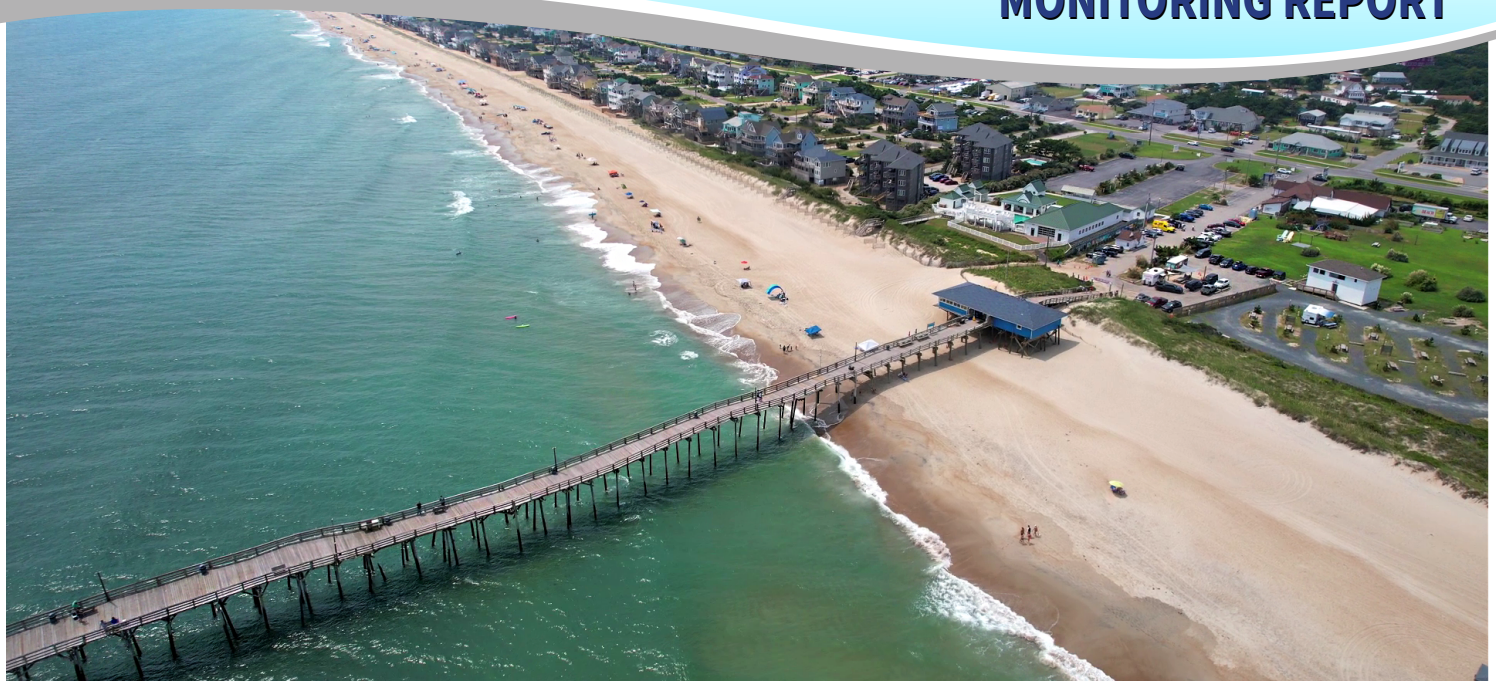
# 2022 Avon and Buxton Beach Renourishment Projects

# 2023 MONITORING REPORT





Prepared for

**Dare County Board of Commissioners**
**Dare County, North Carolina**

COASTAL SCIENCE & ENGINEERING

# 2022 BEACH RENOURISHMENT PROJECTS
# AVON and BUXTON
# DARE COUNTY (NC)

## Year 1 Post-Project Monitoring Report

*Prepared for:*

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[CSE 2557,2558–YR1]
MAY 2024

COVER PHOTO: Oblique aerial photos looking south above the project areas at Avon (upper) and Buxton (lower). from above the central project area, towards Apache Pier. Both project sites retained over 100% of the nourishment volumes within the entire project length. However, a couple hot spots of erosion just south of Avon Pier and along the central Buxton Village resulted in volume losses exceeding 50% of the nourishment volume above certain depths.

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# EXECUTIVE SUMMARY

A pair of nourishment projects at Avon and Buxton in the summer of 2022 placed a total of 2,200,000 cy along 28,700 ft of beach. Along Avon, 1 million cy were placed along 13,200 ft, while along Buxton, 1.2 million cy were placed along 15,500 ft. Because of the proximity between the placement sites, they were both completed in a single deployment by the same contractor working under the same agreement with Dare County.

This report documents changes at both sites over the course of the first year following project completion. The changes reported herein are determined by a series of quarterly and annual surveys described in the post-project monitoring and mitigation plan submitted as part of the permit applications for each location. This plan was determined through coordination between Dare County and CSE based on guidance from NPS, USFWS, and CAMA personnel.

Results presented in this report and its appendices include:

- Beach and inshore profile surveys (see Sections 4.1 and 4.2)

  The project area at Avon retains ~55% of the nourishment volume above –6 ft NAVD and more than 100% of the nourishment volume above –30 ft NAVD. This indicates the template is equilibrating to background wave conditions and continues to reduce storm wave heights along the entire project site.

  The project area at Buxton retains ~50% of the nourishment volume above –6 ft NAVD and more than 100% above –30 ft NAVD. However, Buxton Village (Reach 1) retains only 65% of the nourishment volume above –30 ft NAVD. The bar-trough along the village is relatively close to the shoreline as of September 2023, which may be affecting losses.

- Sand compaction in April (see Section 4.4)

  Compaction survey results collected quarterly over the course of Year 1 indicate both project sites are comparable to the 'Control' area south of Salvo. These results indicate neither fill template caused an unnatural increase in compaction following project completion.

- Geotechnical characteristics of the fill material (see Section 4.5)

  Sand samples collected quarterly over the course of Year 1 indicate both project sites exhibit comparable mean grain sizes and distributions to the 'Control' area south of Salvo. Variations observed at both sites over the course of Year 1 were also observed along the 'Control' area. Results indicate both templates were constructed using appropriate beach-quality sand with no remarkable differences between pre- and post-project conditions.

- Visual inspection for escarpments in April (2023 and 2024 – main report)

  A visual inspection for escarpments was conducted in April 2023 and yielded no areas of concern along either project area.

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## 1.0 INTRODUCTION

Between June and August 2022, 2.2 million cubic yards (cy) of beach-quality sand was placed along two project sites, totaling 5.4 miles of ocean-facing shoreline on Hatteras Island, North Carolina. A project at Avon placed 1.0 million cy of sand along 13,200 linear feet (lf) of beach, while Buxton received 1.2 million cy placed along 15,500 lf (Fig 1.1).

Dare County ('the County') was the project owner and administrator, and Coastal Science & Engineering (CSE, Columbia, South Carolina) served as the Engineer. The renourishment project was completed in one phase under two contracts between Great Lakes Dredge & Dock Company, Inc (GLDD, Houston, Texas) and the County.

The North Carolina Division of Coastal Management (NCDCM) Coastal Area Management Act (CAMA) program, the National Park Service (NPS), and the United States Army Corps of Engineers (USACE) issued permits for the Avon and Buxton projects. Specific monitoring schedules and data collection requirements are included in the special conditions of permits. These special conditions dictate that the County monitor beach conditions along the two sites for at least two years following project completion. CSE and the County agreed to perform five years of post-project monitoring in order to maintain eligibility for FEMA reimbursements following storm damages under the Category G program.

Several types of information are included in annual monitoring reports. Beach profile and borrow area surveys are scheduled annually for five years, while benthic monitoring surveys are scheduled quarterly for two years. Additional data include aerial photography, compaction and escarpment surveys, sediment sampling, and benthic monitoring. CSE tracks required monitoring surveys for all project sites using a form spreadsheet, as shown in Table 1.1. Survey requirements for both Avon and Buxton are identical.

This report details the findings of Coastal Science & Engineering's (CSE) September 2023 (Year 1) survey compared to conditions observed during the August 2022 post-project condition surveys and June 2022 pre-project conditions. Additional comparisons are made between the current (September 2023) data and earlier (eg – pre-June 2022) surveys completed at Buxton. Where applicable, quarterly data collected over the course of Year 1 are included as well.

The main text of this report presents selected profiles and imagery, along with compaction and geotechnical results; the remainder of those data are provided in Appendices A, B, and C, respectively. The report also includes Appendices D and E, which contain the lighting survey and Year 1 benthic monitoring survey report completed under contract by the Coastal Studies Institute (CSI).

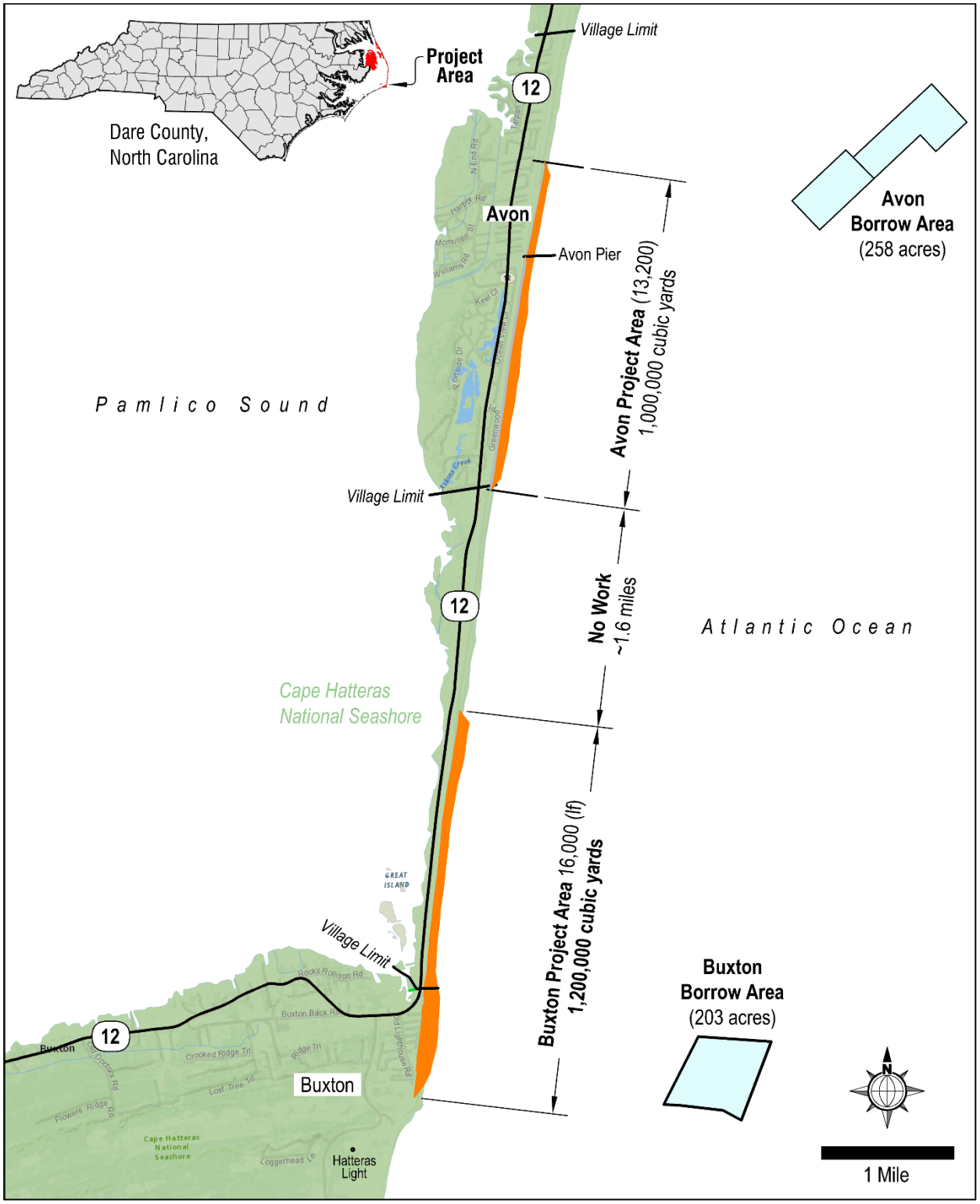



**FIGURE 1.1**. Project vicinity map for the Avon and Buxton renourishment projects occurring in 2022. The design fill template and indicated volumes at Avon extended from just north of Avon Pier to the southern village limits. The template at Buxton extended from several thousand feet north of the village limit to the former Cape Hatteras Lighthouse site on Old Lighthouse Road in Buxton Village. Borrow areas permitted for the two projects were located 2 to 3 miles off each site within state waters. Due to the close proximity of the projects and GLDD's decision to use hopper dredges, both the Avon and Buxton borrow areas were utilized for constructing the Buxton project. Only the Avon borrow area was used for the Avon portion of the fill.

**TABLE 1.1.** USACE, CAMA, and NPS permits require a range of post-project monitoring data to track performance of a beach nourishment project in North Carolina. This visual is CSE's internal method for tracking monitoring requirements following project completion. The data requirements and survey frequencies shown are for Buxton. The same conditions are required for Avon.

**Post Project Required Monitoring Information, Comparisons, and Analysis** ✓

| **Project Number:** | **2503-M** | **Project Name:** | **Village of Buxton Beach Renourishment Project** | **Permit Number:** | SAW-2021-01266 |
|---|---|---|---|---|---|

| Timeline | | | Beach Profiles | Borrow Area Surveys | Beach Sediment Samples | Lighting Survey | Aerial Oblique Photos | Compaction | Escarpments | Aerial Ortho Photos | MHW & Veg Lines |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Report | Year | | | | | | | | | | |
| Pre Project | 2022 | Required | ● | ● | ● | | ● | ● | | ● | ● |
| | | Date Complete | 6/16/2022 | 6/16/2022 | 6/17/2022 | | 6/17/2022 | 6/17/2022 | | 6/17/2022 | 6/15/2022 |
| Post Project | 2022 | Required | ● | ● | ● | | ● | ● | | ● | |
| | | Date Complete | 8/21/2022 | 8/21/2022 | 8/18/2022 | | 8/18/2022 | 8/18/2022 | | 8/18/2022 | |
| Year 1 Annual | 2023 | Required | ● | ● | Quarterly | Twice | ● | Quarterly | | ● | |
| | | Date Complete | 9/8/2023 | 11/30/2023 | | | 8/22/2023 | | | | |
| Year 2 Annual | 2024 | Required | ● | ● | Quarterly | | ● | Quarterly | | ● | |
| | | Date Complete | | | | | | | | | |
| Year 3 Annual | 2025 | Required | ● | ● | | | ● | | | ● | |
| | | Date Complete | | | | | | | | | |
| Year 4 Annual | 2026 | Required | ● | ● | | | ● | | | ● | |
| | | Date Complete | | | | | | | | | |
| Year 5 Annual | 2027 | Required | ● | ● | | | ● | | | ● | |
| | | Date Complete | | | | | | | | | |

Description of Monitoring Requirements

| | | | |
|---|---|---|---|
| | **Beach Profiles:** BD survey performed within 3 months of construction for entire project area and submitted to DCM and USACE. AD final survey must be submitted within 60 days of project completion. | **Borrow Area Surveys:** AD survey provided to DCM within 60 days after project completion. | **Beach Sed Samples:** 16 transects in Buxton, 10 control transects south of Salvo, 3 samples at each transect: toe of dune, berm, LTT. 10 sampling events, pre, post, quarterly for 2 years. |
| | **Lighting Survey:** Two surveys must be conducted from the beach fill area using standard techniques in year following construction. First between May 1 and May 15, brief summary provided to Service. 2nd between July 15 and Aug 1. (USACE #49) | **Aerial Obliques:** Not required but CSE will collect. | **Compaction:** Will be conducted along with beach sediment sampling and ecological study. |
| | **Escarpments:** Visual surveys for escarpments along the project area shall be made immediately after completion of the sand placement, and within 30 days prio to May 1. Exceed 18 inches in height for a distance of 100 ft shall be leveled. | **Aerial Orthos:** Not required but CSE will collect. | **MHW and Static Veg Survey:** Existing MHW line shall be surveyed prior to nourishment activity. Static veg line, line that existed within one year prior to construction shall be established using aerial imagery. |

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# 2.0 SETTING AND HISTORY

## 2.1 Project Setting

Dare County encompasses ~90 miles of ocean shoreline on North Carolina's Outer Banks. The Outer Banks is a chain of barrier islands and spits bordering the Atlantic Ocean from just south of Virginia Beach (VA) to Cape Lookout (NC). Figure 1.1 shows the project location within Dare County and North Carolina.

Approximately half of Dare County's oceanfront shoreline is developed, while the remainder is undeveloped and held in permanent trust by the Cape Hatteras National Seashore. The northern 30 miles of oceanfront beaches in Dare County include (from north to south) the towns of Duck, Southern Shores, Kitty Hawk, Kill Devil Hills, and Nags Head. There is a 5-mile undeveloped portion of Cape Hatteras National Seashore (CAHA) between the southern boundary of Nags Head and Oregon Inlet. The rest of Dare County's oceanfront beaches are on Hatteras Island. These include the National Seashore and the communities of Rodanthe, Waves, Salvo, Avon, Buxton, Frisco, and Hatteras. Approximately 16 miles are developed, and 38 miles are undeveloped along the oceanfront.

Hatteras Island is a classic micro-tidal, wave-dominated barrier island (Hayes 1994) in which littoral sands (ie – sand in the beach zone) of the inner continental shelf have been shaped into a thin, elongated form miles from the mainland. A characteristic of wave-dominated barrier islands is their tendency to be long and narrow with widely separated inlets. Over a 400-year period, up to 30 inlets of varying longevity have been documented along CAHA. However, only three—Oregon Inlet, Hatteras Inlet, and Ocracoke Inlet—have persisted for many decades. The others either closed naturally after a brief life or were closed artificially (Everts et al 1983).

Hurricane *Irene* (August 2011) produced several breach inlets—one adjacent to Oregon Inlet and another along Pea Island, which closed naturally within weeks to a couple of months after the event. A breach at Rodanthe was closed artificially soon after the hurricane. Prior to Hurricane *Irene*, breaches occurred approximately one mile north of Buxton in 1962 (USACE 1963) and near Hatteras Village (west of Buxton) during Hurricane *Isabel* in 2003 (Wutkowski 2004, Walmsley et al 2010). Both breaches were closed artificially within a year to restore vehicle access to the area and to rebuild NC Highway 12, the only road through CAHA. Breach inlets, although infrequent, typically occur where the barrier island is narrowest and lacks high dunes.




**FIGURE 2.1.** Aerial photo taken on 10 September 2014 showing sand movement from north to south and a sand deposit at Cape Point. Sand also accumulates from the west at Cape Point under prevailing winds and waves from the southwest. [Source: CSE]

Avon and Buxton are east-facing beaches near the downcoast terminus of a primary littoral cell extending from the Virginia Capes at the entrance of the Chesapeake Bay to Cape Hatteras, a foreland that marks a prominent turn in the shoreline. A secondary littoral cell that affects Avon and Buxton's beaches extends from Oregon Inlet to Cape Point (Fig 2.1). Beaches within the primary and secondary littoral cells are exposed to similar waves from the northeast and experience the highest waves along the US East Coast (Leffler et al 1996). During Hurricane *Irene* (2011) and *Sandy* (2012), peak wave heights about one mile off Duck and Nags Head, North Carolina, exceeded 27 ft (McNinch et al 2012, CSE 2013). These localities are ~40–55 miles north of Avon. During hurricanes *Florence* (September 2018) and *Dorian* (September 2019), the maximum wave heights at the wave buoy located at Diamond Shoals (NOAA WDBC Station 41025) reached ~30 ft (CSE 2020). This wave buoy is located ~20 miles southeast of Avon.

While hurricane waves often propagate and drive sand to the north, more frequent northeast waves produce net southerly transport along Hatteras Island (Inman & Dolan 1989). Sand moving north to south accounts for the extension of Cape Point (see Fig 2.1). West of Cape Hatteras, the ocean shoreline is sheltered from northeast waves, allowing southerly waves to dominate and drive sand easterly toward Cape Point. Thus, Cape Hatteras and Diamond Shoals are a convergence zone for sand moving along Hatteras Island. Because the northerly waves east of Cape Point are generally more powerful than the southerly waves to the west, the balance of wave energy results in a net westward movement of Cape Hatteras over the long term (see Section 2.2 for more discussion).

Hatteras Island beaches exhibit the full spectrum of conditions from accreting segments (eg – Waves, Salvo, and south Buxton/Cape Point) to retreating erosional segments (eg – Pea Island, Rodanthe, and East Buxton) (Morton & Miller 2005, NCDENR 2012). At decadal to century time scales, littoral sand along Hatteras Island is generally conserved, but shifts from segment to segment. Along some high-erosion segments, shoreline recession rates exceed 12 ft per year (NCDENR 2012). Accreting segments such as Waves and Salvo appear to be widening by >5 ft per year.

Everts et al (1983) prepared a detailed analysis of shoreline change for the Outer Banks, which researched measurements of ocean and sound shoreline positions between the 1850s and 1980s and reviewed earlier maps and charts. This analysis was a cooperative study conducted by the Coastal Engineering Research Center (CERC) and National Ocean Service (NOS) within the US Army Corps of Engineers (USACE) and the National Oceanic & Atmospheric Administration (NOAA) (respectively). Everts et al found that the Outer Banks, on average, was narrowing by ~0.9 meter, or ~3 ft per year, with most of the recession occurring along the oceanfront (~0.8 meter per year average). The study found that the sound shoreline was stable with an average net recession of 0.1

meter per year (~0.3 foot per year). The Everts et al study theorized that the principal losses of sand along the Outer Banks are associated with inlets, particularly the deposits of sand into the sound (Everts et al 1983).

Best-available historical shoreline data (Everts et al 1983, Morton & Miller 2005, NCDENR 2012) indicate that Hatteras Island is drowning in place on average, with shoreline recession occurring along the ocean and sound shorelines. Some segments of Hatteras Island, including parts of Pea Island, Rodanthe, and Buxton, have likely retreated over 1,000 ft in the past century, while other areas have widened by hundreds of feet. Erosion and accretion rates exhibit high variability along the island relative to the island-wide averages (NCDENR 2012). The average width of Hatteras Island is ~1,800 ft. Avon, in contrast, averages ~3,700 ft wide and is considered one of the more stable sections of Hatteras Island (Fenster and Dolan 1993). Partly because of its width, the area of Hatteras Island around Avon has not been breached over the past ~400 years since the earliest recorded maps of the region.

## 2.2 Background, Purpose, and Need

Compared to other tourism-dependent coastlines like New Jersey, South Carolina, and Florida, the Outer Banks have seen relatively few large-scale nourishment projects (Dallas et al 2013). However, there is a long tradition of human intervention designed to mitigate coastal erosion and land loss on Hatteras Island. Cape Hatteras National Seashore was established in 1937 when there was already a permanent population of 'Outer Bankers' living on the island chain. As a result, the NPS has committed to mitigating erosion on the islands at various times (Wirth 1952, Binkley 2007).

Past interventions along Cape Hatteras National Seashore include planting vegetation to promote dune stabilization, closing storm-cut breaches following erosional events, and installing dunes or sandbags to prevent surge-driven flooding (Dallas et al. 2013). In more recent decades, NPS has moved away from such active restoration measures as the population of seasonal tourists has grown on the Outer Banks. NCDOT sponsors scraping along NC Highway 12 following overwash events, with excess material placed back on the dry beach.

NPS policy of the 1930s through the 1960s called for active dune building and revegetation efforts along CAHA (Stratton 1957). However, by the 1970s, the policy was reversed, allowing the beach and dunes to evolve without stabilization measures. Because erosion along Hatteras Island has not been uniform during the past century (NCDENR 2024), a spectrum of conditions exists today. In some places, segments of the beach are relatively stable, and natural processes maintain high dunes. In other areas, erosion has encroached on the dunes, and washovers have extended landward into developed uplands or infrastructure like NC Highway 12.

As a result, Dare County has adopted a stance in which local and county-level funds are used to initiate planning and execution of beach nourishment projects for the various villages within the Seashore. In 2017, Buxton became the first community to use this mechanism to sponsor a beach restoration project (CSE 2017). Positive local feedback from that effort and multiple projects along the communities north of Oregon Inlet listed above led to the County initiating planning for an additional two projects at Avon and Buxton.

Avon and Buxton are relatively small communities compared to the larger towns along the northern portions of Dare County, but they play an important role in driving recreational tourism and fishing for the region. Historically, shoreline erosion rates along portions of Avon and Buxton were modest compared to more vulnerable locations on the Outer Banks (NCDENR 2024). This is particularly true for most of the Avon Village shorefront and much of the undeveloped beach on either side of Buxton.

Although long considered a stable beach with multiple dune ridges offering protection from rough waves and high water, Avon experienced erosion that has dramatically reduced storm protection since ~1998 (Fig 2.2). Portions of Avon south of the pier have been particularly hard-hit, with a ~2-mile reach of shoreline south of Avon Pier no longer containing a protective foredune when the 2022 project was initiated (Fig 2.3). CSE was retained by Dare County in 2020 to perform a feasibility study for sand placement via dredge at Avon and determine whether large-scale renourishment was a reasonable solution for the ongoing beach erosion problem. More specific details on the formulation of the Avon project are provided below.

Erosional hot spots near Buxton Village are related to the long-term migration of Cape Hatteras in a southwestward direction, which is driven by large-scale atmospheric and oceanic processes (Fig 2.4, cf – Inman and Dolan 1989). Three groins were built at the old Cape Hatteras Lighthouse in 1969 to help reduce the shoreline recession and provide some degree of protection for the lighthouse itself. Unsuccessful efforts to mitigate erosion on the beachfront at the lighthouse site resulted in NPS moving the structure landward 2,900 ft in 1999 (Dallas et al 2013). Although the groins have deteriorated over time, they retain some sand-trapping capacity, and there is an offset in the shoreline between Cape Point and the groins, and between the groins and Buxton Village (Fig 2.5). Such an offset will necessarily cause a gradient in longshore sediment transport. In the case of Buxton, this has resulted in considerable sand losses along the developed shorefront of Buxton Village. CSE was retained by Dare County to perform a feasibility study for beach restoration at Buxton and recommended large-scale renourishment (CSE 2013). More specific details on the formulation of the Buxton project are provided below.

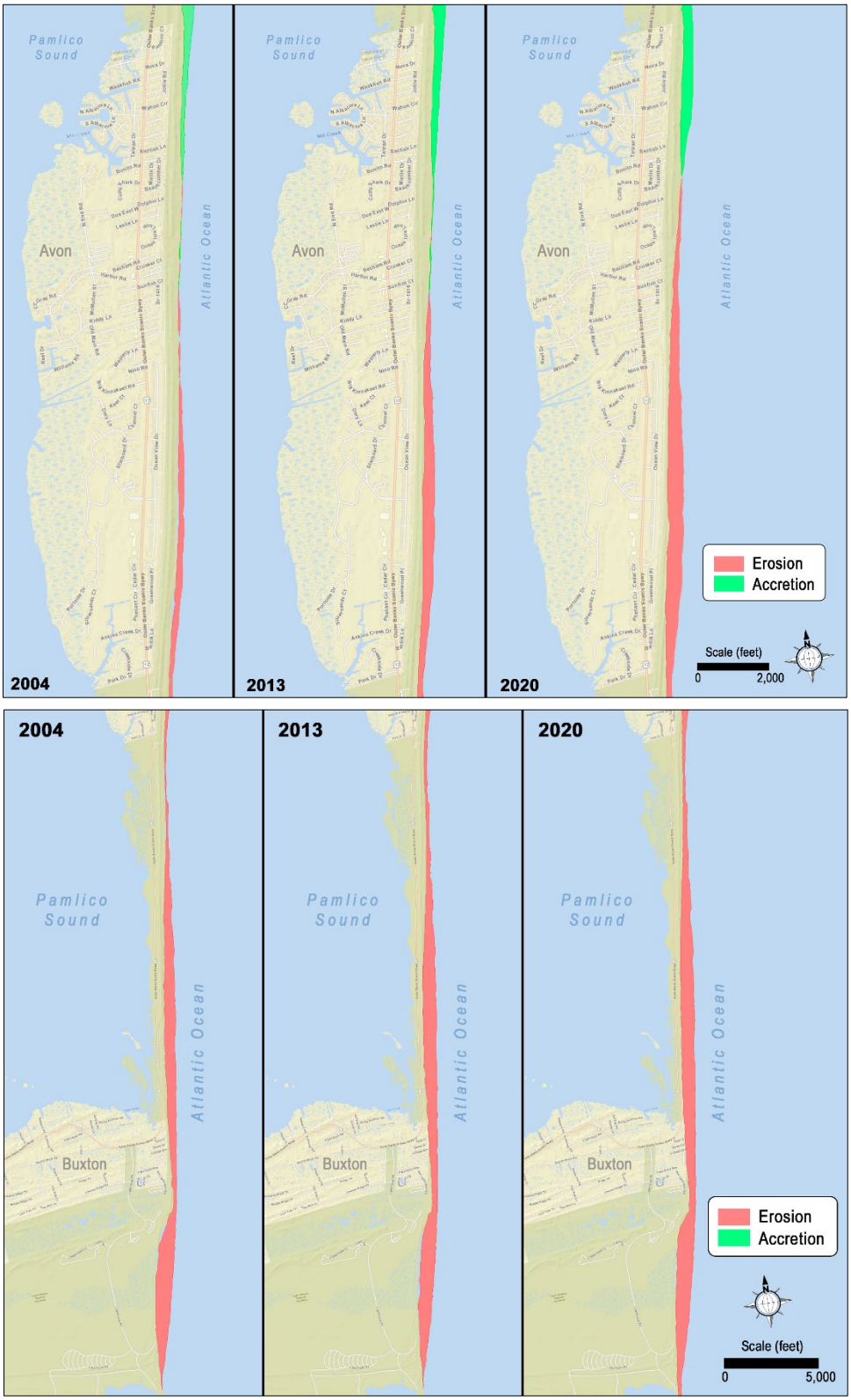



**FIGURE 2.2**. The state of North Carolina adopts erosion rates to help communities identify hot spots and plan for future changes in shoreline position. **[UPPER]** As recently as 2013, annualized erosion rates along much of Avon ranged from 3 to 5 ft/yr with only a few locations experiencing more dramatic beach recession. However, by 2020 erosion rates along south Avon in particular were at or above 10 ft/yr. **[LOWER]** At Buxton, the state has observed more than 10 ft/yr of erosion along much of the shoreline for at least 20 years.

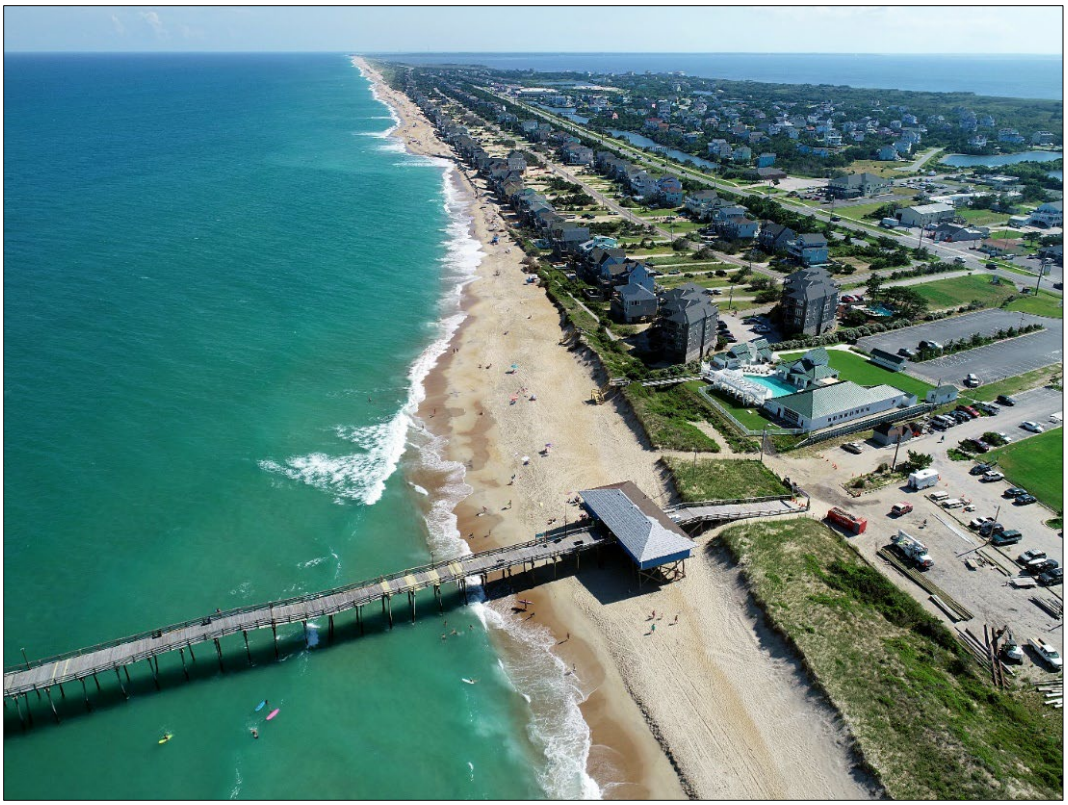


**FIGURE 2.3.** Until the last ~10 to 15 years, erosion rates along south Avon were not dramatically higher than many locations along Hatteras Island. The state-adopted erosion rates along south Avon measured ~4 to 6 ft/yr as recently as 2000, but by 2020 were higher than 15 ft/yr in many locations.

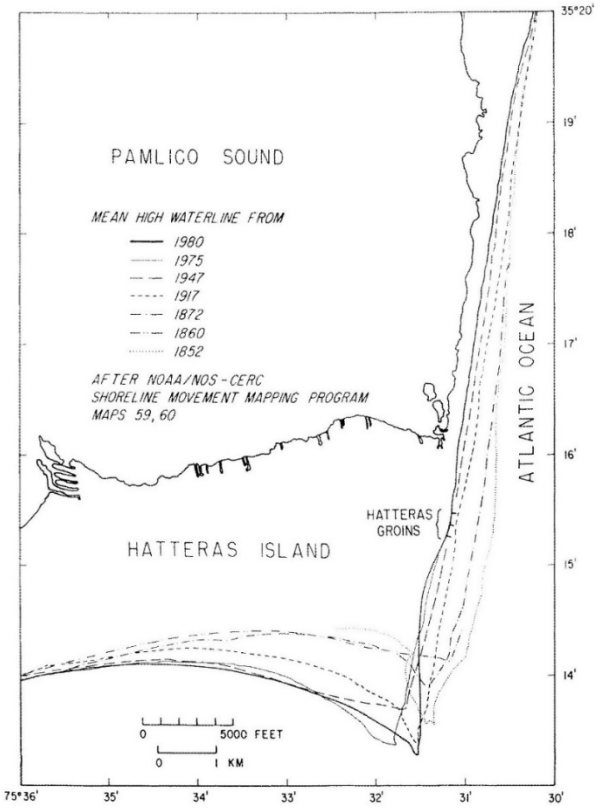



**FIGURE 2.4.** Historic positions of the shoreline in the Cape Hatteras area. The Village of Buxton is located just north of the Hatteras groins labeled here. Between 1852 and 2022, the shoreline at Buxton Village has moved more than one thousand feet westward and resulted in a strong alongshore sediment transport gradient between the village proper and adjacent undeveloped beaches (Everts et al 1983).



**FIGURE 2.5**. Oblique aerial image of Buxton Village taken from the former lighthouse site on 17 June 2022, just weeks before pumping began.

### *2.1.1 Avon*

Large-scale beach nourishment had not occurred at Avon Village before the 2022 effort. The NC Division of Coastal Management (NCDCM) reported official erosion rates ('setback factors') for Avon in 2020 ranging from 2.0 feet per year (ft/yr) north of Avon Pier to 6.0 ft/yr along a ~4,000 ft section of beach south of the pier. Erosion reduces to 3.0 ft/yr at the south limit of the village.

CSE analyzed historical shorelines for fourteen different dates (1852 to 2020) and determined that, indeed, the critically eroded section south of Avon Pier has experienced higher erosion over the past 20 years. For example, between 1946 and 1998, shoreline recession averaged ~1.8 ft/yr, whereas it has averaged ~16 ft/yr since ~1998. Because state erosion rates average over 60+ years, the official rate is lower but increasing with each update along south Avon. The cause of accelerated erosion is unclear, but one factor is rhythmic alongshore sand waves spaced ~3000 ft apart that slowly migrate downcoast, producing systematic variations in beach width. The trough (narrow dry beach area) of one such rhythmic sand wave has persisted south of Avon Pier in recent years. These erosion features are likely linked to inshore bars and shoals, but no comparative surveys are available to confirm this theory.

### *2.1.2 Buxton*

Several nourishment projects were conducted in the Buxton area in the 1960s and 1970s, with more recent projects in 2017–2018 and 2022. The 2018 project was constructed along the same stretch of oceanfront as the 2022 project. Approximately 2.6 million cubic yards (cy) of sand was placed on the 2.9-mile stretch of beach along and just north of Buxton Village. The annual erosion rate from February 2018 to August 2020 was over 50 cy/ft/yr along the project area, which is several times higher than the historical average adopted for the design of the 2017–2018 project (9.5 to 10.2 cy/ft/yr). Due to the loss of nearly 75% of the 2017–2018 nourishment volume in the two years following project completion, in 2019, CSE recommended initiating permitting and design for a follow-up renourishment project at Buxton.

The cause of elevated erosion from 2018 to 2020 at Buxton is probably related to several interacting dynamics related to nearshore bathymetry as well as the position of Cape Point. A deep trough with minimum elevations below –25 ft NAVD persists along much of Buxton Village and runs the length of the project area. Once nourishment material is deposited in this trough, wave and current conditions generally do not allow the material to migrate back onshore.

Another cause of the elevated erosion rates observed at Buxton from 2018 to 2020 is a series of tropical and non-tropical cyclones that have impacted the region. Six named storms (*Irma, Jose, Katia, Maria, Florence,* and *Dorian*) impacted Cape Hatteras over that period, along with a string of rough nor'easter-type storms in the intervening winter seasons. The relatively short time between storm impacts prevented the beach system from effectively recovering volumes lost from the upper shoreface. This led to rapid reductions in beach volume during relatively minor storms.

The quick succession of multiple named and un-named storms along the Buxton project site likely fueled the rapid erosion observed from 2018 to 2020. Because these storms often approach from the south and west, they also draw sand from north to south along the deep trough mentioned above. This exacerbates the loss of volume from the project area.

## 2.3 Project Sponsor

The 2022 beach renourishment project was sponsored by Dare County, North Carolina. The County served as project owner and administrator. Project funding included contributions from the Dare County Beach Nourishment Fund, a North Carolina Department of Environmental Quality (NCDEQ) grant, and reimbursement from FEMA (Federal Emergency Management Agency) as well as the state of North Carolina for sand volume loss due to hurricanes *Florence* and *Dorian* under Public Assistance Program Category G – Beaches.

The construction portion of the project, consisting of mobilization/demobilization, dredge-and-fill, and pre- and post-project third-party surveys, cost a total of $25,870,000. Of this total, Dare County's beach nourishment fund sponsored $17,996,958. An NCDEQ grant sponsored an additional $1,557,607, while FEMA and State reimbursements totaled $6,315,435. The sand fencing and dune grass installation portion of the work was completed for $79,369.

CSE performs all pre- and post-project engineering, consulting, and monitoring under a separate contract with Dare County.

## 2.4 Project Planning

### *2.4.1 Template Design*

The project was implemented by two hopper dredges by the Contractor, Great Lakes Dredge & Dock Company (GLDD). The work included dredging, placement, grading, and environmental protection measures (as specified under federal and state permits) of 2,200,000 cubic yards along 28,700 linear feet of Hatteras Island. Both templates were divided into two reaches, as shown below:

**Avon**

1) Reach 3 (Stations 1550+00 to 1590+00) — 172,000 cy over 4,000 linear feet
2) Reach 4 (Stations 1590+00 to 1682+00) — 828,000 cy over 9,200 linear feet

**Buxton**

3) Reach 2 (Stations 1770+50 to 1880+50) — 525,000 cy over 11,500 linear feet
4) Reach 1 (Stations 1880+50 to 1925+50) — 675,000 cy over 4,500 linear feet

The average fill density (volume of nourishment per linear foot of beach) was 76 cubic yards per foot (cy/ft) of shoreline at Avon and 77 cy/ft at Buxton, which is equivalent to an average beach width increase after natural profile adjustment of ~60 ft. The berm was constructed at +7 ft NAVD with a 1 on 15 seaward slope width averaging from ~100 ft (in Reaches 3 and 2) to ~250 ft (in Reaches 4 and 1). Dunes were constructed along Reaches 1 and 4 with an elevation of +13 ft NAVD, a typical width of 40 ft, and a seaward slope of 1 on 3. It is typical to build a 'fill template' whereby more sand is initially placed on the visible beach, and the sloping seaward edge is steeper than normal (Dean 2002). Such fill templates create an unnatural profile that is inherently unstable. A simple analogy is that of an iceberg with most of its volume below water. If ice is added to the tip of the iceberg, it will settle lower in the water until a new hydrostatic balance is achieved. Similarly, if nourishment sand is placed entirely on top of the visible beach, some of it will be unstable and shift underwater until a balanced profile with a normal slope is achieved.

# 3.0 METHODOLOGY

## 3.1 Elevation Survey

Profiles extend from the foredune to at least ~2,000 ft offshore and are spaced at 500-ft intervals along both project areas. Stationing for these profiles is based on the same survey network, with the origin based at Oregon Inlet and the baseline running along the central axis of Hatteras Island. Individual station numbers are measured in feet south of Oregon Inlet and are recorded using standard engineering notation.

Surveys were performed using a Trimble™ Model R10 GNSS with VRS RTK-GPS for backshore, intertidal, and surf-zone work (Fig 3.1). Bathymetry seaward of the surf zone was obtained using an Applanix POS MV Surfmaster positioning system linked to a precision fathometer (Odom Echotrac CV 100 and SMSW200–4a transducer) mounted on CSE's research vessel, the *R/V Southern Echo*. Raw data were collected at 50 hertz (Hz) (or 50 points per second). Data were collected in x–y–z format and converted to x–z format (distance–elevation pairs), referencing survey monuments for direct comparison with historical data. Raw data were filtered and averaged using HYPACK® software and were reduced to a manageable size for each profile. CSE's precision for bathymetric profiles is ±3 centimeters in the horizontal and ~5 centimeters (~2 inches) in the vertical, with vessel track lines ±20 ft from the planned route.

## 3.2 Volume Calculations

The basic approach to beach monitoring is to track the volume of sand in the beach zone within a specified 'sand box' filled nearly to the top along the landward edge and tapering to a thin layer along the seaward edge. The total volume in this sand box is measured before nourishment and compared to post-project surveys. The differences between these volume measures represent the approximate amount of sand losses (erosion) or gains (accretion) over the survey period. This section describes CSE's methodology for calculating these volumes using survey data.

CSE computes the 'unit volume' of sand in each profile within prescribed contour intervals or cross-shore positions. Unit volumes are the amount of sand (in cy) contained in a one-foot length of beach (ie – cy/ft) between the foredune or some reference backshore limit and a particular depth offshore (Fig 3.2). In most cases, the crest of the foredune is the standard geomorphic indicator for starting distances. Around oceanfront high-rise condominium buildings, the seaward edge of man-made structures is used as a baseline.







**FIGURE 3.1.**
CSE's monitoring methods include land-based data collection via RTK-GPS (upper left) and hydrographic data collection via RTK-GPS linked to a precision echo-sounder.

CSE's shallow-draft vessel the *R/V Southern Echo* is shown in the image to the right.

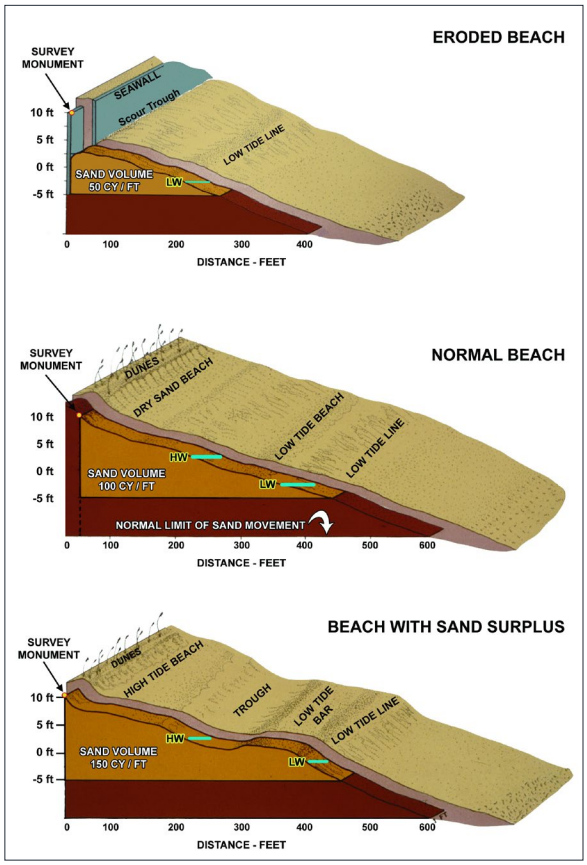



**FIGURE 3.2.** 'Unit volume' is the quantity of sand contained in one unit length of beach from the foredune/seawall to some designated depth offshore.
[From Kana 1990]

These measurements account for variability between profiles and yield an objective quantity for comparison. Changes in unit volume can be interpolated between adjacent profiles to yield net volume change. The net volume change is compared year-to-year and profile-to-profile.

Most changes in bottom elevation that could affect dry beach widths occur above –30 ft NAVD at Buxton (Barrineau et al 2021). CSE adopted this contour for 'closure depth' (aka 'DOC' - depth of closure), representing the seaward limit of measurable elevation change at both sites. This depth represents the outer limit of the active littoral zone within which beach sands move from year to year. CSE also computed changes above other 'lens depths' (above +7 ft NAVD, –6 ft NAVD, –19 ft NAVD, and –24 ft NAVD) to assess volume changes along different portions of the active beach profile:

Storm waves generally shift sand from the dunes and beach (above +7, -6 ft NAVD) to the trough or even deeper beyond the bar (above -19, -24, or -30 ft NAVD). Calculating volume changes above the upper lens depths often reflects more recent wave and wind conditions, whereas measurements to closure depth represent a more holistic accounting of beach volumes.

Beach profiles are commonly grouped into continuous portions of shoreline known as 'reaches.' This enables engineers and resource managers to effectively track the volume of sand contained within a particular section of beach.

In some cases, prominent features like a rocky headland or tidal inlet serve as natural boundaries between reaches. For the purposes of post-project monitoring, this report distinguishes five reaches along Avon and four along Buxton; these are listed in Table 3.1. Along both sites, the central two reaches represent the extent of the fill areas for the 2022 project. The end reaches represent adjacent portions of the NPS-administered shoreline with little to no shorefront development.

## 3.1 Aerial Photography

CSE maintains and operates a DJI Phantom 4 Pro (P4P) unmanned aerial system (UAS, or 'drone') to collect aerial imagery. A Federal Aviation Administration (FAA)-licensed UAS pilot oversees the safe operation of the UAS at all times as required by federal regulations. The P4P is equipped with a 20-megapixel, 1-inch CMOS image sensor and a mechanical shutter. This payload results in a powerful camera that can be used for oblique and vertical aerial photography. The drone can map ~150 acres with a flight time of ~30 minutes on a single battery. The use of multiple batteries allows coverage of larger areas on numerous flights.

**TABLE 3.1.** Project area and monitoring reach boundaries for the Avon and Buxton renourishment projects. The 2022 project placed sand along Reaches 3 and 4 (the 'Pier' and 'Central' reaches) of Avon, and the 'NPS' and 'Buxton' reaches of Buxton.

| Project Area | Reach | Station |
|---|---|---|
| Avon | 1 - "NPS" | 1470+00 |
| | | 1475+00 |
| | | 1480+00 |
| | | 1485+00 |
| | | 1490+00 |
| | | 1495+00 |
| | 2 - "North Avon" | 1500+00 |
| | | 1505+00 |
| | | 1510+00 |
| | | 1515+00 |
| | | 1520+00 |
| | | 1525+00 |
| | | 1530+00 |
| | | 1535+00 |
| | | 1540+00 |
| | | 1545+00 |
| | 3 - "Pier" | 1550+00 |
| | | 1555+00 |
| | | 1560+00 |
| | | 1565+00 |
| | | 1570+00 |
| | | 1575+00 |
| | | 1580+00 |
| | | 1585+00 |
| | 4 - "Central" | 1590+00 |
| | | 1595+00 |
| | | 1600+00 |
| | | 1605+00 |
| | | 1610+00 |
| | | 1615+00 |
| | | 1620+00 |
| | | 1625+00 |
| | | 1630+00 |
| | | 1635+00 |
| | | 1640+00 |
| | | 1645+00 |
| | | 1650+00 |
| | | 1655+00 |
| | | 1660+00 |
| | | 1665+00 |
| | | 1670+00 |
| | | 1675+00 |
| | 5 - "South" | 1680+00 |
| | | 1685+00 |
| | | 1690+00 |
| | | 1695+00 |
| | | 1700+00 |

| Project Area | Reach | Station |
|---|---|---|
| Buxton | Upcoast | 1720+00 |
| | | 1725+00 |
| | | 1730+00 |
| | | 1735+00 |
| | | 1740+00 |
| | | 1745+00 |
| | | 1750+00 |
| | | 1755+00 |
| | | 1760+00 |
| | | 1765+00 |
| | NPS | 1770+00 |
| | | 1775+00 |
| | | 1780+00 |
| | | 1785+00 |
| | | 1790+00 |
| | | 1795+00 |
| | | 1800+00 |
| | | 1805+00 |
| | | 1810+00 |
| | | 1815+00 |
| | | 1820+00 |
| | | 1825+00 |
| | | 1830+00 |
| | | 1835+00 |
| | | 1840+00 |
| | | 1845+00 |
| | | 1850+00 |
| | | 1855+00 |
| | | 1860+00 |
| | | 1865+00 |
| | | 1870+00 |
| | | 1875+00 |
| | | 1880+00 |
| | Buxton | 1885+00 |
| | | 1890+00 |
| | | 1895+00 |
| | | 1900+00 |
| | | 1905+00 |
| | | 1910+00 |
| | | 1915+00 |
| | | 1920+00 |
| | | 1925+00 |
| | Downcoast | 1930+00 |
| | | 1935+00 |
| | | 1940+00 |
| | | 1945+00 |
| | | 1950+00 |
| | | 1955+00 |
| | | 1960+00 |
| | | 1965+00 |
| | | 1970+00 |
| | | 1975+00 |
| | | 1980+00 |

## 4.0 BEACH AND INSHORE SURVEYS

The monitoring results presented herein focus on the beach condition as surveyed at Avon and Buxton in August and September 2023, respectively. These results are compared to pre- and post-project conditions measured in May-June 2022 and August 2022, respectively. Results are presented first as large-scale changes across both project areas above the local DOC (–30 ft NAVD), followed by a more focused analysis of changes above different depths and within individual reaches. Tables containing station- and reach-specific survey results are provided in Appendices A-2 and A-4.

### 4.1 Avon Summary Results to –30 ft NAVD (local DOC)

CSE measured an increase of 868,298 cy above –30 ft NAVD along the Avon project area between May and August 2022. This quantity includes background changes and is different from the contract and dredge survey volumes, which followed a tighter survey grid (100 ft versus 500 ft spacing between profiles) and measured in situ volumes immediately following placement.

**Between August 2022 and August 2023, the project area at Avon gained ~37,200 cy (2.9 cy/ft) of sand above −30 ft NAVD. More than 100% of the project volume remains in the active beach profile above the local DOC. Including adjacent upcoast and downcoast reaches, the Avon survey area gained ~278,800 cy (12.1 cy/ft) between August 2022 and August 2023.**

Figure 4.1 shows unit volume changes by station from August 2022 to August 2023 and unit volume changes by reach since July 2020 (CSE's initial survey) through August 2023. The greatest losses along any depth at Avon occurred within ~2,000 feet of Avon Pier and correspond to the locations receiving the highest fill densities during the 2022 project. This is a common observation following beach nourishment projects and indicates that the fill template is equilibrating to natural background wave and current conditions. These areas of volume loss within the fill template will likely spread laterally and decrease in magnitude over the first year or two following project completion.

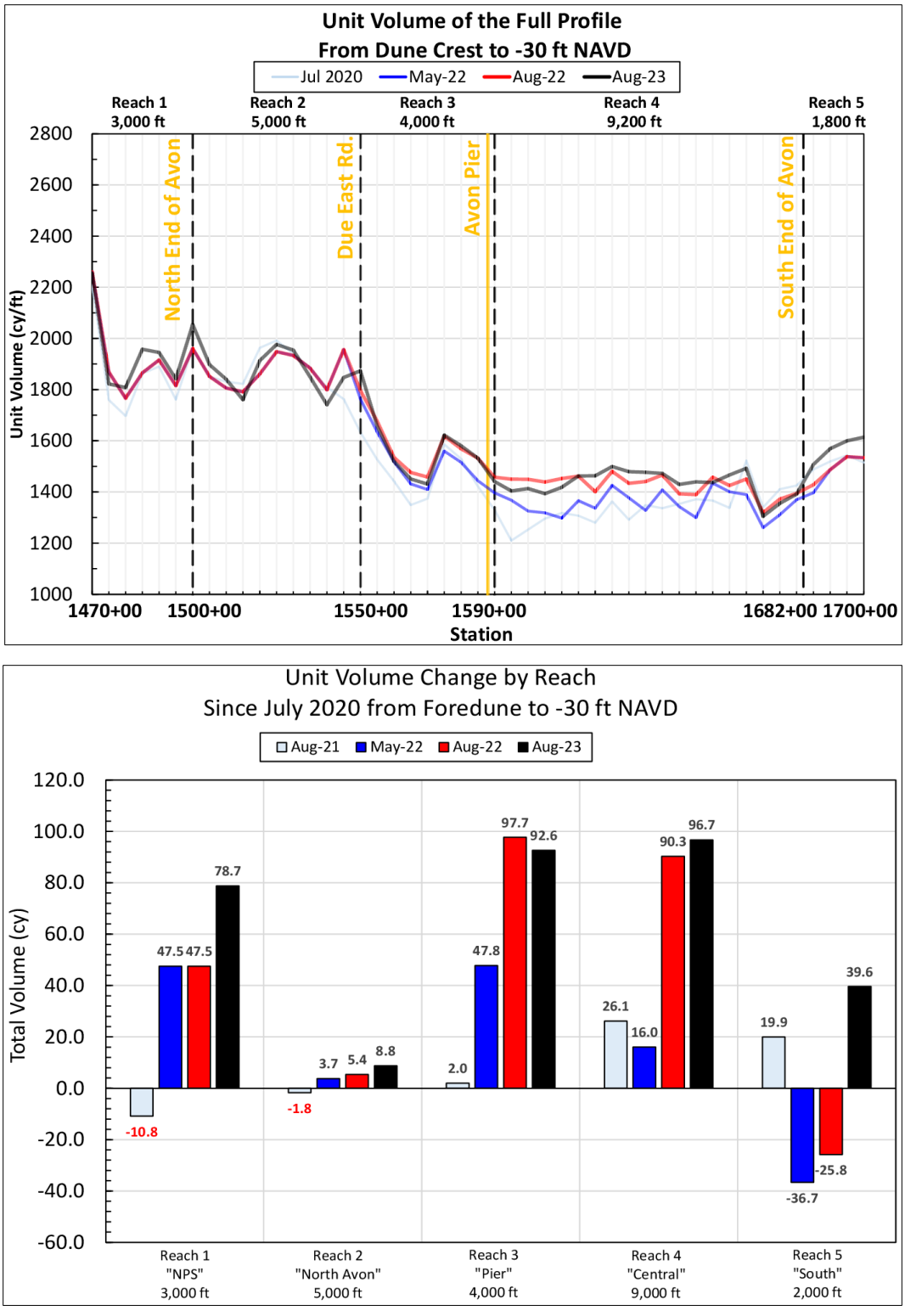



**FIGURE 4.1.** Unit volume change by station (upper) and reach (lower) along Avon from July 2020 to August 2023. Computations are to −30 ft NAVD the local DOC. The greatest changes above DOC occurred along Reaches 3 and 4, which constitute the entire length of the 2022 nourishment template. Substantial volume increases between August 2022 and August 2023 measured in Reaches 1 and 5 indicate nourishment sand is spreading away from the project area and feeding adjacent reaches.

### *4.1.1 Changes by Depth and Reach*

**–24 ft NAVD**

Along Avon, changes observed along the –24 ft contour include all changes to the wet and dry beach, trough, and alongshore bar. Although more than 99% of the observed volume changes along the Avon project area are measured above the –24 ft NAVD depth contour, much of the Pier Reach profiles exhibit changes between the –24 ft and –30 ft contours.

From August 2022 to August 2023, the project area lost ~9,900 cy (–0.8 cy/ft) above –24 ft NAVD. Losses observed above higher contours (discussed below) were probably transported into deeper water and helped keep losses above –24 ft NAVD relatively low. Within the project area, Reach 3 lost ~36,200 cy (–9.0 cy/ft), while Reach 4 gained ~26,300 cy (+2.9 cy/ft). Including adjacent upcoast and downcoast reaches, the Avon survey area gained ~300,300 cy (13.1 cy/ft) above –24 ft NAVD.

**–19 ft NAVD**

The –19 ft contour includes the landward side of the nearshore trough and the most active portions of the beach profile along Avon. Volume changes above this contour help reduce wave heights even during minor to moderate-strength storm events.

From August 2022 to August 2023, the project area at Avon gained ~43,800 cy (3.4 cy/ft) above –19 ft NAVD. Within the project area, Reach 3 gained ~2,900 cy (+0.7 cy/ft), and Reach 4 gained ~41,000 cy (+4.6 cy/ft). Including adjacent upcoast and downcoast reaches, the Avon survey area gained ~377,200 cy (16.4 cy/ft) above –19 ft NAVD.

**–6 ft NAVD**

The logistics of constructing a beach nourishment project restrict sand placement to elevations above the MLW contour. Factoring in the 'run out' of sediment from that elevation towards deeper water that occurs with any shorefront sand placement effort, the post-construction template typically extends to the –6 ft NAVD contour.

Above the –6 ft contour, CSE surveys detected a total volume increase of 973,037 cy between May and August 2022; this volume is much closer to the contract volume of 1,000,000 cy because most of the fill template had not yet been transported into deeper water before the post-project survey. From August 2022 to August 2023, the Avon project area lost ~441,600 cy (–34.0 cy/ft) above –6 ft NAVD. Including adjacent upcoast and downcoast reaches, the Avon survey area lost ~202,500 cy (–8.8 cy/ft) above –6 ft NAVD.

These losses were entirely offset by volume increases in deeper water. This means these losses represent the equilibration of the fill template to background wave and wind conditions, and the loss rates observed from August 2023 to August 2023 above –6 ft NAVD should decrease in future surveys.

**+7 ft NAVD**

Changes above the +7 ft NAVD contour indicate volume gains above the design elevation of the nourishment berm. From August 2022 to August 2023, the Avon project area gained ~38,800 cy (3.0 cy/ft) above +7 ft NAVD. Including adjacent upcoast and downcoast reaches, the Avon survey area gained ~108,100 cy (4.7 cy/ft) above +7 ft NAVD.

This volume increase is reflected in the qualitative improvement of foredune conditions between the pre- and post-project surveys and the August 2023 survey at Avon. A continuous foredune with crest elevations above the storm wave run-up height (>15 ft NAVD along much of the Outer Banks) is the best defense mechanism protecting developed uplands from overwash and rapid loss of beach sands to the back barrier. If storm wave run-up heights do not exceed the foredune crest elevation along Avon, surveyed volumes above the +7 ft NAVD contour will likely continue to increase as the project equilibrates.

## 4.2 Buxton Summary Results to –30 ft NAVD (local DOC)

CSE measured an increase of 1,604,000 cy above –30 ft NAVD along the Buxton project area between May and August 2022. This quantity includes background changes and is thus different from the contract and dredge survey volumes, which followed a tighter survey grid (100 ft versus 500 ft spacing between profiles) and measured in situ volumes immediately following placement.

**The Project Area at Buxton gained ~59,000 cy (3.7 cy/ft) of sand above −30 ft NAVD between August 2022 and August 2023. Along the 'National Seashore' Reach north of the Village of Buxton, the beach gained ~269,700 cy (23.4 cy/ft) and retains more than 100% of the project volume. Along the village, the beach lost ~210,700 cy (46.8 cy/ft) and retains ~64% of the project volume. Including adjacent upcoast and downcoast reaches, the Buxton survey area gained ~1,044,100 cy (40.2 cy/ft) between August 2022 and September 2023.**

Figure 4.1 shows unit volume changes by station from August 2022 to September 2023 and comparative aerial photos of the August 2022 and September 2023 conditions along the central project area. The most significant losses along any depth at Buxton occurred along the developed village shoreline, particularly just north of the Hatteras Motel and in the vicinity of the three groins at the former Hatteras Lighthouse site.

The first erosion hot spot at the northern end of the Village of Buxton occurred along the profiles receiving the largest fill volumes during the 2022 project. This is a common observation following beach nourishment projects and indicates that the fill template is equilibrating to natural background wave and current conditions.

The other hot spot near the old lighthouse site is located along two features that can alter year-to-year volume changes. The first is a bulge in the shoreline that creates an offset between MHW along Buxton Village and the undeveloped National Seashore to the south. The shoreline offset tends to draw sand away from the area around the groins via the same mechanism that tends to erode headlands on higher-relief coasts (wave refraction). Stronger-than-usual wave energy out of the south between August 2022 and August 2023 may have led to increased erosion just north of this offset, due to the reduction in longshore sediment transport caused by the groins. This phenomenon is described in more detail in Section 5.1.

The second is a ~30-ft-deep shore-parallel trough that runs along much of the project area. Bar-trough behavior in wave-dominated environments is often cyclical; the offshore distance between MHW and the bar crest will change with wave and current conditions (Castelle and Masselink 2022). Going back through CSE's annual surveys from 2016, it appears the bar was last at its current

configuration in 2019. From 2016 through 2019, the bar moved ~500 ft onshore with a crest elevation decrease of ~2 to 3 ft (left side of Fig 4.3). Over the same period, the deepest portion of the trough also shoaled from ~–30 ft to ~–20 ft.

Then, from 2019 to 2020, the bar moved ~500 ft offshore and shoaled upward by ~2 to 3 ft. Over the same period, the trough elevation dropped from ~–20 ft NAVD to ~–25 ft NAVD. From 2020 through the September 2023 survey, the crest elevation of the bar has remained relatively constant, but the crest has also gradually migrated landward back to near its 2019 position off Buxton Village (right side of Fig 4.3). Over the same period, the deepest portion of the trough remained relatively constant around –25 ft NAVD and ~1,000 ft offshore.

Over the period from 2020 to 2023, following the 'reset' in which in the bar moved offshore from 2019 to 2020, the bar has also attached to the active beach face (eg – a less pronounced trough present) along the northern end of the survey area in the National Seashore. The location of this attachment zone has gradually moved south from Station ~1730+00 in 2020 to Station ~1780+00 in 2021, Station ~1810+00 in 2022, and Station ~1830+00 in 2023 (Fig 4.4). It is unclear whether this feature will continue migrating towards Buxton Village or begin shifting north at some point in the near future.

A deep shore-parallel trough can serve as a conduit for longshore sediment transport away from the upper beach, with the direction of longshore sediment transport (north or south) depending on predominant conditions. Shifts in the bar crest position and depth alter the hydrodynamic balance of forces in the trough between the bar and Buxton Village. South of the village, the groins keep the position of MHW constant relative to the offshore position and depth of the trough and bar.

As a result, during periods in which the bar and trough move landward, erosion and loss of dry beach area along Buxton Village are likely to be relatively high. This was certainly the case between 2016 and 2019, when the project area (including NPS Reach 2) along Buxton lost nearly 1 million cy. By comparison, during periods in which the bar and trough move seaward or remain relatively constant, losses along Buxton Village are likely to be relatively low. From 2019 through the pre-project survey in 2022, losses along the entire project area measured around 200,000 cy.

So, it is likely that the current arrangement of the bar relatively close to MHW and relatively deep at the crest triggered higher-than-average erosion rates along Buxton Village. If the current cycle of bar-trough behavior mimics the last one observed from 2016 through 2020, a seaward reset in the bar position should lead to reduced erosion rates along the village. The exact timing of such an event is difficult to predict without a more detailed analysis.

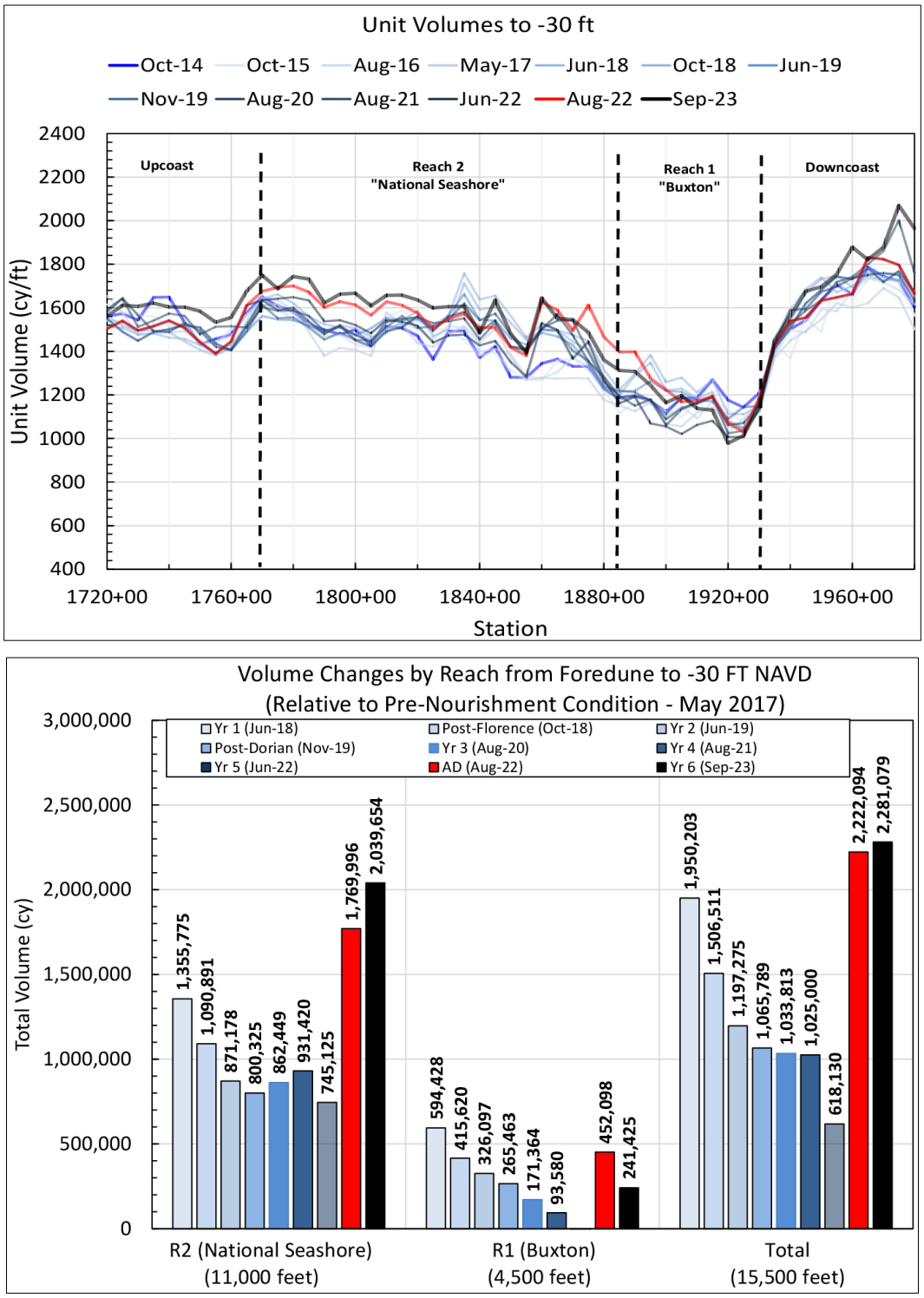



**FIGURE 4.2.** Unit volume change by station (upper) and reach (lower) along Buxton from October 2014 to August 2023. Computations are to −30 ft NAVD the local DOC. The greatest changes above DOC occurred along Reaches 1 and 2, which constitute the entire length of the 2022 nourishment template. Substantial volume increases between August 2022 and August 2023 measured in Reaches 1 and 5 indicate nourishment sand is spreading away from the project area and feeding adjacent reaches.

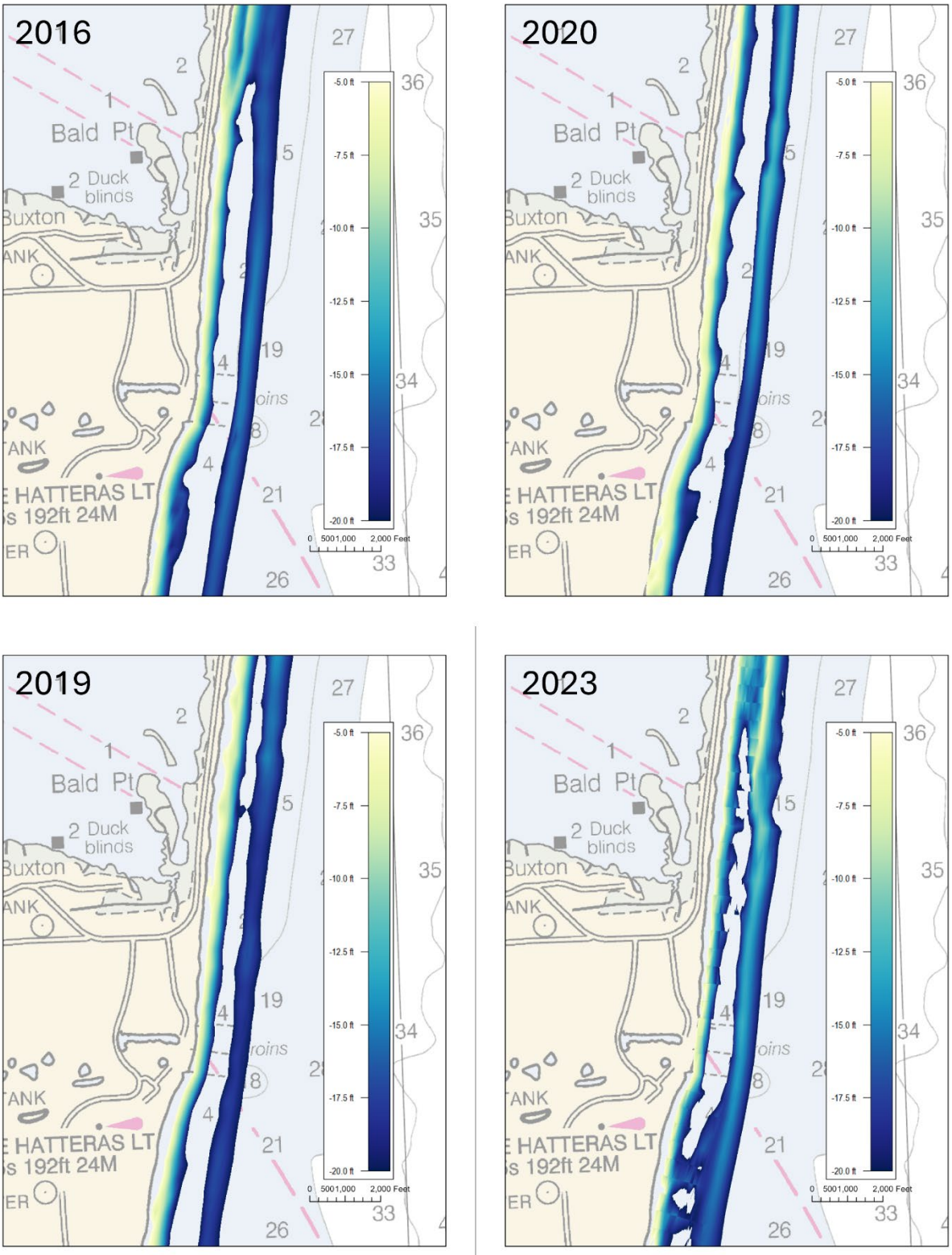



**FIGURE 4.3.** Position of the offshore bar from 2016 to 2023, with elevations clipped to the range between -5 ft and -20 ft NAVD. From 2016 to 2019, the bar shifted onshore by ~500 ft. This led to a steeper shoreface along the village, and increased erosion rates during that time period. From 2019 to 2020, the bar jumped back to near its ~2016-2017 position and erosion began to slow. From 2019 to just before the 2022 project, erosion slowed to around 1/5$^{th}$ of the rate observed from 2016 to 2019.

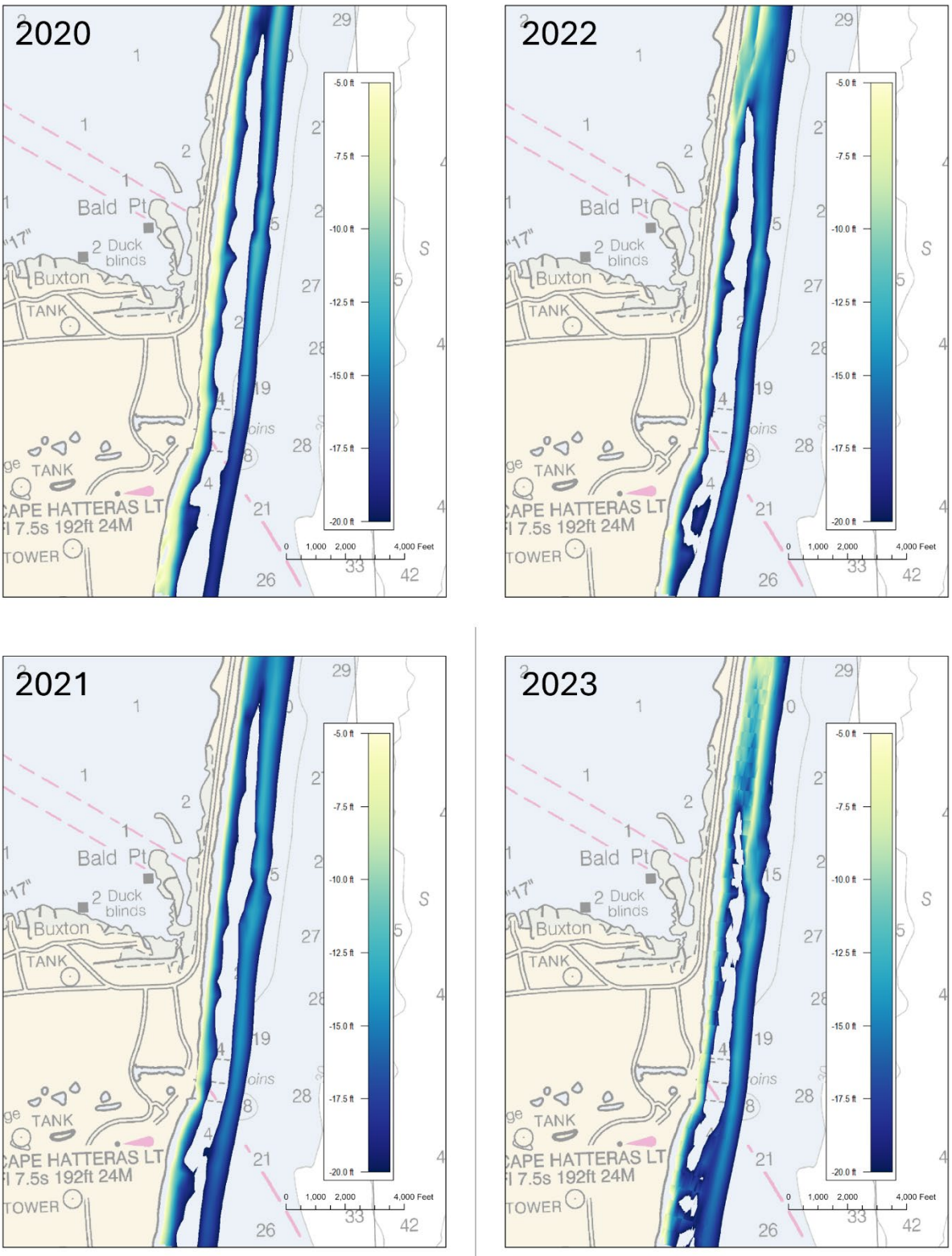



**FIGURE 4.4.** The offshore bar remains 'attached' to the active beach face ~1 to 2 miles north of Buxton village along the Seashore. From 2020 to 2023, this attachment zone has migrated towards the village by 5,000 ft from 2020 to 2021, by 3,000 ft from 2021 to 2022, and by ~2,000 ft from 2022 to 2023.

### *4.2.1 Changes by Depth and Reach*

**–24 ft NAVD**

The –24 ft contour includes the seaward side of the nearshore bar running along much of the Buxton survey area. Volume changes above this contour help reduce wave heights even during minor to moderate-strength storm events. From August 2022 to September 2023, the project area gained ~182,700 cy (0.8 cy/ft) above –24 ft NAVD. This total is the balance between a ~430,400 cy (37.4 cy/ft) gain in the National Seashore Reach north of the village and a ~247,700 (55.0 cy/ft) loss in the village.

Losses along the village occurred primarily above the –6 ft NAVD contour (–279,800 cy, or –62.2 cy/ft). This indicates the template is adjusting rapidly to background wave and wind conditions and feeding parts of the shoreface below the –6 ft NAVD contour. Between –6 ft NAVD and –24 ft NAVD, the Village Reach gained ~32,100 cy (7.1 cy/ft).

Including adjacent upcoast and downcoast reaches, the Buxton survey area gained ~948,700 cy (36.5 cy/ft) above –24 ft NAVD. The Upcoast Reach north of Buxton gained ~456,338 (91.3 cy/ft), while the Downcoast Reach south of Buxton gained ~273,600 cy (54.7 cy/ft).

**–19 ft NAVD**

The –19 ft contour includes the landward side of the nearshore trough and the most active portions of the beach profile along Buxton. Volume changes above this contour help reduce wave heights even during minor to moderate-strength storm events. From August 2022 to September 2023, the project area at Buxton gained ~132,900 cy (8.3 cy/ft) above –19 ft NAVD. This total is the balance between a ~445,800 cy (38.8 cy/ft) gain in the National Seashore Reach north of the village and a ~312,900 (–69.5 cy/ft) loss in the village.

Including adjacent upcoast and downcoast reaches, the Buxton survey area gained ~836,100 cy (32.2 cy/ft) above –19 ft NAVD. The Upcoast Reach north of Buxton gained ~508,400 (101.7 cy/ft), while the Downcoast Reach south of Buxton gained ~194,800 cy (39.0 cy/ft).

**–6 ft NAVD**

The logistics of constructing a beach nourishment project restrict sand placement to elevations above the MLW contour. Factoring in the 'run out' of sediment from that elevation towards deeper water that occurs with any shorefront sand placement effort, the post-construction template typically extends to the –6 ft NAVD contour. This depth represents the base of the more active portion of the beach profile, including swash bars and the constructed template.

Above the –6 ft contour, CSE surveys detected a change of 980,033 cy between June and August 2022; this volume is much closer to the contract volume of 1,000,000 cy because most of the fill template

had not yet been transported into deeper water before the post-project survey. From August 2022 to September 2023, the Buxton project area lost ~484,800 cy (–30.3 cy/ft) above –6 ft NAVD. Losses were recorded along both the National Seashore and Village Reaches, which lost ~205,000 cy (–17.8 cy/ft) and ~279,800 cy (–62.2 cy/ft) respectively.

Including adjacent upcoast and downcoast reaches, the Buxton survey area lost ~189,600 cy (–7.3 cy/ft) above –6 ft NAVD. The Upcoast Reach north of Buxton gained ~117,900 (101.7 cy/ft), while the Downcoast Reach south of Buxton gained ~177,200 cy (39.0 cy/ft).

As discussed above, these losses were partially offset by volume increases in deeper water. This means these losses simply reflect the equilibration of the fill template to background wave and wind conditions, and the rates of loss observed from August 2023 to September 2023 above –6 ft NAVD should decrease in future surveys.

**+7 ft NAVD**

Changes above the +7 ft NAVD contour indicate volume gains above the design elevation of the nourishment berm. These volume changes reflect localized changes in the template as it equilibrates to background conditions, as well as the volume increases in the foredune following project completion. From August 2022 to September 2023, the Buxton project area gained ~73,300 cy (4.6 cy/ft) above +7 ft NAVD. This total is the balance between a ~76,300 cy (6.6 cy/ft) gain in the National Seashore Reach north of the village and a ~3,000 (–0.7 cy/ft) loss in the village.

Including adjacent upcoast and downcoast reaches, the Buxton survey area gained ~108,400 cy (4.2 cy/ft) above +7 ft NAVD. The Upcoast Reach north of Buxton gained ~25,000 (5.0 cy/ft), while the Downcoast Reach south of Buxton gained ~10,100 cy (2.0 cy/ft).

This volume increase is reflected in the qualitative improvement of foredune conditions between the pre- and post-project surveys and the September 2023 survey at Buxton. A continuous foredune with crest elevations above the storm wave run-up height (>15 ft NAVD along much of the Outer Banks) is the best defense mechanism protecting developed uplands from overwash and rapid loss of beach sands to the back barrier. Provided storm wave run-up heights do not exceed the foredune crest elevation along Buxton, surveyed volumes above the +7 ft NAVD contour will likely continue to increase as the project equilibrates.

## 4.3 Oblique Aerial Photography

CSE collected a set of oblique aerial images via drone on 22 August 2023 (Figs 4.5-4.6). The following images are selected for quality and comparability with earlier collections:




**FIGURE 4.5 (page 1 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 1 at the beach nourishment project at Avon (NC). [upper photos: 27 September; middle photos: 26 October; bottom photos: 22 August; *all images taken by D. Giles*]







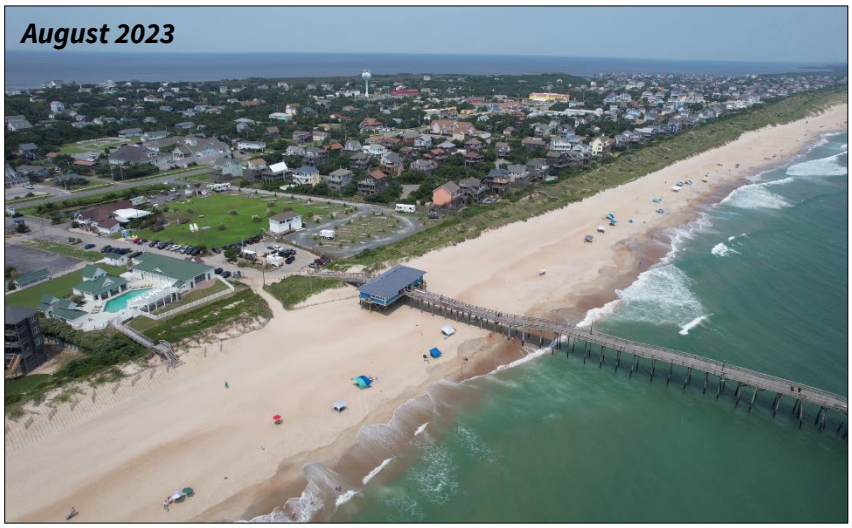



**FIGURE 4.5 (page 2 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 2 at the beach nourishment project at Avon (NC).

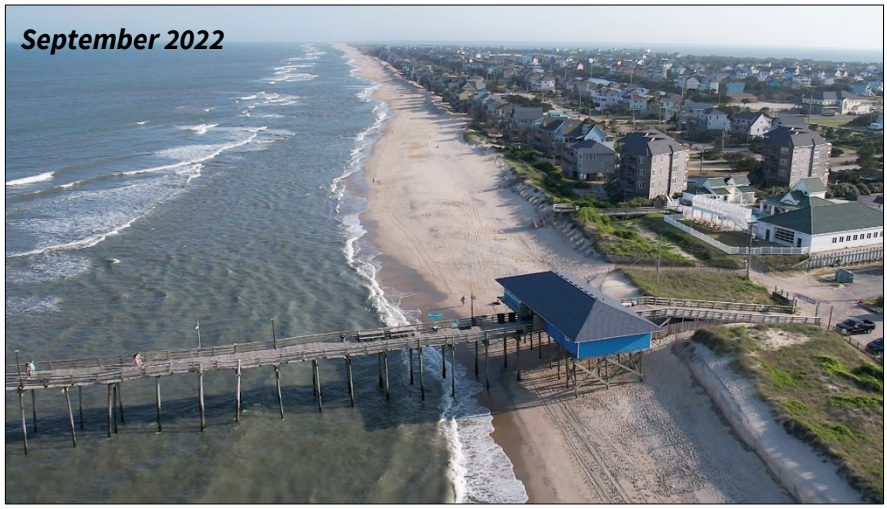









**FIGURE 4.5 (page 3 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 2 the beach nourishment project at Avon (NC).



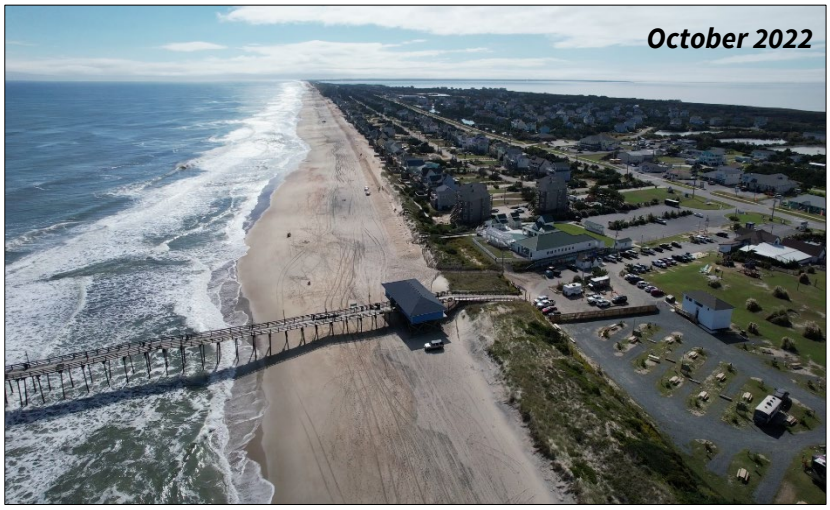







**FIGURE 4.5 (page 4 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 3 at the beach nourishment project at Avon (NC).




**FIGURE 4.5 (page 5 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 4 at the beach nourishment project at Avon (NC).




**FIGURE 4.5 (page 6 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 5 the beach nourishment project at Avon (NC).










**FIGURE 4.6 (page 1 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 1 at the beach nourishment project at Buxton (NC).




**FIGURE 4.6 (page 2 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 1 at the beach nourishment project at Buxton (NC).

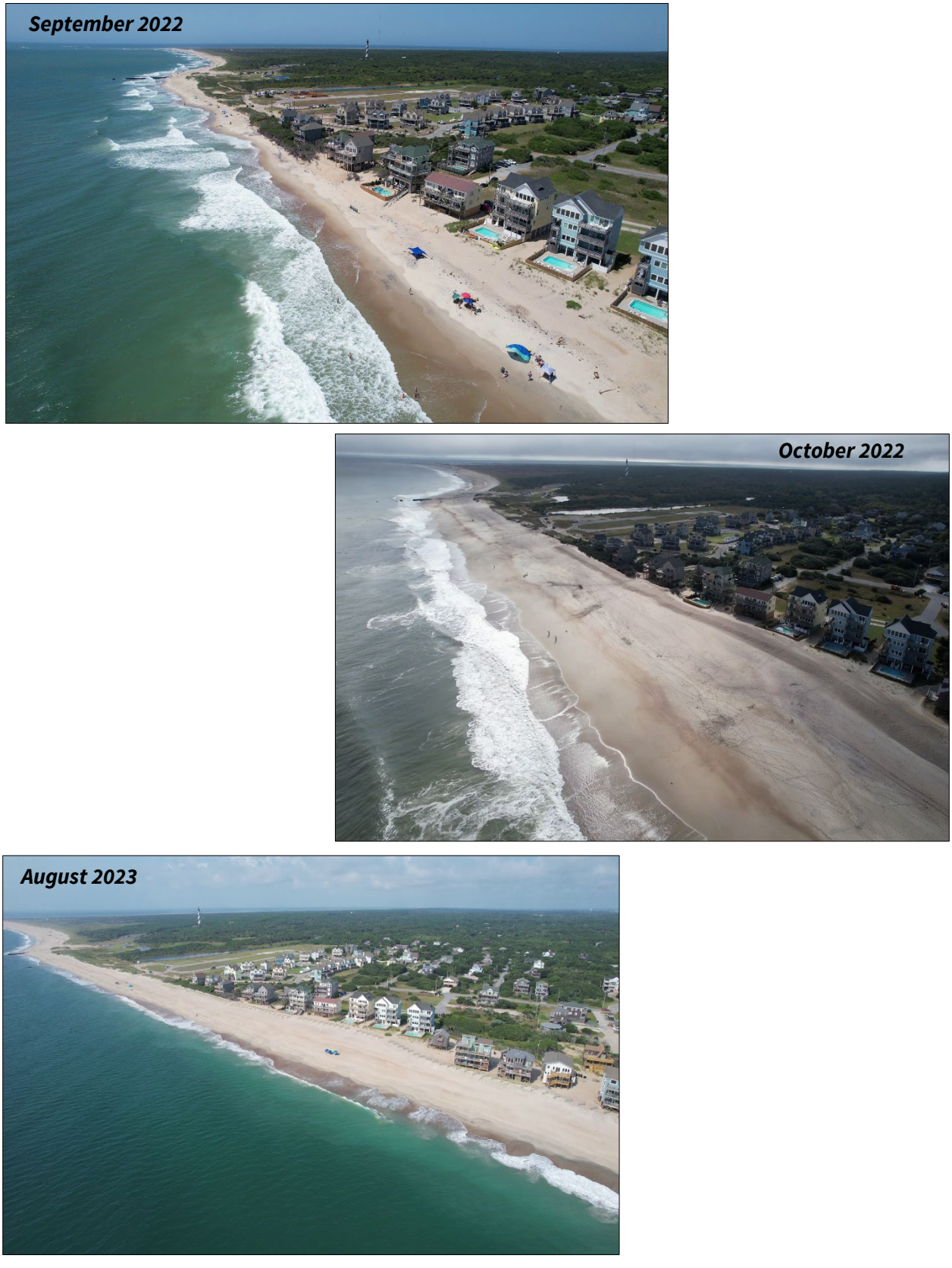



**FIGURE 4.6 (page 3 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 1 at the beach nourishment project at Buxton (NC).




**FIGURE 4.6 (page 4 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 1 at the beach nourishment project at Buxton (NC).







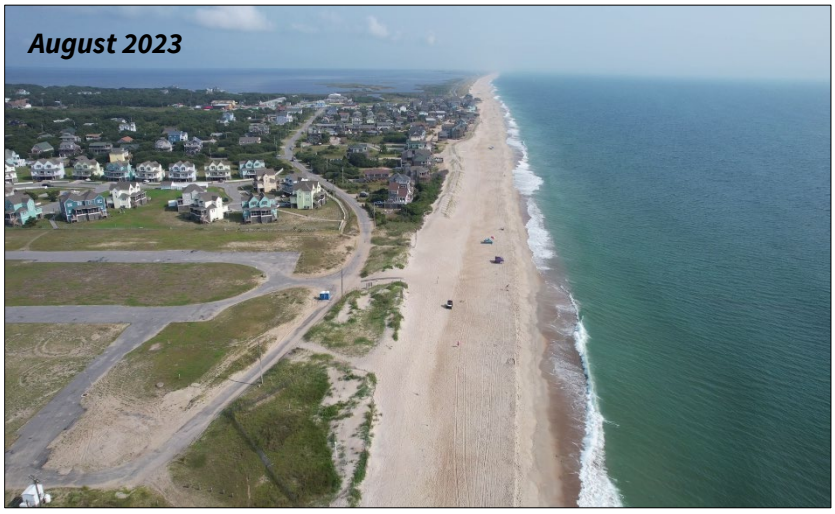



**FIGURE 4.6 (page 5 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of Reach 1 at the beach nourishment project at Buxton (NC).




**FIGURE 4.6 (page 6 of 6).** Before **[UPPER]**, after **[MIDDLE]**, and 1-year post-project **[LOWER]** images of the beach nourishment project at Buxton (NC).

## 4.4 Compaction and Escarpment Surveys

CSE took post-project sediment compaction readings along both project areas and a control area south of Salvo. This control area was determined via consultation with NPS and NFWS personnel before the project began. Samples were collected before dredging (May 2022), after dredging (August 2022), and quarterly throughout monitoring Year 1 (Q1 – November 2022, Q2 – February 2023, Q3 – May 2023, Q4 – August 2023). Compaction sampling stations were located at 500-ft intervals at two measurement locations: the dune toe and the berm. Table 4.1 lists the averaged results for each survey event at all three depths along nourished and unnourished portions of the dune toe and beach berm. A complete listing of all results is provided in Appendix B.

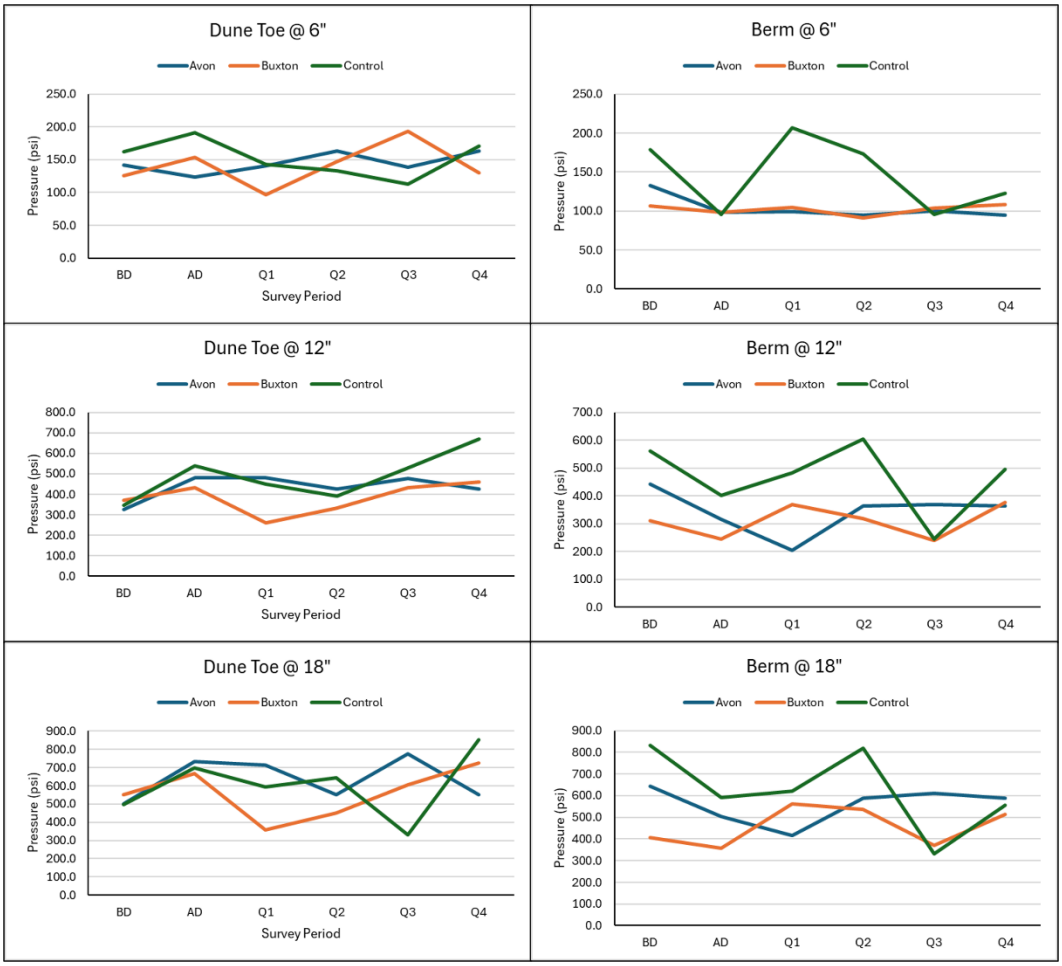
Compaction increases with depth and is lower at the dune toe than along the middle of the dry-sand beach. No specific compaction readings are required in the Biological Opinion. A 500-psi threshold has been recommended for project sites in Florida, but these differ from Hatteras Island beaches in several respects, making results difficult to translate for a North Carolina setting. Comparison between the project and control areas provides the strongest apples-to-apples test for whether nourishment sand led to greater compaction.

The results demonstrate that average compaction through Year 1 along both the Avon and Buxton project areas is comparable or lower than that measured along the control area. When averaged across the entire survey area(s) and for each survey event, the project areas exhibited less compaction than the control over 80% of the time. Visualizing the average results by depth and cross-shore position (Fig 4.7) suggests natural shifts in sediment transport and wave conditions drive the greatest changes in compaction observed across all three sites through Year 1. The greatest change in average compaction values occurred on the berm along the control sites between Q1 (November 2022) and Q3 (May 2023).

Based on these results, CSE does not recommend tilling along either Avon or Buxton. Compaction results at both sites indicate both levels and changes over time fall within acceptable natural variation. Moreover, berm widths along portions of Buxton may not allow for the passage of heavy equipment to perform the work.

**TABLE 4.1 and FIGURE 4.7.** Compaction survey results collected in Year 1. Observations suggest the nourished beach is less compact than adjacent unnourished beaches along the mid-berm, while dune toe observations suggest the two are similar.

| Dune | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6" | | | | 12" | | | | 18" | | |
| *Date* | **Avon** | **Buxton** | **Control** | *Date* | **Avon** | **Buxton** | **Control** | *Date* | **Avon** | **Buxton** | **Control** |
| **BD** | 141.6 | 125.7 | 161.8 | **BD** | 324.5 | 370.6 | 345.0 | **BD** | 501.6 | 553.2 | 497.9 |
| **AD** | 123.6 | 154.1 | 191.4 | **AD** | 482.1 | 432.7 | 538.8 | **AD** | 733.9 | 666.3 | 698.2 |
| **Q1** | 140.9 | 96.9 | 143.4 | **Q1** | 481.9 | 259.6 | 449.3 | **Q1** | 714.3 | 358.3 | 593.5 |
| **Q2** | 163.6 | 147.0 | 133.4 | **Q2** | 426.1 | 334.0 | 391.8 | **Q2** | 551.4 | 451.1 | 644.8 |
| **Q3** | 138.9 | 192.9 | 113.2 | **Q3** | 477.9 | 432.2 | 528.7 | **Q3** | 774.9 | 604.3 | 330.7 |
| **Q4** | 163.6 | 129.5 | 171.3 | **Q4** | 426.1 | 460.2 | 668.6 | **Q4** | 551.4 | 725.2 | 854.7 |
| **AVG** | **145.** | **141.0** | **152.4** | **AVG** | **436.** | **381.6** | **487.0** | **AVG** | **637.9** | **559.7** | **603.3** |
| **Beach** | | | | | | | | | | | |
| | 6" | | | | 12" | | | | 18" | | |
| *Date* | **Avon** | **Buxton** | **Control** | *Date* | **Avon** | **Buxton** | **Control** | *Date* | **Avon** | **Buxton** | **Control** |
| **BD** | 133.1 | 106.5 | 179.0 | **BD** | 443.0 | 310.7 | 561.9 | **BD** | 644.3 | 407.1 | 832.1 |
| **AD** | 98.2 | 98.4 | 95.4 | **AD** | 315.3 | 245.1 | 401.8 | **AD** | 504.3 | 357.3 | 591.5 |
| **Q1** | 98.9 | 104.9 | 206.9 | **Q1** | 205.6 | 369.3 | 483.0 | **Q1** | 414.5 | 563.2 | 621.1 |
| **Q2** | 94.8 | 91.3 | 173.7 | **Q2** | 363.0 | 318.9 | 604.6 | **Q2** | 588.9 | 535.9 | 818.4 |
| **Q3** | 99.9 | 104.0 | 95.4 | **Q3** | 369.2 | 239.3 | 244.8 | **Q3** | 611.3 | 369.1 | 330.7 |
| **Q4** | 94.8 | 108.8 | 122.7 | **Q4** | 363.0 | 375.5 | 496.1 | **Q4** | 588.9 | 513.9 | 557.1 |
| **AVG** | **103.3** | **102.3** | **145.5** | **AVG** | **343.2** | **309.8** | **465.4** | **AVG** | **558.** | **457.8** | **625.2** |



## 4.5 Geotechnical Sampling

Per the monitoring and maintenance plan submitted with the permit application, CSE collected representative sediment samples from both project and control areas (eg – Avon, Buxton, and Salvo 'Control'). Samples were collected before dredging in May and June 2022, after dredging in August 2022, and quarterly throughout the Year 1 monitoring period (Q1 – November 2022, Q2 – February 2023, Q3 – May 2023, Q4 – August 2023).

Samples were collected along survey transects described in Section 3.1 at 1,000-ft spacing along all three sites, with three cross-shore samples collected per transect. There are fourteen transects along Avon, sixteen along Buxton, and ten along the Salvo control site. So, each sampling event consisted of 120 samples, resulting in a net total of 720 samples across all six events.

Samples were dried, sieved, and weighed at quarter-phi intervals according to standard ASTM procedures. Fine- and coarse-size grain contents were determined using dry weights from sieve results. Shell content was measured using two rounds of acid treatment, drying, and weighing to isolate the non-carbonate fraction of all samples.

CSE resampled the before- and after-dredge samples to exclude large clasts and chunks of shell that skewed the grain sizes for those events towards a larger mean. This post-processing was applied to both project sites as well as the control. As a result, the specific mean grain sizes of pre-and post-project sediment characteristics differ slightly from those reported in the Final Report (CSE 2023). No alterations were made to the fine, granule, gravel, or shelly material statistics.

Results of mean grain size (in mm), granule content, and shell content for all six sampling events at all three sites are shown in Table 4.2a-c and Figure 4.8a-f. More complete data with full statistical summaries are provided in Appendix C.

Results indicate the nourishment sand was a good match for both project sites. Longshore variations in mean grain sizes at both sites vary, and most individual stations exhibit a mean grain size between 0.300 and 0.500 mm. Mean grain sizes also varied according to cross-shore position, such that the swash zone tended to exhibit the largest mean grain size, likely due to the influence of relatively large shell fragments and lag deposits of pea gravel. Occurrences of granule-size and shelly material were comparable across all three sites, with site-wide averages of <5% granule-size grains and <10% shelly material. Seasonal changes in the mean grain sizes at both project sites across the Year 1 period are mirrored by similar changes in sediment character at the control site near Salvo. In general, all three sites exhibited the largest mean grain size in May and June 2022, with a gradual decrease in the mean grain sizes exhibited at all sites over the course of Year 1.

**TABLE 4.2a.** Geotechnical data summary for Avon, including before- and after-project data along with quarters 1 through 4 of Year 1.

| Survey Period > | | BD | | | AD | | | Y1Q1 | | | Y1Q2 | | | Y1Q3 | | | Y1Q4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Survey Date> | | 22-May-22 | | | 31-Aug-22 | | | 14-Nov-22 | | | 22-Feb-23 | | | 10-May-23 | | | 22-Aug-23 | | |
| Station | Interval | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell |
| | | mm | % | | mm | % | | mm | % | | mm | % | | mm | % | | mm | % | |
| 1550+00 | Toe of Dune | 0.368 | 0.1 | 2.8 | 0.398 | 0.1 | 3.0 | 0.316 | 1.5 | 2.4 | 0.403 | 3.7 | 7.5 | 0.382 | 0.1 | 2.0 | 0.414 | 0.6 | 2.6 |
| 1550+00 | Beach Face | 0.434 | 1.2 | 1.8 | 0.284 | 0.0 | 3.1 | 0.300 | 0.0 | 1.2 | 0.300 | 0.0 | 1.8 | 0.359 | 0.2 | 2.2 | 0.196 | 0.0 | 0.7 |
| 1550+00 | Swash | 0.614 | 5.2 | 4.8 | 0.368 | 0.5 | 10.6 | 0.334 | 0.0 | 2.0 | 0.343 | 1.3 | 7.7 | 0.343 | 0.1 | 2.5 | 0.301 | 0.1 | 2.3 |
| 1560+00 | Toe of Dune | 0.319 | 0.0 | 1.1 | 0.315 | 1.6 | 1.2 | 0.347 | 0.4 | 4.9 | 0.321 | 0.0 | 2.9 | 0.380 | 0.0 | 1.2 | 0.387 | 0.0 | 1.5 |
| 1560+00 | Beach Face | 0.415 | 0.5 | 1.9 | 0.306 | 0.1 | 4.8 | 0.250 | 0.0 | 1.6 | 0.267 | 0.0 | 2.0 | 0.297 | 0.0 | 2.3 | 0.316 | 0.2 | 3.1 |
| 1560+00 | Swash | 0.617 | 3.4 | 21.9 | 0.314 | 0.1 | 6.7 | 0.301 | 1.9 | 2.2 | 0.587 | 8.9 | 10.7 | 0.339 | 0.0 | 2.3 | 0.342 | 0.4 | 3.7 |
| 1570+00 | Toe of Dune | 0.278 | 0.0 | 0.4 | 0.341 | 0.6 | 1.9 | 0.282 | 0.0 | 1.1 | 0.306 | 0.9 | 4.6 | 0.322 | 0.2 | 3.2 | 0.307 | 0.2 | 2.2 |
| 1570+00 | Beach Face | 0.261 | 0.0 | 0.9 | 0.225 | 0.0 | 2.1 | 0.285 | 0.1 | 2.9 | 0.332 | 0.0 | 3.6 | 0.361 | 0.0 | 3.2 | 0.281 | 0.1 | 2.9 |
| 1570+00 | Swash | 0.633 | 3.2 | 9.2 | 0.289 | 0.4 | 7.0 | 0.312 | 0.1 | 4.4 | 0.289 | 0.0 | 3.5 | 0.388 | 0.1 | 3.6 | 0.338 | 0.4 | 3.9 |
| 1580+00 | Toe of Dune | 0.319 | 0.3 | 1.7 | 0.375 | 1.0 | 2.2 | 0.309 | 0.0 | 2.8 | 0.263 | 0.0 | 1.7 | 0.348 | 0.0 | 3.7 | 0.338 | 0.0 | 2.8 |
| 1580+00 | Beach Face | 0.363 | 0.3 | 1.9 | 0.259 | 0.0 | 4.3 | 0.306 | 0.0 | 4.5 | 0.343 | 0.1 | 5.1 | 0.326 | 0.0 | 3.3 | 0.369 | 2.3 | 9.8 |
| 1580+00 | Swash | 0.842 | 3.1 | 10.7 | 0.464 | 1.2 | 21.8 | 0.397 | 1.5 | 6.5 | 0.465 | 2.9 | 25.5 | 0.409 | 0.7 | 6.6 | 0.670 | 0.8 | 20.1 |
| 1590+00 | Toe of Dune | 0.363 | 0.0 | 3.1 | 0.344 | 0.6 | 3.6 | 0.308 | 0.7 | 3.5 | 0.301 | 0.0 | 3.5 | 0.316 | 1.4 | 4.2 | 0.351 | 0.9 | 4.9 |
| 1590+00 | Beach Face | 0.413 | 0.7 | 3.6 | 0.284 | 0.0 | 4.0 | 0.288 | 0.0 | 3.0 | 0.344 | 0.0 | 3.8 | 0.319 | 0.0 | 2.7 | 0.300 | 0.1 | 5.7 |
| 1590+00 | Swash | 0.731 | 6.1 | 8.3 | 0.506 | 5.4 | 19.8 | 0.399 | 0.1 | 8.6 | 0.396 | 0.0 | 6.0 | 0.340 | 0.3 | 5.0 | 0.399 | 0.7 | 8.4 |
| 1600+00 | Toe of Dune | 0.310 | 0.1 | 1.7 | 0.425 | 3.9 | 13.4 | 0.328 | 0.0 | 5.0 | 0.293 | 0.0 | 1.8 | 0.346 | 0.0 | 4.2 | 0.355 | 0.4 | 8.4 |
| 1600+00 | Beach Face | 0.429 | 1.5 | 5.3 | 0.277 | 0.0 | 2.7 | 0.312 | 0.0 | 5.5 | 0.369 | 0.1 | 5.6 | 0.359 | 0.0 | 3.8 | 0.290 | 0.2 | 3.2 |
| 1600+00 | Swash | 1.068 | 11.3 | 11.5 | 0.451 | 1.1 | 15.6 | 0.320 | 0.0 | 5.0 | 0.336 | 0.3 | 10.3 | 0.363 | 0.9 | 6.4 | 0.691 | 2.6 | 17.6 |
| 1610+00 | Toe of Dune | 0.284 | 0.0 | 0.5 | 0.390 | 1.9 | 32.0 | 0.352 | 0.0 | 7.8 | 0.323 | 0.1 | 6.0 | 0.339 | 0.0 | 4.8 | 0.368 | 0.0 | 4.8 |
| 1610+00 | Beach Face | 0.574 | 2.1 | 12.5 | 0.289 | 0.1 | 3.9 | 0.283 | 0.1 | 5.9 | 0.349 | 0.0 | 4.0 | 0.311 | 0.0 | 2.2 | 0.394 | 0.3 | 7.2 |
| 1610+00 | Swash | 0.817 | 4.2 | 9.0 | 0.571 | 6.7 | 17.7 | 0.357 | 0.0 | 7.0 | 0.422 | 0.2 | 7.3 | 0.373 | 0.1 | 4.8 | 0.403 | 2.2 | 5.2 |
| 1620+00 | Toe of Dune | 0.389 | 0.2 | 3.4 | 0.403 | 5.0 | 9.1 | 0.336 | 0.0 | 7.1 | 0.309 | 0.0 | 4.4 | 0.389 | 0.0 | 4.7 | 0.390 | 0.0 | 4.3 |
| 1620+00 | Beach Face | 0.374 | 0.0 | 1.8 | 0.231 | 0.0 | 2.0 | 0.337 | 0.0 | 5.8 | 0.398 | 0.0 | 6.5 | 0.409 | 0.1 | 5.9 | 0.323 | 0.1 | 6.6 |
| 1620+00 | Swash | 0.600 | 3.7 | 4.1 | 0.858 | 18.7 | 18.2 | 0.410 | 0.1 | 11.0 | 0.356 | 0.0 | 4.2 | 0.382 | 0.1 | 5.9 | 0.369 | 0.8 | 5.9 |
| 1630+00 | Toe of Dune | 0.277 | 0.0 | 1.8 | 0.470 | 0.7 | 5.5 | 0.377 | 0.1 | 5.2 | 0.298 | 0.0 | 3.1 | 0.369 | 0.0 | 4.4 | 0.397 | 0.0 | 4.9 |
| 1630+00 | Beach Face | 0.466 | 0.3 | 4.0 | 0.263 | 0.0 | 2.7 | 0.263 | 0.0 | 2.0 | 0.380 | 0.1 | 5.3 | 0.405 | 0.2 | 5.4 | 0.334 | 0.1 | 4.5 |
| 1630+00 | Swash | 0.647 | 2.2 | 7.2 | 0.298 | 0.2 | 3.6 | 0.368 | 0.0 | 6.8 | 0.513 | 0.6 | 12.5 | 0.454 | 0.1 | 8.1 | 0.326 | 0.0 | 4.0 |
| 1640+00 | Toe of Dune | 0.378 | 0.0 | 1.9 | 0.456 | 1.1 | 4.7 | 0.310 | 0.2 | 5.6 | 0.320 | 1.7 | 4.4 | 0.357 | 0.3 | 6.9 | 0.369 | 0.1 | 6.5 |
| 1640+00 | Beach Face | 0.388 | 0.0 | 2.8 | 0.279 | 0.0 | 2.5 | 0.309 | 0.0 | 4.3 | 0.409 | 0.1 | 7.9 | 0.415 | 0.0 | 6.7 | 0.455 | 0.4 | 10.3 |
| 1640+00 | Swash | 0.496 | 2.2 | 5.8 | 0.659 | 6.3 | 15.9 | 0.231 | 0.0 | 1.9 | 0.377 | 0.0 | 5.1 | 0.500 | 0.7 | 10.0 | 0.390 | 0.4 | 6.6 |
| 1650+00 | Toe of Dune | 0.378 | 0.1 | 4.0 | 0.367 | 1.0 | 13.7 | 0.285 | 0.0 | 4.3 | 0.319 | 0.0 | 4.4 | 0.472 | 0.1 | 9.9 | 0.432 | 0.0 | 9.1 |
| 1650+00 | Beach Face | 0.302 | 0.0 | 2.0 | 0.290 | 0.0 | 3.9 | 0.263 | 0.0 | 2.5 | 0.494 | 0.9 | 12.3 | 0.420 | 0.2 | 6.0 | 0.349 | 0.2 | 5.9 |
| 1650+00 | Swash | 0.469 | 4.6 | 4.1 | 0.690 | 1.0 | 12.7 | 0.328 | 0.6 | 5.4 | 0.393 | 0.1 | 7.1 | 0.417 | 0.1 | 7.2 | 0.306 | 0.0 | 4.2 |
| 1660+00 | Toe of Dune | 0.412 | 0.3 | 3.0 | 0.411 | 1.4 | 7.9 | 0.289 | 0.0 | 6.7 | 0.326 | 0.0 | 5.8 | 0.393 | 0.0 | 7.4 | 0.408 | 0.0 | 6.0 |
| 1660+00 | Beach Face | 0.301 | 0.0 | 1.9 | 0.366 | 0.0 | 4.7 | 0.254 | 0.0 | 1.8 | 0.372 | 0.0 | 5.3 | 0.346 | 0.1 | 5.0 | 0.342 | 0.5 | 4.8 |
| 1660+00 | Swash | 0.528 | 2.8 | 3.4 | 0.985 | 12.5 | 17.8 | 0.354 | 0.0 | 3.0 | 0.376 | 0.0 | 5.6 | 0.449 | 0.1 | 7.8 | 0.310 | 0.4 | 3.8 |
| 1670+00 | Toe of Dune | 0.232 | 0.0 | 0.3 | 0.455 | 5.5 | 10.6 | 0.310 | 0.1 | 3.4 | 0.338 | 0.2 | 3.7 | 0.359 | 0.2 | 4.8 | 0.385 | 0.2 | 5.6 |
| 1670+00 | Beach Face | 0.279 | 0.0 | 1.7 | 0.382 | 0.2 | 3.6 | 0.289 | 0.0 | 1.4 | 0.382 | 0.1 | 7.4 | 0.356 | 0.0 | 4.0 | 0.303 | 0.2 | 3.7 |
| 1670+00 | Swash | 0.622 | 2.2 | 8.1 | 0.760 | 4.6 | 8.7 | 0.329 | 0.6 | 4.1 | 0.352 | 0.1 | 4.5 | 0.400 | 0.0 | 6.1 | 0.342 | 0.3 | 5.3 |
| 1680+00 | Toe of Dune | 0.386 | 0.0 | 2.3 | 0.444 | 1.3 | 3.9 | 0.310 | 0.2 | 5.4 | 0.354 | 1.6 | 5.3 | 0.409 | 0.0 | 6.8 | 0.368 | 0.0 | 4.7 |
| 1680+00 | Beach Face | 0.381 | 0.0 | 1.4 | 0.344 | 0.2 | 2.6 | 0.309 | 0.0 | 5.2 | 0.381 | 0.0 | 5.7 | 0.386 | 0.1 | 5.2 | 0.355 | 0.2 | 4.3 |
| 1680+00 | Swash | 0.607 | 3.5 | 8.5 | 0.675 | 3.3 | 8.8 | 0.231 | 0.0 | 5.6 | 0.373 | 0.0 | 5.8 | 0.449 | 0.1 | 7.6 | 0.447 | 1.8 | 8.1 |
| ALL | Toe of Dune | 0.331 | 0.1 | 2.0 | 0.397 | 1.8 | 8.1 | 0.317 | 0.2 | 4.6 | 0.318 | 0.6 | 4.2 | 0.368 | 0.2 | 4.9 | 0.375 | 0.2 | 4.9 |
| ALL | Beach Face | 0.375 | 0.5 | 3.1 | 0.288 | 0.0 | 3.3 | 0.288 | 0.0 | 3.4 | 0.362 | 0.1 | 5.5 | 0.360 | 0.1 | 4.1 | 0.324 | 0.4 | 5.2 |
| ALL | Swash | 0.635 | 3.8 | 8.3 | 0.519 | 4.2 | 13.2 | 0.329 | 0.4 | 5.3 | 0.392 | 1.0 | 8.3 | 0.398 | 0.2 | 6.0 | 0.388 | 0.8 | 7.1 |
| ALL | ALL | 0.420 | 1.3 | 4.5 | 0.389 | 2.0 | 8.2 | 0.311 | 0.2 | 4.4 | 0.356 | 0.6 | 6.0 | 0.375 | 0.2 | 5.0 | 0.361 | 0.4 | 5.7 |

**TABLE 4.2b.** Geotechnical data summary for Buxton, including before- and after-project data along with quarters 1 through 4 of Year 1.

| Survey Period > | | BD | | | AD | | | Y1Q1 | | | Y1Q2 | | | Y1Q3 | | | Y1Q4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Survey Date> | | 16-Jun-22 | | | 31-Aug-22 | | | 14-Nov-22 | | | 22-Feb-23 | | | 10-May-23 | | | 22-Aug-23 | | |
| Station | Interval | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell |
| | | mm | % | | mm | % | | mm | % | | mm | % | | mm | % | | mm | % | |
| 1770+00 | Toe of Dune | 0.257 | 0.0 | 0.9 | 0.357 | 0.1 | 5.1 | 0.373 | 0.0 | 3.8 | 0.385 | 0.0 | 4.1 | 0.302 | 0.0 | 3.2 | 0.333 | 0.0 | 3.8 |
| 1770+00 | Beach Face | 0.505 | 2.3 | 9.5 | 0.351 | 0.1 | 4.3 | 0.357 | 0.3 | 2.9 | 0.488 | 0.6 | 9.4 | 0.443 | 1.2 | 6.2 | 0.305 | 0.2 | 4.5 |
| 1770+00 | Swash | 0.857 | 16.0 | 18.3 | 0.757 | 5.1 | 16.5 | 0.296 | 0.3 | 3.1 | 0.285 | 0.1 | 2.4 | 0.327 | 0.0 | 3.2 | 0.344 | 0.5 | 6.7 |
| 1780+00 | Toe of Dune | 0.306 | 0.1 | 0.0 | 0.343 | 0.3 | 3.9 | 0.356 | 0.0 | 2.8 | 0.416 | 0.0 | 4.2 | 0.443 | 1.8 | 7.1 | 0.406 | 0.0 | 7.0 |
| 1780+00 | Beach Face | 0.641 | 1.3 | 9.9 | 0.340 | 0.1 | 3.2 | 0.423 | 0.6 | 4.8 | 0.325 | 0.0 | 3.0 | 0.245 | 0.1 | 1.8 | 0.321 | 1.0 | 5.5 |
| 1780+00 | Swash | 0.899 | 6.7 | 12.8 | 0.630 | 5.3 | 14.0 | 0.296 | 0.1 | 3.0 | 0.420 | 0.0 | 5.4 | 0.292 | 0.0 | 2.5 | 0.287 | 0.1 | 5.0 |
| 1790+00 | Toe of Dune | 0.306 | 0.1 | 2.2 | 0.467 | 3.4 | 8.8 | 0.423 | 0.4 | 5.2 | 0.436 | 1.0 | 6.3 | 0.393 | 0.1 | 6.3 | 0.342 | 0.0 | 3.7 |
| 1790+00 | Beach Face | 0.344 | 0.1 | 3.7 | 0.403 | 0.1 | 4.2 | 0.392 | 1.8 | 5.0 | 0.291 | 0.1 | 2.6 | 0.235 | 0.0 | 1.3 | 0.366 | 0.5 | 7.5 |
| 1790+00 | Swash | 0.715 | 7.2 | 11.6 | 0.736 | 7.1 | 17.4 | 0.319 | 0.2 | 3.0 | 0.306 | 0.1 | 3.2 | 0.249 | 0.0 | 1.7 | 0.328 | 0.5 | 6.3 |
| 1800+00 | Toe of Dune | 0.392 | 0.0 | 3.9 | 0.407 | 0.1 | 4.4 | 0.393 | 0.0 | 3.6 | 0.559 | 0.7 | 9.8 | 0.466 | 1.9 | 10.1 | 0.460 | 0.3 | 10.5 |
| 1800+00 | Beach Face | 0.384 | 0.2 | 4.3 | 0.354 | 0.1 | 4.6 | 0.440 | 0.3 | 4.7 | 0.366 | 0.1 | 5.3 | 0.318 | 0.9 | 5.1 | 0.246 | 0.0 | 2.2 |
| 1800+00 | Swash | 0.927 | 11.2 | 18.6 | 0.584 | 5.6 | 26.6 | 0.318 | 0.0 | 2.9 | 0.234 | 0.0 | 1.6 | 0.268 | 0.0 | 2.7 | 0.262 | 0.1 | 5.8 |
| 1810+00 | Toe of Dune | | | | 0.455 | 0.4 | 7.4 | 0.539 | 0.2 | 10.0 | 0.411 | 0.3 | 4.9 | 0.411 | 0.3 | 4.9 | 0.410 | 0.1 | 7.4 |
| 1810+00 | Beach Face | 0.377 | 0.1 | 3.5 | 0.428 | 0.7 | 7.0 | 0.458 | 1.1 | 8.3 | 0.379 | 0.0 | 5.0 | 0.379 | 0.0 | 5.0 | 0.341 | 0.4 | 7.5 |
| 1810+00 | Swash | 0.890 | 10.0 | 13.9 | 0.567 | 3.0 | 18.6 | 0.296 | 0.0 | 2.5 | 0.266 | 0.0 | 2.0 | 0.266 | 0.0 | 2.0 | 0.360 | 0.7 | 5.5 |
| 1820+00 | Toe of Dune | | | | 0.404 | 3.4 | 5.6 | 0.302 | 0.0 | 3.2 | 0.356 | 0.0 | 4.2 | 0.356 | 0.0 | 4.2 | 0.435 | 0.4 | 9.4 |
| 1820+00 | Beach Face | 0.417 | 0.3 | 4.5 | 0.370 | 0.2 | 4.8 | 0.269 | 0.1 | 1.7 | 0.372 | 0.0 | 5.2 | 0.372 | 0.0 | 5.2 | 0.341 | 3.8 | 8.4 |
| 1820+00 | Swash | 1.468 | 37.2 | 22.9 | 0.561 | 2.5 | 20.8 | 0.320 | 0.1 | 5.4 | 0.447 | 0.2 | 6.7 | 0.447 | 0.2 | 6.7 | 0.312 | 0.9 | 6.7 |
| 1830+00 | Toe of Dune | | | | 0.419 | 0.7 | 4.7 | 0.323 | 0.0 | 5.6 | 0.316 | 0.2 | 3.6 | 0.369 | 0.1 | 5.2 | 0.351 | 0.2 | 6.4 |
| 1830+00 | Beach Face | 0.617 | 0.7 | 9.3 | 0.407 | 0.1 | 5.0 | 0.396 | 0.8 | 8.8 | 0.452 | 0.0 | 6.6 | 0.310 | 0.1 | 4.1 | 0.314 | 0.1 | 4.5 |
| 1830+00 | Swash | 0.954 | 12.7 | 17.2 | 0.637 | 3.7 | 16.1 | 0.303 | 0.0 | 3.2 | 0.474 | 0.9 | 6.7 | 0.348 | 0.2 | 5.2 | 0.790 | 20.7 | 26.3 |
| 1840+00 | Toe of Dune | 0.359 | 0.1 | 6.9 | 0.458 | 1.8 | 7.7 | 0.371 | 0.0 | 6.4 | 0.320 | 0.0 | 3.7 | 0.382 | 0.1 | 6.2 | 0.404 | 0.3 | 8.1 |
| 1840+00 | Beach Face | 0.355 | 0.1 | 4.4 | 0.380 | 0.0 | 4.4 | 0.337 | 0.0 | 4.3 | 0.485 | 0.1 | 8.3 | 0.493 | 0.3 | 11.9 | 0.292 | 0.2 | 3.9 |
| 1840+00 | Swash | 0.494 | 2.2 | 10.8 | 0.634 | 1.6 | 16.1 | 0.351 | 0.1 | 6.8 | 0.404 | 0.1 | 6.3 | 0.427 | 0.5 | 6.5 | 0.314 | 0.4 | 7.0 |
| 1850+00 | Toe of Dune | 0.415 | 0.0 | 5.3 | 0.457 | 0.4 | 5.4 | 0.312 | 0.0 | 4.1 | 0.320 | 0.1 | 3.6 | 0.390 | 0.0 | 8.3 | 0.438 | 0.0 | 10.8 |
| 1850+00 | Beach Face | 0.365 | 0.0 | 4.7 | 0.362 | 0.0 | 4.9 | 0.340 | 0.1 | 4.3 | 0.357 | 0.0 | 3.8 | 0.457 | 0.2 | 7.6 | 0.263 | 0.5 | 3.1 |
| 1850+00 | Swash | 0.509 | 2.8 | 10.6 | 0.634 | 3.1 | 19.8 | 0.417 | 0.6 | 9.9 | 0.383 | 0.3 | 4.7 | 0.430 | 0.2 | 6.1 | 0.324 | 0.6 | 8.4 |
| 1860+00 | Toe of Dune | 0.352 | 0.0 | 4.7 | 0.395 | 0.0 | 4.0 | 0.360 | 0.0 | 6.9 | 0.484 | 1.3 | 6.7 | 0.365 | 0.3 | 6.6 | 0.441 | 0.1 | 8.8 |
| 1860+00 | Beach Face | 0.384 | 0.1 | 4.8 | 0.365 | 0.0 | 4.9 | 0.305 | 0.2 | 3.7 | 0.336 | 0.0 | 2.9 | 0.384 | 0.0 | 5.5 | 0.289 | 0.1 | 3.8 |
| 1860+00 | Swash | 0.391 | 1.6 | 6.7 | 0.544 | 1.8 | 18.0 | 0.271 | 0.0 | 2.9 | 0.399 | 0.1 | 6.4 | 0.469 | 0.1 | 8.0 | 0.363 | 0.6 | 9.1 |
| 1870+00 | Toe of Dune | 0.512 | 0.4 | 4.5 | 0.439 | 3.3 | 9.3 | 0.369 | 0.2 | 8.7 | 0.313 | 0.0 | 2.8 | 0.354 | 0.1 | 6.6 | 0.434 | 0.4 | 10.6 |
| 1870+00 | Beach Face | 0.618 | 0.9 | 11.6 | 0.339 | 0.0 | 4.1 | 0.313 | 1.6 | 8.8 | 0.473 | 0.0 | 9.4 | 0.379 | 0.0 | 5.2 | 0.368 | 0.5 | 10.4 |
| 1870+00 | Swash | 0.372 | 0.8 | 6.0 | 0.519 | 4.1 | 22.0 | 0.301 | 0.0 | 4.0 | 0.402 | 0.1 | 7.2 | 0.505 | 1.0 | 9.8 | 0.289 | 0.2 | 4.4 |
| 1880+00 | Toe of Dune | 0.321 | 0.0 | 3.7 | 0.346 | 0.5 | 5.6 | 0.325 | 0.0 | 4.6 | 0.345 | 0.1 | 5.7 | 0.362 | 0.0 | 8.1 | 0.352 | 0.2 | 7.2 |
| 1880+00 | Beach Face | 0.343 | 0.1 | 4.3 | 0.346 | 0.0 | 4.5 | 0.309 | 0.0 | 3.8 | 0.282 | 0.0 | 2.9 | 0.380 | 0.6 | 5.6 | 0.286 | 0.0 | 3.0 |
| 1880+00 | Swash | 0.324 | 0.0 | 12.7 | 0.484 | 0.7 | 12.7 | 0.351 | 0.1 | 6.0 | 0.469 | 0.0 | 10.4 | 0.528 | 1.4 | 12.7 | 0.431 | 2.3 | 11.1 |
| 1890+00 | Toe of Dune | 0.296 | 0.0 | 2.7 | 0.475 | 1.9 | 16.0 | 0.347 | 0.1 | 6.2 | 0.384 | 0.7 | 8.8 | 0.414 | 0.0 | 7.5 | 0.382 | 0.2 | 7.7 |
| 1890+00 | Beach Face | 0.302 | 0.0 | 3.6 | 0.345 | 0.0 | 4.7 | 0.329 | 0.1 | 4.8 | 0.466 | 3.5 | 21.5 | 0.320 | 0.0 | 3.7 | 0.233 | 0.2 | 2.3 |
| 1890+00 | Swash | 0.499 | 3.0 | 9.6 | 0.544 | 2.0 | 21.5 | 0.436 | 1.5 | 11.3 | 0.334 | 0.0 | 4.3 | 0.464 | 0.2 | 13.0 | 0.288 | 0.3 | 4.8 |
| 1900+00 | Toe of Dune | 0.371 | -0.2 | 4.1 | 0.506 | 3.1 | 28.9 | 0.337 | 0.7 | 7.1 | 0.311 | 0.0 | 7.5 | 0.403 | 4.2 | 7.0 | 0.496 | 1.0 | 10.4 |
| 1900+00 | Beach Face | 0.293 | 0.1 | 3.5 | 0.528 | 2.7 | 4.2 | 0.538 | 3.7 | 17.8 | 0.353 | 0.0 | 4.8 | 0.363 | 0.2 | 4.7 | 0.332 | 0.0 | 3.9 |
| 1900+00 | Swash | 0.357 | 3.1 | 6.0 | 0.413 | 1.6 | 16.2 | 0.448 | 5.7 | 19.9 | 0.302 | 0.0 | 3.5 | 0.421 | 0.4 | 10.3 | 0.309 | 7.2 | 5.1 |
| 1910+00 | Toe of Dune | 0.406 | 0.0 | 4.7 | 0.556 | 1.4 | 22.5 | 0.307 | 0.3 | 4.0 | 0.326 | 0.0 | 4.4 | 0.476 | 1.8 | 14.8 | 0.294 | 0.1 | 4.8 |
| 1910+00 | Beach Face | 0.355 | 0.3 | 4.4 | 0.441 | 1.7 | 18.1 | 0.324 | 0.1 | 3.5 | 0.411 | 2.4 | 10.6 | 0.353 | 0.0 | 5.1 | 0.263 | 0.0 | 2.5 |
| 1910+00 | Swash | 0.931 | 14.9 | 18.2 | 0.535 | 1.5 | 21.9 | 1.164 | 28.1 | 12.3 | 0.277 | 0.0 | 3.2 | 0.371 | 0.1 | 5.9 | 0.274 | 0.1 | 4.2 |
| 1920+00 | Toe of Dune | 0.518 | 1.7 | 8.5 | 0.536 | 1.1 | 6.0 | 0.348 | 0.0 | 5.7 | 0.331 | 0.0 | 4.3 | 0.426 | 0.1 | 7.8 | 0.351 | 0.3 | 3.7 |
| 1920+00 | Beach Face | 0.338 | 0.0 | 3.3 | 0.541 | 2.2 | 14.6 | 0.379 | 0.1 | 6.7 | 0.351 | 0.0 | 5.8 | 0.279 | 0.1 | 2.7 | 0.314 | 0.1 | 3.9 |
| 1920+00 | Swash | 0.583 | 2.2 | 12.0 | 0.482 | 0.1 | 12.2 | 0.289 | 0.0 | 3.4 | 0.326 | 0.0 | 4.4 | 0.461 | 0.1 | 9.4 | 0.268 | 0.0 | 3.2 |
| ALL | Toe of Dune | 0.363 | 0.2 | 3.3 | 0.434 | 1.4 | 9.1 | 0.358 | 0.1 | 5.5 | 0.370 | 0.3 | 5.3 | 0.392 | 0.7 | 7.1 | 0.392 | 0.2 | 7.5 |
| ALL | Beach Face | 0.402 | 0.4 | 5.6 | 0.389 | 0.5 | 6.1 | 0.364 | 0.7 | 6.2 | 0.381 | 0.4 | 4.9 | 0.350 | 0.2 | 6.6 | 0.302 | 0.5 | 7.5 |
| ALL | Swash | 0.616 | 7.5 | 13.0 | 0.572 | 3.0 | 18.1 | 0.346 | 1.6 | 6.1 | 0.350 | 0.1 | 6.4 | 0.382 | 0.3 | 5.1 | 0.333 | 2.2 | 5.0 |
| ALL | ALL | 0.450 | 2.7 | 7.3 | 0.458 | 1.6 | 11.1 | 0.356 | 0.8 | 5.9 | 0.367 | 0.3 | 5.6 | 0.374 | 0.4 | 6.3 | 0.340 | 1.0 | 6.6 |

**TABLE 4.2c.** Geotechnical data summary for the control site at Salvo, including before- and after-project data along with quarters 1 through 4 of Year 1.

| Survey Period > | | BD | | | AD | | | Y1Q1 | | | Y1Q2 | | | Y1Q3 | | | Y1Q4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Survey Date> | | 22-May-22 | | | 31-Aug-22 | | | 14-Nov-22 | | | 22-Feb-23 | | | 10-May-23 | | | 22-Aug-23 | | |
| Station | Interval | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell | Mean | Granule | Shell |
| | | mm | % | | mm | % | | mm | % | | mm | % | | mm | % | | mm | % | |
| 980+00 | Toe of Dune | 0.355 | 0.1 | 1.7 | 0.241 | 0.0 | 0.8 | 0.250 | 0.0 | 0.9 | 0.269 | 0.0 | 0.4 | 0.227 | 0.0 | 0.4 | 0.236 | 0.0 | 0.7 |
| 980+00 | Beach Face | 0.361 | 0.0 | 0.5 | 0.280 | 0.0 | 1.0 | 0.240 | 0.1 | 1.0 | 0.298 | 0.0 | 0.8 | 0.287 | 0.0 | 1.4 | 0.250 | 0.0 | 0.8 |
| 980+00 | Swash | 0.980 | 0.0 | 5.0 | 0.733 | 6.7 | 3.3 | 0.300 | 0.3 | 1.7 | 0.494 | 3.2 | 1.9 | 0.350 | 1.5 | 3.6 | 0.272 | 1.2 | 2.0 |
| 990+00 | Toe of Dune | 0.323 | 0.0 | 1.5 | 0.323 | 0.3 | 0.9 | 0.255 | 0.0 | 0.9 | 0.278 | 0.0 | 0.4 | 0.265 | 0.0 | 0.4 | 0.281 | 0.0 | 0.6 |
| 990+00 | Beach Face | 0.314 | 2.6 | 0.6 | 0.349 | 0.9 | 2.7 | 0.246 | 0.1 | 1.2 | 0.295 | 0.0 | 0.7 | 0.324 | 0.0 | 0.7 | 0.261 | 0.0 | 0.7 |
| 990+00 | Swash | 0.603 | 5.4 | 6.1 | 0.682 | 6.6 | 3.0 | 0.297 | 0.1 | 1.2 | 0.647 | 5.8 | 4.0 | 0.397 | 2.0 | 1.8 | 0.624 | 0.3 | 1.5 |
| 1000+00 | Toe of Dune | 0.245 | 0.0 | 0.3 | 0.338 | 0.0 | 0.9 | 0.241 | 0.0 | 0.6 | 0.242 | 0.0 | 0.5 | 0.263 | 0.0 | 0.3 | 0.326 | 0.0 | 0.8 |
| 1000+00 | Beach Face | 0.409 | 3.4 | 5.1 | 0.258 | 0.0 | 3.5 | 0.225 | 0.0 | 0.7 | 0.267 | 0.0 | 0.7 | 0.311 | 0.0 | 0.8 | 0.212 | 0.0 | 0.7 |
| 1000+00 | Swash | 0.778 | 3.1 | 11.5 | 0.704 | 10.8 | 4.2 | 0.252 | 0.0 | 1.0 | 0.707 | 7.3 | 3.0 | 0.451 | 4.7 | 4.7 | 0.231 | 0.0 | 1.0 |
| 1010+00 | Toe of Dune | 0.222 | 0.1 | 0.7 | 0.306 | 0.0 | 0.8 | 0.267 | 0.0 | 0.8 | 0.240 | 0.0 | 0.5 | 0.362 | 0.3 | 0.8 | 0.309 | 0.2 | 0.7 |
| 1010+00 | Beach Face | 0.492 | 3.9 | 8.8 | 0.329 | 0.0 | 1.0 | 0.274 | 0.0 | 1.2 | 0.226 | 0.0 | 0.9 | 0.322 | 0.0 | 0.7 | 0.220 | 0.0 | 0.8 |
| 1010+00 | Swash | 1.091 | 18.3 | 13.5 | 0.493 | 3.5 | 4.6 | 0.396 | 0.1 | 1.5 | 0.434 | 1.6 | 5.2 | 0.388 | 1.0 | 1.6 | 0.267 | 0.0 | 1.5 |
| 1020+00 | Toe of Dune | 0.210 | 0.0 | 0.6 | 0.287 | 0.0 | 0.8 | 0.281 | 0.0 | 0.6 | 0.277 | 0.0 | 1.0 | 0.358 | 0.0 | 0.7 | 0.344 | 0.0 | 0.9 |
| 1020+00 | Beach Face | 0.366 | 0.1 | 1.4 | 0.436 | 0.6 | 3.0 | 0.262 | 0.0 | 0.6 | 0.255 | 0.0 | 0.7 | 0.310 | 0.0 | 0.6 | 0.265 | 0.4 | 2.1 |
| 1020+00 | Swash | 0.506 | 0.0 | 1.9 | 0.807 | 19.1 | 3.5 | 0.331 | 1.8 | 1.4 | 0.472 | 3.1 | 5.8 | 0.544 | 2.3 | 2.6 | 0.264 | 0.2 | 1.4 |
| 1030+00 | Toe of Dune | 0.239 | 0.0 | 0.6 | 0.360 | 0.5 | 1.0 | 0.336 | 0.2 | 0.9 | 0.328 | 0.0 | 1.0 | 0.412 | 0.2 | 1.1 | 0.352 | 0.0 | 1.1 |
| 1030+00 | Beach Face | 0.554 | 5.1 | 2.1 | 0.344 | 0.2 | 1.6 | 0.272 | 0.0 | 0.9 | 0.224 | 0.0 | 0.7 | 0.330 | 0.1 | 0.7 | 0.237 | 0.0 | 1.0 |
| 1030+00 | Swash | 0.686 | 3.7 | 10.9 | 0.983 | 43.7 | 13.4 | 0.299 | 0.0 | 0.8 | 0.589 | 4.8 | 4.1 | 0.421 | 1.0 | 1.7 | 0.399 | 3.6 | 2.3 |
| 1040+00 | Toe of Dune | 0.341 | 0.0 | 0.7 | 0.394 | 0.1 | 1.6 | 0.385 | 0.0 | 1.5 | 0.281 | 0.0 | 0.5 | 0.310 | 0.0 | 0.6 | 0.332 | 0.0 | 1.2 |
| 1040+00 | Beach Face | 0.345 | 0.0 | 0.9 | 0.295 | 0.0 | 1.2 | 0.368 | 0.0 | 0.9 | 0.224 | 0.0 | 0.5 | 0.268 | 0.0 | 0.3 | 0.252 | 0.0 | 0.9 |
| 1040+00 | Swash | 0.545 | 5.1 | 3.2 | 0.417 | 3.5 | 4.5 | 0.306 | 0.0 | 0.7 | 0.298 | 0.7 | 1.1 | 0.263 | 0.0 | 1.0 | 0.308 | 2.6 | 1.7 |
| 1050+00 | Toe of Dune | 0.237 | 0.1 | 0.3 | 0.441 | 1.0 | 3.0 | 0.341 | 0.0 | 1.0 | 0.327 | 0.0 | 0.7 | 0.356 | 0.5 | 1.8 | 0.401 | 0.2 | 1.4 |
| 1050+00 | Beach Face | 0.468 | 1.1 | 3.4 | 0.259 | 0.0 | 1.9 | 0.282 | 0.0 | 0.7 | 0.254 | 0.0 | 0.7 | 0.230 | 0.0 | 0.5 | 0.249 | 0.4 | 1.7 |
| 1050+00 | Swash | 0.714 | 0.0 | 6.3 | 0.855 | 30.9 | 8.8 | 0.352 | 0.1 | 0.9 | 0.652 | 4.2 | 10.9 | 0.298 | 0.0 | 1.1 | 0.321 | 0.1 | 1.6 |
| 1060+00 | Toe of Dune | 0.247 | 0.1 | 0.4 | 0.285 | 0.3 | 0.8 | 0.325 | 0.0 | 0.6 | 0.312 | 0.1 | 0.5 | 0.352 | 0.5 | 1.0 | 0.393 | 0.0 | 1.3 |
| 1060+00 | Beach Face | 0.430 | 1.6 | 2.1 | 0.282 | 0.1 | 1.4 | 0.308 | 4.1 | 1.5 | 0.256 | 0.0 | 0.6 | 0.298 | 0.0 | 1.0 | 0.248 | 0.0 | 1.1 |
| 1060+00 | Swash | 0.549 | 0.0 | 4.2 | 0.612 | 12.1 | 4.2 | 0.322 | 0.0 | 0.8 | 1.056 | 10.3 | 12.6 | 0.236 | 0.0 | 0.6 | 0.243 | 0.0 | 1.4 |
| 1070+00 | Toe of Dune | 0.315 | 0.1 | 0.5 | 0.278 | 0.0 | 0.6 | 0.324 | 0.0 | 0.5 | 0.374 | 0.1 | 1.8 | 0.324 | 0.2 | 0.9 | 0.358 | 0.2 | 1.5 |
| 1070+00 | Beach Face | 0.347 | 0.0 | 0.6 | 0.249 | 0.0 | 0.8 | 0.325 | 0.0 | 0.7 | 0.344 | 0.0 | 0.9 | 0.259 | 0.0 | 0.6 | 0.278 | 0.0 | 1.1 |
| 1070+00 | Swash | 0.498 | 5.9 | 4.1 | 0.856 | 14.4 | 7.0 | 0.379 | 0.3 | 1.4 | 0.296 | 0.3 | 1.0 | 0.337 | 0.0 | 0.9 | 0.308 | 0.5 | 2.3 |
| ALL | Toe of Dune | 0.269 | 0.0 | 0.7 | 0.321 | 0.2 | 1.0 | 0.298 | 0.0 | 0.8 | 0.290 | 0.0 | 0.7 | 0.318 | 0.2 | 0.8 | 0.329 | 0.1 | 1.0 |
| ALL | Beach Face | 0.402 | 1.8 | 2.3 | 0.304 | 0.2 | 1.6 | 0.277 | 0.4 | 1.1 | 0.262 | 0.0 | 4.9 | 0.292 | 0.0 | 2.0 | 0.246 | 0.1 | 1.7 |
| ALL | Swash | 0.647 | 4.5 | 6.7 | 0.675 | 13.5 | 5.6 | 0.321 | 0.3 | 1.0 | 0.527 | 4.1 | 1.1 | 0.358 | 1.3 | 0.8 | 0.308 | 0.9 | 1.2 |
| ALL | ALL | 0.402 | 2.0 | 3.3 | 0.393 | 4.2 | 2.9 | 0.298 | 0.2 | 1.0 | 0.342 | 1.4 | 2.1 | 0.322 | 0.5 | 1.2 | 0.292 | 0.3 | 1.3 |

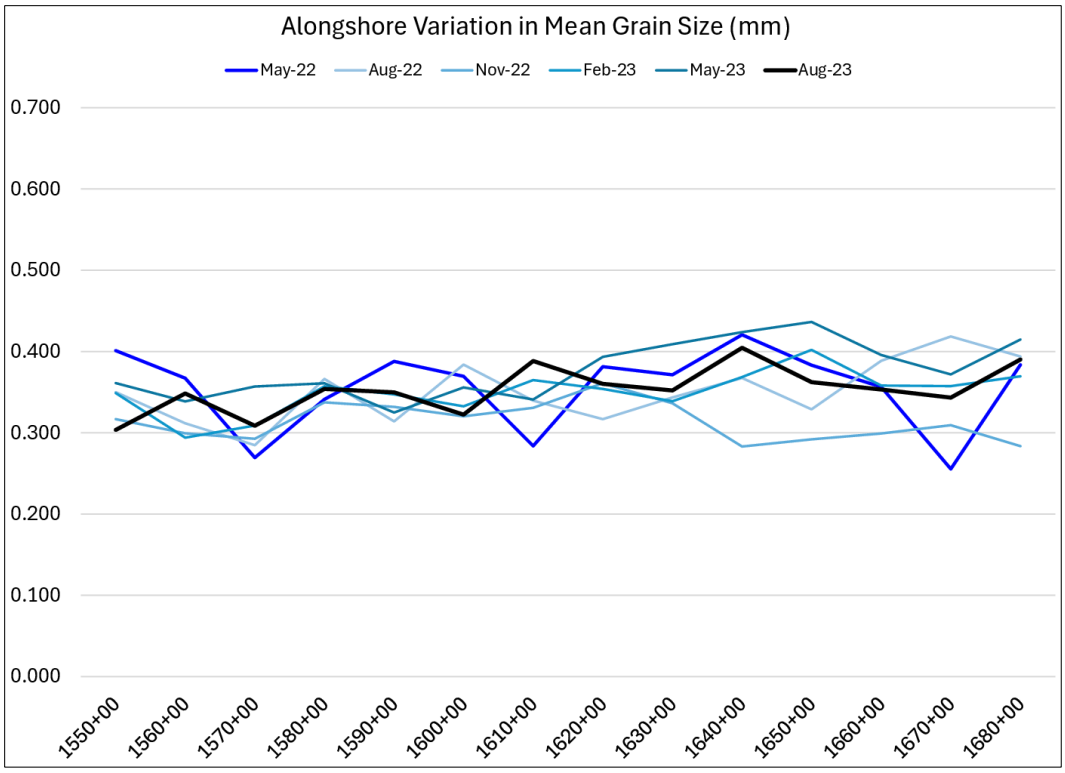



**FIGURE 4.8a.** Alongshore variation in mean grain size at Avon throughout Year 1.

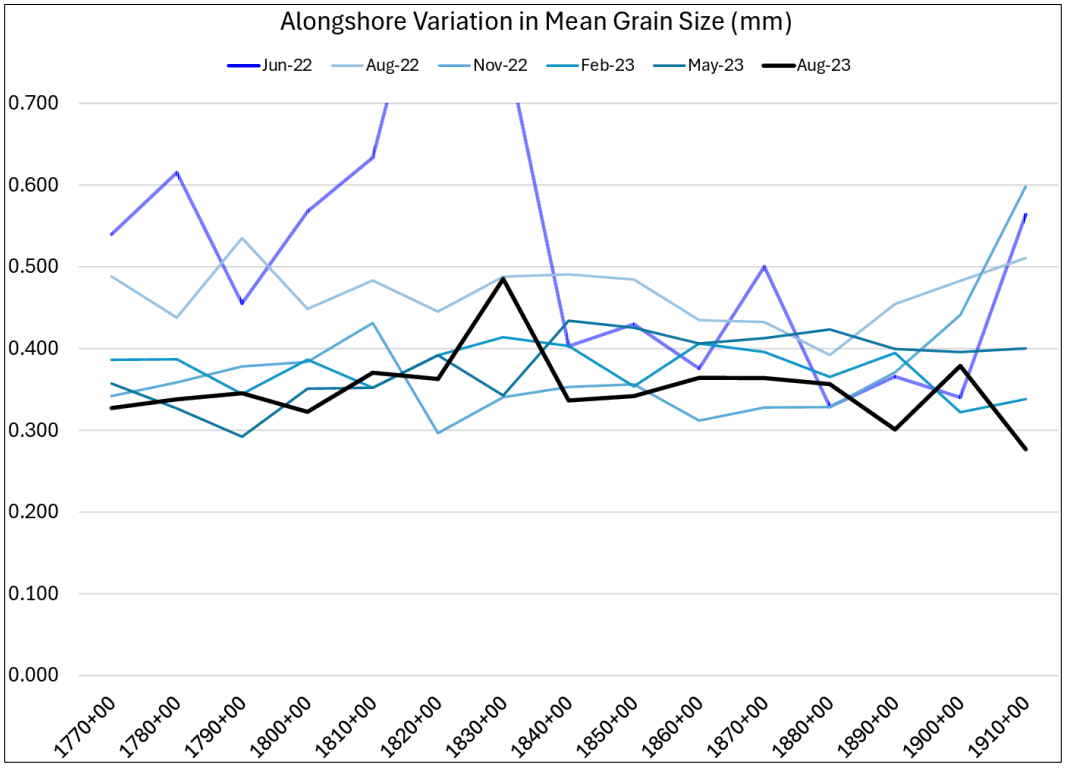



**FIGURE 4.8b.** Alongshore variation in mean grain size at Buxton throughout Year 1.

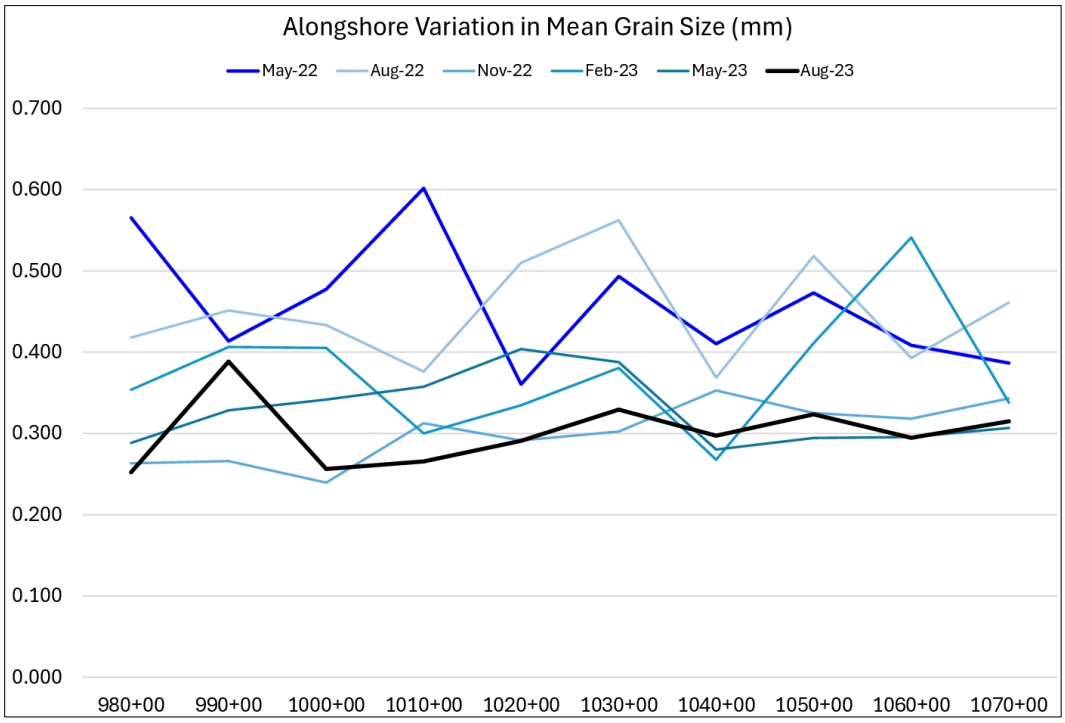



**FIGURE 4.7c.** Alongshore variation in mean grain size at Salvo throughout Year 1.

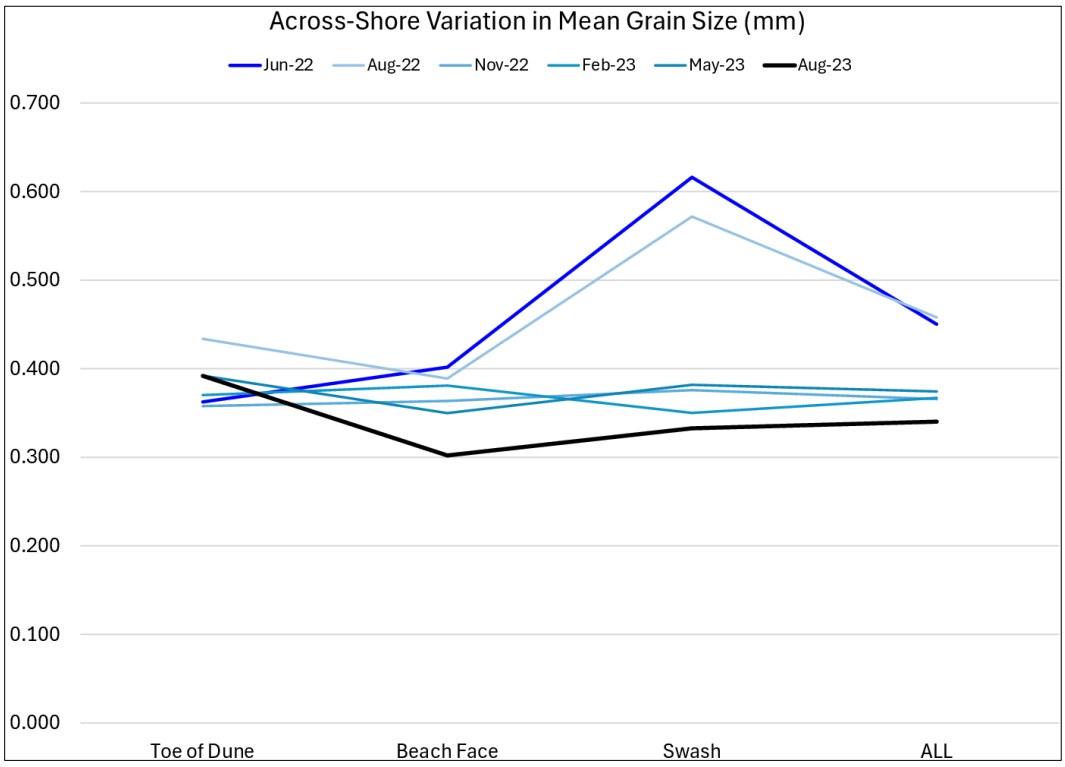



**FIGURE 4.8d.** Across shore variation in mean grain size at Avon throughout Year 1.

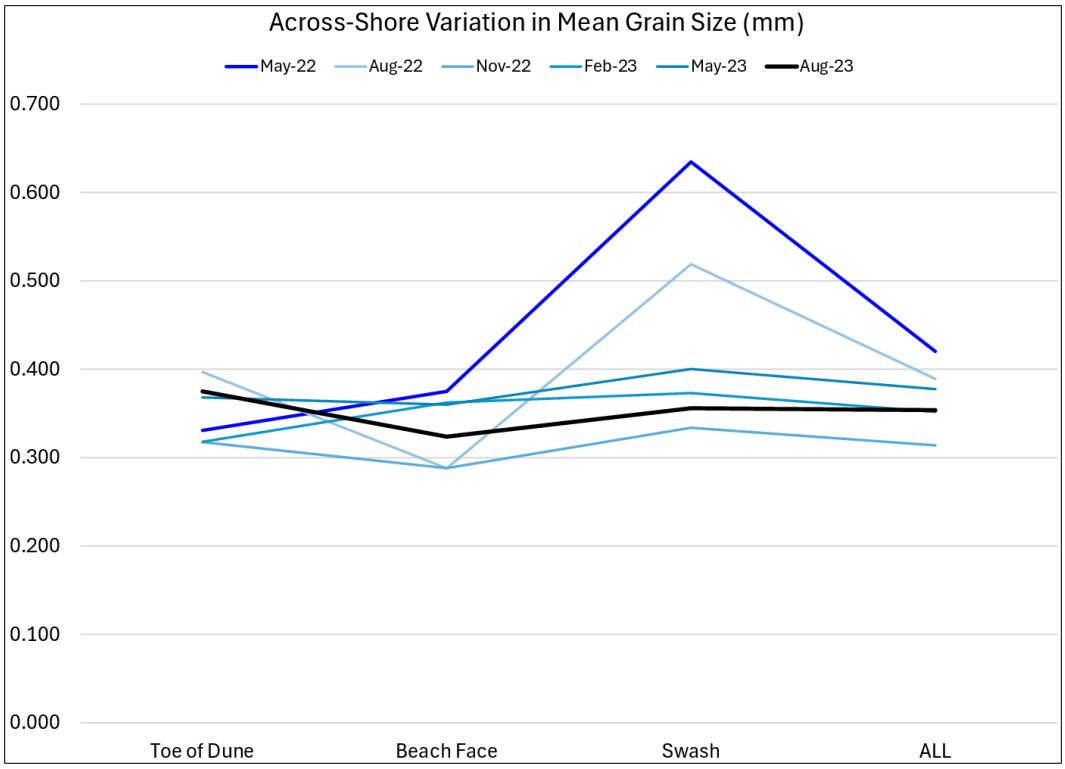



**FIGURE 4.7e.** Across shore variation in mean grain size at Buxton throughout Year 1.

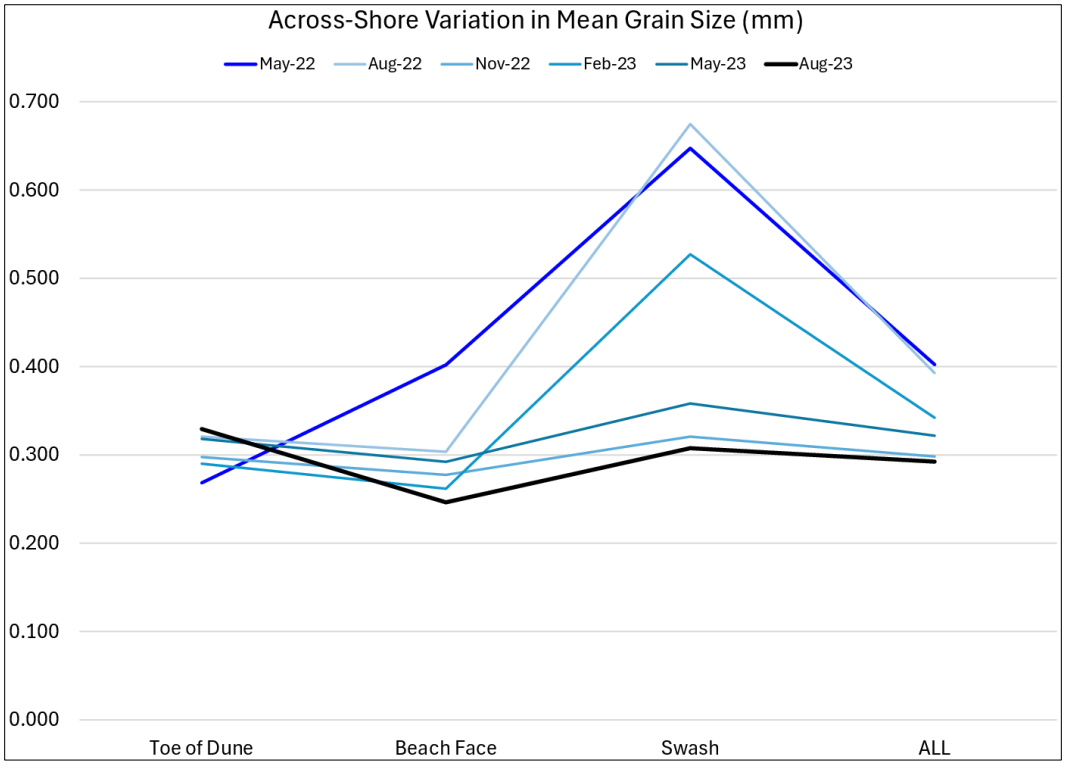



**FIGURE 4.8f.** Across shore variation in mean grain size at Salvo throughout Year 1.

# 5.0 COASTAL RESILIENCY UPDATE

## 5.1 Weather and Climate Conditions, August 2022 to September 2023

CSE gathered weather and climate data from outside sources (all NOAA-supported) to evaluate observed changes to the beach with respect to environmental conditions. Wind and wave data reported here cover the time period from August 2022 to September 2023 (the same as the survey data presented herein).

Wind data are compared to historical data covering the period from 1957 to 2023. Real-time and historical hourly wind data from across the United States are aggregated by the Midwestern Regional Climate Center (MRCC), a cooperative program between offices of the National Oceanic and Atmospheric Administration (NOAA) and Purdue University (MRCC 2023, http://mrcc.purdue.edu/). The closest operational station is located at Billy Mitchell Airport, in Hatteras. Wave data are recorded by the National Data Buoy Center (NDBC) Station 41025 (Diamond Shoals), ~15 and 25 nautical miles (nm) south of Buxton and Avon, respectively (https://www.ndbc.noaa.gov/station_page.php?station=41025). Because NDBC Station 41025 experienced an outage for the first half of the survey year, wave power data described below are calculated using observations from NDBC Station 41120 ('Hatteras East,' ~15 miles east of Buxton and ~15 miles southeast of Avon).

The average wind speed and direction* was ~16.6 miles per hour (mph) from ~176° (approximately south-southeast, Fig 5.1). This is nearly identical to the longer-term data record going back to 2010 (16.8 mph from ~187°). The peak observed wind speed was a gust to 70 mph from ~12° (approximately north-northeast) on 31 August 2023, during the passage of Hurricane *Idalia*.

According to data from MRCC-NOAA, wind directions over the study period were similar to longer-term trends. The proportion of winds from the northeast (0°–90°) and northwest (270°–360°) quadrants represent 53.4% of the total from 1957 to 2023; between August 2022 and September 2023, these have represented 47.1% of the total incoming winds.

The average wave height from August 2022 to September 2023 at Station 41025 was ~4.3 ft, with an average wave period of ~5.4 seconds. The maximum observed wave height was ~22.9 ft in September 2023 during the passage of Tropical Storm *Ophelia* (Fig 5.2). The average wave direction was ~137°. From 2010 to 2023, the maximum observed wave height was ~29.4 ft (Hurricane *Florence*, September 2018), while the maximum wind speed was a gust to 87.5 mph (Hurricane *Dorian*, September 2019). So, even peak conditions from 2022 to 2023 were relatively calm compared to the longer-term observed record.

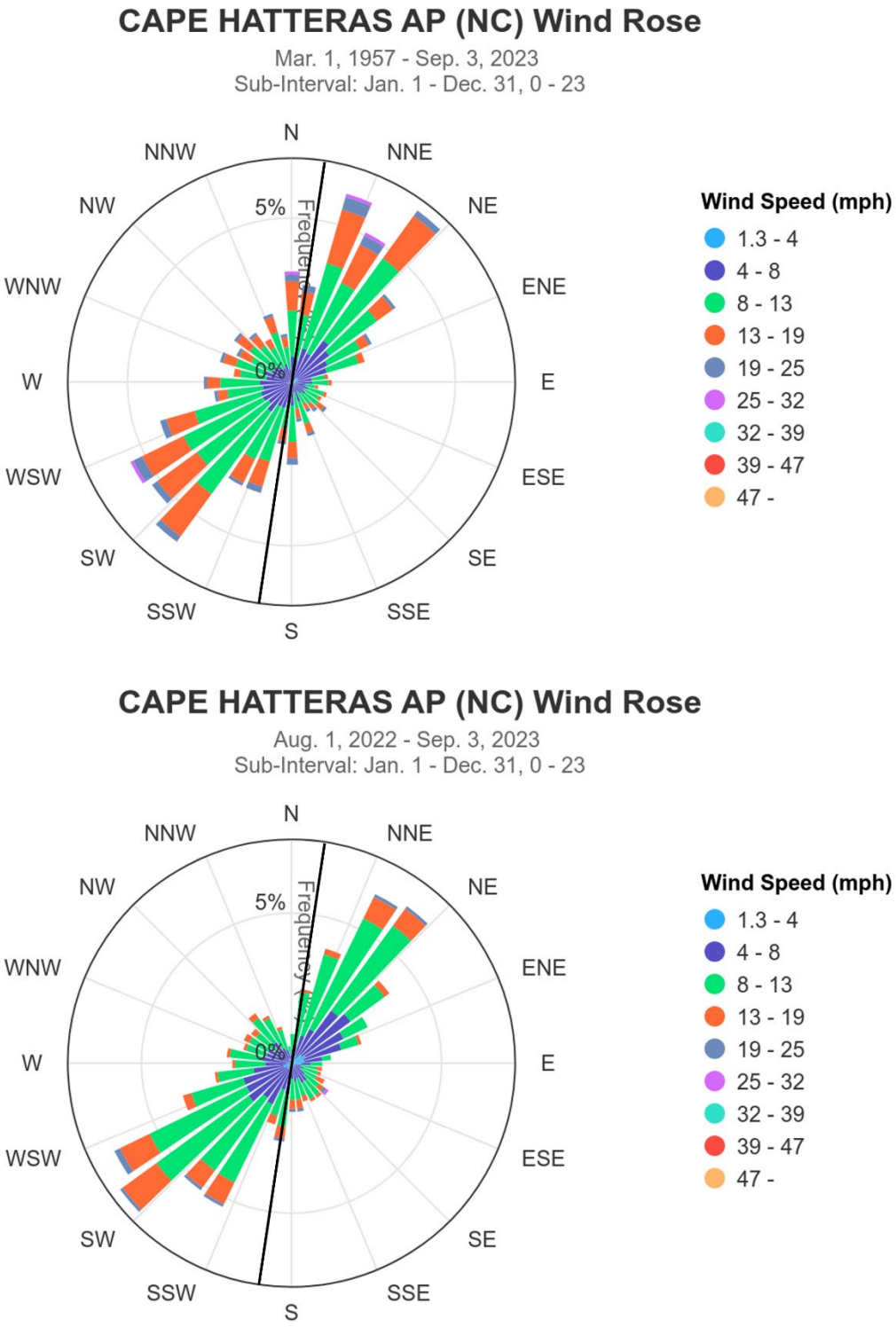



**FIGURE 5.1.** Wind roses showing direction and magnitude of winds measured at Billy Mitchell Airport from August 2022 to September 2023 **[UPPER]** and from March 1957 to September 2023 **[LOWER]**. The line across the wave rose indicates the average shoreline orientation along Hatteras Island between Cape Point and Avon (~10° N).

Other than during the passage of Hurricane *Idalia* and Tropical Storm *Ophelia*, atmospheric pressure dropped below 1000 millibars (mb) just three times from August 2022 to September 2023. This metric is used because most Category 1 hurricanes have a central pressure of ~980–990 mb, and many nor'easter-type storms will feature central pressures below 1000 mb. Similarly, wave height is an easy parameter for distinguishing the relative intensity of storm events. However, atmospheric pressure and wave height are imperfect measures because these are simply proxies for the physical processes that result in beach erosion (eg – a more energetic surf zone with alongshore transport in a particular direction, occurring in phase with a high tide).

The fundamental driver of beach erosion is (are) variation(s) in sediment transport. An increase in erosion indicates more sand is being transported away from a location than towards it. Over time, this reduces beach volumes as measured via surveys (described in Section 3.2). Sand transport increases exponentially with shear stresses generated by currents and wave action, such that a doubling of tidal channel flow velocity or wave height will increase sediment transport rates several times over. This helps explain why even minor storms can exact significant erosional losses along the coast: a four-foot wave is four times more powerful than a two-foot wave.

Engineers and scientists use measurements of wave properties like height, length, and speed to estimate the magnitude of energy exerted by a single wave crest. The estimate is expressed as 'wave power' in kilowatts per meter of crest length (kW/m). Because sand can migrate either way along a beach, wave power must be adjusted so that waves generating southerly transport (ie – north to south) and northerly transport (ie – south to north) can be differentiated.

To accomplish this, wave power can be calculated so that northerly – south-to-north – transport is measured above zero (positive) while southerly transport – north-to-south – is measured below zero (negative). The estimated wave power at Avon and Buxton from August 2022 to September 2023 is shown in Figure 5.3. The larger-magnitude negative wave power values in the winter months represent the passage of low-pressure tropical cyclones and nor'easters.

The most powerful wave from August 2022 to September 2023 occurred on 12 December 2022, with 9.8 kW/m of wave power directed in a northerly direction during the passage of a nor'easter. If individual wave observations are counted as discrete events, southerly-directed wave energy is slightly dominant from August 2022 to September 2023 (eg – ~9,400 observations from south to north versus ~6,700 observations from north to south). The total wave power of northerly-directed energy at both Avon and Buxton from August 2022 to September 2023 was ~4,400 kW/m, while southerly-directed wave power was –6,900 kW/m.

At both buoys, northerly waves occur more frequently, but the strongest waves are southerly. From 2010 to 2023, ~60% of wave observations were northerly, but the average power of a southerly wave was ~60% greater. In many locations along the South Atlantic Bight, this observation matches long-term anecdotal evidence documenting more frequent wave events approaching from the south but the strongest events approaching from the north.

The difference between offshore and nearshore measurements is important to consider when interpreting these data. Sediment transport is primarily influenced by wave height, which is modified by the refraction of wave energy around bars and shoals in the nearshore and shallow offshore zones. Moreover, Station 41025 is located along the southern flank of Diamond Shoals, which means it is shielded from the southerly wave energy that can dominate winter and spring months along Hatteras Island. Station 41120 is located along the northern flank of Diamond Shoals and is shielded from the northerly wave energy, more dominant in the summer and fall.

All this is to say, offshore buoy data are an imperfect representation but remain valuable for comparing long-term records against beach volume measurements. Plotting the data as a time series (Fig 5.3) helps visualize the relative frequency and magnitude of northerly- and southerly-directed wave events. Looking across the entire Year 1 survey period, there is a period of distinct northerly flow (positive values) from ~November 2022 through April 2023. Over the long term, total southerly wave energy tends to outpace northerly wave energy over every month other than July and August at both buoys. Over the 14 months from August 2022 to September 2023, net northerly wave energy is greater for nearly 50% of the time.

Collectively, these results indicate that wave heights and directions from August 2022 to September 2023 remained similar to long-term trends. However, the distribution and timing of heights and directions were more strongly skewed towards a northerly flow than typical. This pattern would generate a south-to-north net longshore sediment transport direction along both Avon and Buxton. Although the long-term sediment transport direction along much of the northern Outer Banks is from north to south, periodic reversals related to prevailing wind and wave patterns in a given year have been documented (Park and Wells 2005, Smallegan 2012). The apparent net sand transport away from the Buxton project towards the north is a strong indicator of such a reversal; once conditions return to a more ‘normal’ balance of transport, that trend should reverse.

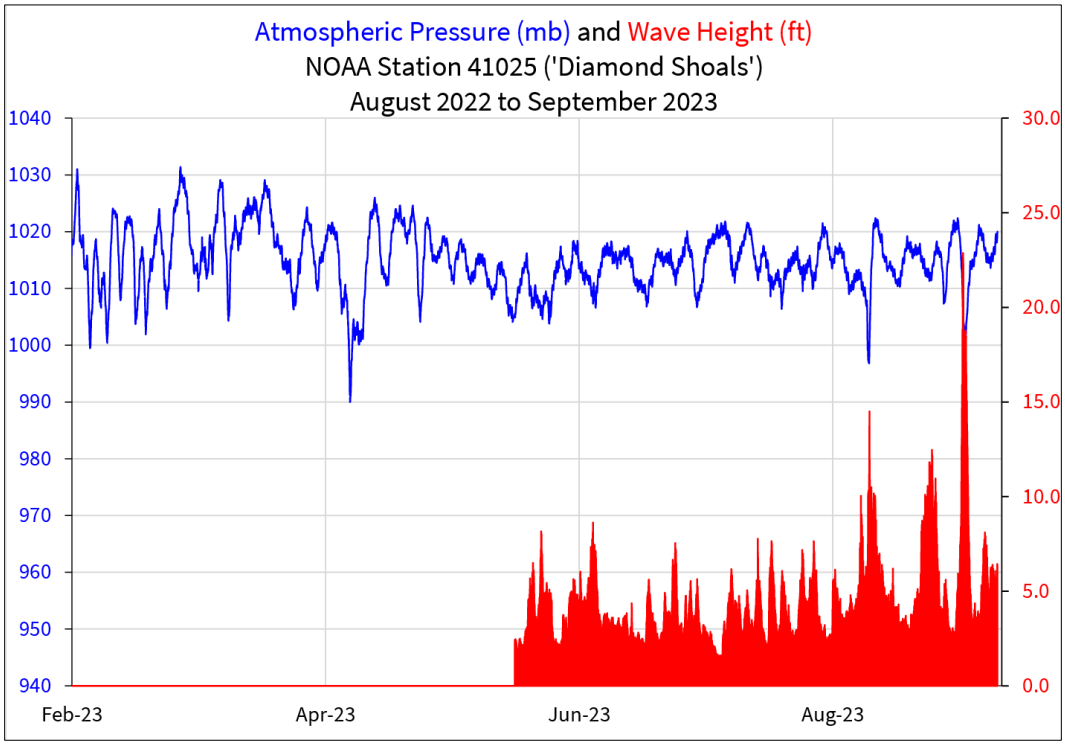



**FIGURE 5.2.** Atmospheric pressure and wave height at NDBC 41025 from August 2022 to September 2023. Conditions were relatively calm, compared to long-term averages.

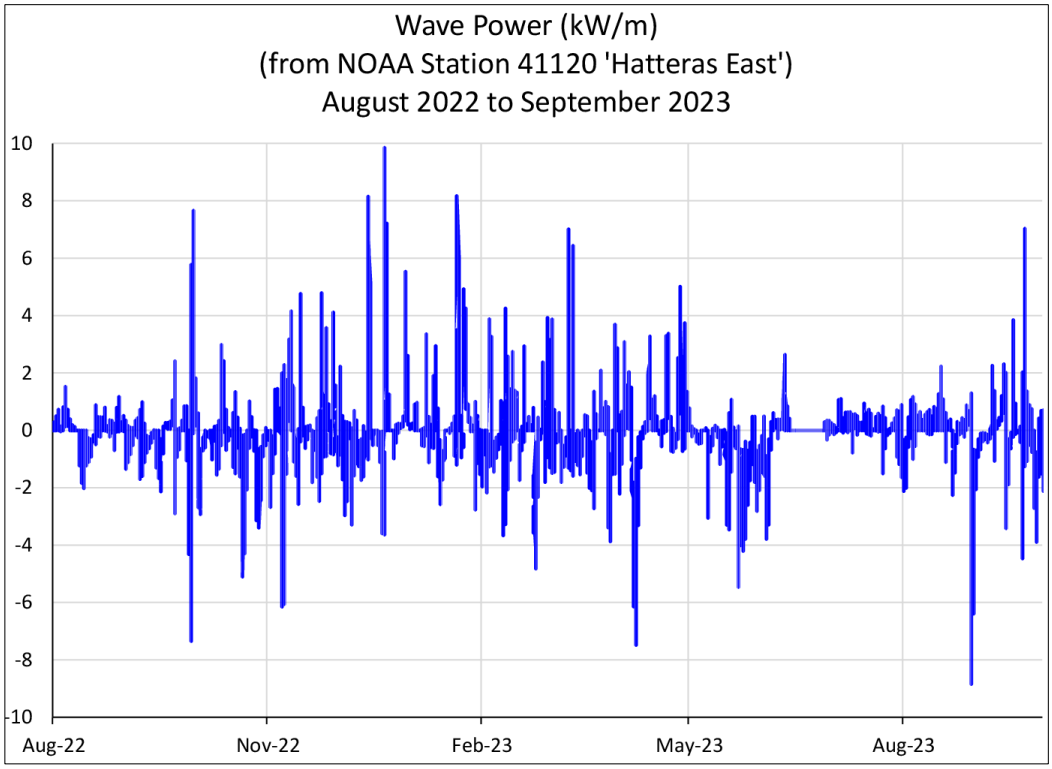



**FIGURE 5.3.** Wave power (in kW/m) for NDBC 41120 from August 2022 to September 2023. Wave power is a useful parameter for determining the relative magnitude and direction of wave energy in an alongshore direction along a beach. Positive values indicate waves move from south to north (ie northerly transport), while negative values indicate predominance of north-to-south (ie southerly) transport.

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## 7.0 SUMMARY OF FINDINGS

A pair of nourishment projects were completed at Avon and Buxton in the summer of 2022. These projects placed a total of 2,200,000 cy along 28,700 ft of beach. Along Avon, 1 million cy were placed along 13,200 ft, while along Buxton, 1.2 million cy were placed along 15,500 ft. Because of the proximity between the placement sites, they were both completed in a single deployment by the same contractor working under the same agreement with Dare County.

This report documents changes at both sites over the course of the first year following project completion. The changes reported herein were measured over a series of quarterly and annual surveys described in the post-project monitoring and mitigation plan submitted, along with the permit applications for each location. This plan was determined through coordination between Dare County and CSE based on guidance from NPS, USFWS, and CAMA personnel.

Results presented in this report and its appendices include:

- Beach and inshore profile surveys (2023 to 2027 – main report; see Sections 4.1 and 4.2)

  The project area at Avon retains ~55% of the nourishment volume above –6 ft NAVD and more than 100% of the nourishment volume above –30 ft NAVD. This indicates the template is equilibrating to background wave conditions and continues to provide excellent storm wave height reduction along the entire project site.

  The project area at Buxton retains ~50% of the nourishment volume above –6 ft NAVD and more than 100% above –30 ft NAVD. However, Buxton Village (Reach 1) retains only 65% of the nourishment volume above –30 ft NAVD. A temporary reversal in longshore sediment transport from 2022 to 2023, triggered by stronger-than-usual south-to-north movement, may have created an erosional arc on the north side of the old lighthouse site groins that led to the higher-than-expected erosion rates along the village. Additionally, the offshore position of the bar-trough appears to be causing higher-than-expected erosion along portions of the village. These changes are described in more detail in Section 4.2.

- Aerial photography (2023 to 2027 – main report; see Section 4.3)

- Sand compaction in April (2023 – main report; see Section 4.4)

  Compaction survey results collected quarterly over the course of Year 1 indicate both project sites are comparable to the 'Control' area south of Salvo. These results indicate neither fill template caused an unnatural increase in compaction following project completion.

- Geotechnical characteristics of the fill material (2023 to 2027 – main report; see Section 4.5)

  Sand samples collected quarterly over the course of Year 1 indicate both project sites exhibit comparable mean grain sizes and distributions to the 'Control' area south of Salvo. Variations observed at both sites over the course of Year 1 were also observed along the 'Control' area.

Results indicate both templates were constructed using appropriate beach-quality sand with no remarkable differences between pre- and post-project conditions.

- Visual inspection for escarpments in April (2023 and 2024 – main report)

  A visual inspection for escarpments was conducted in April 2023 and yielded no areas of concern along either project area.

- Ecological monitoring (2023 and 2024 – Appendix D)

- Lighting surveys in May and July (2023 – Appendix E)

This is the first annual report in a five-year series following completion of the nourishment projects at Avon and Buxton. According to permit conditions, sand compaction measurements, visual inspections for escarpments, and a lighting survey are to occur only in Year 1 (2023), while ecological monitoring is to occur during Years 1 and 2 (2023 and 2024). So, the next report (Year 2 – 2024) will include all the information included here except the compaction, escarpment, and lighting assessments.

Most of the surveyed profiles along both project areas retain more than two-thirds of the placed volumes above –30 ft. Along Avon, ~73% of the project area retains more than 70% volume as of September 2023. Along Buxton, ~71% of the project area retains more than 70% volume as of September 2023. This indicates the templates continue to reduce storm damage by attenuating wave energy in the surf zone. Isolated hot spots of erosion along both sites exist, but are strongly influenced by the timing of surveys and the position of nearshore bathymetric features like troughs and bars. It is unlikely such high rates of loss will spread from these locations or continue to persist into next year.

The Outer Banks and Hatteras Island (and Hatteras Island in particular) are among the most energetic wave-dominant settings on the US East Coast. Storm impacts from tropical and non-tropical cyclones are frequent and severe, and beach conditions should continue to be closely monitored. CSE plans to conduct the next annual survey for the Year 2 monitoring event in August 2024.

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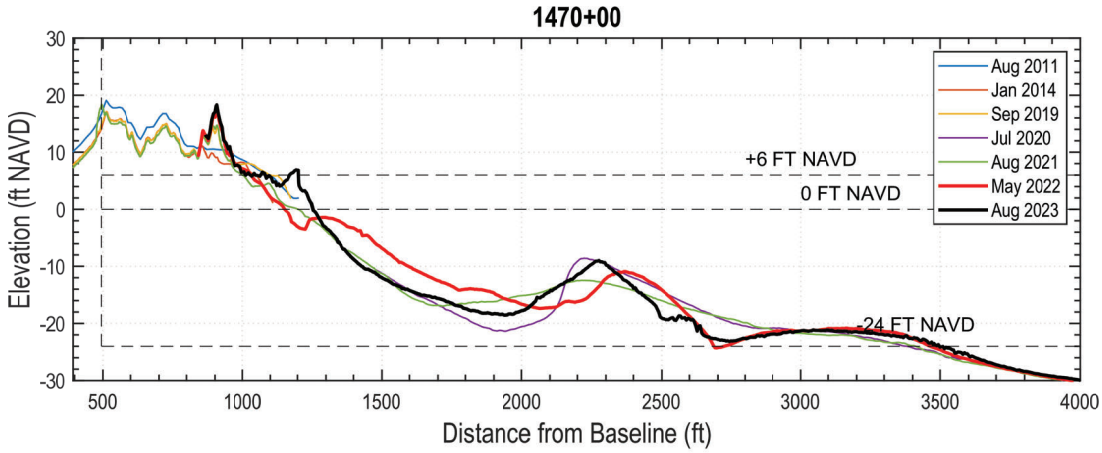
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## 9.0 ACKNOWLEDGMENTS

CSE would like to thank Dare County, particularly Robert Outten, Dustin Peele, and Barton Grover, for supporting the 2022 renourishment projects at Avon and Buxton. We also thank regulatory officials from NCDCM and USACE for their invaluable liaison and coordination. Drew Giles directed CSE's field surveys with assistance from Jake Rotureau, Steven Traynum, Trey Hair, and Dr. Patrick Barrineau. Patrick Barrineau and Drew Giles accomplished data reduction and analysis with assistance from Trey Hair and Dr. Tim Kana. Patrick Barrineau wrote the report with production assistance from Jyothi Palaparthi, Trey Hair, and Carrie Marks.

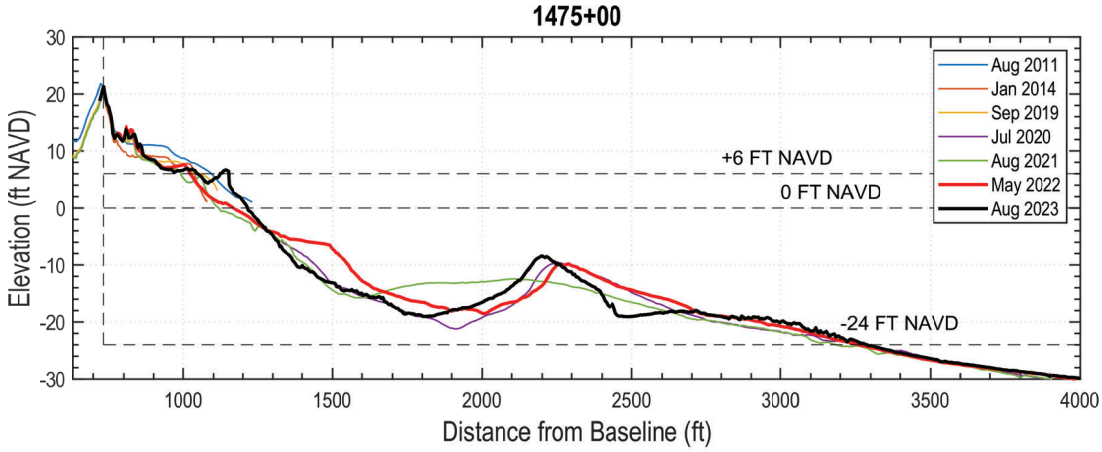
# APPENDIX A-1

# Avon Beach Profiles



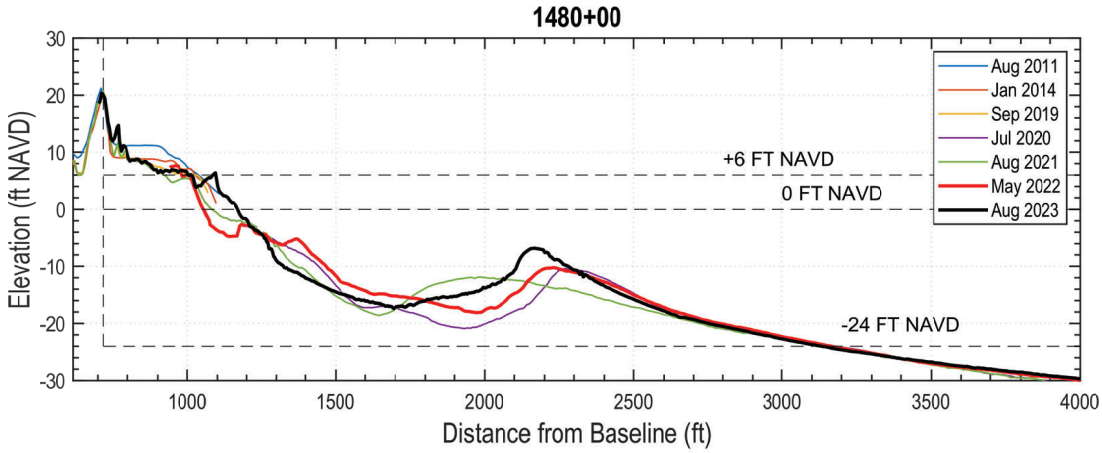

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 143.8 | 292.1 | 923.2 | 1081.0 |
| Jan 2014 | 107.4 | 239.2 | 916.5 | 1123.3 |
| Sep 2019 | 121.3 | 271.1 | 1202.4 | 1522.9 |
| Jul 2020 | 110.1 | 244.3 | 1508.4 | 2209.7 |
| Aug 2021 | 110.1 | 244.3 | 1525.0 | 2223.5 |
| May 2022 | 79.2 | 211.5 | 1554.2 | 2260.5 |
| Aug 2023 | 125.5 | 284.5 | 1541.1 | 2255.3 |





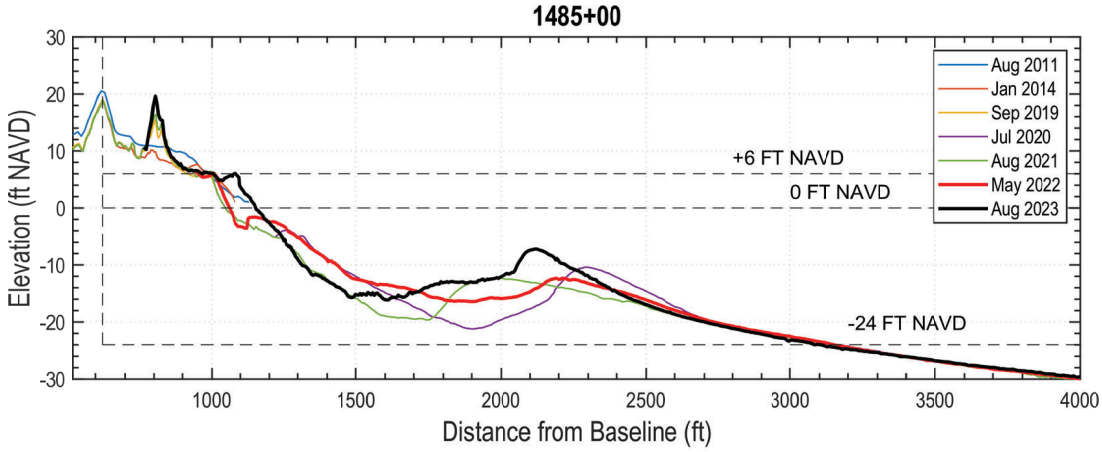

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|---|---|---|---|---|
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| Jan 2014 | 41.1 | 114.0 | 585.1 | 749.8 |
| Sep 2019 | 45.8 | 129.9 | 610.1 | 765.6 |
| Jul 2020 | 39.9 | 114.6 | 1129.8 | 1759.0 |
| Aug 2021 | 39.9 | 114.6 | 1176.3 | 1799.1 |
| May 2022 | 46.7 | 123.1 | 1236.8 | 1868.2 |
| Aug 2023 | 45.3 | 140.8 | 1186.0 | 1821.9 |






| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 52.5 | 141.0 | 1109.5 | 1510.4 |
| Jan 2014 | 33.7 | 113.3 | 569.9 | 718.8 |
| Sep 2019 | 29.2 | 108.9 | 721.6 | 950.5 |
| Jul 2020 | 25.8 | 95.5 | 1075.9 | 1696.9 |
| Aug 2021 | 25.8 | 95.5 | 1110.7 | 1726.0 |
| May 2022 | 13.5 | 82.8 | 1139.8 | 1766.2 |
| Aug 2023 | 32.8 | 119.6 | 1178.1 | 1808.1 |

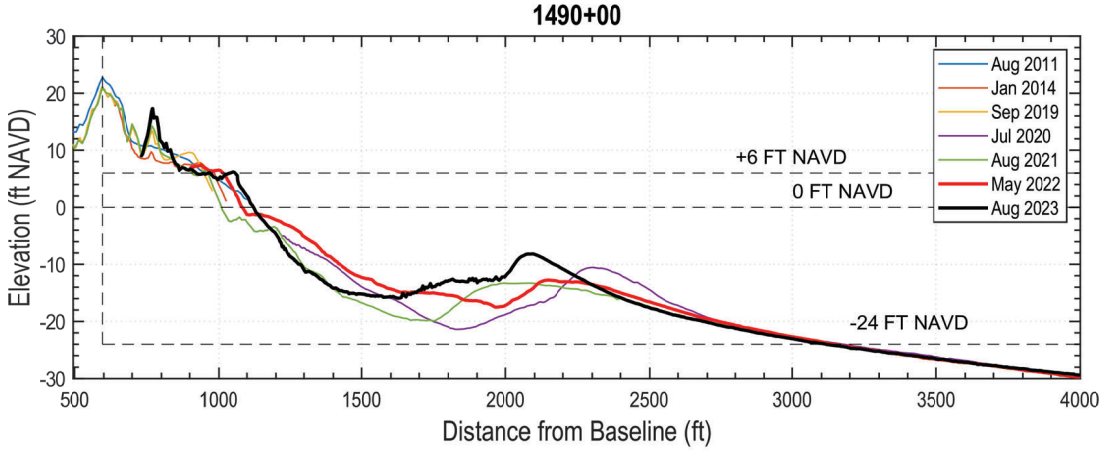





| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
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| Aug 2011 | 70.1 | 167.9 | 1169.0 | 1578.0 |
| Jan 2014 | 45.1 | 140.9 | 665.3 | 830.4 |
| Sep 2019 | 54.5 | 141.9 | 626.4 | 780.8 |
| Jul 2020 | 59.3 | 146.8 | 1212.4 | 1862.8 |
| Aug 2021 | 59.3 | 146.8 | 1180.6 | 1825.2 |
| May 2022 | 5.8 | 96.3 | 1217.1 | 1865.5 |
| Aug 2023 | 55.1 | 162.8 | 1306.5 | 1957.2 |



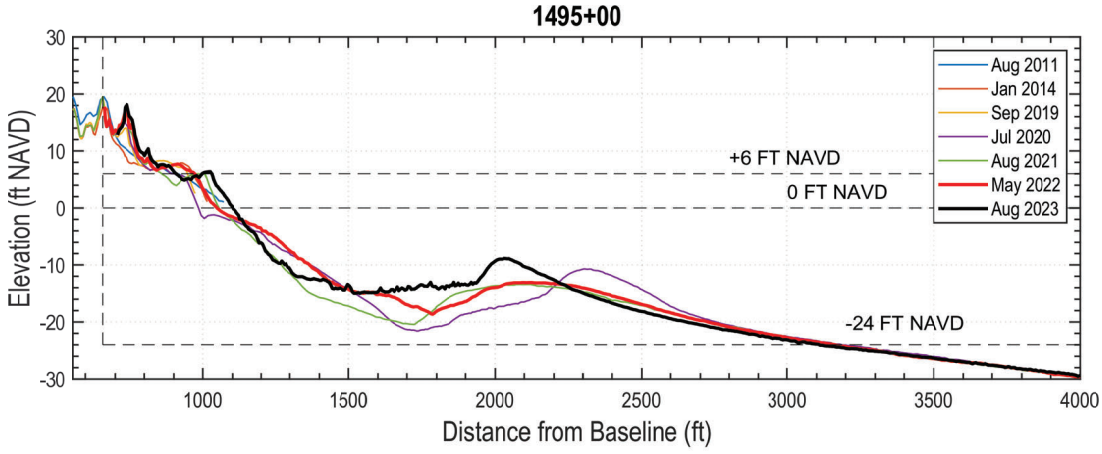
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| Jan 2014 | 60.9 | 152.7 | 636.8 | 787.1 |
| Sep 2019 | 77.1 | 162.8 | 712.5 | 902.8 |
| Jul 2020 | 72.1 | 158.4 | 1218.3 | 1889.9 |
| Aug 2021 | 72.1 | 158.4 | 1178.7 | 1839.1 |
| May 2022 | 13.8 | 115.0 | 1254.1 | 1915.5 |
| Aug 2023 | 43.6 | 151.4 | 1280.1 | 1944.8 |

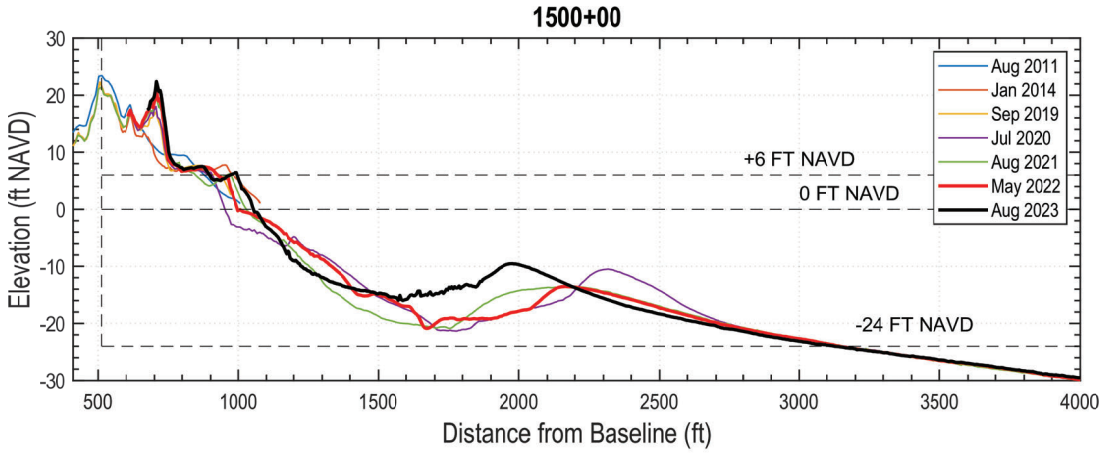


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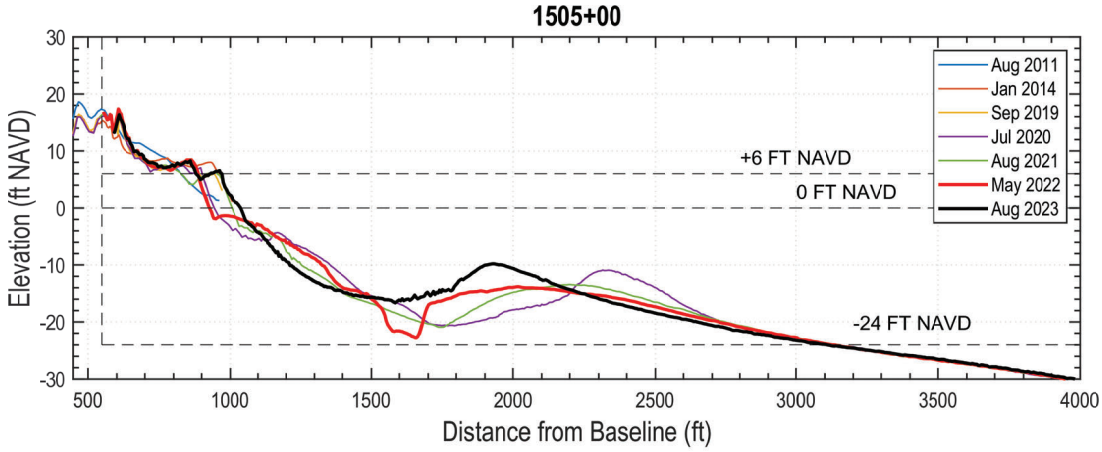

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| Aug 2011 | 36.0 | 114.3 | 785.0 | 1040.4 |
| Jan 2014 | 31.8 | 107.2 | 524.9 | 658.3 |
| Sep 2019 | 41.6 | 111.2 | 515.3 | 648.0 |
| Jul 2020 | 37.4 | 104.3 | 1101.6 | 1761.3 |
| Aug 2021 | 40.2 | 118.6 | 1073.4 | 1725.3 |
| May 2022 | 47.6 | 125.0 | 1161.7 | 1815.1 |
| Aug 2023 | 47.3 | 135.0 | 1186.8 | 1841.5 |






| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 95.8 | 192.5 | 889.2 | 1137.4 |
| Jan 2014 | 76.9 | 194.0 | 834.9 | 1034.7 |
| Sep 2019 | 92.8 | 193.9 | 741.6 | 914.8 |
| Jul 2020 | 92.9 | 185.4 | 1280.4 | 1962.8 |
| Aug 2021 | 97.5 | 201.6 | 1251.3 | 1929.3 |
| May 2022 | 99.3 | 201.8 | 1278.0 | 1960.4 |
| Aug 2023 | 111.4 | 223.8 | 1369.8 | 2054.9 |

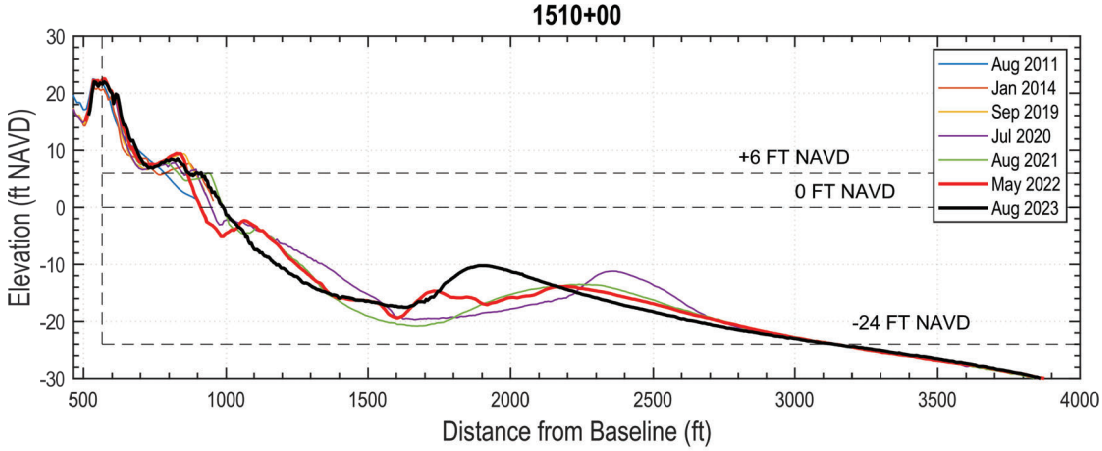




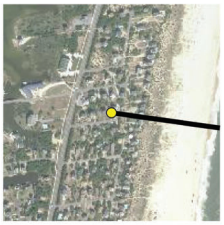

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 53.4 | 135.2 | 1981.3 | 2859.5 |
| Jan 2014 | 48.0 | 145.8 | 662.3 | 822.5 |
| Sep 2019 | 44.3 | 139.9 | 795.4 | 1028.7 |
| Jul 2020 | 42.6 | 125.4 | 1184.0 | 1850.8 |
| Aug 2021 | 45.5 | 139.0 | 1175.1 | 1839.1 |
| May 2022 | 50.9 | 130.4 | 1185.6 | 1851.5 |
| Aug 2023 | 47.2 | 145.4 | 1228.2 | 1897.7 |



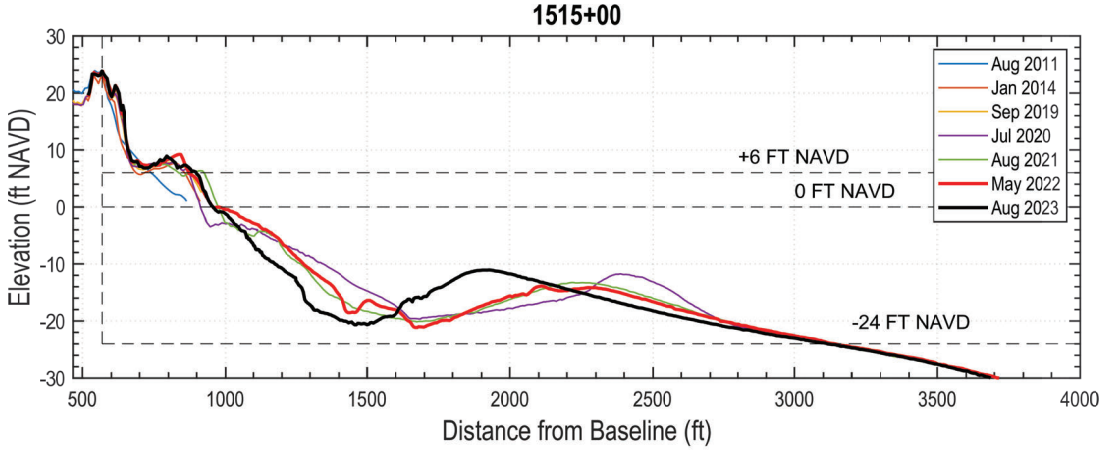
## 1510+00




| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 47.3 | 111.6 | 1030.8 | 1436.1 |
| Jan 2014 | 44.0 | 126.6 | 575.3 | 716.8 |
| Sep 2019 | 54.1 | 133.2 | 531.3 | 650.5 |
| Jul 2020 | 48.7 | 127.9 | 1174.0 | 1830.8 |
| Aug 2021 | 52.2 | 138.3 | 1131.3 | 2251.6 |
| May 2022 | 61.1 | 132.5 | 1150.1 | 1806.2 |
| Aug 2023 | 60.6 | 146.1 | 1180.1 | 1840.2 |

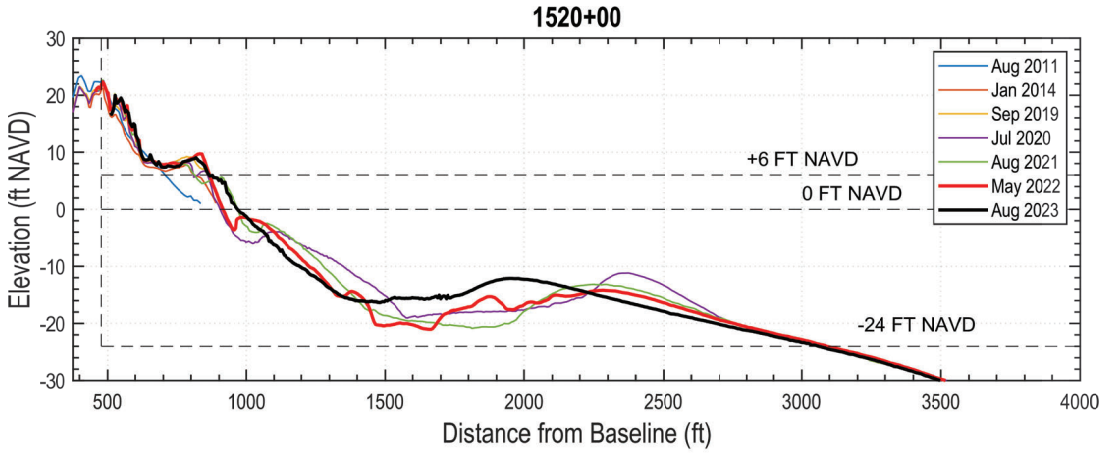


## 1515+00



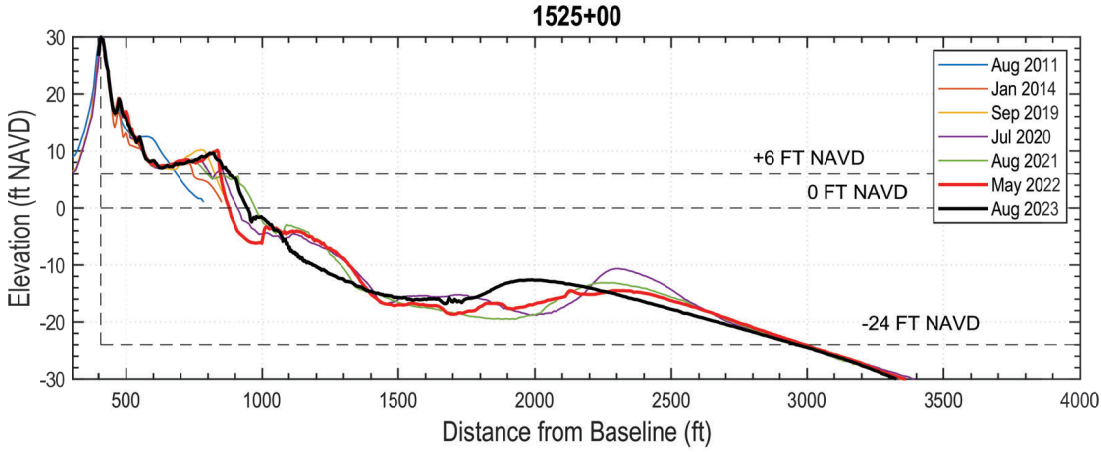

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 38.9 | 92.4 | 524.4 | 680.6 |
| Jan 2014 | 39.0 | 110.5 | 568.5 | 726.8 |
| Sep 2019 | 49.5 | 126.2 | 606.5 | 770.4 |
| Jul 2020 | 51.4 | 123.8 | 1168.1 | 1822.1 |
| Aug 2021 | 51.9 | 136.4 | 1133.8 | 1898.2 |
| May 2022 | 60.0 | 138.2 | 1150.6 | 1791.0 |
| Aug 2023 | 58.4 | 137.9 | 1124.0 | 1760.1 |





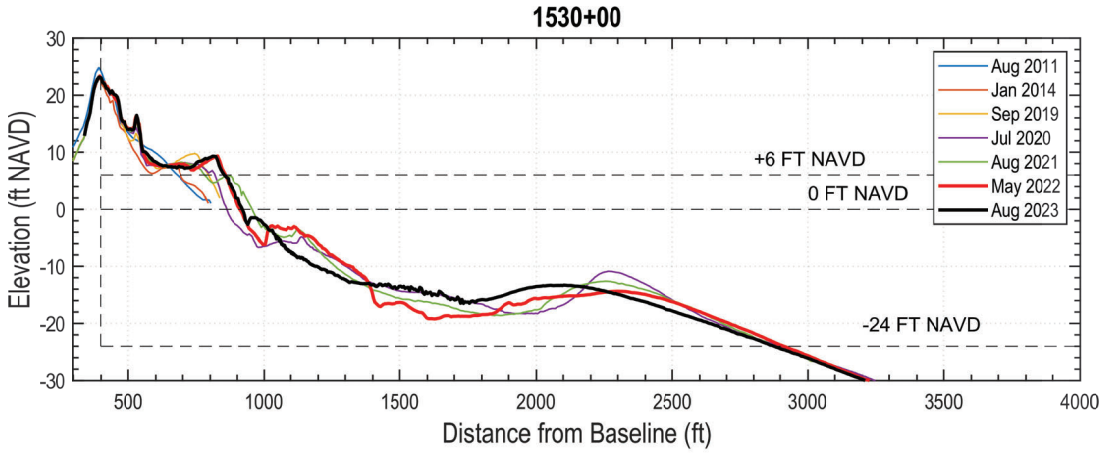

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 59.5 | 125.5 | 665.6 | 864.8 |
| Jan 2014 | 52.9 | 139.3 | 601.8 | 745.5 |
| Sep 2019 | 72.9 | 165.4 | 670.2 | 830.4 |
| Jul 2020 | 69.1 | 158.1 | 1284.2 | 1963.3 |
| Aug 2021 | 73.2 | 172.9 | 1238.4 | 2312.7 |
| May 2022 | 81.5 | 173.0 | 1229.7 | 1861.1 |
| Aug 2023 | 74.0 | 174.2 | 1287.4 | 1913.0 |



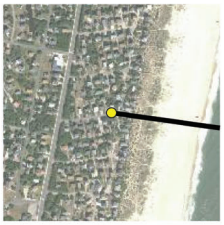


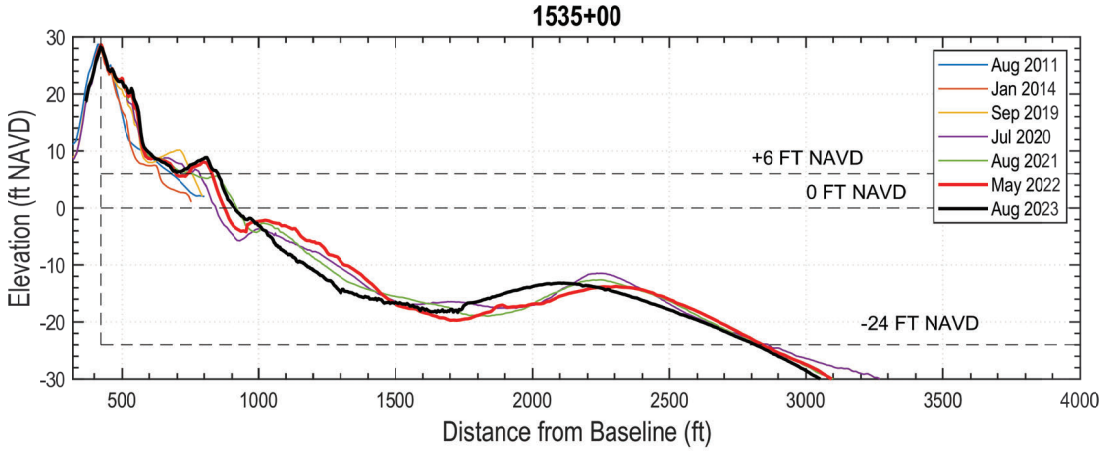

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 84.2 | 157.8 | 674.7 | 855.9 |
| Jan 2014 | 68.2 | 159.1 | 706.9 | 888.3 |
| Sep 2019 | 85.0 | 183.6 | 740.9 | 921.9 |
| Jul 2020 | 80.8 | 185.5 | 1374.8 | 1991.9 |
| Aug 2021 | 81.7 | 197.5 | 1347.0 | 1957.5 |
| May 2022 | 91.1 | 191.3 | 1333.0 | 1948.4 |
| Aug 2023 | 90.6 | 203.6 | 1365.4 | 1976.5 |



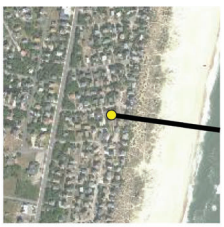


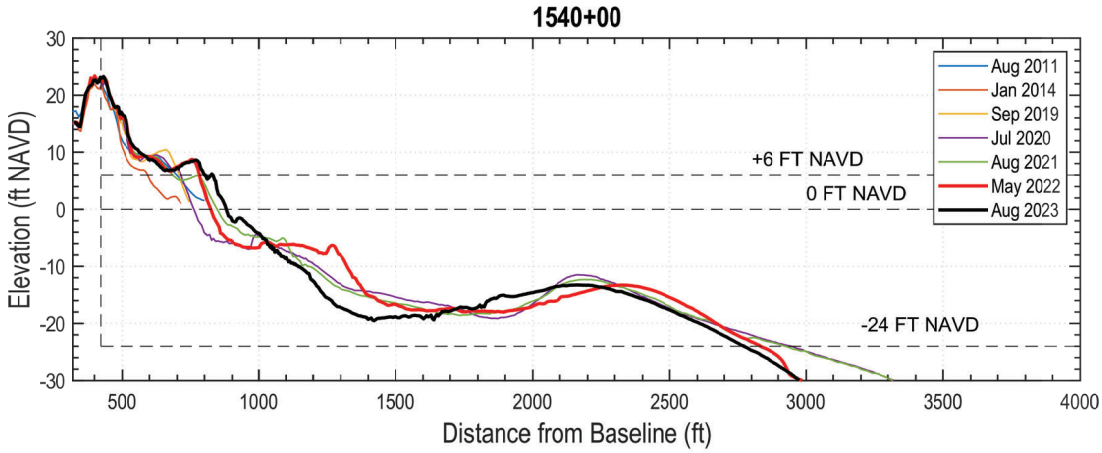

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 73.6 | 150.9 | 635.7 | 793.2 |
| Jan 2014 | 55.4 | 135.2 | 625.8 | 788.6 |
| Sep 2019 | 78.5 | 173.2 | 684.0 | 844.8 |
| Jul 2020 | 78.0 | 175.7 | 1345.0 | 1939.4 |
| Aug 2021 | 79.3 | 192.1 | 1356.1 | 1944.4 |
| May 2022 | 86.1 | 193.4 | 1339.7 | 1932.9 |
| Aug 2023 | 87.8 | 196.6 | 1362.3 | 1954.6 |





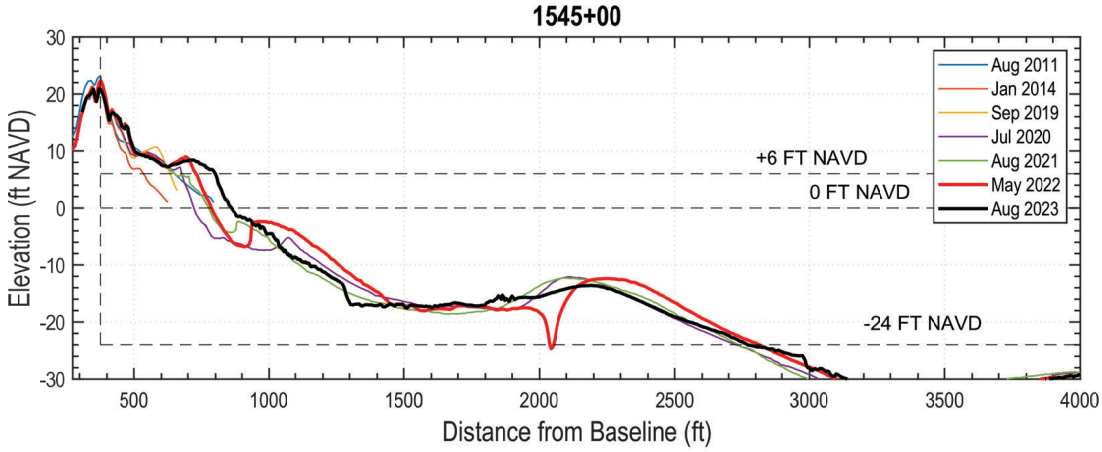

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 73.1 | 150.9 | 1316.7 | 1830.3 |
| Jan 2014 | 65.0 | 126.3 | 511.9 | 634.7 |
| Sep 2019 | 97.9 | 178.7 | 686.8 | 861.4 |
| Jul 2020 | 97.5 | 184.0 | 1302.3 | 1886.9 |
| Aug 2021 | 97.9 | 198.3 | 1309.9 | 1875.1 |
| May 2022 | 101.1 | 195.2 | 1317.0 | 1883.8 |
| Aug 2023 | 107.2 | 207.6 | 1290.3 | 1849.3 |



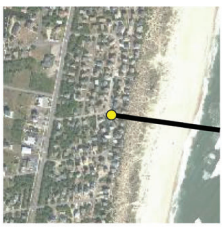


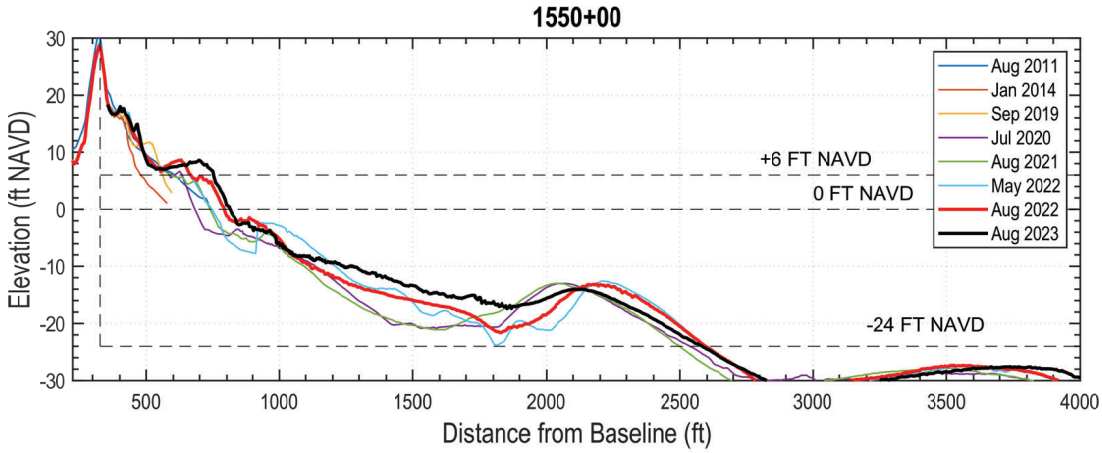

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 55.9 | 134.3 | 1673.5 | 2391.6 |
| Jan 2014 | 38.7 | 89.8 | 509.8 | 661.1 |
| Sep 2019 | 65.4 | 134.0 | 547.0 | 685.8 |
| Jul 2020 | 63.4 | 133.7 | 1205.1 | 1809.0 |
| Aug 2021 | 63.6 | 148.7 | 1227.4 | 1829.3 |
| May 2022 | 70.2 | 154.3 | 1245.6 | 1799.4 |
| Aug 2023 | 72.1 | 167.5 | 1193.8 | 1740.5 |



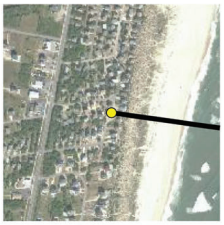


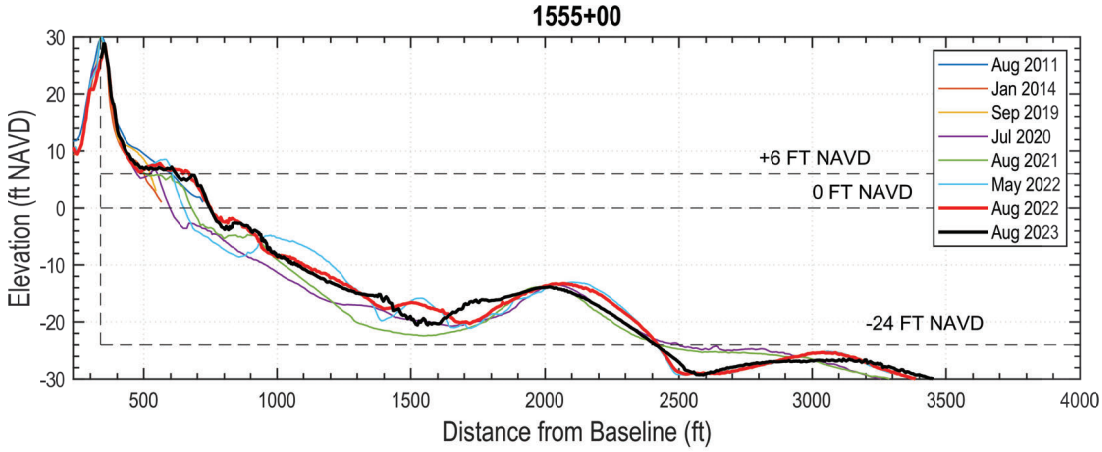

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 50.3 | 129.2 | 756.6 | 987.6 |
| Jan 2014 | 30.8 | 77.0 | 297.4 | 352.5 |
| Sep 2019 | 55.8 | 118.3 | 484.1 | 604.5 |
| Jul 2020 | 55.7 | 127.5 | 1176.5 | 1763.0 |
| Aug 2021 | 57.4 | 136.3 | 1190.9 | 1773.3 |
| May 2022 | 65.6 | 150.2 | 1263.2 | 1956.4 |
| Aug 2023 | 66.9 | 166.5 | 1240.5 | 1846.9 |





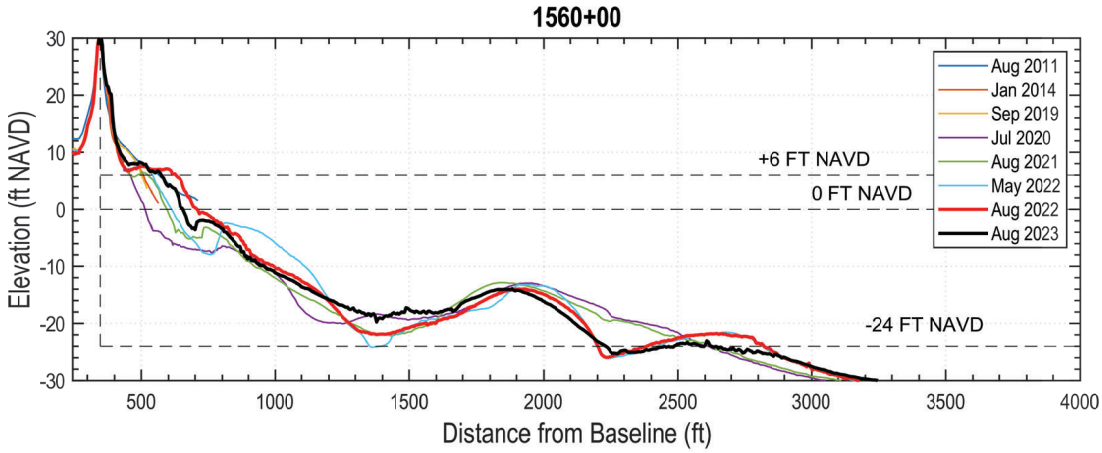

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 69.9 | 147.9 | 625.2 | 778.5 |
| Jan 2014 | 50.4 | 96.9 | 533.0 | 703.8 |
| Sep 2019 | 71.8 | 130.6 | 532.7 | 674.9 |
| Jul 2020 | 70.4 | 143.6 | 1093.1 | 1633.0 |
| Aug 2021 | 72.0 | 153.8 | 1112.2 | 1650.8 |
| May 2022 | 79.8 | 163.3 | 1200.3 | 1763.2 |
| Aug 2022 | 77.2 | 171.6 | 1225.4 | 1796.1 |
| Aug 2023 | 76.6 | 177.1 | 1302.8 | 1873.1 |





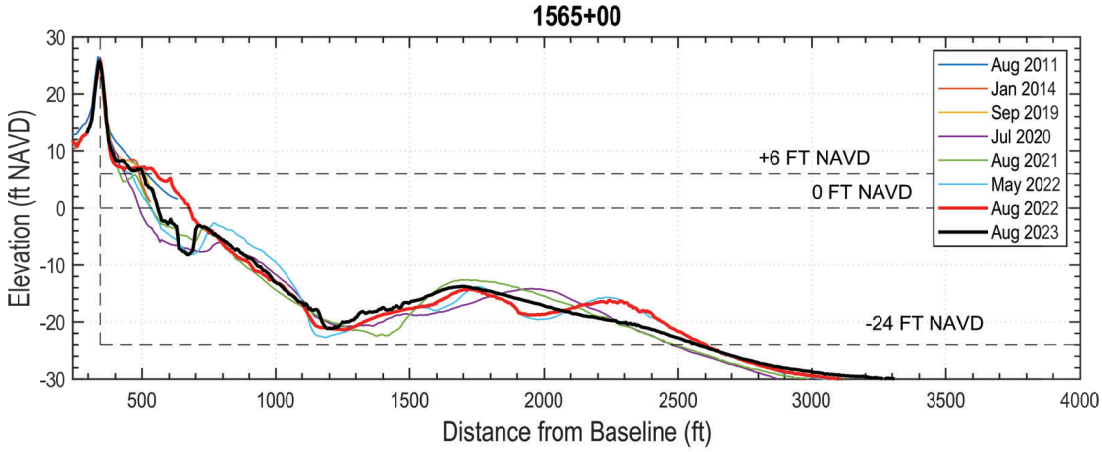

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 65.2 | 138.9 | 622.7 | 784.8 |
| Jan 2014 | 45.9 | 90.5 | 483.4 | 636.3 |
| Sep 2019 | 55.3 | 101.2 | 369.0 | 457.0 |
| Jul 2020 | 48.1 | 99.5 | 937.0 | 1526.4 |
| Aug 2021 | 50.1 | 116.8 | 945.9 | 1523.6 |
| May 2022 | 58.2 | 122.1 | 1085.1 | 1634.2 |
| Aug 2022 | 54.5 | 137.3 | 1123.3 | 1676.7 |
| Aug 2023 | 55.1 | 137.7 | 1101.4 | 1658.2 |



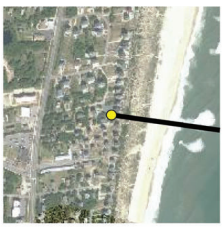


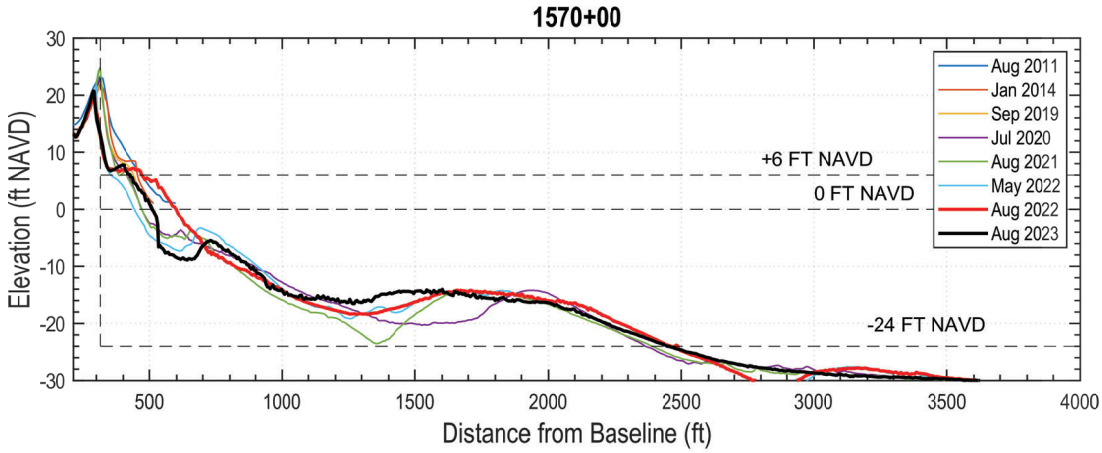

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 45.4 | 114.1 | 1039.2 | 1437.1 |
| Jan 2014 | 37.2 | 80.0 | 442.7 | 582.4 |
| Sep 2019 | 44.1 | 85.4 | 431.3 | 563.4 |
| Jul 2020 | 36.7 | 67.6 | 895.5 | 1441.5 |
| Aug 2021 | 37.9 | 85.9 | 927.1 | 1480.4 |
| May 2022 | 42.6 | 93.1 | 947.4 | 1517.3 |
| Aug 2022 | 42.7 | 113.7 | 959.1 | 1534.4 |
| Aug 2023 | 45.3 | 105.9 | 946.0 | 1519.1 |





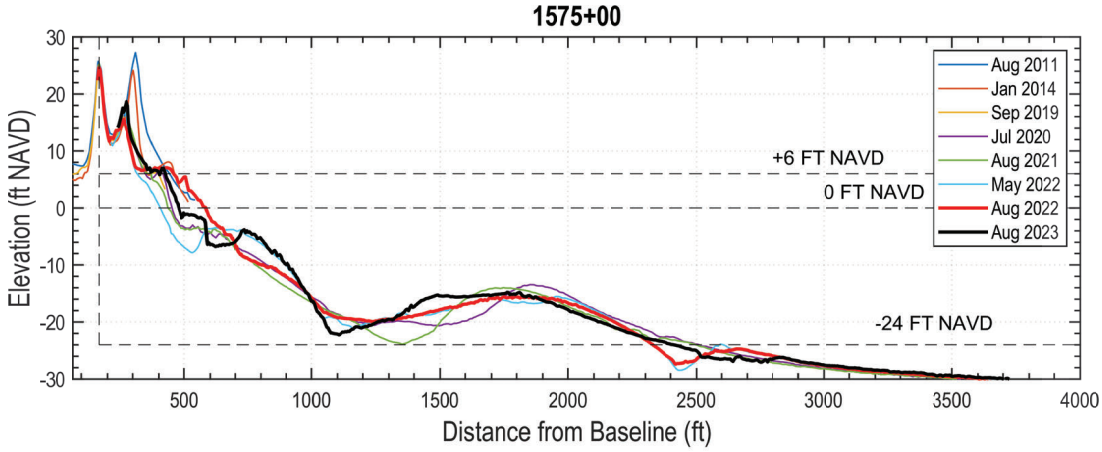

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 32.9 | 90.4 | 1552.6 | 2251.5 |
| Jan 2014 | 24.6 | 62.2 | 405.0 | 541.2 |
| Sep 2019 | 27.0 | 70.7 | 491.1 | 660.3 |
| Jul 2020 | 22.1 | 48.9 | 831.7 | 1348.6 |
| Aug 2021 | 20.6 | 54.4 | 860.0 | 1383.5 |
| May 2022 | 20.3 | 53.4 | 891.2 | 1431.3 |
| Aug 2022 | 24.0 | 85.8 | 933.4 | 1476.0 |
| Aug 2023 | 24.0 | 65.9 | 898.1 | 1450.6 |



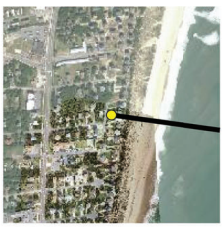


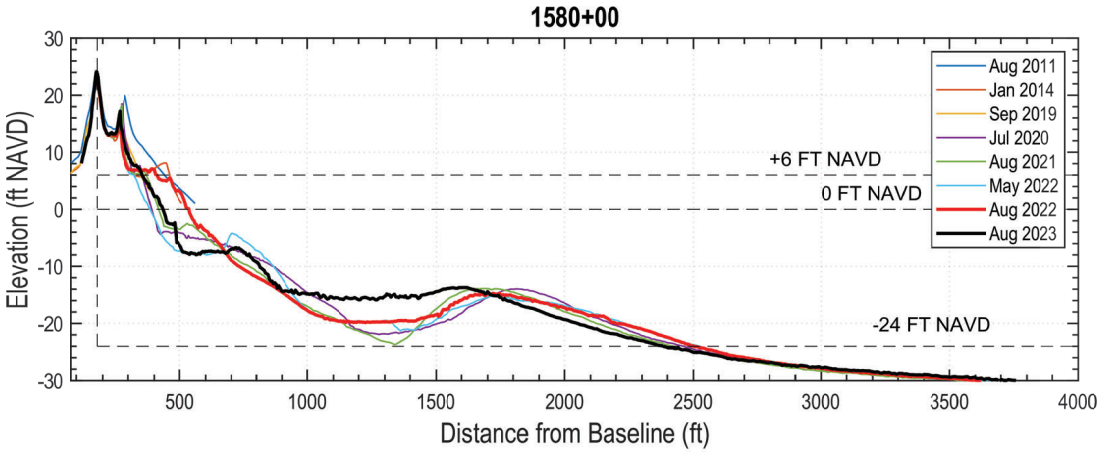

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 38.2 | 86.5 | 819.8 | 1142.0 |
| Jan 2014 | 29.9 | 68.2 | 482.1 | 653.6 |
| Sep 2019 | 21.2 | 56.2 | 369.8 | 492.0 |
| Jul 2020 | 18.5 | 48.0 | 828.1 | 1373.8 |
| Aug 2021 | 17.0 | 46.0 | 787.8 | 1321.5 |
| May 2022 | 3.1 | 24.2 | 868.2 | 1409.3 |
| Aug 2022 | 7.8 | 59.5 | 914.2 | 1457.9 |
| Aug 2023 | 7.2 | 41.9 | 880.0 | 1430.6 |



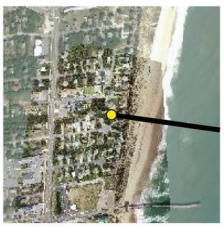


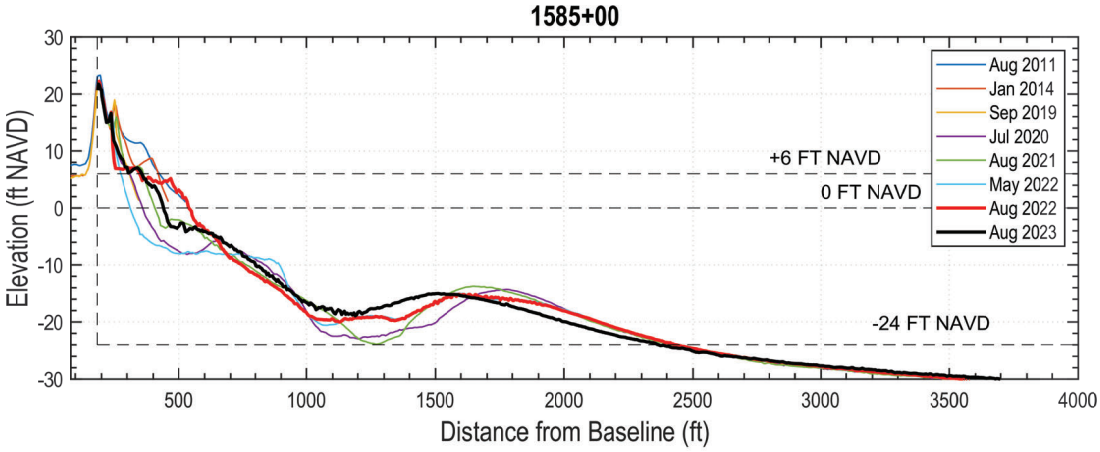

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 95.7 | 174.7 | 2494.1 | 3629.4 |
| Jan 2014 | 67.2 | 139.0 | 581.8 | 730.8 |
| Sep 2019 | 50.0 | 107.0 | 428.4 | 531.7 |
| Jul 2020 | 51.1 | 109.3 | 981.9 | 1585.8 |
| Aug 2021 | 51.9 | 105.3 | 934.8 | 1532.4 |
| May 2022 | 41.2 | 85.6 | 957.4 | 1559.4 |
| Aug 2022 | 46.6 | 126.1 | 1015.0 | 1618.3 |
| Aug 2023 | 51.5 | 114.7 | 1013.6 | 1622.0 |



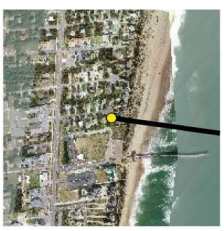


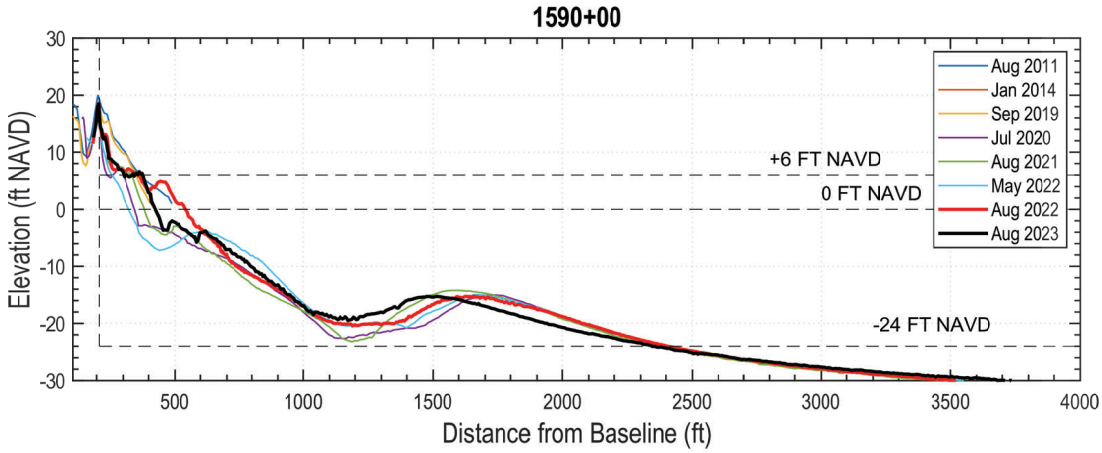

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 70.4 | 144.6 | 714.9 | 924.1 |
| Jan 2014 | 39.1 | 106.8 | 566.3 | 729.4 |
| Sep 2019 | 44.6 | 91.6 | 499.5 | 657.0 |
| Jul 2020 | 43.2 | 86.2 | 930.1 | 1529.3 |
| Aug 2021 | 38.6 | 86.6 | 898.7 | 1487.7 |
| May 2022 | 35.7 | 74.1 | 908.1 | 1515.5 |
| Aug 2022 | 37.8 | 106.5 | 960.8 | 1568.4 |
| Aug 2023 | 41.8 | 89.8 | 973.9 | 1580.5 |



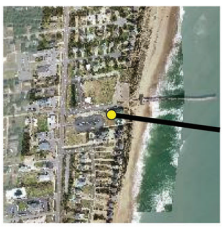


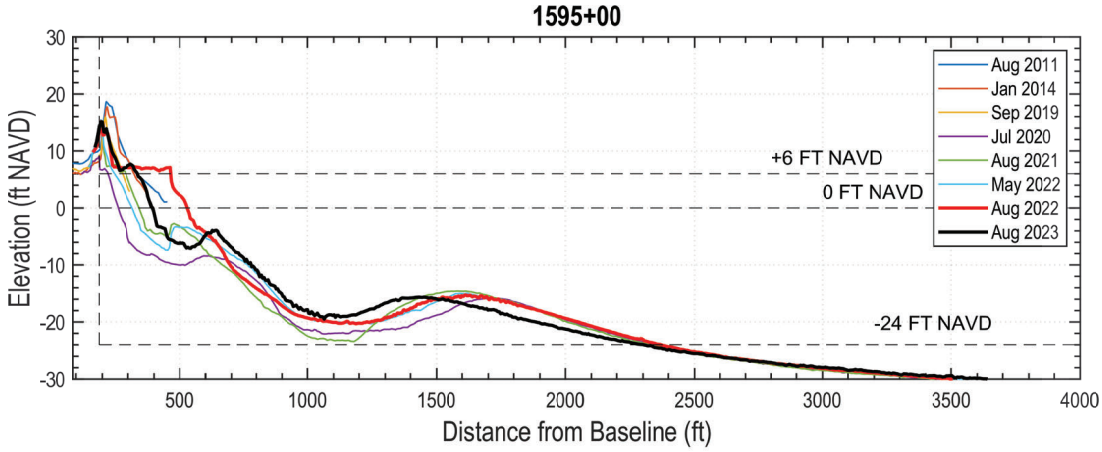

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 65.3 | 131.7 | 627.2 | 805.8 |
| Jan 2014 | 52.4 | 109.8 | 451.1 | 564.2 |
| Sep 2019 | 38.6 | 72.0 | 449.3 | 609.0 |
| Jul 2020 | 32.8 | 66.7 | 827.1 | 1421.8 |
| Aug 2021 | 39.7 | 84.3 | 896.4 | 1485.6 |
| May 2022 | 31.2 | 55.6 | 845.3 | 1443.6 |
| Aug 2022 | 30.5 | 96.0 | 930.0 | 1531.3 |
| Aug 2023 | 34.2 | 83.7 | 925.7 | 1531.7 |



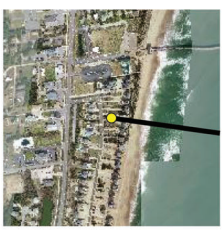


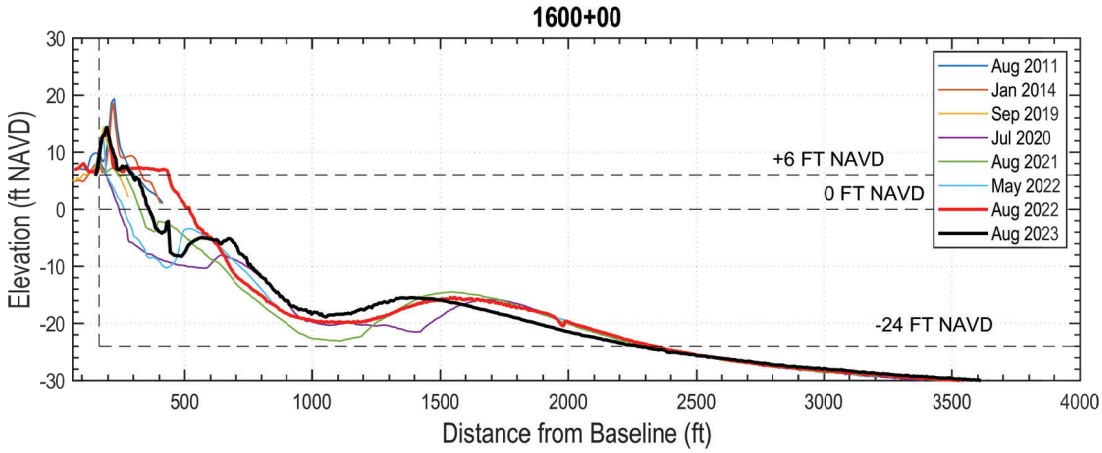

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 33.2 | 85.5 | 685.0 | 935.9 |
| Jan 2014 | 29.1 | 67.7 | 371.2 | 484.2 |
| Sep 2019 | 29.1 | 67.7 | 371.2 | 484.2 |
| Jul 2020 | 5.3 | 30.6 | 744.6 | 1329.2 |
| Aug 2021 | 9.9 | 43.0 | 790.3 | 1368.5 |
| May 2022 | 6.4 | 25.1 | 806.1 | 1396.1 |
| Aug 2022 | 13.6 | 69.9 | 867.6 | 1457.6 |
| Aug 2023 | 12.7 | 54.9 | 839.7 | 1440.4 |





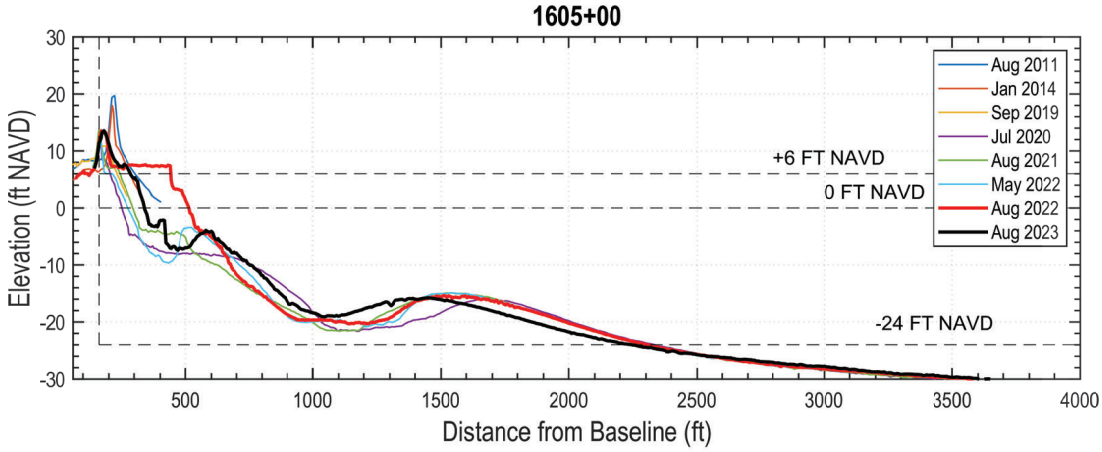

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 33.8 | 82.0 | 779.0 | 1086.6 |
| Jan 2014 | 28.9 | 67.6 | 337.5 | 432.7 |
| Sep 2019 | 16.1 | 42.6 | 313.6 | 423.0 |
| Jul 2020 | 0.9 | 12.8 | 632.6 | 1210.0 |
| Aug 2021 | 8.9 | 37.3 | 730.0 | 1303.0 |
| May 2022 | 8.4 | 29.7 | 781.0 | 1367.6 |
| Aug 2022 | 20.6 | 87.9 | 862.9 | 1449.7 |
| Aug 2023 | 18.2 | 58.4 | 815.4 | 1403.4 |



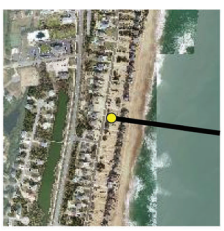


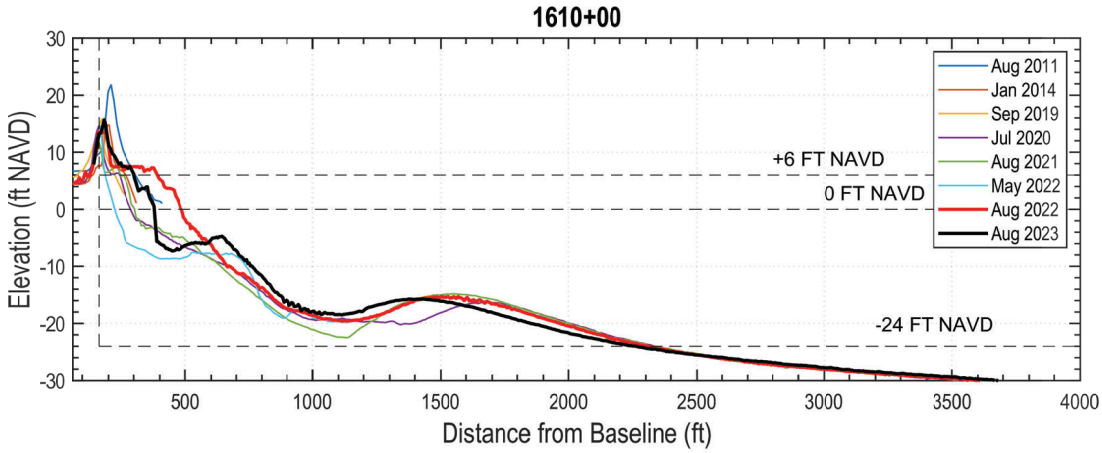

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 26.0 | 71.4 | 459.2 | 604.4 |
| Jan 2014 | 24.0 | 71.9 | 399.9 | 515.2 |
| Sep 2019 | 12.2 | 36.3 | 304.4 | 415.3 |
| Jul 2020 | 1.6 | 13.3 | 676.4 | 1253.0 |
| Aug 2021 | 2.6 | 32.2 | 727.5 | 1304.7 |
| May 2022 | 4.7 | 18.8 | 739.6 | 1325.0 |
| Aug 2022 | 20.0 | 87.2 | 864.0 | 1449.3 |
| Aug 2023 | 16.5 | 54.2 | 821.9 | 1413.2 |



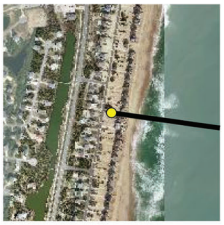


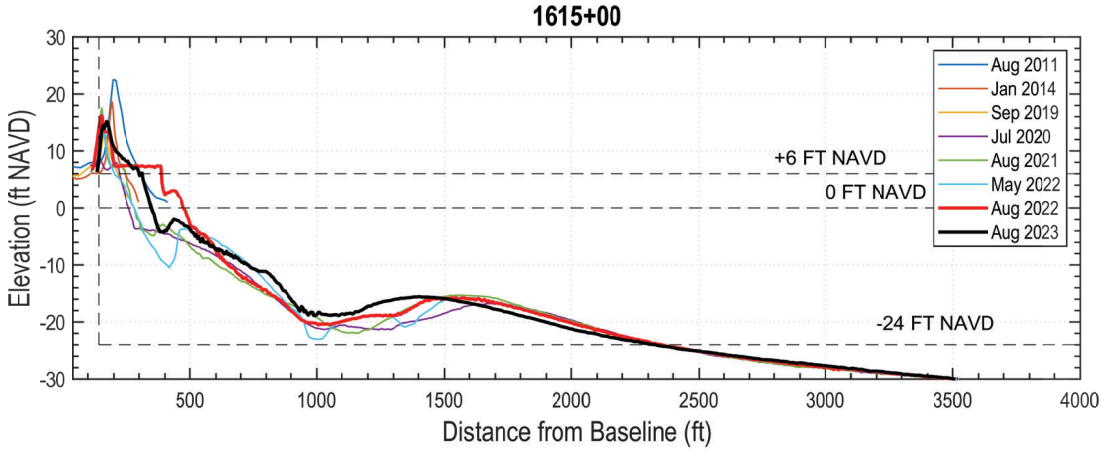

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 27.1 | 70.9 | 520.8 | 701.3 |
| Jan 2014 | 17.2 | 51.4 | 309.7 | 404.0 |
| Sep 2019 | 8.9 | 31.3 | 332.2 | 462.0 |
| Jul 2020 | 4.4 | 19.1 | 715.6 | 1295.7 |
| Aug 2021 | 6.1 | 29.9 | 735.4 | 1313.6 |
| May 2022 | 3.3 | 21.8 | 736.2 | 1318.3 |
| Aug 2022 | 21.7 | 91.0 | 854.7 | 1438.7 |
| Aug 2023 | 15.4 | 50.4 | 802.1 | 1393.3 |





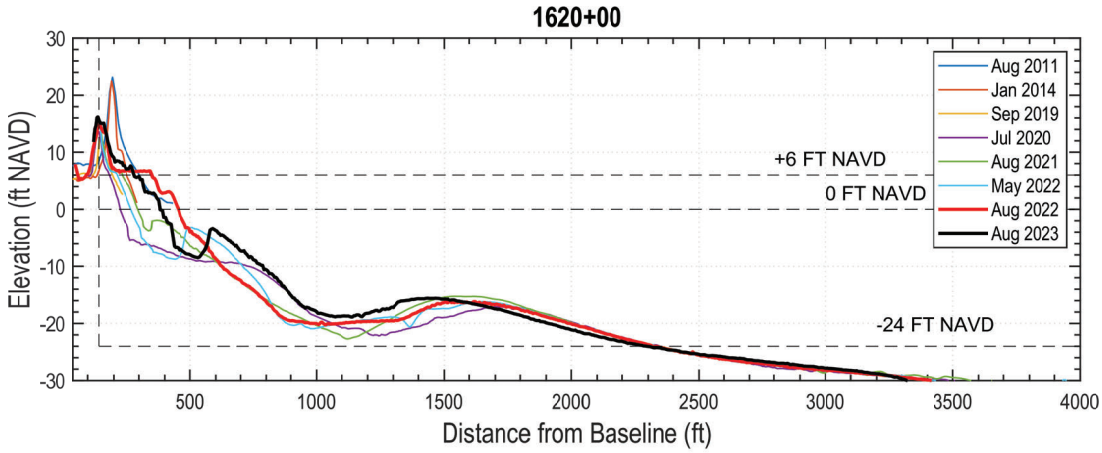

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 36.3 | 79.9 | 573.9 | 776.8 |
| Jan 2014 | 13.3 | 42.5 | 289.1 | 384.1 |
| Sep 2019 | 9.2 | 29.9 | 265.7 | 362.9 |
| Jul 2020 | 6.2 | 28.5 | 729.1 | 1317.3 |
| Aug 2021 | 4.5 | 30.5 | 739.5 | 1333.1 |
| May 2022 | 4.1 | 13.3 | 706.6 | 1297.8 |
| Aug 2022 | 19.3 | 81.7 | 860.3 | 1452.5 |
| Aug 2023 | 19.0 | 58.8 | 816.7 | 1418.0 |



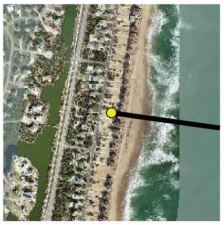


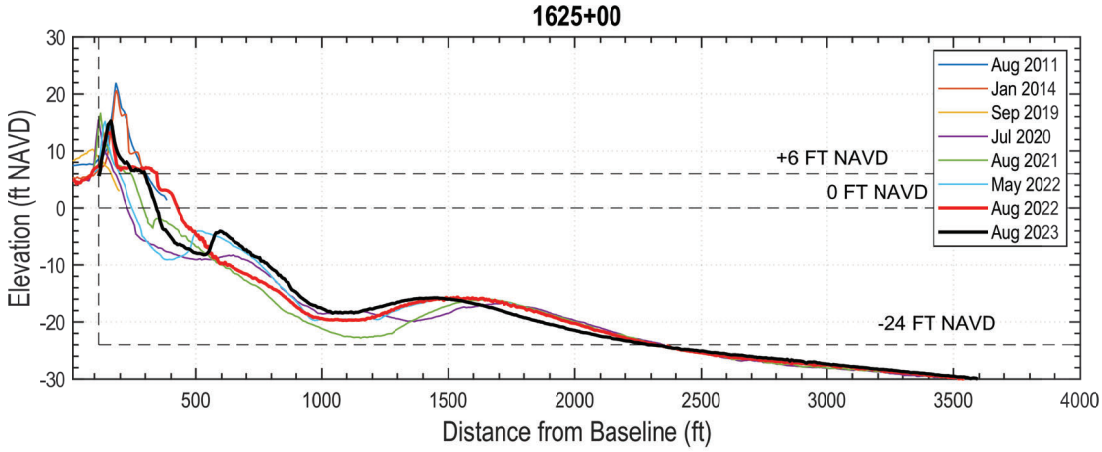

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 43.6 | 91.1 | 714.9 | 982.0 |
| Jan 2014 | 16.2 | 46.9 | 275.7 | 358.8 |
| Sep 2019 | 9.9 | 32.7 | 302.3 | 415.4 |
| Jul 2020 | 4.3 | 25.9 | 714.1 | 1307.0 |
| Aug 2021 | 13.2 | 39.6 | 761.7 | 1355.2 |
| May 2022 | 11.1 | 34.6 | 764.6 | 1365.6 |
| Aug 2022 | 24.5 | 87.0 | 859.5 | 1461.9 |
| Aug 2023 | 23.5 | 65.0 | 855.6 | 1462.5 |



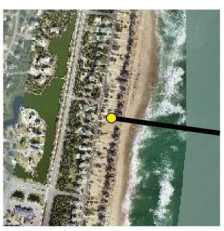



| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 39.3 | 98.1 | 5841.5 | 8032.1 |
| Jan 2014 | 26.5 | 56.5 | 279.9 | 361.6 |
| Sep 2019 | 6.2 | 26.7 | 379.2 | 536.7 |
| Jul 2020 | 4.4 | 18.6 | 696.1 | 1279.5 |
| Aug 2021 | 8.6 | 36.5 | 759.2 | 1357.4 |
| May 2022 | 7.1 | 29.1 | 741.7 | 1336.0 |
| Aug 2022 | 15.7 | 73.7 | 811.3 | 1400.8 |
| Aug 2023 | 19.4 | 63.7 | 865.9 | 1462.9 |

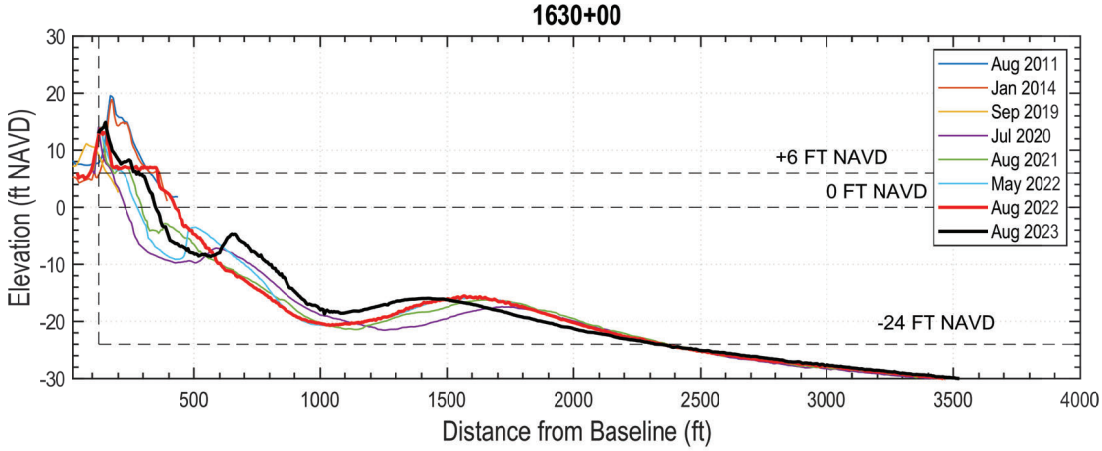




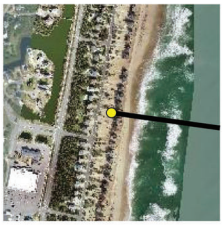

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 47.0 | 99.4 | 507.6 | 657.2 |
| Jan 2014 | 40.1 | 85.3 | 364.6 | 458.6 |
| Sep 2019 | 2.8 | 21.0 | 284.8 | 399.1 |
| Jul 2020 | 8.5 | 28.6 | 762.8 | 1362.4 |
| Aug 2021 | 14.5 | 48.7 | 745.0 | 1348.2 |
| May 2022 | 12.3 | 36.2 | 811.3 | 1425.3 |
| Aug 2022 | 18.2 | 77.1 | 868.4 | 1480.3 |
| Aug 2023 | 20.5 | 66.1 | 875.0 | 1498.8 |



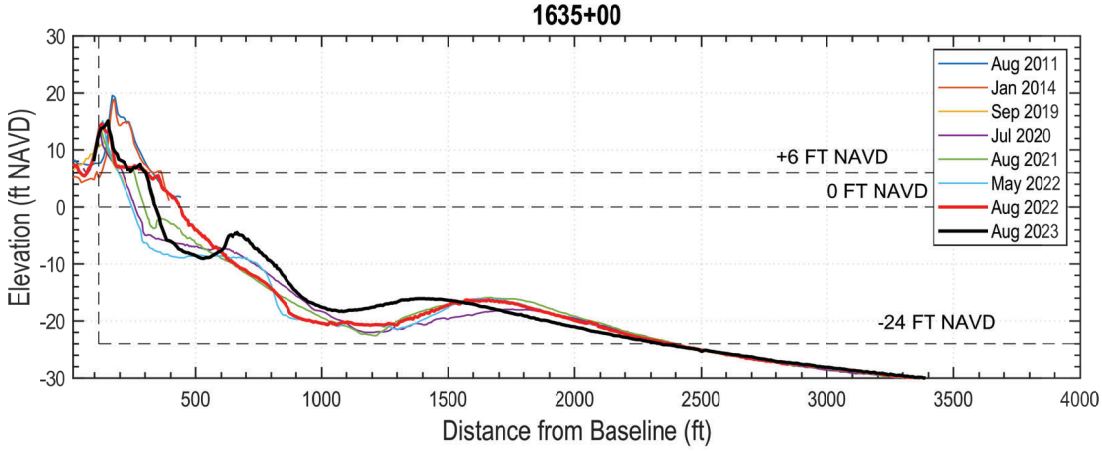
## 1630+00



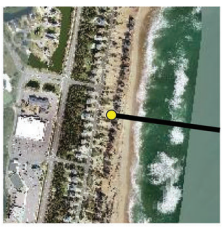

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 49.3 | 112.9 | 1504.2 | 2155.1 |
| Jan 2014 | 42.3 | 99.2 | 422.8 | 528.0 |
| Sep 2019 | 1.7 | 18.4 | 322.1 | 458.6 |
| Jul 2020 | 5.1 | 22.5 | 698.4 | 1291.5 |
| Aug 2021 | 9.4 | 42.2 | 767.4 | 1368.8 |
| May 2022 | 9.8 | 37.5 | 772.2 | 1376.5 |
| Aug 2022 | 17.5 | 75.3 | 828.8 | 1433.3 |
| Aug 2023 | 20.7 | 64.9 | 865.4 | 1479.0 |



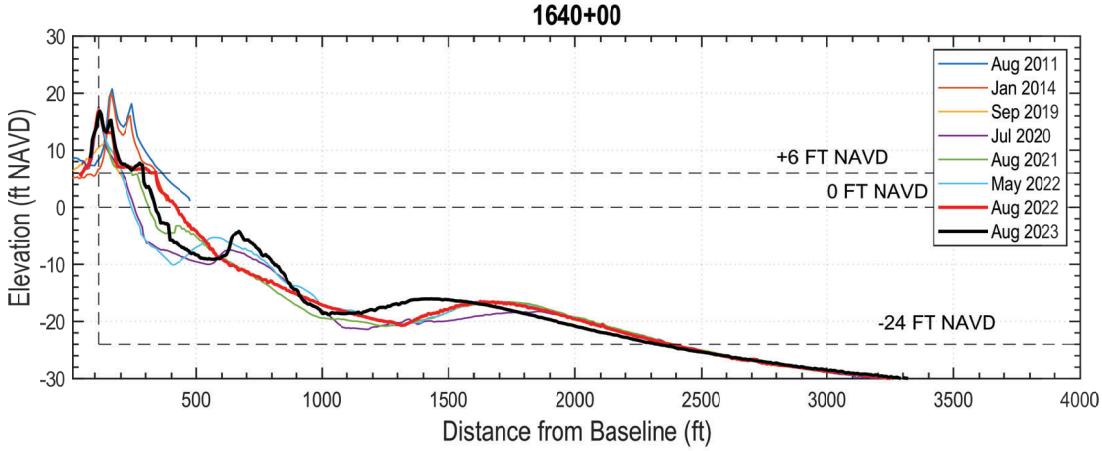
## 1635+00



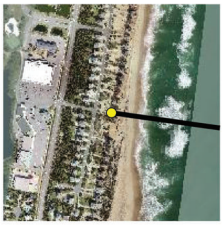

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 49.8 | 167.2 | 7825.2 | 10021.6 |
| Jan 2014 | 42.3 | 100.8 | 431.4 | 538.4 |
| Sep 2019 | 9.4 | 33.9 | 258.5 | 346.4 |
| Jul 2020 | 10.2 | 36.6 | 756.3 | 1348.3 |
| Aug 2021 | 13.2 | 48.7 | 806.4 | 1401.4 |
| May 2022 | 13.3 | 36.8 | 730.3 | 1327.8 |
| Aug 2022 | 19.8 | 78.2 | 841.9 | 1440.7 |
| Aug 2023 | 22.7 | 68.2 | 875.7 | 1476.8 |



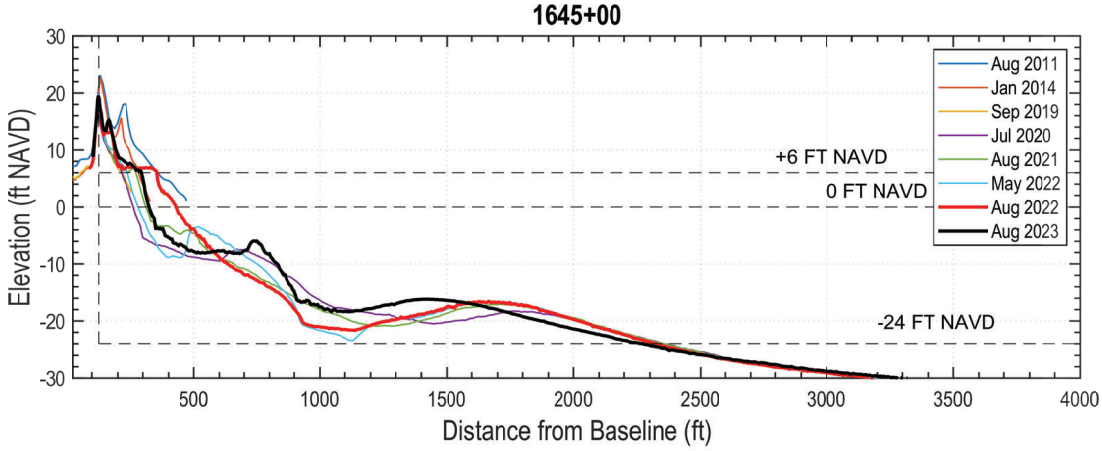
## 1640+00



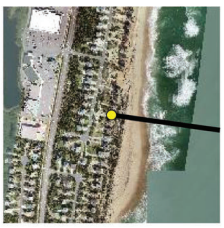

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 62.2 | 132.7 | 568.8 | 710.5 |
| Jan 2014 | 47.0 | 102.7 | 442.5 | 556.7 |
| Sep 2019 | 9.9 | 34.7 | 248.0 | 329.9 |
| Jul 2020 | 13.7 | 40.1 | 752.5 | 1336.6 |
| Aug 2021 | 15.9 | 54.3 | 810.2 | 1397.7 |
| May 2022 | 16.9 | 41.2 | 821.3 | 1407.8 |
| Aug 2022 | 23.0 | 79.2 | 879.7 | 1466.2 |
| Aug 2023 | 26.2 | 70.4 | 883.9 | 1472.6 |

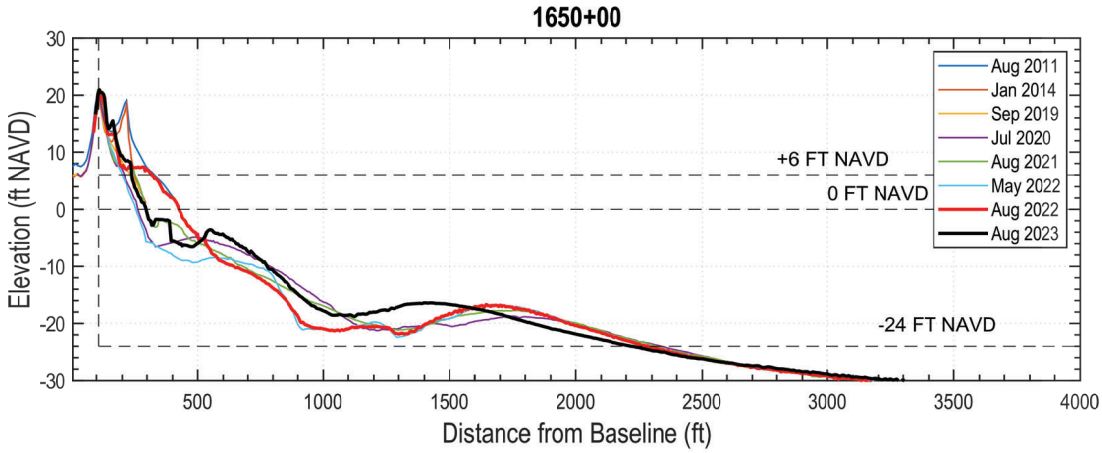


## 1645+00

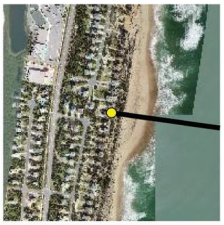


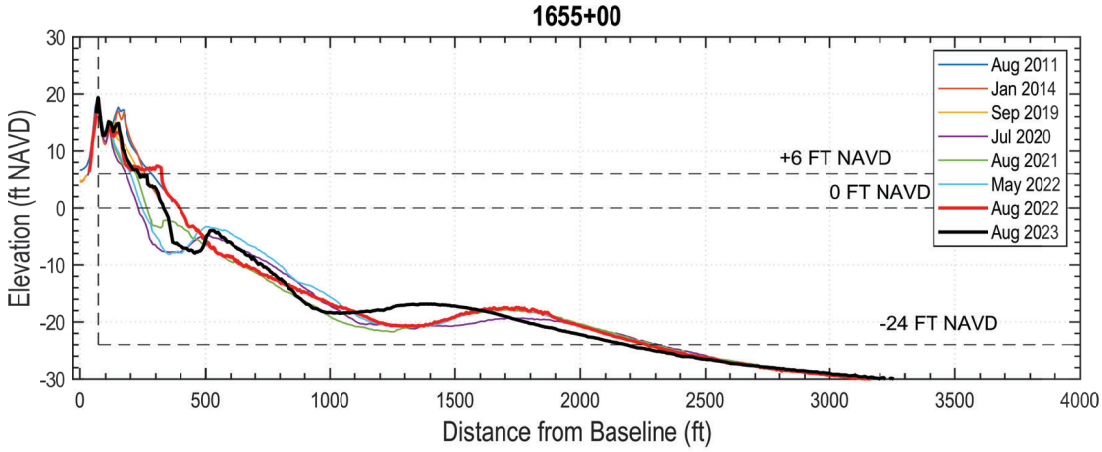

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 62.7 | 130.1 | 545.4 | 680.1 |
| Jan 2014 | 41.6 | 82.4 | 404.0 | 525.1 |
| Sep 2019 | 13.3 | 41.2 | 324.4 | 438.5 |
| Jul 2020 | 13.8 | 39.1 | 780.6 | 1353.1 |
| Aug 2021 | 15.5 | 52.4 | 798.4 | 1372.6 |
| May 2022 | 17.7 | 47.1 | 774.2 | 1342.7 |
| Aug 2022 | 23.0 | 80.0 | 825.0 | 1392.7 |
| Aug 2023 | 26.1 | 66.7 | 856.2 | 1429.2 |



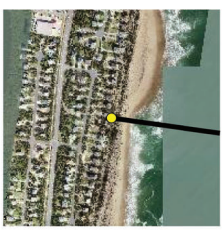



| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 57.2 | 118.8 | 501.1 | 627.8 |
| Jan 2014 | 40.8 | 78.2 | 359.7 | 463.1 |
| Sep 2019 | 23.1 | 61.1 | 435.8 | 586.0 |
| Jul 2020 | 19.4 | 48.4 | 801.5 | 1371.4 |
| Aug 2021 | 23.5 | 61.1 | 822.1 | 1392.0 |
| May 2022 | 22.7 | 49.6 | 733.2 | 1299.2 |
| Aug 2022 | 31.8 | 91.1 | 825.3 | 1389.4 |
| Aug 2023 | 34.6 | 69.2 | 870.7 | 1439.2 |

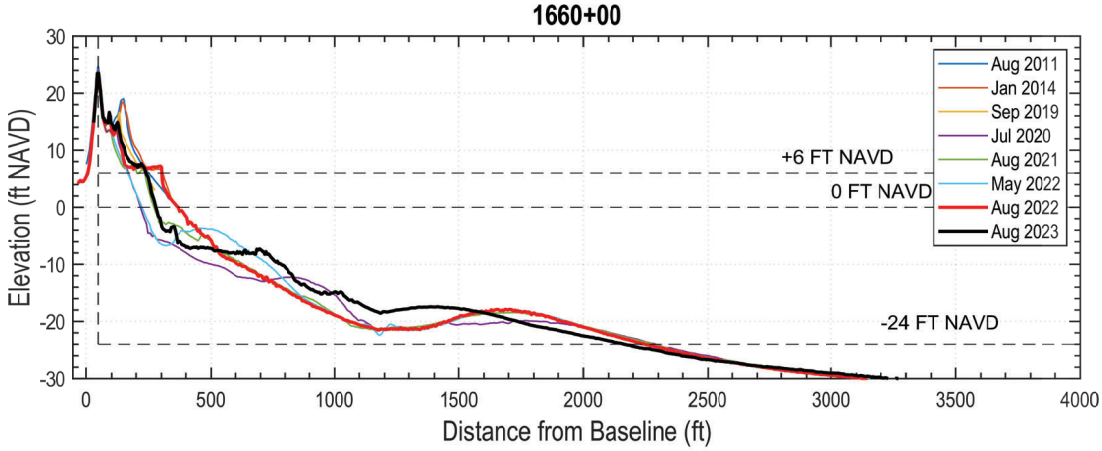




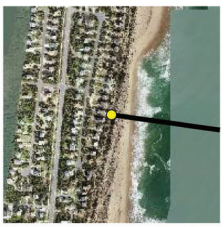

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 51.1 | 109.5 | 504.0 | 641.0 |
| Jan 2014 | 46.3 | 95.4 | 422.6 | 535.8 |
| Sep 2019 | 33.5 | 88.3 | 649.2 | 874.9 |
| Jul 2020 | 19.4 | 49.4 | 793.9 | 1366.3 |
| Aug 2021 | 24.6 | 62.9 | 802.5 | 1374.9 |
| May 2022 | 24.9 | 58.6 | 865.5 | 1434.1 |
| Aug 2022 | 33.1 | 94.4 | 889.2 | 1457.2 |
| Aug 2023 | 33.3 | 83.0 | 870.5 | 1436.6 |



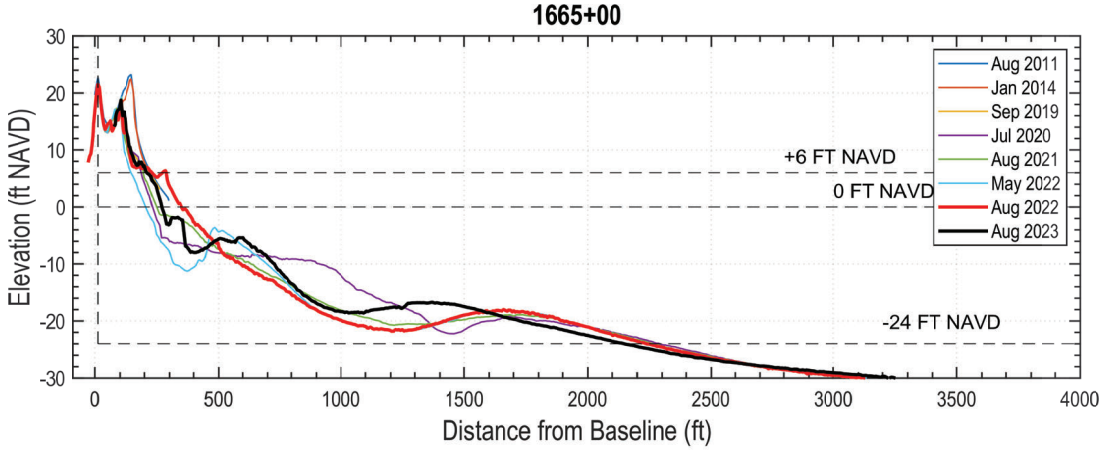
## 1660+00



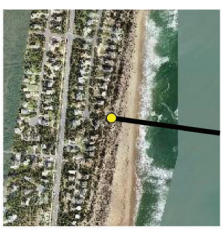

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 56.8 | 115.0 | 1025.9 | 1438.8 |
| Jan 2014 | 56.3 | 118.7 | 476.2 | 592.7 |
| Sep 2019 | 42.8 | 92.6 | 430.4 | 549.2 |
| Jul 2020 | 30.9 | 63.5 | 763.4 | 1337.4 |
| Aug 2021 | 28.6 | 73.8 | 821.1 | 1395.2 |
| May 2022 | 29.3 | 62.2 | 827.9 | 1400.7 |
| Aug 2022 | 37.8 | 98.8 | 855.0 | 1424.6 |
| Aug 2023 | 40.7 | 87.9 | 896.2 | 1465.8 |



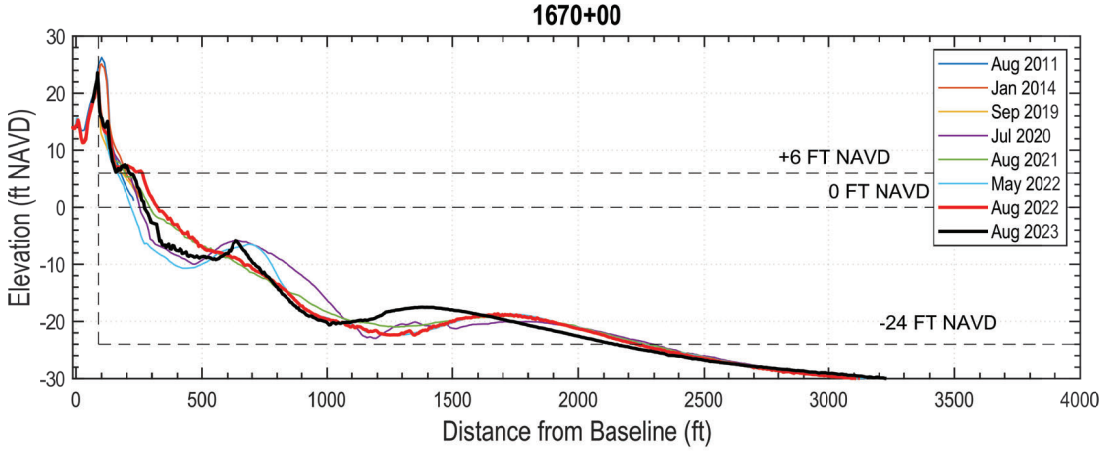
## 1665+00




| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 78.3 | 135.5 | 491.9 | 610.3 |
| Jan 2014 | 69.3 | 122.5 | 440.3 | 545.8 |
| Sep 2019 | 48.2 | 103.4 | 477.2 | 608.5 |
| Jul 2020 | 48.5 | 92.4 | 941.0 | 1522.3 |
| Aug 2021 | 45.5 | 92.1 | 873.2 | 1452.8 |
| May 2022 | 39.9 | 76.5 | 811.8 | 1389.3 |
| Aug 2022 | 46.0 | 111.8 | 874.9 | 1450.4 |
| Aug 2023 | 47.1 | 99.4 | 918.0 | 1492.4 |



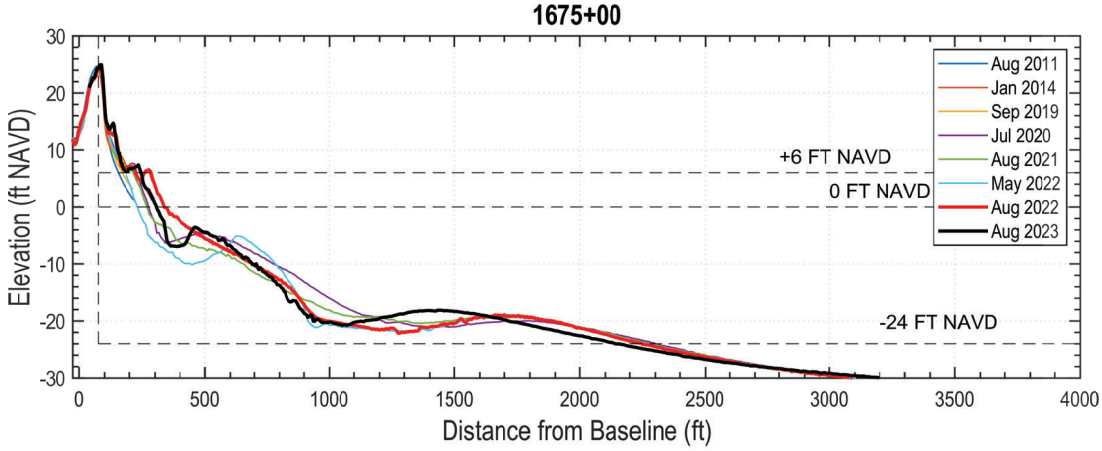
## 1670+00



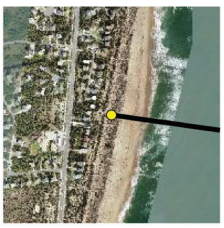

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 33.7 | 60.0 | 264.7 | 338.7 |
| Jan 2014 | 35.9 | 69.0 | 321.7 | 413.6 |
| Sep 2019 | 13.4 | 44.8 | 348.7 | 469.1 |
| Jul 2020 | 20.3 | 52.6 | 773.1 | 1339.3 |
| Aug 2021 | 18.0 | 54.6 | 770.6 | 1334.7 |
| May 2022 | 14.1 | 37.2 | 697.3 | 1260.3 |
| Aug 2022 | 20.4 | 64.7 | 762.4 | 1319.1 |
| Aug 2023 | 18.4 | 54.2 | 748.2 | 1304.7 |

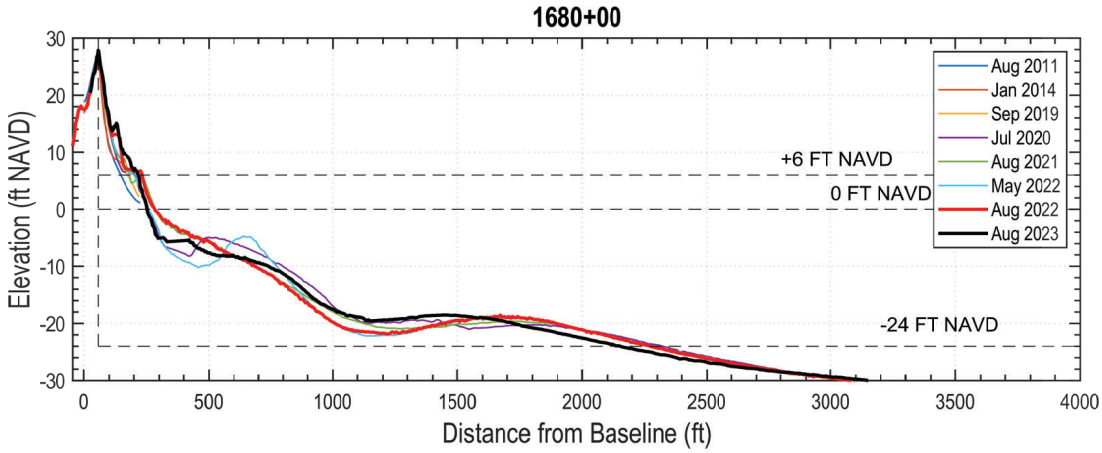


## 1675+00



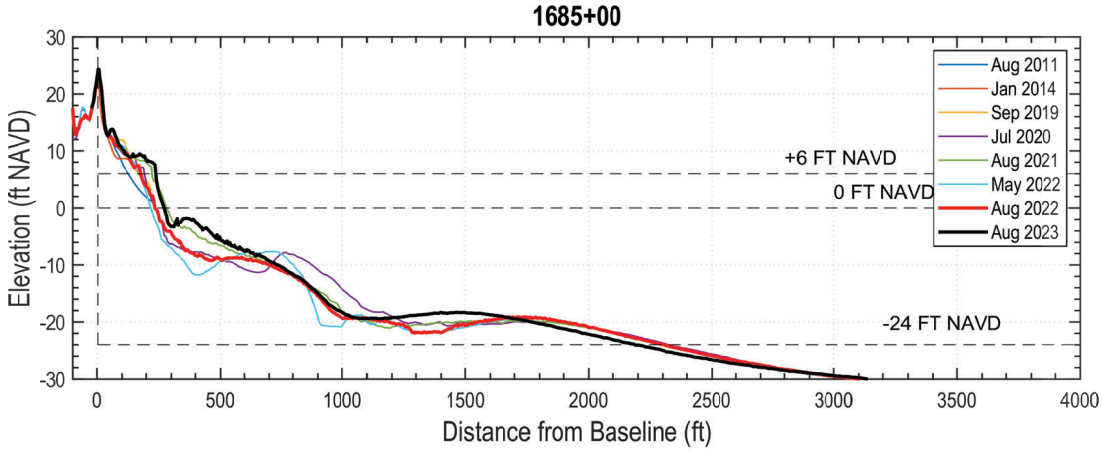

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 22.0 | 48.0 | 430.5 | 598.6 |
| Jan 2014 | 26.4 | 68.4 | 419.0 | 552.4 |
| Sep 2019 | 24.7 | 55.4 | 364.1 | 487.6 |
| Jul 2020 | 30.4 | 69.6 | 839.1 | 1410.5 |
| Aug 2021 | 30.3 | 67.7 | 789.3 | 1358.6 |
| May 2022 | 29.0 | 58.5 | 742.7 | 1310.5 |
| Aug 2022 | 33.1 | 83.8 | 808.4 | 1372.0 |
| Aug 2023 | 34.3 | 78.3 | 796.5 | 1355.1 |



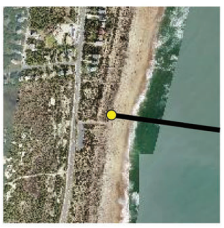


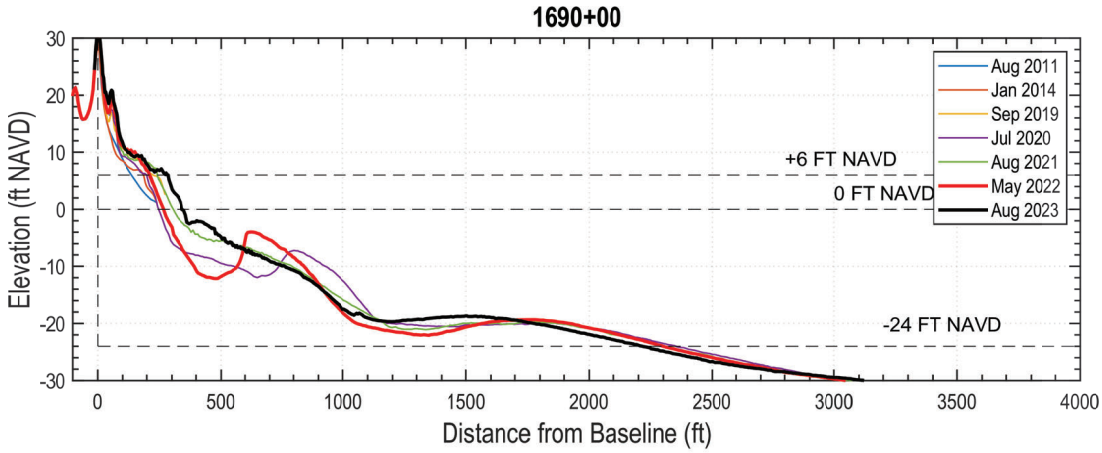

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 22.9 | 51.9 | 378.5 | 511.5 |
| Jan 2014 | 25.9 | 65.5 | 342.8 | 441.4 |
| Sep 2019 | 30.7 | 65.2 | 407.7 | 545.4 |
| Jul 2020 | 32.1 | 70.4 | 846.4 | 1424.8 |
| Aug 2021 | 35.6 | 79.2 | 828.7 | 1400.9 |
| May 2022 | 35.1 | 74.1 | 798.1 | 1369.5 |
| Aug 2022 | 40.5 | 84.0 | 823.2 | 1394.0 |
| Aug 2023 | 45.3 | 84.8 | 832.2 | 1391.3 |





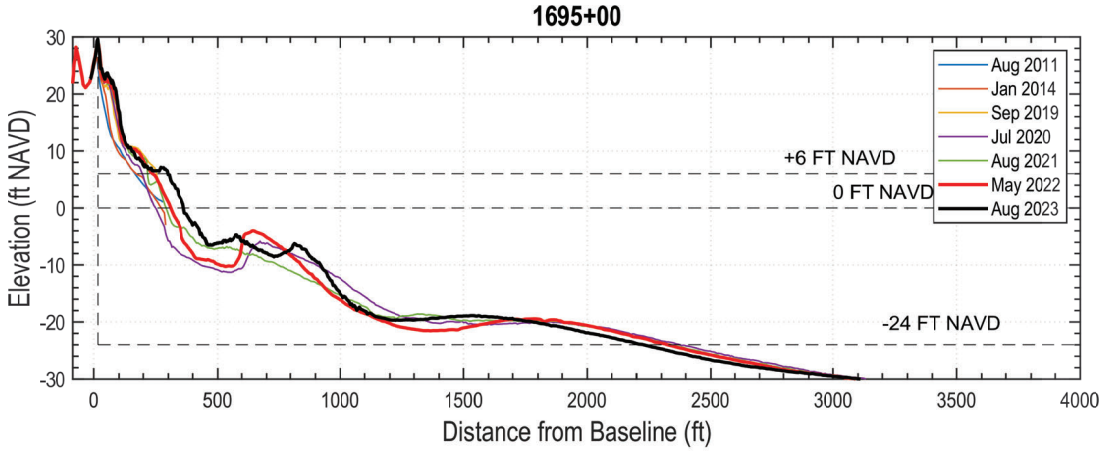

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 27.0 | 67.8 | 1163.4 | 1693.8 |
| Jan 2014 | 27.0 | 72.4 | 385.0 | 495.5 |
| Sep 2019 | 36.7 | 85.7 | 472.8 | 617.9 |
| Jul 2020 | 36.7 | 82.8 | 897.2 | 1488.0 |
| Aug 2021 | 40.1 | 95.4 | 897.4 | 1483.7 |
| May 2022 | 37.1 | 80.1 | 813.1 | 1397.0 |
| Aug 2022 | 35.6 | 81.1 | 840.2 | 1428.0 |
| Aug 2023 | 46.1 | 100.9 | 932.0 | 1507.0 |



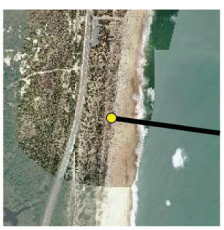


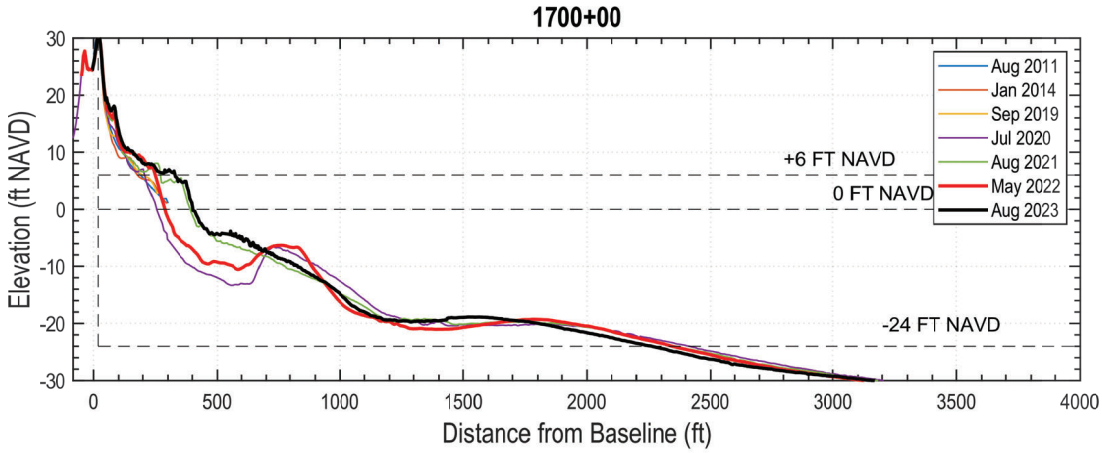

| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 35.5 | 78.2 | 523.0 | 700.9 |
| Jan 2014 | 35.7 | 83.5 | 398.4 | 506.6 |
| Sep 2019 | 52.9 | 112.5 | 467.6 | 585.7 |
| Jul 2020 | 48.5 | 97.9 | 922.4 | 1519.0 |
| Aug 2021 | 58.2 | 118.5 | 967.7 | 1555.7 |
| May 2022 | 60.1 | 112.8 | 902.2 | 1486.8 |
| Aug 2023 | 67.2 | 136.4 | 993.7 | 1569.1 |






| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 34.4 | 81.3 | 610.7 | 828.5 |
| Jan 2014 | 37.6 | 84.4 | 345.4 | 418.6 |
| Sep 2019 | 65.2 | 122.9 | 472.4 | 589.5 |
| Jul 2020 | 56.7 | 101.8 | 942.0 | 1542.5 |
| Aug 2021 | 65.1 | 119.0 | 963.1 | 1554.9 |
| May 2022 | 68.8 | 126.7 | 950.7 | 1537.5 |
| Aug 2023 | 72.1 | 142.6 | 1027.3 | 1599.3 |






| Date | Vol to +6 ft | Vol to 0 ft | Vol to -24 ft | Vol to -30 ft |
|---|---|---|---|---|
| Aug 2011 | 43.3 | 95.7 | 451.7 | 571.0 |
| Jan 2014 | 39.1 | 92.6 | 552.7 | 729.5 |
| Sep 2019 | 44.5 | 97.0 | 479.4 | 618.3 |
| Jul 2020 | 45.3 | 92.4 | 903.7 | 1514.9 |
| Aug 2021 | 53.1 | 128.2 | 1007.4 | 1608.5 |
| May 2022 | 59.0 | 114.5 | 940.4 | 1533.1 |
| Aug 2023 | 64.5 | 144.6 | 1032.8 | 1613.7 |



# APPENDIX A-2

# Avon Survey Results

| Volumes from Dune Crest to -30 ft NAVD | | | | Unit Volume (cy/ft) | | | | | Total Volume (cy) | | | | | Unit Volume Change Since Last Survey (cy/ft) | | | | Total Volume Change Since Last Survey (cy) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reach | Station | Offset | Distance to Next | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 |
| 1 - "NPS" | 1470+00 | 495 | 500 | 2209.7 | 2223.5 | 2260.5 | 2260.5 | 2,255.3 | 992,162 | 1,005,641 | 1,032,175 | 1,032,175 | 1,019,301 | 13.8 | 37.0 | 0.0 | -5.1 | 13,479 | 26,533 | 0 | -12,874 |
| | 1475+00 | 733 | 500 | 1759.0 | 1799.1 | 1868.2 | 1868.2 | 1,821.9 | 863,963 | 881,274 | 908,609 | 908,609 | 907,485 | 40.1 | 69.1 | 0.0 | -46.3 | 17,310 | 27,336 | 0 | -1,124 |
| | 1480+00 | 718 | 500 | 1696.9 | 1726.0 | 1766.2 | 1766.2 | 1,808.1 | 889,934 | 887,797 | 907,922 | 907,922 | 941,322 | 29.1 | 40.2 | 0.0 | 41.9 | -2,136 | 20,125 | 0 | 33,399 |
| | 1485+00 | 623 | 500 | 1862.8 | 1825.2 | 1865.5 | 1865.5 | 1,957.2 | 938,193 | 916,086 | 945,250 | 945,250 | 975,513 | -37.7 | 40.3 | 0.0 | 91.7 | -22,106 | 29,164 | 0 | 30,263 |
| | 1490+00 | 595 | 500 | 1889.9 | 1839.1 | 1915.5 | 1915.5 | 1,944.8 | 912,802 | 891,108 | 932,665 | 932,665 | 946,571 | -50.8 | 76.4 | 0.0 | 29.3 | -21,693 | 41,557 | 0 | 13,906 |
| | 1495+00 | 658 | 500 | 1761.3 | 1725.3 | 1815.1 | 1815.1 | 1,841.5 | 931,016 | 913,657 | 943,876 | 943,876 | 974,091 | -36.0 | 89.9 | 0.0 | 26.3 | -17,359 | 30,219 | 0 | 30,215 |
| 2 - "North Avon" | 1500+00 | 512 | 500 | 1962.8 | 1929.3 | 1960.4 | 1960.4 | 2,054.9 | 953,401 | 942,123 | 952,973 | 952,973 | 988,141 | -33.4 | 31.0 | 0.0 | 94.5 | -11,277 | 10,850 | 0 | 35,168 |
| | 1505+00 | 548 | 500 | 1850.8 | 1839.1 | 1851.5 | 1851.5 | 1,897.7 | 920,403 | 914,411 | 914,431 | 914,431 | 934,470 | -11.7 | 12.4 | 0.0 | 46.1 | -5,992 | 20 | 0 | 20,039 |
| | 1510+00 | 565 | 500 | 1830.8 | 1818.5 | 1806.2 | 1806.2 | 1,840.2 | 913,223 | 929,178 | 899,300 | 899,300 | 900,091 | -12.3 | -12.3 | 0.0 | 34.0 | 15,955 | -29,878 | 0 | 791 |
| | 1515+00 | 568 | 500 | 1822.1 | 1898.2 | 1791.0 | 1791.0 | 1,760.1 | 946,349 | 952,601 | 913,020 | 913,020 | 918,285 | 76.1 | -107.2 | 0.0 | -30.9 | 6,252 | -39,581 | 0 | 5,265 |
| | 1520+00 | 478 | 500 | 1963.3 | 1912.2 | 1861.1 | 1861.1 | 1,913.0 | 988,810 | 967,418 | 952,362 | 952,362 | 972,368 | -51.1 | -51.1 | 0.0 | 51.9 | -21,392 | -15,057 | 0 | 20,006 |
| | 1525+00 | 408 | 500 | 1991.9 | 1957.5 | 1948.4 | 1948.4 | 1,976.5 | 982,846 | 975,478 | 970,312 | 970,312 | 982,771 | -34.5 | -9.1 | 0.0 | 28.1 | -7,368 | -5,166 | 0 | 12,459 |
| | 1530+00 | 399 | 500 | 1939.4 | 1944.4 | 1932.9 | 1932.9 | 1,954.6 | 956,579 | 954,876 | 954,167 | 954,167 | 950,981 | 5.0 | -11.5 | 0.0 | 21.7 | -1,704 | -708 | 0 | -3,187 |
| | 1535+00 | 423 | 500 | 1886.9 | 1875.1 | 1883.8 | 1883.8 | 1,849.3 | 923,976 | 926,097 | 920,791 | 920,791 | 897,463 | -11.8 | 8.7 | 0.0 | -34.5 | 2,121 | -5,305 | 0 | -23,329 |
| | 1540+00 | 422 | 500 | 1809.0 | 1829.3 | 1799.4 | 1799.4 | 1,740.5 | 893,016 | 900,644 | 938,953 | 938,953 | 896,850 | 20.3 | -29.9 | 0.0 | -58.8 | 7,628 | 38,309 | 0 | -42,102 |
| | 1545+00 | 376 | 500 | 1763.0 | 1773.3 | 1956.4 | 1956.4 | 1,846.9 | 849,013 | 856,022 | 929,913 | 938,141 | 929,990 | 10.2 | 183.2 | 0.0 | -109.6 | 7,009 | 73,891 | 8,228 | -8,151 |
| 3 - "Pier" | 1550+00 | 327 | 500 | 1633.0 | 1650.8 | 1763.2 | 1796.1 | 1,873.1 | 789,847 | 793,610 | 849,346 | 868,203 | 882,825 | 17.8 | 112.4 | 32.9 | 77.0 | 3,763 | 55,736 | 18,858 | 14,621 |
| | 1555+00 | 338 | 500 | 1526.4 | 1523.6 | 1634.2 | 1676.7 | 1,658.2 | 741,961 | 751,014 | 787,857 | 802,762 | 794,328 | -2.8 | 110.6 | 42.5 | -18.5 | 9,053 | 36,844 | 14,905 | -8,434 |
| | 1560+00 | 347 | 500 | 1441.5 | 1480.4 | 1517.3 | 1534.4 | 1,519.1 | 697,529 | 715,976 | 737,149 | 752,602 | 742,427 | 39.0 | 36.8 | 17.1 | -15.2 | 18,447 | 21,173 | 15,452 | -10,175 |
| | 1565+00 | 344 | 500 | 1348.6 | 1383.5 | 1431.3 | 1476.0 | 1,450.6 | 680,609 | 676,250 | 710,167 | 733,488 | 720,299 | 34.8 | 47.9 | 44.7 | -25.5 | -4,360 | 33,917 | 23,322 | -13,189 |
| | 1570+00 | 314 | 500 | 1373.8 | 1321.5 | 1409.3 | 1457.9 | 1,430.6 | 739,895 | 713,478 | 742,195 | 769,059 | 763,151 | -52.3 | 87.8 | 48.6 | -27.3 | -26,417 | 28,717 | 26,864 | -5,908 |
| | 1575+00 | 168 | 500 | 1585.8 | 1532.4 | 1559.4 | 1618.3 | 1,622.0 | 778,765 | 755,018 | 768,738 | 796,669 | 800,613 | -53.4 | 27.1 | 58.9 | 3.7 | -23,747 | 13,720 | 27,932 | 3,943 |
| | 1580+00 | 179 | 500 | 1529.3 | 1487.7 | 1515.5 | 1568.4 | 1,580.5 | 737,768 | 743,318 | 739,776 | 774,921 | 778,039 | -41.6 | 27.8 | 52.9 | 12.1 | 5,551 | -3,542 | 35,145 | 3,118 |
| | 1585+00 | 183 | 500 | 1421.8 | 1485.6 | 1443.6 | 1531.3 | 1,531.7 | 687,757 | 713,522 | 709,936 | 747,225 | 743,038 | 63.8 | -42.0 | 87.7 | 0.4 | 25,765 | -3,586 | 37,289 | -4,187 |
| 4 - "Central" | 1590+00 | 209 | 500 | 1329.2 | 1368.5 | 1396.1 | 1457.6 | 1,440.4 | 634,814 | 667,880 | 690,931 | 726,811 | 710,955 | 39.3 | 27.6 | 61.4 | -17.1 | 33,067 | 23,050 | 35,881 | -15,856 |
| | 1595+00 | 188 | 500 | 1210.0 | 1303.0 | 1367.6 | 1449.7 | 1,403.4 | 615,744 | 651,934 | 673,155 | 724,745 | 704,141 | 93.0 | 64.6 | 82.1 | -46.3 | 36,190 | 21,221 | 51,590 | -20,604 |
| | 1600+00 | 165 | 500 | 1253.0 | 1304.7 | 1325.0 | 1449.3 | 1,413.2 | 637,169 | 654,569 | 660,823 | 721,991 | 701,611 | 51.8 | 20.3 | 124.3 | -36.1 | 17,400 | 6,253 | 61,168 | -20,379 |
| | 1605+00 | 162 | 500 | 1295.7 | 1313.6 | 1318.3 | 1438.7 | 1,393.3 | 653,263 | 661,668 | 654,005 | 722,784 | 702,810 | 17.8 | 4.7 | 120.4 | -45.4 | 8,404 | -7,663 | 68,779 | -19,975 |
| | 1610+00 | 163 | 500 | 1317.3 | 1333.1 | 1297.8 | 1452.5 | 1,418.0 | 656,085 | 672,084 | 665,850 | 728,593 | 720,111 | 15.8 | -35.3 | 154.7 | -34.5 | 15,999 | -6,235 | 62,743 | -8,482 |
| | 1615+00 | 142 | 500 | 1307.0 | 1355.2 | 1365.6 | 1461.9 | 1,462.5 | 646,620 | 678,159 | 675,404 | 715,670 | 731,333 | 48.2 | 10.4 | 96.3 | 0.6 | 31,539 | -2,755 | 40,266 | 15,663 |
| | 1620+00 | 142 | 500 | 1279.5 | 1357.4 | 1336.0 | 1400.8 | 1,462.9 | 660,463 | 676,402 | 690,319 | 720,271 | 740,424 | 77.9 | -21.4 | 64.8 | 62.1 | 15,939 | 13,916 | 29,953 | 20,153 |
| | 1625+00 | 116 | 500 | 1362.4 | 1348.2 | 1425.3 | 1480.3 | 1,498.8 | 663,472 | 679,256 | 700,456 | 728,404 | 744,454 | -14.2 | 77.1 | 55.0 | 18.5 | 15,783 | 21,200 | 27,948 | 16,050 |
| | 1630+00 | 125 | 500 | 1291.5 | 1368.8 | 1376.5 | 1433.3 | 1,479.0 | 659,955 | 692,560 | 676,083 | 718,496 | 738,943 | 77.3 | 7.7 | 56.8 | 45.7 | 32,605 | -16,477 | 42,413 | 20,447 |
| | 1635+00 | 117 | 500 | 1348.3 | 1401.4 | 1327.8 | 1440.7 | 1,476.8 | 671,217 | 699,776 | 683,910 | 726,719 | 737,333 | 53.1 | -73.6 | 112.9 | 36.1 | 28,559 | -15,866 | 42,809 | 10,614 |
| | 1640+00 | 114 | 500 | 1336.6 | 1397.7 | 1407.8 | 1466.2 | 1,472.6 | 672,406 | 692,570 | 687,644 | 714,727 | 725,446 | 61.1 | 10.2 | 58.4 | 6.3 | 20,163 | -4,925 | 27,082 | 10,719 |
| | 1645+00 | 126 | 500 | 1353.1 | 1372.6 | 1342.7 | 1392.7 | 1,429.2 | 681,129 | 691,157 | 660,489 | 695,526 | 717,116 | 19.5 | -29.9 | 50.0 | 36.5 | 10,029 | -30,669 | 35,037 | 21,590 |
| | 1650+00 | 108 | 500 | 1371.4 | 1392.0 | 1299.2 | 1389.4 | 1,439.2 | 684,448 | 691,747 | 683,327 | 711,660 | 718,949 | 20.6 | -92.8 | 90.2 | 49.8 | 7,299 | -8,420 | 28,333 | 7,288 |
| | 1655+00 | 72 | 500 | 1366.3 | 1374.9 | 1434.1 | 1457.2 | 1,436.6 | 675,940 | 692,540 | 708,703 | 720,455 | 725,583 | 8.6 | 59.1 | 23.1 | -20.7 | 16,600 | 16,163 | 11,753 | 5,127 |
| | 1660+00 | 47 | 500 | 1337.4 | 1395.2 | 1400.7 | 1424.6 | 1,465.8 | 714,939 | 711,994 | 697,514 | 718,748 | 739,532 | 57.8 | 5.5 | 23.9 | 41.2 | -2,945 | -14,480 | 21,234 | 20,784 |
| | 1665+00 | 12 | 500 | 1522.3 | 1452.8 | 1389.3 | 1450.4 | 1,492.4 | 715,402 | 696,855 | 662,399 | 692,366 | 699,277 | -69.6 | -63.4 | 61.1 | 42.0 | -18,546 | -34,456 | 29,967 | 6,911 |
| | 1670+00 | 88 | 500 | 1339.3 | 1334.7 | 1260.3 | 1319.1 | 1,304.7 | 687,433 | 673,320 | 642,684 | 672,761 | 664,966 | -4.6 | -74.4 | 58.8 | -14.3 | -14,114 | -30,636 | 30,077 | -7,795 |
| | 1675+00 | 75 | 500 | 1410.5 | 1358.6 | 1310.5 | 1372.0 | 1,355.1 | 708,816 | 689,881 | 670,001 | 691,500 | 686,605 | -51.9 | -48.1 | 61.5 | -16.9 | -18,934 | -19,880 | 21,499 | -4,895 |
| 5 - "South" | 1680+00 | 57 | 500 | 1424.8 | 1400.9 | 1369.5 | 1394.0 | 1,391.3 | 728,197 | 721,146 | 691,629 | 705,511 | 724,575 | -23.9 | -31.4 | 24.5 | -2.7 | -7,051 | -29,517 | 13,881 | 19,065 |
| | 1685+00 | 4 | 500 | 1488.0 | 1483.7 | 1397.0 | 1428.0 | 1,507.0 | 751,749 | 759,849 | 720,956 | 728,717 | 769,013 | -4.3 | -86.7 | 31.0 | 79.0 | 8,099 | -38,892 | 7,760 | 40,296 |
| | 1690+00 | 1 | 500 | 1519.0 | 1555.7 | 1486.8 | 1486.8 | 1,569.1 | 765,368 | 777,662 | 756,091 | 756,091 | 792,083 | 36.7 | -68.9 | 0.0 | 82.2 | 12,294 | -21,570 | 0 | 35,991 |
| | 1695+00 | 17 | 500 | 1542.5 | 1554.9 | 1537.5 | 1537.5 | 1,599.3 | 764,332 | 790,849 | 767,662 | 767,662 | 803,243 | 12.5 | -17.4 | 0.0 | 61.8 | 26,517 | -23,187 | 0 | 35,581 |
| | 1700+00 | 18 | - | 1514.9 | 1608.5 | 1533.1 | 1533.1 | 1,613.7 | - | - | - | - | - | 93.6 | -75.3 | 0.0 | 80.6 | - | - | - | - |

| Reach | Dist to Next | Unit Volume (cy/ft) | | | | | Total Volume (cy) | | | | | Unit Volume Change Since Last Survey (cy/ft) | | | | Total Volume Change Since Last Survey (cy) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 |
| **1 - "NPS"** | **3,000** | 1842.7 | 1831.9 | 1890.2 | 1890.2 | 1921.4 | 5,528,069 | 5,495,563 | 5,670,497 | 5,670,497 | 5,764,282 | -10.8 | 58.3 | 0.0 | 31.3 | -32,506 | 174,934 | 0 | 93,785 |
| **2 - "North Avon"** | **5,000** | 1865.5 | 1863.8 | 1869.2 | 1870.9 | 1874.3 | 9,327,615 | 9,318,848 | 9,346,223 | 9,354,451 | 9,371,409 | -1.8 | 5.5 | 1.6 | 3.4 | -8,767 | 27,375 | 8,228 | 16,959 |
| **3 - "Pier"** | **4,000** | 1463.5 | 1465.5 | 1511.3 | 1561.2 | 1556.2 | 5,854,130 | 5,862,185 | 6,045,163 | 6,244,930 | 6,224,719 | 2.0 | 45.7 | 49.9 | -5.1 | 8,055 | 182,978 | 199,766 | -20,210 |
| **4 - "Central"** | **9,000** | 1337.7 | 1363.8 | 1353.7 | 1428.0 | 1434.4 | 12,039,315 | 12,274,352 | 12,183,695 | 12,852,226 | 12,909,588 | 26.1 | -10.1 | 74.3 | 6.4 | 235,037 | -90,657 | 668,532 | 57,362 |
| **5 - "South"** | **2,000** | 1504.8 | 1524.8 | 1468.2 | 1479.0 | 1544.5 | 3,009,646 | 3,049,505 | 2,936,338 | 2,957,980 | 3,088,914 | 19.9 | -56.6 | 10.8 | 65.5 | 39,859 | -113,167 | 21,642 | 130,934 |
| **Project** | **13,000** | **1376.4** | **1395.1** | **1402.2** | **1469.0** | **1471.9** | **17,893,444** | **18,136,537** | **18,228,858** | **19,097,156** | **19,134,307** | **18.7** | **7.1** | **66.8** | **2.9** | **243,093** | **92,321** | **868,298** | **37,151** |
| **All** | **23,000** | **1554.7** | **1565.2** | **1573.1** | **1612.2** | **1624.3** | **35,758,774** | **36,000,453** | **36,181,916** | **37,080,084** | **37,358,913** | **10.5** | **7.9** | **39.1** | **12.1** | **241,679** | **181,463** | **898,168** | **278,829** |

| Reach | Dist to Next | Unit Volume (cy/ft) | | | | | Total Volume (cy) | | | | | UV Change Since 2020 (cy/ft) | | | | TV Change Since 2020 (cy) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 |
| **1 - "NPS"** | **3,000** | 1842.7 | 1831.9 | 1890.2 | 1890.2 | 1921.4 | 5,528,069 | 5,495,563 | 5,670,497 | 5,670,497 | 5,764,282 | -10.8 | 47.5 | 47.5 | 78.7 | -32,506 | 142,427 | 142,427 | 236,212 |
| **2 - "North Avon"** | **5,000** | 1865.5 | 1863.8 | 1869.2 | 1870.9 | 1874.3 | 9,327,615 | 9,318,848 | 9,346,223 | 9,354,451 | 9,371,409 | -1.8 | 3.7 | 5.4 | 8.8 | -8,767 | 18,608 | 26,836 | 43,795 |
| **3 - "Pier"** | **4,000** | 1463.5 | 1465.5 | 1511.3 | 1561.2 | 1556.2 | 5,854,130 | 5,862,185 | 6,045,163 | 6,244,930 | 6,224,719 | 2.0 | 47.8 | 97.7 | 92.6 | 8,055 | 191,033 | 390,800 | 370,590 |
| **4 - "Central"** | **9,000** | 1337.7 | 1363.8 | 1353.7 | 1428.0 | 1434.4 | 12,039,315 | 12,274,352 | 12,183,695 | 12,852,226 | 12,909,588 | 26.1 | 16.0 | 90.3 | 96.7 | 235,037 | 144,380 | 812,912 | 870,273 |
| **5 - "South"** | **2,000** | 1504.8 | 1524.8 | 1468.2 | 1479.0 | 1544.5 | 3,009,646 | 3,049,505 | 2,936,338 | 2,957,980 | 3,088,914 | 19.9 | -36.7 | -25.8 | 39.6 | 39,859 | -73,307 | -51,666 | 79,268 |
| **Project** | **13,000** | **1376.4** | **1395.1** | **1402.2** | **1469.0** | **1471.9** | **17,893,444** | **18,136,537** | **18,228,858** | **19,097,156** | **19,134,307** | **18.7** | **25.8** | **92.6** | **95.5** | **243,093** | **335,414** | **1,203,712** | **1,240,863** |
| **All** | **23,000** | **1554.7** | **1565.2** | **1573.1** | **1612.2** | **1624.3** | **35,758,774** | **36,000,453** | **36,181,916** | **37,080,084** | **37,358,913** | **10.5** | **18.4** | **57.4** | **69.6** | **241,679** | **423,142** | **1,321,310** | **1,600,138** |

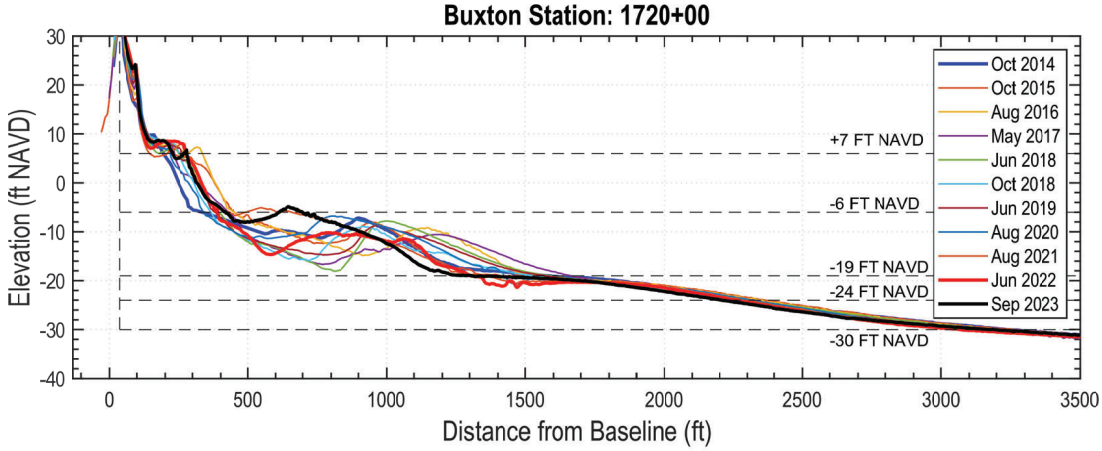
| Volumes from Dune Crest to -6 ft NAVD | | | | Unit Volume (cy/ft) | | | | | Total Volume (cy) | | | | | Unit Volume Change Since Last Survey (cy/ft) | | | | Total Volume Change Since Last Survey (cy) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reach | Station | Offset | Distance to Next | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 |
| 1 - "NPS" | 1470+00 | 495 | 500 | 418.4 | 418.4 | 397.6 | 397.6 | 463.3 | 161,014 | 161,031 | 159,852 | 159,852 | 180,603 | 0.0 | -20.8 | 0.0 | 65.7 | 17 | -1,179 | 0 | 20,750 |
| | 1475+00 | 733 | 500 | 225.6 | 225.7 | 241.8 | 241.8 | 259.2 | 107,292 | 107,198 | 105,059 | 105,059 | 122,535 | 0.1 | 16.1 | 0.0 | 17.3 | -94 | -2,139 | 0 | 17,476 |
| | 1480+00 | 718 | 500 | 203.5 | 203.1 | 178.4 | 178.4 | 231.0 | 117,506 | 116,125 | 100,346 | 100,346 | 130,854 | -0.4 | -24.7 | 0.0 | 52.6 | -1,381 | -15,779 | 0 | 30,508 |
| | 1485+00 | 623 | 500 | 266.5 | 261.4 | 223.0 | 223.0 | 292.4 | 135,206 | 133,805 | 119,146 | 119,146 | 142,837 | -5.1 | -38.5 | 0.0 | 69.5 | -1,400 | -14,660 | 0 | 23,692 |
| | 1490+00 | 595 | 500 | 274.3 | 273.8 | 253.6 | 253.6 | 278.9 | 120,433 | 123,707 | 122,722 | 122,722 | 130,744 | -0.5 | -20.2 | 0.0 | 25.3 | 3,274 | -985 | 0 | 8,021 |
| | 1495+00 | 658 | 500 | 207.4 | 221.0 | 237.3 | 237.3 | 244.1 | 126,873 | 138,200 | 143,703 | 143,703 | 149,871 | 13.6 | 16.2 | 0.0 | 6.8 | 11,328 | 5,503 | 0 | 6,168 |
| 2 - "North Avon" | 1500+00 | 512 | 500 | 300.1 | 331.8 | 337.5 | 337.5 | 355.4 | 132,568 | 146,635 | 146,051 | 146,051 | 154,667 | 31.7 | 5.8 | 0.0 | 17.9 | 14,067 | -584 | 0 | 8,616 |
| | 1505+00 | 548 | 500 | 230.2 | 254.8 | 246.7 | 246.7 | 263.2 | 116,557 | 125,192 | 119,654 | 119,654 | 128,445 | 24.6 | -8.1 | 0.0 | 16.6 | 8,635 | -5,538 | 0 | 8,791 |
| | 1510+00 | 565 | 500 | 236.0 | 246.0 | 231.9 | 231.9 | 250.5 | 115,123 | 122,165 | 122,164 | 122,164 | 122,916 | 10.0 | -14.1 | 0.0 | 18.6 | 7,043 | -2 | 0 | 752 |
| | 1515+00 | 568 | 500 | 224.5 | 242.7 | 256.7 | 256.7 | 241.1 | 123,289 | 136,200 | 138,592 | 138,592 | 134,812 | 18.2 | 14.0 | 0.0 | -15.6 | 12,911 | 2,391 | 0 | -3,780 |
| | 1520+00 | 478 | 500 | 268.7 | 302.1 | 297.7 | 297.7 | 298.1 | 145,643 | 161,666 | 153,054 | 153,054 | 159,517 | 33.4 | -4.5 | 0.0 | 0.5 | 16,023 | -8,612 | 0 | 6,463 |
| | 1525+00 | 408 | 500 | 313.9 | 344.5 | 314.6 | 314.6 | 339.9 | 151,189 | 169,477 | 161,281 | 161,281 | 167,360 | 30.7 | -30.0 | 0.0 | 25.4 | 18,288 | -8,196 | 0 | 6,079 |
| | 1530+00 | 399 | 500 | 290.9 | 333.4 | 330.6 | 330.6 | 329.5 | 146,239 | 165,406 | 164,662 | 164,662 | 165,778 | 42.5 | -2.8 | 0.0 | -1.1 | 19,167 | -744 | 0 | 1,115 |
| | 1535+00 | 423 | 500 | 294.1 | 328.2 | 328.1 | 328.1 | 333.6 | 128,360 | 147,271 | 144,608 | 144,608 | 155,032 | 34.2 | -0.2 | 0.0 | 5.5 | 18,911 | -2,664 | 0 | 10,424 |
| | 1540+00 | 422 | 500 | 219.4 | 260.8 | 250.4 | 250.4 | 286.5 | 108,514 | 126,791 | 129,925 | 129,925 | 145,098 | 41.5 | -10.5 | 0.0 | 36.2 | 18,277 | 3,134 | 0 | 15,172 |
| | 1545+00 | 376 | 500 | 214.7 | 246.3 | 269.4 | 269.4 | 293.9 | 114,105 | 126,845 | 137,483 | 142,683 | 149,513 | 31.6 | 23.0 | 0.0 | 24.5 | 12,739 | 10,638 | 5,200 | 6,830 |
| 3 - "Pier" | 1550+00 | 327 | 500 | 241.7 | 261.1 | 280.6 | 301.4 | 304.2 | 104,641 | 117,843 | 121,017 | 138,040 | 138,515 | 19.3 | 19.5 | 20.8 | 2.8 | 13,202 | 3,174 | 17,024 | 474 |
| | 1555+00 | 338 | 500 | 176.8 | 210.3 | 203.5 | 250.8 | 249.9 | 72,427 | 91,971 | 95,847 | 116,535 | 111,590 | 33.5 | -6.8 | 47.3 | -0.9 | 19,544 | 3,876 | 20,688 | -4,944 |
| | 1560+00 | 347 | 500 | 112.9 | 157.6 | 179.9 | 215.4 | 196.5 | 50,562 | 68,294 | 73,921 | 96,500 | 81,824 | 44.7 | 22.3 | 35.5 | -18.9 | 17,732 | 5,627 | 22,580 | -14,676 |
| | 1565+00 | 344 | 500 | 89.4 | 115.6 | 115.8 | 170.6 | 130.8 | 47,217 | 53,335 | 46,365 | 75,999 | 55,134 | 26.2 | 0.2 | 54.9 | -39.8 | 6,118 | -6,970 | 29,634 | -20,865 |
| | 1570+00 | 314 | 500 | 99.5 | 97.7 | 69.7 | 133.4 | 89.7 | 72,410 | 71,023 | 57,551 | 90,658 | 74,143 | -1.8 | -28.1 | 63.7 | -43.6 | -1,386 | -13,472 | 33,107 | -16,516 |
| | 1575+00 | 168 | 500 | 190.1 | 186.4 | 160.5 | 229.3 | 206.8 | 84,601 | 86,568 | 72,655 | 106,443 | 90,173 | -3.8 | -25.8 | 68.8 | -22.4 | 1,967 | -13,913 | 33,788 | -16,271 |
| | 1580+00 | 179 | 500 | 148.3 | 159.9 | 130.1 | 196.5 | 153.8 | 65,507 | 79,257 | 55,212 | 95,671 | 78,556 | 11.6 | -29.8 | 66.4 | -42.7 | 13,749 | -24,045 | 40,459 | -17,115 |
| | 1585+00 | 183 | 500 | 113.8 | 157.1 | 90.8 | 186.2 | 160.4 | 48,214 | 64,200 | 39,801 | 85,341 | 71,087 | 43.4 | -66.4 | 95.4 | -25.8 | 15,986 | -24,400 | 45,540 | -14,254 |
| 4 - "Central" | 1590+00 | 209 | 500 | 79.1 | 99.7 | 68.5 | 155.2 | 124.0 | 28,327 | 47,416 | 36,277 | 82,155 | 59,891 | 20.6 | -31.2 | 86.7 | -31.2 | 19,089 | -11,139 | 45,878 | -22,263 |
| | 1595+00 | 188 | 500 | 34.2 | 90.0 | 76.7 | 173.4 | 115.6 | 17,490 | 44,484 | 32,901 | 87,066 | 56,543 | 55.8 | -13.3 | 96.8 | -57.8 | 26,994 | -11,583 | 54,165 | -30,523 |
| | 1600+00 | 165 | 500 | 35.7 | 88.0 | 54.9 | 174.8 | 110.6 | 20,168 | 40,764 | 29,058 | 88,127 | 53,917 | 52.2 | -33.0 | 119.9 | -64.2 | 20,596 | -11,705 | 59,069 | -34,210 |
| | 1605+00 | 162 | 500 | 44.9 | 75.1 | 61.3 | 177.7 | 105.1 | 29,486 | 38,478 | 23,353 | 85,118 | 53,888 | 30.2 | -13.8 | 116.4 | -72.6 | 8,992 | -15,125 | 61,765 | -31,230 |
| | 1610+00 | 163 | 500 | 73.0 | 78.8 | 32.1 | 162.8 | 110.5 | 35,087 | 41,411 | 28,343 | 83,290 | 60,272 | 5.8 | -46.7 | 130.7 | -52.3 | 6,325 | -13,069 | 54,947 | -23,018 |
| | 1615+00 | 142 | 500 | 67.3 | 86.8 | 81.2 | 170.4 | 130.6 | 27,560 | 44,647 | 38,389 | 80,533 | 65,185 | 19.5 | -5.6 | 89.1 | -39.7 | 17,087 | -6,257 | 42,143 | -15,347 |
| | 1620+00 | 142 | 500 | 42.9 | 91.8 | 72.3 | 151.8 | 130.1 | 25,698 | 49,843 | 37,582 | 76,914 | 64,193 | 48.8 | -19.4 | 79.4 | -21.6 | 24,145 | -12,261 | 39,333 | -12,721 |
| | 1625+00 | 116 | 500 | 59.9 | 107.6 | 78.0 | 155.9 | 126.7 | 27,748 | 50,711 | 40,552 | 76,998 | 62,437 | 47.7 | -29.6 | 77.9 | -29.2 | 22,963 | -10,159 | 36,446 | -14,561 |
| | 1630+00 | 125 | 500 | 51.1 | 95.2 | 84.2 | 152.1 | 123.1 | 31,704 | 50,750 | 38,840 | 78,004 | 62,186 | 44.1 | -11.0 | 67.9 | -29.0 | 19,046 | -11,910 | 39,164 | -15,818 |
| | 1635+00 | 117 | 500 | 75.7 | 107.8 | 71.2 | 159.9 | 125.7 | 38,133 | 55,494 | 37,206 | 79,740 | 63,983 | 32.1 | -36.6 | 88.8 | -34.3 | 17,361 | -18,288 | 42,534 | -15,757 |
| | 1640+00 | 114 | 500 | 76.8 | 114.2 | 77.7 | 159.0 | 130.3 | 37,843 | 56,507 | 43,420 | 79,366 | 62,170 | 37.4 | -36.6 | 81.4 | -28.8 | 18,664 | -13,087 | 35,946 | -17,196 |
| | 1645+00 | 126 | 500 | 74.5 | 111.8 | 96.0 | 158.4 | 118.4 | 41,967 | 59,043 | 45,951 | 82,544 | 62,870 | 37.3 | -15.8 | 62.4 | -40.0 | 17,076 | -13,092 | 36,593 | -19,674 |
| | 1650+00 | 108 | 500 | 93.3 | 124.4 | 87.8 | 171.8 | 133.1 | 46,881 | 62,861 | 51,450 | 87,270 | 70,754 | 31.0 | -36.6 | 84.0 | -38.7 | 15,980 | -11,411 | 35,820 | -16,516 |
| | 1655+00 | 72 | 500 | 94.2 | 127.1 | 118.0 | 177.3 | 149.9 | 50,404 | 67,143 | 60,184 | 90,262 | 74,381 | 32.9 | -9.1 | 59.3 | -27.4 | 16,739 | -6,959 | 30,077 | -15,881 |
| | 1660+00 | 47 | 500 | 107.4 | 141.5 | 122.7 | 183.7 | 147.6 | 63,583 | 77,602 | 63,678 | 96,239 | 79,669 | 34.1 | -18.8 | 61.0 | -36.1 | 14,019 | -13,924 | 32,561 | -16,569 |
| | 1665+00 | 12 | 500 | 146.9 | 168.9 | 132.0 | 201.2 | 171.1 | 60,445 | 71,571 | 50,909 | 83,481 | 68,451 | 22.0 | -36.9 | 69.2 | -30.1 | 11,126 | -20,662 | 32,571 | -15,029 |
| | 1670+00 | 88 | 500 | 94.9 | 117.4 | 71.6 | 132.7 | 102.7 | 55,341 | 60,090 | 43,173 | 73,267 | 61,218 | 22.5 | -45.7 | 61.0 | -30.0 | 4,749 | -16,917 | 30,095 | -12,050 |
| | 1675+00 | 75 | 500 | 126.5 | 123.0 | 101.0 | 160.4 | 142.2 | 62,817 | 67,515 | 57,530 | 78,640 | 69,617 | -3.5 | -22.0 | 59.3 | -18.2 | 4,697 | -9,984 | 21,110 | -9,023 |
| 5 - "South" | 1680+00 | 57 | 500 | 124.8 | 147.1 | 129.1 | 154.2 | 136.3 | 66,177 | 79,717 | 65,539 | 73,843 | 80,483 | 22.3 | -18.0 | 25.1 | -17.9 | 13,540 | -14,179 | 8,305 | 6,640 |
| | 1685+00 | 4 | 500 | 139.9 | 171.8 | 133.1 | 141.2 | 185.6 | 74,583 | 93,347 | 79,356 | 81,385 | 104,605 | 31.9 | -38.7 | 8.1 | 44.4 | 18,764 | -13,991 | 2,029 | 23,221 |
| | 1690+00 | 1 | 500 | 158.4 | 201.6 | 184.3 | 184.3 | 232.8 | 79,561 | 98,222 | 97,200 | 97,200 | 116,022 | 43.2 | -17.2 | 0.0 | 48.5 | 18,662 | -1,023 | 0 | 18,823 |
| | 1695+00 | 17 | 500 | 159.8 | 191.3 | 204.5 | 204.5 | 231.3 | 77,630 | 103,395 | 96,398 | 96,398 | 119,687 | 31.5 | 13.1 | 0.0 | 26.8 | 25,765 | -6,997 | 0 | 23,289 |
| | 1700+00 | 18 | - | 150.7 | 222.3 | 181.1 | 181.1 | 247.5 | - | - | - | - | - | 71.6 | -41.1 | 0.0 | 66.3 | - | - | - | - |

| Reach | Dist to Next | Unit Volume (cy/ft) | | | | | Total Volume (cy) | | | | | Unit Volume Change Since Last Survey (cy/ft) | | | | Total Volume Change Since Last Survey (cy) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Jul-20 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 | Aug-21 | May-22 | Aug-22 | Aug-23 |
| **1** | **3,000** | 256.1 | 260.0 | 250.3 | 250.3 | 285.8 | 768,323 | 780,067 | 750,829 | 750,829 | 857,445 | 3.9 | -9.7 | 0.0 | 35.5 | 11,744 | -29,238 | 0 | 106,616 |
| **2** | **5,000** | 256.3 | 285.5 | 283.5 | 284.5 | 296.6 | 1,281,588 | 1,427,650 | 1,417,473 | 1,422,674 | 1,483,137 | 29.2 | -2.0 | 1.0 | 12.1 | 146,062 | -10,176 | 5,200 | 60,463 |
| **3** | **4,000** | 136.4 | 158.1 | 140.6 | 201.3 | 175.3 | 545,580 | 632,492 | 562,368 | 805,189 | 701,021 | 21.7 | -17.5 | 60.7 | -26.0 | 86,911 | -70,123 | 242,820 | -104,167 |
| **4** | **9,000** | 77.9 | 109.6 | 84.3 | 165.4 | 128.0 | 700,680 | 986,328 | 758,795 | 1,489,012 | 1,151,625 | 31.7 | -25.3 | 81.1 | -37.5 | 285,648 | -227,533 | 730,216 | -337,386 |
| **5** | **2,000** | 149.0 | 187.3 | 169.2 | 174.4 | 210.4 | 297,951 | 374,682 | 338,492 | 348,825 | 420,798 | 38.4 | -18.1 | 5.2 | 36.0 | 76,731 | -36,190 | 10,334 | 71,973 |
| **Project** | **13,000** | **95.9** | **124.5** | **101.6** | **176.5** | **142.5** | **1,246,261** | **1,618,820** | **1,321,164** | **2,294,200** | **1,852,647** | **28.7** | **-22.9** | **74.8** | **-34.0** | **372,560** | **-297,656** | **973,037** | **-441,554** |
| **All** | **23,000** | **156.3** | **182.7** | **166.4** | **209.4** | **200.6** | **3,594,123** | **4,201,219** | **3,827,958** | **4,816,529** | **4,614,026** | **26.4** | **-16.2** | **43.0** | **-8.8** | **607,096** | **-373,261** | **988,571** | **-202,502** |

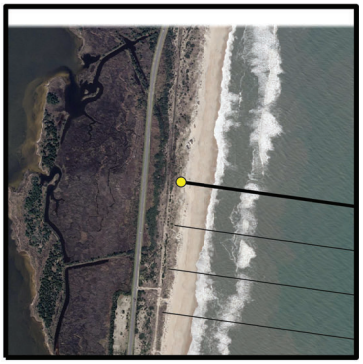
# APPENDIX A-3

# Buxton Beach Profiles

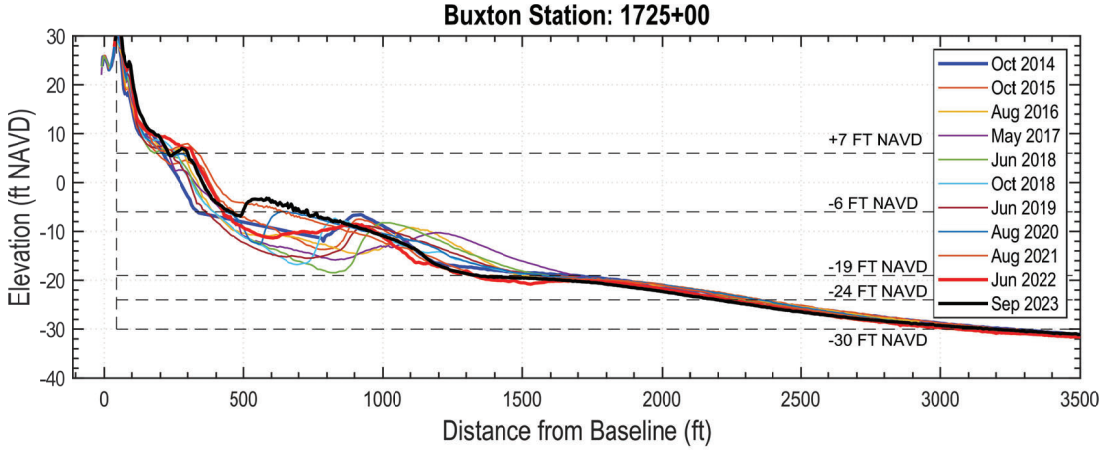
## Buxton Station: 1720+00



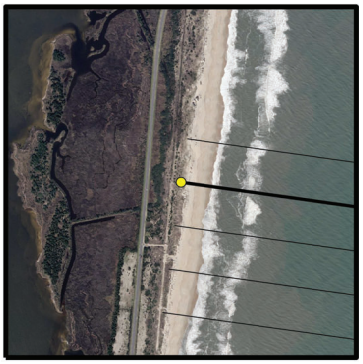

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 47.1 | 147.9 | 593.4 | 960.0 | 1561.3 |
| Oct 2015 | 49.5 | 204.2 | 643.4 | 1010.1 | 1615.7 |
| Aug 2016 | 54.7 | 218.2 | 690.1 | 1055.1 | 1653.3 |
| May 2017 | 57.2 | 188.8 | 614.4 | 963.9 | 1539.8 |
| Jun 2018 | 55.6 | 191.1 | 607.5 | 966.9 | 1562.2 |
| Oct 2018 | 64.3 | 190.9 | 583.6 | 932.3 | 1512.0 |
| Jun 2019 | 61.9 | 195.6 | 618.6 | 967.5 | 1550.7 |
| Aug 2020 | 60.9 | 176.5 | 643.5 | 995.5 | 1580.1 |
| Aug 2021 | 56.9 | 193.4 | 662.6 | 1012.1 | 1593.0 |
| Jun 2022 | 63.3 | 203.5 | 596.0 | 932.0 | 1503.4 |
| Sep 2023 | 62.3 | 198.7 | 644.9 | 986.8 | 1560.8 |



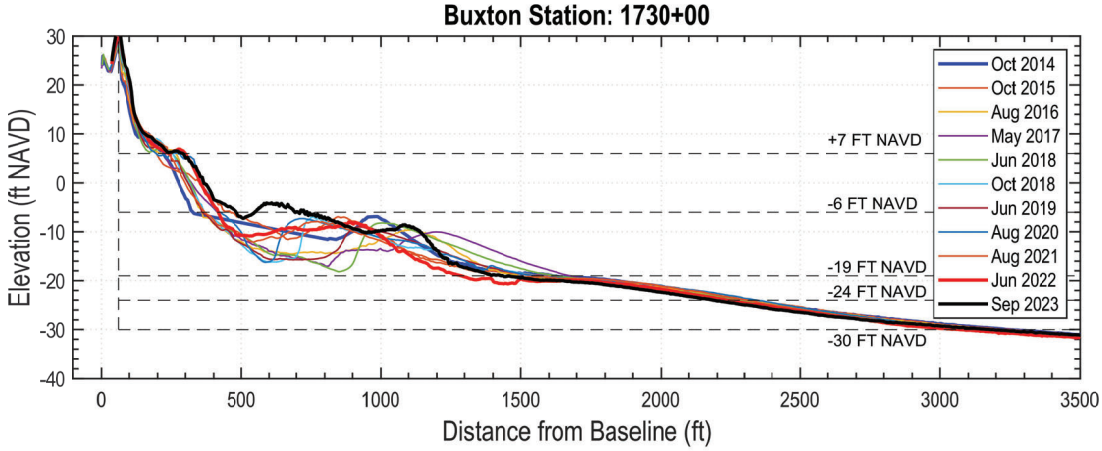
## Buxton Station: 1725+00



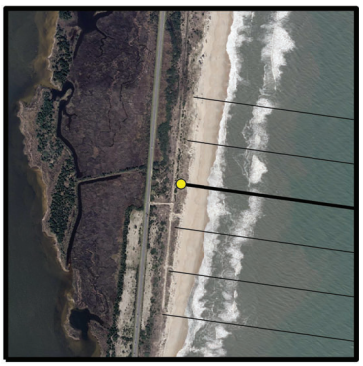

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 42.5 | 149.8 | 607.8 | 976.0 | 1573.4 |
| Oct 2015 | 41.4 | 187.4 | 609.7 | 977.9 | 1580.9 |
| Aug 2016 | 45.0 | 181.6 | 618.2 | 981.4 | 1575.7 |
| May 2017 | 47.9 | 178.4 | 617.5 | 966.5 | 1537.3 |
| Jun 2018 | 44.5 | 172.6 | 576.9 | 931.4 | 1517.8 |
| Oct 2018 | 50.5 | 178.8 | 584.7 | 932.3 | 1508.7 |
| Jun 2019 | 47.5 | 170.4 | 567.1 | 910.6 | 1490.1 |
| Aug 2020 | 49.5 | 198.0 | 686.9 | 1056.0 | 1643.1 |
| Aug 2021 | 56.3 | 234.0 | 700.8 | 1060.8 | 1643.2 |
| Jun 2022 | 62.6 | 218.1 | 635.1 | 972.7 | 1540.0 |
| Sep 2023 | 64.1 | 225.0 | 704.7 | 1040.9 | 1611.8 |



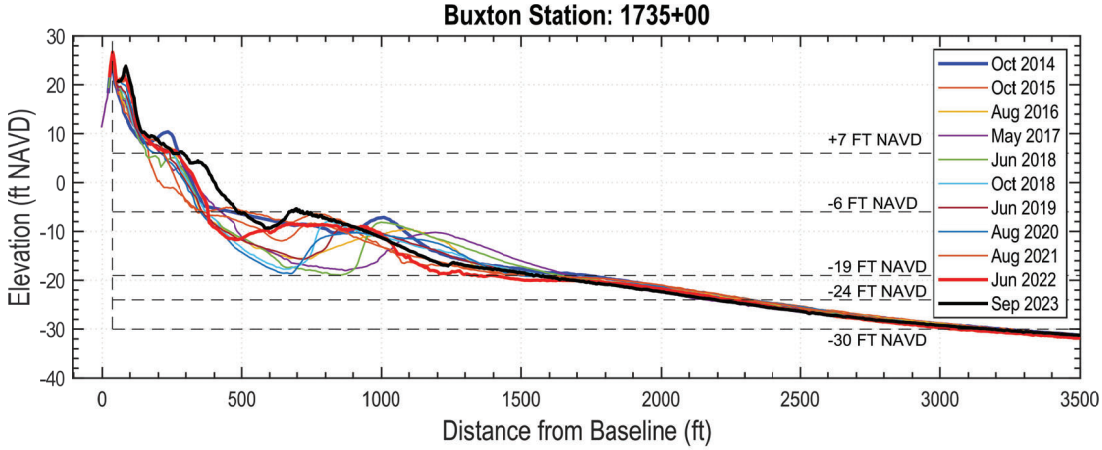
## Buxton Station: 1730+00



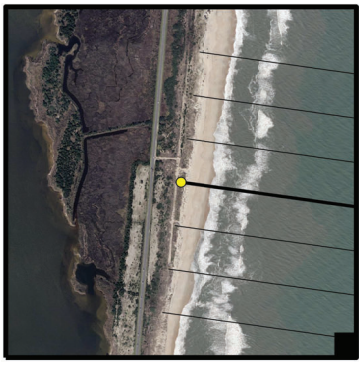

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 31.0 | 132.5 | 591.0 | 952.2 | 1543.6 |
| Oct 2015 | 32.1 | 156.2 | 605.3 | 969.9 | 1563.3 |
| Aug 2016 | 33.2 | 150.4 | 538.2 | 892.3 | 1478.0 |
| May 2017 | 36.6 | 156.3 | 573.0 | 914.7 | 1474.9 |
| Jun 2018 | 33.9 | 153.5 | 558.1 | 912.0 | 1495.3 |
| Oct 2018 | 40.9 | 159.1 | 562.3 | 906.7 | 1477.5 |
| Jun 2019 | 38.1 | 154.1 | 532.9 | 874.4 | 1448.9 |
| Aug 2020 | 40.4 | 177.1 | 617.6 | 981.1 | 1566.1 |
| Aug 2021 | 47.3 | 160.9 | 574.5 | 935.1 | 1512.5 |
| Jun 2022 | 43.4 | 182.3 | 594.7 | 930.0 | 1496.4 |
| Sep 2023 | 46.0 | 199.2 | 706.4 | 1039.9 | 1606.5 |



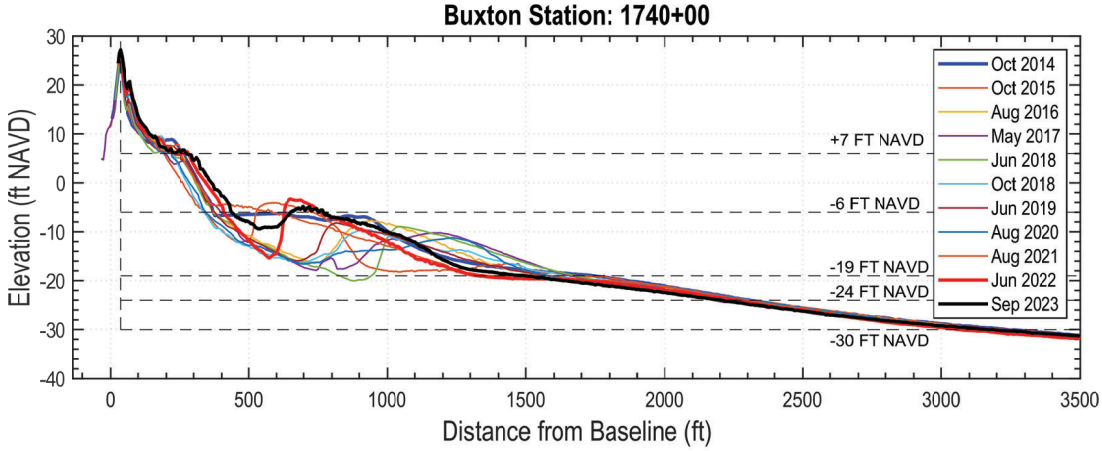
## Buxton Station: 1735+00



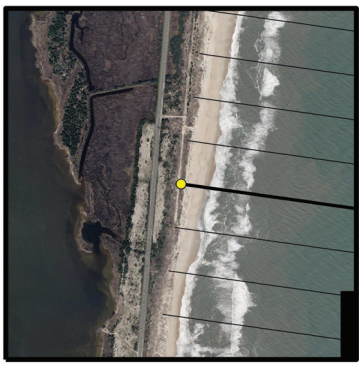

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 36.2 | 173.6 | 686.3 | 1054.2 | 1648.0 |
| Oct 2015 | 32.5 | 127.0 | 591.5 | 960.0 | 1561.1 |
| Aug 2016 | 34.7 | 161.8 | 570.0 | 929.2 | 1523.2 |
| May 2017 | 34.9 | 167.9 | 571.6 | 916.1 | 1483.5 |
| Jun 2018 | 33.6 | 156.3 | 553.4 | 907.9 | 1495.9 |
| Oct 2018 | 39.7 | 167.5 | 563.0 | 907.4 | 1481.6 |
| Jun 2019 | 39.1 | 163.7 | 569.0 | 911.5 | 1488.9 |
| Aug 2020 | 41.5 | 159.3 | 541.3 | 900.8 | 1492.7 |
| Aug 2021 | 48.4 | 159.2 | 582.7 | 951.2 | 1541.3 |
| Jun 2022 | 48.0 | 186.6 | 598.2 | 942.8 | 1515.1 |
| Sep 2023 | 53.4 | 222.3 | 705.0 | 1046.7 | 1621.7 |



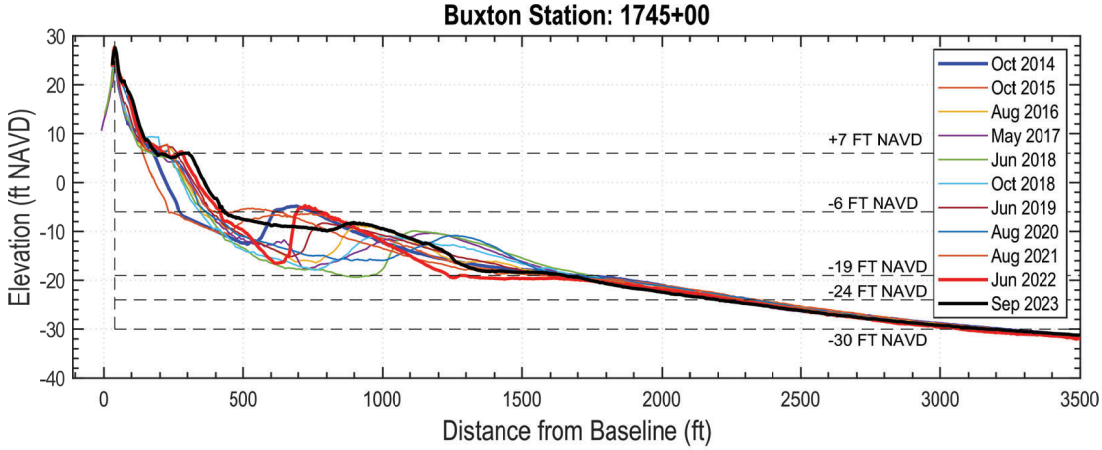
## Buxton Station: 1740+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 29.0 | 163.3 | 681.8 | 1052.4 | 1649.5 |
| Oct 2015 | 27.5 | 141.9 | 543.5 | 914.2 | 1514.0 |
| Aug 2016 | 27.6 | 157.8 | 592.8 | 952.7 | 1546.0 |
| May 2017 | 25.4 | 153.9 | 569.5 | 915.0 | 1485.5 |
| Jun 2018 | 23.8 | 149.5 | 548.0 | 901.3 | 1487.8 |
| Oct 2018 | 32.6 | 146.5 | 542.3 | 888.5 | 1462.8 |
| Jun 2019 | 29.5 | 161.2 | 581.6 | 924.2 | 1501.7 |
| Aug 2020 | 32.0 | 148.4 | 535.7 | 896.6 | 1489.8 |
| Aug 2021 | 36.2 | 176.2 | 626.4 | 986.9 | 1573.6 |
| Jun 2022 | 39.1 | 191.8 | 618.9 | 965.3 | 1540.7 |
| Sep 2023 | 40.9 | 197.5 | 688.0 | 1025.4 | 1603.5 |



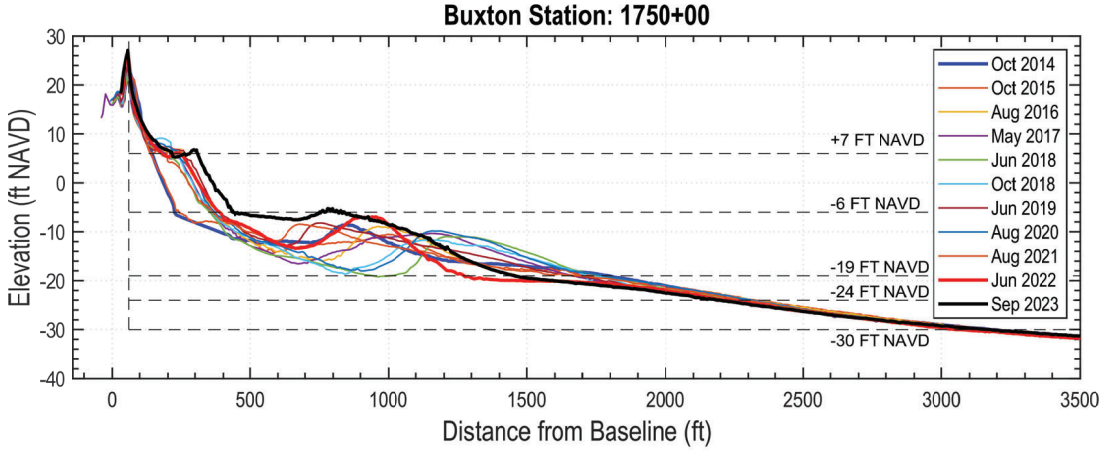
## Buxton Station: 1745+00



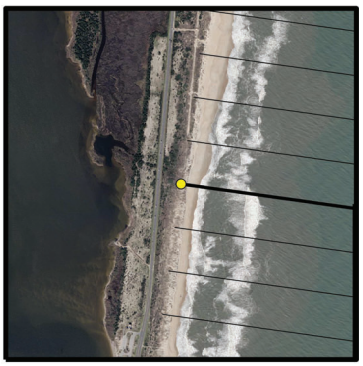

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 27.5 | 118.2 | 568.0 | 938.6 | 1533.1 |
| Oct 2015 | 25.7 | 94.7 | 560.2 | 931.3 | 1531.6 |
| Aug 2016 | 25.2 | 147.8 | 555.3 | 918.4 | 1510.2 |
| May 2017 | 26.6 | 151.9 | 577.1 | 923.3 | 1492.9 |
| Jun 2018 | 24.5 | 138.9 | 503.9 | 861.7 | 1445.7 |
| Oct 2018 | 32.2 | 147.1 | 531.9 | 884.0 | 1457.4 |
| Jun 2019 | 30.0 | 163.9 | 601.0 | 945.1 | 1520.2 |
| Aug 2020 | 37.2 | 160.7 | 571.8 | 939.9 | 1530.6 |
| Aug 2021 | 38.5 | 166.9 | 616.1 | 976.7 | 1562.9 |
| Jun 2022 | 40.4 | 182.5 | 589.5 | 933.5 | 1508.1 |
| Sep 2023 | 43.9 | 192.6 | 679.9 | 1025.3 | 1603.0 |



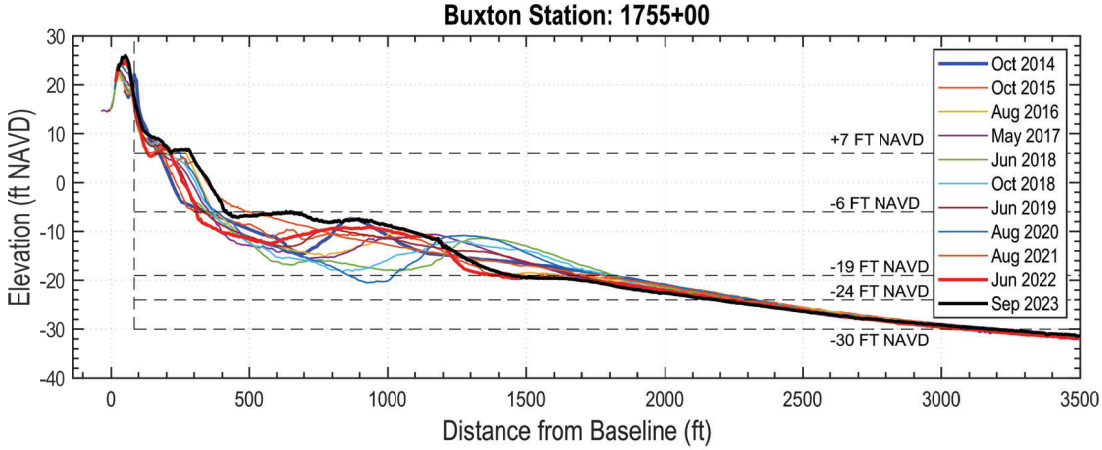
## Buxton Station: 1750+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 23.0 | 80.9 | 479.0 | 846.7 | 1431.4 |
| Oct 2015 | 21.4 | 80.8 | 471.0 | 838.7 | 1431.3 |
| Aug 2016 | 13.8 | 129.4 | 510.8 | 856.7 | 1444.0 |
| May 2017 | 14.6 | 120.5 | 536.0 | 877.0 | 1440.5 |
| Jun 2018 | 14.9 | 113.7 | 470.5 | 828.8 | 1406.5 |
| Oct 2018 | 20.2 | 128.3 | 512.5 | 861.7 | 1429.1 |
| Jun 2019 | 15.5 | 138.9 | 591.9 | 939.3 | 1509.6 |
| Aug 2020 | 22.3 | 137.0 | 544.9 | 913.1 | 1493.8 |
| Aug 2021 | 19.6 | 118.7 | 539.2 | 898.6 | 1478.1 |
| Jun 2022 | 20.0 | 135.6 | 543.2 | 873.4 | 1441.9 |
| Sep 2023 | 23.4 | 164.5 | 683.8 | 1012.7 | 1583.7 |



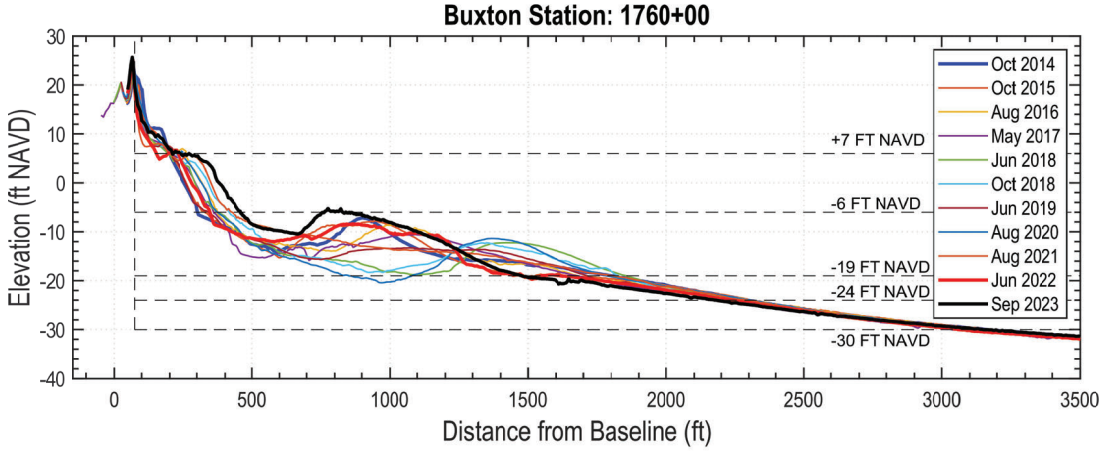
## Buxton Station: 1755+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 15.6 | 82.0 | 515.7 | 879.2 | 1457.5 |
| Oct 2015 | 10.7 | 81.5 | 496.8 | 859.8 | 1444.4 |
| Aug 2016 | 6.6 | 116.5 | 498.5 | 854.8 | 1434.9 |
| May 2017 | 8.3 | 100.8 | 496.3 | 832.5 | 1388.1 |
| Jun 2018 | 8.2 | 94.4 | 449.2 | 806.6 | 1381.2 |
| Oct 2018 | 9.6 | 110.0 | 476.4 | 827.0 | 1390.7 |
| Jun 2019 | 8.6 | 95.6 | 526.8 | 870.4 | 1435.4 |
| Aug 2020 | 14.1 | 120.9 | 487.4 | 845.8 | 1420.5 |
| Aug 2021 | 6.3 | 122.9 | 579.5 | 939.6 | 1512.7 |
| Jun 2022 | 6.3 | 88.1 | 492.2 | 828.0 | 1390.1 |
| Sep 2023 | 14.6 | 139.5 | 641.3 | 968.7 | 1533.2 |



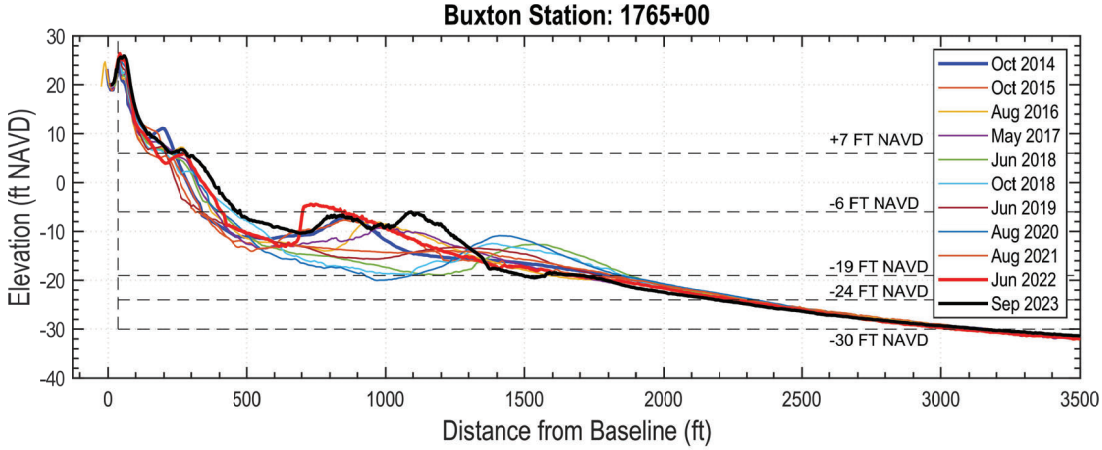
## Buxton Station: 1760+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 28.5 | 112.1 | 531.7 | 897.9 | 1476.7 |
| Oct 2015 | 23.7 | 111.4 | 521.7 | 885.0 | 1469.4 |
| Aug 2016 | 14.9 | 128.3 | 559.7 | 916.8 | 1497.8 |
| May 2017 | 15.4 | 116.6 | 516.7 | 856.8 | 1414.1 |
| Jun 2018 | 16.0 | 115.9 | 480.4 | 843.1 | 1417.2 |
| Oct 2018 | 14.9 | 134.2 | 512.1 | 868.6 | 1433.4 |
| Jun 2019 | 15.8 | 103.5 | 489.1 | 837.3 | 1405.4 |
| Aug 2020 | 21.7 | 132.2 | 469.2 | 827.6 | 1405.4 |
| Aug 2021 | 8.1 | 132.1 | 576.2 | 939.7 | 1514.9 |
| Jun 2022 | 9.5 | 104.9 | 534.3 | 880.0 | 1445.3 |
| Sep 2023 | 18.7 | 160.0 | 662.9 | 989.9 | 1555.6 |



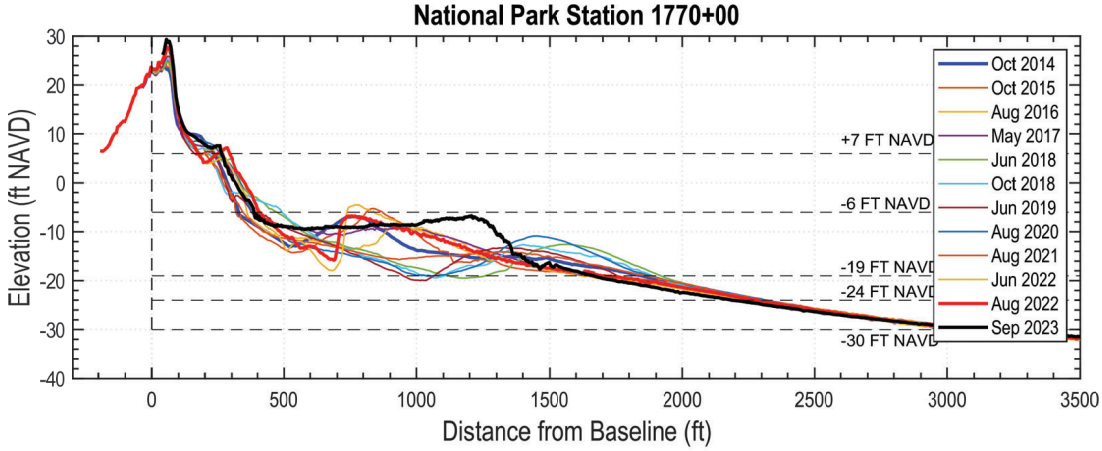
## Buxton Station: 1765+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 41.4 | 161.0 | 618.3 | 990.9 | 1576.5 |
| Oct 2015 | 42.2 | 148.5 | 603.0 | 976.1 | 1568.8 |
| Aug 2016 | 30.6 | 167.1 | 616.5 | 978.5 | 1567.2 |
| May 2017 | 34.6 | 168.8 | 625.1 | 972.5 | 1540.4 |
| Jun 2018 | 35.0 | 164.6 | 551.9 | 923.6 | 1503.4 |
| Oct 2018 | 34.0 | 169.5 | 567.8 | 935.6 | 1509.8 |
| Jun 2019 | 35.4 | 137.4 | 556.0 | 915.7 | 1491.3 |
| Aug 2020 | 44.2 | 182.0 | 559.3 | 934.2 | 1520.8 |
| Aug 2021 | 36.4 | 148.0 | 551.2 | 924.1 | 1509.4 |
| Jun 2022 | 41.1 | 184.0 | 678.3 | 1037.5 | 1611.4 |
| Sep 2023 | 49.6 | 210.0 | 755.3 | 1103.6 | 1677.0 |



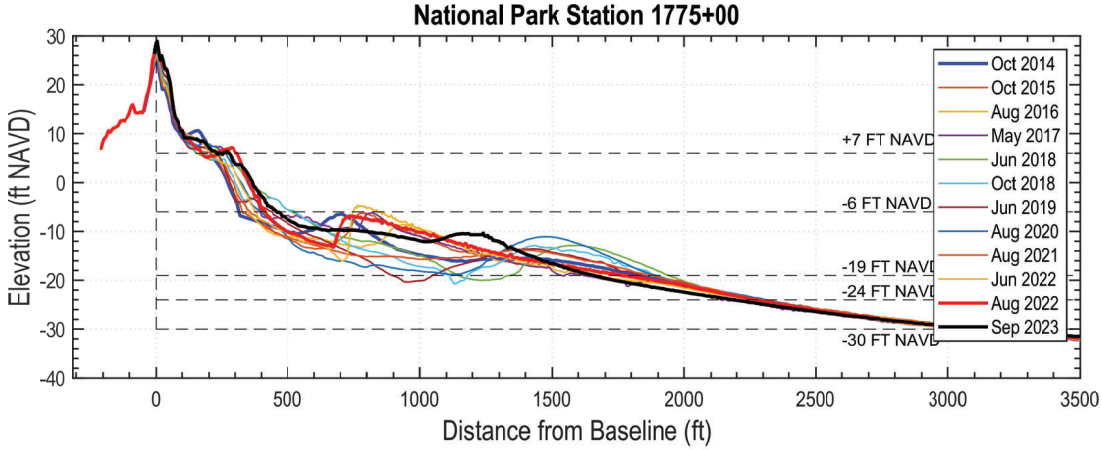
## National Park Station 1770+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 62.4 | 196.6 | 675.9 | 1058.4 | 1650.8 |
| Oct 2015 | 60.6 | 187.8 | 631.1 | 1009.8 | 1608.7 |
| Aug 2016 | 58.5 | 207.6 | 673.0 | 1042.9 | 1639.5 |
| May 2017 | 60.8 | 212.2 | 721.2 | 1074.5 | 1648.3 |
| Jun 2018 | 60.1 | 221.2 | 666.4 | 1050.1 | 1641.2 |
| Oct 2018 | 62.1 | 205.4 | 650.3 | 1029.0 | 1610.0 |
| Jun 2019 | 61.7 | 197.4 | 614.2 | 979.8 | 1562.3 |
| Aug 2020 | 72.7 | 227.5 | 656.4 | 1042.4 | 1634.5 |
| Aug 2021 | 70.3 | 198.8 | 625.2 | 1010.2 | 1602.0 |
| Jun 2022 | 70.6 | 222.1 | 693.1 | 1057.4 | 1634.9 |
| Aug 2022 | 68.5 | 228.4 | 714.5 | 1086.6 | 1675.7 |
| Sep 2023 | 80.7 | 231.9 | 813.8 | 1167.5 | 1749.4 |



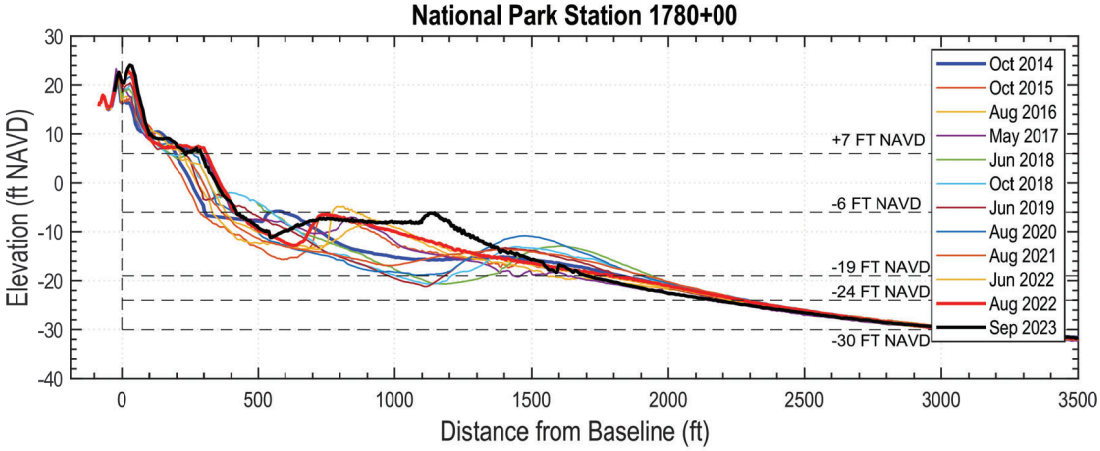
## National Park Station 1775+00



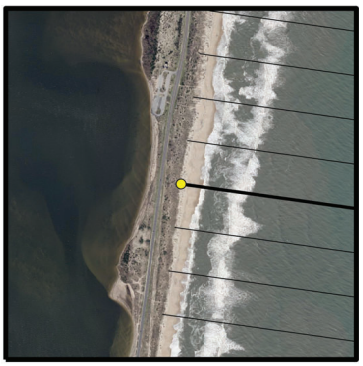

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 42.2 | 168.6 | 636.7 | 1017.0 | 1607.5 |
| Oct 2015 | 39.4 | 168.3 | 639.7 | 1019.7 | 1617.7 |
| Aug 2016 | 39.2 | 176.9 | 631.3 | 1000.5 | 1595.1 |
| May 2017 | 41.3 | 204.4 | 714.7 | 1064.3 | 1634.5 |
| Jun 2018 | 40.7 | 209.1 | 691.5 | 1073.2 | 1662.0 |
| Oct 2018 | 42.2 | 193.1 | 656.9 | 1034.8 | 1614.5 |
| Jun 2019 | 43.2 | 182.6 | 595.3 | 964.3 | 1546.2 |
| Aug 2020 | 48.4 | 201.0 | 613.0 | 999.3 | 1588.8 |
| Aug 2021 | 52.2 | 187.6 | 614.1 | 999.1 | 1586.3 |
| Jun 2022 | 52.2 | 200.6 | 696.4 | 1065.0 | 1641.8 |
| Aug 2022 | 48.6 | 213.7 | 730.4 | 1106.8 | 1694.0 |
| Sep 2023 | 52.3 | 222.4 | 755.3 | 1107.4 | 1687.5 |



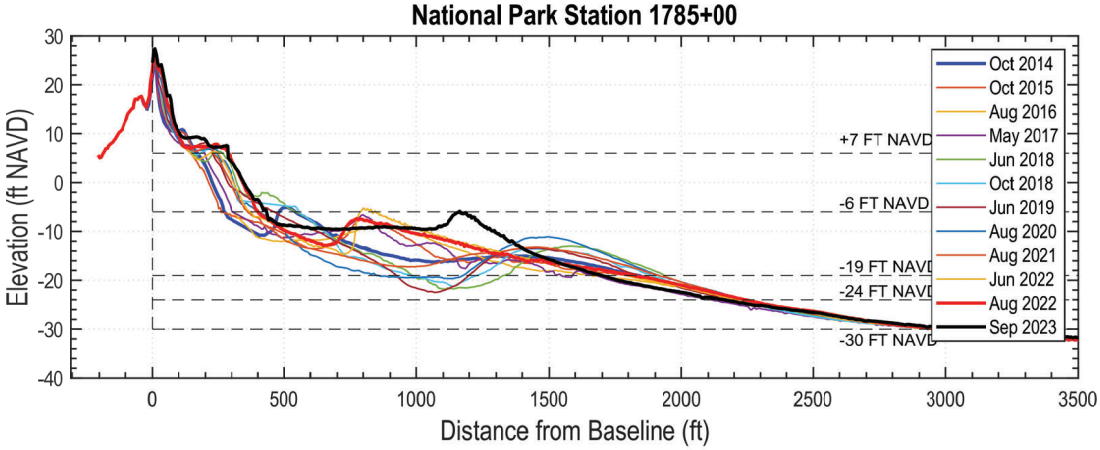
## National Park Station 1780+00



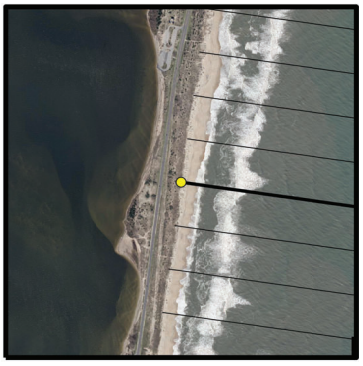

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 30.9 | 150.6 | 625.4 | 1003.3 | 1586.4 |
| Oct 2015 | 31.5 | 138.9 | 573.9 | 952.3 | 1543.2 |
| Aug 2016 | 28.2 | 159.6 | 598.5 | 959.2 | 1540.8 |
| May 2017 | 29.1 | 193.9 | 675.7 | 1025.2 | 1588.6 |
| Jun 2018 | 31.4 | 203.0 | 659.6 | 1034.8 | 1620.9 |
| Oct 2018 | 32.3 | 189.3 | 630.2 | 1001.7 | 1574.7 |
| Jun 2019 | 34.4 | 178.4 | 604.5 | 967.4 | 1543.9 |
| Aug 2020 | 41.2 | 192.5 | 627.9 | 1013.7 | 1600.8 |
| Aug 2021 | 46.5 | 184.5 | 615.5 | 1003.4 | 1587.8 |
| Jun 2022 | 46.5 | 195.2 | 703.7 | 1074.1 | 1648.3 |
| Aug 2022 | 42.7 | 213.7 | 740.7 | 1117.8 | 1700.1 |
| Sep 2023 | 51.5 | 215.5 | 815.9 | 1170.1 | 1743.5 |



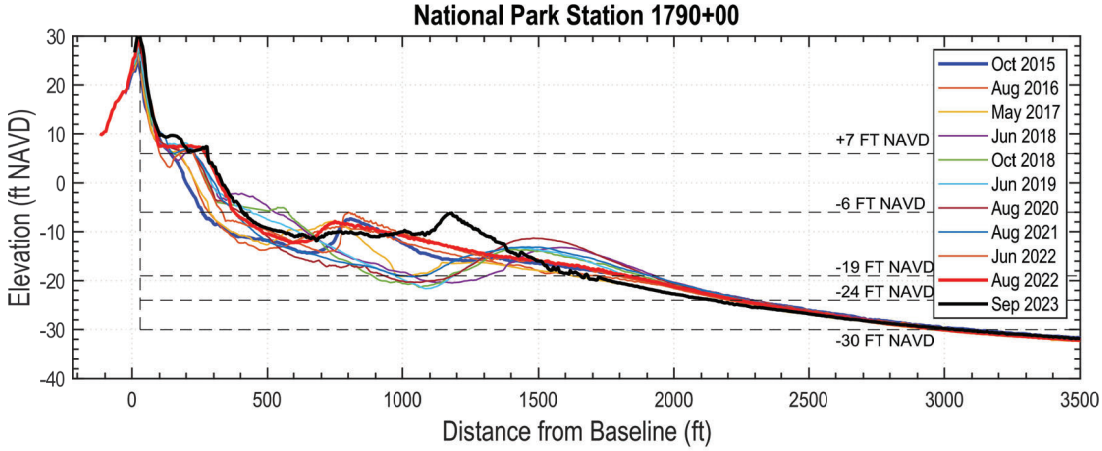
## National Park Station 1785+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 32.1 | 140.0 | 581.8 | 956.5 | 1522.8 |
| Oct 2015 | 29.0 | 127.1 | 574.3 | 948.6 | 1524.1 |
| Aug 2016 | 27.7 | 146.4 | 590.6 | 956.1 | 1525.3 |
| May 2017 | 27.7 | 146.4 | 595.5 | 942.1 | 1490.0 |
| Jun 2018 | 31.8 | 195.6 | 640.0 | 1000.2 | 1560.2 |
| Oct 2018 | 32.8 | 182.8 | 611.5 | 977.6 | 1532.5 |
| Jun 2019 | 36.1 | 182.2 | 608.7 | 957.2 | 1517.8 |
| Aug 2020 | 37.5 | 183.4 | 587.1 | 967.1 | 1538.0 |
| Aug 2021 | 45.0 | 184.1 | 607.8 | 991.9 | 1561.7 |
| Jun 2022 | 43.0 | 183.6 | 701.7 | 1072.5 | 1634.0 |
| Aug 2022 | 44.4 | 207.4 | 722.7 | 1100.1 | 1671.6 |
| Sep 2023 | 55.6 | 221.9 | 810.4 | 1163.3 | 1731.9 |



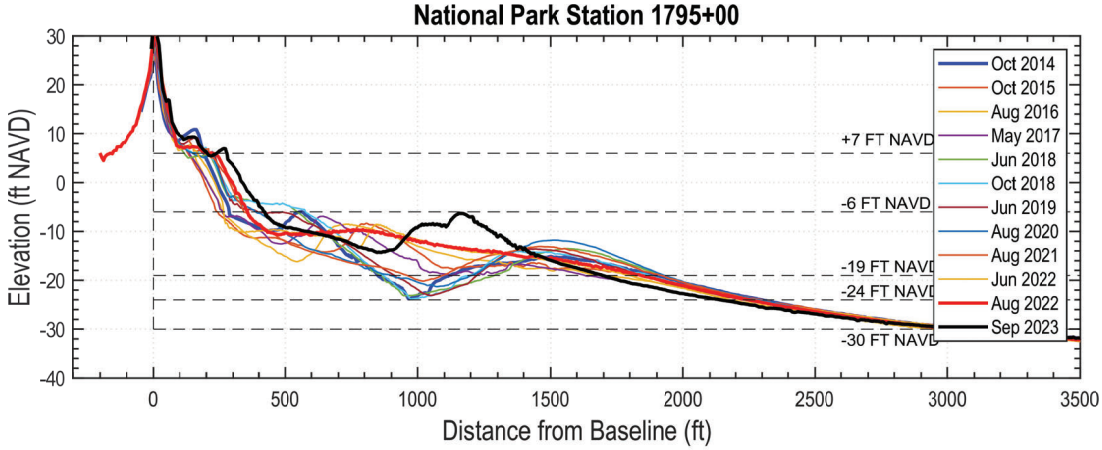
## National Park Station 1790+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2015 | 23.6 | 115.6 | 520.0 | 894.4 | 1466.4 |
| Aug 2016 | 19.3 | 99.8 | 517.6 | 891.1 | 1470.0 |
| May 2017 | 17.4 | 111.4 | 522.8 | 888.6 | 1466.3 |
| Jun 2018 | 17.9 | 113.3 | 482.8 | 826.1 | 1379.6 |
| Oct 2018 | 21.1 | 159.4 | 580.2 | 950.5 | 1524.3 |
| Jun 2019 | 22.5 | 147.0 | 556.9 | 915.5 | 1481.2 |
| Aug 2020 | 26.6 | 156.6 | 568.2 | 922.9 | 1487.1 |
| Aug 2021 | 27.6 | 148.8 | 536.2 | 907.0 | 1479.3 |
| Jun 2022 | 31.1 | 156.9 | 540.7 | 920.5 | 1492.1 |
| Aug 2022 | 26.9 | 134.7 | 615.2 | 979.0 | 1538.0 |
| Sep 2023 | 29.6 | 168.0 | 665.2 | 1035.4 | 1602.4 |
| | 37.5 | 181.7 | 718.3 | 1063.0 | 1621.9 |



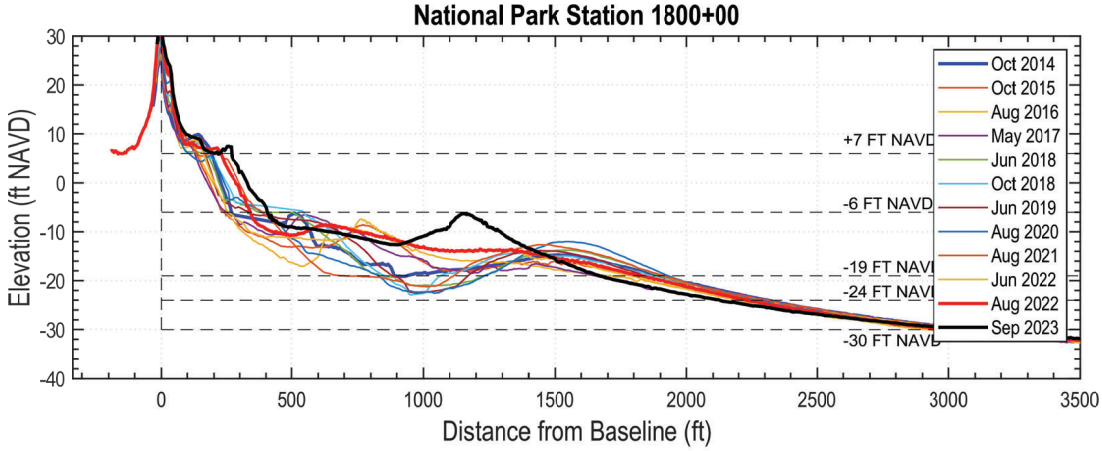
## National Park Station 1795+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 34.4 | 148.0 | 528.3 | 891.3 | 1477.5 |
| Oct 2015 | 28.0 | 117.5 | 502.9 | 884.4 | 1473.4 |
| Aug 2016 | 27.7 | 125.3 | 522.6 | 892.2 | 1478.5 |
| May 2017 | 29.8 | 124.9 | 505.0 | 855.0 | 1416.1 |
| Jun 2018 | 32.9 | 167.3 | 581.6 | 929.3 | 1510.2 |
| Oct 2018 | 33.7 | 174.3 | 602.5 | 947.8 | 1520.8 |
| Jun 2019 | 38.2 | 165.9 | 588.8 | 935.0 | 1509.3 |
| Aug 2020 | 35.8 | 161.2 | 565.8 | 938.8 | 1518.6 |
| Aug 2021 | 43.2 | 176.0 | 559.5 | 941.3 | 1516.9 |
| Jun 2022 | 39.2 | 145.2 | 613.5 | 981.1 | 1542.7 |
| Aug 2022 | 39.1 | 177.7 | 675.9 | 1052.8 | 1628.9 |
| Sep 2023 | 48.9 | 208.1 | 747.9 | 1098.8 | 1662.7 |



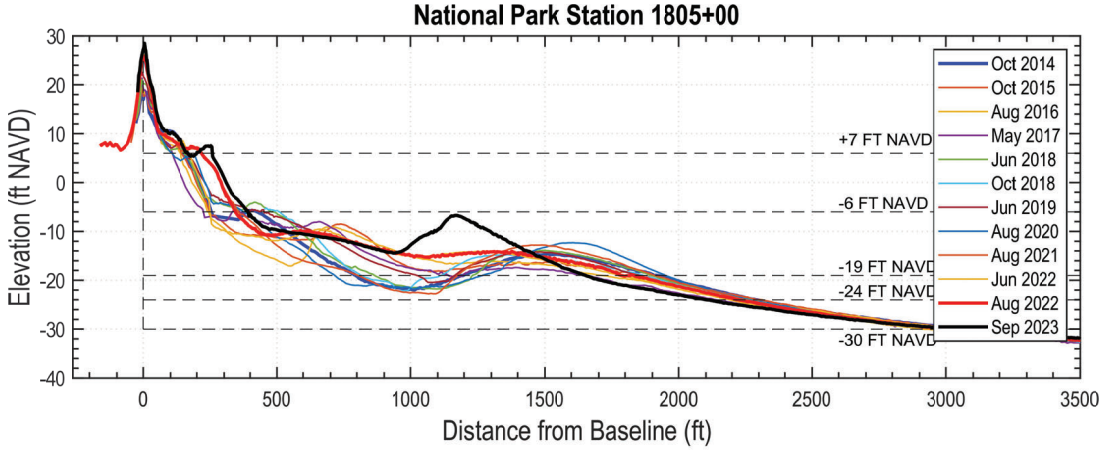
## National Park Station 1800+00



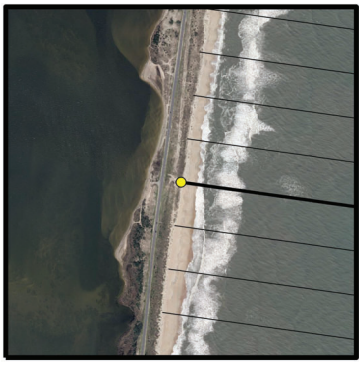

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 27.2 | 135.1 | 521.5 | 909.4 | 1499.4 |
| Oct 2015 | 26.5 | 112.5 | 493.4 | 877.5 | 1468.4 |
| Aug 2016 | 20.6 | 112.7 | 479.8 | 849.2 | 1431.7 |
| May 2017 | 22.3 | 105.8 | 498.5 | 846.8 | 1406.7 |
| Jun 2018 | 25.2 | 132.9 | 533.9 | 898.4 | 1478.5 |
| Oct 2018 | 28.9 | 153.7 | 573.3 | 933.6 | 1505.3 |
| Jun 2019 | 29.9 | 130.1 | 553.8 | 903.0 | 1474.5 |
| Aug 2020 | 30.4 | 143.1 | 521.6 | 872.4 | 1450.7 |
| Aug 2021 | 33.8 | 170.6 | 530.4 | 900.0 | 1474.6 |
| Jun 2022 | 38.1 | 134.7 | 595.4 | 962.1 | 1521.3 |
| Aug 2022 | 36.9 | 170.9 | 665.0 | 1040.3 | 1613.2 |
| Sep 2023 | 46.6 | 202.0 | 753.1 | 1101.5 | 1666.6 |



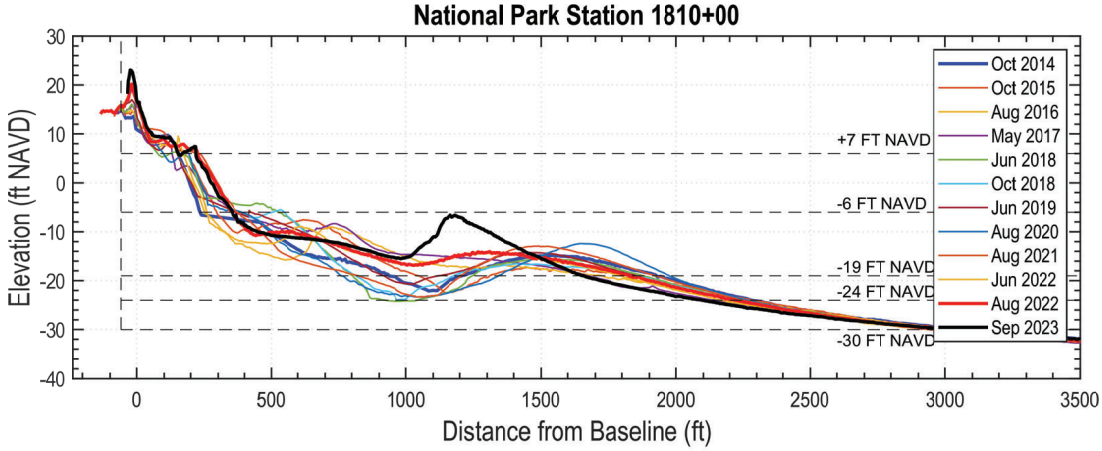
## National Park Station 1805+00



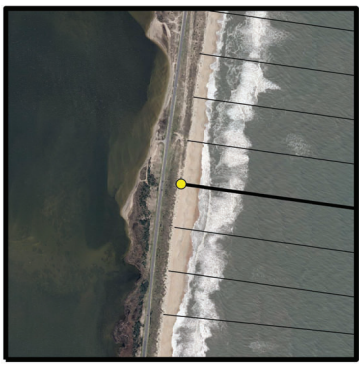

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 25.4 | 124.1 | 479.8 | 841.1 | 1425.8 |
| Oct 2015 | 24.7 | 118.1 | 508.2 | 892.2 | 1480.4 |
| Aug 2016 | 19.7 | 107.5 | 464.7 | 834.9 | 1417.5 |
| May 2017 | 18.8 | 92.3 | 471.0 | 820.1 | 1379.3 |
| Jun 2018 | 20.9 | 129.0 | 522.8 | 879.5 | 1454.8 |
| Oct 2018 | 24.7 | 140.6 | 535.8 | 899.2 | 1467.2 |
| Jun 2019 | 24.7 | 139.8 | 568.2 | 937.0 | 1505.9 |
| Aug 2020 | 26.2 | 134.4 | 497.5 | 847.0 | 1422.7 |
| Aug 2021 | 29.7 | 164.8 | 521.3 | 870.8 | 1443.2 |
| Jun 2022 | 31.4 | 132.6 | 556.5 | 923.2 | 1482.7 |
| Aug 2022 | 31.0 | 165.7 | 620.5 | 994.6 | 1565.7 |
| Sep 2023 | 39.0 | 185.1 | 706.7 | 1049.9 | 1608.6 |



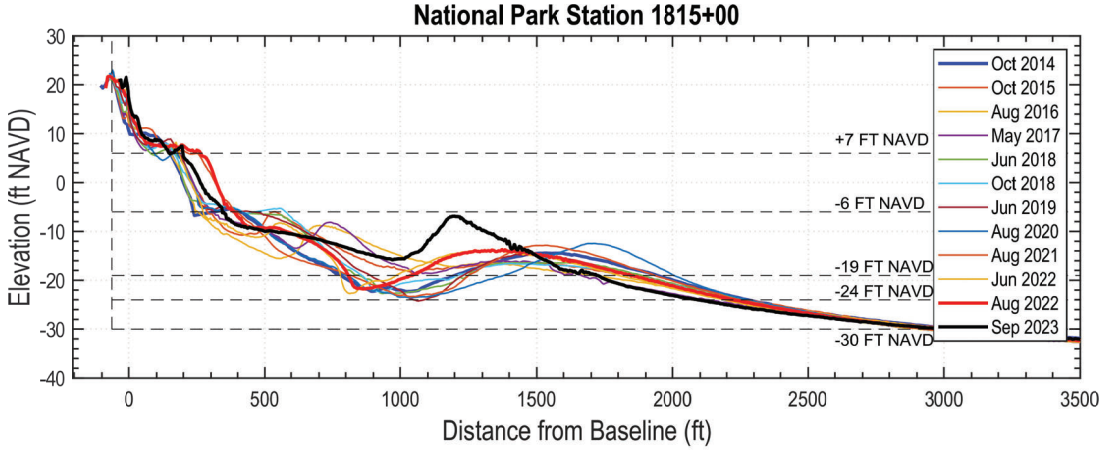
## National Park Station 1810+00



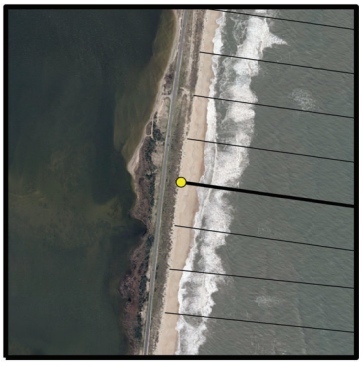

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 28.2 | 149.8 | 534.7 | 918.9 | 1514.2 |
| Oct 2015 | 34.4 | 176.8 | 582.1 | 957.0 | 1554.4 |
| Aug 2016 | 27.6 | 152.0 | 533.6 | 913.9 | 1505.7 |
| May 2017 | 25.2 | 162.2 | 645.9 | 1006.4 | 1578.4 |
| Jun 2018 | 24.2 | 173.8 | 581.2 | 912.4 | 1498.7 |
| Oct 2018 | 28.8 | 159.6 | 548.8 | 904.1 | 1484.4 |
| Jun 2019 | 28.8 | 159.2 | 594.8 | 972.7 | 1553.2 |
| Aug 2020 | 34.2 | 171.3 | 565.2 | 905.6 | 1491.4 |
| Aug 2021 | 37.8 | 206.5 | 590.7 | 950.9 | 1534.6 |
| Jun 2022 | 38.7 | 170.0 | 596.3 | 973.1 | 1543.5 |
| Aug 2022 | 38.6 | 204.3 | 661.8 | 1046.3 | 1628.0 |
| Sep 2023 | 49.7 | 209.4 | 733.2 | 1087.9 | 1656.9 |



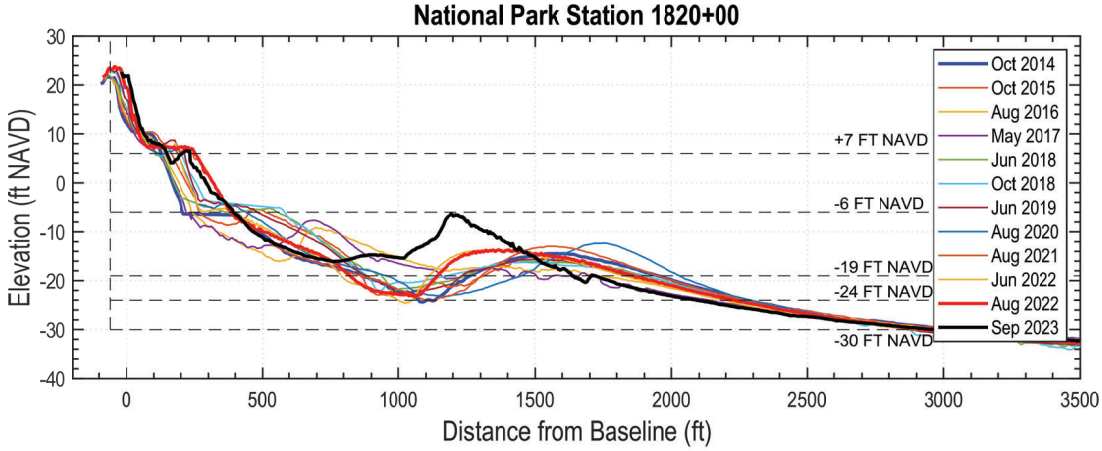
## National Park Station 1815+00



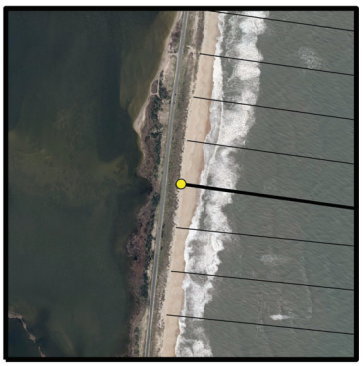

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 33.2 | 159.2 | 546.4 | 914.1 | 1507.3 |
| Oct 2015 | 37.9 | 179.1 | 599.0 | 992.4 | 1587.4 |
| Aug 2016 | 33.3 | 159.6 | 559.3 | 939.6 | 1530.7 |
| May 2017 | 30.2 | 172.8 | 599.0 | 959.0 | 1527.3 |
| Jun 2018 | 29.7 | 164.5 | 573.7 | 933.9 | 1520.7 |
| Oct 2018 | 34.7 | 179.0 | 588.7 | 958.5 | 1539.7 |
| Jun 2019 | 37.7 | 180.9 | 613.2 | 962.5 | 1543.1 |
| Aug 2020 | 39.4 | 175.9 | 577.5 | 922.9 | 1510.2 |
| Aug 2021 | 43.2 | 221.6 | 612.5 | 965.9 | 1549.4 |
| Jun 2022 | 43.8 | 182.8 | 598.7 | 965.3 | 1535.8 |
| Aug 2022 | 42.7 | 224.8 | 658.5 | 1031.2 | 1611.9 |
| Sep 2023 | 48.4 | 204.0 | 732.2 | 1091.1 | 1658.2 |



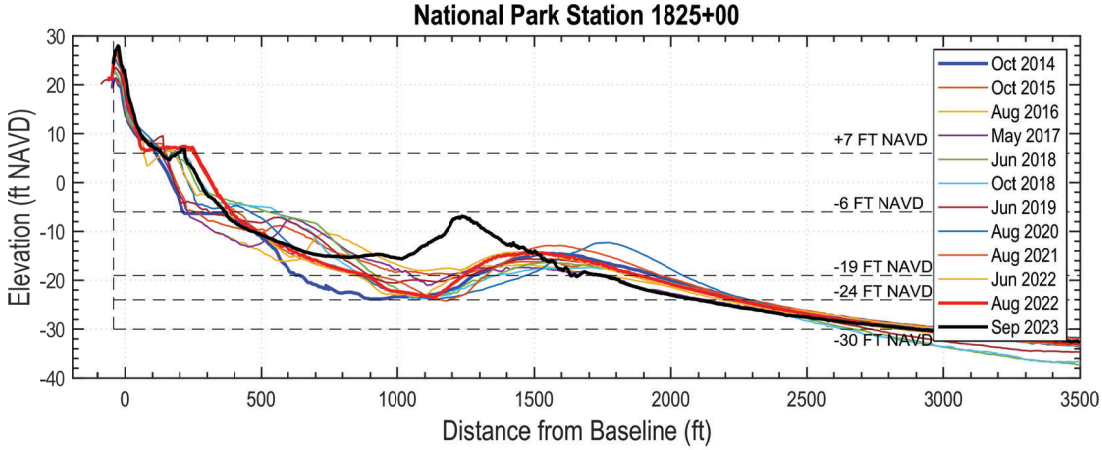
## National Park Station 1820+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 36.1 | 144.2 | 518.6 | 880.2 | 1471.1 |
| Oct 2015 | 40.2 | 173.2 | 587.4 | 943.2 | 1536.0 |
| Aug 2016 | 39.3 | 157.9 | 536.4 | 917.2 | 1502.7 |
| May 2017 | 35.1 | 144.9 | 514.7 | 871.2 | 1437.5 |
| Jun 2018 | 38.5 | 157.7 | 591.8 | 967.0 | 1547.5 |
| Oct 2018 | 42.6 | 205.0 | 630.8 | 1010.5 | 1586.5 |
| Jun 2019 | 47.3 | 203.2 | 617.2 | 975.2 | 1551.9 |
| Aug 2020 | 49.3 | 192.8 | 614.9 | 977.1 | 1562.0 |
| Aug 2021 | 51.9 | 229.9 | 622.6 | 975.6 | 1556.2 |
| Jun 2022 | 52.3 | 191.9 | 604.3 | 950.5 | 1517.9 |
| Aug 2022 | 51.2 | 229.6 | 641.9 | 997.2 | 1575.8 |
| Sep 2023 | 58.8 | 223.5 | 716.5 | 1073.4 | 1636.3 |



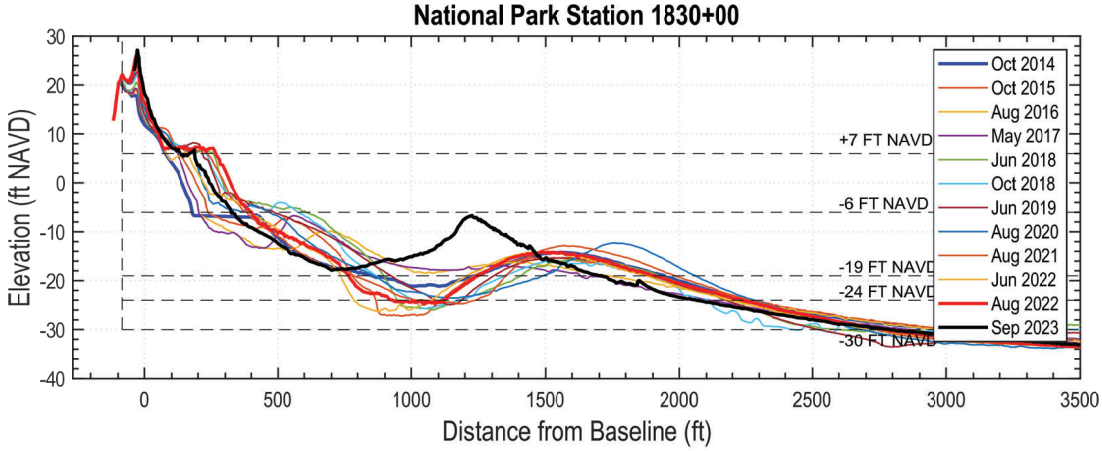
## National Park Station 1825+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 30.2 | 129.2 | 461.6 | 779.1 | 1363.0 |
| Oct 2015 | 33.2 | 143.5 | 533.1 | 926.0 | 1515.8 |
| Aug 2016 | 35.0 | 140.8 | 490.1 | 870.6 | 1454.9 |
| May 2017 | 35.0 | 140.8 | 502.8 | 860.3 | 1419.9 |
| Jun 2018 | 36.0 | 192.5 | 617.8 | 966.3 | 1518.9 |
| Oct 2018 | 36.9 | 199.8 | 585.4 | 922.6 | 1468.8 |
| Jun 2019 | 41.1 | 152.0 | 558.9 | 932.5 | 1490.9 |
| Aug 2020 | 44.7 | 178.7 | 581.6 | 922.5 | 1496.7 |
| Aug 2021 | 44.3 | 211.3 | 598.9 | 956.4 | 1529.5 |
| Jun 2022 | 42.8 | 175.3 | 536.8 | 879.4 | 1440.2 |
| Aug 2022 | 41.8 | 212.8 | 584.3 | 935.1 | 1506.3 |
| Sep 2023 | 48.7 | 197.4 | 686.4 | 1045.6 | 1599.4 |



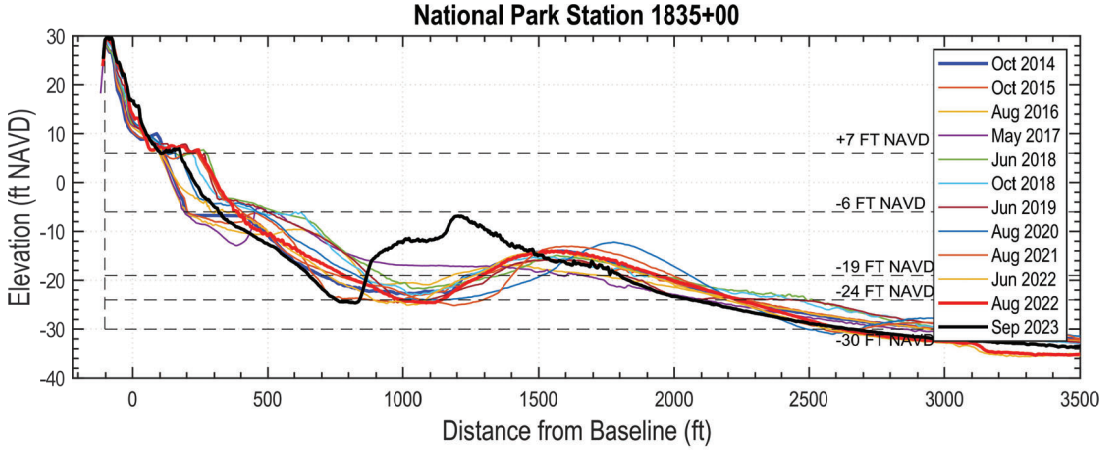
## National Park Station 1830+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 38.7 | 143.0 | 519.5 | 904.1 | 1492.0 |
| Oct 2015 | 49.9 | 180.2 | 578.0 | 914.1 | 1487.3 |
| Aug 2016 | 46.8 | 164.9 | 546.6 | 931.1 | 1518.5 |
| May 2017 | 46.8 | 164.9 | 549.2 | 912.7 | 1477.7 |
| Jun 2018 | 49.4 | 243.8 | 698.2 | 1026.2 | 1564.9 |
| Oct 2018 | 53.9 | 240.9 | 668.1 | 991.0 | 1502.3 |
| Jun 2019 | 55.8 | 237.0 | 680.2 | 1028.7 | 1565.0 |
| Aug 2020 | 60.0 | 210.9 | 644.5 | 992.9 | 1560.6 |
| Aug 2021 | 62.6 | 243.5 | 638.9 | 970.6 | 1537.6 |
| Jun 2022 | 59.8 | 210.9 | 606.7 | 927.1 | 1472.5 |
| Aug 2022 | 58.4 | 252.2 | 650.1 | 981.7 | 1549.4 |
| Sep 2023 | 68.3 | 223.7 | 690.7 | 1054.0 | 1605.5 |



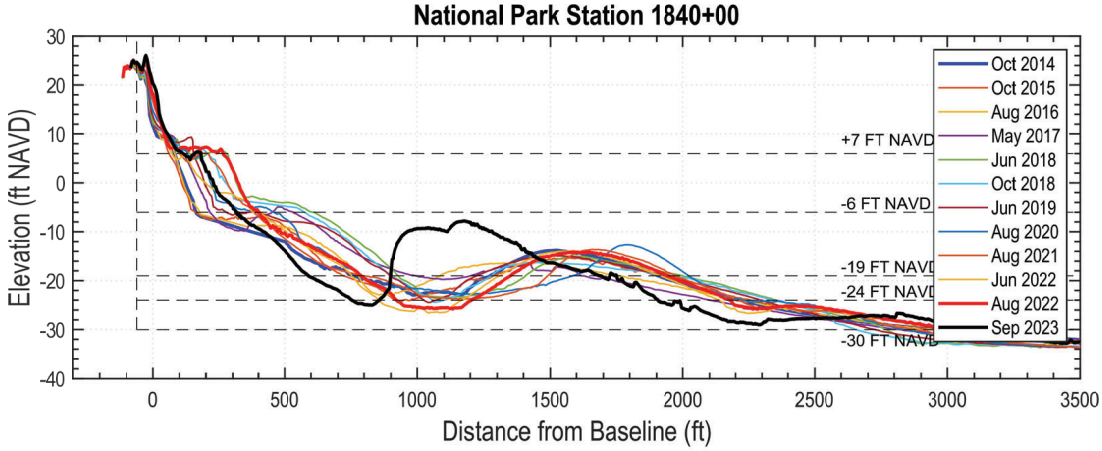
## National Park Station 1835+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 55.4 | 178.8 | 556.3 | 905.9 | 1494.7 |
| Oct 2015 | 55.3 | 179.8 | 541.5 | 860.6 | 1454.6 |
| Aug 2016 | 58.0 | 174.7 | 543.7 | 915.1 | 1504.9 |
| May 2017 | 61.5 | 180.5 | 586.5 | 950.6 | 1516.5 |
| Jun 2018 | 63.9 | 269.1 | 728.7 | 1128.9 | 1758.6 |
| Oct 2018 | 67.5 | 253.4 | 704.8 | 1085.7 | 1712.7 |
| Jun 2019 | 70.3 | 268.7 | 704.1 | 1026.9 | 1663.4 |
| Aug 2020 | 73.5 | 235.1 | 672.2 | 1000.5 | 1581.3 |
| Aug 2021 | 73.8 | 260.5 | 660.2 | 987.3 | 1552.1 |
| Jun 2022 | 72.5 | 206.6 | 596.9 | 929.6 | 1477.3 |
| Aug 2022 | 73.5 | 269.0 | 666.7 | 1012.4 | 1572.6 |
| Sep 2023 | 79.9 | 238.8 | 722.9 | 1066.0 | 1606.9 |



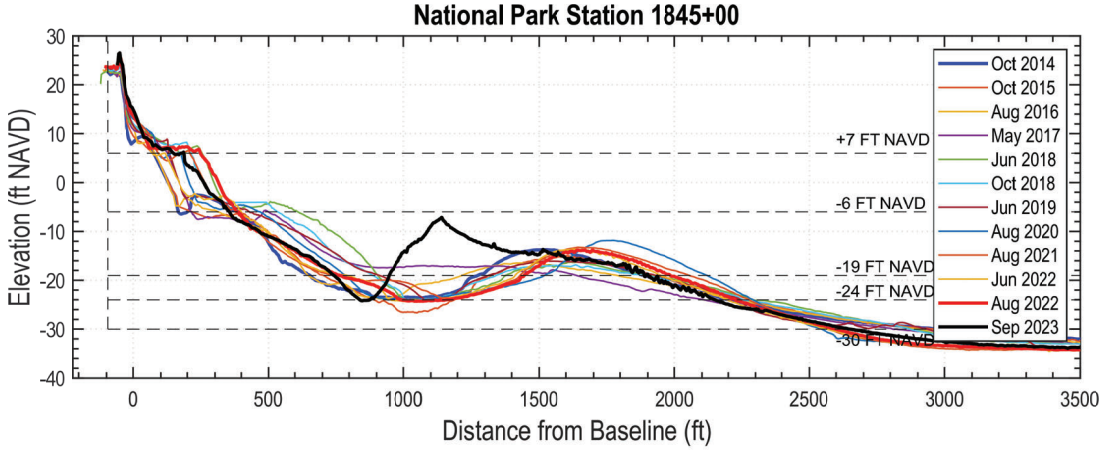
## National Park Station 1840+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 34.1 | 120.7 | 450.1 | 797.3 | 1371.8 |
| Oct 2015 | 33.6 | 113.4 | 457.4 | 799.4 | 1380.8 |
| Aug 2016 | 34.5 | 119.9 | 469.7 | 822.1 | 1399.0 |
| May 2017 | 39.5 | 148.8 | 530.0 | 885.0 | 1440.5 |
| Jun 2018 | 39.6 | 233.4 | 690.8 | 1051.8 | 1638.3 |
| Oct 2018 | 41.0 | 213.2 | 646.8 | 1018.0 | 1591.5 |
| Jun 2019 | 45.1 | 167.7 | 604.6 | 974.2 | 1544.1 |
| Aug 2020 | 46.0 | 182.6 | 565.4 | 891.9 | 1487.5 |
| Aug 2021 | 47.3 | 203.2 | 553.0 | 872.3 | 1454.5 |
| Jun 2022 | 46.5 | 178.1 | 557.4 | 862.5 | 1427.0 |
| Aug 2022 | 47.7 | 229.5 | 609.2 | 924.9 | 1508.8 |
| Sep 2023 | 54.1 | 189.8 | 630.0 | 940.5 | 1484.3 |



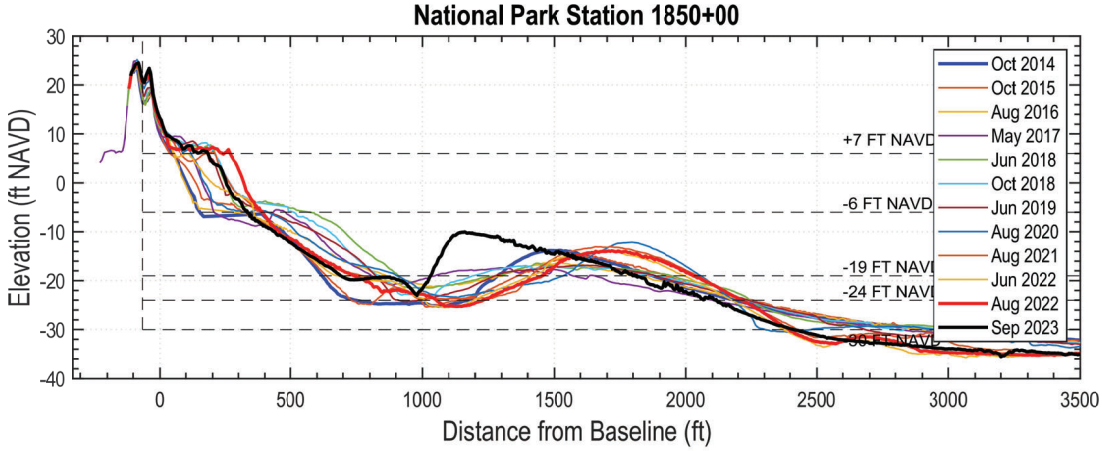
## National Park Station 1845+00



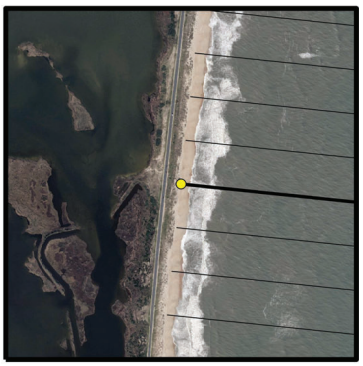

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 41.4 | 159.2 | 522.0 | 841.7 | 1422.3 |
| Oct 2015 | 41.9 | 148.2 | 505.7 | 823.9 | 1395.6 |
| Aug 2016 | 45.3 | 156.4 | 487.4 | 826.0 | 1410.6 |
| May 2017 | 51.6 | 177.0 | 577.8 | 939.5 | 1501.6 |
| Jun 2018 | 55.6 | 252.5 | 704.7 | 1057.4 | 1656.1 |
| Oct 2018 | 58.3 | 243.1 | 656.0 | 1011.8 | 1603.9 |
| Jun 2019 | 57.0 | 200.0 | 616.4 | 982.2 | 1540.8 |
| Aug 2020 | 60.3 | 209.8 | 650.5 | 986.2 | 1542.1 |
| Aug 2021 | 60.3 | 228.2 | 608.0 | 971.5 | 1529.8 |
| Jun 2022 | 58.3 | 199.3 | 575.2 | 901.7 | 1448.0 |
| Aug 2022 | 58.2 | 251.3 | 627.8 | 955.2 | 1509.4 |
| Sep 2023 | 62.1 | 228.3 | 716.7 | 1084.7 | 1636.1 |



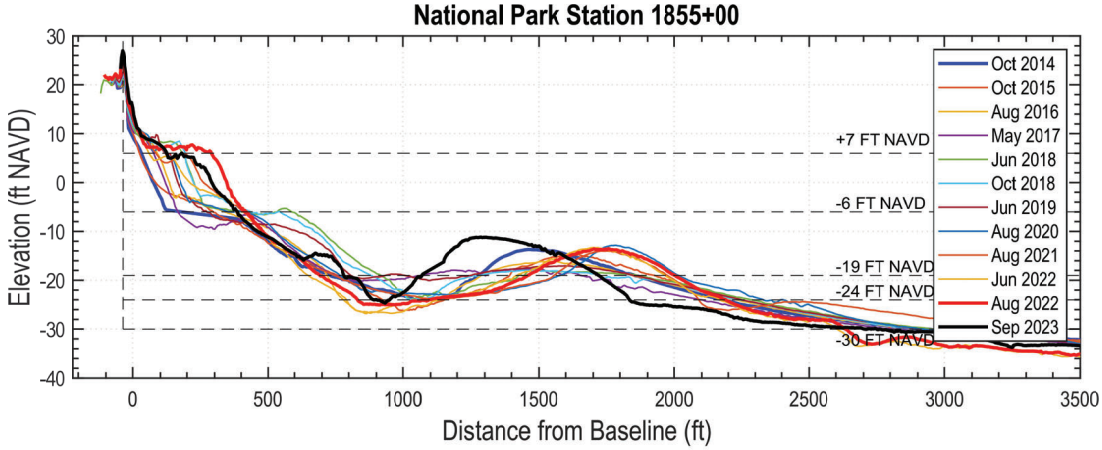
## National Park Station 1850+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 22.3 | 100.7 | 441.1 | 722.5 | 1280.7 |
| Oct 2015 | 21.8 | 120.3 | 440.8 | 739.7 | 1313.0 |
| Aug 2016 | 25.2 | 103.7 | 447.0 | 812.3 | 1386.2 |
| May 2017 | 29.1 | 137.8 | 480.7 | 827.1 | 1379.3 |
| Jun 2018 | 30.1 | 193.2 | 620.8 | 1003.3 | 1563.6 |
| Oct 2018 | 34.3 | 204.4 | 600.4 | 964.7 | 1531.4 |
| Jun 2019 | 33.5 | 183.7 | 561.2 | 899.9 | 1459.2 |
| Aug 2020 | 33.8 | 148.6 | 555.8 | 900.4 | 1420.4 |
| Aug 2021 | 34.6 | 187.2 | 565.5 | 892.3 | 1422.2 |
| Jun 2022 | 32.5 | 164.9 | 511.9 | 837.9 | 1351.0 |
| Aug 2022 | 31.6 | 214.3 | 576.5 | 896.7 | 1418.1 |
| Sep 2023 | 37.6 | 187.6 | 608.5 | 967.8 | 1482.0 |



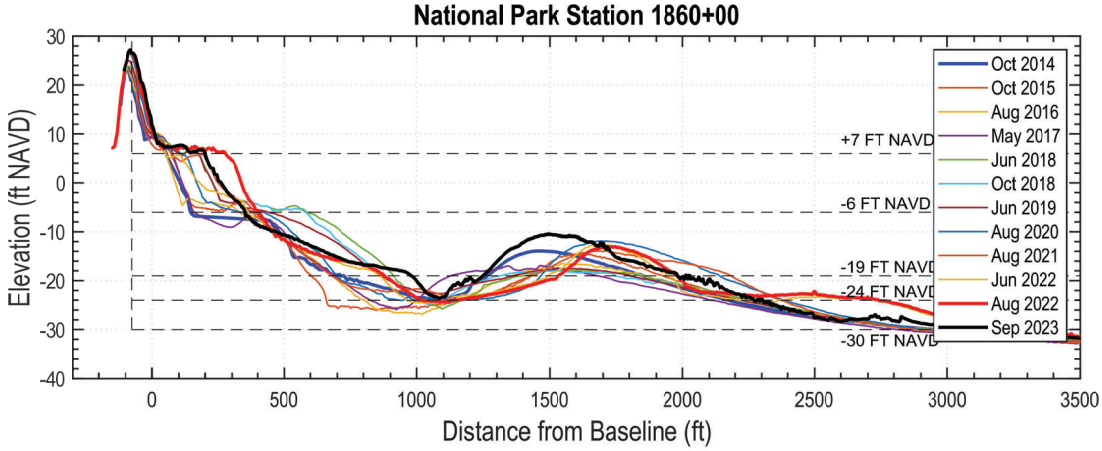
## National Park Station 1855+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 12.3 | 66.0 | 399.0 | 718.4 | 1280.4 |
| Oct 2015 | 12.7 | 82.7 | 400.9 | 708.7 | 1269.7 |
| Aug 2016 | 18.3 | 111.4 | 443.9 | 741.9 | 1286.0 |
| May 2017 | 17.2 | 91.1 | 380.8 | 723.9 | 1269.1 |
| Jun 2018 | 22.7 | 152.0 | 540.2 | 881.9 | 1463.2 |
| Oct 2018 | 22.9 | 161.8 | 534.9 | 881.0 | 1452.9 |
| Jun 2019 | 24.1 | 124.9 | 475.3 | 855.3 | 1430.9 |
| Aug 2020 | 23.8 | 131.4 | 492.3 | 813.0 | 1403.9 |
| Aug 2021 | 25.0 | 166.6 | 497.8 | 789.8 | 1414.4 |
| Jun 2022 | 22.6 | 146.9 | 482.7 | 764.5 | 1283.4 |
| Aug 2022 | 24.3 | 206.3 | 556.6 | 845.8 | 1380.1 |
| Sep 2023 | 28.3 | 179.6 | 591.1 | 897.7 | 1393.8 |



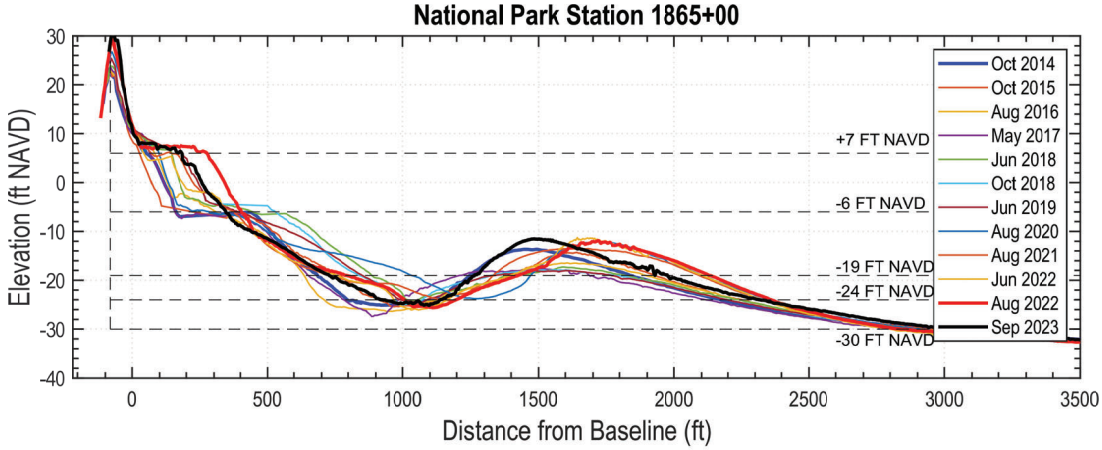
## National Park Station 1860+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 19.7 | 103.4 | 447.9 | 774.4 | 1344.8 |
| Oct 2015 | 18.0 | 115.1 | 441.6 | 712.1 | 1267.4 |
| Aug 2016 | 24.9 | 114.8 | 428.2 | 725.2 | 1276.7 |
| May 2017 | 24.9 | 115.5 | 421.1 | 730.3 | 1278.4 |
| Jun 2018 | 27.6 | 185.4 | 605.2 | 943.0 | 1524.0 |
| Oct 2018 | 28.3 | 184.4 | 580.1 | 920.6 | 1494.7 |
| Jun 2019 | 28.3 | 176.8 | 559.7 | 908.3 | 1485.5 |
| Aug 2020 | 33.0 | 152.8 | 580.2 | 905.2 | 1501.6 |
| Aug 2021 | 35.5 | 190.1 | 564.4 | 917.5 | 1505.8 |
| Jun 2022 | 35.8 | 166.7 | 539.3 | 852.9 | 1529.9 |
| Aug 2022 | 36.4 | 232.3 | 609.7 | 945.5 | 1625.4 |
| Sep 2023 | 41.5 | 201.5 | 661.6 | 1051.1 | 1644.5 |



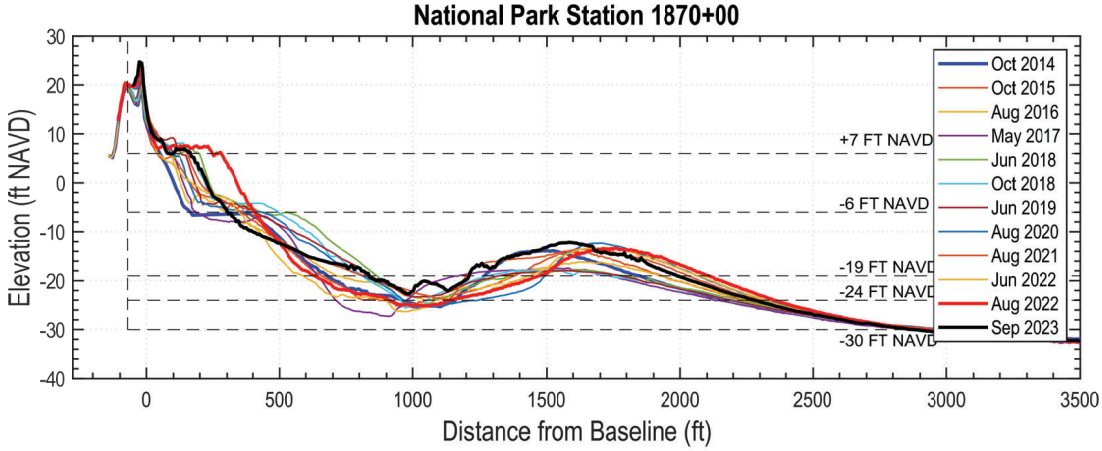
## National Park Station 1865+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 31.1 | 123.5 | 497.3 | 799.8 | 1364.1 |
| Oct 2015 | 28.0 | 102.8 | 467.9 | 782.6 | 1358.2 |
| Aug 2016 | 35.0 | 145.9 | 461.6 | 748.7 | 1304.8 |
| May 2017 | 34.3 | 126.9 | 430.6 | 730.5 | 1275.0 |
| Jun 2018 | 37.8 | 172.9 | 574.7 | 916.4 | 1498.0 |
| Oct 2018 | 42.8 | 208.5 | 587.3 | 927.2 | 1498.1 |
| Jun 2019 | 42.8 | 200.1 | 562.3 | 895.0 | 1468.4 |
| Aug 2020 | 43.7 | 148.2 | 600.9 | 977.4 | 1569.9 |
| Aug 2021 | 47.0 | 196.6 | 590.1 | 955.7 | 1541.1 |
| Jun 2022 | 45.6 | 180.2 | 573.1 | 928.6 | 1498.6 |
| Aug 2022 | 48.4 | 247.4 | 649.6 | 1010.1 | 1590.0 |
| Sep 2023 | 51.6 | 212.2 | 614.2 | 952.7 | 1552.1 |



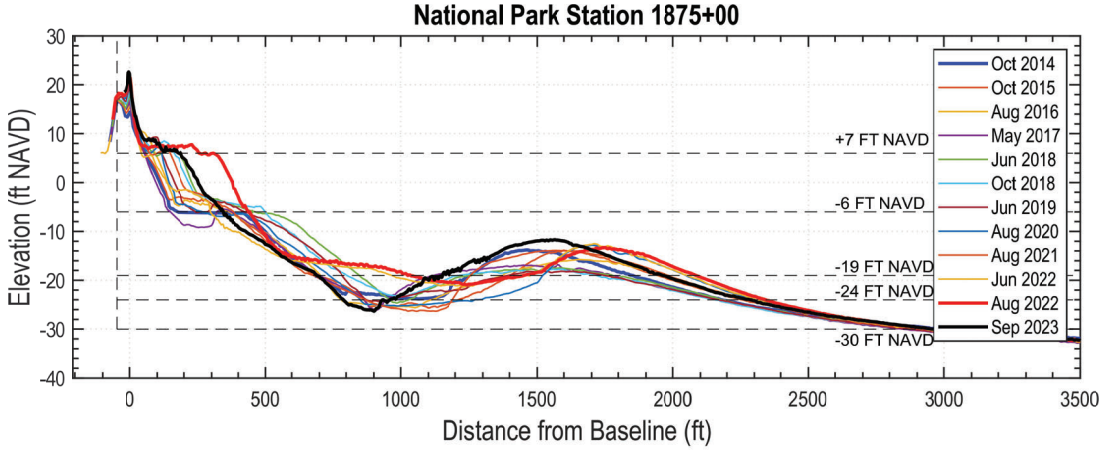
## National Park Station 1870+00



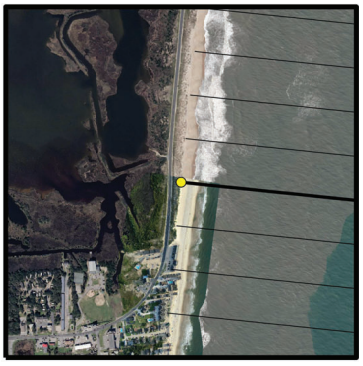

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 29.0 | 109.6 | 461.9 | 767.0 | 1331.0 |
| Oct 2015 | 28.0 | 145.2 | 484.8 | 790.6 | 1368.7 |
| Aug 2016 | 32.8 | 136.7 | 452.8 | 790.2 | 1370.8 |
| May 2017 | 32.0 | 131.0 | 434.9 | 737.4 | 1276.8 |
| Jun 2018 | 33.1 | 186.3 | 573.0 | 903.9 | 1476.4 |
| Oct 2018 | 38.6 | 188.9 | 551.1 | 880.0 | 1444.5 |
| Jun 2019 | 40.5 | 170.5 | 521.5 | 858.4 | 1428.7 |
| Aug 2020 | 40.3 | 154.8 | 570.7 | 893.9 | 1473.8 |
| Aug 2021 | 43.8 | 180.6 | 585.9 | 959.8 | 1541.7 |
| Jun 2022 | 40.6 | 159.6 | 495.2 | 797.7 | 1366.5 |
| Aug 2022 | 42.2 | 235.9 | 594.1 | 912.8 | 1495.8 |
| Sep 2023 | 43.7 | 183.5 | 586.4 | 967.5 | 1545.5 |



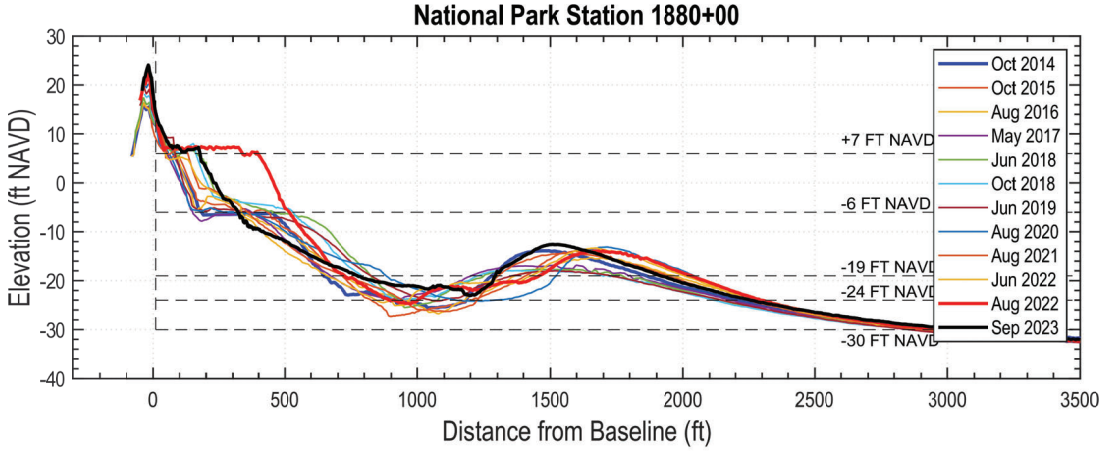
## National Park Station 1875+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 20.5 | 94.1 | 448.4 | 759.0 | 1330.4 |
| Oct 2015 | 21.3 | 113.8 | 447.2 | 746.8 | 1311.4 |
| Aug 2016 | 27.8 | 124.5 | 455.9 | 764.6 | 1331.9 |
| May 2017 | 23.2 | 92.0 | 391.3 | 720.8 | 1275.4 |
| Jun 2018 | 26.8 | 168.6 | 545.3 | 882.7 | 1446.8 |
| Oct 2018 | 30.4 | 172.5 | 515.6 | 848.7 | 1407.5 |
| Jun 2019 | 33.5 | 140.8 | 477.1 | 781.5 | 1343.0 |
| Aug 2020 | 29.3 | 124.1 | 495.6 | 786.6 | 1354.2 |
| Aug 2021 | 32.7 | 158.6 | 523.0 | 841.5 | 1396.9 |
| Jun 2022 | 29.5 | 129.4 | 478.0 | 866.1 | 1445.7 |
| Aug 2022 | 33.1 | 232.1 | 623.1 | 1024.8 | 1612.7 |
| Sep 2023 | 37.7 | 180.6 | 569.3 | 911.9 | 1486.8 |



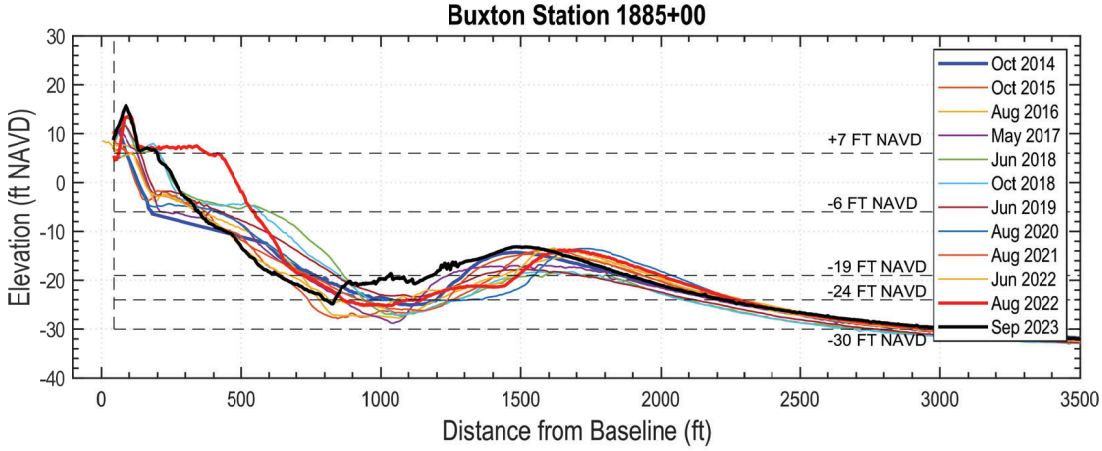
## National Park Station 1880+00



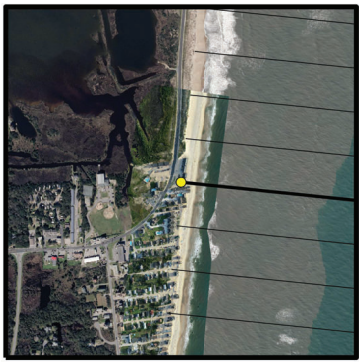

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 5.8 | 61.8 | 389.6 | 672.6 | 1228.7 |
| Oct 2015 | 0.7 | 67.5 | 399.1 | 681.9 | 1224.7 |
| Aug 2016 | 4.1 | 70.8 | 380.4 | 685.9 | 1241.3 |
| May 2017 | 3.6 | 46.8 | 319.6 | 627.2 | 1175.7 |
| Jun 2018 | 4.1 | 113.8 | 464.2 | 774.8 | 1315.9 |
| Oct 2018 | 6.3 | 115.8 | 441.9 | 747.3 | 1285.9 |
| Jun 2019 | 7.9 | 62.5 | 381.6 | 681.3 | 1224.8 |
| Aug 2020 | 2.1 | 48.9 | 405.0 | 718.1 | 1281.6 |
| Aug 2021 | 5.1 | 96.3 | 410.7 | 718.0 | 1259.0 |
| Jun 2022 | 3.2 | 90.1 | 386.9 | 709.3 | 1269.3 |
| Aug 2022 | 5.0 | 214.7 | 571.7 | 898.1 | 1466.8 |
| Sep 2023 | 7.4 | 113.8 | 444.8 | 786.8 | 1360.9 |



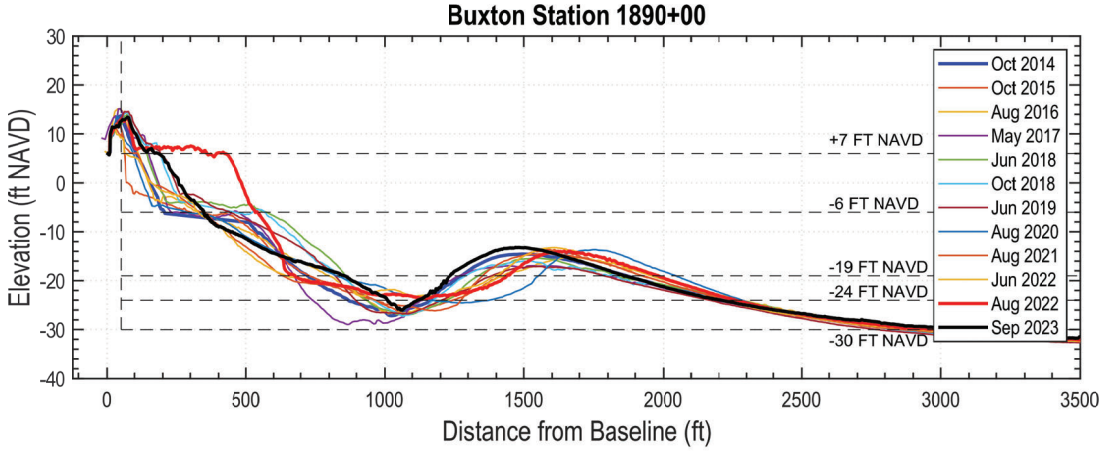
## Buxton Station 1885+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 3.8 | 45.0 | 333.6 | 631.2 | 1182.8 |
| Oct 2015 | 1.0 | 56.1 | 341.4 | 600.6 | 1115.4 |
| Aug 2016 | 1.7 | 69.8 | 370.5 | 653.4 | 1174.6 |
| May 2017 | 6.1 | 64.1 | 345.4 | 635.1 | 1150.9 |
| Jun 2018 | 9.5 | 126.6 | 472.1 | 734.5 | 1224.3 |
| Oct 2018 | 11.5 | 125.3 | 447.2 | 709.2 | 1198.7 |
| Jun 2019 | 10.2 | 93.3 | 395.6 | 689.2 | 1214.0 |
| Aug 2020 | 0.0 | 47.1 | 372.7 | 641.3 | 1190.3 |
| Aug 2021 | 0.0 | 68.7 | 370.6 | 665.0 | 1195.7 |
| Jun 2022 | 0.0 | 62.3 | 339.2 | 621.4 | 1161.7 |
| Aug 2022 | 12.7 | 217.5 | 555.7 | 845.4 | 1396.9 |
| Sep 2023 | 17.1 | 120.9 | 420.0 | 751.4 | 1312.4 |



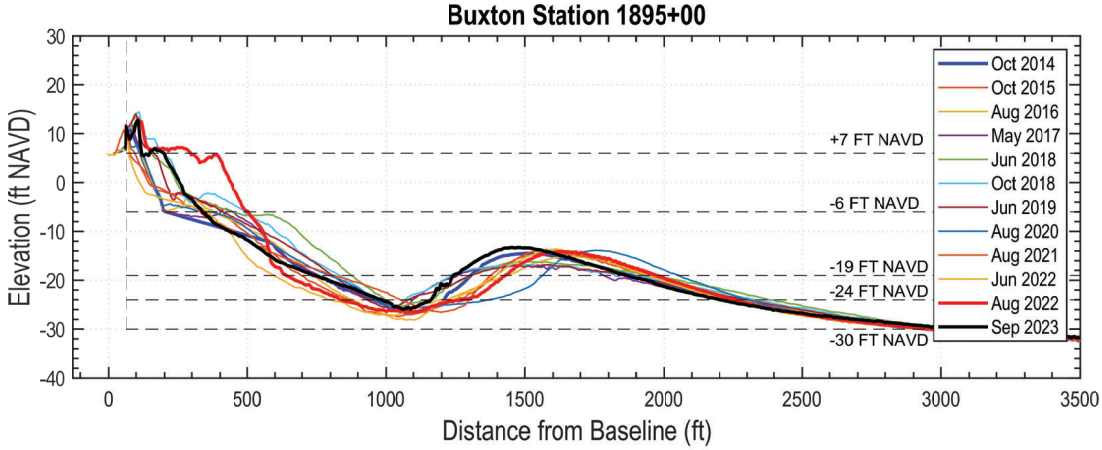
## Buxton Station 1890+00



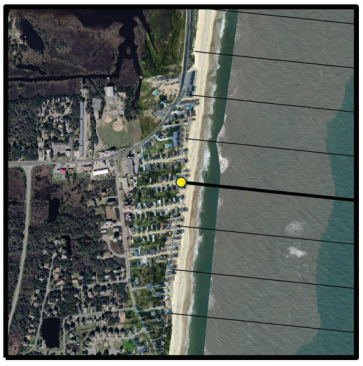

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 5.7 | 54.5 | 365.8 | 654.7 | 1195.1 |
| Oct 2015 | 0.8 | 30.4 | 340.8 | 624.2 | 1169.1 |
| Aug 2016 | 8.5 | 67.0 | 365.6 | 662.5 | 1206.3 |
| May 2017 | 11.9 | 76.1 | 360.5 | 630.2 | 1125.3 |
| Jun 2018 | 14.4 | 96.5 | 466.1 | 765.3 | 1296.7 |
| Oct 2018 | 17.3 | 110.9 | 455.2 | 757.3 | 1288.2 |
| Jun 2019 | 18.0 | 122.0 | 435.2 | 709.5 | 1218.5 |
| Aug 2020 | 2.3 | 44.1 | 353.8 | 651.5 | 1197.5 |
| Aug 2021 | 1.2 | 67.0 | 340.9 | 624.1 | 1150.5 |
| Jun 2022 | 0.8 | 64.1 | 338.0 | 647.6 | 1191.4 |
| Aug 2022 | 10.1 | 212.8 | 543.3 | 844.3 | 1398.3 |
| Sep 2023 | 12.0 | 110.6 | 434.4 | 752.9 | 1307.6 |



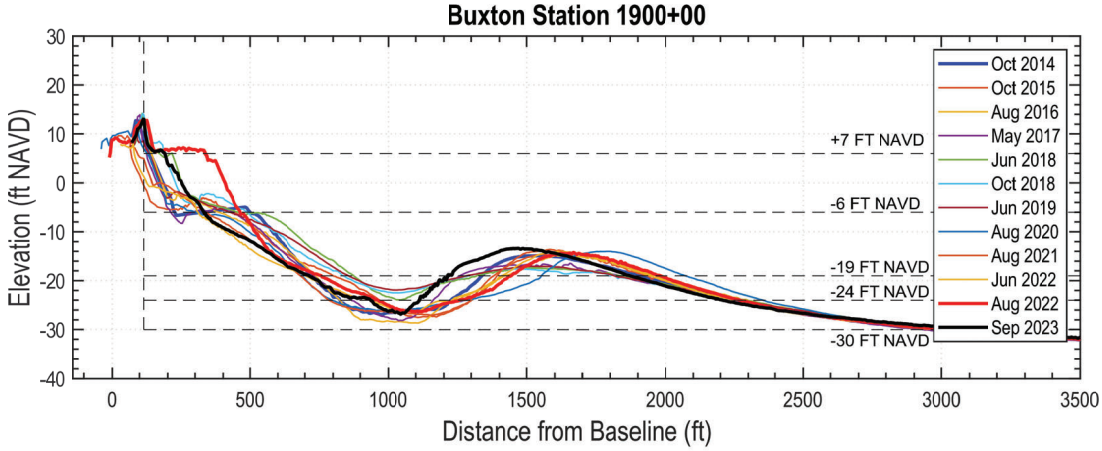
## Buxton Station 1895+00



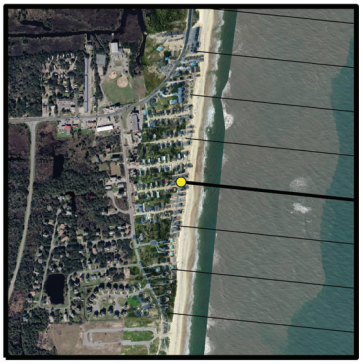

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 4.6 | 48.6 | 333.9 | 626.7 | 1172.1 |
| Oct 2015 | 0.5 | 59.6 | 355.5 | 627.3 | 1159.3 |
| Aug 2016 | 1.4 | 53.9 | 350.9 | 634.8 | 1165.9 |
| May 2017 | 6.0 | 52.6 | 330.9 | 629.5 | 1166.2 |
| Jun 2018 | 12.9 | 104.4 | 467.0 | 804.9 | 1383.5 |
| Oct 2018 | 16.6 | 123.6 | 443.9 | 776.9 | 1348.5 |
| Jun 2019 | 10.7 | 92.8 | 390.9 | 701.9 | 1263.4 |
| Aug 2020 | 2.2 | 52.6 | 363.4 | 642.0 | 1177.6 |
| Aug 2021 | 1.2 | 53.5 | 346.3 | 648.9 | 1180.0 |
| Jun 2022 | 0.8 | 38.4 | 296.5 | 551.8 | 1068.8 |
| Aug 2022 | 10.1 | 182.2 | 487.2 | 749.1 | 1276.6 |
| Sep 2023 | 6.9 | 96.6 | 393.0 | 694.3 | 1244.5 |



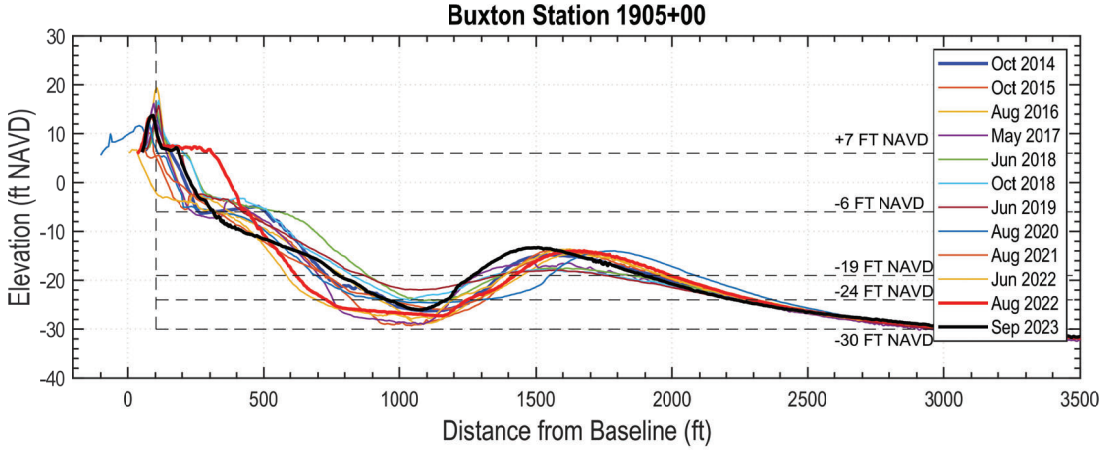
## Buxton Station 1900+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 0.6 | 35.1 | 333.4 | 600.7 | 1123.0 |
| Oct 2015 | 0.0 | 18.3 | 316.7 | 598.5 | 1125.1 |
| Aug 2016 | 2.3 | 45.9 | 326.6 | 595.7 | 1098.7 |
| May 2017 | 0.2 | 25.0 | 282.0 | 558.8 | 1067.0 |
| Jun 2018 | 2.4 | 75.0 | 381.9 | 702.6 | 1259.1 |
| Oct 2018 | 5.3 | 77.1 | 350.3 | 672.5 | 1221.2 |
| Jun 2019 | 0.2 | 44.6 | 333.6 | 664.9 | 1218.5 |
| Aug 2020 | 0.0 | 28.1 | 298.1 | 554.2 | 1088.4 |
| Aug 2021 | 0.0 | 34.5 | 295.0 | 554.4 | 1061.0 |
| Jun 2022 | 0.0 | 28.0 | 264.4 | 529.4 | 1055.3 |
| Aug 2022 | 4.8 | 140.3 | 417.0 | 691.8 | 1223.9 |
| Sep 2023 | 1.8 | 65.4 | 339.2 | 626.7 | 1164.5 |



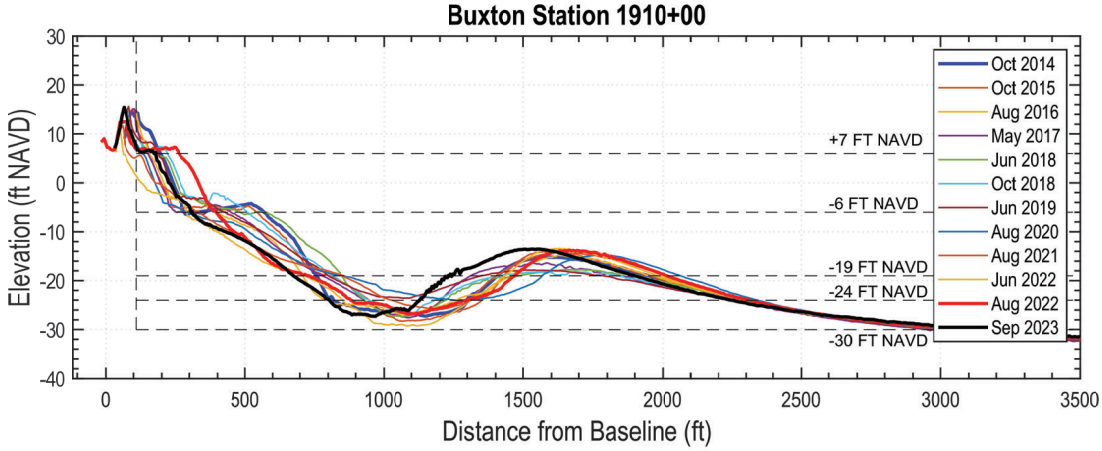
## Buxton Station 1905+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 5.9 | 59.9 | 367.3 | 647.5 | 1185.1 |
| Oct 2015 | 0.0 | 39.2 | 340.3 | 602.8 | 1099.1 |
| Aug 2016 | 9.4 | 60.8 | 347.6 | 627.7 | 1148.9 |
| May 2017 | 3.6 | 45.9 | 308.7 | 572.7 | 1055.5 |
| Jun 2018 | 6.4 | 95.0 | 417.4 | 723.7 | 1279.6 |
| Oct 2018 | 9.5 | 101.1 | 377.7 | 679.2 | 1228.4 |
| Jun 2019 | 7.3 | 81.6 | 351.0 | 667.9 | 1214.4 |
| Aug 2020 | 0.0 | 34.4 | 313.8 | 578.1 | 1139.1 |
| Aug 2021 | 0.0 | 40.0 | 307.4 | 589.8 | 1133.7 |
| Jun 2022 | 0.0 | 15.0 | 269.1 | 515.3 | 1020.5 |
| Aug 2022 | 2.7 | 129.8 | 402.2 | 652.8 | 1168.4 |
| Sep 2023 | 1.4 | 64.0 | 354.5 | 649.8 | 1197.4 |



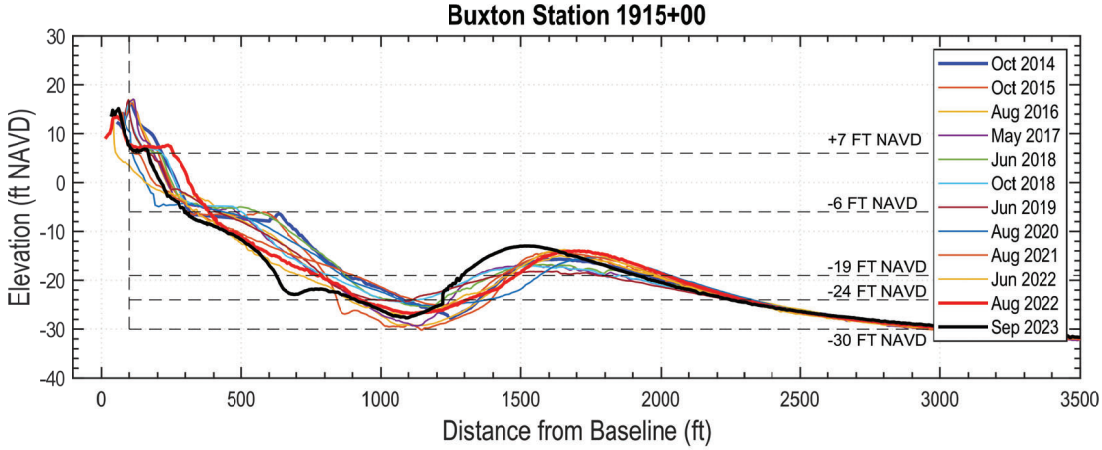
## Buxton Station 1910+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 10.6 | 79.5 | 401.4 | 666.8 | 1186.5 |
| Oct 2015 | 3.9 | 55.5 | 379.0 | 654.8 | 1168.0 |
| Aug 2016 | 4.7 | 63.0 | 341.6 | 597.4 | 1091.9 |
| May 2017 | 2.0 | 44.9 | 315.2 | 599.6 | 1119.2 |
| Jun 2018 | 1.5 | 78.0 | 386.4 | 676.9 | 1211.6 |
| Oct 2018 | 1.7 | 94.5 | 366.9 | 651.9 | 1185.6 |
| Jun 2019 | 3.4 | 73.2 | 334.0 | 630.9 | 1176.3 |
| Aug 2020 | 0.2 | 33.8 | 307.8 | 608.3 | 1164.8 |
| Aug 2021 | 0.0 | 41.2 | 318.7 | 619.3 | 1162.6 |
| Jun 2022 | 0.0 | 25.0 | 268.6 | 535.0 | 1062.9 |
| Aug 2022 | 0.2 | 102.9 | 369.1 | 638.3 | 1175.6 |
| Sep 2023 | 0.0 | 55.8 | 323.2 | 604.3 | 1137.6 |



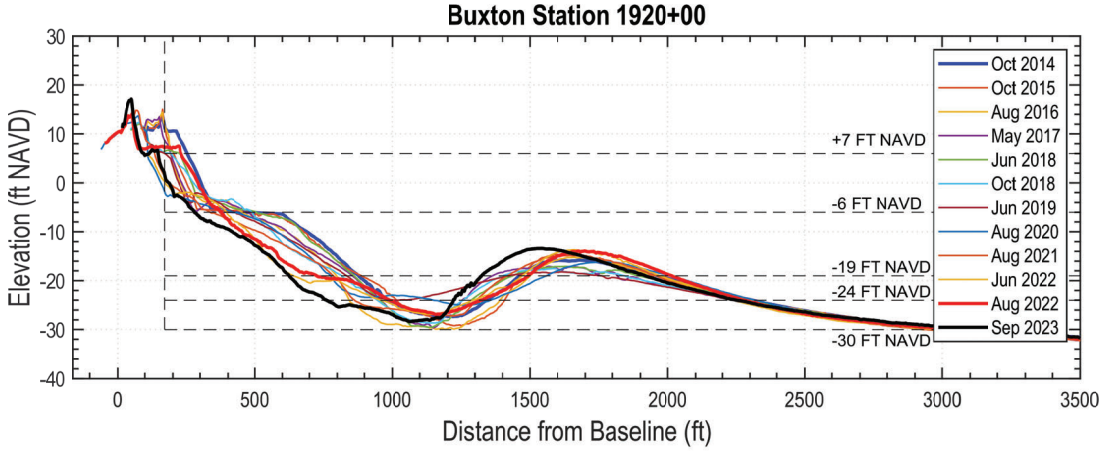
## Buxton Station 1915+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 18.0 | 96.0 | 433.4 | 730.8 | 1270.1 |
| Oct 2015 | 14.8 | 83.5 | 426.1 | 690.4 | 1173.0 |
| Aug 2016 | 15.8 | 92.6 | 392.1 | 663.9 | 1170.6 |
| May 2017 | 13.0 | 83.3 | 360.0 | 637.4 | 1143.1 |
| Jun 2018 | 5.0 | 86.1 | 416.9 | 716.1 | 1268.9 |
| Oct 2018 | 5.6 | 91.7 | 368.3 | 664.5 | 1213.3 |
| Jun 2019 | 5.0 | 80.5 | 343.1 | 623.1 | 1171.1 |
| Aug 2020 | 0.7 | 36.9 | 360.4 | 645.1 | 1190.6 |
| Aug 2021 | 0.0 | 49.8 | 348.5 | 655.3 | 1197.3 |
| Jun 2022 | 0.0 | 38.9 | 297.6 | 565.0 | 1081.9 |
| Aug 2022 | 1.8 | 104.1 | 382.5 | 660.2 | 1190.7 |
| Sep 2023 | 0.1 | 54.4 | 327.9 | 595.9 | 1129.8 |



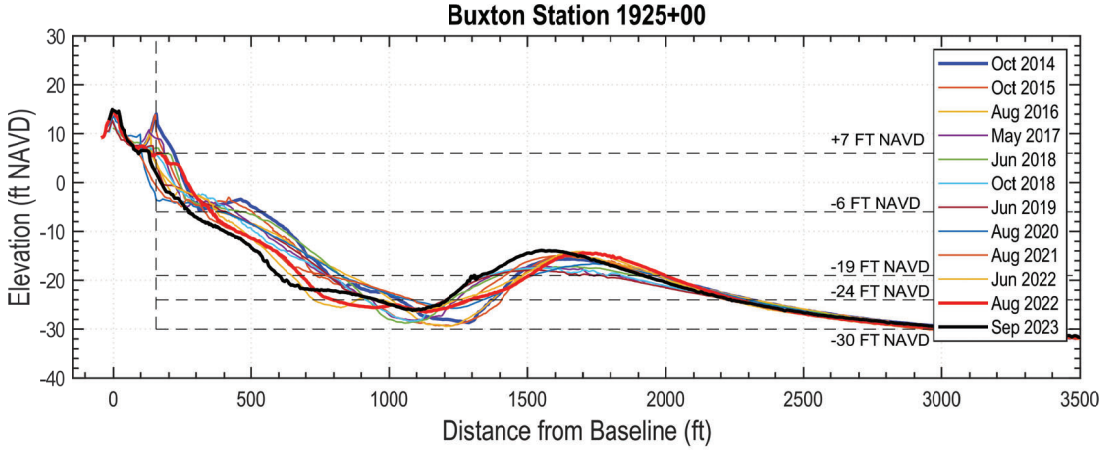
## Buxton Station 1920+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 7.8 | 70.4 | 384.7 | 659.8 | 1176.3 |
| Oct 2015 | 1.6 | 40.7 | 358.8 | 633.1 | 1133.3 |
| Aug 2016 | 2.2 | 44.2 | 320.5 | 566.7 | 1027.0 |
| May 2017 | 0.6 | 40.2 | 305.2 | 576.7 | 1070.0 |
| Jun 2018 | 0.0 | 55.3 | 339.9 | 612.2 | 1112.9 |
| Oct 2018 | 0.0 | 58.7 | 291.3 | 556.2 | 1057.6 |
| Jun 2019 | 0.0 | 37.0 | 272.3 | 548.6 | 1081.2 |
| Aug 2020 | 0.0 | 17.8 | 270.7 | 527.9 | 1062.5 |
| Aug 2021 | 0.0 | 20.2 | 276.0 | 533.0 | 1023.5 |
| Jun 2022 | 0.0 | 26.8 | 252.3 | 505.3 | 1007.5 |
| Aug 2022 | 0.6 | 57.7 | 290.4 | 558.6 | 1072.3 |
| Sep 2023 | 0.0 | 13.3 | 234.4 | 478.2 | 978.8 |



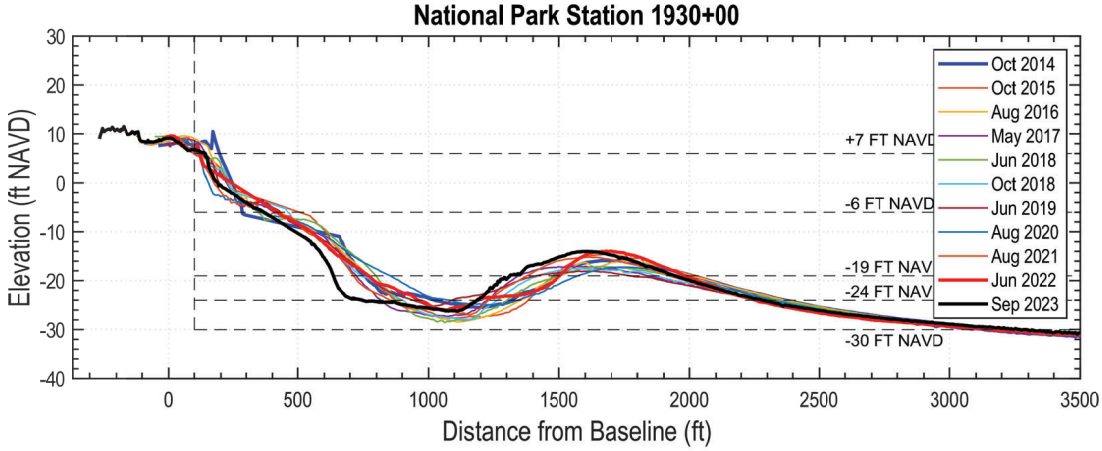
## Buxton Station 1925+00




| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 5.5 | 67.6 | 357.4 | 627.4 | 1142.9 |
| Oct 2015 | 1.3 | 51.9 | 328.8 | 582.1 | 1069.7 |
| Aug 2016 | 0.0 | 32.9 | 308.4 | 584.2 | 1091.0 |
| May 2017 | 1.7 | 42.3 | 275.5 | 539.0 | 1039.8 |
| Jun 2018 | 0.0 | 46.6 | 319.5 | 598.8 | 1111.6 |
| Oct 2018 | 0.0 | 42.8 | 266.5 | 536.1 | 1045.0 |
| Jun 2019 | 0.0 | 33.1 | 262.4 | 524.9 | 1048.9 |
| Aug 2020 | 0.0 | 13.1 | 264.3 | 538.5 | 1070.5 |
| Aug 2021 | 0.0 | 14.7 | 241.4 | 519.0 | 1036.8 |
| Jun 2022 | 0.0 | 36.2 | 264.2 | 496.0 | 1006.2 |
| Aug 2022 | 0.0 | 50.1 | 282.4 | 518.3 | 1029.3 |
| Sep 2023 | 0.0 | 15.7 | 227.6 | 484.6 | 1013.9 |



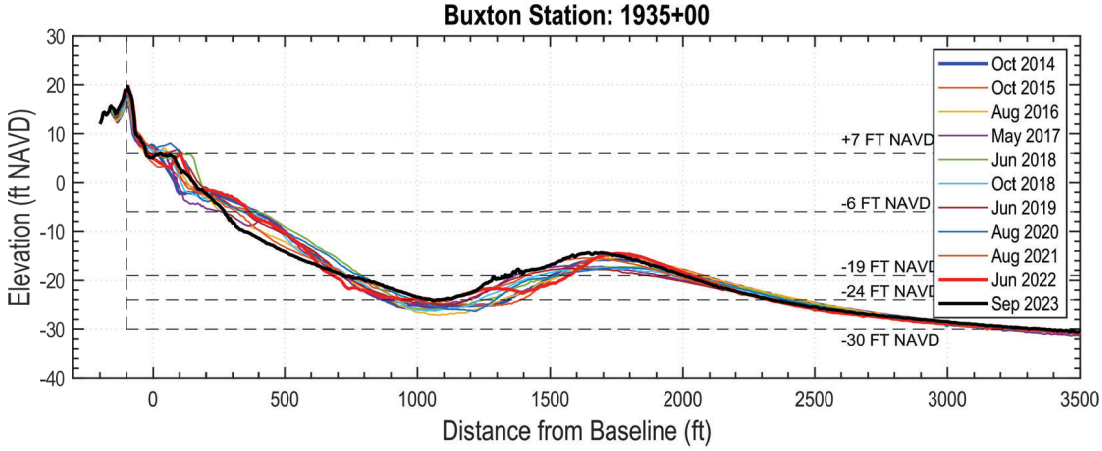
## National Park Station 1930+00



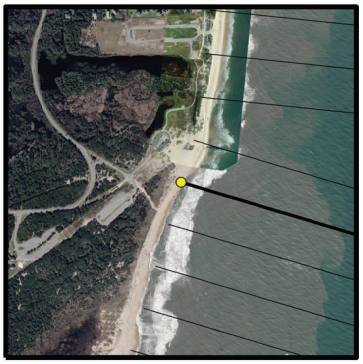

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 3.9 | 71.0 | 353.9 | 634.0 | 1208.2 |
| Oct 2015 | 0.1 | 75.4 | 390.6 | 663.5 | 1198.0 |
| Aug 2016 | 2.4 | 69.9 | 358.4 | 634.6 | 1167.5 |
| May 2017 | 1.2 | 61.1 | 324.8 | 592.6 | 1119.3 |
| Jun 2018 | 0.0 | 60.6 | 340.8 | 615.7 | 1148.2 |
| Oct 2018 | 0.0 | 69.4 | 326.5 | 599.4 | 1130.6 |
| Jun 2019 | 0.0 | 58.8 | 310.2 | 589.0 | 1148.2 |
| Aug 2020 | 0.0 | 36.7 | 311.9 | 592.6 | 1155.4 |
| Aug 2021 | 0.0 | 42.2 | 327.7 | 596.4 | 1130.2 |
| Jun 2022 | 0.2 | 66.1 | 364.6 | 635.8 | 1183.8 |
| Sep 2023 | 0.0 | 51.7 | 329.1 | 592.4 | 1147.3 |



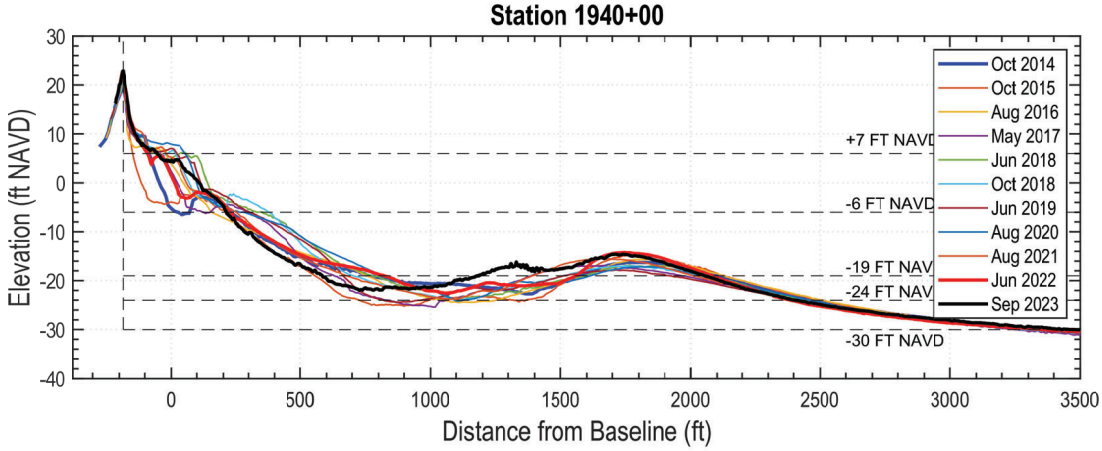
## Buxton Station: 1935+00



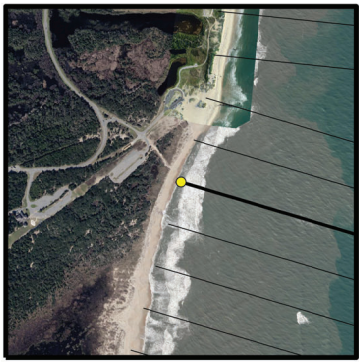

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 9.3 | 121.0 | 480.6 | 796.0 | 1419.2 |
| Oct 2015 | 9.4 | 117.3 | 482.1 | 802.9 | 1431.4 |
| Aug 2016 | 9.0 | 120.2 | 452.8 | 770.4 | 1380.7 |
| May 2017 | 9.7 | 103.6 | 433.0 | 753.2 | 1370.1 |
| Jun 2018 | 12.5 | 147.7 | 507.5 | 837.9 | 1458.6 |
| Oct 2018 | 13.2 | 134.5 | 462.2 | 785.0 | 1393.4 |
| Jun 2019 | 12.5 | 145.6 | 472.8 | 795.1 | 1413.8 |
| Aug 2020 | 16.9 | 145.3 | 488.6 | 822.1 | 1434.3 |
| Aug 2021 | 16.5 | 131.1 | 466.7 | 807.6 | 1428.5 |
| Jun 2022 | 14.4 | 142.9 | 496.3 | 805.5 | 1427.4 |
| Sep 2023 | 14.7 | 131.1 | 460.5 | 815.3 | 1449.2 |



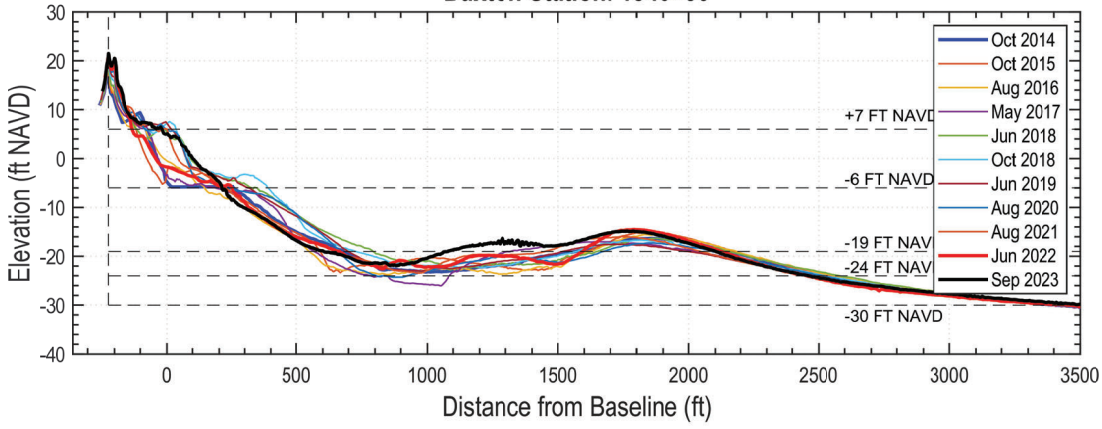
## Station 1940+00



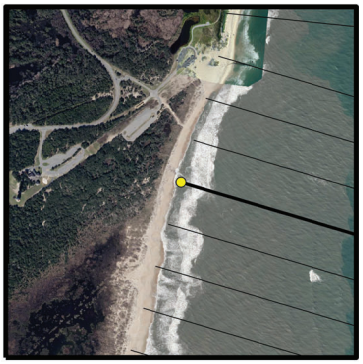

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 15.5 | 93.9 | 424.6 | 827.0 | 1502.3 |
| Oct 2015 | 9.4 | 67.4 | 389.6 | 697.7 | 1368.6 |
| Aug 2016 | 7.8 | 120.6 | 462.1 | 822.9 | 1499.1 |
| May 2017 | 11.9 | 114.5 | 451.9 | 794.2 | 1448.8 |
| Jun 2018 | 13.6 | 168.9 | 547.5 | 921.4 | 1589.5 |
| Oct 2018 | 14.3 | 154.1 | 516.5 | 877.8 | 1535.2 |
| Jun 2019 | 13.0 | 166.1 | 512.8 | 850.1 | 1506.3 |
| Aug 2020 | 23.2 | 164.5 | 541.6 | 925.0 | 1590.0 |
| Aug 2021 | 20.1 | 148.1 | 494.7 | 863.0 | 1525.6 |
| Jun 2022 | 16.5 | 125.0 | 489.9 | 882.0 | 1538.5 |
| Sep 2023 | 17.1 | 149.0 | 487.7 | 888.8 | 1560.6 |

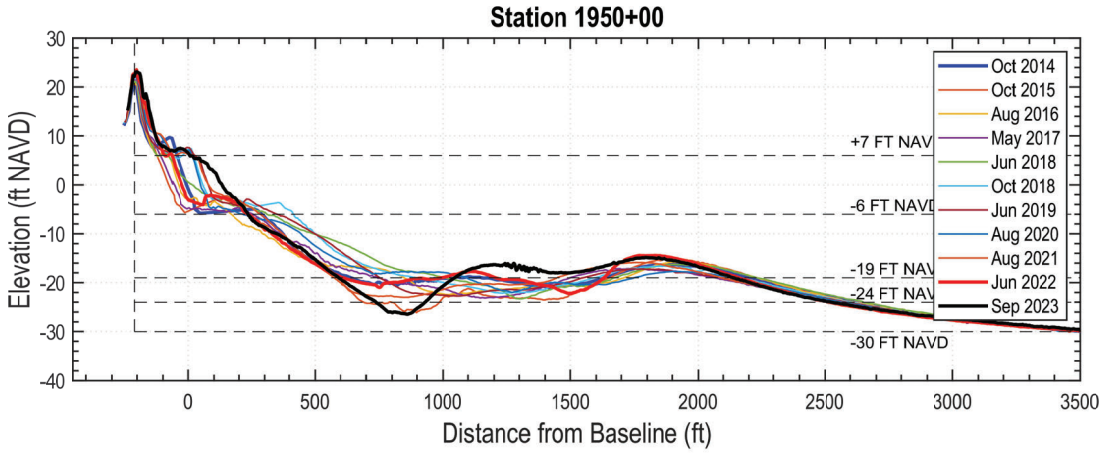


## Buxton Station: 1945+00



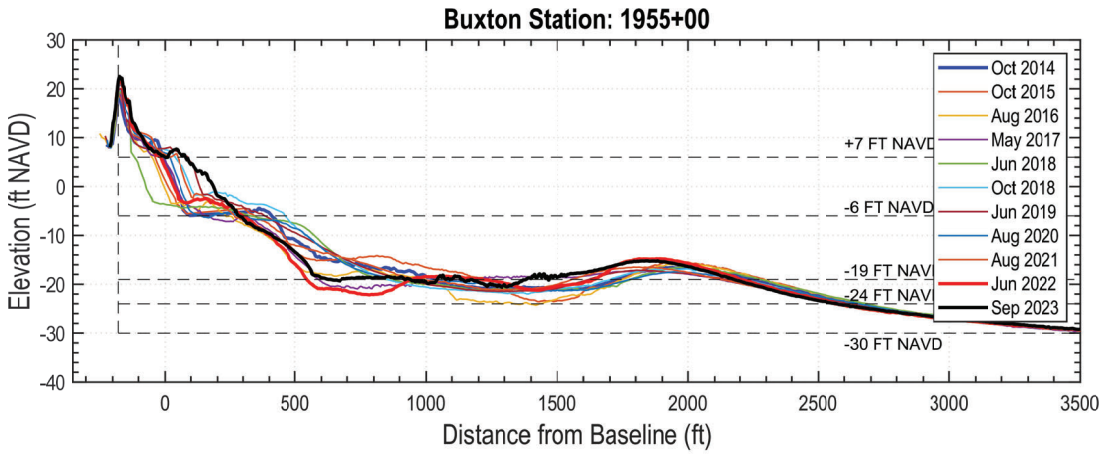

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 12.5 | 103.3 | 457.1 | 843.7 | 1542.6 |
| Oct 2015 | 16.6 | 112.0 | 468.3 | 849.7 | 1550.3 |
| Aug 2016 | 10.9 | 118.9 | 443.9 | 781.9 | 1486.4 |
| May 2017 | 14.0 | 110.1 | 459.1 | 820.9 | 1493.4 |
| Jun 2018 | 16.1 | 168.7 | 568.9 | 979.0 | 1685.2 |
| Oct 2018 | 18.0 | 185.3 | 572.2 | 971.6 | 1666.1 |
| Jun 2019 | 18.6 | 177.1 | 548.2 | 929.5 | 1619.6 |
| Aug 2020 | 22.8 | 166.1 | 536.3 | 906.1 | 1594.1 |
| Aug 2021 | 25.8 | 163.7 | 507.6 | 909.0 | 1586.9 |
| Jun 2022 | 23.0 | 123.9 | 480.0 | 874.9 | 1554.8 |
| Sep 2023 | 26.6 | 179.0 | 548.5 | 979.7 | 1675.4 |



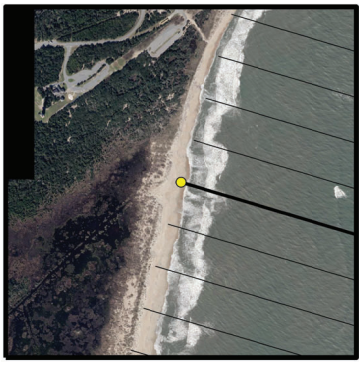



| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 20.7 | 123.8 | 469.0 | 922.6 | 1635.6 |
| Oct 2015 | 17.2 | 98.1 | 448.0 | 785.0 | 1491.1 |
| Aug 2016 | 16.9 | 111.1 | 451.7 | 872.7 | 1591.2 |
| May 2017 | 20.0 | 100.0 | 447.1 | 846.7 | 1546.3 |
| Jun 2018 | 19.3 | 138.1 | 573.7 | 1016.5 | 1739.1 |
| Oct 2018 | 21.5 | 175.5 | 588.9 | 1021.8 | 1732.6 |
| Jun 2019 | 22.7 | 175.9 | 572.5 | 974.0 | 1682.1 |
| Aug 2020 | 30.4 | 158.8 | 529.8 | 969.2 | 1673.2 |
| Aug 2021 | 32.9 | 183.9 | 540.7 | 935.4 | 1634.4 |
| Jun 2022 | 31.3 | 140.4 | 497.9 | 934.3 | 1633.4 |
| Sep 2023 | 35.6 | 196.9 | 588.5 | 997.0 | 1695.8 |

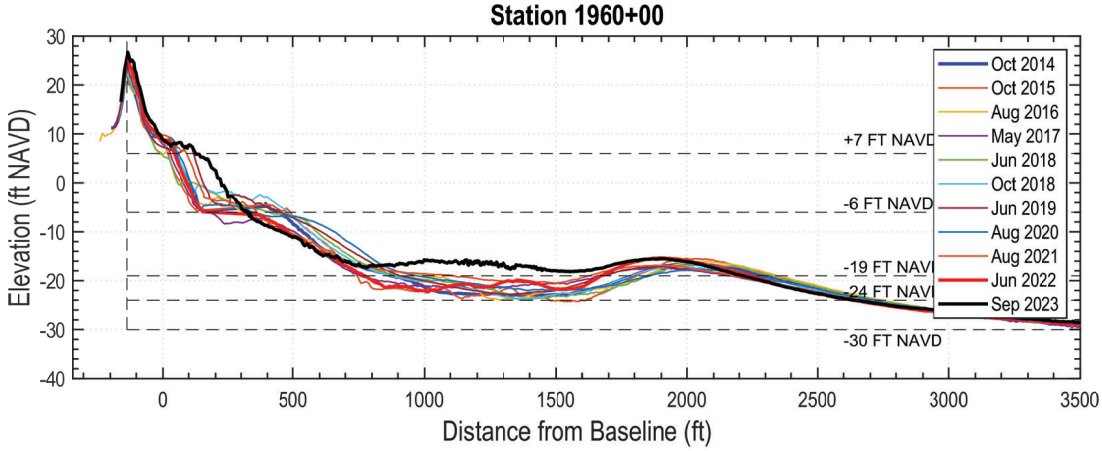




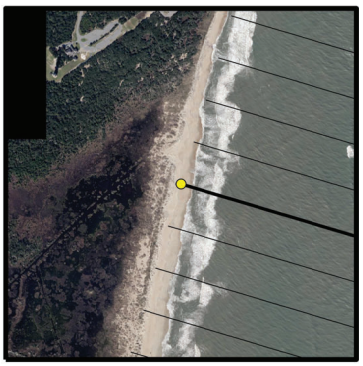

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 23.1 | 132.9 | 541.5 | 988.7 | 1706.5 |
| Oct 2015 | 21.9 | 122.3 | 563.3 | 1002.9 | 1728.2 |
| Aug 2016 | 19.1 | 116.0 | 465.3 | 860.2 | 1585.0 |
| May 2017 | 20.6 | 128.7 | 465.9 | 912.9 | 1621.4 |
| Jun 2018 | 16.2 | 88.7 | 501.8 | 938.9 | 1670.1 |
| Oct 2018 | 21.7 | 190.5 | 602.9 | 1025.0 | 1746.0 |
| Jun 2019 | 23.2 | 190.0 | 595.0 | 1025.7 | 1743.9 |
| Aug 2020 | 30.3 | 145.5 | 536.6 | 979.6 | 1697.3 |
| Aug 2021 | 34.2 | 174.5 | 568.0 | 1007.9 | 1717.0 |
| Jun 2022 | 31.7 | 151.7 | 509.7 | 934.8 | 1647.9 |
| Sep 2023 | 33.7 | 202.7 | 575.5 | 1035.4 | 1754.1 |



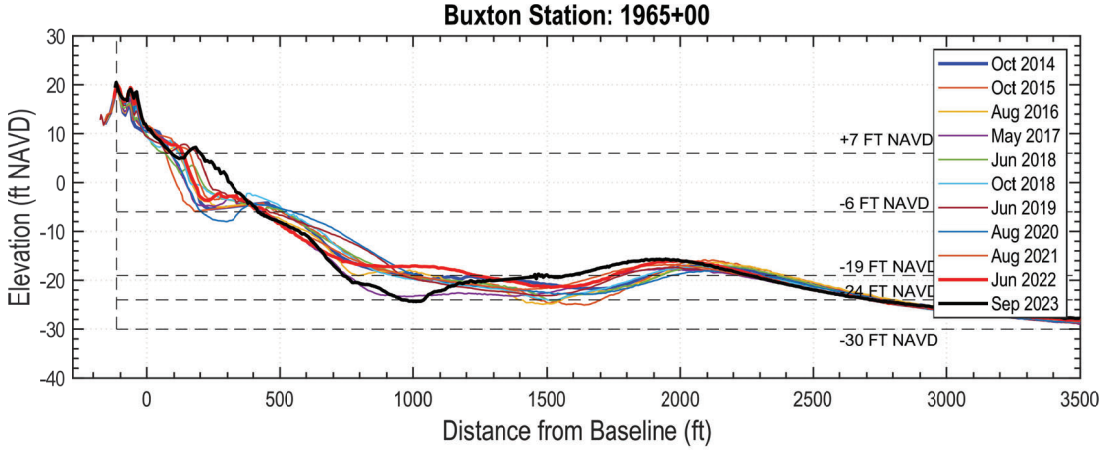
## Station 1960+00



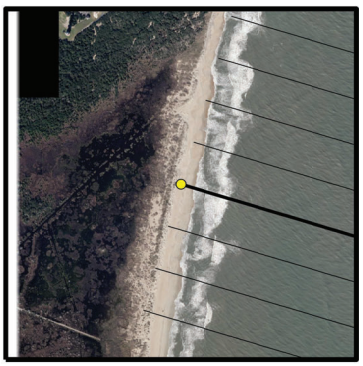

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 34.3 | 153.2 | 542.2 | 931.8 | 1661.3 |
| Oct 2015 | 34.1 | 142.1 | 546.6 | 908.1 | 1637.0 |
| Aug 2016 | 29.6 | 144.6 | 529.5 | 946.5 | 1677.2 |
| May 2017 | 34.2 | 136.1 | 475.8 | 888.3 | 1601.0 |
| Jun 2018 | 30.8 | 155.1 | 563.8 | 964.2 | 1699.6 |
| Oct 2018 | 33.9 | 187.5 | 581.9 | 973.4 | 1695.6 |
| Jun 2019 | 34.1 | 190.0 | 603.9 | 1011.5 | 1731.5 |
| Aug 2020 | 42.3 | 165.9 | 584.9 | 1007.6 | 1735.5 |
| Aug 2021 | 44.8 | 187.3 | 566.3 | 1020.0 | 1741.9 |
| Jun 2022 | 43.6 | 151.6 | 531.3 | 938.5 | 1663.5 |
| Sep 2023 | 52.8 | 223.1 | 670.5 | 1141.6 | 1878.3 |



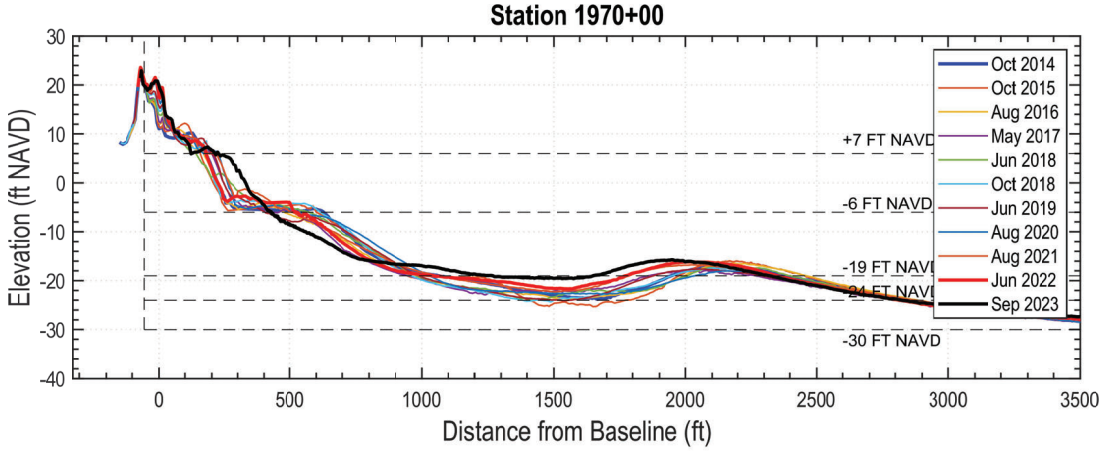
## Buxton Station: 1965+00



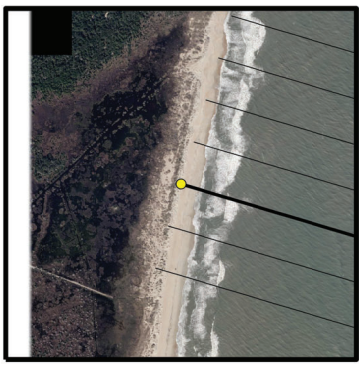

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 37.5 | 185.9 | 594.9 | 1044.3 | 1787.4 |
| Oct 2015 | 37.3 | 155.8 | 584.8 | 987.7 | 1729.5 |
| Aug 2016 | 36.6 | 182.4 | 581.9 | 993.5 | 1736.2 |
| May 2017 | 38.3 | 174.0 | 535.3 | 891.8 | 1620.4 |
| Jun 2018 | 32.8 | 189.1 | 608.5 | 1018.6 | 1759.7 |
| Oct 2018 | 38.0 | 206.5 | 619.8 | 1015.0 | 1745.5 |
| Jun 2019 | 38.4 | 218.0 | 652.6 | 1053.9 | 1781.8 |
| Aug 2020 | 42.8 | 174.4 | 610.1 | 1014.2 | 1750.4 |
| Aug 2021 | 49.4 | 215.0 | 619.8 | 1054.1 | 1799.6 |
| Jun 2022 | 48.7 | 208.2 | 626.0 | 1077.8 | 1831.0 |
| Sep 2023 | 47.0 | 243.1 | 641.8 | 1059.8 | 1820.7 |



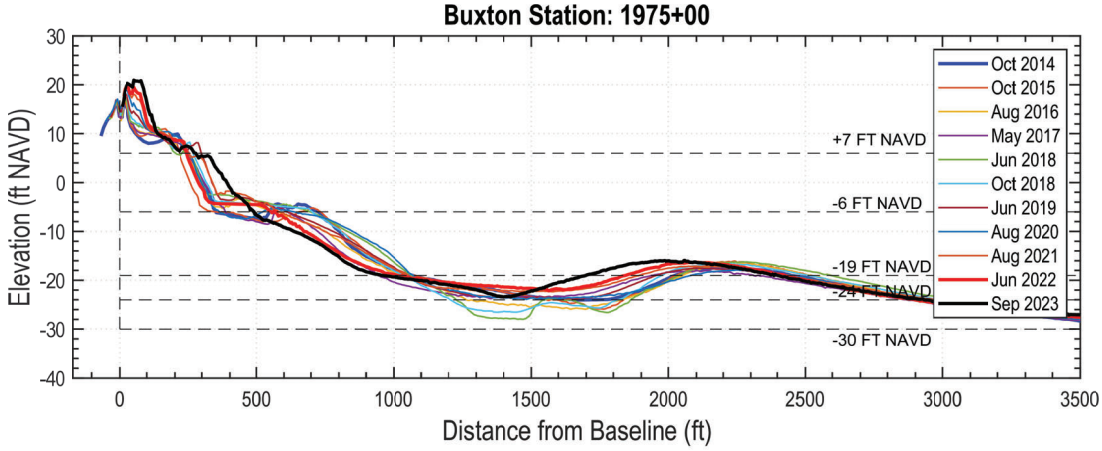
## Station 1970+00



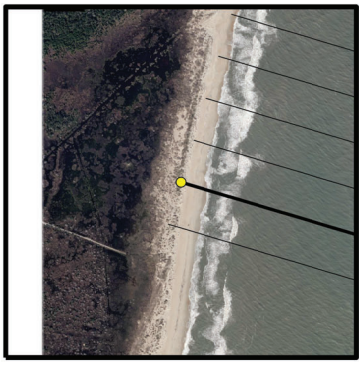

| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 33.9 | 173.5 | 594.8 | 1001.9 | 1744.7 |
| Oct 2015 | 40.5 | 176.6 | 612.1 | 1002.2 | 1741.2 |
| Aug 2016 | 37.0 | 177.2 | 579.0 | 966.9 | 1716.8 |
| May 2017 | 40.0 | 189.7 | 562.0 | 956.6 | 1691.0 |
| Jun 2018 | 34.8 | 192.9 | 611.9 | 999.1 | 1754.3 |
| Oct 2018 | 38.7 | 193.9 | 611.5 | 982.8 | 1726.9 |
| Jun 2019 | 42.0 | 194.6 | 603.1 | 981.4 | 1718.2 |
| Aug 2020 | 46.0 | 204.3 | 631.0 | 1019.7 | 1759.8 |
| Aug 2021 | 50.5 | 222.2 | 642.0 | 1082.2 | 1859.9 |
| Jun 2022 | 50.5 | 205.1 | 619.3 | 1066.9 | 1822.7 |
| Sep 2023 | 48.2 | 228.5 | 639.7 | 1117.5 | 1877.9 |

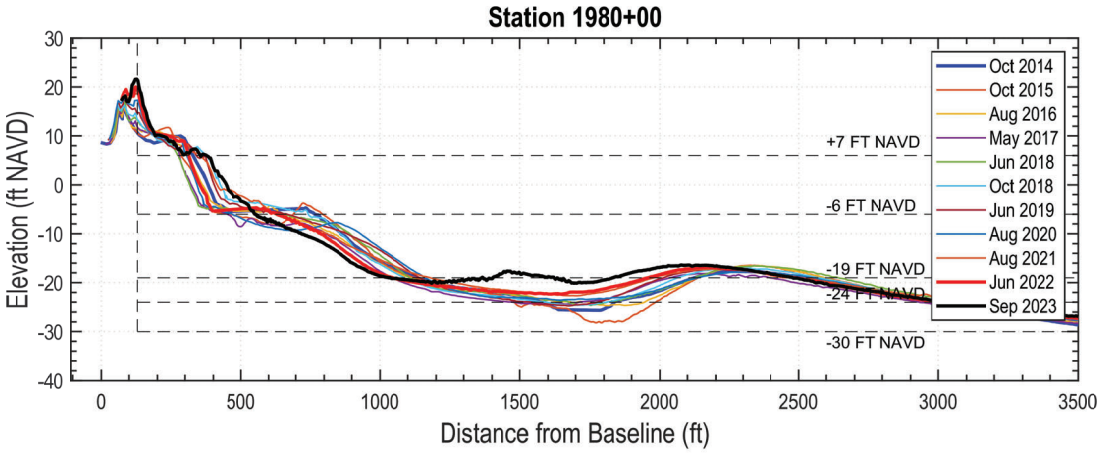


## Buxton Station: 1975+00

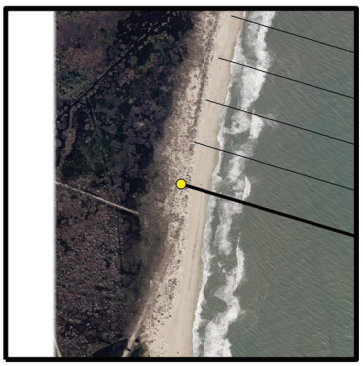



| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| Oct 2014 | 25.8 | 176.6 | 599.7 | 983.8 | 1721.4 |
| Oct 2015 | 30.7 | 155.7 | 597.1 | 982.3 | 1716.9 |
| Aug 2016 | 28.9 | 181.6 | 598.5 | 955.7 | 1682.2 |
| May 2017 | 29.8 | 178.0 | 549.6 | 912.1 | 1647.1 |
| Jun 2018 | 33.8 | 202.7 | 671.4 | 1044.2 | 1761.0 |
| Oct 2018 | 35.4 | 203.6 | 647.9 | 1012.0 | 1728.9 |
| Jun 2019 | 37.0 | 215.0 | 639.5 | 1018.2 | 1767.6 |
| Aug 2020 | 46.1 | 190.3 | 633.0 | 1002.7 | 1749.6 |
| Aug 2021 | 51.8 | 231.1 | 655.0 | 1076.5 | 2002.1 |
| Jun 2022 | 53.8 | 203.4 | 603.8 | 1036.6 | 1796.6 |
| Sep 2023 | 58.4 | 242.4 | 633.2 | 1065.3 | 2070.3 |






| Date | Vol to +7 | Vol to -6 | Vol to -19 | Vol to -24 | Vol to -30 |
|---|---|---|---|---|---|
| **Oct 2014** | 15.9 | 145.7 | 542.4 | 908.1 | 1603.3 |
| **Oct 2015** | 18.7 | 127.0 | 533.9 | 888.6 | 1564.5 |
| **Aug 2016** | 18.8 | 137.3 | 530.9 | 896.7 | 1614.5 |
| **May 2017** | 16.2 | 109.7 | 454.1 | 792.8 | 1501.0 |
| **Jun 2018** | 14.9 | 113.8 | 533.0 | 913.8 | 1651.8 |
| **Oct 2018** | 15.2 | 172.9 | 574.9 | 943.0 | 1668.6 |
| **Jun 2019** | 18.1 | 157.5 | 571.2 | 945.3 | 1670.8 |
| **Aug 2020** | 23.2 | 127.8 | 521.8 | 896.8 | 1632.0 |
| **Aug 2021** | 27.7 | 181.2 | 571.7 | 998.3 | 1761.1 |
| **Jun 2022** | 26.5 | 141.0 | 510.6 | 919.0 | 1665.1 |
| **Sep 2023** | 25.7 | 177.3 | 542.0 | 1013.0 | 1964.1 |



# APPENDIX A-4

# Buxton Survey Results

| Volumes from Dune Crest to -30 ft NAVD (Buxton) | | | | Unit Volume (cy/ft) | | | | | | | | | | | | | Total Volume (cy) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reach | Station | Offset | Distance to Next | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 |
| | 1720+00 | | 500 | | 1561.3 | 1615.7 | 1653.3 | 1539.8 | 1562.2 | 1512.0 | 1550.7 | 1550.7 | 1580.1 | 1593.0 | 1503.4 | 1503.4 | 1560.8 | | 783,667 | 799,164 | 807,249 | 769,263 | 769,990 | 755,176 | 760,198 | 760,198 | 805,804 | 809,066 | 760,843 | 760,843 | 793,147 |
| | 1725+00 | | 500 | | 1573.4 | 1580.9 | 1575.7 | 1537.3 | 1517.8 | 1508.7 | 1490.1 | 1490.1 | 1643.1 | 1643.2 | 1540.0 | 1540.0 | 1611.8 | | 779,252 | 786,042 | 763,413 | 753,058 | 753,261 | 746,548 | 734,749 | 734,749 | 802,298 | 788,943 | 759,103 | 759,103 | 804,581 |
| | 1730+00 | | 500 | | 1543.6 | 1563.3 | 1478.0 | 1474.9 | 1495.3 | 1477.5 | 1448.9 | 1448.9 | 1566.1 | 1512.5 | 1496.4 | 1496.4 | 1606.5 | | 797,899 | 781,092 | 750,294 | 739,617 | 747,801 | 739,783 | 734,446 | 734,446 | 764,712 | 763,459 | 752,891 | 752,891 | 807,056 |
| | 1735+00 | | 500 | | 1648.0 | 1561.1 | 1523.2 | 1483.5 | 1495.9 | 1481.6 | 1488.9 | 1488.9 | 1492.7 | 1541.3 | 1515.1 | 1515.1 | 1621.7 | | 824,359 | 768,788 | 767,290 | 742,256 | 745,934 | 736,112 | 747,654 | 747,654 | 745,640 | 778,731 | 763,956 | 763,956 | 806,316 |
| "Upcoast" | 1740+00 | | 500 | | 1649.5 | 1514.0 | 1546.0 | 1485.5 | 1487.8 | 1462.8 | 1501.7 | 1501.7 | 1489.8 | 1573.6 | 1540.7 | 1540.7 | 1603.5 | | 795,645 | 761,403 | 764,029 | 744,601 | 733,388 | 730,064 | 755,470 | 755,470 | 755,104 | 784,120 | 762,192 | 762,192 | 801,626 |
| | 1745+00 | | 500 | | 1533.1 | 1531.6 | 1510.2 | 1492.9 | 1445.7 | 1457.4 | 1520.2 | 1520.2 | 1530.6 | 1562.9 | 1508.1 | 1508.1 | 1603.0 | | 741,130 | 740,721 | 738,540 | 733,359 | 713,057 | 721,624 | 757,453 | 757,453 | 756,097 | 760,244 | 737,494 | 737,494 | 796,680 |
| | 1750+00 | | 500 | | 1431.4 | 1431.3 | 1444.0 | 1440.5 | 1406.5 | 1429.1 | 1509.6 | 1509.6 | 1493.8 | 1478.1 | 1441.9 | 1441.9 | 1583.7 | | 722,225 | 718,925 | 719,724 | 707,159 | 696,918 | 704,944 | 736,262 | 736,262 | 728,565 | 747,712 | 707,995 | 707,995 | 779,245 |
| | 1755+00 | | 500 | | 1457.5 | 1444.4 | 1434.9 | 1388.1 | 1381.2 | 1390.7 | 1435.4 | 1435.4 | 1420.5 | 1512.7 | 1390.1 | 1390.1 | 1533.2 | | 733,546 | 728,452 | 733,175 | 700,552 | 699,607 | 706,039 | 710,194 | 710,194 | 706,469 | 756,919 | 708,840 | 708,840 | 772,202 |
| | 1760+00 | | 500 | | 1476.7 | 1469.4 | 1497.8 | 1414.1 | 1417.2 | 1433.4 | 1405.4 | 1405.4 | 1405.4 | 1514.9 | 1445.3 | 1445.3 | 1555.6 | | 763,290 | 759,547 | 766,247 | 738,622 | 730,168 | 735,810 | 724,159 | 724,159 | 731,560 | 756,085 | 764,169 | 764,169 | 808,134 |
| | 1765+00 | | 500 | | 1576.5 | 1568.8 | 1567.2 | 1540.4 | 1503.4 | 1509.8 | 1491.3 | 1491.3 | 1520.8 | 1509.4 | 1611.4 | 1611.4 | 1677.0 | | 806,810 | 794,372 | 801,670 | 797,169 | 786,165 | 779,944 | 763,397 | 776,276 | 788,825 | 777,842 | 811,583 | 821,775 | 856,585 |
| | 1770+00 | | 500 | | 1650.8 | 1608.7 | 1639.5 | 1648.3 | 1641.2 | 1610.0 | 1562.3 | 1613.8 | 1634.5 | 1602.0 | 1634.9 | 1675.7 | 1749.4 | | 814,568 | 806,605 | 808,647 | 820,703 | 825,802 | 806,125 | 777,128 | 791,443 | 805,815 | 797,078 | 819,189 | 842,434 | 859,220 |
| | 1775+00 | | 500 | | 1607.5 | 1617.7 | 1595.1 | 1634.5 | 1662.0 | 1614.5 | 1546.2 | 1552.0 | 1588.8 | 1586.3 | 1641.8 | 1694.0 | 1687.5 | | 798,477 | 790,216 | 783,974 | 805,785 | 820,710 | 797,316 | 772,521 | 777,017 | 797,393 | 793,525 | 822,544 | 848,547 | 857,753 |
| | 1780+00 | | 500 | | 1586.4 | 1543.2 | 1540.8 | 1588.6 | 1620.9 | 1574.7 | 1543.9 | 1556.1 | 1600.8 | 1587.8 | 1648.3 | 1700.1 | 1743.5 | | 777,314 | 766,824 | 766,514 | 769,644 | 795,268 | 776,797 | 765,431 | 766,582 | 784,690 | 787,362 | 820,578 | 842,946 | 868,847 |
| | 1785+00 | | 500 | | 1522.8 | 1524.1 | 1525.3 | 1490.0 | 1560.2 | 1532.5 | 1517.8 | 1510.2 | 1538.0 | 1561.7 | 1634.0 | 1671.6 | 1731.9 | | 755,748 | 748,541 | 747,893 | 717,383 | 771,120 | 753,421 | 751,243 | 741,004 | 754,317 | 763,447 | 792,994 | 818,520 | 838,433 |
| | 1790+00 | | 500 | 1418.6 | 1500.2 | 1470.0 | 1466.3 | 1379.6 | 1524.3 | 1481.2 | 1487.1 | 1453.8 | 1479.3 | 1492.1 | 1538.0 | 1602.4 | 1621.9 | 1,435,092 | 744,420 | 735,856 | 736,202 | 698,926 | 758,614 | 750,502 | 749,114 | 734,900 | 749,470 | 752,246 | 770,185 | 807,834 | 821,133 |
| | 1795+00 | | 500 | | 1477.5 | 1473.4 | 1478.5 | 1416.1 | 1510.2 | 1520.8 | 1509.3 | 1485.8 | 1518.6 | 1516.9 | 1542.7 | 1628.9 | 1662.7 | | 744,239 | 735,445 | 727,554 | 705,707 | 747,161 | 756,523 | 745,950 | 734,726 | 742,320 | 747,869 | 766,007 | 810,530 | 832,312 |
| | 1800+00 | | 500 | 1451.6 | 1499.4 | 1468.4 | 1431.7 | 1406.7 | 1478.5 | 1505.3 | 1474.5 | 1453.1 | 1450.7 | 1474.6 | 1521.3 | 1613.2 | 1666.6 | 1,477,690 | 731,300 | 737,194 | 712,315 | 696,504 | 733,317 | 743,119 | 745,086 | 725,328 | 718,345 | 729,457 | 750,998 | 794,723 | 818,802 |
| | 1805+00 | | 500 | | 1425.8 | 1480.4 | 1417.5 | 1379.3 | 1454.8 | 1467.2 | 1505.9 | 1448.2 | 1422.7 | 1443.2 | 1482.7 | 1565.7 | 1608.6 | | 734,985 | 758,696 | 730,815 | 739,426 | 738,375 | 737,901 | 764,772 | 739,887 | 728,515 | 744,469 | 756,548 | 798,425 | 816,391 |
| | 1810+00 | | 500 | 1503.8 | 1514.2 | 1554.4 | 1505.7 | 1578.4 | 1498.7 | 1484.4 | 1553.2 | 1511.3 | 1491.4 | 1534.6 | 1543.5 | 1628.0 | 1656.9 | 1,487,876 | 755,356 | 785,462 | 759,106 | 776,420 | 754,848 | 756,033 | 774,083 | 768,660 | 750,397 | 771,001 | 769,828 | 809,990 | 828,792 |
| | 1815+00 | | 500 | | 1507.3 | 1587.4 | 1530.7 | 1527.3 | 1520.7 | 1539.7 | 1543.1 | 1563.3 | 1510.2 | 1549.4 | 1535.8 | 1611.9 | 1658.2 | | 744,587 | 780,853 | 758,355 | 741,196 | 767,040 | 781,542 | 773,746 | 767,637 | 768,059 | 776,379 | 763,423 | 796,936 | 823,645 |
| | 1820+00 | | 500 | 1472.0 | 1471.1 | 1536.0 | 1502.7 | 1437.5 | 1547.5 | 1586.5 | 1551.9 | 1507.2 | 1562.0 | 1556.2 | 1517.9 | 1575.8 | 1636.3 | 1,482,969 | 708,527 | 762,931 | 739,412 | 714,354 | 766,597 | 763,814 | 760,694 | 755,625 | 764,670 | 771,406 | 739,524 | 770,529 | 808,925 |
| 2 - "NPS" | 1825+00 | | 500 | | 1363.0 | 1515.8 | 1454.9 | 1419.9 | 1518.9 | 1468.8 | 1490.9 | 1515.3 | 1496.7 | 1529.5 | 1440.2 | 1506.3 | 1599.4 | | 713,749 | 750,755 | 743,357 | 724,397 | 770,957 | 742,768 | 763,982 | 765,471 | 764,302 | 766,774 | 728,185 | 763,925 | 801,223 |
| | 1830+00 | | 500 | 1494.0 | 1492.0 | 1487.3 | 1518.5 | 1477.7 | 1564.9 | 1502.3 | 1565.0 | 1546.6 | 1560.6 | 1537.6 | 1472.5 | 1549.4 | 1605.5 | 1,417,020 | 746,681 | 735,465 | 755,850 | 748,540 | 830,883 | 803,756 | 807,099 | 791,905 | 785,467 | 772,419 | 737,444 | 780,491 | 803,101 |
| | 1835+00 | | 500 | | 1494.7 | 1454.6 | 1504.9 | 1516.5 | 1758.6 | 1712.7 | 1663.4 | 1621.0 | 1581.3 | 1552.1 | 1477.3 | 1572.6 | 1606.9 | | 716,643 | 708,853 | 725,968 | 739,253 | 849,235 | 826,061 | 801,880 | 791,064 | 767,196 | 751,649 | 726,059 | 770,335 | 772,792 |
| | 1840+00 | | 500 | 1340.1 | 1371.8 | 1380.8 | 1399.0 | 1440.5 | 1638.3 | 1591.5 | 1544.1 | 1543.3 | 1487.5 | 1454.5 | 1427.0 | 1508.8 | 1484.3 | 1,325,334 | 698,536 | 694,114 | 702,383 | 735,533 | 823,596 | 798,851 | 771,243 | 779,206 | 757,384 | 746,096 | 718,752 | 754,538 | 780,099 |
| | 1845+00 | | 500 | | 1422.3 | 1395.6 | 1410.6 | 1501.6 | 1656.1 | 1603.9 | 1540.8 | 1573.6 | 1542.1 | 1529.8 | 1448.0 | 1509.4 | 1636.1 | | 675,743 | 677,159 | 699,194 | 720,217 | 804,912 | 783,818 | 750,013 | 762,749 | 740,609 | 738,021 | 699,746 | 731,875 | 779,530 |
| | 1850+00 | | 500 | 1310.6 | 1280.7 | 1313.0 | 1386.2 | 1379.3 | 1563.6 | 1531.4 | 1459.2 | 1477.4 | 1420.4 | 1422.2 | 1351.0 | 1418.1 | 1482.0 | 1,324,233 | 640,261 | 645,666 | 668,049 | 662,097 | 756,683 | 746,063 | 722,536 | 718,372 | 706,076 | 709,168 | 658,589 | 699,548 | 718,955 |
| | 1855+00 | | 500 | | 1280.4 | 1269.7 | 1286.0 | 1269.1 | 1463.2 | 1452.9 | 1430.9 | 1396.1 | 1403.9 | 1414.4 | 1283.4 | 1380.1 | 1393.8 | | 656,303 | 634,257 | 640,668 | 636,893 | 746,799 | 736,891 | 729,103 | 724,545 | 726,392 | 730,055 | 703,331 | 751,380 | 759,581 |
| | 1860+00 | | 500 | 1337.9 | 1344.8 | 1267.4 | 1276.7 | 1278.4 | 1524.0 | 1494.7 | 1485.5 | 1502.1 | 1501.6 | 1505.8 | 1529.9 | 1625.4 | 1644.5 | 1,336,402 | 677,228 | 656,386 | 645,371 | 638,366 | 755,495 | 748,199 | 738,463 | 748,790 | 767,893 | 761,732 | 757,135 | 803,864 | 799,160 |
| | 1865+00 | | 500 | | 1364.1 | 1358.2 | 1304.8 | 1275.0 | 1498.0 | 1498.1 | 1468.4 | 1493.0 | 1569.9 | 1541.1 | 1498.6 | 1590.0 | 1552.1 | | 673,785 | 681,724 | 668,899 | 637,946 | 743,577 | 735,642 | 724,273 | 723,780 | 760,927 | 770,715 | 716,276 | 771,448 | 774,406 |
| | 1870+00 | | 500 | 1334.9 | 1331.0 | 1368.7 | 1370.8 | 1276.8 | 1476.4 | 1444.5 | 1428.7 | 1402.1 | 1473.8 | 1541.7 | 1366.5 | 1495.8 | 1545.5 | 1,282,986 | 665,375 | 670,027 | 675,678 | 638,039 | 730,791 | 712,995 | 692,931 | 689,846 | 707,000 | 734,655 | 703,038 | 777,114 | 758,077 |
| | 1875+00 | | 500 | | 1330.4 | 1311.4 | 1331.9 | 1275.4 | 1446.8 | 1407.5 | 1343.0 | 1357.3 | 1354.2 | 1396.9 | 1445.7 | 1612.7 | 1486.8 | | 639,795 | 634,025 | 643,312 | 612,772 | 690,686 | 673,358 | 641,948 | 648,951 | 658,970 | 663,972 | 678,741 | 769,877 | 711,918 |
| | 1880+00 | | 500 | 1231.0 | 1228.7 | 1224.7 | 1241.3 | 1175.7 | 1315.9 | 1285.9 | 1224.8 | 1238.5 | 1281.6 | 1259.0 | 1269.3 | 1466.8 | 1360.9 | 1,219,068 | 602,876 | 585,018 | 603,992 | 581,652 | 635,058 | 621,146 | 609,690 | 614,586 | 617,994 | 613,676 | 607,760 | 715,938 | 668,309 |
| | 1885+00 | | 500 | | 1182.8 | 1115.4 | 1174.6 | 1150.9 | 1224.3 | 1198.7 | 1214.0 | 1219.8 | 1190.3 | 1195.7 | 1161.7 | 1396.9 | 1312.4 | | 594,478 | 571,117 | 595,234 | 569,055 | 630,251 | 621,713 | 608,125 | 608,210 | 596,959 | 586,561 | 588,287 | 698,800 | 654,989 |
| | 1890+00 | | 500 | 1207.1 | 1195.1 | 1169.1 | 1206.3 | 1125.3 | 1296.7 | 1288.2 | 1218.5 | 1213.0 | 1197.5 | 1150.5 | 1191.4 | 1398.3 | 1307.6 | 1,171,275 | 591,819 | 582,097 | 593,054 | 572,877 | 670,049 | 659,180 | 620,478 | 596,470 | 593,789 | 582,621 | 565,053 | 668,733 | 638,024 |
| | 1895+00 | | 500 | | 1172.1 | 1159.3 | 1165.9 | 1166.2 | 1383.5 | 1348.5 | 1263.4 | 1172.9 | 1177.6 | 1180.0 | 1068.8 | 1276.6 | 1244.5 | | 573,790 | 571,102 | 566,148 | 558,299 | 660,644 | 642,428 | 620,463 | 570,704 | 566,508 | 560,244 | 531,015 | 625,132 | 602,258 |
| | 1900+00 | | 500 | 1135.5 | 1123.0 | 1125.1 | 1098.7 | 1067.0 | 1259.1 | 1221.2 | 1218.5 | 1109.9 | 1088.4 | 1061.0 | 1055.3 | 1223.9 | 1164.5 | 1,166,521 | 577,018 | 556,059 | 561,893 | 530,638 | 634,659 | 612,407 | 608,226 | 575,366 | 556,867 | 548,684 | 518,938 | 598,061 | 590,488 |
| 1 - "Buxton" | 1905+00 | | 500 | | 1185.1 | 1099.1 | 1148.9 | 1055.5 | 1279.6 | 1228.4 | 1214.4 | 1191.5 | 1139.1 | 1133.7 | 1020.5 | 1168.4 | 1197.4 | | 592,876 | 566,787 | 560,186 | 543,691 | 622,779 | 603,517 | 597,692 | 587,436 | 575,977 | 574,085 | 520,844 | 586,002 | 583,767 |
| | 1910+00 | | 500 | 1197.6 | 1186.5 | 1168.0 | 1091.9 | 1119.2 | 1211.6 | 1185.6 | 1176.3 | 1158.2 | 1164.8 | 1162.6 | 1062.9 | 1175.6 | 1137.6 | 1,155,820 | 614,146 | 585,252 | 565,605 | 565,583 | 620,119 | 599,725 | 586,863 | 586,606 | 588,868 | 589,990 | 536,197 | 591,581 | 566,873 |
| | 1915+00 | | 500 | | 1270.1 | 1173.0 | 1170.6 | 1143.1 | 1268.9 | 1213.3 | 1171.1 | 1188.2 | 1190.6 | 1197.3 | 1081.9 | 1190.7 | 1129.8 | | 611,614 | 576,574 | 549,388 | 553,279 | 595,453 | 567,705 | 563,073 | 569,518 | 563,290 | 555,213 | 522,360 | 565,736 | 527,163 |
| | 1920+00 | | 500 | 1114.1 | 1176.3 | 1133.3 | 1027.0 | 1070.0 | 1112.9 | 1057.6 | 1081.2 | 1089.9 | 1062.5 | 1023.5 | 1007.5 | 1072.3 | 978.8 | 1,130,728 | 579,796 | 550,744 | 529,506 | 527,441 | 556,137 | 525,648 | 532,516 | 558,590 | 533,257 | 515,067 | 503,431 | 525,394 | 498,177 |
| | 1925+00 | | 500 | | 1142.9 | 1069.7 | 1091.0 | 1039.8 | 1111.6 | 1045.0 | 1048.9 | 1144.5 | 1070.5 | 1036.8 | 1006.2 | 1029.3 | 1013.9 | | 587,772 | 566,914 | 564,631 | 539,761 | 564,960 | 543,921 | 549,285 | 573,187 | 556,471 | 541,740 | 547,502 | 553,283 | 540,309 |
| | 1930+00 | | 500 | 1147.4 | 1208.2 | 1198.0 | 1167.5 | 1119.3 | 1148.2 | 1130.6 | 1148.2 | 1148.2 | 1155.4 | 1130.2 | 1183.8 | 1183.8 | 1147.3 | 1,355,234 | 656,863 | 657,351 | 637,037 | 622,339 | 651,703 | 631,015 | 640,507 | 640,507 | 647,427 | 639,666 | 652,807 | 652,807 | 649,139 |
| | 1935+00 | | 500 | | 1419.2 | 1431.4 | 1380.7 | 1370.1 | 1458.6 | 1393.4 | 1413.8 | 1413.8 | 1434.3 | 1428.5 | 1427.4 | 1427.4 | 1449.2 | | 730,390 | 700,003 | 719,935 | 704,731 | 762,032 | 732,154 | 730,025 | 730,025 | 756,085 | 738,511 | 741,479 | 741,479 | 752,450 |
| | 1940+00 | | 500 | 1563.1 | 1502.3 | 1368.6 | 1499.1 | 1448.8 | 1589.5 | 1535.2 | 1506.3 | 1506.3 | 1590.0 | 1525.6 | 1538.5 | 1538.5 | 1560.6 | 1,629,626 | 761,237 | 729,741 | 746,365 | 735,556 | 818,665 | 800,331 | 781,474 | 781,474 | 796,014 | 778,124 | 773,318 | 773,318 | 808,984 |
| | 1945+00 | | 500 | | 1542.6 | 1550.3 | 1486.4 | 1493.4 | 1685.2 | 1666.1 | 1619.6 | 1619.6 | 1594.1 | 1586.9 | 1554.8 | 1554.8 | 1675.4 | | 794,542 | 760,362 | 769,390 | 759,931 | 856,068 | 849,679 | 825,422 | 825,422 | 816,816 | 805,338 | 797,048 | 797,048 | 842,797 |
| | 1950+00 | | 500 | 1696.2 | 1635.6 | 1491.1 | 1591.2 | 1546.3 | 1739.1 | 1732.6 | 1682.1 | 1682.1 | 1673.2 | 1634.4 | 1633.4 | 1633.4 | 1695.8 | 1,711,679 | 835,507 | 804,817 | 794,034 | 791,936 | 852,306 | 869,645 | 856,513 | 856,513 | 842,623 | 837,853 | 820,328 | 820,328 | 862,478 |
| "Downcoast" | 1955+00 | | 500 | | 1706.5 | 1728.2 | 1585.0 | 1621.4 | 1670.1 | 1746.0 | 1743.9 | 1743.9 | 1697.3 | 1717.0 | 1647.9 | 1647.9 | 1754.1 | | 841,930 | 841,297 | 815,551 | 805,595 | 842,433 | 860,392 | 868,867 | 868,867 | 858,205 | 864,728 | 827,849 | 827,849 | 908,084 |
| | 1960+00 | | 500 | 1727.2 | 1661.3 | 1637.0 | 1677.2 | 1601.0 | 1699.6 | 1695.6 | 1731.5 | 1731.5 | 1735.5 | 1741.9 | 1663.5 | 1663.5 | 1878.3 | 1,743,830 | 862,159 | 841,617 | 853,358 | 805,339 | 864,834 | 860,271 | 878,329 | 878,329 | 871,480 | 885,393 | 873,627 | 873,627 | 924,727 |
| | 1965+00 | | 500 | | 1787.4 | 1729.5 | 1736.2 | 1620.4 | 1759.7 | 1745.5 | 1781.8 | 1781.8 | 1750.4 | 1799.6 | 1831.0 | 1831.0 | 1820.7 | | 883,030 | 867,662 | 863,241 | 827,835 | 878,501 | 868,095 | 874,986 | 874,986 | 877,559 | 914,892 | 913,430 | 913,430 | 924,649 |
| | 1970+00 | | 500 | 1760.5 | 1744.7 | 1741.2 | 1716.8 | 1691.0 | 1754.3 | 1726.9 | 1718.2 | 1718.2 | 1759.8 | 1859.9 | 1822.7 | 1822.7 | 1877.9 | 1,760,478 | 866,529 | 864,530 | 849,757 | 834,516 | 878,811 | 863,952 | 871,452 | 871,452 | 877,361 | 965,511 | 904,839 | 904,839 | 987,052 |
| | 1975+00 | | 500 | | 1721.4 | 1716.9 | 1682.2 | 1647.1 | 1761.0 | 1728.9 | 1767.6 | 1767.6 | 1749.6 | 2002.1 | 1796.6 | 1796.6 | 2070.3 | | 831,173 | 820,355 | 824,195 | 787,021 | 853,185 | 849,373 | 859,614 | 859,614 | 845,400 | 940,789 | 865,425 | 865,425 | 1,008,600 |
| | 1980+00 | | 500 | 1684.6 | 1603.3 | 1564.5 | 1614.5 | 1501.0 | 1651.8 | 1668.6 | 1670.8 | 1670.8 | 1632.0 | 1761.1 | 1665.1 | 1665.1 | 1964.1 | | | | | | | | | | | | | | |

| Reach | Distance to Next | Unit Volume (cy/ft) | | | | | | | | | | | | | | Unit Volume (cy/ft) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 |
| UC | 5000 | | 1545.1 | 1528.1 | 1523.0 | 1479.7 | 1471.3 | 1466.3 | 1484.2 | 1484.2 | 1514.3 | 1544.2 | 1499.2 | 1499.2 | 1595.7 | | 7,747,823 | 7,638,505 | 7,611,631 | 7,425,656 | 7,376,289 | 7,356,046 | 7,423,982 | 7,436,862 | 7,585,075 | 7,723,122 | 7,529,067 | 7,539,259 | 8,025,572 |
| 2 | 11500 | 1389.4 | 1437.7 | 1443.9 | 1440.0 | 1424.9 | 1541.0 | 1517.9 | 1497.4 | 1492.2 | 1498.7 | 1503.9 | 1489.1 | 1574.0 | 1600.9 | 13,788,670 | 16,416,494 | 16,482,071 | 16,443,507 | 16,261,750 | 17,617,526 | 17,352,642 | 17,132,928 | 17,062,076 | 17,124,199 | 17,193,170 | 17,006,876 | 18,031,746 | 18,301,404 |
| 1 | 4500 | 1163.5 | 1181.5 | 1134.7 | 1130.5 | 1104.1 | 1238.7 | 1198.5 | 1178.5 | 1165.3 | 1142.4 | 1126.8 | 1072.9 | 1214.7 | 1165.2 | 4,624,343 | 5,323,309 | 5,126,646 | 5,085,645 | 4,960,623 | 5,555,051 | 5,376,243 | 5,286,720 | 5,226,087 | 5,131,987 | 5,054,203 | 4,833,628 | 5,412,722 | 5,202,048 |
| DC | 5000 | 1596.5 | 1593.9 | 1559.7 | 1557.9 | 1514.5 | 1628.8 | 1615.4 | 1616.7 | 1616.7 | 1615.6 | 1653.4 | 1615.0 | 1615.0 | 1717.6 | 8,200,847 | 8,063,359 | 7,887,735 | 7,872,863 | 7,674,799 | 8,258,537 | 8,184,907 | 8,187,189 | 8,187,189 | 8,188,970 | 8,370,805 | 8,170,148 | 8,170,148 | 8,668,960 |
| **Project** | **16000** | **1324.9** | **1365.7** | **1357.0** | **1352.9** | **1334.7** | **1456.0** | **1428.0** | **1407.7** | **1400.3** | **1398.5** | **1397.8** | **1372.1** | **1473.0** | **1478.4** | **18,413,013** | **21,739,803** | **21,608,718** | **21,529,152** | **21,222,374** | **23,172,577** | **22,728,885** | **22,419,649** | **22,288,162** | **22,256,187** | **22,247,374** | **21,840,503** | **23,444,468** | **23,503,453** |
| All | 26000 | 1406.4 | 1446.9 | 1431.3 | 1427.6 | 1399.4 | 1494.8 | 1474.2 | 1465.5 | 1461.0 | 1465.4 | 1478.5 | 1446.5 | 1507.4 | 1550.2 | 26,613,860 | 37,550,985 | 37,134,958 | 37,013,646 | 36,322,829 | 38,807,403 | 38,269,837 | 38,030,820 | 37,912,213 | 38,030,231 | 38,341,301 | 37,539,719 | 39,153,876 | 40,197,985 |

| Volumes from Dune Crest to -30 ft NAVD (Buxton) | | | | Unit Vol Since Last (cy/ft) | | | | | | | | | | | | | Total Vol Since Last (cy/ft) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reach | Station | Offset | Distance to Next | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 |
| "Upcoast" | 1720+00 | | 500 | | 1562.92 | 22.29 | -14.54 | -48.34 | 0.93 | -21.5 | -6.8 | 0.0 | 113.2 | -10.09 | -78.06 | 0.00 | 77.78 | | 783,667 | 15,497 | 8,084 | -37,986 | 727 | -14,813 | 5,022 | 0 | 45,606 | 3,262 | -48,223 | 0 | 32,303 |
| | 1725+00 | | 500 | | 1577.15 | -10.02 | -53.43 | -21.03 | 8.39 | -14.7 | -17.1 | 0.0 | 97.8 | -14.61 | -40.41 | 0.00 | 99.64 | | 779,252 | 6,790 | -22,629 | -10,355 | 203 | -6,713 | -11,799 | 0 | 67,549 | -13,355 | -29,840 | 0 | 45,478 |
| | 1730+00 | | 500 | | 1622.26 | -72.38 | -32.30 | -35.71 | 11.86 | -17.8 | 6.2 | 0.0 | 28.3 | 31.84 | -25.34 | 0.00 | 96.52 | | 797,899 | -16,807 | -30,798 | -10,677 | 8,184 | -8,018 | -5,337 | 0 | 30,266 | -1,253 | -10,568 | 0 | 54,164 |
| | 1735+00 | | 500 | | 1620.00 | -89.81 | 1.13 | -44.46 | -7.53 | -13.1 | 36.9 | 0.0 | -2.4 | 62.11 | -36.70 | 0.00 | 81.79 | | 824,359 | -55,571 | -1,498 | -25,034 | 3,678 | -9,821 | 11,542 | 0 | -2,014 | 33,091 | -14,775 | 0 | 42,360 |
| | 1740+00 | | 500 | | 1536.78 | -34.65 | 0.45 | -24.61 | -31.51 | 5.2 | 61.2 | 0.0 | -1.7 | 33.16 | -44.68 | 0.00 | 98.62 | | 795,645 | -34,243 | 2,626 | -19,428 | -11,213 | -3,324 | 25,405 | 0 | -366 | 29,016 | -21,928 | 0 | 39,434 |
| | 1745+00 | | 500 | | 1463.35 | -3.71 | -1.38 | -17.75 | -30.54 | 16.6 | 67.1 | 0.0 | -9.1 | 23.29 | -62.47 | 0.00 | 130.44 | | 741,130 | -409 | -2,181 | -5,181 | -20,302 | 8,568 | 35,829 | 0 | -1,356 | 4,146 | -22,750 | 0 | 59,186 |
| | 1750+00 | | 500 | | 1455.77 | -8.39 | 5.52 | -45.19 | -11.19 | 14.5 | 35.5 | 0.0 | -11.4 | 69.60 | -87.80 | 0.00 | 134.61 | | 722,225 | -3,300 | 799 | -12,565 | -10,241 | 8,026 | 31,318 | 0 | -7,697 | 19,147 | -39,717 | 0 | 71,250 |
| | 1755+00 | | 500 | | 1496.84 | -8.84 | 11.42 | -60.25 | -9.40 | 12.1 | -7.5 | 0.0 | 3.7 | 74.98 | -40.00 | 0.00 | 107.33 | | 733,546 | -5,094 | 4,723 | -32,623 | -945 | 6,432 | 4,155 | 0 | -3,726 | 50,451 | -48,079 | 0 | 63,362 |
| | 1760+00 | | 500 | | 1570.10 | -16.18 | 14.00 | -32.13 | -19.46 | -0.6 | -28.2 | 12.9 | 20.0 | 13.54 | 41.82 | 10.19 | 78.78 | | 763,290 | -3,743 | 6,700 | -27,625 | -8,454 | 5,642 | -11,651 | 0 | 7,401 | 24,525 | 8,084 | 0 | 43,966 |
| | 1765+00 | | 500 | | 1621.38 | -20.40 | 9.34 | 7.55 | -5.91 | -25.9 | -45.5 | 27.2 | 26.9 | -19.72 | 55.85 | 33.44 | 51.60 | | 806,810 | -12,438 | 7,299 | -4,501 | -11,005 | -6,221 | -16,547 | 12,879 | 12,549 | -10,983 | 33,741 | 10,193 | 34,810 |
| 2 - "NPS" | 1770+00 | | 500 | | 1613.04 | -16.22 | -4.20 | 33.87 | 20.02 | -43.1 | -53.8 | 18.8 | 34.7 | -12.60 | 51.13 | 49.25 | 25.99 | | 814,568 | -7,963 | 2,042 | 12,055 | 5,100 | -19,677 | -28,997 | 14,315 | 14,371 | -8,737 | 22,111 | 23,245 | 16,786 |
| | 1775+00 | | 500 | | 1575.79 | -18.75 | -6.55 | 24.94 | 40.55 | -41.9 | -36.2 | 5.6 | 38.5 | -1.20 | 62.24 | 48.37 | 35.11 | | 798,477 | -8,261 | -6,242 | 21,811 | 14,925 | -23,394 | -24,795 | 4,496 | 20,376 | -3,868 | 29,019 | 26,003 | 9,206 |
| | 1780+00 | | 500 | | 1533.06 | -17.70 | -0.96 | -27.38 | 79.36 | -36.2 | -13.5 | -9.1 | 31.4 | 11.80 | 62.76 | 47.89 | 45.81 | | 777,314 | -10,490 | -309 | 3,129 | 25,624 | -18,470 | -11,366 | 1,151 | 18,108 | 2,672 | 33,217 | 22,368 | 25,901 |
| | 1785+00 | | 500 | | 65.08 | -15.77 | -0.30 | -67.79 | 113.43 | -25.8 | -3.6 | -24.5 | 27.9 | 11.91 | 47.49 | 63.17 | 33.21 | | 755,748 | -7,207 | -648 | -30,510 | 53,737 | -17,698 | -2,179 | -10,239 | 13,314 | 9,130 | 29,547 | 25,526 | 19,913 |
| | 1790+00 | | 500 | | 53.6 | -17.4 | -7.5 | -59.1 | 101.14 | 1.2 | -12.0 | -25.4 | 22.2 | 8.3 | 36.1 | 82.2 | 35.1 | | -690,672 | -8,564 | 346 | -37,276 | 59,689 | -8,112 | -1,388 | -14,214 | 14,570 | 2,776 | 17,940 | 37,648 | 13,300 |
| | 1795+00 | | 500 | | -2.2 | -2.9 | -32.8 | -37.7 | 78.27 | 19.2 | -8.6 | -31.0 | 0.6 | 16.7 | 39.7 | 88.2 | 45.9 | | 744,239 | -8,793 | -7,892 | -21,847 | 41,455 | 9,362 | -10,573 | -11,225 | 7,594 | 5,550 | 18,138 | 44,522 | 21,782 |
| | 1800+00 | | 500 | | -11.4 | 29.6 | -52.8 | -7.2 | 35.76 | 9.3 | 28.8 | -44.6 | -18.4 | 27.1 | 33.6 | 85.6 | 42.0 | | -746,390 | 5,894 | -24,879 | -15,811 | 36,813 | 9,801 | 1,967 | -19,758 | -6,982 | 11,112 | 21,541 | 43,725 | 24,079 |
| | 1805+00 | | 500 | | 2.5 | 53.8 | -54.2 | 25.9 | -22.62 | 0.7 | 44.9 | -30.3 | -29.6 | 36.6 | 10.9 | 82.0 | 36.8 | | 734,985 | 23,712 | -27,882 | 8,612 | -1,052 | -474 | 26,871 | -24,885 | -11,372 | 15,954 | 12,080 | 41,877 | 17,966 |
| | 1810+00 | | 500 | | 12.1 | 66.4 | -48.9 | 0.2 | 4.27 | 15.7 | 10.3 | -11.5 | -17.8 | 28.9 | -14.1 | 73.7 | 45.5 | | -732,520 | 30,106 | -26,356 | 17,313 | -21,572 | 1,185 | 18,050 | -5,422 | -18,263 | 20,604 | -1,172 | 40,162 | 18,802 |
| | 1815+00 | | 500 | | -29.9 | 90.7 | -46.0 | -42.2 | 78.09 | 11.7 | -10.9 | -11.2 | 9.5 | 15.1 | -44.8 | 64.5 | 65.1 | | 744,587 | 36,266 | -22,499 | -17,159 | 25,845 | 14,502 | -7,796 | -6,108 | 421 | 8,320 | -12,956 | 33,513 | 26,709 |
| | 1820+00 | | 500 | | -60.7 | 91.4 | -30.9 | -44.0 | 98.80 | -31.0 | 18.1 | -3.6 | 7.9 | 9.2 | -70.5 | 66.7 | 75.7 | | -774,442 | 54,404 | -23,519 | -25,058 | 52,243 | -2,783 | -3,120 | -5,069 | 9,045 | 6,736 | -31,883 | 31,005 | 38,396 |
| | 1825+00 | | 500 | | 43.4 | 25.8 | 13.0 | -26.3 | 128.90 | -55.3 | 24.6 | -13.7 | -7.6 | -10.6 | -73.6 | 78.8 | 59.9 | | 713,749 | 37,006 | -7,398 | -18,959 | 46,560 | -28,189 | 21,214 | 1,489 | -1,169 | 2,472 | -38,589 | 35,739 | 37,298 |
| | 1830+00 | | 500 | | 46.3 | -19.0 | 37.5 | 6.0 | 192.33 | -50.3 | -20.8 | -26.0 | -30.3 | -28.6 | -60.6 | 87.3 | 25.1 | | -670,339 | -11,216 | 20,385 | -7,310 | 82,344 | -27,128 | 3,344 | -15,194 | -6,438 | -13,048 | -34,975 | 43,047 | 22,610 |
| | 1835+00 | | 500 | | 89.8 | -12.2 | 25.4 | 46.4 | 198.04 | -47.9 | -51.8 | -2.9 | -45.7 | -26.8 | -52.9 | 80.1 | 28.0 | | 716,643 | -7,790 | 17,116 | 13,285 | 109,982 | -23,174 | -24,181 | -10,816 | -23,868 | -15,547 | -25,590 | 44,276 | 2,457 |
| | 1840+00 | | 500 | | 48.9 | -3.0 | 30.3 | 54.2 | 172.76 | -45.8 | -61.4 | 20.7 | -44.0 | -13.9 | -65.6 | 67.9 | 73.2 | | -626,798 | -4,422 | 8,269 | 33,150 | 88,063 | -24,745 | -27,608 | 7,963 | -21,823 | -11,288 | -27,344 | 35,787 | 25,560 |
| | 1845+00 | | 500 | | -8.2 | 6.8 | 44.4 | 15.1 | 179.28 | -31.7 | -57.3 | 8.6 | -34.4 | 0.5 | -88.9 | 73.1 | 67.1 | | 675,743 | 1,415 | 22,035 | 21,023 | 84,696 | -21,094 | -33,805 | 12,736 | -22,140 | -2,588 | -38,275 | 32,129 | 47,656 |
| | 1850+00 | | 500 | | -27.7 | -16.6 | 28.8 | -9.7 | 204.49 | -20.5 | -31.3 | -8.7 | -10.4 | 6.8 | -77.3 | 89.0 | 27.6 | | -683,973 | 5,405 | 22,383 | -5,952 | 94,586 | -10,621 | -23,527 | -4,164 | -12,296 | 3,092 | -50,579 | 40,959 | 19,407 |
| | 1855+00 | | 500 | | -2.9 | -42.9 | -4.6 | -10.8 | 227.04 | -17.2 | -17.5 | 5.8 | 21.0 | -2.5 | -31.3 | 94.8 | 3.5 | | 656,303 | -22,046 | 6,411 | -3,775 | 109,906 | -9,908 | -7,788 | -4,558 | 1,848 | 3,662 | -26,723 | 48,049 | 8,201 |
| | 1860+00 | | 500 | | 14.6 | -12.9 | -23.8 | -38.0 | 222.76 | -15.2 | -21.1 | 9.8 | 56.2 | 3.6 | -59.0 | 101.9 | -1.7 | | -659,174 | -20,842 | -11,015 | -7,005 | 117,129 | -7,296 | -9,736 | 10,327 | 19,103 | -6,161 | -4,597 | 46,729 | -4,704 |
| | 1865+00 | | 500 | | 56.2 | 12.6 | -7.2 | -68.6 | 198.38 | -25.7 | -31.4 | -3.6 | 54.3 | 37.4 | -86.1 | 129.2 | -16.1 | | 673,785 | 7,939 | -12,825 | -30,953 | 105,631 | -7,934 | -11,370 | -493 | 37,147 | 9,788 | -54,439 | 55,172 | 2,958 |
| | 1870+00 | | 500 | | 22.2 | -1.1 | 14.9 | -68.2 | 170.67 | -35.1 | -51.5 | 3.9 | 27.2 | 32.7 | -16.8 | 165.2 | -77.0 | | -617,611 | 4,652 | 5,651 | -37,639 | 92,753 | -17,797 | -20,064 | -3,085 | 17,154 | 27,656 | -31,618 | 74,077 | -19,038 |
| | 1875+00 | | 500 | | 23.6 | -23.6 | 28.3 | -52.9 | 131.32 | -31.2 | -42.9 | 11.9 | 13.4 | 0.7 | 8.9 | 199.3 | -105.6 | | 639,795 | -5,770 | 9,286 | -30,539 | 77,913 | -17,327 | -31,411 | 7,003 | 10,019 | 5,003 | 14,768 | 91,136 | -57,959 |
| | 1880+00 | | 500 | | -21.7 | -41.2 | 43.1 | -48.5 | 114.60 | -22.5 | -25.0 | 5.0 | -7.8 | -14.7 | -4.2 | 218.7 | -91.4 | | -616,192 | -17,859 | 18,974 | -22,340 | 53,406 | -13,912 | -11,456 | 4,896 | 3,408 | -4,317 | -5,916 | 108,177 | -47,629 |
| 1 - "Buxton" | 1885+00 | | 500 | | 15.0 | -33.1 | 35.1 | -46.4 | 158.37 | -19.4 | -52.3 | -23.9 | -13.9 | -21.6 | -15.8 | 214.2 | -74.5 | | 594,478 | -23,361 | 24,117 | -26,178 | 61,196 | -8,539 | -13,587 | 85 | -11,251 | -10,398 | 1,726 | 110,513 | -43,811 |
| | 1890+00 | | 500 | | -5.7 | -12.4 | 6.0 | -28.0 | 199.52 | -29.1 | -60.7 | -73.8 | -6.9 | -17.4 | -46.8 | 197.8 | -53.6 | | -579,457 | -9,721 | 10,957 | -20,178 | 97,172 | -10,869 | -38,702 | -24,008 | -2,681 | -11,168 | -17,568 | 103,680 | -30,708 |
| | 1895+00 | | 500 | | -15.7 | -23.6 | 0.9 | -39.1 | 206.37 | -40.5 | -26.1 | -82.6 | -22.7 | -14.4 | -59.0 | 173.2 | -30.4 | | 573,790 | -2,688 | -4,954 | -7,849 | 102,345 | -18,217 | -21,964 | -49,760 | -4,196 | -6,265 | -29,228 | 94,117 | -22,874 |
| | 1900+00 | | 500 | | 3.4 | -47.0 | -0.8 | -47.8 | 183.11 | -41.5 | -10.0 | -43.1 | -30.0 | -10.1 | -83.0 | 144.3 | -9.8 | | -589,502 | -20,960 | 5,834 | -31,255 | 104,022 | -22,252 | -4,181 | -32,860 | -18,499 | -8,183 | -29,745 | 79,123 | -7,573 |
| | 1905+00 | | 500 | | 51.2 | -55.0 | -26.2 | -16.5 | 133.62 | -39.7 | -18.7 | -10.5 | -9.2 | -0.8 | -107.0 | 120.5 | -26.9 | | 592,876 | -26,089 | -6,601 | -16,495 | 79,088 | -19,261 | -5,826 | -10,256 | -11,459 | -1,892 | -53,240 | 65,158 | -2,235 |
| | 1910+00 | | 500 | | 69.9 | -63.9 | -46.8 | 3.9 | 96.71 | -48.1 | -17.5 | 6.2 | -4.0 | -7.0 | -86.6 | 98.8 | -63.3 | | -541,674 | -28,894 | -19,647 | -22 | 54,536 | -20,395 | -12,862 | -257 | 2,262 | 1,121 | -53,793 | 55,384 | -24,708 |
| | 1915+00 | | 500 | | 60.7 | -64.1 | -48.4 | 1.8 | 70.87 | -58.2 | 2.2 | 32.5 | -31.6 | -26.3 | -44.5 | 65.3 | -65.8 | | 611,614 | -35,040 | -27,186 | 3,891 | 42,174 | -27,749 | -4,632 | 6,445 | -6,228 | -8,078 | -32,852 | 43,376 | -38,573 |
| | 1920+00 | | 500 | | 36.8 | -49.9 | -23.5 | -26.9 | 53.89 | -51.5 | 12.2 | 50.0 | -42.0 | -32.9 | -5.9 | 27.7 | -40.2 | | -550,932 | -29,052 | -21,238 | -2,065 | 28,696 | -30,489 | 6,868 | 26,075 | -25,333 | -18,190 | -11,635 | 21,963 | -27,217 |
| | 1925+00 | | 500 | | -110.6 | -20.4 | -22.6 | -39.6 | 54.56 | -41.7 | 14.9 | 23.9 | -9.8 | -22.5 | 18.9 | 5.8 | -16.6 | | 587,772 | -20,858 | -2,284 | -24,870 | 25,199 | -21,039 | 5,364 | 23,902 | -16,715 | -14,731 | 5,761 | 5,781 | -12,974 |
| "Downcoast" | 1930+00 | | 500 | | 32.0 | -29.9 | -0.4 | -29.9 | 86.66 | -50.6 | 7.4 | 0.0 | 33.0 | -25.3 | 16.1 | 0.0 | 7.3 | | -698,371 | 488 | -20,313 | -14,698 | 29,363 | -20,688 | 9,492 | 0 | 6,921 | -7,761 | 13,141 | 0 | -3,668 |
| | 1935+00 | | 500 | | -138.0 | -61.9 | 36.6 | -26.0 | 140.41 | -48.2 | -21.0 | 0.0 | 40.6 | -35.5 | -1.8 | 0.0 | 46.6 | | 730,390 | -30,387 | 19,932 | -15,204 | 57,301 | -29,879 | -2,128 | 0 | 26,059 | -17,574 | 2,968 | 0 | 10,972 |
| | 1940+00 | | 500 | | -73.8 | -65.7 | 25.7 | -20.3 | 179.25 | -24.7 | -43.1 | 0.0 | 5.9 | -29.4 | -13.1 | 0.0 | 81.4 | | -868,389 | -31,496 | 16,624 | -10,808 | 83,109 | -18,334 | -18,858 | 0 | 14,541 | -17,891 | -4,806 | 0 | 35,666 |
| | 1945+00 | | 500 | | -81.6 | -64.9 | -1.8 | -11.6 | 156.51 | 11.0 | -37.4 | 0.0 | -22.5 | -16.2 | -25.8 | 0.0 | 87.9 | | 794,542 | -34,180 | 9,029 | -9,460 | 96,137 | -6,388 | -24,257 | 0 | -8,606 | -11,478 | -8,291 | 0 | 45,750 |
| | 1950+00 | | 500 | | -34.2 | -31.3 | -36.5 | -12.1 | 97.21 | 35.3 | -4.7 | 0.0 | -24.6 | 1.8 | -54.4 | 0.0 | 122.4 | | -876,173 | -30,689 | -10,783 | -2,099 | 60,370 | 17,339 | -13,133 | 0 | -13,890 | -4,770 | -17,525 | 0 | 42,150 |
| | 1955+00 | | 500 | | -39.7 | -21.2 | -14.0 | -58.0 | 96.33 | 13.4 | 26.5 | 0.0 | -17.5 | 20.4 | -48.6 | 0.0 | 131.3 | | 841,930 | -633 | -25,746 | -9,956 | 36,838 | 17,959 | 8,475 | 0 | -10,662 | 6,524 | -36,880 | 0 | 80,235 |
| | 1960+00 | | 500 | | 1.4 | -35.9 | 7.3 | -83.4 | 110.16 | -15.0 | 24.9 | 0.0 | -4.3 | 51.2 | -13.2 | 0.0 | 62.3 | | -881,671 | -20,542 | 11,741 | -48,019 | 59,495 | -4,563 | 18,057 | 0 | -6,849 | 13,913 | -11,766 | 0 | 51,100 |
| | 1965+00 | | 500 | | -10.9 | -17.4 | -19.2 | -50.6 | 94.96 | -25.3 | 14.4 | 0.0 | 8.5 | 125.5 | -62.1 | 0.0 | 93.4 | | 883,030 | -15,368 | -4,421 | -35,406 | 50,666 | -10,406 | 6,890 | 0 | 2,573 | 37,334 | -1,462 | 0 | 11,218 |
| | 1970+00 | | 500 | | -62.8 | -12.8 | -10.9 | -52.4 | 110.46 | -18.7 | 17.7 | 0.0 | -8.3 | 183.5 | -136.0 | 0.0 | 225.4 | | -893,949 | -1,999 | -14,773 | -15,241 | 44,295 | -14,859 | 7,500 | 0 | 5,909 | 88,150 | -60,673 | 0 | 82,213 |
| | 1975+00 | | 500 | | 1662.3 | -21.6 | 7.7 | -74.3 | 132.33 | -7.6 | 20.5 | 0.0 | -28.4 | 190.8 | -150.7 | 0.0 | 286.4 | | 831,173 | -10,818 | 3,839 | -37,173 | 66,163 | -3,812 | 10,242 | 0 | -14,214 | 95,389 | -75,365 | 0 | 143,175 |
| | 1980+00 | | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | Unit Vol Since Last (cy/ft) | | | | | | | | | | | | | Total Vol Since Last (cy/ft) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reach | Distance to Next | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 |
| **UC** | **5000** | | 1549.6 | -21.9 | -5.4 | -37.2 | -9.9 | -4.0 | 13.6 | 2.6 | 29.6 | 27.6 | -38.8 | 2.0 | 97.3 | | 7,747,823 | -109,317 | -26,874 | -185,975 | -49,367 | -20,243 | 67,937 | 12,879 | 148,213 | 138,047 | -194,055 | 10,193 | 486,313 |
| **2** | **11500** | | 228.5 | 5.7 | -3.4 | -15.8 | 117.9 | -23.0 | -19.1 | -6.2 | 5.4 | 6.0 | -16.2 | 89.1 | 23.4 | | 2,627,824 | 65,578 | -38,564 | -181,757 | 1,355,775 | -264,884 | -219,714 | -70,852 | 62,124 | 68,971 | -186,295 | 1,024,871 | 269,658 |
| **1** | **4500** | | 155.3 | -43.7 | -9.1 | -27.8 | 132.1 | -39.7 | -19.9 | -13.5 | -20.9 | -17.3 | -49.0 | 128.7 | -46.8 | | 698,966 | -196,663 | -41,002 | -125,022 | 594,428 | -178,808 | -89,522 | -60,634 | -94,099 | -77,784 | -220,575 | 579,094 | -210,673 |
| **DC** | **5000** | | -27.5 | -35.1 | -3.0 | -39.6 | 116.7 | -14.7 | 0.5 | 0.0 | 0.4 | 36.4 | -40.1 | 0.0 | 99.8 | | -137,488 | -175,624 | -14,872 | -198,064 | 583,738 | -73,630 | 2,282 | 0 | 1,781 | 181,835 | -200,657 | 0 | 498,811 |
| **Project** | **16000** | | **207.9** | **-8.2** | **-5.0** | **-19.2** | **121.9** | **-27.7** | **-19.3** | **-8.2** | **-2.0** | **-0.6** | **-25.4** | **100.2** | **3.7** | | **3,326,790** | **-131,085** | **-79,566** | **-306,778** | **1,950,203** | **-443,692** | **-309,236** | **-131,486** | **-31,976** | **-8,813** | **-406,870** | **1,603,965** | **58,985** |
| **All** | **26000** | | **420.7** | **-16.0** | **-4.7** | **-26.6** | **95.6** | **-20.7** | **-9.2** | **-4.6** | **4.5** | **12.0** | **-30.8** | **62.1** | **40.2** | | **10,937,124** | **-416,027** | **-121,312** | **-690,817** | **2,484,574** | **-537,565** | **-239,017** | **-118,607** | **118,019** | **311,069** | **-801,582** | **1,614,157** | **1,044,109** |

| Volumes from Dune Crest to -6 ft NAVD (Buxton) | | | | Unit Volume (cy/ft) | | | | | | | | | | | | | Total Volume (cy) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reach | Station | Offset | Distance to Next | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 |
| "Upcoast" | 1720+00 | | 500 | | 147.9 | 204.2 | 218.2 | 188.8 | 191.1 | 190.9 | 195.6 | 195.6 | 176.5 | 193.4 | 203.5 | 203.5 | 198.7 | | 74,414 | 97,896 | 99,947 | 91,803 | 90,910 | 92,407 | 91,491 | 91,491 | 93,622 | 106,836 | 105,408 | 105,408 | 105,923 |
| | 1725+00 | | 500 | | 149.8 | 187.4 | 181.6 | 178.4 | 172.6 | 178.8 | 170.4 | 170.4 | 198.0 | 234.0 | 218.1 | 218.1 | 225.0 | | 70,566 | 85,908 | 82,999 | 83,663 | 81,517 | 84,469 | 81,121 | 81,121 | 93,772 | 98,723 | 100,110 | 100,110 | 106,047 |
| | 1730+00 | | 500 | | 132.5 | 156.2 | 150.4 | 156.3 | 153.5 | 159.1 | 154.1 | 154.1 | 177.1 | 160.9 | 182.3 | 182.3 | 199.2 | | 76,522 | 70,815 | 78,046 | 81,044 | 77,460 | 81,651 | 79,467 | 79,467 | 84,094 | 80,044 | 92,233 | 92,233 | 105,379 |
| | 1735+00 | | 500 | | 173.6 | 127.0 | 161.8 | 167.9 | 156.3 | 167.5 | 163.7 | 163.7 | 159.3 | 159.2 | 186.6 | 186.6 | 222.3 | | 84,224 | 67,244 | 79,890 | 80,456 | 76,467 | 78,495 | 81,244 | 81,244 | 76,933 | 83,849 | 94,609 | 94,609 | 104,940 |
| | 1740+00 | | 500 | | 163.3 | 141.9 | 157.8 | 153.9 | 149.5 | 146.5 | 161.2 | 161.2 | 148.4 | 176.2 | 191.8 | 191.8 | 197.5 | | 70,365 | 59,157 | 76,399 | 76,440 | 72,108 | 73,392 | 81,292 | 81,292 | 77,285 | 85,776 | 93,582 | 93,582 | 97,506 |
| | 1745+00 | | 500 | | 118.2 | 94.7 | 147.8 | 151.9 | 138.9 | 147.1 | 163.9 | 163.9 | 160.7 | 166.9 | 182.5 | 182.5 | 192.6 | | 49,760 | 43,879 | 69,304 | 68,087 | 63,136 | 68,856 | 75,701 | 75,701 | 74,420 | 71,413 | 79,542 | 79,542 | 89,253 |
| | 1750+00 | | 500 | | 80.9 | 80.8 | 129.4 | 120.5 | 113.7 | 128.3 | 138.9 | 138.9 | 137.0 | 118.7 | 135.6 | 135.6 | 164.5 | | 40,724 | 40,578 | 61,475 | 55,327 | 52,021 | 59,572 | 58,612 | 58,612 | 64,465 | 60,395 | 55,944 | 55,944 | 75,995 |
| | 1755+00 | | 500 | | 82.0 | 81.5 | 116.5 | 100.8 | 94.4 | 110.0 | 95.6 | 95.6 | 120.9 | 122.9 | 88.1 | 88.1 | 139.5 | | 48,534 | 48,226 | 61,204 | 54,368 | 52,592 | 61,027 | 49,758 | 49,758 | 63,265 | 63,757 | 48,258 | 48,258 | 74,873 |
| | 1760+00 | | 500 | | 112.1 | 111.4 | 128.3 | 116.6 | 115.9 | 134.2 | 103.5 | 103.5 | 132.2 | 132.1 | 104.9 | 104.9 | 160.0 | | 68,266 | 64,991 | 73,849 | 71,364 | 70,145 | 75,918 | 60,226 | 60,226 | 78,553 | 70,031 | 72,218 | 72,218 | 92,484 |
| | 1765+00 | | 500 | | 161.0 | 148.5 | 167.1 | 168.8 | 164.6 | 169.5 | 137.4 | 137.4 | 182.0 | 148.0 | 184.0 | 184.0 | 210.0 | | 89,400 | 84,087 | 93,662 | 95,253 | 96,473 | 93,740 | 83,701 | 88,861 | 102,392 | 86,685 | 101,510 | 103,081 | 110,463 |
| 2 - "NPS" | 1770+00 | | 500 | | 196.6 | 187.8 | 207.6 | 212.2 | 221.2 | 205.4 | 197.4 | 218.0 | 227.5 | 198.8 | 222.1 | 228.4 | 231.9 | | 91,309 | 89,021 | 96,124 | 104,152 | 107,576 | 99,643 | 95,001 | 106,506 | 107,139 | 96,583 | 105,666 | 110,506 | 113,561 |
| | 1775+00 | | 500 | | 168.6 | 168.3 | 176.9 | 204.4 | 209.1 | 193.1 | 182.6 | 208.0 | 201.0 | 187.6 | 200.6 | 213.7 | 222.4 | | 79,796 | 76,795 | 84,122 | 99,581 | 103,025 | 95,610 | 90,257 | 100,089 | 98,372 | 93,011 | 98,941 | 106,839 | 109,460 |
| | 1780+00 | | 500 | | 150.6 | 138.9 | 159.6 | 193.9 | 203.0 | 189.3 | 178.4 | 192.3 | 192.5 | 184.5 | 195.2 | 213.7 | 215.5 | | 72,636 | 66,499 | 76,481 | 85,071 | 99,661 | 93,030 | 90,150 | 94,972 | 93,969 | 92,156 | 94,702 | 105,282 | 109,352 |
| | 1785+00 | | 500 | | 140.0 | 127.1 | 146.4 | 146.4 | 195.6 | 182.8 | 182.2 | 187.6 | 183.4 | 184.1 | 183.6 | 207.4 | 221.9 | | 70,989 | 56,720 | 64,437 | 64,917 | 88,743 | 82,460 | 84,699 | 85,202 | 83,052 | 85,258 | 79,588 | 93,853 | 100,914 |
| | 1790+00 | | 500 | 120.7 | 144.0 | 99.8 | 111.4 | 113.3 | 159.4 | 147.0 | 156.6 | 153.3 | 148.8 | 156.9 | 134.7 | 168.0 | 181.7 | 126,586 | 72,991 | 54,318 | 59,170 | 59,539 | 81,675 | 80,336 | 80,632 | 79,740 | 77,500 | 83,216 | 69,985 | 86,429 | 97,454 |
| | 1795+00 | | 500 | | 148.0 | 117.5 | 125.3 | 124.9 | 167.3 | 174.3 | 165.9 | 165.7 | 161.2 | 176.0 | 145.2 | 177.7 | 208.1 | | 70,778 | 57,487 | 59,500 | 57,664 | 75,065 | 81,999 | 74,010 | 79,048 | 76,078 | 86,651 | 69,976 | 87,154 | 102,524 |
| | 1800+00 | | 500 | 132.5 | 135.1 | 112.5 | 112.7 | 105.8 | 132.9 | 153.7 | 130.1 | 150.5 | 143.1 | 170.6 | 134.7 | 170.9 | 202.0 | 133,170 | 64,802 | 57,639 | 55,049 | 49,515 | 65,473 | 73,580 | 67,466 | 73,544 | 69,381 | 83,851 | 66,821 | 84,134 | 96,766 |
| | 1805+00 | | 500 | | 124.1 | 118.1 | 107.5 | 92.3 | 129.0 | 140.6 | 139.8 | 143.7 | 134.4 | 164.8 | 132.6 | 165.7 | 185.1 | | 68,455 | 73,725 | 64,874 | 63,607 | 75,687 | 75,052 | 74,731 | 79,444 | 76,434 | 92,824 | 75,643 | 92,499 | 98,612 |
| | 1810+00 | | 500 | 133.9 | 149.8 | 176.8 | 152.0 | 162.2 | 173.8 | 159.6 | 159.2 | 174.1 | 171.3 | 206.5 | 170.0 | 204.3 | 209.4 | 146,035 | 77,234 | 88,988 | 77,902 | 83,733 | 84,571 | 84,653 | 85,026 | 89,536 | 86,805 | 107,035 | 88,200 | 107,294 | 103,341 |
| | 1815+00 | | 500 | | 159.2 | 179.1 | 159.6 | 172.8 | 164.5 | 179.0 | 180.9 | 184.1 | 175.9 | 221.6 | 182.8 | 224.8 | 204.0 | | 75,846 | 88,095 | 79,366 | 79,421 | 80,544 | 96,022 | 96,025 | 93,143 | 92,169 | 112,874 | 93,685 | 113,617 | 106,861 |
| | 1820+00 | | 500 | 158.2 | 144.2 | 173.2 | 157.9 | 144.9 | 157.7 | 205.0 | 203.2 | 188.5 | 192.8 | 229.9 | 191.9 | 229.6 | 223.5 | 162,435 | 68,354 | 79,185 | 74,654 | 71,420 | 87,547 | 101,220 | 88,784 | 90,625 | 92,871 | 110,303 | 91,813 | 110,599 | 105,213 |
| | 1825+00 | | 500 | | 129.2 | 143.5 | 140.8 | 140.8 | 192.5 | 199.8 | 152.0 | 174.0 | 178.7 | 211.3 | 175.3 | 212.8 | 197.4 | | 68,041 | 80,921 | 76,420 | 76,420 | 109,072 | 110,174 | 97,236 | 96,935 | 97,386 | 113,703 | 96,562 | 116,250 | 105,262 |
| | 1830+00 | | 500 | 166.7 | 143.0 | 180.2 | 164.9 | 164.9 | 243.8 | 240.9 | 237.0 | 213.8 | 210.9 | 243.5 | 210.9 | 252.2 | 223.7 | 142,167 | 80,451 | 89,989 | 84,911 | 86,357 | 128,210 | 123,574 | 126,426 | 112,499 | 111,494 | 126,005 | 104,377 | 130,317 | 115,609 |
| | 1835+00 | | 500 | | 178.8 | 179.8 | 174.7 | 180.5 | 269.1 | 253.4 | 268.7 | 236.2 | 235.1 | 260.5 | 206.6 | 269.0 | 238.8 | | 74,884 | 73,297 | 73,647 | 82,337 | 125,609 | 116,667 | 109,119 | 107,506 | 104,439 | 115,948 | 96,167 | 124,635 | 107,156 |
| | 1840+00 | | 500 | 117.7 | 120.7 | 113.4 | 119.9 | 148.8 | 233.4 | 213.2 | 167.7 | 193.8 | 182.6 | 203.2 | 178.1 | 229.5 | 189.8 | 119,171 | 69,969 | 65,400 | 69,054 | 81,461 | 121,462 | 114,078 | 91,927 | 100,643 | 98,097 | 107,873 | 94,352 | 120,201 | 104,548 |
| | 1845+00 | | 500 | | 159.2 | 148.2 | 156.4 | 177.0 | 252.5 | 243.1 | 200.0 | 208.8 | 209.8 | 228.2 | 199.3 | 251.3 | 228.3 | | 64,978 | 67,118 | 65,021 | 78,708 | 111,409 | 111,874 | 95,922 | 92,432 | 89,598 | 103,866 | 91,066 | 116,396 | 103,976 |
| | 1850+00 | | 500 | 120.7 | 100.7 | 120.3 | 103.7 | 137.8 | 193.2 | 204.4 | 183.7 | 160.9 | 148.6 | 187.2 | 164.9 | 214.3 | 187.6 | 125,967 | 41,687 | 50,751 | 53,785 | 57,235 | 86,301 | 91,559 | 77,151 | 69,732 | 70,009 | 88,459 | 77,965 | 105,151 | 91,784 |
| | 1855+00 | | 500 | | 66.0 | 82.7 | 111.4 | 91.1 | 152.0 | 161.8 | 124.9 | 118.0 | 131.4 | 166.6 | 146.9 | 206.3 | 179.6 | | 42,349 | 49,451 | 56,560 | 51,648 | 84,365 | 86,550 | 75,416 | 59,941 | 71,053 | 89,191 | 78,402 | 109,656 | 95,273 |
| | 1860+00 | | 500 | 131.3 | 103.4 | 115.1 | 114.8 | 115.5 | 185.4 | 184.4 | 176.8 | 121.8 | 152.8 | 190.1 | 166.7 | 232.3 | 201.5 | 130,996 | 56,706 | 54,481 | 65,176 | 60,606 | 89,571 | 98,217 | 94,216 | 65,975 | 75,255 | 96,683 | 86,722 | 119,928 | 103,435 |
| | 1865+00 | | 500 | | 123.5 | 102.8 | 145.9 | 126.9 | 172.9 | 208.5 | 200.1 | 142.1 | 148.2 | 196.6 | 180.2 | 247.4 | 212.2 | | 58,266 | 62,013 | 70,642 | 64,479 | 89,797 | 99,346 | 92,638 | 74,306 | 75,741 | 94,289 | 84,949 | 120,835 | 98,932 |
| | 1870+00 | | 500 | 130.7 | 109.6 | 145.2 | 136.7 | 131.0 | 186.3 | 188.9 | 170.5 | 155.1 | 154.8 | 180.6 | 159.6 | 235.9 | 183.5 | 106,754 | 50,921 | 64,748 | 65,293 | 55,735 | 88,726 | 90,344 | 77,804 | 66,088 | 69,709 | 84,793 | 72,235 | 116,994 | 91,024 |
| | 1875+00 | | 500 | | 94.1 | 113.8 | 124.5 | 92.0 | 168.6 | 172.5 | 140.8 | 109.3 | 124.1 | 158.6 | 129.4 | 232.1 | 180.6 | | 38,978 | 45,316 | 48,832 | 34,700 | 70,582 | 72,080 | 50,805 | 43,981 | 43,251 | 63,728 | 54,867 | 111,691 | 73,599 |
| | 1880+00 | | 500 | 82.8 | 61.8 | 67.5 | 70.8 | 46.8 | 113.8 | 115.8 | 62.5 | 66.7 | 48.9 | 96.3 | 90.1 | 214.7 | 113.8 | 77,802 | 26,715 | 30,905 | 35,166 | 27,737 | 60,092 | 60,283 | 38,929 | 29,582 | 24,005 | 41,250 | 38,094 | 108,053 | 58,689 |
| 1 - "Buxton" | 1885+00 | | 500 | | 45.0 | 56.1 | 69.8 | 64.1 | 126.6 | 125.3 | 93.3 | 51.7 | 47.1 | 68.7 | 62.3 | 217.5 | 120.9 | | 24,887 | 21,621 | 34,204 | 35,058 | 55,785 | 59,051 | 53,803 | 30,767 | 22,797 | 33,928 | 31,599 | 107,564 | 57,883 |
| | 1890+00 | | 500 | 72.8 | 54.5 | 30.4 | 67.0 | 76.1 | 96.5 | 110.9 | 122.0 | 71.4 | 44.1 | 67.0 | 64.1 | 212.8 | 110.6 | 64,758 | 25,776 | 22,489 | 30,221 | 32,192 | 50,222 | 58,636 | 53,683 | 32,927 | 24,169 | 30,128 | 25,635 | 98,743 | 51,797 |
| | 1895+00 | | 500 | | 48.6 | 59.6 | 53.9 | 52.6 | 104.4 | 123.6 | 92.8 | 60.3 | 52.6 | 53.5 | 38.4 | 182.2 | 96.6 | | 20,924 | 19,474 | 24,958 | 19,416 | 44,839 | 50,179 | 34,348 | 18,817 | 20,162 | 22,003 | 16,604 | 80,635 | 40,514 |
| | 1900+00 | | 500 | 56.7 | 35.1 | 18.3 | 45.9 | 25.0 | 75.0 | 77.1 | 44.6 | 15.0 | 28.1 | 34.5 | 28.0 | 140.3 | 65.4 | 71,635 | 23,747 | 14,366 | 26,685 | 17,740 | 42,490 | 44,542 | 31,550 | 10,130 | 15,626 | 18,624 | 10,756 | 67,522 | 32,355 |
| | 1905+00 | | 500 | | 59.9 | 39.2 | 60.8 | 45.9 | 95.0 | 101.1 | 81.6 | 25.6 | 34.4 | 40.0 | 15.0 | 129.8 | 64.0 | | 34,838 | 23,674 | 30,939 | 22,707 | 43,233 | 48,898 | 38,697 | 15,305 | 17,059 | 20,302 | 10,015 | 58,165 | 29,932 |
| | 1910+00 | | 500 | 86.6 | 79.5 | 55.5 | 63.0 | 44.9 | 78.0 | 94.5 | 73.2 | 35.7 | 33.8 | 41.2 | 25.0 | 102.9 | 55.8 | 76,915 | 43,877 | 34,751 | 38,885 | 32,037 | 41,024 | 46,558 | 38,426 | 21,249 | 17,675 | 22,759 | 15,974 | 51,755 | 27,544 |
| | 1915+00 | | 500 | | 96.0 | 83.5 | 92.6 | 83.3 | 86.1 | 91.7 | 80.5 | 49.3 | 36.9 | 49.8 | 38.9 | 104.1 | 54.4 | | 41,595 | 31,042 | 34,188 | 30,872 | 35,352 | 37,601 | 29,363 | 16,272 | 13,669 | 17,513 | 16,414 | 40,457 | 16,932 |
| | 1920+00 | | 500 | 67.2 | 70.4 | 40.7 | 44.2 | 40.2 | 55.3 | 58.7 | 37.0 | 15.8 | 17.8 | 20.2 | 26.8 | 57.7 | 13.3 | 66,075 | 34,487 | 23,152 | 19,279 | 20,621 | 25,478 | 25,374 | 17,513 | 14,981 | 7,719 | 8,745 | 15,751 | 26,943 | 7,249 |
| | 1925+00 | | 500 | | 67.6 | 51.9 | 32.9 | 42.3 | 46.6 | 42.8 | 33.1 | 44.2 | 13.1 | 14.7 | 36.2 | 50.1 | 15.7 | | 34,642 | 31,832 | 25,716 | 25,841 | 26,802 | 28,067 | 22,975 | 25,741 | 12,446 | 14,227 | 25,569 | 29,033 | 16,837 |
| "Downcoast" | 1930+00 | | 500 | 64.9 | 71.0 | 75.4 | 69.9 | 61.1 | 60.6 | 69.4 | 58.8 | 58.8 | 36.7 | 42.2 | 66.1 | 66.1 | 51.7 | 99,977 | 47,992 | 48,181 | 47,527 | 41,187 | 52,057 | 50,984 | 51,111 | 51,111 | 45,507 | 43,329 | 52,247 | 52,247 | 45,684 |
| | 1935+00 | | 500 | | 121.0 | 117.3 | 120.2 | 103.6 | 147.7 | 134.5 | 145.6 | 145.6 | 145.3 | 131.1 | 142.9 | 142.9 | 131.1 | | 53,721 | 46,184 | 60,204 | 54,525 | 79,132 | 72,143 | 77,945 | 77,945 | 77,464 | 69,808 | 66,971 | 66,971 | 70,012 |
| | 1940+00 | | 500 | 135.0 | 93.9 | 67.4 | 120.6 | 114.5 | 168.9 | 154.1 | 166.1 | 166.1 | 164.5 | 148.1 | 125.0 | 125.0 | 149.0 | 148,799 | 49,301 | 44,865 | 59,881 | 56,130 | 84,397 | 84,839 | 85,805 | 85,805 | 82,644 | 77,946 | 62,202 | 62,202 | 81,990 |
| | 1945+00 | | 500 | | 103.3 | 112.0 | 118.9 | 110.1 | 168.7 | 185.3 | 177.1 | 177.1 | 166.1 | 163.7 | 123.9 | 123.9 | 179.0 | | 56,779 | 52,541 | 57,509 | 52,507 | 76,714 | 90,199 | 88,238 | 88,238 | 81,209 | 86,895 | 66,066 | 66,066 | 93,962 |
| | 1950+00 | | 500 | 162.6 | 123.8 | 98.1 | 111.1 | 100.0 | 138.1 | 175.5 | 175.9 | 175.9 | 158.8 | 183.9 | 140.4 | 140.4 | 196.9 | 168,979 | 64,171 | 55,115 | 56,786 | 57,160 | 56,717 | 91,497 | 91,468 | 91,468 | 76,060 | 89,601 | 73,037 | 73,037 | 99,885 |
| | 1955+00 | | 500 | | 132.9 | 122.3 | 116.0 | 128.7 | 88.7 | 190.5 | 190.0 | 190.0 | 145.5 | 174.5 | 151.7 | 151.7 | 202.7 | | 71,530 | 66,104 | 65,142 | 66,195 | 60,967 | 94,501 | 95,005 | 95,005 | 77,833 | 90,453 | 75,839 | 75,839 | 106,452 |
| | 1960+00 | | 500 | 175.4 | 153.2 | 142.1 | 144.6 | 136.1 | 155.1 | 187.5 | 190.0 | 190.0 | 165.9 | 187.3 | 151.6 | 151.6 | 223.1 | 186,283 | 84,784 | 74,480 | 81,748 | 77,519 | 86,055 | 98,507 | 102,002 | 102,002 | 85,063 | 100,585 | 89,958 | 89,958 | 116,552 |
| | 1965+00 | | 500 | | 185.9 | 155.8 | 182.4 | 174.0 | 189.1 | 206.5 | 218.0 | 218.0 | 174.4 | 215.0 | 208.2 | 208.2 | 243.1 | | 89,845 | 83,117 | 89,914 | 90,913 | 95,493 | 100,088 | 103,147 | 103,147 | 94,665 | 109,305 | 103,332 | 103,332 | 117,897 |
| | 1970+00 | | 500 | 197.2 | 173.5 | 176.6 | 177.2 | 189.7 | 192.9 | 193.9 | 194.6 | 194.6 | 204.3 | 222.2 | 205.1 | 205.1 | 228.5 | 197,166 | 87,509 | 83,072 | 89,700 | 91,916 | 98,887 | 99,378 | 102,404 | 102,404 | 98,633 | 113,326 | 102,128 | 102,128 | 117,736 |
| | 1975+00 | | 500 | | 176.6 | 155.7 | 181.6 | 178.0 | 202.7 | 203.6 | 215.0 | 215.0 | 190.3 | 231.1 | 203.4 | 203.4 | 242.4 | | 80,576 | 70,659 | 79,712 | 71,915 | 79,122 | 94,143 | 93,117 | 93,117 | 79,514 | 103,074 | 86,104 | 86,104 | 104,932 |
| | 1980+00 | | 500 | 202.8 | 145.7 | 127.0 | 137.3 | 109.7 | 113.8 | 172.9 | 157.5 | 157.5 | 127.8 | 181.2 | 141.0 | 141.0 | 177.3 | | | | | | | | | | | | | | |

| Reach | Distance to Next | Unit Volume (cy/ft) | | | | | | | | | | | | | | Total Volume (cy/ft) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 |
| **UC** | **5000** | | 132.1 | 133.4 | 155.9 | 150.4 | 145.1 | 153.2 | 148.4 | 148.4 | 159.2 | 161.2 | 167.8 | 167.8 | 190.9 | | 672,774 | 662,781 | 776,776 | 757,806 | 732,831 | 769,528 | 742,614 | 747,774 | 808,802 | 807,508 | 843,415 | 844,985 | 962,863 |
| **2** | **11500** | 129.5 | 132.6 | 135.3 | 138.3 | 140.3 | 185.9 | 187.7 | 172.2 | 168.1 | 167.7 | 191.5 | 169.6 | 217.5 | 201.8 | 1,271,084 | 1,487,135 | 1,522,863 | 1,556,184 | 1,576,044 | 2,114,765 | 2,138,348 | 1,954,370 | 1,891,468 | 1,883,805 | 2,169,551 | 1,910,775 | 2,498,311 | 2,293,347 |
| **1** | **4500** | 70.8 | 61.8 | 48.4 | 58.9 | 52.7 | 84.8 | 91.7 | 73.1 | 41.0 | 34.2 | 43.3 | 37.2 | 133.0 | 66.3 | 279,383 | 284,773 | 222,402 | 265,074 | 236,483 | 365,225 | 398,906 | 320,358 | 186,188 | 151,321 | 188,228 | 168,318 | 560,815 | 281,042 |
| **DC** | **5000** | 156.3 | 134.6 | 122.7 | 134.5 | 127.8 | 147.8 | 170.3 | 171.7 | 171.7 | 152.7 | 170.9 | 150.8 | 150.8 | 184.1 | 801,203 | 686,208 | 624,318 | 688,123 | 659,966 | 769,541 | 876,277 | 890,243 | 890,243 | 798,593 | 884,323 | 777,882 | 777,882 | 955,101 |
| **Project** | **16000** | **112.7** | **112.7** | **110.8** | **116.0** | **115.6** | **157.5** | **160.7** | **144.3** | **132.3** | **130.2** | **149.8** | **132.4** | **193.7** | **163.7** | **1,550,466** | **1,771,908** | **1,745,265** | **1,821,258** | **1,812,527** | **2,479,990** | **2,537,254** | **2,274,727** | **2,077,656** | **2,035,126** | **2,357,779** | **2,079,093** | **3,059,126** | **2,574,390** |
| **All** | **26000** | **125.8** | **120.9** | **117.6** | **127.4** | **124.7** | **153.2** | **161.3** | **150.8** | **143.5** | **140.3** | **156.3** | **142.9** | **179.9** | **173.1** | **2,351,670** | **3,130,890** | **3,032,364** | **3,286,157** | **3,230,299** | **3,982,362** | **4,183,060** | **3,907,585** | **3,715,673** | **3,642,521** | **4,049,611** | **3,700,389** | **4,681,993** | **4,492,354** |

| Volumes from Dune Crest to -6 ft NAVD (Buxton) | | | | Unit Vol Since Last (cy/ft) | | | | | | | | | | | | | Total Vol Since Last (cy/ft) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reach | Station | Offset | Distance to Next | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 |
| "Upcoast" | 1720+00 | | 500 | | 144.98 | 38.82 | -0.86 | -7.48 | -3.04 | 4.4 | -4.3 | 0.0 | 14.8 | 18.17 | -0.04 | 0.00 | 6.45 | | 74,414 | 23,482 | 2,051 | -8,144 | -893 | 1,496 | -916 | 0 | 2,131 | 13,214 | -1,428 | 0 | 515 |
| | 1725+00 | | 500 | | 147.09 | 9.63 | 4.32 | 3.66 | -5.73 | 7.1 | -5.5 | 0.0 | 17.3 | 0.90 | 13.58 | 0.00 | 19.08 | | 70,566 | 15,342 | -2,909 | 664 | -2,146 | 2,952 | -3,348 | 0 | 12,651 | 4,951 | 1,387 | 0 | 5,937 |
| | 1730+00 | | 500 | | 160.75 | -22.69 | 19.88 | 3.56 | -7.57 | 6.2 | 0.6 | 0.0 | 0.3 | 2.87 | 22.95 | 0.00 | 23.48 | | 76,522 | -5,708 | 7,231 | 2,998 | -3,584 | 4,190 | -2,183 | 0 | 4,626 | -4,050 | 12,189 | 0 | 13,146 |
| | 1735+00 | | 500 | | 154.59 | -28.19 | 29.89 | 0.61 | -8.32 | 3.3 | 10.6 | 0.0 | -8.3 | 15.41 | 18.57 | 0.00 | 14.25 | | 84,224 | -16,980 | 12,646 | 566 | -3,989 | 2,028 | 2,749 | 0 | -4,311 | 6,916 | 10,760 | 0 | 10,331 |
| | 1740+00 | | 500 | | 120.12 | -17.09 | 42.67 | -1.18 | -9.28 | 7.0 | 14.7 | 0.0 | -5.3 | 5.48 | 15.93 | 0.00 | 13.64 | | 70,365 | -11,208 | 17,242 | 41 | -4,332 | 1,284 | 7,899 | 0 | -4,006 | 8,490 | 7,806 | 0 | 3,924 |
| | 1745+00 | | 500 | | 90.48 | -6.03 | 46.32 | -7.36 | -8.26 | 13.3 | 5.9 | 0.0 | 4.6 | -7.08 | 3.68 | 0.00 | 29.76 | | 49,760 | -5,881 | 25,425 | -1,217 | -4,952 | 5,721 | 6,845 | 0 | -1,282 | -3,007 | 8,129 | 0 | 9,712 |
| | 1750+00 | | 500 | | 89.26 | -0.45 | 33.88 | -12.98 | -5.08 | 16.0 | -12.2 | 0.0 | 19.4 | -3.58 | -19.95 | 0.00 | 46.67 | | 40,724 | -146 | 20,897 | -6,148 | -3,306 | 7,551 | -960 | 0 | 5,853 | -4,070 | -4,451 | 0 | 20,051 |
| | 1755+00 | | 500 | | 116.80 | -3.58 | 21.84 | -9.32 | -2.99 | 14.2 | -27.0 | 0.0 | 31.8 | -8.03 | -13.31 | 0.00 | 46.88 | | 48,534 | -307 | 12,978 | -6,837 | -1,775 | 8,435 | -11,270 | 0 | 13,507 | 491 | -15,498 | 0 | 26,615 |
| | 1760+00 | | 500 | | 157.67 | -8.59 | 18.43 | -0.89 | 0.00 | 3.0 | -25.7 | 5.2 | 31.9 | -24.23 | 17.01 | 1.57 | 27.65 | | 68,266 | -3,274 | 8,858 | -2,485 | -1,219 | 5,773 | -15,692 | 0 | 18,327 | -8,521 | 2,187 | 0 | 20,266 |
| | 1765+00 | | 500 | | 180.71 | -7.60 | 16.68 | 9.62 | 4.64 | -10.7 | -14.7 | 16.7 | 14.2 | -26.26 | 23.91 | 6.41 | 10.44 | | 89,400 | -5,313 | 9,575 | 1,591 | 1,220 | -2,733 | -10,039 | 5,160 | 13,531 | -15,708 | 14,825 | 1,570 | 7,383 |
| 2 - "NPS" | 1770+00 | | 500 | | 171.10 | -5.29 | 14.43 | 23.49 | 6.87 | -15.3 | -10.0 | 21.3 | -1.1 | -15.92 | 15.01 | 12.74 | 5.68 | | 91,309 | -2,288 | 7,103 | 8,028 | 3,424 | -7,933 | -4,642 | 11,505 | 633 | -10,556 | 9,083 | 4,840 | 3,056 |
| | 1775+00 | | 500 | | 152.43 | -9.14 | 17.31 | 24.05 | 18.03 | -14.0 | -8.2 | 14.7 | -2.7 | -7.17 | 8.48 | 18.48 | 6.69 | | 79,796 | -3,001 | 7,327 | 15,459 | 3,444 | -7,415 | -5,353 | 9,832 | -1,717 | -5,361 | 5,929 | 7,898 | 2,621 |
| | 1780+00 | | 500 | | 143.62 | -20.41 | 17.70 | 9.07 | 38.42 | -12.9 | -0.6 | 5.3 | -3.2 | 0.39 | -3.12 | 24.84 | 11.13 | | 72,636 | -6,137 | 9,982 | 8,591 | 14,590 | -6,631 | -2,880 | 4,822 | -1,003 | -1,813 | 2,546 | 10,579 | 4,071 |
| | 1785+00 | | 500 | | 17.39 | -32.94 | 12.57 | 0.85 | 45.96 | -7.6 | 2.5 | -0.4 | -4.4 | 7.92 | -18.90 | 30.71 | 18.09 | | 70,989 | -14,269 | 7,717 | 480 | 23,826 | -6,284 | 2,239 | 503 | -2,150 | 2,206 | -5,670 | 14,265 | 7,060 |
| | 1790+00 | | 500 | | 17.2 | -32.0 | 6.9 | -1.5 | 39.54 | 5.6 | -7.7 | 4.1 | -5.2 | 16.3 | -29.9 | 33.6 | 26.4 | | -53,595 | -18,674 | 4,852 | 369 | 22,136 | -1,339 | 296 | -892 | -2,240 | 5,717 | -13,232 | 16,445 | 11,025 |
| | 1795+00 | | 500 | | 2.4 | -20.5 | -0.6 | -7.4 | 33.36 | 15.0 | -14.1 | 11.1 | -7.1 | 25.0 | -33.7 | 34.5 | 28.0 | | 70,778 | -13,291 | 2,012 | -1,836 | 17,402 | 6,933 | -7,989 | 5,037 | -2,969 | 10,573 | -16,675 | 17,177 | 15,371 |
| | 1800+00 | | 500 | | 0.1 | -1.9 | -11.4 | -6.8 | 28.04 | 7.5 | -6.4 | 10.8 | -7.2 | 30.9 | -34.2 | 34.2 | 18.7 | | -68,369 | -7,163 | -2,590 | -5,534 | 15,958 | 8,107 | -6,113 | 6,078 | -4,163 | 14,470 | -17,030 | 17,314 | 12,632 |
| | 1805+00 | | 500 | | -0.3 | 17.0 | -19.9 | 4.6 | 12.92 | -0.6 | 0.1 | 9.2 | -5.7 | 36.6 | -36.0 | 36.0 | 2.2 | | 68,455 | 5,270 | -8,851 | -1,267 | 12,080 | -635 | -320 | 4,713 | -3,010 | 16,390 | -17,181 | 16,857 | 6,113 |
| | 1810+00 | | 500 | | 7.0 | 24.0 | -19.8 | 5.9 | 1.96 | 15.6 | 0.4 | 1.6 | -3.7 | 40.9 | -38.0 | 39.0 | -10.7 | | -68,800 | 11,754 | -11,086 | 5,831 | 838 | 82 | 373 | 4,510 | -2,731 | 20,230 | -18,835 | 19,094 | -3,953 |
| | 1815+00 | | 500 | | -18.2 | 23.1 | -13.3 | -3.2 | 17.25 | 29.2 | -12.4 | -1.0 | 1.3 | 38.1 | -37.7 | 38.7 | -12.1 | | 75,846 | 12,249 | -8,729 | 55 | 1,123 | 15,478 | 3 | -2,882 | -974 | 20,705 | -19,189 | 19,932 | -6,755 |
| | 1820+00 | | 500 | | -26.0 | 23.7 | -9.0 | -3.2 | 48.78 | 14.8 | -25.4 | 1.5 | 2.7 | 33.7 | -35.6 | 38.5 | -16.4 | | -94,081 | 10,831 | -4,531 | -3,234 | 16,127 | 13,673 | -12,435 | 1,841 | 2,245 | 17,433 | -18,490 | 18,786 | -5,387 |
| | 1825+00 | | 500 | | 6.3 | 22.4 | -9.6 | 1.4 | 74.51 | -3.5 | -10.1 | -14.2 | -0.6 | 30.8 | -38.8 | 45.6 | -25.7 | | 68,041 | 12,880 | -4,501 | 0 | 32,653 | 1,101 | -12,938 | -301 | 451 | 16,317 | -17,141 | 19,688 | -10,988 |
| | 1830+00 | | 500 | | 13.2 | 8.0 | -4.7 | 10.1 | 85.13 | -13.6 | -4.7 | -15.5 | -4.1 | 26.0 | -41.4 | 54.4 | -32.2 | | -61,715 | 9,538 | -5,078 | 1,446 | 41,853 | -4,636 | 2,852 | -13,927 | -1,004 | 14,511 | -21,627 | 25,940 | -14,708 |
| | 1835+00 | | 500 | | 25.7 | -6.2 | 4.0 | 21.1 | 83.27 | -16.3 | -29.7 | 7.1 | -5.6 | 21.3 | -33.3 | 54.3 | -33.1 | | 74,884 | -1,587 | 349 | 8,690 | 43,272 | -8,943 | -7,548 | -1,613 | -3,067 | 11,509 | -19,781 | 28,468 | -17,478 |
| | 1840+00 | | 500 | | 15.8 | -2.4 | 1.6 | 26.1 | 72.70 | -6.9 | -38.1 | 5.2 | -5.4 | 24.0 | -26.3 | 51.2 | -28.1 | | -49,202 | -4,570 | 3,654 | 12,407 | 40,001 | -7,384 | -22,151 | 8,717 | -2,546 | 9,776 | -13,522 | 25,850 | -15,653 |
| | 1845+00 | | 500 | | -19.3 | 11.2 | 0.9 | 17.1 | 61.77 | 5.7 | -30.4 | -10.9 | -2.6 | 32.7 | -23.3 | 52.5 | -25.8 | | 64,978 | 2,140 | -2,098 | 13,688 | 32,700 | 465 | -15,952 | -3,491 | -2,834 | 14,268 | -12,801 | 25,330 | -12,420 |
| | 1850+00 | | 500 | | -41.9 | 16.2 | 10.1 | -1.5 | 61.78 | 7.4 | -25.5 | -22.9 | 11.4 | 36.6 | -21.3 | 58.4 | -27.7 | | -84,281 | 9,064 | 3,033 | 3,450 | 29,066 | 5,258 | -14,407 | -7,420 | 277 | 18,451 | -10,495 | 27,186 | -13,367 |
| | 1855+00 | | 500 | | -31.9 | 4.9 | 17.8 | -9.5 | 61.68 | 10.8 | -15.1 | -43.7 | 20.4 | 39.6 | -20.7 | 64.5 | -30.9 | | 42,349 | 7,102 | 7,109 | -4,912 | 32,717 | 2,185 | -11,134 | -15,475 | 11,112 | 18,138 | -10,789 | 31,254 | -14,382 |
| | 1860+00 | | 500 | | -16.0 | 1.5 | 19.3 | -10.7 | 54.28 | 18.2 | -10.7 | -46.6 | 10.7 | 40.0 | -19.3 | 69.1 | -38.4 | | -74,290 | -2,225 | 10,696 | -4,570 | 28,965 | 8,646 | -4,001 | -28,241 | 9,279 | 21,428 | -9,960 | 33,205 | -16,493 |
| | 1865+00 | | 500 | | 2.4 | 17.6 | 9.2 | -15.7 | 58.31 | 11.2 | -19.2 | -30.0 | 5.1 | 33.6 | -21.9 | 80.6 | -47.9 | | 58,266 | 3,747 | 8,629 | -6,162 | 25,318 | 9,548 | -6,708 | -18,332 | 1,436 | 18,547 | -9,340 | 35,885 | -21,903 |
| | 1870+00 | | 500 | | -16.9 | 20.2 | 4.1 | -23.7 | 68.87 | 3.1 | -33.8 | -18.5 | 2.9 | 35.6 | -21.4 | 101.6 | -64.1 | | -55,832 | 13,827 | 545 | -9,558 | 32,991 | 1,618 | -12,540 | -11,716 | 3,621 | 15,084 | -12,558 | 44,759 | -25,969 |
| | 1875+00 | | 500 | | -12.1 | 10.5 | 7.8 | -21.6 | 68.24 | 1.7 | -42.6 | -16.2 | -6.3 | 37.7 | -12.0 | 126.8 | -87.5 | | 38,978 | 6,338 | 3,515 | -14,132 | 35,882 | 1,498 | -21,275 | -6,823 | -731 | 20,477 | -8,861 | 56,824 | -38,092 |
| | 1880+00 | | 500 | | -26.2 | 0.9 | 16.8 | -6.6 | 53.08 | 3.5 | -26.6 | -32.4 | -13.5 | 28.4 | -5.5 | 145.9 | -99.0 | | -51,088 | 4,191 | 4,261 | -7,430 | 32,355 | 191 | -21,355 | -9,346 | -5,577 | 17,245 | -3,156 | 69,959 | -49,363 |
| 1 - "Buxton" | 1885+00 | | 500 | | -14.1 | -6.6 | 20.3 | 2.8 | 38.76 | 11.7 | -10.2 | -43.8 | -16.7 | 17.1 | -6.8 | 149.1 | -96.6 | | 24,887 | -3,266 | 12,583 | 854 | 20,727 | 3,265 | -5,247 | -23,036 | -7,971 | 11,132 | -2,329 | 75,965 | -49,681 |
| | 1890+00 | | 500 | | -18.1 | -4.7 | 13.2 | -3.6 | 43.45 | 13.8 | -20.8 | -36.3 | -7.4 | 7.8 | -9.9 | 137.1 | -87.1 | | -38,982 | -3,287 | 7,732 | 1,971 | 18,030 | 8,414 | -4,953 | -20,756 | -8,758 | 5,959 | -4,493 | 73,108 | -46,946 |
| | 1895+00 | | 500 | | -27.0 | -10.8 | 17.8 | -14.5 | 50.17 | 7.4 | -28.8 | -37.0 | 6.8 | 4.8 | -13.3 | 120.8 | -75.3 | | 20,924 | -1,450 | 5,483 | -5,542 | 25,423 | 5,340 | -15,830 | -15,532 | 1,345 | 1,841 | -5,398 | 64,031 | -40,121 |
| | 1900+00 | | 500 | | -13.1 | -20.5 | 19.6 | -17.2 | 45.28 | 7.7 | -23.2 | -44.8 | 7.3 | 6.2 | -18.2 | 104.9 | -63.4 | | -47,889 | -9,380 | 12,319 | -8,945 | 24,750 | 2,052 | -12,992 | -21,420 | 5,496 | 2,998 | -7,867 | 56,765 | -35,167 |
| | 1905+00 | | 500 | | 1.8 | -20.3 | 11.4 | -15.1 | 29.51 | 11.2 | -18.3 | -40.6 | -1.8 | 8.3 | -17.1 | 83.9 | -52.4 | | 34,838 | -11,164 | 7,265 | -8,232 | 20,526 | 5,665 | -10,202 | -23,392 | 1,754 | 3,243 | -10,287 | 48,150 | -28,233 |
| | 1910+00 | | 500 | | 8.6 | -19.7 | 7.3 | -10.2 | 13.47 | 7.8 | -16.4 | -30.3 | -6.2 | 8.9 | -7.9 | 59.8 | -47.7 | | -33,037 | -9,126 | 4,134 | -6,848 | 8,987 | 5,535 | -8,133 | -17,177 | -3,574 | 5,084 | -6,784 | 35,781 | -24,211 |
| | 1915+00 | | 500 | | 10.0 | -21.9 | -0.7 | -2.0 | 9.34 | 2.1 | -16.1 | -15.6 | -9.9 | 4.9 | 5.9 | 35.2 | -43.2 | | 41,595 | -10,553 | 3,145 | -3,316 | 4,481 | 2,249 | -8,239 | -13,090 | -2,604 | 3,844 | -1,100 | 24,043 | -23,525 |
| | 1920+00 | | 500 | | 3.1 | -14.1 | -10.0 | 1.5 | 5.82 | 1.2 | -13.0 | 0.2 | -20.6 | 2.8 | 18.3 | 14.7 | -31.9 | | -31,587 | -11,335 | -3,873 | 1,342 | 4,856 | -103 | -7,861 | -2,532 | -7,262 | 1,027 | 7,006 | 11,191 | -19,694 |
| | 1925+00 | | 500 | | -17.3 | -2.6 | -6.8 | -6.2 | 11.83 | 0.2 | -5.0 | 2.8 | -18.9 | -0.4 | 20.3 | 3.5 | -18.8 | | 34,642 | -2,810 | -6,116 | 125 | 961 | 1,265 | -5,092 | 2,766 | -13,295 | 1,781 | 11,341 | 3,464 | -12,196 |
| "Downcoast" | 1930+00 | | 500 | | 1.7 | -7.3 | 13.4 | -12.0 | 35.48 | -8.1 | 5.9 | 0.0 | -6.1 | -9.8 | 6.1 | 0.0 | -3.5 | | -51,984 | 189 | -653 | -6,340 | 10,870 | -1,074 | 127 | 0 | -5,604 | -2,179 | 8,919 | 0 | -6,563 |
| | 1935+00 | | 500 | | -45.8 | -12.0 | 29.0 | -9.4 | 52.87 | -6.5 | 6.8 | 0.0 | -3.6 | -12.4 | -18.6 | 0.0 | 22.8 | | 53,721 | -7,537 | 14,021 | -5,679 | 24,607 | -6,989 | 5,802 | 0 | -480 | -7,656 | -2,837 | 0 | 3,041 |
| | 1940+00 | | 500 | | -42.7 | -8.7 | 20.0 | -8.8 | 52.47 | 13.9 | -1.0 | 0.0 | -10.2 | 1.0 | -36.6 | 0.0 | 47.7 | | -99,498 | -4,436 | 15,016 | -3,751 | 28,267 | 441 | 967 | 0 | -3,161 | -4,698 | -15,745 | 0 | 19,788 |
| | 1945+00 | | 500 | | -48.0 | -13.3 | 6.6 | -4.6 | 23.76 | 48.3 | -2.0 | 0.0 | -22.4 | 19.2 | -37.4 | 0.0 | 54.7 | | 56,779 | -4,239 | 4,969 | -5,003 | 24,207 | 13,485 | -1,961 | 0 | -7,030 | 5,687 | -20,830 | 0 | 27,896 |
| | 1950+00 | | 500 | | -33.3 | -14.5 | 0.7 | 1.4 | -5.67 | 68.3 | 0.5 | 0.0 | -32.6 | 26.2 | -31.2 | 0.0 | 57.5 | | -104,807 | -9,057 | 1,671 | 374 | -444 | 34,780 | -29 | 0 | -15,408 | 13,541 | -16,564 | 0 | 26,848 |
| | 1955+00 | | 500 | | -30.0 | -15.7 | 6.3 | -3.2 | 3.31 | 46.0 | 4.0 | 0.0 | -34.1 | 28.1 | -25.2 | 0.0 | 57.2 | | 71,530 | -5,426 | -962 | 1,053 | -5,228 | 33,533 | 504 | 0 | -17,172 | 12,620 | -14,615 | 0 | 30,613 |
| | 1960+00 | | 500 | | -11.7 | -17.0 | 14.1 | -3.2 | 13.12 | 17.0 | 6.6 | 0.0 | -25.4 | 30.2 | -16.6 | 0.0 | 41.2 | | -101,499 | -10,304 | 7,268 | -4,229 | 8,535 | 12,452 | 3,496 | 0 | -16,939 | 15,522 | -10,627 | 0 | 26,595 |
| | 1965+00 | | 500 | | -19.8 | -11.2 | 13.4 | 3.2 | 11.55 | 5.1 | 6.1 | 0.0 | -12.3 | 29.3 | -17.2 | 0.0 | 30.2 | | 89,845 | -6,728 | 6,796 | 999 | 4,580 | 4,595 | 3,059 | 0 | -8,482 | 14,640 | -5,974 | 0 | 14,565 |
| | 1970+00 | | 500 | | -29.1 | -14.4 | 15.7 | -5.6 | 14.18 | 15.5 | 2.0 | 0.0 | -17.4 | 38.3 | -28.2 | 0.0 | 34.4 | | -109,657 | -4,437 | 6,628 | 2,216 | 6,972 | 491 | 3,026 | 0 | -3,772 | 14,693 | -11,198 | 0 | 15,608 |
| | 1975+00 | | 500 | | 161.2 | -19.8 | 18.1 | -15.6 | 14.42 | 30.0 | -2.1 | 0.0 | -27.2 | 47.1 | -33.9 | 0.0 | 37.7 | | 80,576 | -9,916 | 9,053 | -7,798 | 7,208 | 15,021 | -1,026 | 0 | -13,603 | 23,560 | -16,970 | 0 | 18,828 |
| | 1980+00 | | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Reach | Distance to Next | Unit Vol Since Last (cy/ft) | | | | | | | | | | | | | Total Vol Since Last (cy/ft) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 | Aug-13 | Oct-14 | Oct-15 | Aug-16 | May-17 | Jun-18 | Oct-18 | Jun-19 | Nov-19 | Aug-20 | Aug-21 | Jun-22 | Aug-22 | Sep-23 |
| **UC** | **5000** | | 134.6 | -2.0 | 22.8 | -3.8 | -5.0 | 7.3 | -5.4 | 1.0 | 12.2 | -0.3 | 7.2 | 0.3 | 23.6 | | 672,774 | -9,993 | 113,995 | -18,970 | -24,975 | 36,697 | -26,914 | 5,160 | 61,028 | -1,293 | 35,906 | 1,570 | 117,878 |
| **2** | **11500** | | 18.8 | 3.1 | 2.9 | 1.7 | 46.8 | 2.1 | -16.0 | -5.5 | -0.7 | 24.8 | -22.5 | 51.1 | -17.8 | | 216,051 | 35,729 | 33,321 | 19,859 | 538,721 | 23,583 | -183,978 | -62,902 | -7,663 | 285,745 | -258,776 | 587,536 | -204,963 |
| **1** | **4500** | | 1.2 | -13.9 | 9.5 | -6.4 | 28.6 | 7.5 | -17.5 | -29.8 | -7.7 | 8.2 | -4.4 | 87.2 | -62.2 | | 5,391 | -62,371 | 42,672 | -28,590 | 128,742 | 33,682 | -78,549 | -134,169 | -34,867 | 36,907 | -19,911 | 392,498 | -279,773 |
| **DC** | **5000** | | -23.0 | -12.4 | 12.8 | -5.6 | 21.9 | 21.3 | 2.8 | 0.0 | -18.3 | 17.1 | -21.3 | 0.0 | 35.4 | | -114,995 | -61,890 | 63,806 | -28,157 | 109,575 | 106,736 | 13,966 | 0 | -91,650 | 85,730 | -106,441 | 0 | 177,219 |
| **Project** | **16000** | | **13.8** | **-1.7** | **4.7** | **-0.5** | **41.7** | **3.6** | **-16.4** | **-12.3** | **-2.7** | **20.2** | **-17.4** | **61.3** | **-30.3** | | **221,441** | **-26,642** | **75,993** | **-8,731** | **667,463** | **57,265** | **-262,527** | **-197,071** | **-42,530** | **322,653** | **-278,686** | **980,033** | **-484,737** |
| **All** | **26000** | | **30.0** | **-3.8** | **9.8** | **-2.1** | **28.9** | **7.7** | **-10.6** | **-7.4** | **-2.8** | **15.7** | **-13.4** | **37.8** | **-7.3** | | **779,220** | **-98,526** | **253,793** | **-55,858** | **752,063** | **200,698** | **-275,475** | **-191,911** | **-73,152** | **407,089** | **-349,221** | **981,604** | **-189,639** |

# APPENDIX B

# Compaction Survey Results

# Avon Before Dredge Compaction Measurements (May 2022) - To Be Nourished Beach

D= Seaward toe of dune
B=middle beach
Measurements taken 19 May 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 1550+00 | D | 228 | 512 | 669 | 261 | 512 | 730 | B | 85 | 171 | 199 | 119 | 204 | 194 |
| | | 313 | 498 | 754 | | | | | 114 | 199 | 156 | | | |
| | | 242 | 526 | 768 | | | | | 156 | 242 | 228 | | | |
| 1560+00 | D | 270 | 569 | 498 | 289 | 560 | 507 | B | 85 | 526 | 612 | 138 | 555 | 659 |
| | | 299 | 541 | 498 | | | | | 142 | 569 | 683 | | | |
| | | 299 | 569 | 526 | | | | | 185 | 569 | 683 | | | |
| 1570+00 | D | 57 | 171 | 171 | 76 | 166 | 185 | B | 100 | 427 | 583 | 128 | 436 | 597 |
| | | 85 | 156 | 185 | | | | | 156 | 455 | 654 | | | |
| | | 85 | 171 | 199 | | | | | 128 | 427 | 555 | | | |
| 1580+00 | D | 142 | 270 | 356 | 166 | 261 | 346 | B | 71 | 498 | 541 | 57 | 503 | 607 |
| | | 171 | 242 | 384 | | | | | 43 | 512 | 640 | | | |
| | | 185 | 270 | 299 | | | | | 57 | 498 | 640 | | | |
| 1590+00 | D | 28 | 228 | 455 | 28 | 209 | 446 | B | 142 | 512 | 882 | 190 | 488 | 915 |
| | | 0 | 114 | 469 | | | | | 185 | 455 | 910 | | | |
| | | 57 | 284 | 413 | | | | | 242 | 498 | 953 | | | |
| 1600+00 | D | 71 | 256 | 555 | 90 | 247 | 621 | B | 185 | 797 | 711 | 313 | 820 | 787 |
| | | 128 | 256 | 640 | | | | | 398 | 839 | 768 | | | |
| | | 71 | 228 | 669 | | | | | 356 | 825 | 882 | | | |
| 1610+00 | D | 57 | 284 | 484 | 81 | 294 | 574 | B | 128 | 398 | 1000 | 166 | 370 | 869 |
| | | 114 | 313 | 569 | | | | | 142 | 356 | 797 | | | |
| | | 71 | 284 | 669 | | | | | 228 | 356 | 811 | | | |
| 1620+00 | D | 171 | 427 | 313 | 228 | 427 | 284 | B | 128 | 455 | 341 | 114 | 455 | 322 |
| | | 242 | 427 | 341 | | | | | 128 | 441 | 313 | | | |
| | | 270 | 427 | 199 | | | | | 85 | 469 | 313 | | | |
| 1630+00 | D | 270 | 384 | 484 | 237 | 384 | 512 | B | 85 | 427 | 541 | 71 | 351 | 574 |
| | | 185 | 398 | 512 | | | | | 71 | 256 | 597 | | | |
| | | 256 | 370 | 541 | | | | | 57 | 370 | 583 | | | |
| 1640+00 | D | 57 | 156 | 612 | 95 | 190 | 541 | B | 43 | 228 | 768 | 76 | 232 | 744 |
| | | 114 | 199 | 555 | | | | | 57 | 228 | 697 | | | |
| | | 114 | 213 | 455 | | | | | 128 | 242 | 768 | | | |
| 1650+00 | D | 213 | 299 | 398 | 175 | 261 | 389 | B | 185 | 626 | 797 | 209 | 626 | 825 |
| | | 142 | 256 | 370 | | | | | 228 | 597 | 825 | | | |
| | | 171 | 228 | 398 | | | | | 213 | 654 | 853 | | | |
| 1660+00 | D | 71 | 156 | 213 | 90 | 156 | 275 | B | 142 | 583 | 811 | 166 | 550 | 773 |
| | | 100 | 156 | 284 | | | | | 185 | 541 | 853 | | | |
| | | 100 | 156 | 327 | | | | | 171 | 526 | 654 | | | |
| 1670+00 | D | 114 | 356 | 740 | 123 | 341 | 792 | B | 71 | 341 | 583 | 76 | 266 | 621 |
| | | 142 | 299 | 825 | | | | | 85 | 270 | 640 | | | |
| | | 114 | 370 | 811 | | | | | 71 | 185 | 640 | | | |
| 1680+00 | D | 28 | 512 | 825 | 43 | 536 | 820 | B | 43 | 356 | 512 | 43 | 346 | 531 |
| | | 43 | 555 | 754 | | | | | 14 | 398 | 541 | | | |
| | | 57 | 541 | 882 | | | | | 71 | 284 | 541 | | | |
| Average | D | - | - | - | 142 | 324 | 502 | B | - | - | - | 133 | 443 | 644 |

# Avon After Dredge Compaction Measurements (August 2022) - Nourished Beach

D= Seaward toe of dune
B=beach face
Measurement taken 2 August 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 1550+00 | D | 199 | 640 | 967 | 213 | 631 | 887 | B | 28 | 100 | 384 | 62 | 294 | 351 |
| | | 185 | 640 | 811 | | | | | 114 | 427 | 356 | | | |
| | | 256 | 612 | 882 | | | | | 43 | 356 | 313 | | | |
| 1560+00 | D | 100 | 612 | 782 | 128 | 635 | 759 | B | 100 | 413 | 711 | 85 | 422 | 706 |
| | | 128 | 654 | 725 | | | | | 85 | 384 | 740 | | | |
| | | 156 | 640 | 768 | | | | | 71 | 469 | 669 | | | |
| 1570+00 | D | 71 | 455 | 711 | 85 | 479 | 711 | B | 57 | 455 | 740 | 76 | 493 | 773 |
| | | 100 | 498 | 725 | | | | | 85 | 484 | 754 | | | |
| | | 85 | 484 | 697 | | | | | 85 | 541 | 825 | | | |
| 1580+00 | D | 43 | 583 | 725 | 66 | 616 | 740 | B | 71 | 484 | 740 | 104 | 507 | 735 |
| | | 71 | 640 | 725 | | | | | 100 | 441 | 811 | | | |
| | | 85 | 626 | 768 | | | | | 142 | 597 | 654 | | | |
| 1590+00 | D | 114 | 469 | 683 | 100 | 403 | 669 | B | 171 | 341 | 612 | 152 | 341 | 650 |
| | | 85 | 384 | 597 | | | | | 128 | 341 | 626 | | | |
| | | 100 | 356 | 725 | | | | | 156 | 341 | 711 | | | |
| 1600+00 | D | 114 | 427 | 526 | 119 | 512 | 597 | B | 85 | 555 | 569 | 100 | 507 | 607 |
| | | 128 | 569 | 626 | | | | | 100 | 512 | 640 | | | |
| | | 114 | 541 | 640 | | | | | 114 | 455 | 612 | | | |
| 1610+00 | D | 469 | 1000 | 1000 | 465 | 845 | 1000 | B | 171 | 441 | 725 | 156 | 408 | 763 |
| | | 484 | 754 | 1000 | | | | | 156 | 384 | 754 | | | |
| | | 441 | 782 | 1000 | | | | | 142 | 398 | 811 | | | |
| 1620+00 | D | 114 | 284 | 740 | 109 | 417 | 749 | B | 71 | 171 | 171 | 128 | 171 | 175 |
| | | 128 | 356 | 697 | | | | | 142 | 171 | 171 | | | |
| | | 85 | 612 | 811 | | | | | 171 | 171 | 185 | | | |
| 1630+00 | D | 43 | 427 | 725 | 71 | 484 | 768 | B | 71 | 185 | 754 | 71 | 175 | 706 |
| | | 100 | 512 | 797 | | | | | 57 | 142 | 697 | | | |
| | | 71 | 512 | 782 | | | | | 85 | 199 | 669 | | | |
| 1640+00 | D | 28 | 356 | 740 | 90 | 469 | 759 | B | 100 | 213 | 384 | 90 | 171 | 318 |
| | | 100 | 512 | 754 | | | | | 85 | 142 | 341 | | | |
| | | 142 | 541 | 782 | | | | | 85 | 156 | 228 | | | |
| 1650+00 | D | 43 | 213 | 669 | 66 | 270 | 740 | B | 85 | 270 | 356 | 100 | 251 | 341 |
| | | 71 | 327 | 782 | | | | | 100 | 256 | 384 | | | |
| | | 85 | 270 | 768 | | | | | 114 | 228 | 284 | | | |
| 1660+00 | D | 43 | 213 | 825 | 47 | 237 | 583 | B | 100 | 213 | 242 | 133 | 209 | 394 |
| | | 71 | 256 | 455 | | | | | 156 | 228 | 469 | | | |
| | | 28 | 242 | 469 | | | | | 142 | 185 | 469 | | | |
| 1670+00 | D | 57 | 427 | 697 | 81 | 474 | 740 | B | 85 | 341 | 284 | 76 | 327 | 299 |
| | | 100 | 455 | 782 | | | | | 57 | 256 | 341 | | | |
| | | 85 | 541 | 740 | | | | | 85 | 384 | 270 | | | |
| 1680+00 | D | 85 | 242 | 541 | 90 | 275 | 574 | B | 28 | 128 | 213 | 43 | 138 | 242 |
| | | 85 | 284 | 597 | | | | | 43 | 128 | 228 | | | |
| | | 100 | 299 | 583 | | | | | 57 | 156 | 284 | | | |
| Average | D | - | - | - | 124 | 482 | 734 | B | - | - | - | 98 | 315 | 504 |

# Avon Post 1st Qtr Compaction Measurements (November 2022) - Nourished Beach

D= Seaward toe of dune
B=beach face
Measurement taken 15 November 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 1550+00 | D | 185 | 569 | 768 | 213 | 560 | 820 | B | 71 | 142 | 526 | 52 | 142 | 503 |
| | | 242 | 583 | 853 | | | | | 28 | 142 | 469 | | | |
| | | 213 | 526 | 839 | | | | | 57 | 142 | 512 | | | |
| 1560+00 | D | 142 | 512 | 839 | 156 | 531 | 853 | B | 171 | 284 | 569 | 156 | 280 | 564 |
| | | 156 | 541 | 853 | | | | | 142 | 270 | 555 | | | |
| | | 171 | 541 | 868 | | | | | 156 | 284 | 569 | | | |
| 1570+00 | D | 114 | 256 | 597 | 128 | 299 | 522 | B | 171 | 242 | 569 | 175 | 218 | 522 |
| | | 128 | 299 | 441 | | | | | 185 | 213 | 498 | | | |
| | | 142 | 341 | 526 | | | | | 171 | 199 | 498 | | | |
| 1580+00 | D | 128 | 213 | 484 | 128 | 237 | 498 | B | 171 | 128 | 469 | 100 | 128 | 455 |
| | | 128 | 256 | 526 | | | | | 57 | 142 | 427 | | | |
| | | 128 | 242 | 484 | | | | | 71 | 114 | 469 | | | |
| 1590+00 | D | 142 | 413 | 768 | 156 | 403 | 749 | B | 85 | 142 | 142 | 76 | 114 | 128 |
| | | 171 | 441 | 697 | | | | | 71 | 100 | 128 | | | |
| | | 156 | 356 | 782 | | | | | 71 | 100 | 114 | | | |
| 1600+00 | D | 85 | 171 | 612 | 119 | 185 | 588 | B | 71 | 85 | 427 | 81 | 109 | 431 |
| | | 142 | 213 | 612 | | | | | 85 | 128 | 441 | | | |
| | | 128 | 171 | 541 | | | | | 85 | 114 | 427 | | | |
| 1610+00 | D | 85 | 213 | 341 | 81 | 261 | 365 | B | 142 | 71 | 85 | 147 | 100 | 76 |
| | | 57 | 270 | 398 | | | | | 156 | 85 | 71 | | | |
| | | 100 | 299 | 356 | | | | | 142 | 142 | 71 | | | |
| 1620+00 | D | 213 | 512 | 654 | 247 | 555 | 659 | B | 43 | 142 | 270 | 47 | 138 | 261 |
| | | 228 | 569 | 626 | | | | | 43 | 128 | 213 | | | |
| | | 299 | 583 | 697 | | | | | 57 | 142 | 299 | | | |
| 1630+00 | D | 114 | 341 | 626 | 100 | 365 | 654 | B | 57 | 71 | 171 | 57 | 76 | 180 |
| | | 100 | 370 | 654 | | | | | 57 | 85 | 199 | | | |
| | | 85 | 384 | 683 | | | | | 57 | 71 | 171 | | | |
| 1640+00 | D | 71 | 612 | 740 | 90 | 612 | 778 | B | 171 | 469 | 782 | 180 | 536 | 778 |
| | | 85 | 583 | 740 | | | | | 185 | 526 | 740 | | | |
| | | 114 | 640 | 853 | | | | | 185 | 612 | 811 | | | |
| 1650+00 | D | 142 | 626 | 811 | 171 | 621 | 825 | B | 14 | 356 | 626 | 19 | 322 | 597 |
| | | 171 | 612 | 825 | | | | | 28 | 313 | 597 | | | |
| | | 199 | 626 | 839 | | | | | 14 | 299 | 569 | | | |
| 1660+00 | D | 114 | 754 | 1000 | 147 | 740 | 937 | B | 114 | 228 | 484 | 119 | 308 | 512 |
| | | 142 | 612 | 811 | | | | | 100 | 327 | 526 | | | |
| | | 185 | 853 | 1000 | | | | | 142 | 370 | 526 | | | |
| 1670+00 | D | 57 | 725 | 1000 | 71 | 711 | 936 | B | 100 | 427 | 626 | 119 | 370 | 607 |
| | | 71 | 654 | 853 | | | | | 114 | 327 | 597 | | | |
| | | 85 | 754 | 953 | | | | | 142 | 356 | 597 | | | |
| 1680+00 | D | 142 | 697 | 896 | 166 | 669 | 816 | B | 71 | 43 | 199 | 57 | 38 | 190 |
| | | 156 | 626 | 797 | | | | | 57 | 28 | 185 | | | |
| | | 199 | 683 | 754 | | | | | 43 | 43 | 185 | | | |
| Average | D | - | - | - | 141 | 482 | 714 | B | - | - | - | 99 | 206 | 415 |

# Avon Post 2nd Qtr Compaction Measurements (February 2023) - Nourished Beach

D= Seaward toe of dune
B=beach face
Measurement taken 23 February 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 0+00 | D | 185 | 284 | 640 | 218 | 270 | 578 | B | 43 | 256 | 327 | 52 | 284 | 341 |
| | | 213 | 199 | 484 | | | | | 57 | 299 | 327 | | | |
| | | 256 | 327 | 612 | | | | | 57 | 299 | 370 | | | |
| 0+00 | D | 85 | 441 | 754 | 85 | 488 | 673 | B | 100 | 569 | 825 | 123 | 541 | 806 |
| | | 85 | 526 | 583 | | | | | 128 | 512 | 797 | | | |
| | | 85 | 498 | 683 | | | | | 142 | 541 | 797 | | | |
| 0+00 | D | 270 | 327 | 583 | 275 | 389 | 536 | B | 28 | 284 | 782 | 38 | 294 | 787 |
| | | 284 | 398 | 725 | | | | | 28 | 228 | 782 | | | |
| | | 270 | 441 | 299 | | | | | 57 | 370 | 797 | | | |
| 0+00 | D | 299 | 626 | 469 | 308 | 659 | 479 | B | 28 | 413 | 526 | 43 | 389 | 465 |
| | | 341 | 683 | 413 | | | | | 57 | 370 | 427 | | | |
| | | 284 | 669 | 555 | | | | | 43 | 384 | 441 | | | |
| 0+00 | D | 156 | 228 | 256 | 142 | 213 | 256 | B | 28 | 427 | 541 | 85 | 436 | 545 |
| | | 128 | 199 | 242 | | | | | 85 | 413 | 541 | | | |
| | | 142 | 213 | 270 | | | | | 142 | 469 | 555 | | | |
| 0+00 | D | 142 | 228 | 199 | 161 | 223 | 261 | B | 427 | 1000 | 1000 | 531 | 1000 | 1000 |
| | | 171 | 228 | 270 | | | | | 569 | 1000 | 1000 | | | |
| | | 171 | 213 | 313 | | | | | 597 | 1000 | 1000 | | | |
| 0+00 | D | 71 | 541 | 484 | 128 | 484 | 545 | B | 28 | 71 | 612 | 24 | 76 | 574 |
| | | 142 | 555 | 597 | | | | | 28 | 85 | 569 | | | |
| | | 171 | 356 | 555 | | | | | 14 | 71 | 541 | | | |
| 0+00 | D | 71 | 384 | 370 | 114 | 351 | 370 | B | 85 | 441 | 612 | 90 | 408 | 616 |
| | | 128 | 341 | 398 | | | | | 114 | 384 | 583 | | | |
| | | 142 | 327 | 341 | | | | | 71 | 398 | 654 | | | |
| 0+00 | D | 128 | 142 | 284 | 138 | 199 | 322 | B | 28 | 185 | 284 | 57 | 180 | 280 |
| | | 142 | 213 | 327 | | | | | 57 | 156 | 270 | | | |
| | | 142 | 242 | 356 | | | | | 85 | 199 | 284 | | | |
| 0+00 | D | 85 | 427 | 612 | 180 | 431 | 635 | B | 14 | 57 | 768 | 19 | 66 | 782 |
| | | 185 | 427 | 640 | | | | | 28 | 43 | 811 | | | |
| | | 270 | 441 | 654 | | | | | 14 | 100 | 768 | | | |
| 0+00 | D | 100 | 697 | 1000 | 218 | 669 | 817 | B | 57 | 427 | 299 | 57 | 450 | 318 |
| | | 270 | 640 | 711 | | | | | 43 | 469 | 341 | | | |
| | | 284 | 669 | 740 | | | | | 71 | 455 | 313 | | | |
| 0+00 | D | 142 | 839 | 1000 | 147 | 711 | 841 | B | 85 | 427 | 555 | 138 | 436 | 574 |
| | | 128 | 569 | 711 | | | | | 171 | 427 | 555 | | | |
| | | 171 | 725 | 811 | | | | | 156 | 455 | 612 | | | |
| 0+00 | D | 28 | 427 | 1000 | 81 | 460 | 808 | B | 43 | 213 | 640 | 57 | 213 | 688 |
| | | 114 | 469 | 740 | | | | | 71 | 171 | 725 | | | |
| | | 100 | 484 | 683 | | | | | 57 | 256 | 697 | | | |
| 0+00 | D | 57 | 413 | 569 | 95 | 417 | 597 | B | 14 | 341 | 469 | 14 | 308 | 469 |
| | | 85 | 441 | 612 | | | | | 14 | 284 | 469 | | | |
| | | 142 | 398 | 612 | | | | | 14 | 299 | 469 | | | |
| Average | D | - | - | - | 164 | 426 | 551 | B | - | - | - | 95 | 363 | 589 |

# Avon 3rd Qtr Compaction Measurements (May 2023) - Nourished Beach

D= Seaward toe of dune
B=beach face
Measurement taken 10 May 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 0+00 | D | 100 | 469 | 711 | 114 | 446 | 735 | B | 43 | 327 | 597 | 24 | 384 | 588 |
| | | 128 | 427 | 797 | | | | | 28 | 384 | 612 | | | |
| | | 114 | 441 | 697 | | | | | 0 | 441 | 555 | | | |
| 0+00 | D | 142 | 384 | 754 | 152 | 422 | 754 | B | 71 | 341 | 597 | 100 | 327 | 659 |
| | | 142 | 469 | 811 | | | | | 114 | 313 | 711 | | | |
| | | 171 | 413 | 697 | | | | | 114 | 327 | 669 | | | |
| 0+00 | D | 114 | 597 | 711 | 128 | 569 | 749 | B | 156 | 427 | 469 | 114 | 441 | 512 |
| | | 85 | 569 | 711 | | | | | 100 | 413 | 541 | | | |
| | | 185 | 541 | 825 | | | | | 85 | 484 | 526 | | | |
| 0+00 | D | 171 | 469 | 811 | 156 | 436 | 744 | B | 57 | 398 | 612 | 76 | 408 | 612 |
| | | 171 | 413 | 697 | | | | | 57 | 384 | 612 | | | |
| | | 128 | 427 | 725 | | | | | 114 | 441 | 612 | | | |
| 0+00 | D | 156 | 441 | 740 | 161 | 479 | 759 | B | 100 | 242 | 725 | 104 | 266 | 706 |
| | | 142 | 526 | 754 | | | | | 128 | 284 | 683 | | | |
| | | 185 | 469 | 782 | | | | | 85 | 270 | 711 | | | |
| 0+00 | D | 114 | 569 | 711 | 123 | 574 | 730 | B | 142 | 341 | 740 | 138 | 384 | 721 |
| | | 114 | 555 | 725 | | | | | 114 | 370 | 697 | | | |
| | | 142 | 597 | 754 | | | | | 156 | 441 | 725 | | | |
| 0+00 | D | 156 | 413 | 825 | 180 | 441 | 849 | B | 100 | 384 | 669 | 71 | 417 | 645 |
| | | 171 | 469 | 839 | | | | | 43 | 427 | 583 | | | |
| | | 213 | 441 | 882 | | | | | 71 | 441 | 683 | | | |
| 0+00 | D | 57 | 541 | 811 | 62 | 484 | 825 | B | 71 | 341 | 612 | 62 | 375 | 640 |
| | | 43 | 469 | 825 | | | | | 85 | 384 | 626 | | | |
| | | 85 | 441 | 839 | | | | | 28 | 398 | 683 | | | |
| 0+00 | D | 100 | 583 | 1000 | 119 | 631 | 1000 | B | 142 | 327 | 484 | 152 | 398 | 512 |
| | | 114 | 626 | 1000 | | | | | 171 | 427 | 526 | | | |
| | | 142 | 683 | 1000 | | | | | 142 | 441 | 526 | | | |
| 0+00 | D | 85 | 484 | 868 | 128 | 436 | 835 | B | 114 | 384 | 597 | 138 | 422 | 597 |
| | | 171 | 384 | 825 | | | | | 171 | 469 | 555 | | | |
| | | 128 | 441 | 811 | | | | | 128 | 413 | 640 | | | |
| 0+00 | D | 128 | 398 | 669 | 152 | 427 | 702 | B | 114 | 284 | 612 | 90 | 318 | 569 |
| | | 171 | 441 | 683 | | | | | 100 | 341 | 541 | | | |
| | | 156 | 441 | 754 | | | | | 57 | 327 | 555 | | | |
| 0+00 | D | 185 | 484 | 711 | 199 | 465 | 706 | B | 85 | 370 | 597 | 90 | 318 | 583 |
| | | 256 | 441 | 683 | | | | | 85 | 284 | 569 | | | |
| | | 156 | 469 | 725 | | | | | 100 | 299 | 583 | | | |
| 0+00 | D | 128 | 398 | 782 | 119 | 431 | 778 | B | 142 | 469 | 669 | 109 | 422 | 616 |
| | | 128 | 441 | 811 | | | | | 71 | 384 | 612 | | | |
| | | 100 | 455 | 740 | | | | | 114 | 413 | 569 | | | |
| 0+00 | D | 142 | 427 | 669 | 152 | 450 | 683 | B | 100 | 284 | 583 | 133 | 289 | 597 |
| | | 128 | 413 | 711 | | | | | 156 | 284 | 654 | | | |
| | | 185 | 512 | 669 | | | | | 142 | 299 | 555 | | | |
| Average | D | - | - | - | 139 | 478 | 775 | B | - | - | - | 100 | 369 | 611 |

# Avon 4th Qtr Compaction Measurements (August 2023) - Nourished Beach

D= Seaward toe of dune
B=beach face
Measurement taken 22 August 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 0+00 | D | 185 | 284 | 640 | 218 | 270 | 578 | B | 43 | 256 | 327 | 52 | 284 | 341 |
| | | 213 | 199 | 484 | | | | | 57 | 299 | 327 | | | |
| | | 256 | 327 | 612 | | | | | 57 | 299 | 370 | | | |
| 0+00 | D | 85 | 441 | 754 | 85 | 488 | 673 | B | 100 | 569 | 825 | 123 | 541 | 806 |
| | | 85 | 526 | 583 | | | | | 128 | 512 | 797 | | | |
| | | 85 | 498 | 683 | | | | | 142 | 541 | 797 | | | |
| 0+00 | D | 270 | 327 | 583 | 275 | 389 | 536 | B | 28 | 284 | 782 | 38 | 294 | 787 |
| | | 284 | 398 | 725 | | | | | 28 | 228 | 782 | | | |
| | | 270 | 441 | 299 | | | | | 57 | 370 | 797 | | | |
| 0+00 | D | 299 | 626 | 469 | 308 | 659 | 479 | B | 28 | 413 | 526 | 43 | 389 | 465 |
| | | 341 | 683 | 413 | | | | | 57 | 370 | 427 | | | |
| | | 284 | 669 | 555 | | | | | 43 | 384 | 441 | | | |
| 0+00 | D | 156 | 228 | 256 | 142 | 213 | 256 | B | 28 | 427 | 541 | 85 | 436 | 545 |
| | | 128 | 199 | 242 | | | | | 85 | 413 | 541 | | | |
| | | 142 | 213 | 270 | | | | | 142 | 469 | 555 | | | |
| 0+00 | D | 142 | 228 | 199 | 161 | 223 | 261 | B | 427 | 1000 | 1000 | 531 | 1000 | 1000 |
| | | 171 | 228 | 270 | | | | | 569 | 1000 | 1000 | | | |
| | | 171 | 213 | 313 | | | | | 597 | 1000 | 1000 | | | |
| 0+00 | D | 71 | 541 | 484 | 128 | 484 | 545 | B | 28 | 71 | 612 | 24 | 76 | 574 |
| | | 142 | 555 | 597 | | | | | 28 | 85 | 569 | | | |
| | | 171 | 356 | 555 | | | | | 14 | 71 | 541 | | | |
| 0+00 | D | 71 | 384 | 370 | 114 | 351 | 370 | B | 85 | 441 | 612 | 90 | 408 | 616 |
| | | 128 | 341 | 398 | | | | | 114 | 384 | 583 | | | |
| | | 142 | 327 | 341 | | | | | 71 | 398 | 654 | | | |
| 0+00 | D | 128 | 142 | 284 | 138 | 199 | 322 | B | 28 | 185 | 284 | 57 | 180 | 280 |
| | | 142 | 213 | 327 | | | | | 57 | 156 | 270 | | | |
| | | 142 | 242 | 356 | | | | | 85 | 199 | 284 | | | |
| 0+00 | D | 85 | 427 | 612 | 180 | 431 | 635 | B | 14 | 57 | 768 | 19 | 66 | 782 |
| | | 185 | 427 | 640 | | | | | 28 | 43 | 811 | | | |
| | | 270 | 441 | 654 | | | | | 14 | 100 | 768 | | | |
| 0+00 | D | 100 | 697 | 1000 | 218 | 669 | 817 | B | 57 | 427 | 299 | 57 | 450 | 318 |
| | | 270 | 640 | 711 | | | | | 43 | 469 | 341 | | | |
| | | 284 | 669 | 740 | | | | | 71 | 455 | 313 | | | |
| 0+00 | D | 142 | 839 | 1000 | 147 | 711 | 841 | B | 85 | 427 | 555 | 138 | 436 | 574 |
| | | 128 | 569 | 711 | | | | | 171 | 427 | 555 | | | |
| | | 171 | 725 | 811 | | | | | 156 | 455 | 612 | | | |
| 0+00 | D | 28 | 427 | 1000 | 81 | 460 | 808 | B | 43 | 213 | 640 | 57 | 213 | 688 |
| | | 114 | 469 | 740 | | | | | 71 | 171 | 725 | | | |
| | | 100 | 484 | 683 | | | | | 57 | 256 | 697 | | | |
| 0+00 | D | 57 | 413 | 569 | 95 | 417 | 597 | B | 14 | 341 | 469 | 14 | 308 | 469 |
| | | 85 | 441 | 612 | | | | | 14 | 284 | 469 | | | |
| | | 142 | 398 | 612 | | | | | 14 | 299 | 469 | | | |
| Average | D | - | - | - | 164 | 426 | 551 | B | - | - | - | 95 | 363 | 589 |

# Buxton Before Dredge Compaction Measurements (June 2022) - To Be Nourished Beach

D= Seaward toe of dune
B=middle beach
Measurements taken 17 June 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" Averages | 12" Averages | 18" Averages | Sample | 6" | 12" | 18" | 6" Averages | 12" Averages | 18" Averages |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1770+50 | D | 85 | 256 | 398 | 133 | 280 | 422 | B | 156 | 512 | 882 | 156 | 517 | 835 |
| | | 114 | 270 | 441 | | | | | 142 | 541 | 825 | | | |
| | | 199 | 313 | 427 | | | | | 171 | 498 | 797 | | | |
| 1780+00 | D | Bird Closure Area - Did not Collect | | | | | | B | Bird Closure Area - Did not Collect | | | | | |
| 1790+00 | D | 100 | 597 | 782 | 152 | 583 | 744 | B | 100 | 384 | 313 | 128 | 422 | 327 |
| | | 142 | 555 | 740 | | | | | 128 | 427 | 356 | | | |
| | | 213 | 597 | 711 | | | | | 156 | 455 | 313 | | | |
| 1800+00 | D | 185 | 185 | 341 | 166 | 180 | 313 | B | 28 | 242 | 142 | 24 | 313 | 190 |
| | | 142 | 185 | 313 | | | | | 28 | 299 | 156 | | | |
| | | 171 | 171 | 284 | | | | | 14 | 398 | 270 | | | |
| 1810+00 | D | Bird Closure Area - Did not Collect | | | | | | B | 142 | 498 | 455 | 156 | 503 | 488 |
| | | | | | | | | | 185 | 512 | 469 | | | |
| | | | | | | | | | 142 | 498 | 541 | | | |
| 1820+00 | D | Bird Closure Area - Did not Collect | | | | | | B | 0 | 14 | 512 | 14 | 81 | 484 |
| | | | | | | | | | 14 | 71 | 441 | | | |
| | | | | | | | | | 28 | 156 | 498 | | | |
| 1830+00 | D | Bird Closure Area - Did not Collect | | | | | | B | 14 | 256 | 114 | 24 | 256 | 85 |
| | | | | | | | | | 28 | 256 | 71 | | | |
| | | | | | | | | | 28 | 256 | 71 | | | |
| 1840+00 | D | 185 | 711 | 740 | 247 | 721 | 792 | B | 768 | 142 | 299 | 294 | 114 | 280 |
| | | 313 | 740 | 825 | | | | | 57 | 114 | 270 | | | |
| | | 242 | 711 | 811 | | | | | 57 | 85 | 270 | | | |
| 1850+00 | D | 85 | 384 | 697 | 95 | 413 | 616 | B | 71 | 100 | 100 | 66 | 114 | 133 |
| | | 71 | 427 | 640 | | | | | 57 | 100 | 156 | | | |
| | | 128 | 427 | 512 | | | | | 71 | 142 | 142 | | | |
| 1860+00 | D | 71 | 526 | 839 | 123 | 541 | 835 | B | 57 | 256 | 256 | 66 | 275 | 266 |
| | | 85 | 541 | 868 | | | | | 71 | 270 | 284 | | | |
| | | 213 | 555 | 797 | | | | | 71 | 299 | 256 | | | |
| 1870+00 | D | 114 | 512 | 782 | 128 | 493 | 773 | B | 85 | 256 | 398 | 95 | 294 | 446 |
| | | 156 | 498 | 811 | | | | | 100 | 299 | 455 | | | |
| | | 114 | 469 | 725 | | | | | 100 | 327 | 484 | | | |
| 1880+00 | D | 114 | 270 | 427 | 114 | 275 | 427 | B | 114 | 284 | 455 | 114 | 261 | 431 |
| | | 142 | 299 | 441 | | | | | 100 | 284 | 413 | | | |
| | | 85 | 256 | 413 | | | | | 128 | 213 | 427 | | | |
| 1890+0 | D | 85 | 299 | 640 | 95 | 308 | 631 | B | 85 | 327 | 498 | 100 | 332 | 507 |
| | | 128 | 341 | 612 | | | | | 100 | 327 | 541 | | | |
| | | 71 | 284 | 640 | | | | | 114 | 341 | 484 | | | |
| 1900+00 | D | 85 | 156 | 156 | 71 | 152 | 156 | B | 71 | 284 | 284 | 104 | 299 | 327 |
| | | 71 | 156 | 156 | | | | | 114 | 299 | 256 | | | |
| | | 57 | 142 | 156 | | | | | 128 | 313 | 441 | | | |
| 1910+00 | D | 71 | 199 | 498 | 90 | 218 | 465 | B | 142 | 356 | 640 | 156 | 375 | 621 |
| | | 114 | 228 | 455 | | | | | 156 | 356 | 555 | | | |
| | | 85 | 228 | 441 | | | | | 171 | 413 | 669 | | | |
| 1920+00 | D | 57 | 313 | 569 | 95 | 284 | 465 | B | 85 | 498 | 683 | 100 | 507 | 688 |
| | | 85 | 256 | 427 | | | | | 114 | 512 | 683 | | | |
| | | 142 | 284 | 398 | | | | | 100 | 512 | 697 | | | |
| Average | D | - | - | - | 126 | 371 | 553 | B | - | - | - | 107 | 311 | 407 |

# Buxton After Dredge Compaction Measurements (August 2022) - Nourished Beach

D= Seaward toe of dune
B=middle beach
Measurements taken 18 August 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 1770+50 | D | 71 | 356 | 740 | 142 | 441 | 773 | B | 100 | 327 | 142 | 104 | 403 | 180 |
| | | 156 | 398 | 811 | | | | | 114 | 427 | 213 | | | |
| | | 199 | 569 | 768 | | | | | 100 | 455 | 185 | | | |
| 1780+00 | D | 43 | 156 | 384 | 76 | 190 | 398 | B | 71 | 583 | 725 | 119 | 607 | 787 |
| | | 57 | 199 | 398 | | | | | 128 | 555 | 811 | | | |
| | | 128 | 213 | 413 | | | | | 156 | 683 | 825 | | | |
| 1790+00 | D | 14 | 242 | 498 | 109 | 247 | 555 | B | 128 | 199 | 142 | 156 | 199 | 156 |
| | | 171 | 270 | 555 | | | | | 156 | 213 | 156 | | | |
| | | 142 | 228 | 612 | | | | | 185 | 185 | 171 | | | |
| 1800+00 | D | 185 | 199 | 270 | 204 | 237 | 299 | B | 0 | 43 | 114 | 9 | 33 | 114 |
| | | 199 | 228 | 284 | | | | | 14 | 28 | 100 | | | |
| | | 228 | 284 | 341 | | | | | 14 | 28 | 128 | | | |
| 1810+00 | D | 71 | 114 | 413 | 114 | 289 | 631 | B | 199 | 100 | 270 | 190 | 100 | 275 |
| | | 128 | 299 | 725 | | | | | 185 | 71 | 284 | | | |
| | | 142 | 455 | 754 | | | | | 185 | 128 | 270 | | | |
| 1820+00 | D | 43 | 356 | 768 | 90 | 398 | 763 | B | 71 | 114 | 384 | 76 | 161 | 427 |
| | | 100 | 398 | 768 | | | | | 71 | 156 | 455 | | | |
| | | 128 | 441 | 754 | | | | | 85 | 213 | 441 | | | |
| 1830+00 | D | 142 | 797 | 1000 | 194 | 778 | 1000 | B | 28 | 114 | 114 | 24 | 119 | 161 |
| | | 156 | 782 | 1000 | | | | | 28 | 114 | 156 | | | |
| | | 284 | 754 | 1000 | | | | | 14 | 128 | 213 | | | |
| 1840+00 | D | 171 | 256 | 583 | 180 | 299 | 683 | B | 0 | 14 | 228 | 0 | 28 | 166 |
| | | 185 | 299 | 697 | | | | | 0 | 14 | 142 | | | |
| | | 185 | 341 | 768 | | | | | 0 | 57 | 128 | | | |
| 1850+00 | D | 85 | 413 | 569 | 104 | 427 | 583 | B | 14 | 57 | 356 | 14 | 66 | 237 |
| | | 85 | 398 | 512 | | | | | 14 | 100 | 313 | | | |
| | | 142 | 469 | 669 | | | | | 14 | 43 | 43 | | | |
| 1860+00 | D | 327 | 754 | 1000 | 313 | 702 | 826 | B | 14 | 43 | 142 | 14 | 52 | 128 |
| | | 284 | 669 | 697 | | | | | 14 | 71 | 128 | | | |
| | | 327 | 683 | 782 | | | | | 14 | 43 | 114 | | | |
| 1870+00 | D | 185 | 541 | 711 | 209 | 588 | 730 | B | 14 | 71 | 228 | 19 | 133 | 256 |
| | | 213 | 597 | 697 | | | | | 14 | 156 | 256 | | | |
| | | 228 | 626 | 782 | | | | | 28 | 171 | 284 | | | |
| 1880+00 | D | 28 | 398 | 398 | 19 | 398 | 450 | B | 128 | 171 | 85 | 152 | 161 | 85 |
| | | 14 | 370 | 484 | | | | | 156 | 171 | 85 | | | |
| | | 14 | 427 | 469 | | | | | 171 | 142 | 85 | | | |
| 1890+0 | D | 100 | 398 | 811 | 123 | 427 | 811 | B | 71 | 100 | 213 | 81 | 104 | 256 |
| | | 142 | 498 | 811 | | | | | 85 | 114 | 299 | | | |
| | | 128 | 384 | 811 | | | | | 85 | 100 | 256 | | | |
| 1900+00 | D | 199 | 498 | 882 | 199 | 498 | 839 | B | 100 | 526 | 825 | 119 | 522 | 839 |
| | | 228 | 455 | 811 | | | | | 142 | 526 | 868 | | | |
| | | 171 | 541 | 825 | | | | | 114 | 512 | 825 | | | |
| 1910+00 | D | 171 | 711 | 853 | 190 | 697 | 835 | B | 256 | 782 | 1000 | 337 | 773 | 989 |
| | | 256 | 697 | 853 | | | | | 356 | 725 | 967 | | | |
| | | 142 | 683 | 797 | | | | | 398 | 811 | 1000 | | | |
| 1920+00 | D | 171 | 299 | 427 | 199 | 308 | 484 | B | 171 | 413 | 569 | 161 | 460 | 659 |
| | | 213 | 384 | 555 | | | | | 171 | 427 | 683 | | | |
| | | 213 | 242 | 469 | | | | | 142 | 541 | 725 | | | |
| Average | D | - | - | - | 154 | 433 | 666 | B | - | - | - | 98 | 245 | 357 |

# Buxton Post 1st Qtr Compaction Measurements (November 2022) - Nourished Beach

D= Seaward toe of dune
B=middle beach
Measurements taken 15 November 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 1770+50 | D | 185 | 341 | 256 | 156 | 332 | 275 | B | 128 | 626 | 768 | 185 | 673 | 816 |
| | | 156 | 299 | 270 | | | | | 171 | 697 | 853 | | | |
| | | 128 | 356 | 299 | | | | | 256 | 697 | 825 | | | |
| 1780+00 | D | 142 | 199 | 356 | 142 | 223 | 360 | B | 57 | 100 | 327 | 76 | 190 | 327 |
| | | 142 | 199 | 370 | | | | | 43 | 270 | 313 | | | |
| | | 142 | 270 | 356 | | | | | 128 | 199 | 341 | | | |
| 1790+00 | D | 85 | 71 | 213 | 71 | 147 | 213 | B | 71 | 356 | 583 | 109 | 379 | 621 |
| | | 71 | 171 | 199 | | | | | 142 | 398 | 626 | | | |
| | | 57 | 199 | 228 | | | | | 114 | 384 | 654 | | | |
| 1800+00 | D | 57 | 327 | 313 | 100 | 289 | 275 | B | 28 | 71 | 242 | 19 | 76 | 251 |
| | | 100 | 213 | 228 | | | | | 28 | 85 | 256 | | | |
| | | 142 | 327 | 284 | | | | | 0 | 71 | 256 | | | |
| 1810+00 | D | 114 | 284 | 156 | 95 | 209 | 147 | B | 43 | 14 | 313 | 47 | 14 | 284 |
| | | 71 | 43 | 128 | | | | | 43 | 14 | 270 | | | |
| | | 100 | 299 | 156 | | | | | 57 | 14 | 270 | | | |
| 1820+00 | D | 28 | 114 | 270 | 43 | 128 | 299 | B | 114 | 370 | 413 | 109 | 356 | 427 |
| | | 57 | 142 | 284 | | | | | 114 | 341 | 441 | | | |
| | | 43 | 128 | 341 | | | | | 100 | 356 | 427 | | | |
| 1830+00 | D | 114 | 114 | 228 | 104 | 76 | 185 | B | 142 | 427 | 725 | 156 | 441 | 716 |
| | | 114 | 100 | 213 | | | | | 156 | 455 | 754 | | | |
| | | 85 | 14 | 114 | | | | | 171 | 441 | 669 | | | |
| 1840+00 | D | 85 | 71 | 313 | 90 | 109 | 413 | B | 71 | 85 | 284 | 71 | 85 | 318 |
| | | 85 | 114 | 469 | | | | | 71 | 100 | 341 | | | |
| | | 100 | 142 | 455 | | | | | 71 | 71 | 327 | | | |
| 1850+00 | D | 71 | 228 | 128 | 114 | 308 | 166 | B | 142 | 0 | 142 | 133 | 38 | 171 |
| | | 128 | 327 | 171 | | | | | 142 | 71 | 199 | | | |
| | | 142 | 370 | 199 | | | | | 114 | 43 | 171 | | | |
| 1860+00 | D | 114 | 597 | 825 | 133 | 593 | 825 | B | 114 | 299 | 541 | 133 | 289 | 602 |
| | | 156 | 555 | 797 | | | | | 156 | 284 | 612 | | | |
| | | 128 | 626 | 853 | | | | | 128 | 284 | 654 | | | |
| 1870+00 | D | 71 | 213 | 626 | 90 | 261 | 612 | B | 142 | 569 | 740 | 166 | 621 | 801 |
| | | 85 | 270 | 597 | | | | | 171 | 597 | 797 | | | |
| | | 114 | 299 | 612 | | | | | 185 | 697 | 868 | | | |
| 1880+00 | D | 57 | 213 | 413 | 62 | 247 | 394 | B | 28 | 384 | 526 | 62 | 370 | 517 |
| | | 71 | 242 | 384 | | | | | 57 | 356 | 512 | | | |
| | | 57 | 284 | 384 | | | | | 100 | 370 | 512 | | | |
| 1890+0 | D | 71 | 284 | 142 | 81 | 313 | 275 | B | 28 | 256 | 555 | 71 | 275 | 531 |
| | | 71 | 256 | 185 | | | | | 85 | 270 | 654 | | | |
| | | 100 | 398 | 498 | | | | | 100 | 299 | 384 | | | |
| 1900+00 | D | 71 | 341 | 498 | 85 | 327 | 526 | B | 71 | 711 | 825 | 90 | 716 | 942 |
| | | 100 | 327 | 541 | | | | | 100 | 754 | 1000 | | | |
| | | 85 | 313 | 541 | | | | | 100 | 683 | 1000 | | | |
| 1910+00 | D | 100 | 228 | 256 | 114 | 270 | 256 | B | 71 | 583 | 839 | 76 | 626 | 863 |
| | | 114 | 270 | 256 | | | | | 57 | 697 | 896 | | | |
| | | 128 | 313 | 256 | | | | | 100 | 597 | 853 | | | |
| 1920+00 | D | 57 | 256 | 526 | 71 | 322 | 512 | B | 142 | 654 | 797 | 175 | 759 | 825 |
| | | 85 | 356 | 512 | | | | | 185 | 825 | 825 | | | |
| | | 71 | 356 | 498 | | | | | 199 | 797 | 853 | | | |
| Average | D | - | - | - | 97 | 260 | 358 | B | - | - | - | 105 | 369 | 563 |

# Buxton Post 2nd Qtr Compaction Measurements (February 2023) - Nourished Beach

D= Seaward toe of dune
B=middle beach
Measurements taken 23 February 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 1770+50 | D | 100 | 441 | 413 | 114 | 431 | 403 | B | 85 | 114 | 284 | 76 | 123 | 322 |
| | | 114 | 441 | 413 | | | | | 71 | 128 | 341 | | | |
| | | 128 | 413 | 384 | | | | | 71 | 128 | 341 | | | |
| 1780+00 | D | 114 | 171 | 398 | 104 | 171 | 403 | B | 57 | 114 | 171 | 71 | 114 | 247 |
| | | 85 | 128 | 398 | | | | | 85 | 114 | 270 | | | |
| | | 114 | 213 | 413 | | | | | 71 | 114 | 299 | | | |
| 1790+00 | D | 85 | 441 | 725 | 104 | 408 | 744 | B | 100 | 341 | 654 | 138 | 394 | 659 |
| | | 114 | 356 | 782 | | | | | 156 | 427 | 683 | | | |
| | | 114 | 427 | 725 | | | | | 156 | 413 | 640 | | | |
| 1800+00 | D | 100 | 213 | 313 | 133 | 218 | 332 | B | 57 | 370 | 583 | 85 | 346 | 578 |
| | | 142 | 213 | 384 | | | | | 85 | 327 | 569 | | | |
| | | 156 | 228 | 299 | | | | | 114 | 341 | 583 | | | |
| 1810+00 | D | 199 | 441 | 213 | 218 | 488 | 303 | B | 57 | 171 | 498 | 71 | 194 | 493 |
| | | 213 | 526 | 284 | | | | | 71 | 213 | 498 | | | |
| | | 242 | 498 | 413 | | | | | 85 | 199 | 484 | | | |
| 1820+00 | D | 270 | 299 | 256 | 247 | 204 | 228 | B | 14 | 85 | 398 | 14 | 76 | 408 |
| | | 242 | 142 | 228 | | | | | 14 | 71 | 413 | | | |
| | | 228 | 171 | 199 | | | | | 14 | 71 | 413 | | | |
| 1830+00 | D | 43 | 185 | 242 | 57 | 247 | 541 | B | 28 | 313 | 356 | 33 | 289 | 408 |
| | | 71 | 299 | 740 | | | | | 43 | 299 | 441 | | | |
| | | 57 | 256 | 640 | | | | | 28 | 256 | 427 | | | |
| 1840+00 | D | 142 | 256 | 299 | 199 | 171 | 341 | B | 14 | 356 | 327 | 9 | 308 | 379 |
| | | 199 | 128 | 356 | | | | | 0 | 256 | 398 | | | |
| | | 256 | 128 | 370 | | | | | 14 | 313 | 413 | | | |
| 1850+00 | D | 114 | 341 | 213 | 147 | 251 | 209 | B | 71 | 242 | 441 | 85 | 294 | 431 |
| | | 156 | 228 | 256 | | | | | 114 | 284 | 398 | | | |
| | | 171 | 185 | 156 | | | | | 71 | 356 | 455 | | | |
| 1860+00 | D | 156 | 583 | 839 | 204 | 650 | 936 | B | 14 | 28 | 57 | 9 | 19 | 57 |
| | | 256 | 683 | 967 | | | | | 0 | 14 | 43 | | | |
| | | 199 | 683 | 1000 | | | | | 14 | 14 | 71 | | | |
| 1870+00 | D | 185 | 128 | 327 | 166 | 142 | 394 | B | 28 | 242 | 213 | 28 | 242 | 204 |
| | | 171 | 156 | 427 | | | | | 28 | 242 | 185 | | | |
| | | 142 | 142 | 427 | | | | | 28 | 242 | 213 | | | |
| 1880+00 | D | 128 | 341 | 469 | 171 | 322 | 517 | B | 256 | 797 | 1000 | 303 | 744 | 946 |
| | | 185 | 341 | 555 | | | | | 284 | 782 | 1000 | | | |
| | | 199 | 284 | 526 | | | | | 370 | 654 | 839 | | | |
| 1890+0 | D | 43 | 256 | 427 | 66 | 299 | 455 | B | 128 | 541 | 782 | 166 | 512 | 816 |
| | | 57 | 284 | 441 | | | | | 156 | 498 | 825 | | | |
| | | 100 | 356 | 498 | | | | | 213 | 498 | 839 | | | |
| 1900+00 | D | 185 | 469 | 541 | 209 | 455 | 493 | B | 28 | 142 | 939 | 33 | 199 | 853 |
| | | 213 | 455 | 370 | | | | | 43 | 213 | 754 | | | |
| | | 228 | 441 | 569 | | | | | 28 | 242 | 868 | | | |
| 1910+00 | D | 57 | 85 | 242 | 100 | 218 | 318 | B | 57 | 711 | 1000 | 119 | 711 | 994 |
| | | 100 | 284 | 356 | | | | | 71 | 711 | 982 | | | |
| | | 142 | 284 | 356 | | | | | 228 | 711 | 1000 | | | |
| 1920+00 | D | 100 | 626 | 498 | 114 | 669 | 602 | B | 199 | 526 | 754 | 218 | 536 | 778 |
| | | 100 | 669 | 597 | | | | | 242 | 569 | 782 | | | |
| | | 142 | 711 | 711 | | | | | 213 | 512 | 797 | | | |
| Average | D | - | - | - | 147 | 334 | 451 | B | - | - | - | 91 | 319 | 536 |

# Buxton 3rd Qtr Compaction Measurements (May 2023) - Nourished Beach

D= Seaward toe of dune
B=middle beach
Measurements taken 10 May 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 1770+50 | D | 114 | 427 | 498 | 166 | 450 | 550 | B | 28 | 43 | 71 | 33 | 52 | 71 |
| | | 199 | 484 | 597 | | | | | 28 | 28 | 57 | | | |
| | | 185 | 441 | 555 | | | | | 43 | 85 | 85 | | | |
| 1780+00 | D | 199 | 413 | 569 | 247 | 427 | 560 | B | 228 | 484 | 669 | 232 | 498 | 669 |
| | | 256 | 398 | 555 | | | | | 242 | 541 | 626 | | | |
| | | 284 | 469 | 555 | | | | | 228 | 469 | 711 | | | |
| 1790+00 | D | 228 | 356 | 427 | 270 | 351 | 441 | B | 28 | 370 | 640 | 28 | 337 | 659 |
| | | 284 | 341 | 427 | | | | | 28 | 313 | 683 | | | |
| | | 299 | 356 | 469 | | | | | 28 | 327 | 654 | | | |
| 1800+00 | D | 156 | 284 | 427 | 175 | 441 | 455 | B | 85 | 541 | 754 | 213 | 564 | 754 |
| | | 156 | 512 | 455 | | | | | 270 | 526 | 768 | | | |
| | | 213 | 526 | 484 | | | | | 284 | 626 | 740 | | | |
| 1810+00 | D | - | - | - | - | - | - | B | - | - | - | - | - | - |
| | | - | - | - | | | | | - | - | - | | | |
| | | - | - | - | | | | | - | - | - | | | |
| 1820+00 | D | - | - | - | - | - | - | B | - | - | - | - | - | - |
| | | - | - | - | | | | | - | - | - | | | |
| | | - | - | - | | | | | - | - | - | | | |
| 1830+00 | D | - | - | - | - | - | - | B | - | - | - | - | - | - |
| | | - | - | - | | | | | - | - | - | | | |
| | | - | - | - | | | | | - | - | - | | | |
| 1840+00 | D | 185 | 413 | 427 | 213 | 431 | 503 | B | 43 | 43 | 142 | 43 | 43 | 128 |
| | | 256 | 484 | 526 | | | | | 43 | 43 | 100 | | | |
| | | 199 | 398 | 555 | | | | | 43 | 43 | 142 | | | |
| 1850+00 | D | 242 | 484 | 526 | 261 | 512 | 569 | B | 28 | 28 | 28 | 19 | 38 | 28 |
| | | 256 | 512 | 597 | | | | | 14 | 43 | 28 | | | |
| | | 284 | 541 | 583 | | | | | 14 | 43 | 28 | | | |
| 1860+00 | D | 284 | 299 | 725 | 266 | 417 | 811 | B | 57 | 57 | 71 | 71 | 52 | 100 |
| | | 256 | 484 | 868 | | | | | 71 | 43 | 114 | | | |
| | | 256 | 469 | 839 | | | | | 85 | 57 | 114 | | | |
| 1870+00 | D | 156 | 327 | 669 | 142 | 379 | 721 | B | 57 | 156 | 128 | 52 | 161 | 142 |
| | | 199 | 384 | 740 | | | | | 43 | 171 | 142 | | | |
| | | 71 | 427 | 754 | | | | | 57 | 156 | 156 | | | |
| 1880+00 | D | 142 | 413 | 455 | 161 | 427 | 465 | B | 43 | 199 | 356 | 47 | 180 | 341 |
| | | 185 | 455 | 498 | | | | | 43 | 199 | 356 | | | |
| | | 156 | 413 | 441 | | | | | 57 | 142 | 313 | | | |
| 1890+0 | D | 199 | 370 | 811 | 194 | 455 | 782 | B | 114 | 242 | 370 | 114 | 280 | 360 |
| | | 156 | 526 | 782 | | | | | 100 | 270 | 370 | | | |
| | | 228 | 469 | 754 | | | | | 128 | 327 | 341 | | | |
| 1900+00 | D | 128 | 370 | 455 | 161 | 389 | 503 | B | 100 | 341 | 284 | 128 | 356 | 332 |
| | | 156 | 370 | 427 | | | | | 128 | 299 | 370 | | | |
| | | 199 | 427 | 626 | | | | | 156 | 427 | 341 | | | |
| 1910+00 | D | 57 | 626 | 1000 | 66 | 645 | 1000 | B | 228 | 171 | 541 | 199 | 190 | 560 |
| | | 43 | 697 | 1000 | | | | | 213 | 199 | 569 | | | |
| | | 100 | 612 | 1000 | | | | | 156 | 199 | 569 | | | |
| 1920+00 | D | 156 | 228 | 398 | 185 | 294 | 498 | B | 142 | 299 | 669 | 171 | 360 | 654 |
| | | 142 | 341 | 555 | | | | | 171 | 370 | 683 | | | |
| | | 256 | 313 | 541 | | | | | 199 | 413 | 612 | | | |
| Average | D | - | - | - | 193 | 432 | 604 | B | - | - | - | 104 | 239 | 369 |

# Buxton 4th Qtr Compaction Measurements (August 2023) - Nourished Beach

D= Seaward toe of dune
B=middle beach
Measurement taken 22 August 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 1770+50 | D | 171 | 555 | 711 | 156 | 517 | 730 | B | 43 | 284 | 555 | 43 | 303 | 583 |
| | | 142 | 469 | 768 | | | | | 43 | 313 | 583 | | | |
| | | 156 | 526 | 711 | | | | | 43 | 313 | 612 | | | |
| 1780+00 | D | 171 | 498 | 455 | 142 | 503 | 460 | B | 128 | 114 | 114 | 161 | 90 | 119 |
| | | 85 | 469 | 498 | | | | | 156 | 71 | 114 | | | |
| | | 171 | 541 | 427 | | | | | 199 | 85 | 128 | | | |
| 1790+00 | D | 142 | 398 | 597 | 171 | 441 | 612 | B | 57 | 156 | 327 | 66 | 213 | 303 |
| | | 171 | 427 | 597 | | | | | 71 | 256 | 284 | | | |
| | | 199 | 498 | 640 | | | | | 71 | 228 | 299 | | | |
| 1800+00 | D | 100 | 427 | 797 | 128 | 370 | 801 | B | 43 | 356 | 284 | 95 | 360 | 289 |
| | | 114 | 242 | 839 | | | | | 71 | 327 | 270 | | | |
| | | 171 | 441 | 768 | | | | | 171 | 398 | 313 | | | |
| 1810+00 | D | 171 | 583 | 1000 | 232 | 678 | 1000 | B | 28 | 313 | 199 | 33 | 318 | 223 |
| | | 242 | 797 | 1000 | | | | | 28 | 327 | 242 | | | |
| | | 284 | 654 | 1000 | | | | | 43 | 313 | 228 | | | |
| 1820+00 | D | 185 | 284 | 484 | 147 | 299 | 531 | B | 71 | 284 | 213 | 119 | 346 | 270 |
| | | 171 | 327 | 541 | | | | | 100 | 370 | 171 | | | |
| | | 85 | 284 | 569 | | | | | 185 | 384 | 427 | | | |
| 1830+00 | D | 100 | 398 | 697 | 133 | 422 | 688 | B | 85 | 384 | 683 | 76 | 394 | 654 |
| | | 142 | 441 | 711 | | | | | 71 | 356 | 669 | | | |
| | | 156 | 427 | 654 | | | | | 71 | 441 | 612 | | | |
| 1840+00 | D | 114 | 384 | 597 | 133 | 384 | 692 | B | 114 | 541 | 583 | 123 | 526 | 612 |
| | | 142 | 413 | 725 | | | | | 100 | 455 | 626 | | | |
| | | 142 | 356 | 754 | | | | | 156 | 583 | 626 | | | |
| 1850+00 | D | 85 | 469 | 754 | 142 | 450 | 721 | B | 128 | 555 | 725 | 128 | 588 | 702 |
| | | 171 | 427 | 725 | | | | | 114 | 583 | 697 | | | |
| | | 171 | 455 | 683 | | | | | 142 | 626 | 683 | | | |
| 1860+00 | D | 100 | 569 | 1000 | 123 | 550 | 1000 | B | 171 | 398 | 669 | 156 | 422 | 683 |
| | | 142 | 541 | 1000 | | | | | 156 | 441 | 725 | | | |
| | | 128 | 541 | 1000 | | | | | 142 | 427 | 654 | | | |
| 1870+00 | D | 85 | 469 | 697 | 85 | 455 | 735 | B | 114 | 455 | 626 | 123 | 465 | 678 |
| | | 85 | 455 | 740 | | | | | 114 | 427 | 711 | | | |
| | | 85 | 441 | 768 | | | | | 142 | 512 | 697 | | | |
| 1880+00 | D | 114 | 498 | 569 | 133 | 455 | 574 | B | 128 | 441 | 697 | 138 | 479 | 631 |
| | | 128 | 441 | 569 | | | | | 142 | 427 | 555 | | | |
| | | 156 | 427 | 583 | | | | | 142 | 569 | 640 | | | |
| 1890+0 | D | 71 | 384 | 754 | 90 | 351 | 754 | B | 114 | 356 | 555 | 152 | 427 | 583 |
| | | 128 | 313 | 725 | | | | | 156 | 455 | 612 | | | |
| | | 71 | 356 | 782 | | | | | 185 | 469 | 583 | | | |
| 1900+00 | D | 85 | 398 | 526 | 71 | 408 | 522 | B | 100 | 199 | 640 | 119 | 213 | 650 |
| | | 71 | 398 | 498 | | | | | 114 | 185 | 669 | | | |
| | | 57 | 427 | 541 | | | | | 142 | 256 | 640 | | | |
| 1910+00 | D | 43 | 569 | 1000 | 57 | 645 | 1000 | B | 71 | 427 | 669 | 85 | 422 | 673 |
| | | 28 | 669 | 1000 | | | | | 100 | 441 | 640 | | | |
| | | 100 | 697 | 1000 | | | | | 85 | 398 | 711 | | | |
| 1920+00 | D | 100 | 427 | 697 | 128 | 436 | 784 | B | 156 | 484 | 640 | 123 | 441 | 569 |
| | | 156 | 597 | 1000 | | | | | 85 | 413 | 569 | | | |
| | | 128 | 284 | 654 | | | | | 128 | 427 | 498 | | | |
| Average | D | - | - | - | 130 | 460 | 725 | B | - | - | - | 109 | 375 | 514 |

# Salvo Control Measurements (May 2022) - Control Area

D= Seaward toe of dune
B=middle beach
Measurements taken 19 May 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 980+00 | D | 71 | 398 | 441 | 128 | 394 | 465 | B | 142 | 341 | 725 | 133 | 351 | 730 |
| | | 156 | 370 | 455 | | | | | 114 | 327 | 711 | | | |
| | | 156 | 413 | 498 | | | | | 142 | 384 | 754 | | | |
| 990+00 | D | 71 | 512 | 740 | 104 | 583 | 801 | B | 171 | 626 | 797 | 156 | 536 | 797 |
| | | 114 | 612 | 811 | | | | | 114 | 555 | 811 | | | |
| | | 128 | 626 | 853 | | | | | 185 | 427 | 782 | | | |
| 1000+00 | D | 142 | 313 | 455 | 161 | 289 | 441 | B | 128 | 626 | 1000 | 185 | 588 | 893 |
| | | 128 | 284 | 541 | | | | | 213 | 583 | 839 | | | |
| | | 213 | 270 | 327 | | | | | 213 | 555 | 839 | | | |
| 1010+00 | D | 142 | 284 | 711 | 109 | 284 | 735 | B | 142 | 469 | 882 | 161 | 493 | 902 |
| | | 100 | 256 | 797 | | | | | 156 | 498 | 825 | | | |
| | | 85 | 313 | 697 | | | | | 185 | 512 | 1000 | | | |
| 1020+00 | D | 284 | 370 | 142 | 247 | 341 | 152 | B | 43 | 583 | 868 | 95 | 583 | 844 |
| | | 213 | 299 | 128 | | | | | 128 | 626 | 797 | | | |
| | | 242 | 356 | 185 | | | | | 114 | 541 | 868 | | | |
| 1030+00 | D | 256 | 171 | 427 | 199 | 128 | 346 | B | 57 | 526 | 910 | 109 | 560 | 931 |
| | | 270 | 0 | 28 | | | | | 85 | 526 | 882 | | | |
| | | 71 | 213 | 583 | | | | | 185 | 626 | 1000 | | | |
| 1040+00 | D | 71 | 413 | 811 | 175 | 431 | 716 | B | 284 | 683 | 782 | 346 | 692 | 806 |
| | | 199 | 455 | 640 | | | | | 356 | 711 | 782 | | | |
| | | 256 | 427 | 697 | | | | | 398 | 683 | 853 | | | |
| 1050+00 | D | 199 | 199 | 398 | 171 | 308 | 327 | B | 142 | 683 | 711 | 247 | 692 | 754 |
| | | 171 | 427 | 327 | | | | | 199 | 697 | 725 | | | |
| | | 142 | 299 | 256 | | | | | 398 | 697 | 825 | | | |
| 1060+00 | D | 199 | 384 | 384 | 194 | 379 | 384 | B | 156 | 541 | 811 | 175 | 555 | 877 |
| | | 171 | 384 | 455 | | | | | 185 | 555 | 896 | | | |
| | | 213 | 370 | 313 | | | | | 185 | 569 | 925 | | | |
| 1070+00 | D | 213 | 555 | 925 | 194 | 635 | 975 | B | 213 | 725 | 896 | 280 | 735 | 839 |
| | | 142 | 626 | 1000 | | | | | 256 | 725 | 811 | | | |
| | | 228 | 725 | 1000 | | | | | 370 | 754 | 811 | | | |
| Average | D | - | - | - | 162 | 345 | 498 | B | - | - | - | 179 | 562 | 832 |

# Salvo Control Measurements (August 2022) - Control Area

D= Seaward toe of dune
B=beach face
Measurement taken 2 August 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 980+00 | D | 71 | 484 | 725 | 133 | 469 | 669 | B | 142 | 512 | 427 | 161 | 583 | 389 |
| | | 156 | 299 | 640 | | | | | 85 | 626 | 384 | | | |
| | | 171 | 626 | 640 | | | | | 256 | 612 | 356 | | | |
| 990+00 | D | 71 | 341 | 228 | 104 | 394 | 360 | B | 114 | 341 | 370 | 114 | 341 | 346 |
| | | 100 | 384 | 156 | | | | | 128 | 356 | 270 | | | |
| | | 142 | 455 | 697 | | | | | 100 | 327 | 398 | | | |
| 1000+00 | D | 284 | 313 | 583 | 280 | 223 | 659 | B | 71 | 284 | 541 | 76 | 299 | 541 |
| | | 284 | 199 | 654 | | | | | 85 | 270 | 541 | | | |
| | | 270 | 156 | 740 | | | | | 71 | 341 | 541 | | | |
| 1010+00 | D | 28 | 356 | 555 | 38 | 375 | 474 | B | 57 | 711 | 896 | 52 | 688 | 887 |
| | | 57 | 384 | 341 | | | | | 85 | 654 | 853 | | | |
| | | 28 | 384 | 526 | | | | | 14 | 697 | 910 | | | |
| 1020+00 | D | 171 | 697 | 882 | 237 | 683 | 835 | B | 28 | 114 | 569 | 43 | 128 | 597 |
| | | 356 | 654 | 797 | | | | | 43 | 128 | 683 | | | |
| | | 185 | 697 | 825 | | | | | 57 | 142 | 541 | | | |
| 1030+00 | D | 213 | 782 | 1000 | 237 | 778 | 1000 | B | 128 | 327 | 811 | 133 | 422 | 787 |
| | | 242 | 825 | 1000 | | | | | 156 | 356 | 782 | | | |
| | | 256 | 725 | 1000 | | | | | 114 | 583 | 768 | | | |
| 1040+00 | D | 156 | 683 | 740 | 204 | 654 | 778 | B | 85 | 512 | 768 | 128 | 484 | 716 |
| | | 199 | 654 | 797 | | | | | 114 | 441 | 697 | | | |
| | | 256 | 626 | 797 | | | | | 185 | 498 | 683 | | | |
| 1050+00 | D | 228 | 711 | 754 | 299 | 735 | 811 | B | 71 | 242 | 441 | 57 | 270 | 469 |
| | | 284 | 725 | 853 | | | | | 57 | 256 | 469 | | | |
| | | 384 | 768 | 825 | | | | | 43 | 313 | 498 | | | |
| 1060+00 | D | 284 | 711 | 1000 | 365 | 740 | 856 | B | 85 | 626 | 583 | 109 | 616 | 626 |
| | | 370 | 782 | 1000 | | | | | 142 | 541 | 583 | | | |
| | | 441 | 725 | 569 | | | | | 100 | 683 | 711 | | | |
| 1070+00 | D | 142 | 612 | 711 | 147 | 597 | 740 | B | 85 | 185 | 427 | 81 | 270 | 450 |
| | | 185 | 597 | 740 | | | | | 57 | 270 | 526 | | | |
| | | 114 | 583 | 768 | | | | | 100 | 356 | 398 | | | |
| Average | D | - | - | - | 191 | 539 | 698 | B | - | - | - | 95 | 402 | 592 |

# Salvo Post 1st Qtr Control Measurements (November 2022) - Control Area

D= Seaward toe of dune
B=beach face
Measurement taken 15 November 2022

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Averages | | | | | | | Averages | | |
| 980+00 | D | 71 | 242 | 341 | 81 | 218 | 365 | B | 313 | 697 | 868 | 332 | 702 | 858 |
| | | 100 | 228 | 384 | | | | | 398 | 725 | 811 | | | |
| | | 71 | 185 | 370 | | | | | 284 | 683 | 896 | | | |
| 990+00 | D | 85 | 356 | 284 | 109 | 360 | 441 | B | 284 | 626 | 782 | 303 | 631 | 768 |
| | | 100 | 384 | 541 | | | | | 327 | 683 | 782 | | | |
| | | 142 | 341 | 498 | | | | | 299 | 583 | 740 | | | |
| 1000+00 | D | 85 | 413 | 526 | 133 | 455 | 536 | B | 100 | 640 | 896 | 119 | 616 | 849 |
| | | 142 | 469 | 541 | | | | | 142 | 569 | 839 | | | |
| | | 171 | 484 | 541 | | | | | 114 | 640 | 811 | | | |
| 1010+00 | D | 171 | 441 | 683 | 228 | 484 | 730 | B | 299 | 484 | 341 | 284 | 526 | 360 |
| | | 213 | 583 | 711 | | | | | 270 | 512 | 313 | | | |
| | | 299 | 427 | 797 | | | | | 284 | 583 | 427 | | | |
| 1020+00 | D | 114 | 626 | 725 | 147 | 669 | 792 | B | 156 | 398 | 569 | 138 | 394 | 560 |
| | | 142 | 711 | 768 | | | | | 142 | 370 | 526 | | | |
| | | 185 | 669 | 882 | | | | | 114 | 413 | 583 | | | |
| 1030+00 | D | 128 | 441 | 896 | 171 | 531 | 940 | B | 114 | 228 | 583 | 128 | 313 | 607 |
| | | 171 | 455 | 925 | | | | | 128 | 370 | 654 | | | |
| | | 213 | 697 | 1000 | | | | | 142 | 341 | 583 | | | |
| 1040+00 | D | 85 | 356 | 612 | 114 | 384 | 621 | B | 85 | 142 | 469 | 104 | 228 | 531 |
| | | 128 | 327 | 626 | | | | | 114 | 228 | 583 | | | |
| | | 128 | 469 | 626 | | | | | 114 | 313 | 541 | | | |
| 1050+00 | D | 171 | 427 | 341 | 166 | 493 | 322 | B | 228 | 455 | 384 | 247 | 455 | 436 |
| | | 199 | 498 | 284 | | | | | 256 | 484 | 526 | | | |
| | | 128 | 555 | 341 | | | | | 256 | 427 | 398 | | | |
| 1060+00 | D | 100 | 398 | 640 | 142 | 498 | 754 | B | 142 | 327 | 683 | 119 | 289 | 650 |
| | | 156 | 512 | 768 | | | | | 114 | 327 | 754 | | | |
| | | 171 | 583 | 853 | | | | | 100 | 213 | 512 | | | |
| 1070+00 | D | 171 | 284 | 256 | 190 | 346 | 360 | B | 57 | 427 | 597 | 85 | 460 | 706 |
| | | 199 | 384 | 398 | | | | | 85 | 455 | 754 | | | |
| | | 199 | 370 | 427 | | | | | 114 | 498 | 768 | | | |
| Average | D | - | - | - | 143 | 449 | 593 | B | - | - | - | 207 | 483 | 621 |

# Salvo Post 2nd Qtr Control Measurements (February 2023) - Control Area

D= Seaward toe of dune
B=beach face
Measurement taken 23 February 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Average | | | | | | | Average | | |
| 980+00 | D | 156 | 498 | 711 | 175 | 488 | 711 | B | 156 | 612 | 797 | 237 | 669 | 778 |
| | | 199 | 498 | 711 | | | | | 313 | 683 | 797 | | | |
| | | 171 | 469 | 711 | | | | | 242 | 711 | 740 | | | |
| 990+00 | D | 14 | 156 | 583 | 38 | 175 | 578 | B | 57 | 356 | 654 | 81 | 389 | 692 |
| | | 57 | 171 | 612 | | | | | 57 | 398 | 683 | | | |
| | | 43 | 199 | 541 | | | | | 128 | 413 | 740 | | | |
| 1000+00 | D | 100 | 356 | 498 | 100 | 365 | 507 | B | 156 | 541 | 626 | 161 | 522 | 621 |
| | | 114 | 398 | 541 | | | | | 156 | 512 | 626 | | | |
| | | 85 | 341 | 484 | | | | | 171 | 512 | 612 | | | |
| 1010+00 | D | 28 | 57 | 284 | 28 | 71 | 564 | B | 242 | 825 | 1000 | 237 | 806 | 1000 |
| | | 28 | 71 | 740 | | | | | 242 | 825 | 1000 | | | |
| | | 28 | 85 | 669 | | | | | 228 | 768 | 1000 | | | |
| 1020+00 | D | 156 | 597 | 868 | 194 | 607 | 839 | B | 142 | 398 | 768 | 147 | 446 | 825 |
| | | 171 | 669 | 925 | | | | | 142 | 455 | 839 | | | |
| | | 256 | 555 | 725 | | | | | 156 | 484 | 868 | | | |
| 1030+00 | D | 114 | 185 | 413 | 138 | 228 | 455 | B | 57 | 569 | 768 | 100 | 541 | 749 |
| | | 156 | 228 | 441 | | | | | 114 | 526 | 754 | | | |
| | | 142 | 270 | 512 | | | | | 128 | 526 | 725 | | | |
| 1040+00 | D | 413 | 768 | 1000 | 370 | 782 | 1000 | B | 284 | 782 | 1000 | 313 | 759 | 1000 |
| | | 327 | 811 | 1000 | | | | | 313 | 754 | 1000 | | | |
| | | 370 | 768 | 1000 | | | | | 341 | 740 | 1000 | | | |
| 1050+00 | D | 28 | 413 | 469 | 24 | 417 | 503 | B | 85 | 740 | 910 | 114 | 706 | 882 |
| | | 28 | 398 | 512 | | | | | 114 | 669 | 825 | | | |
| | | 14 | 441 | 526 | | | | | 142 | 711 | 910 | | | |
| 1060+00 | D | 71 | 327 | 740 | 71 | 322 | 725 | B | 71 | 597 | 725 | 128 | 569 | 725 |
| | | 85 | 213 | 725 | | | | | 142 | 526 | 740 | | | |
| | | 57 | 427 | 711 | | | | | 171 | 583 | 711 | | | |
| 1070+00 | D | 142 | 526 | 583 | 156 | 545 | 669 | B | 71 | 512 | 583 | 109 | 498 | 578 |
| | | 171 | 555 | 725 | | | | | 156 | 469 | 583 | | | |
| | | 156 | 555 | 697 | | | | | 100 | 512 | 569 | | | |
| Average | D | - | - | - | 133 | 392 | 645 | B | - | - | - | 174 | 605 | 818 |

# Salvo 3rd Qtr Control Measurements (May 2023) - Control Area

D= Seaward toe of dune
B=beach face
Measurement taken 10 May 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Average | | | | | | | Average | | |
| 12 | D | 128 | 626 | 156 | 161 | 650 | 147 | B | 14 | 100 | 156 | 19 | 85 | 147 |
| | | 171 | 669 | 142 | | | | | 28 | 71 | 142 | | | |
| | | 185 | 654 | 142 | | | | | 14 | 85 | 142 | | | |
| 12 | D | 142 | 597 | 142 | 142 | 631 | 119 | B | 43 | 199 | 142 | 71 | 175 | 119 |
| | | 171 | 683 | 114 | | | | | 71 | 156 | 114 | | | |
| | | 114 | 612 | 100 | | | | | 100 | 171 | 100 | | | |
| 10 | D | 100 | 555 | 327 | 133 | 517 | 346 | B | 142 | 284 | 327 | 123 | 294 | 346 |
| | | 142 | 469 | 370 | | | | | 100 | 299 | 370 | | | |
| | | 156 | 526 | 341 | | | | | 128 | 299 | 341 | | | |
| 6 | D | 85 | 484 | 469 | 90 | 474 | 422 | B | 57 | 199 | 469 | 90 | 237 | 422 |
| | | 85 | 469 | 384 | | | | | 114 | 213 | 384 | | | |
| | | 100 | 469 | 413 | | | | | 100 | 299 | 413 | | | |
| 6 | D | 71 | 398 | 284 | 81 | 337 | 289 | B | 43 | 171 | 284 | 47 | 199 | 289 |
| | | 85 | 327 | 299 | | | | | 43 | 213 | 299 | | | |
| | | 85 | 284 | 284 | | | | | 57 | 213 | 284 | | | |
| 8 | D | 142 | 384 | 441 | 133 | 431 | 398 | B | 142 | 341 | 441 | 138 | 318 | 398 |
| | | 114 | 441 | 384 | | | | | 142 | 284 | 384 | | | |
| | | 142 | 469 | 370 | | | | | 128 | 327 | 370 | | | |
| 7 | D | 85 | 541 | 469 | 81 | 564 | 488 | B | 171 | 398 | 469 | 171 | 379 | 488 |
| | | 100 | 555 | 498 | | | | | 213 | 384 | 498 | | | |
| | | 57 | 597 | 498 | | | | | 128 | 356 | 498 | | | |
| 5 | D | 43 | 626 | 441 | 85 | 626 | 436 | B | 114 | 256 | 441 | 104 | 270 | 436 |
| | | 71 | 669 | 455 | | | | | 100 | 270 | 455 | | | |
| | | 142 | 583 | 413 | | | | | 100 | 284 | 413 | | | |
| 7 | D | 171 | 498 | 526 | 128 | 536 | 484 | B | 128 | 327 | 526 | 142 | 365 | 484 |
| | | 100 | 541 | 484 | | | | | 142 | 384 | 484 | | | |
| | | 114 | 569 | 441 | | | | | 156 | 384 | 441 | | | |
| 10 | D | 71 | 398 | 370 | 138 | 460 | 356 | B | 128 | 384 | 370 | 161 | 398 | 356 |
| | | 142 | 484 | 356 | | | | | 213 | 398 | 356 | | | |
| | | 199 | 498 | 341 | | | | | 142 | 413 | 341 | | | |
| Average | D | - | - | - | 113 | 529 | 331 | B | - | - | - | 95 | 245 | 331 |

# Salvo 4th Qtr Control Measurements (August 2023) - Control Area

D= Seaward toe of dune
B=beach face
Measurement taken 22 August 2023

Dune measurements were taken at seaward edge of sand fencing, where present.
Units are pounds per sqaure inch (psi)

| Station | Sample | 6" | 12" | 18" | 6" | 12" | 18" | Sample | 6" | 12" | 18" | 6" | 12" | 18" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Average | | | | | | | Average | | |
| 980+00 | D | 228 | 427 | 654 | 251 | 555 | 545 | B | 43 | 441 | 213 | 43 | 403 | 194 |
| | | 256 | 583 | 413 | | | | | 28 | 413 | 228 | | | |
| | | 270 | 654 | 569 | | | | | 57 | 356 | 142 | | | |
| 990+00 | D | 185 | 413 | 740 | 190 | 507 | 744 | B | 114 | 469 | 270 | 109 | 465 | 308 |
| | | 199 | 569 | 768 | | | | | 114 | 441 | 313 | | | |
| | | 185 | 541 | 725 | | | | | 100 | 484 | 341 | | | |
| 1000+00 | D | 85 | 740 | 1000 | 95 | 721 | 1000 | B | 156 | 626 | 455 | 175 | 626 | 436 |
| | | 100 | 725 | 1000 | | | | | 185 | 569 | 441 | | | |
| | | 100 | 697 | 1000 | | | | | 185 | 683 | 413 | | | |
| 1010+00 | D | 128 | 398 | 797 | 152 | 455 | 860 | B | 213 | 341 | 626 | 213 | 370 | 654 |
| | | 171 | 498 | 1000 | | | | | 213 | 384 | 683 | | | |
| | | 156 | 469 | 782 | | | | | 213 | 384 | 654 | | | |
| 1020+00 | D | 57 | 768 | 1000 | 66 | 787 | 1000 | B | 71 | 427 | 583 | 66 | 431 | 545 |
| | | 43 | 754 | 1000 | | | | | 71 | 427 | 555 | | | |
| | | 100 | 839 | 1000 | | | | | 57 | 441 | 498 | | | |
| 1030+00 | D | 156 | 725 | 711 | 90 | 688 | 688 | B | 114 | 654 | 754 | 180 | 688 | 754 |
| | | 43 | 597 | 711 | | | | | 256 | 711 | 811 | | | |
| | | 71 | 740 | 640 | | | | | 171 | 697 | 697 | | | |
| 1040+00 | D | 384 | 797 | 1000 | 346 | 839 | 1000 | B | 85 | 469 | 797 | 95 | 503 | 835 |
| | | 327 | 896 | 1000 | | | | | 128 | 484 | 853 | | | |
| | | 327 | 825 | 1000 | | | | | 71 | 555 | 853 | | | |
| 1050+00 | D | 299 | 811 | 1000 | 180 | 797 | 1000 | B | 85 | 427 | 683 | 100 | 484 | 730 |
| | | 156 | 825 | 1000 | | | | | 100 | 455 | 725 | | | |
| | | 85 | 754 | 1000 | | | | | 114 | 569 | 782 | | | |
| 1060+00 | D | 28 | 526 | 782 | 24 | 389 | 864 | B | 85 | 284 | 199 | 109 | 360 | 242 |
| | | 28 | 356 | 811 | | | | | 100 | 398 | 242 | | | |
| | | 14 | 284 | 1000 | | | | | 142 | 398 | 284 | | | |
| 1070+00 | D | 242 | 839 | 1000 | 237 | 830 | 1000 | B | 28 | 555 | 612 | 43 | 602 | 650 |
| | | 256 | 853 | 1000 | | | | | 57 | 654 | 683 | | | |
| | | 213 | 797 | 1000 | | | | | 43 | 597 | 654 | | | |
| Average | D | - | - | - | 171 | 669 | 855 | B | - | - | - | 123 | 496 | 557 |

# APPENDIX C-1

# Avon Geotechnical Data

| Avon Beach BD 22-May-22 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 1550+00 | Toe of Dune | 1.44 | 0.66 | 0.26 | 3.09 | 0.368 | 0.632 | 1.28 | 0.67 | 0.65 | 0.04 | 0.90 | 0.0 | 0.1 | 0.0 | 2.8 |
| 1550+00 | Beach Face | 1.20 | 0.81 | -0.60 | 3.42 | 0.434 | 0.570 | 1.10 | 0.76 | 0.79 | -0.22 | 1.06 | 0.0 | 1.2 | 0.0 | 1.8 |
| 1550+00 | Swash | 0.70 | 1.01 | -0.11 | 2.13 | 0.614 | 0.496 | 0.59 | 1.14 | 1.08 | -0.04 | 0.87 | 0.0 | 5.2 | 0.0 | 4.8 |
| 1560+00 | Toe of Dune | 1.65 | 0.54 | -0.25 | 4.12 | 0.319 | 0.688 | 1.53 | 0.49 | 0.51 | -0.16 | 1.11 | 0.0 | 0.0 | 0.0 | 1.1 |
| 1560+00 | Beach Face | 1.27 | 0.61 | -0.37 | 4.43 | 0.415 | 0.653 | 1.17 | 0.58 | 0.58 | 0.05 | 0.99 | 0.0 | 0.5 | 0.0 | 1.9 |
| 1560+00 | Swash | 0.70 | 1.06 | -0.11 | 1.82 | 0.617 | 0.481 | 0.58 | 1.22 | 1.10 | -0.12 | 0.70 | 0.0 | 3.4 | 0.0 | 21.9 |
| 1570+00 | Toe of Dune | 1.85 | 0.64 | 0.25 | 2.78 | 0.278 | 0.643 | 1.75 | 0.68 | 0.66 | 0.15 | 0.96 | 0.0 | 0.0 | 0.0 | 0.4 |
| 1570+00 | Beach Face | 1.94 | 0.51 | -0.93 | 4.92 | 0.261 | 0.702 | 1.83 | 0.47 | 0.49 | -0.15 | 1.31 | 0.0 | 0.0 | 0.0 | 0.9 |
| 1570+00 | Swash | 0.66 | 1.08 | 0.08 | 1.79 | 0.633 | 0.474 | 0.53 | 1.24 | 1.12 | 0.07 | 0.68 | 0.0 | 3.2 | 0.0 | 9.2 |
| 1580+00 | Toe of Dune | 1.65 | 0.65 | -0.65 | 5.15 | 0.319 | 0.636 | 1.55 | 0.53 | 0.60 | -0.10 | 1.35 | 0.0 | 0.3 | 0.0 | 1.7 |
| 1580+00 | Beach Face | 1.46 | 0.64 | -0.75 | 4.40 | 0.363 | 0.642 | 1.34 | 0.58 | 0.60 | -0.21 | 1.03 | 0.0 | 0.3 | 0.0 | 1.9 |
| 1580+00 | Swash | 0.25 | 0.74 | 0.25 | 2.89 | 0.842 | 0.599 | 0.10 | 0.76 | 0.75 | -0.02 | 1.01 | 0.0 | 3.1 | 0.0 | 10.7 |
| 1590+00 | Toe of Dune | 1.46 | 0.55 | 0.17 | 4.28 | 0.363 | 0.685 | 1.32 | 0.50 | 0.52 | 0.03 | 1.07 | 0.1 | 0.0 | 0.0 | 3.1 |
| 1590+00 | Beach Face | 1.28 | 0.74 | -0.82 | 3.62 | 0.413 | 0.600 | 1.17 | 0.70 | 0.71 | -0.28 | 0.99 | 0.0 | 0.7 | 0.0 | 3.6 |
| 1590+00 | Swash | 0.45 | 1.06 | 0.10 | 1.88 | 0.731 | 0.478 | 0.33 | 1.24 | 1.12 | -0.02 | 0.71 | 0.0 | 6.1 | 0.0 | 8.3 |
| 1600+00 | Toe of Dune | 1.69 | 0.50 | -0.74 | 4.77 | 0.310 | 0.707 | 1.59 | 0.47 | 0.48 | -0.20 | 1.06 | 0.0 | 0.1 | 0.0 | 1.7 |
| 1600+00 | Beach Face | 1.22 | 0.87 | -0.71 | 2.92 | 0.429 | 0.547 | 1.10 | 0.88 | 0.87 | -0.30 | 0.93 | 0.0 | 1.5 | 0.0 | 5.3 |
| 1600+00 | Swash | -0.10 | 0.81 | 0.73 | 3.33 | 1.068 | 0.572 | -0.29 | 0.83 | 0.85 | 0.12 | 1.13 | 0.0 | 11.3 | 0.0 | 11.5 |
| 1610+00 | Toe of Dune | 1.82 | 0.52 | 0.34 | 4.09 | 0.284 | 0.696 | 1.66 | 0.45 | 0.50 | -0.01 | 1.21 | 0.0 | 0.0 | 0.0 | 0.5 |
| 1610+00 | Beach Face | 0.80 | 0.89 | -0.27 | 2.49 | 0.574 | 0.539 | 0.69 | 0.97 | 0.92 | -0.14 | 0.90 | 0.0 | 2.1 | 0.0 | 12.5 |
| 1610+00 | Swash | 0.29 | 0.82 | 0.26 | 2.58 | 0.817 | 0.566 | 0.16 | 0.87 | 0.87 | 0.06 | 1.01 | 0.0 | 4.2 | 0.0 | 9.0 |
| 1620+00 | Toe of Dune | 1.36 | 0.57 | -0.60 | 4.38 | 0.389 | 0.673 | 1.25 | 0.55 | 0.55 | -0.16 | 0.98 | 0.0 | 0.2 | 0.0 | 3.4 |
| 1620+00 | Beach Face | 1.42 | 0.65 | -0.72 | 4.33 | 0.374 | 0.637 | 1.30 | 0.56 | 0.61 | -0.21 | 1.19 | 0.0 | 0.0 | 0.0 | 1.8 |
| 1620+00 | Swash | 0.74 | 1.04 | -0.04 | 2.11 | 0.600 | 0.485 | 0.60 | 1.19 | 1.10 | -0.04 | 0.81 | 0.0 | 3.7 | 0.0 | 4.1 |
| 1630+00 | Toe of Dune | 1.85 | 0.50 | -0.01 | 4.11 | 0.277 | 0.706 | 1.72 | 0.47 | 0.49 | -0.03 | 1.16 | 0.0 | 0.0 | 0.0 | 1.8 |
| 1630+00 | Beach Face | 1.10 | 0.67 | -0.35 | 2.96 | 0.466 | 0.630 | 1.00 | 0.70 | 0.67 | -0.12 | 0.88 | 0.0 | 0.3 | 0.0 | 4.0 |
| 1630+00 | Swash | 0.63 | 0.75 | -0.37 | 2.73 | 0.647 | 0.596 | 0.51 | 0.77 | 0.76 | -0.12 | 0.98 | 0.0 | 2.2 | 0.0 | 7.2 |
| 1640+00 | Toe of Dune | 1.40 | 0.51 | -0.52 | 3.54 | 0.378 | 0.703 | 1.28 | 0.51 | 0.50 | -0.11 | 0.93 | 0.0 | 0.0 | 0.0 | 1.9 |
| 1640+00 | Beach Face | 1.37 | 0.49 | -0.33 | 3.98 | 0.388 | 0.714 | 1.25 | 0.48 | 0.47 | -0.06 | 0.97 | 0.0 | 0.0 | 0.0 | 2.8 |
| 1640+00 | Swash | 1.01 | 0.85 | -0.62 | 2.82 | 0.496 | 0.553 | 0.92 | 0.89 | 0.86 | -0.26 | 0.88 | 0.0 | 2.2 | 0.0 | 5.8 |
| 1650+00 | Toe of Dune | 1.40 | 0.51 | -0.58 | 3.95 | 0.378 | 0.702 | 1.29 | 0.51 | 0.50 | -0.13 | 0.95 | 0.0 | 0.1 | 0.0 | 4.0 |
| 1650+00 | Beach Face | 1.73 | 0.43 | -0.62 | 5.72 | 0.302 | 0.743 | 1.62 | 0.40 | 0.41 | -0.15 | 1.09 | 0.0 | 0.0 | 0.0 | 2.0 |
| 1650+00 | Swash | 1.09 | 1.02 | -0.59 | 2.85 | 0.469 | 0.492 | 0.95 | 1.02 | 1.05 | -0.31 | 1.14 | 0.0 | 4.6 | 0.0 | 4.1 |
| 1660+00 | Toe of Dune | 1.28 | 0.58 | -0.89 | 4.64 | 0.412 | 0.669 | 1.19 | 0.55 | 0.55 | -0.18 | 0.97 | 0.0 | 0.3 | 0.0 | 3.0 |
| 1660+00 | Beach Face | 1.73 | 0.43 | -0.67 | 4.79 | 0.301 | 0.744 | 1.62 | 0.41 | 0.41 | -0.16 | 1.08 | 0.0 | 0.0 | 0.0 | 1.9 |
| 1660+00 | Swash | 0.92 | 0.82 | -0.76 | 3.13 | 0.528 | 0.567 | 0.83 | 0.84 | 0.83 | -0.30 | 1.08 | 0.0 | 2.8 | 0.0 | 3.4 |
| 1670+00 | Toe of Dune | 2.11 | 0.52 | 0.47 | 3.47 | 0.232 | 0.697 | 1.97 | 0.49 | 0.52 | 0.28 | 1.21 | 0.0 | 0.0 | 0.0 | 0.3 |
| 1670+00 | Beach Face | 1.84 | 0.42 | -0.23 | 4.36 | 0.279 | 0.746 | 1.72 | 0.41 | 0.41 | -0.11 | 1.10 | 0.0 | 0.0 | 0.0 | 1.7 |
| 1670+00 | Swash | 0.68 | 0.76 | -0.34 | 2.92 | 0.622 | 0.591 | 0.56 | 0.77 | 0.77 | -0.11 | 1.04 | 0.0 | 2.2 | 0.0 | 8.1 |
| 1680+00 | Toe of Dune | 1.37 | 0.54 | -0.37 | 3.26 | 0.386 | 0.690 | 1.25 | 0.54 | 0.53 | -0.06 | 0.92 | 0.0 | 0.0 | 0.0 | 2.3 |
| 1680+00 | Beach Face | 1.39 | 0.53 | -0.18 | 3.45 | 0.381 | 0.691 | 1.26 | 0.54 | 0.53 | -0.06 | 0.93 | 0.0 | 0.0 | 0.0 | 1.4 |
| 1680+00 | Swash | 0.72 | 0.89 | -0.34 | 2.35 | 0.607 | 0.538 | 0.62 | 0.97 | 0.92 | -0.16 | 0.87 | 0.0 | 3.5 | 0.0 | 8.5 |
| ALL | Toe of Dune | 1.60 | 0.61 | -0.16 | 4.05 | 0.331 | 0.657 | 1.47 | 0.54 | 0.58 | -0.07 | 1.16 | 0.0 | 0.1 | 0.0 | 2.0 |
| ALL | Beach Face | 1.41 | 0.70 | -0.86 | 4.16 | 0.375 | 0.614 | 1.30 | 0.63 | 0.67 | -0.22 | 1.11 | 0.0 | 0.5 | 0.0 | 3.1 |
| ALL | Swash | 0.66 | 0.95 | -0.10 | 2.24 | 0.635 | 0.517 | 0.54 | 1.06 | 1.00 | -0.07 | 0.86 | 0.0 | 3.8 | 0.0 | 8.3 |
| ALL | ALL | 1.25 | 0.85 | -0.73 | 3.40 | 0.420 | 0.553 | 1.14 | 0.79 | 0.83 | -0.28 | 1.10 | 0.0 | 1.3 | 0.0 | 4.5 |

| Avon Beach AD 31-Aug-22 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 1550+00 | Toe of Dune | 1.33 | 0.71 | 0.06 | 3.11 | 0.398 | 0.611 | 1.18 | 0.69 | 0.69 | -0.06 | 0.93 | 0.0 | 0.1 | 0.0 | 3.0 |
| 1550+00 | Beach Face | 1.82 | 0.39 | -0.42 | 4.86 | 0.284 | 0.763 | 1.71 | 0.35 | 0.38 | -0.09 | 1.26 | 0.0 | 0.0 | 0.0 | 3.1 |
| 1550+00 | Swash | 1.44 | 0.63 | -0.80 | 4.62 | 0.368 | 0.647 | 1.33 | 0.58 | 0.59 | -0.18 | 0.97 | 0.0 | 0.5 | 0.0 | 10.6 |
| 1560+00 | Toe of Dune | 1.67 | 0.92 | -0.80 | 3.59 | 0.315 | 0.528 | 1.56 | 0.94 | 0.90 | -0.19 | 0.95 | 0.0 | 1.6 | 0.0 | 1.2 |
| 1560+00 | Beach Face | 1.71 | 0.49 | -0.51 | 5.57 | 0.306 | 0.712 | 1.59 | 0.43 | 0.46 | -0.16 | 1.24 | 0.0 | 0.1 | 0.0 | 4.8 |
| 1560+00 | Swash | 1.67 | 0.58 | -0.72 | 4.44 | 0.314 | 0.669 | 1.57 | 0.55 | 0.57 | -0.20 | 1.18 | 0.0 | 0.1 | 0.0 | 6.7 |
| 1570+00 | Toe of Dune | 1.55 | 0.64 | -0.97 | 5.71 | 0.341 | 0.642 | 1.46 | 0.53 | 0.57 | -0.25 | 1.17 | 0.0 | 0.6 | 0.0 | 1.9 |
| 1570+00 | Beach Face | 2.15 | 0.42 | -1.02 | 7.37 | 0.225 | 0.747 | 2.05 | 0.37 | 0.37 | -0.02 | 0.92 | 0.1 | 0.0 | 0.0 | 2.1 |
| 1570+00 | Swash | 1.79 | 0.54 | -1.26 | 8.95 | 0.289 | 0.690 | 1.70 | 0.45 | 0.46 | 0.02 | 1.16 | 0.0 | 0.4 | 0.0 | 7.0 |
| 1580+00 | Toe of Dune | 1.41 | 0.70 | -0.89 | 5.02 | 0.375 | 0.616 | 1.31 | 0.59 | 0.63 | -0.23 | 1.15 | 0.0 | 1.0 | 0.0 | 2.2 |
| 1580+00 | Beach Face | 1.95 | 0.47 | -0.22 | 3.58 | 0.259 | 0.723 | 1.84 | 0.46 | 0.47 | 0.01 | 1.09 | 0.0 | 0.0 | 0.0 | 4.3 |
| 1580+00 | Swash | 1.11 | 0.90 | -0.26 | 2.67 | 0.464 | 0.537 | 1.00 | 0.90 | 0.90 | -0.03 | 0.97 | 0.0 | 1.2 | 0.0 | 21.8 |
| 1590+00 | Toe of Dune | 1.54 | 0.65 | -1.04 | 5.51 | 0.344 | 0.636 | 1.45 | 0.55 | 0.59 | -0.25 | 1.16 | 0.0 | 0.6 | 0.0 | 3.6 |
| 1590+00 | Beach Face | 1.82 | 0.49 | -0.31 | 3.95 | 0.284 | 0.713 | 1.70 | 0.49 | 0.49 | -0.08 | 1.09 | 0.0 | 0.0 | 0.0 | 4.0 |
| 1590+00 | Swash | 0.98 | 1.13 | -0.42 | 2.18 | 0.506 | 0.455 | 0.82 | 1.30 | 1.21 | -0.28 | 0.86 | 0.0 | 5.4 | 0.0 | 19.8 |
| 1600+00 | Toe of Dune | 1.23 | 0.96 | -0.87 | 3.36 | 0.425 | 0.515 | 1.14 | 0.87 | 0.93 | -0.37 | 1.16 | 0.0 | 3.9 | 0.0 | 13.4 |
| 1600+00 | Beach Face | 1.85 | 0.39 | 0.04 | 4.69 | 0.277 | 0.765 | 1.73 | 0.35 | 0.37 | 0.01 | 1.18 | 0.0 | 0.0 | 0.0 | 2.7 |
| 1600+00 | Swash | 1.15 | 0.88 | -0.30 | 2.69 | 0.451 | 0.544 | 1.04 | 0.93 | 0.90 | -0.04 | 0.91 | 0.0 | 1.1 | 0.0 | 15.6 |
| 1610+00 | Toe of Dune | 1.36 | 0.91 | -0.53 | 3.64 | 0.390 | 0.532 | 1.28 | 0.82 | 0.89 | -0.14 | 1.20 | 0.2 | 1.9 | 0.0 | 32.0 |
| 1610+00 | Beach Face | 1.79 | 0.48 | -0.70 | 6.33 | 0.289 | 0.715 | 1.68 | 0.44 | 0.46 | -0.10 | 1.21 | 0.0 | 0.1 | 0.0 | 3.9 |
| 1610+00 | Swash | 0.81 | 1.07 | -0.35 | 2.16 | 0.571 | 0.475 | 0.65 | 1.23 | 1.16 | -0.23 | 0.86 | 0.0 | 6.7 | 0.0 | 17.7 |
| 1620+00 | Toe of Dune | 1.31 | 0.93 | -1.24 | 4.17 | 0.403 | 0.524 | 1.26 | 0.75 | 0.91 | -0.47 | 1.53 | 0.0 | 5.0 | 0.0 | 9.1 |
| 1620+00 | Beach Face | 2.11 | 0.39 | 0.03 | 6.33 | 0.231 | 0.766 | 1.99 | 0.35 | 0.35 | 0.11 | 0.97 | 0.1 | 0.0 | 0.0 | 2.0 |
| 1620+00 | Swash | 0.22 | 1.16 | 0.24 | 1.72 | 0.858 | 0.449 | 0.04 | 1.41 | 1.24 | 0.11 | 0.69 | 0.0 | 18.7 | 0.0 | 18.2 |
| 1630+00 | Toe of Dune | 1.09 | 0.70 | -0.60 | 3.52 | 0.470 | 0.618 | 0.99 | 0.68 | 0.67 | -0.18 | 0.94 | 0.0 | 0.7 | 0.0 | 5.5 |
| 1630+00 | Beach Face | 1.93 | 0.39 | -0.14 | 5.61 | 0.263 | 0.762 | 1.80 | 0.35 | 0.37 | 0.05 | 1.19 | 0.0 | 0.0 | 0.0 | 2.7 |
| 1630+00 | Swash | 1.75 | 0.45 | -1.03 | 8.96 | 0.298 | 0.730 | 1.64 | 0.41 | 0.42 | -0.04 | 1.19 | 0.0 | 0.2 | 0.0 | 3.6 |
| 1640+00 | Toe of Dune | 1.13 | 0.71 | -0.81 | 3.98 | 0.456 | 0.611 | 1.05 | 0.66 | 0.67 | -0.24 | 1.02 | 0.0 | 1.1 | 0.0 | 4.7 |
| 1640+00 | Beach Face | 1.84 | 0.38 | -0.23 | 5.41 | 0.279 | 0.768 | 1.73 | 0.35 | 0.37 | -0.02 | 1.21 | 0.0 | 0.0 | 0.0 | 2.5 |
| 1640+00 | Swash | 0.60 | 1.02 | -0.02 | 2.13 | 0.659 | 0.493 | 0.49 | 1.16 | 1.10 | -0.03 | 0.84 | 0.0 | 6.3 | 0.0 | 15.9 |
| 1650+00 | Toe of Dune | 1.44 | 0.73 | -1.06 | 5.08 | 0.367 | 0.604 | 1.35 | 0.59 | 0.66 | -0.33 | 1.25 | 0.1 | 1.0 | 0.0 | 13.7 |
| 1650+00 | Beach Face | 1.79 | 0.48 | -0.78 | 5.45 | 0.290 | 0.715 | 1.68 | 0.40 | 0.45 | -0.17 | 1.40 | 0.0 | 0.0 | 0.0 | 3.9 |
| 1650+00 | Swash | 0.54 | 0.82 | -0.76 | -3.27 | 0.690 | 0.565 | 0.48 | 1.07 | 0.96 | 0.20 | 0.69 | -2.0 | 1.0 | 0.0 | 12.7 |
| 1660+00 | Toe of Dune | 1.28 | 0.78 | -0.92 | 4.10 | 0.411 | 0.584 | 1.19 | 0.69 | 0.73 | -0.29 | 1.11 | 0.0 | 1.4 | 0.0 | 7.9 |
| 1660+00 | Beach Face | 1.45 | 0.54 | -0.83 | 4.35 | 0.366 | 0.687 | 1.37 | 0.47 | 0.50 | -0.21 | 1.07 | 0.0 | 0.0 | 0.0 | 4.7 |
| 1660+00 | Swash | 0.02 | 0.77 | 0.02 | 2.49 | 0.985 | 0.588 | -0.13 | 0.83 | 0.81 | -0.11 | 0.94 | 0.0 | 12.5 | 0.0 | 17.8 |
| 1670+00 | Toe of Dune | 1.14 | 0.94 | -0.99 | 3.52 | 0.455 | 0.520 | 1.06 | 0.85 | 0.94 | -0.42 | 1.26 | 0.0 | 5.5 | 0.0 | 10.6 |
| 1670+00 | Beach Face | 1.39 | 0.50 | -0.82 | 5.07 | 0.382 | 0.705 | 1.29 | 0.49 | 0.48 | -0.17 | 0.95 | 0.0 | 0.2 | 0.0 | 3.6 |
| 1670+00 | Swash | 0.40 | 0.79 | -0.14 | 2.54 | 0.760 | 0.577 | 0.27 | 0.85 | 0.84 | -0.14 | 0.97 | 0.0 | 4.6 | 0.0 | 8.7 |
| 1680+00 | Toe of Dune | 1.17 | 0.73 | -0.96 | 4.22 | 0.444 | 0.605 | 1.10 | 0.66 | 0.68 | -0.27 | 1.08 | 0.0 | 1.3 | 0.0 | 3.9 |
| 1680+00 | Beach Face | 1.54 | 0.55 | -0.45 | 5.39 | 0.344 | 0.683 | 1.41 | 0.46 | 0.50 | -0.13 | 1.19 | 0.0 | 0.2 | 0.0 | 2.6 |
| 1680+00 | Swash | 0.57 | 0.78 | -0.35 | 2.76 | 0.675 | 0.582 | 0.45 | 0.81 | 0.80 | -0.17 | 0.98 | 0.0 | 3.3 | 0.0 | 8.8 |
| ALL | Toe of Dune | 1.33 | 0.81 | -0.84 | 4.18 | 0.397 | 0.570 | 1.23 | 0.70 | 0.76 | -0.26 | 1.16 | 0.0 | 1.8 | 0.0 | 8.1 |
| ALL | Beach Face | 1.80 | 0.51 | -0.61 | 5.10 | 0.288 | 0.705 | 1.68 | 0.46 | 0.48 | -0.11 | 1.22 | 0.0 | 0.0 | 0.0 | 3.3 |
| ALL | Swash | 0.95 | 1.01 | -0.47 | 2.27 | 0.519 | 0.496 | 0.82 | 1.09 | 1.06 | -0.24 | 0.90 | -0.1 | 4.2 | 0.0 | 13.2 |
| ALL | ALL | 1.36 | 0.87 | -0.99 | 3.78 | 0.389 | 0.546 | 1.28 | 0.78 | 0.84 | -0.36 | 1.21 | 0.0 | 2.0 | 0.0 | 8.2 |

| Avon Beach Y1Q1 14-Nov-22 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 1550+00 | Toe of Dune | 1.66 | 0.70 | -1.09 | 6.56 | 0.316 | 0.616 | 1.57 | 0.59 | 0.61 | -0.11 | 1.12 | 0.0 | 1.5 | 0.0 | 2.4 |
| 1550+00 | Beach Face | 1.73 | 0.60 | -0.56 | 3.77 | 0.300 | 0.659 | 1.64 | 0.55 | 0.59 | -0.16 | 1.18 | 0.0 | 0.0 | 0.0 | 1.2 |
| 1550+00 | Swash | 1.58 | 0.50 | -0.34 | 3.60 | 0.334 | 0.707 | 1.47 | 0.50 | 0.50 | -0.01 | 0.98 | 0.0 | 0.0 | 0.0 | 2.0 |
| 1560+00 | Toe of Dune | 1.53 | 0.71 | -0.38 | 3.29 | 0.347 | 0.613 | 1.40 | 0.74 | 0.70 | -0.12 | 0.89 | 0.0 | 0.4 | 0.0 | 4.9 |
| 1560+00 | Beach Face | 2.00 | 0.56 | -0.27 | 4.58 | 0.250 | 0.679 | 1.88 | 0.50 | 0.53 | 0.05 | 1.10 | 0.0 | 0.0 | 0.0 | 1.6 |
| 1560+00 | Swash | 1.73 | 0.71 | -2.88 | 15.69 | 0.301 | 0.611 | 1.68 | 0.48 | 0.49 | -0.12 | 1.06 | 0.0 | 1.9 | 0.3 | 2.2 |
| 1570+00 | Toe of Dune | 1.83 | 0.47 | 0.00 | 3.69 | 0.282 | 0.723 | 1.70 | 0.45 | 0.46 | -0.01 | 1.09 | 0.0 | 0.0 | 0.0 | 1.1 |
| 1570+00 | Beach Face | 1.81 | 0.47 | -0.03 | 5.59 | 0.285 | 0.722 | 1.68 | 0.44 | 0.45 | 0.05 | 1.10 | 0.0 | 0.1 | 0.0 | 2.9 |
| 1570+00 | Swash | 1.68 | 0.57 | -0.71 | 4.16 | 0.312 | 0.672 | 1.58 | 0.56 | 0.56 | -0.14 | 1.01 | 0.0 | 0.1 | 0.0 | 4.4 |
| 1580+00 | Toe of Dune | 1.69 | 0.49 | 0.02 | 3.73 | 0.309 | 0.713 | 1.58 | 0.45 | 0.47 | 0.00 | 1.14 | 0.0 | 0.0 | 0.0 | 2.8 |
| 1580+00 | Beach Face | 1.71 | 0.54 | -0.12 | 4.12 | 0.306 | 0.689 | 1.59 | 0.50 | 0.52 | -0.02 | 1.13 | 0.0 | 0.0 | 0.0 | 4.5 |
| 1580+00 | Swash | 1.33 | 0.95 | -2.72 | 11.96 | 0.397 | 0.516 | 1.34 | 0.53 | 0.66 | -0.28 | 1.52 | 0.0 | 1.5 | 2.9 | 6.5 |
| 1590+00 | Toe of Dune | 1.70 | 0.53 | -1.33 | 9.58 | 0.308 | 0.692 | 1.60 | 0.45 | 0.46 | -0.05 | 1.11 | 0.0 | 0.7 | 0.0 | 3.5 |
| 1590+00 | Beach Face | 1.80 | 0.49 | 0.00 | 3.91 | 0.288 | 0.710 | 1.67 | 0.46 | 0.48 | -0.01 | 1.16 | 0.0 | 0.0 | 0.0 | 3.0 |
| 1590+00 | Swash | 1.32 | 0.60 | -0.56 | 3.61 | 0.399 | 0.660 | 1.22 | 0.59 | 0.58 | -0.14 | 0.96 | 0.0 | 0.1 | 0.0 | 8.6 |
| 1600+00 | Toe of Dune | 1.61 | 0.47 | 0.20 | 4.61 | 0.328 | 0.724 | 1.47 | 0.41 | 0.44 | -0.03 | 1.12 | 0.0 | 0.0 | 0.0 | 5.0 |
| 1600+00 | Beach Face | 1.68 | 0.55 | 0.07 | 4.09 | 0.312 | 0.682 | 1.55 | 0.51 | 0.54 | 0.04 | 1.17 | 0.0 | 0.0 | 0.0 | 5.5 |
| 1600+00 | Swash | 1.64 | 0.48 | -0.37 | 5.19 | 0.320 | 0.715 | 1.52 | 0.48 | 0.47 | -0.04 | 0.95 | 0.0 | 0.0 | 0.0 | 5.0 |
| 1610+00 | Toe of Dune | 1.51 | 0.54 | 0.16 | 4.17 | 0.352 | 0.688 | 1.37 | 0.49 | 0.51 | 0.04 | 1.09 | 0.0 | 0.0 | 0.0 | 7.8 |
| 1610+00 | Beach Face | 1.82 | 0.50 | -0.12 | 5.37 | 0.283 | 0.709 | 1.70 | 0.46 | 0.47 | 0.06 | 1.12 | 0.0 | 0.1 | 0.0 | 5.9 |
| 1610+00 | Swash | 1.49 | 0.50 | -0.26 | 3.52 | 0.357 | 0.706 | 1.36 | 0.50 | 0.50 | -0.10 | 0.96 | 0.0 | 0.0 | 0.0 | 7.0 |
| 1620+00 | Toe of Dune | 1.57 | 0.57 | 0.02 | 4.05 | 0.336 | 0.672 | 1.44 | 0.53 | 0.55 | -0.01 | 1.15 | 0.0 | 0.0 | 0.0 | 7.1 |
| 1620+00 | Beach Face | 1.57 | 0.48 | -0.24 | 4.11 | 0.337 | 0.718 | 1.44 | 0.45 | 0.46 | -0.09 | 1.05 | 0.0 | 0.0 | 0.0 | 5.8 |
| 1620+00 | Swash | 1.29 | 0.60 | -0.56 | 3.97 | 0.410 | 0.660 | 1.19 | 0.57 | 0.58 | -0.13 | 1.05 | 0.0 | 0.1 | 0.0 | 11.0 |
| 1630+00 | Toe of Dune | 1.41 | 0.55 | -0.06 | 4.86 | 0.377 | 0.684 | 1.28 | 0.49 | 0.52 | 0.00 | 1.19 | 0.0 | 0.1 | 0.0 | 5.2 |
| 1630+00 | Beach Face | 1.93 | 0.42 | 0.11 | 3.66 | 0.263 | 0.747 | 1.81 | 0.42 | 0.42 | 0.08 | 1.00 | 0.0 | 0.0 | 0.0 | 2.0 |
| 1630+00 | Swash | 1.44 | 0.47 | -0.22 | 4.10 | 0.368 | 0.724 | 1.32 | 0.46 | 0.46 | -0.05 | 0.99 | 0.0 | 0.0 | 0.0 | 6.8 |
| 1640+00 | Toe of Dune | 1.69 | 0.57 | -0.34 | 5.45 | 0.310 | 0.672 | 1.57 | 0.51 | 0.53 | 0.03 | 1.15 | 0.0 | 0.2 | 0.0 | 5.6 |
| 1640+00 | Beach Face | 1.69 | 0.46 | -0.09 | 4.13 | 0.309 | 0.729 | 1.58 | 0.43 | 0.45 | -0.02 | 1.12 | 0.0 | 0.0 | 0.0 | 4.3 |
| 1640+00 | Swash | 2.11 | 0.41 | -0.85 | 7.90 | 0.231 | 0.754 | 2.00 | 0.36 | 0.36 | -0.02 | 0.95 | 0.0 | 0.0 | 0.0 | 1.9 |
| 1650+00 | Toe of Dune | 1.81 | 0.50 | -0.13 | 4.67 | 0.285 | 0.707 | 1.69 | 0.47 | 0.48 | 0.03 | 1.16 | 0.0 | 0.0 | 0.0 | 4.3 |
| 1650+00 | Beach Face | 1.93 | 0.47 | -0.39 | 4.85 | 0.263 | 0.721 | 1.82 | 0.43 | 0.45 | 0.00 | 1.10 | 0.0 | 0.0 | 0.0 | 2.5 |
| 1650+00 | Swash | 1.61 | 0.51 | -1.43 | 9.09 | 0.328 | 0.700 | 1.50 | 0.41 | 0.45 | -0.13 | 1.18 | 0.0 | 0.6 | 0.0 | 5.4 |
| 1660+00 | Toe of Dune | 1.79 | 0.46 | 0.00 | 3.90 | 0.289 | 0.729 | 1.67 | 0.45 | 0.45 | -0.01 | 1.07 | 0.0 | 0.0 | 0.0 | 6.7 |
| 1660+00 | Beach Face | 1.98 | 0.41 | 0.12 | 3.08 | 0.254 | 0.754 | 1.85 | 0.43 | 0.42 | 0.09 | 0.94 | 0.0 | 0.0 | 0.0 | 1.8 |
| 1660+00 | Swash | 1.50 | 0.49 | -0.28 | 4.37 | 0.354 | 0.714 | 1.38 | 0.46 | 0.47 | -0.08 | 1.01 | 0.0 | 0.0 | 0.0 | 3.0 |
| 1670+00 | Toe of Dune | 1.69 | 0.56 | -0.30 | 4.87 | 0.310 | 0.678 | 1.57 | 0.51 | 0.53 | 0.02 | 1.15 | 0.0 | 0.1 | 0.0 | 3.4 |
| 1670+00 | Beach Face | 1.79 | 0.46 | -0.08 | 3.86 | 0.289 | 0.728 | 1.67 | 0.45 | 0.45 | -0.01 | 1.06 | 0.0 | 0.0 | 0.0 | 1.4 |
| 1670+00 | Swash | 1.60 | 0.51 | -1.46 | 8.89 | 0.329 | 0.702 | 1.50 | 0.41 | 0.44 | -0.13 | 1.17 | 0.0 | 0.6 | 0.0 | 4.1 |
| 1680+00 | Toe of Dune | 1.69 | 0.57 | -0.38 | 5.35 | 0.310 | 0.672 | 1.57 | 0.51 | 0.53 | 0.02 | 1.15 | 0.0 | 0.2 | 0.0 | 5.4 |
| 1680+00 | Beach Face | 1.69 | 0.46 | -0.15 | 4.05 | 0.309 | 0.729 | 1.58 | 0.43 | 0.45 | -0.01 | 1.12 | 0.0 | 0.0 | 0.0 | 5.2 |
| 1680+00 | Swash | 2.11 | 0.41 | -0.97 | 8.43 | 0.231 | 0.753 | 2.00 | 0.35 | 0.36 | -0.01 | 0.95 | 0.0 | 0.0 | 0.0 | 5.6 |
| ALL | Toe of Dune | 1.66 | 0.57 | -0.41 | 5.15 | 0.317 | 0.675 | 1.54 | 0.52 | 0.54 | -0.02 | 1.13 | 0.0 | 0.2 | 0.0 | 4.6 |
| ALL | Beach Face | 1.79 | 0.51 | -0.18 | 4.29 | 0.288 | 0.704 | 1.68 | 0.48 | 0.49 | 0.00 | 1.12 | 0.0 | 0.0 | 0.0 | 3.4 |
| ALL | Swash | 1.60 | 0.62 | -1.57 | 10.78 | 0.329 | 0.650 | 1.51 | 0.54 | 0.55 | -0.10 | 1.07 | 0.0 | 0.4 | 0.2 | 5.3 |
| ALL | ALL | 1.68 | 0.57 | -0.91 | 7.99 | 0.311 | 0.672 | 1.58 | 0.51 | 0.53 | -0.06 | 1.09 | 0.0 | 0.2 | 0.1 | 4.4 |

| Avon Beach Y1Q2 22-Feb-23 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 1550+00 | Toe of Dune | 1.31 | 0.95 | -0.57 | 3.68 | **0.403** | **0.519** | 1.24 | 0.83 | 0.93 | -0.13 | 1.23 | **0.0** | **3.7** | **0.0** | **7.5** |
| 1550+00 | Beach Face | 1.73 | 0.45 | -0.35 | 3.82 | **0.300** | **0.734** | 1.63 | 0.44 | 0.44 | -0.07 | 1.06 | **0.0** | **0.0** | **0.0** | **1.8** |
| 1550+00 | Swash | 1.55 | 0.85 | -1.10 | 3.87 | **0.343** | **0.554** | 1.46 | 0.83 | 0.83 | -0.41 | 1.05 | **0.0** | **1.3** | **0.0** | **7.7** |
| 1560+00 | Toe of Dune | 1.64 | 0.59 | -0.40 | 3.35 | **0.321** | **0.666** | 1.52 | 0.59 | 0.59 | -0.16 | 1.03 | **0.0** | **0.0** | **0.0** | **2.9** |
| 1560+00 | Beach Face | 1.91 | 0.44 | 0.06 | 4.19 | **0.267** | **0.736** | 1.78 | 0.41 | 0.43 | 0.04 | 1.07 | **0.0** | **0.0** | **0.0** | **2.0** |
| 1560+00 | Swash | 0.77 | 1.30 | -0.29 | 1.71 | **0.587** | **0.407** | 0.71 | 1.43 | 1.30 | -0.31 | 0.65 | **0.0** | **8.9** | **0.3** | **10.7** |
| 1570+00 | Toe of Dune | 1.71 | 0.62 | -1.12 | 7.52 | **0.306** | **0.651** | 1.62 | 0.51 | 0.54 | -0.05 | 1.15 | **0.0** | **0.9** | **0.0** | **4.6** |
| 1570+00 | Beach Face | 1.59 | 0.55 | -0.59 | 4.16 | **0.332** | **0.683** | 1.48 | 0.51 | 0.53 | -0.17 | 1.13 | **0.0** | **0.0** | **0.0** | **3.6** |
| 1570+00 | Swash | 1.79 | 0.50 | -0.85 | 4.67 | **0.289** | **0.706** | 1.69 | 0.46 | 0.48 | -0.18 | 1.13 | **0.0** | **0.0** | **0.0** | **3.5** |
| 1580+00 | Toe of Dune | 1.93 | 0.42 | 0.47 | 4.31 | **0.263** | **0.746** | 1.80 | 0.40 | 0.41 | 0.14 | 1.11 | **0.0** | **0.0** | **0.0** | **1.7** |
| 1580+00 | Beach Face | 1.54 | 0.54 | -0.38 | 4.08 | **0.343** | **0.690** | 1.42 | 0.51 | 0.52 | -0.10 | 1.04 | **0.0** | **0.1** | **0.0** | **5.1** |
| 1580+00 | Swash | 1.10 | 1.12 | -1.47 | 5.99 | **0.465** | **0.460** | 1.10 | 0.82 | 1.00 | -0.28 | 1.40 | **0.0** | **2.9** | **3.1** | **25.5** |
| 1590+00 | Toe of Dune | 1.73 | 0.54 | 0.05 | 3.92 | **0.301** | **0.690** | 1.61 | 0.49 | 0.52 | 0.04 | 1.17 | **0.0** | **0.0** | **0.0** | **3.5** |
| 1590+00 | Beach Face | 1.54 | 0.41 | -0.21 | 4.31 | **0.344** | **0.752** | 1.42 | 0.40 | 0.41 | -0.06 | 1.03 | **0.0** | **0.0** | **0.0** | **3.8** |
| 1590+00 | Swash | 1.33 | 0.51 | -0.14 | 3.86 | **0.396** | **0.705** | 1.21 | 0.50 | 0.49 | -0.04 | 0.97 | **0.0** | **0.0** | **0.0** | **6.0** |
| 1600+00 | Toe of Dune | 1.77 | 0.44 | -0.14 | 4.75 | **0.293** | **0.739** | 1.65 | 0.41 | 0.42 | -0.03 | 1.18 | **0.0** | **0.0** | **0.0** | **1.8** |
| 1600+00 | Beach Face | 1.44 | 0.51 | -0.23 | 4.30 | **0.369** | **0.703** | 1.31 | 0.49 | 0.49 | -0.06 | 1.01 | **0.0** | **0.1** | **0.0** | **5.6** |
| 1600+00 | Swash | 1.58 | 0.70 | -0.47 | 3.96 | **0.336** | **0.616** | 1.47 | 0.68 | 0.68 | -0.06 | 1.06 | **0.0** | **0.3** | **0.0** | **10.3** |
| 1610+00 | Toe of Dune | 1.63 | 0.59 | -0.17 | 4.70 | **0.323** | **0.666** | 1.51 | 0.52 | 0.55 | 0.02 | 1.19 | **0.0** | **0.1** | **0.0** | **6.0** |
| 1610+00 | Beach Face | 1.52 | 0.43 | -0.32 | 3.68 | **0.349** | **0.744** | 1.40 | 0.42 | 0.43 | -0.11 | 1.04 | **0.0** | **0.0** | **0.0** | **4.0** |
| 1610+00 | Swash | 1.24 | 0.57 | -0.63 | 4.20 | **0.422** | **0.675** | 1.14 | 0.55 | 0.54 | -0.14 | 0.95 | **0.0** | **0.2** | **0.0** | **7.3** |
| 1620+00 | Toe of Dune | 1.70 | 0.52 | -0.01 | 4.66 | **0.309** | **0.698** | 1.57 | 0.46 | 0.49 | 0.04 | 1.20 | **0.0** | **0.0** | **0.0** | **4.4** |
| 1620+00 | Beach Face | 1.33 | 0.53 | -0.20 | 3.67 | **0.398** | **0.695** | 1.21 | 0.52 | 0.51 | -0.02 | 0.96 | **0.0** | **0.0** | **0.0** | **6.5** |
| 1620+00 | Swash | 1.49 | 0.40 | -0.13 | 4.50 | **0.356** | **0.758** | 1.37 | 0.39 | 0.39 | -0.08 | 1.09 | **0.0** | **0.0** | **0.0** | **4.2** |
| 1630+00 | Toe of Dune | 1.75 | 0.49 | -0.28 | 5.80 | **0.298** | **0.711** | 1.63 | 0.43 | 0.46 | 0.02 | 1.23 | **0.0** | **0.0** | **0.0** | **3.1** |
| 1630+00 | Beach Face | 1.40 | 0.48 | -0.36 | 4.33 | **0.380** | **0.719** | 1.28 | 0.47 | 0.47 | -0.09 | 0.98 | **0.0** | **0.1** | **0.0** | **5.3** |
| 1630+00 | Swash | 0.96 | 0.68 | -0.46 | 3.13 | **0.513** | **0.623** | 0.86 | 0.69 | 0.68 | -0.14 | 0.98 | **0.0** | **0.6** | **0.0** | **12.5** |
| 1640+00 | Toe of Dune | 1.64 | 0.71 | -1.58 | 7.65 | **0.320** | **0.611** | 1.58 | 0.52 | 0.58 | -0.13 | 1.32 | **0.0** | **1.7** | **0.0** | **4.4** |
| 1640+00 | Beach Face | 1.29 | 0.48 | -0.47 | 4.53 | **0.409** | **0.719** | 1.17 | 0.46 | 0.45 | -0.10 | 0.95 | **0.0** | **0.1** | **0.0** | **7.9** |
| 1640+00 | Swash | 1.41 | 0.44 | -0.19 | 4.43 | **0.377** | **0.735** | 1.29 | 0.42 | 0.43 | -0.09 | 1.03 | **0.0** | **0.0** | **0.0** | **5.1** |
| 1650+00 | Toe of Dune | 1.65 | 0.47 | 0.03 | 4.79 | **0.319** | **0.720** | 1.52 | 0.40 | 0.44 | 0.01 | 1.18 | **0.0** | **0.0** | **0.0** | **4.4** |
| 1650+00 | Beach Face | 1.02 | 0.74 | -0.65 | 3.18 | **0.494** | **0.600** | 0.92 | 0.73 | 0.73 | -0.23 | 0.99 | **0.0** | **0.9** | **0.0** | **12.3** |
| 1650+00 | Swash | 1.35 | 0.47 | -0.55 | 5.07 | **0.393** | **0.724** | 1.23 | 0.46 | 0.44 | -0.12 | 0.95 | **0.0** | **0.1** | **0.0** | **7.1** |
| 1660+00 | Toe of Dune | 1.62 | 0.54 | -0.13 | 3.96 | **0.326** | **0.688** | 1.49 | 0.50 | 0.52 | -0.07 | 1.14 | **0.0** | **0.0** | **0.0** | **5.8** |
| 1660+00 | Beach Face | 1.43 | 0.43 | -0.23 | 4.10 | **0.372** | **0.740** | 1.31 | 0.42 | 0.42 | -0.10 | 0.99 | **0.0** | **0.0** | **0.0** | **5.3** |
| 1660+00 | Swash | 1.41 | 0.48 | -0.39 | 4.34 | **0.376** | **0.715** | 1.29 | 0.47 | 0.47 | -0.10 | 1.02 | **0.0** | **0.0** | **0.0** | **5.6** |
| 1670+00 | Toe of Dune | 1.56 | 0.45 | -0.36 | 6.01 | **0.338** | **0.732** | 1.44 | 0.41 | 0.42 | -0.07 | 1.04 | **0.0** | **0.2** | **0.0** | **3.7** |
| 1670+00 | Beach Face | 1.39 | 0.49 | -0.70 | 4.57 | **0.382** | **0.712** | 1.28 | 0.49 | 0.48 | -0.12 | 0.98 | **0.0** | **0.1** | **0.0** | **7.4** |
| 1670+00 | Swash | 1.51 | 0.46 | -0.15 | 5.95 | **0.352** | **0.729** | 1.38 | 0.41 | 0.42 | -0.04 | 1.09 | **0.0** | **0.1** | **0.0** | **4.5** |
| 1680+00 | Toe of Dune | 1.50 | 0.65 | -1.67 | 8.23 | **0.354** | **0.635** | 1.42 | 0.46 | 0.52 | -0.20 | 1.28 | **0.0** | **1.6** | **0.0** | **5.3** |
| 1680+00 | Beach Face | 1.39 | 0.46 | -0.20 | 4.01 | **0.381** | **0.728** | 1.27 | 0.46 | 0.45 | -0.10 | 0.97 | **0.0** | **0.0** | **0.0** | **5.7** |
| 1680+00 | Swash | 1.42 | 0.45 | 0.00 | 4.78 | **0.373** | **0.730** | 1.30 | 0.42 | 0.43 | -0.05 | 1.03 | **0.0** | **0.0** | **0.0** | **5.8** |
| **ALL** | **Toe of Dune** | **1.65** | **0.60** | **-0.91** | **6.82** | **0.318** | **0.660** | **1.55** | **0.50** | **0.53** | **-0.06** | **1.22** | **0.0** | **0.6** | **0.0** | **4.2** |
| **ALL** | **Beach Face** | **1.46** | **0.54** | **-0.56** | **4.64** | **0.362** | **0.688** | **1.35** | **0.50** | **0.51** | **-0.12** | **1.02** | **0.0** | **0.1** | **0.0** | **5.5** |
| **ALL** | **Swash** | **1.35** | **0.74** | **-1.33** | **6.90** | **0.392** | **0.601** | **1.27** | **0.59** | **0.66** | **-0.20** | **1.25** | **0.0** | **1.0** | **0.2** | **8.3** |
| **ALL** | **ALL** | **1.49** | **0.64** | **-1.11** | **7.02** | **0.356** | **0.641** | **1.39** | **0.53** | **0.56** | **-0.13** | **1.13** | **0.0** | **0.6** | **0.1** | **6.0** |

| Avon Beach Y1Q3 10-May-23 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 1550+00 | Toe of Dune | 1.39 | 0.67 | 0.16 | 3.75 | 0.382 | 0.630 | 1.25 | 0.61 | 0.64 | -0.02 | 1.06 | 0.0 | 0.1 | 0.0 | 2.0 |
| 1550+00 | Beach Face | 1.48 | 0.58 | -0.62 | 4.54 | 0.359 | 0.669 | 1.36 | 0.53 | 0.55 | -0.12 | 1.04 | 0.0 | 0.2 | 0.0 | 2.2 |
| 1550+00 | Swash | 1.55 | 0.65 | -0.48 | 4.14 | 0.343 | 0.638 | 1.44 | 0.62 | 0.62 | -0.15 | 1.03 | 0.2 | 0.1 | 0.0 | 2.5 |
| 1560+00 | Toe of Dune | 1.40 | 0.52 | 0.31 | 3.98 | 0.380 | 0.699 | 1.26 | 0.50 | 0.51 | -0.02 | 1.04 | 0.0 | 0.0 | 0.0 | 1.2 |
| 1560+00 | Beach Face | 1.75 | 0.55 | 0.02 | 4.07 | 0.297 | 0.683 | 1.63 | 0.49 | 0.53 | -0.02 | 1.15 | 0.1 | 0.0 | 0.0 | 2.3 |
| 1560+00 | Swash | 1.56 | 0.49 | -0.12 | 4.45 | 0.339 | 0.711 | 1.43 | 0.46 | 0.47 | -0.08 | 1.03 | 0.0 | 0.0 | 0.0 | 2.3 |
| 1570+00 | Toe of Dune | 1.64 | 0.57 | -0.41 | 4.93 | 0.322 | 0.674 | 1.52 | 0.53 | 0.54 | -0.10 | 1.10 | 0.0 | 0.2 | 0.0 | 3.2 |
| 1570+00 | Beach Face | 1.47 | 0.53 | -0.51 | 3.91 | 0.361 | 0.695 | 1.35 | 0.51 | 0.51 | -0.16 | 0.98 | 0.0 | 0.0 | 0.0 | 3.2 |
| 1570+00 | Swash | 1.37 | 0.57 | -0.15 | 3.41 | 0.388 | 0.672 | 1.24 | 0.58 | 0.57 | -0.05 | 0.91 | 0.0 | 0.1 | 0.0 | 3.6 |
| 1580+00 | Toe of Dune | 1.52 | 0.57 | 0.15 | 3.64 | 0.348 | 0.676 | 1.39 | 0.52 | 0.55 | 0.00 | 1.10 | 0.0 | 0.0 | 0.0 | 3.7 |
| 1580+00 | Beach Face | 1.62 | 0.47 | -0.28 | 4.00 | 0.326 | 0.721 | 1.49 | 0.46 | 0.47 | -0.10 | 1.03 | 0.0 | 0.0 | 0.0 | 3.3 |
| 1580+00 | Swash | 1.29 | 0.68 | -0.65 | 4.37 | 0.409 | 0.625 | 1.19 | 0.63 | 0.64 | -0.14 | 1.02 | 0.0 | 0.7 | 0.0 | 6.6 |
| 1590+00 | Toe of Dune | 1.66 | 0.65 | -1.23 | 7.97 | 0.316 | 0.638 | 1.57 | 0.51 | 0.55 | -0.03 | 1.24 | 0.0 | 1.4 | 0.0 | 4.2 |
| 1590+00 | Beach Face | 1.65 | 0.45 | -0.17 | 4.16 | 0.319 | 0.731 | 1.53 | 0.43 | 0.44 | -0.07 | 1.07 | 0.0 | 0.0 | 0.0 | 2.7 |
| 1590+00 | Swash | 1.56 | 0.62 | -1.06 | 5.76 | 0.340 | 0.652 | 1.46 | 0.52 | 0.56 | -0.18 | 1.19 | 0.0 | 0.3 | 0.0 | 5.0 |
| 1600+00 | Toe of Dune | 1.53 | 0.55 | 0.16 | 3.93 | 0.346 | 0.684 | 1.39 | 0.49 | 0.52 | 0.05 | 1.10 | 0.0 | 0.0 | 0.0 | 4.2 |
| 1600+00 | Beach Face | 1.48 | 0.54 | 0.00 | 3.94 | 0.359 | 0.690 | 1.34 | 0.50 | 0.52 | -0.03 | 1.06 | 0.0 | 0.0 | 0.0 | 3.8 |
| 1600+00 | Swash | 1.46 | 0.70 | -1.04 | 5.05 | 0.363 | 0.616 | 1.37 | 0.62 | 0.65 | -0.24 | 1.12 | 0.0 | 0.9 | 0.0 | 6.4 |
| 1610+00 | Toe of Dune | 1.56 | 0.57 | 0.43 | 4.04 | 0.339 | 0.675 | 1.41 | 0.50 | 0.54 | 0.11 | 1.17 | 0.0 | 0.0 | 0.0 | 4.8 |
| 1610+00 | Beach Face | 1.68 | 0.43 | -0.14 | 4.63 | 0.311 | 0.740 | 1.56 | 0.40 | 0.41 | -0.06 | 1.11 | 0.0 | 0.0 | 0.0 | 2.2 |
| 1610+00 | Swash | 1.42 | 0.52 | -0.44 | 4.32 | 0.373 | 0.698 | 1.30 | 0.51 | 0.51 | -0.10 | 0.96 | 0.0 | 0.1 | 0.0 | 4.8 |
| 1620+00 | Toe of Dune | 1.36 | 0.47 | -0.23 | 3.65 | 0.389 | 0.722 | 1.25 | 0.46 | 0.46 | -0.09 | 1.00 | 0.0 | 0.0 | 0.0 | 4.7 |
| 1620+00 | Beach Face | 1.29 | 0.48 | -0.38 | 4.85 | 0.409 | 0.716 | 1.17 | 0.46 | 0.45 | -0.08 | 0.95 | 0.0 | 0.1 | 0.0 | 5.9 |
| 1620+00 | Swash | 1.39 | 0.52 | -0.56 | 4.10 | 0.382 | 0.695 | 1.27 | 0.52 | 0.51 | -0.14 | 0.96 | 0.0 | 0.1 | 0.0 | 5.9 |
| 1630+00 | Toe of Dune | 1.44 | 0.44 | 0.08 | 4.22 | 0.369 | 0.739 | 1.32 | 0.42 | 0.42 | -0.01 | 1.02 | 0.0 | 0.0 | 0.0 | 4.4 |
| 1630+00 | Beach Face | 1.31 | 0.47 | -0.56 | 5.01 | 0.405 | 0.722 | 1.19 | 0.45 | 0.45 | -0.10 | 0.96 | 0.0 | 0.2 | 0.0 | 5.4 |
| 1630+00 | Swash | 1.14 | 0.50 | -0.44 | 3.80 | 0.454 | 0.708 | 1.03 | 0.50 | 0.49 | -0.04 | 0.98 | 0.0 | 0.1 | 0.0 | 8.1 |
| 1640+00 | Toe of Dune | 1.49 | 0.61 | -0.20 | 5.67 | 0.357 | 0.655 | 1.36 | 0.49 | 0.53 | -0.10 | 1.17 | 0.0 | 0.3 | 0.0 | 6.9 |
| 1640+00 | Beach Face | 1.27 | 0.52 | -0.41 | 3.83 | 0.415 | 0.696 | 1.16 | 0.52 | 0.51 | -0.13 | 0.92 | 0.0 | 0.0 | 0.0 | 6.7 |
| 1640+00 | Swash | 1.00 | 0.62 | -0.63 | 4.07 | 0.500 | 0.652 | 0.91 | 0.57 | 0.59 | -0.10 | 1.06 | 0.0 | 0.7 | 0.0 | 10.0 |
| 1650+00 | Toe of Dune | 1.08 | 0.57 | -0.05 | 4.17 | 0.472 | 0.672 | 0.97 | 0.53 | 0.54 | 0.02 | 1.02 | 0.0 | 0.1 | 0.0 | 9.9 |
| 1650+00 | Beach Face | 1.25 | 0.49 | -0.79 | 4.84 | 0.420 | 0.713 | 1.14 | 0.47 | 0.47 | -0.14 | 0.95 | 0.0 | 0.2 | 0.0 | 6.0 |
| 1650+00 | Swash | 1.26 | 0.49 | -0.57 | 4.09 | 0.417 | 0.710 | 1.15 | 0.48 | 0.48 | -0.13 | 0.96 | 0.0 | 0.1 | 0.0 | 7.2 |
| 1660+00 | Toe of Dune | 1.35 | 0.49 | -0.45 | 4.93 | 0.393 | 0.714 | 1.23 | 0.46 | 0.46 | -0.10 | 1.00 | 0.0 | 0.0 | 0.0 | 7.4 |
| 1660+00 | Beach Face | 1.53 | 0.48 | -0.39 | 4.57 | 0.346 | 0.715 | 1.41 | 0.46 | 0.46 | -0.13 | 1.04 | 0.0 | 0.1 | 0.0 | 5.0 |
| 1660+00 | Swash | 1.16 | 0.50 | -0.49 | 4.28 | 0.449 | 0.709 | 1.05 | 0.48 | 0.48 | -0.06 | 0.99 | 0.0 | 0.1 | 0.0 | 7.8 |
| 1670+00 | Toe of Dune | 1.48 | 0.60 | -0.85 | 5.27 | 0.359 | 0.661 | 1.38 | 0.48 | 0.54 | -0.15 | 1.32 | 0.0 | 0.2 | 0.0 | 4.8 |
| 1670+00 | Beach Face | 1.49 | 0.43 | 0.26 | 4.80 | 0.356 | 0.740 | 1.36 | 0.41 | 0.41 | -0.02 | 1.07 | 0.0 | 0.0 | 0.0 | 4.0 |
| 1670+00 | Swash | 1.32 | 0.46 | -0.28 | 3.46 | 0.400 | 0.727 | 1.20 | 0.46 | 0.45 | -0.10 | 0.94 | 0.0 | 0.0 | 0.0 | 6.1 |
| 1680+00 | Toe of Dune | 1.29 | 0.45 | 0.24 | 4.53 | 0.409 | 0.730 | 1.16 | 0.43 | 0.43 | -0.01 | 1.01 | 0.0 | 0.0 | 0.0 | 6.8 |
| 1680+00 | Beach Face | 1.37 | 0.45 | -0.47 | 4.96 | 0.386 | 0.730 | 1.25 | 0.45 | 0.44 | -0.09 | 0.96 | 0.0 | 0.1 | 0.0 | 5.2 |
| 1680+00 | Swash | 1.15 | 0.52 | -0.46 | 4.02 | 0.449 | 0.699 | 1.04 | 0.51 | 0.50 | -0.09 | 0.98 | 0.0 | 0.1 | 0.0 | 7.6 |
| ALL | Toe of Dune | 1.44 | 0.57 | -0.13 | 4.68 | 0.368 | 0.672 | 1.31 | 0.52 | 0.54 | -0.02 | 1.09 | 0.0 | 0.2 | 0.0 | 4.9 |
| ALL | Beach Face | 1.47 | 0.52 | -0.29 | 4.41 | 0.360 | 0.699 | 1.35 | 0.49 | 0.49 | -0.09 | 1.01 | 0.0 | 0.1 | 0.0 | 4.1 |
| ALL | Swash | 1.33 | 0.59 | -0.49 | 4.35 | 0.398 | 0.665 | 1.22 | 0.56 | 0.56 | -0.09 | 0.99 | 0.0 | 0.2 | 0.0 | 6.0 |
| ALL | ALL | 1.42 | 0.56 | -0.34 | 4.57 | 0.375 | 0.676 | 1.29 | 0.53 | 0.53 | -0.07 | 1.00 | 0.0 | 0.2 | 0.0 | 5.0 |

| Avon Beach Y1Q4 22-Aug-23 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 1550+00 | Toe of Dune | 1.27 | 0.76 | -1.02 | 7.81 | 0.414 | 0.591 | 1.18 | 0.62 | 0.65 | 0.00 | 1.11 | 0.0 | 0.6 | 0.7 | 2.6 |
| 1550+00 | Beach Face | 2.35 | 0.58 | -0.25 | 3.84 | 0.196 | 0.667 | 2.25 | 0.58 | 0.58 | 0.09 | 1.07 | 0.0 | 0.0 | 0.0 | 0.7 |
| 1550+00 | Swash | 1.73 | 0.64 | -0.97 | 4.43 | 0.301 | 0.641 | 1.67 | 0.56 | 0.61 | -0.15 | 1.20 | 0.0 | 0.1 | 0.0 | 2.3 |
| 1560+00 | Toe of Dune | 1.37 | 0.49 | 0.28 | 3.58 | 0.387 | 0.712 | 1.24 | 0.49 | 0.49 | 0.00 | 1.03 | 0.0 | 0.0 | 0.0 | 1.5 |
| 1560+00 | Beach Face | 1.66 | 0.66 | -0.81 | 3.80 | 0.316 | 0.632 | 1.57 | 0.66 | 0.65 | -0.24 | 1.00 | 0.0 | 0.2 | 0.0 | 3.1 |
| 1560+00 | Swash | 1.55 | 0.74 | -0.60 | 3.40 | 0.342 | 0.598 | 1.44 | 0.76 | 0.73 | -0.20 | 0.90 | 0.0 | 0.4 | 0.0 | 3.7 |
| 1570+00 | Toe of Dune | 1.70 | 0.53 | -1.34 | 11.81 | 0.307 | 0.694 | 1.60 | 0.44 | 0.46 | -0.07 | 1.13 | 0.0 | 0.2 | 0.1 | 2.2 |
| 1570+00 | Beach Face | 1.83 | 0.64 | -1.45 | 7.46 | 0.281 | 0.644 | 1.75 | 0.56 | 0.58 | -0.20 | 1.08 | 0.0 | 0.1 | 0.1 | 2.9 |
| 1570+00 | Swash | 1.57 | 0.78 | -0.75 | 3.26 | 0.338 | 0.583 | 1.47 | 0.80 | 0.78 | -0.26 | 0.95 | 0.0 | 0.4 | 0.0 | 3.9 |
| 1580+00 | Toe of Dune | 1.56 | 0.51 | 0.11 | 3.96 | 0.338 | 0.701 | 1.42 | 0.46 | 0.49 | -0.01 | 1.11 | 0.0 | 0.0 | 0.0 | 2.8 |
| 1580+00 | Beach Face | 1.44 | 1.41 | -1.82 | 6.10 | 0.369 | 0.378 | 1.45 | 1.08 | 1.32 | -0.60 | 1.49 | 0.0 | 2.3 | 5.1 | 9.8 |
| 1580+00 | Swash | 0.58 | 0.88 | 0.80 | 2.89 | 0.670 | 0.542 | 0.48 | 0.92 | 0.90 | 0.43 | 1.03 | 0.0 | 0.8 | 0.0 | 20.1 |
| 1590+00 | Toe of Dune | 1.51 | 0.85 | -2.46 | 12.60 | 0.351 | 0.556 | 1.48 | 0.53 | 0.63 | -0.23 | 1.48 | 0.0 | 0.9 | 1.5 | 4.9 |
| 1590+00 | Beach Face | 1.74 | 0.59 | -1.07 | 4.72 | 0.300 | 0.664 | 1.65 | 0.55 | 0.56 | -0.24 | 1.09 | 0.0 | 0.1 | 0.0 | 5.7 |
| 1590+00 | Swash | 1.33 | 0.77 | -0.56 | 3.31 | 0.399 | 0.586 | 1.23 | 0.76 | 0.76 | -0.12 | 0.96 | 0.0 | 0.7 | 0.0 | 8.4 |
| 1600+00 | Toe of Dune | 1.50 | 0.59 | -0.54 | 5.58 | 0.355 | 0.666 | 1.37 | 0.50 | 0.53 | -0.04 | 1.13 | 0.0 | 0.4 | 0.0 | 8.4 |
| 1600+00 | Beach Face | 1.79 | 0.58 | -1.61 | 11.81 | 0.290 | 0.667 | 1.69 | 0.49 | 0.51 | -0.13 | 1.13 | 0.0 | 0.2 | 0.2 | 3.2 |
| 1600+00 | Swash | 0.53 | 0.88 | 0.00 | 2.88 | 0.691 | 0.545 | 0.43 | 0.91 | 0.88 | 0.06 | 0.94 | 0.0 | 2.6 | 0.3 | 17.6 |
| 1610+00 | Toe of Dune | 1.44 | 0.52 | 0.30 | 3.88 | 0.368 | 0.695 | 1.30 | 0.50 | 0.51 | 0.04 | 1.04 | 0.0 | 0.0 | 0.0 | 4.8 |
| 1610+00 | Beach Face | 1.34 | 0.67 | -1.01 | 6.05 | 0.394 | 0.629 | 1.25 | 0.62 | 0.62 | -0.13 | 0.96 | 0.0 | 0.3 | 0.3 | 7.2 |
| 1610+00 | Swash | 1.31 | 0.83 | -1.36 | 5.81 | 0.403 | 0.564 | 1.25 | 0.67 | 0.75 | -0.33 | 1.23 | 0.0 | 2.2 | 0.2 | 5.2 |
| 1620+00 | Toe of Dune | 1.36 | 0.50 | 0.01 | 3.60 | 0.390 | 0.707 | 1.23 | 0.50 | 0.49 | -0.03 | 1.02 | 0.0 | 0.0 | 0.0 | 4.3 |
| 1620+00 | Beach Face | 1.63 | 0.60 | -0.66 | 3.64 | 0.323 | 0.660 | 1.53 | 0.60 | 0.59 | -0.19 | 1.02 | 0.0 | 0.1 | 0.0 | 6.6 |
| 1620+00 | Swash | 1.44 | 0.61 | -1.26 | 6.48 | 0.369 | 0.654 | 1.35 | 0.52 | 0.53 | -0.08 | 1.04 | 0.0 | 0.8 | 0.0 | 5.9 |
| 1630+00 | Toe of Dune | 1.33 | 0.52 | -0.04 | 3.22 | 0.397 | 0.698 | 1.21 | 0.53 | 0.51 | -0.03 | 0.94 | 0.0 | 0.0 | 0.0 | 4.9 |
| 1630+00 | Beach Face | 1.58 | 0.54 | -1.60 | 10.61 | 0.334 | 0.689 | 1.48 | 0.48 | 0.49 | -0.21 | 1.08 | 0.0 | 0.1 | 0.2 | 4.5 |
| 1630+00 | Swash | 1.62 | 0.47 | -0.70 | 4.82 | 0.326 | 0.723 | 1.51 | 0.44 | 0.45 | -0.12 | 1.05 | 0.0 | 0.0 | 0.0 | 4.0 |
| 1640+00 | Toe of Dune | 1.44 | 0.54 | -0.38 | 4.29 | 0.369 | 0.690 | 1.32 | 0.51 | 0.51 | -0.10 | 1.00 | 0.0 | 0.1 | 0.0 | 6.5 |
| 1640+00 | Beach Face | 1.14 | 0.64 | -1.07 | 7.81 | 0.455 | 0.643 | 1.04 | 0.58 | 0.57 | 0.03 | 0.97 | 0.0 | 0.4 | 0.4 | 10.3 |
| 1640+00 | Swash | 1.36 | 0.53 | -0.85 | 5.19 | 0.390 | 0.693 | 1.25 | 0.51 | 0.50 | -0.09 | 0.97 | 0.0 | 0.4 | 0.0 | 6.6 |
| 1650+00 | Toe of Dune | 1.21 | 0.55 | -0.13 | 4.21 | 0.432 | 0.685 | 1.09 | 0.51 | 0.51 | -0.08 | 1.04 | 0.0 | 0.0 | 0.0 | 9.1 |
| 1650+00 | Beach Face | 1.52 | 0.56 | -1.59 | 10.36 | 0.349 | 0.679 | 1.41 | 0.49 | 0.50 | -0.18 | 1.04 | 0.0 | 0.2 | 0.2 | 5.9 |
| 1650+00 | Swash | 1.71 | 0.51 | -0.63 | 3.98 | 0.306 | 0.703 | 1.61 | 0.50 | 0.50 | -0.15 | 1.01 | 0.0 | 0.0 | 0.0 | 4.2 |
| 1660+00 | Toe of Dune | 1.29 | 0.49 | 0.15 | 3.79 | 0.408 | 0.713 | 1.16 | 0.48 | 0.47 | 0.02 | 0.96 | 0.0 | 0.0 | 0.0 | 6.0 |
| 1660+00 | Beach Face | 1.55 | 0.58 | -1.72 | 9.98 | 0.342 | 0.670 | 1.45 | 0.48 | 0.50 | -0.18 | 1.12 | 0.0 | 0.5 | 0.1 | 4.8 |
| 1660+00 | Swash | 1.69 | 0.54 | -1.51 | 8.26 | 0.310 | 0.688 | 1.61 | 0.44 | 0.47 | -0.17 | 1.22 | 0.0 | 0.4 | 0.0 | 3.8 |
| 1670+00 | Toe of Dune | 1.38 | 0.54 | -0.72 | 5.77 | 0.385 | 0.686 | 1.27 | 0.48 | 0.50 | -0.08 | 1.08 | 0.0 | 0.2 | 0.0 | 5.6 |
| 1670+00 | Beach Face | 1.72 | 0.47 | -1.27 | 8.04 | 0.303 | 0.721 | 1.63 | 0.42 | 0.43 | -0.11 | 1.18 | 0.0 | 0.2 | 0.0 | 3.7 |
| 1670+00 | Swash | 1.55 | 0.58 | -1.14 | 6.19 | 0.342 | 0.671 | 1.45 | 0.51 | 0.53 | -0.20 | 1.11 | 0.0 | 0.3 | 0.0 | 5.3 |
| 1680+00 | Toe of Dune | 1.44 | 0.43 | 0.16 | 4.62 | 0.368 | 0.741 | 1.31 | 0.40 | 0.41 | 0.01 | 1.04 | 0.0 | 0.0 | 0.0 | 4.7 |
| 1680+00 | Beach Face | 1.50 | 0.48 | -0.74 | 6.14 | 0.355 | 0.716 | 1.38 | 0.44 | 0.45 | -0.12 | 1.11 | 0.0 | 0.2 | 0.0 | 4.3 |
| 1680+00 | Swash | 1.16 | 0.68 | -1.73 | 8.54 | 0.447 | 0.625 | 1.09 | 0.53 | 0.56 | -0.23 | 1.12 | 0.0 | 1.8 | 0.2 | 8.1 |
| ALL | Toe of Dune | 1.41 | 0.58 | -0.84 | 8.37 | 0.375 | 0.668 | 1.29 | 0.52 | 0.52 | -0.04 | 1.04 | 0.0 | 0.2 | 0.2 | 4.9 |
| ALL | Beach Face | 1.63 | 0.73 | -1.63 | 10.57 | 0.324 | 0.603 | 1.54 | 0.62 | 0.63 | -0.16 | 1.09 | 0.0 | 0.4 | 0.5 | 5.2 |
| ALL | Swash | 1.37 | 0.78 | -0.90 | 4.06 | 0.388 | 0.583 | 1.27 | 0.74 | 0.76 | -0.25 | 1.09 | 0.0 | 0.8 | 0.1 | 7.1 |
| ALL | ALL | 1.47 | 0.71 | -1.12 | 7.04 | 0.361 | 0.611 | 1.37 | 0.63 | 0.65 | -0.14 | 1.10 | 0.0 | 0.4 | 0.2 | 5.7 |

| Buxton Beach AD 16-Jun-22 | | Method of Moments | | | | | | Folk Graphical | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | phi | | | | mm | | phi | | | | | | | | |
| Station | Interval | Mean | STD | Skew | Kurt | Mean | STD | Mean | STD | ISTD | SKEW | Kurt | % | | | |
| 1770+00 | Toe of Dune | 1.96 | 0.35 | 0.17 | 5.65 | 0.257 | 0.787 | 1.85 | 0.27 | 0.31 | 0.12 | 1.37 | 0.0 | 0.0 | 0.0 | 0.9 |
| 1770+00 | Beach Face | 0.99 | 1.10 | -0.25 | 1.81 | 0.505 | 0.467 | 0.86 | 1.24 | 1.11 | -0.16 | 0.68 | 0.0 | 2.3 | 0.0 | 9.5 |
| 1770+00 | Swash | 0.22 | 1.29 | 0.63 | 1.94 | 0.857 | 0.409 | 0.09 | 1.58 | 1.38 | 0.41 | 0.67 | 0.0 | 16.0 | 0.0 | 18.3 |
| 1780+00 | Toe of Dune | 1.71 | 0.53 | -0.61 | 5.59 | 0.306 | 0.693 | 1.61 | 0.43 | 0.48 | -0.21 | 1.23 | 0.0 | 0.1 | 0.0 | 0.0 |
| 1780+00 | Beach Face | 0.64 | 0.99 | 0.21 | 1.86 | 0.641 | 0.503 | 0.53 | 1.14 | 1.02 | 0.16 | 0.71 | 0.0 | 1.3 | 0.0 | 9.9 |
| 1780+00 | Swash | 0.15 | 0.94 | 0.79 | 3.01 | 0.899 | 0.522 | 0.02 | 0.93 | 0.97 | 0.29 | 1.20 | 0.0 | 6.7 | 0.0 | 12.8 |
| 1790+00 | Toe of Dune | 1.71 | 0.53 | -0.61 | 5.59 | 0.306 | 0.693 | 1.61 | 0.43 | 0.48 | -0.21 | 1.23 | 0.0 | 0.1 | 0.0 | 2.2 |
| 1790+00 | Beach Face | 1.54 | 0.59 | -0.70 | 3.81 | 0.344 | 0.662 | 1.44 | 0.57 | 0.57 | -0.27 | 0.98 | 0.0 | 0.1 | 0.0 | 3.7 |
| 1790+00 | Swash | 0.48 | 1.04 | 0.16 | 2.06 | 0.715 | 0.487 | 0.40 | 1.21 | 1.13 | 0.09 | 0.85 | 0.0 | 7.2 | 0.0 | 11.6 |
| 1800+00 | Toe of Dune | 1.35 | 0.59 | 0.30 | 3.44 | 0.392 | 0.663 | 1.22 | 0.57 | 0.57 | 0.09 | 0.92 | 0.0 | 0.0 | 0.0 | 3.9 |
| 1800+00 | Beach Face | 1.38 | 0.62 | -0.55 | 3.74 | 0.384 | 0.652 | 1.26 | 0.60 | 0.59 | -0.15 | 0.92 | 0.0 | 0.2 | 0.0 | 4.3 |
| 1800+00 | Swash | 0.11 | 0.96 | 0.55 | 2.59 | 0.927 | 0.516 | -0.05 | 1.03 | 1.02 | 0.19 | 1.03 | 0.0 | 11.2 | 0.0 | 18.6 |
| 1810+00 | Toe of Dune | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN |
| 1810+00 | Beach Face | 1.41 | 0.62 | 0.14 | 3.71 | 0.377 | 0.649 | 1.26 | 0.57 | 0.60 | 0.08 | 1.05 | 0.0 | 0.1 | 0.0 | 3.5 |
| 1810+00 | Swash | 0.17 | 0.91 | 0.33 | 2.40 | 0.890 | 0.531 | 0.04 | 0.99 | 0.98 | 0.11 | 0.97 | 0.0 | 10.0 | 0.0 | 13.9 |
| 1820+00 | Toe of Dune | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN |
| 1820+00 | Beach Face | 1.26 | 0.61 | -0.67 | 4.24 | 0.417 | 0.657 | 1.17 | 0.59 | 0.58 | -0.15 | 0.91 | 0.0 | 0.3 | 0.0 | 4.5 |
| 1820+00 | Swash | -0.55 | 0.86 | 1.51 | 4.62 | 1.468 | 0.550 | -0.79 | 0.84 | 0.87 | 0.42 | 1.25 | 0.0 | 37.2 | 0.0 | 22.9 |
| 1830+00 | Toe of Dune | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN |
| 1830+00 | Beach Face | 0.70 | 0.78 | 0.35 | 2.58 | 0.617 | 0.583 | 0.61 | 0.88 | 0.81 | 0.24 | 0.91 | 0.0 | 0.7 | 0.0 | 9.3 |
| 1830+00 | Swash | 0.07 | 1.10 | 0.81 | 2.49 | 0.954 | 0.466 | -0.01 | 1.32 | 1.21 | 0.40 | 1.02 | 0.0 | 12.7 | 0.0 | 17.2 |
| 1840+00 | Toe of Dune | 1.48 | 0.71 | -0.36 | 3.81 | 0.359 | 0.611 | 1.33 | 0.60 | 0.68 | -0.07 | 1.26 | 0.0 | 0.1 | 0.0 | 6.9 |
| 1840+00 | Beach Face | 1.49 | 0.65 | -0.58 | 3.20 | 0.355 | 0.637 | 1.38 | 0.66 | 0.64 | -0.22 | 0.94 | 0.0 | 0.1 | 0.0 | 4.4 |
| 1840+00 | Swash | 1.02 | 0.87 | -0.48 | 2.81 | 0.494 | 0.546 | 0.92 | 0.89 | 0.88 | -0.18 | 0.90 | 0.0 | 2.2 | 0.0 | 10.8 |
| 1850+00 | Toe of Dune | 1.27 | 0.48 | 0.41 | 4.94 | 0.415 | 0.717 | 1.15 | 0.46 | 0.45 | 0.02 | 1.14 | 0.0 | 0.0 | 0.0 | 5.3 |
| 1850+00 | Beach Face | 1.45 | 0.63 | -0.43 | 3.14 | 0.365 | 0.648 | 1.32 | 0.62 | 0.62 | -0.09 | 0.94 | 0.0 | 0.0 | 0.0 | 4.7 |
| 1850+00 | Swash | 0.97 | 0.90 | -0.47 | 2.82 | 0.509 | 0.535 | 0.88 | 0.93 | 0.91 | -0.17 | 0.95 | 0.0 | 2.8 | 0.0 | 10.6 |
| 1860+00 | Toe of Dune | 1.51 | 0.60 | 0.38 | 3.34 | 0.352 | 0.660 | 1.33 | 0.55 | 0.58 | 0.10 | 1.03 | 0.0 | 0.0 | 0.0 | 4.7 |
| 1860+00 | Beach Face | 1.38 | 0.61 | -0.44 | 3.45 | 0.384 | 0.654 | 1.25 | 0.60 | 0.59 | -0.09 | 0.89 | 0.0 | 0.1 | 0.0 | 4.8 |
| 1860+00 | Swash | 1.35 | 0.82 | -0.68 | 3.64 | 0.391 | 0.566 | 1.25 | 0.78 | 0.79 | -0.12 | 0.98 | 0.0 | 1.6 | 0.0 | 6.7 |
| 1870+00 | Toe of Dune | 0.97 | 0.58 | -0.17 | 4.51 | 0.512 | 0.670 | 0.84 | 0.51 | 0.54 | -0.03 | 1.09 | 0.0 | 0.4 | 0.0 | 4.5 |
| 1870+00 | Beach Face | 0.70 | 0.71 | 0.22 | 3.17 | 0.618 | 0.611 | 0.56 | 0.69 | 0.71 | 0.08 | 1.04 | 0.0 | 0.9 | 0.0 | 11.6 |
| 1870+00 | Swash | 1.43 | 0.76 | -0.65 | 3.73 | 0.372 | 0.592 | 1.31 | 0.74 | 0.73 | -0.15 | 0.96 | 0.1 | 0.8 | 0.0 | 6.0 |
| 1880+00 | Toe of Dune | 1.64 | 0.53 | 0.26 | 4.13 | 0.321 | 0.691 | 1.50 | 0.47 | 0.51 | -0.05 | 1.15 | 0.1 | 0.0 | 0.0 | 3.7 |
| 1880+00 | Beach Face | 1.55 | 0.65 | -0.23 | 2.96 | 0.343 | 0.639 | 1.42 | 0.66 | 0.64 | -0.02 | 0.93 | 0.0 | 0.1 | 0.0 | 4.3 |
| 1880+00 | Swash | 1.63 | 0.53 | 0.20 | 4.26 | 0.324 | 0.691 | 1.48 | 0.46 | 0.50 | -0.05 | 1.13 | 0.1 | 0.0 | 0.0 | 12.7 |
| 1890+00 | Toe of Dune | 1.76 | 0.49 | -0.26 | 4.10 | 0.296 | 0.710 | 1.64 | 0.46 | 0.47 | -0.16 | 1.05 | 0.0 | 0.0 | 0.0 | 2.7 |
| 1890+00 | Beach Face | 1.73 | 0.55 | -0.79 | 4.29 | 0.302 | 0.684 | 1.63 | 0.52 | 0.53 | -0.24 | 1.03 | 0.0 | 0.0 | 0.0 | 3.6 |
| 1890+00 | Swash | 1.00 | 0.93 | -0.40 | 2.77 | 0.499 | 0.525 | 0.90 | 0.95 | 0.94 | -0.13 | 0.95 | 0.0 | 3.0 | 0.0 | 9.6 |
| 1900+00 | Toe of Dune | 1.43 | 0.48 | -0.03 | 2.54 | 0.371 | 0.717 | 1.30 | 0.49 | 0.48 | -0.04 | 0.90 | 0.1 | -0.2 | 0.0 | 4.1 |
| 1900+00 | Beach Face | 1.77 | 0.54 | -0.66 | 4.48 | 0.293 | 0.686 | 1.67 | 0.52 | 0.53 | -0.16 | 1.02 | 0.0 | 0.1 | 0.0 | 3.5 |
| 1900+00 | Swash | 1.49 | 0.88 | -1.24 | 4.66 | 0.357 | 0.545 | 1.45 | 0.75 | 0.83 | -0.42 | 1.29 | 0.0 | 3.1 | 0.0 | 6.0 |
| 1910+00 | Toe of Dune | 1.30 | 0.51 | -0.07 | 4.08 | 0.406 | 0.702 | 1.19 | 0.52 | 0.50 | -0.01 | 0.95 | 0.0 | 0.0 | 0.0 | 4.7 |
| 1910+00 | Beach Face | 1.49 | 0.59 | -0.85 | 4.89 | 0.355 | 0.665 | 1.37 | 0.53 | 0.54 | -0.17 | 0.96 | 0.0 | 0.3 | 0.0 | 4.4 |
| 1910+00 | Swash | 0.10 | 0.92 | 0.20 | 2.27 | 0.931 | 0.527 | -0.08 | 1.08 | 1.02 | -0.06 | 0.92 | 0.0 | 14.9 | 0.0 | 18.2 |
| 1920+00 | Toe of Dune | 0.95 | 0.68 | -0.57 | 4.33 | 0.518 | 0.624 | 0.84 | 0.58 | 0.63 | -0.14 | 1.15 | 0.0 | 1.7 | 0.0 | 8.5 |
| 1920+00 | Beach Face | 1.56 | 0.53 | -0.50 | 4.50 | 0.338 | 0.690 | 1.44 | 0.47 | 0.49 | -0.26 | 1.07 | 0.0 | 0.0 | 0.0 | 3.3 |
| 1920+00 | Swash | 0.78 | 0.67 | -0.53 | 4.18 | 0.583 | 0.629 | 0.68 | 0.59 | 0.64 | -0.10 | 1.21 | 0.0 | 2.2 | 0.0 | 12.0 |
| **ALL** | **Toe of Dune** | **1.46** | **0.62** | **-0.32** | **4.02** | **0.363** | **0.650** | **1.32** | **0.56** | **0.58** | **-0.05** | **1.00** | **0.0** | **0.2** | **0.0** | **3.3** |
| **ALL** | **Beach Face** | **1.32** | **0.77** | **-0.63** | **3.17** | **0.402** | **0.584** | **1.19** | **0.74** | **0.76** | **-0.21** | **0.99** | **0.0** | **0.4** | **0.0** | **5.6** |
| **ALL** | **Swash** | **0.70** | **1.09** | **-0.16** | **2.02** | **0.616** | **0.468** | **0.57** | **1.25** | **1.17** | **-0.13** | **0.81** | **0.0** | **7.5** | **0.0** | **13.0** |
| **ALL** | **ALL** | **1.15** | **0.92** | **-0.71** | **3.09** | **0.450** | **0.528** | **1.04** | **0.89** | **0.91** | **-0.28** | **1.03** | **0.0** | **2.7** | **0.0** | **7.3** |

| Buxton Beach AD 31-Aug-22 | | Method of Moments | | | | | | Folk Graphical | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | phi | | | | mm | | phi | | | | | | | | |
| Station | Interval | Mean | STD | Skew | Kurt | Mean | STD | Mean | STD | ISTD | SKEW | Kurt | % | | | |
| 1770+00 | Toe of Dune | 1.49 | 0.69 | -0.35 | 3.02 | 0.357 | 0.620 | 1.36 | 0.70 | 0.68 | -0.19 | 0.95 | 0.0 | 0.1 | 0.0 | 5.1 |
| 1770+00 | Beach Face | 1.51 | 0.57 | -0.54 | 3.73 | 0.351 | 0.674 | 1.40 | 0.54 | 0.55 | -0.11 | 0.99 | 0.0 | 0.1 | 0.0 | 4.3 |
| 1770+00 | Swash | 0.40 | 0.87 | 0.12 | 2.50 | 0.757 | 0.548 | 0.27 | 0.93 | 0.92 | -0.01 | 1.00 | 0.0 | 5.1 | 0.0 | 16.5 |
| 1780+00 | Toe of Dune | 1.54 | 0.69 | -0.62 | 3.99 | 0.343 | 0.620 | 1.42 | 0.65 | 0.66 | -0.25 | 1.13 | 0.0 | 0.3 | 0.0 | 3.9 |
| 1780+00 | Beach Face | 1.56 | 0.51 | -0.27 | 4.21 | 0.340 | 0.702 | 1.43 | 0.48 | 0.49 | -0.07 | 1.02 | 0.0 | 0.1 | 0.0 | 3.2 |
| 1780+00 | Swash | 0.67 | 0.97 | -0.23 | 2.20 | 0.630 | 0.511 | 0.54 | 1.08 | 1.03 | -0.15 | 0.86 | 0.0 | 5.3 | 0.0 | 14.0 |
| 1790+00 | Toe of Dune | 1.10 | 0.96 | -0.68 | 2.69 | 0.467 | 0.513 | 0.98 | 0.99 | 0.96 | -0.33 | 0.92 | 0.0 | 3.4 | 0.0 | 8.8 |
| 1790+00 | Beach Face | 1.31 | 0.50 | -0.07 | 4.70 | 0.403 | 0.709 | 1.18 | 0.44 | 0.46 | -0.05 | 1.11 | 0.0 | 0.1 | 0.0 | 4.2 |
| 1790+00 | Swash | 0.44 | 0.95 | 0.00 | 2.21 | 0.736 | 0.517 | 0.32 | 1.04 | 1.01 | -0.08 | 0.89 | 0.0 | 7.1 | 0.0 | 17.4 |
| 1800+00 | Toe of Dune | 1.30 | 0.75 | -0.06 | 2.80 | 0.407 | 0.594 | 1.15 | 0.74 | 0.75 | -0.03 | 0.94 | 0.0 | 0.1 | 0.0 | 4.4 |
| 1800+00 | Beach Face | 1.50 | 0.53 | -0.38 | 4.11 | 0.354 | 0.692 | 1.38 | 0.48 | 0.51 | -0.07 | 1.05 | 0.0 | 0.1 | 0.0 | 4.6 |
| 1800+00 | Swash | 0.78 | 0.94 | -0.50 | 2.53 | 0.584 | 0.520 | 0.66 | 1.01 | 0.99 | -0.31 | 0.99 | 0.0 | 5.6 | 0.0 | 26.6 |
| 1810+00 | Toe of Dune | 1.14 | 0.57 | -0.49 | 4.14 | 0.455 | 0.672 | 1.03 | 0.55 | 0.55 | -0.08 | 0.99 | 0.0 | 0.4 | 0.0 | 7.4 |
| 1810+00 | Beach Face | 1.22 | 0.61 | -0.97 | 5.17 | 0.428 | 0.655 | 1.13 | 0.54 | 0.56 | -0.19 | 1.10 | 0.0 | 0.7 | 0.0 | 7.0 |
| 1810+00 | Swash | 0.82 | 0.83 | -0.62 | 2.90 | 0.567 | 0.564 | 0.71 | 0.85 | 0.84 | -0.26 | 1.03 | 0.0 | 3.0 | 0.0 | 18.6 |
| 1820+00 | Toe of Dune | 1.31 | 0.76 | -1.60 | 6.11 | 0.404 | 0.591 | 1.26 | 0.56 | 0.69 | -0.33 | 1.48 | 0.0 | 3.4 | 0.0 | 5.6 |
| 1820+00 | Beach Face | 1.43 | 0.43 | -0.48 | 6.50 | 0.370 | 0.741 | 1.32 | 0.40 | 0.40 | -0.05 | 1.02 | 0.0 | 0.2 | 0.0 | 4.8 |
| 1820+00 | Swash | 0.83 | 0.76 | -0.75 | 3.27 | 0.561 | 0.592 | 0.73 | 0.74 | 0.75 | -0.27 | 1.09 | 0.0 | 2.5 | 0.0 | 20.8 |
| 1830+00 | Toe of Dune | 1.25 | 0.72 | -0.66 | 4.08 | 0.419 | 0.608 | 1.15 | 0.64 | 0.68 | -0.21 | 1.15 | 0.0 | 0.7 | 0.0 | 4.7 |
| 1830+00 | Beach Face | 1.30 | 0.43 | -0.50 | 4.69 | 0.407 | 0.745 | 1.18 | 0.40 | 0.41 | -0.08 | 1.06 | 0.0 | 0.1 | 0.0 | 5.0 |
| 1830+00 | Swash | 0.65 | 0.76 | -0.62 | 3.01 | 0.637 | 0.591 | 0.54 | 0.76 | 0.77 | -0.25 | 1.06 | 0.0 | 3.7 | 0.0 | 16.1 |
| 1840+00 | Toe of Dune | 1.13 | 0.85 | -0.58 | 3.10 | 0.458 | 0.555 | 1.03 | 0.83 | 0.84 | -0.19 | 0.99 | 0.0 | 1.8 | 0.0 | 7.7 |
| 1840+00 | Beach Face | 1.40 | 0.41 | 0.02 | 4.21 | 0.380 | 0.753 | 1.27 | 0.38 | 0.38 | -0.04 | 0.98 | 0.0 | 0.0 | 0.0 | 4.4 |
| 1840+00 | Swash | 0.66 | 0.70 | -0.38 | 2.93 | 0.634 | 0.615 | 0.54 | 0.72 | 0.71 | -0.14 | 0.95 | 0.0 | 1.6 | 0.0 | 16.1 |
| 1850+00 | Toe of Dune | 1.13 | 0.67 | -0.45 | 3.80 | 0.457 | 0.629 | 1.02 | 0.62 | 0.64 | -0.18 | 1.09 | 0.0 | 0.4 | 0.0 | 5.4 |
| 1850+00 | Beach Face | 1.46 | 0.41 | 0.25 | 3.73 | 0.362 | 0.752 | 1.34 | 0.41 | 0.41 | 0.04 | 0.98 | 0.0 | 0.0 | 0.0 | 4.9 |
| 1850+00 | Swash | 0.66 | 0.76 | -0.44 | 2.98 | 0.634 | 0.589 | 0.54 | 0.77 | 0.76 | -0.18 | 0.98 | 0.0 | 3.1 | 0.0 | 19.8 |
| 1860+00 | Toe of Dune | 1.34 | 0.52 | -0.12 | 3.96 | 0.395 | 0.698 | 1.22 | 0.51 | 0.50 | -0.06 | 0.98 | 0.0 | 0.0 | 0.0 | 4.0 |
| 1860+00 | Beach Face | 1.45 | 0.39 | -0.02 | 4.00 | 0.365 | 0.761 | 1.33 | 0.39 | 0.38 | -0.02 | 0.99 | 0.0 | 0.0 | 0.0 | 4.9 |
| 1860+00 | Swash | 0.88 | 0.66 | -0.76 | 4.10 | 0.544 | 0.632 | 0.79 | 0.60 | 0.63 | -0.18 | 1.14 | 0.0 | 1.8 | 0.0 | 18.0 |
| 1870+00 | Toe of Dune | 1.19 | 1.00 | -0.62 | 2.82 | 0.439 | 0.501 | 1.08 | 1.01 | 1.01 | -0.24 | 1.04 | 0.0 | 3.3 | 0.0 | 9.3 |
| 1870+00 | Beach Face | 1.56 | 0.44 | 0.29 | 4.18 | 0.339 | 0.736 | 1.42 | 0.42 | 0.43 | 0.02 | 1.05 | 0.0 | 0.0 | 0.0 | 4.1 |
| 1870+00 | Swash | 0.95 | 0.88 | -0.50 | 3.25 | 0.519 | 0.543 | 0.85 | 0.84 | 0.89 | -0.16 | 1.21 | 0.0 | 4.1 | 0.0 | 22.0 |
| 1880+00 | Toe of Dune | 1.53 | 0.66 | -0.85 | 4.62 | 0.346 | 0.632 | 1.43 | 0.61 | 0.63 | -0.18 | 1.09 | 0.0 | 0.5 | 0.0 | 5.6 |
| 1880+00 | Beach Face | 1.53 | 0.50 | -0.01 | 4.55 | 0.346 | 0.705 | 1.40 | 0.45 | 0.47 | 0.05 | 1.08 | 0.0 | 0.0 | 0.0 | 4.5 |
| 1880+00 | Swash | 1.05 | 0.56 | -0.82 | 5.14 | 0.484 | 0.678 | 0.95 | 0.50 | 0.52 | -0.10 | 1.14 | 0.0 | 0.7 | 0.0 | 12.7 |
| 1890+00 | Toe of Dune | 1.07 | 0.78 | -0.76 | 3.89 | 0.475 | 0.584 | 0.99 | 0.68 | 0.75 | -0.20 | 1.24 | 0.0 | 1.9 | 0.0 | 16.0 |
| 1890+00 | Beach Face | 1.54 | 0.44 | 0.49 | 4.30 | 0.345 | 0.736 | 1.39 | 0.41 | 0.43 | 0.09 | 1.08 | 0.0 | 0.0 | 0.0 | 4.7 |
| 1890+00 | Swash | 0.88 | 0.75 | -0.64 | 3.49 | 0.544 | 0.596 | 0.78 | 0.72 | 0.74 | -0.21 | 1.17 | 0.0 | 2.0 | 0.0 | 21.5 |
| 1900+00 | Toe of Dune | 0.98 | 0.86 | -0.59 | 3.35 | 0.506 | 0.551 | 0.89 | 0.81 | 0.85 | -0.21 | 1.16 | 0.0 | 3.1 | 0.0 | 28.9 |
| 1900+00 | Beach Face | 0.92 | 0.80 | -0.59 | 3.63 | 0.528 | 0.575 | 0.84 | 0.73 | 0.77 | -0.20 | 1.22 | 0.0 | 2.7 | 0.0 | 4.2 |
| 1900+00 | Swash | 1.27 | 0.71 | -1.11 | 5.52 | 0.413 | 0.611 | 1.21 | 0.55 | 0.64 | -0.19 | 1.42 | 0.0 | 1.6 | 0.0 | 16.2 |
| 1910+00 | Toe of Dune | 0.85 | 0.67 | -0.56 | 4.06 | 0.556 | 0.630 | 0.75 | 0.60 | 0.64 | -0.15 | 1.21 | 0.0 | 1.4 | 0.0 | 22.5 |
| 1910+00 | Beach Face | 1.18 | 0.74 | -0.81 | 4.64 | 0.441 | 0.600 | 1.10 | 0.62 | 0.69 | -0.14 | 1.24 | 0.0 | 1.7 | 0.0 | 18.1 |
| 1910+00 | Swash | 0.90 | 0.67 | -0.66 | 4.10 | 0.535 | 0.628 | 0.81 | 0.61 | 0.64 | -0.17 | 1.15 | 0.0 | 1.5 | 0.0 | 21.9 |
| 1920+00 | Toe of Dune | 0.90 | 0.65 | -0.67 | 3.92 | 0.536 | 0.637 | 0.81 | 0.61 | 0.63 | -0.16 | 1.07 | 0.0 | 1.1 | 0.0 | 6.0 |
| 1920+00 | Beach Face | 0.89 | 0.68 | -0.52 | 5.27 | 0.541 | 0.622 | 0.79 | 0.55 | 0.62 | -0.18 | 1.33 | 0.1 | 2.2 | 0.0 | 14.6 |
| 1920+00 | Swash | 1.05 | 0.53 | -0.08 | 4.28 | 0.482 | 0.693 | 0.94 | 0.50 | 0.51 | -0.02 | 1.02 | 0.0 | 0.1 | 0.0 | 12.2 |
| ALL | Toe of Dune | 1.21 | 0.77 | -0.65 | 3.78 | 0.434 | 0.585 | 1.12 | 0.70 | 0.74 | -0.15 | 1.07 | 0.0 | 1.4 | 0.0 | 9.1 |
| ALL | Beach Face | 1.36 | 0.57 | -0.80 | 5.86 | 0.389 | 0.671 | 1.26 | 0.50 | 0.52 | -0.07 | 1.11 | 0.0 | 0.5 | 0.0 | 6.1 |
| ALL | Swash | 0.81 | 0.81 | -0.55 | 3.11 | 0.572 | 0.572 | 0.69 | 0.80 | 0.80 | -0.22 | 1.07 | 0.0 | 3.0 | 0.0 | 18.1 |
| ALL | ALL | 1.13 | 0.76 | -0.75 | 3.93 | 0.458 | 0.590 | 1.04 | 0.68 | 0.73 | -0.19 | 1.17 | 0.0 | 1.6 | 0.0 | 11.1 |

| Buxton Beach Y1Q1 14-Nov-22 | | Method of Moments | | | | | | Folk Graphical | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | phi | | | | mm | | phi | | | | | % | | | |
| Station | Interval | Mean | STD | Skew | Kurt | Mean | STD | Mean | STD | ISTD | SKEW | Kurt | | | | |
| 1770+00 | Toe of Dune | 1.42 | 0.56 | 0.48 | 3.68 | 0.373 | 0.678 | 1.28 | 0.53 | 0.55 | 0.07 | 1.06 | 0.0 | 0.0 | 0.0 | 3.8 |
| 1770+00 | Beach Face | 1.49 | 0.57 | -0.28 | 4.94 | 0.357 | 0.672 | 1.36 | 0.51 | 0.53 | -0.04 | 1.10 | 0.0 | 0.3 | 0.0 | 2.9 |
| 1770+00 | Swash | 1.76 | 0.68 | -0.74 | 4.19 | 0.296 | 0.625 | 1.66 | 0.63 | 0.65 | -0.18 | 1.10 | 0.0 | 0.3 | 0.0 | 3.1 |
| 1780+00 | Toe of Dune | 1.49 | 0.57 | -0.30 | 3.22 | 0.356 | 0.675 | 1.37 | 0.56 | 0.56 | -0.11 | 1.04 | 0.0 | 0.0 | 0.0 | 2.8 |
| 1780+00 | Beach Face | 1.24 | 0.60 | -0.28 | 4.27 | 0.423 | 0.658 | 1.13 | 0.58 | 0.58 | -0.04 | 0.97 | 0.0 | 0.6 | 0.0 | 4.8 |
| 1780+00 | Swash | 1.75 | 0.59 | -0.52 | 3.93 | 0.296 | 0.662 | 1.65 | 0.55 | 0.57 | -0.13 | 1.09 | 0.0 | 0.1 | 0.0 | 3.0 |
| 1790+00 | Toe of Dune | 1.24 | 0.61 | -0.41 | 4.11 | 0.423 | 0.657 | 1.13 | 0.56 | 0.58 | -0.11 | 1.11 | 0.0 | 0.4 | 0.0 | 5.2 |
| 1790+00 | Beach Face | 1.35 | 0.67 | -0.90 | 6.05 | 0.392 | 0.628 | 1.25 | 0.56 | 0.59 | -0.05 | 1.15 | 0.0 | 1.8 | 0.0 | 5.0 |
| 1790+00 | Swash | 1.65 | 0.50 | -0.60 | 5.10 | 0.319 | 0.707 | 1.54 | 0.48 | 0.48 | -0.06 | 1.06 | 0.0 | 0.2 | 0.0 | 3.0 |
| 1800+00 | Toe of Dune | 1.35 | 0.60 | -0.42 | 3.34 | 0.393 | 0.661 | 1.23 | 0.58 | 0.60 | -0.20 | 1.15 | 0.0 | 0.0 | 0.0 | 3.6 |
| 1800+00 | Beach Face | 1.18 | 0.60 | -0.34 | 3.57 | 0.440 | 0.658 | 1.07 | 0.59 | 0.60 | -0.10 | 1.02 | 0.0 | 0.3 | 0.0 | 4.7 |
| 1800+00 | Swash | 1.65 | 0.51 | -0.39 | 3.61 | 0.318 | 0.703 | 1.54 | 0.51 | 0.51 | -0.06 | 1.02 | 0.0 | 0.0 | 0.0 | 2.9 |
| 1810+00 | Toe of Dune | 0.89 | 0.71 | 0.15 | 2.55 | 0.539 | 0.610 | 0.75 | 0.76 | 0.72 | 0.03 | 0.88 | 0.0 | 0.2 | 0.0 | 10.0 |
| 1810+00 | Beach Face | 1.13 | 0.76 | -0.36 | 3.18 | 0.458 | 0.591 | 1.02 | 0.75 | 0.75 | -0.13 | 1.01 | 0.0 | 1.1 | 0.0 | 8.3 |
| 1810+00 | Swash | 1.75 | 0.49 | -0.65 | 4.52 | 0.296 | 0.711 | 1.65 | 0.47 | 0.47 | -0.10 | 1.04 | 0.0 | 0.0 | 0.0 | 2.5 |
| 1820+00 | Toe of Dune | 1.73 | 0.47 | 0.31 | 3.83 | 0.302 | 0.722 | 1.60 | 0.44 | 0.46 | 0.11 | 1.10 | 0.0 | 0.0 | 0.0 | 3.2 |
| 1820+00 | Beach Face | 1.90 | 0.40 | -0.53 | 6.74 | 0.269 | 0.759 | 1.78 | 0.39 | 0.38 | 0.02 | 0.94 | 0.0 | 0.1 | 0.0 | 1.7 |
| 1820+00 | Swash | 1.64 | 0.71 | -1.19 | 3.96 | 0.320 | 0.612 | 1.60 | 0.55 | 0.65 | -0.34 | 1.63 | 0.0 | 0.1 | 0.0 | 5.4 |
| 1830+00 | Toe of Dune | 1.63 | 0.55 | 0.38 | 4.35 | 0.323 | 0.683 | 1.50 | 0.48 | 0.52 | 0.12 | 1.23 | 0.0 | 0.0 | 0.0 | 5.6 |
| 1830+00 | Beach Face | 1.34 | 0.60 | -0.48 | 5.75 | 0.396 | 0.662 | 1.22 | 0.50 | 0.53 | -0.03 | 1.22 | 0.0 | 0.8 | 0.0 | 8.8 |
| 1830+00 | Swash | 1.72 | 0.44 | -0.05 | 3.61 | 0.303 | 0.739 | 1.60 | 0.44 | 0.44 | 0.07 | 0.99 | 0.0 | 0.0 | 0.0 | 3.2 |
| 1840+00 | Toe of Dune | 1.43 | 0.58 | 0.03 | 3.73 | 0.371 | 0.668 | 1.30 | 0.54 | 0.57 | -0.03 | 1.14 | 0.0 | 0.0 | 0.0 | 6.4 |
| 1840+00 | Beach Face | 1.57 | 0.43 | 0.24 | 5.31 | 0.337 | 0.744 | 1.44 | 0.39 | 0.40 | 0.08 | 1.14 | 0.0 | 0.0 | 0.0 | 4.3 |
| 1840+00 | Swash | 1.51 | 0.61 | -0.17 | 2.82 | 0.351 | 0.657 | 1.40 | 0.64 | 0.62 | 0.04 | 0.90 | 0.0 | 0.1 | 0.0 | 6.8 |
| 1850+00 | Toe of Dune | 1.68 | 0.51 | 0.45 | 3.93 | 0.312 | 0.703 | 1.56 | 0.47 | 0.49 | 0.16 | 1.12 | 0.0 | 0.0 | 0.0 | 4.1 |
| 1850+00 | Beach Face | 1.55 | 0.49 | 0.33 | 4.73 | 0.340 | 0.713 | 1.41 | 0.45 | 0.47 | 0.11 | 1.12 | 0.0 | 0.1 | 0.0 | 4.3 |
| 1850+00 | Swash | 1.26 | 0.68 | -0.57 | 3.38 | 0.417 | 0.623 | 1.15 | 0.69 | 0.69 | -0.16 | 1.04 | 0.0 | 0.6 | 0.0 | 9.9 |
| 1860+00 | Toe of Dune | 1.47 | 0.61 | -0.01 | 3.19 | 0.360 | 0.655 | 1.35 | 0.61 | 0.61 | 0.06 | 1.03 | 0.0 | 0.0 | 0.0 | 6.9 |
| 1860+00 | Beach Face | 1.71 | 0.52 | 0.09 | 5.38 | 0.305 | 0.697 | 1.59 | 0.47 | 0.49 | 0.15 | 1.12 | 0.0 | 0.2 | 0.0 | 3.7 |
| 1860+00 | Swash | 1.89 | 0.45 | 0.19 | 2.54 | 0.271 | 0.732 | 1.76 | 0.49 | 0.46 | 0.12 | 0.87 | 0.0 | 0.0 | 0.0 | 2.9 |
| 1870+00 | Toe of Dune | 1.44 | 0.62 | 0.20 | 3.90 | 0.369 | 0.651 | 1.30 | 0.57 | 0.60 | 0.11 | 1.14 | 0.0 | 0.2 | 0.0 | 8.7 |
| 1870+00 | Beach Face | 1.67 | 0.76 | -0.97 | 5.53 | 0.313 | 0.592 | 1.59 | 0.66 | 0.68 | -0.11 | 1.09 | 0.1 | 1.6 | 0.0 | 8.8 |
| 1870+00 | Swash | 1.73 | 0.43 | 0.00 | 5.10 | 0.301 | 0.745 | 1.61 | 0.39 | 0.40 | 0.21 | 1.15 | 0.0 | 0.0 | 0.0 | 4.0 |
| 1880+00 | Toe of Dune | 1.62 | 0.58 | -0.12 | 2.76 | 0.325 | 0.667 | 1.50 | 0.61 | 0.60 | -0.04 | 1.03 | 0.0 | 0.0 | 0.0 | 4.6 |
| 1880+00 | Beach Face | 1.70 | 0.48 | 0.45 | 3.92 | 0.309 | 0.719 | 1.57 | 0.45 | 0.46 | 0.17 | 1.11 | 0.0 | 0.0 | 0.0 | 3.8 |
| 1880+00 | Swash | 1.51 | 0.49 | -0.48 | 4.68 | 0.351 | 0.714 | 1.40 | 0.45 | 0.46 | 0.02 | 1.10 | 0.0 | 0.1 | 0.0 | 6.0 |
| 1890+00 | Toe of Dune | 1.53 | 0.56 | 0.05 | 4.04 | 0.347 | 0.677 | 1.39 | 0.53 | 0.54 | 0.04 | 1.07 | 0.0 | 0.1 | 0.0 | 6.2 |
| 1890+00 | Beach Face | 1.60 | 0.49 | 0.32 | 4.75 | 0.329 | 0.711 | 1.46 | 0.43 | 0.47 | 0.13 | 1.20 | 0.0 | 0.1 | 0.0 | 4.8 |
| 1890+00 | Swash | 1.20 | 0.57 | -1.03 | 7.03 | 0.436 | 0.672 | 1.10 | 0.45 | 0.49 | 0.02 | 1.28 | 0.0 | 1.5 | 0.0 | 11.3 |
| 1900+00 | Toe of Dune | 1.57 | 0.70 | -0.40 | 4.61 | 0.337 | 0.615 | 1.47 | 0.61 | 0.64 | 0.09 | 1.16 | 0.0 | 0.7 | 0.0 | 7.1 |
| 1900+00 | Beach Face | 0.89 | 0.82 | -0.24 | 3.45 | 0.538 | 0.567 | 0.78 | 0.75 | 0.81 | -0.08 | 1.23 | 0.0 | 3.7 | 0.0 | 17.8 |
| 1900+00 | Swash | 1.16 | 0.86 | -1.05 | 4.35 | 0.448 | 0.552 | 1.12 | 0.70 | 0.88 | -0.22 | 1.51 | 0.0 | 5.7 | 0.0 | 19.9 |
| 1910+00 | Toe of Dune | 1.70 | 0.61 | -0.11 | 4.65 | 0.307 | 0.657 | 1.59 | 0.57 | 0.58 | 0.11 | 1.11 | 0.0 | 0.3 | 0.0 | 4.0 |
| 1910+00 | Beach Face | 1.63 | 0.48 | 0.45 | 4.65 | 0.324 | 0.715 | 1.49 | 0.44 | 0.47 | 0.14 | 1.14 | 0.0 | 0.1 | 0.0 | 3.5 |
| 1910+00 | Swash | -0.22 | 0.74 | 0.32 | 2.55 | 1.164 | 0.598 | -0.40 | 0.88 | 0.81 | -0.02 | 0.79 | 0.0 | 28.1 | 0.0 | 12.3 |
| 1920+00 | Toe of Dune | 1.52 | 0.60 | 0.08 | 3.26 | 0.348 | 0.660 | 1.40 | 0.59 | 0.60 | 0.04 | 1.05 | 0.0 | 0.0 | 0.0 | 5.7 |
| 1920+00 | Beach Face | 1.40 | 0.51 | -0.08 | 5.04 | 0.379 | 0.700 | 1.27 | 0.46 | 0.48 | -0.02 | 1.12 | 0.0 | 0.1 | 0.0 | 6.7 |
| 1920+00 | Swash | 1.79 | 0.38 | 0.66 | 4.35 | 0.289 | 0.767 | 1.65 | 0.39 | 0.38 | 0.22 | 1.08 | 0.0 | 0.0 | 0.0 | 3.4 |
| ALL | Toe of Dune | 1.48 | 0.63 | -0.17 | 3.79 | 0.358 | 0.648 | 1.36 | 0.58 | 0.60 | -0.03 | 1.13 | 0.0 | 0.1 | 0.0 | 5.5 |
| ALL | Beach Face | 1.46 | 0.64 | -0.60 | 5.04 | 0.364 | 0.643 | 1.34 | 0.55 | 0.59 | -0.06 | 1.18 | 0.0 | 0.7 | 0.0 | 6.2 |
| ALL | Swash | 1.53 | 0.71 | -1.21 | 5.66 | 0.346 | 0.613 | 1.47 | 0.59 | 0.64 | -0.16 | 1.27 | 0.0 | 1.6 | 0.0 | 6.1 |
| ALL | ALL | 1.49 | 0.66 | -0.71 | 4.93 | 0.356 | 0.634 | 1.39 | 0.58 | 0.61 | -0.08 | 1.16 | 0.0 | 0.8 | 0.0 | 5.9 |

| Buxton Beach Y1Q2 22-Feb-23 | | Method of Moments | | | | | | Folk Graphical | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | phi | | | | mm | | phi | | | | | % | | | |
| Station | Interval | Mean | STD | Skew | Kurt | Mean | STD | Mean | STD | ISTD | SKEW | Kurt | | | | |
| 1770+00 | Toe of Dune | 1.38 | 0.57 | 0.29 | 3.11 | 0.385 | 0.675 | 1.24 | 0.57 | 0.57 | 0.09 | 0.97 | 0.0 | 0.0 | 0.0 | 4.1 |
| 1770+00 | Beach Face | 1.03 | 0.73 | -0.36 | 2.92 | 0.488 | 0.601 | 0.93 | 0.75 | 0.73 | -0.08 | 0.94 | 0.0 | 0.6 | 0.0 | 9.4 |
| 1770+00 | Swash | 1.81 | 0.49 | -0.05 | 4.13 | 0.285 | 0.712 | 1.69 | 0.49 | 0.48 | 0.01 | 0.99 | 0.0 | 0.1 | 0.0 | 2.4 |
| 1780+00 | Toe of Dune | 1.27 | 0.59 | 0.02 | 3.35 | 0.416 | 0.665 | 1.14 | 0.59 | 0.58 | -0.01 | 0.99 | 0.0 | 0.0 | 0.0 | 4.2 |
| 1780+00 | Beach Face | 1.62 | 0.53 | -0.19 | 4.00 | 0.325 | 0.693 | 1.50 | 0.51 | 0.51 | -0.05 | 1.06 | 0.0 | 0.0 | 0.0 | 3.0 |
| 1780+00 | Swash | 1.25 | 0.43 | 0.52 | 3.65 | 0.420 | 0.743 | 1.12 | 0.43 | 0.43 | 0.12 | 1.06 | 0.0 | 0.0 | 0.0 | 5.4 |
| 1790+00 | Toe of Dune | 1.20 | 0.77 | -0.42 | 3.37 | 0.436 | 0.587 | 1.10 | 0.74 | 0.75 | -0.11 | 0.98 | 0.0 | 1.0 | 0.0 | 6.3 |
| 1790+00 | Beach Face | 1.78 | 0.58 | -0.73 | 4.99 | 0.291 | 0.670 | 1.68 | 0.51 | 0.54 | -0.11 | 1.20 | 0.0 | 0.1 | 0.0 | 2.6 |
| 1790+00 | Swash | 1.71 | 0.50 | -0.40 | 4.78 | 0.306 | 0.708 | 1.60 | 0.47 | 0.48 | -0.04 | 1.03 | 0.0 | 0.1 | 0.0 | 3.2 |
| 1800+00 | Toe of Dune | 0.84 | 0.81 | -0.06 | 2.58 | 0.559 | 0.571 | 0.71 | 0.86 | 0.83 | -0.06 | 0.92 | 0.0 | 0.7 | 0.0 | 9.8 |
| 1800+00 | Beach Face | 1.45 | 0.54 | -0.44 | 4.69 | 0.366 | 0.688 | 1.34 | 0.49 | 0.51 | -0.05 | 1.10 | 0.0 | 0.1 | 0.0 | 5.3 |
| 1800+00 | Swash | 2.09 | 0.43 | -0.19 | 4.53 | 0.234 | 0.740 | 1.97 | 0.40 | 0.41 | -0.02 | 1.04 | 0.0 | 0.0 | 0.0 | 1.6 |
| 1810+00 | Toe of Dune | 1.28 | 0.60 | -0.60 | 4.39 | 0.411 | 0.658 | 1.17 | 0.56 | 0.58 | -0.12 | 1.11 | 0.0 | 0.3 | 0.0 | 4.9 |
| 1810+00 | Beach Face | 1.40 | 0.54 | -0.34 | 4.07 | 0.379 | 0.688 | 1.28 | 0.51 | 0.52 | -0.09 | 1.09 | 0.0 | 0.0 | 0.0 | 5.0 |
| 1810+00 | Swash | 1.91 | 0.44 | 0.01 | 4.04 | 0.266 | 0.735 | 1.79 | 0.42 | 0.43 | 0.03 | 1.04 | 0.0 | 0.0 | 0.0 | 2.0 |
| 1820+00 | Toe of Dune | 1.49 | 0.55 | -0.41 | 4.23 | 0.356 | 0.685 | 1.37 | 0.49 | 0.52 | -0.08 | 1.11 | 0.0 | 0.0 | 0.0 | 4.2 |
| 1820+00 | Beach Face | 1.43 | 0.49 | -0.33 | 3.42 | 0.372 | 0.712 | 1.31 | 0.47 | 0.49 | -0.07 | 1.08 | 0.0 | 0.0 | 0.0 | 5.2 |
| 1820+00 | Swash | 1.16 | 0.55 | -0.32 | 3.71 | 0.447 | 0.684 | 1.05 | 0.55 | 0.53 | -0.06 | 0.96 | 0.0 | 0.2 | 0.0 | 6.7 |
| 1830+00 | Toe of Dune | 1.66 | 0.50 | -0.37 | 5.98 | 0.316 | 0.705 | 1.55 | 0.44 | 0.46 | 0.03 | 1.13 | 0.0 | 0.2 | 0.0 | 3.6 |
| 1830+00 | Beach Face | 1.15 | 0.44 | 0.07 | 3.57 | 0.452 | 0.735 | 1.02 | 0.45 | 0.44 | 0.03 | 0.97 | 0.0 | 0.0 | 0.0 | 6.6 |
| 1830+00 | Swash | 1.08 | 0.60 | -0.87 | 4.91 | 0.474 | 0.659 | 0.99 | 0.53 | 0.56 | -0.14 | 1.13 | 0.0 | 0.9 | 0.0 | 6.7 |
| 1840+00 | Toe of Dune | 1.64 | 0.44 | 0.45 | 4.42 | 0.320 | 0.737 | 1.51 | 0.39 | 0.41 | 0.07 | 1.08 | 0.0 | 0.0 | 0.0 | 3.7 |
| 1840+00 | Beach Face | 1.04 | 0.47 | 0.11 | 4.39 | 0.485 | 0.721 | 0.91 | 0.45 | 0.46 | 0.06 | 1.02 | 0.0 | 0.1 | 0.0 | 8.3 |
| 1840+00 | Swash | 1.31 | 0.49 | -0.27 | 4.27 | 0.404 | 0.711 | 1.19 | 0.48 | 0.47 | -0.05 | 0.99 | 0.0 | 0.1 | 0.0 | 6.3 |
| 1850+00 | Toe of Dune | 1.64 | 0.50 | -0.17 | 5.50 | 0.320 | 0.707 | 1.53 | 0.43 | 0.46 | 0.08 | 1.11 | 0.0 | 0.1 | 0.0 | 3.6 |
| 1850+00 | Beach Face | 1.49 | 0.43 | -0.19 | 4.17 | 0.357 | 0.741 | 1.37 | 0.43 | 0.43 | -0.01 | 1.01 | 0.0 | 0.0 | 0.0 | 3.8 |
| 1850+00 | Swash | 1.38 | 0.50 | -0.71 | 6.24 | 0.383 | 0.709 | 1.28 | 0.45 | 0.46 | -0.04 | 1.05 | 0.0 | 0.3 | 0.0 | 4.7 |
| 1860+00 | Toe of Dune | 1.05 | 0.82 | -0.47 | 3.32 | 0.484 | 0.568 | 0.92 | 0.79 | 0.81 | -0.25 | 1.14 | 0.0 | 1.3 | 0.0 | 6.7 |
| 1860+00 | Beach Face | 1.57 | 0.39 | 0.10 | 5.03 | 0.336 | 0.762 | 1.45 | 0.37 | 0.37 | 0.03 | 1.02 | 0.0 | 0.0 | 0.0 | 2.9 |
| 1860+00 | Swash | 1.33 | 0.50 | -0.28 | 4.69 | 0.399 | 0.706 | 1.21 | 0.47 | 0.48 | -0.04 | 1.04 | 0.0 | 0.1 | 0.0 | 6.4 |
| 1870+00 | Toe of Dune | 1.68 | 0.45 | 0.36 | 4.38 | 0.313 | 0.730 | 1.55 | 0.42 | 0.43 | 0.10 | 1.06 | 0.0 | 0.0 | 0.0 | 2.8 |
| 1870+00 | Beach Face | 1.08 | 0.42 | 0.17 | 4.50 | 0.473 | 0.749 | 0.95 | 0.39 | 0.40 | 0.05 | 1.01 | 0.0 | 0.0 | 0.0 | 9.4 |
| 1870+00 | Swash | 1.32 | 0.46 | -0.22 | 5.34 | 0.402 | 0.725 | 1.19 | 0.43 | 0.44 | 0.00 | 1.05 | 0.0 | 0.1 | 0.0 | 7.2 |
| 1880+00 | Toe of Dune | 1.54 | 0.48 | -0.11 | 5.31 | 0.345 | 0.717 | 1.41 | 0.43 | 0.45 | 0.02 | 1.14 | 0.0 | 0.1 | 0.0 | 5.7 |
| 1880+00 | Beach Face | 1.83 | 0.51 | 0.35 | 3.67 | 0.282 | 0.701 | 1.70 | 0.50 | 0.51 | 0.13 | 1.11 | 0.0 | 0.0 | 0.0 | 2.9 |
| 1880+00 | Swash | 1.09 | 0.48 | 0.80 | 4.27 | 0.469 | 0.718 | 0.95 | 0.45 | 0.46 | 0.24 | 1.12 | 0.0 | 0.0 | 0.0 | 10.4 |
| 1890+00 | Toe of Dune | 1.38 | 0.59 | -0.61 | 5.75 | 0.384 | 0.663 | 1.27 | 0.52 | 0.54 | -0.02 | 1.16 | 0.0 | 0.7 | 0.0 | 8.8 |
| 1890+00 | Beach Face | 1.10 | 1.01 | -1.79 | 6.55 | 0.466 | 0.498 | 1.11 | 0.67 | 0.88 | -0.39 | 1.85 | 0.0 | 3.5 | 2.5 | 21.5 |
| 1890+00 | Swash | 1.58 | 0.38 | 0.45 | 5.40 | 0.334 | 0.769 | 1.46 | 0.34 | 0.36 | 0.19 | 1.09 | 0.0 | 0.0 | 0.0 | 4.3 |
| 1900+00 | Toe of Dune | 1.68 | 0.66 | 0.04 | 3.51 | 0.311 | 0.634 | 1.57 | 0.64 | 0.65 | 0.11 | 1.15 | 0.0 | 0.0 | 0.0 | 7.5 |
| 1900+00 | Beach Face | 1.50 | 0.42 | 0.13 | 4.23 | 0.353 | 0.750 | 1.37 | 0.41 | 0.41 | 0.04 | 1.07 | 0.0 | 0.0 | 0.0 | 4.8 |
| 1900+00 | Swash | 1.73 | 0.41 | -0.04 | 4.51 | 0.302 | 0.754 | 1.60 | 0.39 | 0.40 | 0.09 | 1.08 | 0.0 | 0.0 | 0.0 | 3.5 |
| 1910+00 | Toe of Dune | 1.62 | 0.55 | 0.13 | 3.18 | 0.326 | 0.683 | 1.49 | 0.54 | 0.55 | 0.08 | 1.09 | 0.0 | 0.0 | 0.0 | 4.4 |
| 1910+00 | Beach Face | 1.28 | 0.76 | -1.04 | 5.06 | 0.411 | 0.590 | 1.20 | 0.62 | 0.70 | -0.17 | 1.39 | 0.0 | 2.4 | 0.0 | 10.6 |
| 1910+00 | Swash | 1.85 | 0.43 | -0.44 | 4.97 | 0.277 | 0.742 | 1.74 | 0.42 | 0.41 | 0.10 | 0.94 | 0.0 | 0.0 | 0.0 | 3.2 |
| 1920+00 | Toe of Dune | 1.59 | 0.48 | 0.15 | 4.08 | 0.331 | 0.717 | 1.46 | 0.44 | 0.46 | 0.08 | 1.14 | 0.0 | 0.0 | 0.0 | 4.3 |
| 1920+00 | Beach Face | 1.51 | 0.61 | -0.19 | 3.70 | 0.351 | 0.656 | 1.39 | 0.57 | 0.59 | -0.02 | 1.11 | 0.0 | 0.0 | 0.0 | 5.8 |
| 1920+00 | Swash | 1.62 | 0.48 | -0.21 | 4.50 | 0.326 | 0.717 | 1.50 | 0.44 | 0.46 | 0.07 | 1.09 | 0.0 | 0.0 | 0.0 | 4.4 |
| ALL | Toe of Dune | 1.43 | 0.64 | -0.56 | 4.52 | 0.370 | 0.640 | 1.32 | 0.56 | 0.60 | -0.10 | 1.19 | 0.0 | 0.3 | 0.0 | 5.3 |
| ALL | Beach Face | 1.39 | 0.63 | -0.91 | 6.98 | 0.381 | 0.648 | 1.28 | 0.55 | 0.57 | -0.06 | 1.08 | 0.0 | 0.4 | 0.2 | 4.9 |
| ALL | Swash | 1.51 | 0.57 | -0.25 | 3.99 | 0.350 | 0.676 | 1.39 | 0.54 | 0.55 | -0.01 | 1.03 | 0.0 | 0.1 | 0.0 | 6.4 |
| ALL | ALL | 1.45 | 0.62 | -0.62 | 5.41 | 0.367 | 0.653 | 1.33 | 0.55 | 0.57 | -0.06 | 1.09 | 0.0 | 0.3 | 0.1 | 5.6 |

| Buxton Beach Y1Q3 10-May-23 | | Method of Moments | | | | | | Folk Graphical | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | phi | | | | mm | | phi | | | | | % | | | |
| Station | Interval | Mean | STD | Skew | Kurt | Mean | STD | Mean | STD | ISTD | SKEW | Kurt | | | | |
| 1770+00 | Toe of Dune | 1.73 | 0.55 | 0.13 | 3.34 | 0.302 | 0.684 | 1.60 | 0.53 | 0.54 | 0.03 | 1.05 | 0.0 | 0.0 | 0.0 | 3.2 |
| 1770+00 | Beach Face | 1.18 | 0.85 | -0.49 | 2.85 | 0.443 | 0.553 | 1.08 | 0.86 | 0.85 | -0.17 | 0.93 | 0.0 | 1.2 | 0.0 | 6.2 |
| 1770+00 | Swash | 1.61 | 0.46 | 0.07 | 3.72 | 0.327 | 0.729 | 1.49 | 0.44 | 0.45 | 0.00 | 1.03 | 0.0 | 0.0 | 0.0 | 3.2 |
| 1780+00 | Toe of Dune | 1.17 | 0.80 | -0.43 | 3.71 | 0.443 | 0.576 | 1.08 | 0.73 | 0.76 | -0.09 | 1.08 | 0.0 | 1.8 | 0.0 | 7.1 |
| 1780+00 | Beach Face | 2.03 | 0.43 | -1.00 | 7.82 | 0.245 | 0.741 | 1.92 | 0.40 | 0.41 | -0.07 | 1.03 | 0.0 | 0.1 | 0.0 | 1.8 |
| 1780+00 | Swash | 1.77 | 0.40 | 0.03 | 3.85 | 0.292 | 0.757 | 1.65 | 0.40 | 0.40 | -0.03 | 1.04 | 0.0 | 0.0 | 0.0 | 2.5 |
| 1790+00 | Toe of Dune | 1.35 | 0.86 | -0.29 | 2.55 | 0.393 | 0.552 | 1.22 | 0.89 | 0.87 | -0.19 | 0.91 | 0.0 | 0.1 | 0.0 | 6.3 |
| 1790+00 | Beach Face | 2.09 | 0.35 | -0.12 | 3.98 | 0.235 | 0.785 | 1.97 | 0.34 | 0.34 | 0.04 | 0.94 | 0.0 | 0.0 | 0.0 | 1.3 |
| 1790+00 | Swash | 2.01 | 0.45 | -1.46 | 8.21 | 0.249 | 0.730 | 1.91 | 0.38 | 0.39 | -0.06 | 1.08 | 0.0 | 0.0 | 0.0 | 1.7 |
| 1800+00 | Toe of Dune | 1.10 | 0.86 | -0.57 | 3.15 | 0.466 | 0.550 | 1.01 | 0.82 | 0.86 | -0.17 | 1.10 | 0.0 | 1.9 | 0.0 | 10.1 |
| 1800+00 | Beach Face | 1.65 | 0.83 | -1.14 | 4.27 | 0.318 | 0.564 | 1.57 | 0.76 | 0.79 | -0.36 | 1.24 | 0.0 | 0.9 | 0.0 | 5.1 |
| 1800+00 | Swash | 1.90 | 0.46 | -0.65 | 4.56 | 0.268 | 0.727 | 1.79 | 0.45 | 0.45 | -0.07 | 1.02 | 0.0 | 0.0 | 0.0 | 2.7 |
| 1810+00 | Toe of Dune | 1.28 | 0.60 | -0.60 | 4.39 | 0.411 | 0.658 | 1.17 | 0.56 | 0.58 | -0.12 | 1.11 | 0.0 | 0.3 | 0.0 | 4.9 |
| 1810+00 | Beach Face | 1.40 | 0.54 | -0.34 | 4.07 | 0.379 | 0.688 | 1.28 | 0.51 | 0.52 | -0.09 | 1.09 | 0.0 | 0.0 | 0.0 | 5.0 |
| 1810+00 | Swash | 1.91 | 0.44 | 0.01 | 4.04 | 0.266 | 0.735 | 1.79 | 0.42 | 0.43 | 0.03 | 1.04 | 0.0 | 0.0 | 0.0 | 2.0 |
| 1820+00 | Toe of Dune | 1.49 | 0.55 | -0.41 | 4.23 | 0.356 | 0.685 | 1.37 | 0.49 | 0.52 | -0.08 | 1.11 | 0.0 | 0.0 | 0.0 | 4.2 |
| 1820+00 | Beach Face | 1.43 | 0.49 | -0.33 | 3.42 | 0.372 | 0.712 | 1.31 | 0.47 | 0.49 | -0.07 | 1.08 | 0.0 | 0.0 | 0.0 | 5.2 |
| 1820+00 | Swash | 1.16 | 0.55 | -0.32 | 3.71 | 0.447 | 0.684 | 1.05 | 0.55 | 0.53 | -0.06 | 0.96 | 0.0 | 0.2 | 0.0 | 6.7 |
| 1830+00 | Toe of Dune | 1.44 | 0.54 | -0.25 | 4.38 | 0.369 | 0.689 | 1.31 | 0.51 | 0.51 | -0.06 | 1.00 | 0.0 | 0.1 | 0.0 | 5.2 |
| 1830+00 | Beach Face | 1.69 | 0.58 | -0.55 | 3.76 | 0.310 | 0.670 | 1.59 | 0.56 | 0.57 | -0.15 | 1.05 | 0.0 | 0.1 | 0.0 | 4.1 |
| 1830+00 | Swash | 1.52 | 0.71 | -0.79 | 3.67 | 0.348 | 0.611 | 1.42 | 0.68 | 0.70 | -0.25 | 1.18 | 0.0 | 0.2 | 0.0 | 5.2 |
| 1840+00 | Toe of Dune | 1.39 | 0.57 | -0.32 | 4.19 | 0.382 | 0.675 | 1.27 | 0.53 | 0.55 | -0.06 | 1.11 | 0.0 | 0.1 | 0.0 | 6.2 |
| 1840+00 | Beach Face | 1.02 | 0.61 | -0.68 | 3.68 | 0.493 | 0.657 | 0.93 | 0.55 | 0.59 | -0.17 | 1.17 | 0.0 | 0.3 | 0.0 | 11.9 |
| 1840+00 | Swash | 1.23 | 0.57 | -0.67 | 4.56 | 0.427 | 0.676 | 1.12 | 0.54 | 0.54 | -0.13 | 0.99 | 0.0 | 0.5 | 0.0 | 6.5 |
| 1850+00 | Toe of Dune | 1.36 | 0.64 | 0.11 | 3.49 | 0.390 | 0.644 | 1.23 | 0.60 | 0.62 | -0.01 | 1.11 | 0.0 | 0.0 | 0.0 | 8.3 |
| 1850+00 | Beach Face | 1.13 | 0.58 | -0.74 | 4.02 | 0.457 | 0.671 | 1.03 | 0.54 | 0.56 | -0.17 | 1.14 | 0.0 | 0.2 | 0.0 | 7.6 |
| 1850+00 | Swash | 1.22 | 0.54 | -0.48 | 3.86 | 0.430 | 0.685 | 1.10 | 0.54 | 0.53 | -0.12 | 0.96 | 0.0 | 0.2 | 0.0 | 6.1 |
| 1860+00 | Toe of Dune | 1.45 | 0.60 | -0.40 | 4.88 | 0.365 | 0.661 | 1.33 | 0.52 | 0.55 | -0.03 | 1.12 | 0.0 | 0.3 | 0.0 | 6.6 |
| 1860+00 | Beach Face | 1.38 | 0.59 | -0.39 | 2.84 | 0.384 | 0.663 | 1.25 | 0.62 | 0.60 | -0.21 | 0.86 | 0.0 | 0.0 | 0.0 | 5.5 |
| 1860+00 | Swash | 1.09 | 0.57 | -0.42 | 3.58 | 0.469 | 0.672 | 0.99 | 0.55 | 0.56 | -0.10 | 1.03 | 0.0 | 0.1 | 0.0 | 8.0 |
| 1870+00 | Toe of Dune | 1.50 | 0.63 | -0.23 | 4.39 | 0.354 | 0.647 | 1.38 | 0.55 | 0.58 | 0.05 | 1.13 | 0.0 | 0.1 | 0.0 | 6.6 |
| 1870+00 | Beach Face | 1.40 | 0.50 | -0.51 | 4.37 | 0.379 | 0.709 | 1.29 | 0.46 | 0.48 | -0.07 | 1.07 | 0.0 | 0.0 | 0.0 | 5.2 |
| 1870+00 | Swash | 0.99 | 0.67 | -0.64 | 3.69 | 0.505 | 0.630 | 0.89 | 0.63 | 0.65 | -0.14 | 1.07 | 0.0 | 1.0 | 0.0 | 9.8 |
| 1880+00 | Toe of Dune | 1.46 | 0.58 | 0.26 | 3.53 | 0.362 | 0.668 | 1.32 | 0.54 | 0.57 | 0.08 | 1.08 | 0.0 | 0.0 | 0.0 | 8.1 |
| 1880+00 | Beach Face | 1.40 | 0.62 | -0.64 | 4.65 | 0.380 | 0.650 | 1.28 | 0.57 | 0.59 | -0.07 | 1.05 | 0.0 | 0.6 | 0.0 | 5.6 |
| 1880+00 | Swash | 0.92 | 0.71 | -0.35 | 3.60 | 0.528 | 0.613 | 0.82 | 0.66 | 0.68 | -0.05 | 1.07 | 0.0 | 1.4 | 0.0 | 12.7 |
| 1890+00 | Toe of Dune | 1.27 | 0.52 | 0.07 | 4.21 | 0.414 | 0.698 | 1.14 | 0.48 | 0.49 | 0.03 | 1.04 | 0.0 | 0.0 | 0.0 | 7.5 |
| 1890+00 | Beach Face | 1.64 | 0.48 | -0.07 | 3.81 | 0.320 | 0.715 | 1.52 | 0.47 | 0.48 | 0.00 | 1.06 | 0.0 | 0.0 | 0.0 | 3.7 |
| 1890+00 | Swash | 1.11 | 0.55 | -0.18 | 3.81 | 0.464 | 0.683 | 0.99 | 0.53 | 0.53 | 0.04 | 1.01 | 0.0 | 0.2 | 0.0 | 13.0 |
| 1900+00 | Toe of Dune | 1.31 | 0.83 | -1.35 | 5.10 | 0.403 | 0.562 | 1.26 | 0.65 | 0.78 | -0.31 | 1.47 | 0.0 | 4.2 | 0.0 | 7.0 |
| 1900+00 | Beach Face | 1.46 | 0.51 | -0.41 | 5.08 | 0.363 | 0.700 | 1.35 | 0.47 | 0.49 | -0.01 | 1.05 | 0.0 | 0.2 | 0.0 | 4.7 |
| 1900+00 | Swash | 1.25 | 0.65 | -0.55 | 3.55 | 0.421 | 0.638 | 1.14 | 0.64 | 0.64 | -0.10 | 0.96 | 0.0 | 0.4 | 0.0 | 10.3 |
| 1910+00 | Toe of Dune | 1.07 | 0.73 | -0.56 | 4.16 | 0.476 | 0.602 | 0.99 | 0.63 | 0.69 | -0.08 | 1.16 | 0.0 | 1.8 | 0.0 | 14.8 |
| 1910+00 | Beach Face | 1.50 | 0.49 | -0.18 | 3.56 | 0.353 | 0.713 | 1.38 | 0.47 | 0.48 | -0.03 | 1.01 | 0.0 | 0.0 | 0.0 | 5.1 |
| 1910+00 | Swash | 1.43 | 0.53 | -0.34 | 3.98 | 0.371 | 0.694 | 1.31 | 0.50 | 0.51 | 0.01 | 1.04 | 0.0 | 0.1 | 0.0 | 5.9 |
| 1920+00 | Toe of Dune | 1.23 | 0.64 | -0.13 | 3.26 | 0.426 | 0.642 | 1.11 | 0.64 | 0.63 | -0.10 | 0.97 | 0.0 | 0.1 | 0.0 | 7.8 |
| 1920+00 | Beach Face | 1.84 | 0.52 | -0.72 | 6.20 | 0.279 | 0.697 | 1.74 | 0.48 | 0.49 | 0.02 | 1.09 | 0.0 | 0.1 | 0.0 | 2.7 |
| 1920+00 | Swash | 1.12 | 0.56 | -0.19 | 3.84 | 0.461 | 0.679 | 1.00 | 0.53 | 0.54 | 0.00 | 1.05 | 0.0 | 0.1 | 0.0 | 9.4 |
| ALL | Toe of Dune | 1.35 | 0.68 | -0.55 | 4.39 | 0.392 | 0.622 | 1.24 | 0.61 | 0.64 | -0.09 | 1.14 | 0.0 | 0.7 | 0.0 | 7.1 |
| ALL | Beach Face | 1.51 | 0.64 | -0.66 | 4.12 | 0.350 | 0.640 | 1.41 | 0.61 | 0.62 | -0.12 | 1.07 | 0.0 | 0.2 | 0.0 | 6.6 |
| ALL | Swash | 1.39 | 0.66 | -0.49 | 3.61 | 0.382 | 0.635 | 1.27 | 0.64 | 0.64 | -0.10 | 0.99 | 0.0 | 0.3 | 0.0 | 5.1 |
| ALL | ALL | 1.42 | 0.67 | -0.57 | 4.04 | 0.374 | 0.631 | 1.31 | 0.62 | 0.64 | -0.10 | 1.05 | 0.0 | 0.4 | 0.0 | 6.3 |

| Buxton Beach Y1Q4 22-Aug-23 | | Method of Moments | | | | | | Folk Graphical | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | phi | | | | mm | | phi | | | | | % | | | |
| Station | Interval | Mean | STD | Skew | Kurt | Mean | STD | Mean | STD | ISTD | SKEW | Kurt | | | | |
| 1770+00 | Toe of Dune | 1.59 | 0.56 | 0.21 | 3.76 | 0.333 | 0.680 | 1.45 | 0.52 | 0.54 | 0.03 | 1.15 | 0.0 | 0.0 | 0.0 | 3.8 |
| 1770+00 | Beach Face | 1.72 | 0.60 | -0.71 | 4.19 | 0.305 | 0.661 | 1.62 | 0.59 | 0.59 | -0.13 | 1.01 | 0.0 | 0.2 | 0.0 | 4.5 |
| 1770+00 | Swash | 1.54 | 0.81 | -0.81 | 3.39 | 0.344 | 0.570 | 1.45 | 0.82 | 0.81 | -0.26 | 1.00 | 0.0 | 0.5 | 0.0 | 6.7 |
| 1780+00 | Toe of Dune | 1.30 | 0.71 | -0.06 | 3.30 | 0.406 | 0.610 | 1.18 | 0.68 | 0.70 | -0.04 | 1.06 | 0.0 | 0.0 | 0.0 | 7.0 |
| 1780+00 | Beach Face | 1.64 | 0.76 | -1.23 | 5.11 | 0.321 | 0.589 | 1.59 | 0.66 | 0.71 | -0.25 | 1.21 | 0.0 | 1.0 | 0.0 | 5.5 |
| 1780+00 | Swash | 1.80 | 0.69 | -0.88 | 3.82 | 0.287 | 0.622 | 1.70 | 0.67 | 0.67 | -0.23 | 1.00 | 0.0 | 0.1 | 0.0 | 5.0 |
| 1790+00 | Toe of Dune | 1.55 | 0.56 | 0.10 | 3.02 | 0.342 | 0.679 | 1.42 | 0.57 | 0.56 | 0.01 | 0.96 | 0.0 | 0.0 | 0.0 | 3.7 |
| 1790+00 | Beach Face | 1.45 | 0.84 | -1.43 | 7.31 | 0.366 | 0.557 | 1.38 | 0.75 | 0.75 | -0.14 | 1.02 | 0.0 | 0.5 | 1.1 | 7.5 |
| 1790+00 | Swash | 1.61 | 0.86 | -0.98 | 4.02 | 0.328 | 0.550 | 1.52 | 0.85 | 0.85 | -0.31 | 1.02 | 0.0 | 0.5 | 0.1 | 6.3 |
| 1800+00 | Toe of Dune | 1.12 | 0.92 | -0.07 | 2.24 | 0.460 | 0.527 | 1.00 | 1.00 | 0.94 | -0.09 | 0.81 | 0.0 | 0.3 | 0.0 | 10.5 |
| 1800+00 | Beach Face | 2.03 | 0.51 | -0.63 | 3.80 | 0.246 | 0.701 | 1.91 | 0.51 | 0.50 | -0.15 | 0.97 | 0.0 | 0.0 | 0.0 | 2.2 |
| 1800+00 | Swash | 1.93 | 0.68 | -1.93 | 10.64 | 0.262 | 0.622 | 1.86 | 0.56 | 0.60 | -0.26 | 1.13 | 0.0 | 0.1 | 0.4 | 5.8 |
| 1810+00 | Toe of Dune | 1.29 | 0.82 | -0.23 | 2.59 | 0.410 | 0.565 | 1.18 | 0.86 | 0.84 | -0.08 | 0.92 | 0.0 | 0.1 | 0.0 | 7.4 |
| 1810+00 | Beach Face | 1.55 | 0.85 | -0.82 | 3.56 | 0.341 | 0.554 | 1.46 | 0.87 | 0.85 | -0.29 | 0.99 | 0.0 | 0.4 | 0.1 | 7.5 |
| 1810+00 | Swash | 1.47 | 0.77 | -0.84 | 4.16 | 0.360 | 0.585 | 1.39 | 0.75 | 0.75 | -0.18 | 1.04 | 0.0 | 0.7 | 0.0 | 5.5 |
| 1820+00 | Toe of Dune | 1.20 | 0.87 | -0.71 | 4.78 | 0.435 | 0.548 | 1.10 | 0.82 | 0.81 | -0.12 | 0.90 | 0.0 | 0.4 | 0.8 | 9.4 |
| 1820+00 | Beach Face | 1.55 | 1.18 | -2.06 | 7.69 | 0.341 | 0.442 | 1.63 | 0.73 | 0.97 | -0.38 | 1.76 | 0.0 | 3.8 | 2.0 | 8.4 |
| 1820+00 | Swash | 1.68 | 0.93 | -1.24 | 4.55 | 0.312 | 0.525 | 1.60 | 0.87 | 0.88 | -0.40 | 1.12 | 0.0 | 0.9 | 0.2 | 6.7 |
| 1830+00 | Toe of Dune | 1.51 | 0.61 | -0.69 | 7.16 | 0.351 | 0.657 | 1.40 | 0.51 | 0.55 | -0.03 | 1.14 | 0.0 | 0.2 | 0.2 | 6.4 |
| 1830+00 | Beach Face | 1.67 | 0.59 | -0.36 | 3.81 | 0.314 | 0.666 | 1.56 | 0.61 | 0.59 | -0.03 | 0.95 | 0.0 | 0.1 | 0.0 | 4.5 |
| 1830+00 | Swash | 0.34 | 1.60 | -0.10 | 1.76 | 0.790 | 0.331 | 0.19 | 1.93 | 1.74 | -0.09 | 0.70 | 0.0 | 20.7 | 5.6 | 26.3 |
| 1840+00 | Toe of Dune | 1.31 | 0.60 | -1.10 | 9.15 | 0.404 | 0.659 | 1.20 | 0.51 | 0.53 | -0.06 | 1.16 | 0.0 | 0.3 | 0.3 | 8.1 |
| 1840+00 | Beach Face | 1.77 | 0.63 | -0.79 | 4.80 | 0.292 | 0.647 | 1.68 | 0.61 | 0.61 | -0.13 | 0.99 | 0.0 | 0.2 | 0.0 | 3.9 |
| 1840+00 | Swash | 1.67 | 0.81 | -0.99 | 3.91 | 0.314 | 0.569 | 1.60 | 0.76 | 0.79 | -0.29 | 1.14 | 0.0 | 0.4 | 0.0 | 7.0 |
| 1850+00 | Toe of Dune | 1.19 | 0.59 | 0.21 | 3.91 | 0.438 | 0.666 | 1.06 | 0.55 | 0.57 | 0.02 | 1.11 | 0.0 | 0.0 | 0.0 | 10.8 |
| 1850+00 | Beach Face | 1.92 | 0.60 | -1.33 | 7.74 | 0.263 | 0.660 | 1.83 | 0.52 | 0.53 | -0.10 | 1.02 | 0.0 | 0.5 | 0.0 | 3.1 |
| 1850+00 | Swash | 1.62 | 0.74 | -0.90 | 4.69 | 0.324 | 0.600 | 1.55 | 0.70 | 0.70 | -0.13 | 1.02 | 0.0 | 0.6 | 0.0 | 8.4 |
| 1860+00 | Toe of Dune | 1.18 | 0.57 | 0.39 | 4.05 | 0.441 | 0.673 | 1.04 | 0.54 | 0.55 | 0.10 | 1.09 | 0.0 | 0.1 | 0.0 | 8.8 |
| 1860+00 | Beach Face | 1.79 | 0.61 | -0.68 | 4.30 | 0.289 | 0.657 | 1.70 | 0.58 | 0.59 | -0.11 | 1.03 | 0.0 | 0.1 | 0.0 | 3.8 |
| 1860+00 | Swash | 1.46 | 0.82 | -0.70 | 3.60 | 0.363 | 0.568 | 1.37 | 0.82 | 0.82 | -0.10 | 1.05 | 0.0 | 0.6 | 0.0 | 9.1 |
| 1870+00 | Toe of Dune | 1.20 | 0.81 | -0.90 | 6.09 | 0.434 | 0.569 | 1.12 | 0.70 | 0.74 | -0.07 | 1.13 | 0.0 | 0.4 | 0.8 | 10.6 |
| 1870+00 | Beach Face | 1.44 | 0.77 | -1.01 | 4.98 | 0.368 | 0.588 | 1.36 | 0.70 | 0.73 | -0.17 | 1.14 | 0.0 | 0.5 | 0.2 | 10.4 |
| 1870+00 | Swash | 1.79 | 0.63 | -0.83 | 4.46 | 0.289 | 0.645 | 1.70 | 0.60 | 0.61 | -0.13 | 1.00 | 0.0 | 0.2 | 0.0 | 4.4 |
| 1880+00 | Toe of Dune | 1.51 | 0.73 | -1.15 | 9.54 | 0.352 | 0.602 | 1.41 | 0.58 | 0.62 | 0.08 | 1.21 | 0.0 | 0.2 | 0.8 | 7.2 |
| 1880+00 | Beach Face | 1.81 | 0.49 | -0.03 | 3.41 | 0.286 | 0.710 | 1.69 | 0.50 | 0.49 | 0.05 | 0.99 | 0.0 | 0.0 | 0.0 | 3.0 |
| 1880+00 | Swash | 1.21 | 1.11 | -0.72 | 3.17 | 0.431 | 0.463 | 1.12 | 1.16 | 1.11 | -0.24 | 0.94 | 0.0 | 2.3 | 0.9 | 11.1 |
| 1890+00 | Toe of Dune | 1.39 | 0.56 | -0.07 | 4.83 | 0.382 | 0.679 | 1.26 | 0.51 | 0.53 | 0.03 | 1.12 | 0.0 | 0.2 | 0.0 | 7.7 |
| 1890+00 | Beach Face | 2.10 | 0.50 | -0.83 | 6.26 | 0.233 | 0.706 | 1.99 | 0.49 | 0.48 | -0.10 | 0.96 | 0.0 | 0.2 | 0.0 | 2.3 |
| 1890+00 | Swash | 1.80 | 0.70 | -1.18 | 5.58 | 0.288 | 0.616 | 1.72 | 0.62 | 0.64 | -0.17 | 1.07 | 0.0 | 0.3 | 0.0 | 4.8 |
| 1900+00 | Toe of Dune | 1.01 | 0.77 | -1.68 | 8.79 | 0.496 | 0.588 | 0.96 | 0.58 | 0.62 | -0.11 | 1.13 | 0.0 | 1.0 | 1.4 | 10.4 |
| 1900+00 | Beach Face | 1.59 | 0.54 | -0.12 | 3.19 | 0.332 | 0.688 | 1.47 | 0.54 | 0.54 | 0.00 | 1.02 | 0.0 | 0.0 | 0.0 | 3.9 |
| 1900+00 | Swash | 1.70 | 1.26 | -1.99 | 6.17 | 0.309 | 0.418 | 1.82 | 0.67 | 1.04 | -0.48 | 2.31 | 0.0 | 7.2 | 2.0 | 5.1 |
| 1910+00 | Toe of Dune | 1.77 | 0.61 | 0.09 | 3.44 | 0.294 | 0.656 | 1.65 | 0.61 | 0.60 | 0.09 | 0.98 | 0.0 | 0.1 | 0.0 | 4.8 |
| 1910+00 | Beach Face | 1.93 | 0.52 | -0.29 | 3.94 | 0.263 | 0.697 | 1.81 | 0.52 | 0.51 | -0.03 | 0.97 | 0.0 | 0.0 | 0.0 | 2.5 |
| 1910+00 | Swash | 1.87 | 0.66 | -0.96 | 4.53 | 0.274 | 0.632 | 1.78 | 0.61 | 0.62 | -0.19 | 1.03 | 0.0 | 0.1 | 0.0 | 4.2 |
| 1920+00 | Toe of Dune | 1.51 | 0.55 | -0.29 | 5.51 | 0.351 | 0.681 | 1.38 | 0.47 | 0.51 | 0.02 | 1.20 | 0.0 | 0.3 | 0.0 | 3.7 |
| 1920+00 | Beach Face | 1.67 | 0.56 | -0.38 | 4.24 | 0.314 | 0.677 | 1.56 | 0.54 | 0.55 | -0.03 | 1.05 | 0.0 | 0.1 | 0.0 | 3.9 |
| 1920+00 | Swash | 1.90 | 0.55 | -0.52 | 3.36 | 0.268 | 0.683 | 1.79 | 0.56 | 0.55 | -0.11 | 0.94 | 0.0 | 0.0 | 0.0 | 3.2 |
| ALL | Toe of Dune | 1.35 | 0.72 | -0.60 | 5.50 | 0.392 | 0.609 | 1.23 | 0.64 | 0.67 | -0.06 | 1.11 | 0.0 | 0.2 | 0.3 | 7.5 |
| ALL | Beach Face | 1.73 | 0.71 | -1.48 | 8.58 | 0.302 | 0.612 | 1.65 | 0.62 | 0.63 | -0.14 | 1.04 | 0.0 | 0.5 | 0.2 | 7.5 |
| ALL | Swash | 1.59 | 0.96 | -1.49 | 5.78 | 0.333 | 0.513 | 1.55 | 0.82 | 0.88 | -0.34 | 1.21 | 0.0 | 2.2 | 0.6 | 5.0 |
| ALL | ALL | 1.56 | 0.82 | -1.24 | 6.25 | 0.340 | 0.567 | 1.49 | 0.74 | 0.75 | -0.15 | 1.08 | 0.0 | 1.0 | 0.4 | 6.6 |

| CONTROL BD 22-May-22 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 980+00 | Toe of Dune | 1.49 | 0.66 | -0.71 | 3.79 | **0.355** | **0.631** | 1.37 | 0.62 | 0.64 | -0.30 | 1.08 | **0.0** | **0.1** | **0.0** | **1.7** |
| 980+00 | Beach Face | 1.47 | 0.44 | -0.30 | 3.71 | **0.361** | **0.737** | 1.35 | 0.44 | 0.44 | -0.05 | 0.94 | **0.0** | **0.0** | **0.0** | **0.5** |
| 980+00 | Swash | 0.03 | 0.72 | 0.94 | 4.38 | **0.980** | **0.608** | -0.15 | 0.70 | 0.70 | 0.12 | 0.89 | **0.0** | **0.0** | **0.0** | **5.0** |
| 990+00 | Toe of Dune | 1.63 | 0.65 | -0.01 | 3.21 | **0.323** | **0.636** | 1.51 | 0.61 | 0.64 | -0.02 | 1.24 | **0.0** | **0.0** | **0.0** | **1.5** |
| 990+00 | Beach Face | 1.67 | 0.76 | -1.78 | 7.52 | **0.314** | **0.589** | 1.63 | 0.55 | 0.63 | -0.28 | 1.35 | **0.0** | **2.6** | **0.0** | **0.6** |
| 990+00 | Swash | 0.73 | 1.01 | -0.20 | 2.12 | **0.603** | **0.495** | 0.61 | 1.13 | 1.07 | -0.10 | 0.83 | **0.0** | **5.4** | **0.0** | **6.1** |
| 1000+00 | Toe of Dune | 2.03 | 0.51 | -0.05 | 3.18 | **0.245** | **0.700** | 1.90 | 0.53 | 0.52 | 0.11 | 1.05 | **0.0** | **0.0** | **0.0** | **0.3** |
| 1000+00 | Beach Face | 1.29 | 1.06 | -0.89 | 2.87 | **0.409** | **0.481** | 1.10 | 1.14 | 1.09 | -0.50 | 1.17 | **0.0** | **3.4** | **0.0** | **5.1** |
| 1000+00 | Swash | 0.36 | 0.81 | 0.36 | 2.92 | **0.778** | **0.569** | 0.22 | 0.82 | 0.83 | 0.07 | 1.08 | **0.0** | **3.1** | **0.0** | **11.5** |
| 1010+00 | Toe of Dune | 2.17 | 0.67 | -0.61 | 4.12 | **0.222** | **0.627** | 2.05 | 0.66 | 0.65 | -0.16 | 0.98 | **0.0** | **0.1** | **0.0** | **0.7** |
| 1010+00 | Beach Face | 1.02 | 1.02 | -0.59 | 2.58 | **0.492** | **0.493** | 0.85 | 1.12 | 1.08 | -0.29 | 1.06 | **0.0** | **3.9** | **0.0** | **8.8** |
| 1010+00 | Swash | -0.13 | 0.94 | 0.79 | 2.89 | **1.091** | **0.521** | -0.34 | 1.03 | 1.02 | 0.23 | 1.03 | **0.0** | **18.3** | **0.0** | **13.5** |
| 1020+00 | Toe of Dune | 2.25 | 0.50 | -0.27 | 5.38 | **0.210** | **0.705** | 2.13 | 0.47 | 0.48 | 0.13 | 0.98 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1020+00 | Beach Face | 1.45 | 0.61 | -0.59 | 3.97 | **0.366** | **0.654** | 1.32 | 0.57 | 0.59 | -0.19 | 1.07 | **0.0** | **0.1** | **0.0** | **1.4** |
| 1020+00 | Swash | 0.98 | 0.56 | 0.74 | 3.76 | **0.506** | **0.677** | 0.84 | 0.52 | 0.53 | 0.23 | 1.07 | **0.0** | **0.0** | **0.0** | **1.9** |
| 1030+00 | Toe of Dune | 2.06 | 0.47 | -0.25 | 4.45 | **0.239** | **0.723** | 1.94 | 0.42 | 0.44 | 0.10 | 1.12 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1030+00 | Beach Face | 0.85 | 0.96 | -0.51 | 2.51 | **0.554** | **0.514** | 0.75 | 1.03 | 1.01 | -0.29 | 0.97 | **0.0** | **5.1** | **0.0** | **2.1** |
| 1030+00 | Swash | 0.54 | 0.76 | -0.24 | 2.97 | **0.686** | **0.590** | 0.44 | 0.75 | 0.77 | -0.09 | 1.03 | **0.0** | **3.7** | **0.0** | **10.9** |
| 1040+00 | Toe of Dune | 1.55 | 0.60 | -0.05 | 3.45 | **0.341** | **0.658** | 1.41 | 0.57 | 0.59 | -0.03 | 1.10 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1040+00 | Beach Face | 1.54 | 0.50 | -0.33 | 3.45 | **0.345** | **0.707** | 1.41 | 0.48 | 0.49 | -0.12 | 1.00 | **0.0** | **0.0** | **0.0** | **0.9** |
| 1040+00 | Swash | 0.88 | 0.95 | -0.46 | 2.69 | **0.545** | **0.518** | 0.78 | 0.99 | 1.01 | -0.22 | 1.12 | **0.0** | **5.1** | **0.0** | **3.2** |
| 1050+00 | Toe of Dune | 2.08 | 0.39 | -0.96 | 10.59 | **0.237** | **0.766** | 1.97 | 0.35 | 0.35 | 0.11 | 0.98 | **0.0** | **0.1** | **0.0** | **0.3** |
| 1050+00 | Beach Face | 1.10 | 0.68 | -0.57 | 3.60 | **0.468** | **0.623** | 1.01 | 0.69 | 0.67 | -0.12 | 0.92 | **0.0** | **1.1** | **0.0** | **3.4** |
| 1050+00 | Swash | 0.49 | 1.02 | 0.38 | 1.90 | **0.714** | **0.492** | 0.35 | 1.21 | 1.07 | 0.24 | 0.71 | **0.0** | **0.0** | **0.0** | **6.3** |
| 1060+00 | Toe of Dune | 2.02 | 0.43 | -0.77 | 8.85 | **0.247** | **0.742** | 1.91 | 0.36 | 0.39 | 0.10 | 1.26 | **0.0** | **0.1** | **0.0** | **0.4** |
| 1060+00 | Beach Face | 1.22 | 0.80 | -0.70 | 3.57 | **0.430** | **0.574** | 1.13 | 0.75 | 0.77 | -0.17 | 1.01 | **0.0** | **1.6** | **0.0** | **2.1** |
| 1060+00 | Swash | 0.87 | 0.85 | -0.06 | 2.27 | **0.549** | **0.555** | 0.75 | 0.94 | 0.89 | -0.01 | 0.90 | **0.0** | **0.0** | **0.0** | **4.2** |
| 1070+00 | Toe of Dune | 1.67 | 0.47 | -0.09 | 4.14 | **0.315** | **0.720** | 1.55 | 0.47 | 0.47 | 0.03 | 0.97 | **0.0** | **0.1** | **0.0** | **0.5** |
| 1070+00 | Beach Face | 1.53 | 0.56 | -0.22 | 2.98 | **0.347** | **0.680** | 1.40 | 0.57 | 0.56 | -0.02 | 0.94 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1070+00 | Swash | 1.01 | 0.92 | -0.76 | 3.27 | **0.498** | **0.529** | 0.95 | 0.86 | 0.95 | -0.22 | 1.22 | **0.0** | **5.9** | **0.0** | **4.1** |
| **ALL** | **Toe of Dune** | **1.90** | **0.61** | **-0.46** | **4.19** | 0.269 | 0.656 | **1.78** | **0.57** | **0.59** | **-0.04** | **1.13** | **0.0** | **0.0** | **0.0** | **0.7** |
| **ALL** | **Beach Face** | **1.31** | **0.80** | **-1.00** | **4.21** | 0.402 | 0.573 | **1.22** | **0.69** | **0.76** | **-0.27** | **1.21** | **0.0** | **1.8** | **0.0** | **2.3** |
| **ALL** | **Swash** | **0.63** | **0.94** | **-0.09** | **2.37** | 0.647 | 0.522 | **0.50** | **1.03** | **1.00** | **-0.07** | **0.95** | **0.0** | **4.5** | **0.0** | **6.7** |
| **ALL** | **ALL** | **1.31** | **0.94** | **-0.71** | **3.18** | 0.402 | 0.522 | **1.21** | **0.89** | **0.93** | **-0.26** | **1.11** | **0.0** | **2.0** | **0.0** | **3.3** |

| CONTROL AD 31-Aug-22 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 980+00 | Toe of Dune | 2.05 | 0.48 | -0.51 | 5.17 | **0.241** | **0.719** | 1.94 | 0.42 | 0.45 | 0.03 | 1.14 | **0.0** | **0.0** | **0.0** | **0.8** |
| 980+00 | Beach Face | 1.84 | 0.44 | -0.40 | 4.27 | **0.280** | **0.736** | 1.72 | 0.42 | 0.43 | -0.09 | 1.13 | **0.0** | **0.0** | **0.0** | **1.0** |
| 980+00 | Swash | 0.45 | 0.93 | 0.13 | 2.37 | **0.733** | **0.523** | 0.33 | 1.01 | 1.01 | 0.06 | 1.02 | **0.0** | **6.7** | **0.0** | **3.3** |
| 990+00 | Toe of Dune | 1.63 | 0.55 | -0.53 | 5.92 | **0.323** | **0.684** | 1.51 | 0.49 | 0.50 | -0.12 | 1.10 | **0.0** | **0.3** | **0.0** | **0.9** |
| 990+00 | Beach Face | 1.52 | 0.82 | -0.85 | 3.88 | **0.349** | **0.568** | 1.43 | 0.74 | 0.80 | -0.26 | 1.20 | **0.0** | **0.9** | **0.0** | **2.7** |
| 990+00 | Swash | 0.55 | 0.99 | -0.09 | 2.14 | **0.682** | **0.503** | 0.43 | 1.12 | 1.05 | -0.11 | 0.86 | **0.0** | **6.6** | **0.0** | **3.0** |
| 1000+00 | Toe of Dune | 1.56 | 0.52 | 0.10 | 3.50 | **0.338** | **0.697** | 1.43 | 0.50 | 0.51 | -0.03 | 1.00 | **0.0** | **0.0** | **0.0** | **0.9** |
| 1000+00 | Beach Face | 1.95 | 0.53 | -0.58 | 4.43 | **0.258** | **0.690** | 1.85 | 0.48 | 0.50 | -0.07 | 1.17 | **0.0** | **0.0** | **0.0** | **3.5** |
| 1000+00 | Swash | 0.51 | 1.13 | 0.06 | 1.88 | **0.704** | **0.457** | 0.39 | 1.30 | 1.20 | 0.00 | 0.76 | **0.0** | **10.8** | **0.0** | **4.2** |
| 1010+00 | Toe of Dune | 1.71 | 0.69 | -0.87 | 4.04 | **0.306** | **0.619** | 1.62 | 0.65 | 0.66 | -0.23 | 1.05 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1010+00 | Beach Face | 1.60 | 0.49 | 0.13 | 5.37 | **0.329** | **0.713** | 1.48 | 0.46 | 0.46 | -0.07 | 1.10 | **0.0** | **0.0** | **0.0** | **1.0** |
| 1010+00 | Swash | 1.02 | 1.01 | -0.48 | 2.43 | **0.493** | **0.497** | 0.89 | 1.06 | 1.03 | -0.27 | 0.89 | **0.0** | **3.5** | **0.0** | **4.6** |
| 1020+00 | Toe of Dune | 1.80 | 0.54 | -0.13 | 4.65 | **0.287** | **0.690** | 1.67 | 0.48 | 0.51 | -0.04 | 1.19 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1020+00 | Beach Face | 1.20 | 0.76 | -0.50 | 3.12 | **0.436** | **0.590** | 1.09 | 0.76 | 0.74 | -0.18 | 0.90 | **0.0** | **0.6** | **0.0** | **3.0** |
| 1020+00 | Swash | 0.31 | 1.33 | 0.43 | 1.74 | **0.807** | **0.397** | 0.11 | 1.61 | 1.41 | 0.31 | 0.62 | **0.0** | **19.1** | **0.0** | **3.5** |
| 1030+00 | Toe of Dune | 1.47 | 0.64 | -0.58 | 5.23 | **0.360** | **0.642** | 1.35 | 0.55 | 0.57 | -0.15 | 1.03 | **0.0** | **0.5** | **0.0** | **1.0** |
| 1030+00 | Beach Face | 1.54 | 0.60 | -0.66 | 5.09 | **0.344** | **0.661** | 1.43 | 0.51 | 0.54 | -0.20 | 1.09 | **0.0** | **0.2** | **0.0** | **1.6** |
| 1030+00 | Swash | 0.02 | 1.58 | 0.78 | 1.90 | **0.983** | **0.336** | -0.16 | 1.86 | 1.59 | 0.72 | 0.56 | **0.0** | **43.7** | **0.0** | **13.4** |
| 1040+00 | Toe of Dune | 1.35 | 0.62 | 0.12 | 3.71 | **0.394** | **0.652** | 1.21 | 0.59 | 0.60 | -0.01 | 1.01 | **0.0** | **0.1** | **0.0** | **1.6** |
| 1040+00 | Beach Face | 1.76 | 0.61 | -0.95 | 4.83 | **0.295** | **0.656** | 1.67 | 0.54 | 0.58 | -0.22 | 1.27 | **0.1** | **0.0** | **0.0** | **1.2** |
| 1040+00 | Swash | 1.26 | 1.07 | -0.72 | 2.56 | **0.417** | **0.475** | 1.14 | 1.15 | 1.09 | -0.46 | 0.92 | **0.0** | **3.5** | **0.0** | **4.5** |
| 1050+00 | Toe of Dune | 1.18 | 0.79 | -0.58 | 3.46 | **0.441** | **0.580** | 1.09 | 0.72 | 0.76 | -0.13 | 1.06 | **0.0** | **1.0** | **0.0** | **3.0** |
| 1050+00 | Beach Face | 1.95 | 0.52 | -0.84 | 6.23 | **0.259** | **0.696** | 1.85 | 0.45 | 0.47 | -0.03 | 1.20 | **0.1** | **0.0** | **0.0** | **1.9** |
| 1050+00 | Swash | 0.23 | 1.41 | 0.38 | 1.59 | **0.855** | **0.376** | 0.01 | 1.68 | 1.45 | 0.33 | 0.57 | **0.0** | **30.9** | **0.0** | **8.8** |
| 1060+00 | Toe of Dune | 1.81 | 0.82 | -0.38 | 3.14 | **0.285** | **0.568** | 1.72 | 0.83 | 0.83 | -0.04 | 1.05 | **0.0** | **0.3** | **0.0** | **0.8** |
| 1060+00 | Beach Face | 1.83 | 0.58 | -0.98 | 5.36 | **0.282** | **0.669** | 1.73 | 0.50 | 0.55 | -0.19 | 1.33 | **0.0** | **0.1** | **0.0** | **1.4** |
| 1060+00 | Swash | 0.71 | 1.41 | 0.06 | 1.57 | **0.612** | **0.376** | 0.54 | 1.68 | 1.48 | 0.00 | 0.60 | **0.0** | **12.1** | **0.0** | **4.2** |
| 1070+00 | Toe of Dune | 1.85 | 0.55 | 0.15 | 3.88 | **0.278** | **0.685** | 1.71 | 0.52 | 0.54 | 0.02 | 1.24 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1070+00 | Beach Face | 2.00 | 0.46 | -0.54 | 5.18 | **0.249** | **0.726** | 1.90 | 0.41 | 0.44 | -0.01 | 1.30 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1070+00 | Swash | 0.22 | 1.13 | 0.48 | 2.13 | **0.856** | **0.457** | 0.09 | 1.39 | 1.24 | 0.24 | 0.83 | **0.0** | **14.4** | **0.0** | **7.0** |
| **ALL** | **Toe of Dune** | **1.64** | **0.67** | **-0.49** | **4.24** | **0.321** | **0.627** | **1.53** | **0.61** | **0.63** | **-0.12** | **1.12** | **0.0** | **0.2** | **0.0** | **1.0** |
| **ALL** | **Beach Face** | **1.72** | **0.64** | **-0.92** | **5.00** | **0.304** | **0.642** | **1.62** | **0.56** | **0.60** | **-0.22** | **1.20** | **0.0** | **0.2** | **0.0** | **1.6** |
| **ALL** | **Swash** | **0.57** | **1.25** | **0.06** | **1.77** | **0.675** | **0.421** | **0.39** | **1.49** | **1.33** | **-0.02** | **0.70** | **0.0** | **13.5** | **0.0** | **5.6** |
| **ALL** | **ALL** | **1.35** | **1.01** | **-0.97** | **3.42** | **0.393** | **0.495** | **1.26** | **0.94** | **1.01** | **-0.41** | **1.31** | **0.0** | **4.2** | **0.0** | **2.9** |

| CONTROL Y1Q1 14-Nov-22 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 980+00 | Toe of Dune | 2.00 | 0.42 | -0.26 | 3.62 | **0.250** | **0.749** | 1.88 | 0.42 | 0.42 | -0.01 | 1.03 | **0.0** | **0.0** | **0.0** | **0.9** |
| 980+00 | Beach Face | 2.06 | 0.46 | -1.10 | 8.10 | **0.240** | **0.729** | 1.96 | 0.39 | 0.41 | -0.05 | 1.05 | **0.0** | **0.1** | **0.0** | **1.0** |
| 980+00 | Swash | 1.74 | 0.59 | -1.05 | 6.04 | **0.300** | **0.664** | 1.65 | 0.51 | 0.54 | -0.15 | 1.14 | **0.0** | **0.3** | **0.0** | **1.7** |
| 990+00 | Toe of Dune | 1.97 | 0.49 | 0.05 | 4.69 | **0.255** | **0.711** | 1.84 | 0.44 | 0.47 | 0.08 | 1.19 | **0.0** | **0.0** | **0.0** | **0.9** |
| 990+00 | Beach Face | 2.02 | 0.53 | -1.10 | 6.10 | **0.246** | **0.691** | 1.92 | 0.46 | 0.48 | -0.18 | 1.13 | **0.0** | **0.1** | **0.0** | **1.2** |
| 990+00 | Swash | 1.75 | 0.52 | -0.53 | 4.82 | **0.297** | **0.695** | 1.64 | 0.52 | 0.51 | -0.07 | 0.99 | **0.0** | **0.1** | **0.0** | **1.2** |
| 1000+00 | Toe of Dune | 2.05 | 0.38 | -0.10 | 4.96 | **0.241** | **0.767** | 1.93 | 0.35 | 0.36 | 0.05 | 1.04 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1000+00 | Beach Face | 2.15 | 0.35 | 0.11 | 4.40 | **0.225** | **0.787** | 2.03 | 0.33 | 0.33 | 0.03 | 0.94 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1000+00 | Swash | 1.99 | 0.35 | 0.47 | 2.03 | **0.252** | **0.783** | 1.86 | 0.36 | 0.37 | 0.08 | 1.12 | **0.0** | **0.0** | **0.0** | **1.0** |
| 1010+00 | Toe of Dune | 1.90 | 0.48 | -0.27 | 5.59 | **0.267** | **0.718** | 1.78 | 0.40 | 0.44 | 0.04 | 1.23 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1010+00 | Beach Face | 1.87 | 0.44 | -0.55 | 5.87 | **0.274** | **0.735** | 1.74 | 0.41 | 0.42 | -0.12 | 1.11 | **0.0** | **0.0** | **0.0** | **1.2** |
| 1010+00 | Swash | 1.34 | 0.53 | 0.24 | 4.40 | **0.396** | **0.690** | 1.21 | 0.52 | 0.52 | 0.19 | 1.02 | **0.0** | **0.1** | **0.0** | **1.5** |
| 1020+00 | Toe of Dune | 1.83 | 0.55 | 0.14 | 3.54 | **0.281** | **0.681** | 1.71 | 0.53 | 0.55 | 0.05 | 1.14 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1020+00 | Beach Face | 1.93 | 0.39 | -0.37 | 5.11 | **0.262** | **0.765** | 1.81 | 0.37 | 0.38 | -0.02 | 1.15 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1020+00 | Swash | 1.59 | 0.77 | -1.47 | 6.07 | **0.331** | **0.588** | 1.54 | 0.59 | 0.67 | -0.36 | 1.33 | **0.0** | **1.8** | **0.0** | **1.4** |
| 1030+00 | Toe of Dune | 1.57 | 0.62 | -0.46 | 4.72 | **0.336** | **0.652** | 1.46 | 0.54 | 0.57 | -0.11 | 1.12 | **0.0** | **0.2** | **0.0** | **0.9** |
| 1030+00 | Beach Face | 1.88 | 0.49 | 0.23 | 4.32 | **0.272** | **0.713** | 1.75 | 0.46 | 0.47 | 0.02 | 1.15 | **0.0** | **0.0** | **0.0** | **0.9** |
| 1030+00 | Swash | 1.74 | 0.50 | -0.57 | 3.94 | **0.299** | **0.707** | 1.63 | 0.48 | 0.49 | -0.17 | 1.07 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1040+00 | Toe of Dune | 1.38 | 0.65 | 0.07 | 3.01 | **0.385** | **0.639** | 1.24 | 0.64 | 0.64 | -0.01 | 0.97 | **0.0** | **0.0** | **0.0** | **1.5** |
| 1040+00 | Beach Face | 1.44 | 0.60 | -0.16 | 2.94 | **0.368** | **0.662** | 1.31 | 0.60 | 0.59 | -0.08 | 0.94 | **0.0** | **0.0** | **0.0** | **0.9** |
| 1040+00 | Swash | 1.71 | 0.51 | -0.62 | 4.25 | **0.306** | **0.704** | 1.60 | 0.50 | 0.50 | -0.15 | 1.03 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1050+00 | Toe of Dune | 1.55 | 0.64 | 0.04 | 2.75 | **0.341** | **0.642** | 1.41 | 0.66 | 0.65 | -0.10 | 0.98 | **0.0** | **0.0** | **0.0** | **1.0** |
| 1050+00 | Beach Face | 1.82 | 0.50 | -0.40 | 4.49 | **0.282** | **0.705** | 1.71 | 0.47 | 0.48 | -0.08 | 1.14 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1050+00 | Swash | 1.51 | 0.63 | -0.51 | 3.58 | **0.352** | **0.648** | 1.39 | 0.61 | 0.62 | -0.16 | 1.03 | **0.0** | **0.1** | **0.0** | **0.9** |
| 1060+00 | Toe of Dune | 1.62 | 0.51 | 0.06 | 2.58 | **0.325** | **0.703** | 1.50 | 0.54 | 0.52 | -0.02 | 0.87 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1060+00 | Beach Face | 1.70 | 0.81 | -2.11 | 8.36 | **0.308** | **0.572** | 1.69 | 0.52 | 0.65 | -0.30 | 1.56 | **0.0** | **4.1** | **0.0** | **1.5** |
| 1060+00 | Swash | 1.64 | 0.51 | -0.50 | 4.39 | **0.322** | **0.702** | 1.53 | 0.49 | 0.49 | -0.08 | 1.04 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1070+00 | Toe of Dune | 1.62 | 0.50 | -0.01 | 3.34 | **0.324** | **0.708** | 1.50 | 0.49 | 0.50 | -0.06 | 1.06 | **0.0** | **0.0** | **0.0** | **0.5** |
| 1070+00 | Beach Face | 1.62 | 0.50 | -0.09 | 3.74 | **0.325** | **0.709** | 1.50 | 0.48 | 0.49 | -0.05 | 1.06 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1070+00 | Swash | 1.40 | 0.62 | -0.76 | 4.14 | **0.379** | **0.650** | 1.29 | 0.59 | 0.60 | -0.17 | 1.04 | **0.0** | **0.3** | **0.0** | **1.4** |
| **ALL** | **Toe of Dune** | **1.75** | **0.57** | **-0.32** | **3.73** | **0.298** | **0.672** | **1.63** | **0.55** | **0.56** | **-0.13** | **1.10** | **0.0** | **0.0** | **0.0** | **0.8** |
| **ALL** | **Beach Face** | **1.85** | **0.56** | **-1.15** | **7.37** | **0.277** | **0.679** | **1.75** | **0.50** | **0.51** | **-0.12** | **1.13** | **0.0** | **0.4** | **0.0** | **1.1** |
| **ALL** | **Swash** | **1.64** | **0.59** | **-0.85** | **5.14** | **0.321** | **0.664** | **1.54** | **0.55** | **0.56** | **-0.18** | **1.06** | **0.0** | **0.3** | **0.0** | **1.0** |
| **ALL** | **ALL** | **1.75** | **0.58** | **-0.76** | **5.22** | **0.298** | **0.668** | **1.64** | **0.54** | **0.55** | **-0.15** | **1.07** | **0.0** | **0.2** | **0.0** | **1.0** |

| CONTROL Y1Q2 22-Feb-23 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 980+00 | Toe of Dune | 1.89 | 0.44 | -0.08 | 4.10 | **0.269** | **0.738** | 1.77 | 0.44 | 0.44 | -0.01 | 0.99 | **0.0** | **0.0** | **0.0** | **0.4** |
| 980+00 | Beach Face | 1.75 | 0.53 | -0.37 | 3.81 | **0.298** | **0.695** | 1.64 | 0.51 | 0.51 | -0.13 | 0.98 | **0.0** | **0.0** | **0.0** | **0.8** |
| 980+00 | Swash | 1.02 | 1.16 | -1.16 | 4.69 | **0.494** | **0.448** | 0.98 | 1.06 | 1.10 | -0.30 | 1.05 | **0.0** | **3.2** | **2.5** | **1.9** |
| 990+00 | Toe of Dune | 1.85 | 0.48 | 0.03 | 4.10 | **0.278** | **0.715** | 1.72 | 0.48 | 0.48 | 0.00 | 1.01 | **0.0** | **0.0** | **0.0** | **0.4** |
| 990+00 | Beach Face | 1.76 | 0.44 | -0.10 | 3.75 | **0.295** | **0.737** | 1.64 | 0.44 | 0.44 | -0.04 | 0.99 | **0.0** | **0.0** | **0.0** | **0.7** |
| 990+00 | Swash | 0.63 | 1.10 | -0.23 | 2.51 | **0.647** | **0.467** | 0.53 | 1.17 | 1.13 | -0.04 | 0.87 | **0.0** | **5.8** | **0.8** | **4.0** |
| 1000+00 | Toe of Dune | 2.05 | 0.48 | 0.38 | 3.86 | **0.242** | **0.715** | 1.90 | 0.45 | 0.48 | 0.12 | 1.11 | **0.1** | **0.0** | **0.0** | **0.5** |
| 1000+00 | Beach Face | 1.91 | 0.42 | -0.69 | 5.30 | **0.267** | **0.745** | 1.80 | 0.39 | 0.40 | -0.09 | 1.06 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1000+00 | Swash | 0.50 | 1.45 | -0.71 | 2.61 | **0.707** | **0.365** | 0.33 | 1.63 | 1.61 | -0.30 | 1.12 | **0.0** | **7.3** | **10.1** | **3.0** |
| 1010+00 | Toe of Dune | 2.06 | 0.51 | -0.96 | 5.68 | **0.240** | **0.701** | 1.96 | 0.44 | 0.47 | -0.17 | 1.13 | **0.0** | **0.0** | **0.0** | **0.5** |
| 1010+00 | Beach Face | 2.14 | 0.35 | -0.25 | 5.52 | **0.226** | **0.783** | 2.02 | 0.34 | 0.34 | -0.01 | 0.94 | **0.0** | **0.0** | **0.0** | **0.9** |
| 1010+00 | Swash | 1.20 | 0.85 | -0.51 | 2.95 | **0.434** | **0.553** | 1.11 | 0.85 | 0.83 | -0.17 | 0.87 | **0.0** | **1.6** | **0.0** | **5.2** |
| 1020+00 | Toe of Dune | 1.85 | 0.55 | 0.01 | 3.65 | **0.277** | **0.682** | 1.73 | 0.53 | 0.54 | 0.07 | 1.11 | **0.0** | **0.0** | **0.0** | **1.0** |
| 1020+00 | Beach Face | 1.97 | 0.36 | 0.03 | 3.68 | **0.255** | **0.778** | 1.85 | 0.38 | 0.37 | 0.05 | 1.01 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1020+00 | Swash | 1.08 | 0.81 | -0.84 | 3.82 | **0.472** | **0.570** | 1.00 | 0.74 | 0.79 | -0.24 | 1.16 | **0.0** | **3.1** | **0.0** | **5.8** |
| 1030+00 | Toe of Dune | 1.61 | 0.54 | 0.04 | 4.25 | **0.328** | **0.689** | 1.48 | 0.49 | 0.51 | 0.01 | 1.15 | **0.0** | **0.0** | **0.0** | **1.0** |
| 1030+00 | Beach Face | 2.16 | 0.33 | 0.15 | 5.52 | **0.224** | **0.794** | 2.03 | 0.32 | 0.32 | 0.01 | 0.97 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1030+00 | Swash | 0.76 | 1.11 | -1.01 | 3.89 | **0.589** | **0.462** | 0.72 | 1.02 | 1.10 | -0.30 | 1.18 | **0.0** | **4.8** | **3.2** | **4.1** |
| 1040+00 | Toe of Dune | 1.83 | 0.60 | -0.24 | 3.56 | **0.281** | **0.661** | 1.72 | 0.56 | 0.59 | -0.05 | 1.10 | **0.0** | **0.0** | **0.0** | **0.5** |
| 1040+00 | Beach Face | 2.16 | 0.35 | 0.02 | 4.42 | **0.224** | **0.783** | 2.03 | 0.35 | 0.35 | -0.04 | 0.94 | **0.0** | **0.0** | **0.0** | **0.5** |
| 1040+00 | Swash | 1.75 | 0.56 | -1.50 | 9.46 | **0.298** | **0.679** | 1.66 | 0.45 | 0.48 | -0.10 | 1.18 | **0.0** | **0.7** | **0.0** | **1.1** |
| 1050+00 | Toe of Dune | 1.61 | 0.59 | -0.07 | 3.48 | **0.327** | **0.665** | 1.49 | 0.57 | 0.58 | -0.04 | 1.12 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1050+00 | Beach Face | 1.98 | 0.41 | 0.13 | 3.21 | **0.254** | **0.754** | 1.85 | 0.42 | 0.41 | 0.03 | 0.96 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1050+00 | Swash | 0.62 | 1.10 | -0.85 | 4.02 | **0.652** | **0.465** | 0.57 | 0.97 | 1.10 | -0.17 | 1.36 | **0.0** | **4.2** | **4.1** | **10.9** |
| 1060+00 | Toe of Dune | 1.68 | 0.58 | -0.27 | 4.14 | **0.312** | **0.671** | 1.56 | 0.54 | 0.55 | -0.06 | 1.10 | **0.0** | **0.1** | **0.0** | **0.5** |
| 1060+00 | Beach Face | 1.96 | 0.45 | 0.16 | 3.74 | **0.256** | **0.734** | 1.84 | 0.44 | 0.44 | 0.06 | 1.00 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1060+00 | Swash | -0.08 | 1.46 | -0.57 | 2.45 | **1.056** | **0.362** | -0.36 | 1.75 | 1.65 | -0.45 | 0.98 | **0.0** | **10.3** | **15.3** | **12.6** |
| 1070+00 | Toe of Dune | 1.42 | 0.63 | -0.42 | 3.72 | **0.374** | **0.646** | 1.30 | 0.60 | 0.61 | -0.12 | 1.05 | **0.0** | **0.1** | **0.0** | **1.8** |
| 1070+00 | Beach Face | 1.54 | 0.57 | -0.16 | 3.07 | **0.344** | **0.672** | 1.42 | 0.60 | 0.58 | -0.03 | 0.95 | **0.0** | **0.0** | **0.0** | **0.9** |
| 1070+00 | Swash | 1.76 | 0.50 | -1.20 | 8.38 | **0.296** | **0.709** | 1.66 | 0.43 | 0.44 | -0.07 | 1.09 | **0.0** | **0.3** | **0.0** | **1.0** |
| **ALL** | **Toe of Dune** | **1.79** | **0.58** | **-0.30** | **3.98** | 0.290 | 0.671 | **1.68** | **0.54** | **0.56** | **-0.05** | **1.08** | **0.0** | **0.0** | **0.0** | **0.7** |
| **ALL** | **Beach Face** | **1.93** | **0.47** | **-0.51** | **4.31** | 0.262 | 0.722 | **1.83** | **0.44** | **0.46** | **-0.08** | **1.07** | **0.0** | **0.0** | **0.0** | **4.9** |
| **ALL** | **Swash** | **0.92** | **1.19** | **-1.14** | **4.23** | 0.527 | 0.439 | **0.88** | **1.06** | **1.15** | **-0.34** | **1.17** | **0.0** | **4.1** | **3.6** | **1.1** |
| **ALL** | **ALL** | **1.55** | **0.92** | **-1.83** | **8.00** | 0.342 | 0.527 | **1.51** | **0.72** | **0.79** | **-0.33** | **1.33** | **0.0** | **1.4** | **1.2** | **2.1** |

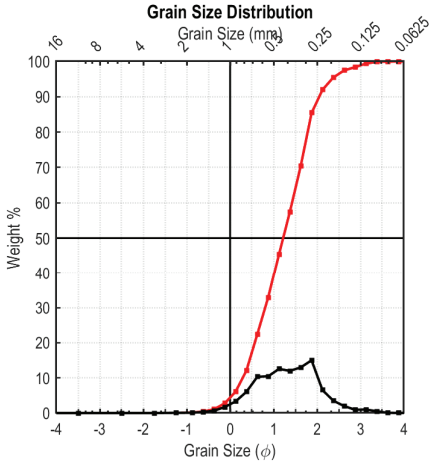
| CONTROL Y1Q3 10-May-23 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 980+00 | Toe of Dune | 2.14 | 0.52 | 0.19 | 3.54 | **0.227** | **0.696** | 2.01 | 0.49 | 0.52 | 0.18 | 1.14 | **0.0** | **0.0** | **0.0** | **0.4** |
| 980+00 | Beach Face | 1.80 | 0.41 | -0.26 | 4.63 | **0.287** | **0.753** | 1.68 | 0.39 | 0.40 | -0.05 | 1.20 | **0.0** | **0.0** | **0.0** | **1.4** |
| 980+00 | Swash | 1.52 | 0.90 | -1.02 | 3.56 | **0.350** | **0.536** | 1.44 | 0.89 | 0.89 | -0.40 | 1.08 | **0.0** | **1.5** | **0.0** | **3.6** |
| 990+00 | Toe of Dune | 1.92 | 0.45 | -0.11 | 4.43 | **0.265** | **0.732** | 1.81 | 0.43 | 0.44 | 0.09 | 1.11 | **0.0** | **0.0** | **0.0** | **0.4** |
| 990+00 | Beach Face | 1.63 | 0.56 | -0.76 | 4.46 | **0.324** | **0.679** | 1.53 | 0.47 | 0.53 | -0.23 | 1.36 | **0.0** | **0.0** | **0.0** | **0.7** |
| 990+00 | Swash | 1.33 | 0.87 | -0.87 | 3.38 | **0.397** | **0.547** | 1.25 | 0.85 | 0.85 | -0.32 | 0.97 | **0.0** | **2.0** | **0.0** | **1.8** |
| 1000+00 | Toe of Dune | 1.92 | 0.44 | -0.01 | 4.16 | **0.263** | **0.738** | 1.80 | 0.42 | 0.42 | 0.03 | 1.02 | **0.0** | **0.0** | **0.0** | **0.3** |
| 1000+00 | Beach Face | 1.69 | 0.45 | -0.37 | 3.76 | **0.311** | **0.732** | 1.58 | 0.43 | 0.44 | -0.09 | 1.08 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1000+00 | Swash | 1.15 | 0.98 | -0.73 | 2.97 | **0.451** | **0.506** | 1.07 | 0.97 | 1.01 | -0.30 | 1.07 | **0.0** | **4.7** | **0.0** | **4.7** |
| 1010+00 | Toe of Dune | 1.46 | 0.58 | -0.60 | 5.14 | **0.362** | **0.671** | 1.35 | 0.50 | 0.53 | -0.06 | 1.11 | **0.0** | **0.3** | **0.0** | **0.8** |
| 1010+00 | Beach Face | 1.63 | 0.45 | -0.43 | 3.40 | **0.322** | **0.733** | 1.52 | 0.44 | 0.45 | -0.11 | 1.02 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1010+00 | Swash | 1.37 | 0.79 | -0.86 | 3.61 | **0.388** | **0.580** | 1.28 | 0.77 | 0.77 | -0.23 | 1.02 | **0.0** | **1.0** | **0.0** | **1.6** |
| 1020+00 | Toe of Dune | 1.48 | 0.55 | 0.00 | 3.28 | **0.358** | **0.682** | 1.35 | 0.54 | 0.54 | -0.04 | 0.96 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1020+00 | Beach Face | 1.69 | 0.48 | 0.11 | 4.25 | **0.310** | **0.719** | 1.56 | 0.43 | 0.45 | -0.02 | 1.10 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1020+00 | Swash | 0.88 | 1.21 | -1.59 | 6.65 | **0.544** | **0.433** | 0.87 | 0.94 | 1.05 | -0.22 | 1.25 | **0.0** | **2.3** | **3.7** | **2.6** |
| 1030+00 | Toe of Dune | 1.28 | 0.53 | -0.58 | 4.74 | **0.412** | **0.693** | 1.17 | 0.50 | 0.50 | -0.04 | 1.00 | **0.0** | **0.2** | **0.0** | **1.1** |
| 1030+00 | Beach Face | 1.60 | 0.50 | -0.34 | 4.32 | **0.330** | **0.705** | 1.48 | 0.49 | 0.49 | -0.09 | 1.04 | **0.0** | **0.1** | **0.0** | **0.7** |
| 1030+00 | Swash | 1.25 | 0.82 | -0.58 | 2.99 | **0.421** | **0.565** | 1.15 | 0.83 | 0.82 | -0.19 | 0.92 | **0.0** | **1.0** | **0.0** | **1.7** |
| 1040+00 | Toe of Dune | 1.69 | 0.56 | -0.19 | 3.97 | **0.310** | **0.679** | 1.57 | 0.52 | 0.54 | -0.06 | 1.09 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1040+00 | Beach Face | 1.90 | 0.36 | 0.02 | 3.29 | **0.268** | **0.781** | 1.78 | 0.36 | 0.36 | 0.02 | 0.98 | **0.0** | **0.0** | **0.0** | **0.3** |
| 1040+00 | Swash | 1.93 | 0.56 | -0.56 | 2.82 | **0.263** | **0.678** | 1.80 | 0.59 | 0.57 | -0.25 | 0.94 | **0.0** | **0.0** | **0.0** | **1.0** |
| 1050+00 | Toe of Dune | 1.49 | 0.61 | -0.82 | 5.35 | **0.356** | **0.654** | 1.38 | 0.54 | 0.56 | -0.12 | 1.08 | **0.0** | **0.5** | **0.0** | **1.8** |
| 1050+00 | Beach Face | 2.12 | 0.34 | 0.10 | 3.82 | **0.230** | **0.792** | 2.00 | 0.33 | 0.33 | 0.01 | 0.95 | **0.0** | **0.0** | **0.0** | **0.5** |
| 1050+00 | Swash | 1.75 | 0.50 | 0.07 | 3.22 | **0.298** | **0.705** | 1.63 | 0.53 | 0.51 | 0.06 | 0.89 | **0.0** | **0.0** | **0.0** | **1.1** |
| 1060+00 | Toe of Dune | 1.50 | 0.66 | -0.10 | 5.54 | **0.352** | **0.635** | 1.38 | 0.59 | 0.59 | -0.06 | 1.05 | **0.5** | **0.5** | **0.0** | **1.0** |
| 1060+00 | Beach Face | 1.75 | 0.54 | -0.61 | 5.45 | **0.298** | **0.688** | 1.65 | 0.49 | 0.49 | -0.03 | 1.00 | **0.1** | **0.0** | **0.0** | **1.0** |
| 1060+00 | Swash | 2.08 | 0.47 | 0.31 | 3.95 | **0.236** | **0.720** | 1.94 | 0.44 | 0.46 | 0.07 | 1.11 | **0.1** | **0.0** | **0.0** | **0.6** |
| 1070+00 | Toe of Dune | 1.63 | 0.68 | -0.38 | 3.55 | **0.324** | **0.623** | 1.51 | 0.66 | 0.67 | -0.12 | 1.12 | **0.0** | **0.2** | **0.0** | **0.9** |
| 1070+00 | Beach Face | 1.95 | 0.48 | 0.20 | 3.67 | **0.259** | **0.718** | 1.82 | 0.46 | 0.46 | 0.05 | 1.03 | **0.0** | **0.0** | **0.0** | **0.6** |
| 1070+00 | Swash | 1.57 | 0.54 | -0.08 | 3.02 | **0.337** | **0.688** | 1.45 | 0.55 | 0.55 | -0.03 | 0.97 | **0.0** | **0.0** | **0.0** | **0.9** |
| **ALL** | **Toe of Dune** | **1.65** | **0.62** | **-0.33** | **4.36** | **0.318** | **0.652** | **1.53** | **0.57** | **0.59** | **-0.08** | **1.12** | **0.1** | **0.2** | **0.0** | **0.8** |
| **ALL** | **Beach Face** | **1.77** | **0.49** | **-0.42** | **4.53** | **0.292** | **0.713** | **1.66** | **0.46** | **0.46** | **-0.09** | **1.08** | **0.0** | **0.0** | **0.0** | **2.0** |
| **ALL** | **Swash** | **1.48** | **0.87** | **-1.36** | **6.73** | **0.358** | **0.547** | **1.41** | **0.77** | **0.80** | **-0.27** | **1.10** | **0.0** | **1.3** | **0.4** | **0.8** |
| **ALL** | **ALL** | **1.64** | **0.69** | **-1.29** | **8.07** | **0.322** | **0.621** | **1.55** | **0.59** | **0.61** | **-0.18** | **1.14** | **0.0** | **0.5** | **0.1** | **1.2** |

| CONTROL Y1Q4 22-Aug-23 | | Method of Moments | | | | | | Folk Graphical Method | | | | | Fines | Granule | Gravel | Shell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | STD | Skew | Kurt | Mean | STD | Gmean | GSTD | GIStd | Gskew | Gkurt | | | | |
| Station | Interval | ϕ | | | | mm | | ϕ | | | | | % | | | |
| 980+00 | Toe of Dune | 2.08 | 0.43 | -0.15 | 5.18 | **0.236** | **0.740** | 1.96 | 0.39 | 0.40 | 0.02 | 1.06 | **0.0** | **0.0** | **0.0** | **0.7** |
| 980+00 | Beach Face | 2.00 | 0.44 | -0.98 | 8.05 | **0.250** | **0.736** | 1.89 | 0.41 | 0.41 | -0.04 | 1.04 | **0.0** | **0.0** | **0.0** | **0.8** |
| 980+00 | Swash | 1.88 | 1.02 | -2.58 | 10.46 | **0.272** | **0.492** | 1.93 | 0.57 | 0.76 | -0.42 | 1.80 | **0.0** | **1.2** | **2.4** | **2.0** |
| 990+00 | Toe of Dune | 1.83 | 0.45 | -0.19 | 4.21 | **0.281** | **0.734** | 1.71 | 0.41 | 0.42 | -0.08 | 1.07 | **0.0** | **0.0** | **0.0** | **0.6** |
| 990+00 | Beach Face | 1.94 | 0.61 | -0.94 | 3.57 | **0.261** | **0.654** | 1.83 | 0.55 | 0.59 | -0.35 | 1.47 | **0.0** | **0.0** | **0.0** | **0.7** |
| 990+00 | Swash | 0.68 | 0.66 | 1.40 | 4.78 | **0.624** | **0.631** | 0.53 | 0.48 | 0.57 | 0.65 | 2.03 | **0.0** | **0.3** | **0.0** | **1.5** |
| 1000+00 | Toe of Dune | 1.62 | 0.60 | -0.06 | 3.09 | **0.326** | **0.660** | 1.49 | 0.60 | 0.60 | -0.07 | 1.00 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1000+00 | Beach Face | 2.24 | 0.35 | -0.49 | 7.96 | **0.212** | **0.782** | 2.11 | 0.35 | 0.34 | -0.06 | 0.98 | **0.0** | **0.0** | **0.0** | **0.7** |
| 1000+00 | Swash | 2.11 | 0.42 | -0.45 | 4.72 | **0.231** | **0.747** | 2.00 | 0.41 | 0.41 | -0.04 | 0.96 | **0.0** | **0.0** | **0.0** | **1.0** |
| 1010+00 | Toe of Dune | 1.69 | 0.50 | -0.70 | 6.54 | **0.309** | **0.707** | 1.59 | 0.45 | 0.46 | -0.06 | 1.07 | **0.0** | **0.2** | **0.0** | **0.7** |
| 1010+00 | Beach Face | 2.18 | 0.36 | -0.20 | 4.53 | **0.220** | **0.777** | 2.06 | 0.37 | 0.36 | -0.04 | 0.91 | **0.0** | **0.0** | **0.0** | **0.8** |
| 1010+00 | Swash | 1.91 | 0.58 | -0.98 | 4.98 | **0.267** | **0.671** | 1.81 | 0.54 | 0.55 | -0.15 | 1.05 | **0.0** | **0.0** | **0.0** | **1.5** |
| 1020+00 | Toe of Dune | 1.54 | 0.50 | -0.26 | 4.07 | **0.344** | **0.707** | 1.41 | 0.46 | 0.48 | -0.09 | 1.13 | **0.0** | **0.0** | **0.0** | **0.9** |
| 1020+00 | Beach Face | 1.92 | 0.63 | -2.02 | 11.80 | **0.265** | **0.648** | 1.84 | 0.50 | 0.53 | -0.15 | 1.11 | **0.0** | **0.4** | **0.2** | **2.1** |
| 1020+00 | Swash | 1.92 | 0.54 | -1.01 | 6.23 | **0.264** | **0.689** | 1.82 | 0.50 | 0.50 | -0.08 | 1.02 | **0.0** | **0.2** | **0.0** | **1.4** |
| 1030+00 | Toe of Dune | 1.51 | 0.47 | -0.04 | 4.20 | **0.352** | **0.720** | 1.38 | 0.44 | 0.46 | 0.00 | 1.11 | **0.0** | **0.0** | **0.0** | **1.1** |
| 1030+00 | Beach Face | 2.08 | 0.43 | -0.42 | 5.02 | **0.237** | **0.743** | 1.96 | 0.39 | 0.40 | -0.03 | 1.01 | **0.0** | **0.0** | **0.0** | **1.0** |
| 1030+00 | Swash | 1.33 | 1.01 | -0.94 | 3.09 | **0.399** | **0.495** | 1.21 | 1.03 | 1.02 | -0.42 | 1.08 | **0.0** | **3.6** | **0.0** | **2.3** |
| 1040+00 | Toe of Dune | 1.59 | 0.49 | -0.05 | 3.83 | **0.332** | **0.714** | 1.46 | 0.45 | 0.47 | -0.05 | 1.08 | **0.0** | **0.0** | **0.0** | **1.2** |
| 1040+00 | Beach Face | 1.99 | 0.48 | -1.22 | 5.92 | **0.252** | **0.716** | 1.89 | 0.43 | 0.45 | -0.17 | 1.15 | **0.0** | **0.0** | **0.0** | **0.9** |
| 1040+00 | Swash | 1.70 | 0.87 | -1.58 | 5.49 | **0.308** | **0.546** | 1.66 | 0.69 | 0.78 | -0.38 | 1.40 | **0.0** | **2.6** | **0.0** | **1.7** |
| 1050+00 | Toe of Dune | 1.32 | 0.66 | -0.31 | 3.90 | **0.401** | **0.632** | 1.20 | 0.61 | 0.65 | -0.10 | 1.17 | **0.0** | **0.2** | **0.0** | **1.4** |
| 1050+00 | Beach Face | 2.01 | 0.65 | -2.04 | 9.75 | **0.249** | **0.637** | 1.94 | 0.49 | 0.49 | -0.15 | 1.04 | **0.0** | **0.4** | **0.0** | **1.7** |
| 1050+00 | Swash | 1.64 | 0.78 | -0.68 | 3.05 | **0.321** | **0.582** | 1.54 | 0.81 | 0.79 | -0.26 | 0.97 | **0.0** | **0.1** | **0.0** | **1.6** |
| 1060+00 | Toe of Dune | 1.35 | 0.63 | -0.02 | 3.30 | **0.393** | **0.645** | 1.22 | 0.61 | 0.63 | -0.03 | 1.06 | **0.0** | **0.0** | **0.0** | **1.3** |
| 1060+00 | Beach Face | 2.01 | 0.50 | -0.55 | 4.71 | **0.248** | **0.709** | 1.89 | 0.47 | 0.47 | -0.05 | 1.02 | **0.0** | **0.0** | **0.0** | **1.1** |
| 1060+00 | Swash | 2.04 | 0.62 | -0.99 | 4.94 | **0.243** | **0.652** | 1.95 | 0.54 | 0.58 | -0.22 | 1.20 | **0.0** | **0.0** | **0.0** | **1.4** |
| 1070+00 | Toe of Dune | 1.48 | 0.73 | -0.60 | 3.34 | **0.358** | **0.604** | 1.37 | 0.73 | 0.73 | -0.21 | 1.04 | **0.0** | **0.2** | **0.0** | **1.5** |
| 1070+00 | Beach Face | 1.84 | 0.51 | -0.32 | 3.75 | **0.278** | **0.700** | 1.73 | 0.51 | 0.51 | -0.06 | 1.03 | **0.0** | **0.0** | **0.0** | **1.1** |
| 1070+00 | Swash | 1.70 | 0.80 | -1.02 | 3.84 | **0.308** | **0.574** | 1.60 | 0.78 | 0.79 | -0.34 | 1.10 | **0.0** | **0.5** | **0.0** | **2.3** |
| **ALL** | **Toe of Dune** | **1.60** | **0.60** | **-0.43** | **4.02** | 0.329 | 0.662 | **1.49** | **0.56** | **0.57** | **-0.10** | **1.11** | **0.0** | **0.1** | **0.0** | **1.0** |
| **ALL** | **Beach Face** | **2.02** | **0.52** | **-1.36** | **8.43** | 0.246 | 0.698 | **1.92** | **0.44** | **0.46** | **-0.13** | **1.11** | **0.0** | **0.1** | **0.0** | **1.7** |
| **ALL** | **Swash** | **1.70** | **0.85** | **-1.26** | **5.04** | 0.308 | 0.555 | **1.59** | **0.83** | **0.80** | **-0.36** | **1.09** | **0.0** | **0.9** | **0.2** | **1.2** |
| **ALL** | **ALL** | **1.77** | **0.69** | **-1.19** | **5.82** | 0.292 | 0.619 | **1.69** | **0.61** | **0.65** | **-0.22** | **1.14** | **0.0** | **0.3** | **0.1** | **1.3** |

# APPENDIX C-2

# Buxton Geotechnical Data

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1550+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.398 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **0.057** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.43 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

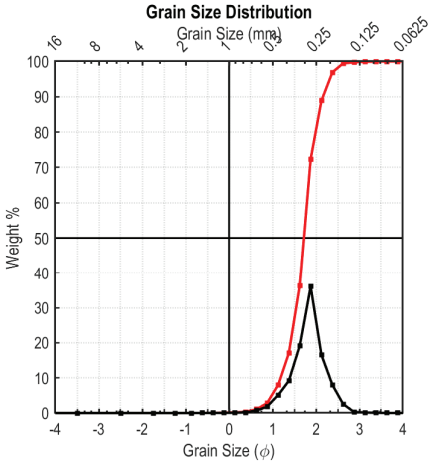
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.13 |
| -0.5 | -0.625 | 0.32 | 0.30 | 0.44 |
| -0.25 | -0.375 | 0.65 | 0.62 | 1.05 |
| 0 | -0.125 | 1.80 | 1.71 | 2.76 |
| 0.25 | 0.125 | 3.48 | 3.30 | 6.06 |
| 0.5 | 0.375 | 6.37 | 6.04 | 12.10 |
| 0.75 | 0.625 | 10.87 | 10.31 | 22.41 |
| 1 | 0.875 | 11.03 | 10.46 | 32.87 |
| 1.25 | 1.125 | 13.24 | 12.56 | 45.43 |
| 1.5 | 1.375 | 12.65 | 12.00 | 57.43 |
| 1.75 | 1.625 | 13.69 | 12.98 | 70.42 |
| 2 | 1.875 | 15.82 | 15.01 | 85.42 |
| 2.25 | 2.125 | 6.89 | 6.54 | 91.96 |
| 2.5 | 2.375 | 3.69 | 3.50 | 95.46 |
| 2.75 | 2.625 | 2.10 | 1.99 | 97.45 |
| 3 | 2.875 | 0.97 | 0.92 | 98.37 |
| 3.25 | 3.125 | 1.06 | 1.01 | 99.37 |
| 3.5 | 3.375 | 0.54 | 0.51 | 99.89 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.395 |
| **5** | 0.045 |
| **16** | 0.470 |
| **25** | 0.685 |
| **50** | 1.220 |
| **75** | 1.700 |
| **84** | 1.850 |
| **95** | 2.340 |
| **99** | 3.030 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.327 | 0.398 |
| Standard Deviation | 0.712 | 0.611 |
| Skewness | 0.057 | |
| Kurtosis | 3.112 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.160 | 1.180 |
| Standard Deviation | 0.690 | 0.693 |
| Skewness (1) | -0.087 | -0.055 |
| Skewness (2) | -0.040 | |
| Kurtosis | 0.663 | 0.927 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1550+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.284 mm** |
| **STD** | **0.763 mm** |
| **Skewness** | **-0.420** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.45 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.1 |

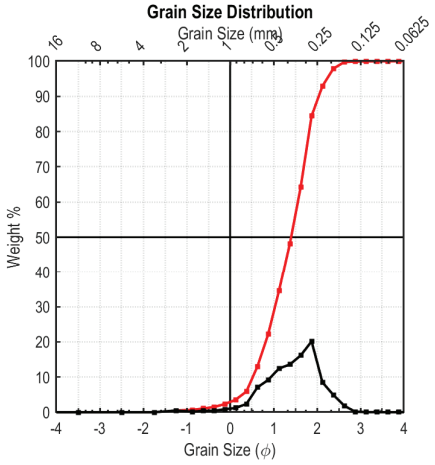
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.04 |
| 0 | -0.125 | 0.04 | 0.04 | 0.08 |
| 0.25 | 0.125 | 0.09 | 0.09 | 0.16 |
| 0.5 | 0.375 | 0.18 | 0.17 | 0.33 |
| 0.75 | 0.625 | 0.74 | 0.70 | 1.03 |
| 1 | 0.875 | 1.90 | 1.80 | 2.84 |
| 1.25 | 1.125 | 5.37 | 5.09 | 7.93 |
| 1.5 | 1.375 | 9.71 | 9.21 | 17.14 |
| 1.75 | 1.625 | 20.15 | 19.11 | 36.24 |
| 2 | 1.875 | 38.04 | 36.07 | 72.32 |
| 2.25 | 2.125 | 17.46 | 16.56 | 88.88 |
| 2.5 | 2.375 | 8.47 | 8.03 | 96.91 |
| 2.75 | 2.625 | 2.68 | 2.54 | 99.45 |
| 3 | 2.875 | 0.32 | 0.30 | 99.75 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.615 |
| **5** | 0.980 |
| **16** | 1.345 |
| **25** | 1.480 |
| **50** | 1.720 |
| **75** | 1.915 |
| **84** | 2.050 |
| **95** | 2.315 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.818 | 0.284 |
| Standard Deviation | 0.390 | 0.763 |
| Skewness | -0.420 | |
| Kurtosis | 4.857 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.697 | 1.705 |
| Standard Deviation | 0.353 | 0.379 |
| Skewness (1) | -0.064 | -0.086 |
| Skewness (2) | -0.206 | |
| Kurtosis | 0.894 | 1.258 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1550+00** |
| **Sample** | **Swash** |
| **Mean** | **0.368 mm** |
| **STD** | **0.647 mm** |
| **Skewness** | **-0.797** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.50 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.49 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.6 |

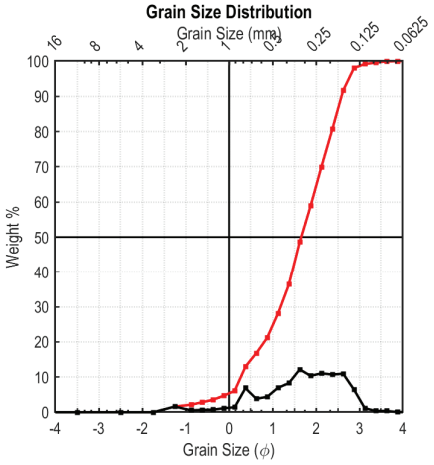
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.52 | 0.49 | 0.49 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.65 |
| -0.5 | -0.625 | 0.42 | 0.40 | 1.05 |
| -0.25 | -0.375 | 0.45 | 0.43 | 1.48 |
| 0 | -0.125 | 0.89 | 0.84 | 2.32 |
| 0.25 | 0.125 | 1.29 | 1.22 | 3.55 |
| 0.5 | 0.375 | 2.49 | 2.36 | 5.91 |
| 0.75 | 0.625 | 7.42 | 7.03 | 12.94 |
| 1 | 0.875 | 9.70 | 9.19 | 22.13 |
| 1.25 | 1.125 | 13.12 | 12.44 | 34.57 |
| 1.5 | 1.375 | 14.32 | 13.57 | 48.14 |
| 1.75 | 1.625 | 17.05 | 16.16 | 64.30 |
| 2 | 1.875 | 21.24 | 20.13 | 84.44 |
| 2.25 | 2.125 | 8.96 | 8.49 | 92.93 |
| 2.5 | 2.375 | 5.20 | 4.93 | 97.86 |
| 2.75 | 2.625 | 1.98 | 1.88 | 99.73 |
| 3 | 2.875 | 0.17 | 0.16 | 99.90 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.94 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.660 |
| **5** | 0.280 |
| **16** | 0.710 |
| **25** | 0.935 |
| **50** | 1.405 |
| **75** | 1.760 |
| **84** | 1.870 |
| **95** | 2.230 |
| **99** | 2.525 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.444 | 0.368 |
| Standard Deviation | 0.627 | 0.647 |
| Skewness | -0.797 | |
| Kurtosis | 4.623 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.290 | 1.328 |
| Standard Deviation | 0.580 | 0.585 |
| Skewness (1) | -0.198 | -0.176 |
| Skewness (2) | -0.259 | |
| Kurtosis | 0.681 | 0.969 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1560+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.315 mm** |
| **STD** | **0.528 mm** |
| **Skewness** | **-0.799** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.85 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.62 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.2 |

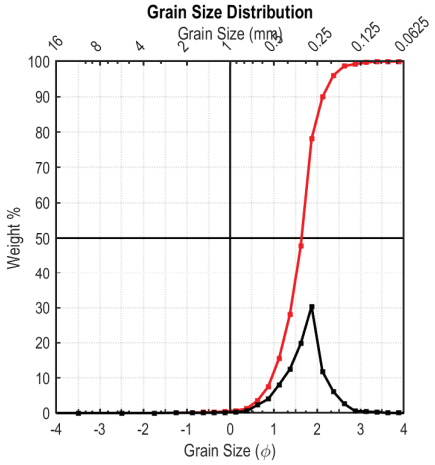
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.71 | 1.62 | 1.62 |
| -0.75 | -0.875 | 0.56 | 0.53 | 2.14 |
| -0.5 | -0.625 | 0.72 | 0.68 | 2.82 |
| -0.25 | -0.375 | 0.76 | 0.72 | 3.54 |
| 0 | -0.125 | 1.20 | 1.13 | 4.68 |
| 0.25 | 0.125 | 1.49 | 1.41 | 6.08 |
| 0.5 | 0.375 | 7.27 | 6.87 | 12.95 |
| 0.75 | 0.625 | 4.06 | 3.84 | 16.79 |
| 1 | 0.875 | 4.63 | 4.37 | 21.16 |
| 1.25 | 1.125 | 7.37 | 6.96 | 28.12 |
| 1.5 | 1.375 | 8.77 | 8.29 | 36.41 |
| 1.75 | 1.625 | 12.87 | 12.16 | 48.57 |
| 2 | 1.875 | 10.95 | 10.34 | 58.91 |
| 2.25 | 2.125 | 11.71 | 11.06 | 69.98 |
| 2.5 | 2.375 | 11.34 | 10.71 | 80.69 |
| 2.75 | 2.625 | 11.60 | 10.96 | 91.65 |
| 3 | 2.875 | 6.79 | 6.41 | 98.06 |
| 3.25 | 3.125 | 1.19 | 1.12 | 99.19 |
| 3.5 | 3.375 | 0.40 | 0.38 | 99.57 |
| 3.75 | 3.625 | 0.39 | 0.37 | 99.93 |
| 4 | 3.875 | 0.05 | 0.05 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.440 |
| **5** | -0.070 |
| **16** | 0.575 |
| **25** | 1.015 |
| **50** | 1.660 |
| **75** | 2.240 |
| **84** | 2.450 |
| **95** | 2.755 |
| **99** | 3.085 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.666 | 0.315 |
| Standard Deviation | 0.920 | 0.528 |
| Skewness | -0.799 | |
| Kurtosis | 3.590 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.512 | 1.562 |
| Standard Deviation | 0.938 | 0.897 |
| Skewness (1) | -0.157 | -0.191 |
| Skewness (2) | -0.339 | |
| Kurtosis | 0.507 | 0.945 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1560+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.306 mm** |
| **STD** | **0.712 mm** |
| **Skewness** | **-0.508** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.64 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

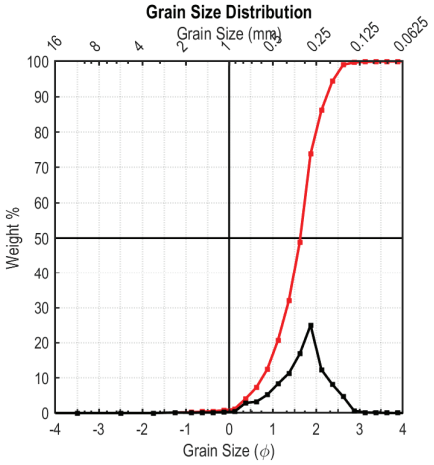
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.12 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.18 |
| -0.25 | -0.375 | 0.10 | 0.09 | 0.27 |
| 0 | -0.125 | 0.18 | 0.17 | 0.44 |
| 0.25 | 0.125 | 0.25 | 0.24 | 0.68 |
| 0.5 | 0.375 | 0.57 | 0.54 | 1.22 |
| 0.75 | 0.625 | 2.39 | 2.26 | 3.48 |
| 1 | 0.875 | 4.21 | 3.99 | 7.47 |
| 1.25 | 1.125 | 8.50 | 8.05 | 15.51 |
| 1.5 | 1.375 | 13.18 | 12.48 | 27.99 |
| 1.75 | 1.625 | 20.87 | 19.76 | 47.75 |
| 2 | 1.875 | 32.06 | 30.35 | 78.10 |
| 2.25 | 2.125 | 12.48 | 11.81 | 89.91 |
| 2.5 | 2.375 | 6.47 | 6.12 | 96.03 |
| 2.75 | 2.625 | 2.78 | 2.63 | 98.67 |
| 3 | 2.875 | 0.61 | 0.58 | 99.24 |
| 3.25 | 3.125 | 0.48 | 0.45 | 99.70 |
| 3.5 | 3.375 | 0.25 | 0.24 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.275 |
| **5** | 0.720 |
| **16** | 1.135 |
| **25** | 1.315 |
| **50** | 1.645 |
| **75** | 1.850 |
| **84** | 2.000 |
| **95** | 2.335 |
| **99** | 2.770 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.708 | 0.306 |
| Standard Deviation | 0.490 | 0.712 |
| Skewness | -0.508 | |
| Kurtosis | 5.565 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.567 | 1.593 |
| Standard Deviation | 0.433 | 0.461 |
| Skewness (1) | -0.179 | -0.162 |
| Skewness (2) | -0.272 | |
| Kurtosis | 0.867 | 1.237 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1560+00** |
| **Sample** | **Swash** |
| **Mean** | **0.314 mm** |
| **STD** | **0.669 mm** |
| **Skewness** | **-0.723** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.57 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.14 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

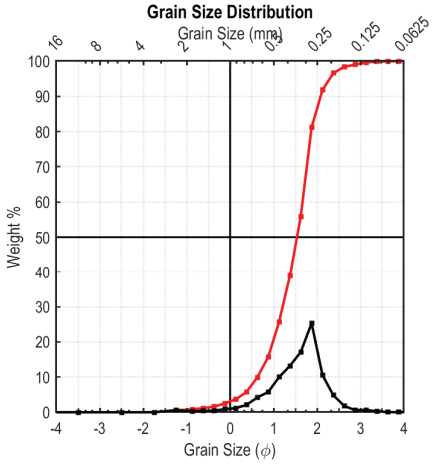
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.15 | 0.14 | 0.14 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.22 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.36 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.50 |
| 0 | -0.125 | 0.28 | 0.27 | 0.77 |
| 0.25 | 0.125 | 0.42 | 0.40 | 1.17 |
| 0.5 | 0.375 | 3.02 | 2.86 | 4.03 |
| 0.75 | 0.625 | 3.39 | 3.21 | 7.24 |
| 1 | 0.875 | 5.44 | 5.15 | 12.39 |
| 1.25 | 1.125 | 8.80 | 8.34 | 20.73 |
| 1.5 | 1.375 | 11.94 | 11.31 | 32.04 |
| 1.75 | 1.625 | 17.77 | 16.83 | 48.87 |
| 2 | 1.875 | 26.40 | 25.01 | 73.88 |
| 2.25 | 2.125 | 13.02 | 12.33 | 86.21 |
| 2.5 | 2.375 | 8.61 | 8.16 | 94.36 |
| 2.75 | 2.625 | 4.94 | 4.68 | 99.04 |
| 3 | 2.875 | 0.70 | 0.66 | 99.71 |
| 3.25 | 3.125 | 0.17 | 0.16 | 99.87 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.020 |
| **5** | 0.450 |
| **16** | 0.985 |
| **25** | 1.220 |
| **50** | 1.635 |
| **75** | 1.900 |
| **84** | 2.080 |
| **95** | 2.410 |
| **99** | 2.625 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.671 | 0.314 |
| Standard Deviation | 0.580 | 0.669 |
| Skewness | -0.723 | |
| Kurtosis | 4.443 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.532 | 1.567 |
| Standard Deviation | 0.548 | 0.571 |
| Skewness (1) | -0.187 | -0.198 |
| Skewness (2) | -0.374 | |
| Kurtosis | 0.790 | 1.181 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1570+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.341 mm** |
| **STD** | **0.642 mm** |
| **Skewness** | **-0.967** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.76 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.59 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.9 |

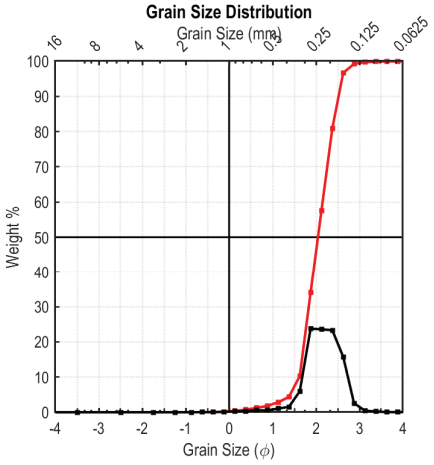
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.62 | 0.59 | 0.59 |
| -0.75 | -0.875 | 0.23 | 0.22 | 0.80 |
| -0.5 | -0.625 | 0.37 | 0.35 | 1.15 |
| -0.25 | -0.375 | 0.47 | 0.44 | 1.60 |
| 0 | -0.125 | 0.94 | 0.89 | 2.49 |
| 0.25 | 0.125 | 1.23 | 1.16 | 3.65 |
| 0.5 | 0.375 | 2.20 | 2.08 | 5.73 |
| 0.75 | 0.625 | 4.45 | 4.21 | 9.94 |
| 1 | 0.875 | 6.06 | 5.73 | 15.67 |
| 1.25 | 1.125 | 10.53 | 9.96 | 25.62 |
| 1.5 | 1.375 | 13.92 | 13.16 | 38.79 |
| 1.75 | 1.625 | 18.11 | 17.12 | 55.91 |
| 2 | 1.875 | 26.75 | 25.29 | 81.20 |
| 2.25 | 2.125 | 11.18 | 10.57 | 91.77 |
| 2.5 | 2.375 | 5.10 | 4.82 | 96.60 |
| 2.75 | 2.625 | 1.90 | 1.80 | 98.39 |
| 3 | 2.875 | 0.64 | 0.61 | 99.00 |
| 3.25 | 3.125 | 0.65 | 0.61 | 99.61 |
| 3.5 | 3.375 | 0.32 | 0.30 | 99.91 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.735 |
| **5** | 0.285 |
| **16** | 0.885 |
| **25** | 1.110 |
| **50** | 1.540 |
| **75** | 1.815 |
| **84** | 1.940 |
| **95** | 2.290 |
| **99** | 2.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.553 | 0.341 |
| Standard Deviation | 0.640 | 0.642 |
| Skewness | -0.967 | |
| Kurtosis | 5.712 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.412 | 1.455 |
| Standard Deviation | 0.528 | 0.568 |
| Skewness (1) | -0.242 | -0.247 |
| Skewness (2) | -0.479 | |
| Kurtosis | 0.900 | 1.166 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1570+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.225 mm** |
| **STD** | **0.747 mm** |
| **Skewness** | **-1.022** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.35 |
| % finer than 0.0625 mm (dry) | 0.06 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.1 |

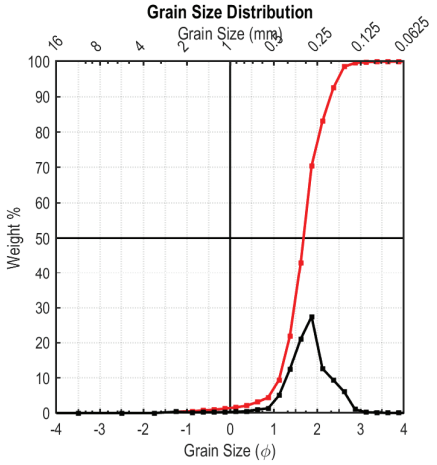
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.03 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.05 |
| 0 | -0.125 | 0.12 | 0.11 | 0.16 |
| 0.25 | 0.125 | 0.22 | 0.21 | 0.37 |
| 0.5 | 0.375 | 0.35 | 0.33 | 0.70 |
| 0.75 | 0.625 | 0.56 | 0.53 | 1.23 |
| 1 | 0.875 | 0.57 | 0.54 | 1.78 |
| 1.25 | 1.125 | 1.09 | 1.03 | 2.81 |
| 1.5 | 1.375 | 1.61 | 1.53 | 4.34 |
| 1.75 | 1.625 | 6.24 | 5.92 | 10.26 |
| 2 | 1.875 | 25.01 | 23.74 | 34.00 |
| 2.25 | 2.125 | 24.84 | 23.58 | 57.58 |
| 2.5 | 2.375 | 24.55 | 23.30 | 80.88 |
| 2.75 | 2.625 | 16.62 | 15.78 | 96.66 |
| 3 | 2.875 | 2.69 | 2.55 | 99.21 |
| 3.25 | 3.125 | 0.49 | 0.47 | 99.68 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.86 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.92 |
| 4 | 3.875 | 0.02 | 0.02 | 99.94 |
| >4.0 | 4.25 | 0.06 | 0.06 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.515 |
| **5** | 1.405 |
| **16** | 1.685 |
| **25** | 1.780 |
| **50** | 2.045 |
| **75** | 2.310 |
| **84** | 2.425 |
| **95** | 2.600 |
| **99** | 2.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.151 | 0.225 |
| Standard Deviation | 0.420 | 0.747 |
| Skewness | -1.022 | |
| Kurtosis | 7.368 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.055 | 2.052 |
| Standard Deviation | 0.370 | 0.366 |
| Skewness (1) | 0.027 | -0.022 |
| Skewness (2) | -0.115 | |
| Kurtosis | 0.615 | 0.924 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1570+00** |
| **Sample** | **Swash** |
| **Mean** | **0.289 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **-1.264** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.75 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.36 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.0 |

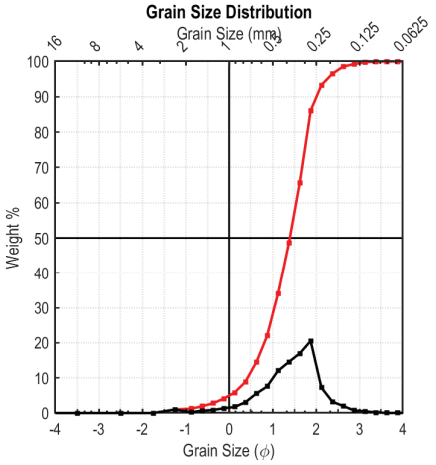
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.38 | 0.36 | 0.36 |
| -0.75 | -0.875 | 0.16 | 0.15 | 0.51 |
| -0.5 | -0.625 | 0.26 | 0.25 | 0.76 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.96 |
| 0 | -0.125 | 0.30 | 0.28 | 1.24 |
| 0.25 | 0.125 | 0.37 | 0.35 | 1.59 |
| 0.5 | 0.375 | 0.53 | 0.50 | 2.09 |
| 0.75 | 0.625 | 1.06 | 1.00 | 3.09 |
| 1 | 0.875 | 1.42 | 1.34 | 4.43 |
| 1.25 | 1.125 | 5.28 | 4.99 | 9.43 |
| 1.5 | 1.375 | 13.20 | 12.48 | 21.91 |
| 1.75 | 1.625 | 22.30 | 21.09 | 43.00 |
| 2 | 1.875 | 29.02 | 27.44 | 70.44 |
| 2.25 | 2.125 | 13.36 | 12.63 | 83.07 |
| 2.5 | 2.375 | 9.94 | 9.40 | 92.47 |
| 2.75 | 2.625 | 6.39 | 6.04 | 98.52 |
| 3 | 2.875 | 1.09 | 1.03 | 99.55 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.78 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.90 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.93 |
| 4 | 3.875 | 0.02 | 0.02 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.335 |
| **5** | 0.905 |
| **16** | 1.255 |
| **25** | 1.410 |
| **50** | 1.690 |
| **75** | 1.965 |
| **84** | 2.150 |
| **95** | 2.480 |
| **99** | 2.745 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.792 | 0.289 |
| Standard Deviation | 0.535 | 0.690 |
| Skewness | -1.264 | |
| Kurtosis | 8.953 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.702 | 1.698 |
| Standard Deviation | 0.448 | 0.462 |
| Skewness (1) | 0.028 | 0.016 |
| Skewness (2) | 0.006 | |
| Kurtosis | 0.760 | 1.163 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1580+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.375 mm** |
| **STD** | **0.616 mm** |
| **Skewness** | **-0.888** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.84 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 1.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.2 |

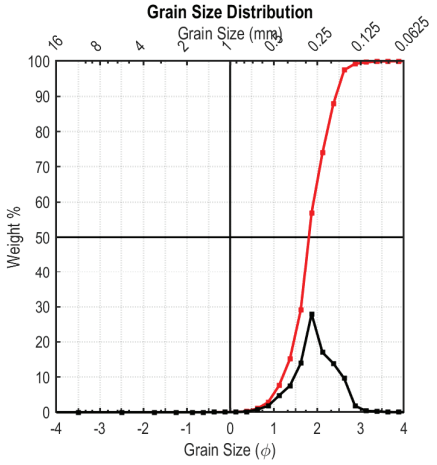
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.06 | 1.00 | 1.00 |
| -0.75 | -0.875 | 0.25 | 0.24 | 1.24 |
| -0.5 | -0.625 | 0.71 | 0.67 | 1.91 |
| -0.25 | -0.375 | 0.90 | 0.85 | 2.76 |
| 0 | -0.125 | 1.43 | 1.35 | 4.11 |
| 0.25 | 0.125 | 1.82 | 1.72 | 5.83 |
| 0.5 | 0.375 | 3.25 | 3.07 | 8.90 |
| 0.75 | 0.625 | 5.86 | 5.54 | 14.44 |
| 1 | 0.875 | 8.00 | 7.56 | 22.00 |
| 1.25 | 1.125 | 12.73 | 12.03 | 34.02 |
| 1.5 | 1.375 | 15.41 | 14.56 | 48.58 |
| 1.75 | 1.625 | 17.96 | 16.97 | 65.55 |
| 2 | 1.875 | 21.73 | 20.53 | 86.08 |
| 2.25 | 2.125 | 7.64 | 7.22 | 93.30 |
| 2.5 | 2.375 | 3.41 | 3.22 | 96.52 |
| 2.75 | 2.625 | 2.12 | 2.00 | 98.53 |
| 3 | 2.875 | 0.77 | 0.73 | 99.25 |
| 3.25 | 3.125 | 0.53 | 0.50 | 99.75 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.250 |
| **5** | 0.005 |
| **16** | 0.675 |
| **25** | 0.935 |
| **50** | 1.395 |
| **75** | 1.740 |
| **84** | 1.850 |
| **95** | 2.255 |
| **99** | 2.790 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.415 | 0.375 |
| Standard Deviation | 0.698 | 0.616 |
| Skewness | -0.888 | |
| Kurtosis | 5.023 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.262 | 1.307 |
| Standard Deviation | 0.588 | 0.635 |
| Skewness (1) | -0.226 | -0.231 |
| Skewness (2) | -0.451 | |
| Kurtosis | 0.915 | 1.146 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1580+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.259 mm** |
| **STD** | **0.723 mm** |
| **Skewness** | **-0.224** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

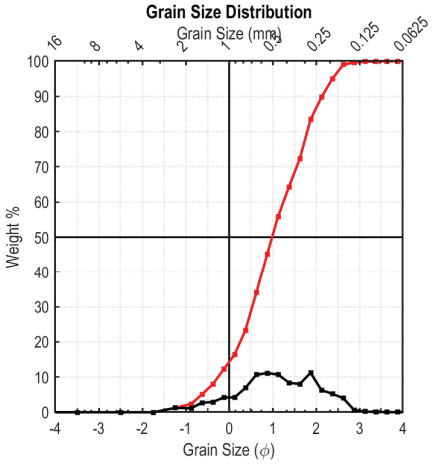
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.01 | 0.01 | 0.03 |
| 0.25 | 0.125 | 0.06 | 0.06 | 0.09 |
| 0.5 | 0.375 | 0.17 | 0.16 | 0.25 |
| 0.75 | 0.625 | 0.83 | 0.79 | 1.04 |
| 1 | 0.875 | 1.90 | 1.80 | 2.84 |
| 1.25 | 1.125 | 4.98 | 4.73 | 7.57 |
| 1.5 | 1.375 | 7.93 | 7.53 | 15.10 |
| 1.75 | 1.625 | 14.63 | 13.90 | 29.00 |
| 2 | 1.875 | 29.41 | 27.94 | 56.94 |
| 2.25 | 2.125 | 17.91 | 17.01 | 73.95 |
| 2.5 | 2.375 | 14.62 | 13.89 | 87.84 |
| 2.75 | 2.625 | 10.12 | 9.61 | 97.45 |
| 3 | 2.875 | 1.91 | 1.81 | 99.27 |
| 3.25 | 3.125 | 0.42 | 0.40 | 99.67 |
| 3.5 | 3.375 | 0.25 | 0.24 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.615 |
| **5** | 0.990 |
| **16** | 1.390 |
| **25** | 1.555 |
| **50** | 1.815 |
| **75** | 2.145 |
| **84** | 2.305 |
| **95** | 2.560 |
| **99** | 2.840 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.948 | 0.259 |
| Standard Deviation | 0.468 | 0.723 |
| Skewness | -0.224 | |
| Kurtosis | 3.581 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.847 | 1.837 |
| Standard Deviation | 0.457 | 0.467 |
| Skewness (1) | 0.071 | 0.010 |
| Skewness (2) | -0.087 | |
| Kurtosis | 0.716 | 1.091 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1580+00** |
| **Sample** | **Swash** |
| **Mean** | **0.464 mm** |
| **STD** | **0.537 mm** |
| **Skewness** | **-0.260** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.75 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 1.21 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 21.8 |

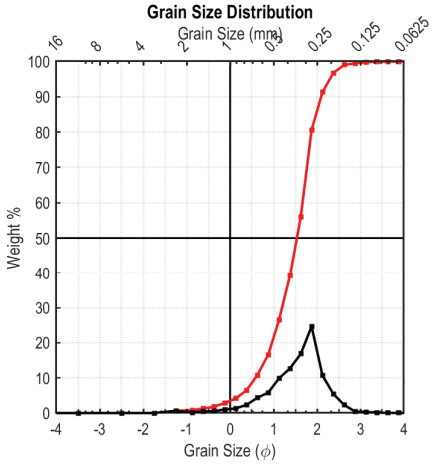
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.29 | 1.21 | 1.21 |
| -0.75 | -0.875 | 1.24 | 1.16 | 2.37 |
| -0.5 | -0.625 | 2.89 | 2.71 | 5.08 |
| -0.25 | -0.375 | 3.11 | 2.91 | 7.99 |
| 0 | -0.125 | 4.48 | 4.20 | 12.19 |
| 0.25 | 0.125 | 4.51 | 4.22 | 16.41 |
| 0.5 | 0.375 | 7.38 | 6.91 | 23.33 |
| 0.75 | 0.625 | 11.36 | 10.64 | 33.97 |
| 1 | 0.875 | 11.90 | 11.15 | 45.11 |
| 1.25 | 1.125 | 11.45 | 10.73 | 55.84 |
| 1.5 | 1.375 | 8.97 | 8.40 | 64.24 |
| 1.75 | 1.625 | 8.56 | 8.02 | 72.26 |
| 2 | 1.875 | 11.96 | 11.20 | 83.47 |
| 2.25 | 2.125 | 6.69 | 6.27 | 89.73 |
| 2.5 | 2.375 | 5.61 | 5.26 | 94.99 |
| 2.75 | 2.625 | 4.27 | 4.00 | 98.99 |
| 3 | 2.875 | 0.70 | 0.66 | 99.64 |
| 3.25 | 3.125 | 0.21 | 0.20 | 99.84 |
| 3.5 | 3.375 | 0.09 | 0.08 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.335 |
| **5** | -0.630 |
| **16** | 0.100 |
| **25** | 0.415 |
| **50** | 0.990 |
| **75** | 1.685 |
| **84** | 1.895 |
| **95** | 2.375 |
| **99** | 2.630 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.107 | 0.464 |
| Standard Deviation | 0.897 | 0.537 |
| Skewness | -0.260 | |
| Kurtosis | 2.671 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.998 | 0.995 |
| Standard Deviation | 0.897 | 0.904 |
| Skewness (1) | 0.008 | -0.035 |
| Skewness (2) | -0.131 | |
| Kurtosis | 0.674 | 0.970 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1590+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.344 mm** |
| **STD** | **0.636 mm** |
| **Skewness** | **-1.039** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.70 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.64 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

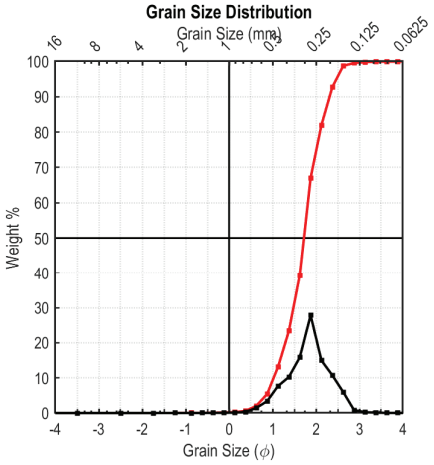
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.68 | 0.64 | 0.64 |
| -0.75 | -0.875 | 0.18 | 0.17 | 0.81 |
| -0.5 | -0.625 | 0.45 | 0.43 | 1.24 |
| -0.25 | -0.375 | 0.59 | 0.56 | 1.80 |
| 0 | -0.125 | 1.07 | 1.01 | 2.81 |
| 0.25 | 0.125 | 1.39 | 1.32 | 4.12 |
| 0.5 | 0.375 | 2.44 | 2.31 | 6.43 |
| 0.75 | 0.625 | 4.59 | 4.34 | 10.78 |
| 1 | 0.875 | 6.12 | 5.79 | 16.57 |
| 1.25 | 1.125 | 10.43 | 9.87 | 26.43 |
| 1.5 | 1.375 | 13.40 | 12.68 | 39.11 |
| 1.75 | 1.625 | 17.78 | 16.82 | 55.93 |
| 2 | 1.875 | 26.05 | 24.65 | 80.58 |
| 2.25 | 2.125 | 11.31 | 10.70 | 91.28 |
| 2.5 | 2.375 | 5.77 | 5.46 | 96.74 |
| 2.75 | 2.625 | 2.40 | 2.27 | 99.01 |
| 3 | 2.875 | 0.48 | 0.45 | 99.46 |
| 3.25 | 3.125 | 0.32 | 0.30 | 99.76 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.90 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.93 |
| 4 | 3.875 | 0.02 | 0.02 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.765 |
| **5** | 0.220 |
| **16** | 0.850 |
| **25** | 1.090 |
| **50** | 1.535 |
| **75** | 1.820 |
| **84** | 1.955 |
| **95** | 2.295 |
| **99** | 2.625 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.541 | 0.344 |
| Standard Deviation | 0.652 | 0.636 |
| Skewness | -1.039 | |
| Kurtosis | 5.509 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.403 | 1.447 |
| Standard Deviation | 0.552 | 0.591 |
| Skewness (1) | -0.240 | -0.254 |
| Skewness (2) | -0.502 | |
| Kurtosis | 0.878 | 1.165 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1590+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.284 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **-0.312** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.59 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

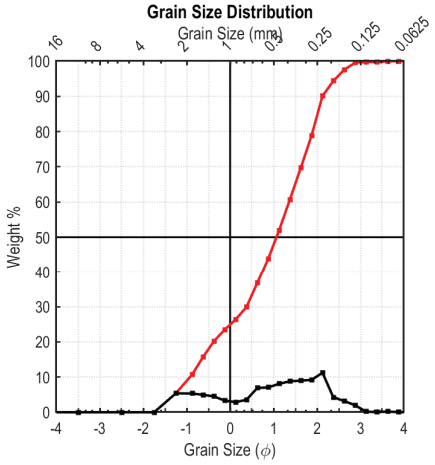
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.02 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.04 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.08 |
| 0 | -0.125 | 0.08 | 0.08 | 0.15 |
| 0.25 | 0.125 | 0.11 | 0.10 | 0.26 |
| 0.5 | 0.375 | 0.35 | 0.33 | 0.59 |
| 0.75 | 0.625 | 1.54 | 1.46 | 2.05 |
| 1 | 0.875 | 3.57 | 3.38 | 5.43 |
| 1.25 | 1.125 | 8.11 | 7.68 | 13.11 |
| 1.5 | 1.375 | 10.84 | 10.27 | 23.37 |
| 1.75 | 1.625 | 16.69 | 15.81 | 39.18 |
| 2 | 1.875 | 29.40 | 27.84 | 67.02 |
| 2.25 | 2.125 | 15.80 | 14.96 | 81.99 |
| 2.5 | 2.375 | 11.34 | 10.74 | 92.73 |
| 2.75 | 2.625 | 6.33 | 5.99 | 98.72 |
| 3 | 2.875 | 0.88 | 0.83 | 99.55 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.79 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.91 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.445 |
| **5** | 0.845 |
| **16** | 1.195 |
| **25** | 1.400 |
| **50** | 1.720 |
| **75** | 2.010 |
| **84** | 2.170 |
| **95** | 2.470 |
| **99** | 2.710 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.815 | 0.284 |
| Standard Deviation | 0.489 | 0.713 |
| Skewness | -0.312 | |
| Kurtosis | 3.949 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.682 | 1.695 |
| Standard Deviation | 0.488 | 0.490 |
| Skewness (1) | -0.077 | -0.077 |
| Skewness (2) | -0.128 | |
| Kurtosis | 0.667 | 1.092 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1590+00** |
| **Sample** | **Swash** |
| **Mean** | **0.506 mm** |
| **STD** | **0.455 mm** |
| **Skewness** | **-0.417** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 103.16 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 5.38 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 19.8 |

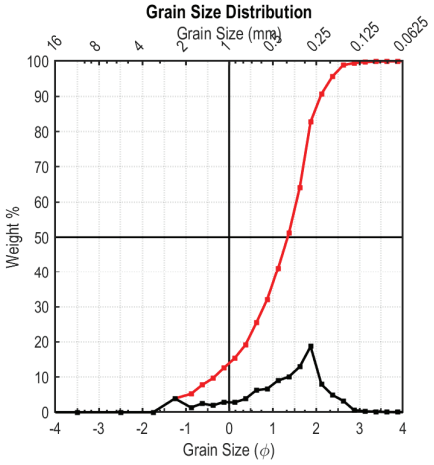
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.55 | 5.38 | 5.38 |
| -0.75 | -0.875 | 5.49 | 5.32 | 10.70 |
| -0.5 | -0.625 | 5.12 | 4.96 | 15.66 |
| -0.25 | -0.375 | 4.64 | 4.50 | 20.16 |
| 0 | -0.125 | 3.41 | 3.31 | 23.47 |
| 0.25 | 0.125 | 2.97 | 2.88 | 26.35 |
| 0.5 | 0.375 | 3.64 | 3.53 | 29.88 |
| 0.75 | 0.625 | 7.12 | 6.90 | 36.78 |
| 1 | 0.875 | 7.26 | 7.04 | 43.82 |
| 1.25 | 1.125 | 8.34 | 8.08 | 51.90 |
| 1.5 | 1.375 | 9.07 | 8.79 | 60.69 |
| 1.75 | 1.625 | 9.27 | 8.99 | 69.68 |
| 2 | 1.875 | 9.48 | 9.19 | 78.87 |
| 2.25 | 2.125 | 11.58 | 11.23 | 90.09 |
| 2.5 | 2.375 | 4.39 | 4.26 | 94.35 |
| 2.75 | 2.625 | 3.30 | 3.20 | 97.55 |
| 3 | 2.875 | 2.06 | 2.00 | 99.54 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.74 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.76 |
| 3.75 | 3.625 | 0.21 | 0.20 | 99.96 |
| 4 | 3.875 | 0.03 | 0.03 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.655 |
| **5** | -1.285 |
| **16** | -0.605 |
| **25** | 0.010 |
| **50** | 1.065 |
| **75** | 1.770 |
| **84** | 1.990 |
| **95** | 2.425 |
| **99** | 2.805 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.983 | 0.506 |
| Standard Deviation | 1.135 | 0.455 |
| Skewness | -0.417 | |
| Kurtosis | 2.184 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.692 | 0.817 |
| Standard Deviation | 1.297 | 1.211 |
| Skewness (1) | -0.287 | -0.277 |
| Skewness (2) | -0.382 | |
| Kurtosis | 0.430 | 0.864 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1600+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.425 mm** |
| **STD** | **0.515 mm** |
| **Skewness** | **-0.870** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.68 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 3.90 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 13.4 |

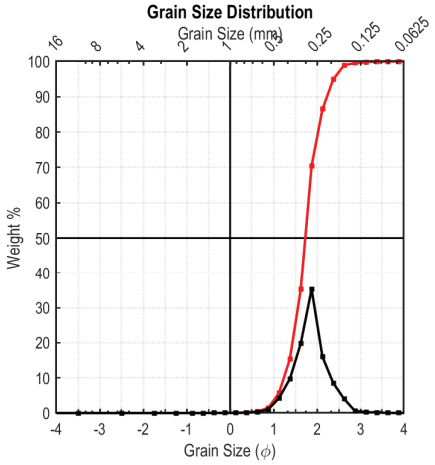
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.12 | 3.90 | 3.90 |
| -0.75 | -0.875 | 1.42 | 1.34 | 5.24 |
| -0.5 | -0.625 | 2.63 | 2.49 | 7.73 |
| -0.25 | -0.375 | 2.03 | 1.92 | 9.65 |
| 0 | -0.125 | 3.07 | 2.90 | 12.56 |
| 0.25 | 0.125 | 2.93 | 2.77 | 15.33 |
| 0.5 | 0.375 | 4.02 | 3.80 | 19.13 |
| 0.75 | 0.625 | 6.61 | 6.25 | 25.39 |
| 1 | 0.875 | 7.03 | 6.65 | 32.04 |
| 1.25 | 1.125 | 9.52 | 9.01 | 41.05 |
| 1.5 | 1.375 | 10.66 | 10.09 | 51.14 |
| 1.75 | 1.625 | 13.67 | 12.94 | 64.07 |
| 2 | 1.875 | 19.76 | 18.70 | 82.77 |
| 2.25 | 2.125 | 8.36 | 7.91 | 90.68 |
| 2.5 | 2.375 | 5.20 | 4.92 | 95.60 |
| 2.75 | 2.625 | 3.44 | 3.26 | 98.86 |
| 3 | 2.875 | 0.64 | 0.61 | 99.46 |
| 3.25 | 3.125 | 0.28 | 0.26 | 99.73 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.87 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.93 |
| 4 | 3.875 | 0.03 | 0.03 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.620 |
| **5** | -0.945 |
| **16** | 0.170 |
| **25** | 0.610 |
| **50** | 1.345 |
| **75** | 1.770 |
| **84** | 1.915 |
| **95** | 2.345 |
| **99** | 2.685 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.235 | 0.425 |
| Standard Deviation | 0.956 | 0.515 |
| Skewness | -0.870 | |
| Kurtosis | 3.364 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.042 | 1.143 |
| Standard Deviation | 0.873 | 0.935 |
| Skewness (1) | -0.347 | -0.369 |
| Skewness (2) | -0.739 | |
| Kurtosis | 0.885 | 1.162 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1600+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.277 mm** |
| **STD** | **0.765 mm** |
| **Skewness** | **0.045** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.62 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.7 |

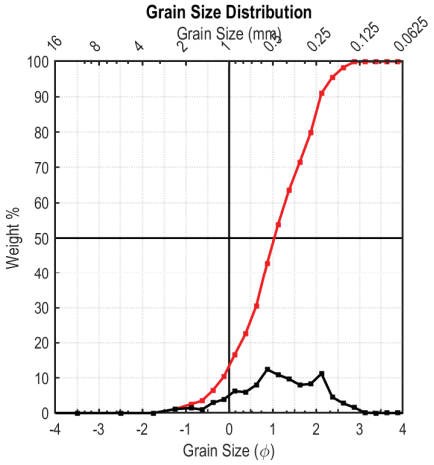
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.03 |
| 0 | -0.125 | 0.02 | 0.02 | 0.05 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.09 |
| 0.5 | 0.375 | 0.07 | 0.07 | 0.16 |
| 0.75 | 0.625 | 0.29 | 0.27 | 0.44 |
| 1 | 0.875 | 1.05 | 0.99 | 1.43 |
| 1.25 | 1.125 | 4.48 | 4.24 | 5.67 |
| 1.5 | 1.375 | 10.27 | 9.72 | 15.39 |
| 1.75 | 1.625 | 20.88 | 19.77 | 35.16 |
| 2 | 1.875 | 37.26 | 35.28 | 70.44 |
| 2.25 | 2.125 | 16.91 | 16.01 | 86.45 |
| 2.5 | 2.375 | 8.98 | 8.50 | 94.95 |
| 2.75 | 2.625 | 4.22 | 4.00 | 98.95 |
| 3 | 2.875 | 0.60 | 0.57 | 99.52 |
| 3.25 | 3.125 | 0.29 | 0.27 | 99.79 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.765 |
| **5** | 1.085 |
| **16** | 1.385 |
| **25** | 1.495 |
| **50** | 1.730 |
| **75** | 1.945 |
| **84** | 2.085 |
| **95** | 2.380 |
| **99** | 2.645 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.854 | 0.277 |
| Standard Deviation | 0.386 | 0.765 |
| Skewness | 0.045 | |
| Kurtosis | 4.691 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.735 | 1.733 |
| Standard Deviation | 0.350 | 0.371 |
| Skewness (1) | 0.014 | 0.009 |
| Skewness (2) | 0.007 | |
| Kurtosis | 0.850 | 1.179 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1600+00** |
| **Sample** | **Swash** |
| **Mean** | **0.451 mm** |
| **STD** | **0.544 mm** |
| **Skewness** | **-0.304** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.88 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 15.6 |

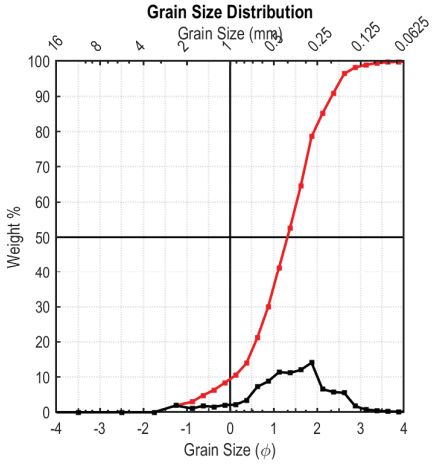
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.19 | 1.11 | 1.11 |
| -0.75 | -0.875 | 1.52 | 1.42 | 2.54 |
| -0.5 | -0.625 | 1.04 | 0.97 | 3.51 |
| -0.25 | -0.375 | 3.15 | 2.95 | 6.46 |
| 0 | -0.125 | 4.12 | 3.85 | 10.31 |
| 0.25 | 0.125 | 6.64 | 6.21 | 16.52 |
| 0.5 | 0.375 | 6.37 | 5.96 | 22.48 |
| 0.75 | 0.625 | 8.56 | 8.01 | 30.49 |
| 1 | 0.875 | 13.22 | 12.37 | 42.86 |
| 1.25 | 1.125 | 11.67 | 10.92 | 53.78 |
| 1.5 | 1.375 | 10.37 | 9.70 | 63.48 |
| 1.75 | 1.625 | 8.57 | 8.02 | 71.50 |
| 2 | 1.875 | 8.84 | 8.27 | 79.77 |
| 2.25 | 2.125 | 11.98 | 11.21 | 90.98 |
| 2.5 | 2.375 | 4.83 | 4.52 | 95.50 |
| 2.75 | 2.625 | 2.96 | 2.77 | 98.27 |
| 3 | 2.875 | 1.69 | 1.58 | 99.85 |
| 3.25 | 3.125 | 0.12 | 0.11 | 99.96 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.300 |
| **5** | -0.500 |
| **16** | 0.105 |
| **25** | 0.455 |
| **50** | 1.040 |
| **75** | 1.730 |
| **84** | 1.970 |
| **95** | 2.345 |
| **99** | 2.740 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.150 | 0.451 |
| Standard Deviation | 0.879 | 0.544 |
| Skewness | -0.304 | |
| Kurtosis | 2.688 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.037 | 1.038 |
| Standard Deviation | 0.932 | 0.897 |
| Skewness (1) | -0.003 | -0.043 |
| Skewness (2) | -0.126 | |
| Kurtosis | 0.525 | 0.914 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1610+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.390 mm** |
| **STD** | **0.532 mm** |
| **Skewness** | **-0.528** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 95.39 |
| % finer than 0.0625 mm (dry) | 0.18 |
| % granule (2-4 mm) | 1.91 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 32.0 |

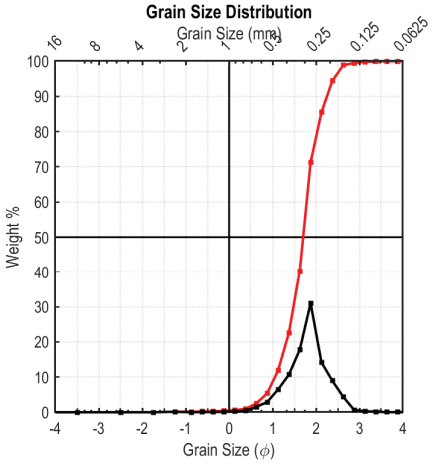
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.82 | 1.91 | 1.91 |
| -0.75 | -0.875 | 1.02 | 1.07 | 2.98 |
| -0.5 | -0.625 | 1.73 | 1.81 | 4.79 |
| -0.25 | -0.375 | 1.45 | 1.52 | 6.31 |
| 0 | -0.125 | 1.96 | 2.05 | 8.37 |
| 0.25 | 0.125 | 2.04 | 2.14 | 10.50 |
| 0.5 | 0.375 | 3.25 | 3.41 | 13.91 |
| 0.75 | 0.625 | 6.90 | 7.23 | 21.14 |
| 1 | 0.875 | 8.37 | 8.77 | 29.92 |
| 1.25 | 1.125 | 10.88 | 11.41 | 41.33 |
| 1.5 | 1.375 | 10.65 | 11.16 | 52.49 |
| 1.75 | 1.625 | 11.48 | 12.03 | 64.52 |
| 2 | 1.875 | 13.43 | 14.08 | 78.60 |
| 2.25 | 2.125 | 6.24 | 6.54 | 85.15 |
| 2.5 | 2.375 | 5.49 | 5.76 | 90.90 |
| 2.75 | 2.625 | 5.26 | 5.51 | 96.41 |
| 3 | 2.875 | 1.70 | 1.78 | 98.20 |
| 3.25 | 3.125 | 0.71 | 0.74 | 98.94 |
| 3.5 | 3.375 | 0.47 | 0.49 | 99.43 |
| 3.75 | 3.625 | 0.24 | 0.25 | 99.69 |
| 4 | 3.875 | 0.13 | 0.14 | 99.82 |
| >4.0 | 4.25 | 0.17 | 0.18 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.490 |
| **5** | -0.590 |
| **16** | 0.445 |
| **25** | 0.735 |
| **50** | 1.320 |
| **75** | 1.810 |
| **84** | 2.080 |
| **95** | 2.560 |
| **99** | 3.155 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.360 | 0.390 |
| Standard Deviation | 0.911 | 0.532 |
| Skewness | -0.528 | |
| Kurtosis | 3.641 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.262 | 1.282 |
| Standard Deviation | 0.818 | 0.886 |
| Skewness (1) | -0.070 | -0.142 |
| Skewness (2) | -0.410 | |
| Kurtosis | 0.927 | 1.201 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1610+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.289 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **-0.697** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.64 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.14 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

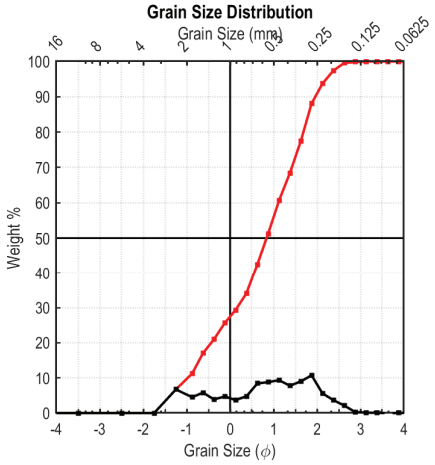
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.15 | 0.14 | 0.14 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.14 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.21 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.27 |
| 0 | -0.125 | 0.12 | 0.11 | 0.39 |
| 0.25 | 0.125 | 0.20 | 0.19 | 0.58 |
| 0.5 | 0.375 | 0.40 | 0.38 | 0.96 |
| 0.75 | 0.625 | 1.62 | 1.53 | 2.49 |
| 1 | 0.875 | 3.06 | 2.90 | 5.39 |
| 1.25 | 1.125 | 6.82 | 6.46 | 11.84 |
| 1.5 | 1.375 | 11.29 | 10.69 | 22.53 |
| 1.75 | 1.625 | 18.74 | 17.74 | 40.27 |
| 2 | 1.875 | 32.75 | 31.00 | 71.27 |
| 2.25 | 2.125 | 14.99 | 14.19 | 85.46 |
| 2.5 | 2.375 | 9.45 | 8.95 | 94.41 |
| 2.75 | 2.625 | 4.65 | 4.40 | 98.81 |
| 3 | 2.875 | 0.71 | 0.67 | 99.48 |
| 3.25 | 3.125 | 0.32 | 0.30 | 99.78 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.92 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.380 |
| **5** | 0.840 |
| **16** | 1.220 |
| **25** | 1.410 |
| **50** | 1.705 |
| **75** | 1.940 |
| **84** | 2.100 |
| **95** | 2.410 |
| **99** | 2.695 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.789 | 0.289 |
| Standard Deviation | 0.483 | 0.715 |
| Skewness | -0.697 | |
| Kurtosis | 6.329 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.660 | 1.675 |
| Standard Deviation | 0.440 | 0.458 |
| Skewness (1) | -0.102 | -0.102 |
| Skewness (2) | -0.182 | |
| Kurtosis | 0.784 | 1.214 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1610+00** |
| **Sample** | **Swash** |
| **Mean** | **0.571 mm** |
| **STD** | **0.475 mm** |
| **Skewness** | **-0.354** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 101.20 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 6.71 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 17.7 |

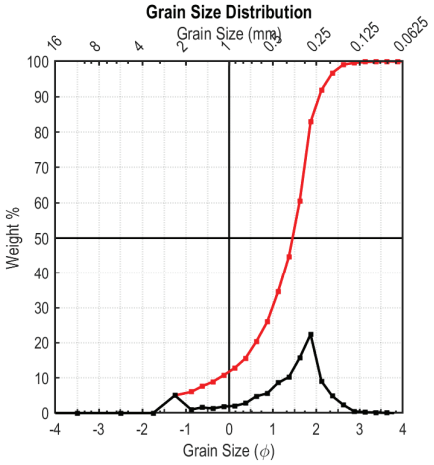
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 6.79 | 6.71 | 6.71 |
| -0.75 | -0.875 | 4.57 | 4.52 | 11.23 |
| -0.5 | -0.625 | 5.88 | 5.81 | 17.04 |
| -0.25 | -0.375 | 3.94 | 3.89 | 20.93 |
| 0 | -0.125 | 4.74 | 4.68 | 25.61 |
| 0.25 | 0.125 | 3.76 | 3.72 | 29.33 |
| 0.5 | 0.375 | 4.80 | 4.74 | 34.07 |
| 0.75 | 0.625 | 8.51 | 8.41 | 42.48 |
| 1 | 0.875 | 8.90 | 8.79 | 51.27 |
| 1.25 | 1.125 | 9.46 | 9.35 | 60.62 |
| 1.5 | 1.375 | 7.86 | 7.77 | 68.39 |
| 1.75 | 1.625 | 9.10 | 8.99 | 77.38 |
| 2 | 1.875 | 10.86 | 10.73 | 88.11 |
| 2.25 | 2.125 | 5.65 | 5.58 | 93.70 |
| 2.5 | 2.375 | 3.74 | 3.70 | 97.39 |
| 2.75 | 2.625 | 2.16 | 2.13 | 99.53 |
| 3 | 2.875 | 0.31 | 0.31 | 99.83 |
| 3.25 | 3.125 | 0.11 | 0.11 | 99.94 |
| 3.5 | 3.375 | 0.06 | 0.06 | 100.00 |
| 3.75 | 3.625 | -0.04 | -0.04 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.675 |
| **5** | -1.375 |
| **16** | -0.670 |
| **25** | -0.160 |
| **50** | 0.840 |
| **75** | 1.560 |
| **84** | 1.780 |
| **95** | 2.215 |
| **99** | 2.565 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.808 | 0.571 |
| Standard Deviation | 1.075 | 0.475 |
| Skewness | -0.354 | |
| Kurtosis | 2.158 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.555 | 0.650 |
| Standard Deviation | 1.225 | 1.156 |
| Skewness (1) | -0.233 | -0.233 |
| Skewness (2) | -0.343 | |
| Kurtosis | 0.465 | 0.855 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1620+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.403 mm** |
| **STD** | **0.524 mm** |
| **Skewness** | **-1.242** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.50 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 5.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.1 |

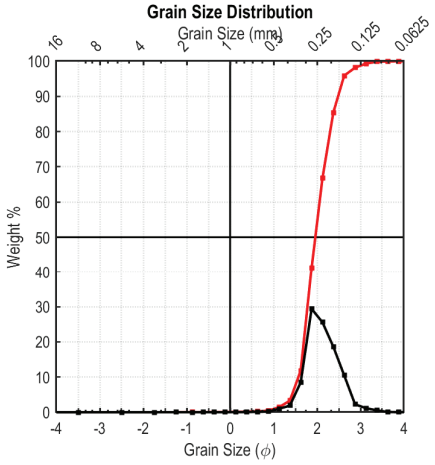
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.29 | 5.01 | 5.01 |
| -0.75 | -0.875 | 1.05 | 1.00 | 6.01 |
| -0.5 | -0.625 | 1.68 | 1.59 | 7.60 |
| -0.25 | -0.375 | 1.38 | 1.31 | 8.91 |
| 0 | -0.125 | 1.96 | 1.86 | 10.77 |
| 0.25 | 0.125 | 2.14 | 2.03 | 12.80 |
| 0.5 | 0.375 | 2.92 | 2.77 | 15.56 |
| 0.75 | 0.625 | 5.04 | 4.78 | 20.34 |
| 1 | 0.875 | 5.89 | 5.58 | 25.92 |
| 1.25 | 1.125 | 9.05 | 8.58 | 34.50 |
| 1.5 | 1.375 | 10.80 | 10.24 | 44.74 |
| 1.75 | 1.625 | 16.60 | 15.73 | 60.47 |
| 2 | 1.875 | 23.65 | 22.42 | 82.89 |
| 2.25 | 2.125 | 9.54 | 9.04 | 91.93 |
| 2.5 | 2.375 | 5.09 | 4.82 | 96.76 |
| 2.75 | 2.625 | 2.49 | 2.36 | 99.12 |
| 3 | 2.875 | 0.52 | 0.49 | 99.61 |
| 3.25 | 3.125 | 0.26 | 0.25 | 99.86 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.98 |
| 3.75 | 3.625 | 0.05 | 0.05 | 100.03 |
| 4 | 3.875 | -0.04 | -0.04 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.650 |
| **5** | -1.250 |
| **16** | 0.400 |
| **25** | 0.835 |
| **50** | 1.460 |
| **75** | 1.785 |
| **84** | 1.905 |
| **95** | 2.285 |
| **99** | 2.615 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.312 | 0.403 |
| Standard Deviation | 0.932 | 0.524 |
| Skewness | -1.242 | |
| Kurtosis | 4.167 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.152 | 1.255 |
| Standard Deviation | 0.752 | 0.912 |
| Skewness (1) | -0.409 | -0.471 |
| Skewness (2) | -1.252 | |
| Kurtosis | 1.349 | 1.525 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1620+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.231 mm** |
| **STD** | **0.766 mm** |
| **Skewness** | **0.033** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.37 |
| % finer than 0.0625 mm (dry) | 0.06 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

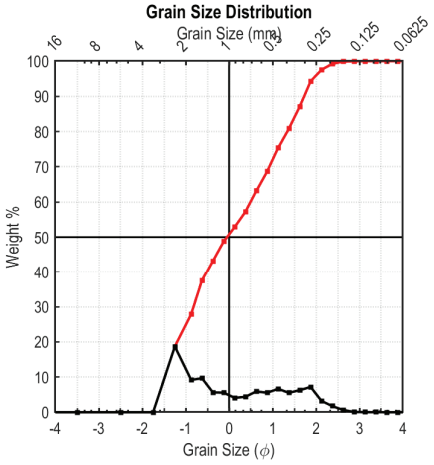
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.02 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.03 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.05 |
| 0 | -0.125 | 0.01 | 0.01 | 0.06 |
| 0.25 | 0.125 | 0.04 | 0.04 | 0.09 |
| 0.5 | 0.375 | 0.05 | 0.05 | 0.14 |
| 0.75 | 0.625 | 0.13 | 0.12 | 0.27 |
| 1 | 0.875 | 0.19 | 0.18 | 0.45 |
| 1.25 | 1.125 | 1.02 | 0.97 | 1.41 |
| 1.5 | 1.375 | 1.99 | 1.89 | 3.30 |
| 1.75 | 1.625 | 8.97 | 8.51 | 11.82 |
| 2 | 1.875 | 30.97 | 29.39 | 41.21 |
| 2.25 | 2.125 | 26.94 | 25.57 | 66.77 |
| 2.5 | 2.375 | 19.62 | 18.62 | 85.39 |
| 2.75 | 2.625 | 11.05 | 10.49 | 95.88 |
| 3 | 2.875 | 2.39 | 2.27 | 98.15 |
| 3.25 | 3.125 | 1.21 | 1.15 | 99.30 |
| 3.5 | 3.375 | 0.57 | 0.54 | 99.84 |
| 3.75 | 3.625 | 0.10 | 0.09 | 99.93 |
| 4 | 3.875 | 0.01 | 0.01 | 99.94 |
| >4.0 | 4.25 | 0.06 | 0.06 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.020 |
| **5** | 1.425 |
| **16** | 1.660 |
| **25** | 1.735 |
| **50** | 1.960 |
| **75** | 2.235 |
| **84** | 2.355 |
| **95** | 2.605 |
| **99** | 3.060 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.115 | 0.231 |
| Standard Deviation | 0.385 | 0.766 |
| Skewness | 0.033 | |
| Kurtosis | 6.331 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.008 | 1.992 |
| Standard Deviation | 0.347 | 0.353 |
| Skewness (1) | 0.137 | 0.115 |
| Skewness (2) | 0.158 | |
| Kurtosis | 0.698 | 0.967 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1620+00** |
| **Sample** | **Swash** |
| **Mean** | **0.858 mm** |
| **STD** | **0.449 mm** |
| **Skewness** | **0.239** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 86.24 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 18.69 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 18.2 |

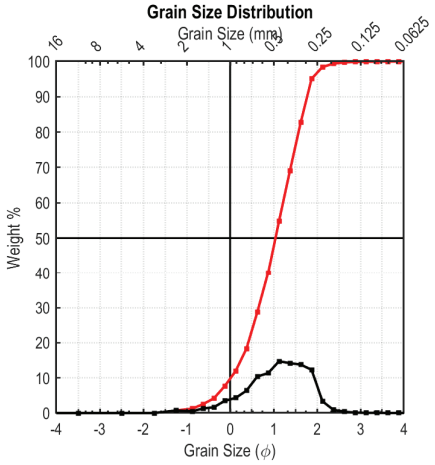
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 16.12 | 18.69 | 18.69 |
| -0.75 | -0.875 | 7.93 | 9.20 | 27.89 |
| -0.5 | -0.625 | 8.33 | 9.66 | 37.55 |
| -0.25 | -0.375 | 4.86 | 5.64 | 43.18 |
| 0 | -0.125 | 4.80 | 5.57 | 48.75 |
| 0.25 | 0.125 | 3.53 | 4.09 | 52.84 |
| 0.5 | 0.375 | 3.78 | 4.38 | 57.22 |
| 0.75 | 0.625 | 5.09 | 5.90 | 63.13 |
| 1 | 0.875 | 4.78 | 5.54 | 68.67 |
| 1.25 | 1.125 | 5.73 | 6.64 | 75.31 |
| 1.5 | 1.375 | 4.76 | 5.52 | 80.83 |
| 1.75 | 1.625 | 5.41 | 6.27 | 87.11 |
| 2 | 1.875 | 6.20 | 7.19 | 94.29 |
| 2.25 | 2.125 | 2.79 | 3.24 | 97.53 |
| 2.5 | 2.375 | 1.48 | 1.72 | 99.25 |
| 2.75 | 2.625 | 0.55 | 0.64 | 99.88 |
| 3 | 2.875 | 0.07 | 0.08 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.725 |
| **5** | -1.615 |
| **16** | -1.320 |
| **25** | -0.995 |
| **50** | -0.050 |
| **75** | 1.115 |
| **84** | 1.500 |
| **95** | 1.930 |
| **99** | 2.340 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.221 | 0.858 |
| Standard Deviation | 1.156 | 0.449 |
| Skewness | 0.239 | |
| Kurtosis | 1.723 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.090 | 0.043 |
| Standard Deviation | 1.410 | 1.242 |
| Skewness (1) | 0.099 | 0.108 |
| Skewness (2) | 0.147 | |
| Kurtosis | 0.257 | 0.689 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1630+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.470 mm** |
| **STD** | **0.618 mm** |
| **Skewness** | **-0.595** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.56 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.72 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.5 |

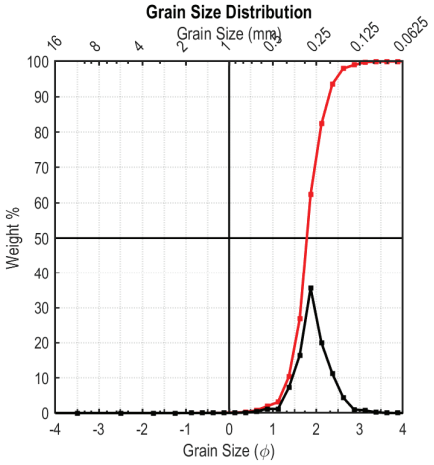
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.76 | 0.72 | 0.72 |
| -0.75 | -0.875 | 0.54 | 0.51 | 1.23 |
| -0.5 | -0.625 | 1.37 | 1.30 | 2.53 |
| -0.25 | -0.375 | 1.74 | 1.65 | 4.18 |
| 0 | -0.125 | 3.66 | 3.47 | 7.64 |
| 0.25 | 0.125 | 4.53 | 4.29 | 11.94 |
| 0.5 | 0.375 | 6.72 | 6.37 | 18.30 |
| 0.75 | 0.625 | 10.97 | 10.39 | 28.69 |
| 1 | 0.875 | 11.99 | 11.36 | 40.05 |
| 1.25 | 1.125 | 15.56 | 14.74 | 54.79 |
| 1.5 | 1.375 | 14.98 | 14.19 | 68.98 |
| 1.75 | 1.625 | 14.56 | 13.79 | 82.78 |
| 2 | 1.875 | 12.99 | 12.31 | 95.08 |
| 2.25 | 2.125 | 3.53 | 3.34 | 98.43 |
| 2.5 | 2.375 | 0.97 | 0.92 | 99.35 |
| 2.75 | 2.625 | 0.41 | 0.39 | 99.73 |
| 3 | 2.875 | 0.12 | 0.11 | 99.85 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.91 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.045 |
| **5** | -0.315 |
| **16** | 0.285 |
| **25** | 0.535 |
| **50** | 1.045 |
| **75** | 1.485 |
| **84** | 1.650 |
| **95** | 1.875 |
| **99** | 2.280 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.089 | 0.470 |
| Standard Deviation | 0.695 | 0.618 |
| Skewness | -0.595 | |
| Kurtosis | 3.523 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.968 | 0.993 |
| Standard Deviation | 0.682 | 0.673 |
| Skewness (1) | -0.114 | -0.178 |
| Skewness (2) | -0.388 | |
| Kurtosis | 0.604 | 0.945 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1630+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.263 mm** |
| **STD** | **0.762 mm** |
| **Skewness** | **-0.137** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.51 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.7 |

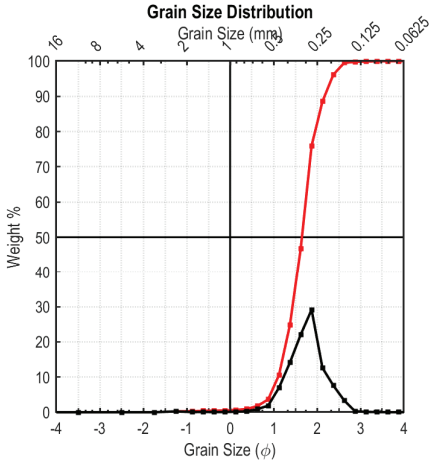
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.03 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.05 |
| 0 | -0.125 | 0.02 | 0.02 | 0.07 |
| 0.25 | 0.125 | 0.06 | 0.06 | 0.12 |
| 0.5 | 0.375 | 0.14 | 0.13 | 0.26 |
| 0.75 | 0.625 | 0.53 | 0.50 | 0.76 |
| 1 | 0.875 | 1.26 | 1.19 | 1.95 |
| 1.25 | 1.125 | 1.21 | 1.15 | 3.10 |
| 1.5 | 1.375 | 7.67 | 7.27 | 10.37 |
| 1.75 | 1.625 | 17.33 | 16.42 | 26.79 |
| 2 | 1.875 | 37.52 | 35.56 | 62.35 |
| 2.25 | 2.125 | 21.08 | 19.98 | 82.33 |
| 2.5 | 2.375 | 11.85 | 11.23 | 93.56 |
| 2.75 | 2.625 | 4.66 | 4.42 | 97.98 |
| 3 | 2.875 | 1.05 | 1.00 | 98.98 |
| 3.25 | 3.125 | 0.82 | 0.78 | 99.75 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.675 |
| **5** | 1.190 |
| **16** | 1.460 |
| **25** | 1.600 |
| **50** | 1.790 |
| **75** | 2.035 |
| **84** | 2.160 |
| **95** | 2.455 |
| **99** | 2.885 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.929 | 0.263 |
| Standard Deviation | 0.392 | 0.762 |
| Skewness | -0.137 | |
| Kurtosis | 5.611 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.810 | 1.803 |
| Standard Deviation | 0.350 | 0.367 |
| Skewness (1) | 0.057 | 0.054 |
| Skewness (2) | 0.093 | |
| Kurtosis | 0.807 | 1.192 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1630+00** |
| **Sample** | **Swash** |
| **Mean** | **0.298 mm** |
| **STD** | **0.730 mm** |
| **Skewness** | **-1.033** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.49 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.25 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

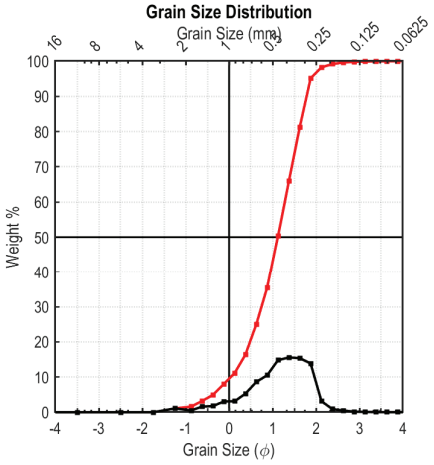
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.26 | 0.25 | 0.25 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.29 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.39 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.44 |
| 0 | -0.125 | 0.07 | 0.07 | 0.50 |
| 0.25 | 0.125 | 0.15 | 0.14 | 0.64 |
| 0.5 | 0.375 | 0.26 | 0.25 | 0.89 |
| 0.75 | 0.625 | 0.91 | 0.86 | 1.75 |
| 1 | 0.875 | 1.98 | 1.88 | 3.63 |
| 1.25 | 1.125 | 7.37 | 6.99 | 10.62 |
| 1.5 | 1.375 | 14.89 | 14.12 | 24.73 |
| 1.75 | 1.625 | 23.29 | 22.08 | 46.81 |
| 2 | 1.875 | 30.74 | 29.14 | 75.95 |
| 2.25 | 2.125 | 13.29 | 12.60 | 88.55 |
| 2.5 | 2.375 | 8.02 | 7.60 | 96.15 |
| 2.75 | 2.625 | 3.54 | 3.36 | 99.51 |
| 3 | 2.875 | 0.31 | 0.29 | 99.80 |
| 3.25 | 3.125 | 0.12 | 0.11 | 99.91 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.405 |
| **5** | 0.925 |
| **16** | 1.220 |
| **25** | 1.380 |
| **50** | 1.650 |
| **75** | 1.865 |
| **84** | 2.035 |
| **95** | 2.335 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.748 | 0.298 |
| Standard Deviation | 0.454 | 0.730 |
| Skewness | -1.033 | |
| Kurtosis | 8.959 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.627 | 1.635 |
| Standard Deviation | 0.408 | 0.417 |
| Skewness (1) | -0.055 | -0.042 |
| Skewness (2) | -0.049 | |
| Kurtosis | 0.730 | 1.191 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1640+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.456 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **-0.807** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.42 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

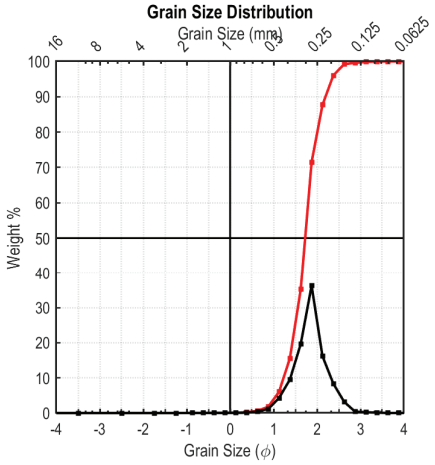
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.14 | 1.08 | 1.08 |
| -0.75 | -0.875 | 0.54 | 0.51 | 1.59 |
| -0.5 | -0.625 | 1.68 | 1.59 | 3.19 |
| -0.25 | -0.375 | 1.83 | 1.74 | 4.92 |
| 0 | -0.125 | 3.22 | 3.05 | 7.98 |
| 0.25 | 0.125 | 3.30 | 3.13 | 11.11 |
| 0.5 | 0.375 | 5.55 | 5.26 | 16.37 |
| 0.75 | 0.625 | 9.08 | 8.61 | 24.99 |
| 1 | 0.875 | 11.08 | 10.51 | 35.50 |
| 1.25 | 1.125 | 15.61 | 14.81 | 50.30 |
| 1.5 | 1.375 | 16.42 | 15.58 | 65.88 |
| 1.75 | 1.625 | 16.20 | 15.37 | 81.25 |
| 2 | 1.875 | 14.62 | 13.87 | 95.11 |
| 2.25 | 2.125 | 3.31 | 3.14 | 98.25 |
| 2.5 | 2.375 | 0.94 | 0.89 | 99.15 |
| 2.75 | 2.625 | 0.52 | 0.49 | 99.64 |
| 3 | 2.875 | 0.17 | 0.16 | 99.80 |
| 3.25 | 3.125 | 0.10 | 0.09 | 99.90 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.290 |
| **5** | -0.370 |
| **16** | 0.355 |
| **25** | 0.625 |
| **50** | 1.120 |
| **75** | 1.525 |
| **84** | 1.675 |
| **95** | 1.875 |
| **99** | 2.335 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.134 | 0.456 |
| Standard Deviation | 0.710 | 0.611 |
| Skewness | -0.807 | |
| Kurtosis | 3.984 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.015 | 1.050 |
| Standard Deviation | 0.660 | 0.670 |
| Skewness (1) | -0.159 | -0.243 |
| Skewness (2) | -0.557 | |
| Kurtosis | 0.701 | 1.022 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1640+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.279 mm** |
| **STD** | **0.768 mm** |
| **Skewness** | **-0.234** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.58 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.5 |

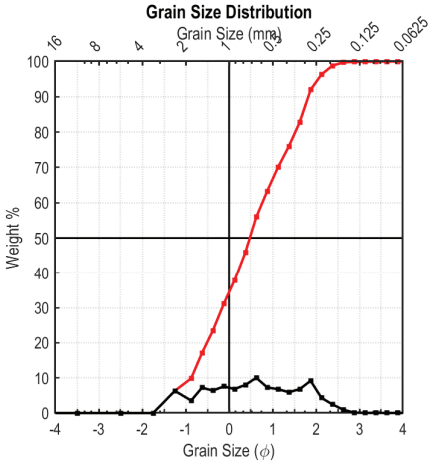
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.03 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.04 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.07 |
| 0 | -0.125 | 0.02 | 0.02 | 0.09 |
| 0.25 | 0.125 | 0.04 | 0.04 | 0.12 |
| 0.5 | 0.375 | 0.09 | 0.09 | 0.21 |
| 0.75 | 0.625 | 0.42 | 0.40 | 0.61 |
| 1 | 0.875 | 1.23 | 1.16 | 1.77 |
| 1.25 | 1.125 | 4.50 | 4.26 | 6.03 |
| 1.5 | 1.375 | 10.06 | 9.53 | 15.56 |
| 1.75 | 1.625 | 20.74 | 19.64 | 35.21 |
| 2 | 1.875 | 38.28 | 36.26 | 71.46 |
| 2.25 | 2.125 | 17.10 | 16.20 | 87.66 |
| 2.5 | 2.375 | 8.84 | 8.37 | 96.03 |
| 2.75 | 2.625 | 3.36 | 3.18 | 99.21 |
| 3 | 2.875 | 0.43 | 0.41 | 99.62 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.86 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.710 |
| **5** | 1.065 |
| **16** | 1.380 |
| **25** | 1.495 |
| **50** | 1.725 |
| **75** | 1.930 |
| **84** | 2.070 |
| **95** | 2.345 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.841 | 0.279 |
| Standard Deviation | 0.381 | 0.768 |
| Skewness | -0.234 | |
| Kurtosis | 5.409 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.725 | 1.725 |
| Standard Deviation | 0.345 | 0.366 |
| Skewness (1) | 0.000 | -0.016 |
| Skewness (2) | -0.058 | |
| Kurtosis | 0.855 | 1.206 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1640+00** |
| **Sample** | **Swash** |
| **Mean** | **0.659 mm** |
| **STD** | **0.493 mm** |
| **Skewness** | **-0.019** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.53 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 6.32 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 15.9 |

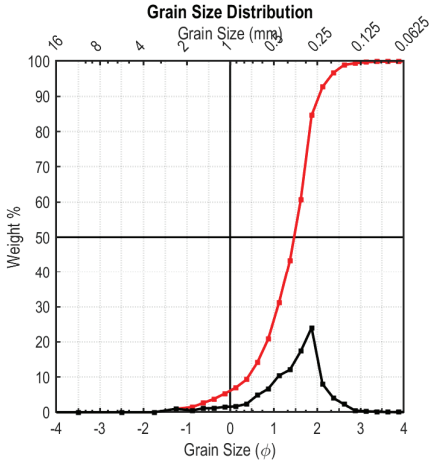
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 6.67 | 6.32 | 6.32 |
| -0.75 | -0.875 | 3.74 | 3.54 | 9.86 |
| -0.5 | -0.625 | 7.63 | 7.23 | 17.09 |
| -0.25 | -0.375 | 6.75 | 6.40 | 23.49 |
| 0 | -0.125 | 7.99 | 7.57 | 31.06 |
| 0.25 | 0.125 | 7.22 | 6.84 | 37.90 |
| 0.5 | 0.375 | 8.47 | 8.03 | 45.93 |
| 0.75 | 0.625 | 10.58 | 10.03 | 55.96 |
| 1 | 0.875 | 7.71 | 7.31 | 63.26 |
| 1.25 | 1.125 | 7.16 | 6.78 | 70.05 |
| 1.5 | 1.375 | 6.26 | 5.93 | 75.98 |
| 1.75 | 1.625 | 7.19 | 6.81 | 82.79 |
| 2 | 1.875 | 9.69 | 9.18 | 91.97 |
| 2.25 | 2.125 | 4.56 | 4.32 | 96.29 |
| 2.5 | 2.375 | 2.61 | 2.47 | 98.77 |
| 2.75 | 2.625 | 1.02 | 0.97 | 99.73 |
| 3 | 2.875 | 0.12 | 0.11 | 99.85 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.90 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.670 |
| **5** | -1.355 |
| **16** | -0.665 |
| **25** | -0.325 |
| **50** | 0.475 |
| **75** | 1.335 |
| **84** | 1.660 |
| **95** | 2.050 |
| **99** | 2.435 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.602 | 0.659 |
| Standard Deviation | 1.020 | 0.493 |
| Skewness | -0.019 | |
| Kurtosis | 2.126 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.498 | 0.490 |
| Standard Deviation | 1.163 | 1.097 |
| Skewness (1) | 0.019 | -0.028 |
| Skewness (2) | -0.110 | |
| Kurtosis | 0.465 | 0.841 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1650+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.367 mm** |
| **STD** | **0.604 mm** |
| **Skewness** | **-1.062** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.70 |
| % finer than 0.0625 mm (dry) | 0.08 |
| % granule (2-4 mm) | 0.96 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 13.7 |

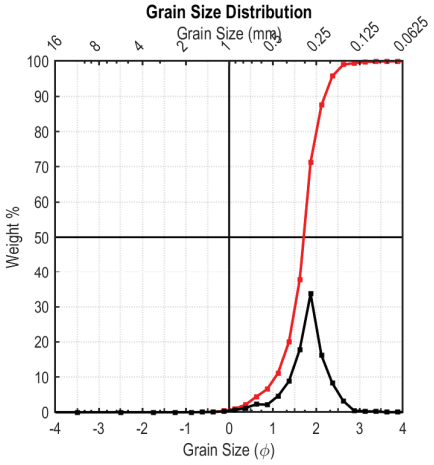
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.02 | 0.96 | 0.96 |
| -0.75 | -0.875 | 0.53 | 0.50 | 1.47 |
| -0.5 | -0.625 | 1.20 | 1.14 | 2.60 |
| -0.25 | -0.375 | 1.23 | 1.16 | 3.77 |
| 0 | -0.125 | 1.61 | 1.52 | 5.29 |
| 0.25 | 0.125 | 1.75 | 1.66 | 6.94 |
| 0.5 | 0.375 | 2.47 | 2.34 | 9.28 |
| 0.75 | 0.625 | 5.10 | 4.82 | 14.11 |
| 1 | 0.875 | 7.03 | 6.65 | 20.76 |
| 1.25 | 1.125 | 11.02 | 10.43 | 31.18 |
| 1.5 | 1.375 | 12.75 | 12.06 | 43.25 |
| 1.75 | 1.625 | 18.32 | 17.33 | 60.58 |
| 2 | 1.875 | 25.38 | 24.01 | 84.59 |
| 2.25 | 2.125 | 8.51 | 8.05 | 92.64 |
| 2.5 | 2.375 | 4.29 | 4.06 | 96.70 |
| 2.75 | 2.625 | 2.36 | 2.23 | 98.93 |
| 3 | 2.875 | 0.51 | 0.48 | 99.41 |
| 3.25 | 3.125 | 0.30 | 0.28 | 99.70 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.83 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.89 |
| 4 | 3.875 | 0.04 | 0.04 | 99.92 |
| >4.0 | 4.25 | 0.08 | 0.08 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.225 |
| **5** | -0.170 |
| **16** | 0.695 |
| **25** | 0.975 |
| **50** | 1.470 |
| **75** | 1.775 |
| **84** | 1.870 |
| **95** | 2.270 |
| **99** | 2.660 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.444 | 0.367 |
| Standard Deviation | 0.728 | 0.604 |
| Skewness | -1.062 | |
| Kurtosis | 5.080 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.282 | 1.345 |
| Standard Deviation | 0.588 | 0.663 |
| Skewness (1) | -0.319 | -0.332 |
| Skewness (2) | -0.715 | |
| Kurtosis | 1.077 | 1.250 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1650+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.290 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **-0.784** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.53 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

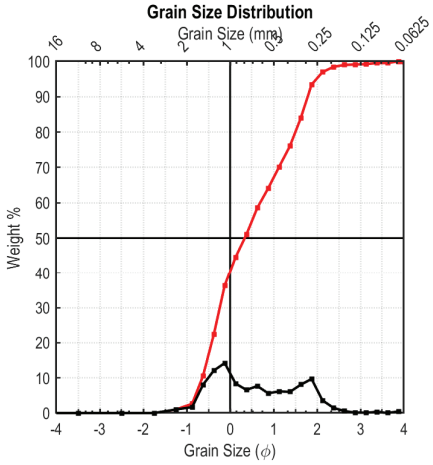
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.04 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.12 |
| 0 | -0.125 | 0.24 | 0.23 | 0.35 |
| 0.25 | 0.125 | 0.63 | 0.60 | 0.95 |
| 0.5 | 0.375 | 1.26 | 1.19 | 2.14 |
| 0.75 | 0.625 | 2.39 | 2.26 | 4.41 |
| 1 | 0.875 | 2.27 | 2.15 | 6.56 |
| 1.25 | 1.125 | 4.83 | 4.58 | 11.13 |
| 1.5 | 1.375 | 9.26 | 8.77 | 19.91 |
| 1.75 | 1.625 | 18.77 | 17.79 | 37.70 |
| 2 | 1.875 | 35.49 | 33.63 | 71.33 |
| 2.25 | 2.125 | 17.05 | 16.16 | 87.48 |
| 2.5 | 2.375 | 8.71 | 8.25 | 95.74 |
| 2.75 | 2.625 | 3.42 | 3.24 | 98.98 |
| 3 | 2.875 | 0.50 | 0.47 | 99.45 |
| 3.25 | 3.125 | 0.29 | 0.27 | 99.73 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.91 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.93 |
| 4 | 3.875 | 0.02 | 0.02 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.135 |
| **5** | 0.695 |
| **16** | 1.265 |
| **25** | 1.445 |
| **50** | 1.715 |
| **75** | 1.930 |
| **84** | 2.070 |
| **95** | 2.355 |
| **99** | 2.635 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.786 | 0.290 |
| Standard Deviation | 0.485 | 0.715 |
| Skewness | -0.784 | |
| Kurtosis | 5.449 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.668 | 1.683 |
| Standard Deviation | 0.403 | 0.453 |
| Skewness (1) | -0.118 | -0.173 |
| Skewness (2) | -0.472 | |
| Kurtosis | 1.062 | 1.403 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1650+00** |
| **Sample** | **Swash** |
| **Mean** | **0.690 mm** |
| **STD** | **0.565 mm** |
| **Skewness** | **-0.763** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.42 |
| % finer than 0.0625 mm (dry) | -1.98 |
| % granule (2-4 mm) | 1.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.7 |

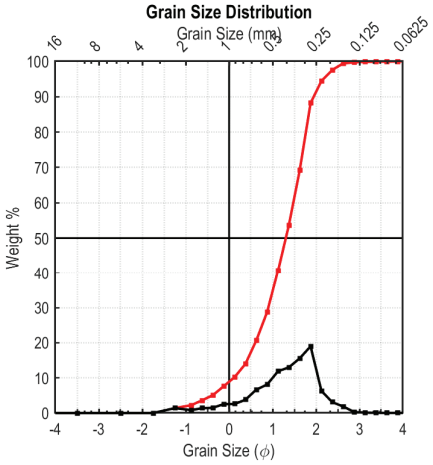
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.07 | 1.01 | 1.01 |
| -0.75 | -0.875 | 1.77 | 1.68 | 2.69 |
| -0.5 | -0.625 | 8.49 | 8.05 | 10.75 |
| -0.25 | -0.375 | 12.77 | 12.11 | 22.86 |
| 0 | -0.125 | 14.99 | 14.22 | 37.08 |
| 0.25 | 0.125 | 8.83 | 8.38 | 45.46 |
| 0.5 | 0.375 | 6.94 | 6.58 | 52.04 |
| 0.75 | 0.625 | 8.10 | 7.68 | 59.72 |
| 1 | 0.875 | 5.93 | 5.63 | 65.35 |
| 1.25 | 1.125 | 6.49 | 6.16 | 71.50 |
| 1.5 | 1.375 | 6.35 | 6.02 | 77.53 |
| 1.75 | 1.625 | 8.50 | 8.06 | 85.59 |
| 2 | 1.875 | 10.23 | 9.70 | 95.30 |
| 2.25 | 2.125 | 3.79 | 3.60 | 98.89 |
| 2.5 | 2.375 | 1.59 | 1.51 | 100.40 |
| 2.75 | 2.625 | 0.59 | 0.56 | 100.96 |
| 3 | 2.875 | 0.14 | 0.13 | 101.09 |
| 3.25 | 3.125 | 0.12 | 0.11 | 101.20 |
| 3.5 | 3.375 | 0.31 | 0.29 | 101.50 |
| 3.75 | 3.625 | 0.04 | 0.04 | 101.54 |
| 4 | 3.875 | 0.47 | 0.45 | 101.98 |
| >4.0 | 4.25 | -2.09 | -1.98 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.250 |
| **5** | -0.800 |
| **16** | -0.510 |
| **25** | -0.330 |
| **50** | 0.335 |
| **75** | 1.330 |
| **84** | 1.625 |
| **95** | 1.985 |
| **99** | 2.635 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.535 | 0.690 |
| Standard Deviation | 0.823 | 0.565 |
| Skewness | -0.763 | |
| Kurtosis | -3.268 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.558 | 0.483 |
| Standard Deviation | 1.067 | 0.956 |
| Skewness (1) | 0.208 | 0.197 |
| Skewness (2) | 0.241 | |
| Kurtosis | 0.304 | 0.688 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1660+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.411 mm** |
| **STD** | **0.584 mm** |
| **Skewness** | **-0.921** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.54 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.40 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.9 |

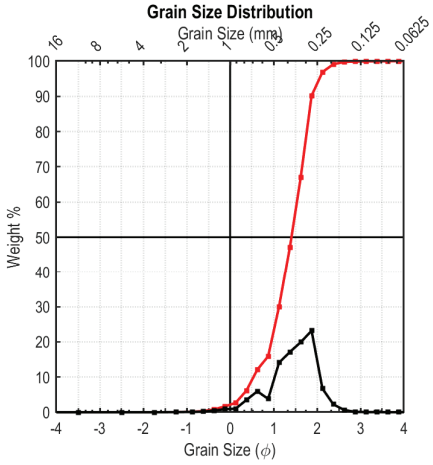
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.48 | 1.40 | 1.40 |
| -0.75 | -0.875 | 0.87 | 0.82 | 2.23 |
| -0.5 | -0.625 | 1.45 | 1.37 | 3.60 |
| -0.25 | -0.375 | 1.57 | 1.49 | 5.09 |
| 0 | -0.125 | 2.68 | 2.54 | 7.63 |
| 0.25 | 0.125 | 2.72 | 2.58 | 10.20 |
| 0.5 | 0.375 | 3.99 | 3.78 | 13.99 |
| 0.75 | 0.625 | 7.04 | 6.67 | 20.66 |
| 1 | 0.875 | 8.56 | 8.11 | 28.77 |
| 1.25 | 1.125 | 12.55 | 11.89 | 40.66 |
| 1.5 | 1.375 | 13.72 | 13.00 | 53.66 |
| 1.75 | 1.625 | 16.44 | 15.58 | 69.23 |
| 2 | 1.875 | 20.04 | 18.99 | 88.22 |
| 2.25 | 2.125 | 6.62 | 6.27 | 94.49 |
| 2.5 | 2.375 | 3.26 | 3.09 | 97.58 |
| 2.75 | 2.625 | 1.96 | 1.86 | 99.44 |
| 3 | 2.875 | 0.32 | 0.30 | 99.74 |
| 3.25 | 3.125 | 0.12 | 0.11 | 99.86 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.91 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.94 |
| 4 | 3.875 | 0.04 | 0.04 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.395 |
| **5** | -0.390 |
| **16** | 0.450 |
| **25** | 0.760 |
| **50** | 1.305 |
| **75** | 1.700 |
| **84** | 1.820 |
| **95** | 2.165 |
| **99** | 2.565 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.283 | 0.411 |
| Standard Deviation | 0.775 | 0.584 |
| Skewness | -0.921 | |
| Kurtosis | 4.100 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.135 | 1.192 |
| Standard Deviation | 0.685 | 0.730 |
| Skewness (1) | -0.248 | -0.287 |
| Skewness (2) | -0.609 | |
| Kurtosis | 0.865 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1660+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.366 mm** |
| **STD** | **0.687 mm** |
| **Skewness** | **-0.825** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.54 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

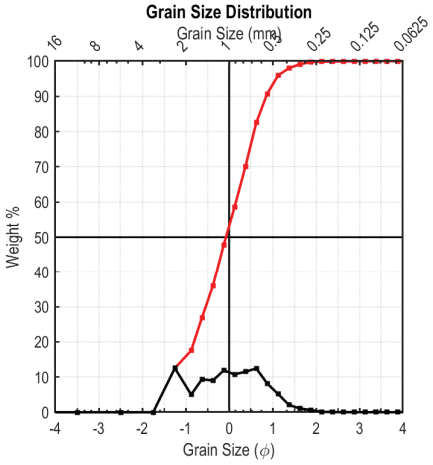
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.10 | 0.10 | 0.13 |
| -0.5 | -0.625 | 0.18 | 0.17 | 0.31 |
| -0.25 | -0.375 | 0.50 | 0.48 | 0.78 |
| 0 | -0.125 | 0.91 | 0.87 | 1.65 |
| 0.25 | 0.125 | 1.05 | 1.00 | 2.66 |
| 0.5 | 0.375 | 3.65 | 3.49 | 6.15 |
| 0.75 | 0.625 | 6.22 | 5.95 | 12.10 |
| 1 | 0.875 | 3.98 | 3.81 | 15.91 |
| 1.25 | 1.125 | 14.71 | 14.07 | 29.98 |
| 1.5 | 1.375 | 17.91 | 17.13 | 47.11 |
| 1.75 | 1.625 | 20.82 | 19.92 | 67.03 |
| 2 | 1.875 | 24.21 | 23.16 | 90.19 |
| 2.25 | 2.125 | 7.01 | 6.71 | 96.89 |
| 2.5 | 2.375 | 2.34 | 2.24 | 99.13 |
| 2.75 | 2.625 | 0.68 | 0.65 | 99.78 |
| 3 | 2.875 | 0.11 | 0.11 | 99.89 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.93 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.315 |
| **5** | 0.295 |
| **16** | 0.875 |
| **25** | 1.035 |
| **50** | 1.410 |
| **75** | 1.710 |
| **84** | 1.810 |
| **95** | 2.055 |
| **99** | 2.360 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.451 | 0.366 |
| Standard Deviation | 0.541 | 0.687 |
| Skewness | -0.825 | |
| Kurtosis | 4.347 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.343 | 1.365 |
| Standard Deviation | 0.468 | 0.500 |
| Skewness (1) | -0.144 | -0.206 |
| Skewness (2) | -0.503 | |
| Kurtosis | 0.882 | 1.069 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1660+00** |
| **Sample** | **Swash** |
| **Mean** | **0.985 mm** |
| **STD** | **0.588 mm** |
| **Skewness** | **0.021** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.47 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 12.52 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 17.8 |

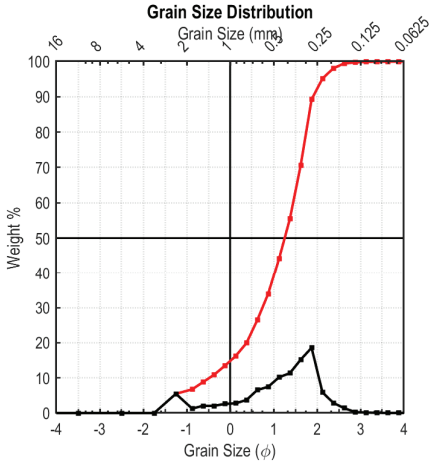
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 13.21 | 12.52 | 12.52 |
| -0.75 | -0.875 | 5.28 | 5.01 | 17.53 |
| -0.5 | -0.625 | 9.89 | 9.38 | 26.91 |
| -0.25 | -0.375 | 9.50 | 9.01 | 35.92 |
| 0 | -0.125 | 12.54 | 11.89 | 47.81 |
| 0.25 | 0.125 | 11.37 | 10.78 | 58.59 |
| 0.5 | 0.375 | 12.14 | 11.51 | 70.10 |
| 0.75 | 0.625 | 13.13 | 12.45 | 82.54 |
| 1 | 0.875 | 8.61 | 8.16 | 90.71 |
| 1.25 | 1.125 | 5.50 | 5.21 | 95.92 |
| 1.5 | 1.375 | 2.20 | 2.09 | 98.01 |
| 1.75 | 1.625 | 1.15 | 1.09 | 99.10 |
| 2 | 1.875 | 0.67 | 0.64 | 99.73 |
| 2.25 | 2.125 | 0.13 | 0.12 | 99.86 |
| 2.5 | 2.375 | 0.06 | 0.06 | 99.91 |
| 2.75 | 2.625 | 0.03 | 0.03 | 99.94 |
| 3 | 2.875 | 0.02 | 0.02 | 99.96 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.710 |
| **5** | -1.550 |
| **16** | -0.990 |
| **25** | -0.675 |
| **50** | -0.075 |
| **75** | 0.475 |
| **84** | 0.670 |
| **95** | 1.080 |
| **99** | 1.600 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.022 | 0.985 |
| Standard Deviation | 0.766 | 0.588 |
| Skewness | 0.021 | |
| Kurtosis | 2.492 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -0.160 | -0.132 |
| Standard Deviation | 0.830 | 0.813 |
| Skewness (1) | -0.102 | -0.112 |
| Skewness (2) | -0.193 | |
| Kurtosis | 0.584 | 0.937 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1670+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.455 mm** |
| **STD** | **0.520 mm** |
| **Skewness** | **-0.992** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.62 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 5.47 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.6 |

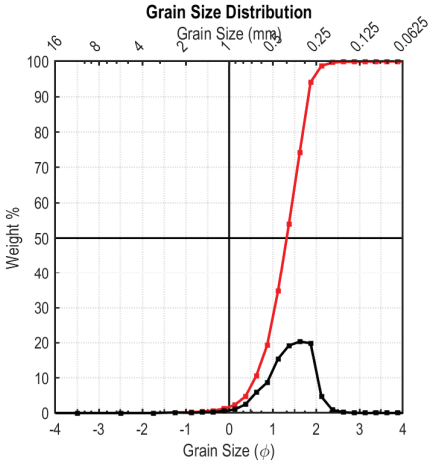
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.78 | 5.47 | 5.47 |
| -0.75 | -0.875 | 1.34 | 1.27 | 6.74 |
| -0.5 | -0.625 | 2.17 | 2.05 | 8.80 |
| -0.25 | -0.375 | 2.15 | 2.04 | 10.83 |
| 0 | -0.125 | 2.74 | 2.59 | 13.43 |
| 0.25 | 0.125 | 2.92 | 2.76 | 16.19 |
| 0.5 | 0.375 | 3.92 | 3.71 | 19.90 |
| 0.75 | 0.625 | 6.93 | 6.56 | 26.46 |
| 1 | 0.875 | 7.88 | 7.46 | 33.92 |
| 1.25 | 1.125 | 10.75 | 10.18 | 44.10 |
| 1.5 | 1.375 | 11.99 | 11.35 | 55.45 |
| 1.75 | 1.625 | 16.07 | 15.21 | 70.67 |
| 2 | 1.875 | 19.63 | 18.59 | 89.25 |
| 2.25 | 2.125 | 6.21 | 5.88 | 95.13 |
| 2.5 | 2.375 | 3.07 | 2.91 | 98.04 |
| 2.75 | 2.625 | 1.47 | 1.39 | 99.43 |
| 3 | 2.875 | 0.30 | 0.28 | 99.72 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.86 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.92 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.660 |
| **5** | -1.295 |
| **16** | 0.110 |
| **25** | 0.570 |
| **50** | 1.255 |
| **75** | 1.685 |
| **84** | 1.805 |
| **95** | 2.120 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.135 | 0.455 |
| Standard Deviation | 0.942 | 0.520 |
| Skewness | -0.992 | |
| Kurtosis | 3.517 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.958 | 1.057 |
| Standard Deviation | 0.848 | 0.941 |
| Skewness (1) | -0.351 | -0.422 |
| Skewness (2) | -0.994 | |
| Kurtosis | 1.015 | 1.255 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1670+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.382 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **-0.819** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.60 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.16 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

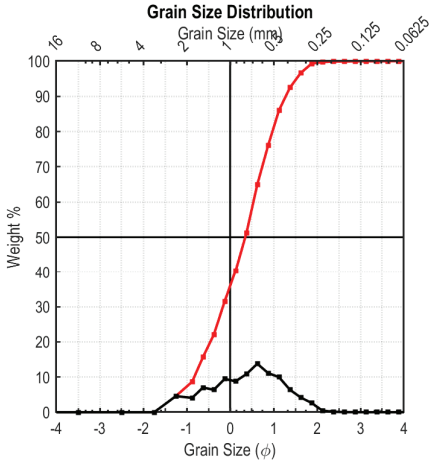
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.16 | 0.16 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.22 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.42 |
| -0.25 | -0.375 | 0.27 | 0.26 | 0.67 |
| 0 | -0.125 | 0.60 | 0.57 | 1.24 |
| 0.25 | 0.125 | 1.09 | 1.03 | 2.27 |
| 0.5 | 0.375 | 2.58 | 2.44 | 4.72 |
| 0.75 | 0.625 | 6.22 | 5.89 | 10.61 |
| 1 | 0.875 | 9.17 | 8.68 | 19.29 |
| 1.25 | 1.125 | 16.29 | 15.43 | 34.72 |
| 1.5 | 1.375 | 20.26 | 19.19 | 53.90 |
| 1.75 | 1.625 | 21.48 | 20.34 | 74.24 |
| 2 | 1.875 | 20.98 | 19.87 | 94.11 |
| 2.25 | 2.125 | 4.91 | 4.65 | 98.76 |
| 2.5 | 2.375 | 0.95 | 0.90 | 99.66 |
| 2.75 | 2.625 | 0.24 | 0.23 | 99.89 |
| 3 | 2.875 | 0.04 | 0.04 | 99.92 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.94 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.95 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.230 |
| **5** | 0.385 |
| **16** | 0.780 |
| **25** | 0.970 |
| **50** | 1.325 |
| **75** | 1.635 |
| **84** | 1.750 |
| **95** | 1.925 |
| **99** | 2.190 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.388 | 0.382 |
| Standard Deviation | 0.504 | 0.705 |
| Skewness | -0.819 | |
| Kurtosis | 5.065 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.265 | 1.285 |
| Standard Deviation | 0.485 | 0.476 |
| Skewness (1) | -0.124 | -0.172 |
| Skewness (2) | -0.351 | |
| Kurtosis | 0.588 | 0.949 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1670+00** |
| **Sample** | **Swash** |
| **Mean** | **0.760 mm** |
| **STD** | **0.577 mm** |
| **Skewness** | **-0.145** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 97.30 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 4.58 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.7 |

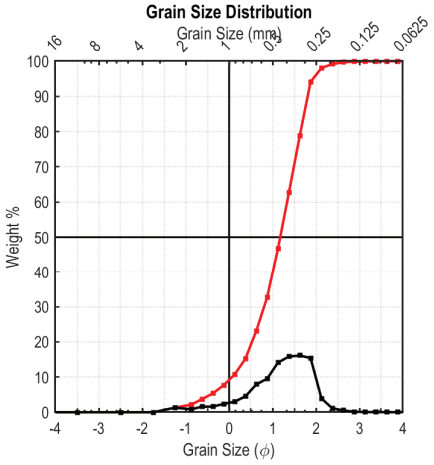
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.46 | 4.58 | 4.58 |
| -0.75 | -0.875 | 3.97 | 4.08 | 8.66 |
| -0.5 | -0.625 | 6.84 | 7.03 | 15.69 |
| -0.25 | -0.375 | 6.21 | 6.38 | 22.08 |
| 0 | -0.125 | 9.22 | 9.48 | 31.55 |
| 0.25 | 0.125 | 8.55 | 8.79 | 40.34 |
| 0.5 | 0.375 | 10.55 | 10.84 | 51.18 |
| 0.75 | 0.625 | 13.41 | 13.78 | 64.96 |
| 1 | 0.875 | 10.82 | 11.12 | 76.08 |
| 1.25 | 1.125 | 9.70 | 9.97 | 86.05 |
| 1.5 | 1.375 | 6.23 | 6.40 | 92.46 |
| 1.75 | 1.625 | 4.08 | 4.19 | 96.65 |
| 2 | 1.875 | 2.57 | 2.64 | 99.29 |
| 2.25 | 2.125 | 0.44 | 0.45 | 99.74 |
| 2.5 | 2.375 | 0.14 | 0.14 | 99.89 |
| 2.75 | 2.625 | 0.04 | 0.04 | 99.93 |
| 3 | 2.875 | 0.02 | 0.02 | 99.95 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.96 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.640 |
| **5** | -1.210 |
| **16** | -0.615 |
| **25** | -0.300 |
| **50** | 0.350 |
| **75** | 0.850 |
| **84** | 1.075 |
| **95** | 1.525 |
| **99** | 1.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.397 | 0.760 |
| Standard Deviation | 0.794 | 0.577 |
| Skewness | -0.145 | |
| Kurtosis | 2.542 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.230 | 0.270 |
| Standard Deviation | 0.845 | 0.837 |
| Skewness (1) | -0.142 | -0.141 |
| Skewness (2) | -0.228 | |
| Kurtosis | 0.618 | 0.975 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1680+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.444 mm** |
| **STD** | **0.605 mm** |
| **Skewness** | **-0.957** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.90 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.30 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

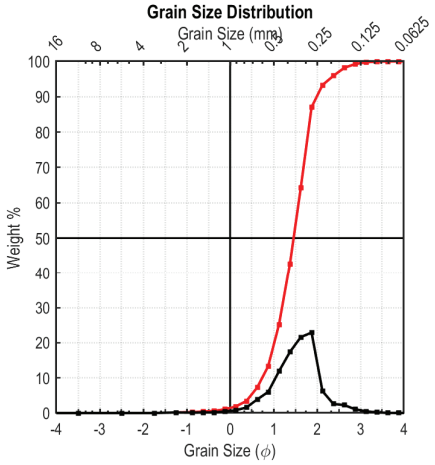
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.38 | 1.30 | 1.30 |
| -0.75 | -0.875 | 0.90 | 0.85 | 2.15 |
| -0.5 | -0.625 | 1.67 | 1.58 | 3.73 |
| -0.25 | -0.375 | 1.70 | 1.61 | 5.34 |
| 0 | -0.125 | 2.52 | 2.38 | 7.71 |
| 0.25 | 0.125 | 3.17 | 2.99 | 10.71 |
| 0.5 | 0.375 | 4.78 | 4.51 | 15.22 |
| 0.75 | 0.625 | 8.37 | 7.90 | 23.13 |
| 1 | 0.875 | 10.11 | 9.55 | 32.67 |
| 1.25 | 1.125 | 14.96 | 14.13 | 46.80 |
| 1.5 | 1.375 | 16.75 | 15.82 | 62.62 |
| 1.75 | 1.625 | 17.08 | 16.13 | 78.74 |
| 2 | 1.875 | 16.29 | 15.38 | 94.13 |
| 2.25 | 2.125 | 4.16 | 3.93 | 98.05 |
| 2.5 | 2.375 | 1.18 | 1.11 | 99.17 |
| 2.75 | 2.625 | 0.55 | 0.52 | 99.69 |
| 3 | 2.875 | 0.16 | 0.15 | 99.84 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.92 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.365 |
| **5** | -0.425 |
| **16** | 0.400 |
| **25** | 0.675 |
| **50** | 1.175 |
| **75** | 1.565 |
| **84** | 1.710 |
| **95** | 1.930 |
| **99** | 2.335 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.171 | 0.444 |
| Standard Deviation | 0.726 | 0.605 |
| Skewness | -0.957 | |
| Kurtosis | 4.215 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.055 | 1.095 |
| Standard Deviation | 0.655 | 0.684 |
| Skewness (1) | -0.183 | -0.271 |
| Skewness (2) | -0.645 | |
| Kurtosis | 0.798 | 1.084 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1680+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.344 mm** |
| **STD** | **0.683 mm** |
| **Skewness** | **-0.452** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.58 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.6 |

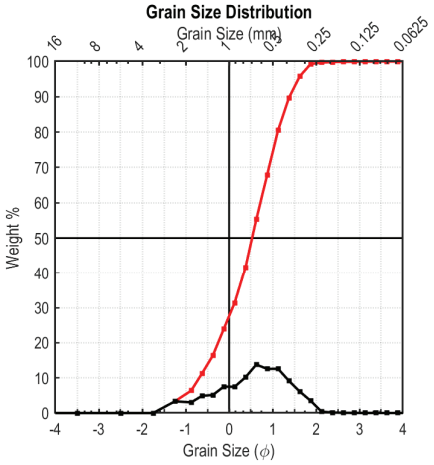
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.10 | 0.09 | 0.27 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.43 |
| -0.25 | -0.375 | 0.18 | 0.17 | 0.60 |
| 0 | -0.125 | 0.49 | 0.46 | 1.06 |
| 0.25 | 0.125 | 0.83 | 0.79 | 1.85 |
| 0.5 | 0.375 | 1.66 | 1.57 | 3.42 |
| 0.75 | 0.625 | 4.11 | 3.89 | 7.31 |
| 1 | 0.875 | 6.33 | 6.00 | 13.31 |
| 1.25 | 1.125 | 12.57 | 11.91 | 25.21 |
| 1.5 | 1.375 | 18.33 | 17.36 | 42.57 |
| 1.75 | 1.625 | 22.80 | 21.59 | 64.17 |
| 2 | 1.875 | 24.18 | 22.90 | 87.07 |
| 2.25 | 2.125 | 6.58 | 6.23 | 93.30 |
| 2.5 | 2.375 | 2.74 | 2.60 | 95.90 |
| 2.75 | 2.625 | 2.39 | 2.26 | 98.16 |
| 3 | 2.875 | 1.15 | 1.09 | 99.25 |
| 3.25 | 3.125 | 0.53 | 0.50 | 99.75 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.160 |
| **5** | 0.475 |
| **16** | 0.930 |
| **25** | 1.120 |
| **50** | 1.460 |
| **75** | 1.745 |
| **84** | 1.840 |
| **95** | 2.290 |
| **99** | 2.815 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.541 | 0.344 |
| Standard Deviation | 0.549 | 0.683 |
| Skewness | -0.452 | |
| Kurtosis | 5.394 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.385 | 1.410 |
| Standard Deviation | 0.455 | 0.503 |
| Skewness (1) | -0.165 | -0.125 |
| Skewness (2) | -0.170 | |
| Kurtosis | 0.995 | 1.190 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1680+00** |
| **Sample** | **Swash** |
| **Mean** | **0.675 mm** |
| **STD** | **0.582 mm** |
| **Skewness** | **-0.348** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.33 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 3.33 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.8 |

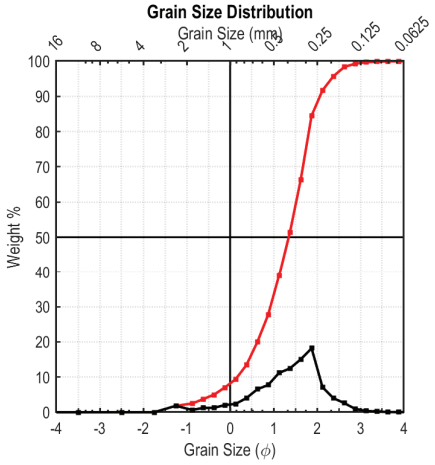
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.37 | 3.33 | 3.33 |
| -0.75 | -0.875 | 3.08 | 3.04 | 6.37 |
| -0.5 | -0.625 | 4.95 | 4.89 | 11.25 |
| -0.25 | -0.375 | 5.21 | 5.14 | 16.39 |
| 0 | -0.125 | 7.60 | 7.50 | 23.89 |
| 0.25 | 0.125 | 7.57 | 7.47 | 31.36 |
| 0.5 | 0.375 | 10.29 | 10.15 | 41.52 |
| 0.75 | 0.625 | 13.97 | 13.79 | 55.30 |
| 1 | 0.875 | 12.74 | 12.57 | 67.88 |
| 1.25 | 1.125 | 12.76 | 12.59 | 80.47 |
| 1.5 | 1.375 | 9.30 | 9.18 | 89.65 |
| 1.75 | 1.625 | 6.21 | 6.13 | 95.78 |
| 2 | 1.875 | 3.53 | 3.48 | 99.26 |
| 2.25 | 2.125 | 0.42 | 0.41 | 99.67 |
| 2.5 | 2.375 | 0.15 | 0.15 | 99.82 |
| 2.75 | 2.625 | 0.07 | 0.07 | 99.89 |
| 3 | 2.875 | 0.03 | 0.03 | 99.92 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.94 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.600 |
| **5** | -1.045 |
| **16** | -0.395 |
| **25** | -0.090 |
| **50** | 0.530 |
| **75** | 1.015 |
| **84** | 1.220 |
| **95** | 1.595 |
| **99** | 1.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.567 | 0.675 |
| Standard Deviation | 0.780 | 0.582 |
| Skewness | -0.348 | |
| Kurtosis | 2.758 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.413 | 0.452 |
| Standard Deviation | 0.807 | 0.804 |
| Skewness (1) | -0.146 | -0.169 |
| Skewness (2) | -0.316 | |
| Kurtosis | 0.635 | 0.979 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.397 mm** |
| **STD** | **0.570 mm** |
| **Skewness** | **-0.836** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.92 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 1.83 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.1 |

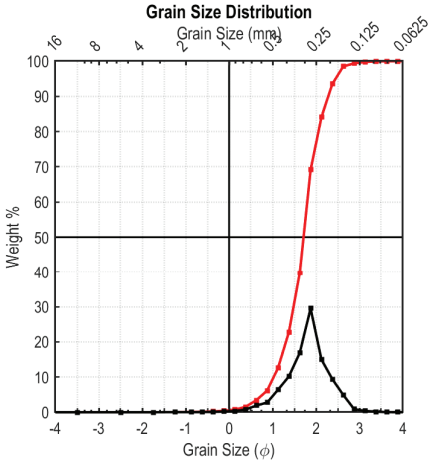
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.92 | 1.83 | 1.83 |
| -0.75 | -0.875 | 0.68 | 0.65 | 2.48 |
| -0.5 | -0.625 | 1.30 | 1.24 | 3.72 |
| -0.25 | -0.375 | 1.32 | 1.26 | 4.97 |
| 0 | -0.125 | 2.13 | 2.03 | 7.00 |
| 0.25 | 0.125 | 2.49 | 2.38 | 9.38 |
| 0.5 | 0.375 | 4.22 | 4.03 | 13.41 |
| 0.75 | 0.625 | 6.85 | 6.53 | 19.93 |
| 1 | 0.875 | 8.13 | 7.75 | 27.68 |
| 1.25 | 1.125 | 11.73 | 11.18 | 38.86 |
| 1.5 | 1.375 | 13.06 | 12.45 | 51.31 |
| 1.75 | 1.625 | 15.77 | 15.03 | 66.34 |
| 2 | 1.875 | 19.08 | 18.18 | 84.53 |
| 2.25 | 2.125 | 7.51 | 7.16 | 91.69 |
| 2.5 | 2.375 | 4.20 | 4.00 | 95.69 |
| 2.75 | 2.625 | 2.76 | 2.63 | 98.32 |
| 3 | 2.875 | 1.01 | 0.96 | 99.28 |
| 3.25 | 3.125 | 0.42 | 0.40 | 99.67 |
| 3.5 | 3.375 | 0.19 | 0.19 | 99.86 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.93 |
| 4 | 3.875 | 0.03 | 0.03 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.475 |
| **5** | -0.370 |
| **16** | 0.475 |
| **25** | 0.790 |
| **50** | 1.350 |
| **75** | 1.745 |
| **84** | 1.870 |
| **95** | 2.330 |
| **99** | 2.805 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.333 | 0.397 |
| Standard Deviation | 0.811 | 0.570 |
| Skewness | -0.836 | |
| Kurtosis | 4.182 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.173 | 1.232 |
| Standard Deviation | 0.698 | 0.758 |
| Skewness (1) | -0.254 | -0.264 |
| Skewness (2) | -0.530 | |
| Kurtosis | 0.935 | 1.159 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.288 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **-0.614** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.45 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.3 |

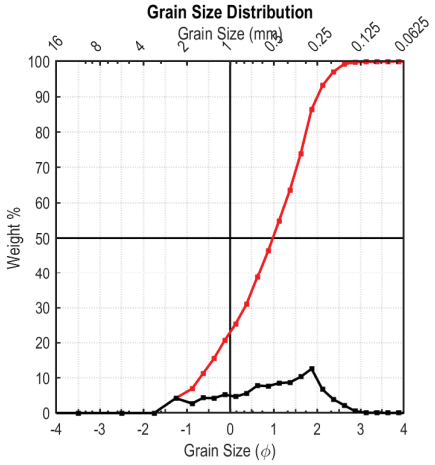
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.03 | 0.02 | 0.07 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.12 |
| -0.25 | -0.375 | 0.10 | 0.10 | 0.22 |
| 0 | -0.125 | 0.20 | 0.19 | 0.41 |
| 0.25 | 0.125 | 0.34 | 0.32 | 0.73 |
| 0.5 | 0.375 | 0.82 | 0.78 | 1.51 |
| 0.75 | 0.625 | 2.00 | 1.90 | 3.41 |
| 1 | 0.875 | 2.91 | 2.76 | 6.17 |
| 1.25 | 1.125 | 6.75 | 6.40 | 12.57 |
| 1.5 | 1.375 | 10.74 | 10.18 | 22.75 |
| 1.75 | 1.625 | 17.79 | 16.87 | 39.62 |
| 2 | 1.875 | 31.11 | 29.50 | 69.13 |
| 2.25 | 2.125 | 15.79 | 14.97 | 84.10 |
| 2.5 | 2.375 | 9.92 | 9.41 | 93.51 |
| 2.75 | 2.625 | 5.23 | 4.96 | 98.47 |
| 3 | 2.875 | 0.96 | 0.91 | 99.38 |
| 3.25 | 3.125 | 0.40 | 0.38 | 99.75 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.92 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.210 |
| **5** | 0.770 |
| **16** | 1.210 |
| **25** | 1.410 |
| **50** | 1.715 |
| **75** | 1.975 |
| **84** | 2.125 |
| **95** | 2.450 |
| **99** | 2.770 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.795 | 0.288 |
| Standard Deviation | 0.505 | 0.705 |
| Skewness | -0.614 | |
| Kurtosis | 5.098 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.667 | 1.683 |
| Standard Deviation | 0.458 | 0.483 |
| Skewness (1) | -0.104 | -0.114 |
| Skewness (2) | -0.230 | |
| Kurtosis | 0.836 | 1.219 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.519 mm** |
| **STD** | **0.496 mm** |
| **Skewness** | **-0.470** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 102.97 |
| % finer than 0.0625 mm (dry) | -0.13 |
| % granule (2-4 mm) | 4.23 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 13.2 |

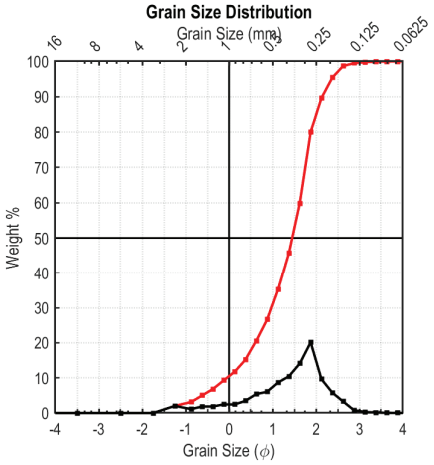
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.36 | 4.23 | 4.23 |
| -0.75 | -0.875 | 2.79 | 2.71 | 6.94 |
| -0.5 | -0.625 | 4.43 | 4.30 | 11.24 |
| -0.25 | -0.375 | 4.36 | 4.23 | 15.47 |
| 0 | -0.125 | 5.39 | 5.23 | 20.71 |
| 0.25 | 0.125 | 4.80 | 4.66 | 25.37 |
| 0.5 | 0.375 | 5.76 | 5.60 | 30.96 |
| 0.75 | 0.625 | 8.04 | 7.81 | 38.77 |
| 1 | 0.875 | 7.89 | 7.66 | 46.43 |
| 1.25 | 1.125 | 8.77 | 8.52 | 54.95 |
| 1.5 | 1.375 | 8.98 | 8.72 | 63.67 |
| 1.75 | 1.625 | 10.60 | 10.30 | 73.97 |
| 2 | 1.875 | 12.96 | 12.59 | 86.56 |
| 2.25 | 2.125 | 6.90 | 6.71 | 93.26 |
| 2.5 | 2.375 | 4.03 | 3.91 | 97.17 |
| 2.75 | 2.625 | 2.27 | 2.21 | 99.38 |
| 3 | 2.875 | 0.53 | 0.52 | 99.90 |
| 3.25 | 3.125 | 0.10 | 0.10 | 100.00 |
| 3.5 | 3.375 | 0.06 | 0.06 | 100.06 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.08 |
| 4 | 3.875 | 0.05 | 0.05 | 100.13 |
| >4.0 | 4.25 | -0.13 | -0.13 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.630 |
| **5** | -1.145 |
| **16** | -0.350 |
| **25** | 0.105 |
| **50** | 0.980 |
| **75** | 1.645 |
| **84** | 1.825 |
| **95** | 2.245 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.946 | 0.519 |
| Standard Deviation | 1.011 | 0.496 |
| Skewness | -0.470 | |
| Kurtosis | 2.267 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.738 | 0.818 |
| Standard Deviation | 1.087 | 1.057 |
| Skewness (1) | -0.223 | -0.238 |
| Skewness (2) | -0.395 | |
| Kurtosis | 0.559 | 0.902 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.389 mm** |
| **STD** | **0.546 mm** |
| **Skewness** | **-0.987** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.45 |
| % finer than 0.0625 mm (dry) | -0.02 |
| % granule (2-4 mm) | 2.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.2 |

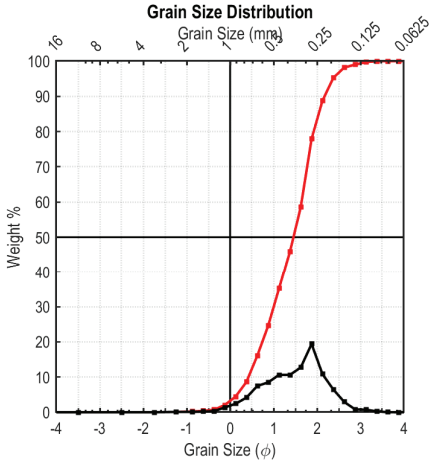
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.11 | 2.02 | 2.02 |
| -0.75 | -0.875 | 1.16 | 1.12 | 3.13 |
| -0.5 | -0.625 | 1.93 | 1.85 | 4.98 |
| -0.25 | -0.375 | 1.93 | 1.84 | 6.82 |
| 0 | -0.125 | 2.57 | 2.47 | 9.29 |
| 0.25 | 0.125 | 2.54 | 2.43 | 11.72 |
| 0.5 | 0.375 | 3.60 | 3.45 | 15.17 |
| 0.75 | 0.625 | 5.63 | 5.39 | 20.56 |
| 1 | 0.875 | 6.31 | 6.04 | 26.60 |
| 1.25 | 1.125 | 9.08 | 8.70 | 35.30 |
| 1.5 | 1.375 | 10.93 | 10.46 | 45.76 |
| 1.75 | 1.625 | 14.72 | 14.10 | 59.86 |
| 2 | 1.875 | 21.05 | 20.15 | 80.01 |
| 2.25 | 2.125 | 10.07 | 9.64 | 89.65 |
| 2.5 | 2.375 | 6.05 | 5.79 | 95.44 |
| 2.75 | 2.625 | 3.42 | 3.27 | 98.72 |
| 3 | 2.875 | 0.83 | 0.80 | 99.51 |
| 3.25 | 3.125 | 0.31 | 0.29 | 99.81 |
| 3.5 | 3.375 | 0.14 | 0.14 | 99.95 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.99 |
| 4 | 3.875 | 0.03 | 0.03 | 100.02 |
| >4.0 | 4.25 | -0.02 | -0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.500 |
| **5** | -0.620 |
| **16** | 0.415 |
| **25** | 0.810 |
| **50** | 1.450 |
| **75** | 1.815 |
| **84** | 1.980 |
| **95** | 2.355 |
| **99** | 2.720 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.362 | 0.389 |
| Standard Deviation | 0.873 | 0.546 |
| Skewness | -0.987 | |
| Kurtosis | 3.784 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.198 | 1.282 |
| Standard Deviation | 0.782 | 0.842 |
| Skewness (1) | -0.323 | -0.357 |
| Skewness (2) | -0.744 | |
| Kurtosis | 0.901 | 1.213 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1770+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.357 mm** |
| **STD** | **0.620 mm** |
| **Skewness** | **-0.352** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.37 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.1 |

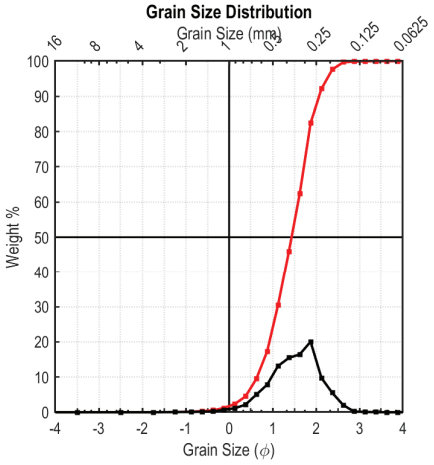
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.20 |
| -0.5 | -0.625 | 0.19 | 0.18 | 0.38 |
| -0.25 | -0.375 | 0.33 | 0.31 | 0.69 |
| 0 | -0.125 | 1.42 | 1.35 | 2.04 |
| 0.25 | 0.125 | 2.54 | 2.41 | 4.45 |
| 0.5 | 0.375 | 4.38 | 4.16 | 8.61 |
| 0.75 | 0.625 | 7.87 | 7.47 | 16.08 |
| 1 | 0.875 | 8.93 | 8.47 | 24.55 |
| 1.25 | 1.125 | 11.20 | 10.63 | 35.18 |
| 1.5 | 1.375 | 11.19 | 10.62 | 45.80 |
| 1.75 | 1.625 | 13.41 | 12.73 | 58.53 |
| 2 | 1.875 | 20.45 | 19.41 | 77.93 |
| 2.25 | 2.125 | 11.42 | 10.84 | 88.77 |
| 2.5 | 2.375 | 6.82 | 6.47 | 95.25 |
| 2.75 | 2.625 | 3.10 | 2.94 | 98.19 |
| 3 | 2.875 | 0.86 | 0.82 | 99.00 |
| 3.25 | 3.125 | 0.76 | 0.72 | 99.72 |
| 3.5 | 3.375 | 0.28 | 0.27 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.320 |
| **5** | 0.160 |
| **16** | 0.620 |
| **25** | 0.885 |
| **50** | 1.455 |
| **75** | 1.835 |
| **84** | 2.015 |
| **95** | 2.365 |
| **99** | 2.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.486 | 0.357 |
| Standard Deviation | 0.689 | 0.620 |
| Skewness | -0.352 | |
| Kurtosis | 3.015 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.317 | 1.363 |
| Standard Deviation | 0.697 | 0.683 |
| Skewness (1) | -0.197 | -0.186 |
| Skewness (2) | -0.276 | |
| Kurtosis | 0.581 | 0.951 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1770+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.351 mm** |
| **STD** | **0.674 mm** |
| **Skewness** | **-0.539** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.10 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

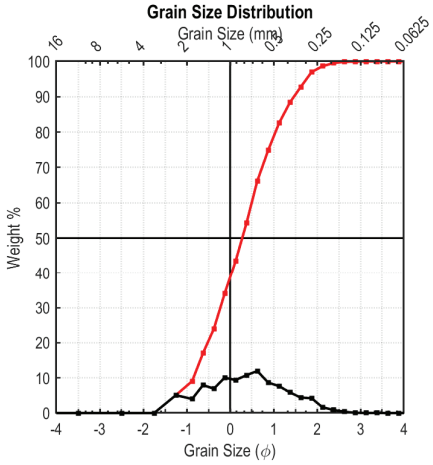
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.10 | 0.10 | 0.15 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.31 |
| -0.25 | -0.375 | 0.22 | 0.21 | 0.52 |
| 0 | -0.125 | 0.70 | 0.67 | 1.19 |
| 0.25 | 0.125 | 1.19 | 1.13 | 2.32 |
| 0.5 | 0.375 | 2.25 | 2.14 | 4.46 |
| 0.75 | 0.625 | 5.26 | 5.00 | 9.47 |
| 1 | 0.875 | 8.23 | 7.83 | 17.30 |
| 1.25 | 1.125 | 13.82 | 13.15 | 30.45 |
| 1.5 | 1.375 | 16.24 | 15.45 | 45.90 |
| 1.75 | 1.625 | 17.29 | 16.45 | 62.35 |
| 2 | 1.875 | 21.07 | 20.05 | 82.40 |
| 2.25 | 2.125 | 10.24 | 9.74 | 92.14 |
| 2.5 | 2.375 | 5.77 | 5.49 | 97.63 |
| 2.75 | 2.625 | 2.15 | 2.05 | 99.68 |
| 3 | 2.875 | 0.21 | 0.20 | 99.88 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.96 |
| 3.5 | 3.375 | 0.04 | 0.04 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.195 |
| **5** | 0.400 |
| **16** | 0.835 |
| **25** | 1.020 |
| **50** | 1.435 |
| **75** | 1.785 |
| **84** | 1.915 |
| **95** | 2.255 |
| **99** | 2.540 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.509 | 0.351 |
| Standard Deviation | 0.569 | 0.674 |
| Skewness | -0.539 | |
| Kurtosis | 3.729 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.375 | 1.395 |
| Standard Deviation | 0.540 | 0.551 |
| Skewness (1) | -0.111 | -0.114 |
| Skewness (2) | -0.199 | |
| Kurtosis | 0.718 | 0.994 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1770+00** |
| **Sample** | **Swash** |
| **Mean** | **0.757 mm** |
| **STD** | **0.548 mm** |
| **Skewness** | **0.117** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 100.03 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 5.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 16.5 |

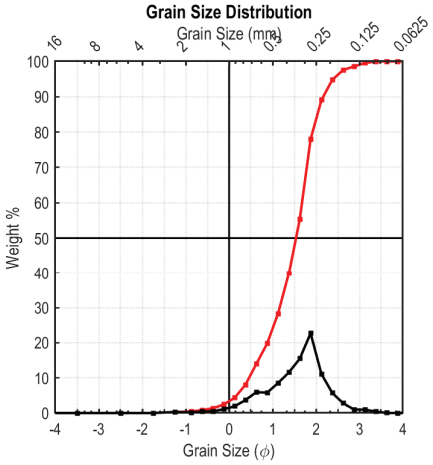
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.08 | 5.08 | 5.08 |
| -0.75 | -0.875 | 4.00 | 4.00 | 9.08 |
| -0.5 | -0.625 | 7.96 | 7.96 | 17.03 |
| -0.25 | -0.375 | 6.94 | 6.94 | 23.97 |
| 0 | -0.125 | 10.08 | 10.08 | 34.05 |
| 0.25 | 0.125 | 9.39 | 9.39 | 43.44 |
| 0.5 | 0.375 | 10.77 | 10.77 | 54.20 |
| 0.75 | 0.625 | 11.97 | 11.97 | 66.17 |
| 1 | 0.875 | 8.67 | 8.67 | 74.84 |
| 1.25 | 1.125 | 7.68 | 7.68 | 82.52 |
| 1.5 | 1.375 | 5.86 | 5.86 | 88.37 |
| 1.75 | 1.625 | 4.40 | 4.40 | 92.77 |
| 2 | 1.875 | 4.22 | 4.22 | 96.99 |
| 2.25 | 2.125 | 1.64 | 1.64 | 98.63 |
| 2.5 | 2.375 | 0.89 | 0.89 | 99.52 |
| 2.75 | 2.625 | 0.37 | 0.37 | 99.89 |
| 3 | 2.875 | 0.06 | 0.06 | 99.95 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.650 |
| **5** | -1.260 |
| **16** | -0.660 |
| **25** | -0.350 |
| **50** | 0.275 |
| **75** | 0.880 |
| **84** | 1.190 |
| **95** | 1.755 |
| **99** | 2.230 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.403 | 0.757 |
| Standard Deviation | 0.868 | 0.548 |
| Skewness | 0.117 | |
| Kurtosis | 2.504 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.265 | 0.268 |
| Standard Deviation | 0.925 | 0.919 |
| Skewness (1) | -0.011 | -0.015 |
| Skewness (2) | -0.030 | |
| Kurtosis | 0.630 | 1.005 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1780+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.343 mm** |
| **STD** | **0.620 mm** |
| **Skewness** | **-0.623** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.21 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.29 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

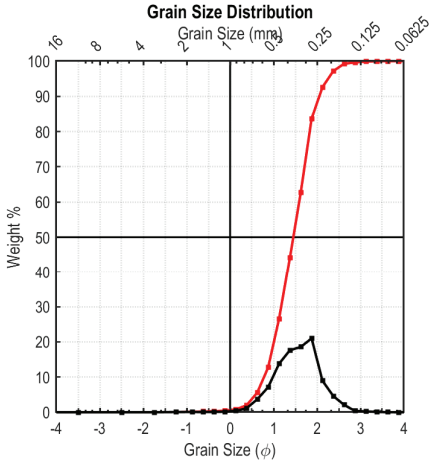
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.31 | 0.29 | 0.29 |
| -0.75 | -0.875 | 0.15 | 0.14 | 0.44 |
| -0.5 | -0.625 | 0.42 | 0.40 | 0.84 |
| -0.25 | -0.375 | 0.53 | 0.50 | 1.34 |
| 0 | -0.125 | 1.15 | 1.09 | 2.43 |
| 0.25 | 0.125 | 2.00 | 1.90 | 4.33 |
| 0.5 | 0.375 | 3.89 | 3.70 | 8.03 |
| 0.75 | 0.625 | 6.24 | 5.93 | 13.96 |
| 1 | 0.875 | 6.11 | 5.81 | 19.77 |
| 1.25 | 1.125 | 8.96 | 8.52 | 28.29 |
| 1.5 | 1.375 | 12.17 | 11.57 | 39.85 |
| 1.75 | 1.625 | 16.26 | 15.45 | 55.31 |
| 2 | 1.875 | 23.87 | 22.69 | 78.00 |
| 2.25 | 2.125 | 11.66 | 11.08 | 89.08 |
| 2.5 | 2.375 | 6.01 | 5.71 | 94.79 |
| 2.75 | 2.625 | 2.92 | 2.78 | 97.57 |
| 3 | 2.875 | 1.05 | 1.00 | 98.56 |
| 3.25 | 3.125 | 1.02 | 0.97 | 99.53 |
| 3.5 | 3.375 | 0.45 | 0.43 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.545 |
| **5** | 0.170 |
| **16** | 0.715 |
| **25** | 1.030 |
| **50** | 1.540 |
| **75** | 1.840 |
| **84** | 2.010 |
| **95** | 2.395 |
| **99** | 2.985 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.544 | 0.343 |
| Standard Deviation | 0.690 | 0.620 |
| Skewness | -0.623 | |
| Kurtosis | 3.993 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.362 | 1.422 |
| Standard Deviation | 0.647 | 0.661 |
| Skewness (1) | -0.274 | -0.253 |
| Skewness (2) | -0.398 | |
| Kurtosis | 0.718 | 1.126 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1780+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.340 mm** |
| **STD** | **0.702 mm** |
| **Skewness** | **-0.274** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.14 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

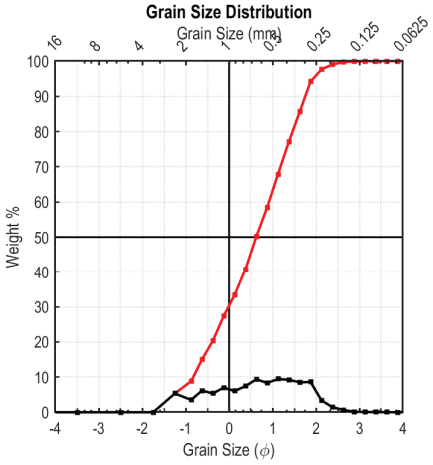
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.13 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.19 |
| -0.25 | -0.375 | 0.10 | 0.10 | 0.29 |
| 0 | -0.125 | 0.16 | 0.15 | 0.44 |
| 0.25 | 0.125 | 0.40 | 0.38 | 0.82 |
| 0.5 | 0.375 | 1.16 | 1.10 | 1.92 |
| 0.75 | 0.625 | 3.87 | 3.68 | 5.60 |
| 1 | 0.875 | 7.49 | 7.12 | 12.73 |
| 1.25 | 1.125 | 14.48 | 13.77 | 26.50 |
| 1.5 | 1.375 | 18.53 | 17.62 | 44.12 |
| 1.75 | 1.625 | 19.50 | 18.55 | 62.67 |
| 2 | 1.875 | 22.07 | 20.99 | 83.66 |
| 2.25 | 2.125 | 9.40 | 8.94 | 92.60 |
| 2.5 | 2.375 | 4.83 | 4.59 | 97.19 |
| 2.75 | 2.625 | 2.18 | 2.07 | 99.27 |
| 3 | 2.875 | 0.40 | 0.38 | 99.65 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.165 |
| **5** | 0.585 |
| **16** | 0.935 |
| **25** | 1.100 |
| **50** | 1.455 |
| **75** | 1.770 |
| **84** | 1.885 |
| **95** | 2.255 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.556 | 0.340 |
| Standard Deviation | 0.511 | 0.702 |
| Skewness | -0.274 | |
| Kurtosis | 4.212 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.410 | 1.425 |
| Standard Deviation | 0.475 | 0.491 |
| Skewness (1) | -0.095 | -0.068 |
| Skewness (2) | -0.074 | |
| Kurtosis | 0.758 | 1.022 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1780+00** |
| **Sample** | **Swash** |
| **Mean** | **0.630 mm** |
| **STD** | **0.511 mm** |
| **Skewness** | **-0.230** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 101.15 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 5.32 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 14.0 |

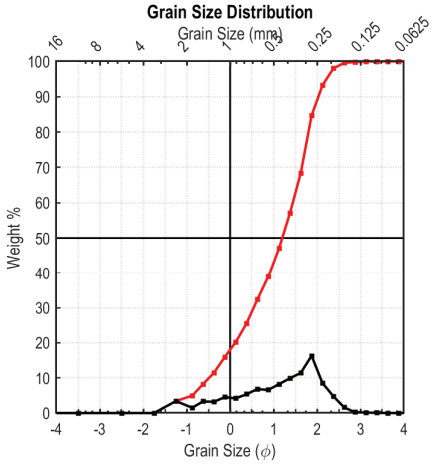
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.38 | 5.32 | 5.32 |
| -0.75 | -0.875 | 3.55 | 3.51 | 8.83 |
| -0.5 | -0.625 | 6.23 | 6.16 | 14.99 |
| -0.25 | -0.375 | 5.40 | 5.34 | 20.33 |
| 0 | -0.125 | 7.09 | 7.01 | 27.34 |
| 0.25 | 0.125 | 6.10 | 6.03 | 33.37 |
| 0.5 | 0.375 | 7.49 | 7.40 | 40.77 |
| 0.75 | 0.625 | 9.47 | 9.36 | 50.13 |
| 1 | 0.875 | 8.43 | 8.33 | 58.47 |
| 1.25 | 1.125 | 9.55 | 9.44 | 67.91 |
| 1.5 | 1.375 | 9.32 | 9.21 | 77.12 |
| 1.75 | 1.625 | 8.61 | 8.51 | 85.64 |
| 2 | 1.875 | 8.70 | 8.60 | 94.24 |
| 2.25 | 2.125 | 3.41 | 3.37 | 97.61 |
| 2.5 | 2.375 | 1.48 | 1.46 | 99.07 |
| 2.75 | 2.625 | 0.66 | 0.65 | 99.72 |
| 3 | 2.875 | 0.15 | 0.15 | 99.87 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.95 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.655 |
| **5** | -1.280 |
| **16** | -0.580 |
| **25** | -0.210 |
| **50** | 0.620 |
| **75** | 1.315 |
| **84** | 1.575 |
| **95** | 1.930 |
| **99** | 2.365 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.667 | 0.630 |
| Standard Deviation | 0.968 | 0.511 |
| Skewness | -0.230 | |
| Kurtosis | 2.205 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.497 | 0.538 |
| Standard Deviation | 1.077 | 1.025 |
| Skewness (1) | -0.114 | -0.149 |
| Skewness (2) | -0.274 | |
| Kurtosis | 0.490 | 0.863 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1790+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.467 mm** |
| **STD** | **0.513 mm** |
| **Skewness** | **-0.684** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.41 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.8 |

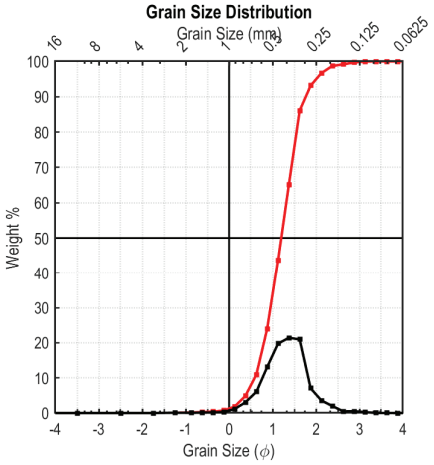
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.58 | 3.41 | 3.41 |
| -0.75 | -0.875 | 1.59 | 1.51 | 4.92 |
| -0.5 | -0.625 | 3.46 | 3.29 | 8.21 |
| -0.25 | -0.375 | 3.37 | 3.21 | 11.42 |
| 0 | -0.125 | 4.75 | 4.52 | 15.94 |
| 0.25 | 0.125 | 4.39 | 4.18 | 20.12 |
| 0.5 | 0.375 | 5.61 | 5.34 | 25.46 |
| 0.75 | 0.625 | 7.16 | 6.81 | 32.27 |
| 1 | 0.875 | 6.91 | 6.58 | 38.85 |
| 1.25 | 1.125 | 8.65 | 8.23 | 47.08 |
| 1.5 | 1.375 | 10.39 | 9.89 | 56.97 |
| 1.75 | 1.625 | 12.01 | 11.43 | 68.40 |
| 2 | 1.875 | 17.11 | 16.28 | 84.69 |
| 2.25 | 2.125 | 8.96 | 8.53 | 93.21 |
| 2.5 | 2.375 | 5.03 | 4.79 | 98.00 |
| 2.75 | 2.625 | 1.67 | 1.59 | 99.59 |
| 3 | 2.875 | 0.24 | 0.23 | 99.82 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.95 |
| 3.5 | 3.375 | 0.05 | 0.05 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.605 |
| **5** | -0.870 |
| **16** | -0.120 |
| **25** | 0.355 |
| **50** | 1.200 |
| **75** | 1.725 |
| **84** | 1.865 |
| **95** | 2.220 |
| **99** | 2.530 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.100 | 0.467 |
| Standard Deviation | 0.962 | 0.513 |
| Skewness | -0.684 | |
| Kurtosis | 2.688 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.872 | 0.982 |
| Standard Deviation | 0.992 | 0.964 |
| Skewness (1) | -0.330 | -0.335 |
| Skewness (2) | -0.529 | |
| Kurtosis | 0.557 | 0.924 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1790+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.403 mm** |
| **STD** | **0.709 mm** |
| **Skewness** | **-0.065** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.94 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

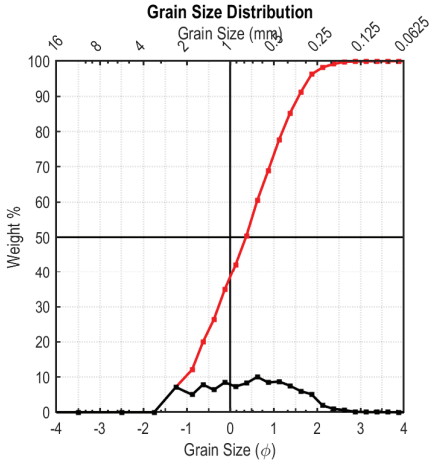
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.09 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.14 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.27 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.41 |
| 0 | -0.125 | 0.31 | 0.30 | 0.71 |
| 0.25 | 0.125 | 1.18 | 1.12 | 1.83 |
| 0.5 | 0.375 | 3.20 | 3.05 | 4.88 |
| 0.75 | 0.625 | 6.31 | 6.01 | 10.89 |
| 1 | 0.875 | 13.72 | 13.07 | 23.97 |
| 1.25 | 1.125 | 20.72 | 19.74 | 43.71 |
| 1.5 | 1.375 | 22.50 | 21.44 | 65.15 |
| 1.75 | 1.625 | 21.99 | 20.95 | 86.11 |
| 2 | 1.875 | 7.39 | 7.04 | 93.15 |
| 2.25 | 2.125 | 3.74 | 3.56 | 96.71 |
| 2.5 | 2.375 | 2.09 | 1.99 | 98.70 |
| 2.75 | 2.625 | 0.50 | 0.48 | 99.18 |
| 3 | 2.875 | 0.54 | 0.51 | 99.70 |
| 3.25 | 3.125 | 0.29 | 0.28 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.060 |
| **5** | 0.380 |
| **16** | 0.725 |
| **25** | 0.890 |
| **50** | 1.200 |
| **75** | 1.490 |
| **84** | 1.600 |
| **95** | 2.005 |
| **99** | 2.530 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.311 | 0.403 |
| Standard Deviation | 0.497 | 0.709 |
| Skewness | -0.065 | |
| Kurtosis | 4.702 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.163 | 1.175 |
| Standard Deviation | 0.438 | 0.465 |
| Skewness (1) | -0.086 | -0.047 |
| Skewness (2) | -0.017 | |
| Kurtosis | 0.857 | 1.110 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1790+00** |
| **Sample** | **Swash** |
| **Mean** | **0.736 mm** |
| **STD** | **0.517 mm** |
| **Skewness** | **0.002** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 95.67 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 7.14 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 17.4 |

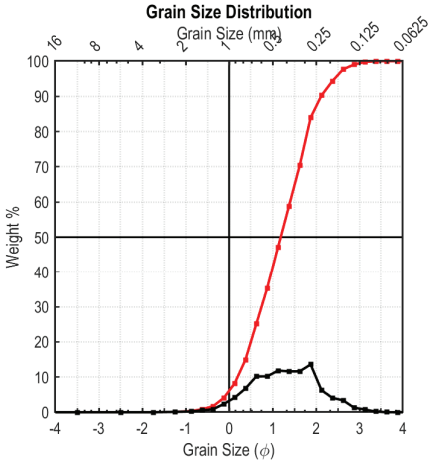
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 6.83 | 7.14 | 7.14 |
| -0.75 | -0.875 | 4.77 | 4.99 | 12.13 |
| -0.5 | -0.625 | 7.53 | 7.87 | 20.00 |
| -0.25 | -0.375 | 6.09 | 6.37 | 26.36 |
| 0 | -0.125 | 8.12 | 8.49 | 34.85 |
| 0.25 | 0.125 | 6.99 | 7.31 | 42.16 |
| 0.5 | 0.375 | 7.90 | 8.26 | 50.41 |
| 0.75 | 0.625 | 9.61 | 10.04 | 60.46 |
| 1 | 0.875 | 8.08 | 8.45 | 68.90 |
| 1.25 | 1.125 | 8.35 | 8.73 | 77.63 |
| 1.5 | 1.375 | 7.21 | 7.54 | 85.17 |
| 1.75 | 1.625 | 5.74 | 6.00 | 91.17 |
| 2 | 1.875 | 4.88 | 5.10 | 96.27 |
| 2.25 | 2.125 | 1.85 | 1.93 | 98.20 |
| 2.5 | 2.375 | 0.93 | 0.97 | 99.17 |
| 2.75 | 2.625 | 0.59 | 0.62 | 99.79 |
| 3 | 2.875 | 0.12 | 0.13 | 99.92 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.680 |
| **5** | -1.400 |
| **16** | -0.750 |
| **25** | -0.430 |
| **50** | 0.360 |
| **75** | 1.050 |
| **84** | 1.335 |
| **95** | 1.815 |
| **99** | 2.330 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.442 | 0.736 |
| Standard Deviation | 0.952 | 0.517 |
| Skewness | 0.002 | |
| Kurtosis | 2.208 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.292 | 0.315 |
| Standard Deviation | 1.042 | 1.008 |
| Skewness (1) | -0.065 | -0.080 |
| Skewness (2) | -0.146 | |
| Kurtosis | 0.542 | 0.890 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1800+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.407 mm** |
| **STD** | **0.594 mm** |
| **Skewness** | **-0.056** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

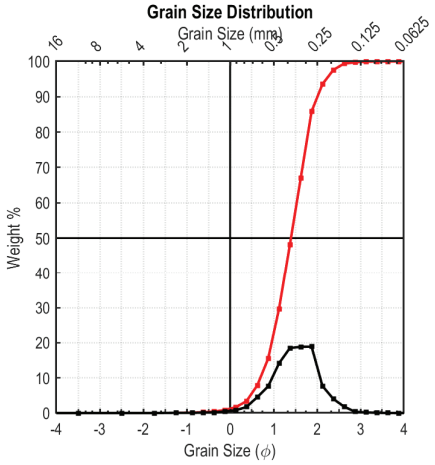
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.22 | 0.21 | 0.31 |
| -0.5 | -0.625 | 0.57 | 0.54 | 0.86 |
| -0.25 | -0.375 | 0.87 | 0.83 | 1.69 |
| 0 | -0.125 | 2.47 | 2.35 | 4.04 |
| 0.25 | 0.125 | 4.34 | 4.13 | 8.17 |
| 0.5 | 0.375 | 7.08 | 6.74 | 14.91 |
| 0.75 | 0.625 | 10.69 | 10.18 | 25.09 |
| 1 | 0.875 | 10.71 | 10.20 | 35.29 |
| 1.25 | 1.125 | 12.43 | 11.83 | 47.12 |
| 1.5 | 1.375 | 12.21 | 11.63 | 58.75 |
| 1.75 | 1.625 | 12.20 | 11.62 | 70.36 |
| 2 | 1.875 | 14.27 | 13.59 | 83.95 |
| 2.25 | 2.125 | 6.61 | 6.29 | 90.24 |
| 2.5 | 2.375 | 4.29 | 4.08 | 94.33 |
| 2.75 | 2.625 | 3.55 | 3.38 | 97.71 |
| 3 | 2.875 | 1.38 | 1.31 | 99.02 |
| 3.25 | 3.125 | 0.80 | 0.76 | 99.78 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.580 |
| **5** | -0.065 |
| **16** | 0.400 |
| **25** | 0.625 |
| **50** | 1.185 |
| **75** | 1.710 |
| **84** | 1.875 |
| **95** | 2.425 |
| **99** | 2.870 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.296 | 0.407 |
| Standard Deviation | 0.752 | 0.594 |
| Skewness | -0.056 | |
| Kurtosis | 2.798 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.137 | 1.153 |
| Standard Deviation | 0.738 | 0.746 |
| Skewness (1) | -0.064 | -0.034 |
| Skewness (2) | -0.007 | |
| Kurtosis | 0.688 | 0.941 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1800+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.354 mm** |
| **STD** | **0.692 mm** |
| **Skewness** | **-0.381** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.00 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.6 |

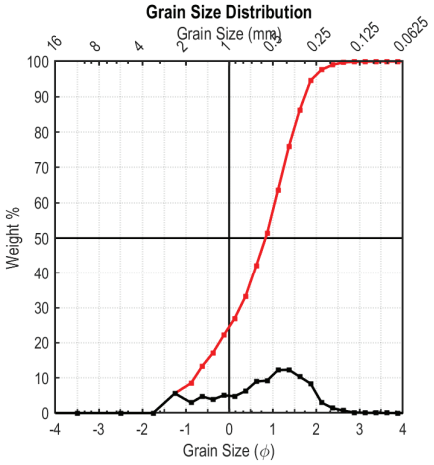
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.10 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.24 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.40 |
| 0 | -0.125 | 0.48 | 0.46 | 0.86 |
| 0.25 | 0.125 | 0.82 | 0.78 | 1.64 |
| 0.5 | 0.375 | 1.81 | 1.72 | 3.36 |
| 0.75 | 0.625 | 4.75 | 4.52 | 7.89 |
| 1 | 0.875 | 7.98 | 7.60 | 15.49 |
| 1.25 | 1.125 | 14.86 | 14.15 | 29.64 |
| 1.5 | 1.375 | 19.41 | 18.49 | 48.12 |
| 1.75 | 1.625 | 19.80 | 18.86 | 66.98 |
| 2 | 1.875 | 19.83 | 18.89 | 85.87 |
| 2.25 | 2.125 | 8.08 | 7.70 | 93.56 |
| 2.5 | 2.375 | 4.22 | 4.02 | 97.58 |
| 2.75 | 2.625 | 1.90 | 1.81 | 99.39 |
| 3 | 2.875 | 0.37 | 0.35 | 99.74 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.92 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.080 |
| **5** | 0.465 |
| **16** | 0.885 |
| **25** | 1.045 |
| **50** | 1.400 |
| **75** | 1.730 |
| **84** | 1.850 |
| **95** | 2.215 |
| **99** | 2.570 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.498 | 0.354 |
| Standard Deviation | 0.531 | 0.692 |
| Skewness | -0.381 | |
| Kurtosis | 4.106 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.367 | 1.378 |
| Standard Deviation | 0.483 | 0.506 |
| Skewness (1) | -0.067 | -0.068 |
| Skewness (2) | -0.124 | |
| Kurtosis | 0.813 | 1.047 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1800+00** |
| **Sample** | **Swash** |
| **Mean** | **0.584 mm** |
| **STD** | **0.520 mm** |
| **Skewness** | **-0.503** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 93.75 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 5.60 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 26.6 |

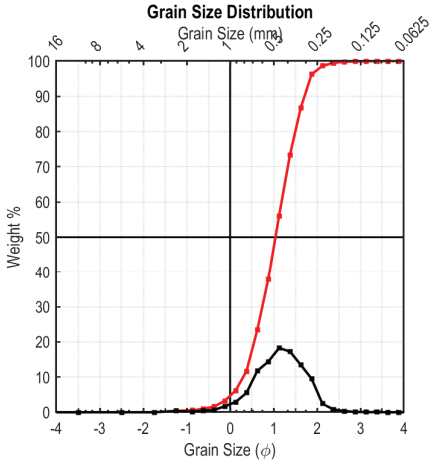
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.25 | 5.60 | 5.60 |
| -0.75 | -0.875 | 2.75 | 2.93 | 8.53 |
| -0.5 | -0.625 | 4.42 | 4.71 | 13.25 |
| -0.25 | -0.375 | 3.61 | 3.85 | 17.10 |
| 0 | -0.125 | 4.72 | 5.03 | 22.13 |
| 0.25 | 0.125 | 4.48 | 4.78 | 26.91 |
| 0.5 | 0.375 | 5.86 | 6.25 | 33.16 |
| 0.75 | 0.625 | 8.41 | 8.97 | 42.13 |
| 1 | 0.875 | 8.66 | 9.24 | 51.37 |
| 1.25 | 1.125 | 11.47 | 12.23 | 63.61 |
| 1.5 | 1.375 | 11.54 | 12.31 | 75.91 |
| 1.75 | 1.625 | 9.69 | 10.34 | 86.25 |
| 2 | 1.875 | 7.85 | 8.37 | 94.62 |
| 2.25 | 2.125 | 2.81 | 3.00 | 97.62 |
| 2.5 | 2.375 | 1.32 | 1.41 | 99.03 |
| 2.75 | 2.625 | 0.65 | 0.69 | 99.72 |
| 3 | 2.875 | 0.14 | 0.15 | 99.87 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.660 |
| **5** | -1.305 |
| **16** | -0.445 |
| **25** | 0.025 |
| **50** | 0.840 |
| **75** | 1.355 |
| **84** | 1.570 |
| **95** | 1.905 |
| **99** | 2.370 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.776 | 0.584 |
| Standard Deviation | 0.944 | 0.520 |
| Skewness | -0.503 | |
| Kurtosis | 2.528 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.562 | 0.655 |
| Standard Deviation | 1.008 | 0.990 |
| Skewness (1) | -0.275 | -0.306 |
| Skewness (2) | -0.536 | |
| Kurtosis | 0.593 | 0.989 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1810+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.455 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.490** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.28 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.37 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.4 |

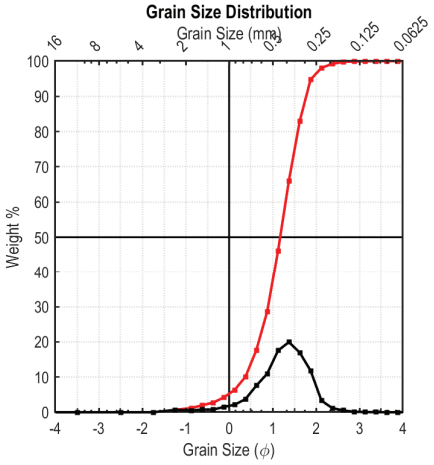
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.39 | 0.37 | 0.37 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.53 |
| -0.5 | -0.625 | 0.43 | 0.41 | 0.94 |
| -0.25 | -0.375 | 0.66 | 0.63 | 1.57 |
| 0 | -0.125 | 1.77 | 1.68 | 3.25 |
| 0.25 | 0.125 | 3.05 | 2.90 | 6.15 |
| 0.5 | 0.375 | 5.78 | 5.49 | 11.64 |
| 0.75 | 0.625 | 12.38 | 11.76 | 23.39 |
| 1 | 0.875 | 15.10 | 14.34 | 37.74 |
| 1.25 | 1.125 | 19.19 | 18.23 | 55.97 |
| 1.5 | 1.375 | 18.21 | 17.30 | 73.26 |
| 1.75 | 1.625 | 14.18 | 13.47 | 86.73 |
| 2 | 1.875 | 10.03 | 9.53 | 96.26 |
| 2.25 | 2.125 | 2.54 | 2.41 | 98.67 |
| 2.5 | 2.375 | 0.85 | 0.81 | 99.48 |
| 2.75 | 2.625 | 0.36 | 0.34 | 99.82 |
| 3 | 2.875 | 0.10 | 0.09 | 99.91 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.600 |
| **5** | 0.025 |
| **16** | 0.470 |
| **25** | 0.655 |
| **50** | 1.045 |
| **75** | 1.405 |
| **84** | 1.575 |
| **95** | 1.840 |
| **99** | 2.225 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.136 | 0.455 |
| Standard Deviation | 0.573 | 0.672 |
| Skewness | -0.490 | |
| Kurtosis | 4.138 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.022 | 1.030 |
| Standard Deviation | 0.552 | 0.551 |
| Skewness (1) | -0.041 | -0.082 |
| Skewness (2) | -0.204 | |
| Kurtosis | 0.643 | 0.992 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1810+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.428 mm** |
| **STD** | **0.655 mm** |
| **Skewness** | **-0.973** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.28 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.67 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.0 |

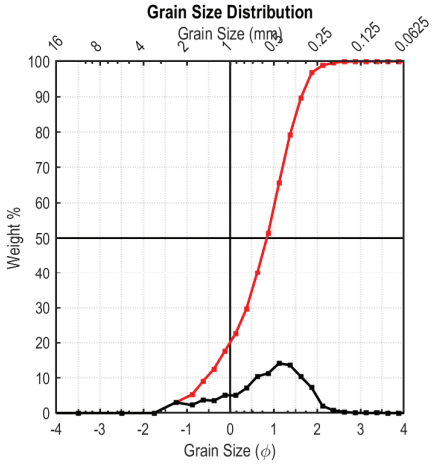
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.71 | 0.67 | 0.67 |
| -0.75 | -0.875 | 0.54 | 0.51 | 1.19 |
| -0.5 | -0.625 | 0.81 | 0.77 | 1.96 |
| -0.25 | -0.375 | 0.80 | 0.76 | 2.72 |
| 0 | -0.125 | 1.56 | 1.48 | 4.20 |
| 0.25 | 0.125 | 2.25 | 2.14 | 6.34 |
| 0.5 | 0.375 | 3.93 | 3.73 | 10.07 |
| 0.75 | 0.625 | 7.95 | 7.55 | 17.62 |
| 1 | 0.875 | 11.52 | 10.94 | 28.56 |
| 1.25 | 1.125 | 18.44 | 17.52 | 46.08 |
| 1.5 | 1.375 | 20.98 | 19.93 | 66.00 |
| 1.75 | 1.625 | 17.86 | 16.96 | 82.97 |
| 2 | 1.875 | 12.43 | 11.81 | 94.78 |
| 2.25 | 2.125 | 3.48 | 3.31 | 98.08 |
| 2.5 | 2.375 | 1.23 | 1.17 | 99.25 |
| 2.75 | 2.625 | 0.55 | 0.52 | 99.77 |
| 3 | 2.875 | 0.14 | 0.13 | 99.91 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.010 |
| **5** | -0.030 |
| **16** | 0.570 |
| **25** | 0.795 |
| **50** | 1.175 |
| **75** | 1.510 |
| **84** | 1.645 |
| **95** | 1.890 |
| **99** | 2.320 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.224 | 0.428 |
| Standard Deviation | 0.611 | 0.655 |
| Skewness | -0.973 | |
| Kurtosis | 5.168 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.107 | 1.130 |
| Standard Deviation | 0.538 | 0.560 |
| Skewness (1) | -0.126 | -0.190 |
| Skewness (2) | -0.456 | |
| Kurtosis | 0.786 | 1.101 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1810+00** |
| **Sample** | **Swash** |
| **Mean** | **0.567 mm** |
| **STD** | **0.564 mm** |
| **Skewness** | **-0.616** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.22 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 18.6 |

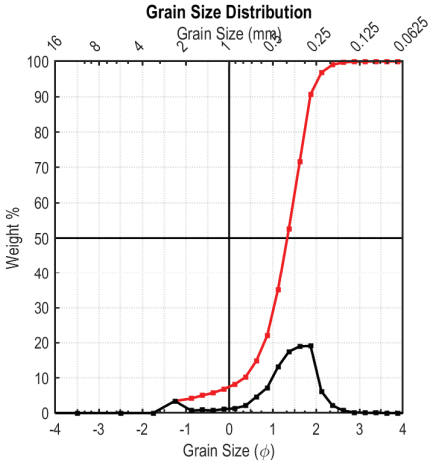
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.10 | 3.03 | 3.03 |
| -0.75 | -0.875 | 2.29 | 2.24 | 5.27 |
| -0.5 | -0.625 | 3.84 | 3.76 | 9.03 |
| -0.25 | -0.375 | 3.56 | 3.48 | 12.51 |
| 0 | -0.125 | 5.20 | 5.09 | 17.60 |
| 0.25 | 0.125 | 5.10 | 4.99 | 22.59 |
| 0.5 | 0.375 | 7.23 | 7.07 | 29.66 |
| 0.75 | 0.625 | 10.67 | 10.44 | 40.10 |
| 1 | 0.875 | 11.54 | 11.29 | 51.39 |
| 1.25 | 1.125 | 14.47 | 14.16 | 65.54 |
| 1.5 | 1.375 | 13.93 | 13.63 | 79.17 |
| 1.75 | 1.625 | 10.64 | 10.41 | 89.58 |
| 2 | 1.875 | 7.38 | 7.22 | 96.80 |
| 2.25 | 2.125 | 2.10 | 2.05 | 98.86 |
| 2.5 | 2.375 | 0.76 | 0.74 | 99.60 |
| 2.75 | 2.625 | 0.32 | 0.31 | 99.91 |
| 3 | 2.875 | 0.05 | 0.05 | 99.96 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.585 |
| **5** | -0.920 |
| **16** | -0.205 |
| **25** | 0.210 |
| **50** | 0.845 |
| **75** | 1.300 |
| **84** | 1.490 |
| **95** | 1.815 |
| **99** | 2.175 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.820 | 0.567 |
| Standard Deviation | 0.825 | 0.564 |
| Skewness | -0.616 | |
| Kurtosis | 2.902 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.642 | 0.710 |
| Standard Deviation | 0.847 | 0.838 |
| Skewness (1) | -0.239 | -0.265 |
| Skewness (2) | -0.469 | |
| Kurtosis | 0.614 | 1.028 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1820+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.404 mm** |
| **STD** | **0.591 mm** |
| **Skewness** | **-1.602** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.32 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.43 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

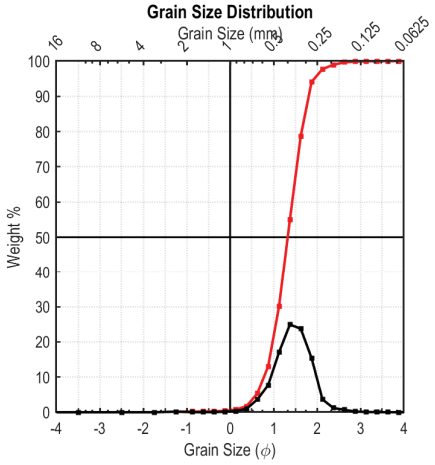
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.61 | 3.43 | 3.43 |
| -0.75 | -0.875 | 0.73 | 0.69 | 4.12 |
| -0.5 | -0.625 | 0.92 | 0.87 | 4.99 |
| -0.25 | -0.375 | 0.75 | 0.71 | 5.71 |
| 0 | -0.125 | 1.16 | 1.10 | 6.81 |
| 0.25 | 0.125 | 1.40 | 1.33 | 8.14 |
| 0.5 | 0.375 | 2.17 | 2.06 | 10.20 |
| 0.75 | 0.625 | 4.87 | 4.62 | 14.82 |
| 1 | 0.875 | 7.57 | 7.19 | 22.01 |
| 1.25 | 1.125 | 13.84 | 13.14 | 35.15 |
| 1.5 | 1.375 | 18.41 | 17.48 | 52.63 |
| 1.75 | 1.625 | 19.99 | 18.98 | 71.61 |
| 2 | 1.875 | 20.11 | 19.09 | 90.70 |
| 2.25 | 2.125 | 6.48 | 6.15 | 96.86 |
| 2.5 | 2.375 | 2.29 | 2.17 | 99.03 |
| 2.75 | 2.625 | 0.74 | 0.70 | 99.73 |
| 3 | 2.875 | 0.17 | 0.16 | 99.90 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.605 |
| **5** | -0.625 |
| **16** | 0.665 |
| **25** | 0.930 |
| **50** | 1.335 |
| **75** | 1.670 |
| **84** | 1.785 |
| **95** | 2.050 |
| **99** | 2.370 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.306 | 0.404 |
| Standard Deviation | 0.759 | 0.591 |
| Skewness | -1.602 | |
| Kurtosis | 6.108 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.225 | 1.262 |
| Standard Deviation | 0.560 | 0.685 |
| Skewness (1) | -0.196 | -0.331 |
| Skewness (2) | -1.112 | |
| Kurtosis | 1.388 | 1.482 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1820+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.370 mm** |
| **STD** | **0.741 mm** |
| **Skewness** | **-0.484** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.08 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

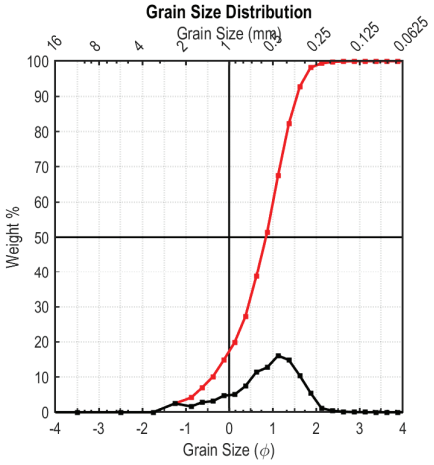
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.20 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.22 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.27 |
| 0 | -0.125 | 0.15 | 0.14 | 0.41 |
| 0.25 | 0.125 | 0.35 | 0.33 | 0.74 |
| 0.5 | 0.375 | 1.01 | 0.96 | 1.70 |
| 0.75 | 0.625 | 3.80 | 3.62 | 5.32 |
| 1 | 0.875 | 8.10 | 7.71 | 13.03 |
| 1.25 | 1.125 | 17.89 | 17.03 | 30.05 |
| 1.5 | 1.375 | 26.18 | 24.91 | 54.97 |
| 1.75 | 1.625 | 24.95 | 23.74 | 78.71 |
| 2 | 1.875 | 16.17 | 15.39 | 94.10 |
| 2.25 | 2.125 | 3.83 | 3.64 | 97.74 |
| 2.5 | 2.375 | 1.28 | 1.22 | 98.96 |
| 2.75 | 2.625 | 0.73 | 0.69 | 99.66 |
| 3 | 2.875 | 0.22 | 0.21 | 99.87 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.190 |
| **5** | 0.605 |
| **16** | 0.920 |
| **25** | 1.050 |
| **50** | 1.325 |
| **75** | 1.585 |
| **84** | 1.710 |
| **95** | 1.935 |
| **99** | 2.390 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.435 | 0.370 |
| Standard Deviation | 0.432 | 0.741 |
| Skewness | -0.484 | |
| Kurtosis | 6.500 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.315 | 1.318 |
| Standard Deviation | 0.395 | 0.399 |
| Skewness (1) | -0.025 | -0.054 |
| Skewness (2) | -0.139 | |
| Kurtosis | 0.684 | 1.019 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1820+00** |
| **Sample** | **Swash** |
| **Mean** | **0.561 mm** |
| **STD** | **0.592 mm** |
| **Skewness** | **-0.746** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.95 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 2.49 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 20.8 |

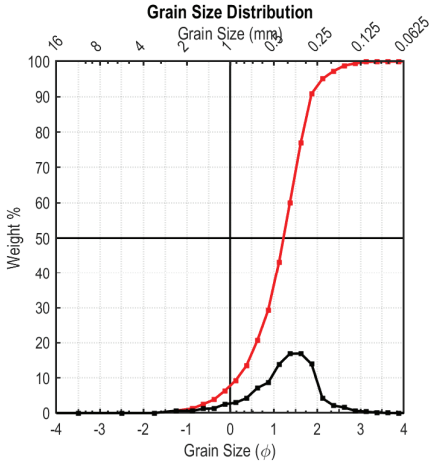
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.54 | 2.49 | 2.49 |
| -0.75 | -0.875 | 1.69 | 1.66 | 4.15 |
| -0.5 | -0.625 | 2.86 | 2.81 | 6.95 |
| -0.25 | -0.375 | 3.22 | 3.16 | 10.11 |
| 0 | -0.125 | 4.79 | 4.70 | 14.81 |
| 0.25 | 0.125 | 5.11 | 5.01 | 19.82 |
| 0.5 | 0.375 | 7.57 | 7.43 | 27.25 |
| 0.75 | 0.625 | 11.63 | 11.41 | 38.66 |
| 1 | 0.875 | 12.97 | 12.72 | 51.38 |
| 1.25 | 1.125 | 16.39 | 16.08 | 67.45 |
| 1.5 | 1.375 | 15.14 | 14.85 | 82.31 |
| 1.75 | 1.625 | 10.61 | 10.41 | 92.71 |
| 2 | 1.875 | 5.59 | 5.48 | 98.20 |
| 2.25 | 2.125 | 1.18 | 1.16 | 99.35 |
| 2.5 | 2.375 | 0.44 | 0.43 | 99.78 |
| 2.75 | 2.625 | 0.16 | 0.16 | 99.94 |
| 3 | 2.875 | 0.04 | 0.04 | 99.98 |
| 3.25 | 3.125 | 0.02 | 0.02 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.550 |
| **5** | -0.800 |
| **16** | -0.065 |
| **25** | 0.300 |
| **50** | 0.850 |
| **75** | 1.250 |
| **84** | 1.415 |
| **95** | 1.730 |
| **99** | 2.050 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.834 | 0.561 |
| Standard Deviation | 0.755 | 0.592 |
| Skewness | -0.746 | |
| Kurtosis | 3.271 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.675 | 0.733 |
| Standard Deviation | 0.740 | 0.753 |
| Skewness (1) | -0.236 | -0.270 |
| Skewness (2) | -0.520 | |
| Kurtosis | 0.709 | 1.091 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1830+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.419 mm** |
| **STD** | **0.608 mm** |
| **Skewness** | **-0.663** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.13 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.67 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

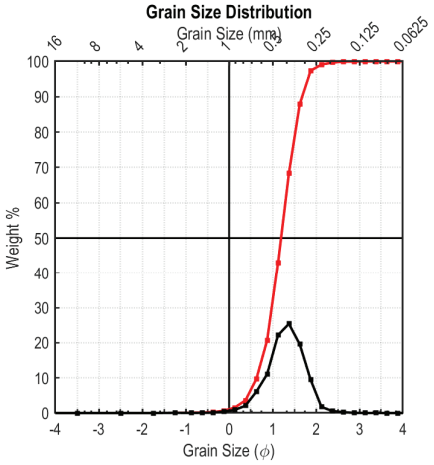
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.70 | 0.67 | 0.67 |
| -0.75 | -0.875 | 0.63 | 0.60 | 1.27 |
| -0.5 | -0.625 | 1.28 | 1.22 | 2.48 |
| -0.25 | -0.375 | 1.39 | 1.32 | 3.80 |
| 0 | -0.125 | 2.64 | 2.51 | 6.32 |
| 0.25 | 0.125 | 3.08 | 2.93 | 9.25 |
| 0.5 | 0.375 | 4.45 | 4.23 | 13.48 |
| 0.75 | 0.625 | 7.49 | 7.12 | 20.60 |
| 1 | 0.875 | 9.09 | 8.65 | 29.25 |
| 1.25 | 1.125 | 14.57 | 13.86 | 43.11 |
| 1.5 | 1.375 | 17.74 | 16.87 | 59.98 |
| 1.75 | 1.625 | 17.81 | 16.94 | 76.92 |
| 2 | 1.875 | 14.65 | 13.94 | 90.86 |
| 2.25 | 2.125 | 4.42 | 4.20 | 95.06 |
| 2.5 | 2.375 | 2.26 | 2.15 | 97.21 |
| 2.75 | 2.625 | 1.66 | 1.58 | 98.79 |
| 3 | 2.875 | 0.68 | 0.65 | 99.44 |
| 3.25 | 3.125 | 0.42 | 0.40 | 99.84 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.040 |
| **5** | -0.255 |
| **16** | 0.465 |
| **25** | 0.750 |
| **50** | 1.225 |
| **75** | 1.595 |
| **84** | 1.750 |
| **95** | 2.120 |
| **99** | 2.705 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.254 | 0.419 |
| Standard Deviation | 0.718 | 0.608 |
| Skewness | -0.663 | |
| Kurtosis | 4.082 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.107 | 1.147 |
| Standard Deviation | 0.643 | 0.681 |
| Skewness (1) | -0.183 | -0.215 |
| Skewness (2) | -0.455 | |
| Kurtosis | 0.848 | 1.152 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1830+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.407 mm** |
| **STD** | **0.745 mm** |
| **Skewness** | **-0.496** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

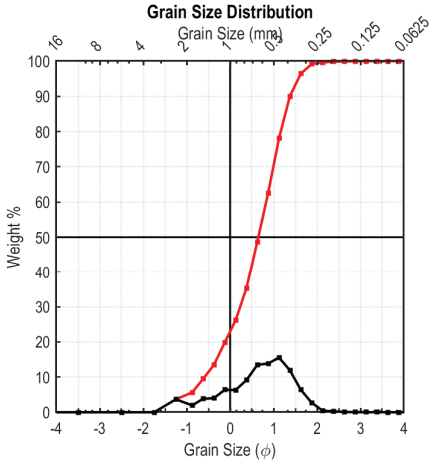
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.09 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.14 |
| -0.25 | -0.375 | 0.11 | 0.10 | 0.25 |
| 0 | -0.125 | 0.43 | 0.41 | 0.66 |
| 0.25 | 0.125 | 0.91 | 0.87 | 1.52 |
| 0.5 | 0.375 | 2.18 | 2.07 | 3.60 |
| 0.75 | 0.625 | 6.36 | 6.05 | 9.65 |
| 1 | 0.875 | 11.64 | 11.08 | 20.73 |
| 1.25 | 1.125 | 23.30 | 22.18 | 42.90 |
| 1.5 | 1.375 | 26.69 | 25.40 | 68.31 |
| 1.75 | 1.625 | 20.56 | 19.57 | 87.87 |
| 2 | 1.875 | 9.97 | 9.49 | 97.36 |
| 2.25 | 2.125 | 1.83 | 1.74 | 99.11 |
| 2.5 | 2.375 | 0.60 | 0.57 | 99.68 |
| 2.75 | 2.625 | 0.26 | 0.25 | 99.92 |
| 3 | 2.875 | 0.05 | 0.05 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.025 |
| **5** | 0.435 |
| **16** | 0.770 |
| **25** | 0.925 |
| **50** | 1.195 |
| **75** | 1.460 |
| **84** | 1.575 |
| **95** | 1.815 |
| **99** | 2.110 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.295 | 0.407 |
| Standard Deviation | 0.425 | 0.745 |
| Skewness | -0.496 | |
| Kurtosis | 4.687 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.172 | 1.180 |
| Standard Deviation | 0.402 | 0.410 |
| Skewness (1) | -0.056 | -0.079 |
| Skewness (2) | -0.174 | |
| Kurtosis | 0.714 | 1.057 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1830+00** |
| **Sample** | **Swash** |
| **Mean** | **0.637 mm** |
| **STD** | **0.591 mm** |
| **Skewness** | **-0.621** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.68 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 16.1 |

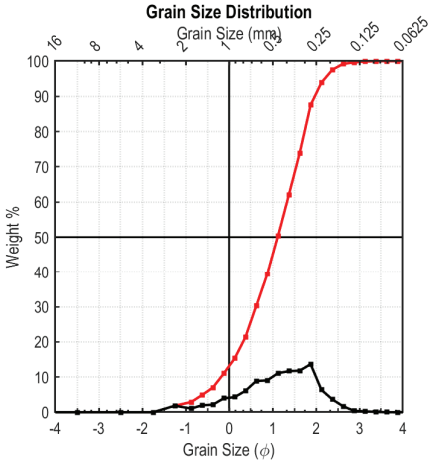
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.86 | 3.68 | 3.68 |
| -0.75 | -0.875 | 2.05 | 1.95 | 5.63 |
| -0.5 | -0.625 | 4.00 | 3.81 | 9.44 |
| -0.25 | -0.375 | 4.20 | 4.00 | 13.43 |
| 0 | -0.125 | 6.68 | 6.36 | 19.79 |
| 0.25 | 0.125 | 6.65 | 6.33 | 26.13 |
| 0.5 | 0.375 | 9.58 | 9.12 | 35.25 |
| 0.75 | 0.625 | 14.14 | 13.46 | 48.71 |
| 1 | 0.875 | 14.55 | 13.85 | 62.56 |
| 1.25 | 1.125 | 16.32 | 15.54 | 78.10 |
| 1.5 | 1.375 | 12.52 | 11.92 | 90.02 |
| 1.75 | 1.625 | 6.73 | 6.41 | 96.43 |
| 2 | 1.875 | 2.86 | 2.72 | 99.15 |
| 2.25 | 2.125 | 0.49 | 0.47 | 99.62 |
| 2.5 | 2.375 | 0.24 | 0.23 | 99.85 |
| 2.75 | 2.625 | 0.10 | 0.10 | 99.94 |
| 3 | 2.875 | 0.03 | 0.03 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.615 |
| **5** | -0.995 |
| **16** | -0.275 |
| **25** | 0.080 |
| **50** | 0.650 |
| **75** | 1.075 |
| **84** | 1.250 |
| **95** | 1.570 |
| **99** | 1.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.651 | 0.637 |
| Standard Deviation | 0.758 | 0.591 |
| Skewness | -0.621 | |
| Kurtosis | 3.010 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.487 | 0.542 |
| Standard Deviation | 0.763 | 0.770 |
| Skewness (1) | -0.213 | -0.248 |
| Skewness (2) | -0.475 | |
| Kurtosis | 0.682 | 1.057 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1840+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.458 mm** |
| **STD** | **0.555 mm** |
| **Skewness** | **-0.578** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.09 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.85 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.7 |

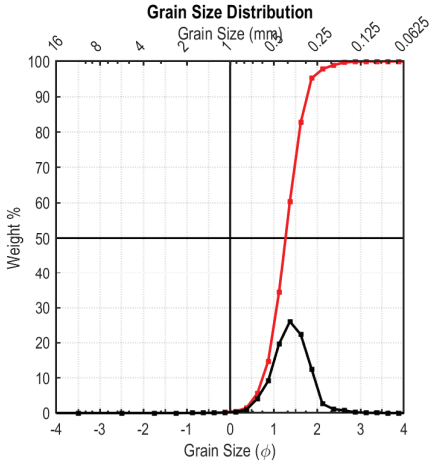
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.94 | 1.85 | 1.85 |
| -0.75 | -0.875 | 1.11 | 1.06 | 2.90 |
| -0.5 | -0.625 | 2.07 | 1.97 | 4.87 |
| -0.25 | -0.375 | 2.27 | 2.16 | 7.03 |
| 0 | -0.125 | 4.15 | 3.95 | 10.98 |
| 0.25 | 0.125 | 4.51 | 4.29 | 15.27 |
| 0.5 | 0.375 | 6.39 | 6.08 | 21.35 |
| 0.75 | 0.625 | 9.34 | 8.89 | 30.24 |
| 1 | 0.875 | 9.50 | 9.04 | 39.28 |
| 1.25 | 1.125 | 11.67 | 11.10 | 50.39 |
| 1.5 | 1.375 | 12.28 | 11.69 | 62.07 |
| 1.75 | 1.625 | 12.42 | 11.82 | 73.89 |
| 2 | 1.875 | 14.36 | 13.66 | 87.55 |
| 2.25 | 2.125 | 6.68 | 6.36 | 93.91 |
| 2.5 | 2.375 | 3.83 | 3.64 | 97.55 |
| 2.75 | 2.625 | 1.77 | 1.68 | 99.24 |
| 3 | 2.875 | 0.42 | 0.40 | 99.64 |
| 3.25 | 3.125 | 0.27 | 0.26 | 99.90 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.480 |
| **5** | -0.610 |
| **16** | 0.155 |
| **25** | 0.480 |
| **50** | 1.115 |
| **75** | 1.645 |
| **84** | 1.810 |
| **95** | 2.200 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.128 | 0.458 |
| Standard Deviation | 0.850 | 0.555 |
| Skewness | -0.578 | |
| Kurtosis | 3.097 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.982 | 1.027 |
| Standard Deviation | 0.828 | 0.840 |
| Skewness (1) | -0.160 | -0.194 |
| Skewness (2) | -0.387 | |
| Kurtosis | 0.698 | 0.989 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1840+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.380 mm** |
| **STD** | **0.753 mm** |
| **Skewness** | **0.018** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.08 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

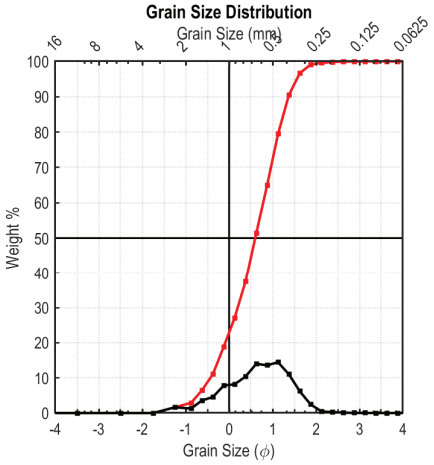
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.04 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.08 |
| 0 | -0.125 | 0.12 | 0.11 | 0.19 |
| 0.25 | 0.125 | 0.31 | 0.30 | 0.49 |
| 0.5 | 0.375 | 1.01 | 0.96 | 1.45 |
| 0.75 | 0.625 | 4.32 | 4.11 | 5.56 |
| 1 | 0.875 | 9.58 | 9.12 | 14.67 |
| 1.25 | 1.125 | 20.63 | 19.63 | 34.31 |
| 1.5 | 1.375 | 27.38 | 26.06 | 60.36 |
| 1.75 | 1.625 | 23.47 | 22.34 | 82.70 |
| 2 | 1.875 | 13.14 | 12.50 | 95.20 |
| 2.25 | 2.125 | 2.73 | 2.60 | 97.80 |
| 2.5 | 2.375 | 1.21 | 1.15 | 98.95 |
| 2.75 | 2.625 | 0.78 | 0.74 | 99.70 |
| 3 | 2.875 | 0.22 | 0.21 | 99.90 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.260 |
| **5** | 0.590 |
| **16** | 0.890 |
| **25** | 1.005 |
| **50** | 1.275 |
| **75** | 1.540 |
| **84** | 1.650 |
| **95** | 1.870 |
| **99** | 2.390 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.397 | 0.380 |
| Standard Deviation | 0.410 | 0.753 |
| Skewness | 0.018 | |
| Kurtosis | 4.210 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.270 | 1.272 |
| Standard Deviation | 0.380 | 0.384 |
| Skewness (1) | -0.013 | -0.042 |
| Skewness (2) | -0.118 | |
| Kurtosis | 0.684 | 0.981 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1840+00** |
| **Sample** | **Swash** |
| **Mean** | **0.634 mm** |
| **STD** | **0.615 mm** |
| **Skewness** | **-0.380** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.02 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.63 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 16.1 |

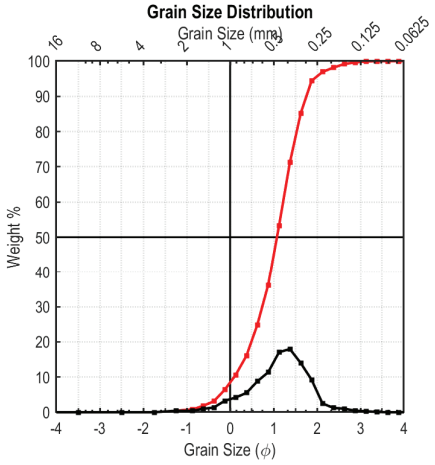
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.71 | 1.63 | 1.63 |
| -0.75 | -0.875 | 1.34 | 1.28 | 2.90 |
| -0.5 | -0.625 | 3.77 | 3.59 | 6.49 |
| -0.25 | -0.375 | 4.78 | 4.55 | 11.05 |
| 0 | -0.125 | 8.21 | 7.82 | 18.86 |
| 0.25 | 0.125 | 8.58 | 8.17 | 27.03 |
| 0.5 | 0.375 | 10.88 | 10.36 | 37.39 |
| 0.75 | 0.625 | 14.71 | 14.01 | 51.40 |
| 1 | 0.875 | 14.26 | 13.58 | 64.98 |
| 1.25 | 1.125 | 15.18 | 14.45 | 79.43 |
| 1.5 | 1.375 | 11.58 | 11.03 | 90.46 |
| 1.75 | 1.625 | 6.50 | 6.19 | 96.65 |
| 2 | 1.875 | 2.58 | 2.46 | 99.10 |
| 2.25 | 2.125 | 0.49 | 0.47 | 99.57 |
| 2.5 | 2.375 | 0.26 | 0.25 | 99.82 |
| 2.75 | 2.625 | 0.13 | 0.12 | 99.94 |
| 3 | 2.875 | 0.03 | 0.03 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.445 |
| **5** | -0.730 |
| **16** | -0.215 |
| **25** | 0.065 |
| **50** | 0.600 |
| **75** | 1.050 |
| **84** | 1.230 |
| **95** | 1.560 |
| **99** | 1.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.656 | 0.634 |
| Standard Deviation | 0.701 | 0.615 |
| Skewness | -0.380 | |
| Kurtosis | 2.929 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.508 | 0.538 |
| Standard Deviation | 0.722 | 0.708 |
| Skewness (1) | -0.128 | -0.145 |
| Skewness (2) | -0.256 | |
| Kurtosis | 0.585 | 0.953 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1850+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.457 mm** |
| **STD** | **0.629 mm** |
| **Skewness** | **-0.446** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.43 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.4 |

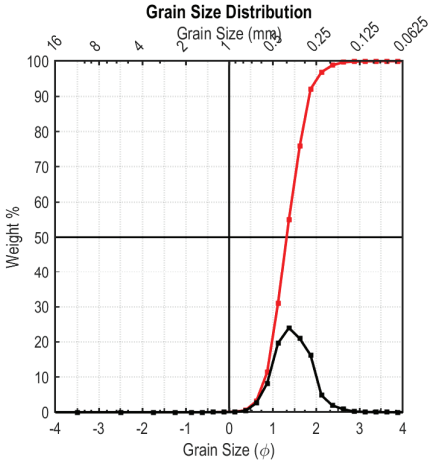
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.45 | 0.43 | 0.43 |
| -0.75 | -0.875 | 0.40 | 0.38 | 0.81 |
| -0.5 | -0.625 | 1.02 | 0.97 | 1.78 |
| -0.25 | -0.375 | 1.42 | 1.35 | 3.13 |
| 0 | -0.125 | 3.42 | 3.25 | 6.38 |
| 0.25 | 0.125 | 4.39 | 4.18 | 10.56 |
| 0.5 | 0.375 | 5.77 | 5.49 | 16.05 |
| 0.75 | 0.625 | 9.22 | 8.77 | 24.82 |
| 1 | 0.875 | 11.94 | 11.36 | 36.18 |
| 1.25 | 1.125 | 17.93 | 17.06 | 53.24 |
| 1.5 | 1.375 | 18.89 | 17.97 | 71.21 |
| 1.75 | 1.625 | 14.70 | 13.99 | 85.20 |
| 2 | 1.875 | 9.69 | 9.22 | 94.42 |
| 2.25 | 2.125 | 2.64 | 2.51 | 96.93 |
| 2.5 | 2.375 | 1.30 | 1.24 | 98.16 |
| 2.75 | 2.625 | 1.07 | 1.02 | 99.18 |
| 3 | 2.875 | 0.47 | 0.45 | 99.63 |
| 3.25 | 3.125 | 0.30 | 0.29 | 99.91 |
| 3.5 | 3.375 | 0.09 | 0.09 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.825 |
| **5** | -0.230 |
| **16** | 0.375 |
| **25** | 0.630 |
| **50** | 1.080 |
| **75** | 1.445 |
| **84** | 1.605 |
| **95** | 1.935 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.129 | 0.457 |
| Standard Deviation | 0.668 | 0.629 |
| Skewness | -0.446 | |
| Kurtosis | 3.798 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.990 | 1.020 |
| Standard Deviation | 0.615 | 0.636 |
| Skewness (1) | -0.146 | -0.178 |
| Skewness (2) | -0.370 | |
| Kurtosis | 0.760 | 1.089 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1850+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.362 mm** |
| **STD** | **0.752 mm** |
| **Skewness** | **0.254** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.14 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.9 |

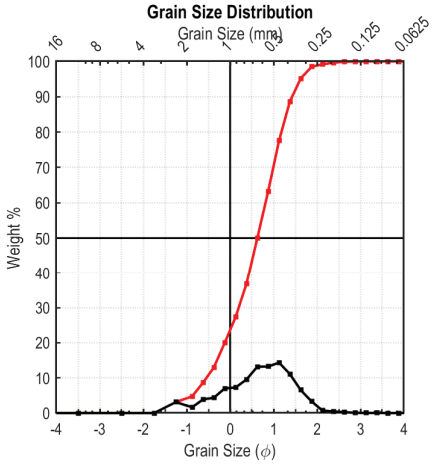
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.03 |
| 0 | -0.125 | 0.03 | 0.03 | 0.06 |
| 0.25 | 0.125 | 0.09 | 0.09 | 0.14 |
| 0.5 | 0.375 | 0.42 | 0.40 | 0.54 |
| 0.75 | 0.625 | 2.73 | 2.60 | 3.14 |
| 1 | 0.875 | 8.64 | 8.22 | 11.36 |
| 1.25 | 1.125 | 20.62 | 19.61 | 30.97 |
| 1.5 | 1.375 | 25.20 | 23.97 | 54.94 |
| 1.75 | 1.625 | 22.01 | 20.93 | 75.87 |
| 2 | 1.875 | 17.04 | 16.21 | 92.08 |
| 2.25 | 2.125 | 5.05 | 4.80 | 96.88 |
| 2.5 | 2.375 | 2.04 | 1.94 | 98.82 |
| 2.75 | 2.625 | 0.91 | 0.87 | 99.69 |
| 3 | 2.875 | 0.20 | 0.19 | 99.88 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.420 |
| **5** | 0.680 |
| **16** | 0.935 |
| **25** | 1.050 |
| **50** | 1.325 |
| **75** | 1.615 |
| **84** | 1.750 |
| **95** | 2.025 |
| **99** | 2.425 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.464 | 0.362 |
| Standard Deviation | 0.411 | 0.752 |
| Skewness | 0.254 | |
| Kurtosis | 3.729 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.343 | 1.337 |
| Standard Deviation | 0.407 | 0.408 |
| Skewness (1) | 0.043 | 0.042 |
| Skewness (2) | 0.067 | |
| Kurtosis | 0.650 | 0.976 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1850+00** |
| **Sample** | **Swash** |
| **Mean** | **0.634 mm** |
| **STD** | **0.589 mm** |
| **Skewness** | **-0.438** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.01 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 19.8 |

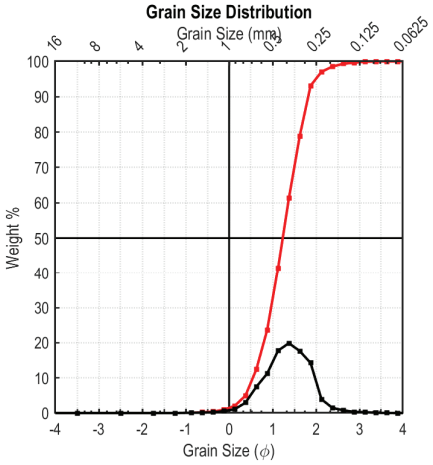
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.27 | 3.11 | 3.11 |
| -0.75 | -0.875 | 1.72 | 1.64 | 4.75 |
| -0.5 | -0.625 | 4.07 | 3.88 | 8.63 |
| -0.25 | -0.375 | 4.58 | 4.36 | 12.99 |
| 0 | -0.125 | 7.36 | 7.01 | 20.00 |
| 0.25 | 0.125 | 7.64 | 7.28 | 27.27 |
| 0.5 | 0.375 | 10.00 | 9.52 | 36.80 |
| 0.75 | 0.625 | 13.85 | 13.19 | 49.99 |
| 1 | 0.875 | 13.89 | 13.23 | 63.21 |
| 1.25 | 1.125 | 15.07 | 14.35 | 77.56 |
| 1.5 | 1.375 | 11.65 | 11.09 | 88.66 |
| 1.75 | 1.625 | 6.85 | 6.52 | 95.18 |
| 2 | 1.875 | 3.46 | 3.29 | 98.48 |
| 2.25 | 2.125 | 0.74 | 0.70 | 99.18 |
| 2.5 | 2.375 | 0.47 | 0.45 | 99.63 |
| 2.75 | 2.625 | 0.28 | 0.27 | 99.90 |
| 3 | 2.875 | 0.06 | 0.06 | 99.95 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.590 |
| **5** | -0.860 |
| **16** | -0.270 |
| **25** | 0.045 |
| **50** | 0.625 |
| **75** | 1.080 |
| **84** | 1.270 |
| **95** | 1.620 |
| **99** | 2.060 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.658 | 0.634 |
| Standard Deviation | 0.764 | 0.589 |
| Skewness | -0.438 | |
| Kurtosis | 2.980 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.500 | 0.542 |
| Standard Deviation | 0.770 | 0.761 |
| Skewness (1) | -0.162 | -0.180 |
| Skewness (2) | -0.318 | |
| Kurtosis | 0.610 | 0.982 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1860+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.395 mm** |
| **STD** | **0.698 mm** |
| **Skewness** | **-0.122** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.06 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

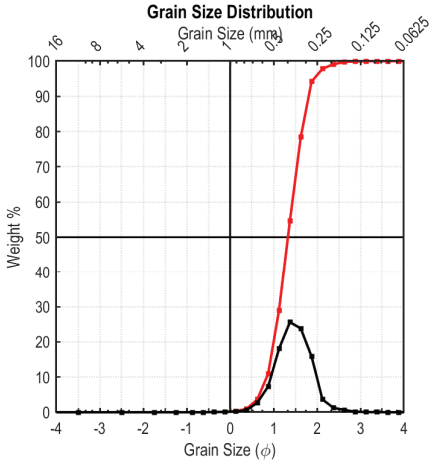
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.08 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.20 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.39 |
| 0 | -0.125 | 0.58 | 0.55 | 0.94 |
| 0.25 | 0.125 | 1.12 | 1.07 | 2.01 |
| 0.5 | 0.375 | 3.08 | 2.93 | 4.94 |
| 0.75 | 0.625 | 7.83 | 7.45 | 12.39 |
| 1 | 0.875 | 11.79 | 11.22 | 23.62 |
| 1.25 | 1.125 | 18.64 | 17.74 | 41.36 |
| 1.5 | 1.375 | 20.89 | 19.88 | 61.24 |
| 1.75 | 1.625 | 18.54 | 17.65 | 78.89 |
| 2 | 1.875 | 14.96 | 14.24 | 93.13 |
| 2.25 | 2.125 | 4.13 | 3.93 | 97.06 |
| 2.5 | 2.375 | 1.55 | 1.48 | 98.53 |
| 2.75 | 2.625 | 0.83 | 0.79 | 99.32 |
| 3 | 2.875 | 0.34 | 0.32 | 99.65 |
| 3.25 | 3.125 | 0.27 | 0.26 | 99.90 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.110 |
| **5** | 0.375 |
| **16** | 0.705 |
| **25** | 0.895 |
| **50** | 1.235 |
| **75** | 1.570 |
| **84** | 1.715 |
| **95** | 1.995 |
| **99** | 2.520 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.341 | 0.395 |
| Standard Deviation | 0.518 | 0.698 |
| Skewness | -0.122 | |
| Kurtosis | 3.964 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.210 | 1.218 |
| Standard Deviation | 0.505 | 0.498 |
| Skewness (1) | -0.050 | -0.056 |
| Skewness (2) | -0.099 | |
| Kurtosis | 0.604 | 0.984 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1860+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.365 mm** |
| **STD** | **0.761 mm** |
| **Skewness** | **-0.017** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.08 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.9 |

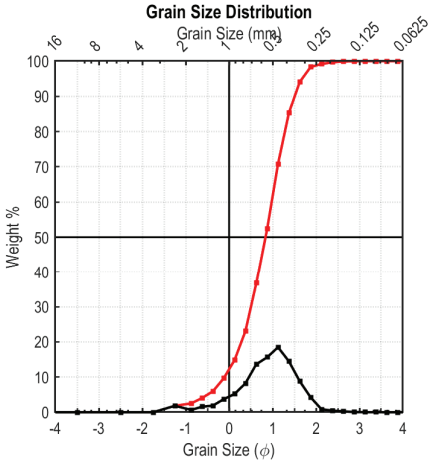
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.05 |
| 0 | -0.125 | 0.10 | 0.10 | 0.14 |
| 0.25 | 0.125 | 0.20 | 0.19 | 0.33 |
| 0.5 | 0.375 | 0.63 | 0.60 | 0.93 |
| 0.75 | 0.625 | 2.82 | 2.68 | 3.62 |
| 1 | 0.875 | 7.71 | 7.34 | 10.95 |
| 1.25 | 1.125 | 18.93 | 18.01 | 28.97 |
| 1.5 | 1.375 | 26.89 | 25.59 | 54.56 |
| 1.75 | 1.625 | 25.04 | 23.83 | 78.39 |
| 2 | 1.875 | 16.62 | 15.82 | 94.20 |
| 2.25 | 2.125 | 3.81 | 3.63 | 97.83 |
| 2.5 | 2.375 | 1.34 | 1.28 | 99.11 |
| 2.75 | 2.625 | 0.69 | 0.66 | 99.76 |
| 3 | 2.875 | 0.16 | 0.15 | 99.91 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.98 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.380 |
| **5** | 0.670 |
| **16** | 0.945 |
| **25** | 1.070 |
| **50** | 1.330 |
| **75** | 1.590 |
| **84** | 1.715 |
| **95** | 1.930 |
| **99** | 2.355 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.453 | 0.365 |
| Standard Deviation | 0.394 | 0.761 |
| Skewness | -0.017 | |
| Kurtosis | 4.000 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.330 | 1.330 |
| Standard Deviation | 0.385 | 0.383 |
| Skewness (1) | -0.000 | -0.024 |
| Skewness (2) | -0.078 | |
| Kurtosis | 0.636 | 0.993 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1860+00** |
| **Sample** | **Swash** |
| **Mean** | **0.544 mm** |
| **STD** | **0.632 mm** |
| **Skewness** | **-0.759** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.83 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 18.0 |

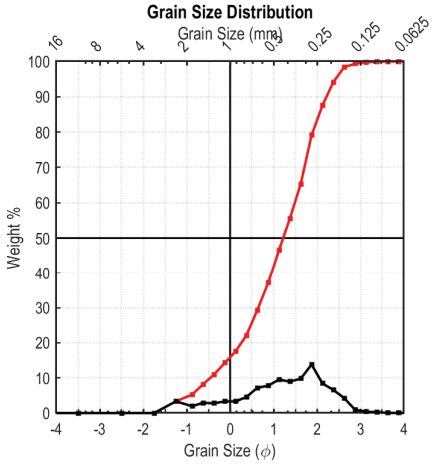
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.92 | 1.83 | 1.83 |
| -0.75 | -0.875 | 0.71 | 0.68 | 2.50 |
| -0.5 | -0.625 | 1.63 | 1.55 | 4.05 |
| -0.25 | -0.375 | 1.98 | 1.88 | 5.94 |
| 0 | -0.125 | 3.90 | 3.71 | 9.65 |
| 0.25 | 0.125 | 5.45 | 5.19 | 14.83 |
| 0.5 | 0.375 | 8.65 | 8.23 | 23.06 |
| 0.75 | 0.625 | 14.35 | 13.65 | 36.71 |
| 1 | 0.875 | 16.41 | 15.61 | 52.33 |
| 1.25 | 1.125 | 19.42 | 18.48 | 70.80 |
| 1.5 | 1.375 | 15.22 | 14.48 | 85.28 |
| 1.75 | 1.625 | 9.25 | 8.80 | 94.08 |
| 2 | 1.875 | 4.47 | 4.25 | 98.34 |
| 2.25 | 2.125 | 0.90 | 0.86 | 99.19 |
| 2.5 | 2.375 | 0.49 | 0.47 | 99.66 |
| 2.75 | 2.625 | 0.27 | 0.26 | 99.91 |
| 3 | 2.875 | 0.06 | 0.06 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.475 |
| **5** | -0.500 |
| **16** | 0.160 |
| **25** | 0.410 |
| **50** | 0.840 |
| **75** | 1.195 |
| **84** | 1.355 |
| **95** | 1.680 |
| **99** | 2.070 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.877 | 0.544 |
| Standard Deviation | 0.662 | 0.632 |
| Skewness | -0.759 | |
| Kurtosis | 4.104 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.758 | 0.785 |
| Standard Deviation | 0.597 | 0.629 |
| Skewness (1) | -0.138 | -0.184 |
| Skewness (2) | -0.418 | |
| Kurtosis | 0.824 | 1.138 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1870+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.439 mm** |
| **STD** | **0.501 mm** |
| **Skewness** | **-0.617** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.77 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 3.32 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.3 |

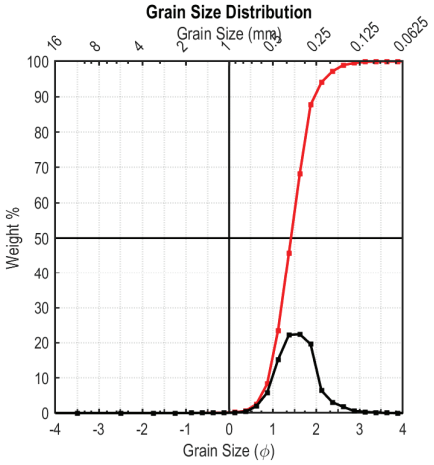
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.38 | 3.32 | 3.32 |
| -0.75 | -0.875 | 1.97 | 1.94 | 5.26 |
| -0.5 | -0.625 | 2.95 | 2.90 | 8.16 |
| -0.25 | -0.375 | 2.82 | 2.77 | 10.93 |
| 0 | -0.125 | 3.37 | 3.31 | 14.24 |
| 0.25 | 0.125 | 3.37 | 3.31 | 17.55 |
| 0.5 | 0.375 | 4.65 | 4.57 | 22.12 |
| 0.75 | 0.625 | 7.31 | 7.18 | 29.30 |
| 1 | 0.875 | 7.92 | 7.78 | 37.08 |
| 1.25 | 1.125 | 9.70 | 9.53 | 46.61 |
| 1.5 | 1.375 | 9.09 | 8.93 | 55.55 |
| 1.75 | 1.625 | 9.96 | 9.79 | 65.33 |
| 2 | 1.875 | 14.05 | 13.81 | 79.14 |
| 2.25 | 2.125 | 8.56 | 8.41 | 87.55 |
| 2.5 | 2.375 | 6.70 | 6.58 | 94.13 |
| 2.75 | 2.625 | 4.33 | 4.25 | 98.39 |
| 3 | 2.875 | 0.95 | 0.93 | 99.32 |
| 3.25 | 3.125 | 0.41 | 0.40 | 99.72 |
| 3.5 | 3.375 | 0.21 | 0.21 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.600 |
| **5** | -0.925 |
| **16** | 0.010 |
| **25** | 0.475 |
| **50** | 1.220 |
| **75** | 1.800 |
| **84** | 2.020 |
| **95** | 2.425 |
| **99** | 2.790 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.187 | 0.439 |
| Standard Deviation | 0.998 | 0.501 |
| Skewness | -0.617 | |
| Kurtosis | 2.818 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.015 | 1.083 |
| Standard Deviation | 1.005 | 1.010 |
| Skewness (1) | -0.204 | -0.242 |
| Skewness (2) | -0.468 | |
| Kurtosis | 0.667 | 1.036 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1870+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.339 mm** |
| **STD** | **0.736 mm** |
| **Skewness** | **0.291** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.10 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

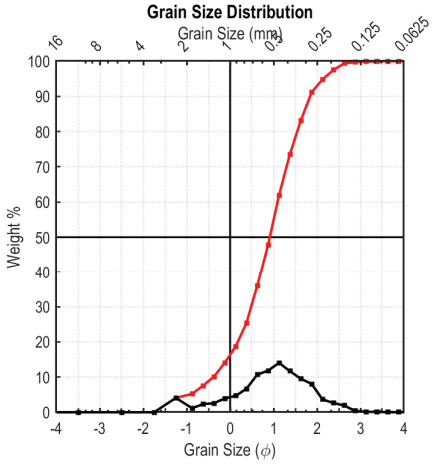
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.05 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.06 |
| 0 | -0.125 | 0.03 | 0.03 | 0.09 |
| 0.25 | 0.125 | 0.12 | 0.11 | 0.20 |
| 0.5 | 0.375 | 0.39 | 0.37 | 0.57 |
| 0.75 | 0.625 | 2.03 | 1.93 | 2.50 |
| 1 | 0.875 | 6.07 | 5.78 | 8.28 |
| 1.25 | 1.125 | 15.93 | 15.16 | 23.43 |
| 1.5 | 1.375 | 23.37 | 22.24 | 45.67 |
| 1.75 | 1.625 | 23.59 | 22.45 | 68.12 |
| 2 | 1.875 | 20.59 | 19.59 | 87.71 |
| 2.25 | 2.125 | 6.71 | 6.38 | 94.09 |
| 2.5 | 2.375 | 3.24 | 3.08 | 97.17 |
| 2.75 | 2.625 | 1.86 | 1.77 | 98.94 |
| 3 | 2.875 | 0.61 | 0.58 | 99.52 |
| 3.25 | 3.125 | 0.36 | 0.34 | 99.87 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.430 |
| **5** | 0.735 |
| **16** | 1.000 |
| **25** | 1.145 |
| **50** | 1.425 |
| **75** | 1.715 |
| **84** | 1.830 |
| **95** | 2.200 |
| **99** | 2.650 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.559 | 0.339 |
| Standard Deviation | 0.442 | 0.736 |
| Skewness | 0.291 | |
| Kurtosis | 4.179 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.415 | 1.418 |
| Standard Deviation | 0.415 | 0.429 |
| Skewness (1) | -0.024 | 0.017 |
| Skewness (2) | 0.102 | |
| Kurtosis | 0.765 | 1.053 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1870+00** |
| **Sample** | **Swash** |
| **Mean** | **0.519 mm** |
| **STD** | **0.543 mm** |
| **Skewness** | **-0.499** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 4.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 22.0 |

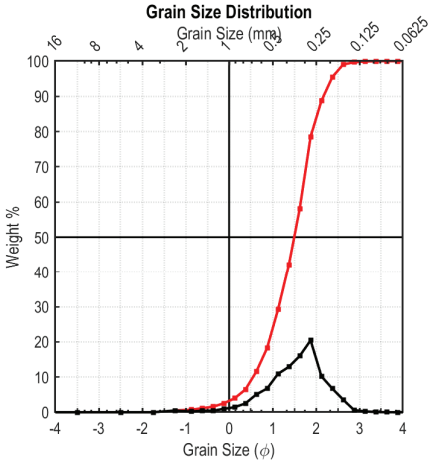
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.28 | 4.08 | 4.08 |
| -0.75 | -0.875 | 1.20 | 1.14 | 5.22 |
| -0.5 | -0.625 | 2.44 | 2.32 | 7.54 |
| -0.25 | -0.375 | 2.68 | 2.55 | 10.09 |
| 0 | -0.125 | 4.12 | 3.92 | 14.02 |
| 0.25 | 0.125 | 4.87 | 4.64 | 18.65 |
| 0.5 | 0.375 | 7.00 | 6.66 | 25.32 |
| 0.75 | 0.625 | 11.24 | 10.70 | 36.02 |
| 1 | 0.875 | 12.43 | 11.83 | 47.85 |
| 1.25 | 1.125 | 14.74 | 14.03 | 61.89 |
| 1.5 | 1.375 | 12.26 | 11.67 | 73.56 |
| 1.75 | 1.625 | 10.00 | 9.52 | 83.08 |
| 2 | 1.875 | 8.46 | 8.05 | 91.14 |
| 2.25 | 2.125 | 3.84 | 3.66 | 94.79 |
| 2.5 | 2.375 | 2.78 | 2.65 | 97.44 |
| 2.75 | 2.625 | 2.00 | 1.90 | 99.34 |
| 3 | 2.875 | 0.40 | 0.38 | 99.72 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.87 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.625 |
| **5** | -0.945 |
| **16** | -0.020 |
| **25** | 0.365 |
| **50** | 0.915 |
| **75** | 1.415 |
| **84** | 1.655 |
| **95** | 2.145 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.946 | 0.519 |
| Standard Deviation | 0.880 | 0.543 |
| Skewness | -0.499 | |
| Kurtosis | 3.247 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.817 | 0.850 |
| Standard Deviation | 0.838 | 0.887 |
| Skewness (1) | -0.116 | -0.160 |
| Skewness (2) | -0.376 | |
| Kurtosis | 0.845 | 1.206 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1880+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.346 mm** |
| **STD** | **0.632 mm** |
| **Skewness** | **-0.846** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.15 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.49 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

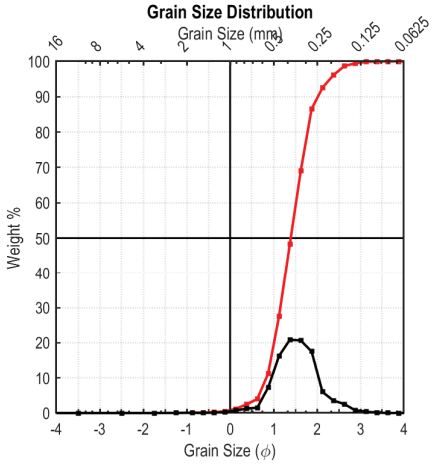
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.52 | 0.49 | 0.49 |
| -0.75 | -0.875 | 0.21 | 0.20 | 0.69 |
| -0.5 | -0.625 | 0.47 | 0.45 | 1.14 |
| -0.25 | -0.375 | 0.45 | 0.43 | 1.57 |
| 0 | -0.125 | 1.01 | 0.96 | 2.53 |
| 0.25 | 0.125 | 1.50 | 1.43 | 3.96 |
| 0.5 | 0.375 | 2.64 | 2.51 | 6.47 |
| 0.75 | 0.625 | 5.32 | 5.06 | 11.53 |
| 1 | 0.875 | 7.11 | 6.76 | 18.29 |
| 1.25 | 1.125 | 11.47 | 10.91 | 29.20 |
| 1.5 | 1.375 | 13.58 | 12.91 | 42.11 |
| 1.75 | 1.625 | 16.83 | 16.01 | 58.12 |
| 2 | 1.875 | 21.49 | 20.44 | 78.55 |
| 2.25 | 2.125 | 10.73 | 10.20 | 88.76 |
| 2.5 | 2.375 | 7.07 | 6.72 | 95.48 |
| 2.75 | 2.625 | 3.76 | 3.58 | 99.06 |
| 3 | 2.875 | 0.64 | 0.61 | 99.67 |
| 3.25 | 3.125 | 0.26 | 0.25 | 99.91 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.705 |
| **5** | 0.230 |
| **16** | 0.790 |
| **25** | 1.030 |
| **50** | 1.500 |
| **75** | 1.830 |
| **84** | 2.010 |
| **95** | 2.355 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.531 | 0.346 |
| Standard Deviation | 0.663 | 0.632 |
| Skewness | -0.846 | |
| Kurtosis | 4.616 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.400 | 1.433 |
| Standard Deviation | 0.610 | 0.627 |
| Skewness (1) | -0.164 | -0.180 |
| Skewness (2) | -0.340 | |
| Kurtosis | 0.742 | 1.089 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1880+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.346 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **-0.007** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

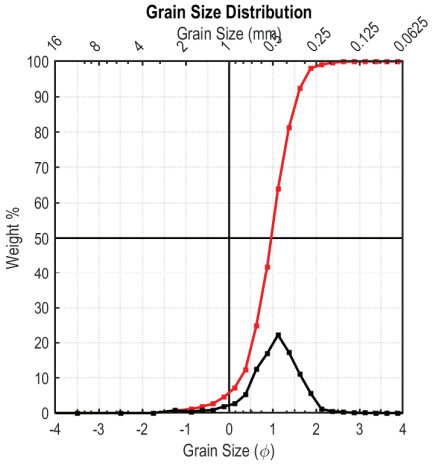
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.10 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.12 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.25 |
| 0 | -0.125 | 0.25 | 0.24 | 0.49 |
| 0.25 | 0.125 | 0.73 | 0.69 | 1.18 |
| 0.5 | 0.375 | 1.34 | 1.28 | 2.46 |
| 0.75 | 0.625 | 1.61 | 1.53 | 3.99 |
| 1 | 0.875 | 7.64 | 7.27 | 11.26 |
| 1.25 | 1.125 | 17.05 | 16.23 | 27.49 |
| 1.5 | 1.375 | 21.93 | 20.87 | 48.36 |
| 1.75 | 1.625 | 21.70 | 20.65 | 69.01 |
| 2 | 1.875 | 18.40 | 17.51 | 86.52 |
| 2.25 | 2.125 | 6.32 | 6.02 | 92.54 |
| 2.5 | 2.375 | 3.73 | 3.55 | 96.09 |
| 2.75 | 2.625 | 2.69 | 2.56 | 98.65 |
| 3 | 2.875 | 0.86 | 0.82 | 99.47 |
| 3.25 | 3.125 | 0.43 | 0.41 | 99.88 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.060 |
| **5** | 0.660 |
| **16** | 0.950 |
| **25** | 1.085 |
| **50** | 1.395 |
| **75** | 1.710 |
| **84** | 1.840 |
| **95** | 2.300 |
| **99** | 2.730 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.530 | 0.346 |
| Standard Deviation | 0.504 | 0.705 |
| Skewness | -0.007 | |
| Kurtosis | 4.546 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.395 | 1.395 |
| Standard Deviation | 0.445 | 0.471 |
| Skewness (1) | -0.000 | 0.052 |
| Skewness (2) | 0.191 | |
| Kurtosis | 0.843 | 1.075 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.484 mm** |
| **STD** | **0.678 mm** |
| **Skewness** | **-0.818** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.01 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.73 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.7 |

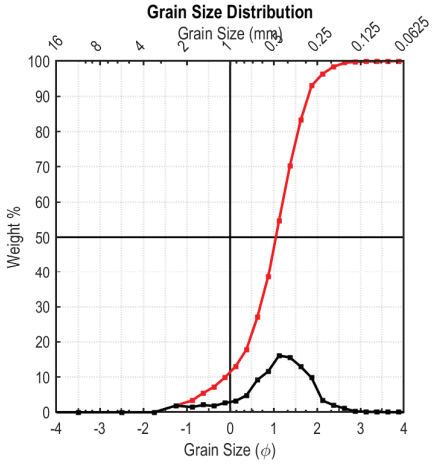
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.77 | 0.73 | 0.73 |
| -0.75 | -0.875 | 0.35 | 0.33 | 1.07 |
| -0.5 | -0.625 | 0.78 | 0.74 | 1.81 |
| -0.25 | -0.375 | 0.88 | 0.84 | 2.65 |
| 0 | -0.125 | 1.97 | 1.88 | 4.52 |
| 0.25 | 0.125 | 2.74 | 2.61 | 7.13 |
| 0.5 | 0.375 | 5.46 | 5.20 | 12.33 |
| 0.75 | 0.625 | 13.10 | 12.48 | 24.81 |
| 1 | 0.875 | 17.77 | 16.92 | 41.73 |
| 1.25 | 1.125 | 23.33 | 22.22 | 63.95 |
| 1.5 | 1.375 | 18.14 | 17.27 | 81.22 |
| 1.75 | 1.625 | 11.67 | 11.11 | 92.33 |
| 2 | 1.875 | 5.94 | 5.66 | 97.99 |
| 2.25 | 2.125 | 1.19 | 1.13 | 99.12 |
| 2.5 | 2.375 | 0.54 | 0.51 | 99.64 |
| 2.75 | 2.625 | 0.29 | 0.28 | 99.91 |
| 3 | 2.875 | 0.06 | 0.06 | 99.97 |
| 3.25 | 3.125 | 0.03 | 0.03 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.950 |
| **5** | -0.080 |
| **16** | 0.450 |
| **25** | 0.630 |
| **50** | 0.970 |
| **75** | 1.285 |
| **84** | 1.440 |
| **95** | 1.745 |
| **99** | 2.100 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.047 | 0.484 |
| Standard Deviation | 0.562 | 0.678 |
| Skewness | -0.818 | |
| Kurtosis | 5.144 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.945 | 0.953 |
| Standard Deviation | 0.495 | 0.524 |
| Skewness (1) | -0.051 | -0.101 |
| Skewness (2) | -0.278 | |
| Kurtosis | 0.843 | 1.142 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1890+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.475 mm** |
| **STD** | **0.584 mm** |
| **Skewness** | **-0.765** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 101.39 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.88 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 16.0 |

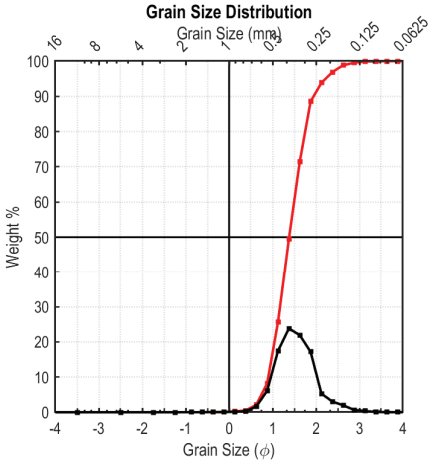
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.91 | 1.88 | 1.88 |
| -0.75 | -0.875 | 1.49 | 1.47 | 3.35 |
| -0.5 | -0.625 | 2.09 | 2.06 | 5.41 |
| -0.25 | -0.375 | 1.81 | 1.79 | 7.20 |
| 0 | -0.125 | 2.67 | 2.63 | 9.83 |
| 0.25 | 0.125 | 3.23 | 3.19 | 13.02 |
| 0.5 | 0.375 | 4.86 | 4.79 | 17.81 |
| 0.75 | 0.625 | 9.30 | 9.17 | 26.98 |
| 1 | 0.875 | 11.75 | 11.59 | 38.57 |
| 1.25 | 1.125 | 16.32 | 16.10 | 54.67 |
| 1.5 | 1.375 | 15.80 | 15.58 | 70.25 |
| 1.75 | 1.625 | 13.16 | 12.98 | 83.23 |
| 2 | 1.875 | 9.93 | 9.79 | 93.03 |
| 2.25 | 2.125 | 3.38 | 3.33 | 96.36 |
| 2.5 | 2.375 | 2.07 | 2.04 | 98.40 |
| 2.75 | 2.625 | 1.10 | 1.08 | 99.49 |
| 3 | 2.875 | 0.28 | 0.28 | 99.76 |
| 3.25 | 3.125 | 0.14 | 0.14 | 99.90 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.485 |
| **5** | -0.675 |
| **16** | 0.280 |
| **25** | 0.570 |
| **50** | 1.050 |
| **75** | 1.465 |
| **84** | 1.645 |
| **95** | 2.025 |
| **99** | 2.515 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.075 | 0.475 |
| Standard Deviation | 0.776 | 0.584 |
| Skewness | -0.765 | |
| Kurtosis | 3.893 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.962 | 0.992 |
| Standard Deviation | 0.683 | 0.750 |
| Skewness (1) | -0.128 | -0.203 |
| Skewness (2) | -0.549 | |
| Kurtosis | 0.978 | 1.236 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1890+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.345 mm** |
| **STD** | **0.736 mm** |
| **Skewness** | **0.488** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.08 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

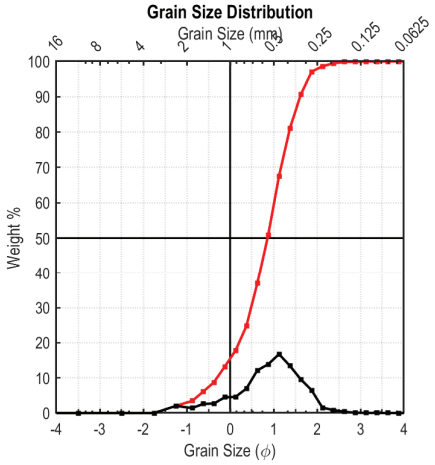
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.06 |
| 0 | -0.125 | 0.04 | 0.04 | 0.10 |
| 0.25 | 0.125 | 0.15 | 0.14 | 0.24 |
| 0.5 | 0.375 | 0.26 | 0.25 | 0.49 |
| 0.75 | 0.625 | 1.71 | 1.63 | 2.11 |
| 1 | 0.875 | 6.41 | 6.10 | 8.21 |
| 1.25 | 1.125 | 18.35 | 17.46 | 25.68 |
| 1.5 | 1.375 | 25.01 | 23.80 | 49.48 |
| 1.75 | 1.625 | 23.04 | 21.93 | 71.40 |
| 2 | 1.875 | 18.03 | 17.16 | 88.56 |
| 2.25 | 2.125 | 5.55 | 5.28 | 93.84 |
| 2.5 | 2.375 | 3.20 | 3.05 | 96.89 |
| 2.75 | 2.625 | 2.06 | 1.96 | 98.85 |
| 3 | 2.875 | 0.71 | 0.68 | 99.52 |
| 3.25 | 3.125 | 0.38 | 0.36 | 99.89 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.455 |
| **5** | 0.745 |
| **16** | 0.985 |
| **25** | 1.115 |
| **50** | 1.380 |
| **75** | 1.675 |
| **84** | 1.810 |
| **95** | 2.220 |
| **99** | 2.680 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.537 | 0.345 |
| Standard Deviation | 0.442 | 0.736 |
| Skewness | 0.488 | |
| Kurtosis | 4.300 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.397 | 1.392 |
| Standard Deviation | 0.413 | 0.430 |
| Skewness (1) | 0.042 | 0.091 |
| Skewness (2) | 0.248 | |
| Kurtosis | 0.788 | 1.079 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1890+00** |
| **Sample** | **Swash** |
| **Mean** | **0.544 mm** |
| **STD** | **0.596 mm** |
| **Skewness** | **-0.641** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 100.45 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 21.5 |

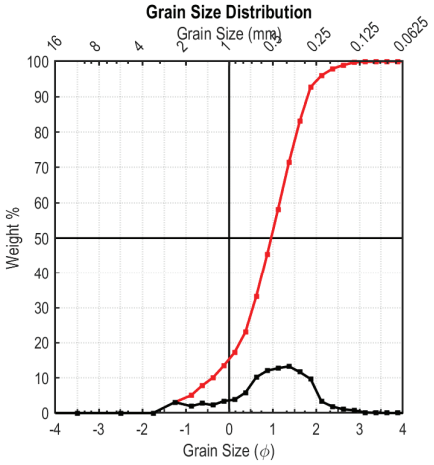
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.05 | 2.04 | 2.04 |
| -0.75 | -0.875 | 1.41 | 1.40 | 3.44 |
| -0.5 | -0.625 | 2.59 | 2.58 | 6.02 |
| -0.25 | -0.375 | 2.73 | 2.72 | 8.74 |
| 0 | -0.125 | 4.48 | 4.46 | 13.20 |
| 0.25 | 0.125 | 4.62 | 4.60 | 17.80 |
| 0.5 | 0.375 | 7.02 | 6.99 | 24.79 |
| 0.75 | 0.625 | 12.20 | 12.15 | 36.93 |
| 1 | 0.875 | 13.93 | 13.87 | 50.80 |
| 1.25 | 1.125 | 16.83 | 16.75 | 67.56 |
| 1.5 | 1.375 | 13.51 | 13.45 | 81.01 |
| 1.75 | 1.625 | 9.63 | 9.59 | 90.59 |
| 2 | 1.875 | 6.52 | 6.49 | 97.08 |
| 2.25 | 2.125 | 1.53 | 1.52 | 98.61 |
| 2.5 | 2.375 | 0.86 | 0.86 | 99.46 |
| 2.75 | 2.625 | 0.37 | 0.37 | 99.83 |
| 3 | 2.875 | 0.08 | 0.08 | 99.91 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.505 |
| **5** | -0.725 |
| **16** | 0.025 |
| **25** | 0.380 |
| **50** | 0.860 |
| **75** | 1.265 |
| **84** | 1.455 |
| **95** | 1.795 |
| **99** | 2.240 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.878 | 0.544 |
| Standard Deviation | 0.746 | 0.596 |
| Skewness | -0.641 | |
| Kurtosis | 3.488 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.740 | 0.780 |
| Standard Deviation | 0.715 | 0.739 |
| Skewness (1) | -0.168 | -0.213 |
| Skewness (2) | -0.455 | |
| Kurtosis | 0.762 | 1.167 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1900+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.506 mm** |
| **STD** | **0.551 mm** |
| **Skewness** | **-0.592** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 95.37 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 3.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 28.9 |

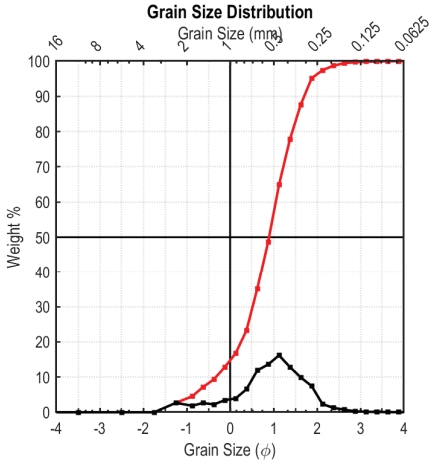
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.94 | 3.08 | 3.08 |
| -0.75 | -0.875 | 1.86 | 1.95 | 5.03 |
| -0.5 | -0.625 | 2.63 | 2.76 | 7.79 |
| -0.25 | -0.375 | 2.15 | 2.25 | 10.05 |
| 0 | -0.125 | 3.25 | 3.41 | 13.45 |
| 0.25 | 0.125 | 3.63 | 3.81 | 17.26 |
| 0.5 | 0.375 | 5.54 | 5.81 | 23.07 |
| 0.75 | 0.625 | 9.73 | 10.20 | 33.27 |
| 1 | 0.875 | 11.49 | 12.05 | 45.32 |
| 1.25 | 1.125 | 12.18 | 12.77 | 58.09 |
| 1.5 | 1.375 | 12.67 | 13.29 | 71.37 |
| 1.75 | 1.625 | 11.13 | 11.67 | 83.04 |
| 2 | 1.875 | 9.25 | 9.70 | 92.74 |
| 2.25 | 2.125 | 3.12 | 3.27 | 96.02 |
| 2.5 | 2.375 | 1.78 | 1.87 | 97.88 |
| 2.75 | 2.625 | 1.01 | 1.06 | 98.94 |
| 3 | 2.875 | 0.74 | 0.78 | 99.72 |
| 3.25 | 3.125 | 0.16 | 0.17 | 99.88 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.590 |
| **5** | -0.880 |
| **16** | 0.040 |
| **25** | 0.420 |
| **50** | 0.965 |
| **75** | 1.455 |
| **84** | 1.650 |
| **95** | 2.045 |
| **99** | 2.645 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.981 | 0.506 |
| Standard Deviation | 0.860 | 0.551 |
| Skewness | -0.592 | |
| Kurtosis | 3.349 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.845 | 0.885 |
| Standard Deviation | 0.805 | 0.846 |
| Skewness (1) | -0.149 | -0.205 |
| Skewness (2) | -0.475 | |
| Kurtosis | 0.817 | 1.158 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1900+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.528 mm** |
| **STD** | **0.575 mm** |
| **Skewness** | **-0.587** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 97.40 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 2.67 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

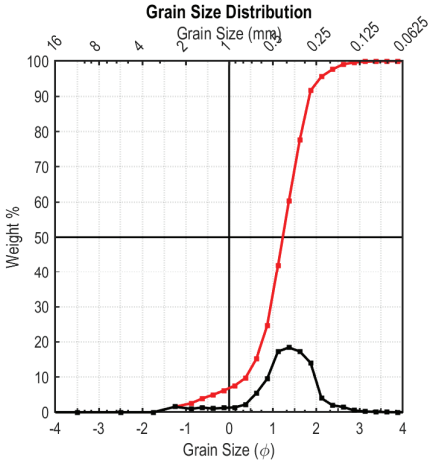
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.60 | 2.67 | 2.67 |
| -0.75 | -0.875 | 1.80 | 1.85 | 4.52 |
| -0.5 | -0.625 | 2.56 | 2.63 | 7.15 |
| -0.25 | -0.375 | 2.16 | 2.22 | 9.36 |
| 0 | -0.125 | 3.34 | 3.43 | 12.79 |
| 0.25 | 0.125 | 3.82 | 3.92 | 16.71 |
| 0.5 | 0.375 | 6.35 | 6.52 | 23.23 |
| 0.75 | 0.625 | 11.59 | 11.90 | 35.13 |
| 1 | 0.875 | 13.22 | 13.57 | 48.71 |
| 1.25 | 1.125 | 15.75 | 16.17 | 64.88 |
| 1.5 | 1.375 | 12.53 | 12.86 | 77.74 |
| 1.75 | 1.625 | 9.65 | 9.91 | 87.65 |
| 2 | 1.875 | 7.26 | 7.45 | 95.10 |
| 2.25 | 2.125 | 2.26 | 2.32 | 97.42 |
| 2.5 | 2.375 | 1.23 | 1.26 | 98.69 |
| 2.75 | 2.625 | 0.72 | 0.74 | 99.43 |
| 3 | 2.875 | 0.26 | 0.27 | 99.69 |
| 3.25 | 3.125 | 0.14 | 0.14 | 99.84 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.565 |
| **5** | -0.830 |
| **16** | 0.080 |
| **25** | 0.410 |
| **50** | 0.895 |
| **75** | 1.320 |
| **84** | 1.535 |
| **95** | 1.870 |
| **99** | 2.480 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.920 | 0.528 |
| Standard Deviation | 0.799 | 0.575 |
| Skewness | -0.587 | |
| Kurtosis | 3.634 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.808 | 0.837 |
| Standard Deviation | 0.728 | 0.773 |
| Skewness (1) | -0.120 | -0.199 |
| Skewness (2) | -0.515 | |
| Kurtosis | 0.856 | 1.216 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1900+00** |
| **Sample** | **Swash** |
| **Mean** | **0.413 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **-1.115** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 97.14 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.55 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 16.2 |

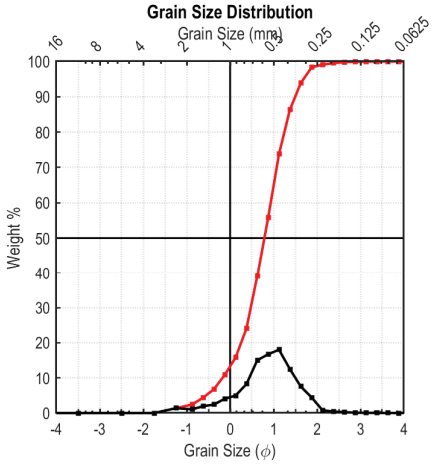
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.51 | 1.55 | 1.55 |
| -0.75 | -0.875 | 0.95 | 0.98 | 2.53 |
| -0.5 | -0.625 | 1.31 | 1.35 | 3.88 |
| -0.25 | -0.375 | 1.02 | 1.05 | 4.93 |
| 0 | -0.125 | 1.20 | 1.24 | 6.17 |
| 0.25 | 0.125 | 1.33 | 1.37 | 7.54 |
| 0.5 | 0.375 | 2.13 | 2.19 | 9.73 |
| 0.75 | 0.625 | 5.24 | 5.39 | 15.12 |
| 1 | 0.875 | 9.23 | 9.50 | 24.62 |
| 1.25 | 1.125 | 16.80 | 17.29 | 41.92 |
| 1.5 | 1.375 | 17.85 | 18.38 | 60.29 |
| 1.75 | 1.625 | 16.81 | 17.30 | 77.60 |
| 2 | 1.875 | 13.63 | 14.03 | 91.63 |
| 2.25 | 2.125 | 3.89 | 4.00 | 95.64 |
| 2.5 | 2.375 | 1.93 | 1.99 | 97.62 |
| 2.75 | 2.625 | 1.44 | 1.48 | 99.10 |
| 3 | 2.875 | 0.51 | 0.53 | 99.63 |
| 3.25 | 3.125 | 0.21 | 0.22 | 99.85 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.430 |
| **5** | -0.360 |
| **16** | 0.650 |
| **25** | 0.880 |
| **50** | 1.235 |
| **75** | 1.585 |
| **84** | 1.740 |
| **95** | 2.085 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.275 | 0.413 |
| Standard Deviation | 0.711 | 0.611 |
| Skewness | -1.115 | |
| Kurtosis | 5.525 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.195 | 1.208 |
| Standard Deviation | 0.545 | 0.643 |
| Skewness (1) | -0.073 | -0.189 |
| Skewness (2) | -0.683 | |
| Kurtosis | 1.243 | 1.421 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1910+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.556 mm** |
| **STD** | **0.630 mm** |
| **Skewness** | **-0.559** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.65 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 1.37 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 22.5 |

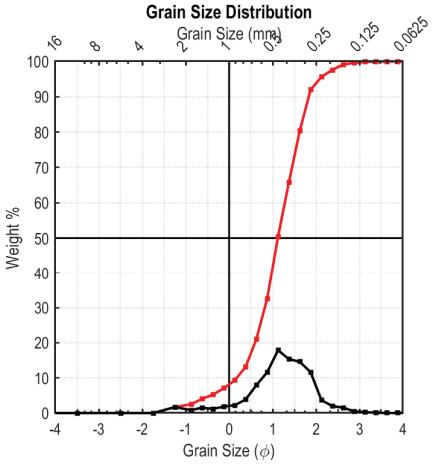
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.41 | 1.37 | 1.37 |
| -0.75 | -0.875 | 1.08 | 1.05 | 2.43 |
| -0.5 | -0.625 | 1.99 | 1.94 | 4.36 |
| -0.25 | -0.375 | 2.47 | 2.41 | 6.77 |
| 0 | -0.125 | 4.16 | 4.05 | 10.82 |
| 0.25 | 0.125 | 5.10 | 4.97 | 15.79 |
| 0.5 | 0.375 | 8.46 | 8.24 | 24.03 |
| 0.75 | 0.625 | 15.43 | 15.03 | 39.06 |
| 1 | 0.875 | 17.16 | 16.72 | 55.78 |
| 1.25 | 1.125 | 18.50 | 18.02 | 73.80 |
| 1.5 | 1.375 | 12.83 | 12.50 | 86.30 |
| 1.75 | 1.625 | 7.75 | 7.55 | 93.85 |
| 2 | 1.875 | 4.57 | 4.45 | 98.30 |
| 2.25 | 2.125 | 0.81 | 0.79 | 99.09 |
| 2.5 | 2.375 | 0.43 | 0.42 | 99.51 |
| 2.75 | 2.625 | 0.28 | 0.27 | 99.79 |
| 3 | 2.875 | 0.09 | 0.09 | 99.87 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.93 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.385 |
| **5** | -0.560 |
| **16** | 0.130 |
| **25** | 0.390 |
| **50** | 0.790 |
| **75** | 1.150 |
| **84** | 1.330 |
| **95** | 1.690 |
| **99** | 2.095 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.846 | 0.556 |
| Standard Deviation | 0.667 | 0.630 |
| Skewness | -0.559 | |
| Kurtosis | 4.055 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.730 | 0.750 |
| Standard Deviation | 0.600 | 0.641 |
| Skewness (1) | -0.100 | -0.150 |
| Skewness (2) | -0.375 | |
| Kurtosis | 0.875 | 1.213 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1910+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.441 mm** |
| **STD** | **0.600 mm** |
| **Skewness** | **-0.812** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.02 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 1.69 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 18.1 |

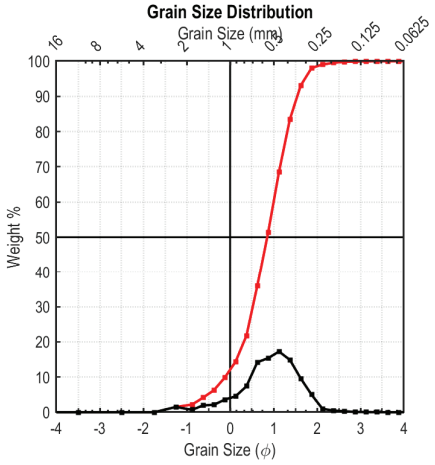
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.72 | 1.69 | 1.69 |
| -0.75 | -0.875 | 0.85 | 0.83 | 2.52 |
| -0.5 | -0.625 | 1.54 | 1.51 | 4.03 |
| -0.25 | -0.375 | 1.21 | 1.19 | 5.21 |
| 0 | -0.125 | 1.86 | 1.82 | 7.04 |
| 0.25 | 0.125 | 2.27 | 2.23 | 9.26 |
| 0.5 | 0.375 | 3.86 | 3.78 | 13.05 |
| 0.75 | 0.625 | 8.06 | 7.90 | 20.95 |
| 1 | 0.875 | 11.83 | 11.60 | 32.54 |
| 1.25 | 1.125 | 18.23 | 17.87 | 50.41 |
| 1.5 | 1.375 | 15.66 | 15.35 | 65.76 |
| 1.75 | 1.625 | 14.88 | 14.59 | 80.35 |
| 2 | 1.875 | 11.86 | 11.63 | 91.97 |
| 2.25 | 2.125 | 3.72 | 3.65 | 95.62 |
| 2.5 | 2.375 | 2.02 | 1.98 | 97.60 |
| 2.75 | 2.625 | 1.54 | 1.51 | 99.11 |
| 3 | 2.875 | 0.51 | 0.50 | 99.61 |
| 3.25 | 3.125 | 0.26 | 0.25 | 99.86 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.455 |
| **5** | -0.420 |
| **16** | 0.470 |
| **25** | 0.710 |
| **50** | 1.120 |
| **75** | 1.535 |
| **84** | 1.705 |
| **95** | 2.085 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.182 | 0.441 |
| Standard Deviation | 0.738 | 0.600 |
| Skewness | -0.812 | |
| Kurtosis | 4.645 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.087 | 1.098 |
| Standard Deviation | 0.618 | 0.688 |
| Skewness (1) | -0.053 | -0.141 |
| Skewness (2) | -0.466 | |
| Kurtosis | 1.028 | 1.244 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1910+00** |
| **Sample** | **Swash** |
| **Mean** | **0.535 mm** |
| **STD** | **0.628 mm** |
| **Skewness** | **-0.660** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.69 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 1.50 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 21.9 |

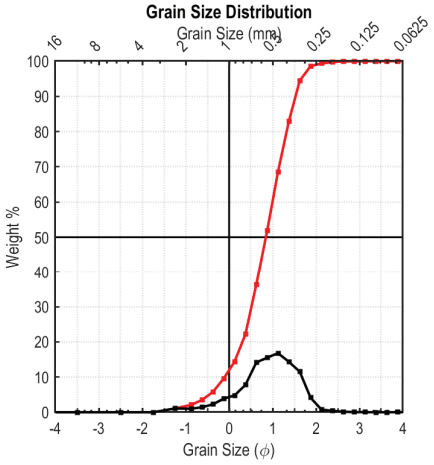
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.54 | 1.50 | 1.50 |
| -0.75 | -0.875 | 0.71 | 0.69 | 2.19 |
| -0.5 | -0.625 | 1.99 | 1.94 | 4.13 |
| -0.25 | -0.375 | 2.19 | 2.13 | 6.26 |
| 0 | -0.125 | 3.67 | 3.57 | 9.84 |
| 0.25 | 0.125 | 4.66 | 4.54 | 14.37 |
| 0.5 | 0.375 | 7.58 | 7.38 | 21.75 |
| 0.75 | 0.625 | 14.59 | 14.21 | 35.96 |
| 1 | 0.875 | 15.80 | 15.39 | 51.35 |
| 1.25 | 1.125 | 17.71 | 17.25 | 68.59 |
| 1.5 | 1.375 | 15.30 | 14.90 | 83.49 |
| 1.75 | 1.625 | 9.85 | 9.59 | 93.09 |
| 2 | 1.875 | 5.11 | 4.98 | 98.06 |
| 2.25 | 2.125 | 1.00 | 0.97 | 99.04 |
| 2.5 | 2.375 | 0.50 | 0.49 | 99.52 |
| 2.75 | 2.625 | 0.29 | 0.28 | 99.81 |
| 3 | 2.875 | 0.09 | 0.09 | 99.89 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.95 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.415 |
| **5** | -0.525 |
| **16** | 0.180 |
| **25** | 0.430 |
| **50** | 0.855 |
| **75** | 1.230 |
| **84** | 1.390 |
| **95** | 1.720 |
| **99** | 2.115 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.901 | 0.535 |
| Standard Deviation | 0.672 | 0.628 |
| Skewness | -0.660 | |
| Kurtosis | 4.099 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.785 | 0.808 |
| Standard Deviation | 0.605 | 0.643 |
| Skewness (1) | -0.116 | -0.173 |
| Skewness (2) | -0.426 | |
| Kurtosis | 0.855 | 1.150 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1920+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.536 mm** |
| **STD** | **0.637 mm** |
| **Skewness** | **-0.671** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.57 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

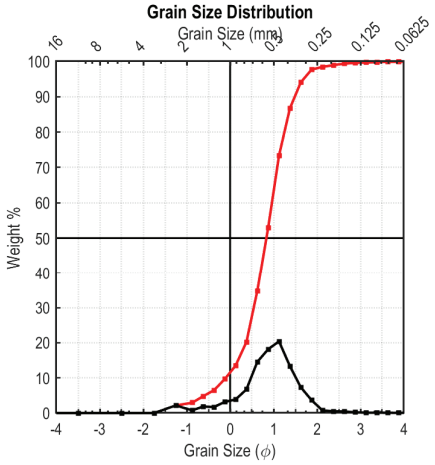
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.11 | 1.08 | 1.08 |
| -0.75 | -0.875 | 1.03 | 1.00 | 2.09 |
| -0.5 | -0.625 | 1.45 | 1.41 | 3.50 |
| -0.25 | -0.375 | 2.30 | 2.24 | 5.74 |
| 0 | -0.125 | 3.96 | 3.86 | 9.60 |
| 0.25 | 0.125 | 4.92 | 4.80 | 14.40 |
| 0.5 | 0.375 | 7.97 | 7.77 | 22.17 |
| 0.75 | 0.625 | 14.50 | 14.14 | 36.31 |
| 1 | 0.875 | 15.91 | 15.51 | 51.82 |
| 1.25 | 1.125 | 17.21 | 16.78 | 68.60 |
| 1.5 | 1.375 | 14.71 | 14.34 | 82.94 |
| 1.75 | 1.625 | 11.81 | 11.51 | 94.45 |
| 2 | 1.875 | 4.23 | 4.12 | 98.58 |
| 2.25 | 2.125 | 0.77 | 0.75 | 99.33 |
| 2.5 | 2.375 | 0.42 | 0.41 | 99.74 |
| 2.75 | 2.625 | 0.17 | 0.17 | 99.90 |
| 3 | 2.875 | 0.04 | 0.04 | 99.94 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.97 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.290 |
| **5** | -0.460 |
| **16** | 0.175 |
| **25** | 0.425 |
| **50** | 0.845 |
| **75** | 1.235 |
| **84** | 1.400 |
| **95** | 1.660 |
| **99** | 2.015 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.898 | 0.536 |
| Standard Deviation | 0.651 | 0.637 |
| Skewness | -0.671 | |
| Kurtosis | 3.918 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.787 | 0.807 |
| Standard Deviation | 0.613 | 0.627 |
| Skewness (1) | -0.094 | -0.163 |
| Skewness (2) | -0.400 | |
| Kurtosis | 0.731 | 1.073 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1920+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.541 mm** |
| **STD** | **0.622 mm** |
| **Skewness** | **-0.521** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.24 |
| % finer than 0.0625 mm (dry) | 0.10 |
| % granule (2-4 mm) | 2.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 14.6 |

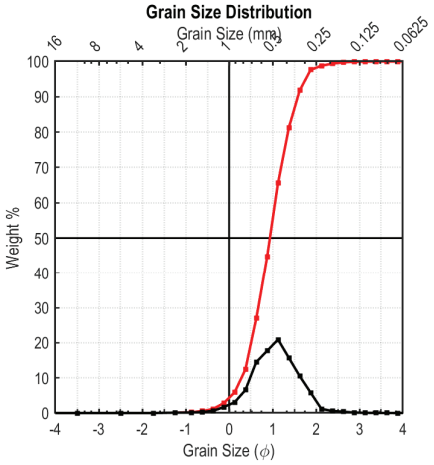
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.28 | 2.17 | 2.17 |
| -0.75 | -0.875 | 0.79 | 0.75 | 2.92 |
| -0.5 | -0.625 | 1.94 | 1.84 | 4.76 |
| -0.25 | -0.375 | 1.80 | 1.71 | 6.47 |
| 0 | -0.125 | 3.33 | 3.16 | 9.64 |
| 0.25 | 0.125 | 4.06 | 3.86 | 13.49 |
| 0.5 | 0.375 | 7.08 | 6.73 | 20.22 |
| 0.75 | 0.625 | 15.32 | 14.56 | 34.78 |
| 1 | 0.875 | 19.11 | 18.16 | 52.94 |
| 1.25 | 1.125 | 21.47 | 20.40 | 73.34 |
| 1.5 | 1.375 | 14.06 | 13.36 | 86.70 |
| 1.75 | 1.625 | 7.74 | 7.35 | 94.05 |
| 2 | 1.875 | 3.84 | 3.65 | 97.70 |
| 2.25 | 2.125 | 0.78 | 0.74 | 98.44 |
| 2.5 | 2.375 | 0.52 | 0.49 | 98.94 |
| 2.75 | 2.625 | 0.46 | 0.44 | 99.37 |
| 3 | 2.875 | 0.22 | 0.21 | 99.58 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.69 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.78 |
| 3.75 | 3.625 | 0.09 | 0.09 | 99.87 |
| 4 | 3.875 | 0.04 | 0.04 | 99.90 |
| >4.0 | 4.25 | 0.10 | 0.10 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.520 |
| **5** | -0.590 |
| **16** | 0.220 |
| **25** | 0.455 |
| **50** | 0.835 |
| **75** | 1.155 |
| **84** | 1.325 |
| **95** | 1.690 |
| **99** | 2.410 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.886 | 0.541 |
| Standard Deviation | 0.685 | 0.622 |
| Skewness | -0.521 | |
| Kurtosis | 5.265 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.772 | 0.793 |
| Standard Deviation | 0.552 | 0.622 |
| Skewness (1) | -0.113 | -0.182 |
| Skewness (2) | -0.516 | |
| Kurtosis | 1.063 | 1.335 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **1920+00** |
| **Sample** | **Swash** |
| **Mean** | **0.482 mm** |
| **STD** | **0.693 mm** |
| **Skewness** | **-0.077** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.33 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.2 |

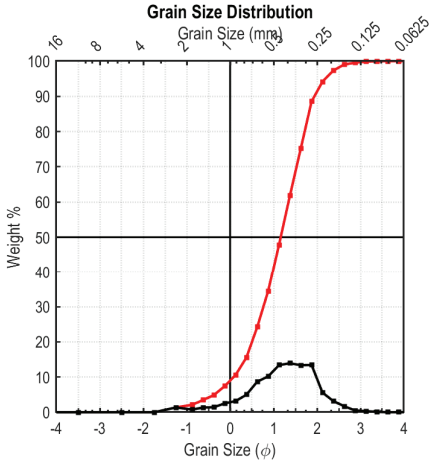
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.14 | 0.13 | 0.24 |
| -0.5 | -0.625 | 0.32 | 0.30 | 0.54 |
| -0.25 | -0.375 | 0.62 | 0.59 | 1.13 |
| 0 | -0.125 | 1.78 | 1.69 | 2.82 |
| 0.25 | 0.125 | 3.23 | 3.07 | 5.89 |
| 0.5 | 0.375 | 6.89 | 6.54 | 12.43 |
| 0.75 | 0.625 | 15.31 | 14.54 | 26.96 |
| 1 | 0.875 | 18.66 | 17.72 | 44.68 |
| 1.25 | 1.125 | 22.02 | 20.91 | 65.58 |
| 1.5 | 1.375 | 16.54 | 15.70 | 81.29 |
| 1.75 | 1.625 | 11.07 | 10.51 | 91.80 |
| 2 | 1.875 | 6.12 | 5.81 | 97.61 |
| 2.25 | 2.125 | 1.23 | 1.17 | 98.78 |
| 2.5 | 2.375 | 0.62 | 0.59 | 99.36 |
| 2.75 | 2.625 | 0.40 | 0.38 | 99.74 |
| 3 | 2.875 | 0.14 | 0.13 | 99.88 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.93 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.430 |
| **5** | 0.055 |
| **16** | 0.435 |
| **25** | 0.590 |
| **50** | 0.940 |
| **75** | 1.275 |
| **84** | 1.440 |
| **95** | 1.765 |
| **99** | 2.220 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.053 | 0.482 |
| Standard Deviation | 0.528 | 0.693 |
| Skewness | -0.077 | |
| Kurtosis | 4.282 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.938 | 0.938 |
| Standard Deviation | 0.502 | 0.510 |
| Skewness (1) | -0.005 | -0.020 |
| Skewness (2) | -0.060 | |
| Kurtosis | 0.701 | 1.023 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.434 mm** |
| **STD** | **0.585 mm** |
| **Skewness** | **-0.647** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.79 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.35 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.1 |

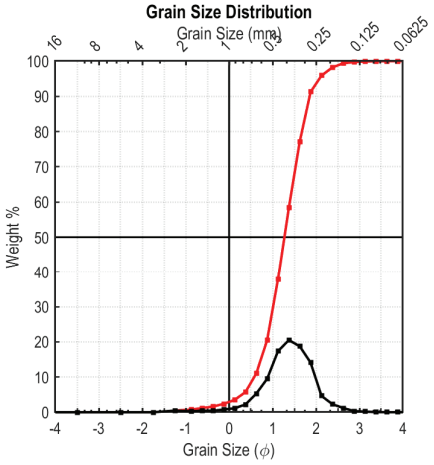
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.40 | 1.35 | 1.35 |
| -0.75 | -0.875 | 0.80 | 0.77 | 2.13 |
| -0.5 | -0.625 | 1.38 | 1.33 | 3.45 |
| -0.25 | -0.375 | 1.49 | 1.43 | 4.89 |
| 0 | -0.125 | 2.62 | 2.53 | 7.41 |
| 0.25 | 0.125 | 3.29 | 3.17 | 10.58 |
| 0.5 | 0.375 | 5.17 | 4.98 | 15.56 |
| 0.75 | 0.625 | 9.04 | 8.71 | 24.27 |
| 1 | 0.875 | 10.56 | 10.18 | 34.45 |
| 1.25 | 1.125 | 13.90 | 13.40 | 47.85 |
| 1.5 | 1.375 | 14.44 | 13.91 | 61.76 |
| 1.75 | 1.625 | 13.88 | 13.38 | 75.14 |
| 2 | 1.875 | 13.94 | 13.43 | 88.57 |
| 2.25 | 2.125 | 5.81 | 5.60 | 94.16 |
| 2.5 | 2.375 | 3.29 | 3.17 | 97.34 |
| 2.75 | 2.625 | 1.77 | 1.71 | 99.04 |
| 3 | 2.875 | 0.53 | 0.51 | 99.55 |
| 3.25 | 3.125 | 0.32 | 0.31 | 99.86 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.380 |
| **5** | -0.365 |
| **16** | 0.390 |
| **25** | 0.645 |
| **50** | 1.165 |
| **75** | 1.620 |
| **84** | 1.790 |
| **95** | 2.190 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.205 | 0.434 |
| Standard Deviation | 0.773 | 0.585 |
| Skewness | -0.647 | |
| Kurtosis | 3.779 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.090 | 1.115 |
| Standard Deviation | 0.700 | 0.737 |
| Skewness (1) | -0.107 | -0.152 |
| Skewness (2) | -0.361 | |
| Kurtosis | 0.825 | 1.074 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.389 mm** |
| **STD** | **0.671 mm** |
| **Skewness** | **-0.797** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.43 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.47 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.1 |

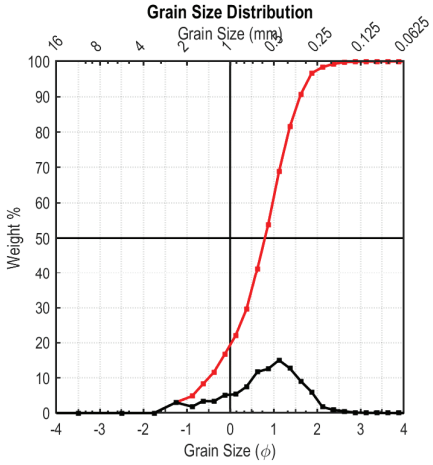
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.49 | 0.47 | 0.47 |
| -0.75 | -0.875 | 0.28 | 0.27 | 0.74 |
| -0.5 | -0.625 | 0.47 | 0.45 | 1.19 |
| -0.25 | -0.375 | 0.44 | 0.42 | 1.61 |
| 0 | -0.125 | 0.81 | 0.77 | 2.38 |
| 0.25 | 0.125 | 1.18 | 1.13 | 3.51 |
| 0.5 | 0.375 | 2.31 | 2.21 | 5.72 |
| 0.75 | 0.625 | 5.53 | 5.30 | 11.01 |
| 1 | 0.875 | 9.93 | 9.51 | 20.52 |
| 1.25 | 1.125 | 18.15 | 17.38 | 37.91 |
| 1.5 | 1.375 | 21.41 | 20.50 | 58.41 |
| 1.75 | 1.625 | 19.57 | 18.74 | 77.15 |
| 2 | 1.875 | 14.73 | 14.11 | 91.25 |
| 2.25 | 2.125 | 4.85 | 4.64 | 95.89 |
| 2.5 | 2.375 | 2.41 | 2.31 | 98.20 |
| 2.75 | 2.625 | 1.25 | 1.20 | 99.40 |
| 3 | 2.875 | 0.35 | 0.34 | 99.74 |
| 3.25 | 3.125 | 0.18 | 0.18 | 99.91 |
| 3.5 | 3.375 | 0.06 | 0.05 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.730 |
| **5** | 0.295 |
| **16** | 0.755 |
| **25** | 0.940 |
| **50** | 1.270 |
| **75** | 1.595 |
| **84** | 1.745 |
| **95** | 2.075 |
| **99** | 2.540 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.362 | 0.389 |
| Standard Deviation | 0.575 | 0.671 |
| Skewness | -0.797 | |
| Kurtosis | 5.865 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.250 | 1.257 |
| Standard Deviation | 0.495 | 0.517 |
| Skewness (1) | -0.040 | -0.068 |
| Skewness (2) | -0.172 | |
| Kurtosis | 0.798 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.572 mm** |
| **STD** | **0.572 mm** |
| **Skewness** | **-0.545** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.91 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 18.1 |

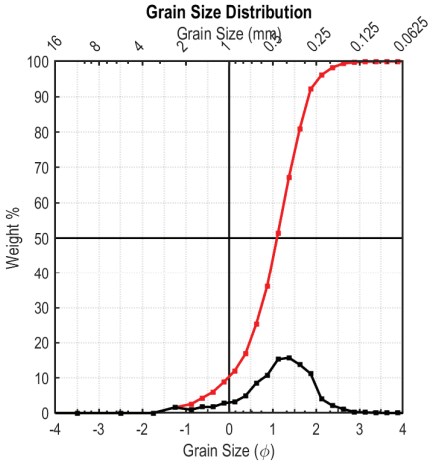
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.08 | 3.02 | 3.02 |
| -0.75 | -0.875 | 1.85 | 1.82 | 4.83 |
| -0.5 | -0.625 | 3.48 | 3.42 | 8.25 |
| -0.25 | -0.375 | 3.41 | 3.34 | 11.59 |
| 0 | -0.125 | 5.21 | 5.11 | 16.71 |
| 0.25 | 0.125 | 5.43 | 5.33 | 22.04 |
| 0.5 | 0.375 | 7.63 | 7.48 | 29.52 |
| 0.75 | 0.625 | 11.91 | 11.68 | 41.20 |
| 1 | 0.875 | 12.83 | 12.59 | 53.79 |
| 1.25 | 1.125 | 15.33 | 15.05 | 68.84 |
| 1.5 | 1.375 | 12.97 | 12.73 | 81.57 |
| 1.75 | 1.625 | 9.25 | 9.08 | 90.65 |
| 2 | 1.875 | 6.11 | 6.00 | 96.64 |
| 2.25 | 2.125 | 1.77 | 1.73 | 98.38 |
| 2.5 | 2.375 | 0.91 | 0.89 | 99.27 |
| 2.75 | 2.625 | 0.52 | 0.51 | 99.78 |
| 3 | 2.875 | 0.13 | 0.12 | 99.90 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.585 |
| **5** | -0.865 |
| **16** | -0.160 |
| **25** | 0.225 |
| **50** | 0.800 |
| **75** | 1.245 |
| **84** | 1.440 |
| **95** | 1.805 |
| **99** | 2.300 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.806 | 0.572 |
| Standard Deviation | 0.806 | 0.572 |
| Skewness | -0.545 | |
| Kurtosis | 3.105 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.640 | 0.693 |
| Standard Deviation | 0.800 | 0.805 |
| Skewness (1) | -0.200 | -0.224 |
| Skewness (2) | -0.412 | |
| Kurtosis | 0.669 | 1.073 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 18 2022** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.458 mm** |
| **STD** | **0.590 mm** |
| **Skewness** | **-0.751** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.37 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.60 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 11.1 |

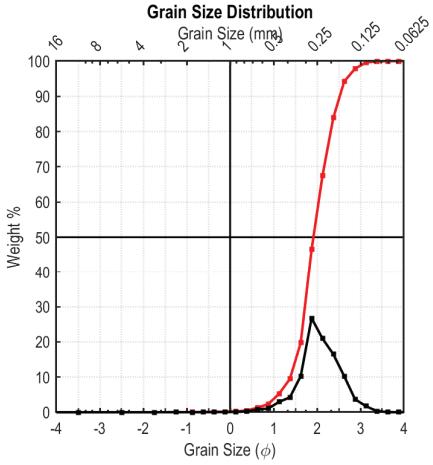
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.66 | 1.60 | 1.60 |
| -0.75 | -0.875 | 0.98 | 0.94 | 2.55 |
| -0.5 | -0.625 | 1.78 | 1.72 | 4.27 |
| -0.25 | -0.375 | 1.78 | 1.72 | 5.99 |
| 0 | -0.125 | 2.88 | 2.78 | 8.77 |
| 0.25 | 0.125 | 3.30 | 3.19 | 11.96 |
| 0.5 | 0.375 | 5.03 | 4.87 | 16.83 |
| 0.75 | 0.625 | 8.83 | 8.54 | 25.37 |
| 1 | 0.875 | 11.11 | 10.74 | 36.12 |
| 1.25 | 1.125 | 15.80 | 15.28 | 51.40 |
| 1.5 | 1.375 | 16.27 | 15.74 | 67.14 |
| 1.75 | 1.625 | 14.23 | 13.77 | 80.91 |
| 2 | 1.875 | 11.59 | 11.22 | 92.13 |
| 2.25 | 2.125 | 4.14 | 4.01 | 96.13 |
| 2.5 | 2.375 | 2.20 | 2.13 | 98.26 |
| 2.75 | 2.625 | 1.18 | 1.14 | 99.40 |
| 3 | 2.875 | 0.34 | 0.33 | 99.73 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.91 |
| 3.5 | 3.375 | 0.07 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.440 |
| **5** | -0.520 |
| **16** | 0.330 |
| **25** | 0.615 |
| **50** | 1.100 |
| **75** | 1.520 |
| **84** | 1.695 |
| **95** | 2.055 |
| **99** | 2.535 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.127 | 0.458 |
| Standard Deviation | 0.761 | 0.590 |
| Skewness | -0.751 | |
| Kurtosis | 3.933 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.012 | 1.042 |
| Standard Deviation | 0.682 | 0.731 |
| Skewness (1) | -0.128 | -0.193 |
| Skewness (2) | -0.487 | |
| Kurtosis | 0.886 | 1.166 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **980+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.241 mm** |
| **STD** | **0.719 mm** |
| **Skewness** | **-0.515** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

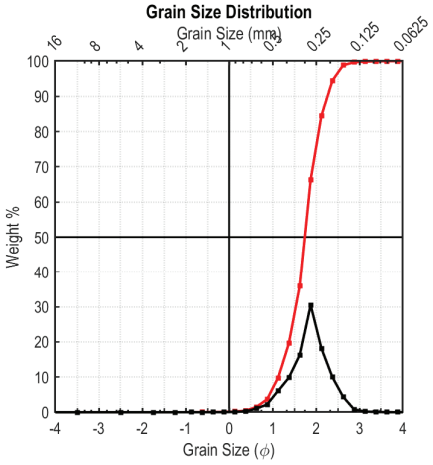
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.03 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.07 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.11 |
| 0 | -0.125 | 0.06 | 0.06 | 0.17 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.25 |
| 0.5 | 0.375 | 0.25 | 0.24 | 0.48 |
| 0.75 | 0.625 | 0.81 | 0.77 | 1.25 |
| 1 | 0.875 | 1.10 | 1.04 | 2.30 |
| 1.25 | 1.125 | 3.09 | 2.94 | 5.23 |
| 1.5 | 1.375 | 4.45 | 4.23 | 9.46 |
| 1.75 | 1.625 | 10.83 | 10.29 | 19.75 |
| 2 | 1.875 | 28.15 | 26.74 | 46.49 |
| 2.25 | 2.125 | 22.05 | 20.95 | 67.44 |
| 2.5 | 2.375 | 17.36 | 16.49 | 83.93 |
| 2.75 | 2.625 | 10.80 | 10.26 | 94.19 |
| 3 | 2.875 | 3.88 | 3.69 | 97.87 |
| 3.25 | 3.125 | 1.83 | 1.74 | 99.61 |
| 3.5 | 3.375 | 0.36 | 0.34 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.545 |
| **5** | 1.105 |
| **16** | 1.535 |
| **25** | 1.675 |
| **50** | 1.915 |
| **75** | 2.240 |
| **84** | 2.375 |
| **95** | 2.680 |
| **99** | 3.035 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.054 | 0.241 |
| Standard Deviation | 0.477 | 0.719 |
| Skewness | -0.515 | |
| Kurtosis | 5.170 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.955 | 1.942 |
| Standard Deviation | 0.420 | 0.449 |
| Skewness (1) | 0.095 | 0.033 |
| Skewness (2) | -0.054 | |
| Kurtosis | 0.875 | 1.142 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **980+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.280 mm** |
| **STD** | **0.736 mm** |
| **Skewness** | **-0.401** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.80 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

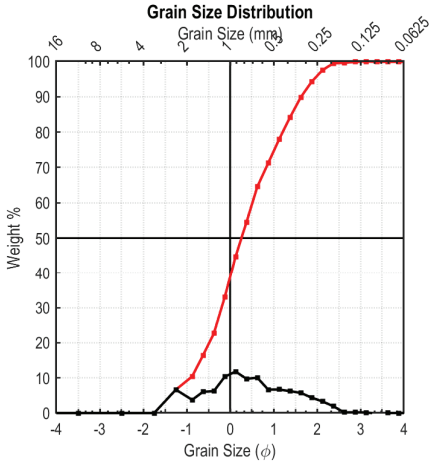
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.03 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.03 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.06 |
| 0 | -0.125 | 0.04 | 0.04 | 0.09 |
| 0.25 | 0.125 | 0.10 | 0.09 | 0.19 |
| 0.5 | 0.375 | 0.27 | 0.26 | 0.44 |
| 0.75 | 0.625 | 1.10 | 1.04 | 1.48 |
| 1 | 0.875 | 2.33 | 2.20 | 3.69 |
| 1.25 | 1.125 | 6.43 | 6.08 | 9.76 |
| 1.5 | 1.375 | 10.43 | 9.86 | 19.62 |
| 1.75 | 1.625 | 17.17 | 16.23 | 35.85 |
| 2 | 1.875 | 32.26 | 30.49 | 66.34 |
| 2.25 | 2.125 | 19.20 | 18.15 | 84.49 |
| 2.5 | 2.375 | 10.56 | 9.98 | 94.47 |
| 2.75 | 2.625 | 4.63 | 4.38 | 98.85 |
| 3 | 2.875 | 0.87 | 0.82 | 99.67 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.88 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.510 |
| **5** | 0.930 |
| **16** | 1.285 |
| **25** | 1.460 |
| **50** | 1.740 |
| **75** | 1.995 |
| **84** | 2.120 |
| **95** | 2.405 |
| **99** | 2.670 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.838 | 0.280 |
| Standard Deviation | 0.442 | 0.736 |
| Skewness | -0.401 | |
| Kurtosis | 4.269 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.703 | 1.715 |
| Standard Deviation | 0.417 | 0.432 |
| Skewness (1) | -0.090 | -0.094 |
| Skewness (2) | -0.174 | |
| Kurtosis | 0.766 | 1.130 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **980+00** |
| **Sample** | **Swash** |
| **Mean** | **0.733 mm** |
| **STD** | **0.523 mm** |
| **Skewness** | **0.128** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 95.55 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 6.66 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.3 |

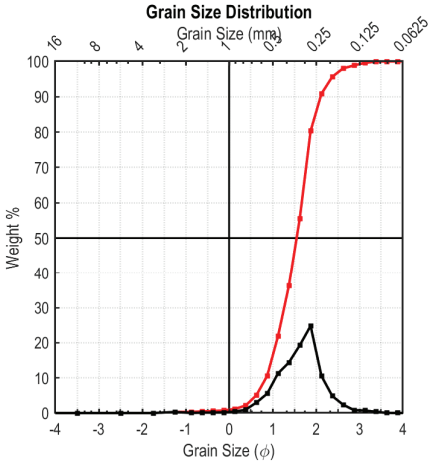
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 6.36 | 6.66 | 6.66 |
| -0.75 | -0.875 | 3.59 | 3.76 | 10.41 |
| -0.5 | -0.625 | 5.76 | 6.03 | 16.44 |
| -0.25 | -0.375 | 5.96 | 6.24 | 22.68 |
| 0 | -0.125 | 9.86 | 10.32 | 33.00 |
| 0.25 | 0.125 | 11.27 | 11.79 | 44.79 |
| 0.5 | 0.375 | 9.31 | 9.74 | 54.54 |
| 0.75 | 0.625 | 9.61 | 10.06 | 64.59 |
| 1 | 0.875 | 6.38 | 6.68 | 71.27 |
| 1.25 | 1.125 | 6.40 | 6.70 | 77.97 |
| 1.5 | 1.375 | 5.95 | 6.23 | 84.20 |
| 1.75 | 1.625 | 5.49 | 5.75 | 89.94 |
| 2 | 1.875 | 4.19 | 4.39 | 94.33 |
| 2.25 | 2.125 | 3.16 | 3.31 | 97.63 |
| 2.5 | 2.375 | 1.84 | 1.93 | 99.56 |
| 2.75 | 2.625 | 0.17 | 0.18 | 99.74 |
| 3 | 2.875 | 0.20 | 0.21 | 99.95 |
| 3.25 | 3.125 | 0.15 | 0.16 | 100.10 |
| 3.5 | 3.375 | -0.13 | -0.14 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.675 |
| **5** | -1.375 |
| **16** | -0.645 |
| **25** | -0.320 |
| **50** | 0.260 |
| **75** | 1.015 |
| **84** | 1.370 |
| **95** | 1.935 |
| **99** | 2.315 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.447 | 0.733 |
| Standard Deviation | 0.934 | 0.523 |
| Skewness | 0.128 | |
| Kurtosis | 2.372 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.363 | 0.328 |
| Standard Deviation | 1.008 | 1.005 |
| Skewness (1) | 0.102 | 0.057 |
| Skewness (2) | 0.020 | |
| Kurtosis | 0.643 | 1.016 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **990+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.323 mm** |
| **STD** | **0.684 mm** |
| **Skewness** | **-0.531** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.23 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.30 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

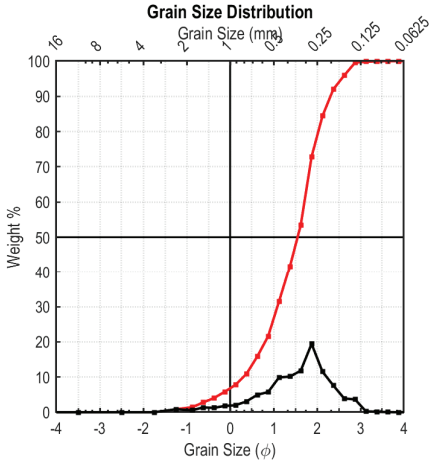
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.32 | 0.30 | 0.30 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.33 |
| -0.5 | -0.625 | 0.11 | 0.10 | 0.44 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.57 |
| 0 | -0.125 | 0.17 | 0.16 | 0.73 |
| 0.25 | 0.125 | 0.45 | 0.43 | 1.16 |
| 0.5 | 0.375 | 0.98 | 0.93 | 2.09 |
| 0.75 | 0.625 | 3.10 | 2.95 | 5.04 |
| 1 | 0.875 | 5.81 | 5.52 | 10.56 |
| 1.25 | 1.125 | 11.89 | 11.30 | 21.86 |
| 1.5 | 1.375 | 15.14 | 14.39 | 36.24 |
| 1.75 | 1.625 | 20.27 | 19.26 | 55.51 |
| 2 | 1.875 | 26.10 | 24.80 | 80.31 |
| 2.25 | 2.125 | 11.09 | 10.54 | 90.85 |
| 2.5 | 2.375 | 5.08 | 4.83 | 95.68 |
| 2.75 | 2.625 | 2.48 | 2.36 | 98.03 |
| 3 | 2.875 | 0.87 | 0.83 | 98.86 |
| 3.25 | 3.125 | 0.77 | 0.73 | 99.59 |
| 3.5 | 3.375 | 0.37 | 0.35 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.030 |
| **5** | 0.620 |
| **16** | 0.995 |
| **25** | 1.180 |
| **50** | 1.555 |
| **75** | 1.820 |
| **84** | 1.965 |
| **95** | 2.340 |
| **99** | 2.925 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.629 | 0.323 |
| Standard Deviation | 0.548 | 0.684 |
| Skewness | -0.531 | |
| Kurtosis | 5.923 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.480 | 1.505 |
| Standard Deviation | 0.485 | 0.503 |
| Skewness (1) | -0.155 | -0.121 |
| Skewness (2) | -0.155 | |
| Kurtosis | 0.773 | 1.101 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **990+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.349 mm** |
| **STD** | **0.568 mm** |
| **Skewness** | **-0.855** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.80 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.85 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.7 |

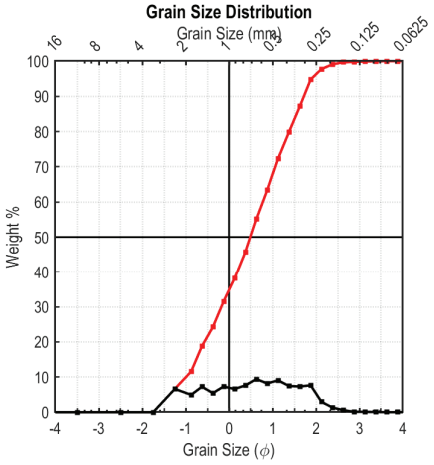
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.90 | 0.85 | 0.85 |
| -0.75 | -0.875 | 0.60 | 0.57 | 1.42 |
| -0.5 | -0.625 | 1.44 | 1.36 | 2.78 |
| -0.25 | -0.375 | 1.32 | 1.25 | 4.03 |
| 0 | -0.125 | 1.89 | 1.79 | 5.81 |
| 0.25 | 0.125 | 2.11 | 1.99 | 7.81 |
| 0.5 | 0.375 | 3.26 | 3.08 | 10.89 |
| 0.75 | 0.625 | 5.25 | 4.96 | 15.85 |
| 1 | 0.875 | 6.08 | 5.75 | 21.60 |
| 1.25 | 1.125 | 10.47 | 9.90 | 31.49 |
| 1.5 | 1.375 | 10.71 | 10.12 | 41.62 |
| 1.75 | 1.625 | 12.51 | 11.82 | 53.44 |
| 2 | 1.875 | 20.56 | 19.43 | 72.87 |
| 2.25 | 2.125 | 12.20 | 11.53 | 84.40 |
| 2.5 | 2.375 | 8.04 | 7.60 | 92.00 |
| 2.75 | 2.625 | 4.15 | 3.92 | 95.93 |
| 3 | 2.875 | 3.85 | 3.64 | 99.57 |
| 3.25 | 3.125 | 0.28 | 0.26 | 99.83 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.95 |
| 3.75 | 3.625 | 0.05 | 0.05 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.150 |
| **5** | -0.240 |
| **16** | 0.630 |
| **25** | 0.960 |
| **50** | 1.550 |
| **75** | 1.920 |
| **84** | 2.115 |
| **95** | 2.565 |
| **99** | 2.835 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.519 | 0.349 |
| Standard Deviation | 0.816 | 0.568 |
| Skewness | -0.855 | |
| Kurtosis | 3.883 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.373 | 1.432 |
| Standard Deviation | 0.743 | 0.796 |
| Skewness (1) | -0.239 | -0.258 |
| Skewness (2) | -0.522 | |
| Kurtosis | 0.889 | 1.197 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **990+00** |
| **Sample** | **Swash** |
| **Mean** | **0.682 mm** |
| **STD** | **0.503 mm** |
| **Skewness** | **-0.091** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 96.27 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 6.63 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

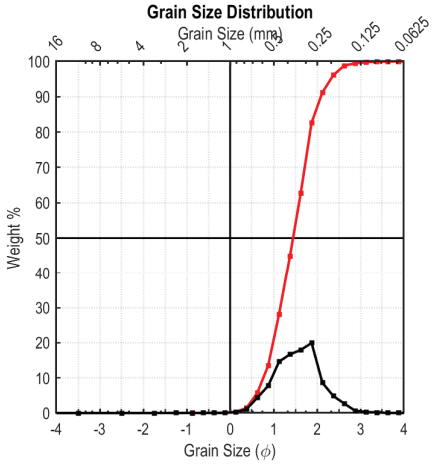
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 6.38 | 6.63 | 6.63 |
| -0.75 | -0.875 | 4.75 | 4.93 | 11.56 |
| -0.5 | -0.625 | 6.96 | 7.23 | 18.79 |
| -0.25 | -0.375 | 5.23 | 5.43 | 24.22 |
| 0 | -0.125 | 7.04 | 7.31 | 31.54 |
| 0.25 | 0.125 | 6.35 | 6.60 | 38.13 |
| 0.5 | 0.375 | 7.32 | 7.60 | 45.74 |
| 0.75 | 0.625 | 9.06 | 9.41 | 55.15 |
| 1 | 0.875 | 7.88 | 8.19 | 63.33 |
| 1.25 | 1.125 | 8.71 | 9.05 | 72.38 |
| 1.5 | 1.375 | 7.18 | 7.46 | 79.84 |
| 1.75 | 1.625 | 7.03 | 7.30 | 87.14 |
| 2 | 1.875 | 7.37 | 7.66 | 94.80 |
| 2.25 | 2.125 | 2.84 | 2.95 | 97.75 |
| 2.5 | 2.375 | 1.29 | 1.34 | 99.09 |
| 2.75 | 2.625 | 0.56 | 0.58 | 99.67 |
| 3 | 2.875 | 0.13 | 0.14 | 99.80 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.91 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.675 |
| **5** | -1.375 |
| **16** | -0.720 |
| **25** | -0.350 |
| **50** | 0.490 |
| **75** | 1.215 |
| **84** | 1.515 |
| **95** | 1.890 |
| **99** | 2.360 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.553 | 0.682 |
| Standard Deviation | 0.991 | 0.503 |
| Skewness | -0.091 | |
| Kurtosis | 2.142 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.398 | 0.428 |
| Standard Deviation | 1.117 | 1.053 |
| Skewness (1) | -0.083 | -0.113 |
| Skewness (2) | -0.208 | |
| Kurtosis | 0.461 | 0.855 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1000+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.338 mm** |
| **STD** | **0.697 mm** |
| **Skewness** | **0.100** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.61 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

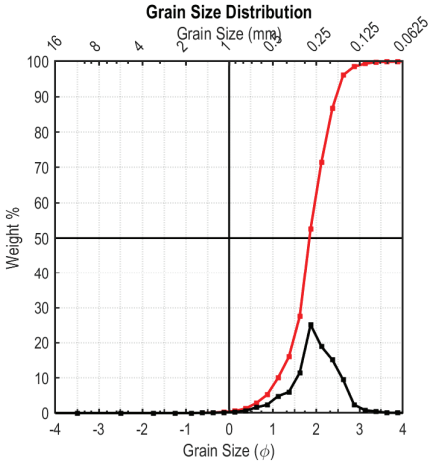
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.03 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.05 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.07 |
| 0 | -0.125 | 0.03 | 0.03 | 0.09 |
| 0.25 | 0.125 | 0.24 | 0.23 | 0.32 |
| 0.5 | 0.375 | 1.14 | 1.08 | 1.40 |
| 0.75 | 0.625 | 4.58 | 4.34 | 5.74 |
| 1 | 0.875 | 8.17 | 7.74 | 13.48 |
| 1.25 | 1.125 | 15.42 | 14.60 | 28.08 |
| 1.5 | 1.375 | 17.63 | 16.69 | 44.77 |
| 1.75 | 1.625 | 18.95 | 17.94 | 62.71 |
| 2 | 1.875 | 21.07 | 19.95 | 82.66 |
| 2.25 | 2.125 | 9.07 | 8.59 | 91.25 |
| 2.5 | 2.375 | 5.12 | 4.85 | 96.10 |
| 2.75 | 2.625 | 2.85 | 2.70 | 98.80 |
| 3 | 2.875 | 0.71 | 0.67 | 99.47 |
| 3.25 | 3.125 | 0.31 | 0.29 | 99.76 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.280 |
| **5** | 0.580 |
| **16** | 0.920 |
| **25** | 1.070 |
| **50** | 1.450 |
| **75** | 1.780 |
| **84** | 1.915 |
| **95** | 2.320 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.563 | 0.338 |
| Standard Deviation | 0.520 | 0.697 |
| Skewness | 0.100 | |
| Kurtosis | 3.501 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.417 | 1.428 |
| Standard Deviation | 0.498 | 0.512 |
| Skewness (1) | -0.065 | -0.033 |
| Skewness (2) | 0.000 | |
| Kurtosis | 0.749 | 1.004 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1000+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.258 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **-0.576** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.43 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

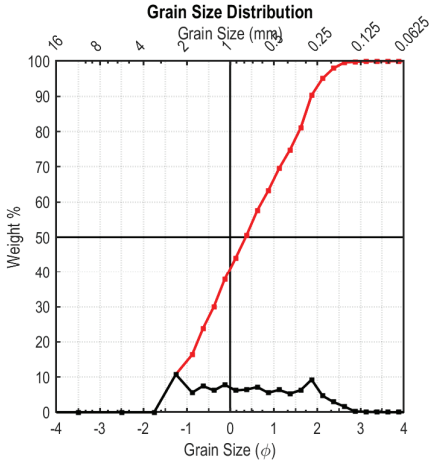
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.05 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.12 |
| 0 | -0.125 | 0.18 | 0.17 | 0.29 |
| 0.25 | 0.125 | 0.30 | 0.28 | 0.58 |
| 0.5 | 0.375 | 0.70 | 0.66 | 1.24 |
| 0.75 | 0.625 | 1.69 | 1.60 | 2.85 |
| 1 | 0.875 | 2.48 | 2.35 | 5.20 |
| 1.25 | 1.125 | 5.06 | 4.80 | 10.00 |
| 1.5 | 1.375 | 6.32 | 5.99 | 15.99 |
| 1.75 | 1.625 | 12.11 | 11.49 | 27.48 |
| 2 | 1.875 | 26.50 | 25.14 | 52.61 |
| 2.25 | 2.125 | 19.94 | 18.91 | 71.53 |
| 2.5 | 2.375 | 15.99 | 15.17 | 86.69 |
| 2.75 | 2.625 | 9.95 | 9.44 | 96.13 |
| 3 | 2.875 | 2.53 | 2.40 | 98.53 |
| 3.25 | 3.125 | 0.85 | 0.81 | 99.34 |
| 3.5 | 3.375 | 0.50 | 0.47 | 99.81 |
| 3.75 | 3.625 | 0.10 | 0.09 | 99.91 |
| 4 | 3.875 | 0.06 | 0.06 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.285 |
| **5** | 0.855 |
| **16** | 1.375 |
| **25** | 1.570 |
| **50** | 1.850 |
| **75** | 2.180 |
| **84** | 2.330 |
| **95** | 2.595 |
| **99** | 3.020 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.954 | 0.258 |
| Standard Deviation | 0.535 | 0.690 |
| Skewness | -0.576 | |
| Kurtosis | 4.428 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.853 | 1.852 |
| Standard Deviation | 0.478 | 0.502 |
| Skewness (1) | 0.005 | -0.069 |
| Skewness (2) | -0.262 | |
| Kurtosis | 0.822 | 1.169 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1000+00** |
| **Sample** | **Swash** |
| **Mean** | **0.704 mm** |
| **STD** | **0.457 mm** |
| **Skewness** | **0.061** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 97.63 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 10.77 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

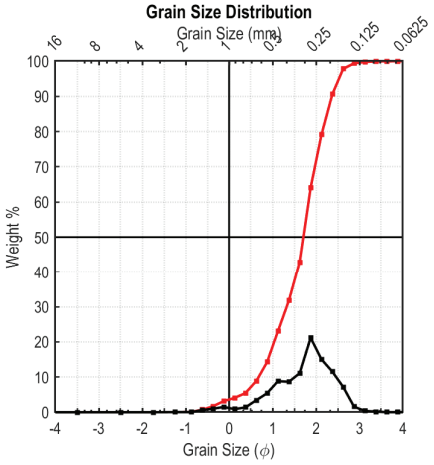
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 10.51 | 10.77 | 10.77 |
| -0.75 | -0.875 | 5.45 | 5.58 | 16.35 |
| -0.5 | -0.625 | 7.29 | 7.47 | 23.81 |
| -0.25 | -0.375 | 6.05 | 6.20 | 30.01 |
| 0 | -0.125 | 7.63 | 7.82 | 37.83 |
| 0.25 | 0.125 | 6.05 | 6.20 | 44.02 |
| 0.5 | 0.375 | 6.28 | 6.43 | 50.46 |
| 0.75 | 0.625 | 7.00 | 7.17 | 57.63 |
| 1 | 0.875 | 5.40 | 5.53 | 63.16 |
| 1.25 | 1.125 | 6.20 | 6.35 | 69.51 |
| 1.5 | 1.375 | 5.13 | 5.25 | 74.76 |
| 1.75 | 1.625 | 6.15 | 6.30 | 81.06 |
| 2 | 1.875 | 9.04 | 9.26 | 90.32 |
| 2.25 | 2.125 | 4.60 | 4.71 | 95.03 |
| 2.5 | 2.375 | 2.85 | 2.92 | 97.95 |
| 2.75 | 2.625 | 1.60 | 1.64 | 99.59 |
| 3 | 2.875 | 0.22 | 0.23 | 99.82 |
| 3.25 | 3.125 | 0.12 | 0.12 | 99.94 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.705 |
| **5** | -1.520 |
| **16** | -0.900 |
| **25** | -0.575 |
| **50** | 0.355 |
| **75** | 1.385 |
| **84** | 1.705 |
| **95** | 2.125 |
| **99** | 2.535 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.507 | 0.704 |
| Standard Deviation | 1.129 | 0.457 |
| Skewness | 0.061 | |
| Kurtosis | 1.882 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.403 | 0.387 |
| Standard Deviation | 1.302 | 1.204 |
| Skewness (1) | 0.036 | 0.004 |
| Skewness (2) | -0.040 | |
| Kurtosis | 0.399 | 0.762 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1010+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.306 mm** |
| **STD** | **0.619 mm** |
| **Skewness** | **-0.866** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.40 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

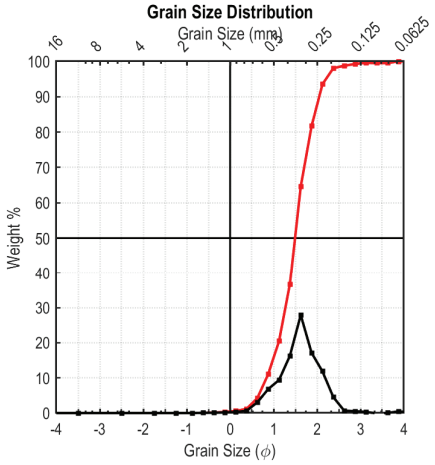
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.09 |
| -0.5 | -0.625 | 0.64 | 0.61 | 0.69 |
| -0.25 | -0.375 | 1.05 | 1.00 | 1.69 |
| 0 | -0.125 | 1.56 | 1.48 | 3.17 |
| 0.25 | 0.125 | 0.95 | 0.90 | 4.07 |
| 0.5 | 0.375 | 1.45 | 1.38 | 5.45 |
| 0.75 | 0.625 | 3.60 | 3.42 | 8.86 |
| 1 | 0.875 | 5.71 | 5.42 | 14.28 |
| 1.25 | 1.125 | 9.31 | 8.83 | 23.11 |
| 1.5 | 1.375 | 9.12 | 8.65 | 31.76 |
| 1.75 | 1.625 | 11.70 | 11.10 | 42.87 |
| 2 | 1.875 | 22.31 | 21.17 | 64.03 |
| 2.25 | 2.125 | 15.86 | 15.05 | 79.08 |
| 2.5 | 2.375 | 12.15 | 11.53 | 90.61 |
| 2.75 | 2.625 | 7.59 | 7.20 | 97.81 |
| 3 | 2.875 | 1.65 | 1.57 | 99.37 |
| 3.25 | 3.125 | 0.40 | 0.38 | 99.75 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.550 |
| **5** | 0.295 |
| **16** | 0.925 |
| **25** | 1.180 |
| **50** | 1.710 |
| **75** | 2.055 |
| **84** | 2.230 |
| **95** | 2.530 |
| **99** | 2.815 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.709 | 0.306 |
| Standard Deviation | 0.692 | 0.619 |
| Skewness | -0.866 | |
| Kurtosis | 4.035 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.577 | 1.622 |
| Standard Deviation | 0.653 | 0.665 |
| Skewness (1) | -0.203 | -0.235 |
| Skewness (2) | -0.456 | |
| Kurtosis | 0.713 | 1.047 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1010+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.329 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **0.132** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.53 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

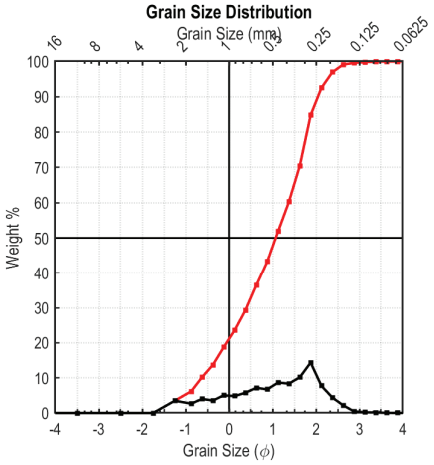
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.06 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.14 |
| 0 | -0.125 | 0.17 | 0.16 | 0.30 |
| 0.25 | 0.125 | 0.29 | 0.28 | 0.58 |
| 0.5 | 0.375 | 0.64 | 0.62 | 1.20 |
| 0.75 | 0.625 | 3.13 | 3.02 | 4.22 |
| 1 | 0.875 | 7.05 | 6.81 | 11.03 |
| 1.25 | 1.125 | 9.73 | 9.40 | 20.43 |
| 1.5 | 1.375 | 16.85 | 16.28 | 36.70 |
| 1.75 | 1.625 | 28.87 | 27.89 | 64.59 |
| 2 | 1.875 | 17.72 | 17.12 | 81.71 |
| 2.25 | 2.125 | 12.26 | 11.84 | 93.55 |
| 2.5 | 2.375 | 4.69 | 4.53 | 98.08 |
| 2.75 | 2.625 | 0.71 | 0.69 | 98.76 |
| 3 | 2.875 | 0.53 | 0.51 | 99.28 |
| 3.25 | 3.125 | 0.33 | 0.32 | 99.59 |
| 3.5 | 3.375 | -0.10 | -0.10 | 99.50 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.53 |
| 4 | 3.875 | 0.49 | 0.47 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.295 |
| **5** | 0.655 |
| **16** | 1.005 |
| **25** | 1.195 |
| **50** | 1.495 |
| **75** | 1.775 |
| **84** | 1.925 |
| **95** | 2.205 |
| **99** | 2.740 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.602 | 0.329 |
| Standard Deviation | 0.489 | 0.713 |
| Skewness | 0.132 | |
| Kurtosis | 5.365 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.465 | 1.475 |
| Standard Deviation | 0.460 | 0.465 |
| Skewness (1) | -0.065 | -0.075 |
| Skewness (2) | -0.141 | |
| Kurtosis | 0.685 | 1.095 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1010+00** |
| **Sample** | **Swash** |
| **Mean** | **0.493 mm** |
| **STD** | **0.497 mm** |
| **Skewness** | **-0.479** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 100.45 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 3.49 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.6 |

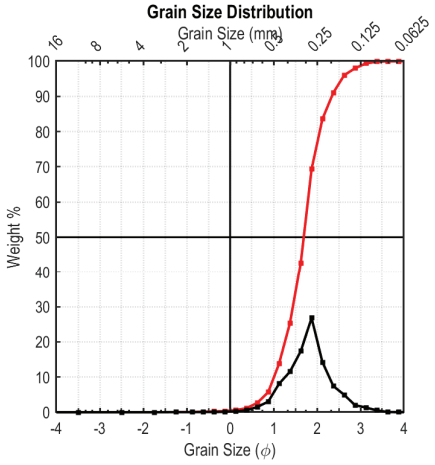
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.51 | 3.49 | 3.49 |
| -0.75 | -0.875 | 2.68 | 2.67 | 6.16 |
| -0.5 | -0.625 | 4.02 | 4.00 | 10.16 |
| -0.25 | -0.375 | 3.57 | 3.55 | 13.72 |
| 0 | -0.125 | 5.05 | 5.03 | 18.75 |
| 0.25 | 0.125 | 4.84 | 4.82 | 23.56 |
| 0.5 | 0.375 | 5.79 | 5.76 | 29.33 |
| 0.75 | 0.625 | 7.22 | 7.19 | 36.52 |
| 1 | 0.875 | 6.74 | 6.71 | 43.23 |
| 1.25 | 1.125 | 8.71 | 8.67 | 51.90 |
| 1.5 | 1.375 | 8.40 | 8.36 | 60.26 |
| 1.75 | 1.625 | 10.21 | 10.16 | 70.42 |
| 2 | 1.875 | 14.43 | 14.37 | 84.79 |
| 2.25 | 2.125 | 7.76 | 7.73 | 92.51 |
| 2.5 | 2.375 | 4.44 | 4.42 | 96.93 |
| 2.75 | 2.625 | 2.19 | 2.18 | 99.11 |
| 3 | 2.875 | 0.47 | 0.47 | 99.58 |
| 3.25 | 3.125 | 0.21 | 0.21 | 99.79 |
| 3.5 | 3.375 | 0.14 | 0.14 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.605 |
| **5** | -1.040 |
| **16** | -0.260 |
| **25** | 0.185 |
| **50** | 1.070 |
| **75** | 1.705 |
| **84** | 1.860 |
| **95** | 2.265 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.020 | 0.493 |
| Standard Deviation | 1.009 | 0.497 |
| Skewness | -0.479 | |
| Kurtosis | 2.425 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.800 | 0.890 |
| Standard Deviation | 1.060 | 1.031 |
| Skewness (1) | -0.255 | -0.266 |
| Skewness (2) | -0.432 | |
| Kurtosis | 0.559 | 0.891 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1020+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.287 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **-0.130** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.50 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

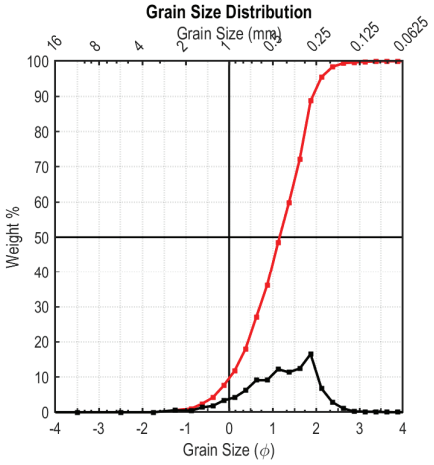
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.07 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.15 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.22 |
| 0 | -0.125 | 0.12 | 0.11 | 0.33 |
| 0.25 | 0.125 | 0.29 | 0.27 | 0.61 |
| 0.5 | 0.375 | 0.57 | 0.54 | 1.15 |
| 0.75 | 0.625 | 1.61 | 1.53 | 2.67 |
| 1 | 0.875 | 3.17 | 3.00 | 5.68 |
| 1.25 | 1.125 | 8.52 | 8.08 | 13.75 |
| 1.5 | 1.375 | 12.13 | 11.50 | 25.25 |
| 1.75 | 1.625 | 18.30 | 17.35 | 42.60 |
| 2 | 1.875 | 28.24 | 26.77 | 69.36 |
| 2.25 | 2.125 | 15.01 | 14.23 | 83.59 |
| 2.5 | 2.375 | 7.85 | 7.44 | 91.03 |
| 2.75 | 2.625 | 5.23 | 4.96 | 95.99 |
| 3 | 2.875 | 2.11 | 2.00 | 97.99 |
| 3.25 | 3.125 | 1.41 | 1.34 | 99.33 |
| 3.5 | 3.375 | 0.57 | 0.54 | 99.87 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.305 |
| **5** | 0.820 |
| **16** | 1.175 |
| **25** | 1.370 |
| **50** | 1.695 |
| **75** | 1.975 |
| **84** | 2.140 |
| **95** | 2.575 |
| **99** | 3.065 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.801 | 0.287 |
| Standard Deviation | 0.535 | 0.690 |
| Skewness | -0.130 | |
| Kurtosis | 4.653 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.657 | 1.670 |
| Standard Deviation | 0.482 | 0.507 |
| Skewness (1) | -0.078 | -0.037 |
| Skewness (2) | 0.005 | |
| Kurtosis | 0.819 | 1.189 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1020+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.436 mm** |
| **STD** | **0.590 mm** |
| **Skewness** | **-0.502** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.55 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.57 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

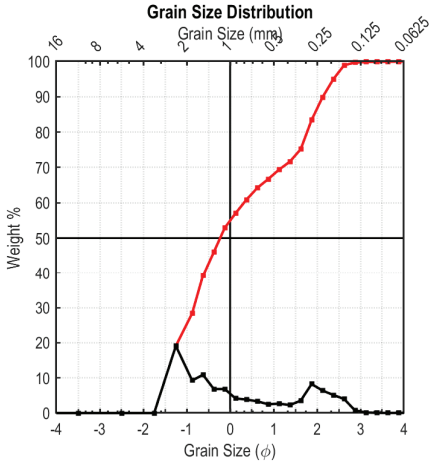
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.60 | 0.57 | 0.57 |
| -0.75 | -0.875 | 0.48 | 0.45 | 1.02 |
| -0.5 | -0.625 | 1.45 | 1.37 | 2.40 |
| -0.25 | -0.375 | 1.90 | 1.80 | 4.20 |
| 0 | -0.125 | 3.57 | 3.38 | 7.58 |
| 0.25 | 0.125 | 4.42 | 4.19 | 11.77 |
| 0.5 | 0.375 | 6.52 | 6.18 | 17.94 |
| 0.75 | 0.625 | 9.60 | 9.10 | 27.04 |
| 1 | 0.875 | 9.62 | 9.11 | 36.15 |
| 1.25 | 1.125 | 12.90 | 12.22 | 48.38 |
| 1.5 | 1.375 | 12.00 | 11.37 | 59.74 |
| 1.75 | 1.625 | 13.11 | 12.42 | 72.16 |
| 2 | 1.875 | 17.45 | 16.53 | 88.70 |
| 2.25 | 2.125 | 7.14 | 6.76 | 95.46 |
| 2.5 | 2.375 | 3.04 | 2.88 | 98.34 |
| 2.75 | 2.625 | 1.13 | 1.07 | 99.41 |
| 3 | 2.875 | 0.25 | 0.24 | 99.65 |
| 3.25 | 3.125 | 0.18 | 0.17 | 99.82 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.895 |
| **5** | -0.315 |
| **16** | 0.295 |
| **25** | 0.570 |
| **50** | 1.160 |
| **75** | 1.670 |
| **84** | 1.805 |
| **95** | 2.110 |
| **99** | 2.530 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.199 | 0.436 |
| Standard Deviation | 0.760 | 0.590 |
| Skewness | -0.502 | |
| Kurtosis | 3.124 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.050 | 1.087 |
| Standard Deviation | 0.755 | 0.745 |
| Skewness (1) | -0.146 | -0.181 |
| Skewness (2) | -0.348 | |
| Kurtosis | 0.606 | 0.904 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1020+00** |
| **Sample** | **Swash** |
| **Mean** | **0.807 mm** |
| **STD** | **0.397 mm** |
| **Skewness** | **0.428** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 88.23 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 19.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

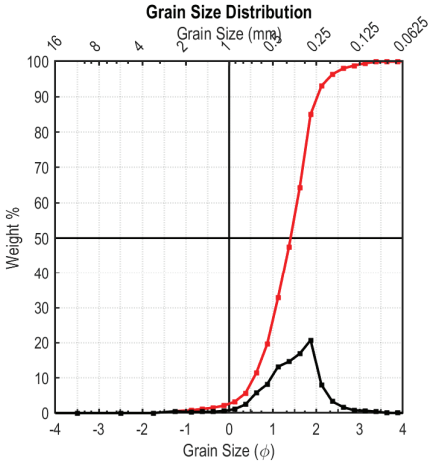
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 16.84 | 19.09 | 19.09 |
| -0.75 | -0.875 | 8.19 | 9.28 | 28.37 |
| -0.5 | -0.625 | 9.59 | 10.87 | 39.24 |
| -0.25 | -0.375 | 6.02 | 6.82 | 46.06 |
| 0 | -0.125 | 6.03 | 6.83 | 52.90 |
| 0.25 | 0.125 | 3.66 | 4.15 | 57.04 |
| 0.5 | 0.375 | 3.38 | 3.83 | 60.87 |
| 0.75 | 0.625 | 2.94 | 3.33 | 64.21 |
| 1 | 0.875 | 2.20 | 2.49 | 66.70 |
| 1.25 | 1.125 | 2.36 | 2.67 | 69.38 |
| 1.5 | 1.375 | 2.00 | 2.27 | 71.64 |
| 1.75 | 1.625 | 3.12 | 3.54 | 75.18 |
| 2 | 1.875 | 7.28 | 8.25 | 83.43 |
| 2.25 | 2.125 | 5.64 | 6.39 | 89.82 |
| 2.5 | 2.375 | 4.54 | 5.15 | 94.97 |
| 2.75 | 2.625 | 3.50 | 3.97 | 98.93 |
| 3 | 2.875 | 0.65 | 0.74 | 99.67 |
| 3.25 | 3.125 | 0.14 | 0.16 | 99.83 |
| 3.5 | 3.375 | 0.05 | 0.06 | 99.89 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.91 |
| 4 | 3.875 | 0.04 | 0.05 | 99.95 |
| >4.0 | 4.25 | 0.04 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.725 |
| **5** | -1.620 |
| **16** | -1.330 |
| **25** | -1.010 |
| **50** | -0.230 |
| **75** | 1.610 |
| **84** | 1.895 |
| **95** | 2.375 |
| **99** | 2.645 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.308 | 0.807 |
| Standard Deviation | 1.334 | 0.397 |
| Skewness | 0.428 | |
| Kurtosis | 1.742 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.282 | 0.112 |
| Standard Deviation | 1.613 | 1.412 |
| Skewness (1) | 0.318 | 0.311 |
| Skewness (2) | 0.377 | |
| Kurtosis | 0.239 | 0.625 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1030+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.360 mm** |
| **STD** | **0.642 mm** |
| **Skewness** | **-0.576** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.57 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.50 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

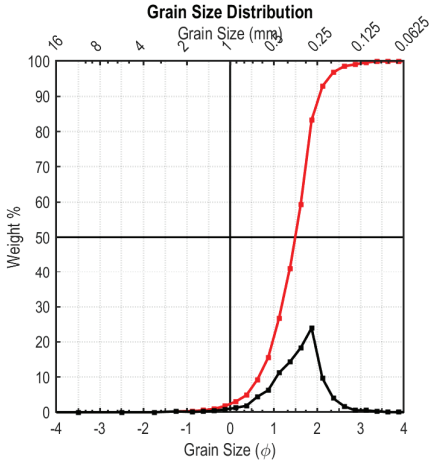
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.53 | 0.50 | 0.50 |
| -0.75 | -0.875 | 0.31 | 0.29 | 0.80 |
| -0.5 | -0.625 | 0.38 | 0.36 | 1.16 |
| -0.25 | -0.375 | 0.37 | 0.35 | 1.51 |
| 0 | -0.125 | 0.62 | 0.59 | 2.09 |
| 0.25 | 0.125 | 1.17 | 1.11 | 3.20 |
| 0.5 | 0.375 | 2.56 | 2.42 | 5.63 |
| 0.75 | 0.625 | 6.10 | 5.78 | 11.40 |
| 1 | 0.875 | 8.65 | 8.19 | 19.60 |
| 1.25 | 1.125 | 13.94 | 13.20 | 32.80 |
| 1.5 | 1.375 | 15.42 | 14.61 | 47.41 |
| 1.75 | 1.625 | 17.82 | 16.88 | 64.29 |
| 2 | 1.875 | 21.89 | 20.74 | 85.02 |
| 2.25 | 2.125 | 8.48 | 8.03 | 93.06 |
| 2.5 | 2.375 | 3.47 | 3.29 | 96.34 |
| 2.75 | 2.625 | 1.76 | 1.67 | 98.01 |
| 3 | 2.875 | 0.83 | 0.79 | 98.80 |
| 3.25 | 3.125 | 0.72 | 0.68 | 99.48 |
| 3.5 | 3.375 | 0.42 | 0.40 | 99.88 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.93 |
| 4 | 3.875 | 0.02 | 0.02 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.735 |
| **5** | 0.310 |
| **16** | 0.765 |
| **25** | 0.975 |
| **50** | 1.415 |
| **75** | 1.755 |
| **84** | 1.865 |
| **95** | 2.275 |
| **99** | 2.950 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.472 | 0.360 |
| Standard Deviation | 0.640 | 0.642 |
| Skewness | -0.576 | |
| Kurtosis | 5.226 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.315 | 1.348 |
| Standard Deviation | 0.550 | 0.573 |
| Skewness (1) | -0.182 | -0.153 |
| Skewness (2) | -0.223 | |
| Kurtosis | 0.786 | 1.032 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1030+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.344 mm** |
| **STD** | **0.661 mm** |
| **Skewness** | **-0.657** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.51 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.24 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.6 |

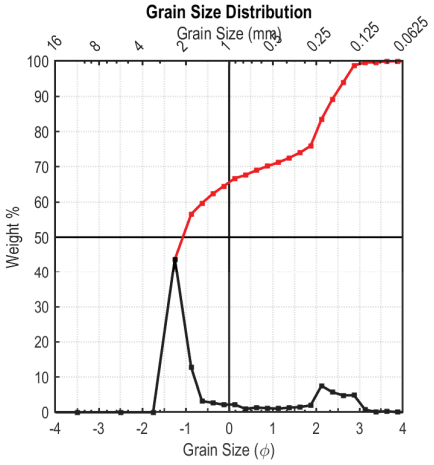
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.25 | 0.24 | 0.24 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.32 |
| -0.5 | -0.625 | 0.24 | 0.23 | 0.55 |
| -0.25 | -0.375 | 0.42 | 0.40 | 0.95 |
| 0 | -0.125 | 0.85 | 0.81 | 1.75 |
| 0.25 | 0.125 | 1.31 | 1.24 | 2.99 |
| 0.5 | 0.375 | 1.95 | 1.85 | 4.84 |
| 0.75 | 0.625 | 4.64 | 4.40 | 9.24 |
| 1 | 0.875 | 6.59 | 6.25 | 15.49 |
| 1.25 | 1.125 | 11.83 | 11.21 | 26.70 |
| 1.5 | 1.375 | 15.09 | 14.30 | 41.00 |
| 1.75 | 1.625 | 19.34 | 18.33 | 59.33 |
| 2 | 1.875 | 25.24 | 23.92 | 83.25 |
| 2.25 | 2.125 | 10.16 | 9.63 | 92.88 |
| 2.5 | 2.375 | 4.18 | 3.96 | 96.84 |
| 2.75 | 2.625 | 1.78 | 1.69 | 98.53 |
| 3 | 2.875 | 0.58 | 0.55 | 99.08 |
| 3.25 | 3.125 | 0.56 | 0.53 | 99.61 |
| 3.5 | 3.375 | 0.31 | 0.29 | 99.91 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | 0.385 |
| **16** | 0.885 |
| **25** | 1.085 |
| **50** | 1.500 |
| **75** | 1.790 |
| **84** | 1.895 |
| **95** | 2.260 |
| **99** | 2.840 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.541 | 0.344 |
| Standard Deviation | 0.596 | 0.661 |
| Skewness | -0.657 | |
| Kurtosis | 5.086 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.390 | 1.427 |
| Standard Deviation | 0.505 | 0.537 |
| Skewness (1) | -0.218 | -0.204 |
| Skewness (2) | -0.351 | |
| Kurtosis | 0.856 | 1.090 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1030+00** |
| **Sample** | **Swash** |
| **Mean** | **0.983 mm** |
| **STD** | **0.336 mm** |
| **Skewness** | **0.785** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Fine Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 62.10 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 43.72 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 13.4 |

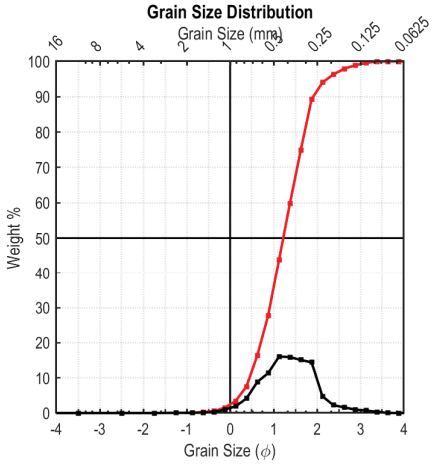
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 27.15 | 43.72 | 43.72 |
| -0.75 | -0.875 | 7.95 | 12.80 | 56.52 |
| -0.5 | -0.625 | 1.96 | 3.16 | 59.68 |
| -0.25 | -0.375 | 1.67 | 2.69 | 62.37 |
| 0 | -0.125 | 1.32 | 2.13 | 64.49 |
| 0.25 | 0.125 | 1.37 | 2.21 | 66.70 |
| 0.5 | 0.375 | 0.60 | 0.97 | 67.67 |
| 0.75 | 0.625 | 0.83 | 1.34 | 69.00 |
| 1 | 0.875 | 0.72 | 1.16 | 70.16 |
| 1.25 | 1.125 | 0.64 | 1.03 | 71.19 |
| 1.5 | 1.375 | 0.81 | 1.30 | 72.50 |
| 1.75 | 1.625 | 0.92 | 1.48 | 73.98 |
| 2 | 1.875 | 1.21 | 1.95 | 75.93 |
| 2.25 | 2.125 | 4.68 | 7.54 | 83.46 |
| 2.5 | 2.375 | 3.54 | 5.70 | 89.16 |
| 2.75 | 2.625 | 2.98 | 4.80 | 93.96 |
| 3 | 2.875 | 3.00 | 4.83 | 98.79 |
| 3.25 | 3.125 | 0.50 | 0.81 | 99.60 |
| 3.5 | 3.375 | 0.03 | 0.05 | 99.65 |
| 3.75 | 3.625 | 0.19 | 0.31 | 99.95 |
| 4 | 3.875 | 0.01 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.02 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.740 |
| **5** | -1.695 |
| **16** | -1.565 |
| **25** | -1.465 |
| **50** | -1.065 |
| **75** | 1.755 |
| **84** | 2.150 |
| **95** | 2.680 |
| **99** | 2.940 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.024 | 0.983 |
| Standard Deviation | 1.576 | 0.336 |
| Skewness | 0.785 | |
| Kurtosis | 1.896 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.292 | -0.160 |
| Standard Deviation | 1.857 | 1.592 |
| Skewness (1) | 0.731 | 0.721 |
| Skewness (2) | 0.838 | |
| Kurtosis | 0.178 | 0.557 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1040+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.394 mm** |
| **STD** | **0.652 mm** |
| **Skewness** | **0.118** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.47 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.6 |

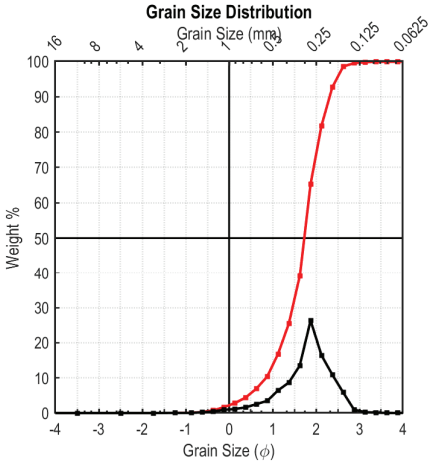
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.09 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.26 |
| -0.25 | -0.375 | 0.30 | 0.28 | 0.54 |
| 0 | -0.125 | 1.00 | 0.95 | 1.49 |
| 0.25 | 0.125 | 2.03 | 1.92 | 3.41 |
| 0.5 | 0.375 | 4.35 | 4.12 | 7.54 |
| 0.75 | 0.625 | 9.34 | 8.86 | 16.39 |
| 1 | 0.875 | 11.97 | 11.35 | 27.74 |
| 1.25 | 1.125 | 16.95 | 16.07 | 43.82 |
| 1.5 | 1.375 | 16.80 | 15.93 | 59.74 |
| 1.75 | 1.625 | 15.93 | 15.10 | 74.85 |
| 2 | 1.875 | 15.23 | 14.44 | 89.29 |
| 2.25 | 2.125 | 5.02 | 4.76 | 94.05 |
| 2.5 | 2.375 | 2.37 | 2.25 | 96.30 |
| 2.75 | 2.625 | 1.71 | 1.62 | 97.92 |
| 3 | 2.875 | 1.02 | 0.97 | 98.89 |
| 3.25 | 3.125 | 0.76 | 0.72 | 99.61 |
| 3.5 | 3.375 | 0.36 | 0.34 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | -0.00 | -0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.255 |
| **5** | 0.220 |
| **16** | 0.615 |
| **25** | 0.815 |
| **50** | 1.220 |
| **75** | 1.630 |
| **84** | 1.785 |
| **95** | 2.230 |
| **99** | 2.915 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.345 | 0.394 |
| Standard Deviation | 0.618 | 0.652 |
| Skewness | 0.118 | |
| Kurtosis | 3.713 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.200 | 1.207 |
| Standard Deviation | 0.585 | 0.597 |
| Skewness (1) | -0.034 | -0.015 |
| Skewness (2) | 0.009 | |
| Kurtosis | 0.718 | 1.011 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1040+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.295 mm** |
| **STD** | **0.656 mm** |
| **Skewness** | **-0.948** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.77 |
| % finer than 0.0625 mm (dry) | 0.09 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.2 |

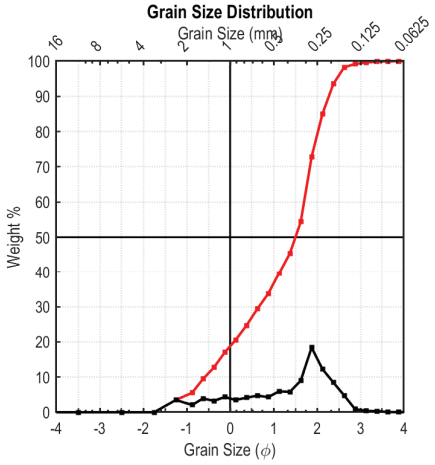
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.07 |
| -0.5 | -0.625 | 0.22 | 0.21 | 0.27 |
| -0.25 | -0.375 | 0.48 | 0.45 | 0.73 |
| 0 | -0.125 | 0.96 | 0.91 | 1.64 |
| 0.25 | 0.125 | 1.22 | 1.15 | 2.79 |
| 0.5 | 0.375 | 1.67 | 1.58 | 4.37 |
| 0.75 | 0.625 | 2.69 | 2.54 | 6.91 |
| 1 | 0.875 | 3.65 | 3.45 | 10.36 |
| 1.25 | 1.125 | 6.80 | 6.43 | 16.79 |
| 1.5 | 1.375 | 9.21 | 8.71 | 25.50 |
| 1.75 | 1.625 | 14.27 | 13.49 | 38.99 |
| 2 | 1.875 | 27.86 | 26.34 | 65.33 |
| 2.25 | 2.125 | 17.39 | 16.44 | 81.77 |
| 2.5 | 2.375 | 11.55 | 10.92 | 92.69 |
| 2.75 | 2.625 | 6.19 | 5.85 | 98.54 |
| 3 | 2.875 | 1.02 | 0.96 | 99.51 |
| 3.25 | 3.125 | 0.28 | 0.26 | 99.77 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.88 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.91 |
| 4 | 3.875 | 0.01 | 0.01 | 99.91 |
| >4.0 | 4.25 | 0.09 | 0.09 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.300 |
| **5** | 0.435 |
| **16** | 1.095 |
| **25** | 1.360 |
| **50** | 1.730 |
| **75** | 2.020 |
| **84** | 2.175 |
| **95** | 2.475 |
| **99** | 2.745 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.761 | 0.295 |
| Standard Deviation | 0.608 | 0.656 |
| Skewness | -0.948 | |
| Kurtosis | 4.831 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.635 | 1.667 |
| Standard Deviation | 0.540 | 0.579 |
| Skewness (1) | -0.176 | -0.223 |
| Skewness (2) | -0.509 | |
| Kurtosis | 0.889 | 1.267 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1040+00** |
| **Sample** | **Swash** |
| **Mean** | **0.417 mm** |
| **STD** | **0.475 mm** |
| **Skewness** | **-0.718** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 99.88 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 3.48 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

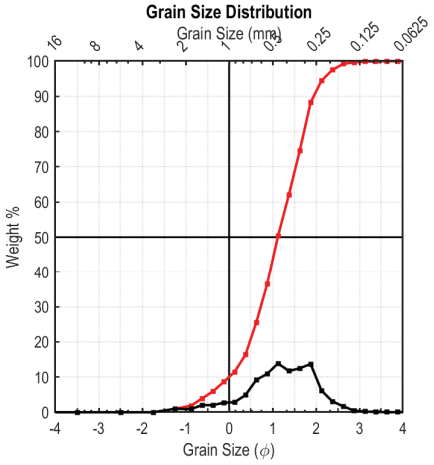
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.48 | 3.48 | 3.48 |
| -0.75 | -0.875 | 2.06 | 2.06 | 5.55 |
| -0.5 | -0.625 | 3.91 | 3.91 | 9.46 |
| -0.25 | -0.375 | 3.24 | 3.24 | 12.71 |
| 0 | -0.125 | 4.30 | 4.31 | 17.01 |
| 0.25 | 0.125 | 3.50 | 3.50 | 20.51 |
| 0.5 | 0.375 | 4.12 | 4.12 | 24.64 |
| 0.75 | 0.625 | 4.72 | 4.73 | 29.37 |
| 1 | 0.875 | 4.30 | 4.31 | 33.67 |
| 1.25 | 1.125 | 5.92 | 5.93 | 39.60 |
| 1.5 | 1.375 | 5.80 | 5.81 | 45.40 |
| 1.75 | 1.625 | 8.97 | 8.98 | 54.39 |
| 2 | 1.875 | 18.37 | 18.39 | 72.78 |
| 2.25 | 2.125 | 12.24 | 12.25 | 85.03 |
| 2.5 | 2.375 | 8.47 | 8.48 | 93.51 |
| 2.75 | 2.625 | 4.76 | 4.77 | 98.28 |
| 3 | 2.875 | 0.89 | 0.89 | 99.17 |
| 3.25 | 3.125 | 0.41 | 0.41 | 99.58 |
| 3.5 | 3.375 | 0.30 | 0.30 | 99.88 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.605 |
| **5** | -0.975 |
| **16** | -0.185 |
| **25** | 0.395 |
| **50** | 1.505 |
| **75** | 1.920 |
| **84** | 2.105 |
| **95** | 2.455 |
| **99** | 2.830 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.261 | 0.417 |
| Standard Deviation | 1.074 | 0.475 |
| Skewness | -0.718 | |
| Kurtosis | 2.565 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.960 | 1.142 |
| Standard Deviation | 1.145 | 1.092 |
| Skewness (1) | -0.476 | -0.461 |
| Skewness (2) | -0.668 | |
| Kurtosis | 0.498 | 0.922 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1050+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.441 mm** |
| **STD** | **0.580 mm** |
| **Skewness** | **-0.582** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.54 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.98 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

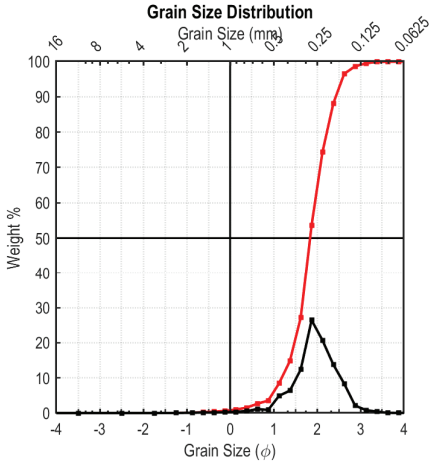
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.04 | 0.98 | 0.98 |
| -0.75 | -0.875 | 0.94 | 0.88 | 1.86 |
| -0.5 | -0.625 | 2.18 | 2.05 | 3.90 |
| -0.25 | -0.375 | 2.14 | 2.01 | 5.91 |
| 0 | -0.125 | 2.88 | 2.70 | 8.62 |
| 0.25 | 0.125 | 3.04 | 2.85 | 11.47 |
| 0.5 | 0.375 | 5.18 | 4.86 | 16.33 |
| 0.75 | 0.625 | 9.80 | 9.20 | 25.53 |
| 1 | 0.875 | 11.64 | 10.93 | 36.46 |
| 1.25 | 1.125 | 14.79 | 13.88 | 50.34 |
| 1.5 | 1.375 | 12.48 | 11.71 | 62.05 |
| 1.75 | 1.625 | 13.31 | 12.49 | 74.54 |
| 2 | 1.875 | 14.61 | 13.71 | 88.26 |
| 2.25 | 2.125 | 6.57 | 6.17 | 94.42 |
| 2.5 | 2.375 | 3.28 | 3.08 | 97.50 |
| 2.75 | 2.625 | 1.81 | 1.70 | 99.20 |
| 3 | 2.875 | 0.48 | 0.45 | 99.65 |
| 3.25 | 3.125 | 0.21 | 0.20 | 99.85 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.240 |
| **5** | -0.490 |
| **16** | 0.360 |
| **25** | 0.610 |
| **50** | 1.120 |
| **75** | 1.635 |
| **84** | 1.795 |
| **95** | 2.170 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.182 | 0.441 |
| Standard Deviation | 0.786 | 0.580 |
| Skewness | -0.582 | |
| Kurtosis | 3.464 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.077 | 1.092 |
| Standard Deviation | 0.718 | 0.762 |
| Skewness (1) | -0.059 | -0.135 |
| Skewness (2) | -0.390 | |
| Kurtosis | 0.854 | 1.064 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1050+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.259 mm** |
| **STD** | **0.696 mm** |
| **Skewness** | **-0.836** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.23 |
| % finer than 0.0625 mm (dry) | 0.06 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.9 |

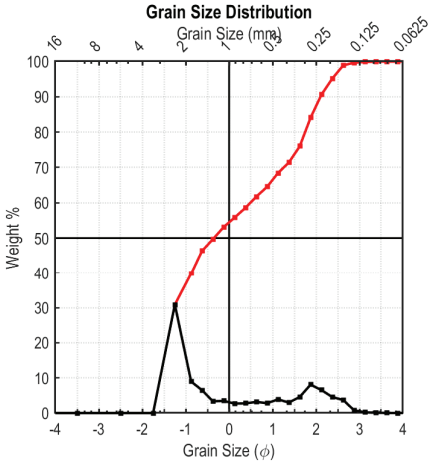
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.10 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.26 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.38 |
| 0 | -0.125 | 0.26 | 0.25 | 0.63 |
| 0.25 | 0.125 | 0.36 | 0.34 | 0.97 |
| 0.5 | 0.375 | 0.58 | 0.55 | 1.52 |
| 0.75 | 0.625 | 1.19 | 1.13 | 2.65 |
| 1 | 0.875 | 0.93 | 0.88 | 3.54 |
| 1.25 | 1.125 | 5.14 | 4.88 | 8.42 |
| 1.5 | 1.375 | 6.72 | 6.39 | 14.81 |
| 1.75 | 1.625 | 13.03 | 12.38 | 27.19 |
| 2 | 1.875 | 27.81 | 26.43 | 53.62 |
| 2.25 | 2.125 | 21.79 | 20.71 | 74.32 |
| 2.5 | 2.375 | 14.52 | 13.80 | 88.12 |
| 2.75 | 2.625 | 8.80 | 8.36 | 96.48 |
| 3 | 2.875 | 2.24 | 2.13 | 98.61 |
| 3.25 | 3.125 | 0.89 | 0.85 | 99.46 |
| 3.5 | 3.375 | 0.42 | 0.40 | 99.86 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.91 |
| 4 | 3.875 | 0.03 | 0.03 | 99.94 |
| >4.0 | 4.25 | 0.06 | 0.06 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.140 |
| **5** | 0.950 |
| **16** | 1.400 |
| **25** | 1.580 |
| **50** | 1.840 |
| **75** | 2.135 |
| **84** | 2.300 |
| **95** | 2.580 |
| **99** | 2.990 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.948 | 0.259 |
| Standard Deviation | 0.523 | 0.696 |
| Skewness | -0.836 | |
| Kurtosis | 6.226 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.850 | 1.847 |
| Standard Deviation | 0.450 | 0.472 |
| Skewness (1) | 0.022 | -0.035 |
| Skewness (2) | -0.167 | |
| Kurtosis | 0.811 | 1.204 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1050+00** |
| **Sample** | **Swash** |
| **Mean** | **0.855 mm** |
| **STD** | **0.376 mm** |
| **Skewness** | **0.385** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Very Platykurtic |

| | |
|---|---|
| Total weight (gram) | 71.34 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 30.87 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.8 |

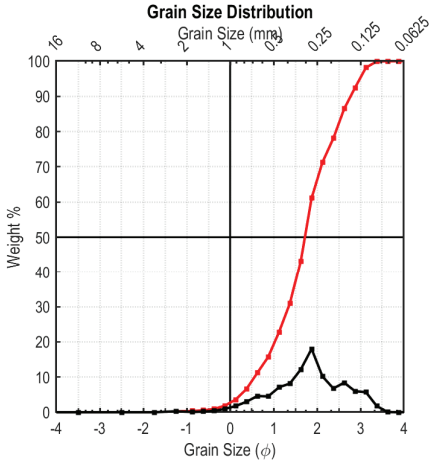
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 22.02 | 30.87 | 30.87 |
| -0.75 | -0.875 | 6.39 | 8.96 | 39.82 |
| -0.5 | -0.625 | 4.64 | 6.50 | 46.33 |
| -0.25 | -0.375 | 2.39 | 3.35 | 49.68 |
| 0 | -0.125 | 2.46 | 3.45 | 53.13 |
| 0.25 | 0.125 | 1.92 | 2.69 | 55.82 |
| 0.5 | 0.375 | 1.96 | 2.75 | 58.56 |
| 0.75 | 0.625 | 2.26 | 3.17 | 61.73 |
| 1 | 0.875 | 2.00 | 2.80 | 64.54 |
| 1.25 | 1.125 | 2.78 | 3.90 | 68.43 |
| 1.5 | 1.375 | 2.12 | 2.97 | 71.40 |
| 1.75 | 1.625 | 3.27 | 4.58 | 75.99 |
| 2 | 1.875 | 5.77 | 8.09 | 84.08 |
| 2.25 | 2.125 | 4.65 | 6.52 | 90.59 |
| 2.5 | 2.375 | 3.25 | 4.56 | 95.15 |
| 2.75 | 2.625 | 2.65 | 3.71 | 98.86 |
| 3 | 2.875 | 0.56 | 0.78 | 99.65 |
| 3.25 | 3.125 | 0.14 | 0.20 | 99.85 |
| 3.5 | 3.375 | 0.06 | 0.08 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.03 | 99.96 |
| 4 | 3.875 | 0.00 | 0.00 | 99.96 |
| >4.0 | 4.25 | 0.03 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.735 |
| **5** | -1.670 |
| **16** | -1.490 |
| **25** | -1.345 |
| **50** | -0.350 |
| **75** | 1.570 |
| **84** | 1.875 |
| **95** | 2.365 |
| **99** | 2.670 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.226 | 0.855 |
| Standard Deviation | 1.411 | 0.376 |
| Skewness | 0.385 | |
| Kurtosis | 1.588 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.193 | 0.012 |
| Standard Deviation | 1.682 | 1.453 |
| Skewness (1) | 0.322 | 0.334 |
| Skewness (2) | 0.415 | |
| Kurtosis | 0.199 | 0.567 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1060+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.285 mm** |
| **STD** | **0.568 mm** |
| **Skewness** | **-0.385** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.29 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

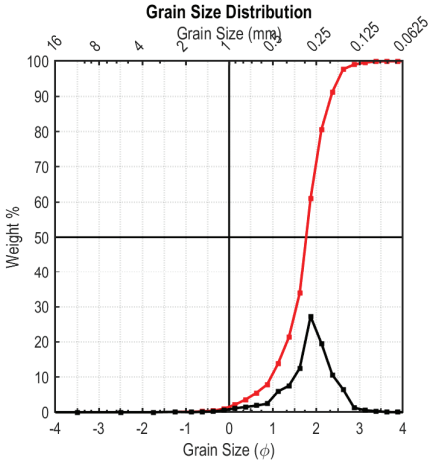
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.29 | 0.27 | 0.27 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.35 |
| -0.5 | -0.625 | 0.19 | 0.18 | 0.53 |
| -0.25 | -0.375 | 0.40 | 0.38 | 0.90 |
| 0 | -0.125 | 1.01 | 0.95 | 1.85 |
| 0.25 | 0.125 | 1.85 | 1.74 | 3.59 |
| 0.5 | 0.375 | 3.17 | 2.98 | 6.58 |
| 0.75 | 0.625 | 4.90 | 4.61 | 11.19 |
| 1 | 0.875 | 4.79 | 4.51 | 15.69 |
| 1.25 | 1.125 | 7.53 | 7.08 | 22.78 |
| 1.5 | 1.375 | 8.68 | 8.17 | 30.94 |
| 1.75 | 1.625 | 12.92 | 12.16 | 43.10 |
| 2 | 1.875 | 19.13 | 18.00 | 61.10 |
| 2.25 | 2.125 | 10.83 | 10.19 | 71.29 |
| 2.5 | 2.375 | 7.20 | 6.77 | 78.06 |
| 2.75 | 2.625 | 8.93 | 8.40 | 86.46 |
| 3 | 2.875 | 6.36 | 5.98 | 92.45 |
| 3.25 | 3.125 | 6.07 | 5.71 | 98.16 |
| 3.5 | 3.375 | 1.87 | 1.76 | 99.92 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.350 |
| **5** | 0.245 |
| **16** | 0.885 |
| **25** | 1.195 |
| **50** | 1.720 |
| **75** | 2.260 |
| **84** | 2.550 |
| **95** | 2.985 |
| **99** | 3.245 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.812 | 0.285 |
| Standard Deviation | 0.815 | 0.568 |
| Skewness | -0.385 | |
| Kurtosis | 3.138 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.717 | 1.718 |
| Standard Deviation | 0.833 | 0.831 |
| Skewness (1) | -0.003 | -0.040 |
| Skewness (2) | -0.126 | |
| Kurtosis | 0.646 | 1.054 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1060+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.282 mm** |
| **STD** | **0.669 mm** |
| **Skewness** | **-0.981** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 106.64 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

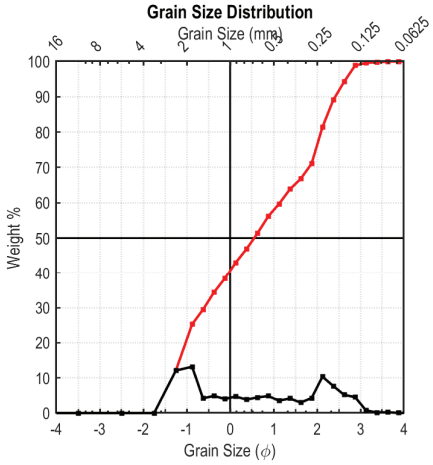
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.11 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.24 |
| -0.25 | -0.375 | 0.19 | 0.18 | 0.42 |
| 0 | -0.125 | 0.60 | 0.56 | 0.98 |
| 0.25 | 0.125 | 1.18 | 1.11 | 2.09 |
| 0.5 | 0.375 | 1.59 | 1.49 | 3.58 |
| 0.75 | 0.625 | 2.02 | 1.89 | 5.48 |
| 1 | 0.875 | 2.57 | 2.41 | 7.89 |
| 1.25 | 1.125 | 6.30 | 5.91 | 13.79 |
| 1.5 | 1.375 | 8.02 | 7.52 | 21.31 |
| 1.75 | 1.625 | 13.35 | 12.52 | 33.83 |
| 2 | 1.875 | 29.03 | 27.22 | 61.06 |
| 2.25 | 2.125 | 20.85 | 19.55 | 80.61 |
| 2.5 | 2.375 | 11.34 | 10.63 | 91.24 |
| 2.75 | 2.625 | 6.90 | 6.47 | 97.71 |
| 3 | 2.875 | 1.40 | 1.31 | 99.02 |
| 3.25 | 3.125 | 0.60 | 0.56 | 99.59 |
| 3.5 | 3.375 | 0.34 | 0.32 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.120 |
| **5** | 0.560 |
| **16** | 1.200 |
| **25** | 1.450 |
| **50** | 1.775 |
| **75** | 2.055 |
| **84** | 2.205 |
| **95** | 2.520 |
| **99** | 2.870 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.828 | 0.282 |
| Standard Deviation | 0.581 | 0.669 |
| Skewness | -0.981 | |
| Kurtosis | 5.362 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.702 | 1.727 |
| Standard Deviation | 0.503 | 0.548 |
| Skewness (1) | -0.144 | -0.192 |
| Skewness (2) | -0.468 | |
| Kurtosis | 0.950 | 1.328 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1060+00** |
| **Sample** | **Swash** |
| **Mean** | **0.612 mm** |
| **STD** | **0.376 mm** |
| **Skewness** | **0.061** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Very Platykurtic |

| | |
|---|---|
| Total weight (gram) | 100.43 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 12.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

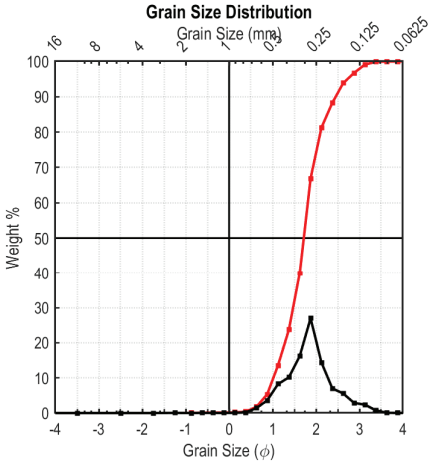
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 12.15 | 12.10 | 12.10 |
| -0.75 | -0.875 | 13.23 | 13.17 | 25.27 |
| -0.5 | -0.625 | 4.19 | 4.17 | 29.44 |
| -0.25 | -0.375 | 4.90 | 4.88 | 34.32 |
| 0 | -0.125 | 4.02 | 4.00 | 38.33 |
| 0.25 | 0.125 | 4.71 | 4.69 | 43.02 |
| 0.5 | 0.375 | 3.86 | 3.84 | 46.86 |
| 0.75 | 0.625 | 4.46 | 4.44 | 51.30 |
| 1 | 0.875 | 4.85 | 4.83 | 56.13 |
| 1.25 | 1.125 | 3.56 | 3.54 | 59.67 |
| 1.5 | 1.375 | 4.16 | 4.14 | 63.82 |
| 1.75 | 1.625 | 2.99 | 2.98 | 66.79 |
| 2 | 1.875 | 4.30 | 4.28 | 71.07 |
| 2.25 | 2.125 | 10.39 | 10.35 | 81.42 |
| 2.5 | 2.375 | 7.71 | 7.68 | 89.10 |
| 2.75 | 2.625 | 5.19 | 5.17 | 94.26 |
| 3 | 2.875 | 4.56 | 4.54 | 98.81 |
| 3.25 | 3.125 | 0.79 | 0.79 | 99.59 |
| 3.5 | 3.375 | 0.13 | 0.13 | 99.72 |
| 3.75 | 3.625 | 0.24 | 0.24 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.710 |
| **5** | -1.545 |
| **16** | -1.140 |
| **25** | -0.885 |
| **50** | 0.550 |
| **75** | 1.970 |
| **84** | 2.210 |
| **95** | 2.665 |
| **99** | 2.935 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.708 | 0.612 |
| Standard Deviation | 1.410 | 0.376 |
| Skewness | 0.061 | |
| Kurtosis | 1.572 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.535 | 0.540 |
| Standard Deviation | 1.675 | 1.475 |
| Skewness (1) | -0.009 | -0.002 |
| Skewness (2) | 0.006 | |
| Kurtosis | 0.257 | 0.604 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1070+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.278 mm** |
| **STD** | **0.685 mm** |
| **Skewness** | **0.155** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.54 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

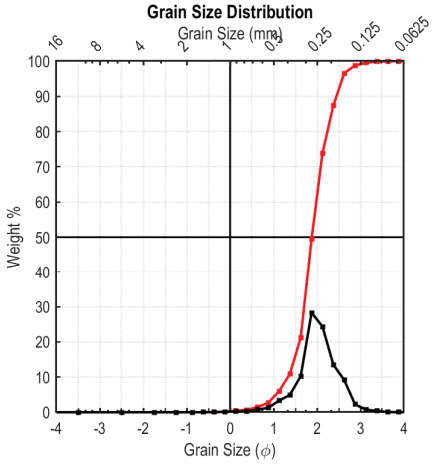
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.04 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.08 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.10 |
| 0 | -0.125 | 0.02 | 0.02 | 0.12 |
| 0.25 | 0.125 | 0.06 | 0.06 | 0.18 |
| 0.5 | 0.375 | 0.18 | 0.17 | 0.35 |
| 0.75 | 0.625 | 1.45 | 1.37 | 1.72 |
| 1 | 0.875 | 3.79 | 3.59 | 5.32 |
| 1.25 | 1.125 | 8.69 | 8.23 | 13.55 |
| 1.5 | 1.375 | 10.73 | 10.17 | 23.72 |
| 1.75 | 1.625 | 17.11 | 16.21 | 39.93 |
| 2 | 1.875 | 28.46 | 26.97 | 66.89 |
| 2.25 | 2.125 | 15.17 | 14.37 | 81.27 |
| 2.5 | 2.375 | 7.41 | 7.02 | 88.29 |
| 2.75 | 2.625 | 5.87 | 5.56 | 93.85 |
| 3 | 2.875 | 3.04 | 2.88 | 96.73 |
| 3.25 | 3.125 | 2.51 | 2.38 | 99.11 |
| 3.5 | 3.375 | 0.82 | 0.78 | 99.89 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.495 |
| **5** | 0.855 |
| **16** | 1.185 |
| **25** | 1.395 |
| **50** | 1.720 |
| **75** | 2.015 |
| **84** | 2.220 |
| **95** | 2.725 |
| **99** | 3.115 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.847 | 0.278 |
| Standard Deviation | 0.546 | 0.685 |
| Skewness | 0.155 | |
| Kurtosis | 3.881 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.702 | 1.708 |
| Standard Deviation | 0.517 | 0.542 |
| Skewness (1) | -0.034 | 0.021 |
| Skewness (2) | 0.135 | |
| Kurtosis | 0.807 | 1.236 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1070+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.249 mm** |
| **STD** | **0.726 mm** |
| **Skewness** | **-0.539** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.55 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

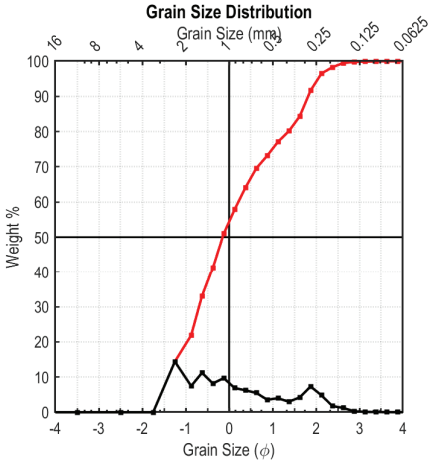
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.05 |
| 0 | -0.125 | 0.12 | 0.11 | 0.16 |
| 0.25 | 0.125 | 0.25 | 0.24 | 0.40 |
| 0.5 | 0.375 | 0.30 | 0.28 | 0.68 |
| 0.75 | 0.625 | 0.76 | 0.72 | 1.40 |
| 1 | 0.875 | 1.35 | 1.28 | 2.68 |
| 1.25 | 1.125 | 3.46 | 3.28 | 5.96 |
| 1.5 | 1.375 | 5.21 | 4.94 | 10.90 |
| 1.75 | 1.625 | 10.86 | 10.29 | 21.18 |
| 2 | 1.875 | 29.87 | 28.30 | 49.48 |
| 2.25 | 2.125 | 25.70 | 24.35 | 73.83 |
| 2.5 | 2.375 | 14.29 | 13.54 | 87.37 |
| 2.75 | 2.625 | 9.68 | 9.17 | 96.54 |
| 3 | 2.875 | 2.36 | 2.24 | 98.78 |
| 3.25 | 3.125 | 0.79 | 0.75 | 99.53 |
| 3.5 | 3.375 | 0.39 | 0.37 | 99.90 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.485 |
| **5** | 1.050 |
| **16** | 1.500 |
| **25** | 1.660 |
| **50** | 1.880 |
| **75** | 2.145 |
| **84** | 2.315 |
| **95** | 2.585 |
| **99** | 2.950 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.003 | 0.249 |
| Standard Deviation | 0.461 | 0.726 |
| Skewness | -0.539 | |
| Kurtosis | 5.175 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.907 | 1.898 |
| Standard Deviation | 0.407 | 0.436 |
| Skewness (1) | 0.067 | -0.007 |
| Skewness (2) | -0.153 | |
| Kurtosis | 0.883 | 1.297 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **1070+00** |
| **Sample** | **Swash** |
| **Mean** | **0.856 mm** |
| **STD** | **0.457 mm** |
| **Skewness** | **0.480** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Fine Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 84.51 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 14.40 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.0 |

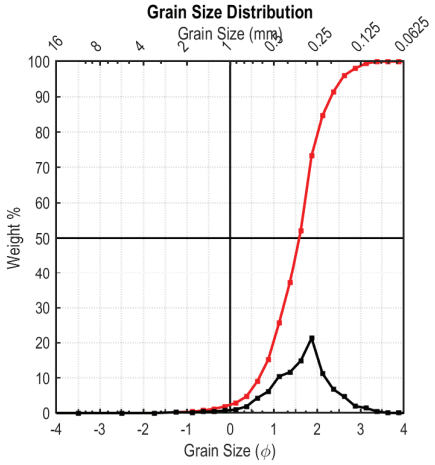
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 12.17 | 14.40 | 14.40 |
| -0.75 | -0.875 | 6.30 | 7.45 | 21.86 |
| -0.5 | -0.625 | 9.47 | 11.21 | 33.06 |
| -0.25 | -0.375 | 6.92 | 8.19 | 41.25 |
| 0 | -0.125 | 8.21 | 9.71 | 50.96 |
| 0.25 | 0.125 | 5.82 | 6.89 | 57.85 |
| 0.5 | 0.375 | 5.27 | 6.24 | 64.09 |
| 0.75 | 0.625 | 4.64 | 5.49 | 69.58 |
| 1 | 0.875 | 3.01 | 3.56 | 73.14 |
| 1.25 | 1.125 | 3.36 | 3.98 | 77.12 |
| 1.5 | 1.375 | 2.54 | 3.01 | 80.12 |
| 1.75 | 1.625 | 3.57 | 4.22 | 84.35 |
| 2 | 1.875 | 6.19 | 7.32 | 91.67 |
| 2.25 | 2.125 | 4.07 | 4.82 | 96.49 |
| 2.5 | 2.375 | 1.50 | 1.77 | 98.26 |
| 2.75 | 2.625 | 1.03 | 1.22 | 99.48 |
| 3 | 2.875 | 0.24 | 0.28 | 99.76 |
| 3.25 | 3.125 | 0.09 | 0.11 | 99.87 |
| 3.5 | 3.375 | 0.05 | 0.06 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.04 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.715 |
| **5** | -1.575 |
| **16** | -1.170 |
| **25** | -0.805 |
| **50** | -0.150 |
| **75** | 0.990 |
| **84** | 1.605 |
| **95** | 2.050 |
| **99** | 2.525 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.224 | 0.856 |
| Standard Deviation | 1.130 | 0.457 |
| Skewness | 0.480 | |
| Kurtosis | 2.131 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.218 | 0.095 |
| Standard Deviation | 1.387 | 1.243 |
| Skewness (1) | 0.265 | 0.239 |
| Skewness (2) | 0.279 | |
| Kurtosis | 0.306 | 0.828 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.321 mm** |
| **STD** | **0.627 mm** |
| **Skewness** | **-0.491** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.64 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.23 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

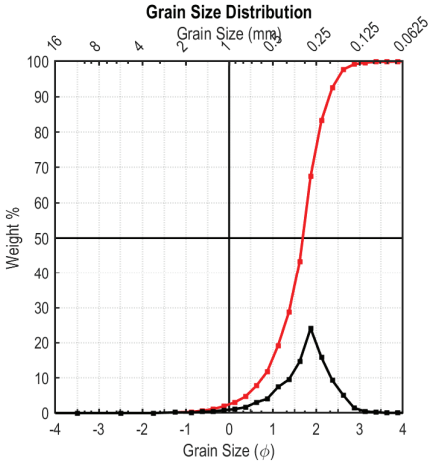
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.24 | 0.23 | 0.23 |
| -0.75 | -0.875 | 0.15 | 0.14 | 0.37 |
| -0.5 | -0.625 | 0.39 | 0.37 | 0.73 |
| -0.25 | -0.375 | 0.46 | 0.43 | 1.17 |
| 0 | -0.125 | 0.75 | 0.71 | 1.87 |
| 0.25 | 0.125 | 1.02 | 0.96 | 2.84 |
| 0.5 | 0.375 | 1.98 | 1.88 | 4.71 |
| 0.75 | 0.625 | 4.53 | 4.29 | 9.00 |
| 1 | 0.875 | 6.48 | 6.13 | 15.13 |
| 1.25 | 1.125 | 11.01 | 10.42 | 25.56 |
| 1.5 | 1.375 | 12.26 | 11.60 | 37.16 |
| 1.75 | 1.625 | 15.71 | 14.87 | 52.04 |
| 2 | 1.875 | 22.52 | 21.32 | 73.35 |
| 2.25 | 2.125 | 11.92 | 11.28 | 84.63 |
| 2.5 | 2.375 | 7.13 | 6.75 | 91.38 |
| 2.75 | 2.625 | 4.90 | 4.64 | 96.02 |
| 3 | 2.875 | 2.09 | 1.98 | 98.01 |
| 3.25 | 3.125 | 1.50 | 1.42 | 99.42 |
| 3.5 | 3.375 | 0.52 | 0.50 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.470 |
| **5** | 0.390 |
| **16** | 0.895 |
| **25** | 1.110 |
| **50** | 1.590 |
| **75** | 1.910 |
| **84** | 2.110 |
| **95** | 2.570 |
| **99** | 3.050 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.641 | 0.321 |
| Standard Deviation | 0.674 | 0.627 |
| Skewness | -0.491 | |
| Kurtosis | 4.243 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.502 | 1.532 |
| Standard Deviation | 0.607 | 0.634 |
| Skewness (1) | -0.144 | -0.122 |
| Skewness (2) | -0.181 | |
| Kurtosis | 0.794 | 1.117 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.304 mm** |
| **STD** | **0.642 mm** |
| **Skewness** | **-0.919** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.48 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.18 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.6 |

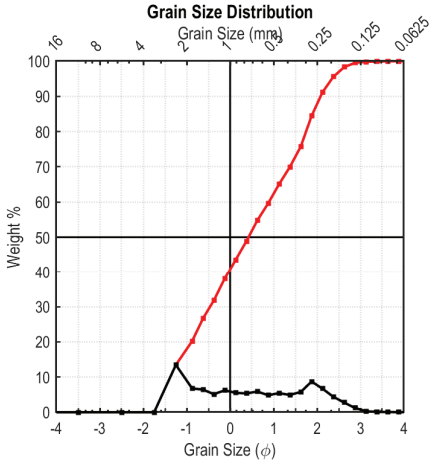
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.19 | 0.18 | 0.18 |
| -0.75 | -0.875 | 0.13 | 0.13 | 0.31 |
| -0.5 | -0.625 | 0.38 | 0.36 | 0.67 |
| -0.25 | -0.375 | 0.47 | 0.44 | 1.11 |
| 0 | -0.125 | 0.86 | 0.82 | 1.93 |
| 0.25 | 0.125 | 1.15 | 1.09 | 3.02 |
| 0.5 | 0.375 | 1.75 | 1.66 | 4.68 |
| 0.75 | 0.625 | 3.21 | 3.04 | 7.72 |
| 1 | 0.875 | 4.27 | 4.04 | 11.76 |
| 1.25 | 1.125 | 7.81 | 7.41 | 19.17 |
| 1.5 | 1.375 | 10.06 | 9.53 | 28.70 |
| 1.75 | 1.625 | 15.46 | 14.66 | 43.36 |
| 2 | 1.875 | 25.43 | 24.11 | 67.47 |
| 2.25 | 2.125 | 16.66 | 15.80 | 83.27 |
| 2.5 | 2.375 | 9.82 | 9.31 | 92.58 |
| 2.75 | 2.625 | 5.39 | 5.11 | 97.69 |
| 3 | 2.875 | 1.56 | 1.48 | 99.17 |
| 3.25 | 3.125 | 0.50 | 0.47 | 99.64 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.86 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.91 |
| 4 | 3.875 | 0.07 | 0.06 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.435 |
| **5** | 0.400 |
| **16** | 1.020 |
| **25** | 1.280 |
| **50** | 1.695 |
| **75** | 1.995 |
| **84** | 2.145 |
| **95** | 2.495 |
| **99** | 2.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.719 | 0.304 |
| Standard Deviation | 0.639 | 0.642 |
| Skewness | -0.919 | |
| Kurtosis | 5.004 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.583 | 1.620 |
| Standard Deviation | 0.562 | 0.599 |
| Skewness (1) | -0.200 | -0.218 |
| Skewness (2) | -0.440 | |
| Kurtosis | 0.862 | 1.201 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.675 mm** |
| **STD** | **0.421 mm** |
| **Skewness** | **0.060** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 89.64 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 13.45 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

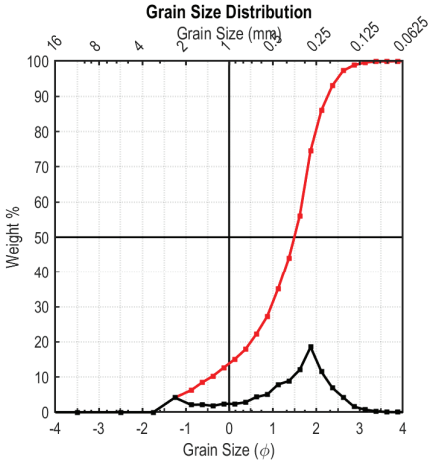
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 12.06 | 13.45 | 13.45 |
| -0.75 | -0.875 | 6.06 | 6.76 | 20.21 |
| -0.5 | -0.625 | 5.78 | 6.45 | 26.66 |
| -0.25 | -0.375 | 4.60 | 5.13 | 31.78 |
| 0 | -0.125 | 5.59 | 6.24 | 38.02 |
| 0.25 | 0.125 | 4.95 | 5.52 | 43.54 |
| 0.5 | 0.375 | 4.79 | 5.34 | 48.88 |
| 0.75 | 0.625 | 5.27 | 5.88 | 54.77 |
| 1 | 0.875 | 4.35 | 4.85 | 59.62 |
| 1.25 | 1.125 | 4.86 | 5.43 | 65.05 |
| 1.5 | 1.375 | 4.41 | 4.92 | 69.96 |
| 1.75 | 1.625 | 5.17 | 5.77 | 75.73 |
| 2 | 1.875 | 7.81 | 8.72 | 84.45 |
| 2.25 | 2.125 | 6.00 | 6.70 | 91.15 |
| 2.5 | 2.375 | 3.94 | 4.40 | 95.55 |
| 2.75 | 2.625 | 2.46 | 2.75 | 98.30 |
| 3 | 2.875 | 1.09 | 1.22 | 99.51 |
| 3.25 | 3.125 | 0.27 | 0.30 | 99.81 |
| 3.5 | 3.375 | 0.07 | 0.08 | 99.89 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.715 |
| **5** | -1.565 |
| **16** | -1.110 |
| **25** | -0.690 |
| **50** | 0.420 |
| **75** | 1.595 |
| **84** | 1.860 |
| **95** | 2.345 |
| **99** | 2.770 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.568 | 0.675 |
| Standard Deviation | 1.248 | 0.421 |
| Skewness | 0.060 | |
| Kurtosis | 1.775 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.375 | 0.390 |
| Standard Deviation | 1.485 | 1.335 |
| Skewness (1) | -0.030 | -0.023 |
| Skewness (2) | -0.020 | |
| Kurtosis | 0.316 | 0.701 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 02 2022** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.393 mm** |
| **STD** | **0.495 mm** |
| **Skewness** | **-0.966** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 100.25 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 4.15 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.9 |

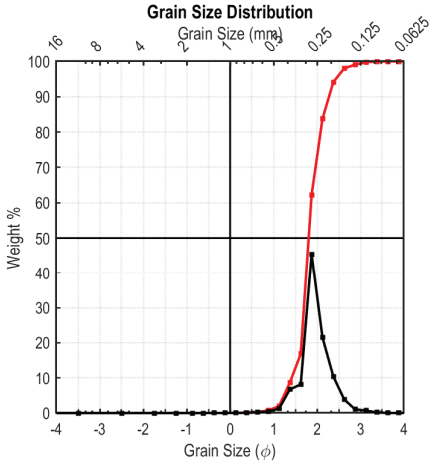
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.16 | 4.15 | 4.15 |
| -0.75 | -0.875 | 2.11 | 2.11 | 6.26 |
| -0.5 | -0.625 | 2.18 | 2.18 | 8.44 |
| -0.25 | -0.375 | 1.84 | 1.83 | 10.27 |
| 0 | -0.125 | 2.40 | 2.39 | 12.67 |
| 0.25 | 0.125 | 2.37 | 2.37 | 15.03 |
| 0.5 | 0.375 | 2.84 | 2.83 | 17.87 |
| 0.75 | 0.625 | 4.34 | 4.33 | 22.19 |
| 1 | 0.875 | 5.03 | 5.02 | 27.21 |
| 1.25 | 1.125 | 7.90 | 7.88 | 35.09 |
| 1.5 | 1.375 | 8.91 | 8.89 | 43.97 |
| 1.75 | 1.625 | 12.12 | 12.09 | 56.06 |
| 2 | 1.875 | 18.59 | 18.54 | 74.60 |
| 2.25 | 2.125 | 11.53 | 11.50 | 86.10 |
| 2.5 | 2.375 | 6.96 | 6.95 | 93.04 |
| 2.75 | 2.625 | 4.25 | 4.24 | 97.28 |
| 3 | 2.875 | 1.58 | 1.58 | 98.86 |
| 3.25 | 3.125 | 0.75 | 0.75 | 99.62 |
| 3.5 | 3.375 | 0.28 | 0.27 | 99.89 |
| 3.75 | 3.625 | 0.06 | 0.05 | 99.94 |
| 4 | 3.875 | 0.03 | 0.03 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.630 |
| **5** | -1.100 |
| **16** | 0.210 |
| **25** | 0.765 |
| **50** | 1.500 |
| **75** | 1.885 |
| **84** | 2.080 |
| **95** | 2.490 |
| **99** | 2.920 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.349 | 0.393 |
| Standard Deviation | 1.013 | 0.495 |
| Skewness | -0.966 | |
| Kurtosis | 3.418 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.145 | 1.263 |
| Standard Deviation | 0.935 | 1.011 |
| Skewness (1) | -0.380 | -0.414 |
| Skewness (2) | -0.861 | |
| Kurtosis | 0.920 | 1.314 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1770+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.257 mm** |
| **STD** | **0.787 mm** |
| **Skewness** | **0.166** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Very Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

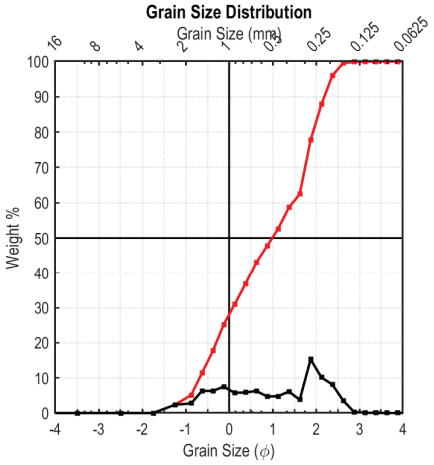
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.01 | 0.01 | 0.02 |
| 0.25 | 0.125 | 0.03 | 0.03 | 0.05 |
| 0.5 | 0.375 | 0.04 | 0.04 | 0.09 |
| 0.75 | 0.625 | 0.20 | 0.19 | 0.28 |
| 1 | 0.875 | 0.46 | 0.44 | 0.71 |
| 1.25 | 1.125 | 1.29 | 1.23 | 1.94 |
| 1.5 | 1.375 | 7.09 | 6.74 | 8.68 |
| 1.75 | 1.625 | 8.57 | 8.14 | 16.82 |
| 2 | 1.875 | 47.75 | 45.38 | 62.20 |
| 2.25 | 2.125 | 22.66 | 21.54 | 83.74 |
| 2.5 | 2.375 | 10.95 | 10.41 | 94.15 |
| 2.75 | 2.625 | 4.08 | 3.88 | 98.02 |
| 3 | 2.875 | 1.12 | 1.06 | 99.09 |
| 3.25 | 3.125 | 0.73 | 0.69 | 99.78 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.935 |
| **5** | 1.240 |
| **16** | 1.600 |
| **25** | 1.670 |
| **50** | 1.810 |
| **75** | 2.025 |
| **84** | 2.130 |
| **95** | 2.430 |
| **99** | 2.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.961 | 0.257 |
| Standard Deviation | 0.346 | 0.787 |
| Skewness | 0.166 | |
| Kurtosis | 5.649 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.865 | 1.847 |
| Standard Deviation | 0.265 | 0.313 |
| Skewness (1) | 0.208 | 0.125 |
| Skewness (2) | 0.094 | |
| Kurtosis | 1.245 | 1.374 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1770+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.505 mm** |
| **STD** | **0.467 mm** |
| **Skewness** | **-0.247** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.35 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.5 |

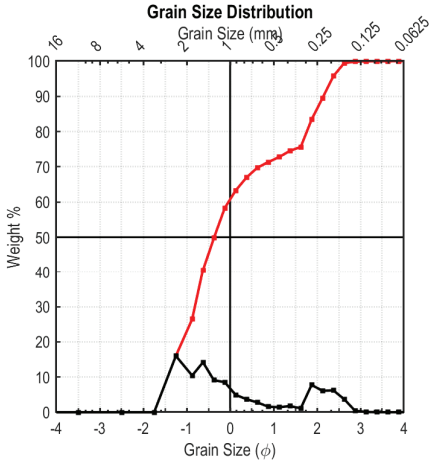
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.47 | 2.35 | 2.35 |
| -0.75 | -0.875 | 2.89 | 2.75 | 5.09 |
| -0.5 | -0.625 | 6.62 | 6.29 | 11.39 |
| -0.25 | -0.375 | 6.62 | 6.29 | 17.68 |
| 0 | -0.125 | 7.90 | 7.51 | 25.19 |
| 0.25 | 0.125 | 6.04 | 5.74 | 30.93 |
| 0.5 | 0.375 | 6.16 | 5.85 | 36.78 |
| 0.75 | 0.625 | 6.61 | 6.28 | 43.06 |
| 1 | 0.875 | 4.96 | 4.71 | 47.78 |
| 1.25 | 1.125 | 5.03 | 4.78 | 52.56 |
| 1.5 | 1.375 | 6.43 | 6.11 | 58.67 |
| 1.75 | 1.625 | 3.98 | 3.78 | 62.45 |
| 2 | 1.875 | 16.09 | 15.29 | 77.74 |
| 2.25 | 2.125 | 10.65 | 10.12 | 87.86 |
| 2.5 | 2.375 | 8.53 | 8.11 | 95.97 |
| 2.75 | 2.625 | 3.74 | 3.55 | 99.52 |
| 3 | 2.875 | 0.34 | 0.32 | 99.85 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.94 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.535 |
| **5** | -0.890 |
| **16** | -0.440 |
| **25** | -0.130 |
| **50** | 0.990 |
| **75** | 1.830 |
| **84** | 2.030 |
| **95** | 2.345 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.985 | 0.505 |
| Standard Deviation | 1.099 | 0.467 |
| Skewness | -0.247 | |
| Kurtosis | 1.806 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.795 | 0.860 |
| Standard Deviation | 1.235 | 1.108 |
| Skewness (1) | -0.158 | -0.160 |
| Skewness (2) | -0.213 | |
| Kurtosis | 0.310 | 0.676 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1770+00** |
| **Sample** | **Swash** |
| **Mean** | **0.857 mm** |
| **STD** | **0.409 mm** |
| **Skewness** | **0.626** |

| **USCS** | **Wentworth** |
|---|---|
| SW | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Well Graded | Fine Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 92.77 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 16.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 18.3 |

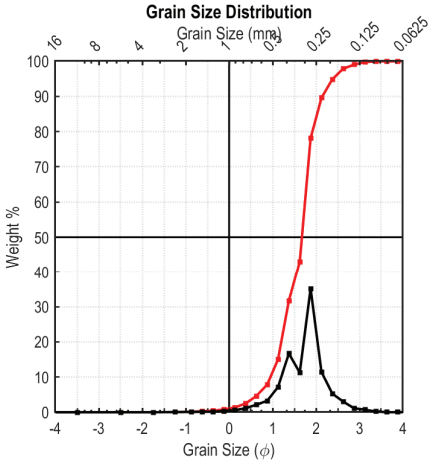
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 14.85 | 16.01 | 16.01 |
| -0.75 | -0.875 | 9.67 | 10.42 | 26.43 |
| -0.5 | -0.625 | 13.17 | 14.20 | 40.63 |
| -0.25 | -0.375 | 8.46 | 9.12 | 49.75 |
| 0 | -0.125 | 7.92 | 8.54 | 58.28 |
| 0.25 | 0.125 | 4.60 | 4.96 | 63.24 |
| 0.5 | 0.375 | 3.44 | 3.71 | 66.95 |
| 0.75 | 0.625 | 2.59 | 2.79 | 69.74 |
| 1 | 0.875 | 1.48 | 1.60 | 71.34 |
| 1.25 | 1.125 | 1.31 | 1.41 | 72.75 |
| 1.5 | 1.375 | 1.64 | 1.77 | 74.52 |
| 1.75 | 1.625 | 1.04 | 1.12 | 75.64 |
| 2 | 1.875 | 7.21 | 7.77 | 83.41 |
| 2.25 | 2.125 | 5.65 | 6.09 | 89.50 |
| 2.5 | 2.375 | 5.77 | 6.22 | 95.72 |
| 2.75 | 2.625 | 3.45 | 3.72 | 99.44 |
| 3 | 2.875 | 0.39 | 0.42 | 99.86 |
| 3.25 | 3.125 | 0.09 | 0.10 | 99.96 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.720 |
| **5** | -1.595 |
| **16** | -1.250 |
| **25** | -0.925 |
| **50** | -0.370 |
| **75** | 1.485 |
| **84** | 1.900 |
| **95** | 2.345 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.222 | 0.857 |
| Standard Deviation | 1.291 | 0.409 |
| Skewness | 0.626 | |
| Kurtosis | 1.939 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.325 | 0.093 |
| Standard Deviation | 1.575 | 1.384 |
| Skewness (1) | 0.441 | 0.410 |
| Skewness (2) | 0.473 | |
| Kurtosis | 0.251 | 0.670 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1780+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.306 mm** |
| **STD** | **0.693 mm** |
| **Skewness** | **-0.615** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.44 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.0 |

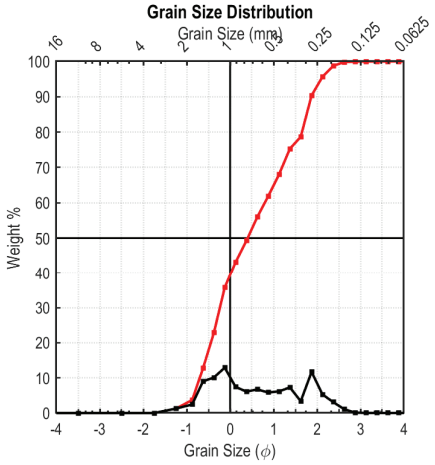
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.13 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.28 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.43 |
| 0 | -0.125 | 0.36 | 0.34 | 0.77 |
| 0.25 | 0.125 | 0.59 | 0.56 | 1.33 |
| 0.5 | 0.375 | 1.20 | 1.14 | 2.47 |
| 0.75 | 0.625 | 2.25 | 2.13 | 4.60 |
| 1 | 0.875 | 3.42 | 3.24 | 7.84 |
| 1.25 | 1.125 | 7.56 | 7.17 | 15.01 |
| 1.5 | 1.375 | 17.60 | 16.69 | 31.71 |
| 1.75 | 1.625 | 11.86 | 11.25 | 42.95 |
| 2 | 1.875 | 37.06 | 35.15 | 78.10 |
| 2.25 | 2.125 | 12.07 | 11.45 | 89.55 |
| 2.5 | 2.375 | 5.58 | 5.29 | 94.84 |
| 2.75 | 2.625 | 3.18 | 3.02 | 97.86 |
| 3 | 2.875 | 1.20 | 1.14 | 98.99 |
| 3.25 | 3.125 | 0.76 | 0.72 | 99.72 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.020 |
| **5** | 0.655 |
| **16** | 1.140 |
| **25** | 1.275 |
| **50** | 1.675 |
| **75** | 1.855 |
| **84** | 2.005 |
| **95** | 2.390 |
| **99** | 2.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.709 | 0.306 |
| Standard Deviation | 0.529 | 0.693 |
| Skewness | -0.615 | |
| Kurtosis | 5.593 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.573 | 1.607 |
| Standard Deviation | 0.432 | 0.479 |
| Skewness (1) | -0.237 | -0.206 |
| Skewness (2) | -0.353 | |
| Kurtosis | 1.006 | 1.226 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1780+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.641 mm** |
| **STD** | **0.503 mm** |
| **Skewness** | **0.213** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.14 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.26 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.9 |

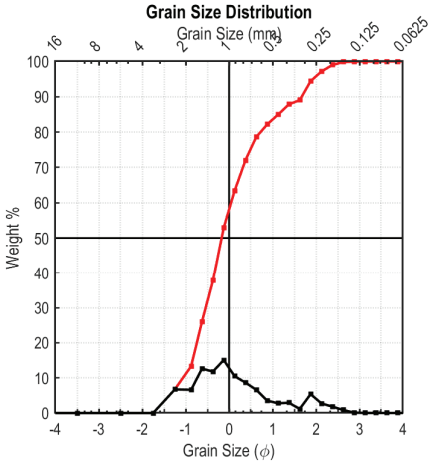
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.33 | 1.26 | 1.26 |
| -0.75 | -0.875 | 2.55 | 2.43 | 3.69 |
| -0.5 | -0.625 | 9.48 | 9.02 | 12.71 |
| -0.25 | -0.375 | 10.63 | 10.11 | 22.82 |
| 0 | -0.125 | 13.57 | 12.91 | 35.72 |
| 0.25 | 0.125 | 7.81 | 7.43 | 43.15 |
| 0.5 | 0.375 | 6.42 | 6.11 | 49.26 |
| 0.75 | 0.625 | 7.07 | 6.72 | 55.98 |
| 1 | 0.875 | 6.14 | 5.84 | 61.82 |
| 1.25 | 1.125 | 6.49 | 6.17 | 68.00 |
| 1.5 | 1.375 | 7.67 | 7.30 | 75.29 |
| 1.75 | 1.625 | 3.54 | 3.37 | 78.66 |
| 2 | 1.875 | 12.30 | 11.70 | 90.36 |
| 2.25 | 2.125 | 5.56 | 5.29 | 95.64 |
| 2.5 | 2.375 | 3.25 | 3.09 | 98.74 |
| 2.75 | 2.625 | 1.14 | 1.08 | 99.82 |
| 3 | 2.875 | 0.12 | 0.11 | 99.93 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.96 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.355 |
| **5** | -0.840 |
| **16** | -0.545 |
| **25** | -0.335 |
| **50** | 0.405 |
| **75** | 1.365 |
| **84** | 1.740 |
| **95** | 2.095 |
| **99** | 2.435 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.642 | 0.641 |
| Standard Deviation | 0.990 | 0.503 |
| Skewness | 0.213 | |
| Kurtosis | 1.860 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.597 | 0.533 |
| Standard Deviation | 1.142 | 1.016 |
| Skewness (1) | 0.168 | 0.160 |
| Skewness (2) | 0.195 | |
| Kurtosis | 0.284 | 0.708 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1780+00** |
| **Sample** | **Swash** |
| **Mean** | **0.899 mm** |
| **STD** | **0.522 mm** |
| **Skewness** | **0.793** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Fine Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.41 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 6.73 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.8 |

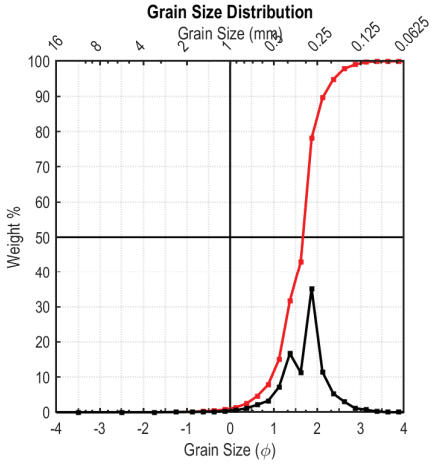
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 6.82 | 6.73 | 6.73 |
| -0.75 | -0.875 | 6.71 | 6.62 | 13.34 |
| -0.5 | -0.625 | 12.83 | 12.65 | 25.99 |
| -0.25 | -0.375 | 11.96 | 11.79 | 37.79 |
| 0 | -0.125 | 15.30 | 15.09 | 52.87 |
| 0.25 | 0.125 | 10.64 | 10.49 | 63.37 |
| 0.5 | 0.375 | 8.78 | 8.66 | 72.02 |
| 0.75 | 0.625 | 6.70 | 6.61 | 78.63 |
| 1 | 0.875 | 3.58 | 3.53 | 82.16 |
| 1.25 | 1.125 | 2.82 | 2.78 | 84.94 |
| 1.5 | 1.375 | 2.96 | 2.92 | 87.86 |
| 1.75 | 1.625 | 1.19 | 1.17 | 89.03 |
| 2 | 1.875 | 5.46 | 5.38 | 94.42 |
| 2.25 | 2.125 | 2.77 | 2.73 | 97.15 |
| 2.5 | 2.375 | 1.85 | 1.82 | 98.97 |
| 2.75 | 2.625 | 0.87 | 0.86 | 99.83 |
| 3 | 2.875 | 0.11 | 0.11 | 99.94 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.675 |
| **5** | -1.380 |
| **16** | -0.820 |
| **25** | -0.645 |
| **50** | -0.175 |
| **75** | 0.490 |
| **84** | 1.040 |
| **95** | 1.930 |
| **99** | 2.380 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.154 | 0.899 |
| Standard Deviation | 0.937 | 0.522 |
| Skewness | 0.793 | |
| Kurtosis | 3.010 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.110 | 0.015 |
| Standard Deviation | 0.930 | 0.967 |
| Skewness (1) | 0.306 | 0.289 |
| Skewness (2) | 0.484 | |
| Kurtosis | 0.780 | 1.195 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1790+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.306 mm** |
| **STD** | **0.693 mm** |
| **Skewness** | **-0.615** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.44 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.2 |

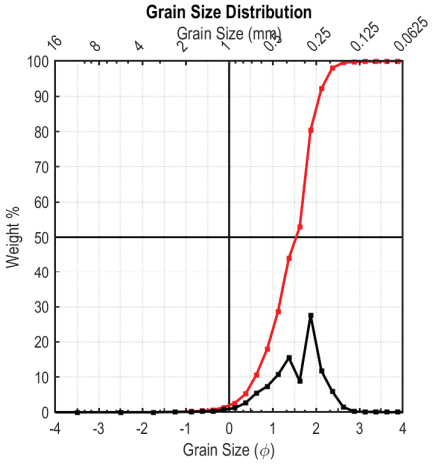
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.13 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.28 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.43 |
| 0 | -0.125 | 0.36 | 0.34 | 0.77 |
| 0.25 | 0.125 | 0.59 | 0.56 | 1.33 |
| 0.5 | 0.375 | 1.20 | 1.14 | 2.47 |
| 0.75 | 0.625 | 2.25 | 2.13 | 4.60 |
| 1 | 0.875 | 3.42 | 3.24 | 7.84 |
| 1.25 | 1.125 | 7.56 | 7.17 | 15.01 |
| 1.5 | 1.375 | 17.60 | 16.69 | 31.71 |
| 1.75 | 1.625 | 11.86 | 11.25 | 42.95 |
| 2 | 1.875 | 37.06 | 35.15 | 78.10 |
| 2.25 | 2.125 | 12.07 | 11.45 | 89.55 |
| 2.5 | 2.375 | 5.58 | 5.29 | 94.84 |
| 2.75 | 2.625 | 3.18 | 3.02 | 97.86 |
| 3 | 2.875 | 1.20 | 1.14 | 98.99 |
| 3.25 | 3.125 | 0.76 | 0.72 | 99.72 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.020 |
| **5** | 0.655 |
| **16** | 1.140 |
| **25** | 1.275 |
| **50** | 1.675 |
| **75** | 1.855 |
| **84** | 2.005 |
| **95** | 2.390 |
| **99** | 2.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.709 | 0.306 |
| Standard Deviation | 0.529 | 0.693 |
| Skewness | -0.615 | |
| Kurtosis | 5.593 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.573 | 1.607 |
| Standard Deviation | 0.432 | 0.479 |
| Skewness (1) | -0.237 | -0.206 |
| Skewness (2) | -0.353 | |
| Kurtosis | 1.006 | 1.226 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1790+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.344 mm** |
| **STD** | **0.662 mm** |
| **Skewness** | **-0.695** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.36 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

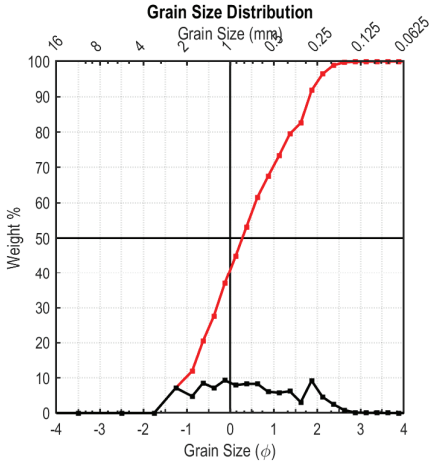
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.10 | 0.09 | 0.19 |
| -0.5 | -0.625 | 0.22 | 0.21 | 0.40 |
| -0.25 | -0.375 | 0.27 | 0.26 | 0.65 |
| 0 | -0.125 | 0.75 | 0.71 | 1.37 |
| 0.25 | 0.125 | 1.27 | 1.21 | 2.57 |
| 0.5 | 0.375 | 2.73 | 2.59 | 5.16 |
| 0.75 | 0.625 | 5.72 | 5.43 | 10.59 |
| 1 | 0.875 | 7.75 | 7.36 | 17.95 |
| 1.25 | 1.125 | 11.21 | 10.64 | 28.59 |
| 1.5 | 1.375 | 16.31 | 15.48 | 44.07 |
| 1.75 | 1.625 | 9.30 | 8.83 | 52.89 |
| 2 | 1.875 | 29.02 | 27.54 | 80.44 |
| 2.25 | 2.125 | 12.36 | 11.73 | 92.17 |
| 2.5 | 2.375 | 6.20 | 5.88 | 98.05 |
| 2.75 | 2.625 | 1.62 | 1.54 | 99.59 |
| 3 | 2.875 | 0.19 | 0.18 | 99.77 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.91 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.255 |
| **5** | 0.360 |
| **16** | 0.810 |
| **25** | 1.040 |
| **50** | 1.545 |
| **75** | 1.825 |
| **84** | 1.950 |
| **95** | 2.245 |
| **99** | 2.530 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.539 | 0.344 |
| Standard Deviation | 0.594 | 0.662 |
| Skewness | -0.695 | |
| Kurtosis | 3.813 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.380 | 1.435 |
| Standard Deviation | 0.570 | 0.571 |
| Skewness (1) | -0.289 | -0.273 |
| Skewness (2) | -0.425 | |
| Kurtosis | 0.654 | 0.984 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1790+00** |
| **Sample** | **Swash** |
| **Mean** | **0.715 mm** |
| **STD** | **0.487 mm** |
| **Skewness** | **0.162** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 96.10 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 7.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 11.6 |

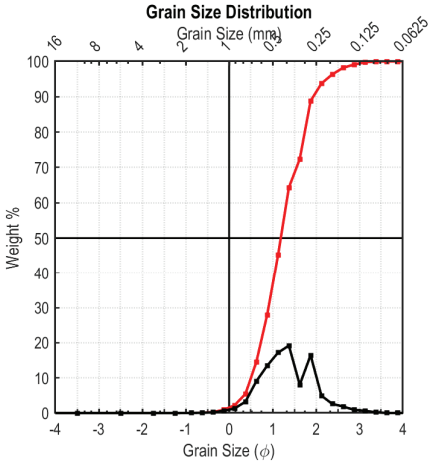
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 6.89 | 7.17 | 7.17 |
| -0.75 | -0.875 | 4.58 | 4.77 | 11.94 |
| -0.5 | -0.625 | 8.20 | 8.53 | 20.47 |
| -0.25 | -0.375 | 6.86 | 7.14 | 27.61 |
| 0 | -0.125 | 8.95 | 9.31 | 36.92 |
| 0.25 | 0.125 | 7.62 | 7.93 | 44.85 |
| 0.5 | 0.375 | 7.99 | 8.31 | 53.16 |
| 0.75 | 0.625 | 7.99 | 8.31 | 61.48 |
| 1 | 0.875 | 5.81 | 6.05 | 67.52 |
| 1.25 | 1.125 | 5.57 | 5.80 | 73.32 |
| 1.5 | 1.375 | 5.95 | 6.19 | 79.51 |
| 1.75 | 1.625 | 2.96 | 3.08 | 82.59 |
| 2 | 1.875 | 8.85 | 9.21 | 91.80 |
| 2.25 | 2.125 | 4.43 | 4.61 | 96.41 |
| 2.5 | 2.375 | 2.39 | 2.49 | 98.90 |
| 2.75 | 2.625 | 0.82 | 0.85 | 99.75 |
| 3 | 2.875 | 0.12 | 0.12 | 99.88 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.680 |
| **5** | -1.400 |
| **16** | -0.755 |
| **25** | -0.465 |
| **50** | 0.280 |
| **75** | 1.195 |
| **84** | 1.665 |
| **95** | 2.050 |
| **99** | 2.405 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.483 | 0.715 |
| Standard Deviation | 1.039 | 0.487 |
| Skewness | 0.162 | |
| Kurtosis | 2.064 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.455 | 0.397 |
| Standard Deviation | 1.210 | 1.128 |
| Skewness (1) | 0.145 | 0.085 |
| Skewness (2) | 0.037 | |
| Kurtosis | 0.426 | 0.852 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1800+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.392 mm** |
| **STD** | **0.663 mm** |
| **Skewness** | **0.299** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.28 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

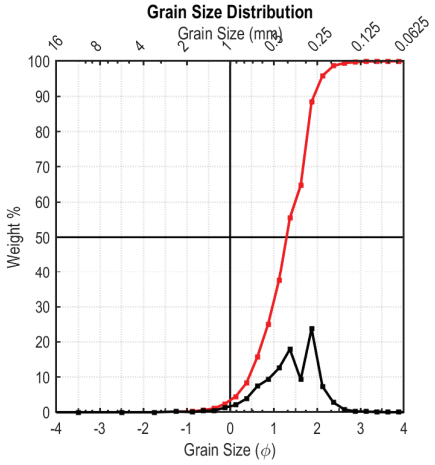
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.09 |
| -0.25 | -0.375 | 0.19 | 0.18 | 0.27 |
| 0 | -0.125 | 0.69 | 0.66 | 0.92 |
| 0.25 | 0.125 | 1.35 | 1.28 | 2.20 |
| 0.5 | 0.375 | 3.41 | 3.24 | 5.44 |
| 0.75 | 0.625 | 9.51 | 9.03 | 14.48 |
| 1 | 0.875 | 14.17 | 13.46 | 27.94 |
| 1.25 | 1.125 | 18.09 | 17.18 | 45.12 |
| 1.5 | 1.375 | 20.20 | 19.19 | 64.30 |
| 1.75 | 1.625 | 8.48 | 8.05 | 72.36 |
| 2 | 1.875 | 17.33 | 16.46 | 88.82 |
| 2.25 | 2.125 | 5.19 | 4.93 | 93.75 |
| 2.5 | 2.375 | 2.73 | 2.59 | 96.34 |
| 2.75 | 2.625 | 1.96 | 1.86 | 98.20 |
| 3 | 2.875 | 0.95 | 0.90 | 99.11 |
| 3.25 | 3.125 | 0.69 | 0.66 | 99.76 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.110 |
| **5** | 0.340 |
| **16** | 0.655 |
| **25** | 0.820 |
| **50** | 1.190 |
| **75** | 1.665 |
| **84** | 1.800 |
| **95** | 2.245 |
| **99** | 2.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.352 | 0.392 |
| Standard Deviation | 0.592 | 0.663 |
| Skewness | 0.299 | |
| Kurtosis | 3.437 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.227 | 1.215 |
| Standard Deviation | 0.573 | 0.575 |
| Skewness (1) | 0.066 | 0.087 |
| Skewness (2) | 0.179 | |
| Kurtosis | 0.664 | 0.924 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1800+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.384 mm** |
| **STD** | **0.652 mm** |
| **Skewness** | **-0.550** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.19 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

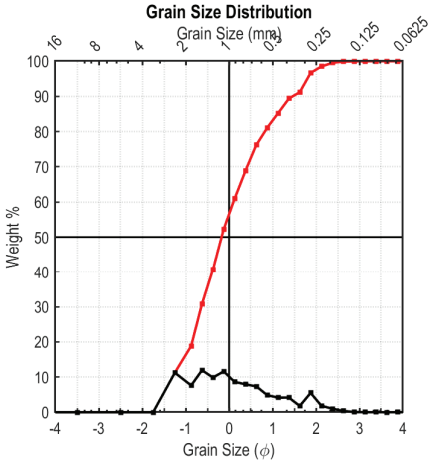
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.20 | 0.19 | 0.19 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.24 |
| -0.5 | -0.625 | 0.39 | 0.37 | 0.61 |
| -0.25 | -0.375 | 0.48 | 0.46 | 1.06 |
| 0 | -0.125 | 1.38 | 1.31 | 2.37 |
| 0.25 | 0.125 | 2.17 | 2.06 | 4.44 |
| 0.5 | 0.375 | 4.06 | 3.86 | 8.29 |
| 0.75 | 0.625 | 7.77 | 7.38 | 15.67 |
| 1 | 0.875 | 9.84 | 9.35 | 25.02 |
| 1.25 | 1.125 | 13.20 | 12.54 | 37.56 |
| 1.5 | 1.375 | 18.86 | 17.92 | 55.48 |
| 1.75 | 1.625 | 9.77 | 9.28 | 64.76 |
| 2 | 1.875 | 25.00 | 23.75 | 88.51 |
| 2.25 | 2.125 | 7.72 | 7.33 | 95.84 |
| 2.5 | 2.375 | 2.95 | 2.80 | 98.64 |
| 2.75 | 2.625 | 0.85 | 0.81 | 99.45 |
| 3 | 2.875 | 0.27 | 0.26 | 99.71 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.90 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.95 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.410 |
| **5** | 0.160 |
| **16** | 0.635 |
| **25** | 0.875 |
| **50** | 1.300 |
| **75** | 1.735 |
| **84** | 1.830 |
| **95** | 2.095 |
| **99** | 2.485 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.381 | 0.384 |
| Standard Deviation | 0.618 | 0.652 |
| Skewness | -0.550 | |
| Kurtosis | 3.735 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.232 | 1.255 |
| Standard Deviation | 0.598 | 0.592 |
| Skewness (1) | -0.113 | -0.146 |
| Skewness (2) | -0.289 | |
| Kurtosis | 0.619 | 0.922 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1800+00** |
| **Sample** | **Swash** |
| **Mean** | **0.927 mm** |
| **STD** | **0.516 mm** |
| **Skewness** | **0.553** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Fine Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 93.19 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 11.25 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 18.6 |

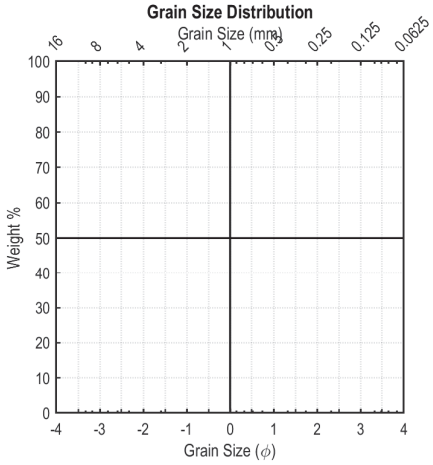
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 10.48 | 11.25 | 11.25 |
| -0.75 | -0.875 | 7.09 | 7.61 | 18.85 |
| -0.5 | -0.625 | 11.13 | 11.94 | 30.80 |
| -0.25 | -0.375 | 9.19 | 9.86 | 40.66 |
| 0 | -0.125 | 10.81 | 11.60 | 52.26 |
| 0.25 | 0.125 | 8.05 | 8.64 | 60.90 |
| 0.5 | 0.375 | 7.40 | 7.94 | 68.84 |
| 0.75 | 0.625 | 6.86 | 7.36 | 76.20 |
| 1 | 0.875 | 4.53 | 4.86 | 81.06 |
| 1.25 | 1.125 | 3.87 | 4.15 | 85.21 |
| 1.5 | 1.375 | 3.89 | 4.17 | 89.39 |
| 1.75 | 1.625 | 1.66 | 1.78 | 91.17 |
| 2 | 1.875 | 5.12 | 5.49 | 96.66 |
| 2.25 | 2.125 | 1.70 | 1.82 | 98.49 |
| 2.5 | 2.375 | 0.94 | 1.01 | 99.50 |
| 2.75 | 2.625 | 0.36 | 0.39 | 99.88 |
| 3 | 2.875 | 0.05 | 0.05 | 99.94 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.96 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.705 |
| **5** | -1.530 |
| **16** | -1.015 |
| **25** | -0.745 |
| **50** | -0.175 |
| **75** | 0.585 |
| **84** | 1.050 |
| **95** | 1.800 |
| **99** | 2.250 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.109 | 0.927 |
| Standard Deviation | 0.956 | 0.516 |
| Skewness | 0.553 | |
| Kurtosis | 2.595 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.017 | -0.047 |
| Standard Deviation | 1.032 | 1.021 |
| Skewness (1) | 0.186 | 0.186 |
| Skewness (2) | 0.300 | |
| Kurtosis | 0.613 | 1.026 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1810+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **NaN mm** |
| **STD** | **NaN mm** |
| **Skewness** | **NaN** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Silt or Clay |
| Fine Grained Soil | Very Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Platykurtic |

| | |
|---|---|
| Total weight (gram) | NaN |
| % finer than 0.0625 mm (dry) | NaN |
| % granule (2-4 mm) | NaN |
| % gravel (>4 mm) | NaN |
| CaCO3 | 0.0 |

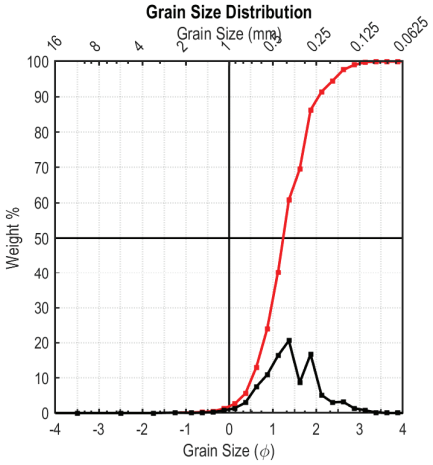
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | NaN | NaN | NaN |
| -3 | -3.5 | NaN | NaN | NaN |
| -2 | -2.5 | NaN | NaN | NaN |
| -1.5 | -1.75 | NaN | NaN | NaN |
| -1 | -1.25 | NaN | NaN | NaN |
| -0.75 | -0.875 | NaN | NaN | NaN |
| -0.5 | -0.625 | NaN | NaN | NaN |
| -0.25 | -0.375 | NaN | NaN | NaN |
| 0 | -0.125 | NaN | NaN | NaN |
| 0.25 | 0.125 | NaN | NaN | NaN |
| 0.5 | 0.375 | NaN | NaN | NaN |
| 0.75 | 0.625 | NaN | NaN | NaN |
| 1 | 0.875 | NaN | NaN | NaN |
| 1.25 | 1.125 | NaN | NaN | NaN |
| 1.5 | 1.375 | NaN | NaN | NaN |
| 1.75 | 1.625 | NaN | NaN | NaN |
| 2 | 1.875 | NaN | NaN | NaN |
| 2.25 | 2.125 | NaN | NaN | NaN |
| 2.5 | 2.375 | NaN | NaN | NaN |
| 2.75 | 2.625 | NaN | NaN | NaN |
| 3 | 2.875 | NaN | NaN | NaN |
| 3.25 | 3.125 | NaN | NaN | NaN |
| 3.5 | 3.375 | NaN | NaN | NaN |
| 3.75 | 3.625 | NaN | NaN | NaN |
| 4 | 3.875 | NaN | NaN | NaN |
| >4.0 | 4.25 | NaN | NaN | NaN |

| **Percentiles** | |
|---|---|
| **1** | -4.500 |
| **5** | -4.500 |
| **16** | -4.500 |
| **25** | -4.500 |
| **50** | -4.500 |
| **75** | -4.500 |
| **84** | -4.500 |
| **95** | -4.500 |
| **99** | -4.500 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | NaN | NaN |
| Standard Deviation | NaN | NaN |
| Skewness | NaN | |
| Kurtosis | NaN | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -4.500 | -4.500 |
| Standard Deviation | 0.000 | 0.000 |
| Skewness (1) | NaN | NaN |
| Skewness (2) | NaN | |
| Kurtosis | NaN | NaN |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1810+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.377 mm** |
| **STD** | **0.649 mm** |
| **Skewness** | **0.142** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

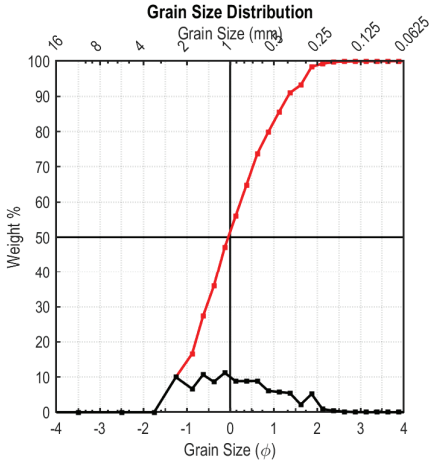
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.12 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.15 |
| -0.5 | -0.625 | 0.11 | 0.10 | 0.26 |
| -0.25 | -0.375 | 0.26 | 0.25 | 0.50 |
| 0 | -0.125 | 0.77 | 0.73 | 1.24 |
| 0.25 | 0.125 | 1.42 | 1.35 | 2.59 |
| 0.5 | 0.375 | 3.13 | 2.97 | 5.56 |
| 0.75 | 0.625 | 7.86 | 7.47 | 13.03 |
| 1 | 0.875 | 11.44 | 10.87 | 23.90 |
| 1.25 | 1.125 | 17.19 | 16.34 | 40.24 |
| 1.5 | 1.375 | 21.68 | 20.60 | 60.84 |
| 1.75 | 1.625 | 9.14 | 8.69 | 69.53 |
| 2 | 1.875 | 17.61 | 16.74 | 86.27 |
| 2.25 | 2.125 | 5.39 | 5.12 | 91.39 |
| 2.5 | 2.375 | 3.19 | 3.03 | 94.42 |
| 2.75 | 2.625 | 3.35 | 3.18 | 97.61 |
| 3 | 2.875 | 1.44 | 1.37 | 98.97 |
| 3.25 | 3.125 | 0.84 | 0.80 | 99.77 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.205 |
| **5** | 0.330 |
| **16** | 0.695 |
| **25** | 0.890 |
| **50** | 1.245 |
| **75** | 1.705 |
| **84** | 1.840 |
| **95** | 2.420 |
| **99** | 2.885 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.409 | 0.377 |
| Standard Deviation | 0.624 | 0.649 |
| Skewness | 0.142 | |
| Kurtosis | 3.709 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.267 | 1.260 |
| Standard Deviation | 0.573 | 0.603 |
| Skewness (1) | 0.039 | 0.082 |
| Skewness (2) | 0.227 | |
| Kurtosis | 0.825 | 1.051 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1810+00** |
| **Sample** | **Swash** |
| **Mean** | **0.890 mm** |
| **STD** | **0.531 mm** |
| **Skewness** | **0.326** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 94.44 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 9.97 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 13.9 |

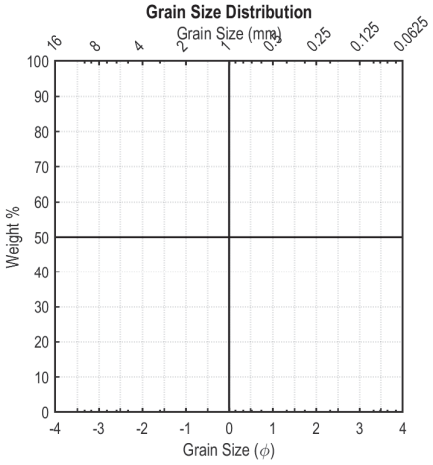
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 9.42 | 9.97 | 9.97 |
| -0.75 | -0.875 | 6.28 | 6.65 | 16.62 |
| -0.5 | -0.625 | 10.06 | 10.65 | 27.28 |
| -0.25 | -0.375 | 8.16 | 8.64 | 35.92 |
| 0 | -0.125 | 10.57 | 11.19 | 47.11 |
| 0.25 | 0.125 | 8.35 | 8.84 | 55.95 |
| 0.5 | 0.375 | 8.37 | 8.86 | 64.81 |
| 0.75 | 0.625 | 8.40 | 8.89 | 73.71 |
| 1 | 0.875 | 5.75 | 6.09 | 79.80 |
| 1.25 | 1.125 | 5.43 | 5.75 | 85.55 |
| 1.5 | 1.375 | 5.16 | 5.46 | 91.01 |
| 1.75 | 1.625 | 2.06 | 2.18 | 93.19 |
| 2 | 1.875 | 4.91 | 5.20 | 98.39 |
| 2.25 | 2.125 | 0.85 | 0.90 | 99.29 |
| 2.5 | 2.375 | 0.41 | 0.43 | 99.72 |
| 2.75 | 2.625 | 0.16 | 0.17 | 99.89 |
| 3 | 2.875 | 0.04 | 0.04 | 99.94 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.96 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.700 |
| **5** | -1.500 |
| **16** | -0.910 |
| **25** | -0.680 |
| **50** | -0.045 |
| **75** | 0.680 |
| **84** | 1.060 |
| **95** | 1.710 |
| **99** | 2.045 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.167 | 0.890 |
| Standard Deviation | 0.913 | 0.531 |
| Skewness | 0.326 | |
| Kurtosis | 2.395 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.075 | 0.035 |
| Standard Deviation | 0.985 | 0.979 |
| Skewness (1) | 0.122 | 0.108 |
| Skewness (2) | 0.152 | |
| Kurtosis | 0.629 | 0.967 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1820+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **NaN mm** |
| **STD** | **NaN mm** |
| **Skewness** | **NaN** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Silt or Clay |
| Fine Grained Soil | Very Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Platykurtic |

| | |
|---|---|
| Total weight (gram) | NaN |
| % finer than 0.0625 mm (dry) | NaN |
| % granule (2-4 mm) | NaN |
| % gravel (>4 mm) | NaN |
| CaCO3 | 0.0 |

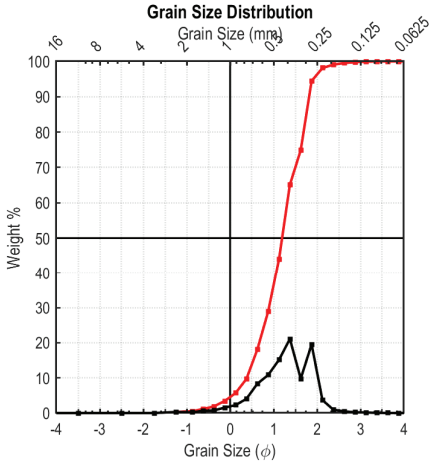
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | NaN | NaN | NaN |
| -3 | -3.5 | NaN | NaN | NaN |
| -2 | -2.5 | NaN | NaN | NaN |
| -1.5 | -1.75 | NaN | NaN | NaN |
| -1 | -1.25 | NaN | NaN | NaN |
| -0.75 | -0.875 | NaN | NaN | NaN |
| -0.5 | -0.625 | NaN | NaN | NaN |
| -0.25 | -0.375 | NaN | NaN | NaN |
| 0 | -0.125 | NaN | NaN | NaN |
| 0.25 | 0.125 | NaN | NaN | NaN |
| 0.5 | 0.375 | NaN | NaN | NaN |
| 0.75 | 0.625 | NaN | NaN | NaN |
| 1 | 0.875 | NaN | NaN | NaN |
| 1.25 | 1.125 | NaN | NaN | NaN |
| 1.5 | 1.375 | NaN | NaN | NaN |
| 1.75 | 1.625 | NaN | NaN | NaN |
| 2 | 1.875 | NaN | NaN | NaN |
| 2.25 | 2.125 | NaN | NaN | NaN |
| 2.5 | 2.375 | NaN | NaN | NaN |
| 2.75 | 2.625 | NaN | NaN | NaN |
| 3 | 2.875 | NaN | NaN | NaN |
| 3.25 | 3.125 | NaN | NaN | NaN |
| 3.5 | 3.375 | NaN | NaN | NaN |
| 3.75 | 3.625 | NaN | NaN | NaN |
| 4 | 3.875 | NaN | NaN | NaN |
| >4.0 | 4.25 | NaN | NaN | NaN |

| **Percentiles** | |
|---|---|
| **1** | -4.500 |
| **5** | -4.500 |
| **16** | -4.500 |
| **25** | -4.500 |
| **50** | -4.500 |
| **75** | -4.500 |
| **84** | -4.500 |
| **95** | -4.500 |
| **99** | -4.500 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | NaN | NaN |
| Standard Deviation | NaN | NaN |
| Skewness | NaN | |
| Kurtosis | NaN | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -4.500 | -4.500 |
| Standard Deviation | 0.000 | 0.000 |
| Skewness (1) | NaN | NaN |
| Skewness (2) | NaN | |
| Kurtosis | NaN | NaN |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1820+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.417 mm** |
| **STD** | **0.657 mm** |
| **Skewness** | **-0.672** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.15 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.30 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

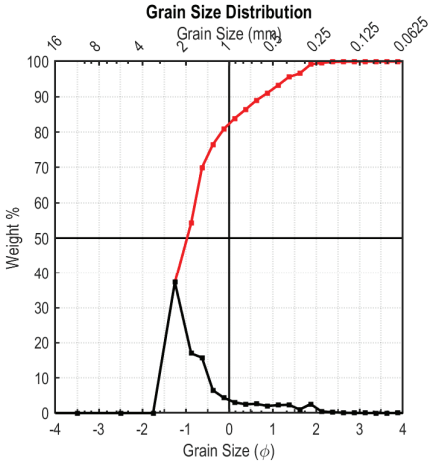
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.32 | 0.30 | 0.30 |
| -0.75 | -0.875 | 0.22 | 0.21 | 0.51 |
| -0.5 | -0.625 | 0.66 | 0.63 | 1.14 |
| -0.25 | -0.375 | 0.78 | 0.74 | 1.88 |
| 0 | -0.125 | 1.62 | 1.54 | 3.42 |
| 0.25 | 0.125 | 2.37 | 2.25 | 5.68 |
| 0.5 | 0.375 | 4.25 | 4.04 | 9.72 |
| 0.75 | 0.625 | 8.76 | 8.33 | 18.05 |
| 1 | 0.875 | 11.38 | 10.82 | 28.87 |
| 1.25 | 1.125 | 15.93 | 15.15 | 44.02 |
| 1.5 | 1.375 | 22.18 | 21.09 | 65.12 |
| 1.75 | 1.625 | 10.28 | 9.78 | 74.89 |
| 2 | 1.875 | 20.56 | 19.55 | 94.45 |
| 2.25 | 2.125 | 3.87 | 3.68 | 98.13 |
| 2.5 | 2.375 | 1.01 | 0.96 | 99.09 |
| 2.75 | 2.625 | 0.49 | 0.47 | 99.55 |
| 3 | 2.875 | 0.23 | 0.22 | 99.77 |
| 3.25 | 3.125 | 0.17 | 0.16 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.680 |
| **5** | 0.050 |
| **16** | 0.565 |
| **25** | 0.785 |
| **50** | 1.195 |
| **75** | 1.625 |
| **84** | 1.740 |
| **95** | 1.915 |
| **99** | 2.350 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.263 | 0.417 |
| Standard Deviation | 0.605 | 0.657 |
| Skewness | -0.672 | |
| Kurtosis | 4.244 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.152 | 1.167 |
| Standard Deviation | 0.587 | 0.576 |
| Skewness (1) | -0.072 | -0.150 |
| Skewness (2) | -0.362 | |
| Kurtosis | 0.587 | 0.910 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1820+00** |
| **Sample** | **Swash** |
| **Mean** | **1.468 mm** |
| **STD** | **0.550 mm** |
| **Skewness** | **1.508** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Very Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Strongly Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 72.36 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 37.23 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 22.9 |

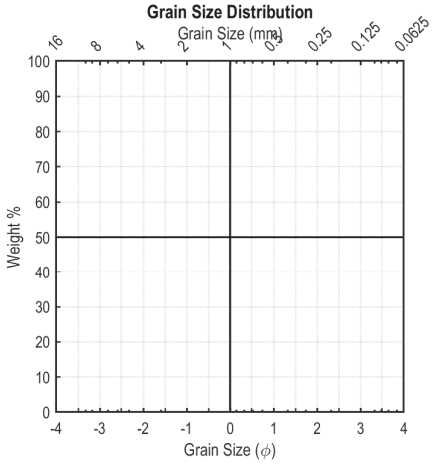
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 26.94 | 37.23 | 37.23 |
| -0.75 | -0.875 | 12.30 | 17.00 | 54.23 |
| -0.5 | -0.625 | 11.39 | 15.74 | 69.97 |
| -0.25 | -0.375 | 4.71 | 6.51 | 76.48 |
| 0 | -0.125 | 3.14 | 4.34 | 80.82 |
| 0.25 | 0.125 | 2.20 | 3.04 | 83.86 |
| 0.5 | 0.375 | 1.81 | 2.50 | 86.36 |
| 0.75 | 0.625 | 1.89 | 2.61 | 88.97 |
| 1 | 0.875 | 1.47 | 2.03 | 91.00 |
| 1.25 | 1.125 | 1.62 | 2.24 | 93.24 |
| 1.5 | 1.375 | 1.70 | 2.35 | 95.59 |
| 1.75 | 1.625 | 0.73 | 1.01 | 96.60 |
| 2 | 1.875 | 1.84 | 2.54 | 99.14 |
| 2.25 | 2.125 | 0.34 | 0.47 | 99.61 |
| 2.5 | 2.375 | 0.17 | 0.23 | 99.85 |
| 2.75 | 2.625 | 0.06 | 0.08 | 99.93 |
| 3 | 2.875 | 0.02 | 0.03 | 99.96 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.97 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.735 |
| **5** | -1.685 |
| **16** | -1.535 |
| **25** | -1.415 |
| **50** | -0.970 |
| **75** | -0.430 |
| **84** | 0.140 |
| **95** | 1.310 |
| **99** | 1.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | -0.553 | 1.468 |
| Standard Deviation | 0.862 | 0.550 |
| Skewness | 1.508 | |
| Kurtosis | 4.616 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -0.698 | -0.788 |
| Standard Deviation | 0.838 | 0.873 |
| Skewness (1) | 0.325 | 0.424 |
| Skewness (2) | 0.934 | |
| Kurtosis | 0.788 | 1.246 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1830+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **NaN mm** |
| **STD** | **NaN mm** |
| **Skewness** | **NaN** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Silt or Clay |
| Fine Grained Soil | Very Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Platykurtic |

| | |
|---|---|
| Total weight (gram) | NaN |
| % finer than 0.0625 mm (dry) | NaN |
| % granule (2-4 mm) | NaN |
| % gravel (>4 mm) | NaN |
| CaCO3 | 0.0 |

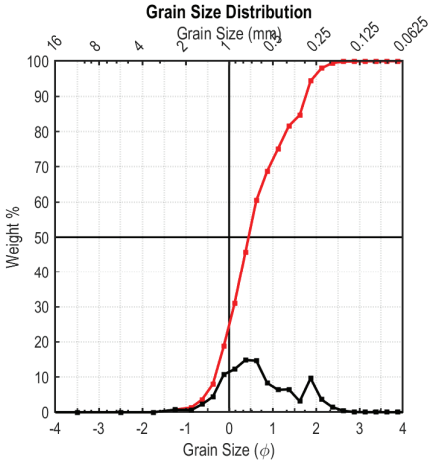
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | NaN | NaN | NaN |
| -3 | -3.5 | NaN | NaN | NaN |
| -2 | -2.5 | NaN | NaN | NaN |
| -1.5 | -1.75 | NaN | NaN | NaN |
| -1 | -1.25 | NaN | NaN | NaN |
| -0.75 | -0.875 | NaN | NaN | NaN |
| -0.5 | -0.625 | NaN | NaN | NaN |
| -0.25 | -0.375 | NaN | NaN | NaN |
| 0 | -0.125 | NaN | NaN | NaN |
| 0.25 | 0.125 | NaN | NaN | NaN |
| 0.5 | 0.375 | NaN | NaN | NaN |
| 0.75 | 0.625 | NaN | NaN | NaN |
| 1 | 0.875 | NaN | NaN | NaN |
| 1.25 | 1.125 | NaN | NaN | NaN |
| 1.5 | 1.375 | NaN | NaN | NaN |
| 1.75 | 1.625 | NaN | NaN | NaN |
| 2 | 1.875 | NaN | NaN | NaN |
| 2.25 | 2.125 | NaN | NaN | NaN |
| 2.5 | 2.375 | NaN | NaN | NaN |
| 2.75 | 2.625 | NaN | NaN | NaN |
| 3 | 2.875 | NaN | NaN | NaN |
| 3.25 | 3.125 | NaN | NaN | NaN |
| 3.5 | 3.375 | NaN | NaN | NaN |
| 3.75 | 3.625 | NaN | NaN | NaN |
| 4 | 3.875 | NaN | NaN | NaN |
| >4.0 | 4.25 | NaN | NaN | NaN |

| **Percentiles** | |
|---|---|
| **1** | -4.500 |
| **5** | -4.500 |
| **16** | -4.500 |
| **25** | -4.500 |
| **50** | -4.500 |
| **75** | -4.500 |
| **84** | -4.500 |
| **95** | -4.500 |
| **99** | -4.500 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | NaN | NaN |
| Standard Deviation | NaN | NaN |
| Skewness | NaN | |
| Kurtosis | NaN | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -4.500 | -4.500 |
| Standard Deviation | 0.000 | 0.000 |
| Skewness (1) | NaN | NaN |
| Skewness (2) | NaN | |
| Kurtosis | NaN | NaN |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1830+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.617 mm** |
| **STD** | **0.583 mm** |
| **Skewness** | **0.352** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.20 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.72 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.3 |

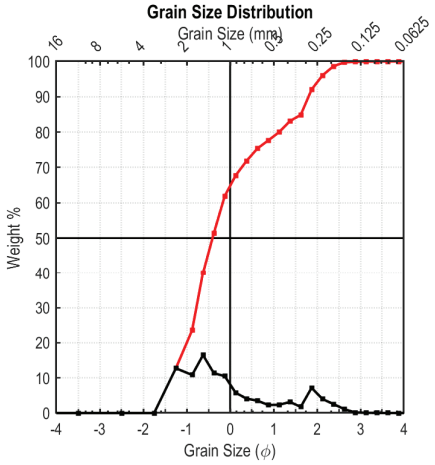
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.76 | 0.72 | 0.72 |
| -0.75 | -0.875 | 0.65 | 0.62 | 1.34 |
| -0.5 | -0.625 | 2.36 | 2.24 | 3.58 |
| -0.25 | -0.375 | 4.64 | 4.41 | 7.99 |
| 0 | -0.125 | 11.26 | 10.70 | 18.70 |
| 0.25 | 0.125 | 12.87 | 12.23 | 30.93 |
| 0.5 | 0.375 | 15.61 | 14.84 | 45.77 |
| 0.75 | 0.625 | 15.41 | 14.65 | 60.42 |
| 1 | 0.875 | 8.76 | 8.33 | 68.75 |
| 1.25 | 1.125 | 6.70 | 6.37 | 75.11 |
| 1.5 | 1.375 | 6.84 | 6.50 | 81.62 |
| 1.75 | 1.625 | 3.27 | 3.11 | 84.72 |
| 2 | 1.875 | 10.15 | 9.65 | 94.37 |
| 2.25 | 2.125 | 3.80 | 3.61 | 97.98 |
| 2.5 | 2.375 | 1.54 | 1.46 | 99.45 |
| 2.75 | 2.625 | 0.45 | 0.43 | 99.88 |
| 3 | 2.875 | 0.06 | 0.06 | 99.93 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.96 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.080 |
| **5** | -0.545 |
| **16** | -0.190 |
| **25** | 0.005 |
| **50** | 0.445 |
| **75** | 1.120 |
| **84** | 1.565 |
| **95** | 1.920 |
| **99** | 2.300 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.696 | 0.617 |
| Standard Deviation | 0.778 | 0.583 |
| Skewness | 0.352 | |
| Kurtosis | 2.576 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.687 | 0.607 |
| Standard Deviation | 0.878 | 0.812 |
| Skewness (1) | 0.276 | 0.237 |
| Skewness (2) | 0.276 | |
| Kurtosis | 0.405 | 0.906 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1830+00** |
| **Sample** | **Swash** |
| **Mean** | **0.954 mm** |
| **STD** | **0.466 mm** |
| **Skewness** | **0.811** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Fine Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 95.31 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 12.74 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 17.2 |

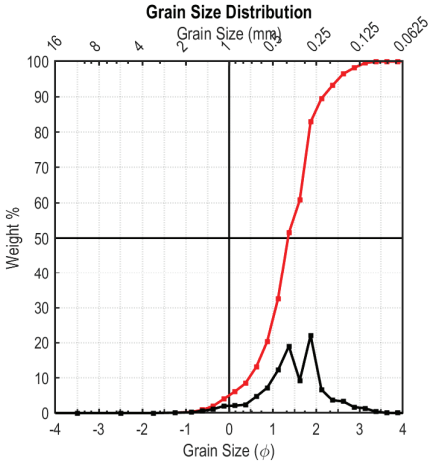
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 12.14 | 12.74 | 12.74 |
| -0.75 | -0.875 | 10.33 | 10.84 | 23.58 |
| -0.5 | -0.625 | 15.71 | 16.48 | 40.06 |
| -0.25 | -0.375 | 10.81 | 11.34 | 51.40 |
| 0 | -0.125 | 10.01 | 10.50 | 61.90 |
| 0.25 | 0.125 | 5.52 | 5.79 | 67.69 |
| 0.5 | 0.375 | 3.92 | 4.11 | 71.81 |
| 0.75 | 0.625 | 3.36 | 3.53 | 75.33 |
| 1 | 0.875 | 2.19 | 2.30 | 77.63 |
| 1.25 | 1.125 | 2.22 | 2.33 | 79.96 |
| 1.5 | 1.375 | 3.00 | 3.15 | 83.11 |
| 1.75 | 1.625 | 1.68 | 1.76 | 84.87 |
| 2 | 1.875 | 6.84 | 7.18 | 92.05 |
| 2.25 | 2.125 | 3.80 | 3.99 | 96.03 |
| 2.5 | 2.375 | 2.45 | 2.57 | 98.60 |
| 2.75 | 2.625 | 1.07 | 1.12 | 99.73 |
| 3 | 2.875 | 0.15 | 0.16 | 99.88 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.710 |
| **5** | -1.555 |
| **16** | -1.135 |
| **25** | -0.855 |
| **50** | -0.405 |
| **75** | 0.600 |
| **84** | 1.500 |
| **95** | 2.060 |
| **99** | 2.465 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.068 | 0.954 |
| Standard Deviation | 1.102 | 0.466 |
| Skewness | 0.811 | |
| Kurtosis | 2.494 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.183 | -0.013 |
| Standard Deviation | 1.317 | 1.206 |
| Skewness (1) | 0.446 | 0.405 |
| Skewness (2) | 0.499 | |
| Kurtosis | 0.372 | 1.018 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1840+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.359 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **-0.364** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.47 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.9 |

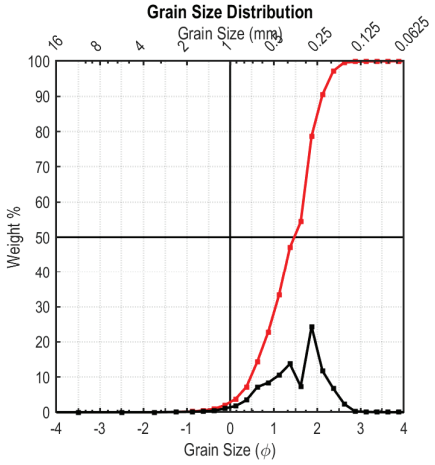
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.28 |
| -0.5 | -0.625 | 0.64 | 0.61 | 0.89 |
| -0.25 | -0.375 | 1.12 | 1.06 | 1.95 |
| 0 | -0.125 | 2.13 | 2.02 | 3.97 |
| 0.25 | 0.125 | 2.19 | 2.08 | 6.05 |
| 0.5 | 0.375 | 2.53 | 2.40 | 8.45 |
| 0.75 | 0.625 | 4.95 | 4.69 | 13.14 |
| 1 | 0.875 | 7.58 | 7.19 | 20.33 |
| 1.25 | 1.125 | 12.85 | 12.18 | 32.51 |
| 1.5 | 1.375 | 20.05 | 19.01 | 51.52 |
| 1.75 | 1.625 | 9.72 | 9.22 | 60.74 |
| 2 | 1.875 | 23.32 | 22.11 | 82.85 |
| 2.25 | 2.125 | 7.01 | 6.65 | 89.49 |
| 2.5 | 2.375 | 3.86 | 3.66 | 93.15 |
| 2.75 | 2.625 | 3.49 | 3.31 | 96.46 |
| 3 | 2.875 | 1.80 | 1.71 | 98.17 |
| 3.25 | 3.125 | 1.43 | 1.36 | 99.53 |
| 3.5 | 3.375 | 0.43 | 0.41 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.600 |
| **5** | 0.000 |
| **16** | 0.725 |
| **25** | 0.970 |
| **50** | 1.355 |
| **75** | 1.785 |
| **84** | 1.920 |
| **95** | 2.515 |
| **99** | 3.030 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.476 | 0.359 |
| Standard Deviation | 0.710 | 0.611 |
| Skewness | -0.364 | |
| Kurtosis | 3.811 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.323 | 1.333 |
| Standard Deviation | 0.597 | 0.680 |
| Skewness (1) | -0.054 | -0.066 |
| Skewness (2) | -0.163 | |
| Kurtosis | 1.105 | 1.265 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1840+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.355 mm** |
| **STD** | **0.637 mm** |
| **Skewness** | **-0.577** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.26 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

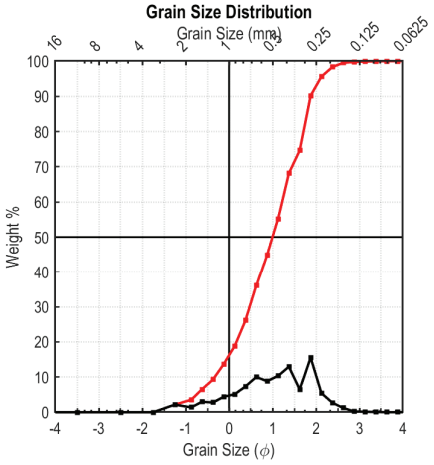
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.14 | 0.13 | 0.21 |
| -0.5 | -0.625 | 0.31 | 0.29 | 0.50 |
| -0.25 | -0.375 | 0.45 | 0.43 | 0.93 |
| 0 | -0.125 | 1.13 | 1.07 | 2.00 |
| 0.25 | 0.125 | 1.85 | 1.76 | 3.76 |
| 0.5 | 0.375 | 3.62 | 3.44 | 7.20 |
| 0.75 | 0.625 | 7.54 | 7.16 | 14.36 |
| 1 | 0.875 | 8.83 | 8.39 | 22.75 |
| 1.25 | 1.125 | 11.11 | 10.55 | 33.31 |
| 1.5 | 1.375 | 14.46 | 13.74 | 47.05 |
| 1.75 | 1.625 | 7.72 | 7.33 | 54.38 |
| 2 | 1.875 | 25.62 | 24.34 | 78.72 |
| 2.25 | 2.125 | 12.38 | 11.76 | 90.48 |
| 2.5 | 2.375 | 7.09 | 6.74 | 97.22 |
| 2.75 | 2.625 | 2.50 | 2.38 | 99.59 |
| 3 | 2.875 | 0.25 | 0.24 | 99.83 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.93 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | 0.215 |
| **16** | 0.675 |
| **25** | 0.930 |
| **50** | 1.475 |
| **75** | 1.835 |
| **84** | 1.985 |
| **95** | 2.295 |
| **99** | 2.565 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.494 | 0.355 |
| Standard Deviation | 0.652 | 0.637 |
| Skewness | -0.577 | |
| Kurtosis | 3.199 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.330 | 1.378 |
| Standard Deviation | 0.655 | 0.643 |
| Skewness (1) | -0.221 | -0.216 |
| Skewness (2) | -0.336 | |
| Kurtosis | 0.588 | 0.942 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1840+00** |
| **Sample** | **Swash** |
| **Mean** | **0.494 mm** |
| **STD** | **0.546 mm** |
| **Skewness** | **-0.481** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.25 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.15 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.8 |

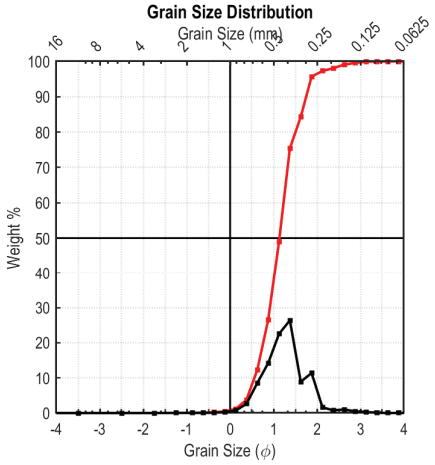
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.18 | 2.15 | 2.15 |
| -0.75 | -0.875 | 1.40 | 1.38 | 3.54 |
| -0.5 | -0.625 | 3.01 | 2.97 | 6.51 |
| -0.25 | -0.375 | 2.80 | 2.77 | 9.27 |
| 0 | -0.125 | 4.44 | 4.39 | 13.66 |
| 0.25 | 0.125 | 5.17 | 5.11 | 18.77 |
| 0.5 | 0.375 | 7.40 | 7.31 | 26.07 |
| 0.75 | 0.625 | 10.12 | 10.00 | 36.07 |
| 1 | 0.875 | 8.93 | 8.82 | 44.89 |
| 1.25 | 1.125 | 10.46 | 10.33 | 55.22 |
| 1.5 | 1.375 | 13.11 | 12.95 | 68.17 |
| 1.75 | 1.625 | 6.56 | 6.48 | 74.65 |
| 2 | 1.875 | 15.74 | 15.55 | 90.19 |
| 2.25 | 2.125 | 5.49 | 5.42 | 95.61 |
| 2.5 | 2.375 | 2.73 | 2.70 | 98.31 |
| 2.75 | 2.625 | 1.23 | 1.21 | 99.53 |
| 3 | 2.875 | 0.23 | 0.23 | 99.75 |
| 3.25 | 3.125 | 0.14 | 0.14 | 99.89 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.520 |
| **5** | -0.750 |
| **16** | -0.010 |
| **25** | 0.340 |
| **50** | 1.000 |
| **75** | 1.630 |
| **84** | 1.775 |
| **95** | 2.095 |
| **99** | 2.515 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.017 | 0.494 |
| Standard Deviation | 0.874 | 0.546 |
| Skewness | -0.481 | |
| Kurtosis | 2.810 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.883 | 0.922 |
| Standard Deviation | 0.892 | 0.877 |
| Skewness (1) | -0.132 | -0.181 |
| Skewness (2) | -0.367 | |
| Kurtosis | 0.594 | 0.904 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1850+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.415 mm** |
| **STD** | **0.717 mm** |
| **Skewness** | **0.406** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.3 |

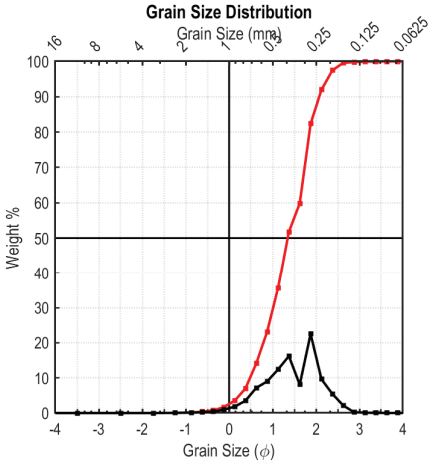
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.07 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.11 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.20 |
| 0 | -0.125 | 0.28 | 0.27 | 0.47 |
| 0.25 | 0.125 | 0.73 | 0.69 | 1.16 |
| 0.5 | 0.375 | 2.72 | 2.59 | 3.74 |
| 0.75 | 0.625 | 8.99 | 8.54 | 12.29 |
| 1 | 0.875 | 14.94 | 14.20 | 26.49 |
| 1.25 | 1.125 | 23.70 | 22.52 | 49.01 |
| 1.5 | 1.375 | 27.76 | 26.38 | 75.39 |
| 1.75 | 1.625 | 9.37 | 8.91 | 84.30 |
| 2 | 1.875 | 11.99 | 11.40 | 95.69 |
| 2.25 | 2.125 | 1.69 | 1.61 | 97.30 |
| 2.5 | 2.375 | 0.82 | 0.78 | 98.08 |
| 2.75 | 2.625 | 1.06 | 1.01 | 99.09 |
| 3 | 2.875 | 0.53 | 0.50 | 99.59 |
| 3.25 | 3.125 | 0.33 | 0.31 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.070 |
| **5** | 0.410 |
| **16** | 0.690 |
| **25** | 0.850 |
| **50** | 1.135 |
| **75** | 1.370 |
| **84** | 1.615 |
| **95** | 1.860 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.268 | 0.415 |
| Standard Deviation | 0.479 | 0.717 |
| Skewness | 0.406 | |
| Kurtosis | 4.944 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.152 | 1.147 |
| Standard Deviation | 0.462 | 0.451 |
| Skewness (1) | 0.038 | 0.019 |
| Skewness (2) | 0.000 | |
| Kurtosis | 0.568 | 1.143 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1850+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.365 mm** |
| **STD** | **0.648 mm** |
| **Skewness** | **-0.428** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.34 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

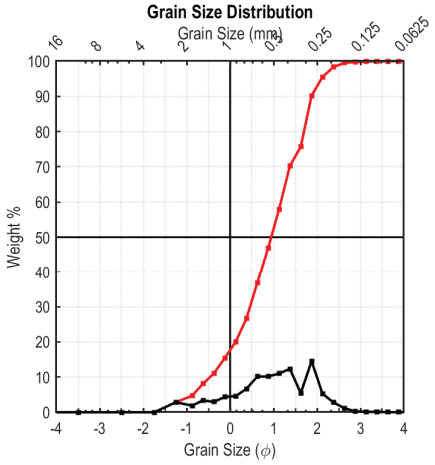
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.15 |
| -0.5 | -0.625 | 0.22 | 0.21 | 0.36 |
| -0.25 | -0.375 | 0.37 | 0.35 | 0.71 |
| 0 | -0.125 | 1.02 | 0.97 | 1.68 |
| 0.25 | 0.125 | 1.89 | 1.79 | 3.47 |
| 0.5 | 0.375 | 3.69 | 3.50 | 6.98 |
| 0.75 | 0.625 | 7.56 | 7.18 | 14.15 |
| 1 | 0.875 | 9.48 | 9.00 | 23.15 |
| 1.25 | 1.125 | 13.05 | 12.39 | 35.54 |
| 1.5 | 1.375 | 17.08 | 16.21 | 51.76 |
| 1.75 | 1.625 | 8.51 | 8.08 | 59.83 |
| 2 | 1.875 | 23.72 | 22.52 | 82.35 |
| 2.25 | 2.125 | 10.13 | 9.62 | 91.97 |
| 2.5 | 2.375 | 5.76 | 5.47 | 97.44 |
| 2.75 | 2.625 | 2.27 | 2.15 | 99.59 |
| 3 | 2.875 | 0.24 | 0.23 | 99.82 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.92 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.300 |
| **5** | 0.235 |
| **16** | 0.675 |
| **25** | 0.910 |
| **50** | 1.350 |
| **75** | 1.795 |
| **84** | 1.920 |
| **95** | 2.265 |
| **99** | 2.555 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.453 | 0.365 |
| Standard Deviation | 0.627 | 0.648 |
| Skewness | -0.428 | |
| Kurtosis | 3.142 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.297 | 1.315 |
| Standard Deviation | 0.623 | 0.619 |
| Skewness (1) | -0.084 | -0.091 |
| Skewness (2) | -0.161 | |
| Kurtosis | 0.631 | 0.940 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1850+00** |
| **Sample** | **Swash** |
| **Mean** | **0.509 mm** |
| **STD** | **0.535 mm** |
| **Skewness** | **-0.473** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.85 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 2.84 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.6 |

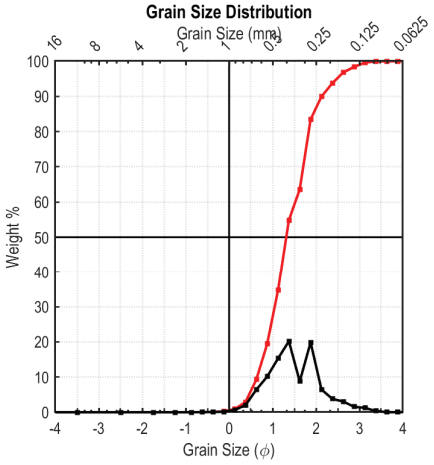
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.89 | 2.84 | 2.84 |
| -0.75 | -0.875 | 1.91 | 1.88 | 4.71 |
| -0.5 | -0.625 | 3.45 | 3.39 | 8.10 |
| -0.25 | -0.375 | 2.97 | 2.92 | 11.02 |
| 0 | -0.125 | 4.46 | 4.38 | 15.40 |
| 0.25 | 0.125 | 4.66 | 4.58 | 19.97 |
| 0.5 | 0.375 | 6.78 | 6.66 | 26.63 |
| 0.75 | 0.625 | 10.34 | 10.15 | 36.78 |
| 1 | 0.875 | 10.33 | 10.14 | 46.92 |
| 1.25 | 1.125 | 11.19 | 10.99 | 57.91 |
| 1.5 | 1.375 | 12.56 | 12.33 | 70.24 |
| 1.75 | 1.625 | 5.54 | 5.44 | 75.68 |
| 2 | 1.875 | 14.78 | 14.51 | 90.19 |
| 2.25 | 2.125 | 5.41 | 5.31 | 95.50 |
| 2.5 | 2.375 | 2.84 | 2.79 | 98.29 |
| 2.75 | 2.625 | 1.22 | 1.20 | 99.49 |
| 3 | 2.875 | 0.23 | 0.23 | 99.72 |
| 3.25 | 3.125 | 0.16 | 0.16 | 99.87 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.575 |
| **5** | -0.855 |
| **16** | -0.090 |
| **25** | 0.315 |
| **50** | 0.945 |
| **75** | 1.595 |
| **84** | 1.770 |
| **95** | 2.100 |
| **99** | 2.525 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.974 | 0.509 |
| Standard Deviation | 0.902 | 0.535 |
| Skewness | -0.473 | |
| Kurtosis | 2.820 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.840 | 0.875 |
| Standard Deviation | 0.930 | 0.913 |
| Skewness (1) | -0.113 | -0.166 |
| Skewness (2) | -0.347 | |
| Kurtosis | 0.589 | 0.946 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1860+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.352 mm** |
| **STD** | **0.660 mm** |
| **Skewness** | **0.375** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.26 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

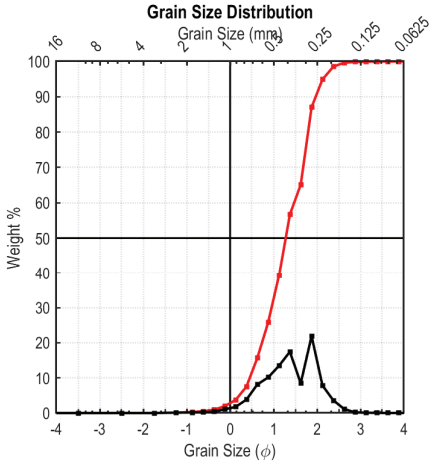
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.04 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.10 |
| 0 | -0.125 | 0.17 | 0.16 | 0.26 |
| 0.25 | 0.125 | 0.67 | 0.64 | 0.89 |
| 0.5 | 0.375 | 2.08 | 1.98 | 2.87 |
| 0.75 | 0.625 | 6.74 | 6.40 | 9.27 |
| 1 | 0.875 | 10.66 | 10.13 | 19.40 |
| 1.25 | 1.125 | 16.07 | 15.27 | 34.67 |
| 1.5 | 1.375 | 21.24 | 20.18 | 54.85 |
| 1.75 | 1.625 | 9.22 | 8.76 | 63.60 |
| 2 | 1.875 | 20.90 | 19.86 | 83.46 |
| 2.25 | 2.125 | 6.81 | 6.47 | 89.93 |
| 2.5 | 2.375 | 4.00 | 3.80 | 93.73 |
| 2.75 | 2.625 | 3.22 | 3.06 | 96.79 |
| 3 | 2.875 | 1.63 | 1.55 | 98.34 |
| 3.25 | 3.125 | 1.31 | 1.24 | 99.58 |
| 3.5 | 3.375 | 0.37 | 0.35 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.140 |
| **5** | 0.460 |
| **16** | 0.790 |
| **25** | 0.965 |
| **50** | 1.315 |
| **75** | 1.770 |
| **84** | 1.895 |
| **95** | 2.480 |
| **99** | 3.010 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.506 | 0.352 |
| Standard Deviation | 0.599 | 0.660 |
| Skewness | 0.375 | |
| Kurtosis | 3.338 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.343 | 1.333 |
| Standard Deviation | 0.552 | 0.582 |
| Skewness (1) | 0.050 | 0.102 |
| Skewness (2) | 0.281 | |
| Kurtosis | 0.828 | 1.028 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1860+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.384 mm** |
| **STD** | **0.654 mm** |
| **Skewness** | **-0.444** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.24 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

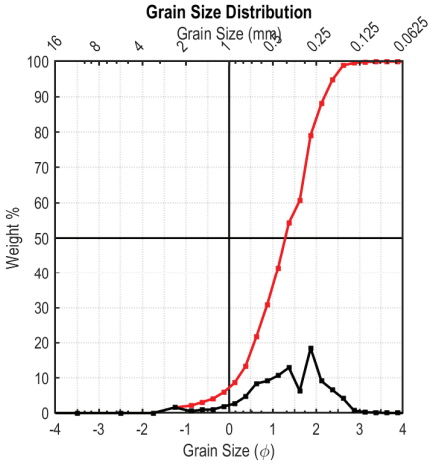
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.12 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.28 |
| -0.5 | -0.625 | 0.25 | 0.24 | 0.51 |
| -0.25 | -0.375 | 0.41 | 0.39 | 0.90 |
| 0 | -0.125 | 1.12 | 1.06 | 1.97 |
| 0.25 | 0.125 | 1.83 | 1.74 | 3.71 |
| 0.5 | 0.375 | 4.01 | 3.81 | 7.52 |
| 0.75 | 0.625 | 8.55 | 8.12 | 15.64 |
| 1 | 0.875 | 10.66 | 10.13 | 25.77 |
| 1.25 | 1.125 | 14.15 | 13.45 | 39.22 |
| 1.5 | 1.375 | 18.36 | 17.45 | 56.66 |
| 1.75 | 1.625 | 8.92 | 8.48 | 65.14 |
| 2 | 1.875 | 23.05 | 21.90 | 87.04 |
| 2.25 | 2.125 | 8.27 | 7.86 | 94.90 |
| 2.5 | 2.375 | 3.79 | 3.60 | 98.50 |
| 2.75 | 2.625 | 1.21 | 1.15 | 99.65 |
| 3 | 2.875 | 0.19 | 0.18 | 99.83 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.92 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.350 |
| **5** | 0.210 |
| **16** | 0.635 |
| **25** | 0.855 |
| **50** | 1.280 |
| **75** | 1.740 |
| **84** | 1.840 |
| **95** | 2.130 |
| **99** | 2.485 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.382 | 0.384 |
| Standard Deviation | 0.613 | 0.654 |
| Skewness | -0.444 | |
| Kurtosis | 3.448 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.237 | 1.252 |
| Standard Deviation | 0.603 | 0.592 |
| Skewness (1) | -0.071 | -0.093 |
| Skewness (2) | -0.183 | |
| Kurtosis | 0.593 | 0.889 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1860+00** |
| **Sample** | **Swash** |
| **Mean** | **0.391 mm** |
| **STD** | **0.566 mm** |
| **Skewness** | **-0.680** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.26 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 1.59 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

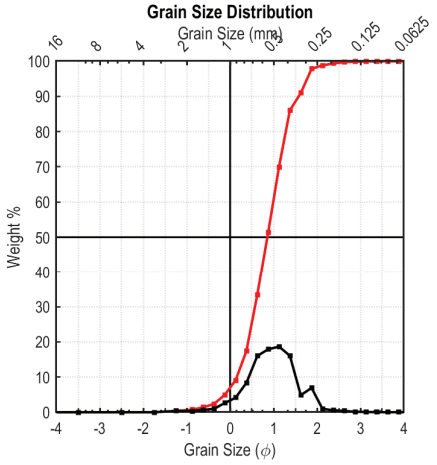
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.67 | 1.59 | 1.59 |
| -0.75 | -0.875 | 0.56 | 0.53 | 2.12 |
| -0.5 | -0.625 | 0.99 | 0.94 | 3.06 |
| -0.25 | -0.375 | 1.05 | 1.00 | 4.06 |
| 0 | -0.125 | 1.96 | 1.86 | 5.92 |
| 0.25 | 0.125 | 2.81 | 2.67 | 8.59 |
| 0.5 | 0.375 | 4.92 | 4.67 | 13.26 |
| 0.75 | 0.625 | 8.83 | 8.39 | 21.65 |
| 1 | 0.875 | 9.60 | 9.12 | 30.77 |
| 1.25 | 1.125 | 11.21 | 10.65 | 41.42 |
| 1.5 | 1.375 | 13.60 | 12.92 | 54.34 |
| 1.75 | 1.625 | 6.59 | 6.26 | 60.60 |
| 2 | 1.875 | 19.43 | 18.46 | 79.06 |
| 2.25 | 2.125 | 9.58 | 9.10 | 88.16 |
| 2.5 | 2.375 | 6.94 | 6.59 | 94.76 |
| 2.75 | 2.625 | 4.34 | 4.12 | 98.88 |
| 3 | 2.875 | 0.73 | 0.69 | 99.57 |
| 3.25 | 3.125 | 0.26 | 0.25 | 99.82 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.435 |
| **5** | -0.250 |
| **16** | 0.455 |
| **25** | 0.715 |
| **50** | 1.290 |
| **75** | 1.820 |
| **84** | 2.010 |
| **95** | 2.390 |
| **99** | 2.670 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.354 | 0.391 |
| Standard Deviation | 0.822 | 0.566 |
| Skewness | -0.680 | |
| Kurtosis | 3.639 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.232 | 1.252 |
| Standard Deviation | 0.777 | 0.789 |
| Skewness (1) | -0.074 | -0.120 |
| Skewness (2) | -0.283 | |
| Kurtosis | 0.698 | 0.979 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1870+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.512 mm** |
| **STD** | **0.670 mm** |
| **Skewness** | **-0.165** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.38 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

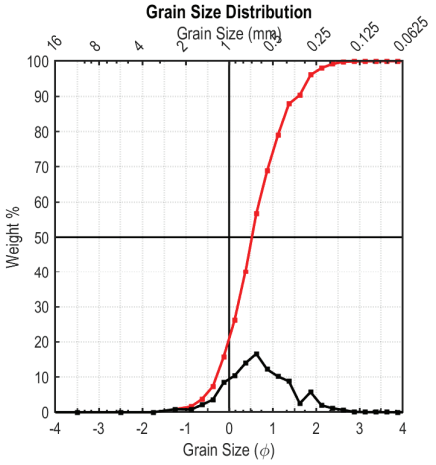
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.40 | 0.38 | 0.38 |
| -0.75 | -0.875 | 0.35 | 0.33 | 0.71 |
| -0.5 | -0.625 | 0.70 | 0.67 | 1.38 |
| -0.25 | -0.375 | 1.00 | 0.95 | 2.33 |
| 0 | -0.125 | 2.75 | 2.62 | 4.94 |
| 0.25 | 0.125 | 4.34 | 4.13 | 9.07 |
| 0.5 | 0.375 | 8.79 | 8.36 | 17.43 |
| 0.75 | 0.625 | 16.83 | 16.00 | 33.43 |
| 1 | 0.875 | 18.81 | 17.89 | 51.32 |
| 1.25 | 1.125 | 19.62 | 18.66 | 69.98 |
| 1.5 | 1.375 | 16.89 | 16.06 | 86.04 |
| 1.75 | 1.625 | 5.13 | 4.88 | 90.92 |
| 2 | 1.875 | 7.25 | 6.89 | 97.81 |
| 2.25 | 2.125 | 1.03 | 0.98 | 98.79 |
| 2.5 | 2.375 | 0.57 | 0.54 | 99.33 |
| 2.75 | 2.625 | 0.39 | 0.37 | 99.71 |
| 3 | 2.875 | 0.14 | 0.13 | 99.84 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.92 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.94 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.765 |
| **5** | -0.120 |
| **16** | 0.330 |
| **25** | 0.495 |
| **50** | 0.855 |
| **75** | 1.205 |
| **84** | 1.345 |
| **95** | 1.775 |
| **99** | 2.220 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.967 | 0.512 |
| Standard Deviation | 0.577 | 0.670 |
| Skewness | -0.165 | |
| Kurtosis | 4.512 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.837 | 0.843 |
| Standard Deviation | 0.507 | 0.541 |
| Skewness (1) | -0.034 | -0.032 |
| Skewness (2) | -0.054 | |
| Kurtosis | 0.867 | 1.094 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1870+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.618 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **0.217** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.86 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 11.6 |

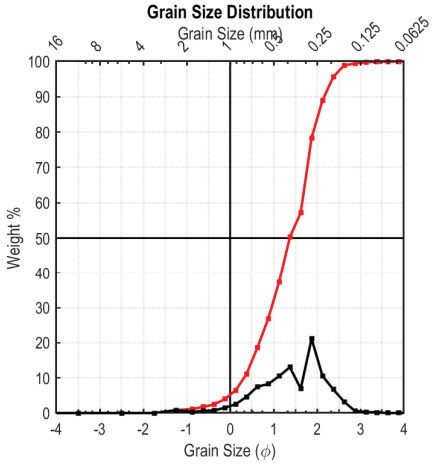
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.90 | 0.86 | 0.86 |
| -0.75 | -0.875 | 0.80 | 0.76 | 1.62 |
| -0.5 | -0.625 | 2.24 | 2.13 | 3.75 |
| -0.25 | -0.375 | 3.76 | 3.58 | 7.33 |
| 0 | -0.125 | 8.87 | 8.44 | 15.77 |
| 0.25 | 0.125 | 10.91 | 10.38 | 26.15 |
| 0.5 | 0.375 | 14.64 | 13.93 | 40.09 |
| 0.75 | 0.625 | 17.47 | 16.63 | 56.71 |
| 1 | 0.875 | 12.80 | 12.18 | 68.90 |
| 1.25 | 1.125 | 10.67 | 10.16 | 79.05 |
| 1.5 | 1.375 | 9.24 | 8.79 | 87.85 |
| 1.75 | 1.625 | 2.63 | 2.50 | 90.35 |
| 2 | 1.875 | 6.01 | 5.72 | 96.07 |
| 2.25 | 2.125 | 2.07 | 1.97 | 98.04 |
| 2.5 | 2.375 | 1.20 | 1.14 | 99.18 |
| 2.75 | 2.625 | 0.67 | 0.64 | 99.82 |
| 3 | 2.875 | 0.11 | 0.10 | 99.92 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.180 |
| **5** | -0.540 |
| **16** | -0.120 |
| **25** | 0.095 |
| **50** | 0.525 |
| **75** | 1.025 |
| **84** | 1.265 |
| **95** | 1.830 |
| **99** | 2.335 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.695 | 0.618 |
| Standard Deviation | 0.712 | 0.611 |
| Skewness | 0.217 | |
| Kurtosis | 3.173 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.573 | 0.557 |
| Standard Deviation | 0.693 | 0.705 |
| Skewness (1) | 0.069 | 0.085 |
| Skewness (2) | 0.173 | |
| Kurtosis | 0.711 | 1.044 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.372 mm** |
| **STD** | **0.592 mm** |
| **Skewness** | **-0.646** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.36 |
| % finer than 0.0625 mm (dry) | 0.07 |
| % granule (2-4 mm) | 0.84 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

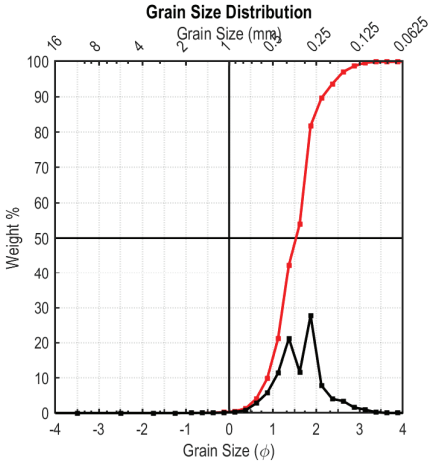
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.88 | 0.84 | 0.84 |
| -0.75 | -0.875 | 0.29 | 0.28 | 1.11 |
| -0.5 | -0.625 | 0.65 | 0.62 | 1.73 |
| -0.25 | -0.375 | 0.75 | 0.71 | 2.44 |
| 0 | -0.125 | 1.59 | 1.51 | 3.95 |
| 0.25 | 0.125 | 2.62 | 2.49 | 6.44 |
| 0.5 | 0.375 | 4.86 | 4.61 | 11.05 |
| 0.75 | 0.625 | 7.90 | 7.50 | 18.55 |
| 1 | 0.875 | 8.69 | 8.25 | 26.79 |
| 1.25 | 1.125 | 11.03 | 10.47 | 37.26 |
| 1.5 | 1.375 | 13.74 | 13.04 | 50.30 |
| 1.75 | 1.625 | 7.28 | 6.91 | 57.21 |
| 2 | 1.875 | 22.29 | 21.16 | 78.37 |
| 2.25 | 2.125 | 11.15 | 10.58 | 88.95 |
| 2.5 | 2.375 | 7.06 | 6.70 | 95.65 |
| 2.75 | 2.625 | 3.39 | 3.22 | 98.87 |
| 3 | 2.875 | 0.59 | 0.56 | 99.43 |
| 3.25 | 3.125 | 0.34 | 0.32 | 99.75 |
| 3.5 | 3.375 | 0.16 | 0.15 | 99.91 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.92 |
| 4 | 3.875 | 0.01 | 0.01 | 99.93 |
| >4.0 | 4.25 | 0.07 | 0.07 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.025 |
| **5** | -0.020 |
| **16** | 0.540 |
| **25** | 0.820 |
| **50** | 1.370 |
| **75** | 1.835 |
| **84** | 2.010 |
| **95** | 2.350 |
| **99** | 2.685 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.428 | 0.372 |
| Standard Deviation | 0.757 | 0.592 |
| Skewness | -0.646 | |
| Kurtosis | 3.728 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.275 | 1.307 |
| Standard Deviation | 0.735 | 0.727 |
| Skewness (1) | -0.129 | -0.151 |
| Skewness (2) | -0.279 | |
| Kurtosis | 0.612 | 0.957 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1880+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.321 mm** |
| **STD** | **0.691 mm** |
| **Skewness** | **0.260** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.42 |
| % finer than 0.0625 mm (dry) | 0.09 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

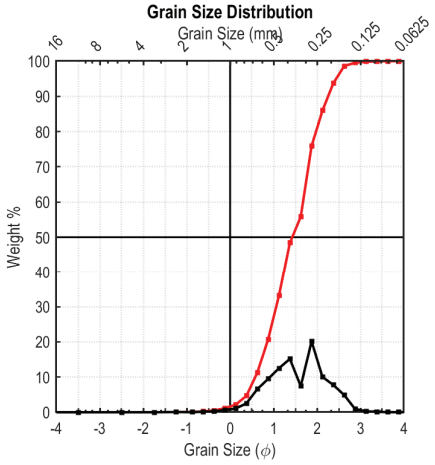
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.05 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.09 |
| 0 | -0.125 | 0.12 | 0.11 | 0.21 |
| 0.25 | 0.125 | 0.31 | 0.29 | 0.50 |
| 0.5 | 0.375 | 0.80 | 0.76 | 1.26 |
| 0.75 | 0.625 | 2.96 | 2.81 | 4.07 |
| 1 | 0.875 | 6.02 | 5.71 | 9.78 |
| 1.25 | 1.125 | 11.96 | 11.35 | 21.13 |
| 1.5 | 1.375 | 22.39 | 21.24 | 42.36 |
| 1.75 | 1.625 | 12.28 | 11.65 | 54.01 |
| 2 | 1.875 | 29.28 | 27.77 | 81.79 |
| 2.25 | 2.125 | 8.25 | 7.83 | 89.61 |
| 2.5 | 2.375 | 4.25 | 4.03 | 93.64 |
| 2.75 | 2.625 | 3.58 | 3.40 | 97.04 |
| 3 | 2.875 | 1.69 | 1.60 | 98.64 |
| 3.25 | 3.125 | 1.04 | 0.99 | 99.63 |
| 3.5 | 3.375 | 0.24 | 0.23 | 99.86 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.89 |
| 4 | 3.875 | 0.02 | 0.02 | 99.91 |
| >4.0 | 4.25 | 0.10 | 0.09 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.290 |
| **5** | 0.665 |
| **16** | 1.010 |
| **25** | 1.170 |
| **50** | 1.540 |
| **75** | 1.815 |
| **84** | 1.945 |
| **95** | 2.475 |
| **99** | 2.965 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.641 | 0.321 |
| Standard Deviation | 0.533 | 0.691 |
| Skewness | 0.260 | |
| Kurtosis | 4.127 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.477 | 1.498 |
| Standard Deviation | 0.468 | 0.508 |
| Skewness (1) | -0.134 | -0.050 |
| Skewness (2) | 0.064 | |
| Kurtosis | 0.936 | 1.150 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1880+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.343 mm** |
| **STD** | **0.639 mm** |
| **Skewness** | **-0.226** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.15 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

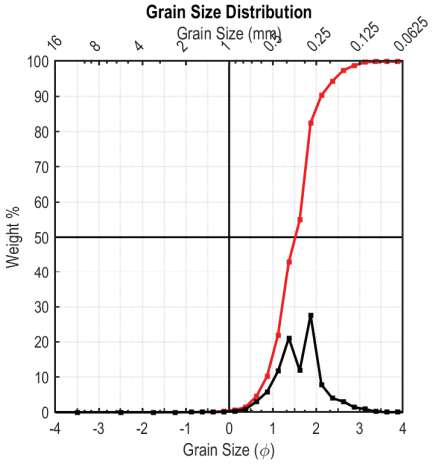
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.09 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.24 |
| -0.25 | -0.375 | 0.27 | 0.26 | 0.49 |
| 0 | -0.125 | 0.65 | 0.62 | 1.11 |
| 0.25 | 0.125 | 1.09 | 1.04 | 2.15 |
| 0.5 | 0.375 | 2.65 | 2.52 | 4.67 |
| 0.75 | 0.625 | 6.91 | 6.57 | 11.24 |
| 1 | 0.875 | 9.97 | 9.48 | 20.72 |
| 1.25 | 1.125 | 13.16 | 12.52 | 33.24 |
| 1.5 | 1.375 | 15.94 | 15.16 | 48.40 |
| 1.75 | 1.625 | 7.79 | 7.41 | 55.81 |
| 2 | 1.875 | 21.16 | 20.12 | 75.93 |
| 2.25 | 2.125 | 10.54 | 10.02 | 85.95 |
| 2.5 | 2.375 | 8.16 | 7.76 | 93.71 |
| 2.75 | 2.625 | 5.14 | 4.89 | 98.60 |
| 3 | 2.875 | 0.99 | 0.94 | 99.54 |
| 3.25 | 3.125 | 0.30 | 0.29 | 99.83 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.170 |
| **5** | 0.390 |
| **16** | 0.750 |
| **25** | 0.960 |
| **50** | 1.430 |
| **75** | 1.865 |
| **84** | 2.075 |
| **95** | 2.440 |
| **99** | 2.730 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.546 | 0.343 |
| Standard Deviation | 0.646 | 0.639 |
| Skewness | -0.226 | |
| Kurtosis | 2.959 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.413 | 1.418 |
| Standard Deviation | 0.663 | 0.642 |
| Skewness (1) | -0.026 | -0.021 |
| Skewness (2) | -0.023 | |
| Kurtosis | 0.547 | 0.928 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.324 mm** |
| **STD** | **0.691 mm** |
| **Skewness** | **0.196** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.34 |
| % finer than 0.0625 mm (dry) | 0.10 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.7 |

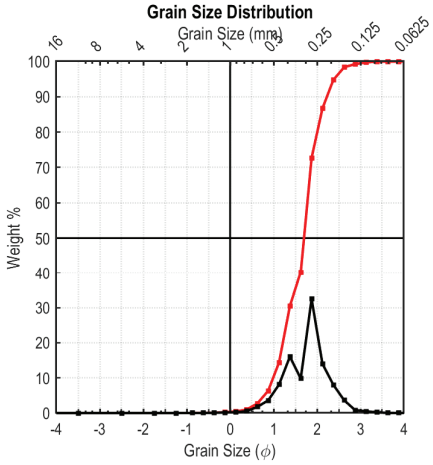
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.09 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.14 |
| 0 | -0.125 | 0.13 | 0.12 | 0.27 |
| 0.25 | 0.125 | 0.36 | 0.34 | 0.61 |
| 0.5 | 0.375 | 0.89 | 0.84 | 1.45 |
| 0.75 | 0.625 | 3.17 | 3.01 | 4.46 |
| 1 | 0.875 | 6.13 | 5.82 | 10.28 |
| 1.25 | 1.125 | 12.29 | 11.67 | 21.95 |
| 1.5 | 1.375 | 22.20 | 21.07 | 43.02 |
| 1.75 | 1.625 | 12.50 | 11.87 | 54.89 |
| 2 | 1.875 | 29.07 | 27.60 | 82.49 |
| 2.25 | 2.125 | 8.23 | 7.81 | 90.30 |
| 2.5 | 2.375 | 4.19 | 3.98 | 94.28 |
| 2.75 | 2.625 | 3.24 | 3.08 | 97.35 |
| 3 | 2.875 | 1.49 | 1.41 | 98.77 |
| 3.25 | 3.125 | 0.96 | 0.91 | 99.68 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.86 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.88 |
| 4 | 3.875 | 0.02 | 0.02 | 99.90 |
| >4.0 | 4.25 | 0.11 | 0.10 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.240 |
| **5** | 0.650 |
| **16** | 1.000 |
| **25** | 1.160 |
| **50** | 1.520 |
| **75** | 1.805 |
| **84** | 1.925 |
| **95** | 2.435 |
| **99** | 2.940 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.626 | 0.324 |
| Standard Deviation | 0.532 | 0.691 |
| Skewness | 0.196 | |
| Kurtosis | 4.263 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.462 | 1.482 |
| Standard Deviation | 0.462 | 0.502 |
| Skewness (1) | -0.124 | -0.050 |
| Skewness (2) | 0.049 | |
| Kurtosis | 0.930 | 1.134 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1890+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.296 mm** |
| **STD** | **0.710 mm** |
| **Skewness** | **-0.258** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.29 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.7 |

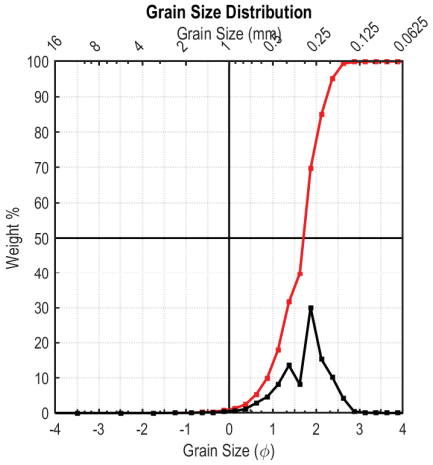
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.03 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.09 |
| 0 | -0.125 | 0.17 | 0.16 | 0.25 |
| 0.25 | 0.125 | 0.21 | 0.20 | 0.45 |
| 0.5 | 0.375 | 0.55 | 0.52 | 0.97 |
| 0.75 | 0.625 | 1.83 | 1.74 | 2.71 |
| 1 | 0.875 | 3.79 | 3.60 | 6.31 |
| 1.25 | 1.125 | 8.50 | 8.07 | 14.38 |
| 1.5 | 1.375 | 16.89 | 16.04 | 30.42 |
| 1.75 | 1.625 | 10.32 | 9.80 | 40.22 |
| 2 | 1.875 | 34.19 | 32.47 | 72.69 |
| 2.25 | 2.125 | 14.75 | 14.01 | 86.70 |
| 2.5 | 2.375 | 8.47 | 8.04 | 94.75 |
| 2.75 | 2.625 | 3.81 | 3.62 | 98.37 |
| 3 | 2.875 | 0.90 | 0.85 | 99.22 |
| 3.25 | 3.125 | 0.53 | 0.50 | 99.72 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.380 |
| **5** | 0.785 |
| **16** | 1.150 |
| **25** | 1.290 |
| **50** | 1.700 |
| **75** | 1.915 |
| **84** | 2.075 |
| **95** | 2.390 |
| **99** | 2.810 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.757 | 0.296 |
| Standard Deviation | 0.494 | 0.710 |
| Skewness | -0.258 | |
| Kurtosis | 4.104 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.613 | 1.642 |
| Standard Deviation | 0.463 | 0.474 |
| Skewness (1) | -0.189 | -0.165 |
| Skewness (2) | -0.243 | |
| Kurtosis | 0.735 | 1.052 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1890+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.302 mm** |
| **STD** | **0.684 mm** |
| **Skewness** | **-0.787** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

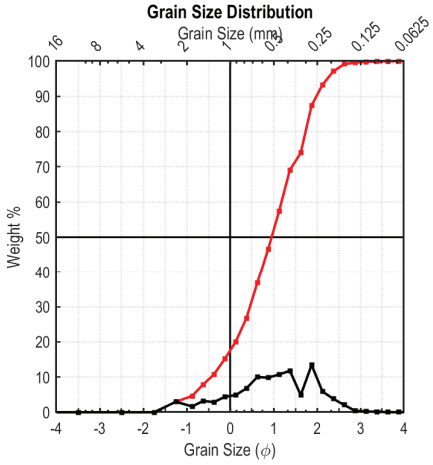
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.08 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.21 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.34 |
| 0 | -0.125 | 0.41 | 0.39 | 0.73 |
| 0.25 | 0.125 | 0.58 | 0.55 | 1.28 |
| 0.5 | 0.375 | 1.22 | 1.16 | 2.44 |
| 0.75 | 0.625 | 3.02 | 2.87 | 5.32 |
| 1 | 0.875 | 4.85 | 4.61 | 9.93 |
| 1.25 | 1.125 | 8.49 | 8.07 | 18.00 |
| 1.5 | 1.375 | 14.26 | 13.56 | 31.56 |
| 1.75 | 1.625 | 8.57 | 8.15 | 39.71 |
| 2 | 1.875 | 31.53 | 29.98 | 69.69 |
| 2.25 | 2.125 | 16.08 | 15.29 | 84.98 |
| 2.5 | 2.375 | 10.71 | 10.18 | 95.17 |
| 2.75 | 2.625 | 4.44 | 4.22 | 99.39 |
| 3 | 2.875 | 0.46 | 0.44 | 99.83 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.93 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.005 |
| **5** | 0.600 |
| **16** | 1.065 |
| **25** | 1.255 |
| **50** | 1.710 |
| **75** | 1.960 |
| **84** | 2.110 |
| **95** | 2.370 |
| **99** | 2.600 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.729 | 0.302 |
| Standard Deviation | 0.549 | 0.684 |
| Skewness | -0.787 | |
| Kurtosis | 4.286 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.587 | 1.628 |
| Standard Deviation | 0.522 | 0.529 |
| Skewness (1) | -0.234 | -0.244 |
| Skewness (2) | -0.431 | |
| Kurtosis | 0.694 | 1.029 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1890+00** |
| **Sample** | **Swash** |
| **Mean** | **0.499 mm** |
| **STD** | **0.525 mm** |
| **Skewness** | **-0.400** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 98.70 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 2.99 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.6 |

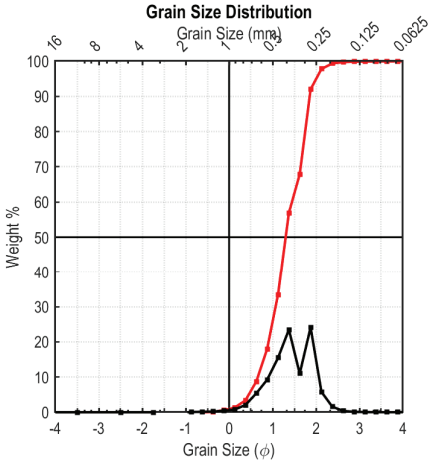
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.95 | 2.99 | 2.99 |
| -0.75 | -0.875 | 1.62 | 1.64 | 4.63 |
| -0.5 | -0.625 | 3.17 | 3.21 | 7.84 |
| -0.25 | -0.375 | 2.84 | 2.88 | 10.72 |
| 0 | -0.125 | 4.33 | 4.39 | 15.11 |
| 0.25 | 0.125 | 4.80 | 4.86 | 19.97 |
| 0.5 | 0.375 | 6.69 | 6.78 | 26.75 |
| 0.75 | 0.625 | 9.88 | 10.01 | 36.76 |
| 1 | 0.875 | 9.70 | 9.83 | 46.59 |
| 1.25 | 1.125 | 10.59 | 10.73 | 57.32 |
| 1.5 | 1.375 | 11.63 | 11.78 | 69.10 |
| 1.75 | 1.625 | 4.79 | 4.85 | 73.95 |
| 2 | 1.875 | 13.27 | 13.44 | 87.40 |
| 2.25 | 2.125 | 5.81 | 5.89 | 93.28 |
| 2.5 | 2.375 | 3.76 | 3.81 | 97.09 |
| 2.75 | 2.625 | 2.04 | 2.07 | 99.16 |
| 3 | 2.875 | 0.41 | 0.42 | 99.57 |
| 3.25 | 3.125 | 0.24 | 0.24 | 99.82 |
| 3.5 | 3.375 | 0.12 | 0.12 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.585 |
| **5** | -0.845 |
| **16** | -0.080 |
| **25** | 0.310 |
| **50** | 0.955 |
| **75** | 1.645 |
| **84** | 1.810 |
| **95** | 2.240 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.001 | 0.499 |
| Standard Deviation | 0.928 | 0.525 |
| Skewness | -0.400 | |
| Kurtosis | 2.767 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.865 | 0.895 |
| Standard Deviation | 0.945 | 0.940 |
| Skewness (1) | -0.095 | -0.131 |
| Skewness (2) | -0.272 | |
| Kurtosis | 0.632 | 0.947 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1900+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.371 mm** |
| **STD** | **0.717 mm** |
| **Skewness** | **-0.026** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.02 |
| % finer than 0.0625 mm (dry) | 0.06 |
| % granule (2-4 mm) | -0.25 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

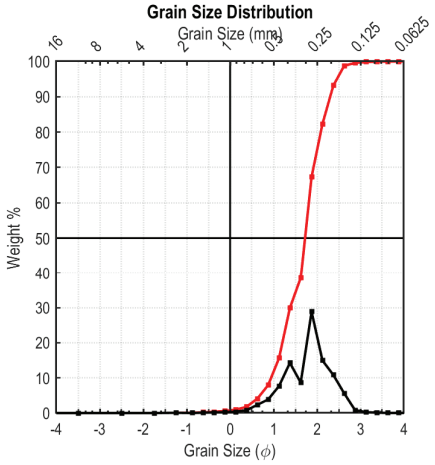
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | -0.26 | -0.25 | -0.25 |
| -0.75 | -0.875 | 0.06 | 0.06 | -0.19 |
| -0.5 | -0.625 | 0.14 | 0.13 | -0.06 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.13 |
| 0 | -0.125 | 0.45 | 0.43 | 0.56 |
| 0.25 | 0.125 | 0.79 | 0.75 | 1.31 |
| 0.5 | 0.375 | 2.16 | 2.06 | 3.37 |
| 0.75 | 0.625 | 5.64 | 5.37 | 8.74 |
| 1 | 0.875 | 9.71 | 9.25 | 17.99 |
| 1.25 | 1.125 | 16.23 | 15.45 | 33.44 |
| 1.5 | 1.375 | 24.64 | 23.46 | 56.90 |
| 1.75 | 1.625 | 11.54 | 10.99 | 67.89 |
| 2 | 1.875 | 25.32 | 24.11 | 92.00 |
| 2.25 | 2.125 | 6.07 | 5.78 | 97.78 |
| 2.5 | 2.375 | 1.65 | 1.57 | 99.35 |
| 2.75 | 2.625 | 0.40 | 0.38 | 99.73 |
| 3 | 2.875 | 0.12 | 0.11 | 99.85 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.90 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.92 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.93 |
| 4 | 3.875 | 0.01 | 0.01 | 99.94 |
| >4.0 | 4.25 | 0.06 | 0.06 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.020 |
| **5** | 0.450 |
| **16** | 0.820 |
| **25** | 0.990 |
| **50** | 1.300 |
| **75** | 1.700 |
| **84** | 1.790 |
| **95** | 2.005 |
| **99** | 2.320 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.430 | 0.371 |
| Standard Deviation | 0.481 | 0.717 |
| Skewness | -0.026 | |
| Kurtosis | 2.535 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.305 | 1.303 |
| Standard Deviation | 0.485 | 0.478 |
| Skewness (1) | 0.010 | -0.041 |
| Skewness (2) | -0.149 | |
| Kurtosis | 0.603 | 0.898 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1900+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.293 mm** |
| **STD** | **0.686 mm** |
| **Skewness** | **-0.660** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.06 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

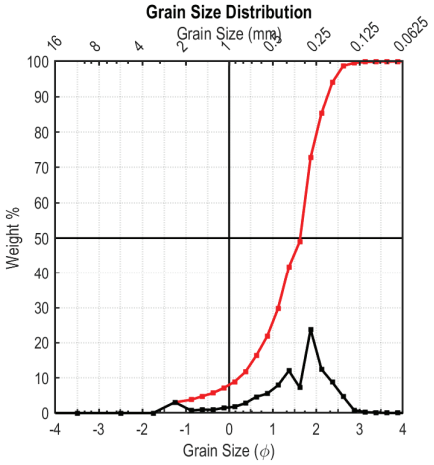
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.08 |
| -0.5 | -0.625 | 0.11 | 0.10 | 0.18 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.34 |
| 0 | -0.125 | 0.27 | 0.26 | 0.60 |
| 0.25 | 0.125 | 0.36 | 0.34 | 0.94 |
| 0.5 | 0.375 | 0.85 | 0.81 | 1.75 |
| 0.75 | 0.625 | 2.44 | 2.32 | 4.07 |
| 1 | 0.875 | 4.07 | 3.87 | 7.95 |
| 1.25 | 1.125 | 8.05 | 7.66 | 15.61 |
| 1.5 | 1.375 | 14.99 | 14.27 | 29.88 |
| 1.75 | 1.625 | 9.09 | 8.65 | 38.53 |
| 2 | 1.875 | 30.28 | 28.82 | 67.35 |
| 2.25 | 2.125 | 15.70 | 14.94 | 82.30 |
| 2.5 | 2.375 | 11.40 | 10.85 | 93.15 |
| 2.75 | 2.625 | 5.89 | 5.61 | 98.75 |
| 3 | 2.875 | 0.87 | 0.83 | 99.58 |
| 3.25 | 3.125 | 0.26 | 0.25 | 99.83 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.145 |
| **5** | 0.685 |
| **16** | 1.130 |
| **25** | 1.290 |
| **50** | 1.725 |
| **75** | 2.005 |
| **84** | 2.165 |
| **95** | 2.460 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.773 | 0.293 |
| Standard Deviation | 0.543 | 0.686 |
| Skewness | -0.660 | |
| Kurtosis | 4.475 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.647 | 1.673 |
| Standard Deviation | 0.518 | 0.528 |
| Skewness (1) | -0.150 | -0.161 |
| Skewness (2) | -0.295 | |
| Kurtosis | 0.715 | 1.017 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1900+00** |
| **Sample** | **Swash** |
| **Mean** | **0.357 mm** |
| **STD** | **0.545 mm** |
| **Skewness** | **-1.245** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.25 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 3.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

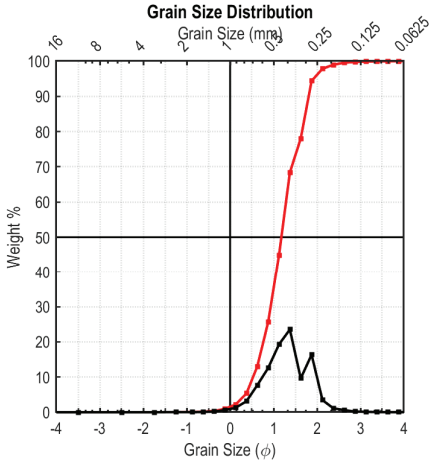
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.22 | 3.06 | 3.06 |
| -0.75 | -0.875 | 0.76 | 0.72 | 3.78 |
| -0.5 | -0.625 | 1.02 | 0.97 | 4.75 |
| -0.25 | -0.375 | 0.97 | 0.92 | 5.67 |
| 0 | -0.125 | 1.54 | 1.46 | 7.14 |
| 0.25 | 0.125 | 1.87 | 1.78 | 8.91 |
| 0.5 | 0.375 | 2.95 | 2.80 | 11.71 |
| 0.75 | 0.625 | 4.87 | 4.63 | 16.34 |
| 1 | 0.875 | 5.78 | 5.49 | 21.83 |
| 1.25 | 1.125 | 8.31 | 7.90 | 29.73 |
| 1.5 | 1.375 | 12.66 | 12.03 | 41.76 |
| 1.75 | 1.625 | 7.65 | 7.27 | 49.03 |
| 2 | 1.875 | 25.04 | 23.79 | 72.82 |
| 2.25 | 2.125 | 13.12 | 12.47 | 85.28 |
| 2.5 | 2.375 | 9.21 | 8.75 | 94.03 |
| 2.75 | 2.625 | 4.94 | 4.69 | 98.73 |
| 3 | 2.875 | 0.88 | 0.84 | 99.56 |
| 3.25 | 3.125 | 0.28 | 0.27 | 99.83 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.585 |
| **5** | -0.555 |
| **16** | 0.605 |
| **25** | 0.975 |
| **50** | 1.635 |
| **75** | 1.920 |
| **84** | 2.100 |
| **95** | 2.425 |
| **99** | 2.705 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.487 | 0.357 |
| Standard Deviation | 0.875 | 0.545 |
| Skewness | -1.245 | |
| Kurtosis | 4.655 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.352 | 1.447 |
| Standard Deviation | 0.747 | 0.825 |
| Skewness (1) | -0.378 | -0.424 |
| Skewness (2) | -0.936 | |
| Kurtosis | 0.993 | 1.292 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1910+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.406 mm** |
| **STD** | **0.702 mm** |
| **Skewness** | **-0.075** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.21 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

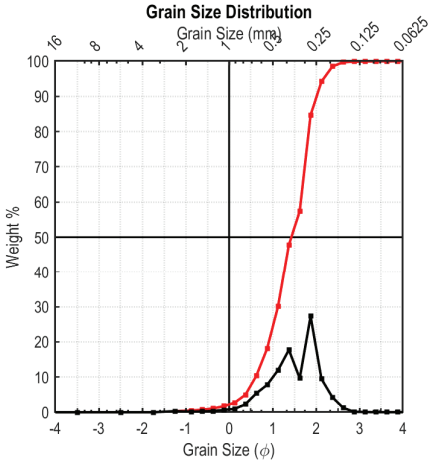
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.07 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.15 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.34 |
| 0 | -0.125 | 0.62 | 0.59 | 0.93 |
| 0.25 | 0.125 | 1.34 | 1.27 | 2.21 |
| 0.5 | 0.375 | 3.28 | 3.12 | 5.32 |
| 0.75 | 0.625 | 8.10 | 7.70 | 13.02 |
| 1 | 0.875 | 13.23 | 12.57 | 25.60 |
| 1.25 | 1.125 | 20.30 | 19.29 | 44.89 |
| 1.5 | 1.375 | 24.74 | 23.51 | 68.41 |
| 1.75 | 1.625 | 10.12 | 9.62 | 78.02 |
| 2 | 1.875 | 17.21 | 16.36 | 94.38 |
| 2.25 | 2.125 | 3.64 | 3.46 | 97.84 |
| 2.5 | 2.375 | 1.18 | 1.12 | 98.96 |
| 2.75 | 2.625 | 0.63 | 0.60 | 99.56 |
| 3 | 2.875 | 0.21 | 0.20 | 99.76 |
| 3.25 | 3.125 | 0.13 | 0.12 | 99.89 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.110 |
| **5** | 0.350 |
| **16** | 0.685 |
| **25** | 0.865 |
| **50** | 1.180 |
| **75** | 1.545 |
| **84** | 1.715 |
| **95** | 1.920 |
| **99** | 2.390 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.302 | 0.406 |
| Standard Deviation | 0.510 | 0.702 |
| Skewness | -0.075 | |
| Kurtosis | 4.081 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.200 | 1.193 |
| Standard Deviation | 0.515 | 0.495 |
| Skewness (1) | 0.039 | -0.009 |
| Skewness (2) | -0.087 | |
| Kurtosis | 0.524 | 0.946 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1910+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.355 mm** |
| **STD** | **0.665 mm** |
| **Skewness** | **-0.846** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.15 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.31 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

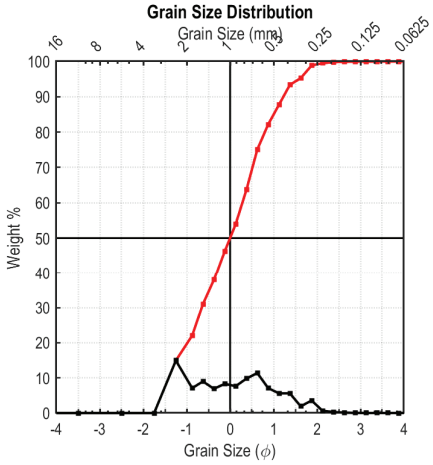
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.33 | 0.31 | 0.31 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.48 |
| -0.5 | -0.625 | 0.27 | 0.26 | 0.73 |
| -0.25 | -0.375 | 0.35 | 0.33 | 1.07 |
| 0 | -0.125 | 0.70 | 0.67 | 1.73 |
| 0.25 | 0.125 | 1.02 | 0.97 | 2.70 |
| 0.5 | 0.375 | 2.38 | 2.26 | 4.96 |
| 0.75 | 0.625 | 5.64 | 5.36 | 10.33 |
| 1 | 0.875 | 8.19 | 7.79 | 18.12 |
| 1.25 | 1.125 | 12.56 | 11.94 | 30.06 |
| 1.5 | 1.375 | 18.65 | 17.74 | 47.80 |
| 1.75 | 1.625 | 10.12 | 9.62 | 57.42 |
| 2 | 1.875 | 28.69 | 27.28 | 84.71 |
| 2.25 | 2.125 | 9.96 | 9.47 | 94.18 |
| 2.5 | 2.375 | 4.50 | 4.28 | 98.46 |
| 2.75 | 2.625 | 1.32 | 1.26 | 99.71 |
| 3 | 2.875 | 0.14 | 0.13 | 99.85 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.91 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.425 |
| **5** | 0.375 |
| **16** | 0.805 |
| **25** | 1.020 |
| **50** | 1.430 |
| **75** | 1.785 |
| **84** | 1.870 |
| **95** | 2.175 |
| **99** | 2.485 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.494 | 0.355 |
| Standard Deviation | 0.588 | 0.665 |
| Skewness | -0.846 | |
| Kurtosis | 4.888 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.337 | 1.368 |
| Standard Deviation | 0.533 | 0.539 |
| Skewness (1) | -0.174 | -0.173 |
| Skewness (2) | -0.291 | |
| Kurtosis | 0.690 | 0.964 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1910+00** |
| **Sample** | **Swash** |
| **Mean** | **0.931 mm** |
| **STD** | **0.527 mm** |
| **Skewness** | **0.197** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 82.88 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 14.94 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 18.2 |

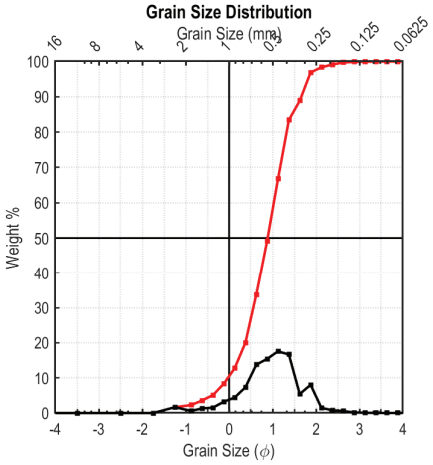
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 12.38 | 14.94 | 14.94 |
| -0.75 | -0.875 | 5.88 | 7.09 | 22.03 |
| -0.5 | -0.625 | 7.46 | 9.00 | 31.03 |
| -0.25 | -0.375 | 5.70 | 6.88 | 37.91 |
| 0 | -0.125 | 6.90 | 8.33 | 46.24 |
| 0.25 | 0.125 | 6.33 | 7.64 | 53.87 |
| 0.5 | 0.375 | 8.12 | 9.80 | 63.67 |
| 0.75 | 0.625 | 9.44 | 11.39 | 75.06 |
| 1 | 0.875 | 5.88 | 7.09 | 82.15 |
| 1.25 | 1.125 | 4.65 | 5.61 | 87.77 |
| 1.5 | 1.375 | 4.64 | 5.60 | 93.36 |
| 1.75 | 1.625 | 1.58 | 1.91 | 95.27 |
| 2 | 1.875 | 2.96 | 3.57 | 98.84 |
| 2.25 | 2.125 | 0.54 | 0.65 | 99.49 |
| 2.5 | 2.375 | 0.24 | 0.29 | 99.78 |
| 2.75 | 2.625 | 0.10 | 0.12 | 99.90 |
| 3 | 2.875 | 0.03 | 0.04 | 99.94 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.95 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.715 |
| **5** | -1.585 |
| **16** | -1.195 |
| **25** | -0.795 |
| **50** | 0.000 |
| **75** | 0.625 |
| **84** | 0.955 |
| **95** | 1.590 |
| **99** | 1.935 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.104 | 0.931 |
| Standard Deviation | 0.925 | 0.527 |
| Skewness | 0.197 | |
| Kurtosis | 2.271 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -0.120 | -0.080 |
| Standard Deviation | 1.075 | 1.019 |
| Skewness (1) | -0.112 | -0.055 |
| Skewness (2) | 0.002 | |
| Kurtosis | 0.477 | 0.916 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1920+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.518 mm** |
| **STD** | **0.624 mm** |
| **Skewness** | **-0.568** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.12 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.66 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.5 |

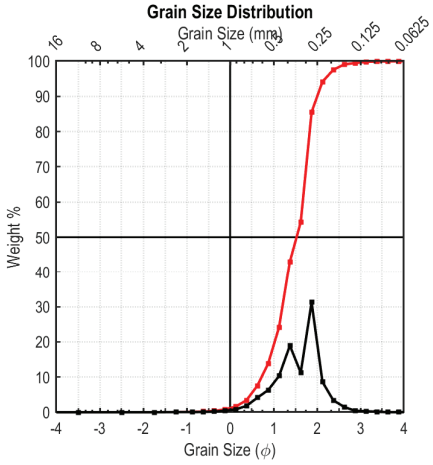
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.74 | 1.66 | 1.66 |
| -0.75 | -0.875 | 0.64 | 0.61 | 2.26 |
| -0.5 | -0.625 | 1.37 | 1.30 | 3.57 |
| -0.25 | -0.375 | 1.61 | 1.53 | 5.10 |
| 0 | -0.125 | 3.37 | 3.21 | 8.30 |
| 0.25 | 0.125 | 4.62 | 4.39 | 12.70 |
| 0.5 | 0.375 | 7.71 | 7.33 | 20.03 |
| 0.75 | 0.625 | 14.46 | 13.76 | 33.79 |
| 1 | 0.875 | 16.22 | 15.43 | 49.22 |
| 1.25 | 1.125 | 18.46 | 17.56 | 66.78 |
| 1.5 | 1.375 | 17.51 | 16.66 | 83.44 |
| 1.75 | 1.625 | 5.69 | 5.41 | 88.85 |
| 2 | 1.875 | 8.44 | 8.03 | 96.88 |
| 2.25 | 2.125 | 1.52 | 1.45 | 98.33 |
| 2.5 | 2.375 | 0.84 | 0.80 | 99.12 |
| 2.75 | 2.625 | 0.59 | 0.56 | 99.69 |
| 3 | 2.875 | 0.17 | 0.16 | 99.85 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.92 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.95 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.450 |
| **5** | -0.390 |
| **16** | 0.235 |
| **25** | 0.465 |
| **50** | 0.885 |
| **75** | 1.250 |
| **84** | 1.400 |
| **95** | 1.815 |
| **99** | 2.335 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.949 | 0.518 |
| Standard Deviation | 0.680 | 0.624 |
| Skewness | -0.568 | |
| Kurtosis | 4.326 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.817 | 0.840 |
| Standard Deviation | 0.583 | 0.625 |
| Skewness (1) | -0.116 | -0.136 |
| Skewness (2) | -0.296 | |
| Kurtosis | 0.893 | 1.151 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1920+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.338 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **-0.502** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.09 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.3 |

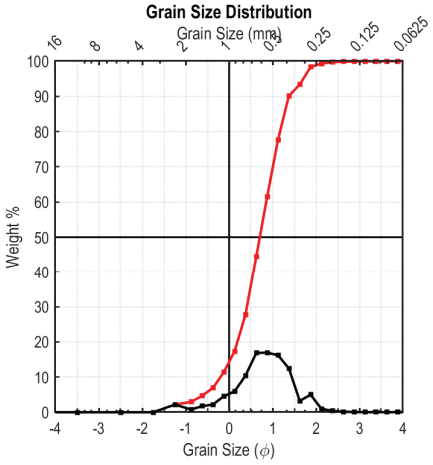
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.10 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.18 |
| -0.25 | -0.375 | 0.19 | 0.18 | 0.36 |
| 0 | -0.125 | 0.44 | 0.42 | 0.78 |
| 0.25 | 0.125 | 0.85 | 0.81 | 1.59 |
| 0.5 | 0.375 | 1.90 | 1.81 | 3.40 |
| 0.75 | 0.625 | 4.34 | 4.13 | 7.53 |
| 1 | 0.875 | 6.61 | 6.29 | 13.82 |
| 1.25 | 1.125 | 10.82 | 10.30 | 24.11 |
| 1.5 | 1.375 | 19.90 | 18.94 | 43.05 |
| 1.75 | 1.625 | 11.82 | 11.25 | 54.30 |
| 2 | 1.875 | 32.83 | 31.24 | 85.54 |
| 2.25 | 2.125 | 9.06 | 8.62 | 94.16 |
| 2.5 | 2.375 | 3.56 | 3.39 | 97.54 |
| 2.75 | 2.625 | 1.59 | 1.51 | 99.06 |
| 3 | 2.875 | 0.44 | 0.42 | 99.48 |
| 3.25 | 3.125 | 0.32 | 0.30 | 99.78 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.91 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.055 |
| **5** | 0.470 |
| **16** | 0.930 |
| **25** | 1.135 |
| **50** | 1.530 |
| **75** | 1.790 |
| **84** | 1.865 |
| **95** | 2.185 |
| **99** | 2.615 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.563 | 0.338 |
| Standard Deviation | 0.534 | 0.690 |
| Skewness | -0.502 | |
| Kurtosis | 4.502 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.397 | 1.442 |
| Standard Deviation | 0.468 | 0.494 |
| Skewness (1) | -0.283 | -0.260 |
| Skewness (2) | -0.433 | |
| Kurtosis | 0.834 | 1.073 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **1920+00** |
| **Sample** | **Swash** |
| **Mean** | **0.583 mm** |
| **STD** | **0.629 mm** |
| **Skewness** | **-0.534** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.14 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 2.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.0 |

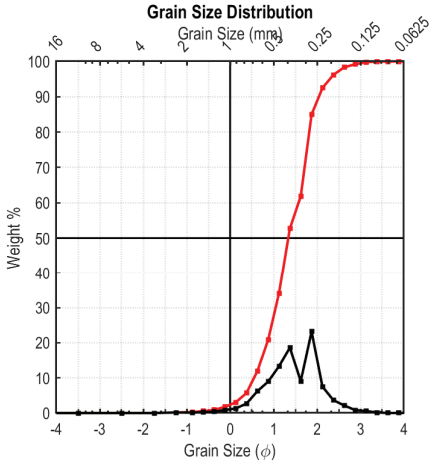
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.28 | 2.17 | 2.17 |
| -0.75 | -0.875 | 0.82 | 0.78 | 2.95 |
| -0.5 | -0.625 | 1.81 | 1.72 | 4.67 |
| -0.25 | -0.375 | 2.31 | 2.20 | 6.87 |
| 0 | -0.125 | 4.72 | 4.49 | 11.36 |
| 0.25 | 0.125 | 6.25 | 5.94 | 17.30 |
| 0.5 | 0.375 | 10.91 | 10.38 | 27.68 |
| 0.75 | 0.625 | 17.72 | 16.85 | 44.53 |
| 1 | 0.875 | 17.81 | 16.94 | 61.47 |
| 1.25 | 1.125 | 17.05 | 16.22 | 77.69 |
| 1.5 | 1.375 | 13.09 | 12.45 | 90.14 |
| 1.75 | 1.625 | 3.39 | 3.22 | 93.36 |
| 2 | 1.875 | 5.23 | 4.97 | 98.34 |
| 2.25 | 2.125 | 1.02 | 0.97 | 99.31 |
| 2.5 | 2.375 | 0.40 | 0.38 | 99.69 |
| 2.75 | 2.625 | 0.18 | 0.17 | 99.86 |
| 3 | 2.875 | 0.05 | 0.05 | 99.90 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.93 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.520 |
| **5** | -0.585 |
| **16** | 0.070 |
| **25** | 0.310 |
| **50** | 0.705 |
| **75** | 1.085 |
| **84** | 1.250 |
| **95** | 1.705 |
| **99** | 2.045 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.780 | 0.583 |
| Standard Deviation | 0.669 | 0.629 |
| Skewness | -0.534 | |
| Kurtosis | 4.178 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.660 | 0.675 |
| Standard Deviation | 0.590 | 0.642 |
| Skewness (1) | -0.076 | -0.101 |
| Skewness (2) | -0.246 | |
| Kurtosis | 0.941 | 1.211 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.363 mm** |
| **STD** | **0.650 mm** |
| **Skewness** | **-0.325** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.16 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.3 |

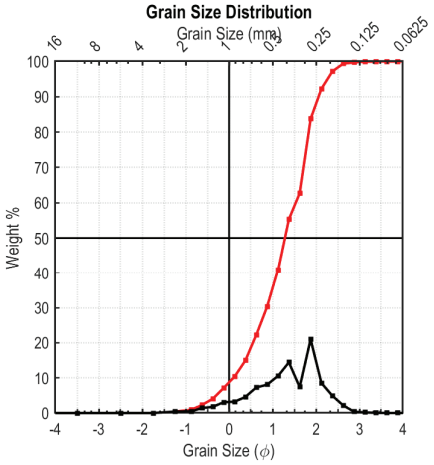
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.16 | 0.16 |
| -0.75 | -0.875 | 0.12 | 0.11 | 0.27 |
| -0.5 | -0.625 | 0.27 | 0.25 | 0.52 |
| -0.25 | -0.375 | 0.38 | 0.36 | 0.88 |
| 0 | -0.125 | 0.88 | 0.84 | 1.72 |
| 0.25 | 0.125 | 1.37 | 1.30 | 3.02 |
| 0.5 | 0.375 | 2.81 | 2.66 | 5.68 |
| 0.75 | 0.625 | 6.52 | 6.19 | 11.87 |
| 1 | 0.875 | 9.42 | 8.95 | 20.82 |
| 1.25 | 1.125 | 14.01 | 13.31 | 34.13 |
| 1.5 | 1.375 | 19.58 | 18.60 | 52.73 |
| 1.75 | 1.625 | 9.55 | 9.07 | 61.81 |
| 2 | 1.875 | 24.39 | 23.17 | 84.98 |
| 2.25 | 2.125 | 7.90 | 7.51 | 92.49 |
| 2.5 | 2.375 | 3.88 | 3.69 | 96.17 |
| 2.75 | 2.625 | 2.27 | 2.16 | 98.34 |
| 3 | 2.875 | 0.90 | 0.85 | 99.19 |
| 3.25 | 3.125 | 0.61 | 0.58 | 99.77 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.340 |
| **5** | 0.310 |
| **16** | 0.740 |
| **25** | 0.955 |
| **50** | 1.340 |
| **75** | 1.765 |
| **84** | 1.865 |
| **95** | 2.295 |
| **99** | 2.820 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.464 | 0.363 |
| Standard Deviation | 0.621 | 0.650 |
| Skewness | -0.325 | |
| Kurtosis | 4.024 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.302 | 1.315 |
| Standard Deviation | 0.562 | 0.582 |
| Skewness (1) | -0.067 | -0.052 |
| Skewness (2) | -0.067 | |
| Kurtosis | 0.764 | 1.004 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.402 mm** |
| **STD** | **0.584 mm** |
| **Skewness** | **-0.635** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.42 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

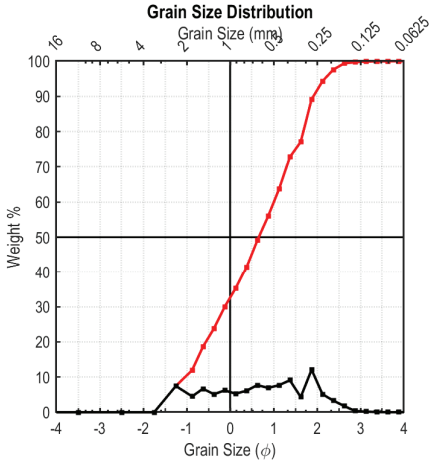
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.44 | 0.42 | 0.42 |
| -0.75 | -0.875 | 0.50 | 0.48 | 0.89 |
| -0.5 | -0.625 | 1.48 | 1.40 | 2.30 |
| -0.25 | -0.375 | 1.86 | 1.77 | 4.07 |
| 0 | -0.125 | 3.24 | 3.08 | 7.15 |
| 0.25 | 0.125 | 3.40 | 3.23 | 10.38 |
| 0.5 | 0.375 | 4.83 | 4.59 | 14.97 |
| 0.75 | 0.625 | 7.67 | 7.29 | 22.26 |
| 1 | 0.875 | 8.48 | 8.06 | 30.32 |
| 1.25 | 1.125 | 11.11 | 10.56 | 40.89 |
| 1.5 | 1.375 | 15.18 | 14.43 | 55.32 |
| 1.75 | 1.625 | 7.78 | 7.39 | 62.71 |
| 2 | 1.875 | 22.10 | 21.01 | 83.72 |
| 2.25 | 2.125 | 8.97 | 8.53 | 92.25 |
| 2.5 | 2.375 | 5.18 | 4.92 | 97.17 |
| 2.75 | 2.625 | 2.29 | 2.18 | 99.35 |
| 3 | 2.875 | 0.40 | 0.38 | 99.73 |
| 3.25 | 3.125 | 0.18 | 0.17 | 99.90 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.855 |
| **5** | -0.300 |
| **16** | 0.410 |
| **25** | 0.710 |
| **50** | 1.285 |
| **75** | 1.770 |
| **84** | 1.885 |
| **95** | 2.265 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.315 | 0.402 |
| Standard Deviation | 0.775 | 0.584 |
| Skewness | -0.635 | |
| Kurtosis | 3.171 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.147 | 1.193 |
| Standard Deviation | 0.737 | 0.757 |
| Skewness (1) | -0.186 | -0.211 |
| Skewness (2) | -0.410 | |
| Kurtosis | 0.739 | 0.992 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.616 mm** |
| **STD** | **0.468 mm** |
| **Skewness** | **-0.155** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 97.29 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 7.45 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 13.0 |

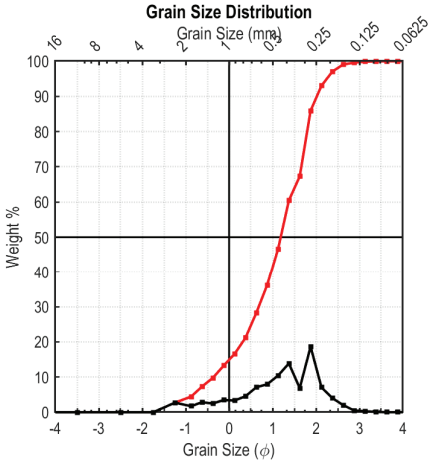
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 7.25 | 7.45 | 7.45 |
| -0.75 | -0.875 | 4.39 | 4.51 | 11.96 |
| -0.5 | -0.625 | 6.51 | 6.69 | 18.65 |
| -0.25 | -0.375 | 4.98 | 5.11 | 23.77 |
| 0 | -0.125 | 6.05 | 6.22 | 29.98 |
| 0.25 | 0.125 | 5.12 | 5.26 | 35.24 |
| 0.5 | 0.375 | 5.95 | 6.12 | 41.36 |
| 0.75 | 0.625 | 7.50 | 7.71 | 49.07 |
| 1 | 0.875 | 6.73 | 6.92 | 55.99 |
| 1.25 | 1.125 | 7.48 | 7.68 | 63.67 |
| 1.5 | 1.375 | 8.85 | 9.09 | 72.76 |
| 1.75 | 1.625 | 4.20 | 4.32 | 77.08 |
| 2 | 1.875 | 11.75 | 12.08 | 89.16 |
| 2.25 | 2.125 | 4.99 | 5.13 | 94.29 |
| 2.5 | 2.375 | 3.21 | 3.30 | 97.59 |
| 2.75 | 2.625 | 1.72 | 1.76 | 99.36 |
| 3 | 2.875 | 0.34 | 0.35 | 99.71 |
| 3.25 | 3.125 | 0.17 | 0.18 | 99.89 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.685 |
| **5** | -1.415 |
| **16** | -0.725 |
| **25** | -0.325 |
| **50** | 0.660 |
| **75** | 1.505 |
| **84** | 1.770 |
| **95** | 2.180 |
| **99** | 2.575 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.699 | 0.616 |
| Standard Deviation | 1.095 | 0.468 |
| Skewness | -0.155 | |
| Kurtosis | 2.015 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.522 | 0.568 |
| Standard Deviation | 1.248 | 1.168 |
| Skewness (1) | -0.110 | -0.132 |
| Skewness (2) | -0.222 | |
| Kurtosis | 0.441 | 0.805 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Jun 16 2022** |
| **Station** | **ALL** |
| **Sample** | **COMP** |
| **Mean** | **0.450 mm** |
| **STD** | **0.528 mm** |
| **Skewness** | **-0.712** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.41 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 2.72 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.3 |

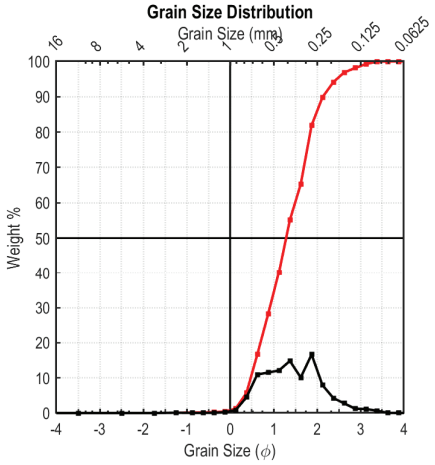
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.78 | 2.72 | 2.72 |
| -0.75 | -0.875 | 1.77 | 1.73 | 4.45 |
| -0.5 | -0.625 | 2.92 | 2.85 | 7.29 |
| -0.25 | -0.375 | 2.54 | 2.48 | 9.77 |
| 0 | -0.125 | 3.56 | 3.47 | 13.25 |
| 0.25 | 0.125 | 3.42 | 3.34 | 16.59 |
| 0.5 | 0.375 | 4.64 | 4.54 | 21.13 |
| 0.75 | 0.625 | 7.28 | 7.11 | 28.23 |
| 1 | 0.875 | 8.13 | 7.94 | 36.17 |
| 1.25 | 1.125 | 10.66 | 10.41 | 46.58 |
| 1.5 | 1.375 | 14.20 | 13.87 | 60.44 |
| 1.75 | 1.625 | 7.02 | 6.85 | 67.30 |
| 2 | 1.875 | 19.08 | 18.64 | 85.93 |
| 2.25 | 2.125 | 7.25 | 7.08 | 93.01 |
| 2.5 | 2.375 | 4.10 | 4.01 | 97.02 |
| 2.75 | 2.625 | 2.08 | 2.03 | 99.05 |
| 3 | 2.875 | 0.52 | 0.51 | 99.56 |
| 3.25 | 3.125 | 0.30 | 0.29 | 99.86 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.03 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.565 |
| **5** | -0.825 |
| **16** | 0.080 |
| **25** | 0.510 |
| **50** | 1.185 |
| **75** | 1.730 |
| **84** | 1.850 |
| **95** | 2.250 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.151 | 0.450 |
| Standard Deviation | 0.920 | 0.528 |
| Skewness | -0.712 | |
| Kurtosis | 3.090 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.965 | 1.038 |
| Standard Deviation | 0.885 | 0.908 |
| Skewness (1) | -0.249 | -0.278 |
| Skewness (2) | -0.534 | |
| Kurtosis | 0.737 | 1.033 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1550+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.368 mm** |
| **STD** | **0.632 mm** |
| **Skewness** | **0.258** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.15 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.8 |

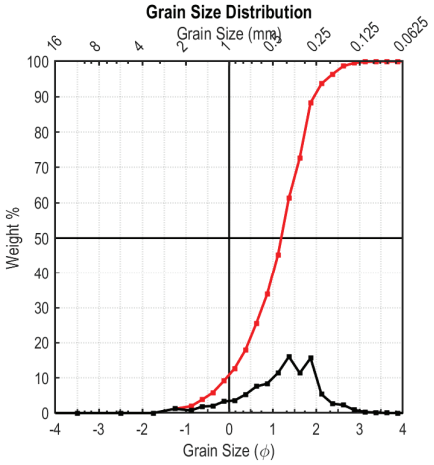
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.09 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.12 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.16 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.24 |
| 0 | -0.125 | 0.20 | 0.19 | 0.43 |
| 0.25 | 0.125 | 0.84 | 0.80 | 1.23 |
| 0.5 | 0.375 | 4.69 | 4.46 | 5.69 |
| 0.75 | 0.625 | 11.54 | 10.97 | 16.66 |
| 1 | 0.875 | 12.11 | 11.52 | 28.18 |
| 1.25 | 1.125 | 12.74 | 12.12 | 40.29 |
| 1.5 | 1.375 | 15.60 | 14.84 | 55.13 |
| 1.75 | 1.625 | 10.64 | 10.12 | 65.25 |
| 2 | 1.875 | 17.52 | 16.66 | 81.91 |
| 2.25 | 2.125 | 8.35 | 7.94 | 89.85 |
| 2.5 | 2.375 | 4.49 | 4.27 | 94.12 |
| 2.75 | 2.625 | 2.90 | 2.76 | 96.88 |
| 3 | 2.875 | 1.30 | 1.24 | 98.12 |
| 3.25 | 3.125 | 1.20 | 1.14 | 99.26 |
| 3.5 | 3.375 | 0.71 | 0.68 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.055 |
| **5** | 0.335 |
| **16** | 0.610 |
| **25** | 0.805 |
| **50** | 1.290 |
| **75** | 1.770 |
| **84** | 1.940 |
| **95** | 2.455 |
| **99** | 3.070 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.441 | 0.368 |
| Standard Deviation | 0.662 | 0.632 |
| Skewness | 0.258 | |
| Kurtosis | 3.087 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.275 | 1.280 |
| Standard Deviation | 0.665 | 0.654 |
| Skewness (1) | -0.023 | 0.038 |
| Skewness (2) | 0.158 | |
| Kurtosis | 0.594 | 0.900 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1550+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.434 mm** |
| **STD** | **0.570 mm** |
| **Skewness** | **-0.602** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.79 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.21 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

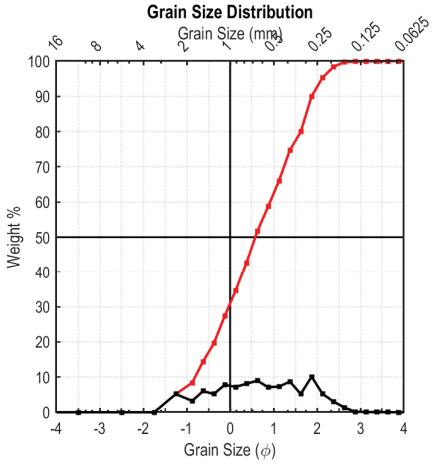
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.27 | 1.21 | 1.21 |
| -0.75 | -0.875 | 0.77 | 0.73 | 1.95 |
| -0.5 | -0.625 | 1.94 | 1.85 | 3.80 |
| -0.25 | -0.375 | 2.11 | 2.01 | 5.81 |
| 0 | -0.125 | 3.44 | 3.28 | 9.09 |
| 0.25 | 0.125 | 3.76 | 3.59 | 12.68 |
| 0.5 | 0.375 | 5.51 | 5.26 | 17.94 |
| 0.75 | 0.625 | 7.92 | 7.56 | 25.50 |
| 1 | 0.875 | 8.76 | 8.36 | 33.86 |
| 1.25 | 1.125 | 11.96 | 11.41 | 45.27 |
| 1.5 | 1.375 | 16.81 | 16.04 | 61.31 |
| 1.75 | 1.625 | 11.92 | 11.38 | 72.69 |
| 2 | 1.875 | 16.39 | 15.64 | 88.33 |
| 2.25 | 2.125 | 5.60 | 5.34 | 93.67 |
| 2.5 | 2.375 | 2.80 | 2.67 | 96.35 |
| 2.75 | 2.625 | 2.41 | 2.30 | 98.64 |
| 3 | 2.875 | 0.95 | 0.91 | 99.55 |
| 3.25 | 3.125 | 0.33 | 0.31 | 99.87 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.335 |
| **5** | -0.475 |
| **16** | 0.285 |
| **25** | 0.610 |
| **50** | 1.200 |
| **75** | 1.660 |
| **84** | 1.805 |
| **95** | 2.250 |
| **99** | 2.725 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.205 | 0.434 |
| Standard Deviation | 0.810 | 0.570 |
| Skewness | -0.602 | |
| Kurtosis | 3.420 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.045 | 1.097 |
| Standard Deviation | 0.760 | 0.793 |
| Skewness (1) | -0.204 | -0.217 |
| Skewness (2) | -0.411 | |
| Kurtosis | 0.793 | 1.064 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1550+00** |
| **Sample** | **Swash** |
| **Mean** | **0.614 mm** |
| **STD** | **0.496 mm** |
| **Skewness** | **-0.105** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 93.43 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 5.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

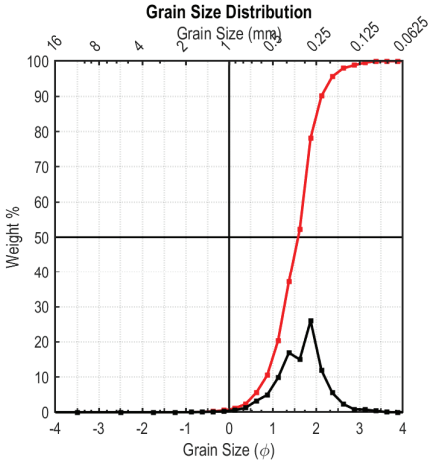
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.83 | 5.17 | 5.17 |
| -0.75 | -0.875 | 3.00 | 3.21 | 8.38 |
| -0.5 | -0.625 | 5.61 | 6.00 | 14.39 |
| -0.25 | -0.375 | 4.85 | 5.19 | 19.58 |
| 0 | -0.125 | 7.28 | 7.79 | 27.37 |
| 0.25 | 0.125 | 6.73 | 7.20 | 34.57 |
| 0.5 | 0.375 | 7.57 | 8.10 | 42.67 |
| 0.75 | 0.625 | 8.38 | 8.97 | 51.64 |
| 1 | 0.875 | 6.63 | 7.10 | 58.74 |
| 1.25 | 1.125 | 6.81 | 7.29 | 66.03 |
| 1.5 | 1.375 | 8.14 | 8.71 | 74.74 |
| 1.75 | 1.625 | 4.85 | 5.19 | 79.93 |
| 2 | 1.875 | 9.44 | 10.10 | 90.04 |
| 2.25 | 2.125 | 4.90 | 5.24 | 95.28 |
| 2.5 | 2.375 | 2.87 | 3.07 | 98.35 |
| 2.75 | 2.625 | 1.28 | 1.37 | 99.72 |
| 3 | 2.875 | 0.14 | 0.15 | 99.87 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.95 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.655 |
| **5** | -1.265 |
| **16** | -0.545 |
| **25** | -0.200 |
| **50** | 0.580 |
| **75** | 1.385 |
| **84** | 1.725 |
| **95** | 2.110 |
| **99** | 2.495 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.703 | 0.614 |
| Standard Deviation | 1.013 | 0.496 |
| Skewness | -0.105 | |
| Kurtosis | 2.133 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.590 | 0.587 |
| Standard Deviation | 1.135 | 1.079 |
| Skewness (1) | 0.009 | -0.042 |
| Skewness (2) | -0.139 | |
| Kurtosis | 0.487 | 0.873 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1560+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.319 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.249** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.60 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

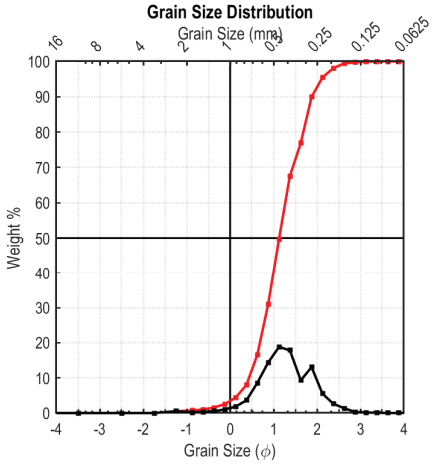
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.10 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.26 |
| 0 | -0.125 | 0.27 | 0.26 | 0.52 |
| 0.25 | 0.125 | 0.58 | 0.56 | 1.08 |
| 0.5 | 0.375 | 1.28 | 1.24 | 2.32 |
| 0.75 | 0.625 | 3.36 | 3.24 | 5.56 |
| 1 | 0.875 | 5.09 | 4.91 | 10.47 |
| 1.25 | 1.125 | 10.14 | 9.79 | 20.26 |
| 1.5 | 1.375 | 17.53 | 16.92 | 37.18 |
| 1.75 | 1.625 | 15.53 | 14.99 | 52.17 |
| 2 | 1.875 | 26.94 | 26.00 | 78.18 |
| 2.25 | 2.125 | 12.37 | 11.94 | 90.12 |
| 2.5 | 2.375 | 5.71 | 5.51 | 95.63 |
| 2.75 | 2.625 | 2.43 | 2.35 | 97.97 |
| 3 | 2.875 | 0.88 | 0.85 | 98.82 |
| 3.25 | 3.125 | 0.78 | 0.75 | 99.58 |
| 3.5 | 3.375 | 0.40 | 0.39 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.090 |
| **5** | 0.580 |
| **16** | 1.015 |
| **25** | 1.195 |
| **50** | 1.590 |
| **75** | 1.845 |
| **84** | 1.995 |
| **95** | 2.345 |
| **99** | 2.935 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.650 | 0.319 |
| Standard Deviation | 0.539 | 0.688 |
| Skewness | -0.249 | |
| Kurtosis | 4.121 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.505 | 1.533 |
| Standard Deviation | 0.490 | 0.512 |
| Skewness (1) | -0.173 | -0.159 |
| Skewness (2) | -0.260 | |
| Kurtosis | 0.801 | 1.113 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1560+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.415 mm** |
| **STD** | **0.653 mm** |
| **Skewness** | **-0.367** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.25 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.52 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.9 |

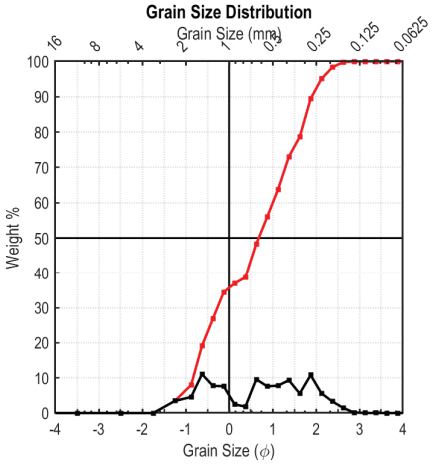
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.55 | 0.52 | 0.52 |
| -0.75 | -0.875 | 0.18 | 0.17 | 0.69 |
| -0.5 | -0.625 | 0.34 | 0.32 | 1.02 |
| -0.25 | -0.375 | 0.55 | 0.52 | 1.54 |
| 0 | -0.125 | 1.06 | 1.01 | 2.55 |
| 0.25 | 0.125 | 1.92 | 1.82 | 4.37 |
| 0.5 | 0.375 | 3.80 | 3.61 | 7.98 |
| 0.75 | 0.625 | 9.02 | 8.57 | 16.55 |
| 1 | 0.875 | 15.12 | 14.37 | 30.92 |
| 1.25 | 1.125 | 19.80 | 18.81 | 49.73 |
| 1.5 | 1.375 | 18.78 | 17.84 | 67.57 |
| 1.75 | 1.625 | 9.80 | 9.31 | 76.88 |
| 2 | 1.875 | 13.75 | 13.06 | 89.95 |
| 2.25 | 2.125 | 5.79 | 5.50 | 95.45 |
| 2.5 | 2.375 | 2.77 | 2.63 | 98.08 |
| 2.75 | 2.625 | 1.44 | 1.37 | 99.45 |
| 3 | 2.875 | 0.30 | 0.29 | 99.73 |
| 3.25 | 3.125 | 0.18 | 0.17 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.640 |
| **5** | 0.170 |
| **16** | 0.610 |
| **25** | 0.770 |
| **50** | 1.130 |
| **75** | 1.575 |
| **84** | 1.760 |
| **95** | 2.105 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.267 | 0.415 |
| Standard Deviation | 0.615 | 0.653 |
| Skewness | -0.367 | |
| Kurtosis | 4.429 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.185 | 1.167 |
| Standard Deviation | 0.575 | 0.581 |
| Skewness (1) | 0.096 | 0.052 |
| Skewness (2) | 0.013 | |
| Kurtosis | 0.683 | 0.985 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1560+00** |
| **Sample** | **Swash** |
| **Mean** | **0.617 mm** |
| **STD** | **0.481 mm** |
| **Skewness** | **-0.106** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 87.27 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.44 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 21.9 |

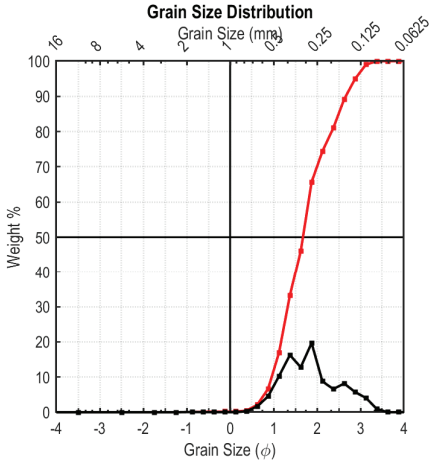
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.00 | 3.44 | 3.44 |
| -0.75 | -0.875 | 4.00 | 4.58 | 8.02 |
| -0.5 | -0.625 | 9.66 | 11.07 | 19.09 |
| -0.25 | -0.375 | 6.76 | 7.75 | 26.84 |
| 0 | -0.125 | 6.65 | 7.62 | 34.46 |
| 0.25 | 0.125 | 2.16 | 2.48 | 36.93 |
| 0.5 | 0.375 | 1.57 | 1.80 | 38.73 |
| 0.75 | 0.625 | 8.38 | 9.60 | 48.33 |
| 1 | 0.875 | 6.63 | 7.60 | 55.93 |
| 1.25 | 1.125 | 6.81 | 7.80 | 63.73 |
| 1.5 | 1.375 | 8.14 | 9.33 | 73.06 |
| 1.75 | 1.625 | 4.85 | 5.56 | 78.62 |
| 2 | 1.875 | 9.44 | 10.82 | 89.44 |
| 2.25 | 2.125 | 4.90 | 5.61 | 95.05 |
| 2.5 | 2.375 | 2.87 | 3.29 | 98.34 |
| 2.75 | 2.625 | 1.28 | 1.47 | 99.81 |
| 3 | 2.875 | 0.14 | 0.16 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.605 |
| **5** | -1.120 |
| **16** | -0.695 |
| **25** | -0.435 |
| **50** | 0.680 |
| **75** | 1.460 |
| **84** | 1.750 |
| **95** | 2.125 |
| **99** | 2.490 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.696 | 0.617 |
| Standard Deviation | 1.057 | 0.481 |
| Skewness | -0.106 | |
| Kurtosis | 1.820 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.528 | 0.578 |
| Standard Deviation | 1.222 | 1.103 |
| Skewness (1) | -0.125 | -0.117 |
| Skewness (2) | -0.145 | |
| Kurtosis | 0.327 | 0.702 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1570+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.278 mm** |
| **STD** | **0.643 mm** |
| **Skewness** | **0.252** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.37 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.4 |

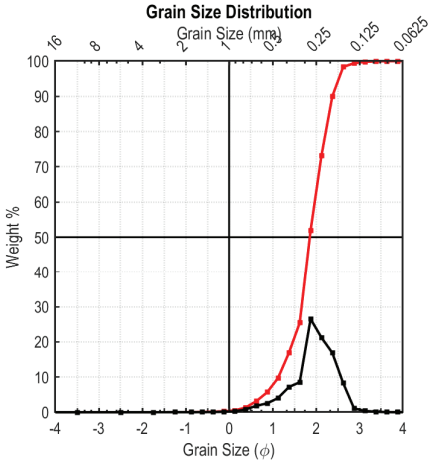
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.08 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.11 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.14 |
| 0 | -0.125 | 0.03 | 0.03 | 0.17 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.19 |
| 0.5 | 0.375 | 0.28 | 0.27 | 0.46 |
| 0.75 | 0.625 | 1.74 | 1.67 | 2.13 |
| 1 | 0.875 | 4.75 | 4.55 | 6.68 |
| 1.25 | 1.125 | 10.72 | 10.27 | 16.95 |
| 1.5 | 1.375 | 16.97 | 16.26 | 33.21 |
| 1.75 | 1.625 | 13.36 | 12.80 | 46.01 |
| 2 | 1.875 | 20.52 | 19.66 | 65.67 |
| 2.25 | 2.125 | 9.14 | 8.76 | 74.43 |
| 2.5 | 2.375 | 6.88 | 6.59 | 81.02 |
| 2.75 | 2.625 | 8.53 | 8.17 | 89.19 |
| 3 | 2.875 | 6.00 | 5.75 | 94.94 |
| 3.25 | 3.125 | 4.25 | 4.07 | 99.01 |
| 3.5 | 3.375 | 1.01 | 0.97 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.455 |
| **5** | 0.785 |
| **16** | 1.100 |
| **25** | 1.250 |
| **50** | 1.675 |
| **75** | 2.145 |
| **84** | 2.465 |
| **95** | 2.880 |
| **99** | 3.125 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.849 | 0.278 |
| Standard Deviation | 0.637 | 0.643 |
| Skewness | 0.252 | |
| Kurtosis | 2.783 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.782 | 1.747 |
| Standard Deviation | 0.682 | 0.659 |
| Skewness (1) | 0.158 | 0.154 |
| Skewness (2) | 0.231 | |
| Kurtosis | 0.535 | 0.959 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1570+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.261 mm** |
| **STD** | **0.702 mm** |
| **Skewness** | **-0.932** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.75 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

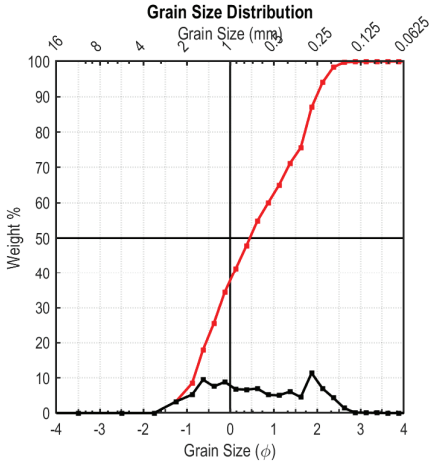
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.04 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.08 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.13 |
| 0 | -0.125 | 0.15 | 0.14 | 0.28 |
| 0.25 | 0.125 | 0.24 | 0.23 | 0.51 |
| 0.5 | 0.375 | 0.84 | 0.81 | 1.32 |
| 0.75 | 0.625 | 1.89 | 1.82 | 3.14 |
| 1 | 0.875 | 2.63 | 2.53 | 5.68 |
| 1.25 | 1.125 | 4.19 | 4.04 | 9.72 |
| 1.5 | 1.375 | 7.42 | 7.15 | 16.87 |
| 1.75 | 1.625 | 8.87 | 8.55 | 25.42 |
| 2 | 1.875 | 27.51 | 26.52 | 51.93 |
| 2.25 | 2.125 | 22.02 | 21.22 | 73.16 |
| 2.5 | 2.375 | 17.51 | 16.88 | 90.03 |
| 2.75 | 2.625 | 8.61 | 8.30 | 98.33 |
| 3 | 2.875 | 1.13 | 1.09 | 99.42 |
| 3.25 | 3.125 | 0.39 | 0.38 | 99.80 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.275 |
| **5** | 0.810 |
| **16** | 1.345 |
| **25** | 1.615 |
| **50** | 1.855 |
| **75** | 2.150 |
| **84** | 2.285 |
| **95** | 2.525 |
| **99** | 2.780 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.935 | 0.261 |
| Standard Deviation | 0.510 | 0.702 |
| Skewness | -0.932 | |
| Kurtosis | 4.923 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.815 | 1.828 |
| Standard Deviation | 0.470 | 0.495 |
| Skewness (1) | -0.085 | -0.152 |
| Skewness (2) | -0.399 | |
| Kurtosis | 0.824 | 1.314 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1570+00** |
| **Sample** | **Swash** |
| **Mean** | **0.633 mm** |
| **STD** | **0.474 mm** |
| **Skewness** | **0.075** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 92.39 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.25 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.2 |

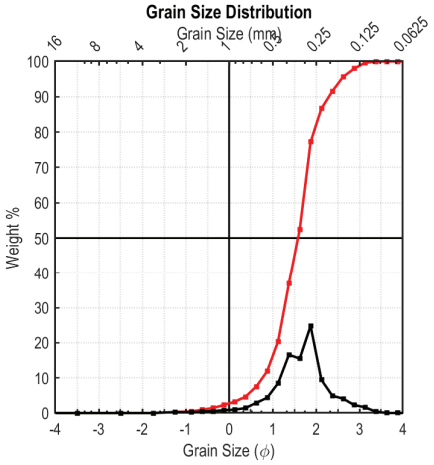
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.00 | 3.25 | 3.25 |
| -0.75 | -0.875 | 4.85 | 5.25 | 8.50 |
| -0.5 | -0.625 | 8.77 | 9.49 | 17.99 |
| -0.25 | -0.375 | 6.98 | 7.55 | 25.54 |
| 0 | -0.125 | 8.17 | 8.84 | 34.39 |
| 0.25 | 0.125 | 6.27 | 6.79 | 41.17 |
| 0.5 | 0.375 | 6.16 | 6.67 | 47.84 |
| 0.75 | 0.625 | 6.44 | 6.97 | 54.81 |
| 1 | 0.875 | 4.76 | 5.15 | 59.96 |
| 1.25 | 1.125 | 4.65 | 5.03 | 65.00 |
| 1.5 | 1.375 | 5.65 | 6.12 | 71.11 |
| 1.75 | 1.625 | 4.15 | 4.49 | 75.60 |
| 2 | 1.875 | 10.52 | 11.39 | 86.99 |
| 2.25 | 2.125 | 6.48 | 7.01 | 94.00 |
| 2.5 | 2.375 | 4.01 | 4.34 | 98.34 |
| 2.75 | 2.625 | 1.30 | 1.41 | 99.75 |
| 3 | 2.875 | 0.11 | 0.12 | 99.87 |
| 3.25 | 3.125 | 0.09 | 0.10 | 99.97 |
| 3.5 | 3.375 | 0.03 | 0.03 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.595 |
| **5** | -1.125 |
| **16** | -0.675 |
| **25** | -0.395 |
| **50** | 0.450 |
| **75** | 1.590 |
| **84** | 1.810 |
| **95** | 2.180 |
| **99** | 2.490 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.661 | 0.633 |
| Standard Deviation | 1.077 | 0.474 |
| Skewness | 0.075 | |
| Kurtosis | 1.786 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.568 | 0.528 |
| Standard Deviation | 1.242 | 1.122 |
| Skewness (1) | 0.095 | 0.071 |
| Skewness (2) | 0.062 | |
| Kurtosis | 0.330 | 0.682 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1580+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.319 mm** |
| **STD** | **0.636 mm** |
| **Skewness** | **-0.655** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.29 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

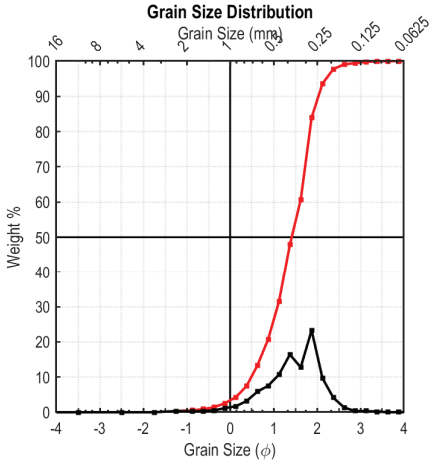
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.30 | 0.29 | 0.29 |
| -0.75 | -0.875 | 0.19 | 0.18 | 0.47 |
| -0.5 | -0.625 | 0.47 | 0.45 | 0.91 |
| -0.25 | -0.375 | 0.54 | 0.51 | 1.43 |
| 0 | -0.125 | 0.88 | 0.84 | 2.26 |
| 0.25 | 0.125 | 1.00 | 0.95 | 3.21 |
| 0.5 | 0.375 | 1.49 | 1.42 | 4.63 |
| 0.75 | 0.625 | 3.06 | 2.91 | 7.54 |
| 1 | 0.875 | 4.59 | 4.36 | 11.90 |
| 1.25 | 1.125 | 8.88 | 8.44 | 20.34 |
| 1.5 | 1.375 | 17.45 | 16.58 | 36.92 |
| 1.75 | 1.625 | 16.31 | 15.50 | 52.42 |
| 2 | 1.875 | 26.09 | 24.80 | 77.22 |
| 2.25 | 2.125 | 9.93 | 9.44 | 86.66 |
| 2.5 | 2.375 | 5.17 | 4.91 | 91.57 |
| 2.75 | 2.625 | 4.30 | 4.09 | 95.66 |
| 3 | 2.875 | 2.41 | 2.29 | 97.95 |
| 3.25 | 3.125 | 1.73 | 1.64 | 99.59 |
| 3.5 | 3.375 | 0.41 | 0.39 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.580 |
| **5** | 0.405 |
| **16** | 0.995 |
| **25** | 1.195 |
| **50** | 1.585 |
| **75** | 1.855 |
| **84** | 2.055 |
| **95** | 2.585 |
| **99** | 3.035 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.647 | 0.319 |
| Standard Deviation | 0.652 | 0.636 |
| Skewness | -0.655 | |
| Kurtosis | 5.150 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.525 | 1.545 |
| Standard Deviation | 0.530 | 0.595 |
| Skewness (1) | -0.113 | -0.098 |
| Skewness (2) | -0.170 | |
| Kurtosis | 1.057 | 1.354 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1580+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.363 mm** |
| **STD** | **0.642 mm** |
| **Skewness** | **-0.751** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.99 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.34 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.9 |

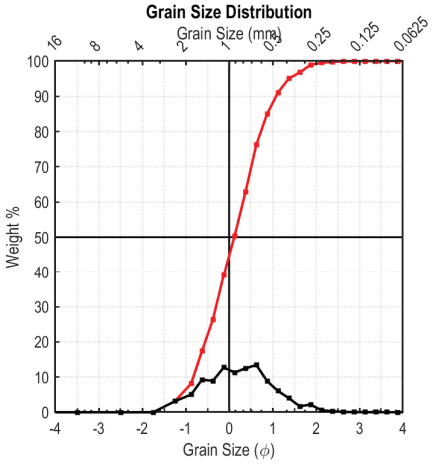
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.36 | 0.34 | 0.34 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.53 |
| -0.5 | -0.625 | 0.36 | 0.34 | 0.88 |
| -0.25 | -0.375 | 0.54 | 0.51 | 1.39 |
| 0 | -0.125 | 1.23 | 1.17 | 2.56 |
| 0.25 | 0.125 | 1.76 | 1.68 | 4.24 |
| 0.5 | 0.375 | 3.31 | 3.15 | 7.39 |
| 0.75 | 0.625 | 6.13 | 5.84 | 13.23 |
| 1 | 0.875 | 7.90 | 7.52 | 20.75 |
| 1.25 | 1.125 | 11.26 | 10.72 | 31.48 |
| 1.5 | 1.375 | 17.21 | 16.39 | 47.87 |
| 1.75 | 1.625 | 13.42 | 12.78 | 60.65 |
| 2 | 1.875 | 24.45 | 23.29 | 83.94 |
| 2.25 | 2.125 | 10.16 | 9.68 | 93.62 |
| 2.5 | 2.375 | 4.33 | 4.12 | 97.74 |
| 2.75 | 2.625 | 1.40 | 1.33 | 99.08 |
| 3 | 2.875 | 0.38 | 0.36 | 99.44 |
| 3.25 | 3.125 | 0.37 | 0.35 | 99.79 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.565 |
| **5** | 0.185 |
| **16** | 0.715 |
| **25** | 0.975 |
| **50** | 1.415 |
| **75** | 1.780 |
| **84** | 1.875 |
| **95** | 2.210 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.462 | 0.363 |
| Standard Deviation | 0.639 | 0.642 |
| Skewness | -0.751 | |
| Kurtosis | 4.396 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.295 | 1.335 |
| Standard Deviation | 0.580 | 0.597 |
| Skewness (1) | -0.207 | -0.211 |
| Skewness (2) | -0.375 | |
| Kurtosis | 0.746 | 1.031 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1580+00** |
| **Sample** | **Swash** |
| **Mean** | **0.842 mm** |
| **STD** | **0.599 mm** |
| **Skewness** | **0.250** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 96.32 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.7 |

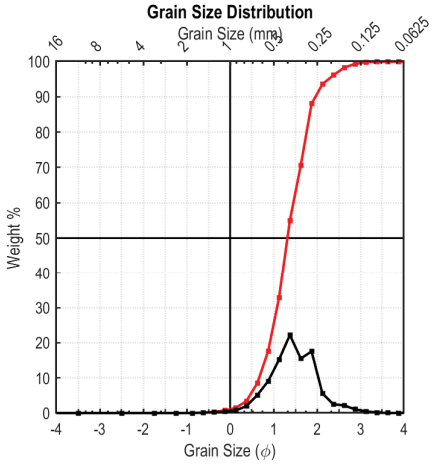
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.00 | 3.11 | 3.11 |
| -0.75 | -0.875 | 4.84 | 5.02 | 8.14 |
| -0.5 | -0.625 | 8.92 | 9.26 | 17.40 |
| -0.25 | -0.375 | 8.58 | 8.91 | 26.31 |
| 0 | -0.125 | 12.25 | 12.72 | 39.03 |
| 0.25 | 0.125 | 10.88 | 11.30 | 50.32 |
| 0.5 | 0.375 | 12.01 | 12.47 | 62.79 |
| 0.75 | 0.625 | 12.94 | 13.43 | 76.23 |
| 1 | 0.875 | 8.50 | 8.82 | 85.05 |
| 1.25 | 1.125 | 5.80 | 6.02 | 91.07 |
| 1.5 | 1.375 | 3.86 | 4.01 | 95.08 |
| 1.75 | 1.625 | 1.63 | 1.69 | 96.77 |
| 2 | 1.875 | 2.10 | 2.18 | 98.95 |
| 2.25 | 2.125 | 0.54 | 0.56 | 99.51 |
| 2.5 | 2.375 | 0.29 | 0.30 | 99.81 |
| 2.75 | 2.625 | 0.10 | 0.10 | 99.92 |
| 3 | 2.875 | 0.03 | 0.03 | 99.95 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.590 |
| **5** | -1.110 |
| **16** | -0.665 |
| **25** | -0.410 |
| **50** | 0.120 |
| **75** | 0.600 |
| **84** | 0.845 |
| **95** | 1.370 |
| **99** | 1.895 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.248 | 0.842 |
| Standard Deviation | 0.740 | 0.599 |
| Skewness | 0.250 | |
| Kurtosis | 2.887 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.090 | 0.100 |
| Standard Deviation | 0.755 | 0.753 |
| Skewness (1) | -0.040 | -0.016 |
| Skewness (2) | 0.013 | |
| Kurtosis | 0.642 | 1.006 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1590+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.363 mm** |
| **STD** | **0.685 mm** |
| **Skewness** | **0.167** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.93 |
| % finer than 0.0625 mm (dry) | 0.09 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.1 |

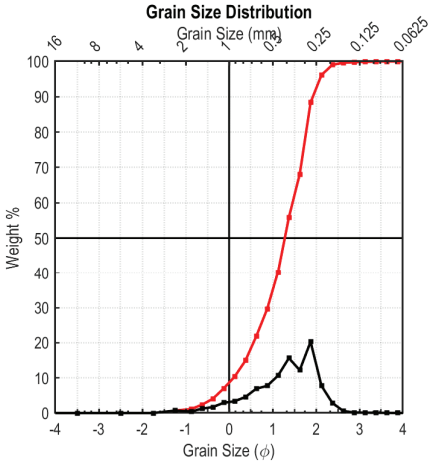
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.12 | 0.11 | 0.11 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.31 |
| 0 | -0.125 | 0.42 | 0.40 | 0.71 |
| 0.25 | 0.125 | 0.76 | 0.72 | 1.44 |
| 0.5 | 0.375 | 2.07 | 1.97 | 3.41 |
| 0.75 | 0.625 | 5.35 | 5.10 | 8.51 |
| 1 | 0.875 | 9.53 | 9.08 | 17.59 |
| 1.25 | 1.125 | 15.94 | 15.19 | 32.78 |
| 1.5 | 1.375 | 23.31 | 22.21 | 55.00 |
| 1.75 | 1.625 | 16.27 | 15.51 | 70.50 |
| 2 | 1.875 | 18.38 | 17.52 | 88.02 |
| 2.25 | 2.125 | 5.82 | 5.55 | 93.57 |
| 2.5 | 2.375 | 2.63 | 2.51 | 96.07 |
| 2.75 | 2.625 | 2.27 | 2.16 | 98.24 |
| 3 | 2.875 | 1.09 | 1.04 | 99.28 |
| 3.25 | 3.125 | 0.53 | 0.51 | 99.78 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.90 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.91 |
| 4 | 3.875 | 0.00 | 0.00 | 99.91 |
| >4.0 | 4.25 | 0.09 | 0.09 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.025 |
| **5** | 0.455 |
| **16** | 0.830 |
| **25** | 0.995 |
| **50** | 1.320 |
| **75** | 1.690 |
| **84** | 1.820 |
| **95** | 2.270 |
| **99** | 2.810 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.462 | 0.363 |
| Standard Deviation | 0.547 | 0.685 |
| Skewness | 0.167 | |
| Kurtosis | 4.279 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.325 | 1.323 |
| Standard Deviation | 0.495 | 0.522 |
| Skewness (1) | 0.010 | 0.028 |
| Skewness (2) | 0.086 | |
| Kurtosis | 0.833 | 1.070 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1590+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.413 mm** |
| **STD** | **0.600 mm** |
| **Skewness** | **-0.824** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.78 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.70 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

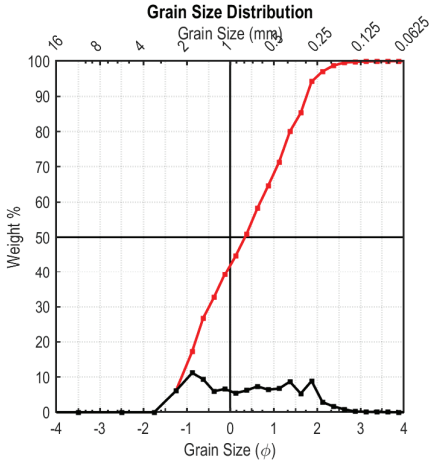
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.73 | 0.70 | 0.70 |
| -0.75 | -0.875 | 0.44 | 0.42 | 1.12 |
| -0.5 | -0.625 | 1.31 | 1.25 | 2.37 |
| -0.25 | -0.375 | 1.79 | 1.71 | 4.08 |
| 0 | -0.125 | 3.06 | 2.92 | 7.00 |
| 0.25 | 0.125 | 3.50 | 3.34 | 10.34 |
| 0.5 | 0.375 | 4.81 | 4.59 | 14.93 |
| 0.75 | 0.625 | 7.27 | 6.94 | 21.86 |
| 1 | 0.875 | 8.10 | 7.73 | 29.60 |
| 1.25 | 1.125 | 11.16 | 10.65 | 40.25 |
| 1.5 | 1.375 | 16.38 | 15.63 | 55.88 |
| 1.75 | 1.625 | 12.78 | 12.20 | 68.08 |
| 2 | 1.875 | 21.28 | 20.31 | 88.39 |
| 2.25 | 2.125 | 8.12 | 7.75 | 96.13 |
| 2.5 | 2.375 | 3.03 | 2.89 | 99.03 |
| 2.75 | 2.625 | 0.63 | 0.60 | 99.63 |
| 3 | 2.875 | 0.14 | 0.13 | 99.76 |
| 3.25 | 3.125 | 0.12 | 0.11 | 99.88 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.980 |
| **5** | -0.295 |
| **16** | 0.415 |
| **25** | 0.725 |
| **50** | 1.280 |
| **75** | 1.710 |
| **84** | 1.820 |
| **95** | 2.090 |
| **99** | 2.375 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.277 | 0.413 |
| Standard Deviation | 0.737 | 0.600 |
| Skewness | -0.824 | |
| Kurtosis | 3.620 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.117 | 1.172 |
| Standard Deviation | 0.702 | 0.713 |
| Skewness (1) | -0.231 | -0.276 |
| Skewness (2) | -0.544 | |
| Kurtosis | 0.698 | 0.992 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1590+00** |
| **Sample** | **Swash** |
| **Mean** | **0.731 mm** |
| **STD** | **0.478 mm** |
| **Skewness** | **0.104** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 33.02 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 6.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.3 |

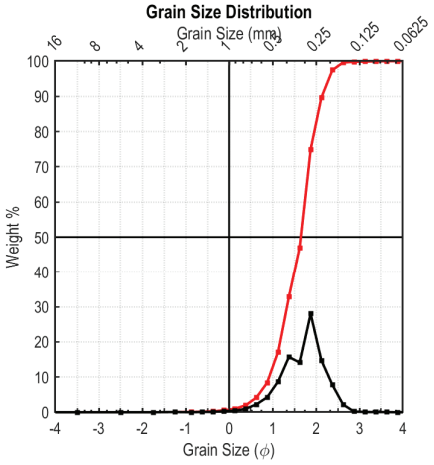
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.00 | 6.06 | 6.06 |
| -0.75 | -0.875 | 3.69 | 11.17 | 17.23 |
| -0.5 | -0.625 | 3.11 | 9.42 | 26.65 |
| -0.25 | -0.375 | 1.97 | 5.97 | 32.61 |
| 0 | -0.125 | 2.18 | 6.60 | 39.22 |
| 0.25 | 0.125 | 1.79 | 5.42 | 44.64 |
| 0.5 | 0.375 | 2.04 | 6.18 | 50.81 |
| 0.75 | 0.625 | 2.43 | 7.36 | 58.17 |
| 1 | 0.875 | 2.12 | 6.42 | 64.59 |
| 1.25 | 1.125 | 2.22 | 6.72 | 71.32 |
| 1.5 | 1.375 | 2.87 | 8.69 | 80.01 |
| 1.75 | 1.625 | 1.75 | 5.30 | 85.31 |
| 2 | 1.875 | 2.93 | 8.88 | 94.19 |
| 2.25 | 2.125 | 0.95 | 2.88 | 97.06 |
| 2.5 | 2.375 | 0.55 | 1.67 | 98.73 |
| 2.75 | 2.625 | 0.28 | 0.85 | 99.58 |
| 3 | 2.875 | 0.07 | 0.21 | 99.79 |
| 3.25 | 3.125 | 0.04 | 0.12 | 99.91 |
| 3.5 | 3.375 | 0.02 | 0.06 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.665 |
| **5** | -1.335 |
| **16** | -0.915 |
| **25** | -0.670 |
| **50** | 0.340 |
| **75** | 1.230 |
| **84** | 1.565 |
| **95** | 1.945 |
| **99** | 2.455 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.453 | 0.731 |
| Standard Deviation | 1.064 | 0.478 |
| Skewness | 0.104 | |
| Kurtosis | 1.880 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.325 | 0.330 |
| Standard Deviation | 1.240 | 1.117 |
| Skewness (1) | -0.012 | -0.017 |
| Skewness (2) | -0.028 | |
| Kurtosis | 0.323 | 0.708 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1600+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.310 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.737** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.83 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

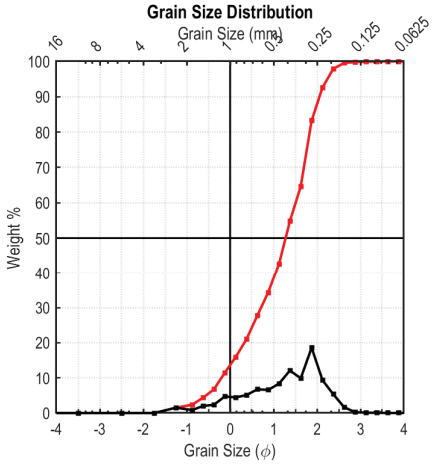
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.07 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.15 |
| -0.25 | -0.375 | 0.11 | 0.10 | 0.26 |
| 0 | -0.125 | 0.30 | 0.29 | 0.54 |
| 0.25 | 0.125 | 0.47 | 0.45 | 0.99 |
| 0.5 | 0.375 | 0.98 | 0.93 | 1.93 |
| 0.75 | 0.625 | 2.33 | 2.22 | 4.15 |
| 1 | 0.875 | 4.46 | 4.25 | 8.40 |
| 1.25 | 1.125 | 9.11 | 8.69 | 17.09 |
| 1.5 | 1.375 | 16.49 | 15.73 | 32.82 |
| 1.75 | 1.625 | 14.80 | 14.12 | 46.94 |
| 2 | 1.875 | 29.36 | 28.01 | 74.95 |
| 2.25 | 2.125 | 15.44 | 14.73 | 89.68 |
| 2.5 | 2.375 | 8.15 | 7.77 | 97.45 |
| 2.75 | 2.625 | 2.28 | 2.17 | 99.63 |
| 3 | 2.875 | 0.20 | 0.19 | 99.82 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.90 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.94 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.125 |
| **5** | 0.675 |
| **16** | 1.095 |
| **25** | 1.250 |
| **50** | 1.650 |
| **75** | 1.875 |
| **84** | 2.030 |
| **95** | 2.295 |
| **99** | 2.555 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.688 | 0.310 |
| Standard Deviation | 0.500 | 0.707 |
| Skewness | -0.737 | |
| Kurtosis | 4.768 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.562 | 1.592 |
| Standard Deviation | 0.468 | 0.479 |
| Skewness (1) | -0.187 | -0.195 |
| Skewness (2) | -0.353 | |
| Kurtosis | 0.733 | 1.062 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1600+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.429 mm** |
| **STD** | **0.547 mm** |
| **Skewness** | **-0.708** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.96 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.51 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.3 |

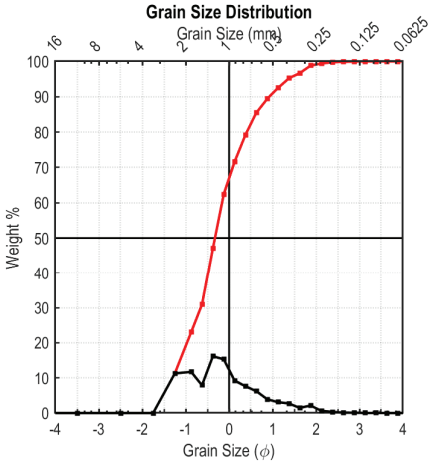
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.59 | 1.51 | 1.51 |
| -0.75 | -0.875 | 0.89 | 0.85 | 2.36 |
| -0.5 | -0.625 | 2.11 | 2.01 | 4.37 |
| -0.25 | -0.375 | 2.46 | 2.34 | 6.72 |
| 0 | -0.125 | 4.94 | 4.71 | 11.42 |
| 0.25 | 0.125 | 4.68 | 4.46 | 15.88 |
| 0.5 | 0.375 | 5.35 | 5.10 | 20.98 |
| 0.75 | 0.625 | 7.08 | 6.75 | 27.72 |
| 1 | 0.875 | 6.90 | 6.57 | 34.30 |
| 1.25 | 1.125 | 8.78 | 8.37 | 42.66 |
| 1.5 | 1.375 | 12.70 | 12.10 | 54.76 |
| 1.75 | 1.625 | 10.37 | 9.88 | 64.64 |
| 2 | 1.875 | 19.50 | 18.58 | 83.22 |
| 2.25 | 2.125 | 9.83 | 9.37 | 92.59 |
| 2.5 | 2.375 | 5.59 | 5.33 | 97.91 |
| 2.75 | 2.625 | 1.73 | 1.65 | 99.56 |
| 3 | 2.875 | 0.26 | 0.25 | 99.81 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.420 |
| **5** | -0.560 |
| **16** | 0.130 |
| **25** | 0.525 |
| **50** | 1.275 |
| **75** | 1.765 |
| **84** | 1.895 |
| **95** | 2.240 |
| **99** | 2.540 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.222 | 0.429 |
| Standard Deviation | 0.871 | 0.547 |
| Skewness | -0.708 | |
| Kurtosis | 2.922 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.012 | 1.100 |
| Standard Deviation | 0.883 | 0.865 |
| Skewness (1) | -0.297 | -0.304 |
| Skewness (2) | -0.493 | |
| Kurtosis | 0.586 | 0.925 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1600+00** |
| **Sample** | **Swash** |
| **Mean** | **1.068 mm** |
| **STD** | **0.572 mm** |
| **Skewness** | **0.730** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Very Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Fine Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 62.04 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 11.28 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 11.5 |

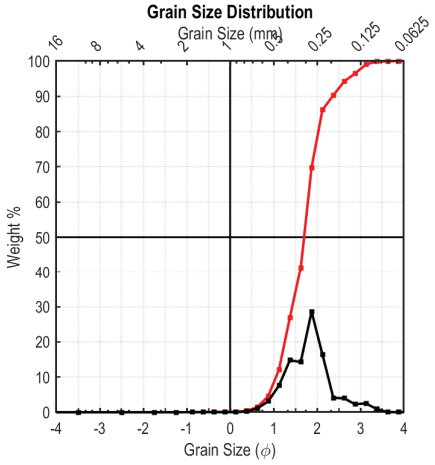
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 7.00 | 11.28 | 11.28 |
| -0.75 | -0.875 | 7.27 | 11.72 | 23.00 |
| -0.5 | -0.625 | 4.90 | 7.90 | 30.90 |
| -0.25 | -0.375 | 10.03 | 16.17 | 47.07 |
| 0 | -0.125 | 9.49 | 15.30 | 62.36 |
| 0.25 | 0.125 | 5.73 | 9.24 | 71.60 |
| 0.5 | 0.375 | 4.73 | 7.62 | 79.22 |
| 0.75 | 0.625 | 3.87 | 6.24 | 85.46 |
| 1 | 0.875 | 2.44 | 3.93 | 89.39 |
| 1.25 | 1.125 | 1.92 | 3.09 | 92.49 |
| 1.5 | 1.375 | 1.69 | 2.72 | 95.21 |
| 1.75 | 1.625 | 0.91 | 1.47 | 96.68 |
| 2 | 1.875 | 1.32 | 2.13 | 98.81 |
| 2.25 | 2.125 | 0.38 | 0.61 | 99.42 |
| 2.5 | 2.375 | 0.21 | 0.34 | 99.76 |
| 2.75 | 2.625 | 0.07 | 0.11 | 99.87 |
| 3 | 2.875 | 0.06 | 0.10 | 99.97 |
| 3.25 | 3.125 | 0.01 | 0.02 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.705 |
| **5** | -1.530 |
| **16** | -1.100 |
| **25** | -0.810 |
| **50** | -0.325 |
| **75** | 0.235 |
| **84** | 0.565 |
| **95** | 1.355 |
| **99** | 1.955 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | -0.095 | 1.068 |
| Standard Deviation | 0.806 | 0.572 |
| Skewness | 0.730 | |
| Kurtosis | 3.327 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -0.268 | -0.287 |
| Standard Deviation | 0.833 | 0.853 |
| Skewness (1) | 0.069 | 0.117 |
| Skewness (2) | 0.285 | |
| Kurtosis | 0.733 | 1.131 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1610+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.284 mm** |
| **STD** | **0.696 mm** |
| **Skewness** | **0.341** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.79 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

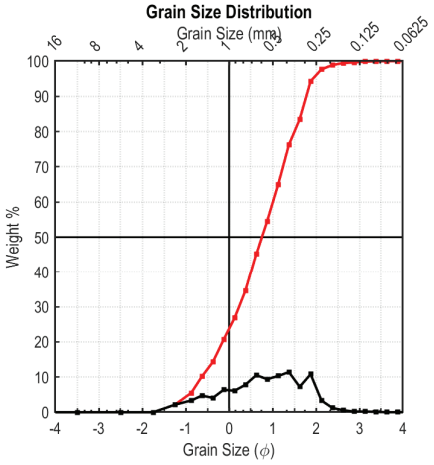
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.03 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.06 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.09 |
| 0 | -0.125 | 0.02 | 0.02 | 0.11 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.15 |
| 0.5 | 0.375 | 0.22 | 0.21 | 0.37 |
| 0.75 | 0.625 | 1.12 | 1.08 | 1.45 |
| 1 | 0.875 | 3.21 | 3.09 | 4.54 |
| 1.25 | 1.125 | 7.89 | 7.60 | 12.14 |
| 1.5 | 1.375 | 15.35 | 14.79 | 26.93 |
| 1.75 | 1.625 | 14.81 | 14.27 | 41.20 |
| 2 | 1.875 | 29.69 | 28.61 | 69.80 |
| 2.25 | 2.125 | 17.00 | 16.38 | 86.18 |
| 2.5 | 2.375 | 4.27 | 4.11 | 90.30 |
| 2.75 | 2.625 | 4.10 | 3.95 | 94.25 |
| 3 | 2.875 | 2.34 | 2.25 | 96.50 |
| 3.25 | 3.125 | 2.63 | 2.53 | 99.04 |
| 3.5 | 3.375 | 0.92 | 0.89 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.03 | 0.03 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.520 |
| **5** | 0.890 |
| **16** | 1.190 |
| **25** | 1.340 |
| **50** | 1.700 |
| **75** | 1.955 |
| **84** | 2.090 |
| **95** | 2.710 |
| **99** | 3.120 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.817 | 0.284 |
| Standard Deviation | 0.523 | 0.696 |
| Skewness | 0.341 | |
| Kurtosis | 4.085 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.640 | 1.660 |
| Standard Deviation | 0.450 | 0.501 |
| Skewness (1) | -0.133 | -0.012 |
| Skewness (2) | 0.222 | |
| Kurtosis | 1.022 | 1.213 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1610+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.574 mm** |
| **STD** | **0.539 mm** |
| **Skewness** | **-0.269** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 93.65 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.14 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.5 |

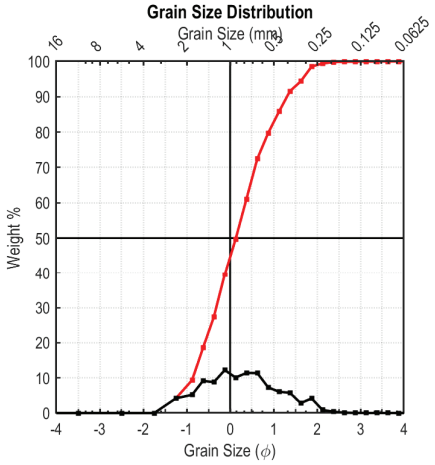
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.00 | 2.14 | 2.14 |
| -0.75 | -0.875 | 3.13 | 3.34 | 5.48 |
| -0.5 | -0.625 | 4.42 | 4.72 | 10.20 |
| -0.25 | -0.375 | 3.83 | 4.09 | 14.29 |
| 0 | -0.125 | 5.99 | 6.40 | 20.68 |
| 0.25 | 0.125 | 5.72 | 6.11 | 26.79 |
| 0.5 | 0.375 | 7.32 | 7.82 | 34.61 |
| 0.75 | 0.625 | 9.87 | 10.54 | 45.15 |
| 1 | 0.875 | 8.80 | 9.40 | 54.54 |
| 1.25 | 1.125 | 9.64 | 10.29 | 64.84 |
| 1.5 | 1.375 | 10.70 | 11.43 | 76.26 |
| 1.75 | 1.625 | 6.77 | 7.23 | 83.49 |
| 2 | 1.875 | 10.13 | 10.82 | 94.31 |
| 2.25 | 2.125 | 3.14 | 3.35 | 97.66 |
| 2.5 | 2.375 | 1.15 | 1.23 | 98.89 |
| 2.75 | 2.625 | 0.53 | 0.57 | 99.46 |
| 3 | 2.875 | 0.18 | 0.19 | 99.65 |
| 3.25 | 3.125 | 0.20 | 0.21 | 99.86 |
| 3.5 | 3.375 | 0.10 | 0.11 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.515 |
| **5** | -0.930 |
| **16** | -0.310 |
| **25** | 0.050 |
| **50** | 0.755 |
| **75** | 1.345 |
| **84** | 1.635 |
| **95** | 1.925 |
| **99** | 2.425 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.802 | 0.574 |
| Standard Deviation | 0.893 | 0.539 |
| Skewness | -0.269 | |
| Kurtosis | 2.495 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.663 | 0.693 |
| Standard Deviation | 0.972 | 0.919 |
| Skewness (1) | -0.095 | -0.138 |
| Skewness (2) | -0.265 | |
| Kurtosis | 0.468 | 0.904 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1610+00** |
| **Sample** | **Swash** |
| **Mean** | **0.817 mm** |
| **STD** | **0.566 mm** |
| **Skewness** | **0.262** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 95.97 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 4.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.0 |

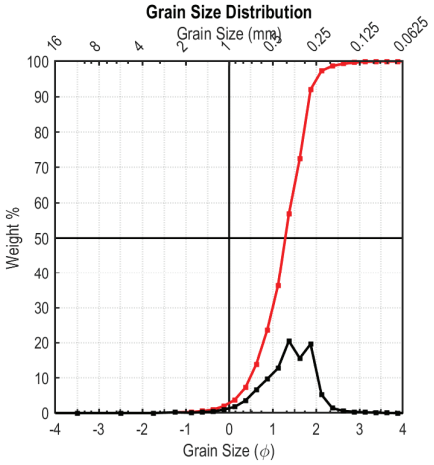
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.00 | 4.17 | 4.17 |
| -0.75 | -0.875 | 5.00 | 5.21 | 9.38 |
| -0.5 | -0.625 | 8.80 | 9.17 | 18.55 |
| -0.25 | -0.375 | 8.43 | 8.78 | 27.33 |
| 0 | -0.125 | 11.72 | 12.21 | 39.54 |
| 0.25 | 0.125 | 9.71 | 10.12 | 49.66 |
| 0.5 | 0.375 | 10.94 | 11.40 | 61.06 |
| 0.75 | 0.625 | 10.92 | 11.38 | 72.44 |
| 1 | 0.875 | 7.00 | 7.29 | 79.73 |
| 1.25 | 1.125 | 5.82 | 6.06 | 85.80 |
| 1.5 | 1.375 | 5.52 | 5.75 | 91.55 |
| 1.75 | 1.625 | 2.70 | 2.81 | 94.36 |
| 2 | 1.875 | 4.01 | 4.18 | 98.54 |
| 2.25 | 2.125 | 0.84 | 0.88 | 99.42 |
| 2.5 | 2.375 | 0.37 | 0.39 | 99.80 |
| 2.75 | 2.625 | 0.10 | 0.10 | 99.91 |
| 3 | 2.875 | 0.04 | 0.04 | 99.95 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.630 |
| **5** | -1.190 |
| **16** | -0.695 |
| **25** | -0.440 |
| **50** | 0.130 |
| **75** | 0.715 |
| **84** | 1.050 |
| **95** | 1.665 |
| **99** | 2.005 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.292 | 0.817 |
| Standard Deviation | 0.820 | 0.566 |
| Skewness | 0.262 | |
| Kurtosis | 2.584 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.177 | 0.162 |
| Standard Deviation | 0.872 | 0.869 |
| Skewness (1) | 0.054 | 0.065 |
| Skewness (2) | 0.123 | |
| Kurtosis | 0.636 | 1.013 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1620+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.389 mm** |
| **STD** | **0.673 mm** |
| **Skewness** | **-0.599** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.59 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.20 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.4 |

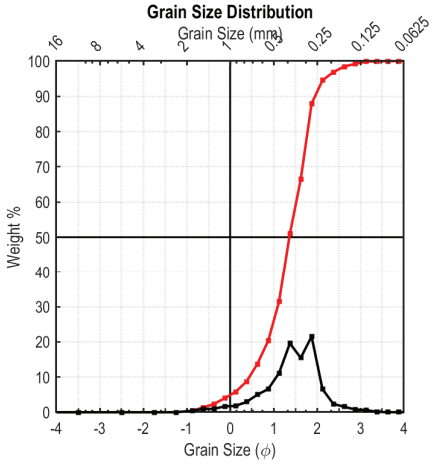
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.21 | 0.20 | 0.20 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.27 |
| -0.5 | -0.625 | 0.29 | 0.27 | 0.55 |
| -0.25 | -0.375 | 0.45 | 0.43 | 0.98 |
| 0 | -0.125 | 1.05 | 0.99 | 1.97 |
| 0.25 | 0.125 | 1.84 | 1.74 | 3.71 |
| 0.5 | 0.375 | 3.73 | 3.53 | 7.25 |
| 0.75 | 0.625 | 7.02 | 6.65 | 13.89 |
| 1 | 0.875 | 10.20 | 9.66 | 23.55 |
| 1.25 | 1.125 | 13.47 | 12.76 | 36.31 |
| 1.5 | 1.375 | 21.66 | 20.51 | 56.82 |
| 1.75 | 1.625 | 16.47 | 15.60 | 72.42 |
| 2 | 1.875 | 20.73 | 19.63 | 92.05 |
| 2.25 | 2.125 | 5.55 | 5.26 | 97.31 |
| 2.5 | 2.375 | 1.48 | 1.40 | 98.71 |
| 2.75 | 2.625 | 0.64 | 0.61 | 99.32 |
| 3 | 2.875 | 0.36 | 0.34 | 99.66 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.87 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.370 |
| **5** | 0.215 |
| **16** | 0.680 |
| **25** | 0.905 |
| **50** | 1.290 |
| **75** | 1.660 |
| **84** | 1.770 |
| **95** | 2.015 |
| **99** | 2.495 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.363 | 0.389 |
| Standard Deviation | 0.572 | 0.673 |
| Skewness | -0.599 | |
| Kurtosis | 4.378 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.225 | 1.247 |
| Standard Deviation | 0.545 | 0.545 |
| Skewness (1) | -0.119 | -0.157 |
| Skewness (2) | -0.321 | |
| Kurtosis | 0.651 | 0.977 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1620+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.374 mm** |
| **STD** | **0.637 mm** |
| **Skewness** | **-0.721** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.01 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

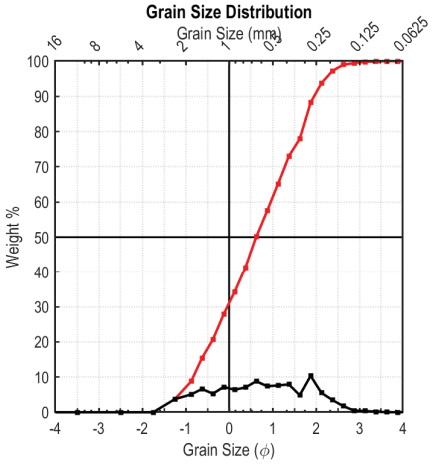
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.45 | 0.43 | 0.43 |
| -0.5 | -0.625 | 0.96 | 0.92 | 1.36 |
| -0.25 | -0.375 | 1.00 | 0.96 | 2.32 |
| 0 | -0.125 | 1.74 | 1.67 | 3.99 |
| 0.25 | 0.125 | 1.87 | 1.80 | 5.79 |
| 0.5 | 0.375 | 3.04 | 2.92 | 8.71 |
| 0.75 | 0.625 | 5.18 | 4.98 | 13.69 |
| 1 | 0.875 | 6.85 | 6.59 | 20.28 |
| 1.25 | 1.125 | 11.56 | 11.11 | 31.39 |
| 1.5 | 1.375 | 20.36 | 19.58 | 50.97 |
| 1.75 | 1.625 | 16.08 | 15.46 | 66.43 |
| 2 | 1.875 | 22.39 | 21.53 | 87.95 |
| 2.25 | 2.125 | 6.83 | 6.57 | 94.52 |
| 2.5 | 2.375 | 2.47 | 2.37 | 96.89 |
| 2.75 | 2.625 | 1.61 | 1.55 | 98.44 |
| 3 | 2.875 | 0.82 | 0.79 | 99.23 |
| 3.25 | 3.125 | 0.65 | 0.62 | 99.86 |
| 3.5 | 3.375 | 0.12 | 0.12 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.720 |
| **5** | 0.015 |
| **16** | 0.715 |
| **25** | 0.980 |
| **50** | 1.365 |
| **75** | 1.725 |
| **84** | 1.830 |
| **95** | 2.175 |
| **99** | 2.800 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.419 | 0.374 |
| Standard Deviation | 0.651 | 0.637 |
| Skewness | -0.721 | |
| Kurtosis | 4.333 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.272 | 1.303 |
| Standard Deviation | 0.558 | 0.606 |
| Skewness (1) | -0.166 | -0.208 |
| Skewness (2) | -0.484 | |
| Kurtosis | 0.937 | 1.188 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1620+00** |
| **Sample** | **Swash** |
| **Mean** | **0.600 mm** |
| **STD** | **0.485 mm** |
| **Skewness** | **-0.039** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 80.51 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.73 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

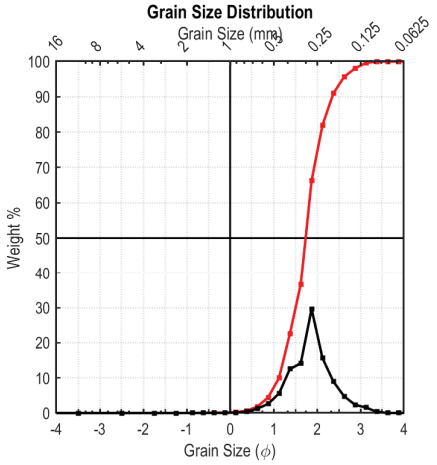
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.00 | 3.73 | 3.73 |
| -0.75 | -0.875 | 4.07 | 5.06 | 8.78 |
| -0.5 | -0.625 | 5.33 | 6.62 | 15.40 |
| -0.25 | -0.375 | 4.24 | 5.27 | 20.67 |
| 0 | -0.125 | 5.80 | 7.20 | 27.87 |
| 0.25 | 0.125 | 5.14 | 6.38 | 34.26 |
| 0.5 | 0.375 | 5.68 | 7.06 | 41.31 |
| 0.75 | 0.625 | 7.09 | 8.81 | 50.12 |
| 1 | 0.875 | 5.94 | 7.38 | 57.50 |
| 1.25 | 1.125 | 6.14 | 7.63 | 65.12 |
| 1.5 | 1.375 | 6.37 | 7.91 | 73.03 |
| 1.75 | 1.625 | 3.91 | 4.86 | 77.89 |
| 2 | 1.875 | 8.33 | 10.35 | 88.24 |
| 2.25 | 2.125 | 4.43 | 5.50 | 93.74 |
| 2.5 | 2.375 | 2.80 | 3.48 | 97.22 |
| 2.75 | 2.625 | 1.42 | 1.76 | 98.98 |
| 3 | 2.875 | 0.37 | 0.46 | 99.44 |
| 3.25 | 3.125 | 0.29 | 0.36 | 99.80 |
| 3.5 | 3.375 | 0.12 | 0.15 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.04 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.615 |
| **5** | -1.155 |
| **16** | -0.595 |
| **25** | -0.225 |
| **50** | 0.620 |
| **75** | 1.475 |
| **84** | 1.775 |
| **95** | 2.215 |
| **99** | 2.635 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.738 | 0.600 |
| Standard Deviation | 1.044 | 0.485 |
| Skewness | -0.039 | |
| Kurtosis | 2.110 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.590 | 0.600 |
| Standard Deviation | 1.185 | 1.103 |
| Skewness (1) | -0.025 | -0.039 |
| Skewness (2) | -0.076 | |
| Kurtosis | 0.422 | 0.812 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1630+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.277 mm** |
| **STD** | **0.706 mm** |
| **Skewness** | **-0.011** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.96 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

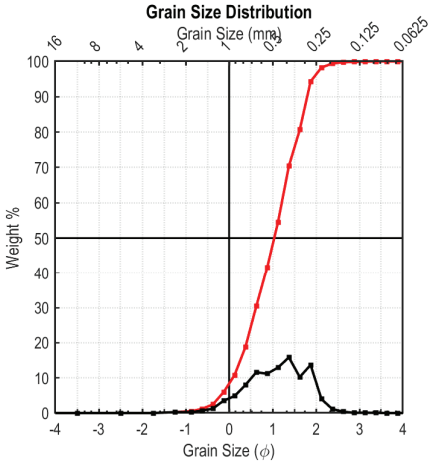
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.05 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.08 |
| 0 | -0.125 | 0.04 | 0.04 | 0.12 |
| 0.25 | 0.125 | 0.13 | 0.13 | 0.24 |
| 0.5 | 0.375 | 0.37 | 0.36 | 0.60 |
| 0.75 | 0.625 | 1.28 | 1.23 | 1.83 |
| 1 | 0.875 | 2.71 | 2.61 | 4.43 |
| 1.25 | 1.125 | 5.78 | 5.56 | 9.99 |
| 1.5 | 1.375 | 13.03 | 12.53 | 22.53 |
| 1.75 | 1.625 | 14.70 | 14.14 | 36.67 |
| 2 | 1.875 | 30.79 | 29.62 | 66.29 |
| 2.25 | 2.125 | 16.27 | 15.65 | 81.94 |
| 2.5 | 2.375 | 9.34 | 8.98 | 90.92 |
| 2.75 | 2.625 | 4.93 | 4.74 | 95.66 |
| 3 | 2.875 | 2.45 | 2.36 | 98.02 |
| 3.25 | 3.125 | 1.63 | 1.57 | 99.59 |
| 3.5 | 3.375 | 0.36 | 0.35 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.455 |
| **5** | 0.900 |
| **16** | 1.245 |
| **25** | 1.420 |
| **50** | 1.740 |
| **75** | 2.015 |
| **84** | 2.180 |
| **95** | 2.590 |
| **99** | 3.030 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.853 | 0.277 |
| Standard Deviation | 0.502 | 0.706 |
| Skewness | -0.011 | |
| Kurtosis | 4.109 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.712 | 1.722 |
| Standard Deviation | 0.467 | 0.490 |
| Skewness (1) | -0.059 | -0.026 |
| Skewness (2) | 0.011 | |
| Kurtosis | 0.807 | 1.164 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1630+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.466 mm** |
| **STD** | **0.630 mm** |
| **Skewness** | **-0.346** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.67 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.26 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

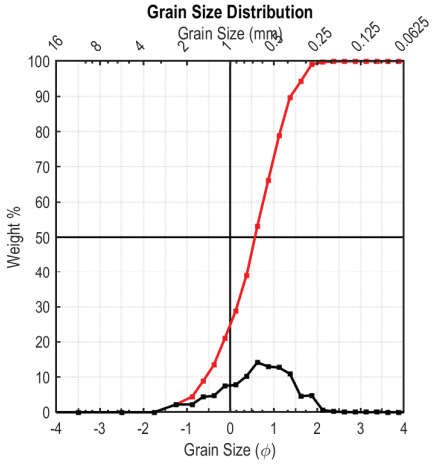
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.27 | 0.26 | 0.26 |
| -0.75 | -0.875 | 0.26 | 0.25 | 0.51 |
| -0.5 | -0.625 | 0.71 | 0.68 | 1.18 |
| -0.25 | -0.375 | 1.32 | 1.26 | 2.45 |
| 0 | -0.125 | 3.70 | 3.53 | 5.98 |
| 0.25 | 0.125 | 5.05 | 4.82 | 10.81 |
| 0.5 | 0.375 | 8.36 | 7.99 | 18.79 |
| 0.75 | 0.625 | 12.15 | 11.61 | 30.40 |
| 1 | 0.875 | 11.71 | 11.19 | 41.59 |
| 1.25 | 1.125 | 13.55 | 12.95 | 54.53 |
| 1.5 | 1.375 | 16.59 | 15.85 | 70.38 |
| 1.75 | 1.625 | 10.72 | 10.24 | 80.62 |
| 2 | 1.875 | 14.33 | 13.69 | 94.32 |
| 2.25 | 2.125 | 4.14 | 3.96 | 98.27 |
| 2.5 | 2.375 | 1.18 | 1.13 | 99.40 |
| 2.75 | 2.625 | 0.41 | 0.39 | 99.79 |
| 3 | 2.875 | 0.05 | 0.05 | 99.84 |
| 3.25 | 3.125 | 0.11 | 0.11 | 99.94 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.695 |
| **5** | -0.195 |
| **16** | 0.290 |
| **25** | 0.510 |
| **50** | 1.035 |
| **75** | 1.490 |
| **84** | 1.685 |
| **95** | 1.920 |
| **99** | 2.285 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.102 | 0.466 |
| Standard Deviation | 0.667 | 0.630 |
| Skewness | -0.346 | |
| Kurtosis | 2.958 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.988 | 1.003 |
| Standard Deviation | 0.698 | 0.669 |
| Skewness (1) | -0.068 | -0.116 |
| Skewness (2) | -0.247 | |
| Kurtosis | 0.516 | 0.884 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1630+00** |
| **Sample** | **Swash** |
| **Mean** | **0.647 mm** |
| **STD** | **0.596 mm** |
| **Skewness** | **-0.367** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.32 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 2.20 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.2 |

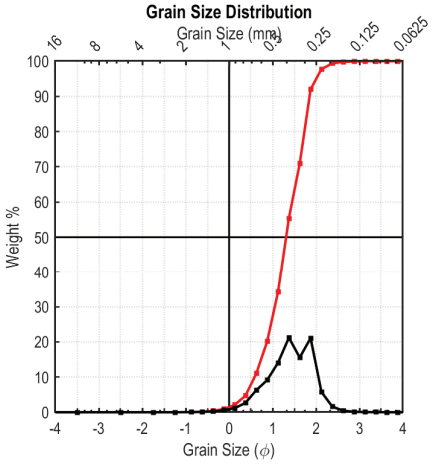
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.27 | 2.20 | 2.20 |
| -0.75 | -0.875 | 2.30 | 2.23 | 4.42 |
| -0.5 | -0.625 | 4.51 | 4.37 | 8.79 |
| -0.25 | -0.375 | 4.81 | 4.66 | 13.44 |
| 0 | -0.125 | 7.74 | 7.49 | 20.93 |
| 0.25 | 0.125 | 8.02 | 7.76 | 28.70 |
| 0.5 | 0.375 | 10.55 | 10.21 | 38.91 |
| 0.75 | 0.625 | 14.64 | 14.17 | 53.08 |
| 1 | 0.875 | 13.42 | 12.99 | 66.07 |
| 1.25 | 1.125 | 13.12 | 12.70 | 78.77 |
| 1.5 | 1.375 | 11.29 | 10.93 | 89.69 |
| 1.75 | 1.625 | 4.70 | 4.55 | 94.24 |
| 2 | 1.875 | 4.96 | 4.80 | 99.04 |
| 2.25 | 2.125 | 0.69 | 0.67 | 99.71 |
| 2.5 | 2.375 | 0.20 | 0.19 | 99.90 |
| 2.75 | 2.625 | 0.06 | 0.06 | 99.96 |
| 3 | 2.875 | 0.02 | 0.02 | 99.98 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.520 |
| **5** | -0.840 |
| **16** | -0.290 |
| **25** | 0.005 |
| **50** | 0.570 |
| **75** | 1.050 |
| **84** | 1.245 |
| **95** | 1.665 |
| **99** | 1.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.628 | 0.647 |
| Standard Deviation | 0.747 | 0.596 |
| Skewness | -0.367 | |
| Kurtosis | 2.733 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.478 | 0.508 |
| Standard Deviation | 0.768 | 0.763 |
| Skewness (1) | -0.121 | -0.123 |
| Skewness (2) | -0.205 | |
| Kurtosis | 0.632 | 0.982 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1640+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.378 mm** |
| **STD** | **0.703 mm** |
| **Skewness** | **-0.517** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.70 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.9 |

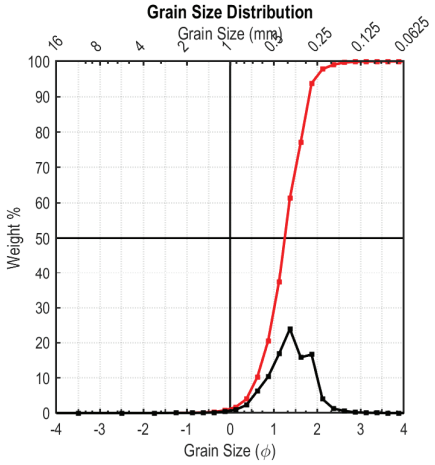
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.05 |
| -0.5 | -0.625 | 0.10 | 0.10 | 0.14 |
| -0.25 | -0.375 | 0.24 | 0.23 | 0.37 |
| 0 | -0.125 | 0.57 | 0.54 | 0.92 |
| 0.25 | 0.125 | 1.20 | 1.15 | 2.06 |
| 0.5 | 0.375 | 2.77 | 2.65 | 4.71 |
| 0.75 | 0.625 | 6.57 | 6.28 | 10.98 |
| 1 | 0.875 | 9.56 | 9.13 | 20.11 |
| 1.25 | 1.125 | 14.72 | 14.06 | 34.17 |
| 1.5 | 1.375 | 22.19 | 21.19 | 55.37 |
| 1.75 | 1.625 | 16.28 | 15.55 | 70.92 |
| 2 | 1.875 | 22.07 | 21.08 | 92.00 |
| 2.25 | 2.125 | 6.02 | 5.75 | 97.75 |
| 2.5 | 2.375 | 1.68 | 1.60 | 99.35 |
| 2.75 | 2.625 | 0.47 | 0.45 | 99.80 |
| 3 | 2.875 | 0.13 | 0.12 | 99.92 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.98 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.105 |
| **5** | 0.385 |
| **16** | 0.760 |
| **25** | 0.960 |
| **50** | 1.310 |
| **75** | 1.675 |
| **84** | 1.780 |
| **95** | 2.005 |
| **99** | 2.320 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.403 | 0.378 |
| Standard Deviation | 0.509 | 0.703 |
| Skewness | -0.517 | |
| Kurtosis | 3.535 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.270 | 1.283 |
| Standard Deviation | 0.510 | 0.500 |
| Skewness (1) | -0.078 | -0.110 |
| Skewness (2) | -0.225 | |
| Kurtosis | 0.588 | 0.929 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1640+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.388 mm** |
| **STD** | **0.714 mm** |
| **Skewness** | **-0.329** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.23 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.8 |

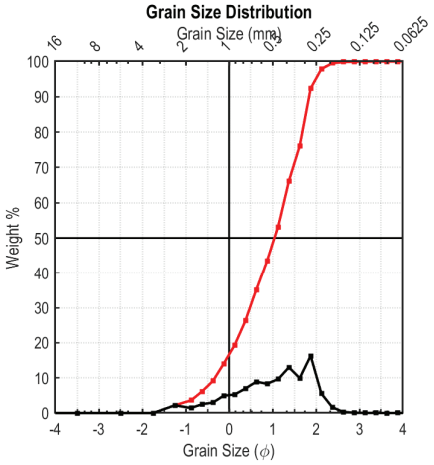
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.07 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.14 |
| -0.25 | -0.375 | 0.18 | 0.17 | 0.31 |
| 0 | -0.125 | 0.47 | 0.45 | 0.76 |
| 0.25 | 0.125 | 0.96 | 0.91 | 1.67 |
| 0.5 | 0.375 | 2.41 | 2.29 | 3.96 |
| 0.75 | 0.625 | 6.58 | 6.25 | 10.22 |
| 1 | 0.875 | 10.88 | 10.34 | 20.55 |
| 1.25 | 1.125 | 17.70 | 16.82 | 37.38 |
| 1.5 | 1.375 | 25.19 | 23.94 | 61.31 |
| 1.75 | 1.625 | 16.65 | 15.82 | 77.14 |
| 2 | 1.875 | 17.54 | 16.67 | 93.80 |
| 2.25 | 2.125 | 4.20 | 3.99 | 97.80 |
| 2.5 | 2.375 | 1.34 | 1.27 | 99.07 |
| 2.75 | 2.625 | 0.65 | 0.62 | 99.69 |
| 3 | 2.875 | 0.20 | 0.19 | 99.88 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.97 |
| 3.5 | 3.375 | 0.03 | 0.03 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.060 |
| **5** | 0.415 |
| **16** | 0.765 |
| **25** | 0.940 |
| **50** | 1.255 |
| **75** | 1.590 |
| **84** | 1.730 |
| **95** | 1.950 |
| **99** | 2.360 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.366 | 0.388 |
| Standard Deviation | 0.486 | 0.714 |
| Skewness | -0.329 | |
| Kurtosis | 3.983 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.248 | 1.250 |
| Standard Deviation | 0.482 | 0.474 |
| Skewness (1) | -0.016 | -0.055 |
| Skewness (2) | -0.150 | |
| Kurtosis | 0.591 | 0.968 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1640+00** |
| **Sample** | **Swash** |
| **Mean** | **0.496 mm** |
| **STD** | **0.553 mm** |
| **Skewness** | **-0.622** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.98 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 2.20 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.8 |

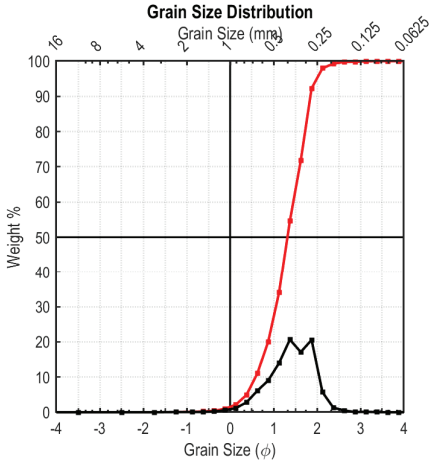
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.31 | 2.20 | 2.20 |
| -0.75 | -0.875 | 1.49 | 1.42 | 3.62 |
| -0.5 | -0.625 | 2.64 | 2.51 | 6.13 |
| -0.25 | -0.375 | 3.12 | 2.97 | 9.11 |
| 0 | -0.125 | 5.18 | 4.93 | 14.04 |
| 0.25 | 0.125 | 5.52 | 5.26 | 19.30 |
| 0.5 | 0.375 | 7.32 | 6.97 | 26.27 |
| 0.75 | 0.625 | 9.33 | 8.89 | 35.16 |
| 1 | 0.875 | 8.75 | 8.33 | 43.49 |
| 1.25 | 1.125 | 10.11 | 9.63 | 53.12 |
| 1.5 | 1.375 | 13.67 | 13.02 | 66.15 |
| 1.75 | 1.625 | 10.42 | 9.93 | 76.07 |
| 2 | 1.875 | 17.10 | 16.29 | 92.36 |
| 2.25 | 2.125 | 5.79 | 5.52 | 97.88 |
| 2.5 | 2.375 | 1.70 | 1.62 | 99.50 |
| 2.75 | 2.625 | 0.35 | 0.33 | 99.83 |
| 3 | 2.875 | 0.08 | 0.08 | 99.90 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.94 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.525 |
| **5** | -0.740 |
| **16** | -0.030 |
| **25** | 0.330 |
| **50** | 1.045 |
| **75** | 1.600 |
| **84** | 1.745 |
| **95** | 1.995 |
| **99** | 2.300 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.012 | 0.496 |
| Standard Deviation | 0.854 | 0.553 |
| Skewness | -0.622 | |
| Kurtosis | 2.821 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.857 | 0.920 |
| Standard Deviation | 0.888 | 0.858 |
| Skewness (1) | -0.211 | -0.258 |
| Skewness (2) | -0.470 | |
| Kurtosis | 0.541 | 0.883 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1650+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.378 mm** |
| **STD** | **0.702 mm** |
| **Skewness** | **-0.577** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.60 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

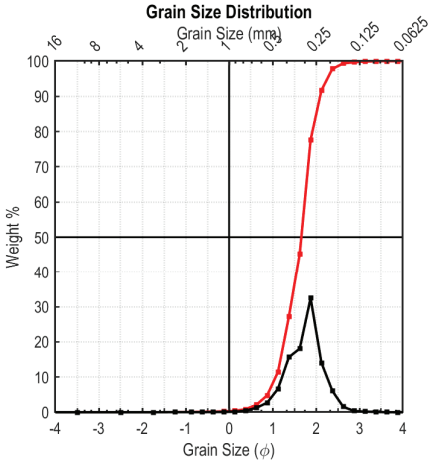
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.11 |
| -0.5 | -0.625 | 0.10 | 0.10 | 0.21 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.40 |
| 0 | -0.125 | 0.58 | 0.55 | 0.96 |
| 0.25 | 0.125 | 1.20 | 1.15 | 2.10 |
| 0.5 | 0.375 | 2.92 | 2.79 | 4.89 |
| 0.75 | 0.625 | 6.37 | 6.09 | 10.98 |
| 1 | 0.875 | 9.43 | 9.02 | 20.00 |
| 1.25 | 1.125 | 14.61 | 13.97 | 33.97 |
| 1.5 | 1.375 | 21.60 | 20.65 | 54.62 |
| 1.75 | 1.625 | 17.89 | 17.10 | 71.72 |
| 2 | 1.875 | 21.50 | 20.55 | 92.28 |
| 2.25 | 2.125 | 5.96 | 5.70 | 97.97 |
| 2.5 | 2.375 | 1.36 | 1.30 | 99.27 |
| 2.75 | 2.625 | 0.53 | 0.51 | 99.78 |
| 3 | 2.875 | 0.05 | 0.05 | 99.83 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.96 |
| 3.5 | 3.375 | 0.04 | 0.04 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.115 |
| **5** | 0.380 |
| **16** | 0.765 |
| **25** | 0.965 |
| **50** | 1.320 |
| **75** | 1.665 |
| **84** | 1.775 |
| **95** | 1.995 |
| **99** | 2.320 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.402 | 0.378 |
| Standard Deviation | 0.511 | 0.702 |
| Skewness | -0.577 | |
| Kurtosis | 3.949 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.270 | 1.287 |
| Standard Deviation | 0.505 | 0.497 |
| Skewness (1) | -0.099 | -0.132 |
| Skewness (2) | -0.262 | |
| Kurtosis | 0.599 | 0.946 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1650+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.302 mm** |
| **STD** | **0.743 mm** |
| **Skewness** | **-0.623** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.28 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

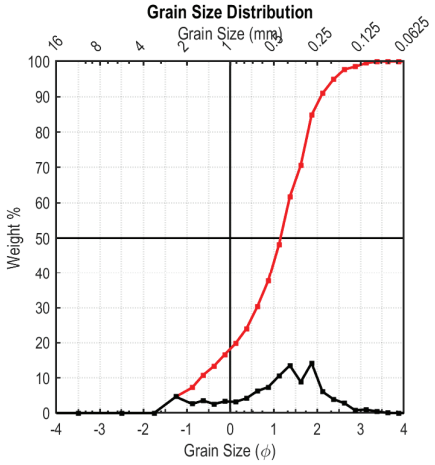
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.07 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.10 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.16 |
| 0 | -0.125 | 0.09 | 0.09 | 0.25 |
| 0.25 | 0.125 | 0.16 | 0.15 | 0.40 |
| 0.5 | 0.375 | 0.46 | 0.44 | 0.84 |
| 0.75 | 0.625 | 1.33 | 1.26 | 2.10 |
| 1 | 0.875 | 2.84 | 2.70 | 4.80 |
| 1.25 | 1.125 | 7.03 | 6.68 | 11.47 |
| 1.5 | 1.375 | 16.47 | 15.64 | 27.12 |
| 1.75 | 1.625 | 19.04 | 18.09 | 45.20 |
| 2 | 1.875 | 34.17 | 32.46 | 77.66 |
| 2.25 | 2.125 | 14.79 | 14.05 | 91.71 |
| 2.5 | 2.375 | 6.41 | 6.09 | 97.80 |
| 2.75 | 2.625 | 1.64 | 1.56 | 99.35 |
| 3 | 2.875 | 0.37 | 0.35 | 99.71 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.405 |
| **5** | 0.885 |
| **16** | 1.195 |
| **25** | 1.340 |
| **50** | 1.660 |
| **75** | 1.855 |
| **84** | 1.990 |
| **95** | 2.260 |
| **99** | 2.570 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.728 | 0.302 |
| Standard Deviation | 0.429 | 0.743 |
| Skewness | -0.623 | |
| Kurtosis | 5.720 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.592 | 1.615 |
| Standard Deviation | 0.397 | 0.407 |
| Skewness (1) | -0.170 | -0.149 |
| Skewness (2) | -0.220 | |
| Kurtosis | 0.730 | 1.094 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1650+00** |
| **Sample** | **Swash** |
| **Mean** | **0.469 mm** |
| **STD** | **0.492 mm** |
| **Skewness** | **-0.592** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 95.21 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 4.63 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

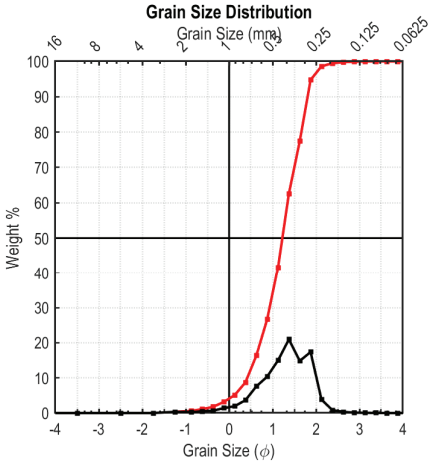
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.41 | 4.63 | 4.63 |
| -0.75 | -0.875 | 2.47 | 2.59 | 7.23 |
| -0.5 | -0.625 | 3.38 | 3.55 | 10.78 |
| -0.25 | -0.375 | 2.43 | 2.55 | 13.33 |
| 0 | -0.125 | 3.15 | 3.31 | 16.64 |
| 0.25 | 0.125 | 3.02 | 3.17 | 19.81 |
| 0.5 | 0.375 | 3.99 | 4.19 | 24.00 |
| 0.75 | 0.625 | 5.96 | 6.26 | 30.26 |
| 1 | 0.875 | 7.01 | 7.36 | 37.62 |
| 1.25 | 1.125 | 10.07 | 10.58 | 48.20 |
| 1.5 | 1.375 | 12.89 | 13.54 | 61.74 |
| 1.75 | 1.625 | 8.44 | 8.86 | 70.60 |
| 2 | 1.875 | 13.54 | 14.22 | 84.82 |
| 2.25 | 2.125 | 5.81 | 6.10 | 90.93 |
| 2.5 | 2.375 | 3.75 | 3.94 | 94.86 |
| 2.75 | 2.625 | 2.70 | 2.84 | 97.70 |
| 3 | 2.875 | 0.78 | 0.82 | 98.52 |
| 3.25 | 3.125 | 0.93 | 0.98 | 99.50 |
| 3.5 | 3.375 | 0.44 | 0.46 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.640 |
| **5** | -1.195 |
| **16** | -0.175 |
| **25** | 0.415 |
| **50** | 1.160 |
| **75** | 1.700 |
| **84** | 1.860 |
| **95** | 2.385 |
| **99** | 3.000 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.091 | 0.469 |
| Standard Deviation | 1.022 | 0.492 |
| Skewness | -0.592 | |
| Kurtosis | 2.853 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.843 | 0.948 |
| Standard Deviation | 1.017 | 1.051 |
| Skewness (1) | -0.312 | -0.314 |
| Skewness (2) | -0.555 | |
| Kurtosis | 0.759 | 1.142 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1660+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.412 mm** |
| **STD** | **0.669 mm** |
| **Skewness** | **-0.887** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.35 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.34 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

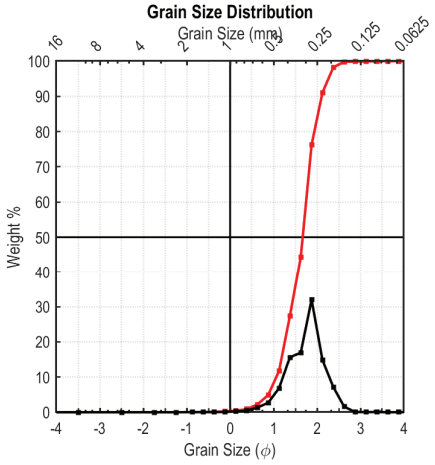
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.36 | 0.34 | 0.34 |
| -0.75 | -0.875 | 0.28 | 0.27 | 0.61 |
| -0.5 | -0.625 | 0.51 | 0.48 | 1.09 |
| -0.25 | -0.375 | 0.69 | 0.65 | 1.75 |
| 0 | -0.125 | 1.47 | 1.40 | 3.14 |
| 0.25 | 0.125 | 2.04 | 1.94 | 5.08 |
| 0.5 | 0.375 | 3.84 | 3.64 | 8.72 |
| 0.75 | 0.625 | 7.99 | 7.58 | 16.31 |
| 1 | 0.875 | 10.90 | 10.35 | 26.65 |
| 1.25 | 1.125 | 15.77 | 14.97 | 41.62 |
| 1.5 | 1.375 | 22.08 | 20.96 | 62.58 |
| 1.75 | 1.625 | 15.62 | 14.83 | 77.41 |
| 2 | 1.875 | 18.29 | 17.36 | 94.77 |
| 2.25 | 2.125 | 4.06 | 3.85 | 98.62 |
| 2.5 | 2.375 | 0.88 | 0.84 | 99.46 |
| 2.75 | 2.625 | 0.36 | 0.34 | 99.80 |
| 3 | 2.875 | 0.12 | 0.11 | 99.91 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.98 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.670 |
| **5** | 0.115 |
| **16** | 0.615 |
| **25** | 0.835 |
| **50** | 1.225 |
| **75** | 1.585 |
| **84** | 1.720 |
| **95** | 1.890 |
| **99** | 2.240 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.280 | 0.412 |
| Standard Deviation | 0.580 | 0.669 |
| Skewness | -0.887 | |
| Kurtosis | 4.636 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.167 | 1.187 |
| Standard Deviation | 0.552 | 0.545 |
| Skewness (1) | -0.104 | -0.177 |
| Skewness (2) | -0.403 | |
| Kurtosis | 0.606 | 0.970 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1660+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.301 mm** |
| **STD** | **0.744 mm** |
| **Skewness** | **-0.672** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.87 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.9 |

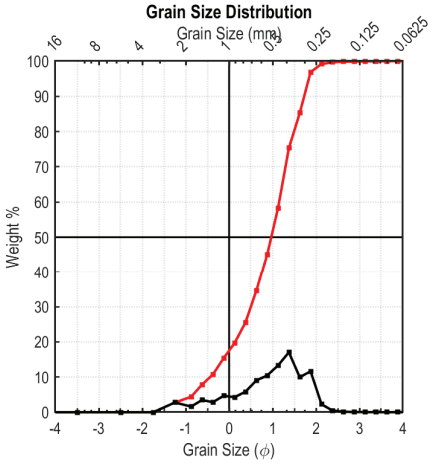
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.04 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.07 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.11 |
| 0 | -0.125 | 0.10 | 0.10 | 0.21 |
| 0.25 | 0.125 | 0.22 | 0.21 | 0.42 |
| 0.5 | 0.375 | 0.47 | 0.45 | 0.87 |
| 0.75 | 0.625 | 1.39 | 1.33 | 2.19 |
| 1 | 0.875 | 2.82 | 2.69 | 4.88 |
| 1.25 | 1.125 | 7.17 | 6.84 | 11.72 |
| 1.5 | 1.375 | 16.36 | 15.60 | 27.32 |
| 1.75 | 1.625 | 17.76 | 16.94 | 44.25 |
| 2 | 1.875 | 33.55 | 31.99 | 76.25 |
| 2.25 | 2.125 | 15.55 | 14.83 | 91.07 |
| 2.5 | 2.375 | 7.51 | 7.16 | 98.24 |
| 2.75 | 2.625 | 1.65 | 1.57 | 99.81 |
| 3 | 2.875 | 0.08 | 0.08 | 99.89 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.400 |
| **5** | 0.880 |
| **16** | 1.195 |
| **25** | 1.340 |
| **50** | 1.670 |
| **75** | 1.865 |
| **84** | 2.005 |
| **95** | 2.260 |
| **99** | 2.495 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.732 | 0.301 |
| Standard Deviation | 0.426 | 0.744 |
| Skewness | -0.672 | |
| Kurtosis | 4.788 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.600 | 1.623 |
| Standard Deviation | 0.405 | 0.412 |
| Skewness (1) | -0.173 | -0.159 |
| Skewness (2) | -0.247 | |
| Kurtosis | 0.704 | 1.077 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1660+00** |
| **Sample** | **Swash** |
| **Mean** | **0.528 mm** |
| **STD** | **0.567 mm** |
| **Skewness** | **-0.760** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.35 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 2.77 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.4 |

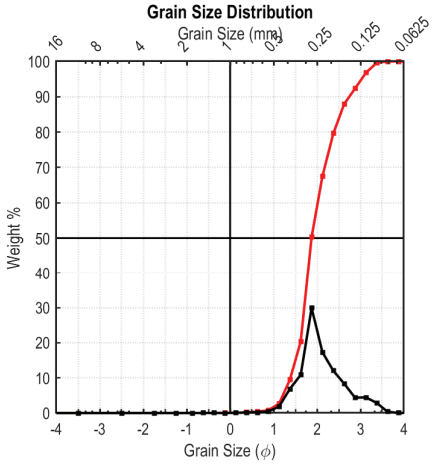
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.83 | 2.77 | 2.77 |
| -0.75 | -0.875 | 1.66 | 1.62 | 4.39 |
| -0.5 | -0.625 | 3.55 | 3.47 | 7.86 |
| -0.25 | -0.375 | 2.93 | 2.86 | 10.72 |
| 0 | -0.125 | 4.79 | 4.68 | 15.40 |
| 0.25 | 0.125 | 4.37 | 4.27 | 19.67 |
| 0.5 | 0.375 | 5.96 | 5.82 | 25.49 |
| 0.75 | 0.625 | 9.25 | 9.04 | 34.53 |
| 1 | 0.875 | 10.69 | 10.44 | 44.97 |
| 1.25 | 1.125 | 13.61 | 13.30 | 58.27 |
| 1.5 | 1.375 | 17.43 | 17.03 | 75.30 |
| 1.75 | 1.625 | 10.19 | 9.96 | 85.26 |
| 2 | 1.875 | 11.91 | 11.64 | 96.89 |
| 2.25 | 2.125 | 2.33 | 2.28 | 99.17 |
| 2.5 | 2.375 | 0.51 | 0.50 | 99.67 |
| 2.75 | 2.625 | 0.17 | 0.17 | 99.83 |
| 3 | 2.875 | 0.06 | 0.06 | 99.89 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.94 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.03 | 0.03 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.570 |
| **5** | -0.830 |
| **16** | -0.090 |
| **25** | 0.355 |
| **50** | 0.970 |
| **75** | 1.370 |
| **84** | 1.595 |
| **95** | 1.835 |
| **99** | 2.105 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.922 | 0.528 |
| Standard Deviation | 0.819 | 0.567 |
| Skewness | -0.760 | |
| Kurtosis | 3.133 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.752 | 0.825 |
| Standard Deviation | 0.842 | 0.825 |
| Skewness (1) | -0.258 | -0.305 |
| Skewness (2) | -0.555 | |
| Kurtosis | 0.582 | 1.076 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1670+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.232 mm** |
| **STD** | **0.697 mm** |
| **Skewness** | **0.472** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Fine Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.28 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.3 |

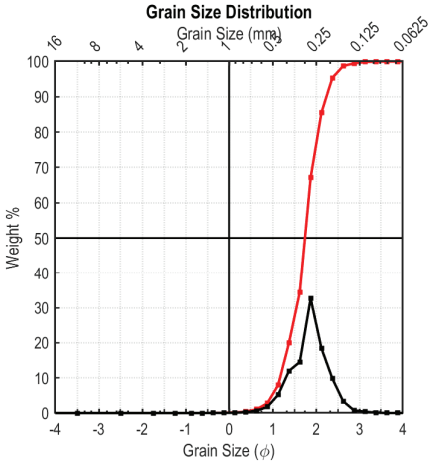
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.02 |
| 0 | -0.125 | 0.00 | 0.00 | 0.02 |
| 0.25 | 0.125 | 0.06 | 0.06 | 0.08 |
| 0.5 | 0.375 | 0.12 | 0.11 | 0.19 |
| 0.75 | 0.625 | 0.18 | 0.17 | 0.36 |
| 1 | 0.875 | 0.47 | 0.44 | 0.80 |
| 1.25 | 1.125 | 1.94 | 1.83 | 2.63 |
| 1.5 | 1.375 | 7.29 | 6.86 | 9.48 |
| 1.75 | 1.625 | 11.57 | 10.89 | 20.37 |
| 2 | 1.875 | 31.77 | 29.89 | 50.26 |
| 2.25 | 2.125 | 18.37 | 17.28 | 67.55 |
| 2.5 | 2.375 | 12.80 | 12.04 | 79.59 |
| 2.75 | 2.625 | 8.88 | 8.36 | 87.95 |
| 3 | 2.875 | 4.64 | 4.37 | 92.31 |
| 3.25 | 3.125 | 4.73 | 4.45 | 96.76 |
| 3.5 | 3.375 | 3.05 | 2.87 | 99.63 |
| 3.75 | 3.625 | 0.37 | 0.35 | 99.98 |
| 4 | 3.875 | 0.02 | 0.02 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.900 |
| **5** | 1.210 |
| **16** | 1.525 |
| **25** | 1.665 |
| **50** | 1.875 |
| **75** | 2.280 |
| **84** | 2.505 |
| **95** | 3.025 |
| **99** | 3.320 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.105 | 0.232 |
| Standard Deviation | 0.520 | 0.697 |
| Skewness | 0.472 | |
| Kurtosis | 3.465 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.015 | 1.968 |
| Standard Deviation | 0.490 | 0.520 |
| Skewness (1) | 0.286 | 0.276 |
| Skewness (2) | 0.495 | |
| Kurtosis | 0.852 | 1.210 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1670+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.279 mm** |
| **STD** | **0.746 mm** |
| **Skewness** | **-0.233** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.15 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

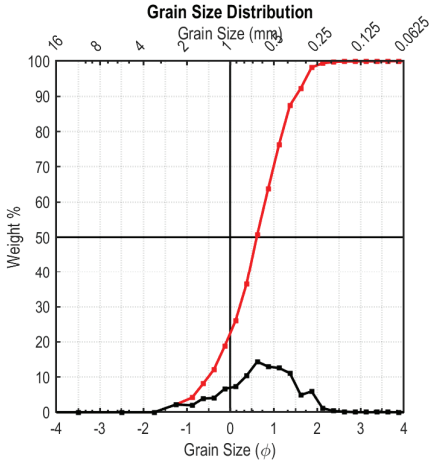
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.03 |
| 0 | -0.125 | 0.04 | 0.04 | 0.07 |
| 0.25 | 0.125 | 0.09 | 0.09 | 0.16 |
| 0.5 | 0.375 | 0.22 | 0.21 | 0.37 |
| 0.75 | 0.625 | 0.69 | 0.67 | 1.04 |
| 1 | 0.875 | 1.77 | 1.72 | 2.75 |
| 1.25 | 1.125 | 5.34 | 5.18 | 7.93 |
| 1.5 | 1.375 | 12.35 | 11.97 | 19.90 |
| 1.75 | 1.625 | 14.98 | 14.52 | 34.43 |
| 2 | 1.875 | 33.70 | 32.67 | 67.10 |
| 2.25 | 2.125 | 19.00 | 18.42 | 85.52 |
| 2.5 | 2.375 | 10.13 | 9.82 | 95.34 |
| 2.75 | 2.625 | 3.47 | 3.36 | 98.70 |
| 3 | 2.875 | 0.78 | 0.76 | 99.46 |
| 3.25 | 3.125 | 0.40 | 0.39 | 99.84 |
| 3.5 | 3.375 | 0.11 | 0.11 | 99.95 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.610 |
| **5** | 0.985 |
| **16** | 1.295 |
| **25** | 1.465 |
| **50** | 1.745 |
| **75** | 1.980 |
| **84** | 2.105 |
| **95** | 2.365 |
| **99** | 2.725 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.844 | 0.279 |
| Standard Deviation | 0.423 | 0.746 |
| Skewness | -0.233 | |
| Kurtosis | 4.357 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.700 | 1.715 |
| Standard Deviation | 0.405 | 0.412 |
| Skewness (1) | -0.111 | -0.106 |
| Skewness (2) | -0.173 | |
| Kurtosis | 0.704 | 1.098 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1670+00** |
| **Sample** | **Swash** |
| **Mean** | **0.622 mm** |
| **STD** | **0.591 mm** |
| **Skewness** | **-0.340** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 100.33 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.19 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.1 |

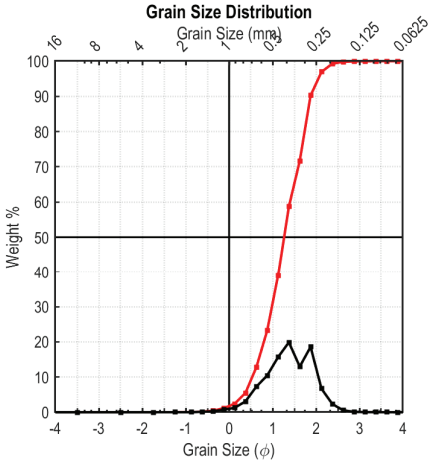
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.20 | 2.19 | 2.19 |
| -0.75 | -0.875 | 1.99 | 1.98 | 4.18 |
| -0.5 | -0.625 | 3.90 | 3.89 | 8.06 |
| -0.25 | -0.375 | 4.06 | 4.05 | 12.11 |
| 0 | -0.125 | 6.70 | 6.68 | 18.79 |
| 0.25 | 0.125 | 7.27 | 7.25 | 26.03 |
| 0.5 | 0.375 | 10.38 | 10.35 | 36.38 |
| 0.75 | 0.625 | 14.43 | 14.38 | 50.76 |
| 1 | 0.875 | 13.00 | 12.96 | 63.72 |
| 1.25 | 1.125 | 12.62 | 12.58 | 76.30 |
| 1.5 | 1.375 | 11.15 | 11.11 | 87.41 |
| 1.75 | 1.625 | 4.88 | 4.86 | 92.28 |
| 2 | 1.875 | 5.96 | 5.94 | 98.22 |
| 2.25 | 2.125 | 1.19 | 1.19 | 99.40 |
| 2.5 | 2.375 | 0.36 | 0.36 | 99.76 |
| 2.75 | 2.625 | 0.16 | 0.16 | 99.92 |
| 3 | 2.875 | 0.02 | 0.02 | 99.94 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.95 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.520 |
| **5** | -0.820 |
| **16** | -0.230 |
| **25** | 0.090 |
| **50** | 0.610 |
| **75** | 1.100 |
| **84** | 1.300 |
| **95** | 1.740 |
| **99** | 2.040 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.684 | 0.622 |
| Standard Deviation | 0.759 | 0.591 |
| Skewness | -0.340 | |
| Kurtosis | 2.923 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.535 | 0.560 |
| Standard Deviation | 0.765 | 0.770 |
| Skewness (1) | -0.098 | -0.108 |
| Skewness (2) | -0.196 | |
| Kurtosis | 0.673 | 1.039 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1680+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.386 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **-0.368** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.94 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.3 |

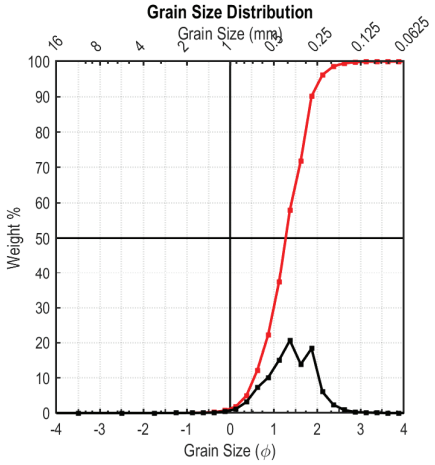
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.03 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.16 |
| -0.25 | -0.375 | 0.26 | 0.25 | 0.41 |
| 0 | -0.125 | 0.77 | 0.73 | 1.14 |
| 0.25 | 0.125 | 1.32 | 1.26 | 2.40 |
| 0.5 | 0.375 | 3.23 | 3.08 | 5.48 |
| 0.75 | 0.625 | 7.62 | 7.26 | 12.74 |
| 1 | 0.875 | 10.95 | 10.43 | 23.18 |
| 1.25 | 1.125 | 16.41 | 15.64 | 38.81 |
| 1.5 | 1.375 | 20.85 | 19.87 | 58.68 |
| 1.75 | 1.625 | 13.62 | 12.98 | 71.66 |
| 2 | 1.875 | 19.49 | 18.57 | 90.23 |
| 2.25 | 2.125 | 7.03 | 6.70 | 96.93 |
| 2.5 | 2.375 | 2.46 | 2.34 | 99.28 |
| 2.75 | 2.625 | 0.57 | 0.54 | 99.82 |
| 3 | 2.875 | 0.12 | 0.11 | 99.93 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.175 |
| **5** | 0.335 |
| **16** | 0.705 |
| **25** | 0.905 |
| **50** | 1.265 |
| **75** | 1.670 |
| **84** | 1.790 |
| **95** | 2.055 |
| **99** | 2.345 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.373 | 0.386 |
| Standard Deviation | 0.536 | 0.690 |
| Skewness | -0.368 | |
| Kurtosis | 3.257 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.248 | 1.253 |
| Standard Deviation | 0.542 | 0.532 |
| Skewness (1) | -0.032 | -0.057 |
| Skewness (2) | -0.129 | |
| Kurtosis | 0.585 | 0.921 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1680+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.381 mm** |
| **STD** | **0.691 mm** |
| **Skewness** | **-0.179** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.30 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

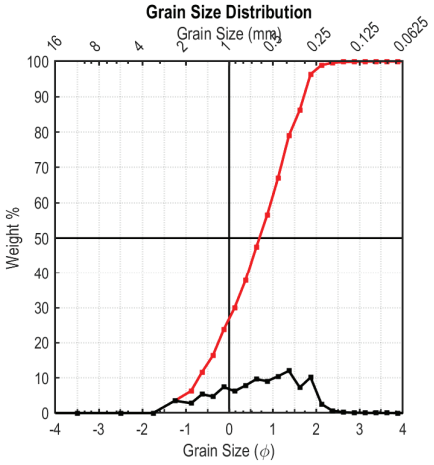
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.05 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.10 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.24 |
| 0 | -0.125 | 0.48 | 0.46 | 0.69 |
| 0.25 | 0.125 | 1.16 | 1.10 | 1.79 |
| 0.5 | 0.375 | 3.31 | 3.14 | 4.94 |
| 0.75 | 0.625 | 7.60 | 7.22 | 12.16 |
| 1 | 0.875 | 10.64 | 10.10 | 22.26 |
| 1.25 | 1.125 | 15.82 | 15.02 | 37.28 |
| 1.5 | 1.375 | 21.76 | 20.66 | 57.95 |
| 1.75 | 1.625 | 14.61 | 13.87 | 71.82 |
| 2 | 1.875 | 19.34 | 18.37 | 90.19 |
| 2.25 | 2.125 | 6.33 | 6.01 | 96.20 |
| 2.5 | 2.375 | 2.52 | 2.39 | 98.59 |
| 2.75 | 2.625 | 0.93 | 0.88 | 99.48 |
| 3 | 2.875 | 0.30 | 0.28 | 99.76 |
| 3.25 | 3.125 | 0.17 | 0.16 | 99.92 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.055 |
| **5** | 0.375 |
| **16** | 0.720 |
| **25** | 0.920 |
| **50** | 1.280 |
| **75** | 1.670 |
| **84** | 1.790 |
| **95** | 2.075 |
| **99** | 2.490 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.392 | 0.381 |
| Standard Deviation | 0.533 | 0.691 |
| Skewness | -0.179 | |
| Kurtosis | 3.446 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.255 | 1.263 |
| Standard Deviation | 0.535 | 0.525 |
| Skewness (1) | -0.047 | -0.056 |
| Skewness (2) | -0.103 | |
| Kurtosis | 0.589 | 0.929 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1680+00** |
| **Sample** | **Swash** |
| **Mean** | **0.607 mm** |
| **STD** | **0.538 mm** |
| **Skewness** | **-0.341** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 102.10 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.51 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.5 |

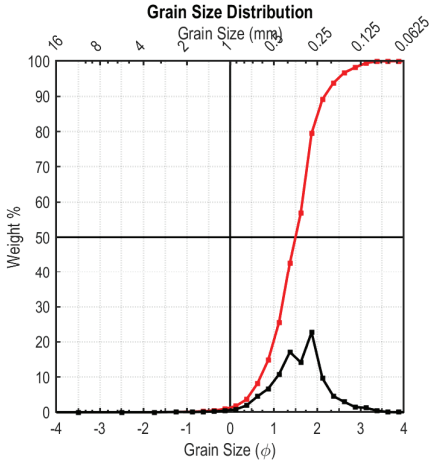
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.58 | 3.51 | 3.51 |
| -0.75 | -0.875 | 2.85 | 2.79 | 6.30 |
| -0.5 | -0.625 | 5.45 | 5.34 | 11.64 |
| -0.25 | -0.375 | 4.81 | 4.71 | 16.35 |
| 0 | -0.125 | 7.56 | 7.40 | 23.75 |
| 0.25 | 0.125 | 6.35 | 6.22 | 29.97 |
| 0.5 | 0.375 | 7.98 | 7.82 | 37.79 |
| 0.75 | 0.625 | 9.85 | 9.65 | 47.43 |
| 1 | 0.875 | 9.26 | 9.07 | 56.50 |
| 1.25 | 1.125 | 10.68 | 10.46 | 66.96 |
| 1.5 | 1.375 | 12.26 | 12.01 | 78.97 |
| 1.75 | 1.625 | 7.42 | 7.27 | 86.24 |
| 2 | 1.875 | 10.36 | 10.15 | 96.39 |
| 2.25 | 2.125 | 2.60 | 2.55 | 98.93 |
| 2.5 | 2.375 | 0.70 | 0.69 | 99.62 |
| 2.75 | 2.625 | 0.22 | 0.22 | 99.83 |
| 3 | 2.875 | 0.08 | 0.08 | 99.91 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.605 |
| **5** | -1.050 |
| **16** | -0.395 |
| **25** | -0.075 |
| **50** | 0.695 |
| **75** | 1.290 |
| **84** | 1.550 |
| **95** | 1.840 |
| **99** | 2.150 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.721 | 0.607 |
| Standard Deviation | 0.893 | 0.538 |
| Skewness | -0.341 | |
| Kurtosis | 2.351 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.578 | 0.617 |
| Standard Deviation | 0.972 | 0.924 |
| Skewness (1) | -0.121 | -0.164 |
| Skewness (2) | -0.308 | |
| Kurtosis | 0.486 | 0.868 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.331 mm** |
| **STD** | **0.657 mm** |
| **Skewness** | **-0.158** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.81 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

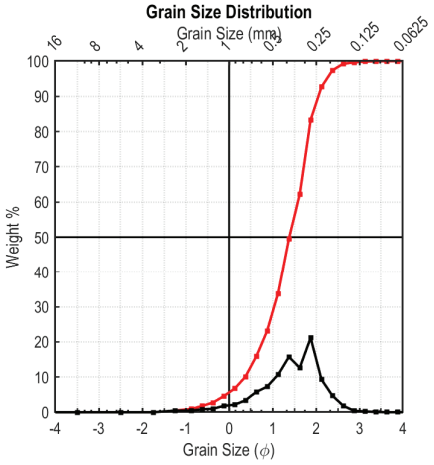
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.13 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.27 |
| -0.25 | -0.375 | 0.22 | 0.21 | 0.48 |
| 0 | -0.125 | 0.47 | 0.45 | 0.93 |
| 0.25 | 0.125 | 0.82 | 0.78 | 1.72 |
| 0.5 | 0.375 | 2.00 | 1.91 | 3.62 |
| 0.75 | 0.625 | 4.68 | 4.47 | 8.09 |
| 1 | 0.875 | 7.00 | 6.68 | 14.77 |
| 1.25 | 1.125 | 11.29 | 10.78 | 25.54 |
| 1.5 | 1.375 | 17.96 | 17.13 | 42.68 |
| 1.75 | 1.625 | 14.85 | 14.17 | 56.84 |
| 2 | 1.875 | 23.80 | 22.70 | 79.55 |
| 2.25 | 2.125 | 10.09 | 9.63 | 89.18 |
| 2.5 | 2.375 | 4.81 | 4.59 | 93.76 |
| 2.75 | 2.625 | 3.09 | 2.94 | 96.71 |
| 3 | 2.875 | 1.58 | 1.51 | 98.21 |
| 3.25 | 3.125 | 1.29 | 1.23 | 99.45 |
| 3.5 | 3.375 | 0.52 | 0.49 | 99.94 |
| 3.75 | 3.625 | 0.05 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.105 |
| **5** | 0.450 |
| **16** | 0.905 |
| **25** | 1.110 |
| **50** | 1.505 |
| **75** | 1.825 |
| **84** | 1.990 |
| **95** | 2.480 |
| **99** | 3.035 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.595 | 0.331 |
| Standard Deviation | 0.607 | 0.657 |
| Skewness | -0.158 | |
| Kurtosis | 4.052 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.447 | 1.467 |
| Standard Deviation | 0.542 | 0.579 |
| Skewness (1) | -0.106 | -0.073 |
| Skewness (2) | -0.074 | |
| Kurtosis | 0.871 | 1.164 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.375 mm** |
| **STD** | **0.614 mm** |
| **Skewness** | **-0.860** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.91 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.47 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.1 |

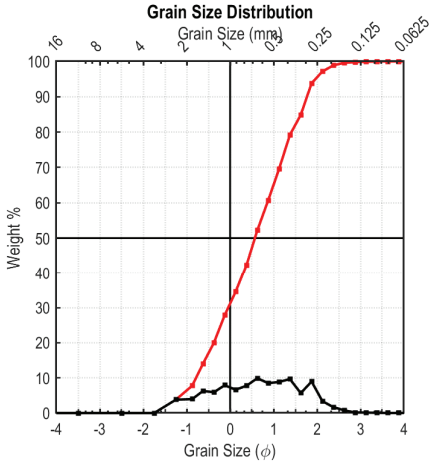
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.49 | 0.47 | 0.47 |
| -0.75 | -0.875 | 0.46 | 0.44 | 0.92 |
| -0.5 | -0.625 | 0.89 | 0.85 | 1.77 |
| -0.25 | -0.375 | 1.01 | 0.97 | 2.74 |
| 0 | -0.125 | 1.89 | 1.82 | 4.56 |
| 0.25 | 0.125 | 2.22 | 2.14 | 6.70 |
| 0.5 | 0.375 | 3.52 | 3.38 | 10.08 |
| 0.75 | 0.625 | 6.01 | 5.78 | 15.86 |
| 1 | 0.875 | 7.55 | 7.27 | 23.13 |
| 1.25 | 1.125 | 11.07 | 10.65 | 33.78 |
| 1.5 | 1.375 | 16.36 | 15.75 | 49.53 |
| 1.75 | 1.625 | 13.13 | 12.63 | 62.16 |
| 2 | 1.875 | 22.00 | 21.18 | 83.34 |
| 2.25 | 2.125 | 9.68 | 9.31 | 92.65 |
| 2.5 | 2.375 | 4.91 | 4.73 | 97.38 |
| 2.75 | 2.625 | 1.94 | 1.86 | 99.24 |
| 3 | 2.875 | 0.42 | 0.41 | 99.65 |
| 3.25 | 3.125 | 0.24 | 0.23 | 99.88 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.850 |
| **5** | -0.075 |
| **16** | 0.630 |
| **25** | 0.920 |
| **50** | 1.385 |
| **75** | 1.775 |
| **84** | 1.895 |
| **95** | 2.250 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.415 | 0.375 |
| Standard Deviation | 0.703 | 0.614 |
| Skewness | -0.860 | |
| Kurtosis | 4.158 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.262 | 1.303 |
| Standard Deviation | 0.633 | 0.669 |
| Skewness (1) | -0.194 | -0.225 |
| Skewness (2) | -0.470 | |
| Kurtosis | 0.838 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.635 mm** |
| **STD** | **0.517 mm** |
| **Skewness** | **-0.097** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 89.23 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.80 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.3 |

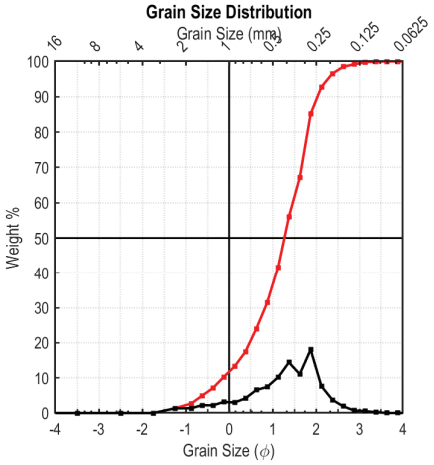
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.39 | 3.80 | 3.80 |
| -0.75 | -0.875 | 3.53 | 3.96 | 7.76 |
| -0.5 | -0.625 | 5.61 | 6.29 | 14.04 |
| -0.25 | -0.375 | 5.29 | 5.92 | 19.97 |
| 0 | -0.125 | 7.05 | 7.90 | 27.86 |
| 0.25 | 0.125 | 5.93 | 6.64 | 34.51 |
| 0.5 | 0.375 | 6.92 | 7.76 | 42.26 |
| 0.75 | 0.625 | 8.85 | 9.92 | 52.18 |
| 1 | 0.875 | 7.58 | 8.50 | 60.68 |
| 1.25 | 1.125 | 7.88 | 8.84 | 69.51 |
| 1.5 | 1.375 | 8.64 | 9.68 | 79.19 |
| 1.75 | 1.625 | 5.06 | 5.67 | 84.86 |
| 2 | 1.875 | 7.99 | 8.96 | 93.82 |
| 2.25 | 2.125 | 2.99 | 3.35 | 97.17 |
| 2.5 | 2.375 | 1.51 | 1.70 | 98.86 |
| 2.75 | 2.625 | 0.68 | 0.76 | 99.62 |
| 3 | 2.875 | 0.14 | 0.16 | 99.78 |
| 3.25 | 3.125 | 0.12 | 0.13 | 99.92 |
| 3.5 | 3.375 | 0.05 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.620 |
| **5** | -1.135 |
| **16** | -0.540 |
| **25** | -0.215 |
| **50** | 0.570 |
| **75** | 1.265 |
| **84** | 1.585 |
| **95** | 1.965 |
| **99** | 2.420 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.656 | 0.635 |
| Standard Deviation | 0.951 | 0.517 |
| Skewness | -0.097 | |
| Kurtosis | 2.239 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.522 | 0.538 |
| Standard Deviation | 1.062 | 1.001 |
| Skewness (1) | -0.045 | -0.072 |
| Skewness (2) | -0.146 | |
| Kurtosis | 0.459 | 0.858 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 22 2022** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.420 mm** |
| **STD** | **0.553 mm** |
| **Skewness** | **-0.728** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 99.32 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.33 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

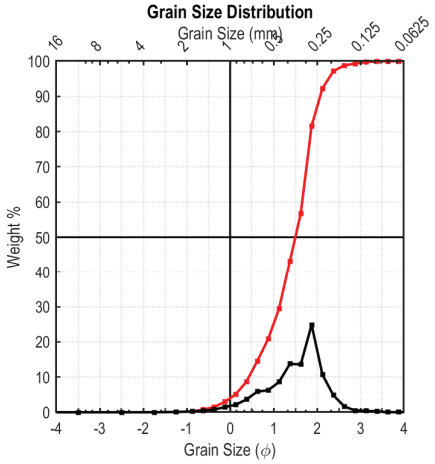
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.32 | 1.33 | 1.33 |
| -0.75 | -0.875 | 1.35 | 1.36 | 2.69 |
| -0.5 | -0.625 | 2.21 | 2.23 | 4.92 |
| -0.25 | -0.375 | 2.17 | 2.19 | 7.11 |
| 0 | -0.125 | 3.14 | 3.16 | 10.26 |
| 0.25 | 0.125 | 2.99 | 3.01 | 13.27 |
| 0.5 | 0.375 | 4.14 | 4.17 | 17.45 |
| 0.75 | 0.625 | 6.51 | 6.56 | 24.01 |
| 1 | 0.875 | 7.38 | 7.43 | 31.43 |
| 1.25 | 1.125 | 10.08 | 10.15 | 41.59 |
| 1.5 | 1.375 | 14.32 | 14.42 | 56.00 |
| 1.75 | 1.625 | 11.01 | 11.09 | 67.09 |
| 2 | 1.875 | 17.93 | 18.05 | 85.14 |
| 2.25 | 2.125 | 7.59 | 7.64 | 92.78 |
| 2.5 | 2.375 | 3.74 | 3.77 | 96.55 |
| 2.75 | 2.625 | 1.90 | 1.91 | 98.47 |
| 3 | 2.875 | 0.71 | 0.72 | 99.19 |
| 3.25 | 3.125 | 0.55 | 0.55 | 99.74 |
| 3.5 | 3.375 | 0.22 | 0.22 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.375 |
| **5** | -0.615 |
| **16** | 0.290 |
| **25** | 0.660 |
| **50** | 1.270 |
| **75** | 1.735 |
| **84** | 1.860 |
| **95** | 2.270 |
| **99** | 2.810 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.251 | 0.420 |
| Standard Deviation | 0.854 | 0.553 |
| Skewness | -0.728 | |
| Kurtosis | 3.395 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.075 | 1.140 |
| Standard Deviation | 0.785 | 0.830 |
| Skewness (1) | -0.248 | -0.278 |
| Skewness (2) | -0.564 | |
| Kurtosis | 0.838 | 1.100 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **980+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.355 mm** |
| **STD** | **0.631 mm** |
| **Skewness** | **-0.706** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.75 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

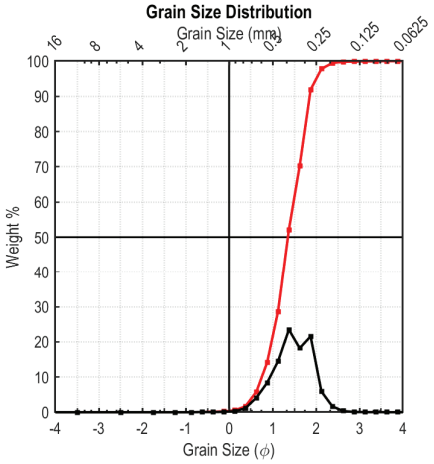
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.27 |
| -0.5 | -0.625 | 0.47 | 0.45 | 0.72 |
| -0.25 | -0.375 | 0.76 | 0.73 | 1.46 |
| 0 | -0.125 | 1.52 | 1.47 | 2.92 |
| 0.25 | 0.125 | 2.21 | 2.13 | 5.05 |
| 0.5 | 0.375 | 3.77 | 3.63 | 8.68 |
| 0.75 | 0.625 | 6.09 | 5.87 | 14.55 |
| 1 | 0.875 | 6.49 | 6.26 | 20.81 |
| 1.25 | 1.125 | 8.91 | 8.59 | 29.40 |
| 1.5 | 1.375 | 14.27 | 13.75 | 43.15 |
| 1.75 | 1.625 | 14.10 | 13.59 | 56.74 |
| 2 | 1.875 | 25.79 | 24.86 | 81.60 |
| 2.25 | 2.125 | 11.06 | 10.66 | 92.26 |
| 2.5 | 2.375 | 5.04 | 4.86 | 97.12 |
| 2.75 | 2.625 | 1.74 | 1.68 | 98.80 |
| 3 | 2.875 | 0.52 | 0.50 | 99.30 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.73 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.530 |
| **5** | 0.120 |
| **16** | 0.685 |
| **25** | 0.995 |
| **50** | 1.500 |
| **75** | 1.810 |
| **84** | 1.930 |
| **95** | 2.265 |
| **99** | 2.725 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.494 | 0.355 |
| Standard Deviation | 0.663 | 0.631 |
| Skewness | -0.706 | |
| Kurtosis | 3.786 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.308 | 1.372 |
| Standard Deviation | 0.623 | 0.636 |
| Skewness (1) | -0.309 | -0.298 |
| Skewness (2) | -0.494 | |
| Kurtosis | 0.723 | 1.079 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **980+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.361 mm** |
| **STD** | **0.737 mm** |
| **Skewness** | **-0.301** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.92 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

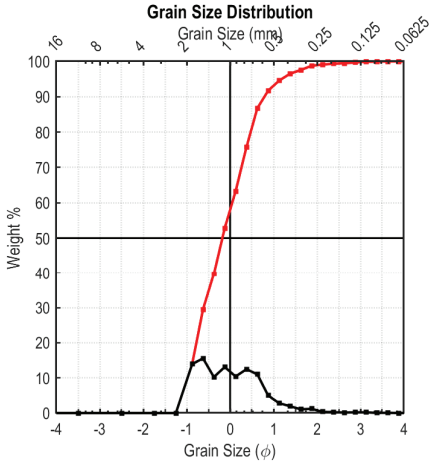
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.08 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.12 |
| 0 | -0.125 | 0.13 | 0.12 | 0.25 |
| 0.25 | 0.125 | 0.29 | 0.28 | 0.52 |
| 0.5 | 0.375 | 1.21 | 1.15 | 1.68 |
| 0.75 | 0.625 | 4.29 | 4.09 | 5.77 |
| 1 | 0.875 | 8.81 | 8.40 | 14.16 |
| 1.25 | 1.125 | 15.19 | 14.48 | 28.64 |
| 1.5 | 1.375 | 24.64 | 23.48 | 52.13 |
| 1.75 | 1.625 | 19.09 | 18.19 | 70.32 |
| 2 | 1.875 | 22.65 | 21.59 | 91.91 |
| 2.25 | 2.125 | 6.18 | 5.89 | 97.80 |
| 2.5 | 2.375 | 1.76 | 1.68 | 99.48 |
| 2.75 | 2.625 | 0.36 | 0.34 | 99.82 |
| 3 | 2.875 | 0.08 | 0.08 | 99.90 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.93 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.230 |
| **5** | 0.580 |
| **16** | 0.905 |
| **25** | 1.060 |
| **50** | 1.350 |
| **75** | 1.680 |
| **84** | 1.785 |
| **95** | 2.005 |
| **99** | 2.305 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.469 | 0.361 |
| Standard Deviation | 0.440 | 0.737 |
| Skewness | -0.301 | |
| Kurtosis | 3.707 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.345 | 1.347 |
| Standard Deviation | 0.440 | 0.436 |
| Skewness (1) | -0.011 | -0.046 |
| Skewness (2) | -0.131 | |
| Kurtosis | 0.619 | 0.942 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **980+00** |
| **Sample** | **Swash** |
| **Mean** | **0.980 mm** |
| **STD** | **0.608 mm** |
| **Skewness** | **0.942** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 29.10 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

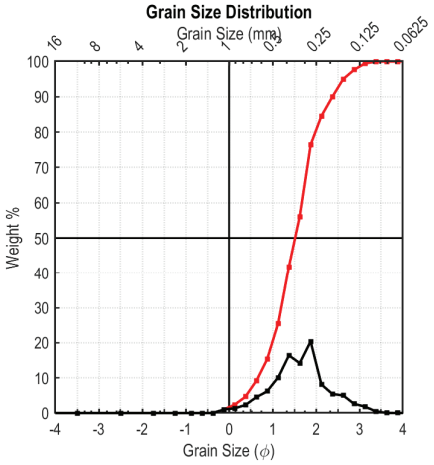
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 4.05 | 13.92 | 13.92 |
| -0.5 | -0.625 | 4.53 | 15.57 | 29.48 |
| -0.25 | -0.375 | 2.98 | 10.24 | 39.73 |
| 0 | -0.125 | 3.81 | 13.09 | 52.82 |
| 0.25 | 0.125 | 3.03 | 10.41 | 63.23 |
| 0.5 | 0.375 | 3.63 | 12.47 | 75.70 |
| 0.75 | 0.625 | 3.21 | 11.03 | 86.74 |
| 1 | 0.875 | 1.45 | 4.98 | 91.72 |
| 1.25 | 1.125 | 0.82 | 2.82 | 94.54 |
| 1.5 | 1.375 | 0.57 | 1.96 | 96.49 |
| 1.75 | 1.625 | 0.31 | 1.07 | 97.56 |
| 2 | 1.875 | 0.35 | 1.20 | 98.76 |
| 2.25 | 2.125 | 0.10 | 0.34 | 99.11 |
| 2.5 | 2.375 | 0.07 | 0.24 | 99.35 |
| 2.75 | 2.625 | 0.04 | 0.14 | 99.48 |
| 3 | 2.875 | 0.06 | 0.21 | 99.69 |
| 3.25 | 3.125 | 0.06 | 0.21 | 99.90 |
| 3.5 | 3.375 | 0.01 | 0.03 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.07 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.225 |
| **5** | -1.115 |
| **16** | -0.840 |
| **25** | -0.695 |
| **50** | -0.180 |
| **75** | 0.360 |
| **84** | 0.565 |
| **95** | 1.185 |
| **99** | 2.045 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.030 | 0.980 |
| Standard Deviation | 0.718 | 0.608 |
| Skewness | 0.942 | |
| Kurtosis | 4.381 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -0.137 | -0.152 |
| Standard Deviation | 0.702 | 0.700 |
| Skewness (1) | 0.060 | 0.124 |
| Skewness (2) | 0.306 | |
| Kurtosis | 0.637 | 0.893 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **990+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.323 mm** |
| **STD** | **0.636 mm** |
| **Skewness** | **-0.007** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.85 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.5 |

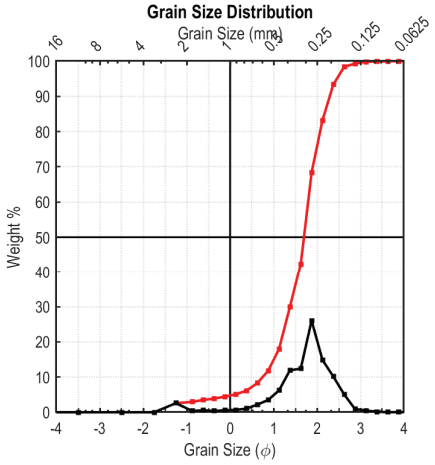
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.00 |
| 0 | -0.125 | 1.05 | 1.02 | 1.02 |
| 0.25 | 0.125 | 1.38 | 1.34 | 2.36 |
| 0.5 | 0.375 | 2.34 | 2.28 | 4.64 |
| 0.75 | 0.625 | 4.62 | 4.49 | 9.13 |
| 1 | 0.875 | 6.36 | 6.18 | 15.31 |
| 1.25 | 1.125 | 10.37 | 10.08 | 25.40 |
| 1.5 | 1.375 | 16.89 | 16.42 | 41.82 |
| 1.75 | 1.625 | 14.62 | 14.21 | 56.03 |
| 2 | 1.875 | 20.98 | 20.40 | 76.43 |
| 2.25 | 2.125 | 8.36 | 8.13 | 84.56 |
| 2.5 | 2.375 | 5.58 | 5.43 | 89.99 |
| 2.75 | 2.625 | 5.14 | 5.00 | 94.98 |
| 3 | 2.875 | 2.70 | 2.63 | 97.61 |
| 3.25 | 3.125 | 1.88 | 1.83 | 99.44 |
| 3.5 | 3.375 | 0.52 | 0.51 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.130 |
| **5** | 0.395 |
| **16** | 0.890 |
| **25** | 1.115 |
| **50** | 1.520 |
| **75** | 1.855 |
| **84** | 2.110 |
| **95** | 2.625 |
| **99** | 3.065 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.629 | 0.323 |
| Standard Deviation | 0.653 | 0.636 |
| Skewness | -0.007 | |
| Kurtosis | 3.213 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.500 | 1.507 |
| Standard Deviation | 0.610 | 0.643 |
| Skewness (1) | -0.033 | -0.021 |
| Skewness (2) | -0.016 | |
| Kurtosis | 0.828 | 1.235 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **990+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.314 mm** |
| **STD** | **0.589 mm** |
| **Skewness** | **-1.783** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.50 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.57 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

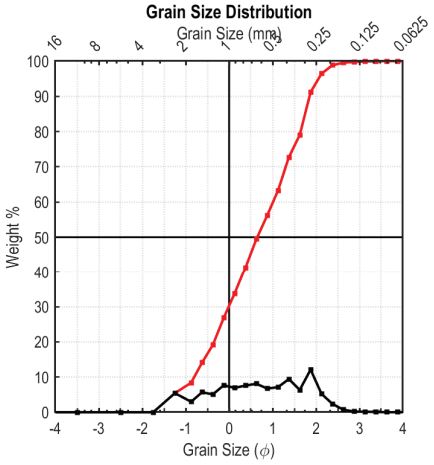
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.69 | 2.57 | 2.57 |
| -0.75 | -0.875 | 0.38 | 0.36 | 2.94 |
| -0.5 | -0.625 | 0.58 | 0.56 | 3.49 |
| -0.25 | -0.375 | 0.39 | 0.37 | 3.87 |
| 0 | -0.125 | 0.58 | 0.56 | 4.42 |
| 0.25 | 0.125 | 0.69 | 0.66 | 5.08 |
| 0.5 | 0.375 | 1.09 | 1.04 | 6.12 |
| 0.75 | 0.625 | 2.26 | 2.16 | 8.29 |
| 1 | 0.875 | 3.65 | 3.49 | 11.78 |
| 1.25 | 1.125 | 6.48 | 6.20 | 17.98 |
| 1.5 | 1.375 | 12.46 | 11.92 | 29.90 |
| 1.75 | 1.625 | 12.94 | 12.38 | 42.29 |
| 2 | 1.875 | 27.22 | 26.05 | 68.33 |
| 2.25 | 2.125 | 15.52 | 14.85 | 83.19 |
| 2.5 | 2.375 | 10.61 | 10.15 | 93.34 |
| 2.75 | 2.625 | 5.28 | 5.05 | 98.39 |
| 3 | 2.875 | 0.95 | 0.91 | 99.30 |
| 3.25 | 3.125 | 0.53 | 0.51 | 99.81 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.03 | 0.03 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.555 |
| **5** | 0.095 |
| **16** | 1.045 |
| **25** | 1.270 |
| **50** | 1.700 |
| **75** | 1.985 |
| **84** | 2.145 |
| **95** | 2.455 |
| **99** | 2.790 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.669 | 0.314 |
| Standard Deviation | 0.763 | 0.589 |
| Skewness | -1.783 | |
| Kurtosis | 7.521 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.595 | 1.630 |
| Standard Deviation | 0.550 | 0.633 |
| Skewness (1) | -0.191 | -0.276 |
| Skewness (2) | -0.773 | |
| Kurtosis | 1.145 | 1.353 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **990+00** |
| **Sample** | **Swash** |
| **Mean** | **0.603 mm** |
| **STD** | **0.495 mm** |
| **Skewness** | **-0.196** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 91.18 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 5.42 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.1 |

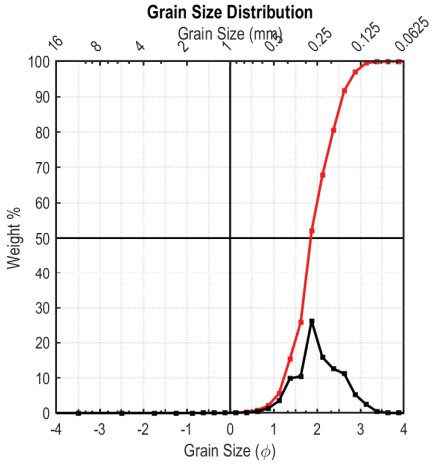
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.94 | 5.42 | 5.42 |
| -0.75 | -0.875 | 2.72 | 2.98 | 8.40 |
| -0.5 | -0.625 | 5.17 | 5.67 | 14.07 |
| -0.25 | -0.375 | 4.64 | 5.09 | 19.16 |
| 0 | -0.125 | 6.98 | 7.66 | 26.82 |
| 0.25 | 0.125 | 6.32 | 6.93 | 33.75 |
| 0.5 | 0.375 | 6.90 | 7.57 | 41.31 |
| 0.75 | 0.625 | 7.39 | 8.10 | 49.42 |
| 1 | 0.875 | 6.14 | 6.73 | 56.15 |
| 1.25 | 1.125 | 6.50 | 7.13 | 63.28 |
| 1.5 | 1.375 | 8.60 | 9.43 | 72.71 |
| 1.75 | 1.625 | 5.78 | 6.34 | 79.05 |
| 2 | 1.875 | 11.06 | 12.13 | 91.18 |
| 2.25 | 2.125 | 4.78 | 5.24 | 96.42 |
| 2.5 | 2.375 | 2.18 | 2.39 | 98.82 |
| 2.75 | 2.625 | 0.68 | 0.75 | 99.56 |
| 3 | 2.875 | 0.16 | 0.18 | 99.74 |
| 3.25 | 3.125 | 0.15 | 0.16 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.08 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.660 |
| **5** | -1.290 |
| **16** | -0.530 |
| **25** | -0.185 |
| **50** | 0.645 |
| **75** | 1.465 |
| **84** | 1.725 |
| **95** | 2.055 |
| **99** | 2.435 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.730 | 0.603 |
| Standard Deviation | 1.014 | 0.495 |
| Skewness | -0.196 | |
| Kurtosis | 2.117 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.598 | 0.613 |
| Standard Deviation | 1.127 | 1.071 |
| Skewness (1) | -0.042 | -0.100 |
| Skewness (2) | -0.233 | |
| Kurtosis | 0.483 | 0.831 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1000+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.245 mm** |
| **STD** | **0.700 mm** |
| **Skewness** | **-0.046** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.29 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.3 |

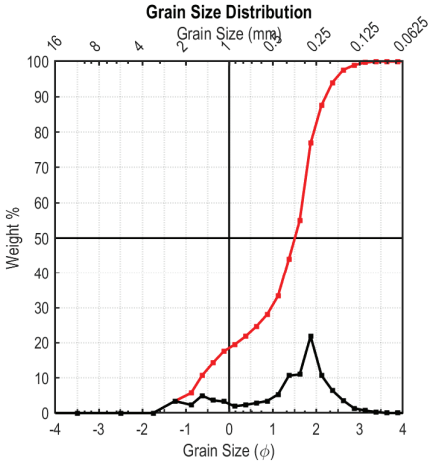
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.03 |
| 0 | -0.125 | 0.02 | 0.02 | 0.05 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.12 |
| 0.5 | 0.375 | 0.17 | 0.16 | 0.28 |
| 0.75 | 0.625 | 0.53 | 0.50 | 0.79 |
| 1 | 0.875 | 1.38 | 1.31 | 2.10 |
| 1.25 | 1.125 | 3.64 | 3.46 | 5.56 |
| 1.5 | 1.375 | 10.36 | 9.84 | 15.40 |
| 1.75 | 1.625 | 10.98 | 10.43 | 25.82 |
| 2 | 1.875 | 27.59 | 26.20 | 52.03 |
| 2.25 | 2.125 | 16.70 | 15.86 | 67.89 |
| 2.5 | 2.375 | 13.26 | 12.59 | 80.48 |
| 2.75 | 2.625 | 11.80 | 11.21 | 91.69 |
| 3 | 2.875 | 5.57 | 5.29 | 96.98 |
| 3.25 | 3.125 | 2.64 | 2.51 | 99.49 |
| 3.5 | 3.375 | 0.50 | 0.47 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.665 |
| **5** | 1.085 |
| **16** | 1.390 |
| **25** | 1.605 |
| **50** | 1.855 |
| **75** | 2.265 |
| **84** | 2.455 |
| **95** | 2.780 |
| **99** | 3.075 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.028 | 0.245 |
| Standard Deviation | 0.515 | 0.700 |
| Skewness | -0.046 | |
| Kurtosis | 3.183 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.923 | 1.900 |
| Standard Deviation | 0.532 | 0.523 |
| Skewness (1) | 0.127 | 0.109 |
| Skewness (2) | 0.146 | |
| Kurtosis | 0.592 | 1.053 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1000+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.409 mm** |
| **STD** | **0.481 mm** |
| **Skewness** | **-0.886** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 100.93 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 3.40 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.1 |

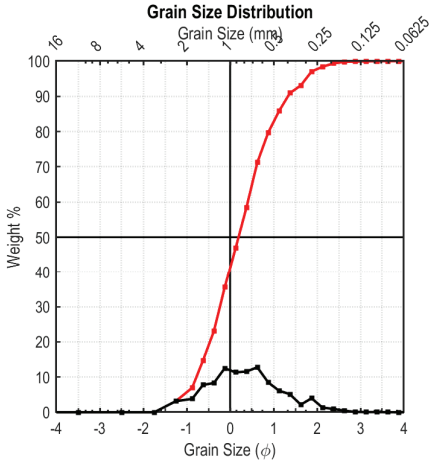
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.43 | 3.40 | 3.40 |
| -0.75 | -0.875 | 2.34 | 2.32 | 5.72 |
| -0.5 | -0.625 | 4.99 | 4.94 | 10.66 |
| -0.25 | -0.375 | 3.64 | 3.61 | 14.27 |
| 0 | -0.125 | 3.31 | 3.28 | 17.55 |
| 0.25 | 0.125 | 1.94 | 1.92 | 19.47 |
| 0.5 | 0.375 | 2.34 | 2.32 | 21.79 |
| 0.75 | 0.625 | 2.87 | 2.84 | 24.63 |
| 1 | 0.875 | 3.46 | 3.43 | 28.06 |
| 1.25 | 1.125 | 5.34 | 5.29 | 33.35 |
| 1.5 | 1.375 | 10.74 | 10.64 | 43.99 |
| 1.75 | 1.625 | 11.09 | 10.99 | 54.98 |
| 2 | 1.875 | 22.08 | 21.88 | 76.86 |
| 2.25 | 2.125 | 10.81 | 10.71 | 87.57 |
| 2.5 | 2.375 | 6.49 | 6.43 | 94.00 |
| 2.75 | 2.625 | 3.62 | 3.59 | 97.58 |
| 3 | 2.875 | 1.37 | 1.36 | 98.94 |
| 3.25 | 3.125 | 0.73 | 0.72 | 99.66 |
| 3.5 | 3.375 | 0.29 | 0.29 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.605 |
| **5** | -0.990 |
| **16** | -0.245 |
| **25** | 0.650 |
| **50** | 1.510 |
| **75** | 1.855 |
| **84** | 2.040 |
| **95** | 2.445 |
| **99** | 2.895 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.290 | 0.409 |
| Standard Deviation | 1.057 | 0.481 |
| Skewness | -0.886 | |
| Kurtosis | 2.873 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.897 | 1.102 |
| Standard Deviation | 1.143 | 1.092 |
| Skewness (1) | -0.536 | -0.496 |
| Skewness (2) | -0.685 | |
| Kurtosis | 0.503 | 1.168 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1000+00** |
| **Sample** | **Swash** |
| **Mean** | **0.778 mm** |
| **STD** | **0.569 mm** |
| **Skewness** | **0.361** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.52 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.15 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 11.5 |

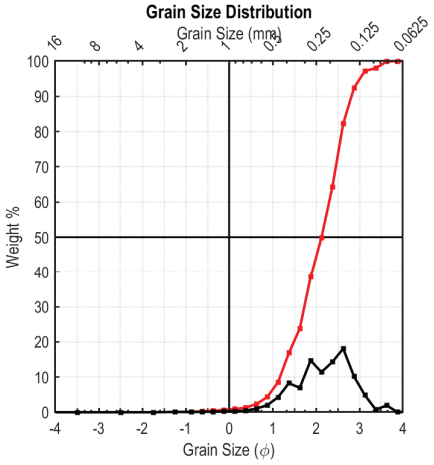
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.26 | 3.15 | 3.15 |
| -0.75 | -0.875 | 3.93 | 3.80 | 6.95 |
| -0.5 | -0.625 | 8.04 | 7.77 | 14.71 |
| -0.25 | -0.375 | 8.59 | 8.30 | 23.01 |
| 0 | -0.125 | 12.95 | 12.51 | 35.52 |
| 0.25 | 0.125 | 11.73 | 11.33 | 46.85 |
| 0.5 | 0.375 | 11.98 | 11.57 | 58.42 |
| 0.75 | 0.625 | 13.22 | 12.77 | 71.19 |
| 1 | 0.875 | 8.79 | 8.49 | 79.69 |
| 1.25 | 1.125 | 6.33 | 6.11 | 85.80 |
| 1.5 | 1.375 | 5.31 | 5.13 | 90.93 |
| 1.75 | 1.625 | 2.23 | 2.15 | 93.08 |
| 2 | 1.875 | 4.12 | 3.98 | 97.06 |
| 2.25 | 2.125 | 1.37 | 1.32 | 98.39 |
| 2.5 | 2.375 | 0.99 | 0.96 | 99.34 |
| 2.75 | 2.625 | 0.47 | 0.45 | 99.80 |
| 3 | 2.875 | 0.10 | 0.10 | 99.89 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.94 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.590 |
| **5** | -1.065 |
| **16** | -0.585 |
| **25** | -0.335 |
| **50** | 0.195 |
| **75** | 0.735 |
| **84** | 1.050 |
| **95** | 1.745 |
| **99** | 2.285 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.362 | 0.778 |
| Standard Deviation | 0.812 | 0.569 |
| Skewness | 0.361 | |
| Kurtosis | 2.924 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.232 | 0.220 |
| Standard Deviation | 0.817 | 0.835 |
| Skewness (1) | 0.046 | 0.075 |
| Skewness (2) | 0.177 | |
| Kurtosis | 0.719 | 1.076 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1010+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.222 mm** |
| **STD** | **0.627 mm** |
| **Skewness** | **-0.613** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 109.47 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

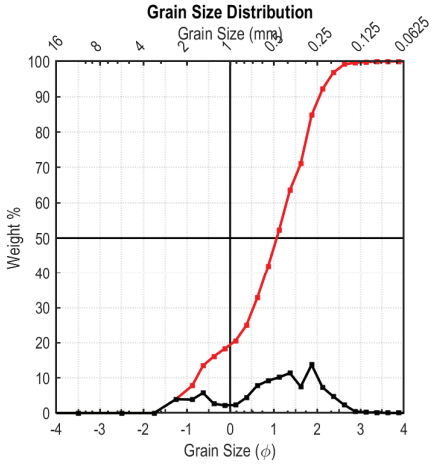
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.06 | 0.05 | 0.15 |
| -0.5 | -0.625 | 0.12 | 0.11 | 0.26 |
| -0.25 | -0.375 | 0.18 | 0.16 | 0.42 |
| 0 | -0.125 | 0.24 | 0.22 | 0.64 |
| 0.25 | 0.125 | 0.26 | 0.24 | 0.88 |
| 0.5 | 0.375 | 0.47 | 0.43 | 1.31 |
| 0.75 | 0.625 | 1.10 | 1.00 | 2.31 |
| 1 | 0.875 | 2.18 | 1.99 | 4.30 |
| 1.25 | 1.125 | 4.66 | 4.26 | 8.56 |
| 1.5 | 1.375 | 9.05 | 8.27 | 16.83 |
| 1.75 | 1.625 | 7.59 | 6.93 | 23.76 |
| 2 | 1.875 | 16.12 | 14.73 | 38.49 |
| 2.25 | 2.125 | 12.48 | 11.40 | 49.89 |
| 2.5 | 2.375 | 15.62 | 14.27 | 64.15 |
| 2.75 | 2.625 | 19.79 | 18.08 | 82.23 |
| 3 | 2.875 | 11.13 | 10.17 | 92.40 |
| 3.25 | 3.125 | 5.29 | 4.83 | 97.23 |
| 3.5 | 3.375 | 0.82 | 0.75 | 97.98 |
| 3.75 | 3.625 | 2.11 | 1.93 | 99.91 |
| 4 | 3.875 | 0.07 | 0.06 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.195 |
| **5** | 0.915 |
| **16** | 1.350 |
| **25** | 1.645 |
| **50** | 2.125 |
| **75** | 2.525 |
| **84** | 2.670 |
| **95** | 3.010 |
| **99** | 3.505 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.171 | 0.222 |
| Standard Deviation | 0.673 | 0.627 |
| Skewness | -0.613 | |
| Kurtosis | 4.124 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.010 | 2.048 |
| Standard Deviation | 0.660 | 0.647 |
| Skewness (1) | -0.174 | -0.165 |
| Skewness (2) | -0.246 | |
| Kurtosis | 0.587 | 0.976 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1010+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.492 mm** |
| **STD** | **0.493 mm** |
| **Skewness** | **-0.589** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 96.52 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.93 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.8 |

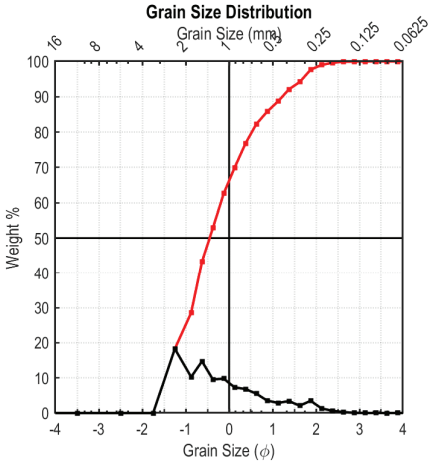
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.79 | 3.93 | 3.93 |
| -0.75 | -0.875 | 3.70 | 3.83 | 7.76 |
| -0.5 | -0.625 | 5.52 | 5.72 | 13.48 |
| -0.25 | -0.375 | 2.54 | 2.63 | 16.11 |
| 0 | -0.125 | 2.12 | 2.20 | 18.31 |
| 0.25 | 0.125 | 2.19 | 2.27 | 20.58 |
| 0.5 | 0.375 | 4.25 | 4.40 | 24.98 |
| 0.75 | 0.625 | 7.57 | 7.84 | 32.82 |
| 1 | 0.875 | 8.87 | 9.19 | 42.01 |
| 1.25 | 1.125 | 9.80 | 10.15 | 52.17 |
| 1.5 | 1.375 | 10.98 | 11.38 | 63.54 |
| 1.75 | 1.625 | 7.24 | 7.50 | 71.04 |
| 2 | 1.875 | 13.27 | 13.75 | 84.79 |
| 2.25 | 2.125 | 7.08 | 7.34 | 92.13 |
| 2.5 | 2.375 | 4.54 | 4.70 | 96.83 |
| 2.75 | 2.625 | 2.25 | 2.33 | 99.16 |
| 3 | 2.875 | 0.45 | 0.47 | 99.63 |
| 3.25 | 3.125 | 0.19 | 0.20 | 99.82 |
| 3.5 | 3.375 | 0.12 | 0.12 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.625 |
| **5** | -1.145 |
| **16** | -0.385 |
| **25** | 0.375 |
| **50** | 1.070 |
| **75** | 1.695 |
| **84** | 1.860 |
| **95** | 2.280 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.023 | 0.492 |
| Standard Deviation | 1.020 | 0.493 |
| Skewness | -0.589 | |
| Kurtosis | 2.583 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.738 | 0.848 |
| Standard Deviation | 1.122 | 1.080 |
| Skewness (1) | -0.296 | -0.295 |
| Skewness (2) | -0.448 | |
| Kurtosis | 0.526 | 1.063 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1010+00** |
| **Sample** | **Swash** |
| **Mean** | **1.091 mm** |
| **STD** | **0.521 mm** |
| **Skewness** | **0.786** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Very Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Fine Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 92.95 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 18.28 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 13.5 |

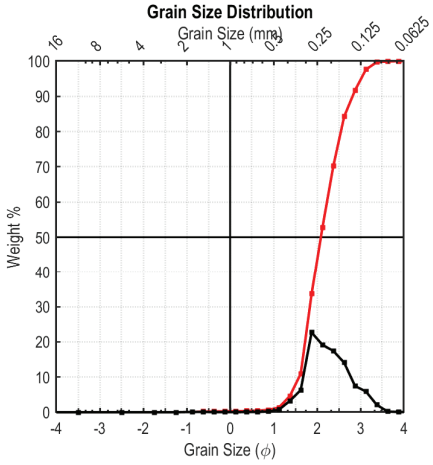
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 16.99 | 18.28 | 18.28 |
| -0.75 | -0.875 | 9.54 | 10.26 | 28.54 |
| -0.5 | -0.625 | 13.69 | 14.73 | 43.27 |
| -0.25 | -0.375 | 8.89 | 9.56 | 52.83 |
| 0 | -0.125 | 9.09 | 9.78 | 62.61 |
| 0.25 | 0.125 | 6.79 | 7.31 | 69.92 |
| 0.5 | 0.375 | 6.35 | 6.83 | 76.75 |
| 0.75 | 0.625 | 5.12 | 5.51 | 82.26 |
| 1 | 0.875 | 3.29 | 3.54 | 85.80 |
| 1.25 | 1.125 | 2.68 | 2.88 | 88.68 |
| 1.5 | 1.375 | 3.16 | 3.40 | 92.08 |
| 1.75 | 1.625 | 1.94 | 2.09 | 94.17 |
| 2 | 1.875 | 3.24 | 3.49 | 97.65 |
| 2.25 | 2.125 | 1.23 | 1.32 | 98.98 |
| 2.5 | 2.375 | 0.60 | 0.65 | 99.62 |
| 2.75 | 2.625 | 0.26 | 0.28 | 99.90 |
| 3 | 2.875 | 0.05 | 0.05 | 99.96 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.725 |
| **5** | -1.615 |
| **16** | -1.310 |
| **25** | -1.005 |
| **50** | -0.450 |
| **75** | 0.310 |
| **84** | 0.750 |
| **95** | 1.685 |
| **99** | 2.135 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | -0.126 | 1.091 |
| Standard Deviation | 0.940 | 0.521 |
| Skewness | 0.786 | |
| Kurtosis | 2.887 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -0.280 | -0.337 |
| Standard Deviation | 1.030 | 1.015 |
| Skewness (1) | 0.165 | 0.229 |
| Skewness (2) | 0.471 | |
| Kurtosis | 0.602 | 1.028 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1020+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.210 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **-0.270** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

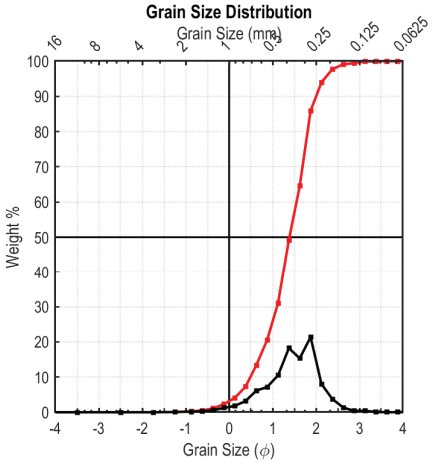
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.09 |
| -0.5 | -0.625 | 0.10 | 0.10 | 0.18 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.22 |
| 0 | -0.125 | 0.05 | 0.05 | 0.27 |
| 0.25 | 0.125 | 0.03 | 0.03 | 0.29 |
| 0.5 | 0.375 | 0.07 | 0.07 | 0.36 |
| 0.75 | 0.625 | 0.09 | 0.09 | 0.45 |
| 1 | 0.875 | 0.21 | 0.20 | 0.65 |
| 1.25 | 1.125 | 0.76 | 0.72 | 1.37 |
| 1.5 | 1.375 | 3.42 | 3.25 | 4.62 |
| 1.75 | 1.625 | 6.66 | 6.33 | 10.95 |
| 2 | 1.875 | 23.86 | 22.68 | 33.62 |
| 2.25 | 2.125 | 20.14 | 19.14 | 52.77 |
| 2.5 | 2.375 | 18.34 | 17.43 | 70.20 |
| 2.75 | 2.625 | 14.80 | 14.07 | 84.26 |
| 3 | 2.875 | 7.84 | 7.45 | 91.71 |
| 3.25 | 3.125 | 6.21 | 5.90 | 97.61 |
| 3.5 | 3.375 | 2.21 | 2.10 | 99.71 |
| 3.75 | 3.625 | 0.21 | 0.20 | 99.91 |
| 4 | 3.875 | 0.08 | 0.08 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.995 |
| **5** | 1.390 |
| **16** | 1.680 |
| **25** | 1.780 |
| **50** | 2.090 |
| **75** | 2.460 |
| **84** | 2.620 |
| **95** | 3.015 |
| **99** | 3.290 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.252 | 0.210 |
| Standard Deviation | 0.504 | 0.705 |
| Skewness | -0.270 | |
| Kurtosis | 5.384 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.150 | 2.130 |
| Standard Deviation | 0.470 | 0.481 |
| Skewness (1) | 0.128 | 0.133 |
| Skewness (2) | 0.239 | |
| Kurtosis | 0.729 | 0.979 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1020+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.366 mm** |
| **STD** | **0.654 mm** |
| **Skewness** | **-0.587** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.65 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

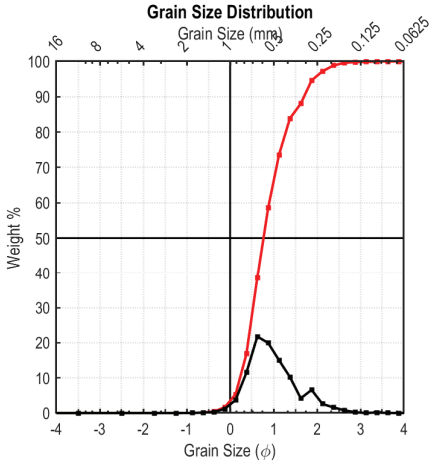
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.18 | 0.17 | 0.24 |
| -0.5 | -0.625 | 0.29 | 0.27 | 0.51 |
| -0.25 | -0.375 | 0.57 | 0.54 | 1.05 |
| 0 | -0.125 | 1.30 | 1.23 | 2.28 |
| 0.25 | 0.125 | 1.87 | 1.77 | 4.05 |
| 0.5 | 0.375 | 3.36 | 3.18 | 7.23 |
| 0.75 | 0.625 | 6.47 | 6.12 | 13.36 |
| 1 | 0.875 | 7.59 | 7.18 | 20.54 |
| 1.25 | 1.125 | 11.06 | 10.47 | 31.01 |
| 1.5 | 1.375 | 19.24 | 18.21 | 49.22 |
| 1.75 | 1.625 | 16.19 | 15.32 | 64.54 |
| 2 | 1.875 | 22.58 | 21.37 | 85.92 |
| 2.25 | 2.125 | 8.49 | 8.04 | 93.95 |
| 2.5 | 2.375 | 3.98 | 3.77 | 97.72 |
| 2.75 | 2.625 | 1.43 | 1.35 | 99.07 |
| 3 | 2.875 | 0.41 | 0.39 | 99.46 |
| 3.25 | 3.125 | 0.46 | 0.44 | 99.90 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.400 |
| **5** | 0.200 |
| **16** | 0.715 |
| **25** | 0.980 |
| **50** | 1.390 |
| **75** | 1.745 |
| **84** | 1.855 |
| **95** | 2.195 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.450 | 0.366 |
| Standard Deviation | 0.613 | 0.654 |
| Skewness | -0.587 | |
| Kurtosis | 3.970 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.285 | 1.320 |
| Standard Deviation | 0.570 | 0.587 |
| Skewness (1) | -0.184 | -0.189 |
| Skewness (2) | -0.338 | |
| Kurtosis | 0.750 | 1.069 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1020+00** |
| **Sample** | **Swash** |
| **Mean** | **0.506 mm** |
| **STD** | **0.677 mm** |
| **Skewness** | **0.741** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.83 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.9 |

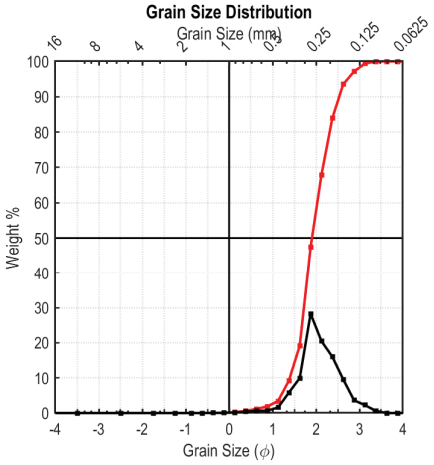
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.13 | 0.13 | 0.13 |
| -0.25 | -0.375 | 0.31 | 0.30 | 0.43 |
| 0 | -0.125 | 1.23 | 1.18 | 1.62 |
| 0.25 | 0.125 | 3.84 | 3.70 | 5.32 |
| 0.5 | 0.375 | 11.95 | 11.51 | 16.83 |
| 0.75 | 0.625 | 22.60 | 21.77 | 38.59 |
| 1 | 0.875 | 20.72 | 19.96 | 58.55 |
| 1.25 | 1.125 | 15.60 | 15.02 | 73.57 |
| 1.5 | 1.375 | 10.67 | 10.28 | 83.85 |
| 1.75 | 1.625 | 4.35 | 4.19 | 88.04 |
| 2 | 1.875 | 6.83 | 6.58 | 94.62 |
| 2.25 | 2.125 | 2.69 | 2.59 | 97.21 |
| 2.5 | 2.375 | 1.66 | 1.60 | 98.81 |
| 2.75 | 2.625 | 0.83 | 0.80 | 99.61 |
| 3 | 2.875 | 0.22 | 0.21 | 99.82 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.84 |
| 3.5 | 3.375 | 0.16 | 0.15 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.255 |
| **5** | 0.105 |
| **16** | 0.355 |
| **25** | 0.470 |
| **50** | 0.770 |
| **75** | 1.160 |
| **84** | 1.385 |
| **95** | 1.910 |
| **99** | 2.435 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.983 | 0.506 |
| Standard Deviation | 0.562 | 0.677 |
| Skewness | 0.741 | |
| Kurtosis | 3.765 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.870 | 0.837 |
| Standard Deviation | 0.515 | 0.531 |
| Skewness (1) | 0.194 | 0.229 |
| Skewness (2) | 0.461 | |
| Kurtosis | 0.752 | 1.072 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1030+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.239 mm** |
| **STD** | **0.723 mm** |
| **Skewness** | **-0.248** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.61 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

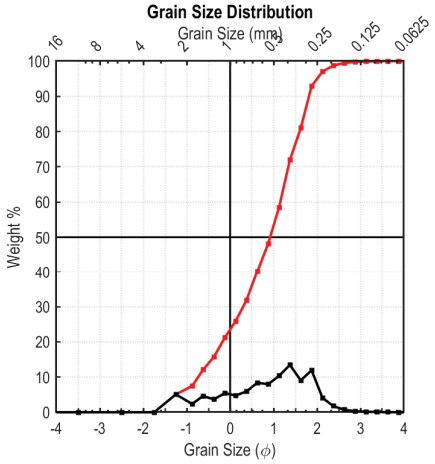
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.03 |
| 0 | -0.125 | 0.05 | 0.05 | 0.08 |
| 0.25 | 0.125 | 0.15 | 0.14 | 0.22 |
| 0.5 | 0.375 | 0.37 | 0.35 | 0.57 |
| 0.75 | 0.625 | 0.63 | 0.60 | 1.18 |
| 1 | 0.875 | 0.70 | 0.67 | 1.84 |
| 1.25 | 1.125 | 1.63 | 1.56 | 3.40 |
| 1.5 | 1.375 | 6.08 | 5.81 | 9.22 |
| 1.75 | 1.625 | 10.39 | 9.93 | 19.15 |
| 2 | 1.875 | 29.57 | 28.27 | 47.41 |
| 2.25 | 2.125 | 21.41 | 20.47 | 67.88 |
| 2.5 | 2.375 | 16.77 | 16.03 | 83.91 |
| 2.75 | 2.625 | 10.03 | 9.59 | 93.50 |
| 3 | 2.875 | 3.81 | 3.64 | 97.14 |
| 3.25 | 3.125 | 2.34 | 2.24 | 99.38 |
| 3.5 | 3.375 | 0.65 | 0.62 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.550 |
| **5** | 1.195 |
| **16** | 1.545 |
| **25** | 1.675 |
| **50** | 1.905 |
| **75** | 2.235 |
| **84** | 2.375 |
| **95** | 2.730 |
| **99** | 3.085 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.063 | 0.239 |
| Standard Deviation | 0.467 | 0.723 |
| Skewness | -0.248 | |
| Kurtosis | 4.451 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.960 | 1.942 |
| Standard Deviation | 0.415 | 0.440 |
| Skewness (1) | 0.133 | 0.104 |
| Skewness (2) | 0.139 | |
| Kurtosis | 0.849 | 1.123 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1030+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.554 mm** |
| **STD** | **0.514 mm** |
| **Skewness** | **-0.509** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 5.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.1 |

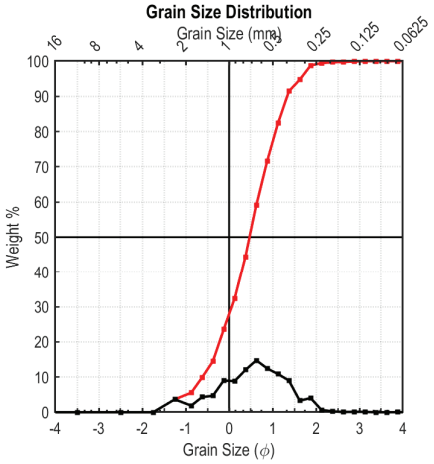
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.34 | 5.08 | 5.08 |
| -0.75 | -0.875 | 2.48 | 2.36 | 7.44 |
| -0.5 | -0.625 | 4.85 | 4.61 | 12.05 |
| -0.25 | -0.375 | 3.85 | 3.66 | 15.72 |
| 0 | -0.125 | 5.70 | 5.42 | 21.14 |
| 0.25 | 0.125 | 4.99 | 4.75 | 25.89 |
| 0.5 | 0.375 | 6.22 | 5.92 | 31.80 |
| 0.75 | 0.625 | 8.81 | 8.38 | 40.19 |
| 1 | 0.875 | 8.38 | 7.97 | 48.16 |
| 1.25 | 1.125 | 10.83 | 10.30 | 58.46 |
| 1.5 | 1.375 | 14.15 | 13.46 | 71.92 |
| 1.75 | 1.625 | 9.52 | 9.06 | 80.98 |
| 2 | 1.875 | 12.54 | 11.93 | 92.91 |
| 2.25 | 2.125 | 4.31 | 4.10 | 97.01 |
| 2.5 | 2.375 | 1.83 | 1.74 | 98.75 |
| 2.75 | 2.625 | 0.75 | 0.71 | 99.47 |
| 3 | 2.875 | 0.31 | 0.29 | 99.76 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.91 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.650 |
| **5** | -1.260 |
| **16** | -0.360 |
| **25** | 0.080 |
| **50** | 0.920 |
| **75** | 1.460 |
| **84** | 1.690 |
| **95** | 2.000 |
| **99** | 2.460 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.852 | 0.554 |
| Standard Deviation | 0.961 | 0.514 |
| Skewness | -0.509 | |
| Kurtosis | 2.513 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.665 | 0.750 |
| Standard Deviation | 1.025 | 1.006 |
| Skewness (1) | -0.249 | -0.293 |
| Skewness (2) | -0.537 | |
| Kurtosis | 0.590 | 0.968 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1030+00** |
| **Sample** | **Swash** |
| **Mean** | **0.686 mm** |
| **STD** | **0.590 mm** |
| **Skewness** | **-0.236** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.92 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.68 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.9 |

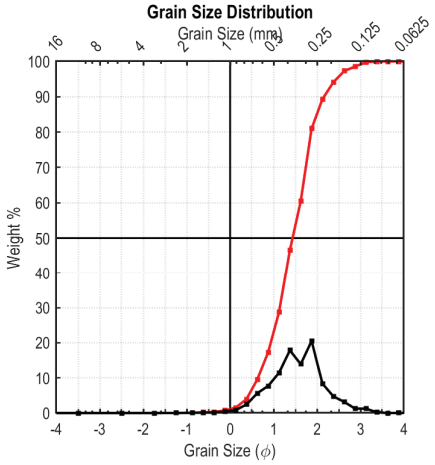
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.86 | 3.68 | 3.68 |
| -0.75 | -0.875 | 1.95 | 1.86 | 5.54 |
| -0.5 | -0.625 | 4.50 | 4.29 | 9.83 |
| -0.25 | -0.375 | 4.92 | 4.69 | 14.52 |
| 0 | -0.125 | 9.45 | 9.01 | 23.52 |
| 0.25 | 0.125 | 9.28 | 8.84 | 32.37 |
| 0.5 | 0.375 | 12.61 | 12.02 | 44.39 |
| 0.75 | 0.625 | 15.46 | 14.74 | 59.12 |
| 1 | 0.875 | 13.08 | 12.47 | 71.59 |
| 1.25 | 1.125 | 11.38 | 10.85 | 82.43 |
| 1.5 | 1.375 | 9.46 | 9.02 | 91.45 |
| 1.75 | 1.625 | 3.44 | 3.28 | 94.73 |
| 2 | 1.875 | 4.24 | 4.04 | 98.77 |
| 2.25 | 2.125 | 0.70 | 0.67 | 99.44 |
| 2.5 | 2.375 | 0.27 | 0.26 | 99.70 |
| 2.75 | 2.625 | 0.07 | 0.07 | 99.76 |
| 3 | 2.875 | 0.13 | 0.12 | 99.89 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.99 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.615 |
| **5** | -0.985 |
| **16** | -0.335 |
| **25** | -0.085 |
| **50** | 0.470 |
| **75** | 0.955 |
| **84** | 1.170 |
| **95** | 1.640 |
| **99** | 1.960 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.544 | 0.686 |
| Standard Deviation | 0.761 | 0.590 |
| Skewness | -0.236 | |
| Kurtosis | 2.967 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.417 | 0.435 |
| Standard Deviation | 0.752 | 0.774 |
| Skewness (1) | -0.070 | -0.089 |
| Skewness (2) | -0.189 | |
| Kurtosis | 0.744 | 1.034 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1040+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.341 mm** |
| **STD** | **0.658 mm** |
| **Skewness** | **-0.050** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.70 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

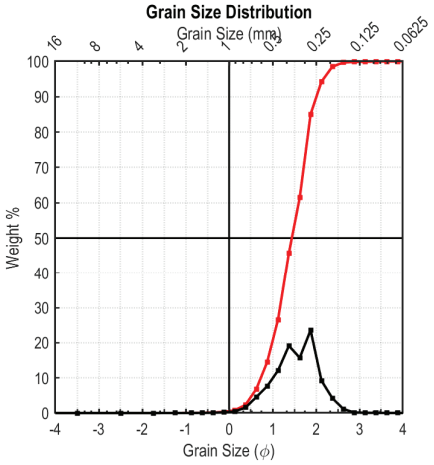
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.07 |
| -0.5 | -0.625 | 0.12 | 0.11 | 0.18 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.31 |
| 0 | -0.125 | 0.42 | 0.40 | 0.71 |
| 0.25 | 0.125 | 0.86 | 0.81 | 1.52 |
| 0.5 | 0.375 | 2.55 | 2.41 | 3.94 |
| 0.75 | 0.625 | 5.95 | 5.63 | 9.56 |
| 1 | 0.875 | 8.15 | 7.71 | 17.28 |
| 1.25 | 1.125 | 12.10 | 11.45 | 28.72 |
| 1.5 | 1.375 | 18.86 | 17.84 | 46.57 |
| 1.75 | 1.625 | 14.69 | 13.90 | 60.46 |
| 2 | 1.875 | 21.68 | 20.51 | 80.97 |
| 2.25 | 2.125 | 8.84 | 8.36 | 89.34 |
| 2.5 | 2.375 | 5.03 | 4.76 | 94.10 |
| 2.75 | 2.625 | 3.35 | 3.17 | 97.27 |
| 3 | 2.875 | 1.33 | 1.26 | 98.52 |
| 3.25 | 3.125 | 1.32 | 1.25 | 99.77 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.035 |
| **5** | 0.420 |
| **16** | 0.835 |
| **25** | 1.045 |
| **50** | 1.435 |
| **75** | 1.800 |
| **84** | 1.965 |
| **95** | 2.445 |
| **99** | 2.970 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.552 | 0.341 |
| Standard Deviation | 0.604 | 0.658 |
| Skewness | -0.050 | |
| Kurtosis | 3.454 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.400 | 1.412 |
| Standard Deviation | 0.565 | 0.589 |
| Skewness (1) | -0.062 | -0.032 |
| Skewness (2) | -0.004 | |
| Kurtosis | 0.792 | 1.099 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1040+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.345 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.329** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.89 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

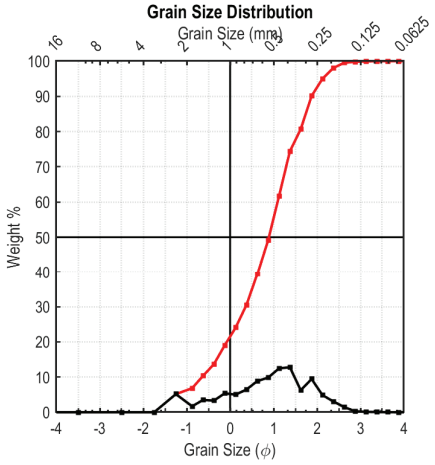
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.06 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.14 |
| 0 | -0.125 | 0.19 | 0.18 | 0.32 |
| 0.25 | 0.125 | 0.46 | 0.44 | 0.76 |
| 0.5 | 0.375 | 1.62 | 1.54 | 2.31 |
| 0.75 | 0.625 | 4.75 | 4.53 | 6.84 |
| 1 | 0.875 | 8.02 | 7.65 | 14.48 |
| 1.25 | 1.125 | 12.68 | 12.09 | 26.57 |
| 1.5 | 1.375 | 20.08 | 19.14 | 45.71 |
| 1.75 | 1.625 | 16.50 | 15.73 | 61.45 |
| 2 | 1.875 | 24.74 | 23.59 | 85.03 |
| 2.25 | 2.125 | 9.68 | 9.23 | 94.26 |
| 2.5 | 2.375 | 4.44 | 4.23 | 98.49 |
| 2.75 | 2.625 | 1.25 | 1.19 | 99.69 |
| 3 | 2.875 | 0.16 | 0.15 | 99.84 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.91 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.02 | 0.02 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.165 |
| **5** | 0.525 |
| **16** | 0.905 |
| **25** | 1.095 |
| **50** | 1.445 |
| **75** | 1.770 |
| **84** | 1.865 |
| **95** | 2.170 |
| **99** | 2.480 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.535 | 0.345 |
| Standard Deviation | 0.500 | 0.707 |
| Skewness | -0.329 | |
| Kurtosis | 3.447 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.385 | 1.405 |
| Standard Deviation | 0.480 | 0.489 |
| Skewness (1) | -0.125 | -0.122 |
| Skewness (2) | -0.203 | |
| Kurtosis | 0.714 | 0.999 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1040+00** |
| **Sample** | **Swash** |
| **Mean** | **0.545 mm** |
| **STD** | **0.518 mm** |
| **Skewness** | **-0.457** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.96 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 5.15 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

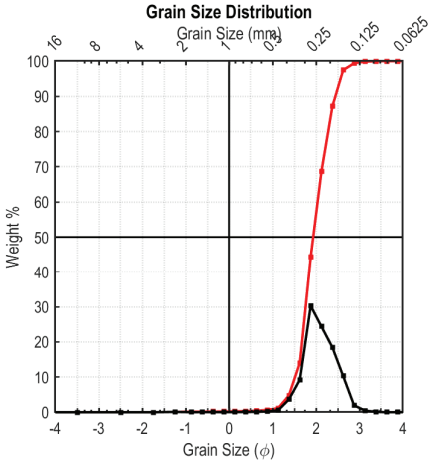
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.35 | 5.15 | 5.15 |
| -0.75 | -0.875 | 1.76 | 1.69 | 6.84 |
| -0.5 | -0.625 | 3.63 | 3.49 | 10.33 |
| -0.25 | -0.375 | 3.44 | 3.31 | 13.64 |
| 0 | -0.125 | 5.60 | 5.39 | 19.03 |
| 0.25 | 0.125 | 5.19 | 4.99 | 24.02 |
| 0.5 | 0.375 | 6.71 | 6.45 | 30.47 |
| 0.75 | 0.625 | 9.21 | 8.86 | 39.33 |
| 1 | 0.875 | 10.23 | 9.84 | 49.17 |
| 1.25 | 1.125 | 12.96 | 12.47 | 61.64 |
| 1.5 | 1.375 | 13.29 | 12.78 | 74.42 |
| 1.75 | 1.625 | 6.50 | 6.25 | 80.68 |
| 2 | 1.875 | 9.82 | 9.45 | 90.12 |
| 2.25 | 2.125 | 5.06 | 4.87 | 94.99 |
| 2.5 | 2.375 | 3.19 | 3.07 | 98.06 |
| 2.75 | 2.625 | 1.53 | 1.47 | 99.53 |
| 3 | 2.875 | 0.30 | 0.29 | 99.82 |
| 3.25 | 3.125 | 0.12 | 0.12 | 99.93 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.655 |
| **5** | -1.265 |
| **16** | -0.265 |
| **25** | 0.165 |
| **50** | 0.890 |
| **75** | 1.400 |
| **84** | 1.715 |
| **95** | 2.125 |
| **99** | 2.535 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.876 | 0.545 |
| Standard Deviation | 0.948 | 0.518 |
| Skewness | -0.457 | |
| Kurtosis | 2.694 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.725 | 0.780 |
| Standard Deviation | 0.990 | 1.009 |
| Skewness (1) | -0.167 | -0.219 |
| Skewness (2) | -0.465 | |
| Kurtosis | 0.712 | 1.125 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1050+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.237 mm** |
| **STD** | **0.766 mm** |
| **Skewness** | **-0.956** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.41 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.3 |

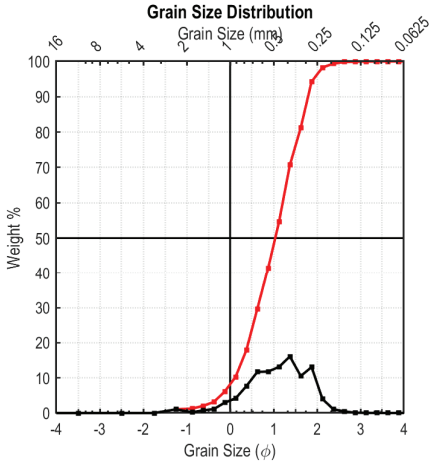
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.11 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.14 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.18 |
| 0 | -0.125 | 0.02 | 0.02 | 0.20 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.25 |
| 0.5 | 0.375 | 0.05 | 0.05 | 0.30 |
| 0.75 | 0.625 | 0.13 | 0.12 | 0.42 |
| 1 | 0.875 | 0.21 | 0.20 | 0.62 |
| 1.25 | 1.125 | 0.57 | 0.55 | 1.17 |
| 1.5 | 1.375 | 3.78 | 3.62 | 4.79 |
| 1.75 | 1.625 | 9.64 | 9.23 | 14.02 |
| 2 | 1.875 | 31.62 | 30.28 | 44.31 |
| 2.25 | 2.125 | 25.44 | 24.37 | 68.67 |
| 2.5 | 2.375 | 19.28 | 18.47 | 87.14 |
| 2.75 | 2.625 | 10.75 | 10.30 | 97.43 |
| 3 | 2.875 | 2.06 | 1.97 | 99.41 |
| 3.25 | 3.125 | 0.49 | 0.47 | 99.88 |
| 3.5 | 3.375 | 0.11 | 0.11 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.050 |
| **5** | 1.380 |
| **16** | 1.640 |
| **25** | 1.715 |
| **50** | 1.935 |
| **75** | 2.210 |
| **84** | 2.335 |
| **95** | 2.565 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.077 | 0.237 |
| Standard Deviation | 0.385 | 0.766 |
| Skewness | -0.956 | |
| Kurtosis | 10.593 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.988 | 1.970 |
| Standard Deviation | 0.347 | 0.353 |
| Skewness (1) | 0.151 | 0.107 |
| Skewness (2) | 0.108 | |
| Kurtosis | 0.705 | 0.981 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1050+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.468 mm** |
| **STD** | **0.623 mm** |
| **Skewness** | **-0.573** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.43 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.4 |

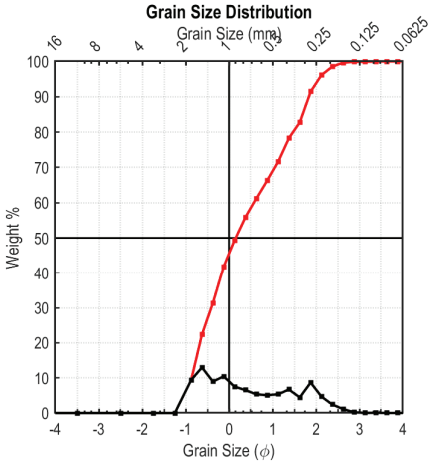
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.11 | 1.05 | 1.05 |
| -0.75 | -0.875 | 0.23 | 0.22 | 1.27 |
| -0.5 | -0.625 | 0.79 | 0.75 | 2.02 |
| -0.25 | -0.375 | 1.19 | 1.13 | 3.15 |
| 0 | -0.125 | 3.13 | 2.97 | 6.12 |
| 0.25 | 0.125 | 4.39 | 4.16 | 10.28 |
| 0.5 | 0.375 | 8.09 | 7.67 | 17.96 |
| 0.75 | 0.625 | 12.33 | 11.69 | 29.65 |
| 1 | 0.875 | 12.44 | 11.80 | 41.45 |
| 1.25 | 1.125 | 13.85 | 13.14 | 54.59 |
| 1.5 | 1.375 | 16.97 | 16.10 | 70.68 |
| 1.75 | 1.625 | 11.10 | 10.53 | 81.21 |
| 2 | 1.875 | 13.78 | 13.07 | 94.28 |
| 2.25 | 2.125 | 4.21 | 3.99 | 98.27 |
| 2.5 | 2.375 | 1.14 | 1.08 | 99.36 |
| 2.75 | 2.625 | 0.50 | 0.47 | 99.83 |
| 3 | 2.875 | 0.09 | 0.09 | 99.91 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.275 |
| **5** | -0.220 |
| **16** | 0.310 |
| **25** | 0.525 |
| **50** | 1.040 |
| **75** | 1.480 |
| **84** | 1.680 |
| **95** | 1.920 |
| **99** | 2.295 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.096 | 0.468 |
| Standard Deviation | 0.684 | 0.623 |
| Skewness | -0.573 | |
| Kurtosis | 3.603 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.995 | 1.010 |
| Standard Deviation | 0.685 | 0.667 |
| Skewness (1) | -0.066 | -0.122 |
| Skewness (2) | -0.277 | |
| Kurtosis | 0.562 | 0.918 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1050+00** |
| **Sample** | **Swash** |
| **Mean** | **0.714 mm** |
| **STD** | **0.492 mm** |
| **Skewness** | **0.378** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 68.64 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.3 |

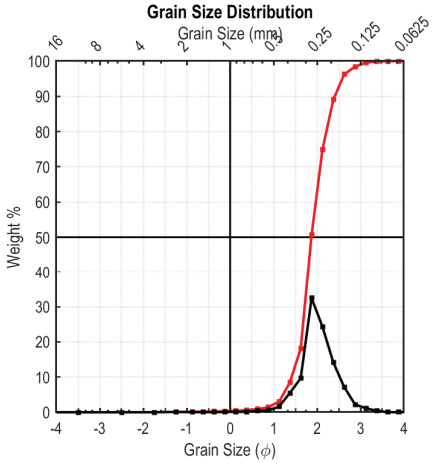
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 6.46 | 9.41 | 9.41 |
| -0.5 | -0.625 | 8.91 | 12.98 | 22.39 |
| -0.25 | -0.375 | 6.15 | 8.96 | 31.35 |
| 0 | -0.125 | 7.17 | 10.45 | 41.80 |
| 0.25 | 0.125 | 5.16 | 7.52 | 49.32 |
| 0.5 | 0.375 | 4.48 | 6.53 | 55.84 |
| 0.75 | 0.625 | 3.66 | 5.33 | 61.17 |
| 1 | 0.875 | 3.48 | 5.07 | 66.24 |
| 1.25 | 1.125 | 3.67 | 5.35 | 71.59 |
| 1.5 | 1.375 | 4.60 | 6.70 | 78.29 |
| 1.75 | 1.625 | 3.06 | 4.46 | 82.75 |
| 2 | 1.875 | 5.96 | 8.68 | 91.43 |
| 2.25 | 2.125 | 3.22 | 4.69 | 96.12 |
| 2.5 | 2.375 | 1.65 | 2.40 | 98.53 |
| 2.75 | 2.625 | 0.77 | 1.12 | 99.65 |
| 3 | 2.875 | 0.15 | 0.22 | 99.87 |
| 3.25 | 3.125 | 0.02 | 0.03 | 99.90 |
| 3.5 | 3.375 | 0.05 | 0.07 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.210 |
| **5** | -1.050 |
| **16** | -0.750 |
| **25** | -0.550 |
| **50** | 0.150 |
| **75** | 1.250 |
| **84** | 1.660 |
| **95** | 2.065 |
| **99** | 2.480 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.486 | 0.714 |
| Standard Deviation | 1.023 | 0.492 |
| Skewness | 0.378 | |
| Kurtosis | 1.905 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.455 | 0.353 |
| Standard Deviation | 1.205 | 1.074 |
| Skewness (1) | 0.253 | 0.241 |
| Skewness (2) | 0.297 | |
| Kurtosis | 0.293 | 0.709 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1060+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.247 mm** |
| **STD** | **0.742 mm** |
| **Skewness** | **-0.766** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 101.85 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.4 |

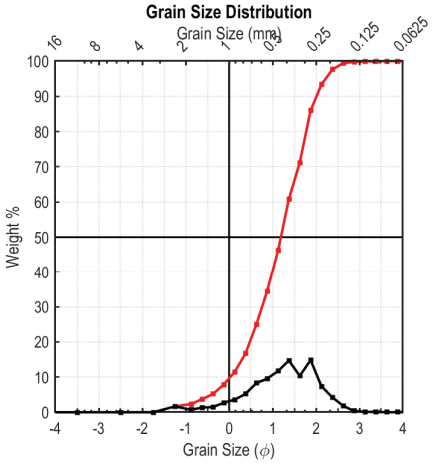
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.12 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.16 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.21 |
| 0 | -0.125 | 0.08 | 0.08 | 0.28 |
| 0.25 | 0.125 | 0.11 | 0.11 | 0.39 |
| 0.5 | 0.375 | 0.14 | 0.14 | 0.53 |
| 0.75 | 0.625 | 0.35 | 0.34 | 0.87 |
| 1 | 0.875 | 0.55 | 0.54 | 1.41 |
| 1.25 | 1.125 | 1.61 | 1.58 | 2.99 |
| 1.5 | 1.375 | 5.58 | 5.48 | 8.47 |
| 1.75 | 1.625 | 9.87 | 9.69 | 18.16 |
| 2 | 1.875 | 33.05 | 32.45 | 50.61 |
| 2.25 | 2.125 | 24.75 | 24.30 | 74.91 |
| 2.5 | 2.375 | 14.41 | 14.15 | 89.06 |
| 2.75 | 2.625 | 7.30 | 7.17 | 96.23 |
| 3 | 2.875 | 2.26 | 2.22 | 98.45 |
| 3.25 | 3.125 | 1.13 | 1.11 | 99.56 |
| 3.5 | 3.375 | 0.42 | 0.41 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.685 |
| **5** | 1.215 |
| **16** | 1.570 |
| **25** | 1.680 |
| **50** | 1.870 |
| **75** | 2.125 |
| **84** | 2.285 |
| **95** | 2.580 |
| **99** | 3.000 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.019 | 0.247 |
| Standard Deviation | 0.430 | 0.742 |
| Skewness | -0.766 | |
| Kurtosis | 8.846 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.927 | 1.908 |
| Standard Deviation | 0.358 | 0.386 |
| Skewness (1) | 0.161 | 0.101 |
| Skewness (2) | 0.077 | |
| Kurtosis | 0.909 | 1.257 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1060+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.430 mm** |
| **STD** | **0.574 mm** |
| **Skewness** | **-0.703** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.83 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.64 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.1 |

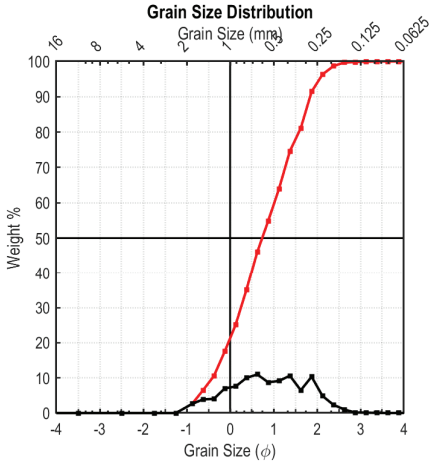
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.72 | 1.64 | 1.64 |
| -0.75 | -0.875 | 0.75 | 0.72 | 2.36 |
| -0.5 | -0.625 | 1.41 | 1.35 | 3.70 |
| -0.25 | -0.375 | 1.54 | 1.47 | 5.17 |
| 0 | -0.125 | 2.83 | 2.70 | 7.87 |
| 0.25 | 0.125 | 3.74 | 3.57 | 11.44 |
| 0.5 | 0.375 | 5.46 | 5.21 | 16.65 |
| 0.75 | 0.625 | 8.65 | 8.25 | 24.90 |
| 1 | 0.875 | 10.02 | 9.56 | 34.46 |
| 1.25 | 1.125 | 12.25 | 11.69 | 46.14 |
| 1.5 | 1.375 | 15.42 | 14.71 | 60.85 |
| 1.75 | 1.625 | 10.83 | 10.33 | 71.18 |
| 2 | 1.875 | 15.54 | 14.82 | 86.01 |
| 2.25 | 2.125 | 7.72 | 7.36 | 93.37 |
| 2.5 | 2.375 | 4.44 | 4.24 | 97.61 |
| 2.75 | 2.625 | 1.90 | 1.81 | 99.42 |
| 3 | 2.875 | 0.36 | 0.34 | 99.76 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.445 |
| **5** | -0.405 |
| **16** | 0.345 |
| **25** | 0.630 |
| **50** | 1.190 |
| **75** | 1.690 |
| **84** | 1.840 |
| **95** | 2.220 |
| **99** | 2.565 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.217 | 0.430 |
| Standard Deviation | 0.801 | 0.574 |
| Skewness | -0.703 | |
| Kurtosis | 3.572 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.092 | 1.125 |
| Standard Deviation | 0.748 | 0.771 |
| Skewness (1) | -0.130 | -0.173 |
| Skewness (2) | -0.378 | |
| Kurtosis | 0.756 | 1.015 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1060+00** |
| **Sample** | **Swash** |
| **Mean** | **0.549 mm** |
| **STD** | **0.555 mm** |
| **Skewness** | **-0.057** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 91.03 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

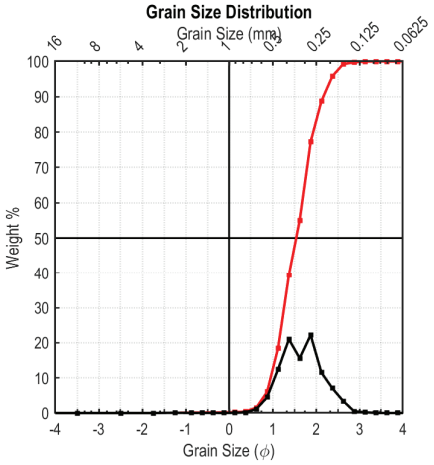
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 2.38 | 2.61 | 2.61 |
| -0.5 | -0.625 | 3.53 | 3.88 | 6.49 |
| -0.25 | -0.375 | 3.67 | 4.03 | 10.52 |
| 0 | -0.125 | 6.37 | 7.00 | 17.52 |
| 0.25 | 0.125 | 6.88 | 7.56 | 25.08 |
| 0.5 | 0.375 | 9.12 | 10.02 | 35.10 |
| 0.75 | 0.625 | 10.00 | 10.99 | 46.08 |
| 1 | 0.875 | 7.96 | 8.74 | 54.83 |
| 1.25 | 1.125 | 8.33 | 9.15 | 63.98 |
| 1.5 | 1.375 | 9.68 | 10.63 | 74.61 |
| 1.75 | 1.625 | 5.90 | 6.48 | 81.09 |
| 2 | 1.875 | 9.41 | 10.34 | 91.43 |
| 2.25 | 2.125 | 4.43 | 4.87 | 96.30 |
| 2.5 | 2.375 | 2.15 | 2.36 | 98.66 |
| 2.75 | 2.625 | 0.93 | 1.02 | 99.68 |
| 3 | 2.875 | 0.13 | 0.14 | 99.82 |
| 3.25 | 3.125 | 0.11 | 0.12 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.105 |
| **5** | -0.720 |
| **16** | -0.180 |
| **25** | 0.120 |
| **50** | 0.735 |
| **75** | 1.390 |
| **84** | 1.695 |
| **95** | 2.060 |
| **99** | 2.460 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.866 | 0.549 |
| Standard Deviation | 0.850 | 0.555 |
| Skewness | -0.057 | |
| Kurtosis | 2.269 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.758 | 0.750 |
| Standard Deviation | 0.937 | 0.890 |
| Skewness (1) | 0.024 | -0.011 |
| Skewness (2) | -0.069 | |
| Kurtosis | 0.483 | 0.897 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1070+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.315 mm** |
| **STD** | **0.720 mm** |
| **Skewness** | **-0.093** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.98 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

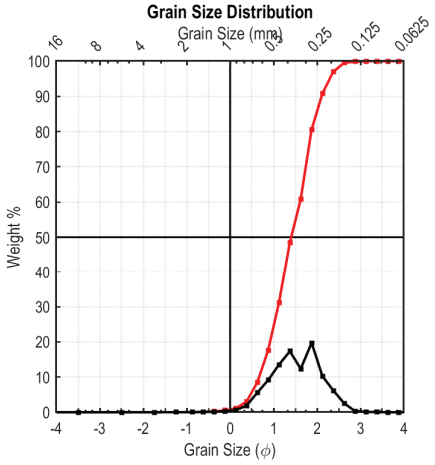
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.10 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.12 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.16 |
| 0 | -0.125 | 0.01 | 0.01 | 0.17 |
| 0.25 | 0.125 | 0.07 | 0.07 | 0.24 |
| 0.5 | 0.375 | 0.18 | 0.17 | 0.41 |
| 0.75 | 0.625 | 1.19 | 1.13 | 1.54 |
| 1 | 0.875 | 4.71 | 4.49 | 6.03 |
| 1.25 | 1.125 | 13.02 | 12.40 | 18.43 |
| 1.5 | 1.375 | 22.05 | 21.00 | 39.44 |
| 1.75 | 1.625 | 16.37 | 15.59 | 55.03 |
| 2 | 1.875 | 23.33 | 22.22 | 77.25 |
| 2.25 | 2.125 | 12.09 | 11.52 | 88.77 |
| 2.5 | 2.375 | 7.39 | 7.04 | 95.81 |
| 2.75 | 2.625 | 3.60 | 3.43 | 99.24 |
| 3 | 2.875 | 0.53 | 0.50 | 99.74 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.505 |
| **5** | 0.820 |
| **16** | 1.075 |
| **25** | 1.205 |
| **50** | 1.545 |
| **75** | 1.850 |
| **84** | 2.020 |
| **95** | 2.345 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.669 | 0.315 |
| Standard Deviation | 0.474 | 0.720 |
| Skewness | -0.093 | |
| Kurtosis | 4.139 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.547 | 1.547 |
| Standard Deviation | 0.473 | 0.467 |
| Skewness (1) | 0.005 | 0.027 |
| Skewness (2) | 0.079 | |
| Kurtosis | 0.614 | 0.969 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1070+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.347 mm** |
| **STD** | **0.680 mm** |
| **Skewness** | **-0.220** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.64 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

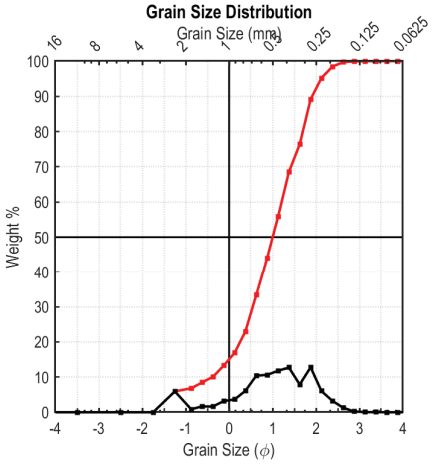
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.04 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.11 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.25 |
| 0 | -0.125 | 0.28 | 0.27 | 0.52 |
| 0.25 | 0.125 | 0.59 | 0.56 | 1.08 |
| 0.5 | 0.375 | 1.95 | 1.86 | 2.94 |
| 0.75 | 0.625 | 5.81 | 5.55 | 8.50 |
| 1 | 0.875 | 9.58 | 9.16 | 17.65 |
| 1.25 | 1.125 | 14.17 | 13.54 | 31.19 |
| 1.5 | 1.375 | 18.13 | 17.33 | 48.52 |
| 1.75 | 1.625 | 12.91 | 12.34 | 60.86 |
| 2 | 1.875 | 20.64 | 19.72 | 80.58 |
| 2.25 | 2.125 | 10.72 | 10.24 | 90.83 |
| 2.5 | 2.375 | 6.46 | 6.17 | 97.00 |
| 2.75 | 2.625 | 2.65 | 2.53 | 99.53 |
| 3 | 2.875 | 0.34 | 0.32 | 99.86 |
| 3.25 | 3.125 | 0.12 | 0.11 | 99.97 |
| 3.5 | 3.375 | 0.03 | 0.03 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.090 |
| **5** | 0.470 |
| **16** | 0.830 |
| **25** | 1.010 |
| **50** | 1.405 |
| **75** | 1.805 |
| **84** | 1.960 |
| **95** | 2.295 |
| **99** | 2.575 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.526 | 0.347 |
| Standard Deviation | 0.557 | 0.680 |
| Skewness | -0.220 | |
| Kurtosis | 2.978 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.395 | 1.398 |
| Standard Deviation | 0.565 | 0.559 |
| Skewness (1) | -0.018 | -0.021 |
| Skewness (2) | -0.040 | |
| Kurtosis | 0.615 | 0.941 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **1070+00** |
| **Sample** | **Swash** |
| **Mean** | **0.498 mm** |
| **STD** | **0.529 mm** |
| **Skewness** | **-0.763** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.95 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 5.94 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

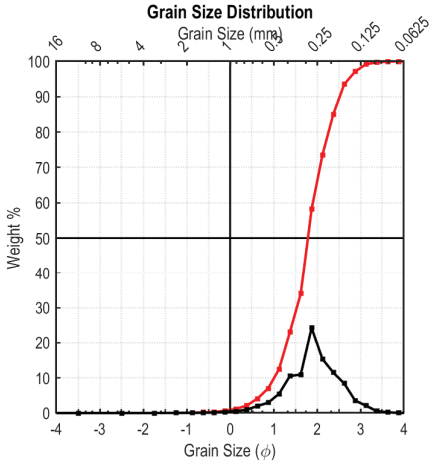
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 6.23 | 5.94 | 5.94 |
| -0.75 | -0.875 | 0.90 | 0.86 | 6.79 |
| -0.5 | -0.625 | 1.74 | 1.66 | 8.45 |
| -0.25 | -0.375 | 1.69 | 1.61 | 10.06 |
| 0 | -0.125 | 3.34 | 3.18 | 13.24 |
| 0.25 | 0.125 | 3.82 | 3.64 | 16.88 |
| 0.5 | 0.375 | 6.40 | 6.10 | 22.98 |
| 0.75 | 0.625 | 10.92 | 10.40 | 33.39 |
| 1 | 0.875 | 11.16 | 10.63 | 44.02 |
| 1.25 | 1.125 | 12.35 | 11.77 | 55.79 |
| 1.5 | 1.375 | 13.35 | 12.72 | 68.51 |
| 1.75 | 1.625 | 8.27 | 7.88 | 76.39 |
| 2 | 1.875 | 13.42 | 12.79 | 89.18 |
| 2.25 | 2.125 | 6.31 | 6.01 | 95.19 |
| 2.5 | 2.375 | 3.41 | 3.25 | 98.44 |
| 2.75 | 2.625 | 1.34 | 1.28 | 99.71 |
| 3 | 2.875 | 0.24 | 0.23 | 99.94 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.98 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.665 |
| **5** | -1.330 |
| **16** | 0.065 |
| **25** | 0.425 |
| **50** | 1.000 |
| **75** | 1.580 |
| **84** | 1.775 |
| **95** | 2.115 |
| **99** | 2.485 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.005 | 0.498 |
| Standard Deviation | 0.918 | 0.529 |
| Skewness | -0.763 | |
| Kurtosis | 3.274 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.920 | 0.947 |
| Standard Deviation | 0.855 | 0.949 |
| Skewness (1) | -0.094 | -0.223 |
| Skewness (2) | -0.711 | |
| Kurtosis | 1.015 | 1.222 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.269 mm** |
| **STD** | **0.656 mm** |
| **Skewness** | **-0.463** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.81 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

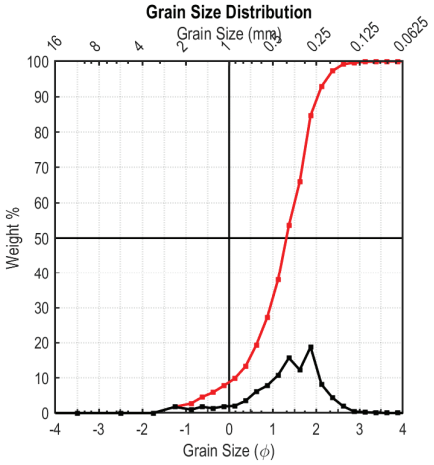
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.05 | 0.04 | 0.09 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.18 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.30 |
| 0 | -0.125 | 0.35 | 0.33 | 0.63 |
| 0.25 | 0.125 | 0.52 | 0.50 | 1.13 |
| 0.5 | 0.375 | 1.01 | 0.96 | 2.09 |
| 0.75 | 0.625 | 2.07 | 1.97 | 4.07 |
| 1 | 0.875 | 3.09 | 2.95 | 7.02 |
| 1.25 | 1.125 | 5.73 | 5.46 | 12.48 |
| 1.5 | 1.375 | 11.03 | 10.53 | 23.01 |
| 1.75 | 1.625 | 11.49 | 10.96 | 33.97 |
| 2 | 1.875 | 25.36 | 24.19 | 58.17 |
| 2.25 | 2.125 | 16.13 | 15.39 | 73.55 |
| 2.5 | 2.375 | 12.07 | 11.52 | 85.07 |
| 2.75 | 2.625 | 8.83 | 8.42 | 93.50 |
| 3 | 2.875 | 3.77 | 3.60 | 97.10 |
| 3.25 | 3.125 | 2.20 | 2.10 | 99.19 |
| 3.5 | 3.375 | 0.57 | 0.55 | 99.74 |
| 3.75 | 3.625 | 0.24 | 0.23 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.060 |
| **5** | 0.705 |
| **16** | 1.210 |
| **25** | 1.420 |
| **50** | 1.790 |
| **75** | 2.155 |
| **84** | 2.350 |
| **95** | 2.730 |
| **99** | 3.100 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.897 | 0.269 |
| Standard Deviation | 0.607 | 0.656 |
| Skewness | -0.463 | |
| Kurtosis | 4.190 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.780 | 1.783 |
| Standard Deviation | 0.570 | 0.592 |
| Skewness (1) | -0.018 | -0.045 |
| Skewness (2) | -0.127 | |
| Kurtosis | 0.776 | 1.129 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.402 mm** |
| **STD** | **0.573 mm** |
| **Skewness** | **-1.003** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.74 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.75 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.3 |

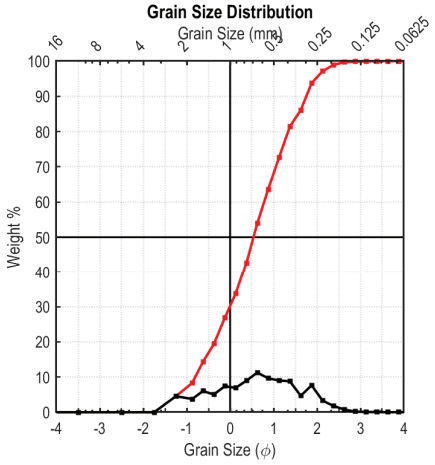
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.82 | 1.75 | 1.75 |
| -0.75 | -0.875 | 1.01 | 0.97 | 2.73 |
| -0.5 | -0.625 | 1.86 | 1.79 | 4.52 |
| -0.25 | -0.375 | 1.40 | 1.35 | 5.87 |
| 0 | -0.125 | 1.96 | 1.89 | 7.76 |
| 0.25 | 0.125 | 2.11 | 2.04 | 9.80 |
| 0.5 | 0.375 | 3.56 | 3.43 | 13.23 |
| 0.75 | 0.625 | 6.38 | 6.15 | 19.38 |
| 1 | 0.875 | 8.08 | 7.79 | 27.17 |
| 1.25 | 1.125 | 11.16 | 10.76 | 37.93 |
| 1.5 | 1.375 | 16.28 | 15.69 | 53.62 |
| 1.75 | 1.625 | 12.74 | 12.28 | 65.90 |
| 2 | 1.875 | 19.50 | 18.80 | 84.71 |
| 2.25 | 2.125 | 8.47 | 8.17 | 92.87 |
| 2.5 | 2.375 | 4.57 | 4.40 | 97.28 |
| 2.75 | 2.625 | 2.00 | 1.93 | 99.20 |
| 3 | 2.875 | 0.45 | 0.44 | 99.64 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.88 |
| 3.5 | 3.375 | 0.09 | 0.08 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.465 |
| **5** | -0.535 |
| **16** | 0.490 |
| **25** | 0.805 |
| **50** | 1.315 |
| **75** | 1.745 |
| **84** | 1.865 |
| **95** | 2.245 |
| **99** | 2.600 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.315 | 0.402 |
| Standard Deviation | 0.804 | 0.573 |
| Skewness | -1.003 | |
| Kurtosis | 4.213 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.177 | 1.223 |
| Standard Deviation | 0.688 | 0.765 |
| Skewness (1) | -0.200 | -0.265 |
| Skewness (2) | -0.669 | |
| Kurtosis | 1.022 | 1.212 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.647 mm** |
| **STD** | **0.522 mm** |
| **Skewness** | **-0.095** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 89.41 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 4.54 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

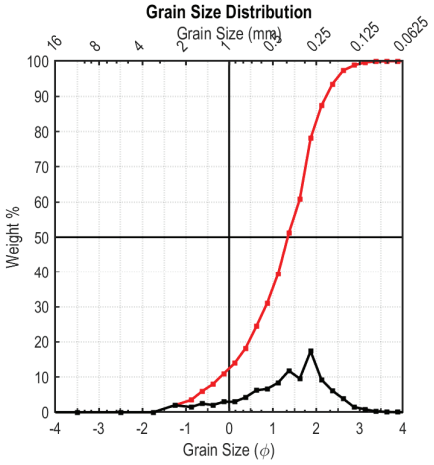
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.06 | 4.54 | 4.54 |
| -0.75 | -0.875 | 3.37 | 3.77 | 8.31 |
| -0.5 | -0.625 | 5.39 | 6.03 | 14.34 |
| -0.25 | -0.375 | 4.53 | 5.06 | 19.40 |
| 0 | -0.125 | 6.60 | 7.38 | 26.78 |
| 0.25 | 0.125 | 6.20 | 6.94 | 33.72 |
| 0.5 | 0.375 | 8.01 | 8.96 | 42.69 |
| 0.75 | 0.625 | 10.08 | 11.27 | 53.96 |
| 1 | 0.875 | 8.63 | 9.65 | 63.61 |
| 1.25 | 1.125 | 8.06 | 9.02 | 72.63 |
| 1.5 | 1.375 | 7.87 | 8.80 | 81.43 |
| 1.75 | 1.625 | 4.18 | 4.67 | 86.10 |
| 2 | 1.875 | 6.85 | 7.66 | 93.76 |
| 2.25 | 2.125 | 2.99 | 3.34 | 97.10 |
| 2.5 | 2.375 | 1.62 | 1.81 | 98.91 |
| 2.75 | 2.625 | 0.69 | 0.77 | 99.68 |
| 3 | 2.875 | 0.15 | 0.17 | 99.86 |
| 3.25 | 3.125 | 0.07 | 0.08 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.640 |
| **5** | -1.205 |
| **16** | -0.545 |
| **25** | -0.185 |
| **50** | 0.535 |
| **75** | 1.190 |
| **84** | 1.515 |
| **95** | 1.970 |
| **99** | 2.405 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.627 | 0.647 |
| Standard Deviation | 0.937 | 0.522 |
| Skewness | -0.095 | |
| Kurtosis | 2.366 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.485 | 0.502 |
| Standard Deviation | 1.030 | 0.996 |
| Skewness (1) | -0.049 | -0.072 |
| Skewness (2) | -0.148 | |
| Kurtosis | 0.541 | 0.946 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 22 2022** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.402 mm** |
| **STD** | **0.522 mm** |
| **Skewness** | **-0.707** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 99.32 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.99 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.3 |

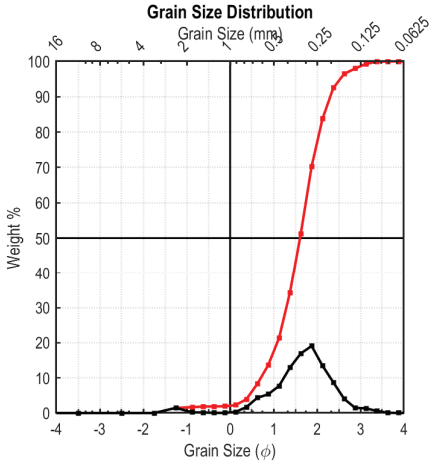
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.98 | 1.99 | 1.99 |
| -0.75 | -0.875 | 1.48 | 1.49 | 3.48 |
| -0.5 | -0.625 | 2.45 | 2.46 | 5.94 |
| -0.25 | -0.375 | 2.02 | 2.03 | 7.97 |
| 0 | -0.125 | 2.97 | 2.99 | 10.96 |
| 0.25 | 0.125 | 2.95 | 2.97 | 13.93 |
| 0.5 | 0.375 | 4.19 | 4.22 | 18.15 |
| 0.75 | 0.625 | 6.18 | 6.22 | 24.37 |
| 1 | 0.875 | 6.60 | 6.65 | 31.01 |
| 1.25 | 1.125 | 8.32 | 8.37 | 39.39 |
| 1.5 | 1.375 | 11.73 | 11.81 | 51.20 |
| 1.75 | 1.625 | 9.47 | 9.53 | 60.73 |
| 2 | 1.875 | 17.24 | 17.35 | 78.09 |
| 2.25 | 2.125 | 9.20 | 9.26 | 87.35 |
| 2.5 | 2.375 | 6.09 | 6.13 | 93.47 |
| 2.75 | 2.625 | 3.84 | 3.87 | 97.34 |
| 3 | 2.875 | 1.46 | 1.47 | 98.81 |
| 3.25 | 3.125 | 0.84 | 0.85 | 99.65 |
| 3.5 | 3.375 | 0.24 | 0.24 | 99.89 |
| 3.75 | 3.625 | 0.09 | 0.09 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.500 |
| **5** | -0.720 |
| **16** | 0.250 |
| **25** | 0.650 |
| **50** | 1.350 |
| **75** | 1.830 |
| **84** | 2.035 |
| **95** | 2.475 |
| **99** | 2.930 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.313 | 0.402 |
| Standard Deviation | 0.938 | 0.522 |
| Skewness | -0.707 | |
| Kurtosis | 3.176 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.143 | 1.212 |
| Standard Deviation | 0.893 | 0.930 |
| Skewness (1) | -0.232 | -0.264 |
| Skewness (2) | -0.529 | |
| Kurtosis | 0.790 | 1.110 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1550+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.316 mm** |
| **STD** | **0.616 mm** |
| **Skewness** | **-1.092** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.76 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.48 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.4 |

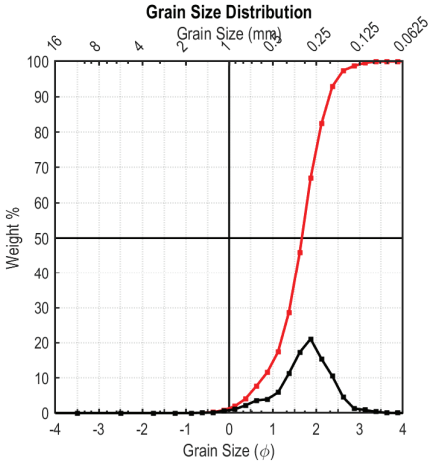
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.56 | 1.48 | 1.48 |
| -0.75 | -0.875 | 0.21 | 0.20 | 1.67 |
| -0.5 | -0.625 | 0.17 | 0.16 | 1.83 |
| -0.25 | -0.375 | 0.05 | 0.05 | 1.88 |
| 0 | -0.125 | 0.04 | 0.04 | 1.92 |
| 0.25 | 0.125 | 0.34 | 0.32 | 2.24 |
| 0.5 | 0.375 | 1.80 | 1.70 | 3.94 |
| 0.75 | 0.625 | 4.58 | 4.33 | 8.27 |
| 1 | 0.875 | 5.64 | 5.33 | 13.61 |
| 1.25 | 1.125 | 8.14 | 7.70 | 21.30 |
| 1.5 | 1.375 | 13.65 | 12.91 | 34.21 |
| 1.75 | 1.625 | 17.91 | 16.93 | 51.14 |
| 2 | 1.875 | 20.19 | 19.09 | 70.23 |
| 2.25 | 2.125 | 14.26 | 13.48 | 83.72 |
| 2.5 | 2.375 | 9.25 | 8.75 | 92.46 |
| 2.75 | 2.625 | 4.25 | 4.02 | 96.48 |
| 3 | 2.875 | 1.57 | 1.48 | 97.97 |
| 3.25 | 3.125 | 1.40 | 1.32 | 99.29 |
| 3.5 | 3.375 | 0.65 | 0.61 | 99.91 |
| 3.75 | 3.625 | 0.09 | 0.09 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.410 |
| **5** | 0.435 |
| **16** | 0.955 |
| **25** | 1.195 |
| **50** | 1.610 |
| **75** | 1.965 |
| **84** | 2.135 |
| **95** | 2.535 |
| **99** | 3.070 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.664 | 0.316 |
| Standard Deviation | 0.699 | 0.616 |
| Skewness | -1.092 | |
| Kurtosis | 6.558 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.545 | 1.567 |
| Standard Deviation | 0.590 | 0.613 |
| Skewness (1) | -0.110 | -0.115 |
| Skewness (2) | -0.212 | |
| Kurtosis | 0.780 | 1.118 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1550+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.300 mm** |
| **STD** | **0.659 mm** |
| **Skewness** | **-0.560** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.72 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.2 |

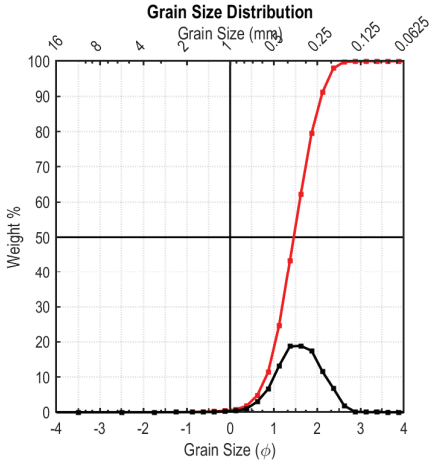
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.09 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.23 |
| 0 | -0.125 | 0.65 | 0.61 | 0.84 |
| 0.25 | 0.125 | 1.11 | 1.05 | 1.89 |
| 0.5 | 0.375 | 2.28 | 2.16 | 4.05 |
| 0.75 | 0.625 | 3.79 | 3.58 | 7.63 |
| 1 | 0.875 | 4.13 | 3.91 | 11.54 |
| 1.25 | 1.125 | 6.17 | 5.84 | 17.38 |
| 1.5 | 1.375 | 11.90 | 11.26 | 28.63 |
| 1.75 | 1.625 | 18.26 | 17.27 | 45.90 |
| 2 | 1.875 | 22.30 | 21.09 | 67.00 |
| 2.25 | 2.125 | 16.30 | 15.42 | 82.42 |
| 2.5 | 2.375 | 11.09 | 10.49 | 92.91 |
| 2.75 | 2.625 | 4.76 | 4.50 | 97.41 |
| 3 | 2.875 | 1.37 | 1.30 | 98.70 |
| 3.25 | 3.125 | 0.93 | 0.88 | 99.58 |
| 3.5 | 3.375 | 0.37 | 0.35 | 99.93 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.085 |
| **5** | 0.440 |
| **16** | 1.065 |
| **25** | 1.295 |
| **50** | 1.675 |
| **75** | 2.005 |
| **84** | 2.165 |
| **95** | 2.490 |
| **99** | 2.960 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.735 | 0.300 |
| Standard Deviation | 0.602 | 0.659 |
| Skewness | -0.560 | |
| Kurtosis | 3.774 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.615 | 1.635 |
| Standard Deviation | 0.550 | 0.586 |
| Skewness (1) | -0.109 | -0.157 |
| Skewness (2) | -0.382 | |
| Kurtosis | 0.864 | 1.183 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1550+00** |
| **Sample** | **Swash** |
| **Mean** | **0.334 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.340** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.63 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

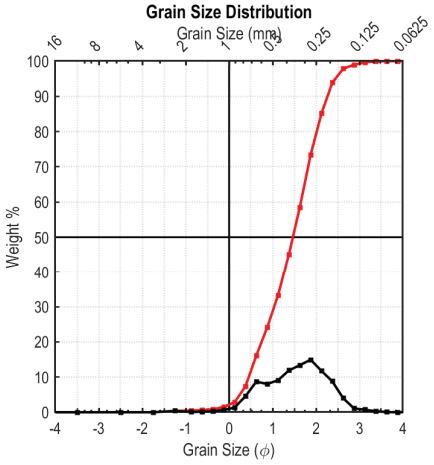
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.06 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.13 |
| -0.25 | -0.375 | 0.10 | 0.09 | 0.23 |
| 0 | -0.125 | 0.21 | 0.20 | 0.43 |
| 0.25 | 0.125 | 0.37 | 0.35 | 0.78 |
| 0.5 | 0.375 | 1.06 | 1.00 | 1.78 |
| 0.75 | 0.625 | 3.18 | 3.01 | 4.79 |
| 1 | 0.875 | 6.98 | 6.61 | 11.40 |
| 1.25 | 1.125 | 13.88 | 13.14 | 24.54 |
| 1.5 | 1.375 | 19.75 | 18.70 | 43.24 |
| 1.75 | 1.625 | 19.93 | 18.87 | 62.10 |
| 2 | 1.875 | 18.46 | 17.48 | 79.58 |
| 2.25 | 2.125 | 12.21 | 11.56 | 91.14 |
| 2.5 | 2.375 | 7.19 | 6.81 | 97.95 |
| 2.75 | 2.625 | 1.98 | 1.87 | 99.82 |
| 3 | 2.875 | 0.13 | 0.12 | 99.94 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.98 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.180 |
| **5** | 0.635 |
| **16** | 0.965 |
| **25** | 1.130 |
| **50** | 1.465 |
| **75** | 1.810 |
| **84** | 1.970 |
| **95** | 2.265 |
| **99** | 2.515 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.580 | 0.334 |
| Standard Deviation | 0.501 | 0.707 |
| Skewness | -0.340 | |
| Kurtosis | 3.602 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.467 | 1.467 |
| Standard Deviation | 0.502 | 0.498 |
| Skewness (1) | 0.005 | -0.007 |
| Skewness (2) | -0.030 | |
| Kurtosis | 0.622 | 0.982 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1560+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.347 mm** |
| **STD** | **0.613 mm** |
| **Skewness** | **-0.378** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.08 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.39 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.9 |

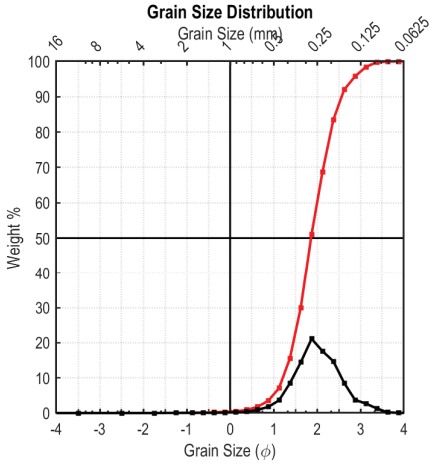
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.41 | 0.39 | 0.39 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.46 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.61 |
| -0.25 | -0.375 | 0.24 | 0.23 | 0.84 |
| 0 | -0.125 | 0.70 | 0.66 | 1.50 |
| 0.25 | 0.125 | 1.40 | 1.32 | 2.82 |
| 0.5 | 0.375 | 4.82 | 4.54 | 7.36 |
| 0.75 | 0.625 | 9.23 | 8.70 | 16.06 |
| 1 | 0.875 | 8.52 | 8.03 | 24.10 |
| 1.25 | 1.125 | 9.64 | 9.09 | 33.18 |
| 1.5 | 1.375 | 12.61 | 11.89 | 45.07 |
| 1.75 | 1.625 | 14.17 | 13.36 | 58.43 |
| 2 | 1.875 | 15.83 | 14.92 | 73.35 |
| 2.25 | 2.125 | 12.48 | 11.76 | 85.12 |
| 2.5 | 2.375 | 9.29 | 8.76 | 93.87 |
| 2.75 | 2.625 | 4.24 | 4.00 | 97.87 |
| 3 | 2.875 | 1.14 | 1.07 | 98.94 |
| 3.25 | 3.125 | 0.75 | 0.71 | 99.65 |
| 3.5 | 3.375 | 0.31 | 0.29 | 99.94 |
| 3.75 | 3.625 | 0.06 | 0.06 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.315 |
| **5** | 0.245 |
| **16** | 0.625 |
| **25** | 0.900 |
| **50** | 1.465 |
| **75** | 1.910 |
| **84** | 2.100 |
| **95** | 2.445 |
| **99** | 2.895 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.526 | 0.347 |
| Standard Deviation | 0.706 | 0.613 |
| Skewness | -0.378 | |
| Kurtosis | 3.291 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.362 | 1.397 |
| Standard Deviation | 0.737 | 0.702 |
| Skewness (1) | -0.139 | -0.124 |
| Skewness (2) | -0.163 | |
| Kurtosis | 0.492 | 0.893 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1560+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.250 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **-0.267** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.70 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.6 |

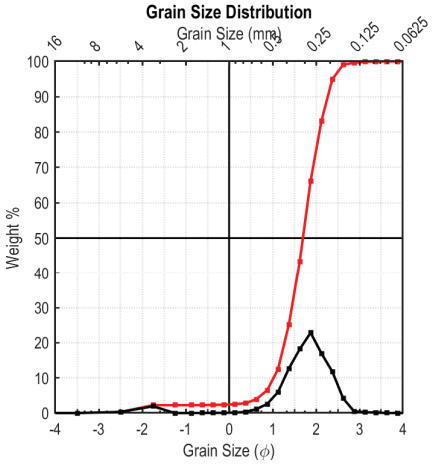
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.09 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.14 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.20 |
| 0 | -0.125 | 0.14 | 0.13 | 0.33 |
| 0.25 | 0.125 | 0.19 | 0.18 | 0.51 |
| 0.5 | 0.375 | 0.37 | 0.35 | 0.86 |
| 0.75 | 0.625 | 0.93 | 0.88 | 1.74 |
| 1 | 0.875 | 1.83 | 1.73 | 3.47 |
| 1.25 | 1.125 | 3.81 | 3.60 | 7.08 |
| 1.5 | 1.375 | 8.96 | 8.48 | 15.55 |
| 1.75 | 1.625 | 15.24 | 14.42 | 29.97 |
| 2 | 1.875 | 22.33 | 21.13 | 51.10 |
| 2.25 | 2.125 | 18.62 | 17.62 | 68.71 |
| 2.5 | 2.375 | 15.59 | 14.75 | 83.46 |
| 2.75 | 2.625 | 9.04 | 8.55 | 92.02 |
| 3 | 2.875 | 3.95 | 3.74 | 95.75 |
| 3.25 | 3.125 | 2.85 | 2.70 | 98.45 |
| 3.5 | 3.375 | 1.37 | 1.30 | 99.74 |
| 3.75 | 3.625 | 0.22 | 0.21 | 99.95 |
| 4 | 3.875 | 0.04 | 0.04 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.415 |
| **5** | 0.980 |
| **16** | 1.385 |
| **25** | 1.540 |
| **50** | 1.860 |
| **75** | 2.230 |
| **84** | 2.390 |
| **95** | 2.825 |
| **99** | 3.230 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.002 | 0.250 |
| Standard Deviation | 0.558 | 0.679 |
| Skewness | -0.267 | |
| Kurtosis | 4.577 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.887 | 1.878 |
| Standard Deviation | 0.502 | 0.531 |
| Skewness (1) | 0.055 | 0.050 |
| Skewness (2) | 0.085 | |
| Kurtosis | 0.836 | 1.096 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1560+00** |
| **Sample** | **Swash** |
| **Mean** | **0.301 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **-2.876** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 107.73 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.92 |
| % gravel (>4 mm) | 0.32 |
| CaCO3 | 2.2 |

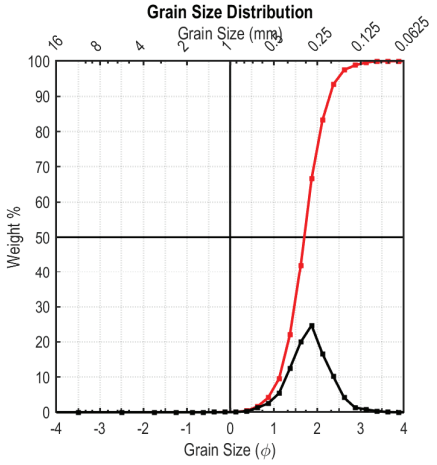
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.34 | 0.32 | 0.32 |
| -1.5 | -1.75 | 2.07 | 1.92 | 2.24 |
| -1 | -1.25 | 0.00 | 0.00 | 2.24 |
| -0.75 | -0.875 | 0.00 | 0.00 | 2.24 |
| -0.5 | -0.625 | 0.02 | 0.02 | 2.26 |
| -0.25 | -0.375 | 0.06 | 0.06 | 2.31 |
| 0 | -0.125 | 0.06 | 0.06 | 2.37 |
| 0.25 | 0.125 | 0.13 | 0.12 | 2.49 |
| 0.5 | 0.375 | 0.34 | 0.32 | 2.80 |
| 0.75 | 0.625 | 1.21 | 1.12 | 3.93 |
| 1 | 0.875 | 2.76 | 2.56 | 6.49 |
| 1.25 | 1.125 | 6.44 | 5.98 | 12.47 |
| 1.5 | 1.375 | 13.66 | 12.68 | 25.15 |
| 1.75 | 1.625 | 19.60 | 18.19 | 43.34 |
| 2 | 1.875 | 24.62 | 22.85 | 66.19 |
| 2.25 | 2.125 | 18.29 | 16.98 | 83.17 |
| 2.5 | 2.375 | 12.70 | 11.79 | 94.96 |
| 2.75 | 2.625 | 4.47 | 4.15 | 99.11 |
| 3 | 2.875 | 0.54 | 0.50 | 99.61 |
| 3.25 | 3.125 | 0.27 | 0.25 | 99.86 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.235 |
| **5** | 0.730 |
| **16** | 1.195 |
| **25** | 1.370 |
| **50** | 1.700 |
| **75** | 2.005 |
| **84** | 2.145 |
| **95** | 2.375 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.731 | 0.301 |
| Standard Deviation | 0.710 | 0.611 |
| Skewness | -2.876 | |
| Kurtosis | 15.687 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.670 | 1.680 |
| Standard Deviation | 0.475 | 0.487 |
| Skewness (1) | -0.063 | -0.121 |
| Skewness (2) | -0.311 | |
| Kurtosis | 0.732 | 1.062 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1570+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.282 mm** |
| **STD** | **0.723 mm** |
| **Skewness** | **0.001** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.35 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

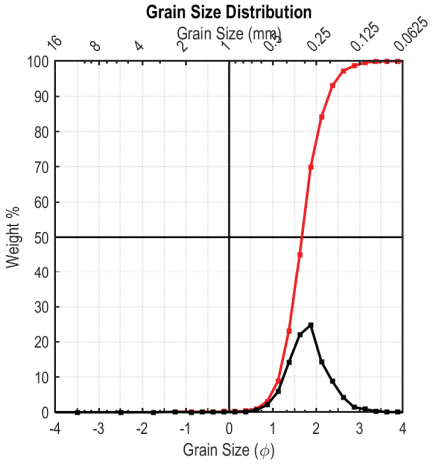
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.02 | 0.02 | 0.03 |
| 0.25 | 0.125 | 0.06 | 0.06 | 0.09 |
| 0.5 | 0.375 | 0.29 | 0.28 | 0.36 |
| 0.75 | 0.625 | 1.31 | 1.24 | 1.60 |
| 1 | 0.875 | 2.66 | 2.52 | 4.13 |
| 1.25 | 1.125 | 5.67 | 5.38 | 9.51 |
| 1.5 | 1.375 | 13.12 | 12.45 | 21.96 |
| 1.75 | 1.625 | 21.02 | 19.95 | 41.92 |
| 2 | 1.875 | 26.02 | 24.70 | 66.62 |
| 2.25 | 2.125 | 17.50 | 16.61 | 83.23 |
| 2.5 | 2.375 | 10.69 | 10.15 | 93.37 |
| 2.75 | 2.625 | 4.34 | 4.12 | 97.49 |
| 3 | 2.875 | 1.40 | 1.33 | 98.82 |
| 3.25 | 3.125 | 0.85 | 0.81 | 99.63 |
| 3.5 | 3.375 | 0.34 | 0.32 | 99.95 |
| 3.75 | 3.625 | 0.05 | 0.05 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.505 |
| **5** | 0.915 |
| **16** | 1.255 |
| **25** | 1.415 |
| **50** | 1.705 |
| **75** | 2.000 |
| **84** | 2.145 |
| **95** | 2.475 |
| **99** | 2.930 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.828 | 0.282 |
| Standard Deviation | 0.468 | 0.723 |
| Skewness | 0.001 | |
| Kurtosis | 3.686 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.700 | 1.702 |
| Standard Deviation | 0.445 | 0.459 |
| Skewness (1) | -0.011 | -0.012 |
| Skewness (2) | -0.022 | |
| Kurtosis | 0.753 | 1.093 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1570+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.285 mm** |
| **STD** | **0.722 mm** |
| **Skewness** | **-0.030** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.58 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.9 |

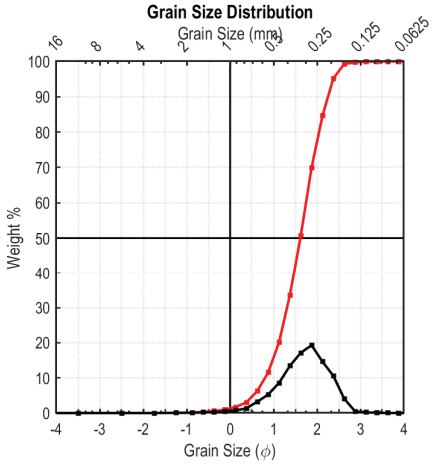
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.10 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.12 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.14 |
| 0 | -0.125 | 0.04 | 0.04 | 0.18 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.23 |
| 0.5 | 0.375 | 0.14 | 0.13 | 0.36 |
| 0.75 | 0.625 | 0.65 | 0.62 | 0.98 |
| 1 | 0.875 | 2.19 | 2.07 | 3.05 |
| 1.25 | 1.125 | 6.18 | 5.85 | 8.90 |
| 1.5 | 1.375 | 14.97 | 14.18 | 23.08 |
| 1.75 | 1.625 | 23.25 | 22.02 | 45.10 |
| 2 | 1.875 | 26.14 | 24.76 | 69.86 |
| 2.25 | 2.125 | 15.15 | 14.35 | 84.21 |
| 2.5 | 2.375 | 9.27 | 8.78 | 92.99 |
| 2.75 | 2.625 | 4.49 | 4.25 | 97.24 |
| 3 | 2.875 | 1.53 | 1.45 | 98.69 |
| 3.25 | 3.125 | 0.91 | 0.86 | 99.55 |
| 3.5 | 3.375 | 0.36 | 0.34 | 99.90 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.96 |
| 4 | 3.875 | 0.03 | 0.03 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.630 |
| **5** | 0.960 |
| **16** | 1.250 |
| **25** | 1.395 |
| **50** | 1.675 |
| **75** | 1.965 |
| **84** | 2.120 |
| **95** | 2.495 |
| **99** | 2.965 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.813 | 0.285 |
| Standard Deviation | 0.470 | 0.722 |
| Skewness | -0.030 | |
| Kurtosis | 5.586 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.685 | 1.682 |
| Standard Deviation | 0.435 | 0.450 |
| Skewness (1) | 0.023 | 0.046 |
| Skewness (2) | 0.121 | |
| Kurtosis | 0.764 | 1.104 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1570+00** |
| **Sample** | **Swash** |
| **Mean** | **0.312 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.707** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.98 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

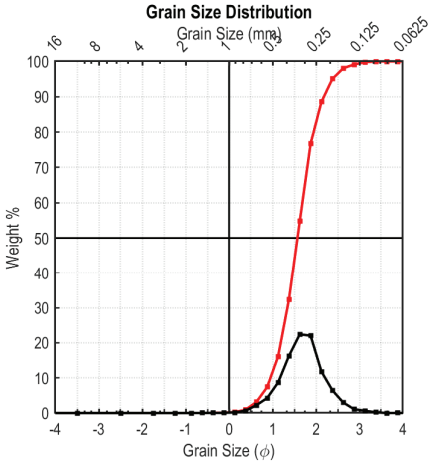
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.13 |
| -0.5 | -0.625 | 0.19 | 0.18 | 0.31 |
| -0.25 | -0.375 | 0.24 | 0.23 | 0.54 |
| 0 | -0.125 | 0.46 | 0.43 | 0.97 |
| 0.25 | 0.125 | 0.76 | 0.72 | 1.69 |
| 0.5 | 0.375 | 1.44 | 1.36 | 3.05 |
| 0.75 | 0.625 | 3.41 | 3.22 | 6.27 |
| 1 | 0.875 | 5.59 | 5.27 | 11.54 |
| 1.25 | 1.125 | 9.07 | 8.56 | 20.10 |
| 1.5 | 1.375 | 14.23 | 13.43 | 33.53 |
| 1.75 | 1.625 | 18.16 | 17.14 | 50.66 |
| 2 | 1.875 | 20.45 | 19.30 | 69.96 |
| 2.25 | 2.125 | 15.49 | 14.62 | 84.57 |
| 2.5 | 2.375 | 11.23 | 10.60 | 95.17 |
| 2.75 | 2.625 | 4.32 | 4.08 | 99.25 |
| 3 | 2.875 | 0.52 | 0.49 | 99.74 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.92 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.115 |
| **5** | 0.525 |
| **16** | 1.005 |
| **25** | 1.215 |
| **50** | 1.615 |
| **75** | 1.960 |
| **84** | 2.115 |
| **95** | 2.370 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.681 | 0.312 |
| Standard Deviation | 0.574 | 0.672 |
| Skewness | -0.707 | |
| Kurtosis | 4.158 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.560 | 1.578 |
| Standard Deviation | 0.555 | 0.557 |
| Skewness (1) | -0.099 | -0.140 |
| Skewness (2) | -0.302 | |
| Kurtosis | 0.662 | 1.015 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1580+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.309 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **0.018** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.41 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.8 |

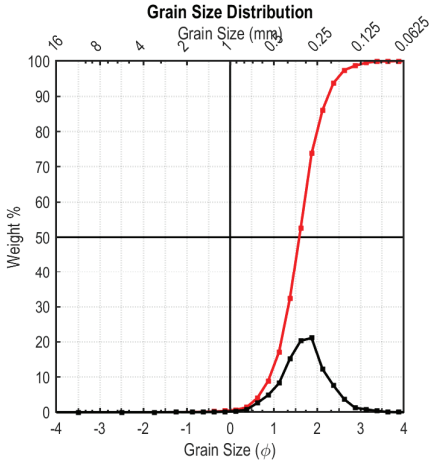
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.05 |
| 0 | -0.125 | 0.05 | 0.05 | 0.09 |
| 0.25 | 0.125 | 0.18 | 0.17 | 0.27 |
| 0.5 | 0.375 | 0.68 | 0.65 | 0.91 |
| 0.75 | 0.625 | 2.33 | 2.21 | 3.12 |
| 1 | 0.875 | 4.49 | 4.26 | 7.38 |
| 1.25 | 1.125 | 9.14 | 8.67 | 16.05 |
| 1.5 | 1.375 | 17.13 | 16.25 | 32.30 |
| 1.75 | 1.625 | 23.63 | 22.42 | 54.72 |
| 2 | 1.875 | 23.22 | 22.03 | 76.75 |
| 2.25 | 2.125 | 12.44 | 11.80 | 88.55 |
| 2.5 | 2.375 | 6.84 | 6.49 | 95.04 |
| 2.75 | 2.625 | 3.17 | 3.01 | 98.05 |
| 3 | 2.875 | 1.15 | 1.09 | 99.14 |
| 3.25 | 3.125 | 0.68 | 0.65 | 99.78 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.385 |
| **5** | 0.735 |
| **16** | 1.125 |
| **25** | 1.265 |
| **50** | 1.570 |
| **75** | 1.855 |
| **84** | 2.030 |
| **95** | 2.375 |
| **99** | 2.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.695 | 0.309 |
| Standard Deviation | 0.489 | 0.713 |
| Skewness | 0.018 | |
| Kurtosis | 3.726 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.578 | 1.575 |
| Standard Deviation | 0.453 | 0.475 |
| Skewness (1) | 0.017 | -0.001 |
| Skewness (2) | -0.033 | |
| Kurtosis | 0.812 | 1.139 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1580+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.306 mm** |
| **STD** | **0.689 mm** |
| **Skewness** | **-0.116** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.65 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

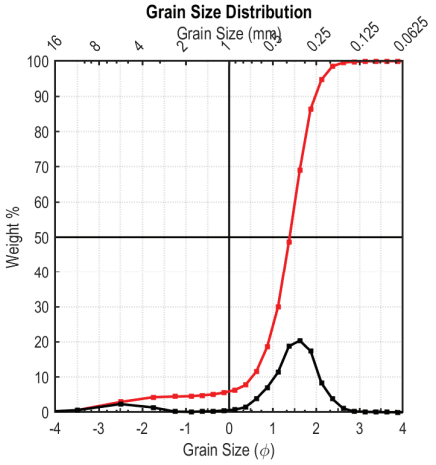
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.05 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.10 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.19 |
| 0 | -0.125 | 0.17 | 0.16 | 0.35 |
| 0.25 | 0.125 | 0.34 | 0.32 | 0.67 |
| 0.5 | 0.375 | 0.75 | 0.71 | 1.38 |
| 0.75 | 0.625 | 2.79 | 2.64 | 4.02 |
| 1 | 0.875 | 5.13 | 4.86 | 8.88 |
| 1.25 | 1.125 | 8.71 | 8.24 | 17.12 |
| 1.5 | 1.375 | 16.07 | 15.21 | 32.33 |
| 1.75 | 1.625 | 21.47 | 20.32 | 52.65 |
| 2 | 1.875 | 22.30 | 21.11 | 73.76 |
| 2.25 | 2.125 | 13.00 | 12.30 | 86.07 |
| 2.5 | 2.375 | 8.08 | 7.65 | 93.72 |
| 2.75 | 2.625 | 3.92 | 3.71 | 97.43 |
| 3 | 2.875 | 1.34 | 1.27 | 98.69 |
| 3.25 | 3.125 | 0.89 | 0.84 | 99.54 |
| 3.5 | 3.375 | 0.39 | 0.37 | 99.91 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.240 |
| **5** | 0.675 |
| **16** | 1.090 |
| **25** | 1.255 |
| **50** | 1.590 |
| **75** | 1.900 |
| **84** | 2.085 |
| **95** | 2.460 |
| **99** | 2.965 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.708 | 0.306 |
| Standard Deviation | 0.537 | 0.689 |
| Skewness | -0.116 | |
| Kurtosis | 4.125 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.587 | 1.588 |
| Standard Deviation | 0.498 | 0.519 |
| Skewness (1) | -0.005 | -0.015 |
| Skewness (2) | -0.045 | |
| Kurtosis | 0.794 | 1.134 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1580+00** |
| **Sample** | **Swash** |
| **Mean** | **0.397 mm** |
| **STD** | **0.516 mm** |
| **Skewness** | **-2.716** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 110.58 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.55 |
| % gravel (>4 mm) | 2.92 |
| CaCO3 | 6.5 |

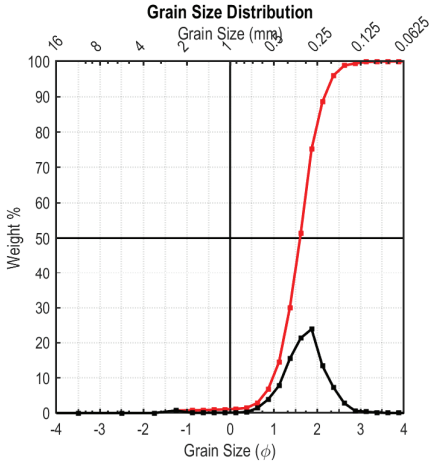
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.66 | 0.60 | 0.60 |
| -2 | -2.5 | 2.57 | 2.32 | 2.92 |
| -1.5 | -1.75 | 1.50 | 1.36 | 4.28 |
| -1 | -1.25 | 0.21 | 0.19 | 4.47 |
| -0.75 | -0.875 | 0.11 | 0.10 | 4.57 |
| -0.5 | -0.625 | 0.26 | 0.24 | 4.80 |
| -0.25 | -0.375 | 0.30 | 0.27 | 5.07 |
| 0 | -0.125 | 0.55 | 0.50 | 5.57 |
| 0.25 | 0.125 | 0.78 | 0.71 | 6.28 |
| 0.5 | 0.375 | 1.61 | 1.46 | 7.73 |
| 0.75 | 0.625 | 4.22 | 3.82 | 11.55 |
| 1 | 0.875 | 7.77 | 7.03 | 18.57 |
| 1.25 | 1.125 | 12.56 | 11.36 | 29.93 |
| 1.5 | 1.375 | 20.72 | 18.74 | 48.67 |
| 1.75 | 1.625 | 22.51 | 20.36 | 69.03 |
| 2 | 1.875 | 19.23 | 17.39 | 86.42 |
| 2.25 | 2.125 | 9.18 | 8.30 | 94.72 |
| 2.5 | 2.375 | 4.20 | 3.80 | 98.52 |
| 2.75 | 2.625 | 1.20 | 1.09 | 99.60 |
| 3 | 2.875 | 0.25 | 0.23 | 99.83 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.95 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.325 |
| **5** | -0.440 |
| **16** | 0.785 |
| **25** | 1.015 |
| **50** | 1.390 |
| **75** | 1.710 |
| **84** | 1.840 |
| **95** | 2.145 |
| **99** | 2.485 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.332 | 0.397 |
| Standard Deviation | 0.953 | 0.516 |
| Skewness | -2.716 | |
| Kurtosis | 11.956 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.312 | 1.338 |
| Standard Deviation | 0.527 | 0.655 |
| Skewness (1) | -0.147 | -0.281 |
| Skewness (2) | -1.019 | |
| Kurtosis | 1.450 | 1.524 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** Nov 14 2022
**Station** 1590+00
**Sample** Toe of Dune

**Mean** 0.308 mm
**STD** 0.692 mm
**Skewness** -1.327

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.29 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.72 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

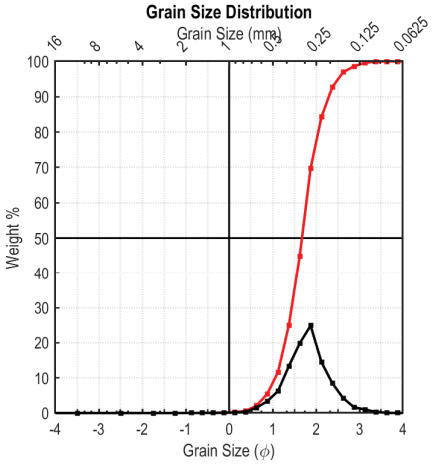
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.76 | 0.72 | 0.72 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.77 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.84 |
| -0.25 | -0.375 | 0.10 | 0.09 | 0.93 |
| 0 | -0.125 | 0.10 | 0.09 | 1.03 |
| 0.25 | 0.125 | 0.14 | 0.13 | 1.16 |
| 0.5 | 0.375 | 0.31 | 0.29 | 1.45 |
| 0.75 | 0.625 | 1.47 | 1.40 | 2.85 |
| 1 | 0.875 | 4.09 | 3.88 | 6.73 |
| 1.25 | 1.125 | 8.20 | 7.79 | 14.52 |
| 1.5 | 1.375 | 16.30 | 15.48 | 30.00 |
| 1.75 | 1.625 | 22.46 | 21.33 | 51.33 |
| 2 | 1.875 | 25.15 | 23.89 | 75.22 |
| 2.25 | 2.125 | 14.10 | 13.39 | 88.61 |
| 2.5 | 2.375 | 7.76 | 7.37 | 95.98 |
| 2.75 | 2.625 | 2.97 | 2.82 | 98.80 |
| 3 | 2.875 | 0.68 | 0.65 | 99.45 |
| 3.25 | 3.125 | 0.40 | 0.38 | 99.83 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| Percentiles | |
|---|---|
| 1 | -0.195 |
| 5 | 0.765 |
| 16 | 1.150 |
| 25 | 1.295 |
| 50 | 1.610 |
| 75 | 1.875 |
| 84 | 2.040 |
| 95 | 2.340 |
| 99 | 2.700 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.699 | 0.308 |
| Standard Deviation | 0.531 | 0.692 |
| Skewness | -1.327 | |
| Kurtosis | 9.581 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.595 | 1.600 |
| Standard Deviation | 0.445 | 0.461 |
| Skewness (1) | -0.034 | -0.053 |
| Skewness (2) | -0.129 | |
| Kurtosis | 0.770 | 1.113 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** Nov 14 2022
**Station** 1590+00
**Sample** Beach Face

**Mean** 0.288 mm
**STD** 0.710 mm
**Skewness** 0.003

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.89 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

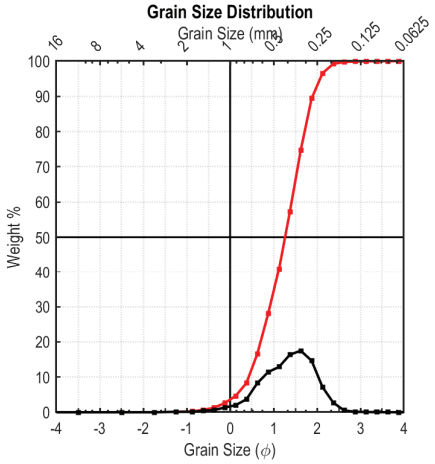
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.03 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.07 |
| 0 | -0.125 | 0.06 | 0.06 | 0.12 |
| 0.25 | 0.125 | 0.14 | 0.13 | 0.25 |
| 0.5 | 0.375 | 0.33 | 0.31 | 0.57 |
| 0.75 | 0.625 | 1.60 | 1.51 | 2.08 |
| 1 | 0.875 | 3.52 | 3.32 | 5.40 |
| 1.25 | 1.125 | 6.63 | 6.26 | 11.66 |
| 1.5 | 1.375 | 14.15 | 13.36 | 25.03 |
| 1.75 | 1.625 | 21.03 | 19.86 | 44.89 |
| 2 | 1.875 | 26.34 | 24.87 | 69.76 |
| 2.25 | 2.125 | 15.35 | 14.50 | 84.26 |
| 2.5 | 2.375 | 8.97 | 8.47 | 92.73 |
| 2.75 | 2.625 | 4.48 | 4.23 | 96.96 |
| 3 | 2.875 | 1.74 | 1.64 | 98.60 |
| 3.25 | 3.125 | 1.06 | 1.00 | 99.60 |
| 3.5 | 3.375 | 0.35 | 0.33 | 99.93 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| Percentiles | |
|---|---|
| 1 | 0.445 |
| 5 | 0.845 |
| 16 | 1.205 |
| 25 | 1.375 |
| 50 | 1.675 |
| 75 | 1.965 |
| 84 | 2.120 |
| 95 | 2.510 |
| 99 | 2.975 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.795 | 0.288 |
| Standard Deviation | 0.494 | 0.710 |
| Skewness | 0.003 | |
| Kurtosis | 3.907 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.663 | 1.667 |
| Standard Deviation | 0.458 | 0.481 |
| Skewness (1) | -0.027 | -0.012 |
| Skewness (2) | 0.005 | |
| Kurtosis | 0.820 | 1.157 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** Nov 14 2022
**Station** 1590+00
**Sample** Swash

**Mean** 0.399 mm
**STD** 0.660 mm
**Skewness** -0.561

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.04 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.6 |

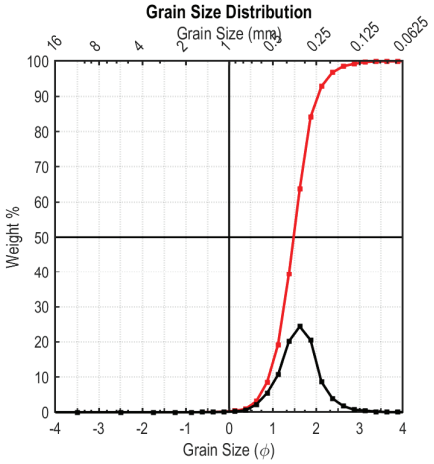
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.24 |
| -0.5 | -0.625 | 0.45 | 0.42 | 0.66 |
| -0.25 | -0.375 | 0.63 | 0.59 | 1.25 |
| 0 | -0.125 | 1.44 | 1.36 | 2.61 |
| 0.25 | 0.125 | 2.12 | 2.00 | 4.61 |
| 0.5 | 0.375 | 3.91 | 3.69 | 8.30 |
| 0.75 | 0.625 | 8.77 | 8.27 | 16.57 |
| 1 | 0.875 | 12.11 | 11.42 | 27.99 |
| 1.25 | 1.125 | 13.66 | 12.88 | 40.87 |
| 1.5 | 1.375 | 17.35 | 16.36 | 57.23 |
| 1.75 | 1.625 | 18.54 | 17.48 | 74.72 |
| 2 | 1.875 | 15.54 | 14.65 | 89.37 |
| 2.25 | 2.125 | 7.61 | 7.18 | 96.55 |
| 2.5 | 2.375 | 2.86 | 2.70 | 99.25 |
| 2.75 | 2.625 | 0.55 | 0.52 | 99.76 |
| 3 | 2.875 | 0.13 | 0.12 | 99.89 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.96 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| Percentiles | |
|---|---|
| 1 | -0.480 |
| 5 | 0.150 |
| 16 | 0.610 |
| 25 | 0.810 |
| 50 | 1.265 |
| 75 | 1.630 |
| 84 | 1.785 |
| 95 | 2.070 |
| 99 | 2.350 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.325 | 0.399 |
| Standard Deviation | 0.599 | 0.660 |
| Skewness | -0.561 | |
| Kurtosis | 3.611 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.198 | 1.220 |
| Standard Deviation | 0.588 | 0.585 |
| Skewness (1) | -0.115 | -0.138 |
| Skewness (2) | -0.264 | |
| Kurtosis | 0.634 | 0.960 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** Nov 14 2022
**Station** 1600+00
**Sample** Toe of Dune

**Mean** 0.328 mm
**STD** 0.724 mm
**Skewness** 0.198

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.26 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

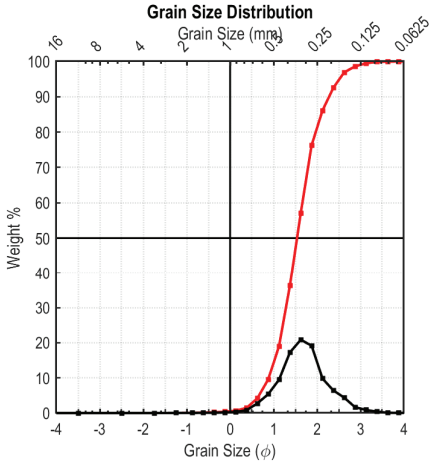
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.03 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.07 |
| 0 | -0.125 | 0.11 | 0.10 | 0.17 |
| 0.25 | 0.125 | 0.21 | 0.20 | 0.37 |
| 0.5 | 0.375 | 0.57 | 0.54 | 0.91 |
| 0.75 | 0.625 | 2.31 | 2.19 | 3.11 |
| 1 | 0.875 | 5.74 | 5.45 | 8.56 |
| 1.25 | 1.125 | 11.20 | 10.64 | 19.20 |
| 1.5 | 1.375 | 21.19 | 20.13 | 39.33 |
| 1.75 | 1.625 | 25.65 | 24.37 | 63.70 |
| 2 | 1.875 | 21.55 | 20.47 | 84.17 |
| 2.25 | 2.125 | 9.10 | 8.65 | 92.82 |
| 2.5 | 2.375 | 4.15 | 3.94 | 96.76 |
| 2.75 | 2.625 | 1.87 | 1.78 | 98.54 |
| 3 | 2.875 | 0.74 | 0.70 | 99.24 |
| 3.25 | 3.125 | 0.52 | 0.49 | 99.73 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.90 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| Percentiles | |
|---|---|
| 1 | 0.385 |
| 5 | 0.710 |
| 16 | 1.050 |
| 25 | 1.195 |
| 50 | 1.485 |
| 75 | 1.765 |
| 84 | 1.875 |
| 95 | 2.265 |
| 99 | 2.790 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.609 | 0.328 |
| Standard Deviation | 0.466 | 0.724 |
| Skewness | 0.198 | |
| Kurtosis | 4.605 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.462 | 1.470 |
| Standard Deviation | 0.413 | 0.442 |
| Skewness (1) | -0.055 | -0.026 |
| Skewness (2) | 0.006 | |
| Kurtosis | 0.885 | 1.118 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1600+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.312 mm** |
| **STD** | **0.682 mm** |
| **Skewness** | **0.074** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.35 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.5 |

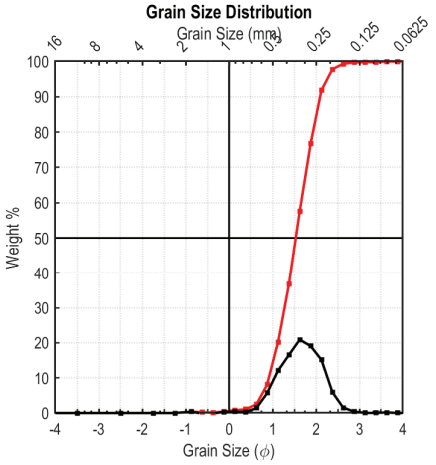
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.06 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.12 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.20 |
| 0 | -0.125 | 0.17 | 0.16 | 0.36 |
| 0.25 | 0.125 | 0.31 | 0.29 | 0.65 |
| 0.5 | 0.375 | 0.83 | 0.79 | 1.44 |
| 0.75 | 0.625 | 2.88 | 2.73 | 4.18 |
| 1 | 0.875 | 5.64 | 5.35 | 9.53 |
| 1.25 | 1.125 | 9.98 | 9.47 | 19.00 |
| 1.5 | 1.375 | 18.15 | 17.23 | 36.23 |
| 1.75 | 1.625 | 21.97 | 20.85 | 57.09 |
| 2 | 1.875 | 20.20 | 19.17 | 76.26 |
| 2.25 | 2.125 | 10.35 | 9.82 | 86.08 |
| 2.5 | 2.375 | 6.78 | 6.44 | 92.52 |
| 2.75 | 2.625 | 4.62 | 4.39 | 96.91 |
| 3 | 2.875 | 1.76 | 1.67 | 98.58 |
| 3.25 | 3.125 | 0.94 | 0.89 | 99.47 |
| 3.5 | 3.375 | 0.41 | 0.39 | 99.86 |
| 3.75 | 3.625 | 0.09 | 0.09 | 99.94 |
| 4 | 3.875 | 0.03 | 0.03 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.235 |
| **5** | 0.665 |
| **16** | 1.045 |
| **25** | 1.210 |
| **50** | 1.540 |
| **75** | 1.860 |
| **84** | 2.070 |
| **95** | 2.515 |
| **99** | 2.995 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.679 | 0.312 |
| Standard Deviation | 0.552 | 0.682 |
| Skewness | 0.074 | |
| Kurtosis | 4.086 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.558 | 1.552 |
| Standard Deviation | 0.513 | 0.537 |
| Skewness (1) | 0.034 | 0.044 |
| Skewness (2) | 0.098 | |
| Kurtosis | 0.805 | 1.166 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1600+00** |
| **Sample** | **Swash** |
| **Mean** | **0.320 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **-0.375** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.79 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

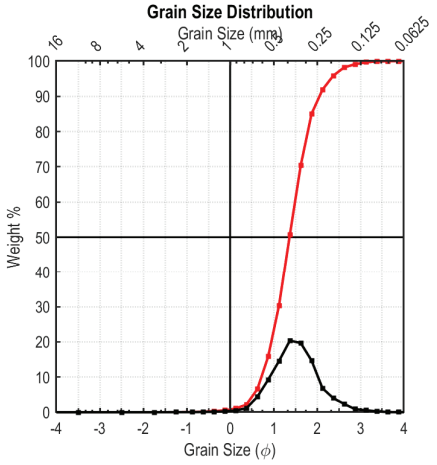
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.41 | 0.39 | 0.39 |
| -0.5 | -0.625 | -0.17 | -0.16 | 0.23 |
| -0.25 | -0.375 | -0.14 | -0.13 | 0.09 |
| 0 | -0.125 | 0.35 | 0.33 | 0.43 |
| 0.25 | 0.125 | 0.37 | 0.35 | 0.78 |
| 0.5 | 0.375 | 0.28 | 0.26 | 1.04 |
| 0.75 | 0.625 | 1.47 | 1.39 | 2.43 |
| 1 | 0.875 | 6.00 | 5.67 | 8.10 |
| 1.25 | 1.125 | 12.78 | 12.08 | 20.18 |
| 1.5 | 1.375 | 17.50 | 16.54 | 36.72 |
| 1.75 | 1.625 | 22.10 | 20.89 | 57.61 |
| 2 | 1.875 | 20.19 | 19.08 | 76.70 |
| 2.25 | 2.125 | 16.01 | 15.13 | 91.83 |
| 2.5 | 2.375 | 6.28 | 5.94 | 97.77 |
| 2.75 | 2.625 | 1.63 | 1.54 | 99.31 |
| 3 | 2.875 | 0.44 | 0.42 | 99.73 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.76 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.80 |
| 3.75 | 3.625 | 0.18 | 0.17 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.335 |
| **5** | 0.740 |
| **16** | 1.040 |
| **25** | 1.200 |
| **50** | 1.535 |
| **75** | 1.855 |
| **84** | 1.995 |
| **95** | 2.260 |
| **99** | 2.575 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.643 | 0.320 |
| Standard Deviation | 0.484 | 0.715 |
| Skewness | -0.375 | |
| Kurtosis | 5.187 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.518 | 1.523 |
| Standard Deviation | 0.478 | 0.469 |
| Skewness (1) | -0.037 | -0.041 |
| Skewness (2) | -0.073 | |
| Kurtosis | 0.592 | 0.951 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1610+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.352 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **0.158** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.40 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.8 |

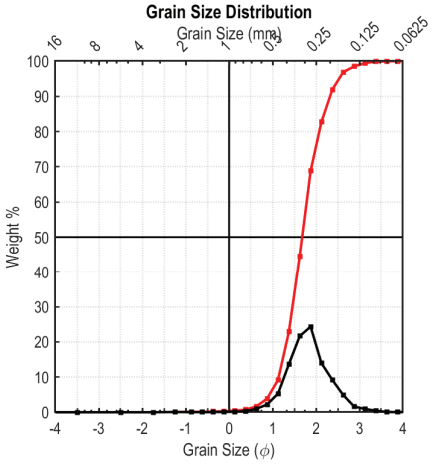
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.06 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.15 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.29 |
| 0 | -0.125 | 0.26 | 0.25 | 0.54 |
| 0.25 | 0.125 | 0.52 | 0.49 | 1.03 |
| 0.5 | 0.375 | 1.21 | 1.15 | 2.18 |
| 0.75 | 0.625 | 4.60 | 4.36 | 6.55 |
| 1 | 0.875 | 9.74 | 9.24 | 15.79 |
| 1.25 | 1.125 | 15.35 | 14.56 | 30.35 |
| 1.5 | 1.375 | 21.47 | 20.37 | 50.72 |
| 1.75 | 1.625 | 20.74 | 19.68 | 70.40 |
| 2 | 1.875 | 15.46 | 14.67 | 85.07 |
| 2.25 | 2.125 | 7.19 | 6.82 | 91.89 |
| 2.5 | 2.375 | 4.21 | 3.99 | 95.88 |
| 2.75 | 2.625 | 2.48 | 2.35 | 98.24 |
| 3 | 2.875 | 0.92 | 0.87 | 99.11 |
| 3.25 | 3.125 | 0.59 | 0.56 | 99.67 |
| 3.5 | 3.375 | 0.27 | 0.26 | 99.92 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.110 |
| **5** | 0.535 |
| **16** | 0.880 |
| **25** | 1.035 |
| **50** | 1.365 |
| **75** | 1.705 |
| **84** | 1.855 |
| **95** | 2.320 |
| **99** | 2.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.505 | 0.352 |
| Standard Deviation | 0.540 | 0.688 |
| Skewness | 0.158 | |
| Kurtosis | 4.169 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.367 | 1.367 |
| Standard Deviation | 0.488 | 0.514 |
| Skewness (1) | 0.005 | 0.038 |
| Skewness (2) | 0.128 | |
| Kurtosis | 0.831 | 1.092 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1610+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.283 mm** |
| **STD** | **0.709 mm** |
| **Skewness** | **-0.116** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.51 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.9 |

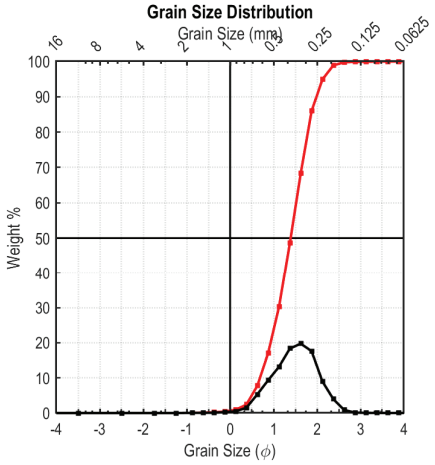
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.10 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.13 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.19 |
| 0 | -0.125 | 0.10 | 0.09 | 0.28 |
| 0.25 | 0.125 | 0.15 | 0.14 | 0.43 |
| 0.5 | 0.375 | 0.30 | 0.28 | 0.71 |
| 0.75 | 0.625 | 1.00 | 0.95 | 1.66 |
| 1 | 0.875 | 2.34 | 2.22 | 3.88 |
| 1.25 | 1.125 | 5.60 | 5.31 | 9.18 |
| 1.5 | 1.375 | 14.42 | 13.67 | 22.85 |
| 1.75 | 1.625 | 22.82 | 21.63 | 44.48 |
| 2 | 1.875 | 25.67 | 24.33 | 68.81 |
| 2.25 | 2.125 | 14.72 | 13.95 | 82.76 |
| 2.5 | 2.375 | 9.68 | 9.17 | 91.93 |
| 2.75 | 2.625 | 5.19 | 4.92 | 96.85 |
| 3 | 2.875 | 1.73 | 1.64 | 98.49 |
| 3.25 | 3.125 | 0.99 | 0.94 | 99.43 |
| 3.5 | 3.375 | 0.45 | 0.43 | 99.86 |
| 3.75 | 3.625 | 0.10 | 0.09 | 99.95 |
| 4 | 3.875 | 0.03 | 0.03 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.450 |
| **5** | 0.930 |
| **16** | 1.250 |
| **25** | 1.400 |
| **50** | 1.680 |
| **75** | 1.985 |
| **84** | 2.160 |
| **95** | 2.530 |
| **99** | 3.010 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.820 | 0.283 |
| Standard Deviation | 0.495 | 0.709 |
| Skewness | -0.116 | |
| Kurtosis | 5.371 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.705 | 1.697 |
| Standard Deviation | 0.455 | 0.470 |
| Skewness (1) | 0.055 | 0.059 |
| Skewness (2) | 0.110 | |
| Kurtosis | 0.758 | 1.121 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1610+00** |
| **Sample** | **Swash** |
| **Mean** | **0.357 mm** |
| **STD** | **0.706 mm** |
| **Skewness** | **-0.258** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.40 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.0 |

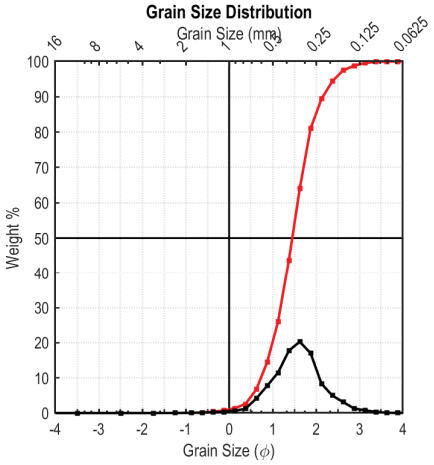
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.05 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.10 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.19 |
| 0 | -0.125 | 0.26 | 0.25 | 0.44 |
| 0.25 | 0.125 | 0.50 | 0.47 | 0.91 |
| 0.5 | 0.375 | 1.59 | 1.51 | 2.42 |
| 0.75 | 0.625 | 5.60 | 5.31 | 7.73 |
| 1 | 0.875 | 9.84 | 9.34 | 17.07 |
| 1.25 | 1.125 | 13.88 | 13.17 | 30.24 |
| 1.5 | 1.375 | 19.36 | 18.37 | 48.61 |
| 1.75 | 1.625 | 20.80 | 19.73 | 68.34 |
| 2 | 1.875 | 18.56 | 17.61 | 85.95 |
| 2.25 | 2.125 | 9.45 | 8.97 | 94.91 |
| 2.5 | 2.375 | 4.18 | 3.97 | 98.88 |
| 2.75 | 2.625 | 0.92 | 0.87 | 99.75 |
| 3 | 2.875 | 0.13 | 0.12 | 99.88 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.92 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.140 |
| **5** | 0.495 |
| **16** | 0.845 |
| **25** | 1.025 |
| **50** | 1.395 |
| **75** | 1.720 |
| **84** | 1.845 |
| **95** | 2.130 |
| **99** | 2.410 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.487 | 0.357 |
| Standard Deviation | 0.503 | 0.706 |
| Skewness | -0.258 | |
| Kurtosis | 3.519 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.345 | 1.362 |
| Standard Deviation | 0.500 | 0.498 |
| Skewness (1) | -0.100 | -0.100 |
| Skewness (2) | -0.165 | |
| Kurtosis | 0.635 | 0.964 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1620+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.336 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **0.016** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.74 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.1 |

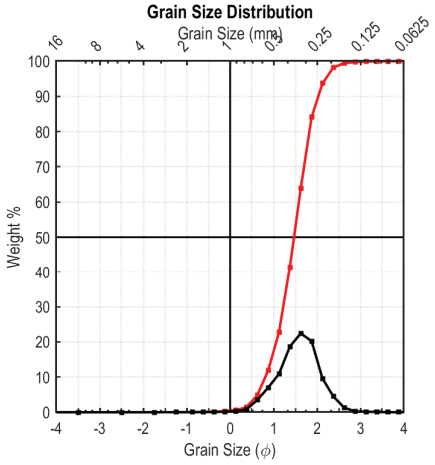
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.06 |
| -0.5 | -0.625 | 0.12 | 0.11 | 0.17 |
| -0.25 | -0.375 | 0.22 | 0.21 | 0.38 |
| 0 | -0.125 | 0.36 | 0.34 | 0.72 |
| 0.25 | 0.125 | 0.67 | 0.63 | 1.35 |
| 0.5 | 0.375 | 1.28 | 1.21 | 2.56 |
| 0.75 | 0.625 | 4.38 | 4.14 | 6.71 |
| 1 | 0.875 | 8.20 | 7.75 | 14.46 |
| 1.25 | 1.125 | 12.15 | 11.49 | 25.95 |
| 1.5 | 1.375 | 18.77 | 17.75 | 43.70 |
| 1.75 | 1.625 | 21.46 | 20.30 | 64.00 |
| 2 | 1.875 | 18.00 | 17.02 | 81.02 |
| 2.25 | 2.125 | 8.84 | 8.36 | 89.38 |
| 2.5 | 2.375 | 5.26 | 4.97 | 94.35 |
| 2.75 | 2.625 | 3.29 | 3.11 | 97.47 |
| 3 | 2.875 | 1.39 | 1.31 | 98.78 |
| 3.25 | 3.125 | 0.81 | 0.77 | 99.55 |
| 3.5 | 3.375 | 0.35 | 0.33 | 99.88 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.95 |
| 4 | 3.875 | 0.03 | 0.03 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.015 |
| **5** | 0.520 |
| **16** | 0.910 |
| **25** | 1.105 |
| **50** | 1.455 |
| **75** | 1.785 |
| **84** | 1.965 |
| **95** | 2.425 |
| **99** | 2.945 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.574 | 0.336 |
| Standard Deviation | 0.573 | 0.672 |
| Skewness | 0.016 | |
| Kurtosis | 4.048 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.438 | 1.443 |
| Standard Deviation | 0.527 | 0.552 |
| Skewness (1) | -0.033 | -0.007 |
| Skewness (2) | 0.033 | |
| Kurtosis | 0.806 | 1.148 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1620+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.337 mm** |
| **STD** | **0.718 mm** |
| **Skewness** | **-0.244** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.55 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.8 |

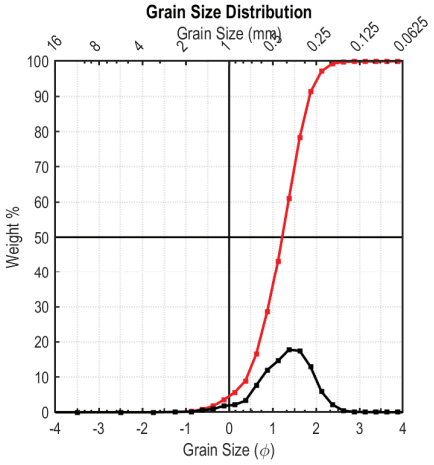
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.04 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.09 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.15 |
| 0 | -0.125 | 0.16 | 0.15 | 0.30 |
| 0.25 | 0.125 | 0.28 | 0.27 | 0.57 |
| 0.5 | 0.375 | 0.87 | 0.82 | 1.39 |
| 0.75 | 0.625 | 3.66 | 3.47 | 4.86 |
| 1 | 0.875 | 7.39 | 7.00 | 11.86 |
| 1.25 | 1.125 | 11.51 | 10.90 | 22.77 |
| 1.5 | 1.375 | 19.72 | 18.68 | 41.45 |
| 1.75 | 1.625 | 23.65 | 22.41 | 63.86 |
| 2 | 1.875 | 21.33 | 20.21 | 84.06 |
| 2.25 | 2.125 | 10.13 | 9.60 | 93.66 |
| 2.5 | 2.375 | 4.76 | 4.51 | 98.17 |
| 2.75 | 2.625 | 1.36 | 1.29 | 99.46 |
| 3 | 2.875 | 0.28 | 0.27 | 99.73 |
| 3.25 | 3.125 | 0.17 | 0.16 | 99.89 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.255 |
| **5** | 0.630 |
| **16** | 0.970 |
| **25** | 1.155 |
| **50** | 1.470 |
| **75** | 1.765 |
| **84** | 1.875 |
| **95** | 2.200 |
| **99** | 2.535 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.569 | 0.337 |
| Standard Deviation | 0.478 | 0.718 |
| Skewness | -0.244 | |
| Kurtosis | 4.108 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.422 | 1.438 |
| Standard Deviation | 0.453 | 0.464 |
| Skewness (1) | -0.105 | -0.088 |
| Skewness (2) | -0.122 | |
| Kurtosis | 0.735 | 1.055 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1620+00** |
| **Sample** | **Swash** |
| **Mean** | **0.410 mm** |
| **STD** | **0.660 mm** |
| **Skewness** | **-0.563** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.46 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 11.0 |

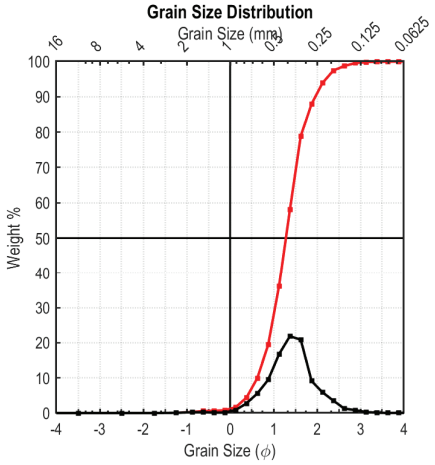
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.09 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.25 |
| -0.5 | -0.625 | 0.62 | 0.59 | 0.83 |
| -0.25 | -0.375 | 0.93 | 0.88 | 1.72 |
| 0 | -0.125 | 1.90 | 1.80 | 3.52 |
| 0.25 | 0.125 | 2.21 | 2.10 | 5.61 |
| 0.5 | 0.375 | 3.47 | 3.29 | 8.90 |
| 0.75 | 0.625 | 8.09 | 7.67 | 16.58 |
| 1 | 0.875 | 12.64 | 11.99 | 28.56 |
| 1.25 | 1.125 | 15.38 | 14.58 | 43.14 |
| 1.5 | 1.375 | 18.75 | 17.78 | 60.92 |
| 1.75 | 1.625 | 18.41 | 17.46 | 78.38 |
| 2 | 1.875 | 13.58 | 12.88 | 91.26 |
| 2.25 | 2.125 | 6.18 | 5.86 | 97.12 |
| 2.5 | 2.375 | 2.29 | 2.17 | 99.29 |
| 2.75 | 2.625 | 0.51 | 0.48 | 99.77 |
| 3 | 2.875 | 0.09 | 0.09 | 99.86 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.91 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.94 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.580 |
| **5** | 0.050 |
| **16** | 0.605 |
| **25** | 0.800 |
| **50** | 1.220 |
| **75** | 1.575 |
| **84** | 1.735 |
| **95** | 2.035 |
| **99** | 2.340 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.286 | 0.410 |
| Standard Deviation | 0.600 | 0.660 |
| Skewness | -0.563 | |
| Kurtosis | 3.971 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.170 | 1.187 |
| Standard Deviation | 0.565 | 0.583 |
| Skewness (1) | -0.088 | -0.134 |
| Skewness (2) | -0.314 | |
| Kurtosis | 0.757 | 1.050 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1630+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.377 mm** |
| **STD** | **0.684 mm** |
| **Skewness** | **-0.056** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.47 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

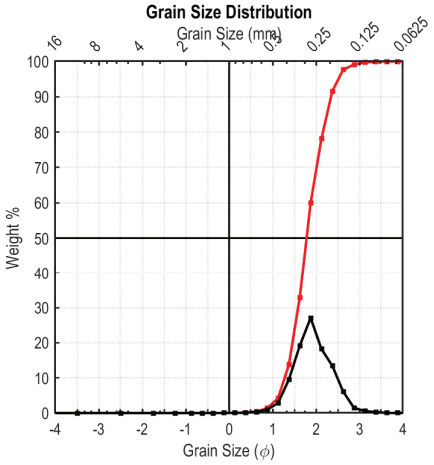
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.25 | 0.24 | 0.29 |
| -0.5 | -0.625 | 0.26 | 0.25 | 0.54 |
| -0.25 | -0.375 | 0.11 | 0.10 | 0.64 |
| 0 | -0.125 | 0.14 | 0.13 | 0.78 |
| 0.25 | 0.125 | 0.90 | 0.85 | 1.63 |
| 0.5 | 0.375 | 2.89 | 2.74 | 4.37 |
| 0.75 | 0.625 | 5.87 | 5.57 | 9.94 |
| 1 | 0.875 | 9.97 | 9.45 | 19.39 |
| 1.25 | 1.125 | 17.65 | 16.73 | 36.12 |
| 1.5 | 1.375 | 23.06 | 21.86 | 57.99 |
| 1.75 | 1.625 | 22.03 | 20.89 | 78.88 |
| 2 | 1.875 | 9.60 | 9.10 | 87.98 |
| 2.25 | 2.125 | 6.22 | 5.90 | 93.88 |
| 2.5 | 2.375 | 3.73 | 3.54 | 97.41 |
| 2.75 | 2.625 | 1.35 | 1.28 | 98.69 |
| 3 | 2.875 | 0.87 | 0.82 | 99.52 |
| 3.25 | 3.125 | 0.31 | 0.29 | 99.81 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.91 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.92 |
| 4 | 3.875 | 0.05 | 0.05 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.060 |
| **5** | 0.405 |
| **16** | 0.785 |
| **25** | 0.960 |
| **50** | 1.285 |
| **75** | 1.580 |
| **84** | 1.765 |
| **95** | 2.205 |
| **99** | 2.720 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.406 | 0.377 |
| Standard Deviation | 0.547 | 0.684 |
| Skewness | -0.056 | |
| Kurtosis | 4.858 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.275 | 1.278 |
| Standard Deviation | 0.490 | 0.518 |
| Skewness (1) | -0.020 | 0.001 |
| Skewness (2) | 0.041 | |
| Kurtosis | 0.837 | 1.190 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1630+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.263 mm** |
| **STD** | **0.747 mm** |
| **Skewness** | **0.111** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.50 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

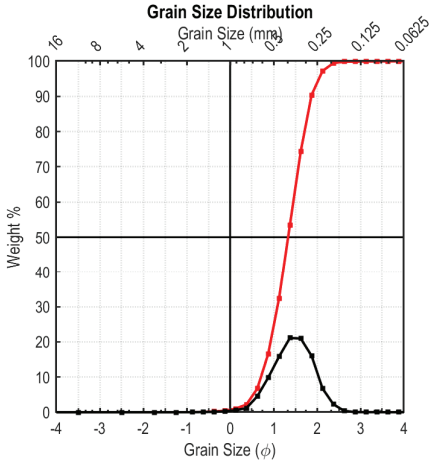
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.00 |
| 0 | -0.125 | 0.01 | 0.01 | 0.01 |
| 0.25 | 0.125 | 0.04 | 0.04 | 0.05 |
| 0.5 | 0.375 | 0.07 | 0.07 | 0.11 |
| 0.75 | 0.625 | 0.31 | 0.29 | 0.41 |
| 1 | 0.875 | 1.02 | 0.97 | 1.37 |
| 1.25 | 1.125 | 2.99 | 2.83 | 4.21 |
| 1.5 | 1.375 | 10.04 | 9.52 | 13.73 |
| 1.75 | 1.625 | 20.19 | 19.14 | 32.86 |
| 2 | 1.875 | 28.56 | 27.07 | 59.93 |
| 2.25 | 2.125 | 19.22 | 18.22 | 78.15 |
| 2.5 | 2.375 | 14.18 | 13.44 | 91.59 |
| 2.75 | 2.625 | 6.41 | 6.08 | 97.67 |
| 3 | 2.875 | 1.52 | 1.44 | 99.11 |
| 3.25 | 3.125 | 0.62 | 0.59 | 99.70 |
| 3.5 | 3.375 | 0.25 | 0.24 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.780 |
| **5** | 1.145 |
| **16** | 1.405 |
| **25** | 1.520 |
| **50** | 1.785 |
| **75** | 2.080 |
| **84** | 2.235 |
| **95** | 2.515 |
| **99** | 2.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.928 | 0.263 |
| Standard Deviation | 0.420 | 0.747 |
| Skewness | 0.111 | |
| Kurtosis | 3.663 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.820 | 1.808 |
| Standard Deviation | 0.415 | 0.415 |
| Skewness (1) | 0.084 | 0.075 |
| Skewness (2) | 0.108 | |
| Kurtosis | 0.651 | 1.003 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1630+00** |
| **Sample** | **Swash** |
| **Mean** | **0.368 mm** |
| **STD** | **0.724 mm** |
| **Skewness** | **-0.221** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.53 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.8 |

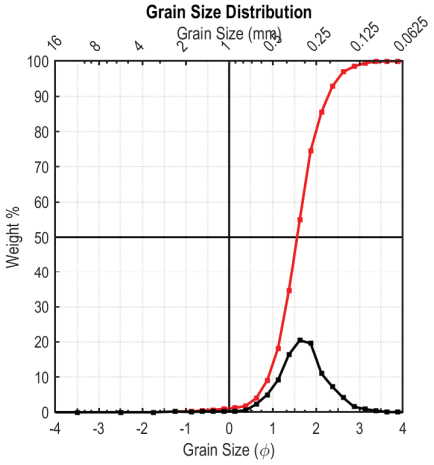
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.09 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.20 |
| 0 | -0.125 | 0.27 | 0.26 | 0.45 |
| 0.25 | 0.125 | 0.58 | 0.55 | 1.00 |
| 0.5 | 0.375 | 1.26 | 1.19 | 2.20 |
| 0.75 | 0.625 | 4.77 | 4.52 | 6.72 |
| 1 | 0.875 | 10.35 | 9.81 | 16.53 |
| 1.25 | 1.125 | 16.66 | 15.79 | 32.31 |
| 1.5 | 1.375 | 22.27 | 21.10 | 53.42 |
| 1.75 | 1.625 | 22.11 | 20.95 | 74.37 |
| 2 | 1.875 | 16.91 | 16.02 | 90.39 |
| 2.25 | 2.125 | 7.16 | 6.78 | 97.18 |
| 2.5 | 2.375 | 2.40 | 2.27 | 99.45 |
| 2.75 | 2.625 | 0.41 | 0.39 | 99.84 |
| 3 | 2.875 | 0.05 | 0.05 | 99.89 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.91 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.94 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.125 |
| **5** | 0.530 |
| **16** | 0.860 |
| **25** | 1.010 |
| **50** | 1.335 |
| **75** | 1.635 |
| **84** | 1.775 |
| **95** | 2.045 |
| **99** | 2.325 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.441 | 0.368 |
| Standard Deviation | 0.465 | 0.724 |
| Skewness | -0.221 | |
| Kurtosis | 4.101 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.317 | 1.323 |
| Standard Deviation | 0.458 | 0.458 |
| Skewness (1) | -0.038 | -0.050 |
| Skewness (2) | -0.104 | |
| Kurtosis | 0.656 | 0.993 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1640+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.310 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.344** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.75 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.20 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

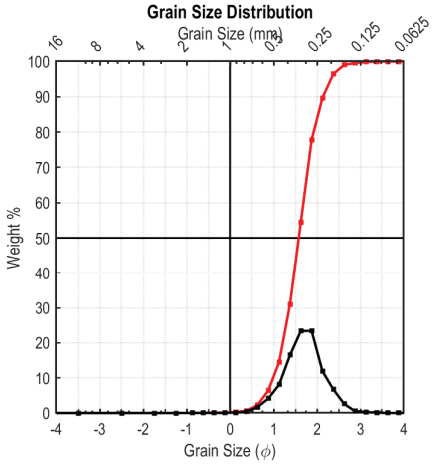
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.21 | 0.20 | 0.20 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.27 |
| -0.5 | -0.625 | 0.22 | 0.21 | 0.48 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.68 |
| 0 | -0.125 | 0.27 | 0.26 | 0.94 |
| 0.25 | 0.125 | 0.30 | 0.28 | 1.22 |
| 0.5 | 0.375 | 0.57 | 0.54 | 1.76 |
| 0.75 | 0.625 | 2.41 | 2.28 | 4.04 |
| 1 | 0.875 | 5.26 | 4.97 | 9.01 |
| 1.25 | 1.125 | 9.67 | 9.14 | 18.16 |
| 1.5 | 1.375 | 17.32 | 16.38 | 34.53 |
| 1.75 | 1.625 | 21.60 | 20.43 | 54.96 |
| 2 | 1.875 | 20.72 | 19.59 | 74.55 |
| 2.25 | 2.125 | 11.63 | 11.00 | 85.55 |
| 2.5 | 2.375 | 7.68 | 7.26 | 92.81 |
| 2.75 | 2.625 | 4.37 | 4.13 | 96.95 |
| 3 | 2.875 | 1.64 | 1.55 | 98.50 |
| 3.25 | 3.125 | 0.98 | 0.93 | 99.42 |
| 3.5 | 3.375 | 0.45 | 0.43 | 99.85 |
| 3.75 | 3.625 | 0.09 | 0.09 | 99.93 |
| 4 | 3.875 | 0.03 | 0.03 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.070 |
| **5** | 0.675 |
| **16** | 1.065 |
| **25** | 1.230 |
| **50** | 1.565 |
| **75** | 1.885 |
| **84** | 2.090 |
| **95** | 2.505 |
| **99** | 3.010 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.690 | 0.310 |
| Standard Deviation | 0.574 | 0.672 |
| Skewness | -0.344 | |
| Kurtosis | 5.447 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.577 | 1.573 |
| Standard Deviation | 0.512 | 0.534 |
| Skewness (1) | 0.024 | 0.026 |
| Skewness (2) | 0.049 | |
| Kurtosis | 0.785 | 1.145 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1640+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.309 mm** |
| **STD** | **0.729 mm** |
| **Skewness** | **-0.094** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.46 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

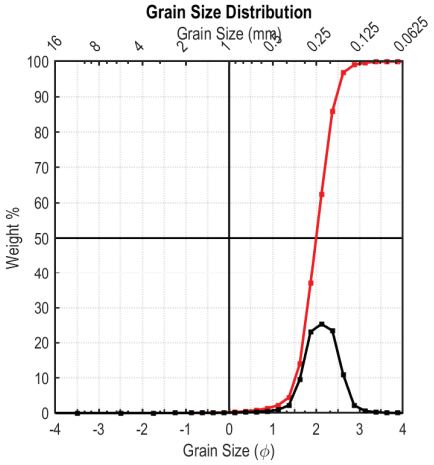
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.05 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.09 |
| 0 | -0.125 | 0.04 | 0.04 | 0.12 |
| 0.25 | 0.125 | 0.14 | 0.13 | 0.26 |
| 0.5 | 0.375 | 0.38 | 0.36 | 0.62 |
| 0.75 | 0.625 | 1.75 | 1.66 | 2.28 |
| 1 | 0.875 | 4.38 | 4.15 | 6.43 |
| 1.25 | 1.125 | 8.54 | 8.10 | 14.53 |
| 1.5 | 1.375 | 17.39 | 16.49 | 31.02 |
| 1.75 | 1.625 | 24.66 | 23.38 | 54.40 |
| 2 | 1.875 | 24.69 | 23.41 | 77.81 |
| 2.25 | 2.125 | 12.54 | 11.89 | 89.70 |
| 2.5 | 2.375 | 7.10 | 6.73 | 96.43 |
| 2.75 | 2.625 | 2.74 | 2.60 | 99.03 |
| 3 | 2.875 | 0.55 | 0.52 | 99.55 |
| 3.25 | 3.125 | 0.31 | 0.29 | 99.85 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.435 |
| **5** | 0.790 |
| **16** | 1.145 |
| **25** | 1.285 |
| **50** | 1.580 |
| **75** | 1.845 |
| **84** | 2.005 |
| **95** | 2.320 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.695 | 0.309 |
| Standard Deviation | 0.456 | 0.729 |
| Skewness | -0.094 | |
| Kurtosis | 4.130 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.575 | 1.577 |
| Standard Deviation | 0.430 | 0.447 |
| Skewness (1) | -0.012 | -0.022 |
| Skewness (2) | -0.058 | |
| Kurtosis | 0.779 | 1.120 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1640+00** |
| **Sample** | **Swash** |
| **Mean** | **0.231 mm** |
| **STD** | **0.754 mm** |
| **Skewness** | **-0.847** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.06 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.9 |

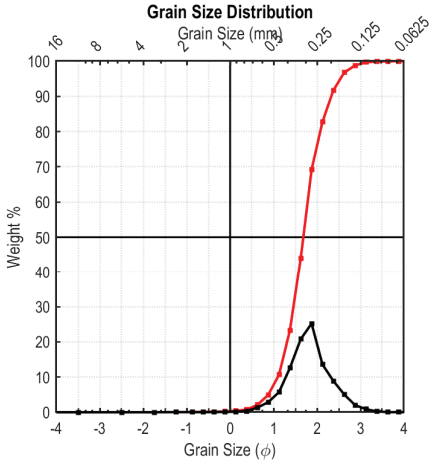
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.04 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.08 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.11 |
| 0 | -0.125 | 0.06 | 0.06 | 0.17 |
| 0.25 | 0.125 | 0.12 | 0.11 | 0.29 |
| 0.5 | 0.375 | 0.20 | 0.19 | 0.48 |
| 0.75 | 0.625 | 0.35 | 0.33 | 0.81 |
| 1 | 0.875 | 0.52 | 0.49 | 1.30 |
| 1.25 | 1.125 | 0.97 | 0.92 | 2.23 |
| 1.5 | 1.375 | 2.31 | 2.20 | 4.43 |
| 1.75 | 1.625 | 9.98 | 9.50 | 13.93 |
| 2 | 1.875 | 24.29 | 23.12 | 37.05 |
| 2.25 | 2.125 | 26.61 | 25.33 | 62.37 |
| 2.5 | 2.375 | 24.65 | 23.46 | 85.84 |
| 2.75 | 2.625 | 11.52 | 10.97 | 96.80 |
| 3 | 2.875 | 2.33 | 2.22 | 99.02 |
| 3.25 | 3.125 | 0.64 | 0.61 | 99.63 |
| 3.5 | 3.375 | 0.26 | 0.25 | 99.88 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.720 |
| **5** | 1.390 |
| **16** | 1.645 |
| **25** | 1.745 |
| **50** | 2.005 |
| **75** | 2.260 |
| **84** | 2.355 |
| **95** | 2.585 |
| **99** | 2.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.114 | 0.231 |
| Standard Deviation | 0.407 | 0.754 |
| Skewness | -0.847 | |
| Kurtosis | 7.899 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.000 | 2.002 |
| Standard Deviation | 0.355 | 0.359 |
| Skewness (1) | -0.014 | -0.022 |
| Skewness (2) | -0.049 | |
| Kurtosis | 0.683 | 0.951 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1650+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.285 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.133** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.33 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

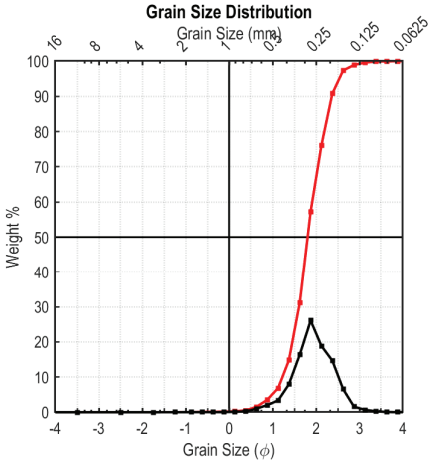
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.07 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.09 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.15 |
| 0 | -0.125 | 0.08 | 0.08 | 0.23 |
| 0.25 | 0.125 | 0.18 | 0.17 | 0.40 |
| 0.5 | 0.375 | 0.36 | 0.34 | 0.74 |
| 0.75 | 0.625 | 1.40 | 1.33 | 2.07 |
| 1 | 0.875 | 3.00 | 2.85 | 4.92 |
| 1.25 | 1.125 | 6.03 | 5.72 | 10.64 |
| 1.5 | 1.375 | 13.24 | 12.57 | 23.21 |
| 1.75 | 1.625 | 21.89 | 20.78 | 44.00 |
| 2 | 1.875 | 26.54 | 25.20 | 69.19 |
| 2.25 | 2.125 | 14.30 | 13.58 | 82.77 |
| 2.5 | 2.375 | 9.39 | 8.91 | 91.68 |
| 2.75 | 2.625 | 5.34 | 5.07 | 96.75 |
| 3 | 2.875 | 2.14 | 2.03 | 98.78 |
| 3.25 | 3.125 | 0.92 | 0.87 | 99.66 |
| 3.5 | 3.375 | 0.26 | 0.25 | 99.91 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.425 |
| **5** | 0.880 |
| **16** | 1.230 |
| **25** | 1.395 |
| **50** | 1.685 |
| **75** | 1.980 |
| **84** | 2.160 |
| **95** | 2.540 |
| **99** | 2.935 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.812 | 0.285 |
| Standard Deviation | 0.501 | 0.707 |
| Skewness | -0.133 | |
| Kurtosis | 4.667 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.695 | 1.692 |
| Standard Deviation | 0.465 | 0.484 |
| Skewness (1) | 0.022 | 0.026 |
| Skewness (2) | 0.054 | |
| Kurtosis | 0.785 | 1.163 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1650+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.263 mm** |
| **STD** | **0.721 mm** |
| **Skewness** | **-0.392** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.43 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.5 |

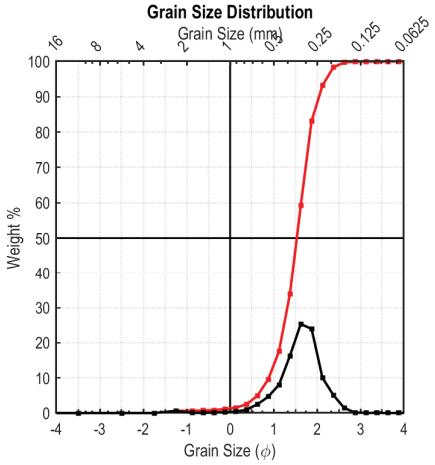
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.04 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.08 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.10 |
| 0 | -0.125 | 0.05 | 0.05 | 0.15 |
| 0.25 | 0.125 | 0.12 | 0.11 | 0.27 |
| 0.5 | 0.375 | 0.26 | 0.25 | 0.51 |
| 0.75 | 0.625 | 1.03 | 0.98 | 1.49 |
| 1 | 0.875 | 2.13 | 2.02 | 3.51 |
| 1.25 | 1.125 | 3.53 | 3.35 | 6.86 |
| 1.5 | 1.375 | 8.39 | 7.96 | 14.82 |
| 1.75 | 1.625 | 17.27 | 16.38 | 31.20 |
| 2 | 1.875 | 27.50 | 26.08 | 57.28 |
| 2.25 | 2.125 | 19.87 | 18.85 | 76.13 |
| 2.5 | 2.375 | 15.47 | 14.67 | 90.80 |
| 2.75 | 2.625 | 6.91 | 6.55 | 97.35 |
| 3 | 2.875 | 1.65 | 1.57 | 98.92 |
| 3.25 | 3.125 | 0.72 | 0.68 | 99.60 |
| 3.5 | 3.375 | 0.30 | 0.28 | 99.89 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.500 |
| **5** | 0.985 |
| **16** | 1.395 |
| **25** | 1.530 |
| **50** | 1.805 |
| **75** | 2.110 |
| **84** | 2.260 |
| **95** | 2.535 |
| **99** | 2.905 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.928 | 0.263 |
| Standard Deviation | 0.471 | 0.721 |
| Skewness | -0.392 | |
| Kurtosis | 4.854 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.827 | 1.820 |
| Standard Deviation | 0.432 | 0.451 |
| Skewness (1) | 0.052 | -0.003 |
| Skewness (2) | -0.104 | |
| Kurtosis | 0.792 | 1.095 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1650+00** |
| **Sample** | **Swash** |
| **Mean** | **0.328 mm** |
| **STD** | **0.700 mm** |
| **Skewness** | **-1.426** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.51 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.62 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.4 |

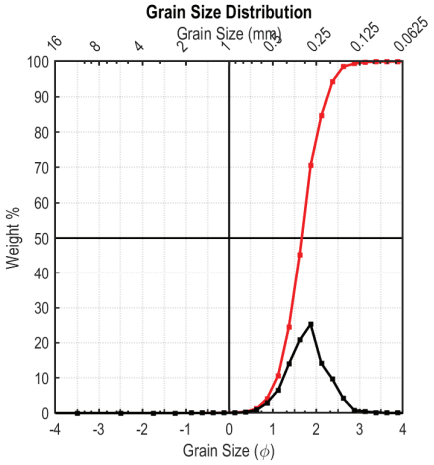
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.65 | 0.62 | 0.62 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.65 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.73 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.84 |
| 0 | -0.125 | 0.29 | 0.27 | 1.12 |
| 0.25 | 0.125 | 0.42 | 0.40 | 1.52 |
| 0.5 | 0.375 | 0.98 | 0.93 | 2.45 |
| 0.75 | 0.625 | 2.60 | 2.46 | 4.91 |
| 1 | 0.875 | 4.89 | 4.63 | 9.54 |
| 1.25 | 1.125 | 8.50 | 8.06 | 17.60 |
| 1.5 | 1.375 | 17.15 | 16.25 | 33.85 |
| 1.75 | 1.625 | 26.73 | 25.33 | 59.19 |
| 2 | 1.875 | 25.27 | 23.95 | 83.14 |
| 2.25 | 2.125 | 10.58 | 10.03 | 93.17 |
| 2.5 | 2.375 | 5.41 | 5.13 | 98.29 |
| 2.75 | 2.625 | 1.53 | 1.45 | 99.74 |
| 3 | 2.875 | 0.15 | 0.14 | 99.89 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.93 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.95 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.235 |
| **5** | 0.630 |
| **16** | 1.075 |
| **25** | 1.240 |
| **50** | 1.535 |
| **75** | 1.790 |
| **84** | 1.895 |
| **95** | 2.215 |
| **99** | 2.495 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.607 | 0.328 |
| Standard Deviation | 0.514 | 0.700 |
| Skewness | -1.426 | |
| Kurtosis | 9.092 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.485 | 1.502 |
| Standard Deviation | 0.410 | 0.445 |
| Skewness (1) | -0.122 | -0.132 |
| Skewness (2) | -0.274 | |
| Kurtosis | 0.933 | 1.181 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1660+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.289 mm** |
| **STD** | **0.729 mm** |
| **Skewness** | **0.005** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.42 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

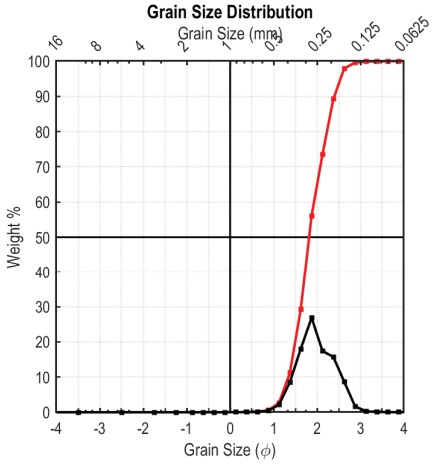
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.04 |
| 0 | -0.125 | 0.04 | 0.04 | 0.08 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.15 |
| 0.5 | 0.375 | 0.19 | 0.18 | 0.33 |
| 0.75 | 0.625 | 0.94 | 0.89 | 1.22 |
| 1 | 0.875 | 3.04 | 2.88 | 4.11 |
| 1.25 | 1.125 | 6.80 | 6.45 | 10.56 |
| 1.5 | 1.375 | 14.72 | 13.96 | 24.52 |
| 1.75 | 1.625 | 21.88 | 20.76 | 45.28 |
| 2 | 1.875 | 26.67 | 25.30 | 70.57 |
| 2.25 | 2.125 | 14.87 | 14.11 | 84.68 |
| 2.5 | 2.375 | 10.14 | 9.62 | 94.30 |
| 2.75 | 2.625 | 4.42 | 4.19 | 98.49 |
| 3 | 2.875 | 0.90 | 0.85 | 99.35 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.77 |
| 3.5 | 3.375 | 0.16 | 0.15 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.560 |
| **5** | 0.910 |
| **16** | 1.220 |
| **25** | 1.380 |
| **50** | 1.670 |
| **75** | 1.955 |
| **84** | 2.115 |
| **95** | 2.415 |
| **99** | 2.775 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.792 | 0.289 |
| Standard Deviation | 0.457 | 0.729 |
| Skewness | 0.005 | |
| Kurtosis | 3.901 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.667 | 1.668 |
| Standard Deviation | 0.448 | 0.452 |
| Skewness (1) | -0.006 | -0.008 |
| Skewness (2) | -0.017 | |
| Kurtosis | 0.682 | 1.073 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1660+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.254 mm** |
| **STD** | **0.754 mm** |
| **Skewness** | **0.118** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.56 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

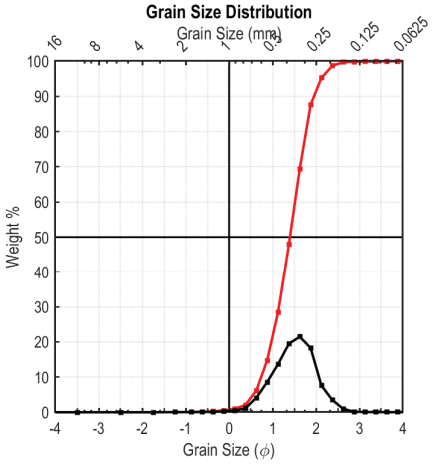
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.00 |
| 0 | -0.125 | 0.00 | 0.00 | 0.00 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.02 |
| 0.5 | 0.375 | 0.02 | 0.02 | 0.04 |
| 0.75 | 0.625 | 0.09 | 0.09 | 0.12 |
| 1 | 0.875 | 0.44 | 0.42 | 0.54 |
| 1.25 | 1.125 | 2.23 | 2.11 | 2.65 |
| 1.5 | 1.375 | 9.02 | 8.54 | 11.20 |
| 1.75 | 1.625 | 19.01 | 18.01 | 29.21 |
| 2 | 1.875 | 28.36 | 26.87 | 56.07 |
| 2.25 | 2.125 | 18.37 | 17.40 | 73.47 |
| 2.5 | 2.375 | 16.60 | 15.73 | 89.20 |
| 2.75 | 2.625 | 9.19 | 8.71 | 97.91 |
| 3 | 2.875 | 1.78 | 1.69 | 99.59 |
| 3.25 | 3.125 | 0.29 | 0.27 | 99.87 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.930 |
| **5** | 1.195 |
| **16** | 1.440 |
| **25** | 1.565 |
| **50** | 1.820 |
| **75** | 2.150 |
| **84** | 2.290 |
| **95** | 2.540 |
| **99** | 2.785 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.976 | 0.254 |
| Standard Deviation | 0.406 | 0.754 |
| Skewness | 0.118 | |
| Kurtosis | 3.079 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.865 | 1.850 |
| Standard Deviation | 0.425 | 0.416 |
| Skewness (1) | 0.106 | 0.088 |
| Skewness (2) | 0.112 | |
| Kurtosis | 0.582 | 0.942 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1660+00** |
| **Sample** | **Swash** |
| **Mean** | **0.354 mm** |
| **STD** | **0.714 mm** |
| **Skewness** | **-0.284** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.52 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

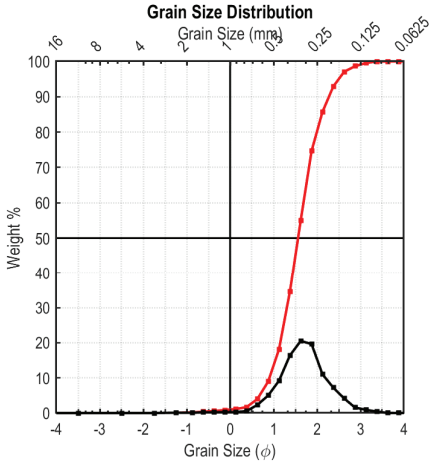
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.06 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.15 |
| -0.25 | -0.375 | 0.11 | 0.10 | 0.26 |
| 0 | -0.125 | 0.27 | 0.26 | 0.51 |
| 0.25 | 0.125 | 0.47 | 0.45 | 0.96 |
| 0.5 | 0.375 | 1.16 | 1.10 | 2.06 |
| 0.75 | 0.625 | 4.34 | 4.11 | 6.17 |
| 1 | 0.875 | 9.04 | 8.57 | 14.74 |
| 1.25 | 1.125 | 14.43 | 13.68 | 28.41 |
| 1.5 | 1.375 | 20.55 | 19.47 | 47.89 |
| 1.75 | 1.625 | 22.67 | 21.48 | 69.37 |
| 2 | 1.875 | 19.28 | 18.27 | 87.64 |
| 2.25 | 2.125 | 7.99 | 7.57 | 95.21 |
| 2.5 | 2.375 | 3.68 | 3.49 | 98.70 |
| 2.75 | 2.625 | 1.02 | 0.97 | 99.67 |
| 3 | 2.875 | 0.16 | 0.15 | 99.82 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.90 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.135 |
| **5** | 0.555 |
| **16** | 0.900 |
| **25** | 1.065 |
| **50** | 1.400 |
| **75** | 1.700 |
| **84** | 1.825 |
| **95** | 2.120 |
| **99** | 2.450 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.496 | 0.354 |
| Standard Deviation | 0.486 | 0.714 |
| Skewness | -0.284 | |
| Kurtosis | 4.370 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.362 | 1.375 |
| Standard Deviation | 0.462 | 0.468 |
| Skewness (1) | -0.081 | -0.080 |
| Skewness (2) | -0.135 | |
| Kurtosis | 0.692 | 1.010 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1670+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.310 mm** |
| **STD** | **0.678 mm** |
| **Skewness** | **-0.296** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.69 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.4 |

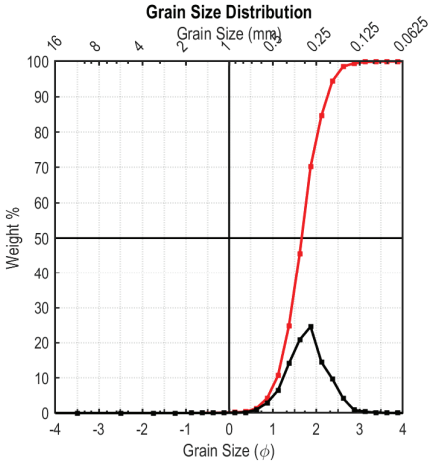
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.17 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.37 |
| -0.25 | -0.375 | 0.22 | 0.21 | 0.58 |
| 0 | -0.125 | 0.29 | 0.27 | 0.85 |
| 0.25 | 0.125 | 0.29 | 0.27 | 1.13 |
| 0.5 | 0.375 | 0.57 | 0.54 | 1.67 |
| 0.75 | 0.625 | 2.43 | 2.30 | 3.96 |
| 1 | 0.875 | 5.27 | 4.99 | 8.95 |
| 1.25 | 1.125 | 9.73 | 9.21 | 18.16 |
| 1.5 | 1.375 | 17.31 | 16.38 | 34.53 |
| 1.75 | 1.625 | 21.69 | 20.52 | 55.06 |
| 2 | 1.875 | 20.74 | 19.62 | 74.68 |
| 2.25 | 2.125 | 11.65 | 11.02 | 85.70 |
| 2.5 | 2.375 | 7.63 | 7.22 | 92.92 |
| 2.75 | 2.625 | 4.39 | 4.15 | 97.08 |
| 3 | 2.875 | 1.64 | 1.55 | 98.63 |
| 3.25 | 3.125 | 0.99 | 0.94 | 99.56 |
| 3.5 | 3.375 | 0.42 | 0.40 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.010 |
| **5** | 0.675 |
| **16** | 1.065 |
| **25** | 1.230 |
| **50** | 1.565 |
| **75** | 1.880 |
| **84** | 2.085 |
| **95** | 2.500 |
| **99** | 2.975 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.690 | 0.310 |
| Standard Deviation | 0.561 | 0.678 |
| Skewness | -0.296 | |
| Kurtosis | 4.870 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.575 | 1.572 |
| Standard Deviation | 0.510 | 0.532 |
| Skewness (1) | 0.020 | 0.022 |
| Skewness (2) | 0.044 | |
| Kurtosis | 0.789 | 1.151 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1670+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.289 mm** |
| **STD** | **0.728 mm** |
| **Skewness** | **-0.082** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.34 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

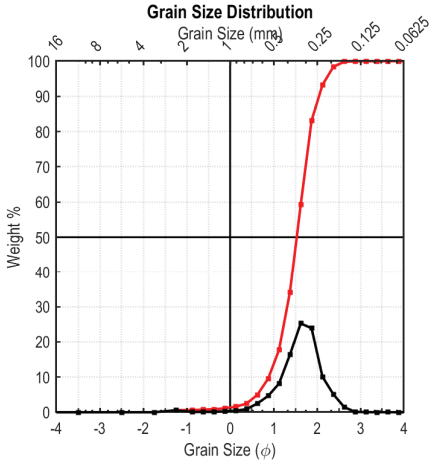
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.04 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.05 |
| 0 | -0.125 | 0.06 | 0.06 | 0.10 |
| 0.25 | 0.125 | 0.09 | 0.09 | 0.19 |
| 0.5 | 0.375 | 0.18 | 0.17 | 0.36 |
| 0.75 | 0.625 | 1.00 | 0.95 | 1.31 |
| 1 | 0.875 | 3.06 | 2.90 | 4.21 |
| 1.25 | 1.125 | 6.79 | 6.45 | 10.66 |
| 1.5 | 1.375 | 14.82 | 14.07 | 24.73 |
| 1.75 | 1.625 | 22.00 | 20.88 | 45.61 |
| 2 | 1.875 | 25.91 | 24.60 | 70.21 |
| 2.25 | 2.125 | 15.25 | 14.48 | 84.69 |
| 2.5 | 2.375 | 10.25 | 9.73 | 94.42 |
| 2.75 | 2.625 | 4.37 | 4.15 | 98.57 |
| 3 | 2.875 | 0.92 | 0.87 | 99.44 |
| 3.25 | 3.125 | 0.42 | 0.40 | 99.84 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.545 |
| **5** | 0.905 |
| **16** | 1.220 |
| **25** | 1.380 |
| **50** | 1.670 |
| **75** | 1.960 |
| **84** | 2.115 |
| **95** | 2.410 |
| **99** | 2.750 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.789 | 0.289 |
| Standard Deviation | 0.457 | 0.728 |
| Skewness | -0.082 | |
| Kurtosis | 3.863 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.667 | 1.668 |
| Standard Deviation | 0.448 | 0.452 |
| Skewness (1) | -0.006 | -0.011 |
| Skewness (2) | -0.028 | |
| Kurtosis | 0.682 | 1.063 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1670+00** |
| **Sample** | **Swash** |
| **Mean** | **0.329 mm** |
| **STD** | **0.702 mm** |
| **Skewness** | **-1.464** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.68 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.58 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

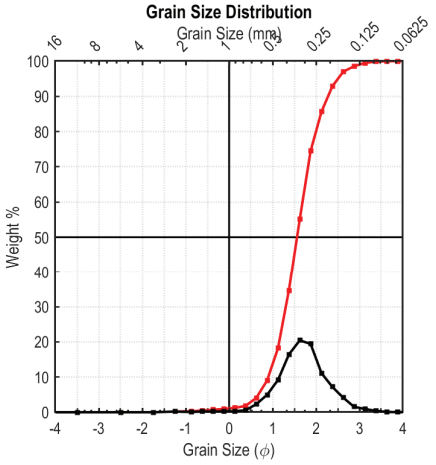
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.61 | 0.58 | 0.58 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.62 |
| -0.5 | -0.625 | 0.12 | 0.11 | 0.74 |
| -0.25 | -0.375 | 0.10 | 0.09 | 0.83 |
| 0 | -0.125 | 0.30 | 0.28 | 1.12 |
| 0.25 | 0.125 | 0.48 | 0.45 | 1.57 |
| 0.5 | 0.375 | 0.92 | 0.87 | 2.44 |
| 0.75 | 0.625 | 2.62 | 2.48 | 4.92 |
| 1 | 0.875 | 4.90 | 4.64 | 9.56 |
| 1.25 | 1.125 | 8.61 | 8.15 | 17.70 |
| 1.5 | 1.375 | 17.27 | 16.34 | 34.05 |
| 1.75 | 1.625 | 26.68 | 25.25 | 59.29 |
| 2 | 1.875 | 25.21 | 23.86 | 83.15 |
| 2.25 | 2.125 | 10.67 | 10.10 | 93.24 |
| 2.5 | 2.375 | 5.41 | 5.12 | 98.36 |
| 2.75 | 2.625 | 1.56 | 1.48 | 99.84 |
| 3 | 2.875 | 0.11 | 0.10 | 99.94 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.98 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.230 |
| **5** | 0.630 |
| **16** | 1.075 |
| **25** | 1.235 |
| **50** | 1.535 |
| **75** | 1.790 |
| **84** | 1.895 |
| **95** | 2.210 |
| **99** | 2.485 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.605 | 0.329 |
| Standard Deviation | 0.511 | 0.702 |
| Skewness | -1.464 | |
| Kurtosis | 8.886 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.485 | 1.502 |
| Standard Deviation | 0.410 | 0.444 |
| Skewness (1) | -0.122 | -0.134 |
| Skewness (2) | -0.280 | |
| Kurtosis | 0.927 | 1.167 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1680+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.310 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.377** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.67 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.20 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.4 |

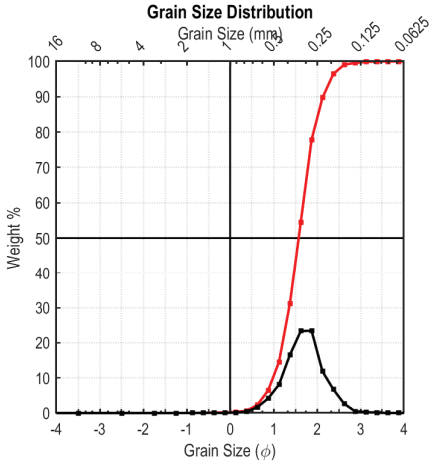
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.21 | 0.20 | 0.20 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.26 |
| -0.5 | -0.625 | 0.23 | 0.22 | 0.48 |
| -0.25 | -0.375 | 0.22 | 0.21 | 0.69 |
| 0 | -0.125 | 0.26 | 0.25 | 0.94 |
| 0.25 | 0.125 | 0.31 | 0.29 | 1.23 |
| 0.5 | 0.375 | 0.59 | 0.56 | 1.79 |
| 0.75 | 0.625 | 2.43 | 2.30 | 4.09 |
| 1 | 0.875 | 5.25 | 4.97 | 9.06 |
| 1.25 | 1.125 | 9.70 | 9.18 | 18.24 |
| 1.5 | 1.375 | 17.34 | 16.41 | 34.65 |
| 1.75 | 1.625 | 21.58 | 20.42 | 55.07 |
| 2 | 1.875 | 20.52 | 19.42 | 74.49 |
| 2.25 | 2.125 | 11.76 | 11.13 | 85.62 |
| 2.5 | 2.375 | 7.63 | 7.22 | 92.84 |
| 2.75 | 2.625 | 4.39 | 4.15 | 96.99 |
| 3 | 2.875 | 1.64 | 1.55 | 98.54 |
| 3.25 | 3.125 | 0.99 | 0.94 | 99.48 |
| 3.5 | 3.375 | 0.42 | 0.40 | 99.88 |
| 3.75 | 3.625 | 0.10 | 0.09 | 99.97 |
| 4 | 3.875 | 0.03 | 0.03 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.070 |
| **5** | 0.670 |
| **16** | 1.065 |
| **25** | 1.230 |
| **50** | 1.565 |
| **75** | 1.885 |
| **84** | 2.090 |
| **95** | 2.505 |
| **99** | 2.995 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.689 | 0.310 |
| Standard Deviation | 0.572 | 0.672 |
| Skewness | -0.377 | |
| Kurtosis | 5.349 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.577 | 1.573 |
| Standard Deviation | 0.512 | 0.534 |
| Skewness (1) | 0.024 | 0.024 |
| Skewness (2) | 0.044 | |
| Kurtosis | 0.790 | 1.148 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1680+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.309 mm** |
| **STD** | **0.729 mm** |
| **Skewness** | **-0.149** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.45 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

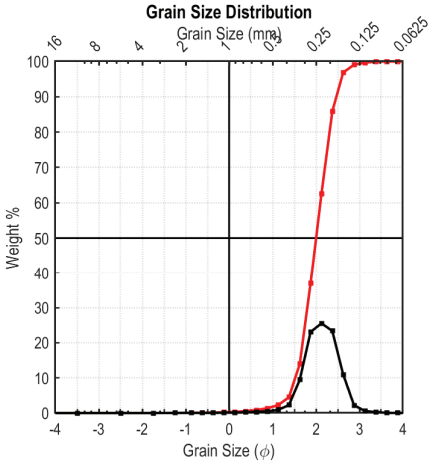
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.06 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.11 |
| 0 | -0.125 | 0.02 | 0.02 | 0.13 |
| 0.25 | 0.125 | 0.15 | 0.14 | 0.28 |
| 0.5 | 0.375 | 0.39 | 0.37 | 0.64 |
| 0.75 | 0.625 | 1.73 | 1.64 | 2.29 |
| 1 | 0.875 | 4.39 | 4.16 | 6.45 |
| 1.25 | 1.125 | 8.55 | 8.11 | 14.56 |
| 1.5 | 1.375 | 17.45 | 16.55 | 31.10 |
| 1.75 | 1.625 | 24.60 | 23.33 | 54.43 |
| 2 | 1.875 | 24.70 | 23.42 | 77.86 |
| 2.25 | 2.125 | 12.50 | 11.85 | 89.71 |
| 2.5 | 2.375 | 7.11 | 6.74 | 96.45 |
| 2.75 | 2.625 | 2.77 | 2.63 | 99.08 |
| 3 | 2.875 | 0.54 | 0.51 | 99.59 |
| 3.25 | 3.125 | 0.30 | 0.28 | 99.88 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.430 |
| **5** | 0.790 |
| **16** | 1.145 |
| **25** | 1.285 |
| **50** | 1.575 |
| **75** | 1.845 |
| **84** | 2.005 |
| **95** | 2.320 |
| **99** | 2.615 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.693 | 0.309 |
| Standard Deviation | 0.456 | 0.729 |
| Skewness | -0.149 | |
| Kurtosis | 4.050 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.575 | 1.575 |
| Standard Deviation | 0.430 | 0.447 |
| Skewness (1) | 0.000 | -0.013 |
| Skewness (2) | -0.047 | |
| Kurtosis | 0.779 | 1.120 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1680+00** |
| **Sample** | **Swash** |
| **Mean** | **0.231 mm** |
| **STD** | **0.753 mm** |
| **Skewness** | **-0.974** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.43 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

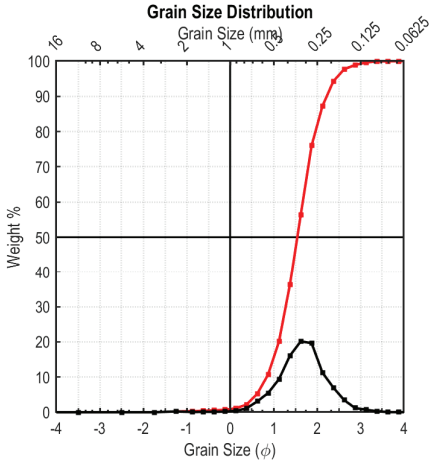
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.06 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.09 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.13 |
| 0 | -0.125 | 0.09 | 0.09 | 0.22 |
| 0.25 | 0.125 | 0.11 | 0.10 | 0.32 |
| 0.5 | 0.375 | 0.20 | 0.19 | 0.51 |
| 0.75 | 0.625 | 0.36 | 0.34 | 0.85 |
| 1 | 0.875 | 0.51 | 0.48 | 1.34 |
| 1.25 | 1.125 | 0.95 | 0.90 | 2.24 |
| 1.5 | 1.375 | 2.36 | 2.24 | 4.48 |
| 1.75 | 1.625 | 9.95 | 9.44 | 13.91 |
| 2 | 1.875 | 24.33 | 23.08 | 36.99 |
| 2.25 | 2.125 | 26.91 | 25.52 | 62.52 |
| 2.5 | 2.375 | 24.63 | 23.36 | 85.88 |
| 2.75 | 2.625 | 11.57 | 10.97 | 96.85 |
| 3 | 2.875 | 2.33 | 2.21 | 99.06 |
| 3.25 | 3.125 | 0.62 | 0.59 | 99.65 |
| 3.5 | 3.375 | 0.27 | 0.26 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.700 |
| **5** | 1.390 |
| **16** | 1.650 |
| **25** | 1.745 |
| **50** | 2.000 |
| **75** | 2.260 |
| **84** | 2.355 |
| **95** | 2.585 |
| **99** | 2.870 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.113 | 0.231 |
| Standard Deviation | 0.409 | 0.753 |
| Skewness | -0.974 | |
| Kurtosis | 8.430 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.002 | 2.002 |
| Standard Deviation | 0.353 | 0.357 |
| Skewness (1) | 0.007 | -0.007 |
| Skewness (2) | -0.035 | |
| Kurtosis | 0.695 | 0.951 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.317 mm** |
| **STD** | **0.675 mm** |
| **Skewness** | **-0.412** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.54 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.23 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.6 |

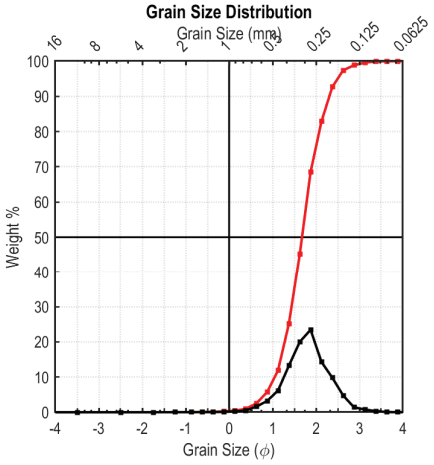
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.24 | 0.23 | 0.23 |
| -0.75 | -0.875 | 0.07 | 0.06 | 0.29 |
| -0.5 | -0.625 | 0.12 | 0.11 | 0.40 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.52 |
| 0 | -0.125 | 0.19 | 0.18 | 0.70 |
| 0.25 | 0.125 | 0.40 | 0.38 | 1.08 |
| 0.5 | 0.375 | 1.15 | 1.09 | 2.17 |
| 0.75 | 0.625 | 3.26 | 3.09 | 5.26 |
| 1 | 0.875 | 5.78 | 5.47 | 10.74 |
| 1.25 | 1.125 | 9.93 | 9.41 | 20.15 |
| 1.5 | 1.375 | 16.95 | 16.05 | 36.20 |
| 1.75 | 1.625 | 21.26 | 20.15 | 56.35 |
| 2 | 1.875 | 20.73 | 19.64 | 75.99 |
| 2.25 | 2.125 | 11.88 | 11.26 | 87.25 |
| 2.5 | 2.375 | 7.40 | 7.01 | 94.26 |
| 2.75 | 2.625 | 3.63 | 3.44 | 97.71 |
| 3 | 2.875 | 1.27 | 1.21 | 98.91 |
| 3.25 | 3.125 | 0.76 | 0.72 | 99.63 |
| 3.5 | 3.375 | 0.30 | 0.29 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.075 |
| **5** | 0.605 |
| **16** | 1.015 |
| **25** | 1.200 |
| **50** | 1.545 |
| **75** | 1.860 |
| **84** | 2.055 |
| **95** | 2.430 |
| **99** | 2.905 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.655 | 0.317 |
| Standard Deviation | 0.566 | 0.675 |
| Skewness | -0.412 | |
| Kurtosis | 5.152 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.535 | 1.538 |
| Standard Deviation | 0.520 | 0.537 |
| Skewness (1) | -0.019 | -0.025 |
| Skewness (2) | -0.053 | |
| Kurtosis | 0.755 | 1.133 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.288 mm** |
| **STD** | **0.704 mm** |
| **Skewness** | **-0.180** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.55 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.4 |

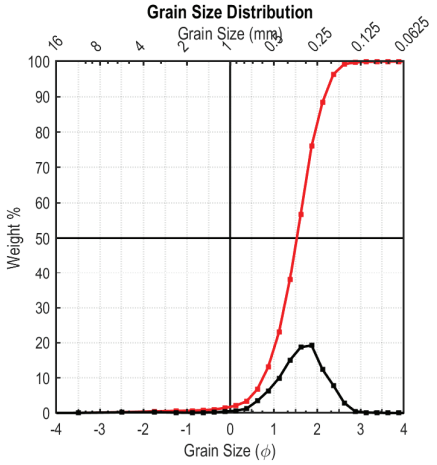
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.04 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.07 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.12 |
| 0 | -0.125 | 0.12 | 0.11 | 0.24 |
| 0.25 | 0.125 | 0.22 | 0.21 | 0.45 |
| 0.5 | 0.375 | 0.51 | 0.49 | 0.93 |
| 0.75 | 0.625 | 1.66 | 1.57 | 2.50 |
| 1 | 0.875 | 3.40 | 3.22 | 5.72 |
| 1.25 | 1.125 | 6.52 | 6.17 | 11.90 |
| 1.5 | 1.375 | 13.96 | 13.23 | 25.12 |
| 1.75 | 1.625 | 21.10 | 19.99 | 45.12 |
| 2 | 1.875 | 24.74 | 23.44 | 68.55 |
| 2.25 | 2.125 | 15.10 | 14.30 | 82.86 |
| 2.5 | 2.375 | 10.35 | 9.81 | 92.66 |
| 2.75 | 2.625 | 5.02 | 4.75 | 97.42 |
| 3 | 2.875 | 1.48 | 1.40 | 98.82 |
| 3.25 | 3.125 | 0.81 | 0.77 | 99.59 |
| 3.5 | 3.375 | 0.34 | 0.32 | 99.91 |
| 3.75 | 3.625 | 0.07 | 0.06 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.385 |
| **5** | 0.820 |
| **16** | 1.205 |
| **25** | 1.375 |
| **50** | 1.675 |
| **75** | 1.990 |
| **84** | 2.155 |
| **95** | 2.500 |
| **99** | 2.935 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.795 | 0.288 |
| Standard Deviation | 0.507 | 0.704 |
| Skewness | -0.180 | |
| Kurtosis | 4.295 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.680 | 1.678 |
| Standard Deviation | 0.475 | 0.492 |
| Skewness (1) | 0.011 | -0.004 |
| Skewness (2) | -0.032 | |
| Kurtosis | 0.768 | 1.120 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** Nov 14 2022
**Station** ALL
**Sample** Swash

**Mean** 0.329 mm
**STD** 0.650 mm
**Skewness** -1.566

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 106.10 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.37 |
| % gravel (>4 mm) | 0.24 |
| CaCO3 | 5.3 |

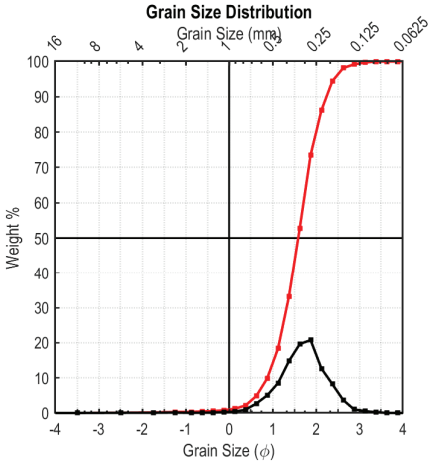
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.05 | 0.04 | 0.04 |
| -2 | -2.5 | 0.21 | 0.20 | 0.24 |
| -1.5 | -1.75 | 0.26 | 0.24 | 0.48 |
| -1 | -1.25 | 0.13 | 0.13 | 0.61 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.68 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.82 |
| -0.25 | -0.375 | 0.20 | 0.19 | 1.00 |
| 0 | -0.125 | 0.46 | 0.44 | 1.44 |
| 0.25 | 0.125 | 0.67 | 0.63 | 2.07 |
| 0.5 | 0.375 | 1.32 | 1.24 | 3.31 |
| 0.75 | 0.625 | 3.64 | 3.43 | 6.75 |
| 1 | 0.875 | 6.71 | 6.32 | 13.07 |
| 1.25 | 1.125 | 10.55 | 9.95 | 23.02 |
| 1.5 | 1.375 | 15.95 | 15.03 | 38.05 |
| 1.75 | 1.625 | 19.87 | 18.73 | 56.77 |
| 2 | 1.875 | 20.42 | 19.25 | 76.02 |
| 2.25 | 2.125 | 13.17 | 12.41 | 88.43 |
| 2.5 | 2.375 | 8.36 | 7.88 | 96.32 |
| 2.75 | 2.625 | 3.08 | 2.91 | 99.23 |
| 3 | 2.875 | 0.53 | 0.50 | 99.72 |
| 3.25 | 3.125 | 0.17 | 0.16 | 99.88 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| Percentiles | |
|---|---|
| 1 | -0.375 |
| 5 | 0.500 |
| 16 | 0.950 |
| 25 | 1.160 |
| 50 | 1.535 |
| 75 | 1.860 |
| 84 | 2.035 |
| 95 | 2.335 |
| 99 | 2.605 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.602 | 0.329 |
| Standard Deviation | 0.620 | 0.650 |
| Skewness | -1.566 | |
| Kurtosis | 10.781 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.492 | 1.507 |
| Standard Deviation | 0.543 | 0.549 |
| Skewness (1) | -0.078 | -0.103 |
| Skewness (2) | -0.217 | |
| Kurtosis | 0.691 | 1.074 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** Nov 14 2022
**Station** ALL
**Sample** ALL

**Mean** 0.311 mm
**STD** 0.672 mm
**Skewness** -0.906

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.73 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.21 |
| % gravel (>4 mm) | 0.08 |
| CaCO3 | 4.4 |

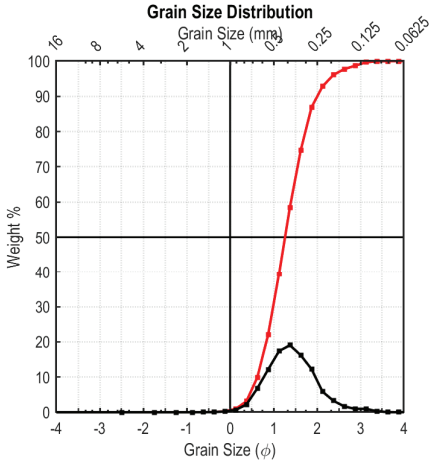
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.02 | 0.01 | 0.01 |
| -2 | -2.5 | 0.07 | 0.07 | 0.08 |
| -1.5 | -1.75 | 0.09 | 0.08 | 0.16 |
| -1 | -1.25 | 0.13 | 0.13 | 0.29 |
| -0.75 | -0.875 | 0.06 | 0.05 | 0.34 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.43 |
| -0.25 | -0.375 | 0.12 | 0.12 | 0.55 |
| 0 | -0.125 | 0.26 | 0.25 | 0.79 |
| 0.25 | 0.125 | 0.43 | 0.41 | 1.20 |
| 0.5 | 0.375 | 0.99 | 0.94 | 2.14 |
| 0.75 | 0.625 | 2.85 | 2.70 | 4.84 |
| 1 | 0.875 | 5.29 | 5.01 | 9.85 |
| 1.25 | 1.125 | 9.00 | 8.51 | 18.36 |
| 1.5 | 1.375 | 15.62 | 14.77 | 33.13 |
| 1.75 | 1.625 | 20.75 | 19.62 | 52.75 |
| 2 | 1.875 | 21.96 | 20.77 | 73.53 |
| 2.25 | 2.125 | 13.38 | 12.66 | 86.18 |
| 2.5 | 2.375 | 8.71 | 8.24 | 94.42 |
| 2.75 | 2.625 | 3.91 | 3.70 | 98.12 |
| 3 | 2.875 | 1.09 | 1.03 | 99.15 |
| 3.25 | 3.125 | 0.58 | 0.55 | 99.70 |
| 3.5 | 3.375 | 0.24 | 0.22 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.02 | 0.01 | 100.00 |

| Percentiles | |
|---|---|
| 1 | 0.000 |
| 5 | 0.635 |
| 16 | 1.055 |
| 25 | 1.235 |
| 50 | 1.590 |
| 75 | 1.905 |
| 84 | 2.080 |
| 95 | 2.415 |
| 99 | 2.840 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.684 | 0.311 |
| Standard Deviation | 0.572 | 0.672 |
| Skewness | -0.906 | |
| Kurtosis | 7.988 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.568 | 1.575 |
| Standard Deviation | 0.512 | 0.526 |
| Skewness (1) | -0.044 | -0.058 |
| Skewness (2) | -0.127 | |
| Kurtosis | 0.737 | 1.089 |

## Grain Size Distribution




**Project** 2403
**Location** Buxton, NC

**Date** Nov 14 2022
**Station** 1770+00
**Sample** Toe of Dune

**Mean** 0.373 mm
**STD** 0.678 mm
**Skewness** 0.476

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Fine Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.74 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.8 |

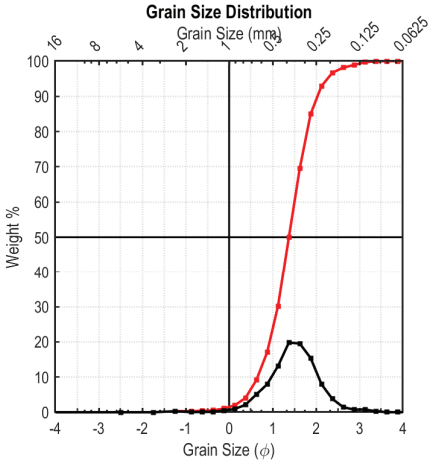
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.06 |
| 0 | -0.125 | 0.23 | 0.22 | 0.27 |
| 0.25 | 0.125 | 0.70 | 0.66 | 0.93 |
| 0.5 | 0.375 | 2.34 | 2.19 | 3.12 |
| 0.75 | 0.625 | 7.24 | 6.78 | 9.90 |
| 1 | 0.875 | 12.99 | 12.17 | 22.07 |
| 1.25 | 1.125 | 18.53 | 17.36 | 39.43 |
| 1.5 | 1.375 | 20.34 | 19.06 | 58.49 |
| 1.75 | 1.625 | 17.30 | 16.21 | 74.70 |
| 2 | 1.875 | 13.06 | 12.24 | 86.93 |
| 2.25 | 2.125 | 6.27 | 5.87 | 92.80 |
| 2.5 | 2.375 | 3.49 | 3.27 | 96.07 |
| 2.75 | 2.625 | 1.77 | 1.66 | 97.73 |
| 3 | 2.875 | 1.03 | 0.96 | 98.70 |
| 3.25 | 3.125 | 1.03 | 0.96 | 99.66 |
| 3.5 | 3.375 | 0.32 | 0.30 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| Percentiles | |
|---|---|
| 1 | 0.135 |
| 5 | 0.445 |
| 16 | 0.750 |
| 25 | 0.915 |
| 50 | 1.265 |
| 75 | 1.630 |
| 84 | 1.815 |
| 95 | 2.295 |
| 99 | 2.955 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.423 | 0.373 |
| Standard Deviation | 0.560 | 0.678 |
| Skewness | 0.476 | |
| Kurtosis | 3.685 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.282 | 1.277 |
| Standard Deviation | 0.532 | 0.547 |
| Skewness (1) | 0.033 | 0.073 |
| Skewness (2) | 0.197 | |
| Kurtosis | 0.737 | 1.060 |

## Grain Size Distribution




**Project** 2403
**Location** Buxton, NC

**Date** Nov 14 2022
**Station** 1770+00
**Sample** Beach Face

**Mean** 0.357 mm
**STD** 0.672 mm
**Skewness** -0.283

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 106.20 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.33 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.9 |

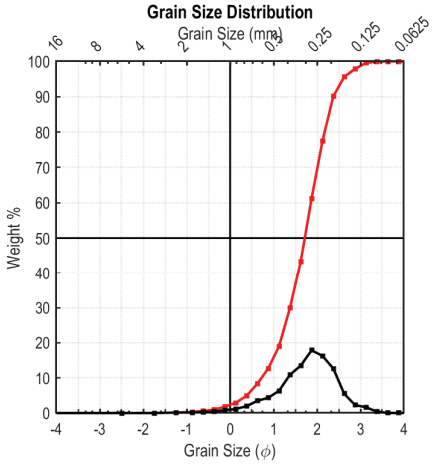
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.31 | 0.29 | 0.29 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.33 |
| -0.5 | -0.625 | 0.09 | 0.08 | 0.41 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.54 |
| 0 | -0.125 | 0.53 | 0.50 | 1.04 |
| 0.25 | 0.125 | 0.96 | 0.90 | 1.94 |
| 0.5 | 0.375 | 2.24 | 2.11 | 4.05 |
| 0.75 | 0.625 | 5.36 | 5.05 | 9.10 |
| 1 | 0.875 | 8.44 | 7.95 | 17.04 |
| 1.25 | 1.125 | 13.95 | 13.14 | 30.18 |
| 1.5 | 1.375 | 21.03 | 19.80 | 49.98 |
| 1.75 | 1.625 | 20.74 | 19.53 | 69.51 |
| 2 | 1.875 | 16.38 | 15.42 | 84.93 |
| 2.25 | 2.125 | 8.47 | 7.98 | 92.91 |
| 2.5 | 2.375 | 4.02 | 3.79 | 96.69 |
| 2.75 | 2.625 | 1.55 | 1.46 | 98.15 |
| 3 | 2.875 | 0.79 | 0.74 | 98.90 |
| 3.25 | 3.125 | 0.84 | 0.79 | 99.69 |
| 3.5 | 3.375 | 0.29 | 0.27 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| Percentiles | |
|---|---|
| 1 | -0.145 |
| 5 | 0.420 |
| 16 | 0.840 |
| 25 | 1.025 |
| 50 | 1.375 |
| 75 | 1.715 |
| 84 | 1.860 |
| 95 | 2.265 |
| 99 | 2.905 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.486 | 0.357 |
| Standard Deviation | 0.574 | 0.672 |
| Skewness | -0.283 | |
| Kurtosis | 4.940 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.350 | 1.358 |
| Standard Deviation | 0.510 | 0.535 |
| Skewness (1) | -0.049 | -0.042 |
| Skewness (2) | -0.064 | |
| Kurtosis | 0.809 | 1.096 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1770+00** |
| **Sample** | **Swash** |
| **Mean** | **0.296 mm** |
| **STD** | **0.625 mm** |
| **Skewness** | **-0.738** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.64 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.28 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.1 |

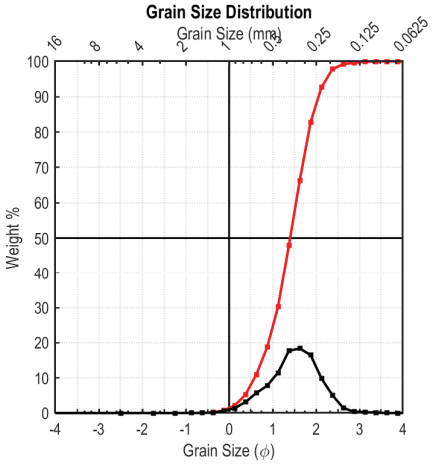
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.16 | 0.15 | 0.28 |
| -0.5 | -0.625 | 0.32 | 0.30 | 0.59 |
| -0.25 | -0.375 | 0.39 | 0.37 | 0.96 |
| 0 | -0.125 | 0.87 | 0.82 | 1.78 |
| 0.25 | 0.125 | 1.20 | 1.14 | 2.92 |
| 0.5 | 0.375 | 2.05 | 1.94 | 4.86 |
| 0.75 | 0.625 | 3.66 | 3.46 | 8.32 |
| 1 | 0.875 | 4.58 | 4.34 | 12.66 |
| 1.25 | 1.125 | 6.68 | 6.32 | 18.98 |
| 1.5 | 1.375 | 11.48 | 10.87 | 29.85 |
| 1.75 | 1.625 | 14.27 | 13.51 | 43.35 |
| 2 | 1.875 | 18.86 | 17.85 | 61.21 |
| 2.25 | 2.125 | 17.18 | 16.26 | 77.47 |
| 2.5 | 2.375 | 13.37 | 12.66 | 90.13 |
| 2.75 | 2.625 | 5.80 | 5.49 | 95.62 |
| 3 | 2.875 | 2.40 | 2.27 | 97.89 |
| 3.25 | 3.125 | 1.75 | 1.66 | 99.55 |
| 3.5 | 3.375 | 0.43 | 0.41 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | 0.385 |
| **16** | 1.005 |
| **25** | 1.265 |
| **50** | 1.720 |
| **75** | 2.085 |
| **84** | 2.255 |
| **95** | 2.595 |
| **99** | 3.045 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.759 | 0.296 |
| Standard Deviation | 0.679 | 0.625 |
| Skewness | -0.738 | |
| Kurtosis | 4.190 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.630 | 1.660 |
| Standard Deviation | 0.625 | 0.647 |
| Skewness (1) | -0.144 | -0.176 |
| Skewness (2) | -0.368 | |
| Kurtosis | 0.768 | 1.105 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1780+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.356 mm** |
| **STD** | **0.675 mm** |
| **Skewness** | **-0.297** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.41 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.8 |

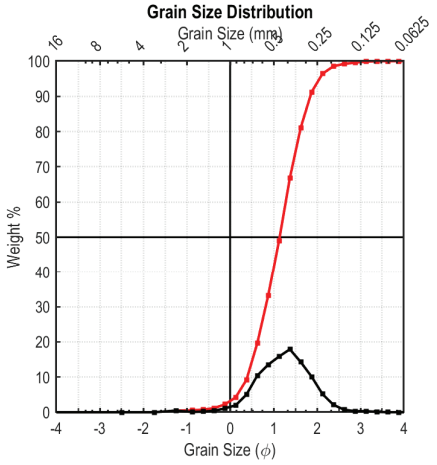
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.05 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.18 |
| 0 | -0.125 | 0.62 | 0.59 | 0.77 |
| 0.25 | 0.125 | 1.43 | 1.36 | 2.13 |
| 0.5 | 0.375 | 3.27 | 3.10 | 5.23 |
| 0.75 | 0.625 | 6.01 | 5.70 | 10.93 |
| 1 | 0.875 | 8.21 | 7.79 | 18.72 |
| 1.25 | 1.125 | 12.11 | 11.49 | 30.21 |
| 1.5 | 1.375 | 18.67 | 17.71 | 47.92 |
| 1.75 | 1.625 | 19.37 | 18.38 | 66.29 |
| 2 | 1.875 | 17.40 | 16.51 | 82.80 |
| 2.25 | 2.125 | 10.39 | 9.86 | 92.66 |
| 2.5 | 2.375 | 5.39 | 5.11 | 97.77 |
| 2.75 | 2.625 | 1.54 | 1.46 | 99.23 |
| 3 | 2.875 | 0.39 | 0.37 | 99.60 |
| 3.25 | 3.125 | 0.30 | 0.28 | 99.89 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.080 |
| **5** | 0.355 |
| **16** | 0.790 |
| **25** | 1.010 |
| **50** | 1.405 |
| **75** | 1.755 |
| **84** | 1.905 |
| **95** | 2.240 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.489 | 0.356 |
| Standard Deviation | 0.567 | 0.675 |
| Skewness | -0.297 | |
| Kurtosis | 3.219 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.347 | 1.367 |
| Standard Deviation | 0.557 | 0.564 |
| Skewness (1) | -0.103 | -0.109 |
| Skewness (2) | -0.193 | |
| Kurtosis | 0.691 | 1.037 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1780+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.423 mm** |
| **STD** | **0.658 mm** |
| **Skewness** | **-0.283** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.38 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.55 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

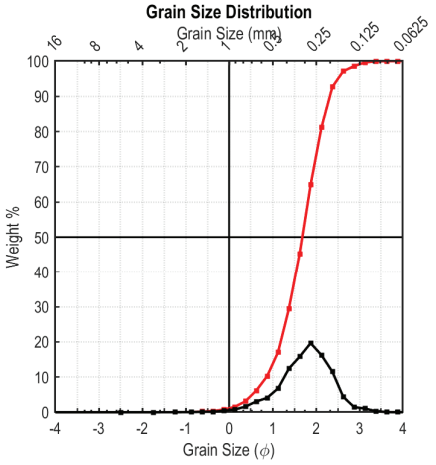
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.50 | 0.47 | 0.47 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.55 |
| -0.5 | -0.625 | 0.20 | 0.19 | 0.74 |
| -0.25 | -0.375 | 0.43 | 0.41 | 1.15 |
| 0 | -0.125 | 1.14 | 1.08 | 2.23 |
| 0.25 | 0.125 | 2.07 | 1.96 | 4.19 |
| 0.5 | 0.375 | 5.27 | 5.00 | 9.20 |
| 0.75 | 0.625 | 10.99 | 10.43 | 19.62 |
| 1 | 0.875 | 14.23 | 13.50 | 33.13 |
| 1.25 | 1.125 | 16.69 | 15.84 | 48.97 |
| 1.5 | 1.375 | 18.85 | 17.89 | 66.85 |
| 1.75 | 1.625 | 15.03 | 14.26 | 81.12 |
| 2 | 1.875 | 10.66 | 10.12 | 91.23 |
| 2.25 | 2.125 | 5.45 | 5.17 | 96.40 |
| 2.5 | 2.375 | 2.24 | 2.13 | 98.53 |
| 2.75 | 2.625 | 0.76 | 0.72 | 99.25 |
| 3 | 2.875 | 0.33 | 0.31 | 99.56 |
| 3.25 | 3.125 | 0.33 | 0.31 | 99.88 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.465 |
| **5** | 0.165 |
| **16** | 0.540 |
| **25** | 0.725 |
| **50** | 1.140 |
| **75** | 1.520 |
| **84** | 1.695 |
| **95** | 2.055 |
| **99** | 2.540 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.242 | 0.423 |
| Standard Deviation | 0.603 | 0.658 |
| Skewness | -0.283 | |
| Kurtosis | 4.268 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.117 | 1.125 |
| Standard Deviation | 0.577 | 0.575 |
| Skewness (1) | -0.039 | -0.035 |
| Skewness (2) | -0.052 | |
| Kurtosis | 0.636 | 0.974 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1780+00** |
| **Sample** | **Swash** |
| **Mean** | **0.296 mm** |
| **STD** | **0.662 mm** |
| **Skewness** | **-0.524** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.67 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

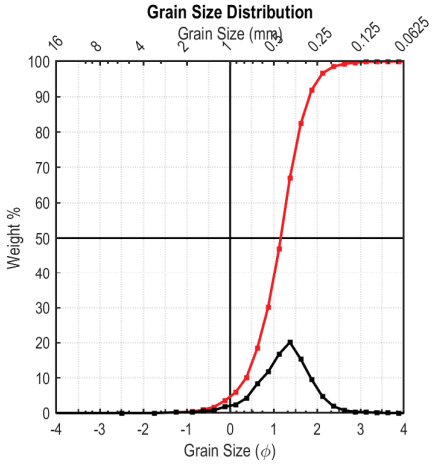
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.06 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.18 |
| -0.25 | -0.375 | 0.16 | 0.15 | 0.33 |
| 0 | -0.125 | 0.44 | 0.42 | 0.75 |
| 0.25 | 0.125 | 0.81 | 0.77 | 1.51 |
| 0.5 | 0.375 | 1.68 | 1.59 | 3.10 |
| 0.75 | 0.625 | 3.24 | 3.07 | 6.17 |
| 1 | 0.875 | 4.33 | 4.10 | 10.27 |
| 1.25 | 1.125 | 7.15 | 6.77 | 17.03 |
| 1.5 | 1.375 | 13.12 | 12.42 | 29.45 |
| 1.75 | 1.625 | 16.70 | 15.80 | 45.25 |
| 2 | 1.875 | 20.77 | 19.66 | 64.91 |
| 2.25 | 2.125 | 17.17 | 16.25 | 81.16 |
| 2.5 | 2.375 | 12.18 | 11.53 | 92.68 |
| 2.75 | 2.625 | 4.68 | 4.43 | 97.11 |
| 3 | 2.875 | 1.54 | 1.46 | 98.57 |
| 3.25 | 3.125 | 1.12 | 1.06 | 99.63 |
| 3.5 | 3.375 | 0.33 | 0.31 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.045 |
| **5** | 0.530 |
| **16** | 1.085 |
| **25** | 1.285 |
| **50** | 1.685 |
| **75** | 2.030 |
| **84** | 2.185 |
| **95** | 2.505 |
| **99** | 2.975 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.755 | 0.296 |
| Standard Deviation | 0.594 | 0.662 |
| Skewness | -0.524 | |
| Kurtosis | 3.926 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.635 | 1.652 |
| Standard Deviation | 0.550 | 0.574 |
| Skewness (1) | -0.091 | -0.130 |
| Skewness (2) | -0.305 | |
| Kurtosis | 0.795 | 1.086 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1790+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.423 mm** |
| **STD** | **0.657 mm** |
| **Skewness** | **-0.408** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.70 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.38 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

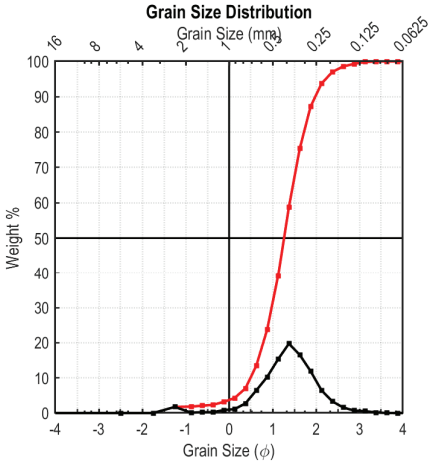
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.20 | 0.19 | 0.19 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.38 |
| -0.5 | -0.625 | 0.60 | 0.57 | 0.95 |
| -0.25 | -0.375 | 0.81 | 0.77 | 1.71 |
| 0 | -0.125 | 1.88 | 1.78 | 3.49 |
| 0.25 | 0.125 | 2.51 | 2.37 | 5.87 |
| 0.5 | 0.375 | 4.47 | 4.23 | 10.09 |
| 0.75 | 0.625 | 8.81 | 8.33 | 18.43 |
| 1 | 0.875 | 12.37 | 11.70 | 30.13 |
| 1.25 | 1.125 | 17.71 | 16.75 | 46.89 |
| 1.5 | 1.375 | 21.28 | 20.13 | 67.02 |
| 1.75 | 1.625 | 16.20 | 15.33 | 82.35 |
| 2 | 1.875 | 10.12 | 9.57 | 91.92 |
| 2.25 | 2.125 | 4.96 | 4.69 | 96.61 |
| 2.5 | 2.375 | 2.03 | 1.92 | 98.53 |
| 2.75 | 2.625 | 0.81 | 0.77 | 99.30 |
| 3 | 2.875 | 0.36 | 0.34 | 99.64 |
| 3.25 | 3.125 | 0.27 | 0.26 | 99.90 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.605 |
| **5** | 0.035 |
| **16** | 0.550 |
| **25** | 0.765 |
| **50** | 1.165 |
| **75** | 1.505 |
| **84** | 1.670 |
| **95** | 2.040 |
| **99** | 2.525 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.241 | 0.423 |
| Standard Deviation | 0.607 | 0.657 |
| Skewness | -0.408 | |
| Kurtosis | 4.110 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.110 | 1.128 |
| Standard Deviation | 0.560 | 0.584 |
| Skewness (1) | -0.098 | -0.113 |
| Skewness (2) | -0.228 | |
| Kurtosis | 0.790 | 1.110 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1790+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.392 mm** |
| **STD** | **0.628 mm** |
| **Skewness** | **-0.899** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.17 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.84 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

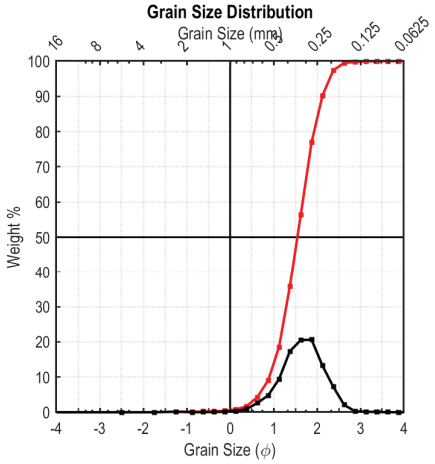
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.83 | 1.74 | 1.74 |
| -0.75 | -0.875 | 0.10 | 0.10 | 1.84 |
| -0.5 | -0.625 | 0.26 | 0.25 | 2.08 |
| -0.25 | -0.375 | 0.26 | 0.25 | 2.33 |
| 0 | -0.125 | 0.87 | 0.83 | 3.16 |
| 0.25 | 0.125 | 1.18 | 1.12 | 4.28 |
| 0.5 | 0.375 | 2.88 | 2.74 | 7.02 |
| 0.75 | 0.625 | 6.79 | 6.46 | 13.47 |
| 1 | 0.875 | 10.80 | 10.27 | 23.74 |
| 1.25 | 1.125 | 16.06 | 15.27 | 39.01 |
| 1.5 | 1.375 | 20.76 | 19.74 | 58.75 |
| 1.75 | 1.625 | 17.42 | 16.56 | 75.32 |
| 2 | 1.875 | 12.52 | 11.90 | 87.22 |
| 2.25 | 2.125 | 6.82 | 6.48 | 93.71 |
| 2.5 | 2.375 | 3.48 | 3.31 | 97.01 |
| 2.75 | 2.625 | 1.65 | 1.57 | 98.58 |
| 3 | 2.875 | 0.74 | 0.70 | 99.29 |
| 3.25 | 3.125 | 0.57 | 0.54 | 99.83 |
| 3.5 | 3.375 | 0.17 | 0.16 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.465 |
| **5** | 0.190 |
| **16** | 0.685 |
| **25** | 0.895 |
| **50** | 1.265 |
| **75** | 1.620 |
| **84** | 1.805 |
| **95** | 2.225 |
| **99** | 2.775 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.352 | 0.392 |
| Standard Deviation | 0.671 | 0.628 |
| Skewness | -0.899 | |
| Kurtosis | 6.045 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.245 | 1.252 |
| Standard Deviation | 0.560 | 0.588 |
| Skewness (1) | -0.036 | -0.046 |
| Skewness (2) | -0.103 | |
| Kurtosis | 0.817 | 1.150 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1790+00** |
| **Sample** | **Swash** |
| **Mean** | **0.319 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.605** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.36 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.16 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

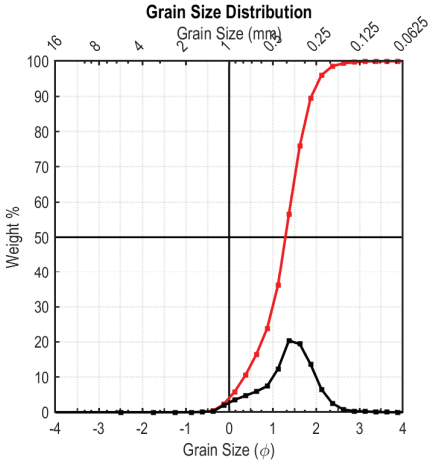
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.16 | 0.16 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.16 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.21 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.27 |
| 0 | -0.125 | 0.17 | 0.16 | 0.43 |
| 0.25 | 0.125 | 0.36 | 0.34 | 0.77 |
| 0.5 | 0.375 | 0.95 | 0.90 | 1.67 |
| 0.75 | 0.625 | 2.75 | 2.61 | 4.28 |
| 1 | 0.875 | 5.05 | 4.79 | 9.07 |
| 1.25 | 1.125 | 9.93 | 9.42 | 18.50 |
| 1.5 | 1.375 | 18.25 | 17.32 | 35.82 |
| 1.75 | 1.625 | 21.62 | 20.52 | 56.34 |
| 2 | 1.875 | 21.72 | 20.62 | 76.96 |
| 2.25 | 2.125 | 13.94 | 13.23 | 90.19 |
| 2.5 | 2.375 | 7.61 | 7.22 | 97.41 |
| 2.75 | 2.625 | 2.18 | 2.07 | 99.48 |
| 3 | 2.875 | 0.30 | 0.28 | 99.76 |
| 3.25 | 3.125 | 0.17 | 0.16 | 99.92 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.190 |
| **5** | 0.665 |
| **16** | 1.060 |
| **25** | 1.220 |
| **50** | 1.550 |
| **75** | 1.850 |
| **84** | 2.010 |
| **95** | 2.290 |
| **99** | 2.565 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.646 | 0.319 |
| Standard Deviation | 0.500 | 0.707 |
| Skewness | -0.605 | |
| Kurtosis | 5.104 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.535 | 1.540 |
| Standard Deviation | 0.475 | 0.484 |
| Skewness (1) | -0.032 | -0.060 |
| Skewness (2) | -0.153 | |
| Kurtosis | 0.711 | 1.057 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1800+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.393 mm** |
| **STD** | **0.661 mm** |
| **Skewness** | **-0.415** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.78 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

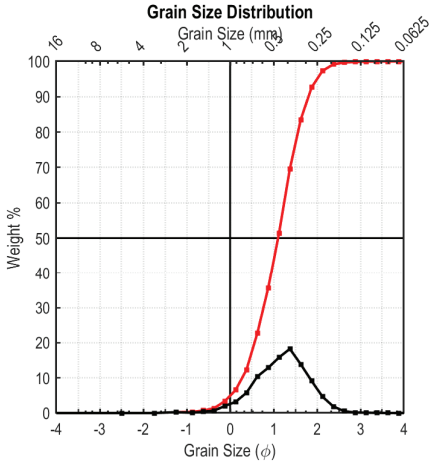
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.11 | 0.10 | 0.10 |
| -0.25 | -0.375 | 0.28 | 0.26 | 0.37 |
| 0 | -0.125 | 2.04 | 1.93 | 2.30 |
| 0.25 | 0.125 | 3.71 | 3.51 | 5.80 |
| 0.5 | 0.375 | 4.98 | 4.71 | 10.51 |
| 0.75 | 0.625 | 6.23 | 5.89 | 16.40 |
| 1 | 0.875 | 7.85 | 7.42 | 23.82 |
| 1.25 | 1.125 | 13.04 | 12.33 | 36.15 |
| 1.5 | 1.375 | 21.53 | 20.35 | 56.50 |
| 1.75 | 1.625 | 20.52 | 19.40 | 75.90 |
| 2 | 1.875 | 14.39 | 13.60 | 89.51 |
| 2.25 | 2.125 | 6.89 | 6.51 | 96.02 |
| 2.5 | 2.375 | 2.69 | 2.54 | 98.56 |
| 2.75 | 2.625 | 0.84 | 0.79 | 99.36 |
| 3 | 2.875 | 0.33 | 0.31 | 99.67 |
| 3.25 | 3.125 | 0.26 | 0.25 | 99.91 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.295 |
| **5** | 0.070 |
| **16** | 0.610 |
| **25** | 0.900 |
| **50** | 1.295 |
| **75** | 1.615 |
| **84** | 1.775 |
| **95** | 2.085 |
| **99** | 2.515 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.348 | 0.393 |
| Standard Deviation | 0.596 | 0.661 |
| Skewness | -0.415 | |
| Kurtosis | 3.339 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.192 | 1.227 |
| Standard Deviation | 0.583 | 0.597 |
| Skewness (1) | -0.176 | -0.196 |
| Skewness (2) | -0.373 | |
| Kurtosis | 0.730 | 1.155 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1800+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.440 mm** |
| **STD** | **0.658 mm** |
| **Skewness** | **-0.338** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.23 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.32 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

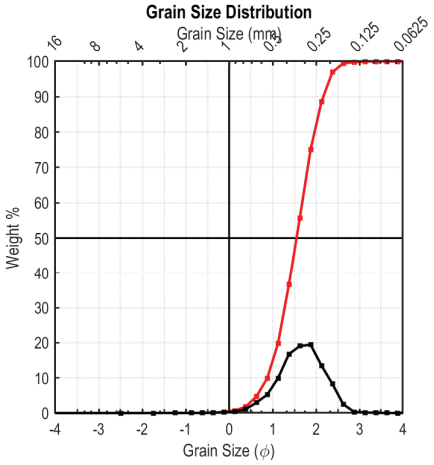
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.26 | 0.25 | 0.25 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.32 |
| -0.5 | -0.625 | 0.39 | 0.37 | 0.69 |
| -0.25 | -0.375 | 0.69 | 0.66 | 1.35 |
| 0 | -0.125 | 2.10 | 2.00 | 3.35 |
| 0.25 | 0.125 | 3.35 | 3.18 | 6.53 |
| 0.5 | 0.375 | 6.06 | 5.76 | 12.29 |
| 0.75 | 0.625 | 10.94 | 10.40 | 22.68 |
| 1 | 0.875 | 13.54 | 12.87 | 35.55 |
| 1.25 | 1.125 | 16.65 | 15.82 | 51.37 |
| 1.5 | 1.375 | 19.21 | 18.26 | 69.63 |
| 1.75 | 1.625 | 14.61 | 13.88 | 83.51 |
| 2 | 1.875 | 9.61 | 9.13 | 92.64 |
| 2.25 | 2.125 | 4.91 | 4.67 | 97.31 |
| 2.5 | 2.375 | 1.96 | 1.86 | 99.17 |
| 2.75 | 2.625 | 0.55 | 0.52 | 99.70 |
| 3 | 2.875 | 0.15 | 0.14 | 99.84 |
| 3.25 | 3.125 | 0.12 | 0.11 | 99.95 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.510 |
| **5** | 0.005 |
| **16** | 0.465 |
| **25** | 0.670 |
| **50** | 1.105 |
| **75** | 1.470 |
| **84** | 1.640 |
| **95** | 2.000 |
| **99** | 2.350 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.184 | 0.440 |
| Standard Deviation | 0.605 | 0.658 |
| Skewness | -0.338 | |
| Kurtosis | 3.567 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.052 | 1.070 |
| Standard Deviation | 0.588 | 0.596 |
| Skewness (1) | -0.089 | -0.096 |
| Skewness (2) | -0.174 | |
| Kurtosis | 0.698 | 1.022 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1800+00** |
| **Sample** | **Swash** |
| **Mean** | **0.318 mm** |
| **STD** | **0.703 mm** |
| **Skewness** | **-0.388** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.23 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.9 |

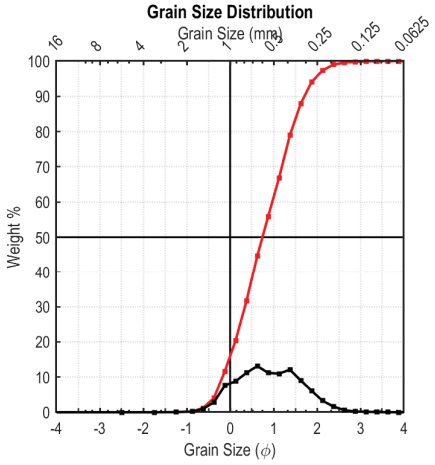
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.04 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.07 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.13 |
| 0 | -0.125 | 0.19 | 0.18 | 0.31 |
| 0.25 | 0.125 | 0.39 | 0.37 | 0.68 |
| 0.5 | 0.375 | 1.10 | 1.05 | 1.73 |
| 0.75 | 0.625 | 3.08 | 2.93 | 4.66 |
| 1 | 0.875 | 5.48 | 5.21 | 9.86 |
| 1.25 | 1.125 | 10.44 | 9.92 | 19.79 |
| 1.5 | 1.375 | 17.63 | 16.75 | 36.54 |
| 1.75 | 1.625 | 20.06 | 19.06 | 55.60 |
| 2 | 1.875 | 20.47 | 19.45 | 75.05 |
| 2.25 | 2.125 | 14.23 | 13.52 | 88.58 |
| 2.5 | 2.375 | 8.78 | 8.34 | 96.92 |
| 2.75 | 2.625 | 2.65 | 2.52 | 99.44 |
| 3 | 2.875 | 0.36 | 0.34 | 99.78 |
| 3.25 | 3.125 | 0.18 | 0.17 | 99.95 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.200 |
| **5** | 0.640 |
| **16** | 1.030 |
| **25** | 1.205 |
| **50** | 1.550 |
| **75** | 1.875 |
| **84** | 2.040 |
| **95** | 2.315 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.652 | 0.318 |
| Standard Deviation | 0.509 | 0.703 |
| Skewness | -0.388 | |
| Kurtosis | 3.606 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.535 | 1.540 |
| Standard Deviation | 0.505 | 0.506 |
| Skewness (1) | -0.030 | -0.058 |
| Skewness (2) | -0.144 | |
| Kurtosis | 0.658 | 1.025 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1810+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.539 mm** |
| **STD** | **0.610 mm** |
| **Skewness** | **0.146** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.81 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.23 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.0 |

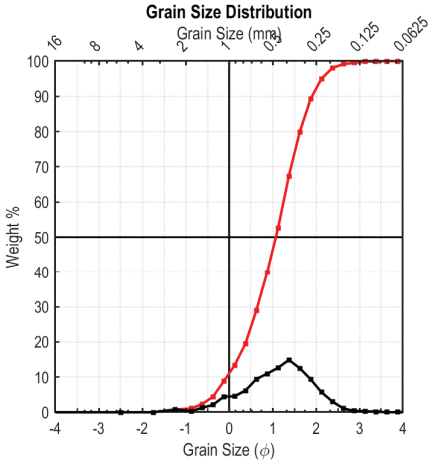
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.19 | 0.18 | 0.23 |
| -0.5 | -0.625 | 1.03 | 0.97 | 1.20 |
| -0.25 | -0.375 | 2.98 | 2.82 | 4.02 |
| 0 | -0.125 | 8.00 | 7.56 | 11.58 |
| 0.25 | 0.125 | 9.30 | 8.79 | 20.37 |
| 0.5 | 0.375 | 11.85 | 11.20 | 31.57 |
| 0.75 | 0.625 | 13.88 | 13.12 | 44.68 |
| 1 | 0.875 | 11.84 | 11.19 | 55.87 |
| 1.25 | 1.125 | 11.60 | 10.96 | 66.84 |
| 1.5 | 1.375 | 12.81 | 12.11 | 78.94 |
| 1.75 | 1.625 | 9.54 | 9.02 | 87.96 |
| 2 | 1.875 | 6.48 | 6.12 | 94.08 |
| 2.25 | 2.125 | 3.45 | 3.26 | 97.34 |
| 2.5 | 2.375 | 1.74 | 1.64 | 98.99 |
| 2.75 | 2.625 | 0.64 | 0.60 | 99.59 |
| 3 | 2.875 | 0.21 | 0.20 | 99.79 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.94 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.675 |
| **5** | -0.340 |
| **16** | 0.000 |
| **25** | 0.230 |
| **50** | 0.745 |
| **75** | 1.295 |
| **84** | 1.515 |
| **95** | 1.945 |
| **99** | 2.380 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.892 | 0.539 |
| Standard Deviation | 0.714 | 0.610 |
| Skewness | 0.146 | |
| Kurtosis | 2.554 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.758 | 0.753 |
| Standard Deviation | 0.758 | 0.725 |
| Skewness (1) | 0.017 | 0.033 |
| Skewness (2) | 0.076 | |
| Kurtosis | 0.508 | 0.879 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1810+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.458 mm** |
| **STD** | **0.591 mm** |
| **Skewness** | **-0.360** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.50 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.3 |

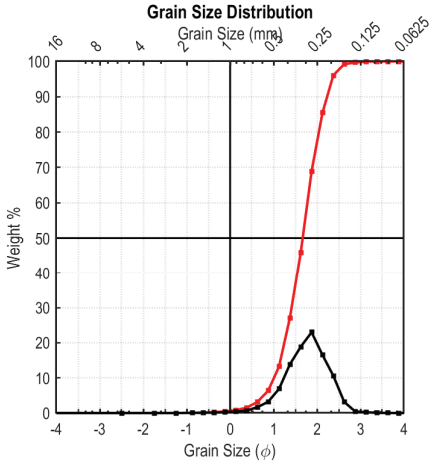
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.82 | 0.78 | 0.78 |
| -0.75 | -0.875 | 0.29 | 0.27 | 1.05 |
| -0.5 | -0.625 | 1.31 | 1.24 | 2.29 |
| -0.25 | -0.375 | 2.20 | 2.09 | 4.38 |
| 0 | -0.125 | 4.65 | 4.41 | 8.79 |
| 0.25 | 0.125 | 4.81 | 4.56 | 13.35 |
| 0.5 | 0.375 | 6.50 | 6.16 | 19.51 |
| 0.75 | 0.625 | 9.93 | 9.41 | 28.92 |
| 1 | 0.875 | 11.58 | 10.98 | 39.90 |
| 1.25 | 1.125 | 13.31 | 12.62 | 52.51 |
| 1.5 | 1.375 | 15.70 | 14.88 | 67.39 |
| 1.75 | 1.625 | 13.20 | 12.51 | 79.91 |
| 2 | 1.875 | 9.90 | 9.38 | 89.29 |
| 2.25 | 2.125 | 6.01 | 5.70 | 94.99 |
| 2.5 | 2.375 | 3.23 | 3.06 | 98.05 |
| 2.75 | 2.625 | 1.16 | 1.10 | 99.15 |
| 3 | 2.875 | 0.39 | 0.37 | 99.52 |
| 3.25 | 3.125 | 0.33 | 0.31 | 99.83 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.945 |
| **5** | -0.340 |
| **16** | 0.235 |
| **25** | 0.520 |
| **50** | 1.075 |
| **75** | 1.525 |
| **84** | 1.735 |
| **95** | 2.125 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.125 | 0.458 |
| Standard Deviation | 0.758 | 0.591 |
| Skewness | -0.360 | |
| Kurtosis | 3.180 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.985 | 1.015 |
| Standard Deviation | 0.750 | 0.748 |
| Skewness (1) | -0.120 | -0.134 |
| Skewness (2) | -0.243 | |
| Kurtosis | 0.643 | 1.005 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1810+00** |
| **Sample** | **Swash** |
| **Mean** | **0.296 mm** |
| **STD** | **0.711 mm** |
| **Skewness** | **-0.651** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.33 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.5 |

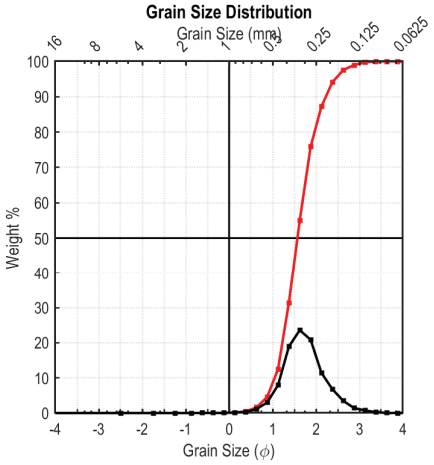
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.05 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.12 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.24 |
| 0 | -0.125 | 0.23 | 0.22 | 0.46 |
| 0.25 | 0.125 | 0.38 | 0.36 | 0.82 |
| 0.5 | 0.375 | 0.71 | 0.67 | 1.49 |
| 0.75 | 0.625 | 1.73 | 1.64 | 3.13 |
| 1 | 0.875 | 3.39 | 3.22 | 6.35 |
| 1.25 | 1.125 | 7.23 | 6.86 | 13.22 |
| 1.5 | 1.375 | 14.59 | 13.85 | 27.07 |
| 1.75 | 1.625 | 19.86 | 18.86 | 45.92 |
| 2 | 1.875 | 24.21 | 22.98 | 68.91 |
| 2.25 | 2.125 | 17.41 | 16.53 | 85.44 |
| 2.5 | 2.375 | 11.17 | 10.60 | 96.04 |
| 2.75 | 2.625 | 3.35 | 3.18 | 99.22 |
| 3 | 2.875 | 0.50 | 0.47 | 99.70 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.93 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.195 |
| **5** | 0.770 |
| **16** | 1.175 |
| **25** | 1.340 |
| **50** | 1.670 |
| **75** | 1.965 |
| **84** | 2.105 |
| **95** | 2.350 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.755 | 0.296 |
| Standard Deviation | 0.492 | 0.711 |
| Skewness | -0.651 | |
| Kurtosis | 4.524 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.640 | 1.650 |
| Standard Deviation | 0.465 | 0.472 |
| Skewness (1) | -0.065 | -0.102 |
| Skewness (2) | -0.237 | |
| Kurtosis | 0.699 | 1.036 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1820+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.302 mm** |
| **STD** | **0.722 mm** |
| **Skewness** | **0.313** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.43 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

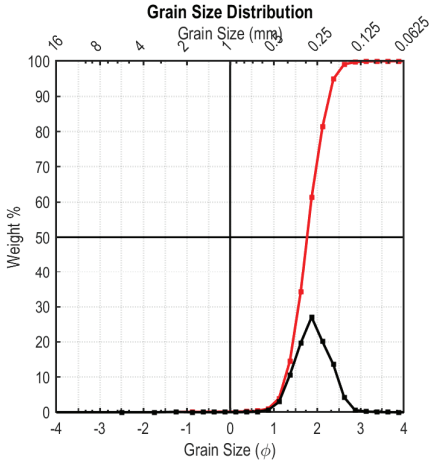
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.02 |
| 0 | -0.125 | 0.03 | 0.03 | 0.05 |
| 0.25 | 0.125 | 0.12 | 0.11 | 0.16 |
| 0.5 | 0.375 | 0.31 | 0.29 | 0.46 |
| 0.75 | 0.625 | 1.16 | 1.10 | 1.56 |
| 1 | 0.875 | 3.16 | 3.00 | 4.55 |
| 1.25 | 1.125 | 8.36 | 7.93 | 12.48 |
| 1.5 | 1.375 | 19.92 | 18.89 | 31.38 |
| 1.75 | 1.625 | 24.87 | 23.59 | 54.97 |
| 2 | 1.875 | 22.00 | 20.87 | 75.83 |
| 2.25 | 2.125 | 12.06 | 11.44 | 87.27 |
| 2.5 | 2.375 | 7.17 | 6.80 | 94.07 |
| 2.75 | 2.625 | 3.67 | 3.48 | 97.55 |
| 3 | 2.875 | 1.49 | 1.41 | 98.97 |
| 3.25 | 3.125 | 0.80 | 0.76 | 99.72 |
| 3.5 | 3.375 | 0.25 | 0.24 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.500 |
| **5** | 0.890 |
| **16** | 1.170 |
| **25** | 1.290 |
| **50** | 1.570 |
| **75** | 1.865 |
| **84** | 2.055 |
| **95** | 2.440 |
| **99** | 2.885 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.728 | 0.302 |
| Standard Deviation | 0.470 | 0.722 |
| Skewness | 0.313 | |
| Kurtosis | 3.834 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.612 | 1.598 |
| Standard Deviation | 0.442 | 0.456 |
| Skewness (1) | 0.096 | 0.109 |
| Skewness (2) | 0.215 | |
| Kurtosis | 0.751 | 1.105 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1820+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.269 mm** |
| **STD** | **0.759 mm** |
| **Skewness** | **-0.532** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.48 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

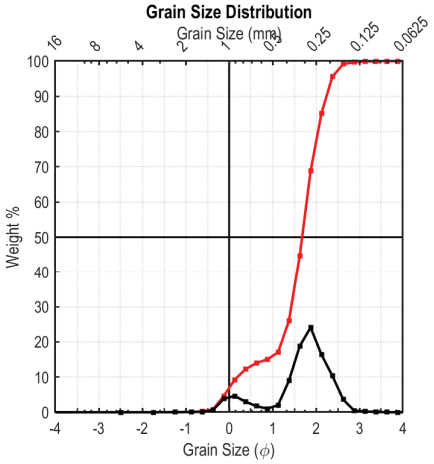
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.09 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.09 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.10 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.11 |
| 0 | -0.125 | 0.03 | 0.03 | 0.14 |
| 0.25 | 0.125 | 0.03 | 0.03 | 0.17 |
| 0.5 | 0.375 | 0.06 | 0.06 | 0.23 |
| 0.75 | 0.625 | 0.16 | 0.15 | 0.38 |
| 1 | 0.875 | 0.66 | 0.63 | 1.00 |
| 1.25 | 1.125 | 3.09 | 2.93 | 3.93 |
| 1.5 | 1.375 | 11.18 | 10.60 | 14.53 |
| 1.75 | 1.625 | 20.76 | 19.68 | 34.22 |
| 2 | 1.875 | 28.51 | 27.03 | 61.24 |
| 2.25 | 2.125 | 21.17 | 20.07 | 81.31 |
| 2.5 | 2.375 | 14.31 | 13.57 | 94.88 |
| 2.75 | 2.625 | 4.48 | 4.25 | 99.13 |
| 3 | 2.875 | 0.62 | 0.59 | 99.72 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.92 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.875 |
| **5** | 1.150 |
| **16** | 1.395 |
| **25** | 1.510 |
| **50** | 1.770 |
| **75** | 2.045 |
| **84** | 2.175 |
| **95** | 2.380 |
| **99** | 2.615 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.897 | 0.269 |
| Standard Deviation | 0.397 | 0.759 |
| Skewness | -0.532 | |
| Kurtosis | 6.744 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.785 | 1.780 |
| Standard Deviation | 0.390 | 0.381 |
| Skewness (1) | 0.038 | 0.015 |
| Skewness (2) | -0.013 | |
| Kurtosis | 0.577 | 0.942 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1820+00** |
| **Sample** | **Swash** |
| **Mean** | **0.320 mm** |
| **STD** | **0.612 mm** |
| **Skewness** | **-1.188** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.42 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.4 |

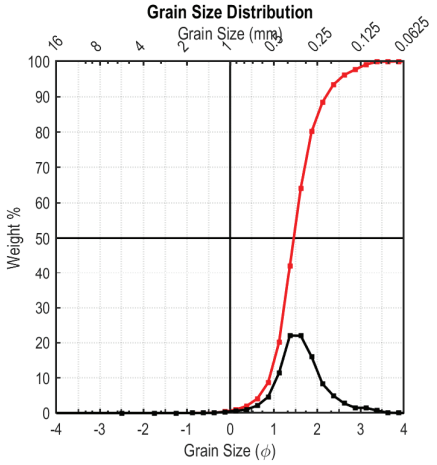
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.09 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.23 |
| -0.25 | -0.375 | 0.59 | 0.56 | 0.79 |
| 0 | -0.125 | 4.02 | 3.81 | 4.60 |
| 0.25 | 0.125 | 4.86 | 4.61 | 9.21 |
| 0.5 | 0.375 | 3.18 | 3.02 | 12.23 |
| 0.75 | 0.625 | 1.83 | 1.74 | 13.96 |
| 1 | 0.875 | 1.08 | 1.02 | 14.99 |
| 1.25 | 1.125 | 2.11 | 2.00 | 16.99 |
| 1.5 | 1.375 | 9.41 | 8.93 | 25.92 |
| 1.75 | 1.625 | 19.82 | 18.80 | 44.72 |
| 2 | 1.875 | 25.38 | 24.08 | 68.79 |
| 2.25 | 2.125 | 17.27 | 16.38 | 85.17 |
| 2.5 | 2.375 | 10.93 | 10.37 | 95.54 |
| 2.75 | 2.625 | 3.84 | 3.64 | 99.18 |
| 3 | 2.875 | 0.51 | 0.48 | 99.67 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.91 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | -0.105 |
| **16** | 1.000 |
| **25** | 1.350 |
| **50** | 1.680 |
| **75** | 1.970 |
| **84** | 2.105 |
| **95** | 2.360 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.645 | 0.320 |
| Standard Deviation | 0.709 | 0.612 |
| Skewness | -1.188 | |
| Kurtosis | 3.955 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.552 | 1.595 |
| Standard Deviation | 0.552 | 0.650 |
| Skewness (1) | -0.231 | -0.340 |
| Skewness (2) | -1.000 | |
| Kurtosis | 1.231 | 1.629 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1830+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.323 mm** |
| **STD** | **0.683 mm** |
| **Skewness** | **0.382** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

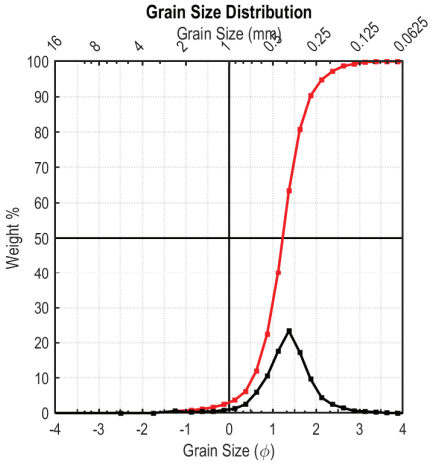
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.03 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.08 |
| 0 | -0.125 | 0.33 | 0.31 | 0.39 |
| 0.25 | 0.125 | 0.61 | 0.58 | 0.97 |
| 0.5 | 0.375 | 1.07 | 1.02 | 1.99 |
| 0.75 | 0.625 | 2.21 | 2.10 | 4.09 |
| 1 | 0.875 | 4.83 | 4.59 | 8.68 |
| 1.25 | 1.125 | 11.99 | 11.40 | 20.08 |
| 1.5 | 1.375 | 23.19 | 22.05 | 42.12 |
| 1.75 | 1.625 | 23.14 | 22.00 | 64.12 |
| 2 | 1.875 | 16.84 | 16.01 | 80.13 |
| 2.25 | 2.125 | 8.75 | 8.32 | 88.45 |
| 2.5 | 2.375 | 5.21 | 4.95 | 93.40 |
| 2.75 | 2.625 | 2.90 | 2.76 | 96.16 |
| 3 | 2.875 | 1.58 | 1.50 | 97.66 |
| 3.25 | 3.125 | 1.55 | 1.47 | 99.13 |
| 3.5 | 3.375 | 0.78 | 0.74 | 99.88 |
| 3.75 | 3.625 | 0.10 | 0.10 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.130 |
| **5** | 0.675 |
| **16** | 1.035 |
| **25** | 1.180 |
| **50** | 1.465 |
| **75** | 1.795 |
| **84** | 1.990 |
| **95** | 2.520 |
| **99** | 3.100 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.632 | 0.323 |
| Standard Deviation | 0.550 | 0.683 |
| Skewness | 0.382 | |
| Kurtosis | 4.351 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.512 | 1.497 |
| Standard Deviation | 0.477 | 0.518 |
| Skewness (1) | 0.099 | 0.122 |
| Skewness (2) | 0.277 | |
| Kurtosis | 0.932 | 1.230 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1830+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.396 mm** |
| **STD** | **0.662 mm** |
| **Skewness** | **-0.485** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.21 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.76 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.8 |

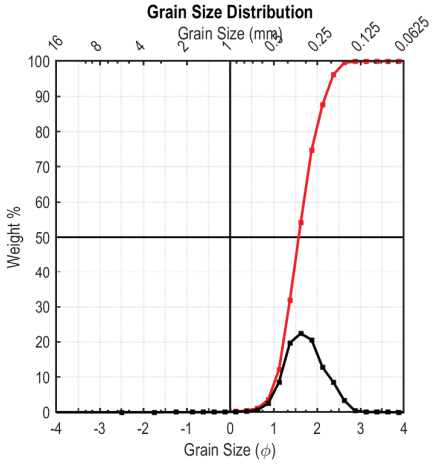
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.59 | 0.56 | 0.56 |
| -0.75 | -0.875 | 0.21 | 0.20 | 0.76 |
| -0.5 | -0.625 | 0.41 | 0.39 | 1.15 |
| -0.25 | -0.375 | 0.46 | 0.44 | 1.59 |
| 0 | -0.125 | 0.88 | 0.84 | 2.42 |
| 0.25 | 0.125 | 1.28 | 1.22 | 3.64 |
| 0.5 | 0.375 | 2.61 | 2.48 | 6.12 |
| 0.75 | 0.625 | 6.15 | 5.85 | 11.97 |
| 1 | 0.875 | 11.05 | 10.50 | 22.47 |
| 1.25 | 1.125 | 18.46 | 17.55 | 40.02 |
| 1.5 | 1.375 | 24.58 | 23.36 | 63.38 |
| 1.75 | 1.625 | 18.19 | 17.29 | 80.67 |
| 2 | 1.875 | 10.15 | 9.65 | 90.31 |
| 2.25 | 2.125 | 4.68 | 4.45 | 94.76 |
| 2.5 | 2.375 | 2.55 | 2.42 | 97.19 |
| 2.75 | 2.625 | 1.54 | 1.46 | 98.65 |
| 3 | 2.875 | 0.66 | 0.63 | 99.28 |
| 3.25 | 3.125 | 0.50 | 0.48 | 99.75 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.720 |
| **5** | 0.260 |
| **16** | 0.720 |
| **25** | 0.910 |
| **50** | 1.230 |
| **75** | 1.545 |
| **84** | 1.710 |
| **95** | 2.150 |
| **99** | 2.765 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.338 | 0.396 |
| Standard Deviation | 0.596 | 0.662 |
| Skewness | -0.485 | |
| Kurtosis | 5.749 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.215 | 1.220 |
| Standard Deviation | 0.495 | 0.534 |
| Skewness (1) | -0.030 | -0.028 |
| Skewness (2) | -0.051 | |
| Kurtosis | 0.909 | 1.220 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1830+00** |
| **Sample** | **Swash** |
| **Mean** | **0.303 mm** |
| **STD** | **0.739 mm** |
| **Skewness** | **-0.046** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.36 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

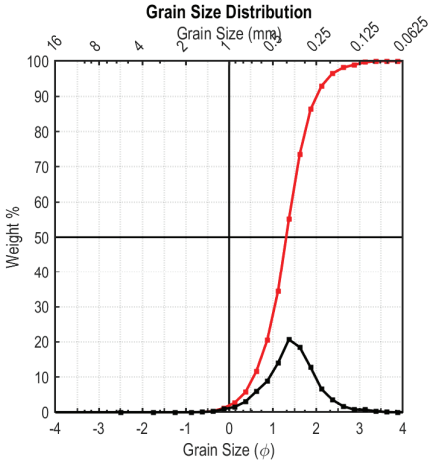
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.02 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.03 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.06 |
| 0 | -0.125 | 0.07 | 0.07 | 0.12 |
| 0.25 | 0.125 | 0.12 | 0.11 | 0.24 |
| 0.5 | 0.375 | 0.22 | 0.21 | 0.45 |
| 0.75 | 0.625 | 0.64 | 0.61 | 1.05 |
| 1 | 0.875 | 2.63 | 2.50 | 3.55 |
| 1.25 | 1.125 | 9.03 | 8.57 | 12.12 |
| 1.5 | 1.375 | 20.74 | 19.68 | 31.81 |
| 1.75 | 1.625 | 23.59 | 22.39 | 54.20 |
| 2 | 1.875 | 21.68 | 20.58 | 74.77 |
| 2.25 | 2.125 | 13.48 | 12.79 | 87.57 |
| 2.5 | 2.375 | 9.02 | 8.56 | 96.13 |
| 2.75 | 2.625 | 3.55 | 3.37 | 99.50 |
| 3 | 2.875 | 0.41 | 0.39 | 99.89 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.605 |
| **5** | 0.915 |
| **16** | 1.175 |
| **25** | 1.290 |
| **50** | 1.580 |
| **75** | 1.880 |
| **84** | 2.055 |
| **95** | 2.340 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.721 | 0.303 |
| Standard Deviation | 0.437 | 0.739 |
| Skewness | -0.046 | |
| Kurtosis | 3.610 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.615 | 1.603 |
| Standard Deviation | 0.440 | 0.436 |
| Skewness (1) | 0.080 | 0.073 |
| Skewness (2) | 0.108 | |
| Kurtosis | 0.619 | 0.990 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1840+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.371 mm** |
| **STD** | **0.668 mm** |
| **Skewness** | **0.027** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.52 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.4 |

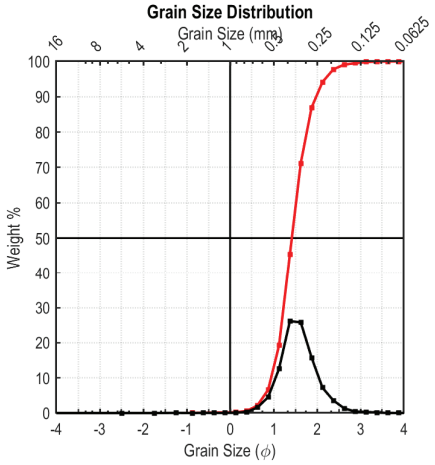
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.07 |
| -0.25 | -0.375 | 0.24 | 0.23 | 0.29 |
| 0 | -0.125 | 0.94 | 0.89 | 1.18 |
| 0.25 | 0.125 | 1.58 | 1.50 | 2.68 |
| 0.5 | 0.375 | 3.17 | 3.00 | 5.69 |
| 0.75 | 0.625 | 6.25 | 5.92 | 11.61 |
| 1 | 0.875 | 9.29 | 8.80 | 20.41 |
| 1.25 | 1.125 | 14.75 | 13.98 | 34.39 |
| 1.5 | 1.375 | 21.83 | 20.69 | 55.08 |
| 1.75 | 1.625 | 19.50 | 18.48 | 73.56 |
| 2 | 1.875 | 13.46 | 12.76 | 86.32 |
| 2.25 | 2.125 | 6.97 | 6.61 | 92.92 |
| 2.5 | 2.375 | 3.76 | 3.56 | 96.48 |
| 2.75 | 2.625 | 1.78 | 1.69 | 98.17 |
| 3 | 2.875 | 0.82 | 0.78 | 98.95 |
| 3.25 | 3.125 | 0.75 | 0.71 | 99.66 |
| 3.5 | 3.375 | 0.32 | 0.30 | 99.96 |
| 3.75 | 3.625 | 0.04 | 0.04 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.175 |
| **5** | 0.320 |
| **16** | 0.750 |
| **25** | 0.955 |
| **50** | 1.315 |
| **75** | 1.655 |
| **84** | 1.830 |
| **95** | 2.270 |
| **99** | 2.895 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.431 | 0.371 |
| Standard Deviation | 0.583 | 0.668 |
| Skewness | 0.027 | |
| Kurtosis | 3.734 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.290 | 1.298 |
| Standard Deviation | 0.540 | 0.565 |
| Skewness (1) | -0.046 | -0.033 |
| Skewness (2) | -0.037 | |
| Kurtosis | 0.806 | 1.142 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1840+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.337 mm** |
| **STD** | **0.744 mm** |
| **Skewness** | **0.240** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.37 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

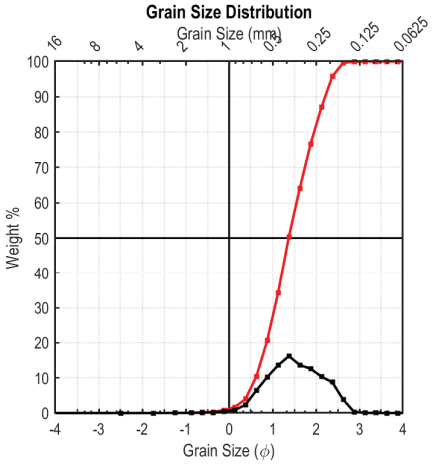
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.04 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.09 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.12 |
| 0 | -0.125 | 0.04 | 0.04 | 0.16 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.24 |
| 0.5 | 0.375 | 0.33 | 0.31 | 0.55 |
| 0.75 | 0.625 | 1.64 | 1.56 | 2.11 |
| 1 | 0.875 | 4.76 | 4.52 | 6.62 |
| 1.25 | 1.125 | 13.27 | 12.59 | 19.22 |
| 1.5 | 1.375 | 27.55 | 26.15 | 45.36 |
| 1.75 | 1.625 | 27.20 | 25.81 | 71.18 |
| 2 | 1.875 | 16.62 | 15.77 | 86.95 |
| 2.25 | 2.125 | 7.60 | 7.21 | 94.16 |
| 2.5 | 2.375 | 3.77 | 3.58 | 97.74 |
| 2.75 | 2.625 | 1.42 | 1.35 | 99.09 |
| 3 | 2.875 | 0.43 | 0.41 | 99.50 |
| 3.25 | 3.125 | 0.35 | 0.33 | 99.83 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.445 |
| **5** | 0.785 |
| **16** | 1.060 |
| **25** | 1.180 |
| **50** | 1.420 |
| **75** | 1.685 |
| **84** | 1.830 |
| **95** | 2.185 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.568 | 0.337 |
| Standard Deviation | 0.426 | 0.744 |
| Skewness | 0.240 | |
| Kurtosis | 5.314 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.445 | 1.437 |
| Standard Deviation | 0.385 | 0.405 |
| Skewness (1) | 0.065 | 0.079 |
| Skewness (2) | 0.169 | |
| Kurtosis | 0.818 | 1.136 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1840+00** |
| **Sample** | **Swash** |
| **Mean** | **0.351 mm** |
| **STD** | **0.657 mm** |
| **Skewness** | **-0.174** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.28 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.8 |

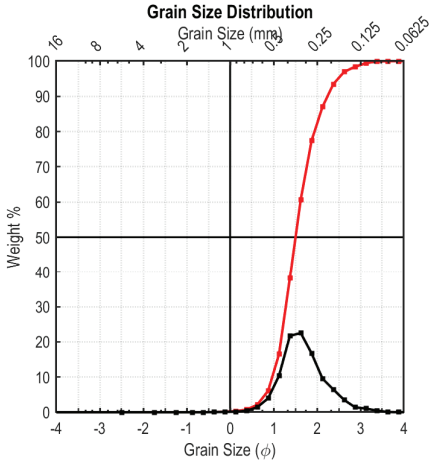
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.08 |
| -0.5 | -0.625 | 0.11 | 0.10 | 0.18 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.34 |
| 0 | -0.125 | 0.49 | 0.47 | 0.81 |
| 0.25 | 0.125 | 0.88 | 0.84 | 1.64 |
| 0.5 | 0.375 | 2.45 | 2.33 | 3.97 |
| 0.75 | 0.625 | 6.75 | 6.41 | 10.38 |
| 1 | 0.875 | 10.75 | 10.21 | 20.59 |
| 1.25 | 1.125 | 14.28 | 13.56 | 34.16 |
| 1.5 | 1.375 | 17.07 | 16.21 | 50.37 |
| 1.75 | 1.625 | 14.40 | 13.68 | 64.05 |
| 2 | 1.875 | 13.28 | 12.61 | 76.66 |
| 2.25 | 2.125 | 10.91 | 10.36 | 87.03 |
| 2.5 | 2.375 | 9.21 | 8.75 | 95.77 |
| 2.75 | 2.625 | 4.02 | 3.82 | 99.59 |
| 3 | 2.875 | 0.36 | 0.34 | 99.93 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.065 |
| **5** | 0.415 |
| **16** | 0.765 |
| **25** | 0.955 |
| **50** | 1.370 |
| **75** | 1.840 |
| **84** | 2.050 |
| **95** | 2.355 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.511 | 0.351 |
| Standard Deviation | 0.606 | 0.657 |
| Skewness | -0.174 | |
| Kurtosis | 2.817 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.407 | 1.395 |
| Standard Deviation | 0.642 | 0.615 |
| Skewness (1) | 0.058 | 0.037 |
| Skewness (2) | 0.023 | |
| Kurtosis | 0.510 | 0.898 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1850+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.312 mm** |
| **STD** | **0.703 mm** |
| **Skewness** | **0.451** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.59 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

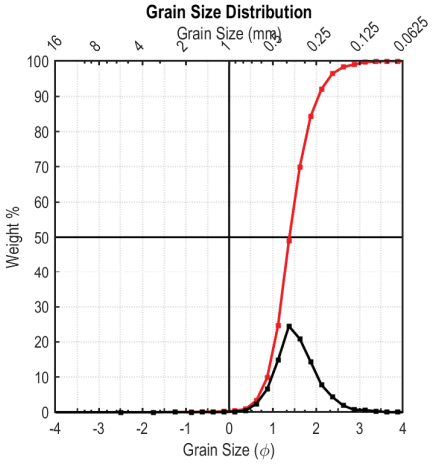
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.05 |
| 0 | -0.125 | 0.11 | 0.10 | 0.15 |
| 0.25 | 0.125 | 0.17 | 0.16 | 0.31 |
| 0.5 | 0.375 | 0.42 | 0.40 | 0.71 |
| 0.75 | 0.625 | 1.51 | 1.43 | 2.14 |
| 1 | 0.875 | 4.19 | 3.97 | 6.11 |
| 1.25 | 1.125 | 10.96 | 10.38 | 16.49 |
| 1.5 | 1.375 | 22.91 | 21.70 | 38.19 |
| 1.75 | 1.625 | 23.78 | 22.52 | 60.71 |
| 2 | 1.875 | 17.66 | 16.73 | 77.43 |
| 2.25 | 2.125 | 10.10 | 9.57 | 87.00 |
| 2.5 | 2.375 | 6.84 | 6.48 | 93.47 |
| 2.75 | 2.625 | 3.70 | 3.50 | 96.98 |
| 3 | 2.875 | 1.49 | 1.41 | 98.39 |
| 3.25 | 3.125 | 1.10 | 1.04 | 99.43 |
| 3.5 | 3.375 | 0.51 | 0.48 | 99.91 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.425 |
| **5** | 0.805 |
| **16** | 1.115 |
| **25** | 1.225 |
| **50** | 1.505 |
| **75** | 1.840 |
| **84** | 2.045 |
| **95** | 2.485 |
| **99** | 3.020 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.681 | 0.312 |
| Standard Deviation | 0.507 | 0.703 |
| Skewness | 0.451 | |
| Kurtosis | 3.927 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.580 | 1.555 |
| Standard Deviation | 0.465 | 0.487 |
| Skewness (1) | 0.161 | 0.164 |
| Skewness (2) | 0.301 | |
| Kurtosis | 0.806 | 1.120 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1850+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.340 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **0.326** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.40 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

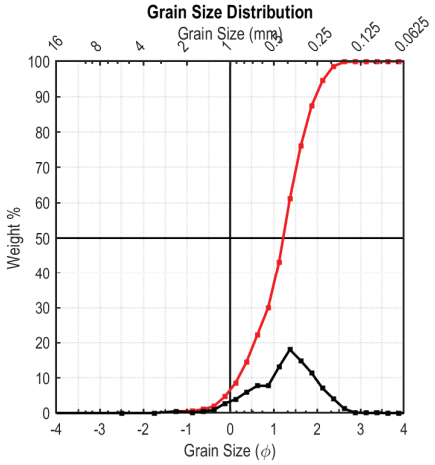
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.06 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.13 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.15 |
| 0 | -0.125 | 0.09 | 0.09 | 0.24 |
| 0.25 | 0.125 | 0.17 | 0.16 | 0.40 |
| 0.5 | 0.375 | 0.52 | 0.49 | 0.89 |
| 0.75 | 0.625 | 2.51 | 2.38 | 3.27 |
| 1 | 0.875 | 6.88 | 6.53 | 9.80 |
| 1.25 | 1.125 | 15.57 | 14.77 | 24.57 |
| 1.5 | 1.375 | 25.79 | 24.47 | 49.04 |
| 1.75 | 1.625 | 22.00 | 20.87 | 69.91 |
| 2 | 1.875 | 15.15 | 14.37 | 84.29 |
| 2.25 | 2.125 | 8.18 | 7.76 | 92.05 |
| 2.5 | 2.375 | 4.60 | 4.36 | 96.41 |
| 2.75 | 2.625 | 2.01 | 1.91 | 98.32 |
| 3 | 2.875 | 0.76 | 0.72 | 99.04 |
| 3.25 | 3.125 | 0.66 | 0.63 | 99.67 |
| 3.5 | 3.375 | 0.30 | 0.28 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.385 |
| **5** | 0.690 |
| **16** | 0.980 |
| **25** | 1.130 |
| **50** | 1.385 |
| **75** | 1.715 |
| **84** | 1.870 |
| **95** | 2.295 |
| **99** | 2.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.554 | 0.340 |
| Standard Deviation | 0.489 | 0.713 |
| Skewness | 0.326 | |
| Kurtosis | 4.734 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.425 | 1.412 |
| Standard Deviation | 0.445 | 0.466 |
| Skewness (1) | 0.090 | 0.112 |
| Skewness (2) | 0.242 | |
| Kurtosis | 0.803 | 1.124 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1850+00** |
| **Sample** | **Swash** |
| **Mean** | **0.417 mm** |
| **STD** | **0.623 mm** |
| **Skewness** | **-0.568** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.29 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.60 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.9 |

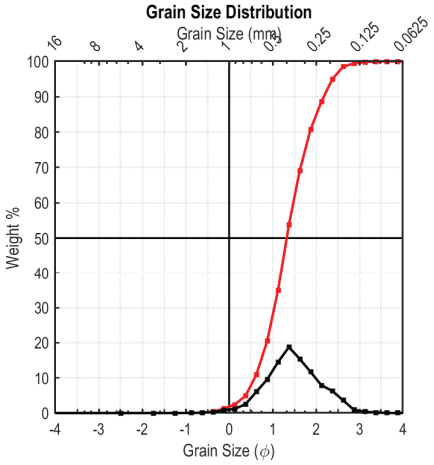
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.52 | 0.49 | 0.49 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.60 |
| -0.5 | -0.625 | 0.50 | 0.47 | 1.07 |
| -0.25 | -0.375 | 0.91 | 0.86 | 1.94 |
| 0 | -0.125 | 2.86 | 2.72 | 4.65 |
| 0.25 | 0.125 | 4.11 | 3.90 | 8.56 |
| 0.5 | 0.375 | 6.23 | 5.92 | 14.47 |
| 0.75 | 0.625 | 8.17 | 7.76 | 22.23 |
| 1 | 0.875 | 8.14 | 7.73 | 29.96 |
| 1.25 | 1.125 | 13.82 | 13.13 | 43.09 |
| 1.5 | 1.375 | 19.02 | 18.06 | 61.15 |
| 1.75 | 1.625 | 15.69 | 14.90 | 76.06 |
| 2 | 1.875 | 12.01 | 11.41 | 87.46 |
| 2.25 | 2.125 | 7.43 | 7.06 | 94.52 |
| 2.5 | 2.375 | 4.31 | 4.09 | 98.61 |
| 2.75 | 2.625 | 1.29 | 1.23 | 99.84 |
| 3 | 2.875 | 0.13 | 0.12 | 99.96 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.665 |
| **5** | -0.105 |
| **16** | 0.425 |
| **25** | 0.715 |
| **50** | 1.220 |
| **75** | 1.605 |
| **84** | 1.800 |
| **95** | 2.155 |
| **99** | 2.455 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.263 | 0.417 |
| Standard Deviation | 0.683 | 0.623 |
| Skewness | -0.568 | |
| Kurtosis | 3.380 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.112 | 1.148 |
| Standard Deviation | 0.688 | 0.686 |
| Skewness (1) | -0.156 | -0.164 |
| Skewness (2) | -0.284 | |
| Kurtosis | 0.644 | 1.041 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1860+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.360 mm** |
| **STD** | **0.655 mm** |
| **Skewness** | **-0.013** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.46 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.9 |

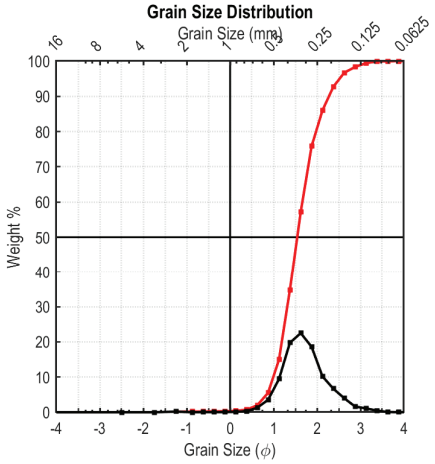
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.03 |
| -0.5 | -0.625 | 0.11 | 0.10 | 0.13 |
| -0.25 | -0.375 | 0.28 | 0.27 | 0.40 |
| 0 | -0.125 | 0.86 | 0.82 | 1.21 |
| 0.25 | 0.125 | 1.23 | 1.17 | 2.38 |
| 0.5 | 0.375 | 2.62 | 2.48 | 4.86 |
| 0.75 | 0.625 | 6.35 | 6.02 | 10.89 |
| 1 | 0.875 | 10.09 | 9.57 | 20.45 |
| 1.25 | 1.125 | 15.28 | 14.49 | 34.94 |
| 1.5 | 1.375 | 19.78 | 18.76 | 53.70 |
| 1.75 | 1.625 | 16.24 | 15.40 | 69.10 |
| 2 | 1.875 | 12.33 | 11.69 | 80.79 |
| 2.25 | 2.125 | 8.30 | 7.87 | 88.66 |
| 2.5 | 2.375 | 6.63 | 6.29 | 94.95 |
| 2.75 | 2.625 | 3.80 | 3.60 | 98.55 |
| 3 | 2.875 | 0.93 | 0.88 | 99.43 |
| 3.25 | 3.125 | 0.41 | 0.39 | 99.82 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.190 |
| **5** | 0.380 |
| **16** | 0.760 |
| **25** | 0.955 |
| **50** | 1.325 |
| **75** | 1.750 |
| **84** | 1.975 |
| **95** | 2.380 |
| **99** | 2.755 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.474 | 0.360 |
| Standard Deviation | 0.611 | 0.655 |
| Skewness | -0.013 | |
| Kurtosis | 3.194 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.367 | 1.353 |
| Standard Deviation | 0.608 | 0.607 |
| Skewness (1) | 0.070 | 0.062 |
| Skewness (2) | 0.091 | |
| Kurtosis | 0.646 | 1.031 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1860+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.305 mm** |
| **STD** | **0.697 mm** |
| **Skewness** | **0.088** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.17 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.18 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

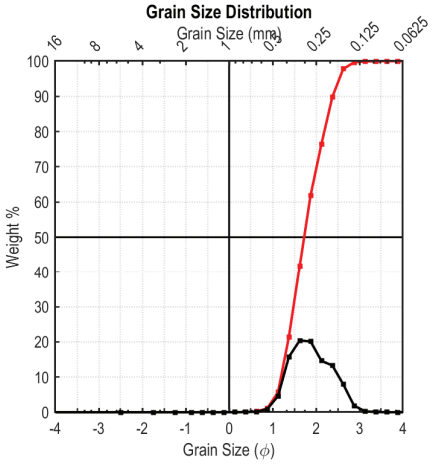
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.19 | 0.18 | 0.18 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.18 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.22 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.25 |
| 0 | -0.125 | 0.05 | 0.05 | 0.29 |
| 0.25 | 0.125 | 0.11 | 0.10 | 0.40 |
| 0.5 | 0.375 | 0.32 | 0.30 | 0.70 |
| 0.75 | 0.625 | 1.35 | 1.28 | 1.99 |
| 1 | 0.875 | 3.75 | 3.57 | 5.55 |
| 1.25 | 1.125 | 9.94 | 9.45 | 15.00 |
| 1.5 | 1.375 | 20.75 | 19.73 | 34.73 |
| 1.75 | 1.625 | 23.65 | 22.49 | 57.22 |
| 2 | 1.875 | 19.56 | 18.60 | 75.82 |
| 2.25 | 2.125 | 10.72 | 10.19 | 86.01 |
| 2.5 | 2.375 | 7.04 | 6.69 | 92.71 |
| 2.75 | 2.625 | 4.20 | 3.99 | 96.70 |
| 3 | 2.875 | 1.72 | 1.64 | 98.34 |
| 3.25 | 3.125 | 1.15 | 1.09 | 99.43 |
| 3.5 | 3.375 | 0.50 | 0.48 | 99.90 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.435 |
| **5** | 0.835 |
| **16** | 1.140 |
| **25** | 1.250 |
| **50** | 1.545 |
| **75** | 1.865 |
| **84** | 2.075 |
| **95** | 2.520 |
| **99** | 3.025 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.711 | 0.305 |
| Standard Deviation | 0.521 | 0.697 |
| Skewness | 0.088 | |
| Kurtosis | 5.383 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.608 | 1.587 |
| Standard Deviation | 0.468 | 0.489 |
| Skewness (1) | 0.134 | 0.145 |
| Skewness (2) | 0.283 | |
| Kurtosis | 0.802 | 1.123 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1860+00** |
| **Sample** | **Swash** |
| **Mean** | **0.271 mm** |
| **STD** | **0.732 mm** |
| **Skewness** | **0.192** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.44 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.9 |

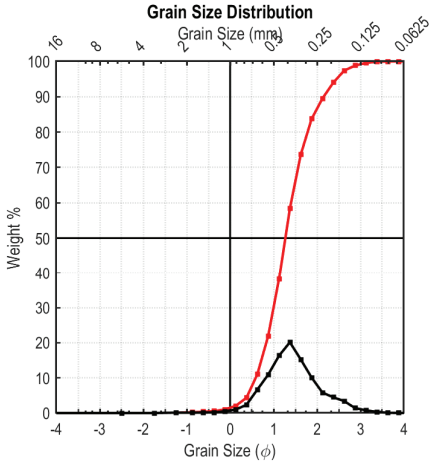
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.00 |
| 0 | -0.125 | 0.00 | 0.00 | 0.00 |
| 0.25 | 0.125 | 0.01 | 0.01 | 0.01 |
| 0.5 | 0.375 | 0.04 | 0.04 | 0.05 |
| 0.75 | 0.625 | 0.17 | 0.16 | 0.21 |
| 1 | 0.875 | 0.90 | 0.85 | 1.06 |
| 1.25 | 1.125 | 4.86 | 4.61 | 5.67 |
| 1.5 | 1.375 | 16.58 | 15.72 | 21.40 |
| 1.75 | 1.625 | 21.52 | 20.41 | 41.81 |
| 2 | 1.875 | 21.20 | 20.11 | 61.91 |
| 2.25 | 2.125 | 15.38 | 14.59 | 76.50 |
| 2.5 | 2.375 | 14.03 | 13.31 | 89.80 |
| 2.75 | 2.625 | 8.40 | 7.97 | 97.77 |
| 3 | 2.875 | 1.98 | 1.88 | 99.65 |
| 3.25 | 3.125 | 0.28 | 0.27 | 99.91 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.855 |
| **5** | 1.090 |
| **16** | 1.290 |
| **25** | 1.420 |
| **50** | 1.725 |
| **75** | 2.100 |
| **84** | 2.265 |
| **95** | 2.540 |
| **99** | 2.790 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.886 | 0.271 |
| Standard Deviation | 0.450 | 0.732 |
| Skewness | 0.192 | |
| Kurtosis | 2.544 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.777 | 1.760 |
| Standard Deviation | 0.487 | 0.463 |
| Skewness (1) | 0.108 | 0.116 |
| Skewness (2) | 0.185 | |
| Kurtosis | 0.487 | 0.874 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1870+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.369 mm** |
| **STD** | **0.651 mm** |
| **Skewness** | **0.205** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.92 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.21 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.7 |

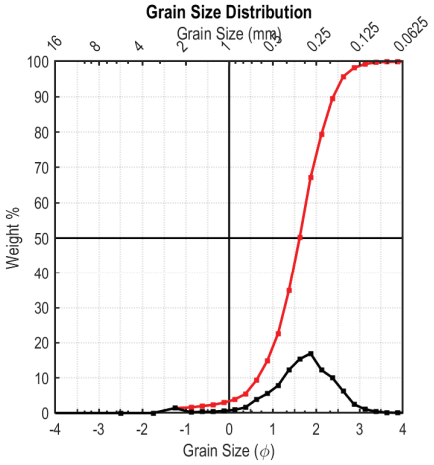
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.12 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.10 | 0.09 | 0.21 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.35 |
| -0.25 | -0.375 | 0.18 | 0.17 | 0.52 |
| 0 | -0.125 | 0.54 | 0.51 | 1.03 |
| 0.25 | 0.125 | 1.04 | 0.98 | 2.01 |
| 0.5 | 0.375 | 2.46 | 2.32 | 4.33 |
| 0.75 | 0.625 | 7.05 | 6.66 | 10.99 |
| 1 | 0.875 | 11.56 | 10.91 | 21.90 |
| 1.25 | 1.125 | 17.28 | 16.31 | 38.22 |
| 1.5 | 1.375 | 21.33 | 20.14 | 58.36 |
| 1.75 | 1.625 | 16.16 | 15.26 | 73.61 |
| 2 | 1.875 | 10.70 | 10.10 | 83.71 |
| 2.25 | 2.125 | 6.15 | 5.81 | 89.52 |
| 2.5 | 2.375 | 4.75 | 4.48 | 94.00 |
| 2.75 | 2.625 | 3.59 | 3.39 | 97.39 |
| 3 | 2.875 | 1.50 | 1.42 | 98.81 |
| 3.25 | 3.125 | 0.81 | 0.76 | 99.58 |
| 3.5 | 3.375 | 0.35 | 0.33 | 99.91 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.98 |
| 4 | 3.875 | 0.02 | 0.02 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.140 |
| **5** | 0.400 |
| **16** | 0.740 |
| **25** | 0.920 |
| **50** | 1.270 |
| **75** | 1.660 |
| **84** | 1.885 |
| **95** | 2.450 |
| **99** | 2.935 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.438 | 0.369 |
| Standard Deviation | 0.619 | 0.651 |
| Skewness | 0.205 | |
| Kurtosis | 3.899 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.312 | 1.298 |
| Standard Deviation | 0.573 | 0.597 |
| Skewness (1) | 0.074 | 0.113 |
| Skewness (2) | 0.271 | |
| Kurtosis | 0.790 | 1.135 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1870+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.313 mm** |
| **STD** | **0.592 mm** |
| **Skewness** | **-0.975** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.57 |
| % finer than 0.0625 mm (dry) | 0.09 |
| % granule (2-4 mm) | 1.62 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.8 |

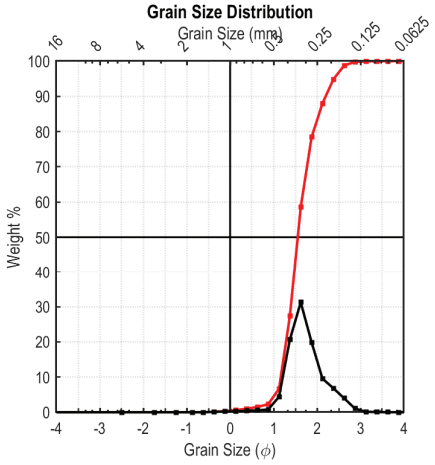
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.48 | 1.40 | 1.40 |
| -0.75 | -0.875 | 0.23 | 0.22 | 1.62 |
| -0.5 | -0.625 | 0.37 | 0.35 | 1.97 |
| -0.25 | -0.375 | 0.38 | 0.36 | 2.33 |
| 0 | -0.125 | 0.64 | 0.61 | 2.94 |
| 0.25 | 0.125 | 0.95 | 0.90 | 3.84 |
| 0.5 | 0.375 | 1.70 | 1.61 | 5.45 |
| 0.75 | 0.625 | 4.05 | 3.84 | 9.28 |
| 1 | 0.875 | 5.80 | 5.49 | 14.78 |
| 1.25 | 1.125 | 8.23 | 7.80 | 22.57 |
| 1.5 | 1.375 | 12.95 | 12.27 | 34.84 |
| 1.75 | 1.625 | 16.22 | 15.36 | 50.20 |
| 2 | 1.875 | 17.91 | 16.97 | 67.17 |
| 2.25 | 2.125 | 12.93 | 12.25 | 79.42 |
| 2.5 | 2.375 | 10.62 | 10.06 | 89.48 |
| 2.75 | 2.625 | 6.57 | 6.22 | 95.70 |
| 3 | 2.875 | 2.61 | 2.47 | 98.17 |
| 3.25 | 3.125 | 1.15 | 1.09 | 99.26 |
| 3.5 | 3.375 | 0.47 | 0.45 | 99.71 |
| 3.75 | 3.625 | 0.15 | 0.14 | 99.85 |
| 4 | 3.875 | 0.07 | 0.07 | 99.91 |
| >4.0 | 4.25 | 0.09 | 0.09 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.395 |
| **5** | 0.305 |
| **16** | 0.915 |
| **25** | 1.175 |
| **50** | 1.620 |
| **75** | 2.035 |
| **84** | 2.240 |
| **95** | 2.595 |
| **99** | 3.065 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.674 | 0.313 |
| Standard Deviation | 0.756 | 0.592 |
| Skewness | -0.975 | |
| Kurtosis | 5.534 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.578 | 1.592 |
| Standard Deviation | 0.663 | 0.678 |
| Skewness (1) | -0.064 | -0.106 |
| Skewness (2) | -0.257 | |
| Kurtosis | 0.728 | 1.091 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.301 mm** |
| **STD** | **0.745 mm** |
| **Skewness** | **-0.003** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.85 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

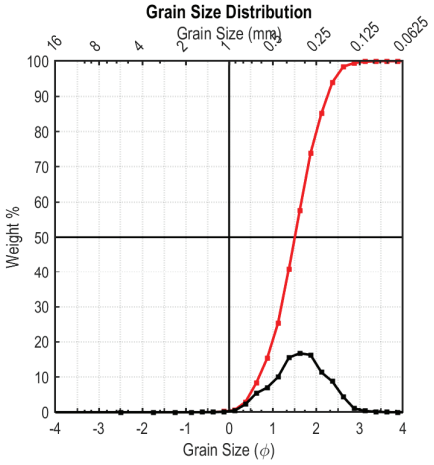
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.11 |
| 0 | -0.125 | 0.22 | 0.21 | 0.32 |
| 0.25 | 0.125 | 0.30 | 0.28 | 0.60 |
| 0.5 | 0.375 | 0.39 | 0.37 | 0.97 |
| 0.75 | 0.625 | 0.55 | 0.52 | 1.49 |
| 1 | 0.875 | 0.83 | 0.78 | 2.28 |
| 1.25 | 1.125 | 4.64 | 4.38 | 6.66 |
| 1.5 | 1.375 | 21.87 | 20.66 | 27.32 |
| 1.75 | 1.625 | 33.05 | 31.22 | 58.55 |
| 2 | 1.875 | 21.04 | 19.88 | 78.42 |
| 2.25 | 2.125 | 10.11 | 9.55 | 87.97 |
| 2.5 | 2.375 | 7.24 | 6.84 | 94.81 |
| 2.75 | 2.625 | 4.18 | 3.95 | 98.76 |
| 3 | 2.875 | 1.09 | 1.03 | 99.79 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.94 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.390 |
| **5** | 1.030 |
| **16** | 1.240 |
| **25** | 1.345 |
| **50** | 1.555 |
| **75** | 1.830 |
| **84** | 2.020 |
| **95** | 2.385 |
| **99** | 2.685 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.730 | 0.301 |
| Standard Deviation | 0.426 | 0.745 |
| Skewness | -0.003 | |
| Kurtosis | 5.102 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.630 | 1.605 |
| Standard Deviation | 0.390 | 0.400 |
| Skewness (1) | 0.192 | 0.209 |
| Skewness (2) | 0.391 | |
| Kurtosis | 0.737 | 1.145 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1880+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.325 mm** |
| **STD** | **0.667 mm** |
| **Skewness** | **-0.121** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.62 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.6 |

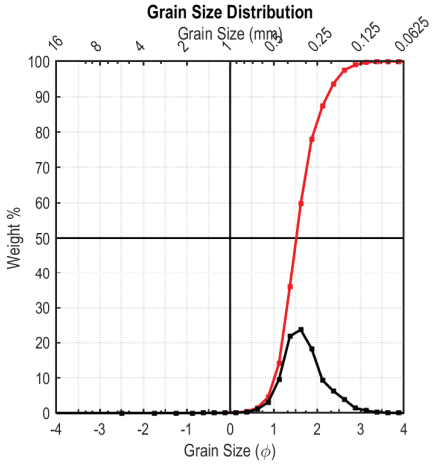
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.04 |
| 0 | -0.125 | 0.15 | 0.14 | 0.18 |
| 0.25 | 0.125 | 0.49 | 0.46 | 0.64 |
| 0.5 | 0.375 | 2.38 | 2.25 | 2.90 |
| 0.75 | 0.625 | 5.73 | 5.43 | 8.32 |
| 1 | 0.875 | 7.39 | 7.00 | 15.32 |
| 1.25 | 1.125 | 10.57 | 10.01 | 25.33 |
| 1.5 | 1.375 | 16.39 | 15.52 | 40.84 |
| 1.75 | 1.625 | 17.70 | 16.76 | 57.60 |
| 2 | 1.875 | 17.21 | 16.29 | 73.90 |
| 2.25 | 2.125 | 11.96 | 11.32 | 85.22 |
| 2.5 | 2.375 | 9.25 | 8.76 | 93.98 |
| 2.75 | 2.625 | 4.66 | 4.41 | 98.39 |
| 3 | 2.875 | 1.15 | 1.09 | 99.48 |
| 3.25 | 3.125 | 0.39 | 0.37 | 99.85 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.165 |
| **5** | 0.470 |
| **16** | 0.890 |
| **25** | 1.115 |
| **50** | 1.510 |
| **75** | 1.900 |
| **84** | 2.100 |
| **95** | 2.435 |
| **99** | 2.765 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.620 | 0.325 |
| Standard Deviation | 0.585 | 0.667 |
| Skewness | -0.121 | |
| Kurtosis | 2.762 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.495 | 1.500 |
| Standard Deviation | 0.605 | 0.600 |
| Skewness (1) | -0.025 | -0.042 |
| Skewness (2) | -0.095 | |
| Kurtosis | 0.624 | 1.026 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1880+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.309 mm** |
| **STD** | **0.719 mm** |
| **Skewness** | **0.446** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.68 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.8 |

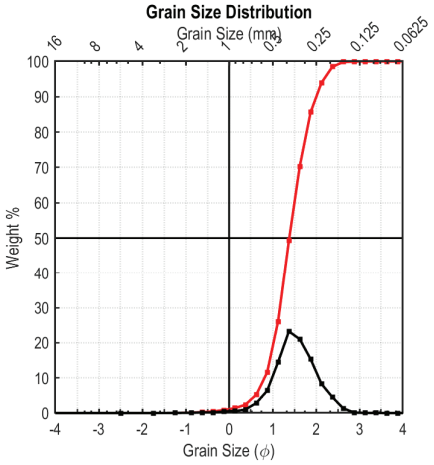
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.04 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.06 |
| 0 | -0.125 | 0.03 | 0.03 | 0.09 |
| 0.25 | 0.125 | 0.09 | 0.09 | 0.17 |
| 0.5 | 0.375 | 0.25 | 0.24 | 0.41 |
| 0.75 | 0.625 | 1.12 | 1.06 | 1.47 |
| 1 | 0.875 | 3.23 | 3.06 | 4.52 |
| 1.25 | 1.125 | 10.15 | 9.60 | 14.13 |
| 1.5 | 1.375 | 23.11 | 21.87 | 36.00 |
| 1.75 | 1.625 | 25.05 | 23.70 | 59.70 |
| 2 | 1.875 | 19.35 | 18.31 | 78.01 |
| 2.25 | 2.125 | 9.89 | 9.36 | 87.37 |
| 2.5 | 2.375 | 6.62 | 6.26 | 93.63 |
| 2.75 | 2.625 | 4.12 | 3.90 | 97.53 |
| 3 | 2.875 | 1.54 | 1.46 | 98.99 |
| 3.25 | 3.125 | 0.76 | 0.72 | 99.71 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.92 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.515 |
| **5** | 0.885 |
| **16** | 1.145 |
| **25** | 1.250 |
| **50** | 1.525 |
| **75** | 1.835 |
| **84** | 2.035 |
| **95** | 2.465 |
| **99** | 2.880 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.696 | 0.309 |
| Standard Deviation | 0.477 | 0.719 |
| Skewness | 0.446 | |
| Kurtosis | 3.922 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.590 | 1.568 |
| Standard Deviation | 0.445 | 0.462 |
| Skewness (1) | 0.146 | 0.168 |
| Skewness (2) | 0.337 | |
| Kurtosis | 0.775 | 1.107 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.351 mm** |
| **STD** | **0.714 mm** |
| **Skewness** | **-0.478** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.24 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

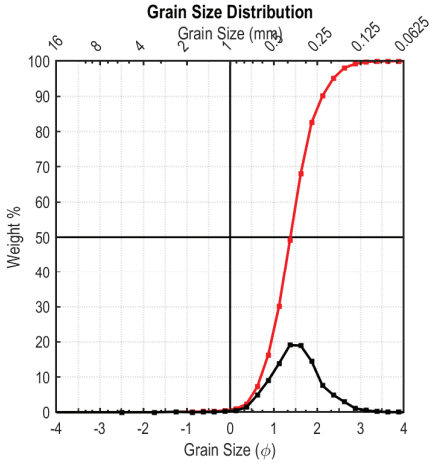
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.10 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.27 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.43 |
| 0 | -0.125 | 0.45 | 0.43 | 0.86 |
| 0.25 | 0.125 | 0.55 | 0.52 | 1.38 |
| 0.5 | 0.375 | 1.05 | 1.00 | 2.38 |
| 0.75 | 0.625 | 3.00 | 2.85 | 5.23 |
| 1 | 0.875 | 6.68 | 6.35 | 11.57 |
| 1.25 | 1.125 | 15.18 | 14.42 | 26.00 |
| 1.5 | 1.375 | 24.46 | 23.24 | 49.24 |
| 1.75 | 1.625 | 22.13 | 21.03 | 70.27 |
| 2 | 1.875 | 16.16 | 15.36 | 85.62 |
| 2.25 | 2.125 | 8.75 | 8.31 | 93.94 |
| 2.5 | 2.375 | 4.77 | 4.53 | 98.47 |
| 2.75 | 2.625 | 1.43 | 1.36 | 99.83 |
| 3 | 2.875 | 0.13 | 0.12 | 99.95 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.055 |
| **5** | 0.605 |
| **16** | 0.950 |
| **25** | 1.110 |
| **50** | 1.385 |
| **75** | 1.700 |
| **84** | 1.850 |
| **95** | 2.185 |
| **99** | 2.470 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.511 | 0.351 |
| Standard Deviation | 0.486 | 0.714 |
| Skewness | -0.478 | |
| Kurtosis | 4.678 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.400 | 1.395 |
| Standard Deviation | 0.450 | 0.464 |
| Skewness (1) | 0.033 | 0.023 |
| Skewness (2) | 0.022 | |
| Kurtosis | 0.756 | 1.098 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1890+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.347 mm** |
| **STD** | **0.677 mm** |
| **Skewness** | **0.049** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.69 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.2 |

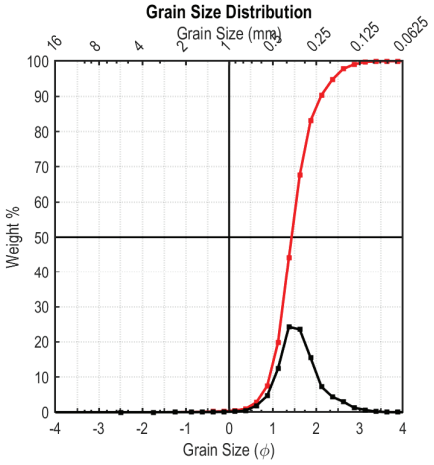
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.13 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.20 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.26 |
| 0 | -0.125 | 0.24 | 0.23 | 0.49 |
| 0.25 | 0.125 | 0.47 | 0.44 | 0.94 |
| 0.5 | 0.375 | 1.46 | 1.38 | 2.32 |
| 0.75 | 0.625 | 5.18 | 4.90 | 7.22 |
| 1 | 0.875 | 9.49 | 8.98 | 16.20 |
| 1.25 | 1.125 | 14.65 | 13.86 | 30.06 |
| 1.5 | 1.375 | 20.15 | 19.07 | 49.12 |
| 1.75 | 1.625 | 20.02 | 18.94 | 68.07 |
| 2 | 1.875 | 15.32 | 14.50 | 82.56 |
| 2.25 | 2.125 | 8.02 | 7.59 | 90.15 |
| 2.5 | 2.375 | 5.21 | 4.93 | 95.08 |
| 2.75 | 2.625 | 3.16 | 2.99 | 98.07 |
| 3 | 2.875 | 1.19 | 1.13 | 99.20 |
| 3.25 | 3.125 | 0.58 | 0.55 | 99.74 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.02 | 0.02 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.135 |
| **5** | 0.510 |
| **16** | 0.870 |
| **25** | 1.035 |
| **50** | 1.385 |
| **75** | 1.745 |
| **84** | 1.920 |
| **95** | 2.370 |
| **99** | 2.830 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.525 | 0.347 |
| Standard Deviation | 0.562 | 0.677 |
| Skewness | 0.049 | |
| Kurtosis | 4.037 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.395 | 1.392 |
| Standard Deviation | 0.525 | 0.544 |
| Skewness (1) | 0.019 | 0.039 |
| Skewness (2) | 0.105 | |
| Kurtosis | 0.771 | 1.074 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1890+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.329 mm** |
| **STD** | **0.711 mm** |
| **Skewness** | **0.319** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.28 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

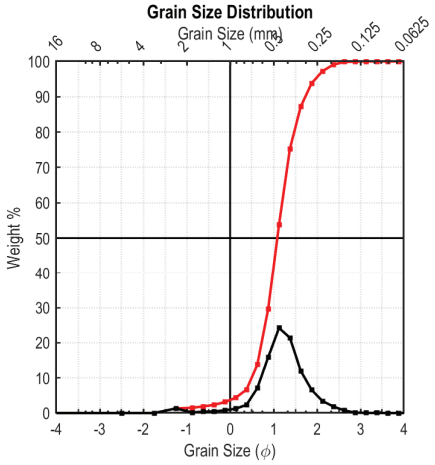
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.06 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.11 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.18 |
| 0 | -0.125 | 0.12 | 0.11 | 0.29 |
| 0.25 | 0.125 | 0.19 | 0.18 | 0.47 |
| 0.5 | 0.375 | 0.51 | 0.48 | 0.96 |
| 0.75 | 0.625 | 1.94 | 1.84 | 2.80 |
| 1 | 0.875 | 4.90 | 4.65 | 7.46 |
| 1.25 | 1.125 | 13.04 | 12.39 | 19.84 |
| 1.5 | 1.375 | 25.56 | 24.28 | 44.12 |
| 1.75 | 1.625 | 24.76 | 23.52 | 67.64 |
| 2 | 1.875 | 16.30 | 15.48 | 83.12 |
| 2.25 | 2.125 | 7.63 | 7.25 | 90.37 |
| 2.5 | 2.375 | 4.63 | 4.40 | 94.77 |
| 2.75 | 2.625 | 3.18 | 3.02 | 97.79 |
| 3 | 2.875 | 1.37 | 1.30 | 99.09 |
| 3.25 | 3.125 | 0.71 | 0.67 | 99.76 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.380 |
| **5** | 0.745 |
| **16** | 1.045 |
| **25** | 1.180 |
| **50** | 1.435 |
| **75** | 1.745 |
| **84** | 1.905 |
| **95** | 2.395 |
| **99** | 2.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.603 | 0.329 |
| Standard Deviation | 0.491 | 0.711 |
| Skewness | 0.319 | |
| Kurtosis | 4.751 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.475 | 1.462 |
| Standard Deviation | 0.430 | 0.465 |
| Skewness (1) | 0.093 | 0.128 |
| Skewness (2) | 0.314 | |
| Kurtosis | 0.919 | 1.197 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1890+00** |
| **Sample** | **Swash** |
| **Mean** | **0.436 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-1.029** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.34 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.49 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 11.3 |

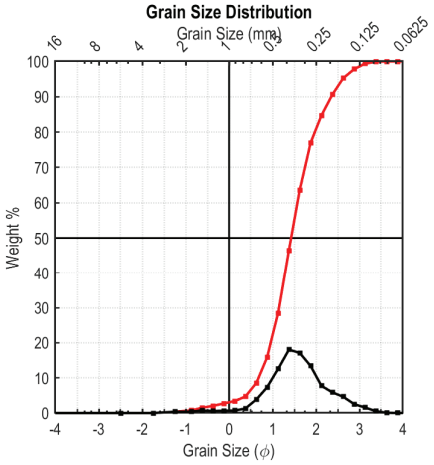
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.39 | 1.32 | 1.32 |
| -0.75 | -0.875 | 0.18 | 0.17 | 1.49 |
| -0.5 | -0.625 | 0.41 | 0.39 | 1.88 |
| -0.25 | -0.375 | 0.47 | 0.45 | 2.33 |
| 0 | -0.125 | 0.82 | 0.78 | 3.10 |
| 0.25 | 0.125 | 1.30 | 1.23 | 4.34 |
| 0.5 | 0.375 | 2.43 | 2.31 | 6.65 |
| 0.75 | 0.625 | 7.47 | 7.09 | 13.74 |
| 1 | 0.875 | 16.70 | 15.85 | 29.59 |
| 1.25 | 1.125 | 25.51 | 24.22 | 53.81 |
| 1.5 | 1.375 | 22.56 | 21.42 | 75.22 |
| 1.75 | 1.625 | 12.64 | 12.00 | 87.22 |
| 2 | 1.875 | 6.94 | 6.59 | 93.81 |
| 2.25 | 2.125 | 3.60 | 3.42 | 97.23 |
| 2.5 | 2.375 | 1.97 | 1.87 | 99.10 |
| 2.75 | 2.625 | 0.78 | 0.74 | 99.84 |
| 3 | 2.875 | 0.12 | 0.11 | 99.95 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.370 |
| **5** | 0.195 |
| **16** | 0.660 |
| **25** | 0.805 |
| **50** | 1.085 |
| **75** | 1.370 |
| **84** | 1.560 |
| **95** | 1.960 |
| **99** | 2.360 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.197 | 0.436 |
| Standard Deviation | 0.574 | 0.672 |
| Skewness | -1.029 | |
| Kurtosis | 7.026 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.110 | 1.102 |
| Standard Deviation | 0.450 | 0.492 |
| Skewness (1) | 0.056 | 0.024 |
| Skewness (2) | -0.017 | |
| Kurtosis | 0.961 | 1.280 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1900+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.337 mm** |
| **STD** | **0.615 mm** |
| **Skewness** | **-0.399** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.61 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.74 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.1 |

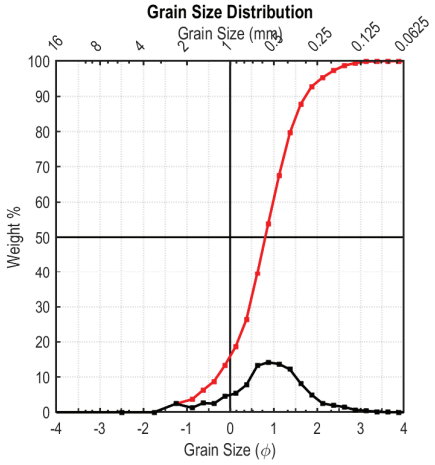
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.39 | 0.37 | 0.37 |
| -0.75 | -0.875 | 0.39 | 0.37 | 0.74 |
| -0.5 | -0.625 | 0.78 | 0.74 | 1.48 |
| -0.25 | -0.375 | 0.60 | 0.57 | 2.05 |
| 0 | -0.125 | 0.70 | 0.66 | 2.71 |
| 0.25 | 0.125 | 0.73 | 0.69 | 3.40 |
| 0.5 | 0.375 | 1.37 | 1.30 | 4.70 |
| 0.75 | 0.625 | 4.06 | 3.84 | 8.54 |
| 1 | 0.875 | 7.77 | 7.36 | 15.90 |
| 1.25 | 1.125 | 13.24 | 12.54 | 28.43 |
| 1.5 | 1.375 | 19.06 | 18.05 | 46.48 |
| 1.75 | 1.625 | 18.07 | 17.11 | 63.59 |
| 2 | 1.875 | 14.14 | 13.39 | 76.98 |
| 2.25 | 2.125 | 8.17 | 7.74 | 84.72 |
| 2.5 | 2.375 | 6.21 | 5.88 | 90.60 |
| 2.75 | 2.625 | 4.90 | 4.64 | 95.24 |
| 3 | 2.875 | 2.70 | 2.56 | 97.79 |
| 3.25 | 3.125 | 1.66 | 1.57 | 99.37 |
| 3.5 | 3.375 | 0.57 | 0.54 | 99.91 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.785 |
| **5** | 0.395 |
| **16** | 0.875 |
| **25** | 1.055 |
| **50** | 1.425 |
| **75** | 1.840 |
| **84** | 2.100 |
| **95** | 2.610 |
| **99** | 3.065 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.567 | 0.337 |
| Standard Deviation | 0.702 | 0.615 |
| Skewness | -0.399 | |
| Kurtosis | 4.608 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.487 | 1.467 |
| Standard Deviation | 0.612 | 0.642 |
| Skewness (1) | 0.102 | 0.086 |
| Skewness (2) | 0.127 | |
| Kurtosis | 0.808 | 1.156 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1900+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.538 mm** |
| **STD** | **0.567 mm** |
| **Skewness** | **-0.238** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.38 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.66 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 17.8 |

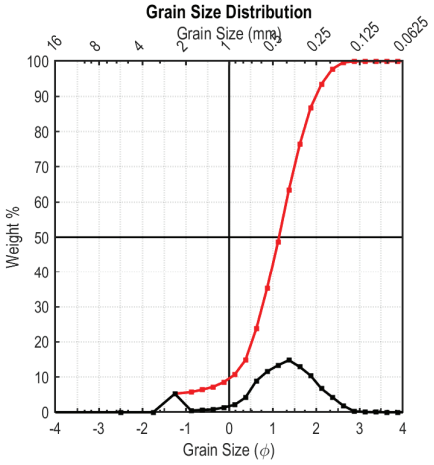
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.54 | 2.41 | 2.41 |
| -0.75 | -0.875 | 1.32 | 1.25 | 3.66 |
| -0.5 | -0.625 | 2.75 | 2.61 | 6.27 |
| -0.25 | -0.375 | 2.59 | 2.46 | 8.73 |
| 0 | -0.125 | 4.76 | 4.52 | 13.25 |
| 0.25 | 0.125 | 5.64 | 5.35 | 18.60 |
| 0.5 | 0.375 | 8.19 | 7.77 | 26.37 |
| 0.75 | 0.625 | 13.92 | 13.21 | 39.58 |
| 1 | 0.875 | 14.95 | 14.19 | 53.77 |
| 1.25 | 1.125 | 14.44 | 13.70 | 67.47 |
| 1.5 | 1.375 | 12.85 | 12.19 | 79.66 |
| 1.75 | 1.625 | 8.59 | 8.15 | 87.82 |
| 2 | 1.875 | 5.24 | 4.97 | 92.79 |
| 2.25 | 2.125 | 2.67 | 2.53 | 95.32 |
| 2.5 | 2.375 | 2.04 | 1.94 | 97.26 |
| 2.75 | 2.625 | 1.57 | 1.49 | 98.75 |
| 3 | 2.875 | 0.71 | 0.67 | 99.42 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.85 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.545 |
| **5** | -0.745 |
| **16** | 0.005 |
| **25** | 0.330 |
| **50** | 0.810 |
| **75** | 1.280 |
| **84** | 1.510 |
| **95** | 2.095 |
| **99** | 2.720 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.895 | 0.538 |
| Standard Deviation | 0.818 | 0.567 |
| Skewness | -0.238 | |
| Kurtosis | 3.446 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.757 | 0.775 |
| Standard Deviation | 0.752 | 0.807 |
| Skewness (1) | -0.070 | -0.082 |
| Skewness (2) | -0.179 | |
| Kurtosis | 0.887 | 1.225 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1900+00** |
| **Sample** | **Swash** |
| **Mean** | **0.448 mm** |
| **STD** | **0.552 mm** |
| **Skewness** | **-1.046** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 97.06 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 5.73 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 19.9 |

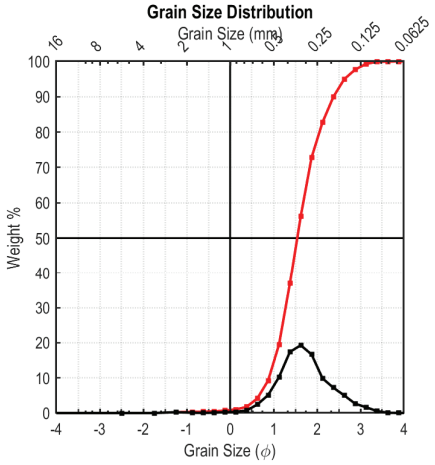
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.11 | 5.26 | 5.26 |
| -0.75 | -0.875 | 0.45 | 0.46 | 5.73 |
| -0.5 | -0.625 | 0.66 | 0.68 | 6.41 |
| -0.25 | -0.375 | 0.76 | 0.78 | 7.19 |
| 0 | -0.125 | 1.31 | 1.35 | 8.54 |
| 0.25 | 0.125 | 2.06 | 2.12 | 10.66 |
| 0.5 | 0.375 | 4.04 | 4.16 | 14.83 |
| 0.75 | 0.625 | 8.64 | 8.90 | 23.73 |
| 1 | 0.875 | 11.24 | 11.58 | 35.31 |
| 1.25 | 1.125 | 12.95 | 13.34 | 48.65 |
| 1.5 | 1.375 | 14.36 | 14.79 | 63.45 |
| 1.75 | 1.625 | 12.52 | 12.90 | 76.34 |
| 2 | 1.875 | 10.12 | 10.43 | 86.77 |
| 2.25 | 2.125 | 6.51 | 6.71 | 93.48 |
| 2.5 | 2.375 | 4.15 | 4.28 | 97.75 |
| 2.75 | 2.625 | 1.83 | 1.89 | 99.64 |
| 3 | 2.875 | 0.27 | 0.28 | 99.92 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.655 |
| **5** | -1.275 |
| **16** | 0.410 |
| **25** | 0.650 |
| **50** | 1.150 |
| **75** | 1.600 |
| **84** | 1.810 |
| **95** | 2.215 |
| **99** | 2.540 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.159 | 0.448 |
| Standard Deviation | 0.858 | 0.552 |
| Skewness | -1.046 | |
| Kurtosis | 4.353 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.110 | 1.123 |
| Standard Deviation | 0.700 | 0.879 |
| Skewness (1) | -0.057 | -0.223 |
| Skewness (2) | -0.971 | |
| Kurtosis | 1.493 | 1.506 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1910+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.307 mm** |
| **STD** | **0.657 mm** |
| **Skewness** | **-0.107** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.75 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.33 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

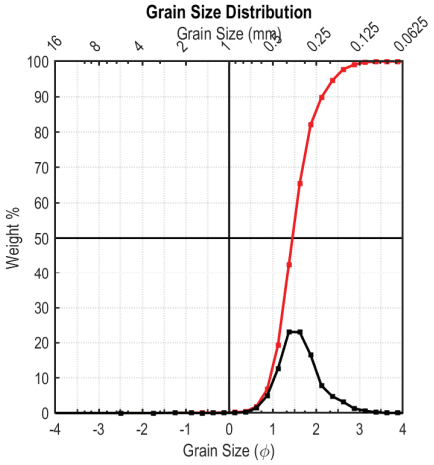
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.26 | 0.25 | 0.25 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.33 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.36 |
| -0.25 | -0.375 | 0.11 | 0.10 | 0.46 |
| 0 | -0.125 | 0.25 | 0.24 | 0.70 |
| 0.25 | 0.125 | 0.33 | 0.31 | 1.01 |
| 0.5 | 0.375 | 0.76 | 0.72 | 1.73 |
| 0.75 | 0.625 | 2.54 | 2.40 | 4.13 |
| 1 | 0.875 | 5.42 | 5.13 | 9.26 |
| 1.25 | 1.125 | 10.83 | 10.24 | 19.50 |
| 1.5 | 1.375 | 18.39 | 17.39 | 36.89 |
| 1.75 | 1.625 | 20.40 | 19.29 | 56.18 |
| 2 | 1.875 | 17.62 | 16.66 | 72.84 |
| 2.25 | 2.125 | 10.45 | 9.88 | 82.72 |
| 2.5 | 2.375 | 7.63 | 7.22 | 89.94 |
| 2.75 | 2.625 | 5.31 | 5.02 | 94.96 |
| 3 | 2.875 | 2.84 | 2.69 | 97.65 |
| 3.25 | 3.125 | 1.75 | 1.65 | 99.30 |
| 3.5 | 3.375 | 0.62 | 0.59 | 99.89 |
| 3.75 | 3.625 | 0.09 | 0.09 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.115 |
| **5** | 0.665 |
| **16** | 1.040 |
| **25** | 1.205 |
| **50** | 1.545 |
| **75** | 1.930 |
| **84** | 2.170 |
| **95** | 2.630 |
| **99** | 3.080 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.705 | 0.307 |
| Standard Deviation | 0.606 | 0.657 |
| Skewness | -0.107 | |
| Kurtosis | 4.648 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.605 | 1.585 |
| Standard Deviation | 0.565 | 0.580 |
| Skewness (1) | 0.106 | 0.105 |
| Skewness (2) | 0.181 | |
| Kurtosis | 0.739 | 1.111 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1910+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.324 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **0.449** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

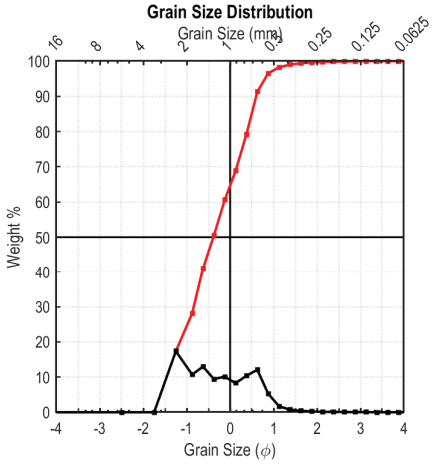
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.08 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.08 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.09 |
| 0 | -0.125 | 0.03 | 0.03 | 0.11 |
| 0.25 | 0.125 | 0.07 | 0.07 | 0.18 |
| 0.5 | 0.375 | 0.25 | 0.24 | 0.42 |
| 0.75 | 0.625 | 1.48 | 1.41 | 1.82 |
| 1 | 0.875 | 5.15 | 4.89 | 6.72 |
| 1.25 | 1.125 | 13.33 | 12.66 | 19.38 |
| 1.5 | 1.375 | 24.31 | 23.09 | 42.47 |
| 1.75 | 1.625 | 24.22 | 23.01 | 65.48 |
| 2 | 1.875 | 17.42 | 16.55 | 82.03 |
| 2.25 | 2.125 | 8.20 | 7.79 | 89.82 |
| 2.5 | 2.375 | 5.00 | 4.75 | 94.57 |
| 2.75 | 2.625 | 3.36 | 3.19 | 97.76 |
| 3 | 2.875 | 1.38 | 1.31 | 99.07 |
| 3.25 | 3.125 | 0.71 | 0.67 | 99.74 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.92 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.480 |
| **5** | 0.785 |
| **16** | 1.060 |
| **25** | 1.185 |
| **50** | 1.455 |
| **75** | 1.770 |
| **84** | 1.940 |
| **95** | 2.410 |
| **99** | 2.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.626 | 0.324 |
| Standard Deviation | 0.483 | 0.715 |
| Skewness | 0.449 | |
| Kurtosis | 4.650 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.500 | 1.485 |
| Standard Deviation | 0.440 | 0.466 |
| Skewness (1) | 0.102 | 0.139 |
| Skewness (2) | 0.324 | |
| Kurtosis | 0.847 | 1.138 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1910+00** |
| **Sample** | **Swash** |
| **Mean** | **1.164 mm** |
| **STD** | **0.598 mm** |
| **Skewness** | **0.320** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Very Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 61.42 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 28.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.3 |

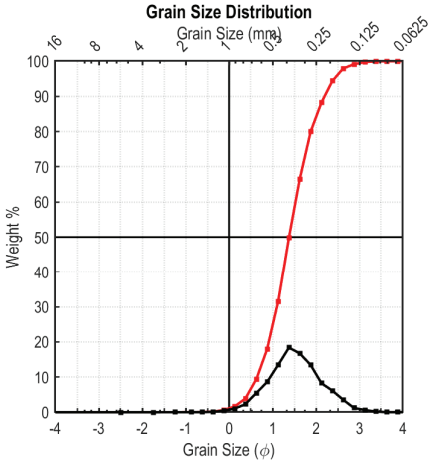
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 10.65 | 17.34 | 17.34 |
| -0.75 | -0.875 | 6.58 | 10.71 | 28.05 |
| -0.5 | -0.625 | 7.97 | 12.98 | 41.03 |
| -0.25 | -0.375 | 5.79 | 9.43 | 50.46 |
| 0 | -0.125 | 6.21 | 10.11 | 60.57 |
| 0.25 | 0.125 | 5.08 | 8.27 | 68.84 |
| 0.5 | 0.375 | 6.37 | 10.37 | 79.21 |
| 0.75 | 0.625 | 7.41 | 12.06 | 91.27 |
| 1 | 0.875 | 3.24 | 5.28 | 96.55 |
| 1.25 | 1.125 | 1.04 | 1.69 | 98.24 |
| 1.5 | 1.375 | 0.46 | 0.75 | 98.99 |
| 1.75 | 1.625 | 0.25 | 0.41 | 99.40 |
| 2 | 1.875 | 0.15 | 0.24 | 99.64 |
| 2.25 | 2.125 | 0.07 | 0.11 | 99.76 |
| 2.5 | 2.375 | 0.06 | 0.10 | 99.85 |
| 2.75 | 2.625 | 0.04 | 0.07 | 99.92 |
| 3 | 2.875 | 0.03 | 0.05 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.03 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.720 |
| **5** | -1.605 |
| **16** | -1.290 |
| **25** | -0.980 |
| **50** | -0.385 |
| **75** | 0.275 |
| **84** | 0.475 |
| **95** | 0.800 |
| **99** | 1.380 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | -0.219 | 1.164 |
| Standard Deviation | 0.742 | 0.598 |
| Skewness | 0.320 | |
| Kurtosis | 2.551 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -0.407 | -0.400 |
| Standard Deviation | 0.883 | 0.806 |
| Skewness (1) | -0.025 | -0.020 |
| Skewness (2) | -0.020 | |
| Kurtosis | 0.363 | 0.785 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1920+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.348 mm** |
| **STD** | **0.660 mm** |
| **Skewness** | **0.076** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.29 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.7 |

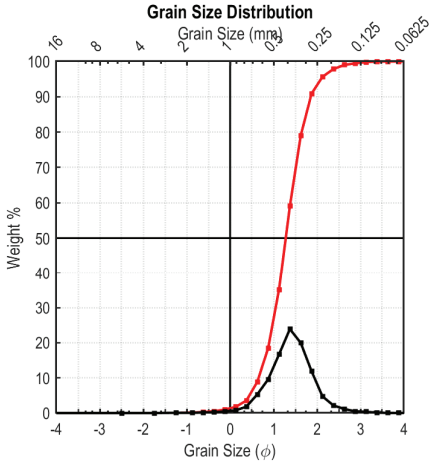
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.05 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.17 |
| 0 | -0.125 | 0.46 | 0.44 | 0.61 |
| 0.25 | 0.125 | 1.07 | 1.02 | 1.62 |
| 0.5 | 0.375 | 2.41 | 2.29 | 3.91 |
| 0.75 | 0.625 | 5.76 | 5.47 | 9.38 |
| 1 | 0.875 | 9.06 | 8.60 | 17.99 |
| 1.25 | 1.125 | 14.13 | 13.42 | 31.41 |
| 1.5 | 1.375 | 19.35 | 18.38 | 49.79 |
| 1.75 | 1.625 | 17.62 | 16.73 | 66.52 |
| 2 | 1.875 | 14.16 | 13.45 | 79.97 |
| 2.25 | 2.125 | 8.69 | 8.25 | 88.22 |
| 2.5 | 2.375 | 6.46 | 6.14 | 94.36 |
| 2.75 | 2.625 | 3.75 | 3.56 | 97.92 |
| 3 | 2.875 | 1.27 | 1.21 | 99.13 |
| 3.25 | 3.125 | 0.66 | 0.63 | 99.75 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.030 |
| **5** | 0.425 |
| **16** | 0.815 |
| **25** | 1.005 |
| **50** | 1.380 |
| **75** | 1.785 |
| **84** | 1.995 |
| **95** | 2.420 |
| **99** | 2.850 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.523 | 0.348 |
| Standard Deviation | 0.599 | 0.660 |
| Skewness | 0.076 | |
| Kurtosis | 3.259 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.405 | 1.397 |
| Standard Deviation | 0.590 | 0.597 |
| Skewness (1) | 0.042 | 0.042 |
| Skewness (2) | 0.072 | |
| Kurtosis | 0.691 | 1.048 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1920+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.379 mm** |
| **STD** | **0.700 mm** |
| **Skewness** | **-0.083** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.21 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.12 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

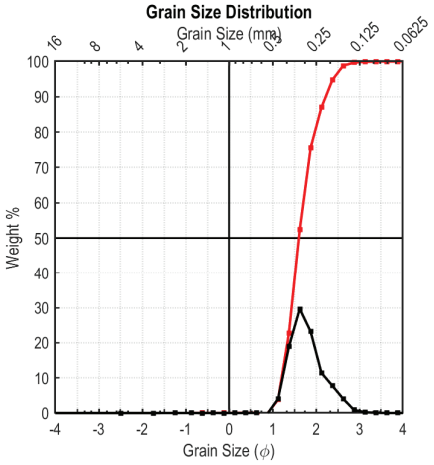
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.12 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.29 |
| -0.25 | -0.375 | 0.23 | 0.22 | 0.50 |
| 0 | -0.125 | 0.50 | 0.48 | 0.98 |
| 0.25 | 0.125 | 0.79 | 0.75 | 1.73 |
| 0.5 | 0.375 | 1.93 | 1.83 | 3.56 |
| 0.75 | 0.625 | 5.59 | 5.31 | 8.88 |
| 1 | 0.875 | 10.10 | 9.60 | 18.48 |
| 1.25 | 1.125 | 17.55 | 16.68 | 35.16 |
| 1.5 | 1.375 | 25.15 | 23.90 | 59.06 |
| 1.75 | 1.625 | 21.00 | 19.96 | 79.02 |
| 2 | 1.875 | 12.49 | 11.87 | 90.89 |
| 2.25 | 2.125 | 4.99 | 4.74 | 95.64 |
| 2.5 | 2.375 | 2.29 | 2.18 | 97.81 |
| 2.75 | 2.625 | 1.22 | 1.16 | 98.97 |
| 3 | 2.875 | 0.52 | 0.49 | 99.47 |
| 3.25 | 3.125 | 0.37 | 0.35 | 99.82 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.120 |
| **5** | 0.445 |
| **16** | 0.810 |
| **25** | 0.975 |
| **50** | 1.280 |
| **75** | 1.575 |
| **84** | 1.730 |
| **95** | 2.090 |
| **99** | 2.640 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.399 | 0.379 |
| Standard Deviation | 0.514 | 0.700 |
| Skewness | -0.083 | |
| Kurtosis | 5.039 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.270 | 1.273 |
| Standard Deviation | 0.460 | 0.479 |
| Skewness (1) | -0.022 | -0.018 |
| Skewness (2) | -0.027 | |
| Kurtosis | 0.788 | 1.124 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1920+00** |
| **Sample** | **Swash** |
| **Mean** | **0.289 mm** |
| **STD** | **0.767 mm** |
| **Skewness** | **0.657** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.78 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.4 |

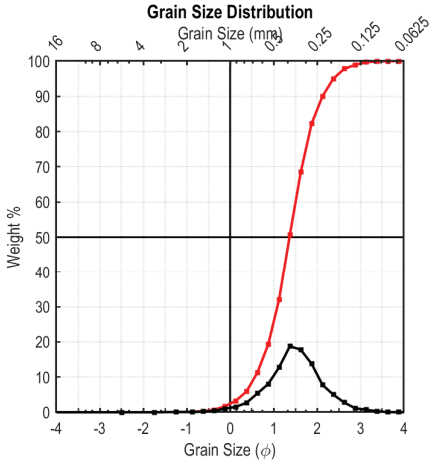
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.02 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.02 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.03 |
| 0 | -0.125 | 0.00 | 0.00 | 0.03 |
| 0.25 | 0.125 | 0.01 | 0.01 | 0.04 |
| 0.5 | 0.375 | 0.01 | 0.01 | 0.05 |
| 0.75 | 0.625 | 0.05 | 0.05 | 0.10 |
| 1 | 0.875 | -0.34 | -0.32 | -0.23 |
| 1.25 | 1.125 | 4.25 | 4.06 | 3.83 |
| 1.5 | 1.375 | 19.79 | 18.89 | 22.71 |
| 1.75 | 1.625 | 31.07 | 29.65 | 52.37 |
| 2 | 1.875 | 24.29 | 23.18 | 75.55 |
| 2.25 | 2.125 | 11.97 | 11.42 | 86.97 |
| 2.5 | 2.375 | 8.14 | 7.77 | 94.74 |
| 2.75 | 2.625 | 4.25 | 4.06 | 98.80 |
| 3 | 2.875 | 0.91 | 0.87 | 99.67 |
| 3.25 | 3.125 | 0.23 | 0.22 | 99.89 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.950 |
| **5** | 1.140 |
| **16** | 1.285 |
| **25** | 1.395 |
| **50** | 1.605 |
| **75** | 1.870 |
| **84** | 2.060 |
| **95** | 2.390 |
| **99** | 2.685 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.789 | 0.289 |
| Standard Deviation | 0.383 | 0.767 |
| Skewness | 0.657 | |
| Kurtosis | 4.351 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.673 | 1.650 |
| Standard Deviation | 0.387 | 0.383 |
| Skewness (1) | 0.174 | 0.215 |
| Skewness (2) | 0.413 | |
| Kurtosis | 0.613 | 1.079 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.358 mm** |
| **STD** | **0.648 mm** |
| **Skewness** | **-0.168** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.66 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.5 |

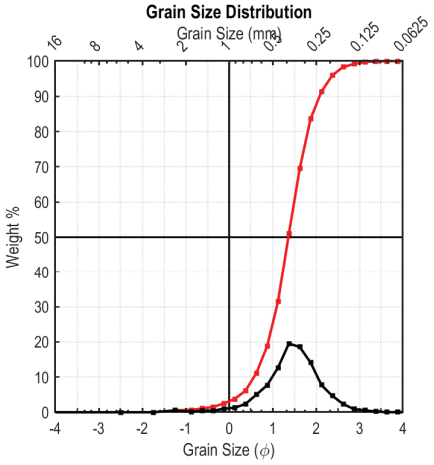
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.07 | 0.06 | 0.13 |
| -0.5 | -0.625 | 0.19 | 0.18 | 0.31 |
| -0.25 | -0.375 | 0.38 | 0.35 | 0.67 |
| 0 | -0.125 | 1.09 | 1.03 | 1.70 |
| 0.25 | 0.125 | 1.59 | 1.51 | 3.20 |
| 0.5 | 0.375 | 2.83 | 2.68 | 5.89 |
| 0.75 | 0.625 | 5.62 | 5.32 | 11.21 |
| 1 | 0.875 | 8.47 | 8.02 | 19.22 |
| 1.25 | 1.125 | 13.44 | 12.72 | 31.94 |
| 1.5 | 1.375 | 19.81 | 18.75 | 50.69 |
| 1.75 | 1.625 | 18.78 | 17.77 | 68.46 |
| 2 | 1.875 | 14.56 | 13.78 | 82.24 |
| 2.25 | 2.125 | 8.22 | 7.78 | 90.02 |
| 2.5 | 2.375 | 5.28 | 5.00 | 95.02 |
| 2.75 | 2.625 | 2.93 | 2.77 | 97.79 |
| 3 | 2.875 | 1.20 | 1.14 | 98.93 |
| 3.25 | 3.125 | 0.78 | 0.74 | 99.67 |
| 3.5 | 3.375 | 0.29 | 0.28 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.01 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.295 |
| **5** | 0.290 |
| **16** | 0.775 |
| **25** | 0.990 |
| **50** | 1.365 |
| **75** | 1.745 |
| **84** | 1.930 |
| **95** | 2.375 |
| **99** | 2.900 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.482 | 0.358 |
| Standard Deviation | 0.625 | 0.648 |
| Skewness | -0.168 | |
| Kurtosis | 3.794 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.353 | 1.357 |
| Standard Deviation | 0.578 | 0.605 |
| Skewness (1) | -0.022 | -0.026 |
| Skewness (2) | -0.056 | |
| Kurtosis | 0.805 | 1.132 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.364 mm** |
| **STD** | **0.643 mm** |
| **Skewness** | **-0.599** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.41 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.67 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.2 |

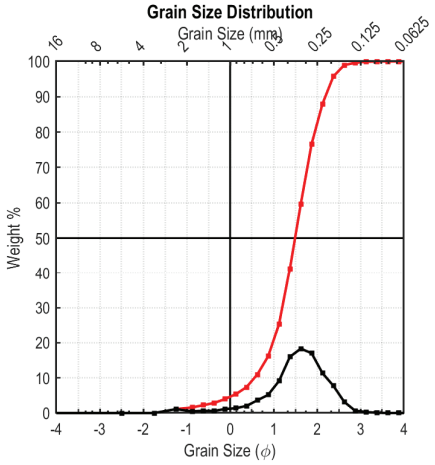
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.55 | 0.53 | 0.53 |
| -0.75 | -0.875 | 0.15 | 0.15 | 0.67 |
| -0.5 | -0.625 | 0.39 | 0.37 | 1.04 |
| -0.25 | -0.375 | 0.47 | 0.45 | 1.49 |
| 0 | -0.125 | 1.03 | 0.98 | 2.47 |
| 0.25 | 0.125 | 1.36 | 1.29 | 3.76 |
| 0.5 | 0.375 | 2.48 | 2.35 | 6.11 |
| 0.75 | 0.625 | 5.24 | 4.98 | 11.08 |
| 1 | 0.875 | 8.11 | 7.70 | 18.78 |
| 1.25 | 1.125 | 13.36 | 12.67 | 31.45 |
| 1.5 | 1.375 | 20.58 | 19.53 | 50.98 |
| 1.75 | 1.625 | 19.54 | 18.54 | 69.52 |
| 2 | 1.875 | 14.86 | 14.10 | 83.62 |
| 2.25 | 2.125 | 8.14 | 7.73 | 91.34 |
| 2.5 | 2.375 | 4.90 | 4.65 | 95.99 |
| 2.75 | 2.625 | 2.46 | 2.33 | 98.33 |
| 3 | 2.875 | 0.92 | 0.87 | 99.20 |
| 3.25 | 3.125 | 0.58 | 0.55 | 99.75 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.655 |
| **5** | 0.255 |
| **16** | 0.785 |
| **25** | 1.000 |
| **50** | 1.360 |
| **75** | 1.720 |
| **84** | 1.885 |
| **95** | 2.320 |
| **99** | 2.820 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.459 | 0.364 |
| Standard Deviation | 0.638 | 0.643 |
| Skewness | -0.599 | |
| Kurtosis | 5.038 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.335 | 1.343 |
| Standard Deviation | 0.550 | 0.588 |
| Skewness (1) | -0.045 | -0.058 |
| Skewness (2) | -0.132 | |
| Kurtosis | 0.877 | 1.175 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.346 mm** |
| **STD** | **0.613 mm** |
| **Skewness** | **-1.212** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.11 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.59 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.1 |

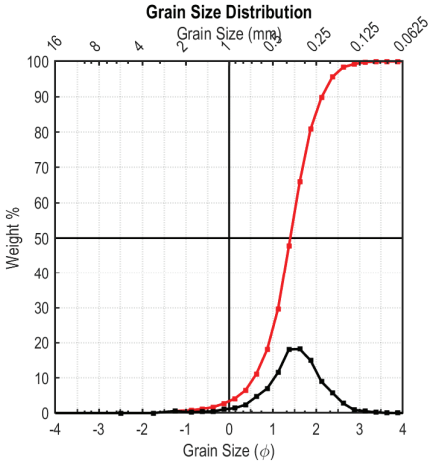
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.13 | 1.11 | 1.11 |
| -0.75 | -0.875 | 0.49 | 0.48 | 1.59 |
| -0.5 | -0.625 | 0.66 | 0.65 | 2.24 |
| -0.25 | -0.375 | 0.61 | 0.60 | 2.84 |
| 0 | -0.125 | 1.15 | 1.12 | 3.96 |
| 0.25 | 0.125 | 1.40 | 1.37 | 5.33 |
| 0.5 | 0.375 | 2.06 | 2.01 | 7.35 |
| 0.75 | 0.625 | 3.70 | 3.62 | 10.97 |
| 1 | 0.875 | 5.29 | 5.18 | 16.15 |
| 1.25 | 1.125 | 9.32 | 9.13 | 25.28 |
| 1.5 | 1.375 | 16.34 | 16.00 | 41.28 |
| 1.75 | 1.625 | 18.70 | 18.31 | 59.59 |
| 2 | 1.875 | 17.39 | 17.03 | 76.62 |
| 2.25 | 2.125 | 11.59 | 11.35 | 87.97 |
| 2.5 | 2.375 | 7.93 | 7.77 | 95.74 |
| 2.75 | 2.625 | 3.27 | 3.20 | 98.94 |
| 3 | 2.875 | 0.69 | 0.68 | 99.62 |
| 3.25 | 3.125 | 0.30 | 0.29 | 99.91 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.300 |
| **5** | 0.065 |
| **16** | 0.870 |
| **25** | 1.115 |
| **50** | 1.495 |
| **75** | 1.850 |
| **84** | 2.040 |
| **95** | 2.350 |
| **99** | 2.645 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.533 | 0.346 |
| Standard Deviation | 0.707 | 0.613 |
| Skewness | -1.212 | |
| Kurtosis | 5.656 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.455 | 1.468 |
| Standard Deviation | 0.585 | 0.639 |
| Skewness (1) | -0.068 | -0.160 |
| Skewness (2) | -0.491 | |
| Kurtosis | 0.953 | 1.274 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.356 mm** |
| **STD** | **0.634 mm** |
| **Skewness** | **-0.709** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.39 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.79 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.9 |

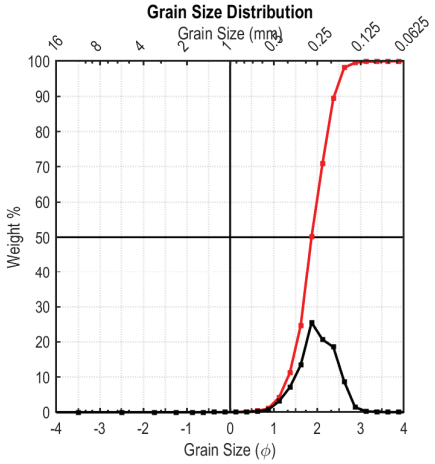
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -3 | -4.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.59 | 0.56 | 0.56 |
| -0.75 | -0.875 | 0.24 | 0.23 | 0.79 |
| -0.5 | -0.625 | 0.41 | 0.40 | 1.18 |
| -0.25 | -0.375 | 0.49 | 0.47 | 1.65 |
| 0 | -0.125 | 1.09 | 1.04 | 2.69 |
| 0.25 | 0.125 | 1.45 | 1.39 | 4.08 |
| 0.5 | 0.375 | 2.46 | 2.35 | 6.44 |
| 0.75 | 0.625 | 4.85 | 4.65 | 11.09 |
| 1 | 0.875 | 7.29 | 6.99 | 18.07 |
| 1.25 | 1.125 | 12.04 | 11.53 | 29.60 |
| 1.5 | 1.375 | 18.91 | 18.11 | 47.72 |
| 1.75 | 1.625 | 19.01 | 18.21 | 65.92 |
| 2 | 1.875 | 15.60 | 14.95 | 80.87 |
| 2.25 | 2.125 | 9.32 | 8.93 | 89.80 |
| 2.5 | 2.375 | 6.04 | 5.78 | 95.58 |
| 2.75 | 2.625 | 2.88 | 2.76 | 98.34 |
| 3 | 2.875 | 0.94 | 0.90 | 99.24 |
| 3.25 | 3.125 | 0.55 | 0.53 | 99.77 |
| 3.5 | 3.375 | 0.19 | 0.19 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.740 |
| **5** | 0.220 |
| **16** | 0.800 |
| **25** | 1.025 |
| **50** | 1.405 |
| **75** | 1.775 |
| **84** | 1.965 |
| **95** | 2.350 |
| **99** | 2.805 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.491 | 0.356 |
| Standard Deviation | 0.658 | 0.634 |
| Skewness | -0.709 | |
| Kurtosis | 4.931 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.382 | 1.390 |
| Standard Deviation | 0.583 | 0.614 |
| Skewness (1) | -0.039 | -0.076 |
| Skewness (2) | -0.206 | |
| Kurtosis | 0.828 | 1.164 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **980+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.250 mm** |
| **STD** | **0.749 mm** |
| **Skewness** | **-0.265** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.39 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

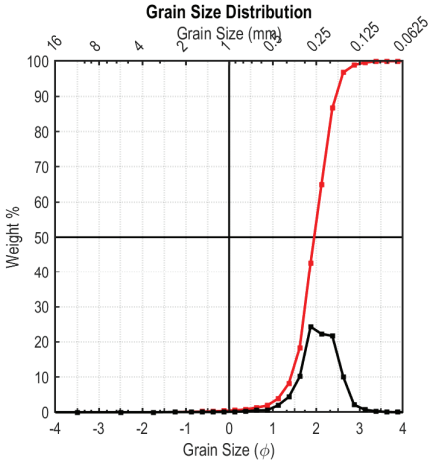
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.01 | 0.01 | 0.03 |
| 0.25 | 0.125 | 0.04 | 0.04 | 0.07 |
| 0.5 | 0.375 | 0.08 | 0.08 | 0.14 |
| 0.75 | 0.625 | 0.22 | 0.21 | 0.35 |
| 1 | 0.875 | 0.74 | 0.70 | 1.05 |
| 1.25 | 1.125 | 3.27 | 3.10 | 4.16 |
| 1.5 | 1.375 | 7.49 | 7.11 | 11.26 |
| 1.75 | 1.625 | 14.14 | 13.42 | 24.68 |
| 2 | 1.875 | 26.88 | 25.51 | 50.19 |
| 2.25 | 2.125 | 21.78 | 20.67 | 70.85 |
| 2.5 | 2.375 | 19.53 | 18.53 | 89.38 |
| 2.75 | 2.625 | 9.21 | 8.74 | 98.12 |
| 3 | 2.875 | 1.53 | 1.45 | 99.57 |
| 3.25 | 3.125 | 0.28 | 0.27 | 99.84 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.96 |
| 4 | 3.875 | 0.03 | 0.03 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.855 |
| **5** | 1.155 |
| **16** | 1.465 |
| **25** | 1.630 |
| **50** | 1.875 |
| **75** | 2.180 |
| **84** | 2.300 |
| **95** | 2.535 |
| **99** | 2.775 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.001 | 0.250 |
| Standard Deviation | 0.417 | 0.749 |
| Skewness | -0.265 | |
| Kurtosis | 3.622 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.882 | 1.880 |
| Standard Deviation | 0.417 | 0.418 |
| Skewness (1) | 0.018 | -0.013 |
| Skewness (2) | -0.072 | |
| Kurtosis | 0.653 | 1.028 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **980+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.240 mm** |
| **STD** | **0.729 mm** |
| **Skewness** | **-1.103** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.70 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

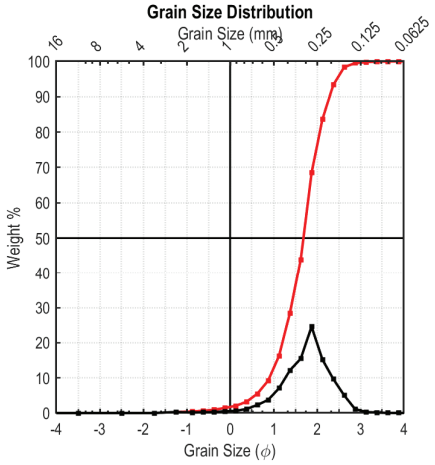
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.11 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.18 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.26 |
| 0 | -0.125 | 0.13 | 0.12 | 0.38 |
| 0.25 | 0.125 | 0.15 | 0.14 | 0.53 |
| 0.5 | 0.375 | 0.29 | 0.28 | 0.80 |
| 0.75 | 0.625 | 0.54 | 0.52 | 1.32 |
| 1 | 0.875 | 0.61 | 0.58 | 1.90 |
| 1.25 | 1.125 | 2.06 | 1.97 | 3.87 |
| 1.5 | 1.375 | 4.56 | 4.36 | 8.22 |
| 1.75 | 1.625 | 10.60 | 10.12 | 18.35 |
| 2 | 1.875 | 25.47 | 24.33 | 42.67 |
| 2.25 | 2.125 | 23.30 | 22.25 | 64.93 |
| 2.5 | 2.375 | 22.73 | 21.71 | 86.64 |
| 2.75 | 2.625 | 10.59 | 10.11 | 96.75 |
| 3 | 2.875 | 2.24 | 2.14 | 98.89 |
| 3.25 | 3.125 | 0.76 | 0.73 | 99.62 |
| 3.5 | 3.375 | 0.31 | 0.30 | 99.91 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.470 |
| **5** | 1.190 |
| **16** | 1.565 |
| **25** | 1.695 |
| **50** | 1.955 |
| **75** | 2.240 |
| **84** | 2.345 |
| **95** | 2.580 |
| **99** | 2.910 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.062 | 0.240 |
| Standard Deviation | 0.456 | 0.729 |
| Skewness | -1.103 | |
| Kurtosis | 8.101 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.955 | 1.955 |
| Standard Deviation | 0.390 | 0.406 |
| Skewness (1) | -0.000 | -0.050 |
| Skewness (2) | -0.179 | |
| Kurtosis | 0.782 | 1.045 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **980+00** |
| **Sample** | **Swash** |
| **Mean** | **0.300 mm** |
| **STD** | **0.664 mm** |
| **Skewness** | **-1.055** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.61 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.30 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

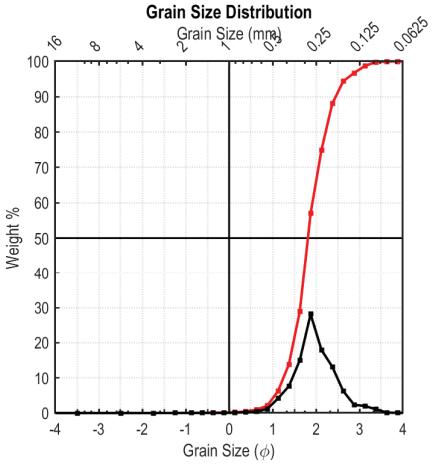
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.32 | 0.30 | 0.30 |
| -0.75 | -0.875 | 0.13 | 0.12 | 0.43 |
| -0.5 | -0.625 | 0.24 | 0.23 | 0.65 |
| -0.25 | -0.375 | 0.29 | 0.27 | 0.93 |
| 0 | -0.125 | 0.53 | 0.50 | 1.43 |
| 0.25 | 0.125 | 0.65 | 0.62 | 2.05 |
| 0.5 | 0.375 | 1.21 | 1.15 | 3.19 |
| 0.75 | 0.625 | 2.42 | 2.29 | 5.48 |
| 1 | 0.875 | 3.95 | 3.74 | 9.22 |
| 1.25 | 1.125 | 7.45 | 7.05 | 16.28 |
| 1.5 | 1.375 | 12.82 | 12.14 | 28.42 |
| 1.75 | 1.625 | 16.35 | 15.48 | 43.90 |
| 2 | 1.875 | 25.96 | 24.58 | 68.48 |
| 2.25 | 2.125 | 16.05 | 15.20 | 83.68 |
| 2.5 | 2.375 | 10.21 | 9.67 | 93.34 |
| 2.75 | 2.625 | 5.31 | 5.03 | 98.37 |
| 3 | 2.875 | 1.20 | 1.14 | 99.51 |
| 3.25 | 3.125 | 0.32 | 0.30 | 99.81 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.340 |
| **5** | 0.570 |
| **16** | 1.115 |
| **25** | 1.305 |
| **50** | 1.685 |
| **75** | 1.980 |
| **84** | 2.135 |
| **95** | 2.455 |
| **99** | 2.765 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.736 | 0.300 |
| Standard Deviation | 0.590 | 0.664 |
| Skewness | -1.055 | |
| Kurtosis | 6.040 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.625 | 1.645 |
| Standard Deviation | 0.510 | 0.541 |
| Skewness (1) | -0.118 | -0.150 |
| Skewness (2) | -0.338 | |
| Kurtosis | 0.848 | 1.145 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **990+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.255 mm** |
| **STD** | **0.711 mm** |
| **Skewness** | **0.053** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.82 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

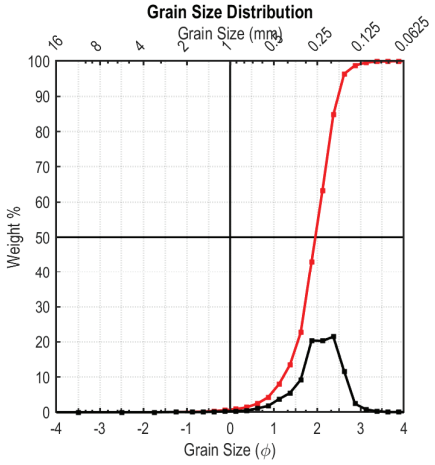
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.03 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.07 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.09 |
| 0 | -0.125 | 0.03 | 0.03 | 0.12 |
| 0.25 | 0.125 | 0.10 | 0.09 | 0.22 |
| 0.5 | 0.375 | 0.22 | 0.21 | 0.43 |
| 0.75 | 0.625 | 0.53 | 0.50 | 0.93 |
| 1 | 0.875 | 1.20 | 1.13 | 2.06 |
| 1.25 | 1.125 | 4.41 | 4.17 | 6.23 |
| 1.5 | 1.375 | 8.07 | 7.63 | 13.85 |
| 1.75 | 1.625 | 15.84 | 14.97 | 28.82 |
| 2 | 1.875 | 29.77 | 28.13 | 56.96 |
| 2.25 | 2.125 | 19.02 | 17.97 | 74.93 |
| 2.5 | 2.375 | 13.92 | 13.15 | 88.08 |
| 2.75 | 2.625 | 6.64 | 6.27 | 94.36 |
| 3 | 2.875 | 2.51 | 2.37 | 96.73 |
| 3.25 | 3.125 | 2.10 | 1.98 | 98.71 |
| 3.5 | 3.375 | 1.16 | 1.10 | 99.81 |
| 3.75 | 3.625 | 0.14 | 0.13 | 99.94 |
| 4 | 3.875 | 0.05 | 0.05 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.640 |
| **5** | 1.050 |
| **16** | 1.410 |
| **25** | 1.560 |
| **50** | 1.815 |
| **75** | 2.125 |
| **84** | 2.295 |
| **95** | 2.695 |
| **99** | 3.190 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.969 | 0.255 |
| Standard Deviation | 0.492 | 0.711 |
| Skewness | 0.053 | |
| Kurtosis | 4.685 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.853 | 1.840 |
| Standard Deviation | 0.442 | 0.470 |
| Skewness (1) | 0.085 | 0.077 |
| Skewness (2) | 0.130 | |
| Kurtosis | 0.859 | 1.193 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **990+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.246 mm** |
| **STD** | **0.691 mm** |
| **Skewness** | **-1.102** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.34 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.2 |

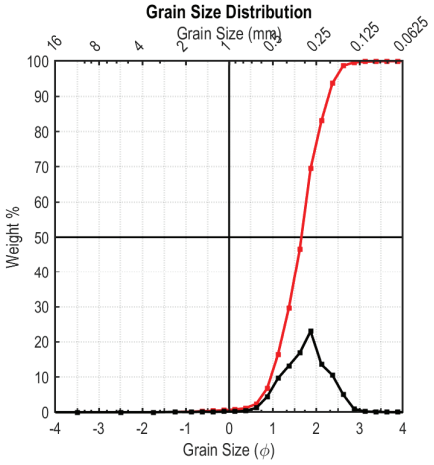
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.09 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.17 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.33 |
| 0 | -0.125 | 0.26 | 0.25 | 0.58 |
| 0.25 | 0.125 | 0.33 | 0.31 | 0.89 |
| 0.5 | 0.375 | 0.51 | 0.48 | 1.38 |
| 0.75 | 0.625 | 1.14 | 1.08 | 2.46 |
| 1 | 0.875 | 1.89 | 1.79 | 4.25 |
| 1.25 | 1.125 | 3.93 | 3.73 | 7.98 |
| 1.5 | 1.375 | 5.74 | 5.45 | 13.43 |
| 1.75 | 1.625 | 9.72 | 9.23 | 22.66 |
| 2 | 1.875 | 21.46 | 20.37 | 43.03 |
| 2.25 | 2.125 | 21.34 | 20.26 | 63.29 |
| 2.5 | 2.375 | 22.63 | 21.48 | 84.77 |
| 2.75 | 2.625 | 12.23 | 11.61 | 96.38 |
| 3 | 2.875 | 2.53 | 2.40 | 98.78 |
| 3.25 | 3.125 | 0.86 | 0.82 | 99.60 |
| 3.5 | 3.375 | 0.29 | 0.28 | 99.88 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.94 |
| 4 | 3.875 | 0.05 | 0.05 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.180 |
| **5** | 0.925 |
| **16** | 1.445 |
| **25** | 1.655 |
| **50** | 1.960 |
| **75** | 2.260 |
| **84** | 2.365 |
| **95** | 2.595 |
| **99** | 2.940 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.025 | 0.246 |
| Standard Deviation | 0.533 | 0.691 |
| Skewness | -1.102 | |
| Kurtosis | 6.096 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.905 | 1.923 |
| Standard Deviation | 0.460 | 0.483 |
| Skewness (1) | -0.120 | -0.180 |
| Skewness (2) | -0.435 | |
| Kurtosis | 0.815 | 1.131 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **990+00** |
| **Sample** | **Swash** |
| **Mean** | **0.297 mm** |
| **STD** | **0.695 mm** |
| **Skewness** | **-0.532** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.48 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.2 |

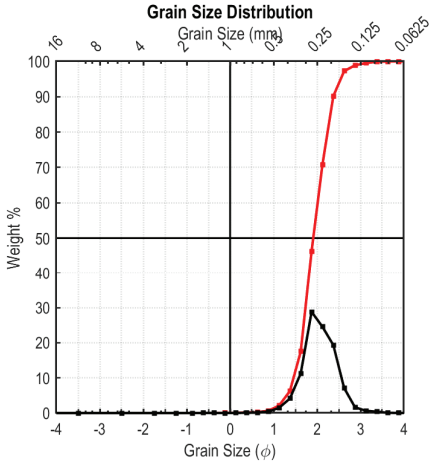
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.09 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.13 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.29 |
| -0.25 | -0.375 | 0.10 | 0.09 | 0.39 |
| 0 | -0.125 | 0.19 | 0.18 | 0.57 |
| 0.25 | 0.125 | 0.22 | 0.21 | 0.78 |
| 0.5 | 0.375 | 0.38 | 0.36 | 1.14 |
| 0.75 | 0.625 | 1.31 | 1.24 | 2.38 |
| 1 | 0.875 | 4.64 | 4.40 | 6.78 |
| 1.25 | 1.125 | 10.19 | 9.66 | 16.44 |
| 1.5 | 1.375 | 13.93 | 13.21 | 29.65 |
| 1.75 | 1.625 | 17.77 | 16.85 | 46.49 |
| 2 | 1.875 | 24.28 | 23.02 | 69.51 |
| 2.25 | 2.125 | 14.30 | 13.56 | 83.07 |
| 2.5 | 2.375 | 11.18 | 10.60 | 93.67 |
| 2.75 | 2.625 | 5.31 | 5.03 | 98.70 |
| 3 | 2.875 | 0.99 | 0.94 | 99.64 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.85 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.280 |
| **5** | 0.775 |
| **16** | 1.115 |
| **25** | 1.285 |
| **50** | 1.665 |
| **75** | 1.975 |
| **84** | 2.145 |
| **95** | 2.440 |
| **99** | 2.705 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.751 | 0.297 |
| Standard Deviation | 0.524 | 0.695 |
| Skewness | -0.532 | |
| Kurtosis | 4.817 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.630 | 1.642 |
| Standard Deviation | 0.515 | 0.510 |
| Skewness (1) | -0.068 | -0.069 |
| Skewness (2) | -0.112 | |
| Kurtosis | 0.617 | 0.989 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1000+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.241 mm** |
| **STD** | **0.767 mm** |
| **Skewness** | **-0.096** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.05 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

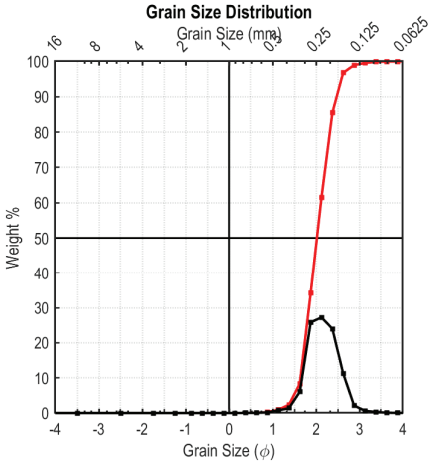
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.04 |
| 0 | -0.125 | 0.00 | 0.00 | 0.04 |
| 0.25 | 0.125 | 0.03 | 0.03 | 0.07 |
| 0.5 | 0.375 | 0.07 | 0.07 | 0.13 |
| 0.75 | 0.625 | 0.13 | 0.12 | 0.26 |
| 1 | 0.875 | 0.40 | 0.38 | 0.64 |
| 1.25 | 1.125 | 1.55 | 1.48 | 2.11 |
| 1.5 | 1.375 | 4.33 | 4.12 | 6.23 |
| 1.75 | 1.625 | 11.83 | 11.26 | 17.50 |
| 2 | 1.875 | 30.26 | 28.80 | 46.30 |
| 2.25 | 2.125 | 25.78 | 24.54 | 70.84 |
| 2.5 | 2.375 | 20.32 | 19.34 | 90.18 |
| 2.75 | 2.625 | 7.44 | 7.08 | 97.27 |
| 3 | 2.875 | 1.71 | 1.63 | 98.89 |
| 3.25 | 3.125 | 0.67 | 0.64 | 99.53 |
| 3.5 | 3.375 | 0.39 | 0.37 | 99.90 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.935 |
| **5** | 1.300 |
| **16** | 1.590 |
| **25** | 1.690 |
| **50** | 1.915 |
| **75** | 2.180 |
| **84** | 2.295 |
| **95** | 2.545 |
| **99** | 2.915 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.050 | 0.241 |
| Standard Deviation | 0.383 | 0.767 |
| Skewness | -0.096 | |
| Kurtosis | 4.958 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.942 | 1.933 |
| Standard Deviation | 0.353 | 0.365 |
| Skewness (1) | 0.078 | 0.045 |
| Skewness (2) | 0.021 | |
| Kurtosis | 0.766 | 1.041 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1000+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.225 mm** |
| **STD** | **0.787 mm** |
| **Skewness** | **0.111** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Very Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.89 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

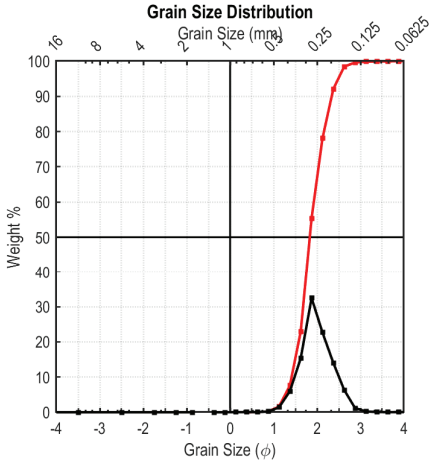
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.00 |
| 0 | -0.125 | 0.00 | 0.00 | 0.00 |
| 0.25 | 0.125 | 0.00 | 0.00 | 0.00 |
| 0.5 | 0.375 | 0.02 | 0.02 | 0.02 |
| 0.75 | 0.625 | 0.05 | 0.05 | 0.07 |
| 1 | 0.875 | 0.17 | 0.16 | 0.23 |
| 1.25 | 1.125 | 0.75 | 0.72 | 0.94 |
| 1.5 | 1.375 | 1.45 | 1.38 | 2.33 |
| 1.75 | 1.625 | 6.34 | 6.04 | 8.37 |
| 2 | 1.875 | 27.09 | 25.83 | 34.20 |
| 2.25 | 2.125 | 28.59 | 27.26 | 61.45 |
| 2.5 | 2.375 | 25.18 | 24.01 | 85.46 |
| 2.75 | 2.625 | 11.87 | 11.32 | 96.77 |
| 3 | 2.875 | 2.26 | 2.15 | 98.93 |
| 3.25 | 3.125 | 0.66 | 0.63 | 99.56 |
| 3.5 | 3.375 | 0.31 | 0.30 | 99.86 |
| 3.75 | 3.625 | 0.10 | 0.10 | 99.95 |
| 4 | 3.875 | 0.03 | 0.03 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.135 |
| **5** | 1.485 |
| **16** | 1.700 |
| **25** | 1.785 |
| **50** | 2.020 |
| **75** | 2.265 |
| **84** | 2.360 |
| **95** | 2.585 |
| **99** | 2.905 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.155 | 0.225 |
| Standard Deviation | 0.346 | 0.787 |
| Skewness | 0.111 | |
| Kurtosis | 4.399 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.030 | 2.027 |
| Standard Deviation | 0.330 | 0.332 |
| Skewness (1) | 0.030 | 0.029 |
| Skewness (2) | 0.045 | |
| Kurtosis | 0.667 | 0.939 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1000+00** |
| **Sample** | **Swash** |
| **Mean** | **0.252 mm** |
| **STD** | **0.783 mm** |
| **Skewness** | **0.471** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.87 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

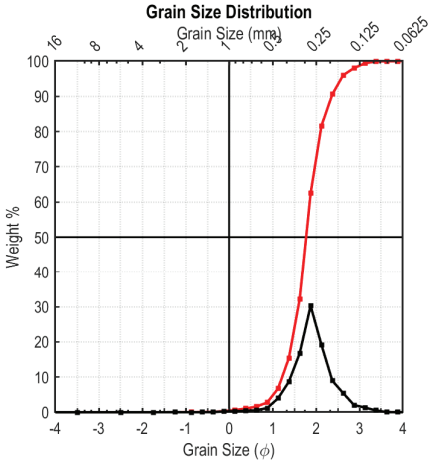
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | -0.08 | -0.08 | -0.08 |
| -0.25 | -0.375 | 0.00 | 0.00 | -0.08 |
| 0 | -0.125 | 0.00 | 0.00 | -0.08 |
| 0.25 | 0.125 | 0.03 | 0.03 | -0.05 |
| 0.5 | 0.375 | 0.03 | 0.03 | -0.02 |
| 0.75 | 0.625 | 0.05 | 0.05 | 0.03 |
| 1 | 0.875 | 0.20 | 0.19 | 0.22 |
| 1.25 | 1.125 | 1.48 | 1.40 | 1.62 |
| 1.5 | 1.375 | 6.32 | 5.97 | 7.58 |
| 1.75 | 1.625 | 16.26 | 15.36 | 22.94 |
| 2 | 1.875 | 34.36 | 32.45 | 55.40 |
| 2.25 | 2.125 | 24.00 | 22.67 | 78.07 |
| 2.5 | 2.375 | 14.85 | 14.03 | 92.09 |
| 2.75 | 2.625 | 6.71 | 6.34 | 98.43 |
| 3 | 2.875 | 1.26 | 1.19 | 99.62 |
| 3.25 | 3.125 | 0.24 | 0.23 | 99.85 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.91 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.94 |
| 4 | 3.875 | 0.05 | 0.05 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.015 |
| **5** | 1.265 |
| **16** | 1.510 |
| **25** | 1.640 |
| **50** | 1.835 |
| **75** | 2.090 |
| **84** | 2.230 |
| **95** | 2.490 |
| **99** | 2.745 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.986 | 0.252 |
| Standard Deviation | 0.353 | 0.783 |
| Skewness | 0.471 | |
| Kurtosis | 2.028 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.870 | 1.858 |
| Standard Deviation | 0.360 | 0.366 |
| Skewness (1) | 0.097 | 0.083 |
| Skewness (2) | 0.118 | |
| Kurtosis | 0.701 | 1.116 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1010+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.267 mm** |
| **STD** | **0.718 mm** |
| **Skewness** | **-0.266** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.88 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

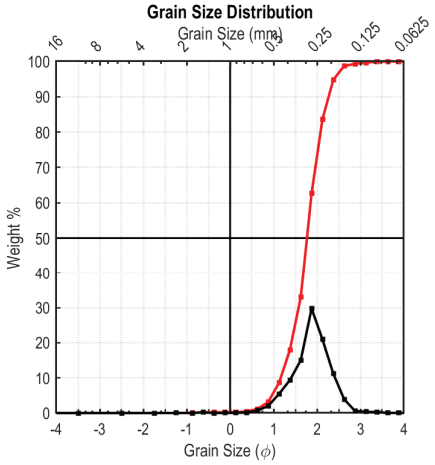
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.03 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.05 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.09 |
| 0 | -0.125 | 0.23 | 0.22 | 0.31 |
| 0.25 | 0.125 | 0.33 | 0.31 | 0.62 |
| 0.5 | 0.375 | 0.43 | 0.41 | 1.03 |
| 0.75 | 0.625 | 0.60 | 0.57 | 1.60 |
| 1 | 0.875 | 1.24 | 1.17 | 2.77 |
| 1.25 | 1.125 | 4.18 | 3.95 | 6.72 |
| 1.5 | 1.375 | 9.21 | 8.70 | 15.41 |
| 1.75 | 1.625 | 17.76 | 16.77 | 32.19 |
| 2 | 1.875 | 32.05 | 30.27 | 62.46 |
| 2.25 | 2.125 | 20.29 | 19.16 | 81.62 |
| 2.5 | 2.375 | 9.48 | 8.95 | 90.57 |
| 2.75 | 2.625 | 5.76 | 5.44 | 96.01 |
| 3 | 2.875 | 2.15 | 2.03 | 98.04 |
| 3.25 | 3.125 | 1.42 | 1.34 | 99.39 |
| 3.5 | 3.375 | 0.56 | 0.53 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.355 |
| **5** | 1.015 |
| **16** | 1.385 |
| **25** | 1.520 |
| **50** | 1.770 |
| **75** | 2.040 |
| **84** | 2.190 |
| **95** | 2.580 |
| **99** | 3.055 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.903 | 0.267 |
| Standard Deviation | 0.479 | 0.718 |
| Skewness | -0.266 | |
| Kurtosis | 5.587 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.787 | 1.782 |
| Standard Deviation | 0.403 | 0.438 |
| Skewness (1) | 0.043 | 0.039 |
| Skewness (2) | 0.068 | |
| Kurtosis | 0.944 | 1.233 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1010+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.274 mm** |
| **STD** | **0.735 mm** |
| **Skewness** | **-0.547** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.90 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.2 |

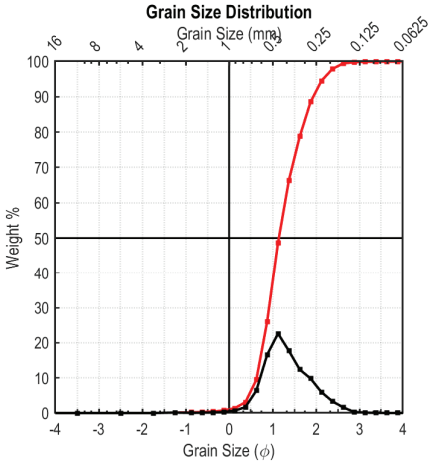
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.02 |
| -0.5 | -0.625 | 0.20 | 0.19 | 0.21 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.21 |
| 0 | -0.125 | 0.03 | 0.03 | 0.24 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.28 |
| 0.5 | 0.375 | 0.15 | 0.14 | 0.42 |
| 0.75 | 0.625 | 0.76 | 0.72 | 1.14 |
| 1 | 0.875 | 2.11 | 1.99 | 3.14 |
| 1.25 | 1.125 | 5.77 | 5.45 | 8.58 |
| 1.5 | 1.375 | 9.92 | 9.37 | 17.95 |
| 1.75 | 1.625 | 15.88 | 15.00 | 32.95 |
| 2 | 1.875 | 31.50 | 29.75 | 62.69 |
| 2.25 | 2.125 | 22.17 | 20.93 | 83.63 |
| 2.5 | 2.375 | 11.85 | 11.19 | 94.82 |
| 2.75 | 2.625 | 4.13 | 3.90 | 98.72 |
| 3 | 2.875 | 0.62 | 0.59 | 99.30 |
| 3.25 | 3.125 | 0.37 | 0.35 | 99.65 |
| 3.5 | 3.375 | 0.28 | 0.26 | 99.92 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.95 |
| 4 | 3.875 | 0.03 | 0.03 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.575 |
| **5** | 0.960 |
| **16** | 1.325 |
| **25** | 1.495 |
| **50** | 1.770 |
| **75** | 2.020 |
| **84** | 2.135 |
| **95** | 2.385 |
| **99** | 2.745 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.865 | 0.274 |
| Standard Deviation | 0.444 | 0.735 |
| Skewness | -0.547 | |
| Kurtosis | 5.873 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.730 | 1.743 |
| Standard Deviation | 0.405 | 0.418 |
| Skewness (1) | -0.099 | -0.118 |
| Skewness (2) | -0.241 | |
| Kurtosis | 0.759 | 1.112 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1010+00** |
| **Sample** | **Swash** |
| **Mean** | **0.396 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **0.236** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.5 |

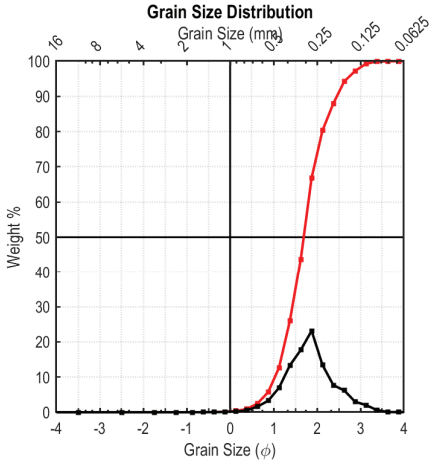
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.18 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.28 |
| -0.25 | -0.375 | 0.16 | 0.15 | 0.43 |
| 0 | -0.125 | 0.31 | 0.29 | 0.72 |
| 0.25 | 0.125 | 0.68 | 0.65 | 1.37 |
| 0.5 | 0.375 | 1.80 | 1.71 | 3.08 |
| 0.75 | 0.625 | 6.70 | 6.36 | 9.44 |
| 1 | 0.875 | 17.47 | 16.60 | 26.04 |
| 1.25 | 1.125 | 23.82 | 22.63 | 48.67 |
| 1.5 | 1.375 | 18.63 | 17.70 | 66.36 |
| 1.75 | 1.625 | 13.03 | 12.38 | 78.74 |
| 2 | 1.875 | 10.33 | 9.81 | 88.55 |
| 2.25 | 2.125 | 6.26 | 5.95 | 94.50 |
| 2.5 | 2.375 | 3.52 | 3.34 | 97.84 |
| 2.75 | 2.625 | 1.69 | 1.61 | 99.45 |
| 3 | 2.875 | 0.33 | 0.31 | 99.76 |
| 3.25 | 3.125 | 0.13 | 0.12 | 99.89 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.92 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.94 |
| 4 | 3.875 | 0.01 | 0.01 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.015 |
| **5** | 0.450 |
| **16** | 0.725 |
| **25** | 0.860 |
| **50** | 1.145 |
| **75** | 1.550 |
| **84** | 1.760 |
| **95** | 2.160 |
| **99** | 2.555 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.337 | 0.396 |
| Standard Deviation | 0.535 | 0.690 |
| Skewness | 0.236 | |
| Kurtosis | 4.400 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.242 | 1.210 |
| Standard Deviation | 0.517 | 0.518 |
| Skewness (1) | 0.188 | 0.188 |
| Skewness (2) | 0.309 | |
| Kurtosis | 0.652 | 1.016 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1020+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.281 mm** |
| **STD** | **0.681 mm** |
| **Skewness** | **0.138** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.69 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

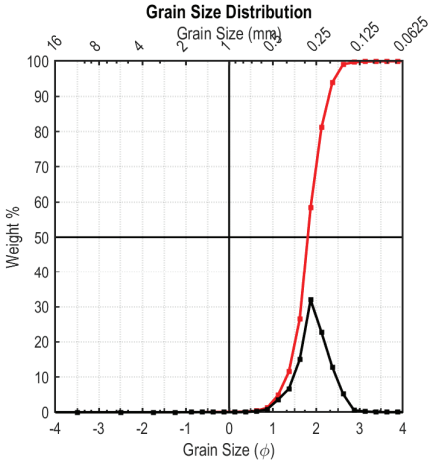
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.05 |
| 0 | -0.125 | 0.10 | 0.09 | 0.14 |
| 0.25 | 0.125 | 0.22 | 0.21 | 0.35 |
| 0.5 | 0.375 | 0.56 | 0.53 | 0.88 |
| 0.75 | 0.625 | 1.65 | 1.56 | 2.44 |
| 1 | 0.875 | 3.45 | 3.26 | 5.71 |
| 1.25 | 1.125 | 7.35 | 6.95 | 12.66 |
| 1.5 | 1.375 | 14.09 | 13.33 | 25.99 |
| 1.75 | 1.625 | 18.70 | 17.69 | 43.68 |
| 2 | 1.875 | 24.47 | 23.15 | 66.84 |
| 2.25 | 2.125 | 14.21 | 13.44 | 80.28 |
| 2.5 | 2.375 | 8.14 | 7.70 | 87.98 |
| 2.75 | 2.625 | 6.57 | 6.22 | 94.20 |
| 3 | 2.875 | 3.18 | 3.01 | 97.21 |
| 3.25 | 3.125 | 2.15 | 2.03 | 99.24 |
| 3.5 | 3.375 | 0.68 | 0.64 | 99.89 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.95 |
| 4 | 3.875 | 0.03 | 0.03 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.395 |
| **5** | 0.820 |
| **16** | 1.190 |
| **25** | 1.355 |
| **50** | 1.695 |
| **75** | 2.025 |
| **84** | 2.245 |
| **95** | 2.690 |
| **99** | 3.095 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.831 | 0.281 |
| Standard Deviation | 0.554 | 0.681 |
| Skewness | 0.138 | |
| Kurtosis | 3.540 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.718 | 1.710 |
| Standard Deviation | 0.528 | 0.547 |
| Skewness (1) | 0.043 | 0.053 |
| Skewness (2) | 0.114 | |
| Kurtosis | 0.773 | 1.144 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1020+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.262 mm** |
| **STD** | **0.765 mm** |
| **Skewness** | **-0.368** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.44 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

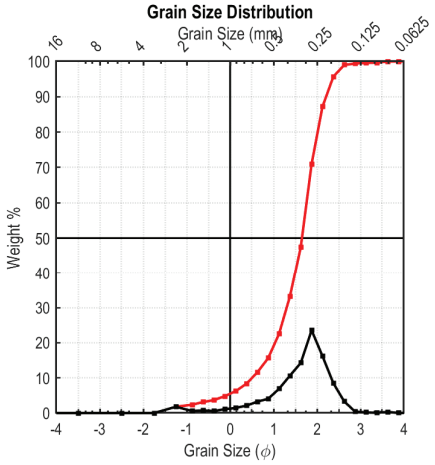
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.05 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.07 |
| 0 | -0.125 | 0.01 | 0.01 | 0.08 |
| 0.25 | 0.125 | 0.03 | 0.03 | 0.10 |
| 0.5 | 0.375 | 0.06 | 0.06 | 0.16 |
| 0.75 | 0.625 | 0.26 | 0.25 | 0.41 |
| 1 | 0.875 | 0.90 | 0.85 | 1.26 |
| 1.25 | 1.125 | 3.76 | 3.57 | 4.83 |
| 1.5 | 1.375 | 7.03 | 6.67 | 11.49 |
| 1.75 | 1.625 | 15.80 | 14.98 | 26.48 |
| 2 | 1.875 | 33.66 | 31.92 | 58.40 |
| 2.25 | 2.125 | 23.97 | 22.73 | 81.14 |
| 2.5 | 2.375 | 13.52 | 12.82 | 93.96 |
| 2.75 | 2.625 | 5.43 | 5.15 | 99.11 |
| 3 | 2.875 | 0.60 | 0.57 | 99.68 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.89 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.800 |
| **5** | 1.130 |
| **16** | 1.450 |
| **25** | 1.600 |
| **50** | 1.810 |
| **75** | 2.060 |
| **84** | 2.180 |
| **95** | 2.425 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.933 | 0.262 |
| Standard Deviation | 0.387 | 0.765 |
| Skewness | -0.368 | |
| Kurtosis | 5.110 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.815 | 1.813 |
| Standard Deviation | 0.365 | 0.379 |
| Skewness (1) | 0.014 | -0.018 |
| Skewness (2) | -0.089 | |
| Kurtosis | 0.774 | 1.154 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1020+00** |
| **Sample** | **Swash** |
| **Mean** | **0.331 mm** |
| **STD** | **0.588 mm** |
| **Skewness** | **-1.466** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.92 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.78 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

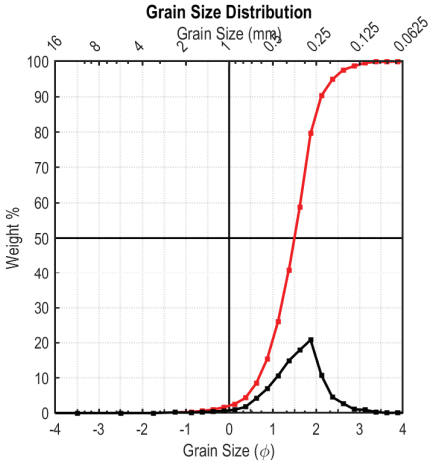
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.89 | 1.78 | 1.78 |
| -0.75 | -0.875 | 0.62 | 0.59 | 2.37 |
| -0.5 | -0.625 | 0.80 | 0.76 | 3.13 |
| -0.25 | -0.375 | 0.60 | 0.57 | 3.69 |
| 0 | -0.125 | 1.16 | 1.10 | 4.79 |
| 0.25 | 0.125 | 1.52 | 1.44 | 6.22 |
| 0.5 | 0.375 | 2.24 | 2.11 | 8.34 |
| 0.75 | 0.625 | 3.42 | 3.23 | 11.57 |
| 1 | 0.875 | 4.30 | 4.06 | 15.63 |
| 1.25 | 1.125 | 7.29 | 6.88 | 22.51 |
| 1.5 | 1.375 | 11.26 | 10.63 | 33.14 |
| 1.75 | 1.625 | 15.09 | 14.25 | 47.38 |
| 2 | 1.875 | 24.95 | 23.56 | 70.94 |
| 2.25 | 2.125 | 17.18 | 16.22 | 87.16 |
| 2.5 | 2.375 | 9.01 | 8.51 | 95.67 |
| 2.75 | 2.625 | 3.51 | 3.31 | 98.98 |
| 3 | 2.875 | 0.44 | 0.42 | 99.40 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.58 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.64 |
| 3.75 | 3.625 | 0.34 | 0.32 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.470 |
| **5** | -0.090 |
| **16** | 0.890 |
| **25** | 1.185 |
| **50** | 1.655 |
| **75** | 1.940 |
| **84** | 2.075 |
| **95** | 2.355 |
| **99** | 2.635 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.593 | 0.331 |
| Standard Deviation | 0.765 | 0.588 |
| Skewness | -1.466 | |
| Kurtosis | 6.073 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.483 | 1.540 |
| Standard Deviation | 0.593 | 0.667 |
| Skewness (1) | -0.291 | -0.359 |
| Skewness (2) | -0.882 | |
| Kurtosis | 1.063 | 1.327 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1030+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.336 mm** |
| **STD** | **0.652 mm** |
| **Skewness** | **-0.460** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.60 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.18 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

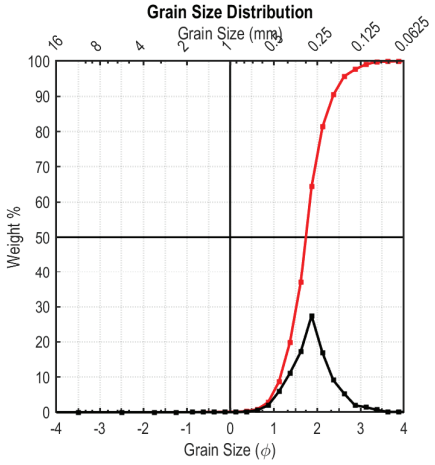
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.19 | 0.18 | 0.18 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.28 |
| -0.5 | -0.625 | 0.33 | 0.31 | 0.60 |
| -0.25 | -0.375 | 0.42 | 0.40 | 0.99 |
| 0 | -0.125 | 0.66 | 0.62 | 1.62 |
| 0.25 | 0.125 | 0.98 | 0.93 | 2.55 |
| 0.5 | 0.375 | 1.85 | 1.75 | 4.30 |
| 0.75 | 0.625 | 4.41 | 4.18 | 8.48 |
| 1 | 0.875 | 7.29 | 6.90 | 15.38 |
| 1.25 | 1.125 | 11.22 | 10.63 | 26.00 |
| 1.5 | 1.375 | 15.72 | 14.89 | 40.89 |
| 1.75 | 1.625 | 18.92 | 17.92 | 58.81 |
| 2 | 1.875 | 21.97 | 20.80 | 79.61 |
| 2.25 | 2.125 | 11.31 | 10.71 | 90.32 |
| 2.5 | 2.375 | 4.79 | 4.54 | 94.86 |
| 2.75 | 2.625 | 2.89 | 2.74 | 97.59 |
| 3 | 2.875 | 1.12 | 1.06 | 98.66 |
| 3.25 | 3.125 | 0.96 | 0.91 | 99.56 |
| 3.5 | 3.375 | 0.32 | 0.30 | 99.87 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.90 |
| 4 | 3.875 | 0.10 | 0.09 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.375 |
| **5** | 0.415 |
| **16** | 0.890 |
| **25** | 1.100 |
| **50** | 1.500 |
| **75** | 1.820 |
| **84** | 1.975 |
| **95** | 2.390 |
| **99** | 2.970 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.574 | 0.336 |
| Standard Deviation | 0.616 | 0.652 |
| Skewness | -0.460 | |
| Kurtosis | 4.721 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.433 | 1.455 |
| Standard Deviation | 0.542 | 0.570 |
| Skewness (1) | -0.124 | -0.112 |
| Skewness (2) | -0.180 | |
| Kurtosis | 0.820 | 1.124 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1030+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.272 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **0.229** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.70 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

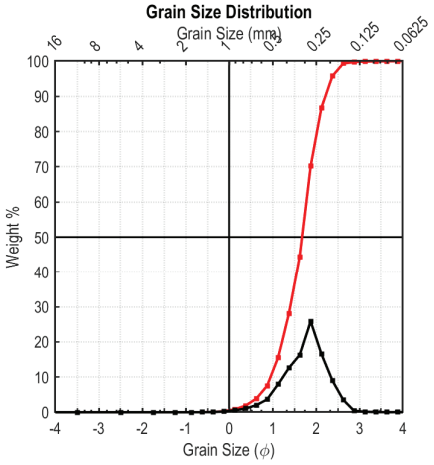
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.06 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.08 |
| 0 | -0.125 | 0.02 | 0.02 | 0.09 |
| 0.25 | 0.125 | 0.04 | 0.04 | 0.13 |
| 0.5 | 0.375 | 0.14 | 0.13 | 0.26 |
| 0.75 | 0.625 | 0.62 | 0.59 | 0.85 |
| 1 | 0.875 | 2.08 | 1.97 | 2.82 |
| 1.25 | 1.125 | 6.24 | 5.90 | 8.72 |
| 1.5 | 1.375 | 11.72 | 11.09 | 19.81 |
| 1.75 | 1.625 | 18.14 | 17.16 | 36.97 |
| 2 | 1.875 | 28.99 | 27.43 | 64.40 |
| 2.25 | 2.125 | 17.87 | 16.91 | 81.31 |
| 2.5 | 2.375 | 9.61 | 9.09 | 90.40 |
| 2.75 | 2.625 | 5.60 | 5.30 | 95.70 |
| 3 | 2.875 | 2.06 | 1.95 | 97.64 |
| 3.25 | 3.125 | 1.53 | 1.45 | 99.09 |
| 3.5 | 3.375 | 0.73 | 0.69 | 99.78 |
| 3.75 | 3.625 | 0.12 | 0.11 | 99.90 |
| 4 | 3.875 | 0.09 | 0.09 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.645 |
| **5** | 0.965 |
| **16** | 1.290 |
| **25** | 1.450 |
| **50** | 1.745 |
| **75** | 2.030 |
| **84** | 2.200 |
| **95** | 2.590 |
| **99** | 3.110 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.880 | 0.272 |
| Standard Deviation | 0.489 | 0.713 |
| Skewness | 0.229 | |
| Kurtosis | 4.324 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.745 | 1.745 |
| Standard Deviation | 0.455 | 0.474 |
| Skewness (1) | 0.000 | 0.020 |
| Skewness (2) | 0.071 | |
| Kurtosis | 0.786 | 1.148 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1030+00** |
| **Sample** | **Swash** |
| **Mean** | **0.299 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.567** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.64 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

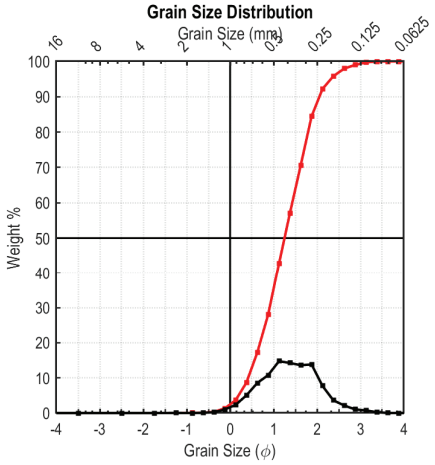
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.08 |
| 0 | -0.125 | 0.22 | 0.21 | 0.28 |
| 0.25 | 0.125 | 0.56 | 0.53 | 0.81 |
| 0.5 | 0.375 | 1.11 | 1.05 | 1.86 |
| 0.75 | 0.625 | 2.12 | 2.01 | 3.87 |
| 1 | 0.875 | 3.87 | 3.66 | 7.54 |
| 1.25 | 1.125 | 8.36 | 7.91 | 15.45 |
| 1.5 | 1.375 | 13.30 | 12.59 | 28.04 |
| 1.75 | 1.625 | 17.20 | 16.28 | 44.32 |
| 2 | 1.875 | 27.32 | 25.86 | 70.18 |
| 2.25 | 2.125 | 17.50 | 16.57 | 86.75 |
| 2.5 | 2.375 | 9.52 | 9.01 | 95.76 |
| 2.75 | 2.625 | 3.76 | 3.56 | 99.32 |
| 3 | 2.875 | 0.45 | 0.43 | 99.74 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.90 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.03 | 0.03 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.170 |
| **5** | 0.700 |
| **16** | 1.135 |
| **25** | 1.315 |
| **50** | 1.680 |
| **75** | 1.950 |
| **84** | 2.085 |
| **95** | 2.355 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.740 | 0.299 |
| Standard Deviation | 0.501 | 0.707 |
| Skewness | -0.567 | |
| Kurtosis | 3.940 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.610 | 1.633 |
| Standard Deviation | 0.475 | 0.488 |
| Skewness (1) | -0.147 | -0.166 |
| Skewness (2) | -0.321 | |
| Kurtosis | 0.742 | 1.068 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1040+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.385 mm** |
| **STD** | **0.639 mm** |
| **Skewness** | **0.074** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 109.32 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.5 |

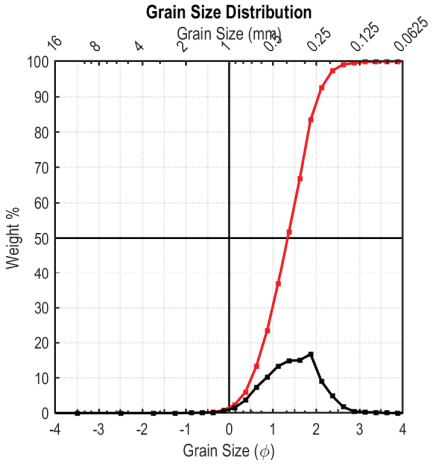
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.03 |
| -0.5 | -0.625 | 0.07 | 0.06 | 0.09 |
| -0.25 | -0.375 | 0.25 | 0.23 | 0.32 |
| 0 | -0.125 | 1.09 | 1.00 | 1.32 |
| 0.25 | 0.125 | 2.53 | 2.31 | 3.63 |
| 0.5 | 0.375 | 5.51 | 5.04 | 8.67 |
| 0.75 | 0.625 | 9.35 | 8.55 | 17.22 |
| 1 | 0.875 | 11.80 | 10.79 | 28.02 |
| 1.25 | 1.125 | 16.14 | 14.76 | 42.78 |
| 1.5 | 1.375 | 15.57 | 14.24 | 57.03 |
| 1.75 | 1.625 | 14.88 | 13.61 | 70.64 |
| 2 | 1.875 | 15.11 | 13.82 | 84.46 |
| 2.25 | 2.125 | 8.45 | 7.73 | 92.19 |
| 2.5 | 2.375 | 3.96 | 3.62 | 95.81 |
| 2.75 | 2.625 | 2.35 | 2.15 | 97.96 |
| 3 | 2.875 | 1.13 | 1.03 | 98.99 |
| 3.25 | 3.125 | 0.81 | 0.74 | 99.73 |
| 3.5 | 3.375 | 0.26 | 0.24 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.205 |
| **5** | 0.195 |
| **16** | 0.590 |
| **25** | 0.805 |
| **50** | 1.250 |
| **75** | 1.705 |
| **84** | 1.865 |
| **95** | 2.320 |
| **99** | 2.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.378 | 0.385 |
| Standard Deviation | 0.647 | 0.639 |
| Skewness | 0.074 | |
| Kurtosis | 3.008 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.227 | 1.235 |
| Standard Deviation | 0.637 | 0.641 |
| Skewness (1) | -0.035 | -0.014 |
| Skewness (2) | 0.012 | |
| Kurtosis | 0.667 | 0.968 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1040+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.368 mm** |
| **STD** | **0.662 mm** |
| **Skewness** | **-0.160** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.13 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

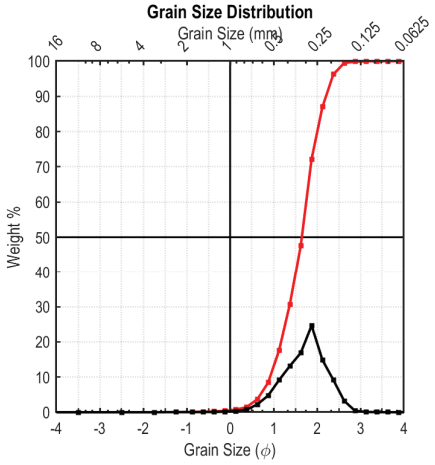
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.04 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.13 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.25 |
| 0 | -0.125 | 0.59 | 0.56 | 0.81 |
| 0.25 | 0.125 | 1.61 | 1.52 | 2.33 |
| 0.5 | 0.375 | 3.85 | 3.63 | 5.95 |
| 0.75 | 0.625 | 7.76 | 7.31 | 13.27 |
| 1 | 0.875 | 10.85 | 10.22 | 23.49 |
| 1.25 | 1.125 | 14.13 | 13.31 | 36.80 |
| 1.5 | 1.375 | 15.81 | 14.90 | 51.70 |
| 1.75 | 1.625 | 15.95 | 15.03 | 66.73 |
| 2 | 1.875 | 17.78 | 16.75 | 83.48 |
| 2.25 | 2.125 | 9.60 | 9.05 | 92.53 |
| 2.5 | 2.375 | 5.13 | 4.83 | 97.36 |
| 2.75 | 2.625 | 1.87 | 1.76 | 99.12 |
| 3 | 2.875 | 0.48 | 0.45 | 99.58 |
| 3.25 | 3.125 | 0.31 | 0.29 | 99.87 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.095 |
| **5** | 0.310 |
| **16** | 0.690 |
| **25** | 0.905 |
| **50** | 1.345 |
| **75** | 1.750 |
| **84** | 1.890 |
| **95** | 2.255 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.441 | 0.368 |
| Standard Deviation | 0.596 | 0.662 |
| Skewness | -0.160 | |
| Kurtosis | 2.940 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.290 | 1.308 |
| Standard Deviation | 0.600 | 0.595 |
| Skewness (1) | -0.092 | -0.078 |
| Skewness (2) | -0.104 | |
| Kurtosis | 0.621 | 0.943 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1040+00** |
| **Sample** | **Swash** |
| **Mean** | **0.306 mm** |
| **STD** | **0.704 mm** |
| **Skewness** | **-0.623** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.77 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

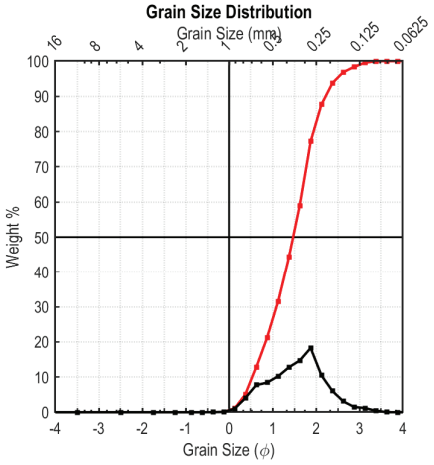
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.09 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.15 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.24 |
| 0 | -0.125 | 0.18 | 0.17 | 0.41 |
| 0.25 | 0.125 | 0.33 | 0.31 | 0.72 |
| 0.5 | 0.375 | 0.77 | 0.73 | 1.45 |
| 0.75 | 0.625 | 2.34 | 2.21 | 3.66 |
| 1 | 0.875 | 5.03 | 4.76 | 8.41 |
| 1.25 | 1.125 | 9.65 | 9.12 | 17.54 |
| 1.5 | 1.375 | 13.92 | 13.16 | 30.70 |
| 1.75 | 1.625 | 17.83 | 16.86 | 47.56 |
| 2 | 1.875 | 26.06 | 24.64 | 72.19 |
| 2.25 | 2.125 | 15.70 | 14.84 | 87.04 |
| 2.5 | 2.375 | 9.72 | 9.19 | 96.23 |
| 2.75 | 2.625 | 3.42 | 3.23 | 99.46 |
| 3 | 2.875 | 0.43 | 0.41 | 99.87 |
| 3.25 | 3.125 | 0.10 | 0.09 | 99.96 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.220 |
| **5** | 0.695 |
| **16** | 1.085 |
| **25** | 1.265 |
| **50** | 1.650 |
| **75** | 1.920 |
| **84** | 2.075 |
| **95** | 2.340 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.711 | 0.306 |
| Standard Deviation | 0.505 | 0.704 |
| Skewness | -0.623 | |
| Kurtosis | 4.250 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.580 | 1.603 |
| Standard Deviation | 0.495 | 0.497 |
| Skewness (1) | -0.141 | -0.151 |
| Skewness (2) | -0.268 | |
| Kurtosis | 0.662 | 1.029 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1050+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.341 mm** |
| **STD** | **0.642 mm** |
| **Skewness** | **0.037** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.17 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

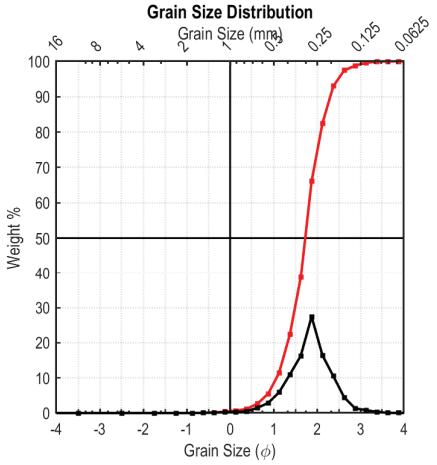
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.11 | 0.10 | 0.11 |
| 0.25 | 0.125 | 1.02 | 0.96 | 1.07 |
| 0.5 | 0.375 | 4.29 | 4.04 | 5.11 |
| 0.75 | 0.625 | 8.21 | 7.73 | 12.85 |
| 1 | 0.875 | 8.93 | 8.41 | 21.26 |
| 1.25 | 1.125 | 10.85 | 10.22 | 31.48 |
| 1.5 | 1.375 | 13.57 | 12.78 | 44.26 |
| 1.75 | 1.625 | 15.60 | 14.69 | 58.95 |
| 2 | 1.875 | 19.40 | 18.27 | 77.23 |
| 2.25 | 2.125 | 11.11 | 10.46 | 87.69 |
| 2.5 | 2.375 | 6.43 | 6.06 | 93.75 |
| 2.75 | 2.625 | 3.30 | 3.11 | 96.85 |
| 3 | 2.875 | 1.59 | 1.50 | 98.35 |
| 3.25 | 3.125 | 1.26 | 1.19 | 99.54 |
| 3.5 | 3.375 | 0.46 | 0.43 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.105 |
| **5** | 0.370 |
| **16** | 0.720 |
| **25** | 0.965 |
| **50** | 1.475 |
| **75** | 1.845 |
| **84** | 2.035 |
| **95** | 2.475 |
| **99** | 3.010 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.554 | 0.341 |
| Standard Deviation | 0.639 | 0.642 |
| Skewness | 0.037 | |
| Kurtosis | 2.748 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.377 | 1.410 |
| Standard Deviation | 0.658 | 0.648 |
| Skewness (1) | -0.148 | -0.099 |
| Skewness (2) | -0.080 | |
| Kurtosis | 0.601 | 0.980 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1050+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.282 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **-0.400** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.67 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

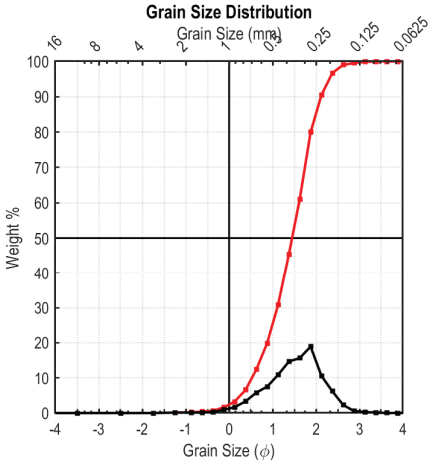
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.06 |
| -0.25 | -0.375 | 0.11 | 0.10 | 0.16 |
| 0 | -0.125 | 0.24 | 0.23 | 0.39 |
| 0.25 | 0.125 | 0.30 | 0.28 | 0.67 |
| 0.5 | 0.375 | 0.51 | 0.48 | 1.15 |
| 0.75 | 0.625 | 1.56 | 1.48 | 2.63 |
| 1 | 0.875 | 3.02 | 2.86 | 5.49 |
| 1.25 | 1.125 | 6.21 | 5.88 | 11.37 |
| 1.5 | 1.375 | 11.60 | 10.98 | 22.34 |
| 1.75 | 1.625 | 17.20 | 16.28 | 38.62 |
| 2 | 1.875 | 29.00 | 27.44 | 66.06 |
| 2.25 | 2.125 | 17.36 | 16.43 | 82.49 |
| 2.5 | 2.375 | 11.09 | 10.49 | 92.99 |
| 2.75 | 2.625 | 4.71 | 4.46 | 97.44 |
| 3 | 2.875 | 1.41 | 1.33 | 98.78 |
| 3.25 | 3.125 | 0.87 | 0.82 | 99.60 |
| 3.5 | 3.375 | 0.35 | 0.33 | 99.93 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.295 |
| **5** | 0.830 |
| **16** | 1.230 |
| **25** | 1.415 |
| **50** | 1.730 |
| **75** | 2.010 |
| **84** | 2.160 |
| **95** | 2.490 |
| **99** | 2.940 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.825 | 0.282 |
| Standard Deviation | 0.505 | 0.705 |
| Skewness | -0.400 | |
| Kurtosis | 4.491 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.695 | 1.707 |
| Standard Deviation | 0.465 | 0.484 |
| Skewness (1) | -0.075 | -0.080 |
| Skewness (2) | -0.151 | |
| Kurtosis | 0.785 | 1.143 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1050+00** |
| **Sample** | **Swash** |
| **Mean** | **0.352 mm** |
| **STD** | **0.648 mm** |
| **Skewness** | **-0.509** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.73 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.12 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

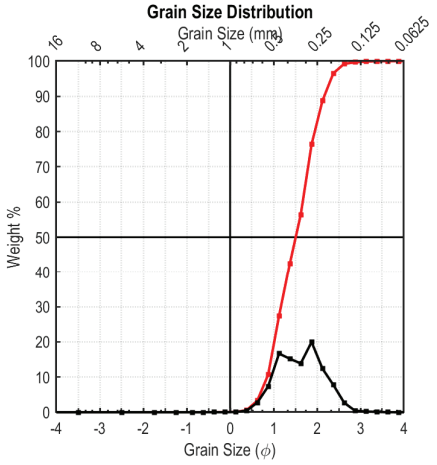
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.13 | 0.12 | 0.12 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.23 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.37 |
| -0.25 | -0.375 | 0.29 | 0.27 | 0.64 |
| 0 | -0.125 | 1.00 | 0.95 | 1.59 |
| 0.25 | 0.125 | 1.75 | 1.66 | 3.24 |
| 0.5 | 0.375 | 3.49 | 3.30 | 6.54 |
| 0.75 | 0.625 | 6.15 | 5.82 | 12.36 |
| 1 | 0.875 | 7.95 | 7.52 | 19.88 |
| 1.25 | 1.125 | 11.47 | 10.85 | 30.73 |
| 1.5 | 1.375 | 15.50 | 14.66 | 45.39 |
| 1.75 | 1.625 | 16.54 | 15.64 | 61.03 |
| 2 | 1.875 | 19.99 | 18.91 | 79.94 |
| 2.25 | 2.125 | 11.17 | 10.56 | 90.50 |
| 2.5 | 2.375 | 6.55 | 6.20 | 96.70 |
| 2.75 | 2.625 | 2.43 | 2.30 | 99.00 |
| 3 | 2.875 | 0.60 | 0.57 | 99.56 |
| 3.25 | 3.125 | 0.32 | 0.30 | 99.87 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.280 |
| **5** | 0.260 |
| **16** | 0.745 |
| **25** | 0.995 |
| **50** | 1.450 |
| **75** | 1.810 |
| **84** | 1.970 |
| **95** | 2.305 |
| **99** | 2.625 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.506 | 0.352 |
| Standard Deviation | 0.625 | 0.648 |
| Skewness | -0.509 | |
| Kurtosis | 3.577 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.357 | 1.388 |
| Standard Deviation | 0.612 | 0.616 |
| Skewness (1) | -0.151 | -0.157 |
| Skewness (2) | -0.273 | |
| Kurtosis | 0.669 | 1.028 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1060+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.325 mm** |
| **STD** | **0.703 mm** |
| **Skewness** | **0.060** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.54 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

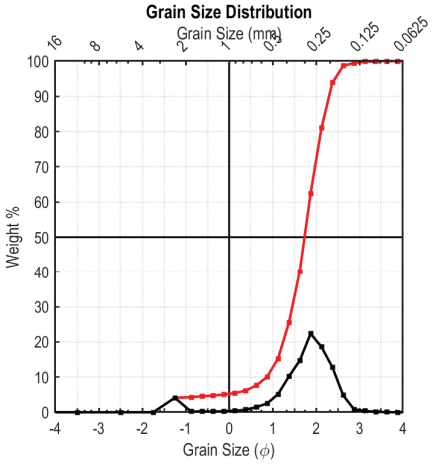
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.01 | 0.01 | 0.03 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.10 |
| 0.5 | 0.375 | 0.48 | 0.45 | 0.56 |
| 0.75 | 0.625 | 2.89 | 2.74 | 3.30 |
| 1 | 0.875 | 7.78 | 7.37 | 10.67 |
| 1.25 | 1.125 | 17.59 | 16.67 | 27.34 |
| 1.5 | 1.375 | 16.03 | 15.19 | 42.52 |
| 1.75 | 1.625 | 14.66 | 13.89 | 56.41 |
| 2 | 1.875 | 21.06 | 19.95 | 76.37 |
| 2.25 | 2.125 | 13.08 | 12.39 | 88.76 |
| 2.5 | 2.375 | 8.21 | 7.78 | 96.54 |
| 2.75 | 2.625 | 2.85 | 2.70 | 99.24 |
| 3 | 2.875 | 0.46 | 0.44 | 99.68 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.89 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.415 |
| **5** | 0.685 |
| **16** | 0.955 |
| **25** | 1.090 |
| **50** | 1.510 |
| **75** | 1.860 |
| **84** | 2.030 |
| **95** | 2.325 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.621 | 0.325 |
| Standard Deviation | 0.509 | 0.703 |
| Skewness | 0.060 | |
| Kurtosis | 2.581 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.493 | 1.498 |
| Standard Deviation | 0.538 | 0.517 |
| Skewness (1) | -0.033 | -0.019 |
| Skewness (2) | -0.009 | |
| Kurtosis | 0.526 | 0.873 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1060+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.308 mm** |
| **STD** | **0.572 mm** |
| **Skewness** | **-2.110** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.73 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 4.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.5 |

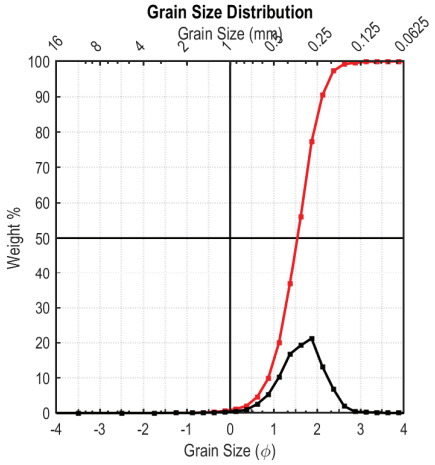
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.34 | 4.10 | 4.10 |
| -0.75 | -0.875 | 0.19 | 0.18 | 4.28 |
| -0.5 | -0.625 | 0.28 | 0.26 | 4.55 |
| -0.25 | -0.375 | 0.20 | 0.19 | 4.74 |
| 0 | -0.125 | 0.32 | 0.30 | 5.04 |
| 0.25 | 0.125 | 0.43 | 0.41 | 5.45 |
| 0.5 | 0.375 | 0.73 | 0.69 | 6.14 |
| 0.75 | 0.625 | 1.54 | 1.46 | 7.59 |
| 1 | 0.875 | 2.65 | 2.51 | 10.10 |
| 1.25 | 1.125 | 5.44 | 5.15 | 15.25 |
| 1.5 | 1.375 | 10.74 | 10.16 | 25.40 |
| 1.75 | 1.625 | 15.53 | 14.69 | 40.09 |
| 2 | 1.875 | 23.62 | 22.34 | 62.43 |
| 2.25 | 2.125 | 19.64 | 18.58 | 81.01 |
| 2.5 | 2.375 | 13.57 | 12.83 | 93.84 |
| 2.75 | 2.625 | 5.10 | 4.82 | 98.67 |
| 3 | 2.875 | 0.86 | 0.81 | 99.48 |
| 3.25 | 3.125 | 0.38 | 0.36 | 99.84 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.630 |
| **5** | -0.160 |
| **16** | 1.145 |
| **25** | 1.365 |
| **50** | 1.735 |
| **75** | 2.045 |
| **84** | 2.185 |
| **95** | 2.435 |
| **99** | 2.730 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.700 | 0.308 |
| Standard Deviation | 0.806 | 0.572 |
| Skewness | -2.110 | |
| Kurtosis | 8.361 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.665 | 1.688 |
| Standard Deviation | 0.520 | 0.653 |
| Skewness (1) | -0.135 | -0.298 |
| Skewness (2) | -1.149 | |
| Kurtosis | 1.495 | 1.564 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1060+00** |
| **Sample** | **Swash** |
| **Mean** | **0.322 mm** |
| **STD** | **0.702 mm** |
| **Skewness** | **-0.501** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.88 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

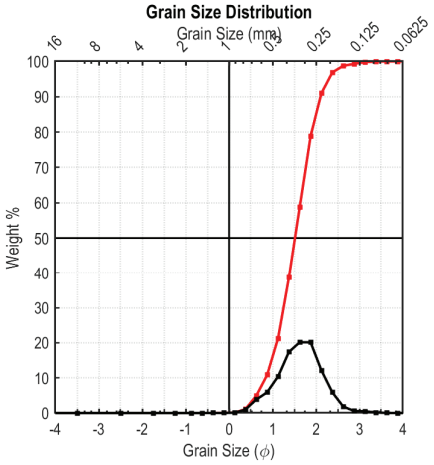
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.06 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.15 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.29 |
| 0 | -0.125 | 0.34 | 0.32 | 0.61 |
| 0.25 | 0.125 | 0.51 | 0.48 | 1.10 |
| 0.5 | 0.375 | 0.99 | 0.94 | 2.03 |
| 0.75 | 0.625 | 2.72 | 2.57 | 4.60 |
| 1 | 0.875 | 5.51 | 5.20 | 9.80 |
| 1.25 | 1.125 | 10.83 | 10.23 | 20.03 |
| 1.5 | 1.375 | 17.74 | 16.75 | 36.79 |
| 1.75 | 1.625 | 20.38 | 19.25 | 56.04 |
| 2 | 1.875 | 22.48 | 21.23 | 77.27 |
| 2.25 | 2.125 | 13.94 | 13.17 | 90.43 |
| 2.5 | 2.375 | 7.26 | 6.86 | 97.29 |
| 2.75 | 2.625 | 2.07 | 1.96 | 99.24 |
| 3 | 2.875 | 0.39 | 0.37 | 99.61 |
| 3.25 | 3.125 | 0.28 | 0.26 | 99.88 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.075 |
| **5** | 0.645 |
| **16** | 1.025 |
| **25** | 1.200 |
| **50** | 1.545 |
| **75** | 1.850 |
| **84** | 2.005 |
| **95** | 2.290 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.637 | 0.322 |
| Standard Deviation | 0.511 | 0.702 |
| Skewness | -0.501 | |
| Kurtosis | 4.386 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.515 | 1.525 |
| Standard Deviation | 0.490 | 0.494 |
| Skewness (1) | -0.061 | -0.078 |
| Skewness (2) | -0.158 | |
| Kurtosis | 0.679 | 1.037 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1070+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.324 mm** |
| **STD** | **0.708 mm** |
| **Skewness** | **-0.007** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.76 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

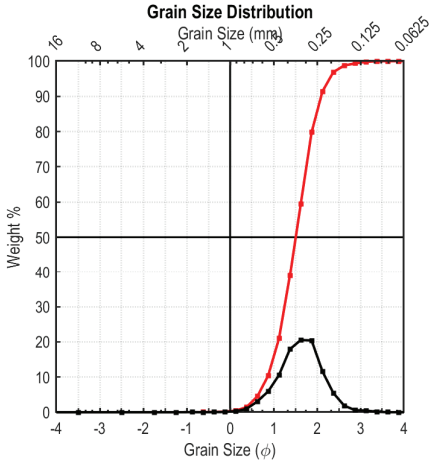
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.01 | 0.01 | 0.03 |
| 0.25 | 0.125 | 0.11 | 0.10 | 0.13 |
| 0.5 | 0.375 | 1.02 | 0.96 | 1.10 |
| 0.75 | 0.625 | 4.06 | 3.84 | 4.94 |
| 1 | 0.875 | 6.25 | 5.91 | 10.85 |
| 1.25 | 1.125 | 10.99 | 10.39 | 21.24 |
| 1.5 | 1.375 | 18.38 | 17.38 | 38.62 |
| 1.75 | 1.625 | 21.31 | 20.15 | 58.77 |
| 2 | 1.875 | 21.29 | 20.13 | 78.90 |
| 2.25 | 2.125 | 12.81 | 12.11 | 91.01 |
| 2.5 | 2.375 | 6.21 | 5.87 | 96.88 |
| 2.75 | 2.625 | 1.97 | 1.86 | 98.74 |
| 3 | 2.875 | 0.59 | 0.56 | 99.30 |
| 3.25 | 3.125 | 0.53 | 0.50 | 99.80 |
| 3.5 | 3.375 | 0.17 | 0.16 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.350 |
| **5** | 0.630 |
| **16** | 1.000 |
| **25** | 1.180 |
| **50** | 1.515 |
| **75** | 1.825 |
| **84** | 1.980 |
| **95** | 2.295 |
| **99** | 2.740 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.624 | 0.324 |
| Standard Deviation | 0.498 | 0.708 |
| Skewness | -0.007 | |
| Kurtosis | 3.340 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.490 | 1.498 |
| Standard Deviation | 0.490 | 0.497 |
| Skewness (1) | -0.051 | -0.057 |
| Skewness (2) | -0.107 | |
| Kurtosis | 0.699 | 1.058 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1070+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.325 mm** |
| **STD** | **0.709 mm** |
| **Skewness** | **-0.092** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.66 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

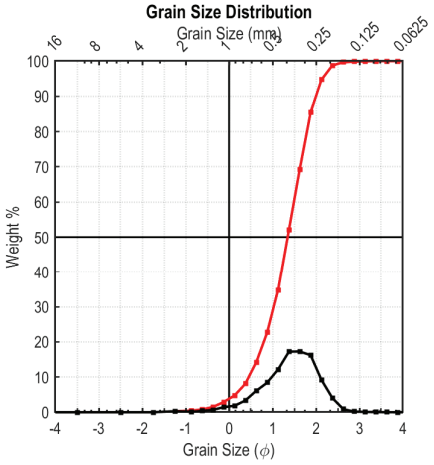
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.04 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.04 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.08 |
| 0 | -0.125 | 0.09 | 0.09 | 0.16 |
| 0.25 | 0.125 | 0.32 | 0.30 | 0.46 |
| 0.5 | 0.375 | 1.00 | 0.95 | 1.41 |
| 0.75 | 0.625 | 3.23 | 3.06 | 4.47 |
| 1 | 0.875 | 6.26 | 5.92 | 10.39 |
| 1.25 | 1.125 | 11.18 | 10.58 | 20.97 |
| 1.5 | 1.375 | 18.91 | 17.90 | 38.87 |
| 1.75 | 1.625 | 21.69 | 20.53 | 59.40 |
| 2 | 1.875 | 21.55 | 20.40 | 79.79 |
| 2.25 | 2.125 | 12.27 | 11.61 | 91.41 |
| 2.5 | 2.375 | 5.78 | 5.47 | 96.88 |
| 2.75 | 2.625 | 1.99 | 1.88 | 98.76 |
| 3 | 2.875 | 0.62 | 0.59 | 99.35 |
| 3.25 | 3.125 | 0.50 | 0.47 | 99.82 |
| 3.5 | 3.375 | 0.16 | 0.15 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.265 |
| **5** | 0.645 |
| **16** | 1.010 |
| **25** | 1.180 |
| **50** | 1.510 |
| **75** | 1.815 |
| **84** | 1.965 |
| **95** | 2.290 |
| **99** | 2.725 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.619 | 0.325 |
| Standard Deviation | 0.497 | 0.709 |
| Skewness | -0.092 | |
| Kurtosis | 3.739 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.487 | 1.495 |
| Standard Deviation | 0.478 | 0.488 |
| Skewness (1) | -0.047 | -0.049 |
| Skewness (2) | -0.089 | |
| Kurtosis | 0.723 | 1.062 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **1070+00** |
| **Sample** | **Swash** |
| **Mean** | **0.379 mm** |
| **STD** | **0.650 mm** |
| **Skewness** | **-0.760** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.69 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.29 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

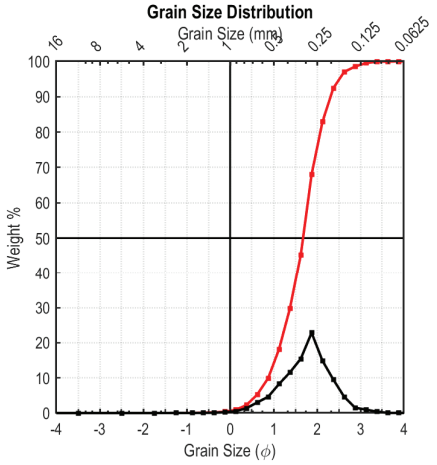
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.31 | 0.29 | 0.29 |
| -0.75 | -0.875 | 0.15 | 0.14 | 0.44 |
| -0.5 | -0.625 | 0.38 | 0.36 | 0.79 |
| -0.25 | -0.375 | 0.72 | 0.68 | 1.48 |
| 0 | -0.125 | 1.52 | 1.44 | 2.91 |
| 0.25 | 0.125 | 1.96 | 1.85 | 4.77 |
| 0.5 | 0.375 | 3.54 | 3.35 | 8.12 |
| 0.75 | 0.625 | 6.46 | 6.11 | 14.23 |
| 1 | 0.875 | 8.89 | 8.41 | 22.64 |
| 1.25 | 1.125 | 12.84 | 12.15 | 34.79 |
| 1.5 | 1.375 | 18.20 | 17.22 | 52.01 |
| 1.75 | 1.625 | 18.26 | 17.28 | 69.29 |
| 2 | 1.875 | 17.14 | 16.22 | 85.50 |
| 2.25 | 2.125 | 9.72 | 9.20 | 94.70 |
| 2.5 | 2.375 | 4.30 | 4.07 | 98.77 |
| 2.75 | 2.625 | 0.95 | 0.90 | 99.67 |
| 3 | 2.875 | 0.19 | 0.18 | 99.85 |
| 3.25 | 3.125 | 0.10 | 0.09 | 99.94 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.550 |
| **5** | 0.140 |
| **16** | 0.680 |
| **25** | 0.925 |
| **50** | 1.345 |
| **75** | 1.715 |
| **84** | 1.850 |
| **95** | 2.145 |
| **99** | 2.440 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.399 | 0.379 |
| Standard Deviation | 0.622 | 0.650 |
| Skewness | -0.760 | |
| Kurtosis | 4.143 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.265 | 1.292 |
| Standard Deviation | 0.585 | 0.596 |
| Skewness (1) | -0.137 | -0.169 |
| Skewness (2) | -0.346 | |
| Kurtosis | 0.714 | 1.040 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.298 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.324** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 106.02 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

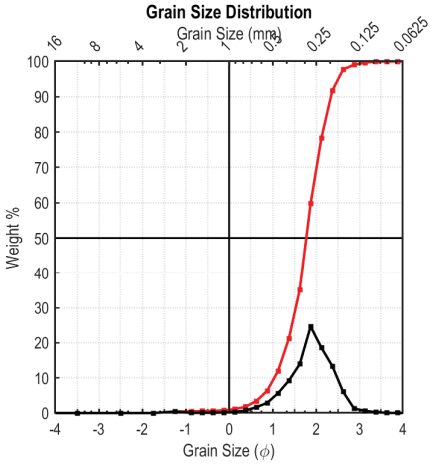
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.04 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.08 |
| -0.25 | -0.375 | 0.09 | 0.08 | 0.17 |
| 0 | -0.125 | 0.22 | 0.21 | 0.38 |
| 0.25 | 0.125 | 0.54 | 0.51 | 0.89 |
| 0.5 | 0.375 | 1.45 | 1.37 | 2.26 |
| 0.75 | 0.625 | 3.21 | 3.02 | 5.28 |
| 1 | 0.875 | 4.91 | 4.63 | 9.91 |
| 1.25 | 1.125 | 8.75 | 8.26 | 18.17 |
| 1.5 | 1.375 | 12.25 | 11.55 | 29.72 |
| 1.75 | 1.625 | 16.36 | 15.43 | 45.15 |
| 2 | 1.875 | 24.23 | 22.85 | 68.00 |
| 2.25 | 2.125 | 15.78 | 14.89 | 82.89 |
| 2.5 | 2.375 | 10.10 | 9.53 | 92.42 |
| 2.75 | 2.625 | 4.90 | 4.62 | 97.04 |
| 3 | 2.875 | 1.60 | 1.51 | 98.54 |
| 3.25 | 3.125 | 1.04 | 0.98 | 99.52 |
| 3.5 | 3.375 | 0.42 | 0.40 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.145 |
| **5** | 0.600 |
| **16** | 1.060 |
| **25** | 1.275 |
| **50** | 1.680 |
| **75** | 1.990 |
| **84** | 2.155 |
| **95** | 2.515 |
| **99** | 2.990 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.749 | 0.298 |
| Standard Deviation | 0.574 | 0.672 |
| Skewness | -0.324 | |
| Kurtosis | 3.726 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.608 | 1.632 |
| Standard Deviation | 0.548 | 0.564 |
| Skewness (1) | -0.132 | -0.130 |
| Skewness (2) | -0.224 | |
| Kurtosis | 0.749 | 1.098 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.277 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **-1.154** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.52 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.43 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

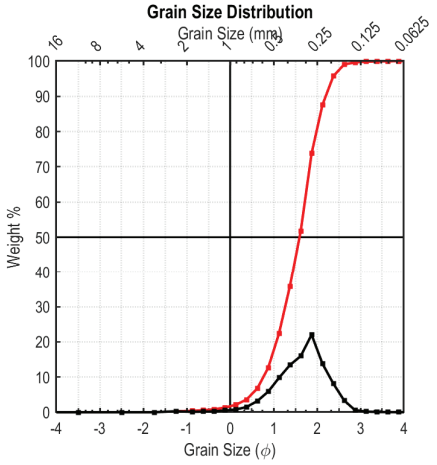
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.45 | 0.43 | 0.43 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.46 |
| -0.5 | -0.625 | 0.09 | 0.08 | 0.54 |
| -0.25 | -0.375 | 0.08 | 0.07 | 0.62 |
| 0 | -0.125 | 0.17 | 0.16 | 0.78 |
| 0.25 | 0.125 | 0.33 | 0.31 | 1.09 |
| 0.5 | 0.375 | 0.73 | 0.69 | 1.78 |
| 0.75 | 0.625 | 1.75 | 1.65 | 3.43 |
| 1 | 0.875 | 3.05 | 2.89 | 6.32 |
| 1.25 | 1.125 | 5.95 | 5.64 | 11.96 |
| 1.5 | 1.375 | 9.75 | 9.24 | 21.20 |
| 1.75 | 1.625 | 14.69 | 13.92 | 35.12 |
| 2 | 1.875 | 26.01 | 24.65 | 59.77 |
| 2.25 | 2.125 | 19.61 | 18.59 | 78.35 |
| 2.5 | 2.375 | 14.11 | 13.37 | 91.73 |
| 2.75 | 2.625 | 6.35 | 6.02 | 97.75 |
| 3 | 2.875 | 1.37 | 1.30 | 99.04 |
| 3.25 | 3.125 | 0.65 | 0.61 | 99.65 |
| 3.5 | 3.375 | 0.28 | 0.26 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.055 |
| **5** | 0.760 |
| **16** | 1.235 |
| **25** | 1.445 |
| **50** | 1.775 |
| **75** | 2.080 |
| **84** | 2.230 |
| **95** | 2.510 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.850 | 0.277 |
| Standard Deviation | 0.559 | 0.679 |
| Skewness | -1.154 | |
| Kurtosis | 7.370 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.732 | 1.747 |
| Standard Deviation | 0.498 | 0.514 |
| Skewness (1) | -0.085 | -0.123 |
| Skewness (2) | -0.281 | |
| Kurtosis | 0.759 | 1.129 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.321 mm** |
| **STD** | **0.664 mm** |
| **Skewness** | **-0.847** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.69 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.28 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

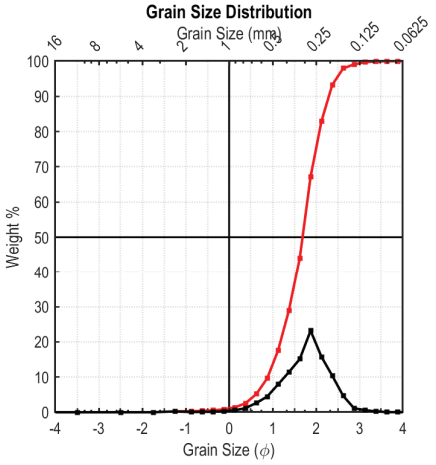
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.30 | 0.28 | 0.28 |
| -0.75 | -0.875 | 0.12 | 0.11 | 0.39 |
| -0.5 | -0.625 | 0.20 | 0.18 | 0.58 |
| -0.25 | -0.375 | 0.25 | 0.23 | 0.81 |
| 0 | -0.125 | 0.54 | 0.52 | 1.32 |
| 0.25 | 0.125 | 0.82 | 0.78 | 2.10 |
| 0.5 | 0.375 | 1.56 | 1.47 | 3.57 |
| 0.75 | 0.625 | 3.37 | 3.19 | 6.76 |
| 1 | 0.875 | 6.18 | 5.85 | 12.61 |
| 1.25 | 1.125 | 10.34 | 9.78 | 22.39 |
| 1.5 | 1.375 | 14.16 | 13.40 | 35.79 |
| 1.75 | 1.625 | 16.87 | 15.96 | 51.76 |
| 2 | 1.875 | 23.29 | 22.03 | 73.79 |
| 2.25 | 2.125 | 14.58 | 13.80 | 87.59 |
| 2.5 | 2.375 | 8.61 | 8.15 | 95.74 |
| 2.75 | 2.625 | 3.52 | 3.33 | 99.06 |
| 3 | 2.875 | 0.63 | 0.59 | 99.66 |
| 3.25 | 3.125 | 0.21 | 0.19 | 99.85 |
| 3.5 | 3.375 | 0.08 | 0.07 | 99.92 |
| 3.75 | 3.625 | 0.06 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.280 |
| **5** | 0.485 |
| **16** | 0.960 |
| **25** | 1.175 |
| **50** | 1.600 |
| **75** | 1.895 |
| **84** | 2.060 |
| **95** | 2.350 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.640 | 0.321 |
| Standard Deviation | 0.591 | 0.664 |
| Skewness | -0.847 | |
| Kurtosis | 5.141 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.510 | 1.540 |
| Standard Deviation | 0.550 | 0.558 |
| Skewness (1) | -0.164 | -0.180 |
| Skewness (2) | -0.332 | |
| Kurtosis | 0.695 | 1.062 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Nov 14 2022** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.298 mm** |
| **STD** | **0.668 mm** |
| **Skewness** | **-0.763** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.74 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.24 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

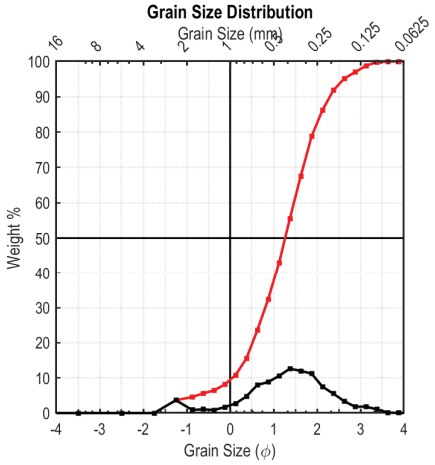
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.26 | 0.24 | 0.24 |
| -0.75 | -0.875 | 0.06 | 0.05 | 0.30 |
| -0.5 | -0.625 | 0.11 | 0.10 | 0.40 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.53 |
| 0 | -0.125 | 0.31 | 0.30 | 0.83 |
| 0.25 | 0.125 | 0.56 | 0.53 | 1.36 |
| 0.5 | 0.375 | 1.24 | 1.18 | 2.54 |
| 0.75 | 0.625 | 2.77 | 2.62 | 5.16 |
| 1 | 0.875 | 4.71 | 4.46 | 9.62 |
| 1.25 | 1.125 | 8.35 | 7.89 | 17.51 |
| 1.5 | 1.375 | 12.05 | 11.40 | 28.91 |
| 1.75 | 1.625 | 15.97 | 15.11 | 44.01 |
| 2 | 1.875 | 24.51 | 23.18 | 67.19 |
| 2.25 | 2.125 | 16.66 | 15.75 | 82.95 |
| 2.5 | 2.375 | 10.94 | 10.35 | 93.29 |
| 2.75 | 2.625 | 4.92 | 4.65 | 97.95 |
| 3 | 2.875 | 1.20 | 1.13 | 99.08 |
| 3.25 | 3.125 | 0.63 | 0.60 | 99.68 |
| 3.5 | 3.375 | 0.26 | 0.24 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.045 |
| **5** | 0.610 |
| **16** | 1.075 |
| **25** | 1.290 |
| **50** | 1.690 |
| **75** | 2.000 |
| **84** | 2.150 |
| **95** | 2.465 |
| **99** | 2.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.746 | 0.298 |
| Standard Deviation | 0.581 | 0.668 |
| Skewness | -0.763 | |
| Kurtosis | 5.216 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.612 | 1.638 |
| Standard Deviation | 0.538 | 0.550 |
| Skewness (1) | -0.144 | -0.154 |
| Skewness (2) | -0.284 | |
| Kurtosis | 0.726 | 1.071 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1550+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.403 mm** |
| **STD** | **0.519 mm** |
| **Skewness** | **-0.571** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.15 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 3.65 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.5 |

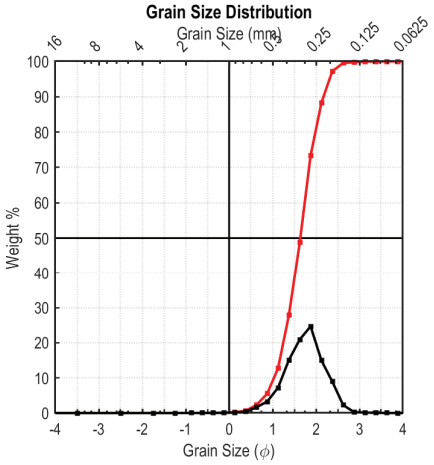
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.84 | 3.65 | 3.65 |
| -0.75 | -0.875 | 0.93 | 0.88 | 4.54 |
| -0.5 | -0.625 | 1.09 | 1.04 | 5.57 |
| -0.25 | -0.375 | 0.90 | 0.86 | 6.43 |
| 0 | -0.125 | 1.76 | 1.67 | 8.10 |
| 0.25 | 0.125 | 2.84 | 2.70 | 10.80 |
| 0.5 | 0.375 | 4.99 | 4.75 | 15.55 |
| 0.75 | 0.625 | 8.41 | 8.00 | 23.55 |
| 1 | 0.875 | 9.26 | 8.81 | 32.35 |
| 1.25 | 1.125 | 11.12 | 10.58 | 42.93 |
| 1.5 | 1.375 | 13.28 | 12.63 | 55.56 |
| 1.75 | 1.625 | 12.61 | 11.99 | 67.55 |
| 2 | 1.875 | 11.79 | 11.21 | 78.76 |
| 2.25 | 2.125 | 7.86 | 7.48 | 86.24 |
| 2.5 | 2.375 | 5.82 | 5.53 | 91.77 |
| 2.75 | 2.625 | 3.53 | 3.36 | 95.13 |
| 3 | 2.875 | 1.91 | 1.82 | 96.95 |
| 3.25 | 3.125 | 1.90 | 1.81 | 98.75 |
| 3.5 | 3.375 | 1.12 | 1.07 | 99.82 |
| 3.75 | 3.625 | 0.14 | 0.13 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.615 |
| **5** | -0.765 |
| **16** | 0.390 |
| **25** | 0.665 |
| **50** | 1.265 |
| **75** | 1.790 |
| **84** | 2.050 |
| **95** | 2.615 |
| **99** | 3.185 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.311 | 0.403 |
| Standard Deviation | 0.946 | 0.519 |
| Skewness | -0.571 | |
| Kurtosis | 3.681 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.220 | 1.235 |
| Standard Deviation | 0.830 | 0.927 |
| Skewness (1) | -0.054 | -0.128 |
| Skewness (2) | -0.410 | |
| Kurtosis | 1.036 | 1.231 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1550+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.300 mm** |
| **STD** | **0.734 mm** |
| **Skewness** | **-0.346** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.24 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

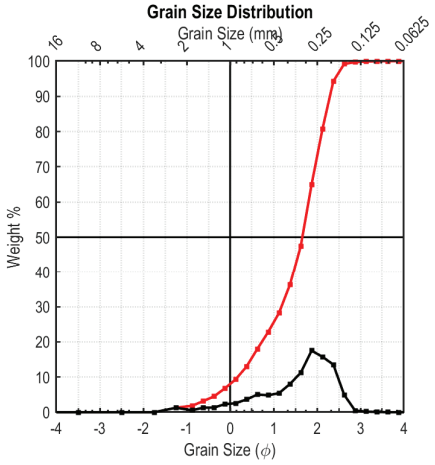
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.03 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.06 |
| 0 | -0.125 | 0.05 | 0.05 | 0.10 |
| 0.25 | 0.125 | 0.13 | 0.12 | 0.23 |
| 0.5 | 0.375 | 0.41 | 0.39 | 0.62 |
| 0.75 | 0.625 | 1.72 | 1.63 | 2.25 |
| 1 | 0.875 | 3.42 | 3.25 | 5.50 |
| 1.25 | 1.125 | 7.58 | 7.20 | 12.70 |
| 1.5 | 1.375 | 15.88 | 15.09 | 27.79 |
| 1.75 | 1.625 | 22.02 | 20.92 | 48.72 |
| 2 | 1.875 | 25.96 | 24.67 | 73.38 |
| 2.25 | 2.125 | 15.72 | 14.94 | 88.32 |
| 2.5 | 2.375 | 9.39 | 8.92 | 97.24 |
| 2.75 | 2.625 | 2.39 | 2.27 | 99.52 |
| 3 | 2.875 | 0.29 | 0.28 | 99.79 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.435 |
| **5** | 0.835 |
| **16** | 1.180 |
| **25** | 1.330 |
| **50** | 1.640 |
| **75** | 1.900 |
| **84** | 2.055 |
| **95** | 2.310 |
| **99** | 2.570 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.735 | 0.300 |
| Standard Deviation | 0.446 | 0.734 |
| Skewness | -0.346 | |
| Kurtosis | 3.819 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.617 | 1.625 |
| Standard Deviation | 0.437 | 0.442 |
| Skewness (1) | -0.051 | -0.071 |
| Skewness (2) | -0.154 | |
| Kurtosis | 0.686 | 1.061 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1550+00** |
| **Sample** | **Swash** |
| **Mean** | **0.343 mm** |
| **STD** | **0.554 mm** |
| **Skewness** | **-1.099** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.10 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.7 |

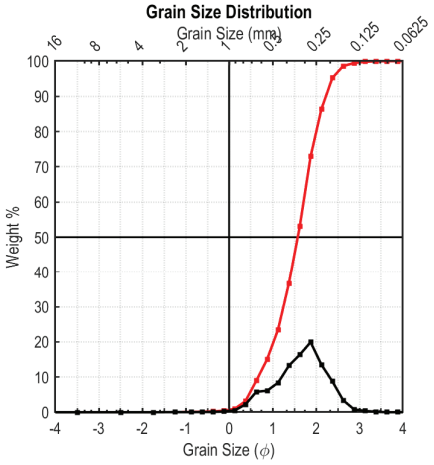
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.34 | 1.27 | 1.27 |
| -0.75 | -0.875 | 0.60 | 0.57 | 1.85 |
| -0.5 | -0.625 | 1.36 | 1.29 | 3.14 |
| -0.25 | -0.375 | 1.40 | 1.33 | 4.47 |
| 0 | -0.125 | 2.40 | 2.28 | 6.76 |
| 0.25 | 0.125 | 2.70 | 2.57 | 9.32 |
| 0.5 | 0.375 | 3.80 | 3.62 | 12.94 |
| 0.75 | 0.625 | 5.29 | 5.03 | 17.97 |
| 1 | 0.875 | 5.07 | 4.82 | 22.80 |
| 1.25 | 1.125 | 5.70 | 5.42 | 28.22 |
| 1.5 | 1.375 | 8.41 | 8.00 | 36.22 |
| 1.75 | 1.625 | 11.81 | 11.24 | 47.46 |
| 2 | 1.875 | 18.40 | 17.51 | 64.97 |
| 2.25 | 2.125 | 16.56 | 15.76 | 80.72 |
| 2.5 | 2.375 | 14.24 | 13.55 | 94.27 |
| 2.75 | 2.625 | 5.19 | 4.94 | 99.21 |
| 3 | 2.875 | 0.53 | 0.50 | 99.71 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.90 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.360 |
| **5** | -0.315 |
| **16** | 0.525 |
| **25** | 0.975 |
| **50** | 1.660 |
| **75** | 2.035 |
| **84** | 2.185 |
| **95** | 2.410 |
| **99** | 2.615 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.546 | 0.343 |
| Standard Deviation | 0.852 | 0.554 |
| Skewness | -1.099 | |
| Kurtosis | 3.869 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.355 | 1.457 |
| Standard Deviation | 0.830 | 0.828 |
| Skewness (1) | -0.367 | -0.409 |
| Skewness (2) | -0.738 | |
| Kurtosis | 0.642 | 1.054 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1560+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.321 mm** |
| **STD** | **0.666 mm** |
| **Skewness** | **-0.401** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.24 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.9 |

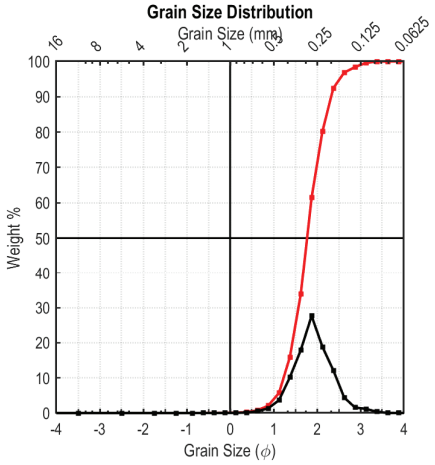
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.08 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.15 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.24 |
| 0 | -0.125 | 0.21 | 0.20 | 0.44 |
| 0.25 | 0.125 | 0.54 | 0.51 | 0.95 |
| 0.5 | 0.375 | 2.31 | 2.19 | 3.15 |
| 0.75 | 0.625 | 6.11 | 5.81 | 8.95 |
| 1 | 0.875 | 6.46 | 6.14 | 15.09 |
| 1.25 | 1.125 | 8.81 | 8.37 | 23.46 |
| 1.5 | 1.375 | 13.91 | 13.22 | 36.68 |
| 1.75 | 1.625 | 17.19 | 16.33 | 53.01 |
| 2 | 1.875 | 20.96 | 19.92 | 72.93 |
| 2.25 | 2.125 | 14.20 | 13.49 | 86.42 |
| 2.5 | 2.375 | 9.25 | 8.79 | 95.21 |
| 2.75 | 2.625 | 3.59 | 3.41 | 98.62 |
| 3 | 2.875 | 0.87 | 0.83 | 99.45 |
| 3.25 | 3.125 | 0.40 | 0.38 | 99.83 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.130 |
| **5** | 0.455 |
| **16** | 0.900 |
| **25** | 1.155 |
| **50** | 1.580 |
| **75** | 1.915 |
| **84** | 2.080 |
| **95** | 2.370 |
| **99** | 2.740 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.638 | 0.321 |
| Standard Deviation | 0.586 | 0.666 |
| Skewness | -0.401 | |
| Kurtosis | 3.346 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.490 | 1.520 |
| Standard Deviation | 0.590 | 0.585 |
| Skewness (1) | -0.153 | -0.164 |
| Skewness (2) | -0.284 | |
| Kurtosis | 0.623 | 1.033 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1560+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.267 mm** |
| **STD** | **0.736 mm** |
| **Skewness** | **0.063** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.01 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

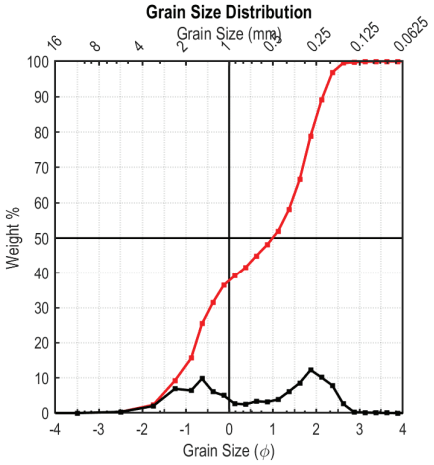
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.03 |
| 0 | -0.125 | 0.03 | 0.03 | 0.06 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.10 |
| 0.5 | 0.375 | 0.14 | 0.13 | 0.24 |
| 0.75 | 0.625 | 0.55 | 0.52 | 0.76 |
| 1 | 0.875 | 1.38 | 1.31 | 2.08 |
| 1.25 | 1.125 | 3.84 | 3.66 | 5.73 |
| 1.5 | 1.375 | 10.70 | 10.19 | 15.92 |
| 1.75 | 1.625 | 18.77 | 17.87 | 33.80 |
| 2 | 1.875 | 29.02 | 27.64 | 61.43 |
| 2.25 | 2.125 | 19.77 | 18.83 | 80.26 |
| 2.5 | 2.375 | 12.77 | 12.16 | 92.42 |
| 2.75 | 2.625 | 4.64 | 4.42 | 96.84 |
| 3 | 2.875 | 1.64 | 1.56 | 98.40 |
| 3.25 | 3.125 | 1.25 | 1.19 | 99.59 |
| 3.5 | 3.375 | 0.38 | 0.36 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.670 |
| **5** | 1.075 |
| **16** | 1.375 |
| **25** | 1.500 |
| **50** | 1.770 |
| **75** | 2.055 |
| **84** | 2.200 |
| **95** | 2.520 |
| **99** | 3.000 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.906 | 0.267 |
| Standard Deviation | 0.443 | 0.736 |
| Skewness | 0.063 | |
| Kurtosis | 4.189 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.788 | 1.782 |
| Standard Deviation | 0.413 | 0.425 |
| Skewness (1) | 0.042 | 0.040 |
| Skewness (2) | 0.067 | |
| Kurtosis | 0.752 | 1.067 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1560+00** |
| **Sample** | **Swash** |
| **Mean** | **0.587 mm** |
| **STD** | **0.407 mm** |
| **Skewness** | **-0.291** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 8.87 |
| % gravel (>4 mm) | 0.32 |
| CaCO3 | 10.7 |

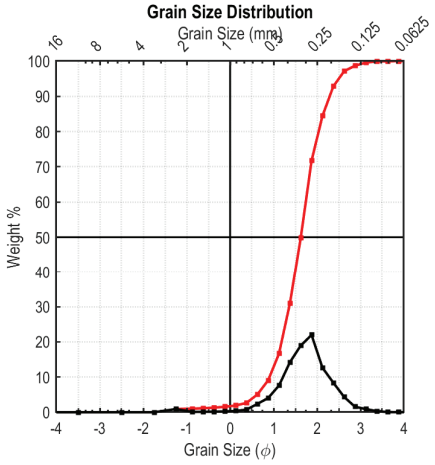
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.34 | 0.32 | 0.32 |
| -1.5 | -1.75 | 2.07 | 1.97 | 2.29 |
| -1 | -1.25 | 7.25 | 6.90 | 9.19 |
| -0.75 | -0.875 | 6.75 | 6.42 | 15.61 |
| -0.5 | -0.625 | 10.28 | 9.78 | 25.39 |
| -0.25 | -0.375 | 6.37 | 6.06 | 31.45 |
| 0 | -0.125 | 5.24 | 4.99 | 36.44 |
| 0.25 | 0.125 | 2.81 | 2.67 | 39.11 |
| 0.5 | 0.375 | 2.59 | 2.46 | 41.58 |
| 0.75 | 0.625 | 3.52 | 3.35 | 44.92 |
| 1 | 0.875 | 3.33 | 3.17 | 48.09 |
| 1.25 | 1.125 | 4.04 | 3.84 | 51.94 |
| 1.5 | 1.375 | 6.43 | 6.12 | 58.05 |
| 1.75 | 1.625 | 9.00 | 8.56 | 66.62 |
| 2 | 1.875 | 12.91 | 12.28 | 78.90 |
| 2.25 | 2.125 | 10.66 | 10.14 | 89.04 |
| 2.5 | 2.375 | 8.26 | 7.86 | 96.90 |
| 2.75 | 2.625 | 2.75 | 2.62 | 99.51 |
| 3 | 2.875 | 0.26 | 0.25 | 99.76 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.91 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.240 |
| **5** | -1.555 |
| **16** | -0.865 |
| **25** | -0.635 |
| **50** | 1.000 |
| **75** | 1.795 |
| **84** | 2.000 |
| **95** | 2.315 |
| **99** | 2.575 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.769 | 0.587 |
| Standard Deviation | 1.298 | 0.407 |
| Skewness | -0.291 | |
| Kurtosis | 1.708 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.568 | 0.712 |
| Standard Deviation | 1.432 | 1.303 |
| Skewness (1) | -0.302 | -0.311 |
| Skewness (2) | -0.433 | |
| Kurtosis | 0.351 | 0.653 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1570+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.306 mm** |
| **STD** | **0.651 mm** |
| **Skewness** | **-1.116** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.39 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.91 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.6 |

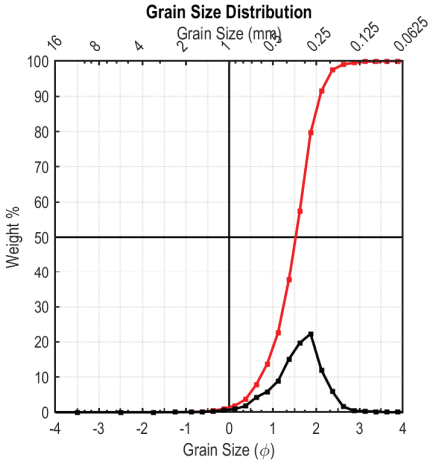
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.96 | 0.91 | 0.91 |
| -0.75 | -0.875 | 0.11 | 0.10 | 1.02 |
| -0.5 | -0.625 | 0.13 | 0.12 | 1.14 |
| -0.25 | -0.375 | 0.17 | 0.16 | 1.30 |
| 0 | -0.125 | 0.26 | 0.25 | 1.55 |
| 0.25 | 0.125 | 0.38 | 0.36 | 1.91 |
| 0.5 | 0.375 | 0.79 | 0.75 | 2.66 |
| 0.75 | 0.625 | 2.49 | 2.36 | 5.02 |
| 1 | 0.875 | 4.27 | 4.05 | 9.07 |
| 1.25 | 1.125 | 8.01 | 7.60 | 16.67 |
| 1.5 | 1.375 | 14.97 | 14.20 | 30.88 |
| 1.75 | 1.625 | 19.97 | 18.95 | 49.82 |
| 2 | 1.875 | 23.14 | 21.96 | 71.78 |
| 2.25 | 2.125 | 13.33 | 12.65 | 84.43 |
| 2.5 | 2.375 | 8.85 | 8.40 | 92.83 |
| 2.75 | 2.625 | 4.56 | 4.33 | 97.15 |
| 3 | 2.875 | 1.63 | 1.55 | 98.70 |
| 3.25 | 3.125 | 0.95 | 0.90 | 99.60 |
| 3.5 | 3.375 | 0.33 | 0.31 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.930 |
| **5** | 0.625 |
| **16** | 1.105 |
| **25** | 1.270 |
| **50** | 1.625 |
| **75** | 1.940 |
| **84** | 2.115 |
| **95** | 2.500 |
| **99** | 2.960 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.708 | 0.306 |
| Standard Deviation | 0.619 | 0.651 |
| Skewness | -1.116 | |
| Kurtosis | 7.523 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.610 | 1.615 |
| Standard Deviation | 0.505 | 0.537 |
| Skewness (1) | -0.030 | -0.048 |
| Skewness (2) | -0.124 | |
| Kurtosis | 0.856 | 1.147 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1570+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.332 mm** |
| **STD** | **0.683 mm** |
| **Skewness** | **-0.589** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.31 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

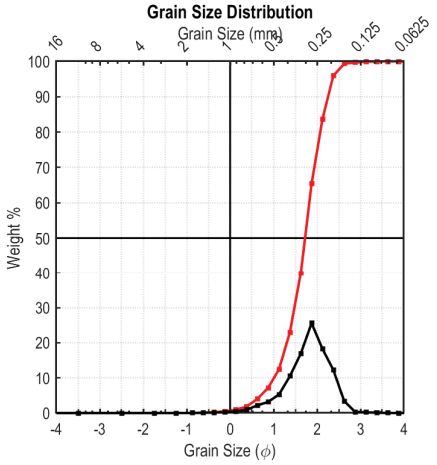
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.08 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.16 |
| -0.25 | -0.375 | 0.28 | 0.27 | 0.43 |
| 0 | -0.125 | 0.55 | 0.52 | 0.95 |
| 0.25 | 0.125 | 0.95 | 0.90 | 1.85 |
| 0.5 | 0.375 | 1.86 | 1.77 | 3.62 |
| 0.75 | 0.625 | 4.48 | 4.25 | 7.87 |
| 1 | 0.875 | 6.14 | 5.83 | 13.70 |
| 1.25 | 1.125 | 9.34 | 8.87 | 22.57 |
| 1.5 | 1.375 | 15.87 | 15.07 | 37.64 |
| 1.75 | 1.625 | 20.74 | 19.69 | 57.34 |
| 2 | 1.875 | 23.46 | 22.28 | 79.61 |
| 2.25 | 2.125 | 12.58 | 11.95 | 91.56 |
| 2.5 | 2.375 | 6.23 | 5.92 | 97.47 |
| 2.75 | 2.625 | 1.71 | 1.62 | 99.10 |
| 3 | 2.875 | 0.43 | 0.41 | 99.51 |
| 3.25 | 3.125 | 0.35 | 0.33 | 99.84 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.110 |
| **5** | 0.455 |
| **16** | 0.940 |
| **25** | 1.165 |
| **50** | 1.530 |
| **75** | 1.825 |
| **84** | 1.965 |
| **95** | 2.270 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.592 | 0.332 |
| Standard Deviation | 0.550 | 0.683 |
| Skewness | -0.589 | |
| Kurtosis | 4.162 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.452 | 1.478 |
| Standard Deviation | 0.512 | 0.531 |
| Skewness (1) | -0.151 | -0.168 |
| Skewness (2) | -0.327 | |
| Kurtosis | 0.771 | 1.127 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1570+00** |
| **Sample** | **Swash** |
| **Mean** | **0.289 mm** |
| **STD** | **0.706 mm** |
| **Skewness** | **-0.846** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.21 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

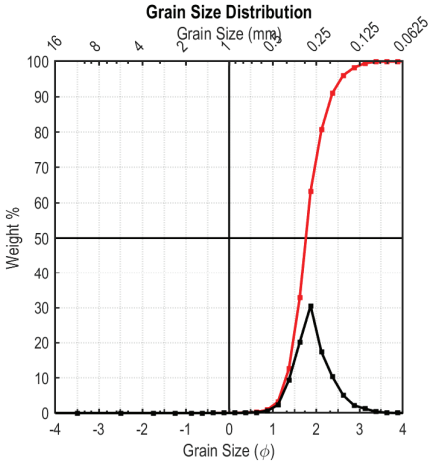
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.09 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.22 |
| 0 | -0.125 | 0.28 | 0.27 | 0.48 |
| 0.25 | 0.125 | 0.45 | 0.43 | 0.91 |
| 0.5 | 0.375 | 0.95 | 0.90 | 1.82 |
| 0.75 | 0.625 | 2.30 | 2.19 | 4.00 |
| 1 | 0.875 | 3.34 | 3.17 | 7.18 |
| 1.25 | 1.125 | 5.56 | 5.28 | 12.46 |
| 1.5 | 1.375 | 11.03 | 10.48 | 22.94 |
| 1.75 | 1.625 | 17.78 | 16.90 | 39.84 |
| 2 | 1.875 | 26.90 | 25.57 | 65.41 |
| 2.25 | 2.125 | 19.21 | 18.26 | 83.67 |
| 2.5 | 2.375 | 12.91 | 12.27 | 95.94 |
| 2.75 | 2.625 | 3.58 | 3.40 | 99.34 |
| 3 | 2.875 | 0.36 | 0.34 | 99.69 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.90 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.150 |
| **5** | 0.705 |
| **16** | 1.210 |
| **25** | 1.405 |
| **50** | 1.725 |
| **75** | 2.005 |
| **84** | 2.130 |
| **95** | 2.355 |
| **99** | 2.600 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.790 | 0.289 |
| Standard Deviation | 0.502 | 0.706 |
| Skewness | -0.846 | |
| Kurtosis | 4.668 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.670 | 1.688 |
| Standard Deviation | 0.460 | 0.480 |
| Skewness (1) | -0.120 | -0.178 |
| Skewness (2) | -0.424 | |
| Kurtosis | 0.793 | 1.127 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1580+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.263 mm** |
| **STD** | **0.746 mm** |
| **Skewness** | **0.475** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.12 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

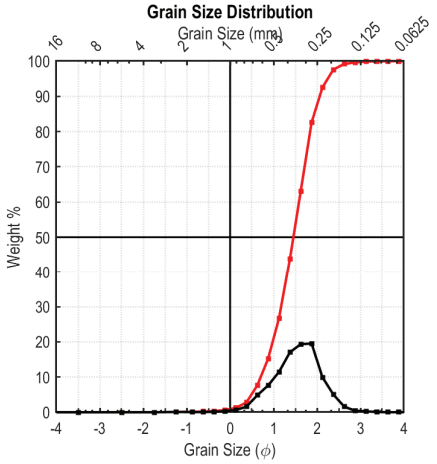
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.01 | 0.01 | 0.03 |
| 0.25 | 0.125 | 0.03 | 0.03 | 0.06 |
| 0.5 | 0.375 | 0.05 | 0.05 | 0.10 |
| 0.75 | 0.625 | 0.18 | 0.17 | 0.28 |
| 1 | 0.875 | 0.64 | 0.61 | 0.88 |
| 1.25 | 1.125 | 2.45 | 2.33 | 3.22 |
| 1.5 | 1.375 | 9.87 | 9.39 | 12.60 |
| 1.75 | 1.625 | 21.19 | 20.16 | 32.76 |
| 2 | 1.875 | 32.09 | 30.53 | 63.29 |
| 2.25 | 2.125 | 18.22 | 17.33 | 80.62 |
| 2.5 | 2.375 | 10.90 | 10.37 | 90.99 |
| 2.75 | 2.625 | 5.32 | 5.06 | 96.05 |
| 3 | 2.875 | 2.30 | 2.19 | 98.24 |
| 3.25 | 3.125 | 1.30 | 1.24 | 99.48 |
| 3.5 | 3.375 | 0.44 | 0.42 | 99.90 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.885 |
| **5** | 1.175 |
| **16** | 1.415 |
| **25** | 1.530 |
| **50** | 1.765 |
| **75** | 2.045 |
| **84** | 2.205 |
| **95** | 2.575 |
| **99** | 3.030 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.929 | 0.263 |
| Standard Deviation | 0.422 | 0.746 |
| Skewness | 0.475 | |
| Kurtosis | 4.314 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.810 | 1.795 |
| Standard Deviation | 0.395 | 0.410 |
| Skewness (1) | 0.114 | 0.136 |
| Skewness (2) | 0.278 | |
| Kurtosis | 0.772 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1580+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.343 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **-0.381** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.1 |

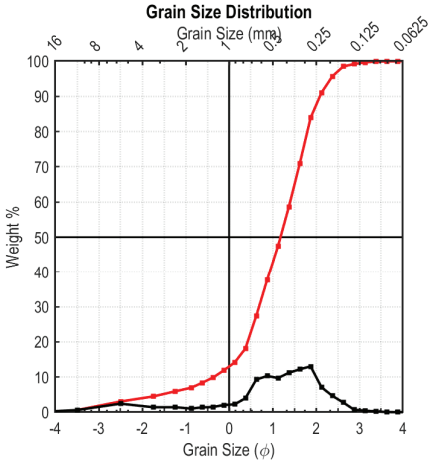
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.09 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.13 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.19 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.31 |
| 0 | -0.125 | 0.31 | 0.29 | 0.61 |
| 0.25 | 0.125 | 0.63 | 0.60 | 1.21 |
| 0.5 | 0.375 | 1.67 | 1.59 | 2.79 |
| 0.75 | 0.625 | 5.08 | 4.83 | 7.62 |
| 1 | 0.875 | 8.02 | 7.62 | 15.25 |
| 1.25 | 1.125 | 12.06 | 11.46 | 26.71 |
| 1.5 | 1.375 | 17.91 | 17.03 | 43.74 |
| 1.75 | 1.625 | 20.35 | 19.35 | 63.09 |
| 2 | 1.875 | 20.53 | 19.52 | 82.60 |
| 2.25 | 2.125 | 10.45 | 9.93 | 92.54 |
| 2.5 | 2.375 | 5.32 | 5.06 | 97.59 |
| 2.75 | 2.625 | 1.69 | 1.61 | 99.20 |
| 3 | 2.875 | 0.45 | 0.43 | 99.63 |
| 3.25 | 3.125 | 0.28 | 0.27 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.040 |
| **5** | 0.490 |
| **16** | 0.890 |
| **25** | 1.090 |
| **50** | 1.455 |
| **75** | 1.780 |
| **84** | 1.910 |
| **95** | 2.245 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.542 | 0.343 |
| Standard Deviation | 0.536 | 0.690 |
| Skewness | -0.381 | |
| Kurtosis | 4.084 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.400 | 1.418 |
| Standard Deviation | 0.510 | 0.521 |
| Skewness (1) | -0.108 | -0.104 |
| Skewness (2) | -0.172 | |
| Kurtosis | 0.721 | 1.042 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1580+00** |
| **Sample** | **Swash** |
| **Mean** | **0.465 mm** |
| **STD** | **0.460 mm** |
| **Skewness** | **-1.475** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.41 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 2.86 |
| % gravel (>4 mm) | 3.06 |
| CaCO3 | 25.5 |

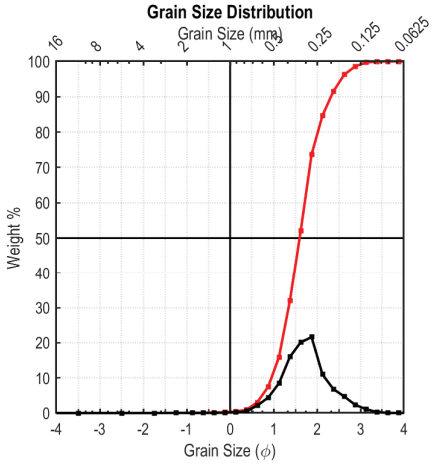
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.66 | 0.63 | 0.63 |
| -2 | -2.5 | 2.57 | 2.44 | 3.06 |
| -1.5 | -1.75 | 1.50 | 1.42 | 4.49 |
| -1 | -1.25 | 1.51 | 1.43 | 5.92 |
| -0.75 | -0.875 | 1.10 | 1.04 | 6.96 |
| -0.5 | -0.625 | 1.46 | 1.39 | 8.35 |
| -0.25 | -0.375 | 1.57 | 1.49 | 9.84 |
| 0 | -0.125 | 2.16 | 2.05 | 11.89 |
| 0.25 | 0.125 | 2.36 | 2.24 | 14.13 |
| 0.5 | 0.375 | 4.21 | 3.99 | 18.12 |
| 0.75 | 0.625 | 9.79 | 9.29 | 27.41 |
| 1 | 0.875 | 10.86 | 10.30 | 37.71 |
| 1.25 | 1.125 | 10.26 | 9.73 | 47.44 |
| 1.5 | 1.375 | 11.82 | 11.21 | 58.66 |
| 1.75 | 1.625 | 12.88 | 12.22 | 70.88 |
| 2 | 1.875 | 13.74 | 13.03 | 83.91 |
| 2.25 | 2.125 | 7.49 | 7.11 | 91.02 |
| 2.5 | 2.375 | 4.92 | 4.67 | 95.68 |
| 2.75 | 2.625 | 2.93 | 2.78 | 98.46 |
| 3 | 2.875 | 0.76 | 0.72 | 99.18 |
| 3.25 | 3.125 | 0.49 | 0.46 | 99.65 |
| 3.5 | 3.375 | 0.24 | 0.23 | 99.88 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.93 |
| 4 | 3.875 | 0.03 | 0.03 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.345 |
| **5** | -1.570 |
| **16** | 0.240 |
| **25** | 0.560 |
| **50** | 1.180 |
| **75** | 1.705 |
| **84** | 1.880 |
| **95** | 2.340 |
| **99** | 2.810 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.104 | 0.465 |
| Standard Deviation | 1.120 | 0.460 |
| Skewness | -1.475 | |
| Kurtosis | 5.986 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.060 | 1.100 |
| Standard Deviation | 0.820 | 1.002 |
| Skewness (1) | -0.146 | -0.276 |
| Skewness (2) | -0.970 | |
| Kurtosis | 1.384 | 1.400 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1590+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.301 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **0.053** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.21 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

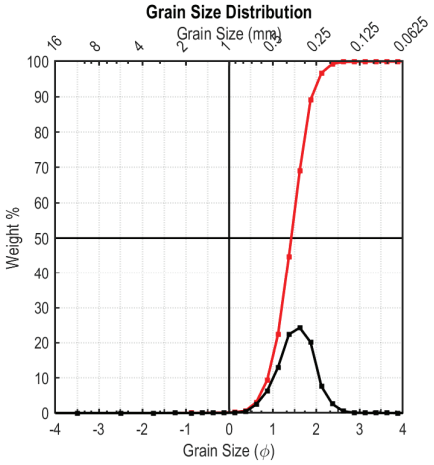
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.06 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.09 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.12 |
| 0 | -0.125 | 0.11 | 0.10 | 0.23 |
| 0.25 | 0.125 | 0.19 | 0.18 | 0.41 |
| 0.5 | 0.375 | 0.55 | 0.52 | 0.93 |
| 0.75 | 0.625 | 2.25 | 2.14 | 3.07 |
| 1 | 0.875 | 4.61 | 4.38 | 7.45 |
| 1.25 | 1.125 | 8.93 | 8.49 | 15.94 |
| 1.5 | 1.375 | 16.82 | 15.99 | 31.93 |
| 1.75 | 1.625 | 21.19 | 20.14 | 52.07 |
| 2 | 1.875 | 22.74 | 21.61 | 73.68 |
| 2.25 | 2.125 | 11.56 | 10.99 | 84.67 |
| 2.5 | 2.375 | 7.18 | 6.82 | 91.49 |
| 2.75 | 2.625 | 4.98 | 4.73 | 96.23 |
| 3 | 2.875 | 2.47 | 2.35 | 98.57 |
| 3.25 | 3.125 | 1.16 | 1.10 | 99.68 |
| 3.5 | 3.375 | 0.29 | 0.28 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.385 |
| **5** | 0.735 |
| **16** | 1.125 |
| **25** | 1.265 |
| **50** | 1.600 |
| **75** | 1.905 |
| **84** | 2.110 |
| **95** | 2.560 |
| **99** | 2.970 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.734 | 0.301 |
| Standard Deviation | 0.536 | 0.690 |
| Skewness | 0.053 | |
| Kurtosis | 3.916 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.617 | 1.612 |
| Standard Deviation | 0.492 | 0.523 |
| Skewness (1) | 0.036 | 0.044 |
| Skewness (2) | 0.096 | |
| Kurtosis | 0.853 | 1.169 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1590+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.344 mm** |
| **STD** | **0.752 mm** |
| **Skewness** | **-0.211** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.20 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.8 |

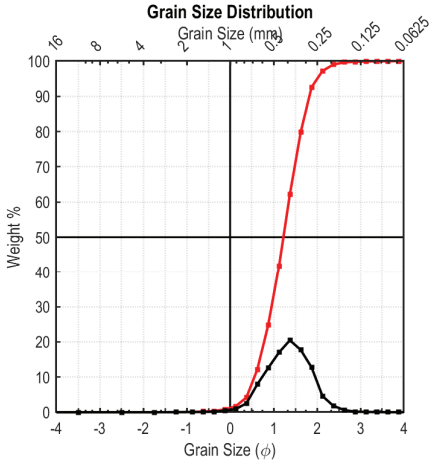
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.03 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.05 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.08 |
| 0 | -0.125 | 0.03 | 0.03 | 0.10 |
| 0.25 | 0.125 | 0.12 | 0.11 | 0.22 |
| 0.5 | 0.375 | 0.43 | 0.41 | 0.63 |
| 0.75 | 0.625 | 2.57 | 2.44 | 3.07 |
| 1 | 0.875 | 6.60 | 6.27 | 9.34 |
| 1.25 | 1.125 | 13.70 | 13.02 | 22.37 |
| 1.5 | 1.375 | 23.54 | 22.38 | 44.74 |
| 1.75 | 1.625 | 25.55 | 24.29 | 69.03 |
| 2 | 1.875 | 21.18 | 20.13 | 89.16 |
| 2.25 | 2.125 | 7.96 | 7.57 | 96.73 |
| 2.5 | 2.375 | 2.71 | 2.58 | 99.31 |
| 2.75 | 2.625 | 0.57 | 0.54 | 99.85 |
| 3 | 2.875 | 0.08 | 0.08 | 99.92 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.96 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.415 |
| **5** | 0.700 |
| **16** | 1.005 |
| **25** | 1.155 |
| **50** | 1.430 |
| **75** | 1.700 |
| **84** | 1.810 |
| **95** | 2.070 |
| **99** | 2.345 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.539 | 0.344 |
| Standard Deviation | 0.411 | 0.752 |
| Skewness | -0.211 | |
| Kurtosis | 4.307 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.407 | 1.415 |
| Standard Deviation | 0.403 | 0.409 |
| Skewness (1) | -0.056 | -0.061 |
| Skewness (2) | -0.112 | |
| Kurtosis | 0.702 | 1.030 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1590+00** |
| **Sample** | **Swash** |
| **Mean** | **0.396 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **-0.140** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.34 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

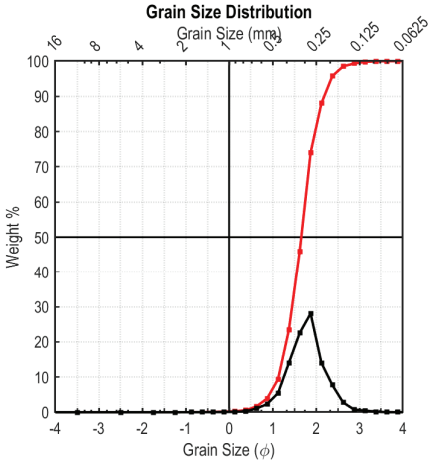
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.09 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.18 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.34 |
| 0 | -0.125 | 0.47 | 0.45 | 0.79 |
| 0.25 | 0.125 | 0.92 | 0.87 | 1.66 |
| 0.5 | 0.375 | 2.68 | 2.54 | 4.21 |
| 0.75 | 0.625 | 8.36 | 7.94 | 12.14 |
| 1 | 0.875 | 13.24 | 12.57 | 24.71 |
| 1.25 | 1.125 | 17.90 | 16.99 | 41.70 |
| 1.5 | 1.375 | 21.55 | 20.46 | 62.16 |
| 1.75 | 1.625 | 18.65 | 17.70 | 79.87 |
| 2 | 1.875 | 13.42 | 12.74 | 92.60 |
| 2.25 | 2.125 | 4.85 | 4.60 | 97.21 |
| 2.5 | 2.375 | 1.92 | 1.82 | 99.03 |
| 2.75 | 2.625 | 0.67 | 0.64 | 99.67 |
| 3 | 2.875 | 0.16 | 0.15 | 99.82 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.92 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.065 |
| **5** | 0.400 |
| **16** | 0.700 |
| **25** | 0.880 |
| **50** | 1.225 |
| **75** | 1.555 |
| **84** | 1.705 |
| **95** | 2.005 |
| **99** | 2.370 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.335 | 0.396 |
| Standard Deviation | 0.505 | 0.705 |
| Skewness | -0.140 | |
| Kurtosis | 3.863 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.202 | 1.210 |
| Standard Deviation | 0.503 | 0.494 |
| Skewness (1) | -0.045 | -0.036 |
| Skewness (2) | -0.045 | |
| Kurtosis | 0.597 | 0.974 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1600+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.293 mm** |
| **STD** | **0.739 mm** |
| **Skewness** | **-0.144** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.10 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

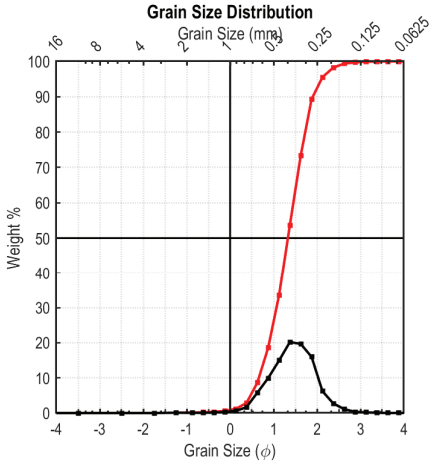
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.04 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.09 |
| 0 | -0.125 | 0.08 | 0.08 | 0.16 |
| 0.25 | 0.125 | 0.12 | 0.11 | 0.28 |
| 0.5 | 0.375 | 0.29 | 0.28 | 0.55 |
| 0.75 | 0.625 | 1.11 | 1.06 | 1.61 |
| 1 | 0.875 | 2.44 | 2.32 | 3.93 |
| 1.25 | 1.125 | 5.72 | 5.44 | 9.37 |
| 1.5 | 1.375 | 14.76 | 14.04 | 23.42 |
| 1.75 | 1.625 | 23.70 | 22.55 | 45.97 |
| 2 | 1.875 | 29.51 | 28.08 | 74.04 |
| 2.25 | 2.125 | 14.71 | 14.00 | 88.04 |
| 2.5 | 2.375 | 8.12 | 7.73 | 95.77 |
| 2.75 | 2.625 | 2.91 | 2.77 | 98.53 |
| 3 | 2.875 | 0.82 | 0.78 | 99.31 |
| 3.25 | 3.125 | 0.50 | 0.48 | 99.79 |
| 3.5 | 3.375 | 0.17 | 0.16 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.480 |
| **5** | 0.925 |
| **16** | 1.245 |
| **25** | 1.395 |
| **50** | 1.660 |
| **75** | 1.890 |
| **84** | 2.055 |
| **95** | 2.350 |
| **99** | 2.775 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.773 | 0.293 |
| Standard Deviation | 0.437 | 0.739 |
| Skewness | -0.144 | |
| Kurtosis | 4.752 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.650 | 1.653 |
| Standard Deviation | 0.405 | 0.418 |
| Skewness (1) | -0.025 | -0.028 |
| Skewness (2) | -0.056 | |
| Kurtosis | 0.759 | 1.180 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1600+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.369 mm** |
| **STD** | **0.703 mm** |
| **Skewness** | **-0.225** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.26 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

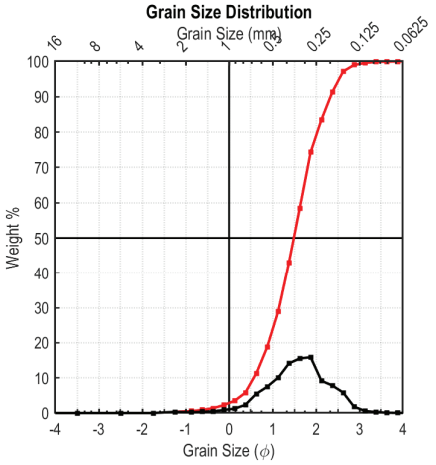
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.14 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.20 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.33 |
| 0 | -0.125 | 0.28 | 0.27 | 0.60 |
| 0.25 | 0.125 | 0.61 | 0.58 | 1.18 |
| 0.5 | 0.375 | 1.74 | 1.65 | 2.83 |
| 0.75 | 0.625 | 6.08 | 5.78 | 8.61 |
| 1 | 0.875 | 10.47 | 9.95 | 18.55 |
| 1.25 | 1.125 | 15.71 | 14.92 | 33.48 |
| 1.5 | 1.375 | 21.27 | 20.21 | 53.69 |
| 1.75 | 1.625 | 20.71 | 19.68 | 73.36 |
| 2 | 1.875 | 16.81 | 15.97 | 89.33 |
| 2.25 | 2.125 | 6.53 | 6.20 | 95.53 |
| 2.5 | 2.375 | 2.86 | 2.72 | 98.25 |
| 2.75 | 2.625 | 1.18 | 1.12 | 99.37 |
| 3 | 2.875 | 0.36 | 0.34 | 99.71 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.050 |
| **5** | 0.470 |
| **16** | 0.810 |
| **25** | 0.985 |
| **50** | 1.330 |
| **75** | 1.650 |
| **84** | 1.790 |
| **95** | 2.105 |
| **99** | 2.540 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.437 | 0.369 |
| Standard Deviation | 0.509 | 0.703 |
| Skewness | -0.225 | |
| Kurtosis | 4.296 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.300 | 1.310 |
| Standard Deviation | 0.490 | 0.493 |
| Skewness (1) | -0.061 | -0.057 |
| Skewness (2) | -0.087 | |
| Kurtosis | 0.668 | 1.008 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1600+00** |
| **Sample** | **Swash** |
| **Mean** | **0.336 mm** |
| **STD** | **0.616 mm** |
| **Skewness** | **-0.473** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.34 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.3 |

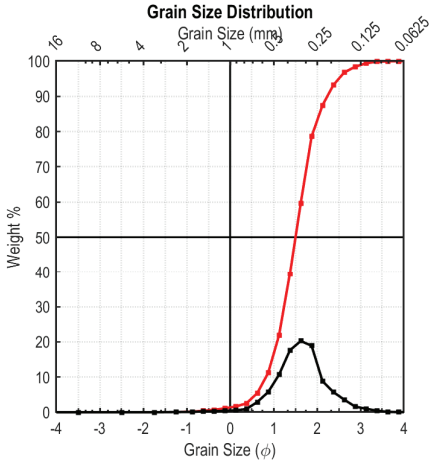
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.36 | 0.34 | 0.34 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.53 |
| -0.5 | -0.625 | 0.37 | 0.35 | 0.89 |
| -0.25 | -0.375 | 0.51 | 0.49 | 1.37 |
| 0 | -0.125 | 0.91 | 0.87 | 2.24 |
| 0.25 | 0.125 | 1.31 | 1.25 | 3.48 |
| 0.5 | 0.375 | 2.44 | 2.32 | 5.81 |
| 0.75 | 0.625 | 5.76 | 5.48 | 11.29 |
| 1 | 0.875 | 7.86 | 7.48 | 18.77 |
| 1.25 | 1.125 | 10.56 | 10.05 | 28.82 |
| 1.5 | 1.375 | 14.82 | 14.10 | 42.92 |
| 1.75 | 1.625 | 16.32 | 15.53 | 58.46 |
| 2 | 1.875 | 16.70 | 15.89 | 74.35 |
| 2.25 | 2.125 | 9.63 | 9.17 | 83.52 |
| 2.5 | 2.375 | 8.23 | 7.83 | 91.35 |
| 2.75 | 2.625 | 6.12 | 5.82 | 97.17 |
| 3 | 2.875 | 1.90 | 1.81 | 98.98 |
| 3.25 | 3.125 | 0.62 | 0.59 | 99.57 |
| 3.5 | 3.375 | 0.29 | 0.28 | 99.85 |
| 3.75 | 3.625 | 0.10 | 0.10 | 99.94 |
| 4 | 3.875 | 0.04 | 0.04 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.565 |
| **5** | 0.290 |
| **16** | 0.780 |
| **25** | 1.030 |
| **50** | 1.490 |
| **75** | 1.895 |
| **84** | 2.140 |
| **95** | 2.530 |
| **99** | 2.885 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.576 | 0.336 |
| Standard Deviation | 0.699 | 0.616 |
| Skewness | -0.473 | |
| Kurtosis | 3.961 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.460 | 1.470 |
| Standard Deviation | 0.680 | 0.679 |
| Skewness (1) | -0.044 | -0.058 |
| Skewness (2) | -0.118 | |
| Kurtosis | 0.647 | 1.061 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1610+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.323 mm** |
| **STD** | **0.666 mm** |
| **Skewness** | **-0.168** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.32 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

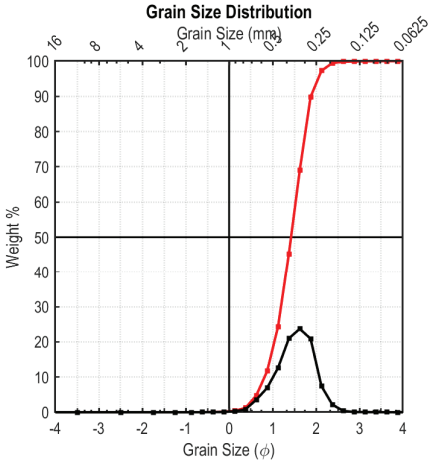
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.10 | 0.09 | 0.15 |
| -0.5 | -0.625 | 0.27 | 0.26 | 0.41 |
| -0.25 | -0.375 | 0.29 | 0.28 | 0.68 |
| 0 | -0.125 | 0.43 | 0.41 | 1.09 |
| 0.25 | 0.125 | 0.55 | 0.52 | 1.61 |
| 0.5 | 0.375 | 0.96 | 0.91 | 2.53 |
| 0.75 | 0.625 | 3.07 | 2.91 | 5.44 |
| 1 | 0.875 | 6.04 | 5.73 | 11.18 |
| 1.25 | 1.125 | 11.23 | 10.66 | 21.84 |
| 1.5 | 1.375 | 18.54 | 17.60 | 39.44 |
| 1.75 | 1.625 | 21.32 | 20.24 | 59.68 |
| 2 | 1.875 | 19.90 | 18.89 | 78.58 |
| 2.25 | 2.125 | 9.34 | 8.87 | 87.45 |
| 2.5 | 2.375 | 6.04 | 5.73 | 93.18 |
| 2.75 | 2.625 | 3.79 | 3.60 | 96.78 |
| 3 | 2.875 | 1.69 | 1.60 | 98.39 |
| 3.25 | 3.125 | 1.06 | 1.01 | 99.39 |
| 3.5 | 3.375 | 0.47 | 0.45 | 99.84 |
| 3.75 | 3.625 | 0.12 | 0.11 | 99.95 |
| 4 | 3.875 | 0.04 | 0.04 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.180 |
| **5** | 0.585 |
| **16** | 0.990 |
| **25** | 1.170 |
| **50** | 1.505 |
| **75** | 1.830 |
| **84** | 2.030 |
| **95** | 2.500 |
| **99** | 3.030 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.631 | 0.323 |
| Standard Deviation | 0.586 | 0.666 |
| Skewness | -0.168 | |
| Kurtosis | 4.703 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.510 | 1.508 |
| Standard Deviation | 0.520 | 0.550 |
| Skewness (1) | 0.010 | 0.024 |
| Skewness (2) | 0.072 | |
| Kurtosis | 0.841 | 1.189 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1610+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.349 mm** |
| **STD** | **0.744 mm** |
| **Skewness** | **-0.323** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

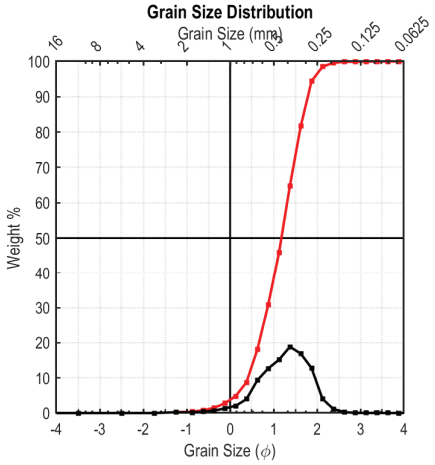
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.06 |
| 0 | -0.125 | 0.09 | 0.09 | 0.14 |
| 0.25 | 0.125 | 0.27 | 0.26 | 0.40 |
| 0.5 | 0.375 | 0.85 | 0.81 | 1.21 |
| 0.75 | 0.625 | 3.74 | 3.56 | 4.76 |
| 1 | 0.875 | 7.28 | 6.92 | 11.68 |
| 1.25 | 1.125 | 13.25 | 12.60 | 24.28 |
| 1.5 | 1.375 | 22.07 | 20.98 | 45.26 |
| 1.75 | 1.625 | 24.93 | 23.70 | 68.96 |
| 2 | 1.875 | 21.97 | 20.89 | 89.85 |
| 2.25 | 2.125 | 7.81 | 7.42 | 97.27 |
| 2.5 | 2.375 | 2.29 | 2.18 | 99.45 |
| 2.75 | 2.625 | 0.41 | 0.39 | 99.84 |
| 3 | 2.875 | 0.07 | 0.07 | 99.90 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.310 |
| **5** | 0.635 |
| **16** | 0.960 |
| **25** | 1.135 |
| **50** | 1.425 |
| **75** | 1.695 |
| **84** | 1.805 |
| **95** | 2.050 |
| **99** | 2.325 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.518 | 0.349 |
| Standard Deviation | 0.428 | 0.744 |
| Skewness | -0.323 | |
| Kurtosis | 3.685 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.383 | 1.397 |
| Standard Deviation | 0.423 | 0.426 |
| Skewness (1) | -0.101 | -0.109 |
| Skewness (2) | -0.195 | |
| Kurtosis | 0.675 | 1.036 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1610+00** |
| **Sample** | **Swash** |
| **Mean** | **0.422 mm** |
| **STD** | **0.675 mm** |
| **Skewness** | **-0.632** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.23 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.3 |

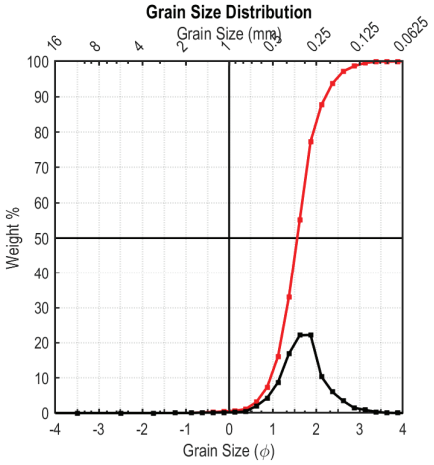
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.24 | 0.23 | 0.23 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.39 |
| -0.5 | -0.625 | 0.40 | 0.38 | 0.77 |
| -0.25 | -0.375 | 0.71 | 0.68 | 1.45 |
| 0 | -0.125 | 1.38 | 1.31 | 2.76 |
| 0.25 | 0.125 | 2.14 | 2.03 | 4.79 |
| 0.5 | 0.375 | 4.15 | 3.95 | 8.74 |
| 0.75 | 0.625 | 9.79 | 9.31 | 18.05 |
| 1 | 0.875 | 13.33 | 12.68 | 30.72 |
| 1.25 | 1.125 | 15.95 | 15.17 | 45.89 |
| 1.5 | 1.375 | 19.84 | 18.87 | 64.76 |
| 1.75 | 1.625 | 17.79 | 16.92 | 81.68 |
| 2 | 1.875 | 13.42 | 12.76 | 94.44 |
| 2.25 | 2.125 | 4.24 | 4.03 | 98.47 |
| 2.5 | 2.375 | 1.21 | 1.15 | 99.62 |
| 2.75 | 2.625 | 0.27 | 0.26 | 99.88 |
| 3 | 2.875 | 0.05 | 0.05 | 99.92 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.95 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.540 |
| **5** | 0.140 |
| **16** | 0.570 |
| **25** | 0.760 |
| **50** | 1.180 |
| **75** | 1.525 |
| **84** | 1.670 |
| **95** | 1.910 |
| **99** | 2.240 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.244 | 0.422 |
| Standard Deviation | 0.568 | 0.675 |
| Skewness | -0.632 | |
| Kurtosis | 4.196 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.120 | 1.140 |
| Standard Deviation | 0.550 | 0.543 |
| Skewness (1) | -0.109 | -0.142 |
| Skewness (2) | -0.282 | |
| Kurtosis | 0.609 | 0.948 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1620+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.309 mm** |
| **STD** | **0.698 mm** |
| **Skewness** | **-0.012** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.29 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

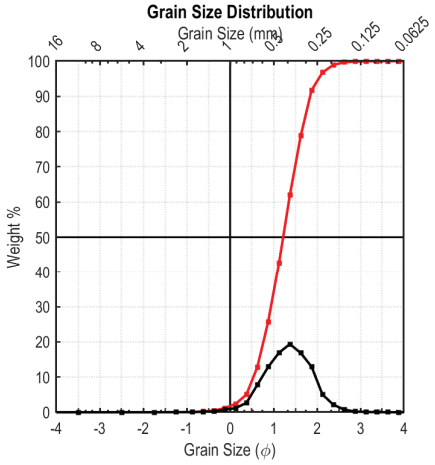
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.04 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.16 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.28 |
| 0 | -0.125 | 0.18 | 0.17 | 0.46 |
| 0.25 | 0.125 | 0.20 | 0.19 | 0.65 |
| 0.5 | 0.375 | 0.47 | 0.45 | 1.09 |
| 0.75 | 0.625 | 2.11 | 2.00 | 3.10 |
| 1 | 0.875 | 4.50 | 4.27 | 7.37 |
| 1.25 | 1.125 | 9.21 | 8.75 | 16.12 |
| 1.5 | 1.375 | 17.76 | 16.87 | 32.99 |
| 1.75 | 1.625 | 23.30 | 22.13 | 55.11 |
| 2 | 1.875 | 23.41 | 22.23 | 77.35 |
| 2.25 | 2.125 | 10.90 | 10.35 | 87.70 |
| 2.5 | 2.375 | 6.34 | 6.02 | 93.72 |
| 2.75 | 2.625 | 3.63 | 3.45 | 97.17 |
| 3 | 2.875 | 1.56 | 1.48 | 98.65 |
| 3.25 | 3.125 | 0.96 | 0.91 | 99.56 |
| 3.5 | 3.375 | 0.36 | 0.34 | 99.91 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.325 |
| **5** | 0.735 |
| **16** | 1.120 |
| **25** | 1.255 |
| **50** | 1.565 |
| **75** | 1.850 |
| **84** | 2.035 |
| **95** | 2.470 |
| **99** | 2.970 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.696 | 0.309 |
| Standard Deviation | 0.518 | 0.698 |
| Skewness | -0.012 | |
| Kurtosis | 4.660 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.578 | 1.573 |
| Standard Deviation | 0.458 | 0.492 |
| Skewness (1) | 0.027 | 0.035 |
| Skewness (2) | 0.082 | |
| Kurtosis | 0.896 | 1.195 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1620+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.398 mm** |
| **STD** | **0.695 mm** |
| **Skewness** | **-0.202** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.5 |

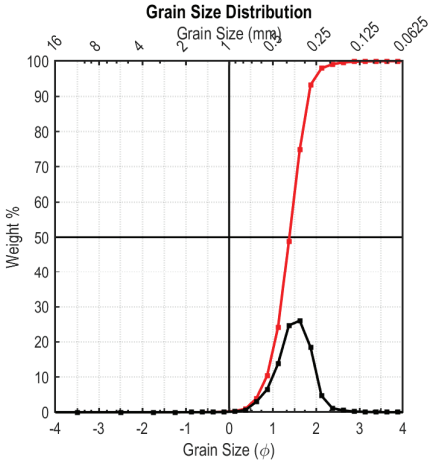
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.06 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.22 |
| -0.25 | -0.375 | 0.25 | 0.24 | 0.46 |
| 0 | -0.125 | 0.75 | 0.71 | 1.17 |
| 0.25 | 0.125 | 1.25 | 1.19 | 2.36 |
| 0.5 | 0.375 | 2.81 | 2.67 | 5.03 |
| 0.75 | 0.625 | 8.16 | 7.76 | 12.80 |
| 1 | 0.875 | 13.54 | 12.88 | 25.68 |
| 1.25 | 1.125 | 17.79 | 16.93 | 42.60 |
| 1.5 | 1.375 | 20.35 | 19.36 | 61.96 |
| 1.75 | 1.625 | 17.70 | 16.84 | 78.80 |
| 2 | 1.875 | 13.60 | 12.94 | 91.74 |
| 2.25 | 2.125 | 5.29 | 5.03 | 96.77 |
| 2.5 | 2.375 | 2.26 | 2.15 | 98.92 |
| 2.75 | 2.625 | 0.79 | 0.75 | 99.68 |
| 3 | 2.875 | 0.20 | 0.19 | 99.87 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.185 |
| **5** | 0.370 |
| **16** | 0.685 |
| **25** | 0.860 |
| **50** | 1.220 |
| **75** | 1.570 |
| **84** | 1.725 |
| **95** | 2.035 |
| **99** | 2.400 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.330 | 0.398 |
| Standard Deviation | 0.526 | 0.695 |
| Skewness | -0.202 | |
| Kurtosis | 3.667 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.205 | 1.210 |
| Standard Deviation | 0.520 | 0.512 |
| Skewness (1) | -0.029 | -0.025 |
| Skewness (2) | -0.034 | |
| Kurtosis | 0.601 | 0.961 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1620+00** |
| **Sample** | **Swash** |
| **Mean** | **0.356 mm** |
| **STD** | **0.758 mm** |
| **Skewness** | **-0.129** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.10 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

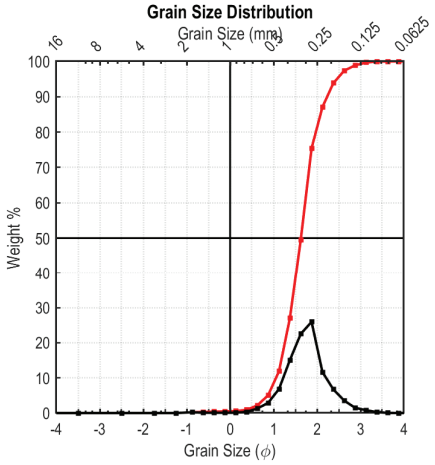
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.05 |
| 0 | -0.125 | 0.08 | 0.08 | 0.12 |
| 0.25 | 0.125 | 0.21 | 0.20 | 0.32 |
| 0.5 | 0.375 | 0.66 | 0.63 | 0.95 |
| 0.75 | 0.625 | 3.10 | 2.95 | 3.90 |
| 1 | 0.875 | 6.83 | 6.50 | 10.40 |
| 1.25 | 1.125 | 14.44 | 13.74 | 24.14 |
| 1.5 | 1.375 | 25.94 | 24.68 | 48.82 |
| 1.75 | 1.625 | 27.35 | 26.02 | 74.84 |
| 2 | 1.875 | 19.35 | 18.41 | 93.25 |
| 2.25 | 2.125 | 4.94 | 4.70 | 97.95 |
| 2.5 | 2.375 | 1.22 | 1.16 | 99.12 |
| 2.75 | 2.625 | 0.55 | 0.52 | 99.64 |
| 3 | 2.875 | 0.21 | 0.20 | 99.84 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.94 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.380 |
| **5** | 0.665 |
| **16** | 0.975 |
| **25** | 1.135 |
| **50** | 1.385 |
| **75** | 1.625 |
| **84** | 1.750 |
| **95** | 1.970 |
| **99** | 2.350 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.492 | 0.356 |
| Standard Deviation | 0.400 | 0.758 |
| Skewness | -0.129 | |
| Kurtosis | 4.505 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.363 | 1.370 |
| Standard Deviation | 0.387 | 0.391 |
| Skewness (1) | -0.058 | -0.081 |
| Skewness (2) | -0.174 | |
| Kurtosis | 0.684 | 1.092 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1630+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.298 mm** |
| **STD** | **0.711 mm** |
| **Skewness** | **-0.279** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.36 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.1 |

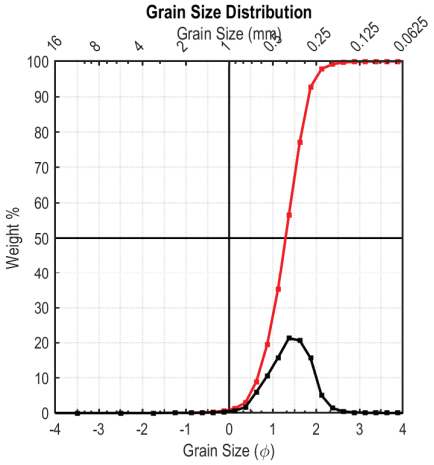
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.23 | 0.22 | 0.22 |
| -0.5 | -0.625 | 0.10 | 0.09 | 0.31 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.38 |
| 0 | -0.125 | 0.08 | 0.08 | 0.46 |
| 0.25 | 0.125 | 0.10 | 0.09 | 0.55 |
| 0.5 | 0.375 | 0.36 | 0.34 | 0.89 |
| 0.75 | 0.625 | 1.34 | 1.27 | 2.16 |
| 1 | 0.875 | 3.06 | 2.90 | 5.07 |
| 1.25 | 1.125 | 7.21 | 6.84 | 11.91 |
| 1.5 | 1.375 | 15.88 | 15.07 | 26.98 |
| 1.75 | 1.625 | 23.72 | 22.51 | 49.50 |
| 2 | 1.875 | 27.34 | 25.95 | 75.45 |
| 2.25 | 2.125 | 12.27 | 11.65 | 87.09 |
| 2.5 | 2.375 | 7.10 | 6.74 | 93.83 |
| 2.75 | 2.625 | 3.73 | 3.54 | 97.37 |
| 3 | 2.875 | 1.59 | 1.51 | 98.88 |
| 3.25 | 3.125 | 0.84 | 0.80 | 99.68 |
| 3.5 | 3.375 | 0.29 | 0.28 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.395 |
| **5** | 0.870 |
| **16** | 1.195 |
| **25** | 1.340 |
| **50** | 1.630 |
| **75** | 1.870 |
| **84** | 2.060 |
| **95** | 2.460 |
| **99** | 2.915 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.748 | 0.298 |
| Standard Deviation | 0.492 | 0.711 |
| Skewness | -0.279 | |
| Kurtosis | 5.803 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.627 | 1.628 |
| Standard Deviation | 0.433 | 0.457 |
| Skewness (1) | -0.006 | 0.019 |
| Skewness (2) | 0.081 | |
| Kurtosis | 0.838 | 1.230 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1630+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.380 mm** |
| **STD** | **0.719 mm** |
| **Skewness** | **-0.356** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.13 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.3 |

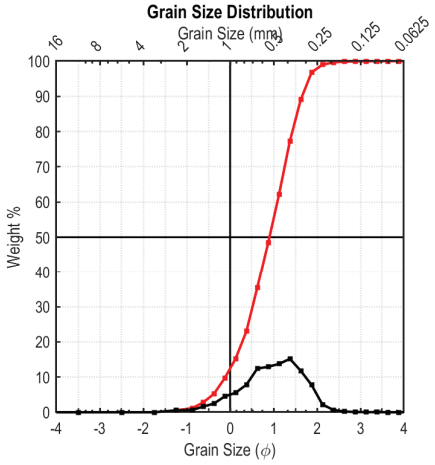
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.09 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.16 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.29 |
| 0 | -0.125 | 0.35 | 0.33 | 0.63 |
| 0.25 | 0.125 | 0.69 | 0.66 | 1.28 |
| 0.5 | 0.375 | 1.75 | 1.66 | 2.95 |
| 0.75 | 0.625 | 6.26 | 5.95 | 8.90 |
| 1 | 0.875 | 11.07 | 10.53 | 19.43 |
| 1.25 | 1.125 | 16.58 | 15.77 | 35.20 |
| 1.5 | 1.375 | 22.39 | 21.30 | 56.50 |
| 1.75 | 1.625 | 21.70 | 20.64 | 77.14 |
| 2 | 1.875 | 16.42 | 15.62 | 92.76 |
| 2.25 | 2.125 | 5.31 | 5.05 | 97.81 |
| 2.5 | 2.375 | 1.47 | 1.40 | 99.21 |
| 2.75 | 2.625 | 0.52 | 0.49 | 99.71 |
| 3 | 2.875 | 0.17 | 0.16 | 99.87 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.95 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.015 |
| **5** | 0.460 |
| **16** | 0.795 |
| **25** | 0.965 |
| **50** | 1.300 |
| **75** | 1.600 |
| **84** | 1.735 |
| **95** | 1.985 |
| **99** | 2.335 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.395 | 0.380 |
| Standard Deviation | 0.477 | 0.719 |
| Skewness | -0.356 | |
| Kurtosis | 4.332 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.265 | 1.277 |
| Standard Deviation | 0.470 | 0.466 |
| Skewness (1) | -0.074 | -0.088 |
| Skewness (2) | -0.165 | |
| Kurtosis | 0.622 | 0.984 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1630+00** |
| **Sample** | **Swash** |
| **Mean** | **0.513 mm** |
| **STD** | **0.623 mm** |
| **Skewness** | **-0.462** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.55 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.5 |

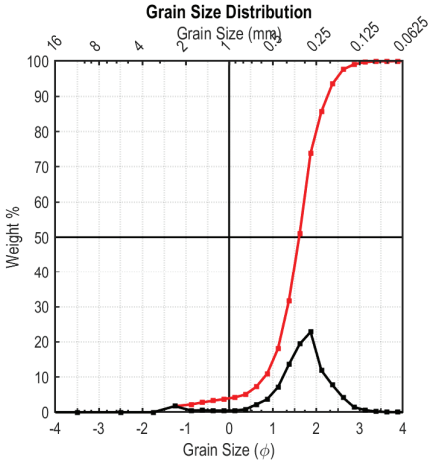
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.58 | 0.55 | 0.55 |
| -0.75 | -0.875 | 0.62 | 0.59 | 1.14 |
| -0.5 | -0.625 | 1.69 | 1.61 | 2.75 |
| -0.25 | -0.375 | 2.58 | 2.45 | 5.20 |
| 0 | -0.125 | 4.72 | 4.49 | 9.68 |
| 0.25 | 0.125 | 5.82 | 5.53 | 15.22 |
| 0.5 | 0.375 | 8.24 | 7.83 | 23.05 |
| 0.75 | 0.625 | 13.06 | 12.41 | 35.46 |
| 1 | 0.875 | 13.59 | 12.92 | 48.37 |
| 1.25 | 1.125 | 14.44 | 13.72 | 62.10 |
| 1.5 | 1.375 | 15.98 | 15.19 | 77.29 |
| 1.75 | 1.625 | 12.39 | 11.78 | 89.06 |
| 2 | 1.875 | 8.14 | 7.74 | 96.80 |
| 2.25 | 2.125 | 2.30 | 2.19 | 98.98 |
| 2.5 | 2.375 | 0.70 | 0.67 | 99.65 |
| 2.75 | 2.625 | 0.22 | 0.21 | 99.86 |
| 3 | 2.875 | 0.08 | 0.08 | 99.93 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.965 |
| **5** | -0.395 |
| **16** | 0.150 |
| **25** | 0.415 |
| **50** | 0.905 |
| **75** | 1.335 |
| **84** | 1.520 |
| **95** | 1.815 |
| **99** | 2.130 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.962 | 0.513 |
| Standard Deviation | 0.683 | 0.623 |
| Skewness | -0.462 | |
| Kurtosis | 3.128 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.835 | 0.858 |
| Standard Deviation | 0.685 | 0.677 |
| Skewness (1) | -0.102 | -0.139 |
| Skewness (2) | -0.285 | |
| Kurtosis | 0.613 | 0.984 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1640+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.320 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **-1.578** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.15 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.73 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

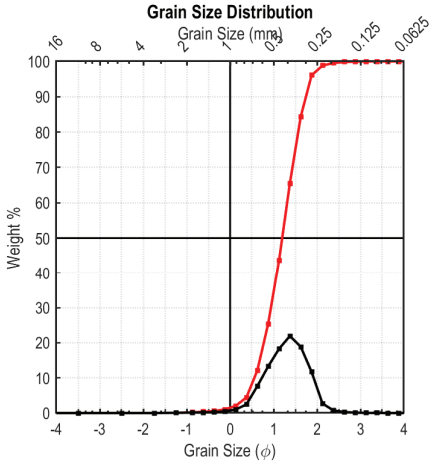
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.82 | 1.73 | 1.73 |
| -0.75 | -0.875 | 0.51 | 0.49 | 2.22 |
| -0.5 | -0.625 | 0.60 | 0.57 | 2.79 |
| -0.25 | -0.375 | 0.50 | 0.48 | 3.26 |
| 0 | -0.125 | 0.49 | 0.47 | 3.73 |
| 0.25 | 0.125 | 0.51 | 0.49 | 4.21 |
| 0.5 | 0.375 | 0.87 | 0.83 | 5.04 |
| 0.75 | 0.625 | 2.32 | 2.21 | 7.25 |
| 1 | 0.875 | 3.89 | 3.70 | 10.95 |
| 1.25 | 1.125 | 7.51 | 7.14 | 18.09 |
| 1.5 | 1.375 | 14.27 | 13.57 | 31.66 |
| 1.75 | 1.625 | 20.40 | 19.40 | 51.06 |
| 2 | 1.875 | 23.99 | 22.82 | 73.88 |
| 2.25 | 2.125 | 12.47 | 11.86 | 85.73 |
| 2.5 | 2.375 | 8.16 | 7.76 | 93.50 |
| 2.75 | 2.625 | 4.36 | 4.15 | 97.64 |
| 3 | 2.875 | 1.52 | 1.45 | 99.09 |
| 3.25 | 3.125 | 0.66 | 0.63 | 99.71 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.460 |
| **5** | 0.365 |
| **16** | 1.050 |
| **25** | 1.250 |
| **50** | 1.610 |
| **75** | 1.900 |
| **84** | 2.090 |
| **95** | 2.465 |
| **99** | 2.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.644 | 0.320 |
| Standard Deviation | 0.710 | 0.611 |
| Skewness | -1.578 | |
| Kurtosis | 7.648 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.570 | 1.583 |
| Standard Deviation | 0.520 | 0.578 |
| Skewness (1) | -0.077 | -0.131 |
| Skewness (2) | -0.375 | |
| Kurtosis | 1.019 | 1.324 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1640+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.409 mm** |
| **STD** | **0.719 mm** |
| **Skewness** | **-0.474** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.14 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.9 |

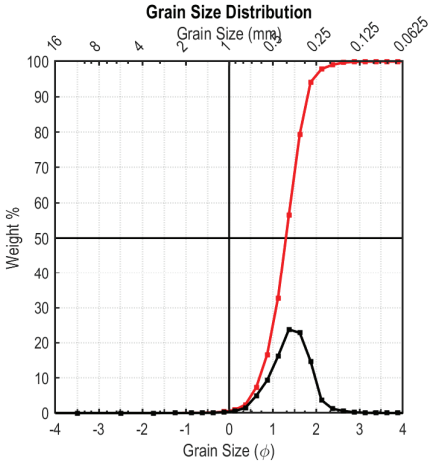
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.12 | 0.11 | 0.18 |
| -0.5 | -0.625 | 0.18 | 0.17 | 0.35 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.55 |
| 0 | -0.125 | 0.50 | 0.48 | 1.03 |
| 0.25 | 0.125 | 1.03 | 0.98 | 2.01 |
| 0.5 | 0.375 | 2.57 | 2.44 | 4.45 |
| 0.75 | 0.625 | 8.03 | 7.64 | 12.09 |
| 1 | 0.875 | 13.94 | 13.26 | 25.35 |
| 1.25 | 1.125 | 19.20 | 18.26 | 43.61 |
| 1.5 | 1.375 | 23.04 | 21.91 | 65.52 |
| 1.75 | 1.625 | 19.83 | 18.86 | 84.38 |
| 2 | 1.875 | 12.29 | 11.69 | 96.07 |
| 2.25 | 2.125 | 2.87 | 2.73 | 98.80 |
| 2.5 | 2.375 | 0.78 | 0.74 | 99.54 |
| 2.75 | 2.625 | 0.30 | 0.29 | 99.83 |
| 3 | 2.875 | 0.11 | 0.10 | 99.93 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.140 |
| **5** | 0.395 |
| **16** | 0.700 |
| **25** | 0.870 |
| **50** | 1.200 |
| **75** | 1.500 |
| **84** | 1.620 |
| **95** | 1.850 |
| **99** | 2.190 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.291 | 0.409 |
| Standard Deviation | 0.477 | 0.719 |
| Skewness | -0.474 | |
| Kurtosis | 4.531 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.160 | 1.173 |
| Standard Deviation | 0.460 | 0.450 |
| Skewness (1) | -0.087 | -0.097 |
| Skewness (2) | -0.168 | |
| Kurtosis | 0.582 | 0.947 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1640+00** |
| **Sample** | **Swash** |
| **Mean** | **0.377 mm** |
| **STD** | **0.735 mm** |
| **Skewness** | **-0.188** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.09 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.1 |

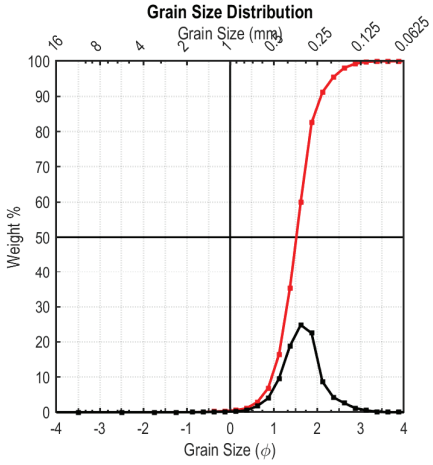
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.07 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.14 |
| 0 | -0.125 | 0.23 | 0.22 | 0.36 |
| 0.25 | 0.125 | 0.55 | 0.52 | 0.88 |
| 0.5 | 0.375 | 1.58 | 1.50 | 2.39 |
| 0.75 | 0.625 | 5.18 | 4.93 | 7.32 |
| 1 | 0.875 | 9.77 | 9.30 | 16.61 |
| 1.25 | 1.125 | 16.96 | 16.14 | 32.75 |
| 1.5 | 1.375 | 24.98 | 23.77 | 56.52 |
| 1.75 | 1.625 | 24.01 | 22.85 | 79.37 |
| 2 | 1.875 | 15.50 | 14.75 | 94.12 |
| 2.25 | 2.125 | 3.88 | 3.69 | 97.81 |
| 2.5 | 2.375 | 1.29 | 1.23 | 99.04 |
| 2.75 | 2.625 | 0.65 | 0.62 | 99.66 |
| 3 | 2.875 | 0.22 | 0.21 | 99.87 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.94 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.145 |
| **5** | 0.505 |
| **16** | 0.860 |
| **25** | 1.005 |
| **50** | 1.305 |
| **75** | 1.575 |
| **84** | 1.705 |
| **95** | 1.935 |
| **99** | 2.365 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.408 | 0.377 |
| Standard Deviation | 0.445 | 0.735 |
| Skewness | -0.188 | |
| Kurtosis | 4.432 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.282 | 1.290 |
| Standard Deviation | 0.423 | 0.428 |
| Skewness (1) | -0.053 | -0.086 |
| Skewness (2) | -0.201 | |
| Kurtosis | 0.692 | 1.028 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1650+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.319 mm** |
| **STD** | **0.720 mm** |
| **Skewness** | **0.034** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.08 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

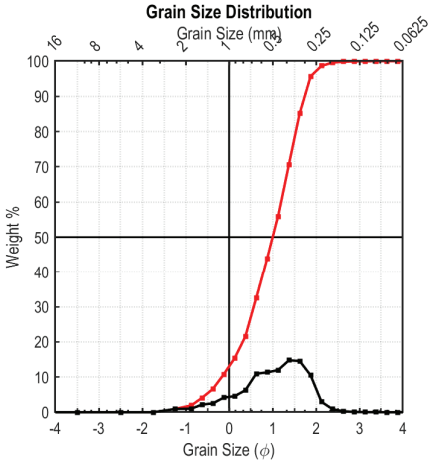
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.06 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.18 |
| 0 | -0.125 | 0.16 | 0.15 | 0.33 |
| 0.25 | 0.125 | 0.26 | 0.25 | 0.58 |
| 0.5 | 0.375 | 0.55 | 0.52 | 1.10 |
| 0.75 | 0.625 | 1.86 | 1.77 | 2.87 |
| 1 | 0.875 | 4.17 | 3.97 | 6.84 |
| 1.25 | 1.125 | 10.08 | 9.59 | 16.44 |
| 1.5 | 1.375 | 19.72 | 18.77 | 35.20 |
| 1.75 | 1.625 | 26.09 | 24.83 | 60.03 |
| 2 | 1.875 | 23.62 | 22.48 | 82.51 |
| 2.25 | 2.125 | 9.12 | 8.68 | 91.19 |
| 2.5 | 2.375 | 4.48 | 4.26 | 95.45 |
| 2.75 | 2.625 | 2.74 | 2.61 | 98.06 |
| 3 | 2.875 | 1.26 | 1.20 | 99.26 |
| 3.25 | 3.125 | 0.58 | 0.55 | 99.81 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.325 |
| **5** | 0.760 |
| **16** | 1.115 |
| **25** | 1.240 |
| **50** | 1.525 |
| **75** | 1.790 |
| **84** | 1.920 |
| **95** | 2.350 |
| **99** | 2.820 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.650 | 0.319 |
| Standard Deviation | 0.475 | 0.720 |
| Skewness | 0.034 | |
| Kurtosis | 4.787 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.517 | 1.520 |
| Standard Deviation | 0.403 | 0.442 |
| Skewness (1) | -0.019 | 0.010 |
| Skewness (2) | 0.075 | |
| Kurtosis | 0.975 | 1.185 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1650+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.494 mm** |
| **STD** | **0.600 mm** |
| **Skewness** | **-0.647** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.09 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.92 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.3 |

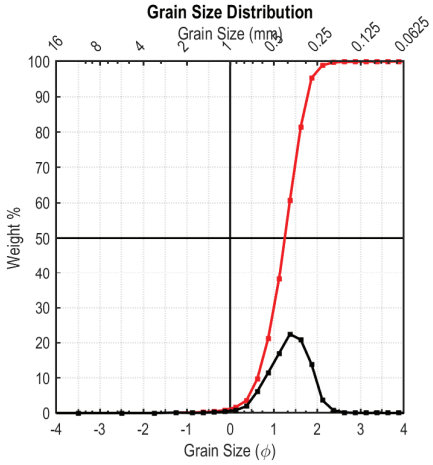
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.97 | 0.92 | 0.92 |
| -0.75 | -0.875 | 1.05 | 1.00 | 1.92 |
| -0.5 | -0.625 | 2.28 | 2.17 | 4.09 |
| -0.25 | -0.375 | 2.65 | 2.52 | 6.61 |
| 0 | -0.125 | 4.37 | 4.16 | 10.77 |
| 0.25 | 0.125 | 4.79 | 4.56 | 15.33 |
| 0.5 | 0.375 | 6.59 | 6.27 | 21.60 |
| 0.75 | 0.625 | 11.52 | 10.96 | 32.56 |
| 1 | 0.875 | 11.90 | 11.32 | 43.89 |
| 1.25 | 1.125 | 12.60 | 11.99 | 55.88 |
| 1.5 | 1.375 | 15.51 | 14.76 | 70.63 |
| 1.75 | 1.625 | 15.30 | 14.56 | 85.19 |
| 2 | 1.875 | 11.02 | 10.49 | 95.68 |
| 2.25 | 2.125 | 3.13 | 2.98 | 98.66 |
| 2.5 | 2.375 | 0.95 | 0.90 | 99.56 |
| 2.75 | 2.625 | 0.30 | 0.29 | 99.85 |
| 3 | 2.875 | 0.09 | 0.09 | 99.93 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.220 |
| **5** | -0.535 |
| **16** | 0.150 |
| **25** | 0.455 |
| **50** | 1.000 |
| **75** | 1.450 |
| **84** | 1.605 |
| **95** | 1.860 |
| **99** | 2.220 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.016 | 0.494 |
| Standard Deviation | 0.738 | 0.600 |
| Skewness | -0.647 | |
| Kurtosis | 3.183 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.877 | 0.918 |
| Standard Deviation | 0.728 | 0.727 |
| Skewness (1) | -0.168 | -0.225 |
| Skewness (2) | -0.464 | |
| Kurtosis | 0.646 | 0.986 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1650+00** |
| **Sample** | **Swash** |
| **Mean** | **0.393 mm** |
| **STD** | **0.724 mm** |
| **Skewness** | **-0.552** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.12 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.1 |

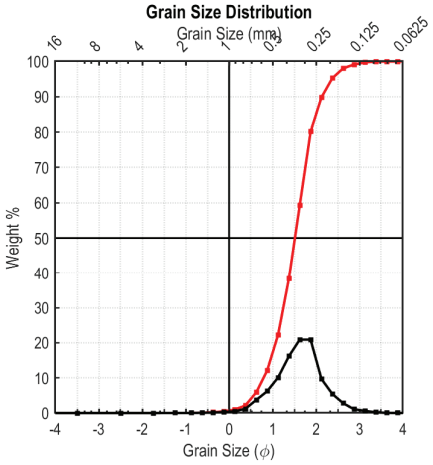
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.13 | 0.12 | 0.12 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.15 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.24 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.43 |
| 0 | -0.125 | 0.42 | 0.40 | 0.83 |
| 0.25 | 0.125 | 0.85 | 0.81 | 1.64 |
| 0.5 | 0.375 | 2.03 | 1.93 | 3.57 |
| 0.75 | 0.625 | 6.47 | 6.15 | 9.72 |
| 1 | 0.875 | 12.06 | 11.47 | 21.19 |
| 1.25 | 1.125 | 17.84 | 16.96 | 38.15 |
| 1.5 | 1.375 | 23.60 | 22.44 | 60.59 |
| 1.75 | 1.625 | 21.95 | 20.87 | 81.47 |
| 2 | 1.875 | 14.56 | 13.85 | 95.31 |
| 2.25 | 2.125 | 3.80 | 3.61 | 98.93 |
| 2.5 | 2.375 | 0.83 | 0.79 | 99.71 |
| 2.75 | 2.625 | 0.17 | 0.16 | 99.88 |
| 3 | 2.875 | 0.04 | 0.04 | 99.91 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.93 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.95 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.070 |
| **5** | 0.435 |
| **16** | 0.760 |
| **25** | 0.930 |
| **50** | 1.255 |
| **75** | 1.550 |
| **84** | 1.670 |
| **95** | 1.870 |
| **99** | 2.150 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.346 | 0.393 |
| Standard Deviation | 0.466 | 0.724 |
| Skewness | -0.552 | |
| Kurtosis | 5.071 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.215 | 1.228 |
| Standard Deviation | 0.455 | 0.445 |
| Skewness (1) | -0.088 | -0.115 |
| Skewness (2) | -0.225 | |
| Kurtosis | 0.577 | 0.949 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1660+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.326 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.125** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.14 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.8 |

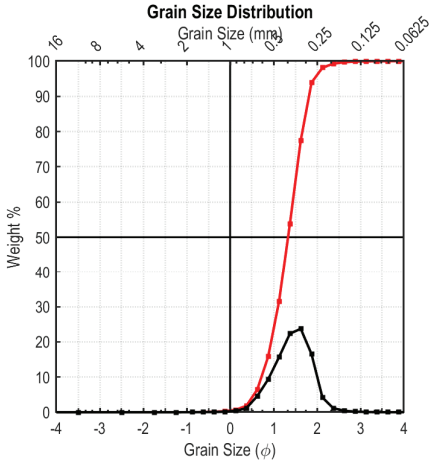
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.02 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.09 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.21 |
| 0 | -0.125 | 0.28 | 0.27 | 0.48 |
| 0.25 | 0.125 | 0.51 | 0.49 | 0.96 |
| 0.5 | 0.375 | 1.26 | 1.20 | 2.16 |
| 0.75 | 0.625 | 3.93 | 3.74 | 5.90 |
| 1 | 0.875 | 6.51 | 6.19 | 12.09 |
| 1.25 | 1.125 | 10.62 | 10.10 | 22.19 |
| 1.5 | 1.375 | 16.98 | 16.15 | 38.34 |
| 1.75 | 1.625 | 21.98 | 20.91 | 59.24 |
| 2 | 1.875 | 21.96 | 20.89 | 80.13 |
| 2.25 | 2.125 | 10.19 | 9.69 | 89.82 |
| 2.5 | 2.375 | 5.71 | 5.43 | 95.25 |
| 2.75 | 2.625 | 2.93 | 2.79 | 98.04 |
| 3 | 2.875 | 1.13 | 1.07 | 99.12 |
| 3.25 | 3.125 | 0.65 | 0.62 | 99.73 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.135 |
| **5** | 0.565 |
| **16** | 0.970 |
| **25** | 1.170 |
| **50** | 1.515 |
| **75** | 1.815 |
| **84** | 1.975 |
| **95** | 2.365 |
| **99** | 2.850 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.616 | 0.326 |
| Standard Deviation | 0.539 | 0.688 |
| Skewness | -0.125 | |
| Kurtosis | 3.957 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.472 | 1.487 |
| Standard Deviation | 0.503 | 0.524 |
| Skewness (1) | -0.085 | -0.070 |
| Skewness (2) | -0.100 | |
| Kurtosis | 0.791 | 1.144 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1660+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.372 mm** |
| **STD** | **0.740 mm** |
| **Skewness** | **-0.234** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.51 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.3 |

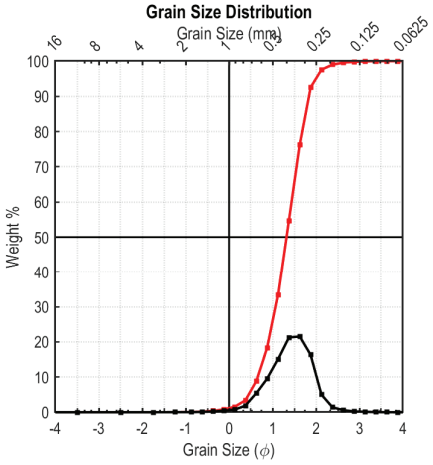
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.06 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.13 |
| 0 | -0.125 | 0.16 | 0.15 | 0.29 |
| 0.25 | 0.125 | 0.40 | 0.38 | 0.67 |
| 0.5 | 0.375 | 1.23 | 1.18 | 1.85 |
| 0.75 | 0.625 | 4.81 | 4.60 | 6.45 |
| 1 | 0.875 | 9.76 | 9.34 | 15.79 |
| 1.25 | 1.125 | 16.36 | 15.65 | 31.44 |
| 1.5 | 1.375 | 23.32 | 22.31 | 53.76 |
| 1.75 | 1.625 | 24.80 | 23.73 | 77.49 |
| 2 | 1.875 | 17.21 | 16.47 | 93.95 |
| 2.25 | 2.125 | 4.36 | 4.17 | 98.12 |
| 2.5 | 2.375 | 1.21 | 1.16 | 99.28 |
| 2.75 | 2.625 | 0.44 | 0.42 | 99.70 |
| 3 | 2.875 | 0.18 | 0.17 | 99.88 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.95 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.195 |
| **5** | 0.545 |
| **16** | 0.880 |
| **25** | 1.020 |
| **50** | 1.335 |
| **75** | 1.600 |
| **84** | 1.725 |
| **95** | 1.940 |
| **99** | 2.315 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.428 | 0.372 |
| Standard Deviation | 0.434 | 0.740 |
| Skewness | -0.234 | |
| Kurtosis | 4.104 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.302 | 1.313 |
| Standard Deviation | 0.423 | 0.423 |
| Skewness (1) | -0.077 | -0.105 |
| Skewness (2) | -0.219 | |
| Kurtosis | 0.651 | 0.986 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1660+00** |
| **Sample** | **Swash** |
| **Mean** | **0.376 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **-0.392** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.05 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

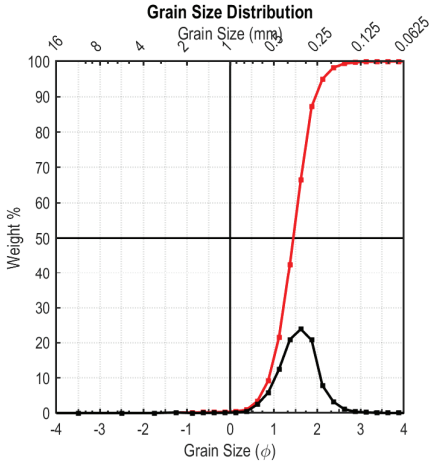
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.06 |
| -0.5 | -0.625 | 0.11 | 0.10 | 0.16 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.36 |
| 0 | -0.125 | 0.46 | 0.44 | 0.80 |
| 0.25 | 0.125 | 0.78 | 0.74 | 1.54 |
| 0.5 | 0.375 | 1.95 | 1.86 | 3.40 |
| 0.75 | 0.625 | 5.67 | 5.40 | 8.80 |
| 1 | 0.875 | 10.03 | 9.55 | 18.34 |
| 1.25 | 1.125 | 15.85 | 15.09 | 33.43 |
| 1.5 | 1.375 | 22.34 | 21.27 | 54.70 |
| 1.75 | 1.625 | 22.63 | 21.54 | 76.24 |
| 2 | 1.875 | 17.13 | 16.31 | 92.55 |
| 2.25 | 2.125 | 5.26 | 5.01 | 97.55 |
| 2.5 | 2.375 | 1.51 | 1.44 | 98.99 |
| 2.75 | 2.625 | 0.61 | 0.58 | 99.57 |
| 3 | 2.875 | 0.25 | 0.24 | 99.81 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.94 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.060 |
| **5** | 0.450 |
| **16** | 0.815 |
| **25** | 0.985 |
| **50** | 1.320 |
| **75** | 1.610 |
| **84** | 1.745 |
| **95** | 2.000 |
| **99** | 2.380 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.409 | 0.376 |
| Standard Deviation | 0.484 | 0.715 |
| Skewness | -0.392 | |
| Kurtosis | 4.342 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.280 | 1.293 |
| Standard Deviation | 0.465 | 0.467 |
| Skewness (1) | -0.086 | -0.104 |
| Skewness (2) | -0.204 | |
| Kurtosis | 0.667 | 1.016 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1670+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.338 mm** |
| **STD** | **0.732 mm** |
| **Skewness** | **-0.362** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.35 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.15 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

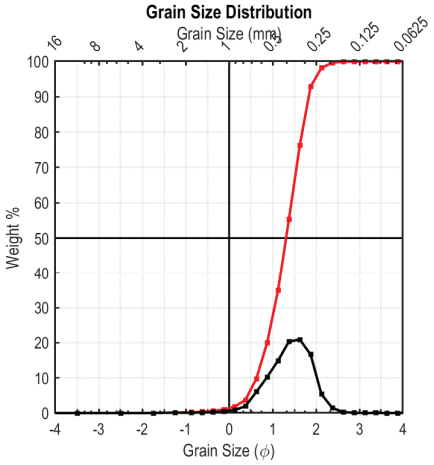
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.16 | 0.15 | 0.15 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.15 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.18 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.24 |
| 0 | -0.125 | 0.07 | 0.07 | 0.30 |
| 0.25 | 0.125 | 0.17 | 0.16 | 0.47 |
| 0.5 | 0.375 | 0.48 | 0.46 | 0.92 |
| 0.75 | 0.625 | 2.55 | 2.42 | 3.34 |
| 1 | 0.875 | 6.12 | 5.81 | 9.15 |
| 1.25 | 1.125 | 13.11 | 12.44 | 21.59 |
| 1.5 | 1.375 | 22.03 | 20.91 | 42.51 |
| 1.75 | 1.625 | 25.16 | 23.88 | 66.39 |
| 2 | 1.875 | 21.89 | 20.78 | 87.17 |
| 2.25 | 2.125 | 8.25 | 7.83 | 95.00 |
| 2.5 | 2.375 | 3.40 | 3.23 | 98.22 |
| 2.75 | 2.625 | 1.19 | 1.13 | 99.35 |
| 3 | 2.875 | 0.38 | 0.36 | 99.72 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.91 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.385 |
| **5** | 0.695 |
| **16** | 1.015 |
| **25** | 1.165 |
| **50** | 1.455 |
| **75** | 1.730 |
| **84** | 1.835 |
| **95** | 2.125 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.563 | 0.338 |
| Standard Deviation | 0.449 | 0.732 |
| Skewness | -0.362 | |
| Kurtosis | 6.014 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.425 | 1.435 |
| Standard Deviation | 0.410 | 0.422 |
| Skewness (1) | -0.073 | -0.068 |
| Skewness (2) | -0.110 | |
| Kurtosis | 0.744 | 1.037 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1670+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.382 mm** |
| **STD** | **0.712 mm** |
| **Skewness** | **-0.703** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.10 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.4 |

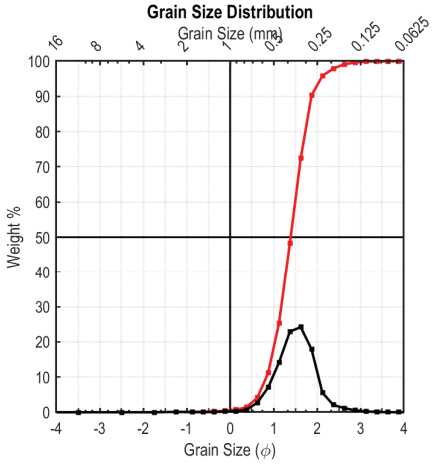
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.12 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.18 |
| -0.5 | -0.625 | 0.18 | 0.17 | 0.35 |
| -0.25 | -0.375 | 0.22 | 0.21 | 0.56 |
| 0 | -0.125 | 0.45 | 0.43 | 0.99 |
| 0.25 | 0.125 | 0.86 | 0.82 | 1.81 |
| 0.5 | 0.375 | 2.04 | 1.94 | 3.75 |
| 0.75 | 0.625 | 6.31 | 6.00 | 9.75 |
| 1 | 0.875 | 10.78 | 10.26 | 20.01 |
| 1.25 | 1.125 | 15.66 | 14.90 | 34.91 |
| 1.5 | 1.375 | 21.37 | 20.33 | 55.24 |
| 1.75 | 1.625 | 21.99 | 20.92 | 76.17 |
| 2 | 1.875 | 17.51 | 16.66 | 92.83 |
| 2.25 | 2.125 | 5.62 | 5.35 | 98.17 |
| 2.5 | 2.375 | 1.52 | 1.45 | 99.62 |
| 2.75 | 2.625 | 0.32 | 0.30 | 99.92 |
| 3 | 2.875 | 0.05 | 0.05 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.120 |
| **5** | 0.425 |
| **16** | 0.775 |
| **25** | 0.960 |
| **50** | 1.310 |
| **75** | 1.610 |
| **84** | 1.745 |
| **95** | 1.975 |
| **99** | 2.270 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.389 | 0.382 |
| Standard Deviation | 0.491 | 0.712 |
| Skewness | -0.703 | |
| Kurtosis | 4.574 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.260 | 1.277 |
| Standard Deviation | 0.485 | 0.477 |
| Skewness (1) | -0.103 | -0.123 |
| Skewness (2) | -0.227 | |
| Kurtosis | 0.598 | 0.977 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1670+00** |
| **Sample** | **Swash** |
| **Mean** | **0.352 mm** |
| **STD** | **0.729 mm** |
| **Skewness** | **-0.150** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

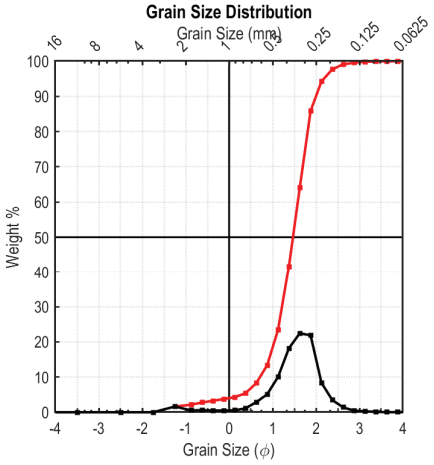
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.12 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.16 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.24 |
| 0 | -0.125 | 0.19 | 0.18 | 0.42 |
| 0.25 | 0.125 | 0.32 | 0.30 | 0.72 |
| 0.5 | 0.375 | 0.71 | 0.68 | 1.40 |
| 0.75 | 0.625 | 2.86 | 2.72 | 4.12 |
| 1 | 0.875 | 7.41 | 7.05 | 11.16 |
| 1.25 | 1.125 | 14.89 | 14.16 | 25.32 |
| 1.5 | 1.375 | 24.11 | 22.93 | 48.25 |
| 1.75 | 1.625 | 25.44 | 24.19 | 72.44 |
| 2 | 1.875 | 18.80 | 17.88 | 90.32 |
| 2.25 | 2.125 | 5.80 | 5.52 | 95.83 |
| 2.5 | 2.375 | 2.18 | 2.07 | 97.91 |
| 2.75 | 2.625 | 1.24 | 1.18 | 99.09 |
| 3 | 2.875 | 0.57 | 0.54 | 99.63 |
| 3.25 | 3.125 | 0.27 | 0.26 | 99.89 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.230 |
| **5** | 0.655 |
| **16** | 0.960 |
| **25** | 1.120 |
| **50** | 1.395 |
| **75** | 1.660 |
| **84** | 1.785 |
| **95** | 2.085 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.507 | 0.352 |
| Standard Deviation | 0.456 | 0.729 |
| Skewness | -0.150 | |
| Kurtosis | 5.955 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.373 | 1.380 |
| Standard Deviation | 0.413 | 0.423 |
| Skewness (1) | -0.055 | -0.045 |
| Skewness (2) | -0.061 | |
| Kurtosis | 0.733 | 1.085 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1680+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.354 mm** |
| **STD** | **0.635 mm** |
| **Skewness** | **-1.666** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.80 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 1.62 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.3 |

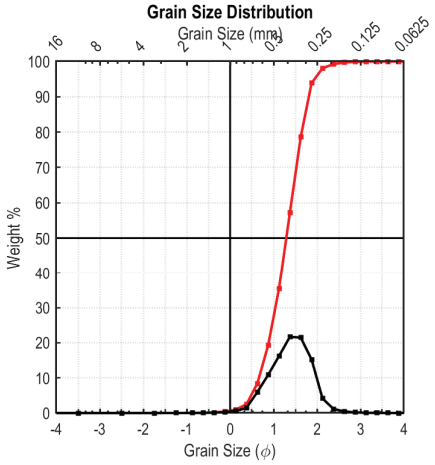
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.70 | 1.62 | 1.62 |
| -0.75 | -0.875 | 0.55 | 0.52 | 2.15 |
| -0.5 | -0.625 | 0.64 | 0.61 | 2.76 |
| -0.25 | -0.375 | 0.52 | 0.50 | 3.25 |
| 0 | -0.125 | 0.51 | 0.49 | 3.74 |
| 0.25 | 0.125 | 0.57 | 0.54 | 4.28 |
| 0.5 | 0.375 | 1.16 | 1.11 | 5.39 |
| 0.75 | 0.625 | 3.02 | 2.88 | 8.27 |
| 1 | 0.875 | 5.34 | 5.10 | 13.37 |
| 1.25 | 1.125 | 10.52 | 10.04 | 23.41 |
| 1.5 | 1.375 | 19.04 | 18.17 | 41.57 |
| 1.75 | 1.625 | 23.51 | 22.43 | 64.01 |
| 2 | 1.875 | 22.91 | 21.86 | 85.87 |
| 2.25 | 2.125 | 8.77 | 8.37 | 94.24 |
| 2.5 | 2.375 | 3.62 | 3.45 | 97.69 |
| 2.75 | 2.625 | 1.46 | 1.39 | 99.08 |
| 3 | 2.875 | 0.48 | 0.46 | 99.54 |
| 3.25 | 3.125 | 0.29 | 0.28 | 99.82 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.440 |
| **5** | 0.285 |
| **16** | 0.940 |
| **25** | 1.145 |
| **50** | 1.470 |
| **75** | 1.750 |
| **84** | 1.855 |
| **95** | 2.180 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.498 | 0.354 |
| Standard Deviation | 0.655 | 0.635 |
| Skewness | -1.666 | |
| Kurtosis | 8.230 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.397 | 1.422 |
| Standard Deviation | 0.458 | 0.516 |
| Skewness (1) | -0.158 | -0.205 |
| Skewness (2) | -0.519 | |
| Kurtosis | 1.071 | 1.284 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1680+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.381 mm** |
| **STD** | **0.728 mm** |
| **Skewness** | **-0.203** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.7 |

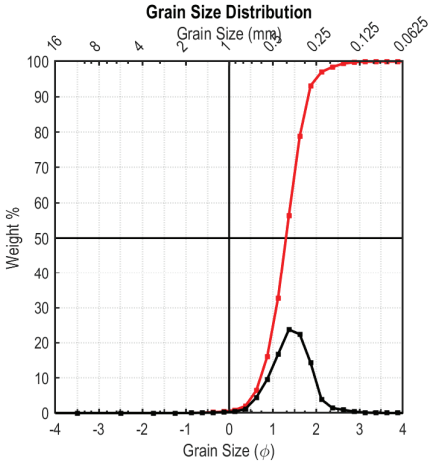
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.07 |
| -0.25 | -0.375 | 0.11 | 0.10 | 0.17 |
| 0 | -0.125 | 0.27 | 0.26 | 0.43 |
| 0.25 | 0.125 | 0.58 | 0.55 | 0.98 |
| 0.5 | 0.375 | 1.55 | 1.47 | 2.45 |
| 0.75 | 0.625 | 6.24 | 5.93 | 8.38 |
| 1 | 0.875 | 11.44 | 10.88 | 19.26 |
| 1.25 | 1.125 | 17.05 | 16.21 | 35.47 |
| 1.5 | 1.375 | 22.81 | 21.68 | 57.15 |
| 1.75 | 1.625 | 22.59 | 21.48 | 78.63 |
| 2 | 1.875 | 16.03 | 15.24 | 93.87 |
| 2.25 | 2.125 | 4.40 | 4.18 | 98.05 |
| 2.5 | 2.375 | 1.25 | 1.19 | 99.24 |
| 2.75 | 2.625 | 0.48 | 0.46 | 99.70 |
| 3 | 2.875 | 0.19 | 0.18 | 99.88 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.94 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.130 |
| **5** | 0.480 |
| **16** | 0.800 |
| **25** | 0.965 |
| **50** | 1.295 |
| **75** | 1.585 |
| **84** | 1.715 |
| **95** | 1.945 |
| **99** | 2.325 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.391 | 0.381 |
| Standard Deviation | 0.457 | 0.728 |
| Skewness | -0.203 | |
| Kurtosis | 4.010 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.257 | 1.270 |
| Standard Deviation | 0.458 | 0.451 |
| Skewness (1) | -0.082 | -0.097 |
| Skewness (2) | -0.180 | |
| Kurtosis | 0.601 | 0.968 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1680+00** |
| **Sample** | **Swash** |
| **Mean** | **0.373 mm** |
| **STD** | **0.730 mm** |
| **Skewness** | **0.003** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.01 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.8 |

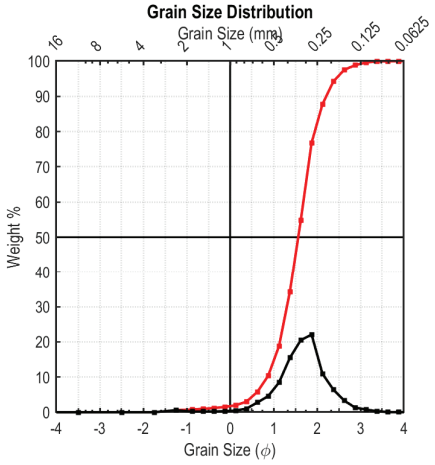
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.10 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.21 |
| 0 | -0.125 | 0.24 | 0.23 | 0.44 |
| 0.25 | 0.125 | 0.43 | 0.41 | 0.85 |
| 0.5 | 0.375 | 1.21 | 1.15 | 2.00 |
| 0.75 | 0.625 | 4.62 | 4.40 | 6.40 |
| 1 | 0.875 | 10.04 | 9.56 | 15.96 |
| 1.25 | 1.125 | 17.50 | 16.67 | 32.63 |
| 1.5 | 1.375 | 24.95 | 23.76 | 56.39 |
| 1.75 | 1.625 | 23.54 | 22.42 | 78.80 |
| 2 | 1.875 | 15.03 | 14.31 | 93.11 |
| 2.25 | 2.125 | 4.08 | 3.89 | 97.00 |
| 2.5 | 2.375 | 1.50 | 1.43 | 98.43 |
| 2.75 | 2.625 | 0.98 | 0.93 | 99.36 |
| 3 | 2.875 | 0.43 | 0.41 | 99.77 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.91 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.95 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.160 |
| **5** | 0.545 |
| **16** | 0.875 |
| **25** | 1.010 |
| **50** | 1.310 |
| **75** | 1.585 |
| **84** | 1.715 |
| **95** | 1.995 |
| **99** | 2.530 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.422 | 0.373 |
| Standard Deviation | 0.454 | 0.730 |
| Skewness | 0.003 | |
| Kurtosis | 4.777 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.295 | 1.300 |
| Standard Deviation | 0.420 | 0.430 |
| Skewness (1) | -0.036 | -0.045 |
| Skewness (2) | -0.095 | |
| Kurtosis | 0.726 | 1.033 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.318 mm** |
| **STD** | **0.660 mm** |
| **Skewness** | **-0.914** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.59 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

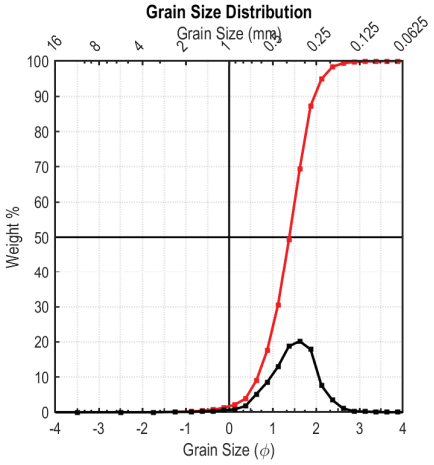
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.62 | 0.59 | 0.59 |
| -0.75 | -0.875 | 0.18 | 0.17 | 0.76 |
| -0.5 | -0.625 | 0.23 | 0.22 | 0.98 |
| -0.25 | -0.375 | 0.22 | 0.21 | 1.19 |
| 0 | -0.125 | 0.33 | 0.31 | 1.51 |
| 0.25 | 0.125 | 0.50 | 0.47 | 1.98 |
| 0.5 | 0.375 | 1.08 | 1.02 | 3.00 |
| 0.75 | 0.625 | 2.91 | 2.77 | 5.77 |
| 1 | 0.875 | 4.81 | 4.57 | 10.34 |
| 1.25 | 1.125 | 8.89 | 8.46 | 18.80 |
| 1.5 | 1.375 | 16.27 | 15.47 | 34.27 |
| 1.75 | 1.625 | 21.52 | 20.46 | 54.73 |
| 2 | 1.875 | 23.23 | 22.09 | 76.81 |
| 2.25 | 2.125 | 11.51 | 10.95 | 87.76 |
| 2.5 | 2.375 | 6.78 | 6.45 | 94.21 |
| 2.75 | 2.625 | 3.48 | 3.31 | 97.52 |
| 3 | 2.875 | 1.40 | 1.33 | 98.85 |
| 3.25 | 3.125 | 0.82 | 0.78 | 99.62 |
| 3.5 | 3.375 | 0.31 | 0.30 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.02 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.02 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.600 |
| **5** | 0.555 |
| **16** | 1.040 |
| **25** | 1.225 |
| **50** | 1.565 |
| **75** | 1.855 |
| **84** | 2.040 |
| **95** | 2.435 |
| **99** | 2.925 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.653 | 0.318 |
| Standard Deviation | 0.600 | 0.660 |
| Skewness | -0.914 | |
| Kurtosis | 6.822 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.540 | 1.548 |
| Standard Deviation | 0.500 | 0.535 |
| Skewness (1) | -0.050 | -0.062 |
| Skewness (2) | -0.140 | |
| Kurtosis | 0.880 | 1.223 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.362 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.559** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.12 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.5 |

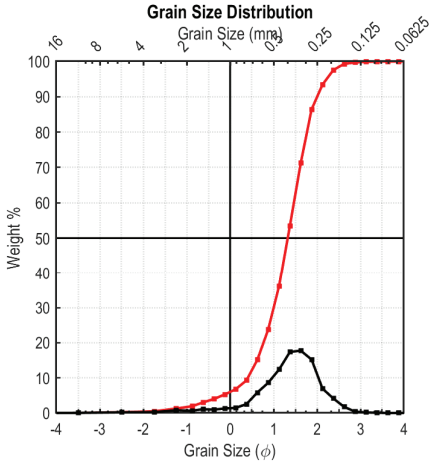
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.20 |
| -0.5 | -0.625 | 0.23 | 0.22 | 0.43 |
| -0.25 | -0.375 | 0.31 | 0.29 | 0.72 |
| 0 | -0.125 | 0.58 | 0.56 | 1.28 |
| 0.25 | 0.125 | 0.88 | 0.84 | 2.12 |
| 0.5 | 0.375 | 1.83 | 1.74 | 3.86 |
| 0.75 | 0.625 | 5.40 | 5.13 | 8.99 |
| 1 | 0.875 | 8.98 | 8.54 | 17.54 |
| 1.25 | 1.125 | 13.62 | 12.96 | 30.50 |
| 1.5 | 1.375 | 19.72 | 18.76 | 49.25 |
| 1.75 | 1.625 | 21.21 | 20.18 | 69.43 |
| 2 | 1.875 | 18.79 | 17.87 | 87.30 |
| 2.25 | 2.125 | 7.99 | 7.60 | 94.90 |
| 2.5 | 2.375 | 3.64 | 3.47 | 98.37 |
| 2.75 | 2.625 | 1.12 | 1.07 | 99.44 |
| 3 | 2.875 | 0.31 | 0.29 | 99.73 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.92 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.250 |
| **5** | 0.430 |
| **16** | 0.830 |
| **25** | 1.020 |
| **50** | 1.385 |
| **75** | 1.705 |
| **84** | 1.830 |
| **95** | 2.130 |
| **99** | 2.525 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.465 | 0.362 |
| Standard Deviation | 0.540 | 0.688 |
| Skewness | -0.559 | |
| Kurtosis | 4.637 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.330 | 1.348 |
| Standard Deviation | 0.500 | 0.508 |
| Skewness (1) | -0.110 | -0.117 |
| Skewness (2) | -0.210 | |
| Kurtosis | 0.700 | 1.017 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.392 mm** |
| **STD** | **0.601 mm** |
| **Skewness** | **-1.329** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.03 |
| % gravel (>4 mm) | 0.24 |
| CaCO3 | 8.3 |

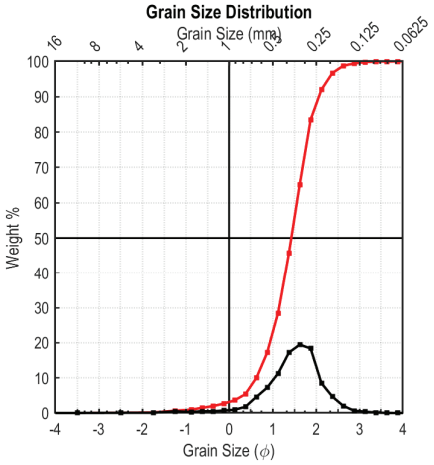
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.05 | 0.04 | 0.04 |
| -2 | -2.5 | 0.21 | 0.20 | 0.24 |
| -1.5 | -1.75 | 0.26 | 0.24 | 0.48 |
| -1 | -1.25 | 0.83 | 0.79 | 1.27 |
| -0.75 | -0.875 | 0.69 | 0.66 | 1.93 |
| -0.5 | -0.625 | 1.15 | 1.09 | 3.02 |
| -0.25 | -0.375 | 1.01 | 0.96 | 3.98 |
| 0 | -0.125 | 1.37 | 1.30 | 5.29 |
| 0.25 | 0.125 | 1.55 | 1.47 | 6.76 |
| 0.5 | 0.375 | 2.66 | 2.53 | 9.28 |
| 0.75 | 0.625 | 6.13 | 5.83 | 15.11 |
| 1 | 0.875 | 9.05 | 8.61 | 23.72 |
| 1.25 | 1.125 | 12.99 | 12.36 | 36.08 |
| 1.5 | 1.375 | 18.27 | 17.38 | 53.45 |
| 1.75 | 1.625 | 18.68 | 17.77 | 71.22 |
| 2 | 1.875 | 16.00 | 15.22 | 86.43 |
| 2.25 | 2.125 | 7.34 | 6.98 | 93.41 |
| 2.5 | 2.375 | 4.35 | 4.14 | 97.55 |
| 2.75 | 2.625 | 1.85 | 1.76 | 99.31 |
| 3 | 2.875 | 0.42 | 0.40 | 99.70 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.88 |
| 3.5 | 3.375 | 0.08 | 0.07 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.425 |
| **5** | -0.180 |
| **16** | 0.650 |
| **25** | 0.900 |
| **50** | 1.325 |
| **75** | 1.685 |
| **84** | 1.835 |
| **95** | 2.220 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.351 | 0.392 |
| Standard Deviation | 0.736 | 0.601 |
| Skewness | -1.329 | |
| Kurtosis | 6.898 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.242 | 1.270 |
| Standard Deviation | 0.593 | 0.660 |
| Skewness (1) | -0.139 | -0.197 |
| Skewness (2) | -0.515 | |
| Kurtosis | 1.025 | 1.253 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.356 mm** |
| **STD** | **0.641 mm** |
| **Skewness** | **-1.109** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.57 |
| % gravel (>4 mm) | 0.08 |
| CaCO3 | 6.0 |

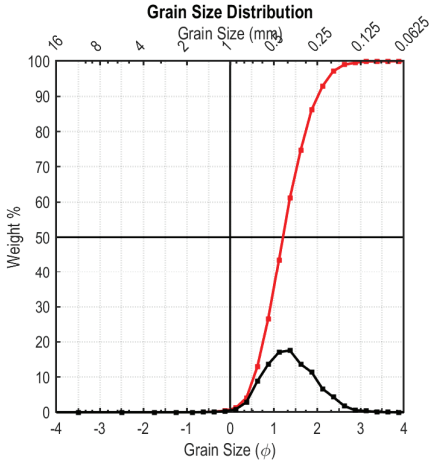
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.02 | 0.01 | 0.01 |
| -2 | -2.5 | 0.07 | 0.07 | 0.08 |
| -1.5 | -1.75 | 0.09 | 0.08 | 0.16 |
| -1 | -1.25 | 0.52 | 0.49 | 0.65 |
| -0.75 | -0.875 | 0.33 | 0.31 | 0.96 |
| -0.5 | -0.625 | 0.54 | 0.51 | 1.48 |
| -0.25 | -0.375 | 0.51 | 0.49 | 1.96 |
| 0 | -0.125 | 0.76 | 0.72 | 2.69 |
| 0.25 | 0.125 | 0.98 | 0.93 | 3.62 |
| 0.5 | 0.375 | 1.86 | 1.76 | 5.38 |
| 0.75 | 0.625 | 4.81 | 4.58 | 9.96 |
| 1 | 0.875 | 7.61 | 7.24 | 17.20 |
| 1.25 | 1.125 | 11.84 | 11.26 | 28.45 |
| 1.5 | 1.375 | 18.09 | 17.20 | 45.65 |
| 1.75 | 1.625 | 20.47 | 19.47 | 65.12 |
| 2 | 1.875 | 19.34 | 18.39 | 83.51 |
| 2.25 | 2.125 | 8.94 | 8.51 | 92.02 |
| 2.5 | 2.375 | 4.93 | 4.68 | 96.71 |
| 2.75 | 2.625 | 2.15 | 2.05 | 98.75 |
| 3 | 2.875 | 0.71 | 0.67 | 99.43 |
| 3.25 | 3.125 | 0.40 | 0.38 | 99.81 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.860 |
| **5** | 0.320 |
| **16** | 0.835 |
| **25** | 1.050 |
| **50** | 1.430 |
| **75** | 1.760 |
| **84** | 1.890 |
| **95** | 2.285 |
| **99** | 2.715 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.489 | 0.356 |
| Standard Deviation | 0.643 | 0.641 |
| Skewness | -1.109 | |
| Kurtosis | 7.023 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.363 | 1.385 |
| Standard Deviation | 0.528 | 0.561 |
| Skewness (1) | -0.128 | -0.129 |
| Skewness (2) | -0.242 | |
| Kurtosis | 0.863 | 1.134 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1770+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.385 mm** |
| **STD** | **0.675 mm** |
| **Skewness** | **0.287** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.93 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

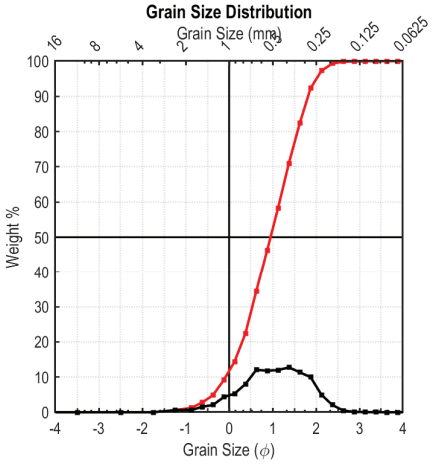
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.04 |
| -0.25 | -0.375 | 0.11 | 0.10 | 0.14 |
| 0 | -0.125 | 0.30 | 0.29 | 0.43 |
| 0.25 | 0.125 | 0.81 | 0.77 | 1.20 |
| 0.5 | 0.375 | 3.02 | 2.88 | 4.08 |
| 0.75 | 0.625 | 9.23 | 8.80 | 12.88 |
| 1 | 0.875 | 14.28 | 13.61 | 26.48 |
| 1.25 | 1.125 | 17.92 | 17.08 | 43.56 |
| 1.5 | 1.375 | 18.43 | 17.56 | 61.13 |
| 1.75 | 1.625 | 14.32 | 13.65 | 74.77 |
| 2 | 1.875 | 11.97 | 11.41 | 86.18 |
| 2.25 | 2.125 | 7.01 | 6.68 | 92.86 |
| 2.5 | 2.375 | 4.52 | 4.31 | 97.17 |
| 2.75 | 2.625 | 1.90 | 1.81 | 98.98 |
| 3 | 2.875 | 0.59 | 0.56 | 99.54 |
| 3.25 | 3.125 | 0.36 | 0.34 | 99.89 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.060 |
| **5** | 0.400 |
| **16** | 0.680 |
| **25** | 0.850 |
| **50** | 1.215 |
| **75** | 1.630 |
| **84** | 1.825 |
| **95** | 2.250 |
| **99** | 2.635 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.377 | 0.385 |
| Standard Deviation | 0.566 | 0.675 |
| Skewness | 0.287 | |
| Kurtosis | 3.114 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.252 | 1.240 |
| Standard Deviation | 0.573 | 0.567 |
| Skewness (1) | 0.066 | 0.092 |
| Skewness (2) | 0.192 | |
| Kurtosis | 0.616 | 0.972 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1770+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.488 mm** |
| **STD** | **0.601 mm** |
| **Skewness** | **-0.361** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.35 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.61 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.4 |

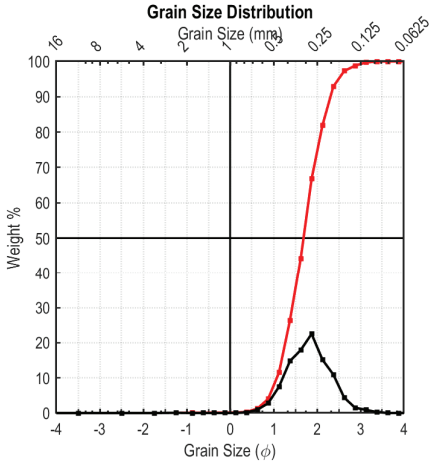
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.64 | 0.61 | 0.61 |
| -0.75 | -0.875 | 0.64 | 0.61 | 1.21 |
| -0.5 | -0.625 | 1.62 | 1.54 | 2.75 |
| -0.25 | -0.375 | 2.17 | 2.06 | 4.81 |
| 0 | -0.125 | 4.52 | 4.29 | 9.10 |
| 0.25 | 0.125 | 5.58 | 5.30 | 14.40 |
| 0.5 | 0.375 | 8.43 | 8.00 | 22.40 |
| 0.75 | 0.625 | 12.69 | 12.05 | 34.45 |
| 1 | 0.875 | 12.45 | 11.82 | 46.26 |
| 1.25 | 1.125 | 12.62 | 11.98 | 58.24 |
| 1.5 | 1.375 | 13.43 | 12.75 | 70.99 |
| 1.75 | 1.625 | 11.96 | 11.35 | 82.34 |
| 2 | 1.875 | 10.50 | 9.97 | 92.31 |
| 2.25 | 2.125 | 5.22 | 4.95 | 97.27 |
| 2.5 | 2.375 | 2.17 | 2.06 | 99.33 |
| 2.75 | 2.625 | 0.53 | 0.50 | 99.83 |
| 3 | 2.875 | 0.10 | 0.09 | 99.92 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.010 |
| **5** | -0.365 |
| **16** | 0.175 |
| **25** | 0.430 |
| **50** | 0.955 |
| **75** | 1.465 |
| **84** | 1.665 |
| **95** | 2.010 |
| **99** | 2.335 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.034 | 0.488 |
| Standard Deviation | 0.734 | 0.601 |
| Skewness | -0.361 | |
| Kurtosis | 2.916 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.920 | 0.932 |
| Standard Deviation | 0.745 | 0.732 |
| Skewness (1) | -0.047 | -0.079 |
| Skewness (2) | -0.178 | |
| Kurtosis | 0.594 | 0.940 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1770+00** |
| **Sample** | **Swash** |
| **Mean** | **0.285 mm** |
| **STD** | **0.712 mm** |
| **Skewness** | **-0.045** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.09 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.4 |

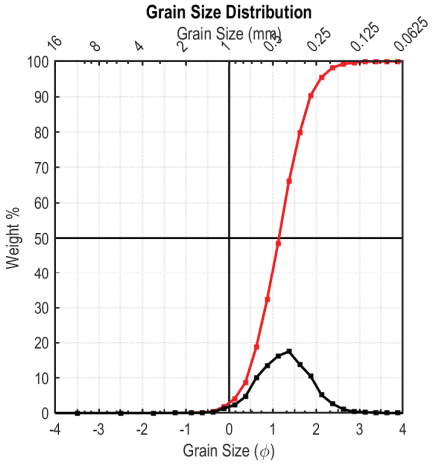
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.07 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.08 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.09 |
| 0 | -0.125 | 0.01 | 0.01 | 0.10 |
| 0.25 | 0.125 | 0.04 | 0.04 | 0.13 |
| 0.5 | 0.375 | 0.18 | 0.17 | 0.30 |
| 0.75 | 0.625 | 0.98 | 0.93 | 1.24 |
| 1 | 0.875 | 2.93 | 2.79 | 4.03 |
| 1.25 | 1.125 | 7.88 | 7.50 | 11.52 |
| 1.5 | 1.375 | 15.51 | 14.76 | 26.28 |
| 1.75 | 1.625 | 18.85 | 17.94 | 44.22 |
| 2 | 1.875 | 23.66 | 22.51 | 66.73 |
| 2.25 | 2.125 | 15.95 | 15.18 | 81.91 |
| 2.5 | 2.375 | 11.52 | 10.96 | 92.87 |
| 2.75 | 2.625 | 4.62 | 4.40 | 97.27 |
| 3 | 2.875 | 1.59 | 1.51 | 98.78 |
| 3.25 | 3.125 | 0.96 | 0.91 | 99.70 |
| 3.5 | 3.375 | 0.29 | 0.28 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.560 |
| **5** | 0.910 |
| **16** | 1.200 |
| **25** | 1.355 |
| **50** | 1.690 |
| **75** | 2.010 |
| **84** | 2.175 |
| **95** | 2.495 |
| **99** | 2.935 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.812 | 0.285 |
| Standard Deviation | 0.490 | 0.712 |
| Skewness | -0.045 | |
| Kurtosis | 4.133 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.687 | 1.688 |
| Standard Deviation | 0.488 | 0.484 |
| Skewness (1) | -0.005 | 0.005 |
| Skewness (2) | 0.026 | |
| Kurtosis | 0.626 | 0.992 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1780+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.416 mm** |
| **STD** | **0.665 mm** |
| **Skewness** | **0.021** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.99 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

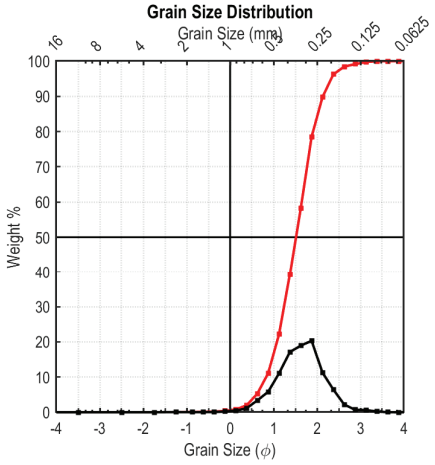
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.09 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.16 |
| -0.25 | -0.375 | 0.30 | 0.29 | 0.45 |
| 0 | -0.125 | 1.38 | 1.31 | 1.76 |
| 0.25 | 0.125 | 2.38 | 2.27 | 4.03 |
| 0.5 | 0.375 | 4.91 | 4.68 | 8.71 |
| 0.75 | 0.625 | 10.57 | 10.07 | 18.77 |
| 1 | 0.875 | 14.21 | 13.53 | 32.31 |
| 1.25 | 1.125 | 17.02 | 16.21 | 48.52 |
| 1.5 | 1.375 | 18.41 | 17.54 | 66.05 |
| 1.75 | 1.625 | 14.49 | 13.80 | 79.86 |
| 2 | 1.875 | 11.04 | 10.52 | 90.37 |
| 2.25 | 2.125 | 5.41 | 5.15 | 95.52 |
| 2.5 | 2.375 | 2.81 | 2.68 | 98.20 |
| 2.75 | 2.625 | 1.13 | 1.08 | 99.28 |
| 3 | 2.875 | 0.38 | 0.36 | 99.64 |
| 3.25 | 3.125 | 0.28 | 0.27 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.270 |
| **5** | 0.175 |
| **16** | 0.555 |
| **25** | 0.740 |
| **50** | 1.145 |
| **75** | 1.535 |
| **84** | 1.725 |
| **95** | 2.100 |
| **99** | 2.560 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.266 | 0.416 |
| Standard Deviation | 0.588 | 0.665 |
| Skewness | 0.021 | |
| Kurtosis | 3.355 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.140 | 1.142 |
| Standard Deviation | 0.585 | 0.584 |
| Skewness (1) | -0.009 | -0.008 |
| Skewness (2) | -0.013 | |
| Kurtosis | 0.645 | 0.992 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1780+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.325 mm** |
| **STD** | **0.693 mm** |
| **Skewness** | **-0.186** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

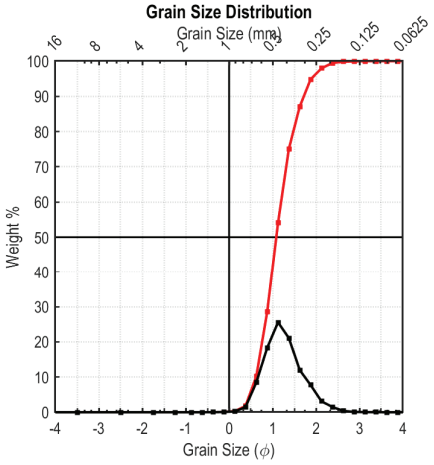
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.07 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.10 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.17 |
| 0 | -0.125 | 0.20 | 0.19 | 0.36 |
| 0.25 | 0.125 | 0.47 | 0.45 | 0.81 |
| 0.5 | 0.375 | 1.17 | 1.11 | 1.92 |
| 0.75 | 0.625 | 3.52 | 3.35 | 5.27 |
| 1 | 0.875 | 6.11 | 5.81 | 11.08 |
| 1.25 | 1.125 | 11.61 | 11.05 | 22.13 |
| 1.5 | 1.375 | 18.01 | 17.13 | 39.26 |
| 1.75 | 1.625 | 19.87 | 18.90 | 58.17 |
| 2 | 1.875 | 21.36 | 20.32 | 78.49 |
| 2.25 | 2.125 | 11.86 | 11.28 | 89.77 |
| 2.5 | 2.375 | 6.79 | 6.46 | 96.23 |
| 2.75 | 2.625 | 2.32 | 2.21 | 98.44 |
| 3 | 2.875 | 0.74 | 0.70 | 99.14 |
| 3.25 | 3.125 | 0.65 | 0.62 | 99.76 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.170 |
| **5** | 0.605 |
| **16** | 0.985 |
| **25** | 1.165 |
| **50** | 1.515 |
| **75** | 1.830 |
| **84** | 1.995 |
| **95** | 2.325 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.622 | 0.325 |
| Standard Deviation | 0.529 | 0.693 |
| Skewness | -0.186 | |
| Kurtosis | 4.002 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.490 | 1.498 |
| Standard Deviation | 0.505 | 0.513 |
| Skewness (1) | -0.050 | -0.054 |
| Skewness (2) | -0.099 | |
| Kurtosis | 0.703 | 1.060 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1780+00** |
| **Sample** | **Swash** |
| **Mean** | **0.420 mm** |
| **STD** | **0.743 mm** |
| **Skewness** | **0.522** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.02 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.4 |

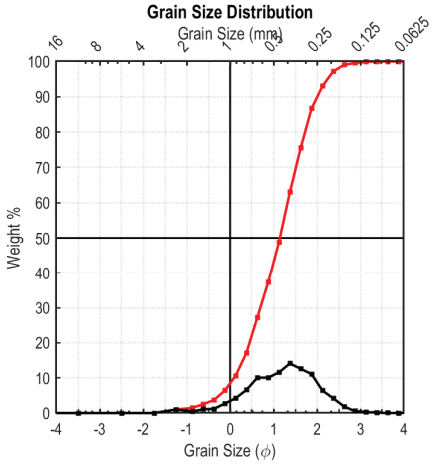
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.08 | 0.08 | 0.09 |
| 0.25 | 0.125 | 0.23 | 0.22 | 0.30 |
| 0.5 | 0.375 | 1.50 | 1.43 | 1.73 |
| 0.75 | 0.625 | 8.88 | 8.46 | 10.19 |
| 1 | 0.875 | 19.21 | 18.29 | 28.48 |
| 1.25 | 1.125 | 26.84 | 25.56 | 54.04 |
| 1.5 | 1.375 | 22.13 | 21.07 | 75.11 |
| 1.75 | 1.625 | 12.59 | 11.99 | 87.10 |
| 2 | 1.875 | 8.13 | 7.74 | 94.84 |
| 2.25 | 2.125 | 3.26 | 3.10 | 97.94 |
| 2.5 | 2.375 | 1.59 | 1.51 | 99.46 |
| 2.75 | 2.625 | 0.41 | 0.39 | 99.85 |
| 3 | 2.875 | 0.09 | 0.09 | 99.93 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.245 |
| **5** | 0.470 |
| **16** | 0.705 |
| **25** | 0.825 |
| **50** | 1.085 |
| **75** | 1.375 |
| **84** | 1.560 |
| **95** | 1.890 |
| **99** | 2.300 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.252 | 0.420 |
| Standard Deviation | 0.429 | 0.743 |
| Skewness | 0.522 | |
| Kurtosis | 3.648 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.133 | 1.117 |
| Standard Deviation | 0.427 | 0.429 |
| Skewness (1) | 0.111 | 0.122 |
| Skewness (2) | 0.222 | |
| Kurtosis | 0.661 | 1.058 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1790+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.436 mm** |
| **STD** | **0.587 mm** |
| **Skewness** | **-0.421** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.15 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.3 |

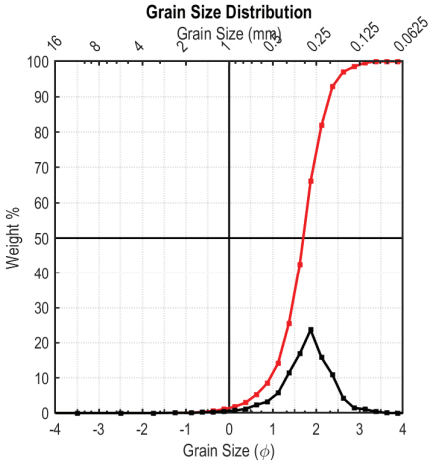
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.06 | 1.01 | 1.01 |
| -0.75 | -0.875 | 0.44 | 0.42 | 1.43 |
| -0.5 | -0.625 | 1.13 | 1.07 | 2.50 |
| -0.25 | -0.375 | 1.24 | 1.18 | 3.68 |
| 0 | -0.125 | 2.83 | 2.69 | 6.37 |
| 0.25 | 0.125 | 4.43 | 4.21 | 10.58 |
| 0.5 | 0.375 | 6.90 | 6.56 | 17.15 |
| 0.75 | 0.625 | 10.58 | 10.06 | 27.21 |
| 1 | 0.875 | 10.59 | 10.07 | 37.28 |
| 1.25 | 1.125 | 12.19 | 11.59 | 48.87 |
| 1.5 | 1.375 | 14.81 | 14.08 | 62.96 |
| 1.75 | 1.625 | 13.25 | 12.60 | 75.56 |
| 2 | 1.875 | 11.66 | 11.09 | 86.65 |
| 2.25 | 2.125 | 6.70 | 6.37 | 93.02 |
| 2.5 | 2.375 | 4.40 | 4.18 | 97.20 |
| 2.75 | 2.625 | 1.93 | 1.84 | 99.04 |
| 3 | 2.875 | 0.55 | 0.52 | 99.56 |
| 3.25 | 3.125 | 0.33 | 0.31 | 99.88 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.255 |
| **5** | -0.250 |
| **16** | 0.330 |
| **25** | 0.570 |
| **50** | 1.145 |
| **75** | 1.615 |
| **84** | 1.815 |
| **95** | 2.245 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.199 | 0.436 |
| Standard Deviation | 0.767 | 0.587 |
| Skewness | -0.421 | |
| Kurtosis | 3.367 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.073 | 1.097 |
| Standard Deviation | 0.742 | 0.749 |
| Skewness (1) | -0.098 | -0.108 |
| Skewness (2) | -0.199 | |
| Kurtosis | 0.680 | 0.979 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1790+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.291 mm** |
| **STD** | **0.670 mm** |
| **Skewness** | **-0.726** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.14 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.6 |

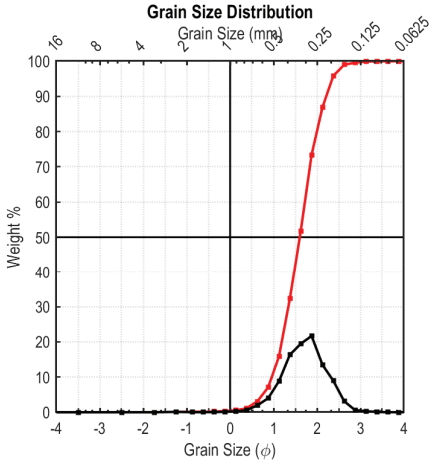
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.10 |
| -0.5 | -0.625 | 0.19 | 0.18 | 0.28 |
| -0.25 | -0.375 | 0.31 | 0.29 | 0.57 |
| 0 | -0.125 | 0.53 | 0.50 | 1.07 |
| 0.25 | 0.125 | 0.73 | 0.69 | 1.77 |
| 0.5 | 0.375 | 1.23 | 1.17 | 2.94 |
| 0.75 | 0.625 | 2.39 | 2.27 | 5.21 |
| 1 | 0.875 | 3.40 | 3.23 | 8.45 |
| 1.25 | 1.125 | 5.97 | 5.68 | 14.12 |
| 1.5 | 1.375 | 11.97 | 11.38 | 25.51 |
| 1.75 | 1.625 | 17.73 | 16.86 | 42.37 |
| 2 | 1.875 | 24.89 | 23.67 | 66.05 |
| 2.25 | 2.125 | 16.63 | 15.82 | 81.86 |
| 2.5 | 2.375 | 11.50 | 10.94 | 92.80 |
| 2.75 | 2.625 | 4.46 | 4.24 | 97.04 |
| 3 | 2.875 | 1.54 | 1.46 | 98.51 |
| 3.25 | 3.125 | 1.13 | 1.07 | 99.58 |
| 3.5 | 3.375 | 0.41 | 0.39 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.160 |
| **5** | 0.600 |
| **16** | 1.165 |
| **25** | 1.365 |
| **50** | 1.705 |
| **75** | 2.015 |
| **84** | 2.175 |
| **95** | 2.505 |
| **99** | 2.990 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.779 | 0.291 |
| Standard Deviation | 0.579 | 0.670 |
| Skewness | -0.726 | |
| Kurtosis | 4.986 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.670 | 1.682 |
| Standard Deviation | 0.505 | 0.541 |
| Skewness (1) | -0.069 | -0.115 |
| Skewness (2) | -0.302 | |
| Kurtosis | 0.886 | 1.201 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1790+00** |
| **Sample** | **Swash** |
| **Mean** | **0.306 mm** |
| **STD** | **0.708 mm** |
| **Skewness** | **-0.397** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

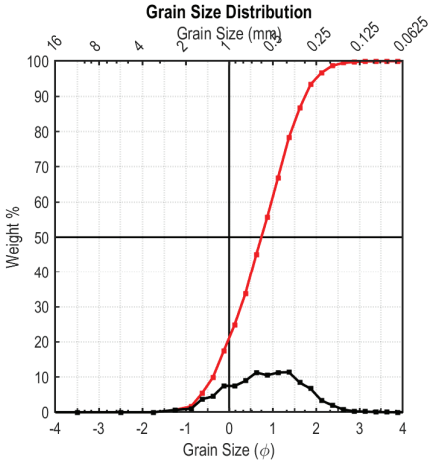
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.12 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.14 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.19 |
| 0 | -0.125 | 0.13 | 0.12 | 0.31 |
| 0.25 | 0.125 | 0.22 | 0.21 | 0.52 |
| 0.5 | 0.375 | 0.62 | 0.59 | 1.11 |
| 0.75 | 0.625 | 2.07 | 1.97 | 3.08 |
| 1 | 0.875 | 4.19 | 3.98 | 7.06 |
| 1.25 | 1.125 | 9.31 | 8.85 | 15.91 |
| 1.5 | 1.375 | 17.21 | 16.36 | 32.27 |
| 1.75 | 1.625 | 20.47 | 19.46 | 51.73 |
| 2 | 1.875 | 22.80 | 21.68 | 73.41 |
| 2.25 | 2.125 | 14.19 | 13.49 | 86.90 |
| 2.5 | 2.375 | 9.40 | 8.94 | 95.84 |
| 2.75 | 2.625 | 3.30 | 3.14 | 98.97 |
| 3 | 2.875 | 0.63 | 0.60 | 99.57 |
| 3.25 | 3.125 | 0.32 | 0.30 | 99.88 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.325 |
| **5** | 0.745 |
| **16** | 1.125 |
| **25** | 1.265 |
| **50** | 1.605 |
| **75** | 1.905 |
| **84** | 2.070 |
| **95** | 2.350 |
| **99** | 2.635 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.707 | 0.306 |
| Standard Deviation | 0.498 | 0.708 |
| Skewness | -0.397 | |
| Kurtosis | 4.782 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.598 | 1.600 |
| Standard Deviation | 0.473 | 0.479 |
| Skewness (1) | -0.016 | -0.044 |
| Skewness (2) | -0.122 | |
| Kurtosis | 0.698 | 1.028 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1800+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.559 mm** |
| **STD** | **0.571 mm** |
| **Skewness** | **-0.058** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.08 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.66 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.8 |

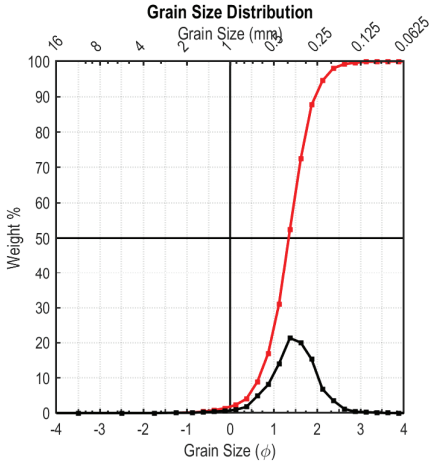
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.69 | 0.66 | 0.66 |
| -0.75 | -0.875 | 1.06 | 1.01 | 1.67 |
| -0.5 | -0.625 | 3.90 | 3.71 | 5.38 |
| -0.25 | -0.375 | 4.72 | 4.49 | 9.87 |
| 0 | -0.125 | 7.92 | 7.54 | 17.41 |
| 0.25 | 0.125 | 7.82 | 7.44 | 24.85 |
| 0.5 | 0.375 | 9.39 | 8.94 | 33.78 |
| 0.75 | 0.625 | 11.87 | 11.30 | 45.08 |
| 1 | 0.875 | 11.05 | 10.52 | 55.60 |
| 1.25 | 1.125 | 11.86 | 11.29 | 66.88 |
| 1.5 | 1.375 | 11.98 | 11.40 | 78.28 |
| 1.75 | 1.625 | 8.84 | 8.41 | 86.70 |
| 2 | 1.875 | 7.03 | 6.69 | 93.39 |
| 2.25 | 2.125 | 3.50 | 3.33 | 96.72 |
| 2.5 | 2.375 | 2.08 | 1.98 | 98.70 |
| 2.75 | 2.625 | 0.83 | 0.79 | 99.49 |
| 3 | 2.875 | 0.27 | 0.26 | 99.74 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.92 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.120 |
| **5** | -0.650 |
| **16** | -0.170 |
| **25** | 0.130 |
| **50** | 0.740 |
| **75** | 1.305 |
| **84** | 1.545 |
| **95** | 1.995 |
| **99** | 2.470 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.839 | 0.559 |
| Standard Deviation | 0.809 | 0.571 |
| Skewness | -0.058 | |
| Kurtosis | 2.578 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.688 | 0.705 |
| Standard Deviation | 0.857 | 0.830 |
| Skewness (1) | -0.061 | -0.056 |
| Skewness (2) | -0.079 | |
| Kurtosis | 0.542 | 0.923 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1800+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.366 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.444** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.95 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.3 |

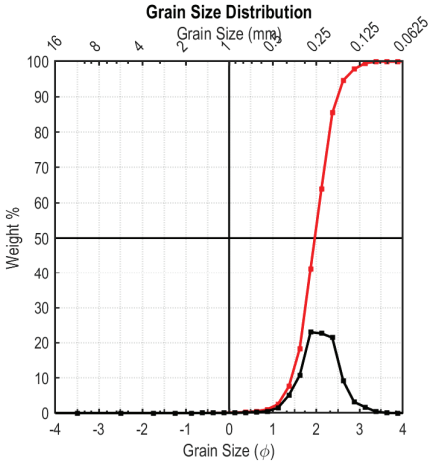
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.14 |
| -0.5 | -0.625 | 0.27 | 0.26 | 0.40 |
| -0.25 | -0.375 | 0.41 | 0.39 | 0.79 |
| 0 | -0.125 | 0.60 | 0.57 | 1.36 |
| 0.25 | 0.125 | 0.98 | 0.93 | 2.30 |
| 0.5 | 0.375 | 1.84 | 1.75 | 4.05 |
| 0.75 | 0.625 | 5.06 | 4.82 | 8.87 |
| 1 | 0.875 | 8.47 | 8.07 | 16.94 |
| 1.25 | 1.125 | 14.75 | 14.05 | 31.00 |
| 1.5 | 1.375 | 22.40 | 21.34 | 52.34 |
| 1.75 | 1.625 | 21.06 | 20.07 | 72.41 |
| 2 | 1.875 | 16.06 | 15.30 | 87.71 |
| 2.25 | 2.125 | 7.15 | 6.81 | 94.52 |
| 2.5 | 2.375 | 3.70 | 3.53 | 98.05 |
| 2.75 | 2.625 | 1.26 | 1.20 | 99.25 |
| 3 | 2.875 | 0.39 | 0.37 | 99.62 |
| 3.25 | 3.125 | 0.28 | 0.27 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.285 |
| **5** | 0.425 |
| **16** | 0.845 |
| **25** | 1.020 |
| **50** | 1.350 |
| **75** | 1.665 |
| **84** | 1.815 |
| **95** | 2.160 |
| **99** | 2.575 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.451 | 0.366 |
| Standard Deviation | 0.539 | 0.688 |
| Skewness | -0.444 | |
| Kurtosis | 4.687 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.330 | 1.337 |
| Standard Deviation | 0.485 | 0.505 |
| Skewness (1) | -0.041 | -0.054 |
| Skewness (2) | -0.119 | |
| Kurtosis | 0.789 | 1.102 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1800+00** |
| **Sample** | **Swash** |
| **Mean** | **0.234 mm** |
| **STD** | **0.740 mm** |
| **Skewness** | **-0.187** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.85 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.6 |

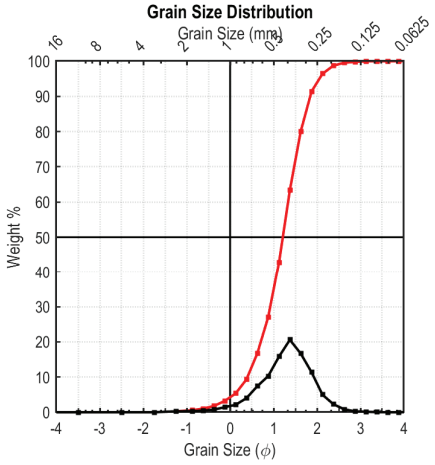
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.03 |
| 0 | -0.125 | 0.04 | 0.04 | 0.07 |
| 0.25 | 0.125 | 0.07 | 0.07 | 0.13 |
| 0.5 | 0.375 | 0.12 | 0.11 | 0.25 |
| 0.75 | 0.625 | 0.27 | 0.26 | 0.51 |
| 1 | 0.875 | 0.53 | 0.51 | 1.01 |
| 1.25 | 1.125 | 1.57 | 1.50 | 2.51 |
| 1.5 | 1.375 | 5.31 | 5.06 | 7.57 |
| 1.75 | 1.625 | 11.27 | 10.75 | 18.32 |
| 2 | 1.875 | 24.11 | 22.99 | 41.32 |
| 2.25 | 2.125 | 23.76 | 22.66 | 63.98 |
| 2.5 | 2.375 | 22.49 | 21.45 | 85.43 |
| 2.75 | 2.625 | 9.63 | 9.18 | 94.61 |
| 3 | 2.875 | 3.33 | 3.18 | 97.79 |
| 3.25 | 3.125 | 1.78 | 1.70 | 99.48 |
| 3.5 | 3.375 | 0.46 | 0.44 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.00 | 0.00 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.870 |
| **5** | 1.250 |
| **16** | 1.570 |
| **25** | 1.700 |
| **50** | 1.970 |
| **75** | 2.255 |
| **84** | 2.360 |
| **95** | 2.655 |
| **99** | 3.055 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.093 | 0.234 |
| Standard Deviation | 0.434 | 0.740 |
| Skewness | -0.187 | |
| Kurtosis | 4.528 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.965 | 1.967 |
| Standard Deviation | 0.395 | 0.410 |
| Skewness (1) | -0.013 | -0.019 |
| Skewness (2) | -0.044 | |
| Kurtosis | 0.778 | 1.038 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1810+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.411 mm** |
| **STD** | **0.658 mm** |
| **Skewness** | **-0.595** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.9 |

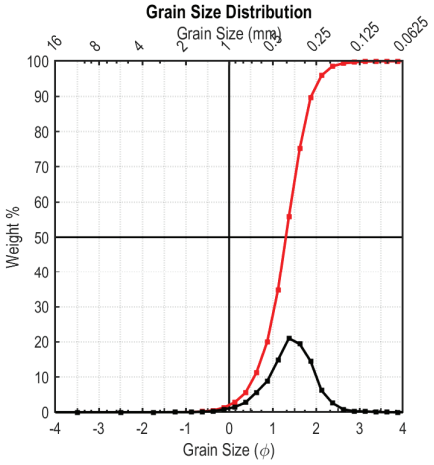
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.28 | 0.27 | 0.27 |
| -0.75 | -0.875 | 0.30 | 0.29 | 0.55 |
| -0.5 | -0.625 | 0.50 | 0.48 | 1.03 |
| -0.25 | -0.375 | 0.77 | 0.73 | 1.76 |
| 0 | -0.125 | 1.52 | 1.45 | 3.21 |
| 0.25 | 0.125 | 2.22 | 2.11 | 5.32 |
| 0.5 | 0.375 | 4.20 | 4.00 | 9.32 |
| 0.75 | 0.625 | 7.77 | 7.40 | 16.72 |
| 1 | 0.875 | 10.79 | 10.27 | 26.99 |
| 1.25 | 1.125 | 16.62 | 15.82 | 42.82 |
| 1.5 | 1.375 | 21.62 | 20.58 | 63.40 |
| 1.75 | 1.625 | 17.51 | 16.67 | 80.07 |
| 2 | 1.875 | 11.92 | 11.35 | 91.42 |
| 2.25 | 2.125 | 5.23 | 4.98 | 96.40 |
| 2.5 | 2.375 | 2.42 | 2.30 | 98.71 |
| 2.75 | 2.625 | 0.88 | 0.84 | 99.54 |
| 3 | 2.875 | 0.27 | 0.26 | 99.80 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.640 |
| **5** | 0.085 |
| **16** | 0.600 |
| **25** | 0.825 |
| **50** | 1.210 |
| **75** | 1.550 |
| **84** | 1.710 |
| **95** | 2.055 |
| **99** | 2.465 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.282 | 0.411 |
| Standard Deviation | 0.604 | 0.658 |
| Skewness | -0.595 | |
| Kurtosis | 4.395 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.155 | 1.173 |
| Standard Deviation | 0.555 | 0.576 |
| Skewness (1) | -0.099 | -0.121 |
| Skewness (2) | -0.252 | |
| Kurtosis | 0.775 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1810+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.379 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.340** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

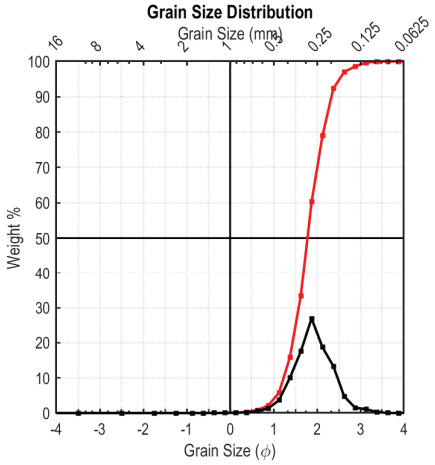
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.05 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.20 |
| -0.25 | -0.375 | 0.31 | 0.30 | 0.49 |
| 0 | -0.125 | 0.87 | 0.83 | 1.32 |
| 0.25 | 0.125 | 1.52 | 1.45 | 2.77 |
| 0.5 | 0.375 | 2.89 | 2.75 | 5.52 |
| 0.75 | 0.625 | 5.93 | 5.64 | 11.16 |
| 1 | 0.875 | 9.23 | 8.78 | 19.95 |
| 1.25 | 1.125 | 15.60 | 14.85 | 34.80 |
| 1.5 | 1.375 | 22.08 | 21.01 | 55.81 |
| 1.75 | 1.625 | 20.37 | 19.39 | 75.20 |
| 2 | 1.875 | 15.24 | 14.50 | 89.70 |
| 2.25 | 2.125 | 6.51 | 6.20 | 95.90 |
| 2.5 | 2.375 | 2.77 | 2.64 | 98.53 |
| 2.75 | 2.625 | 0.89 | 0.85 | 99.38 |
| 3 | 2.875 | 0.29 | 0.28 | 99.66 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.90 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.225 |
| **5** | 0.330 |
| **16** | 0.765 |
| **25** | 0.960 |
| **50** | 1.305 |
| **75** | 1.620 |
| **84** | 1.775 |
| **95** | 2.090 |
| **99** | 2.510 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.399 | 0.379 |
| Standard Deviation | 0.539 | 0.688 |
| Skewness | -0.340 | |
| Kurtosis | 4.069 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.270 | 1.282 |
| Standard Deviation | 0.505 | 0.519 |
| Skewness (1) | -0.069 | -0.089 |
| Skewness (2) | -0.188 | |
| Kurtosis | 0.743 | 1.093 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1810+00** |
| **Sample** | **Swash** |
| **Mean** | **0.266 mm** |
| **STD** | **0.735 mm** |
| **Skewness** | **0.014** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

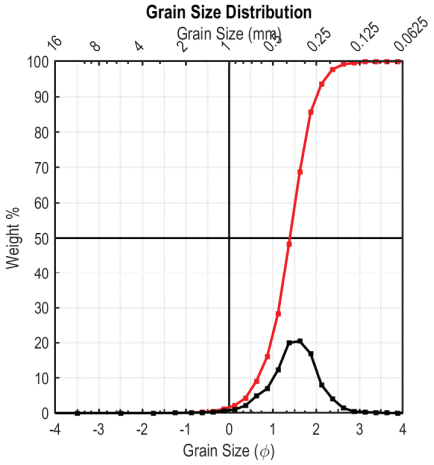
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.03 | 0.03 | 0.04 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.11 |
| 0.5 | 0.375 | 0.18 | 0.17 | 0.29 |
| 0.75 | 0.625 | 0.58 | 0.55 | 0.84 |
| 1 | 0.875 | 1.36 | 1.29 | 2.13 |
| 1.25 | 1.125 | 3.85 | 3.66 | 5.79 |
| 1.5 | 1.375 | 10.54 | 10.02 | 15.80 |
| 1.75 | 1.625 | 18.41 | 17.50 | 33.30 |
| 2 | 1.875 | 28.31 | 26.91 | 60.21 |
| 2.25 | 2.125 | 19.69 | 18.71 | 78.92 |
| 2.5 | 2.375 | 14.06 | 13.36 | 92.28 |
| 2.75 | 2.625 | 4.98 | 4.73 | 97.02 |
| 3 | 2.875 | 1.62 | 1.54 | 98.56 |
| 3.25 | 3.125 | 1.14 | 1.08 | 99.64 |
| 3.5 | 3.375 | 0.34 | 0.32 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.655 |
| **5** | 1.070 |
| **16** | 1.380 |
| **25** | 1.505 |
| **50** | 1.780 |
| **75** | 2.075 |
| **84** | 2.220 |
| **95** | 2.520 |
| **99** | 2.980 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.913 | 0.266 |
| Standard Deviation | 0.445 | 0.735 |
| Skewness | 0.014 | |
| Kurtosis | 4.044 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.800 | 1.793 |
| Standard Deviation | 0.420 | 0.430 |
| Skewness (1) | 0.048 | 0.034 |
| Skewness (2) | 0.036 | |
| Kurtosis | 0.726 | 1.043 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1820+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.356 mm** |
| **STD** | **0.685 mm** |
| **Skewness** | **-0.414** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.10 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

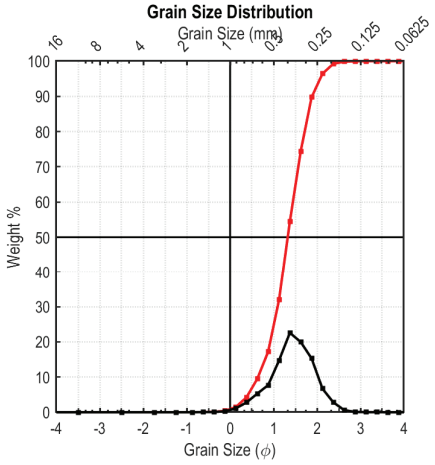
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.10 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.26 |
| -0.25 | -0.375 | 0.27 | 0.26 | 0.51 |
| 0 | -0.125 | 0.68 | 0.65 | 1.16 |
| 0.25 | 0.125 | 1.04 | 0.99 | 2.15 |
| 0.5 | 0.375 | 2.21 | 2.10 | 4.25 |
| 0.75 | 0.625 | 5.05 | 4.80 | 9.06 |
| 1 | 0.875 | 7.31 | 6.96 | 16.01 |
| 1.25 | 1.125 | 12.90 | 12.27 | 28.29 |
| 1.5 | 1.375 | 20.98 | 19.96 | 48.25 |
| 1.75 | 1.625 | 21.49 | 20.45 | 68.70 |
| 2 | 1.875 | 17.76 | 16.90 | 85.59 |
| 2.25 | 2.125 | 8.42 | 8.01 | 93.61 |
| 2.5 | 2.375 | 4.30 | 4.09 | 97.70 |
| 2.75 | 2.625 | 1.53 | 1.46 | 99.15 |
| 3 | 2.875 | 0.45 | 0.43 | 99.58 |
| 3.25 | 3.125 | 0.32 | 0.30 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.185 |
| **5** | 0.415 |
| **16** | 0.875 |
| **25** | 1.060 |
| **50** | 1.395 |
| **75** | 1.720 |
| **84** | 1.850 |
| **95** | 2.210 |
| **99** | 2.600 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.489 | 0.356 |
| Standard Deviation | 0.546 | 0.685 |
| Skewness | -0.414 | |
| Kurtosis | 4.226 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.363 | 1.373 |
| Standard Deviation | 0.488 | 0.516 |
| Skewness (1) | -0.067 | -0.079 |
| Skewness (2) | -0.169 | |
| Kurtosis | 0.841 | 1.115 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1820+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.372 mm** |
| **STD** | **0.712 mm** |
| **Skewness** | **-0.329** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.13 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

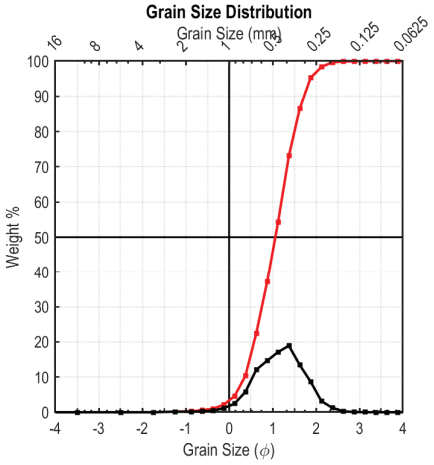
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.05 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.10 |
| 0 | -0.125 | 0.29 | 0.28 | 0.38 |
| 0.25 | 0.125 | 1.11 | 1.06 | 1.44 |
| 0.5 | 0.375 | 2.91 | 2.77 | 4.20 |
| 0.75 | 0.625 | 5.56 | 5.29 | 9.49 |
| 1 | 0.875 | 8.11 | 7.71 | 17.21 |
| 1.25 | 1.125 | 15.46 | 14.71 | 31.91 |
| 1.5 | 1.375 | 23.74 | 22.58 | 54.49 |
| 1.75 | 1.625 | 20.97 | 19.95 | 74.44 |
| 2 | 1.875 | 16.08 | 15.30 | 89.74 |
| 2.25 | 2.125 | 7.04 | 6.70 | 96.43 |
| 2.5 | 2.375 | 2.96 | 2.82 | 99.25 |
| 2.75 | 2.625 | 0.65 | 0.62 | 99.87 |
| 3 | 2.875 | 0.09 | 0.09 | 99.95 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.020 |
| **5** | 0.415 |
| **16** | 0.835 |
| **25** | 1.005 |
| **50** | 1.325 |
| **75** | 1.635 |
| **84** | 1.780 |
| **95** | 2.070 |
| **99** | 2.355 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.428 | 0.372 |
| Standard Deviation | 0.490 | 0.712 |
| Skewness | -0.329 | |
| Kurtosis | 3.421 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.307 | 1.313 |
| Standard Deviation | 0.472 | 0.487 |
| Skewness (1) | -0.037 | -0.068 |
| Skewness (2) | -0.175 | |
| Kurtosis | 0.751 | 1.077 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1820+00** |
| **Sample** | **Swash** |
| **Mean** | **0.447 mm** |
| **STD** | **0.684 mm** |
| **Skewness** | **-0.316** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

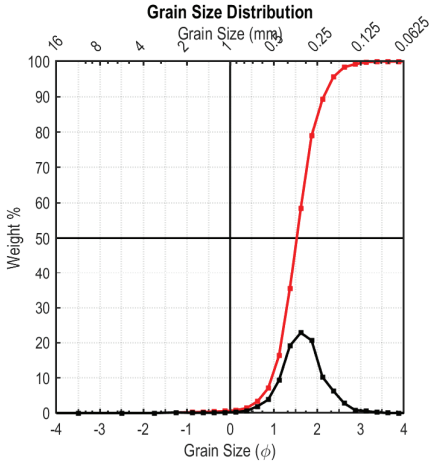
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.28 |
| -0.5 | -0.625 | 0.30 | 0.29 | 0.56 |
| -0.25 | -0.375 | 0.44 | 0.42 | 0.98 |
| 0 | -0.125 | 1.22 | 1.16 | 2.14 |
| 0.25 | 0.125 | 2.56 | 2.44 | 4.58 |
| 0.5 | 0.375 | 6.09 | 5.80 | 10.38 |
| 0.75 | 0.625 | 12.69 | 12.08 | 22.46 |
| 1 | 0.875 | 15.39 | 14.65 | 37.11 |
| 1.25 | 1.125 | 17.95 | 17.09 | 54.20 |
| 1.5 | 1.375 | 19.85 | 18.90 | 73.10 |
| 1.75 | 1.625 | 14.10 | 13.42 | 86.53 |
| 2 | 1.875 | 9.13 | 8.69 | 95.22 |
| 2.25 | 2.125 | 3.31 | 3.15 | 98.37 |
| 2.5 | 2.375 | 1.32 | 1.26 | 99.63 |
| 2.75 | 2.625 | 0.29 | 0.28 | 99.90 |
| 3 | 2.875 | 0.06 | 0.06 | 99.96 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.99 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.370 |
| **5** | 0.145 |
| **16** | 0.490 |
| **25** | 0.670 |
| **50** | 1.065 |
| **75** | 1.410 |
| **84** | 1.580 |
| **95** | 1.870 |
| **99** | 2.250 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.161 | 0.447 |
| Standard Deviation | 0.548 | 0.684 |
| Skewness | -0.316 | |
| Kurtosis | 3.710 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.035 | 1.045 |
| Standard Deviation | 0.545 | 0.534 |
| Skewness (1) | -0.055 | -0.061 |
| Skewness (2) | -0.106 | |
| Kurtosis | 0.583 | 0.955 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1830+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.316 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **-0.369** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.20 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.16 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

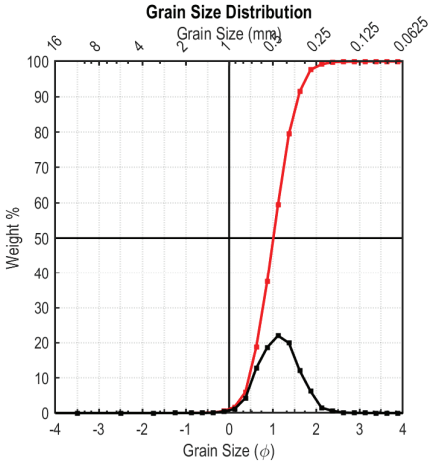
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.16 | 0.16 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.22 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.30 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.38 |
| 0 | -0.125 | 0.15 | 0.14 | 0.52 |
| 0.25 | 0.125 | 0.27 | 0.26 | 0.78 |
| 0.5 | 0.375 | 0.63 | 0.60 | 1.38 |
| 0.75 | 0.625 | 1.98 | 1.88 | 3.26 |
| 1 | 0.875 | 3.97 | 3.77 | 7.03 |
| 1.25 | 1.125 | 9.82 | 9.33 | 16.37 |
| 1.5 | 1.375 | 20.12 | 19.13 | 35.49 |
| 1.75 | 1.625 | 24.03 | 22.84 | 58.34 |
| 2 | 1.875 | 21.75 | 20.67 | 79.01 |
| 2.25 | 2.125 | 10.79 | 10.26 | 89.27 |
| 2.5 | 2.375 | 6.64 | 6.31 | 95.58 |
| 2.75 | 2.625 | 2.92 | 2.78 | 98.36 |
| 3 | 2.875 | 0.90 | 0.86 | 99.21 |
| 3.25 | 3.125 | 0.59 | 0.56 | 99.77 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.215 |
| **5** | 0.740 |
| **16** | 1.115 |
| **25** | 1.240 |
| **50** | 1.535 |
| **75** | 1.825 |
| **84** | 1.995 |
| **95** | 2.350 |
| **99** | 2.815 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.661 | 0.316 |
| Standard Deviation | 0.503 | 0.705 |
| Skewness | -0.369 | |
| Kurtosis | 5.976 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.555 | 1.548 |
| Standard Deviation | 0.440 | 0.464 |
| Skewness (1) | 0.045 | 0.029 |
| Skewness (2) | 0.023 | |
| Kurtosis | 0.830 | 1.128 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1830+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.452 mm** |
| **STD** | **0.735 mm** |
| **Skewness** | **0.072** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.00 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.6 |

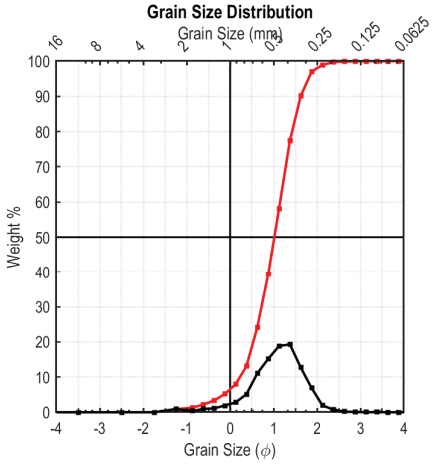
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.04 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.06 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.13 |
| 0 | -0.125 | 0.44 | 0.42 | 0.55 |
| 0.25 | 0.125 | 1.22 | 1.16 | 1.71 |
| 0.5 | 0.375 | 4.48 | 4.27 | 5.98 |
| 0.75 | 0.625 | 13.46 | 12.82 | 18.80 |
| 1 | 0.875 | 19.60 | 18.67 | 37.47 |
| 1.25 | 1.125 | 23.12 | 22.02 | 59.49 |
| 1.5 | 1.375 | 20.95 | 19.95 | 79.44 |
| 1.75 | 1.625 | 12.63 | 12.03 | 91.47 |
| 2 | 1.875 | 6.49 | 6.18 | 97.65 |
| 2.25 | 2.125 | 1.59 | 1.51 | 99.16 |
| 2.5 | 2.375 | 0.67 | 0.64 | 99.80 |
| 2.75 | 2.625 | 0.13 | 0.12 | 99.92 |
| 3 | 2.875 | 0.04 | 0.04 | 99.96 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.99 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.030 |
| **5** | 0.320 |
| **16** | 0.570 |
| **25** | 0.710 |
| **50** | 1.015 |
| **75** | 1.320 |
| **84** | 1.470 |
| **95** | 1.770 |
| **99** | 2.100 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.146 | 0.452 |
| Standard Deviation | 0.445 | 0.735 |
| Skewness | 0.072 | |
| Kurtosis | 3.567 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.020 | 1.018 |
| Standard Deviation | 0.450 | 0.445 |
| Skewness (1) | 0.011 | 0.026 |
| Skewness (2) | 0.067 | |
| Kurtosis | 0.611 | 0.974 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1830+00** |
| **Sample** | **Swash** |
| **Mean** | **0.474 mm** |
| **STD** | **0.659 mm** |
| **Skewness** | **-0.870** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.90 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

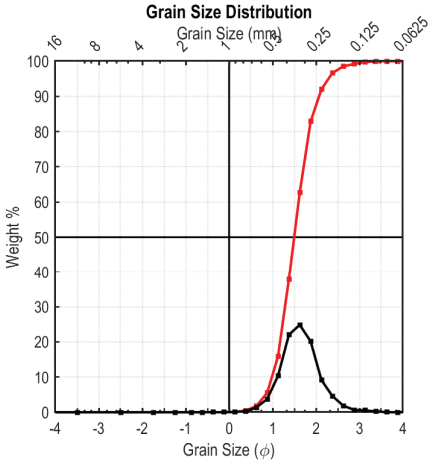
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.95 | 0.90 | 0.90 |
| -0.75 | -0.875 | 0.37 | 0.35 | 1.26 |
| -0.5 | -0.625 | 0.97 | 0.92 | 2.18 |
| -0.25 | -0.375 | 1.16 | 1.10 | 3.28 |
| 0 | -0.125 | 1.98 | 1.88 | 5.16 |
| 0.25 | 0.125 | 2.94 | 2.80 | 7.96 |
| 0.5 | 0.375 | 5.40 | 5.14 | 13.09 |
| 0.75 | 0.625 | 11.62 | 11.05 | 24.14 |
| 1 | 0.875 | 15.93 | 15.15 | 39.29 |
| 1.25 | 1.125 | 19.79 | 18.82 | 58.11 |
| 1.5 | 1.375 | 20.30 | 19.30 | 77.42 |
| 1.75 | 1.625 | 13.36 | 12.70 | 90.12 |
| 2 | 1.875 | 7.25 | 6.89 | 97.01 |
| 2.25 | 2.125 | 2.02 | 1.92 | 98.93 |
| 2.5 | 2.375 | 0.81 | 0.77 | 99.71 |
| 2.75 | 2.625 | 0.20 | 0.19 | 99.90 |
| 3 | 2.875 | 0.06 | 0.06 | 99.95 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.145 |
| **5** | -0.145 |
| **16** | 0.440 |
| **25** | 0.640 |
| **50** | 1.015 |
| **75** | 1.345 |
| **84** | 1.505 |
| **95** | 1.800 |
| **99** | 2.145 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.078 | 0.474 |
| Standard Deviation | 0.601 | 0.659 |
| Skewness | -0.870 | |
| Kurtosis | 4.915 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.972 | 0.987 |
| Standard Deviation | 0.532 | 0.561 |
| Skewness (1) | -0.080 | -0.136 |
| Skewness (2) | -0.352 | |
| Kurtosis | 0.826 | 1.131 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1840+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.320 mm** |
| **STD** | **0.737 mm** |
| **Skewness** | **0.446** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.25 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

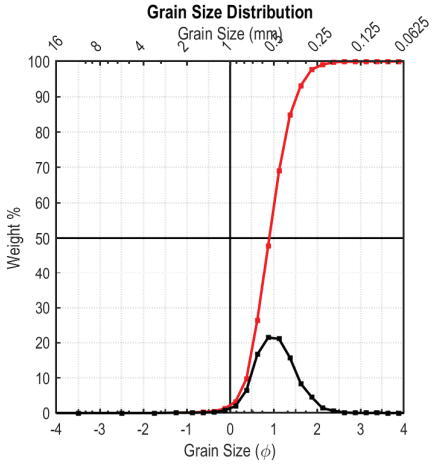
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.01 | 0.01 | 0.02 |
| 0.25 | 0.125 | 0.07 | 0.07 | 0.09 |
| 0.5 | 0.375 | 0.34 | 0.32 | 0.41 |
| 0.75 | 0.625 | 1.43 | 1.36 | 1.77 |
| 1 | 0.875 | 3.92 | 3.73 | 5.49 |
| 1.25 | 1.125 | 10.89 | 10.35 | 15.84 |
| 1.5 | 1.375 | 23.16 | 22.00 | 37.85 |
| 1.75 | 1.625 | 26.14 | 24.84 | 62.68 |
| 2 | 1.875 | 21.23 | 20.17 | 82.85 |
| 2.25 | 2.125 | 9.62 | 9.14 | 91.99 |
| 2.5 | 2.375 | 4.87 | 4.63 | 96.62 |
| 2.75 | 2.625 | 1.98 | 1.88 | 98.50 |
| 3 | 2.875 | 0.72 | 0.68 | 99.18 |
| 3.25 | 3.125 | 0.55 | 0.52 | 99.71 |
| 3.5 | 3.375 | 0.25 | 0.24 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.485 |
| **5** | 0.840 |
| **16** | 1.125 |
| **25** | 1.230 |
| **50** | 1.495 |
| **75** | 1.780 |
| **84** | 1.905 |
| **95** | 2.290 |
| **99** | 2.810 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.643 | 0.320 |
| Standard Deviation | 0.441 | 0.737 |
| Skewness | 0.446 | |
| Kurtosis | 4.422 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.515 | 1.508 |
| Standard Deviation | 0.390 | 0.415 |
| Skewness (1) | 0.051 | 0.074 |
| Skewness (2) | 0.179 | |
| Kurtosis | 0.859 | 1.080 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1840+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.485 mm** |
| **STD** | **0.721 mm** |
| **Skewness** | **0.112** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.97 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.3 |

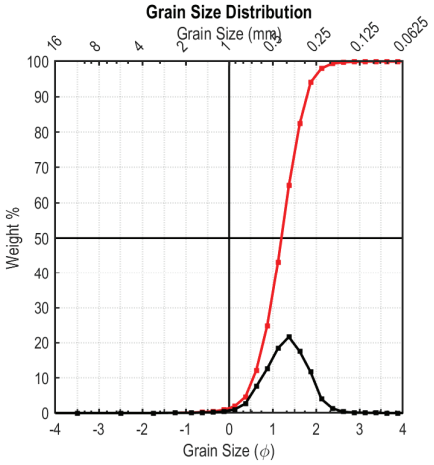
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.17 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.30 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.50 |
| 0 | -0.125 | 0.79 | 0.75 | 1.26 |
| 0.25 | 0.125 | 2.09 | 1.99 | 3.25 |
| 0.5 | 0.375 | 6.80 | 6.48 | 9.73 |
| 0.75 | 0.625 | 17.47 | 16.64 | 26.37 |
| 1 | 0.875 | 22.55 | 21.48 | 47.85 |
| 1.25 | 1.125 | 22.17 | 21.12 | 68.97 |
| 1.5 | 1.375 | 16.55 | 15.77 | 84.74 |
| 1.75 | 1.625 | 8.81 | 8.39 | 93.13 |
| 2 | 1.875 | 4.79 | 4.56 | 97.69 |
| 2.25 | 2.125 | 1.46 | 1.39 | 99.09 |
| 2.5 | 2.375 | 0.70 | 0.67 | 99.75 |
| 2.75 | 2.625 | 0.16 | 0.15 | 99.90 |
| 3 | 2.875 | 0.04 | 0.04 | 99.94 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.210 |
| **5** | 0.195 |
| **16** | 0.470 |
| **25** | 0.605 |
| **50** | 0.900 |
| **75** | 1.220 |
| **84** | 1.365 |
| **95** | 1.725 |
| **99** | 2.110 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.043 | 0.485 |
| Standard Deviation | 0.472 | 0.721 |
| Skewness | 0.112 | |
| Kurtosis | 4.388 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.917 | 0.912 |
| Standard Deviation | 0.448 | 0.456 |
| Skewness (1) | 0.039 | 0.059 |
| Skewness (2) | 0.134 | |
| Kurtosis | 0.709 | 1.020 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1840+00** |
| **Sample** | **Swash** |
| **Mean** | **0.404 mm** |
| **STD** | **0.711 mm** |
| **Skewness** | **-0.274** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.3 |

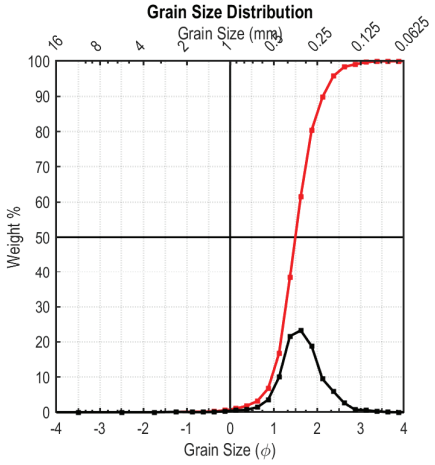
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.11 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.26 |
| -0.25 | -0.375 | 0.19 | 0.18 | 0.44 |
| 0 | -0.125 | 0.49 | 0.47 | 0.90 |
| 0.25 | 0.125 | 1.06 | 1.01 | 1.91 |
| 0.5 | 0.375 | 2.83 | 2.69 | 4.61 |
| 0.75 | 0.625 | 7.95 | 7.57 | 12.18 |
| 1 | 0.875 | 13.23 | 12.60 | 24.77 |
| 1.25 | 1.125 | 19.37 | 18.44 | 43.22 |
| 1.5 | 1.375 | 22.75 | 21.66 | 64.88 |
| 1.75 | 1.625 | 18.39 | 17.51 | 82.39 |
| 2 | 1.875 | 12.26 | 11.67 | 94.06 |
| 2.25 | 2.125 | 4.18 | 3.98 | 98.04 |
| 2.5 | 2.375 | 1.42 | 1.35 | 99.39 |
| 2.75 | 2.625 | 0.38 | 0.36 | 99.75 |
| 3 | 2.875 | 0.12 | 0.11 | 99.87 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.100 |
| **5** | 0.390 |
| **16** | 0.700 |
| **25** | 0.880 |
| **50** | 1.205 |
| **75** | 1.520 |
| **84** | 1.660 |
| **95** | 1.935 |
| **99** | 2.305 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.308 | 0.404 |
| Standard Deviation | 0.492 | 0.711 |
| Skewness | -0.274 | |
| Kurtosis | 4.270 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.180 | 1.188 |
| Standard Deviation | 0.480 | 0.474 |
| Skewness (1) | -0.052 | -0.054 |
| Skewness (2) | -0.089 | |
| Kurtosis | 0.609 | 0.989 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1850+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.320 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.170** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.14 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

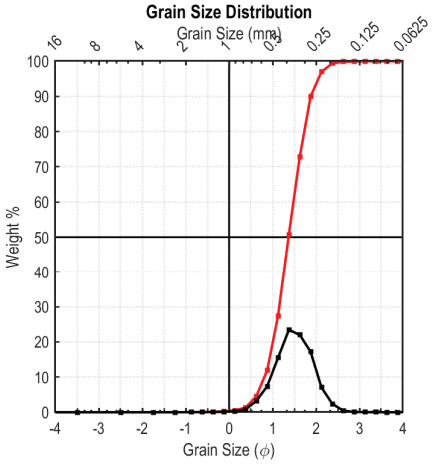
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.12 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.15 |
| -0.25 | -0.375 | 0.10 | 0.10 | 0.25 |
| 0 | -0.125 | 0.30 | 0.29 | 0.53 |
| 0.25 | 0.125 | 0.55 | 0.52 | 1.06 |
| 0.5 | 0.375 | 0.74 | 0.70 | 1.76 |
| 0.75 | 0.625 | 1.49 | 1.42 | 3.18 |
| 1 | 0.875 | 3.74 | 3.56 | 6.73 |
| 1.25 | 1.125 | 10.46 | 9.95 | 16.68 |
| 1.5 | 1.375 | 22.72 | 21.61 | 38.29 |
| 1.75 | 1.625 | 24.44 | 23.25 | 61.54 |
| 2 | 1.875 | 19.76 | 18.79 | 80.33 |
| 2.25 | 2.125 | 9.94 | 9.45 | 89.79 |
| 2.5 | 2.375 | 6.24 | 5.93 | 95.72 |
| 2.75 | 2.625 | 2.77 | 2.63 | 98.35 |
| 3 | 2.875 | 0.78 | 0.74 | 99.10 |
| 3.25 | 3.125 | 0.61 | 0.58 | 99.68 |
| 3.5 | 3.375 | 0.28 | 0.27 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.100 |
| **5** | 0.755 |
| **16** | 1.110 |
| **25** | 1.220 |
| **50** | 1.500 |
| **75** | 1.805 |
| **84** | 1.970 |
| **95** | 2.345 |
| **99** | 2.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.642 | 0.320 |
| Standard Deviation | 0.499 | 0.707 |
| Skewness | -0.170 | |
| Kurtosis | 5.496 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.540 | 1.527 |
| Standard Deviation | 0.430 | 0.456 |
| Skewness (1) | 0.093 | 0.078 |
| Skewness (2) | 0.116 | |
| Kurtosis | 0.849 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1850+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.357 mm** |
| **STD** | **0.741 mm** |
| **Skewness** | **-0.190** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.8 |

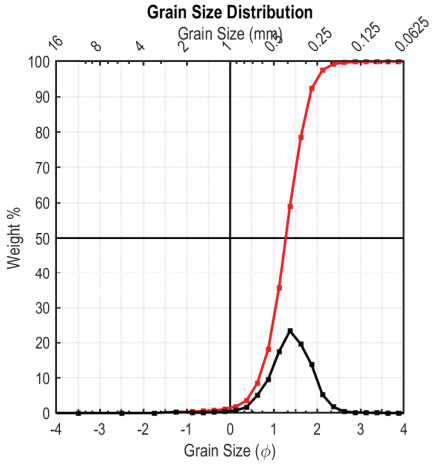
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.03 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.06 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.12 |
| 0 | -0.125 | 0.14 | 0.13 | 0.26 |
| 0.25 | 0.125 | 0.27 | 0.26 | 0.51 |
| 0.5 | 0.375 | 0.84 | 0.80 | 1.31 |
| 0.75 | 0.625 | 3.37 | 3.20 | 4.52 |
| 1 | 0.875 | 7.75 | 7.37 | 11.88 |
| 1.25 | 1.125 | 16.26 | 15.46 | 27.34 |
| 1.5 | 1.375 | 24.63 | 23.41 | 50.76 |
| 1.75 | 1.625 | 23.15 | 22.01 | 72.76 |
| 2 | 1.875 | 18.07 | 17.18 | 89.94 |
| 2.25 | 2.125 | 7.41 | 7.04 | 96.99 |
| 2.5 | 2.375 | 2.50 | 2.38 | 99.36 |
| 2.75 | 2.625 | 0.50 | 0.48 | 99.84 |
| 3 | 2.875 | 0.09 | 0.09 | 99.92 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.96 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.275 |
| **5** | 0.640 |
| **16** | 0.940 |
| **25** | 1.085 |
| **50** | 1.365 |
| **75** | 1.660 |
| **84** | 1.790 |
| **95** | 2.055 |
| **99** | 2.335 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.486 | 0.357 |
| Standard Deviation | 0.432 | 0.741 |
| Skewness | -0.190 | |
| Kurtosis | 4.173 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.365 | 1.365 |
| Standard Deviation | 0.425 | 0.427 |
| Skewness (1) | 0.000 | -0.012 |
| Skewness (2) | -0.041 | |
| Kurtosis | 0.665 | 1.009 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1850+00** |
| **Sample** | **Swash** |
| **Mean** | **0.383 mm** |
| **STD** | **0.709 mm** |
| **Skewness** | **-0.711** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.31 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

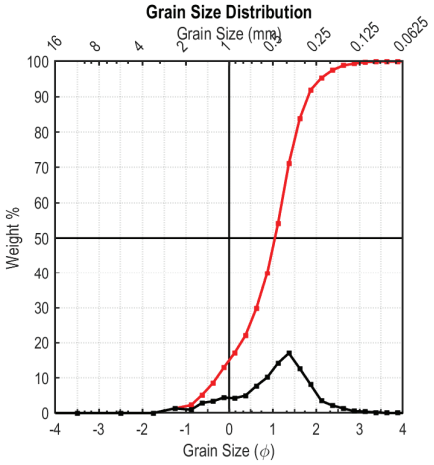
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.33 | 0.31 | 0.31 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.39 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.54 |
| -0.25 | -0.375 | 0.19 | 0.18 | 0.72 |
| 0 | -0.125 | 0.42 | 0.40 | 1.12 |
| 0.25 | 0.125 | 0.74 | 0.70 | 1.83 |
| 0.5 | 0.375 | 1.76 | 1.68 | 3.50 |
| 0.75 | 0.625 | 5.28 | 5.03 | 8.53 |
| 1 | 0.875 | 10.06 | 9.57 | 18.10 |
| 1.25 | 1.125 | 18.34 | 17.46 | 35.56 |
| 1.5 | 1.375 | 24.55 | 23.37 | 58.92 |
| 1.75 | 1.625 | 20.63 | 19.63 | 78.56 |
| 2 | 1.875 | 14.43 | 13.73 | 92.29 |
| 2.25 | 2.125 | 5.50 | 5.23 | 97.53 |
| 2.5 | 2.375 | 1.82 | 1.73 | 99.26 |
| 2.75 | 2.625 | 0.46 | 0.44 | 99.70 |
| 3 | 2.875 | 0.15 | 0.14 | 99.84 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.94 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.200 |
| **5** | 0.450 |
| **16** | 0.820 |
| **25** | 0.975 |
| **50** | 1.280 |
| **75** | 1.580 |
| **84** | 1.725 |
| **95** | 2.005 |
| **99** | 2.340 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.383 | 0.383 |
| Standard Deviation | 0.497 | 0.709 |
| Skewness | -0.711 | |
| Kurtosis | 6.239 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.272 | 1.275 |
| Standard Deviation | 0.453 | 0.462 |
| Skewness (1) | -0.017 | -0.042 |
| Skewness (2) | -0.116 | |
| Kurtosis | 0.718 | 1.053 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1860+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.484 mm** |
| **STD** | **0.568 mm** |
| **Skewness** | **-0.467** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.18 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 1.33 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

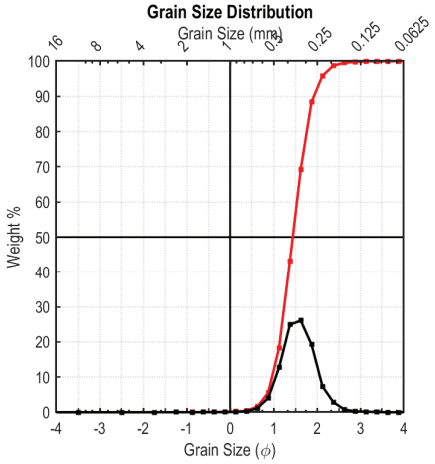
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.40 | 1.33 | 1.33 |
| -0.75 | -0.875 | 0.98 | 0.93 | 2.26 |
| -0.5 | -0.625 | 3.02 | 2.87 | 5.13 |
| -0.25 | -0.375 | 3.52 | 3.35 | 8.48 |
| 0 | -0.125 | 4.64 | 4.41 | 12.89 |
| 0.25 | 0.125 | 4.43 | 4.21 | 17.10 |
| 0.5 | 0.375 | 5.22 | 4.96 | 22.07 |
| 0.75 | 0.625 | 8.10 | 7.70 | 29.77 |
| 1 | 0.875 | 10.65 | 10.13 | 39.89 |
| 1.25 | 1.125 | 14.95 | 14.21 | 54.11 |
| 1.5 | 1.375 | 17.92 | 17.04 | 71.14 |
| 1.75 | 1.625 | 13.32 | 12.66 | 83.81 |
| 2 | 1.875 | 8.52 | 8.10 | 91.91 |
| 2.25 | 2.125 | 3.62 | 3.44 | 95.35 |
| 2.5 | 2.375 | 2.27 | 2.16 | 97.51 |
| 2.75 | 2.625 | 1.40 | 1.33 | 98.84 |
| 3 | 2.875 | 0.55 | 0.52 | 99.36 |
| 3.25 | 3.125 | 0.43 | 0.41 | 99.77 |
| 3.5 | 3.375 | 0.17 | 0.16 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.375 |
| **5** | -0.635 |
| **16** | 0.060 |
| **25** | 0.470 |
| **50** | 1.055 |
| **75** | 1.450 |
| **84** | 1.630 |
| **95** | 2.100 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.047 | 0.484 |
| Standard Deviation | 0.816 | 0.568 |
| Skewness | -0.467 | |
| Kurtosis | 3.317 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.845 | 0.915 |
| Standard Deviation | 0.785 | 0.807 |
| Skewness (1) | -0.268 | -0.252 |
| Skewness (2) | -0.411 | |
| Kurtosis | 0.742 | 1.144 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1860+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.336 mm** |
| **STD** | **0.762 mm** |
| **Skewness** | **0.104** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.08 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.9 |

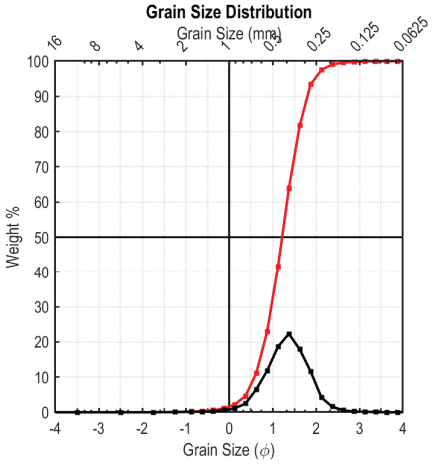
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.02 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.05 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.07 |
| 0 | -0.125 | 0.04 | 0.04 | 0.10 |
| 0.25 | 0.125 | 0.10 | 0.10 | 0.20 |
| 0.5 | 0.375 | 0.23 | 0.22 | 0.42 |
| 0.75 | 0.625 | 1.21 | 1.15 | 1.57 |
| 1 | 0.875 | 4.21 | 4.01 | 5.58 |
| 1.25 | 1.125 | 13.34 | 12.70 | 18.27 |
| 1.5 | 1.375 | 26.17 | 24.90 | 43.18 |
| 1.75 | 1.625 | 27.40 | 26.08 | 69.25 |
| 2 | 1.875 | 20.19 | 19.21 | 88.47 |
| 2.25 | 2.125 | 7.74 | 7.37 | 95.83 |
| 2.5 | 2.375 | 3.02 | 2.87 | 98.71 |
| 2.75 | 2.625 | 0.85 | 0.81 | 99.51 |
| 3 | 2.875 | 0.26 | 0.25 | 99.76 |
| 3.25 | 3.125 | 0.18 | 0.17 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.500 |
| **5** | 0.840 |
| **16** | 1.080 |
| **25** | 1.195 |
| **50** | 1.440 |
| **75** | 1.700 |
| **84** | 1.815 |
| **95** | 2.095 |
| **99** | 2.465 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.573 | 0.336 |
| Standard Deviation | 0.393 | 0.762 |
| Skewness | 0.104 | |
| Kurtosis | 5.029 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.448 | 1.445 |
| Standard Deviation | 0.367 | 0.374 |
| Skewness (1) | 0.020 | 0.032 |
| Skewness (2) | 0.075 | |
| Kurtosis | 0.707 | 1.019 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1860+00** |
| **Sample** | **Swash** |
| **Mean** | **0.399 mm** |
| **STD** | **0.706 mm** |
| **Skewness** | **-0.278** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.21 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.4 |

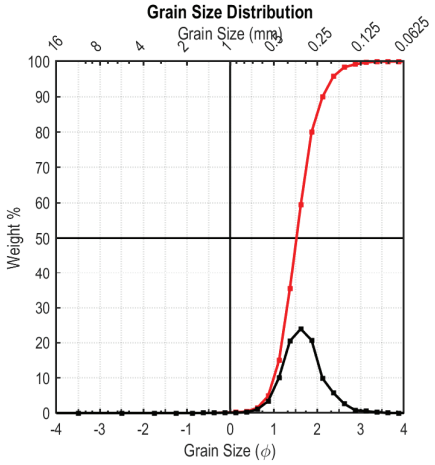
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.13 | 0.12 | 0.18 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.32 |
| -0.25 | -0.375 | 0.23 | 0.22 | 0.54 |
| 0 | -0.125 | 0.56 | 0.53 | 1.07 |
| 0.25 | 0.125 | 1.16 | 1.10 | 2.18 |
| 0.5 | 0.375 | 2.56 | 2.43 | 4.61 |
| 0.75 | 0.625 | 6.84 | 6.50 | 11.11 |
| 1 | 0.875 | 12.44 | 11.82 | 22.94 |
| 1.25 | 1.125 | 19.61 | 18.64 | 41.57 |
| 1.5 | 1.375 | 23.46 | 22.30 | 63.87 |
| 1.75 | 1.625 | 18.79 | 17.86 | 81.73 |
| 2 | 1.875 | 12.22 | 11.61 | 93.35 |
| 2.25 | 2.125 | 4.39 | 4.17 | 97.52 |
| 2.5 | 2.375 | 1.63 | 1.55 | 99.07 |
| 2.75 | 2.625 | 0.56 | 0.53 | 99.60 |
| 3 | 2.875 | 0.20 | 0.19 | 99.79 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.93 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.160 |
| **5** | 0.390 |
| **16** | 0.730 |
| **25** | 0.905 |
| **50** | 1.220 |
| **75** | 1.530 |
| **84** | 1.675 |
| **95** | 1.975 |
| **99** | 2.365 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.327 | 0.399 |
| Standard Deviation | 0.502 | 0.706 |
| Skewness | -0.278 | |
| Kurtosis | 4.690 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.202 | 1.208 |
| Standard Deviation | 0.472 | 0.476 |
| Skewness (1) | -0.037 | -0.042 |
| Skewness (2) | -0.079 | |
| Kurtosis | 0.677 | 1.039 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1870+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.313 mm** |
| **STD** | **0.730 mm** |
| **Skewness** | **0.360** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.26 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.8 |

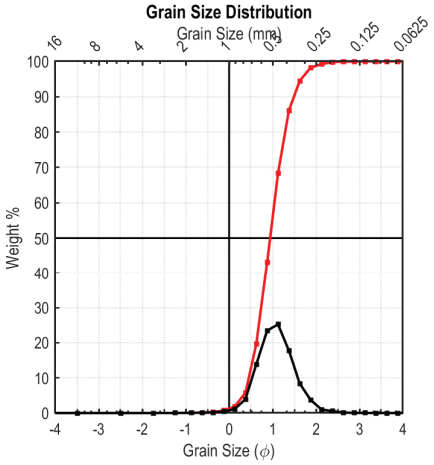
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.05 |
| 0 | -0.125 | 0.09 | 0.09 | 0.13 |
| 0.25 | 0.125 | 0.10 | 0.10 | 0.23 |
| 0.5 | 0.375 | 0.21 | 0.20 | 0.43 |
| 0.75 | 0.625 | 1.09 | 1.04 | 1.46 |
| 1 | 0.875 | 3.55 | 3.37 | 4.84 |
| 1.25 | 1.125 | 10.62 | 10.09 | 14.92 |
| 1.5 | 1.375 | 21.56 | 20.48 | 35.41 |
| 1.75 | 1.625 | 25.20 | 23.94 | 59.35 |
| 2 | 1.875 | 21.81 | 20.72 | 80.07 |
| 2.25 | 2.125 | 10.40 | 9.88 | 89.95 |
| 2.5 | 2.375 | 6.07 | 5.77 | 95.72 |
| 2.75 | 2.625 | 2.76 | 2.62 | 98.34 |
| 3 | 2.875 | 0.88 | 0.84 | 99.17 |
| 3.25 | 3.125 | 0.56 | 0.53 | 99.71 |
| 3.5 | 3.375 | 0.24 | 0.23 | 99.93 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.96 |
| 4 | 3.875 | 0.00 | 0.00 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.515 |
| **5** | 0.880 |
| **16** | 1.140 |
| **25** | 1.250 |
| **50** | 1.525 |
| **75** | 1.815 |
| **84** | 1.975 |
| **95** | 2.345 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.676 | 0.313 |
| Standard Deviation | 0.455 | 0.730 |
| Skewness | 0.360 | |
| Kurtosis | 4.376 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.558 | 1.547 |
| Standard Deviation | 0.417 | 0.431 |
| Skewness (1) | 0.078 | 0.099 |
| Skewness (2) | 0.210 | |
| Kurtosis | 0.754 | 1.063 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1870+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.473 mm** |
| **STD** | **0.749 mm** |
| **Skewness** | **0.169** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.97 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.4 |

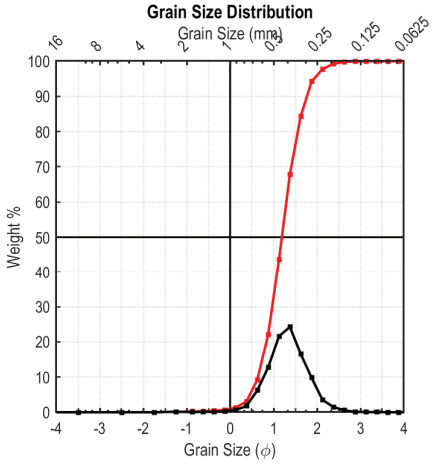
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.06 |
| -0.5 | -0.625 | 0.10 | 0.10 | 0.15 |
| -0.25 | -0.375 | 0.13 | 0.12 | 0.28 |
| 0 | -0.125 | 0.46 | 0.44 | 0.71 |
| 0.25 | 0.125 | 1.16 | 1.11 | 1.82 |
| 0.5 | 0.375 | 4.12 | 3.92 | 5.74 |
| 0.75 | 0.625 | 14.58 | 13.89 | 19.63 |
| 1 | 0.875 | 24.63 | 23.46 | 43.10 |
| 1.25 | 1.125 | 26.47 | 25.22 | 68.31 |
| 1.5 | 1.375 | 18.67 | 17.79 | 86.10 |
| 1.75 | 1.625 | 8.81 | 8.39 | 94.49 |
| 2 | 1.875 | 3.92 | 3.73 | 98.23 |
| 2.25 | 2.125 | 1.06 | 1.01 | 99.24 |
| 2.5 | 2.375 | 0.57 | 0.54 | 99.78 |
| 2.75 | 2.625 | 0.16 | 0.15 | 99.93 |
| 3 | 2.875 | 0.04 | 0.04 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.060 |
| **5** | 0.330 |
| **16** | 0.560 |
| **25** | 0.680 |
| **50** | 0.945 |
| **75** | 1.220 |
| **84** | 1.345 |
| **95** | 1.660 |
| **99** | 2.065 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.081 | 0.473 |
| Standard Deviation | 0.417 | 0.749 |
| Skewness | 0.169 | |
| Kurtosis | 4.500 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.952 | 0.950 |
| Standard Deviation | 0.392 | 0.398 |
| Skewness (1) | 0.019 | 0.047 |
| Skewness (2) | 0.127 | |
| Kurtosis | 0.694 | 1.009 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.402 mm** |
| **STD** | **0.725 mm** |
| **Skewness** | **-0.224** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.02 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.14 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.2 |

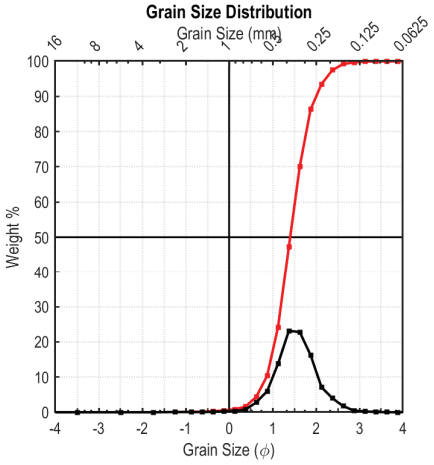
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.15 | 0.14 | 0.14 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.19 |
| -0.5 | -0.625 | 0.12 | 0.11 | 0.30 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.42 |
| 0 | -0.125 | 0.28 | 0.27 | 0.69 |
| 0.25 | 0.125 | 0.62 | 0.59 | 1.28 |
| 0.5 | 0.375 | 1.87 | 1.78 | 3.06 |
| 0.75 | 0.625 | 6.50 | 6.19 | 9.25 |
| 1 | 0.875 | 13.40 | 12.76 | 22.01 |
| 1.25 | 1.125 | 22.68 | 21.60 | 43.60 |
| 1.5 | 1.375 | 25.45 | 24.23 | 67.83 |
| 1.75 | 1.625 | 17.37 | 16.54 | 84.37 |
| 2 | 1.875 | 10.30 | 9.81 | 94.18 |
| 2.25 | 2.125 | 3.72 | 3.54 | 97.72 |
| 2.5 | 2.375 | 1.58 | 1.50 | 99.23 |
| 2.75 | 2.625 | 0.58 | 0.55 | 99.78 |
| 3 | 2.875 | 0.12 | 0.11 | 99.90 |
| 3.25 | 3.125 | 0.07 | 0.07 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.010 |
| **5** | 0.455 |
| **16** | 0.755 |
| **25** | 0.910 |
| **50** | 1.190 |
| **75** | 1.485 |
| **84** | 1.620 |
| **95** | 1.935 |
| **99** | 2.335 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.315 | 0.402 |
| Standard Deviation | 0.464 | 0.725 |
| Skewness | -0.224 | |
| Kurtosis | 5.341 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.188 | 1.188 |
| Standard Deviation | 0.433 | 0.440 |
| Skewness (1) | -0.006 | 0.000 |
| Skewness (2) | 0.012 | |
| Kurtosis | 0.711 | 1.055 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1880+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.345 mm** |
| **STD** | **0.717 mm** |
| **Skewness** | **-0.111** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.19 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.7 |

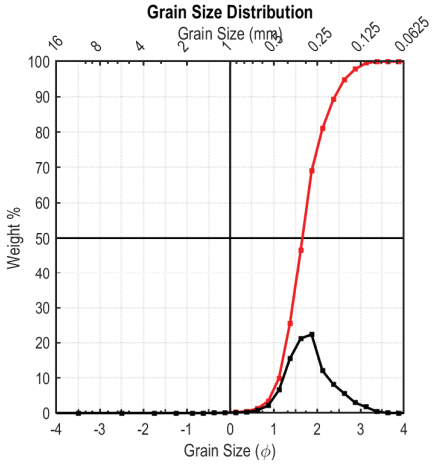
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.11 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.17 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.29 |
| 0 | -0.125 | 0.23 | 0.22 | 0.50 |
| 0.25 | 0.125 | 0.34 | 0.32 | 0.83 |
| 0.5 | 0.375 | 0.81 | 0.77 | 1.60 |
| 0.75 | 0.625 | 2.94 | 2.79 | 4.39 |
| 1 | 0.875 | 6.30 | 5.99 | 10.38 |
| 1.25 | 1.125 | 14.49 | 13.78 | 24.16 |
| 1.5 | 1.375 | 24.33 | 23.13 | 47.29 |
| 1.75 | 1.625 | 23.97 | 22.79 | 70.07 |
| 2 | 1.875 | 17.08 | 16.24 | 86.31 |
| 2.25 | 2.125 | 7.51 | 7.14 | 93.45 |
| 2.5 | 2.375 | 4.19 | 3.98 | 97.43 |
| 2.75 | 2.625 | 1.84 | 1.75 | 99.18 |
| 3 | 2.875 | 0.47 | 0.45 | 99.63 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.87 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.94 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.95 |
| 4 | 3.875 | 0.00 | 0.00 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.180 |
| **5** | 0.650 |
| **16** | 0.975 |
| **25** | 1.135 |
| **50** | 1.405 |
| **75** | 1.700 |
| **84** | 1.840 |
| **95** | 2.220 |
| **99** | 2.600 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.536 | 0.345 |
| Standard Deviation | 0.480 | 0.717 |
| Skewness | -0.111 | |
| Kurtosis | 5.314 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.407 | 1.407 |
| Standard Deviation | 0.432 | 0.454 |
| Skewness (1) | 0.006 | 0.022 |
| Skewness (2) | 0.069 | |
| Kurtosis | 0.815 | 1.139 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1880+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.282 mm** |
| **STD** | **0.701 mm** |
| **Skewness** | **0.348** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.9 |

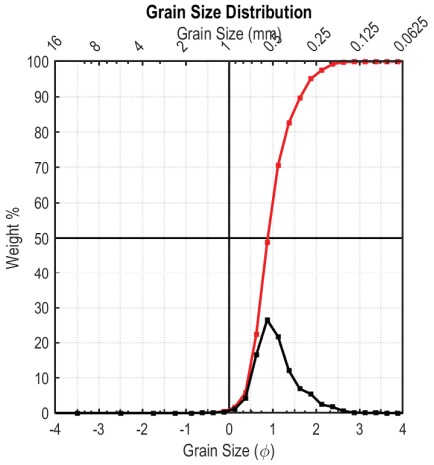
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.09 | 0.09 | 0.10 |
| 0.25 | 0.125 | 0.13 | 0.12 | 0.23 |
| 0.5 | 0.375 | 0.28 | 0.27 | 0.49 |
| 0.75 | 0.625 | 0.78 | 0.74 | 1.23 |
| 1 | 0.875 | 2.25 | 2.14 | 3.37 |
| 1.25 | 1.125 | 6.91 | 6.56 | 9.94 |
| 1.5 | 1.375 | 16.28 | 15.46 | 25.40 |
| 1.75 | 1.625 | 22.34 | 21.22 | 46.62 |
| 2 | 1.875 | 23.54 | 22.36 | 68.98 |
| 2.25 | 2.125 | 12.68 | 12.05 | 81.03 |
| 2.5 | 2.375 | 8.62 | 8.19 | 89.22 |
| 2.75 | 2.625 | 5.89 | 5.60 | 94.81 |
| 3 | 2.875 | 3.13 | 2.97 | 97.79 |
| 3.25 | 3.125 | 1.81 | 1.72 | 99.51 |
| 3.5 | 3.375 | 0.44 | 0.42 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.00 | 0.00 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.545 |
| **5** | 0.935 |
| **16** | 1.225 |
| **25** | 1.370 |
| **50** | 1.665 |
| **75** | 2.000 |
| **84** | 2.215 |
| **95** | 2.640 |
| **99** | 3.050 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.829 | 0.282 |
| Standard Deviation | 0.513 | 0.701 |
| Skewness | 0.348 | |
| Kurtosis | 3.671 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.720 | 1.702 |
| Standard Deviation | 0.495 | 0.506 |
| Skewness (1) | 0.111 | 0.127 |
| Skewness (2) | 0.247 | |
| Kurtosis | 0.722 | 1.109 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.469 mm** |
| **STD** | **0.718 mm** |
| **Skewness** | **0.796** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.01 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.4 |

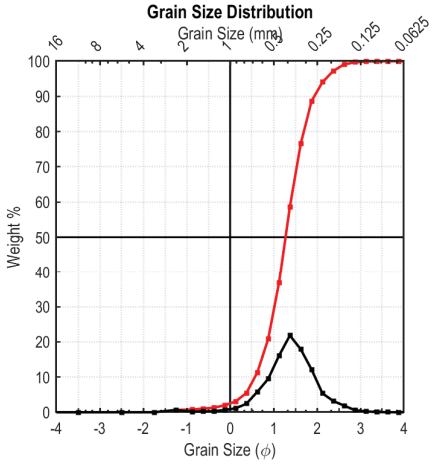
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.06 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.13 |
| 0 | -0.125 | 0.35 | 0.33 | 0.47 |
| 0.25 | 0.125 | 1.14 | 1.09 | 1.55 |
| 0.5 | 0.375 | 4.45 | 4.24 | 5.79 |
| 0.75 | 0.625 | 17.39 | 16.56 | 22.35 |
| 1 | 0.875 | 27.83 | 26.50 | 48.85 |
| 1.25 | 1.125 | 22.84 | 21.75 | 70.60 |
| 1.5 | 1.375 | 12.67 | 12.07 | 82.67 |
| 1.75 | 1.625 | 7.26 | 6.91 | 89.58 |
| 2 | 1.875 | 5.72 | 5.45 | 95.03 |
| 2.25 | 2.125 | 2.54 | 2.42 | 97.45 |
| 2.5 | 2.375 | 1.85 | 1.76 | 99.21 |
| 2.75 | 2.625 | 0.62 | 0.59 | 99.80 |
| 3 | 2.875 | 0.12 | 0.11 | 99.91 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.000 |
| **5** | 0.330 |
| **16** | 0.530 |
| **25** | 0.650 |
| **50** | 0.890 |
| **75** | 1.215 |
| **84** | 1.425 |
| **95** | 1.875 |
| **99** | 2.345 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.092 | 0.469 |
| Standard Deviation | 0.478 | 0.718 |
| Skewness | 0.796 | |
| Kurtosis | 4.267 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.977 | 0.948 |
| Standard Deviation | 0.448 | 0.458 |
| Skewness (1) | 0.196 | 0.235 |
| Skewness (2) | 0.475 | |
| Kurtosis | 0.726 | 1.121 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1890+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.384 mm** |
| **STD** | **0.663 mm** |
| **Skewness** | **-0.614** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.33 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.66 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.8 |

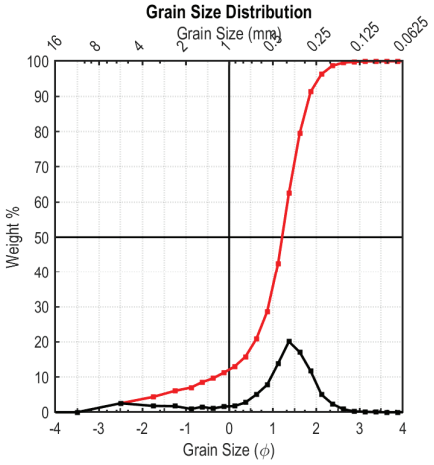
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.69 | 0.66 | 0.66 |
| -0.75 | -0.875 | 0.12 | 0.11 | 0.77 |
| -0.5 | -0.625 | 0.26 | 0.25 | 1.02 |
| -0.25 | -0.375 | 0.31 | 0.29 | 1.31 |
| 0 | -0.125 | 0.69 | 0.66 | 1.97 |
| 0.25 | 0.125 | 1.16 | 1.10 | 3.07 |
| 0.5 | 0.375 | 2.55 | 2.42 | 5.49 |
| 0.75 | 0.625 | 6.12 | 5.81 | 11.30 |
| 1 | 0.875 | 9.97 | 9.47 | 20.76 |
| 1.25 | 1.125 | 16.93 | 16.07 | 36.84 |
| 1.5 | 1.375 | 22.98 | 21.82 | 58.65 |
| 1.75 | 1.625 | 18.85 | 17.90 | 76.55 |
| 2 | 1.875 | 12.77 | 12.12 | 88.67 |
| 2.25 | 2.125 | 5.65 | 5.36 | 94.04 |
| 2.5 | 2.375 | 3.35 | 3.18 | 97.22 |
| 2.75 | 2.625 | 1.98 | 1.88 | 99.10 |
| 3 | 2.875 | 0.59 | 0.56 | 99.66 |
| 3.25 | 3.125 | 0.26 | 0.25 | 99.91 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.640 |
| **5** | 0.325 |
| **16** | 0.750 |
| **25** | 0.940 |
| **50** | 1.275 |
| **75** | 1.605 |
| **84** | 1.780 |
| **95** | 2.200 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.382 | 0.384 |
| Standard Deviation | 0.592 | 0.663 |
| Skewness | -0.614 | |
| Kurtosis | 5.745 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.265 | 1.268 |
| Standard Deviation | 0.515 | 0.542 |
| Skewness (1) | -0.019 | -0.016 |
| Skewness (2) | -0.024 | |
| Kurtosis | 0.820 | 1.156 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1890+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.466 mm** |
| **STD** | **0.498 mm** |
| **Skewness** | **-1.794** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.18 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 3.53 |
| % gravel (>4 mm) | 2.55 |
| CaCO3 | 21.5 |

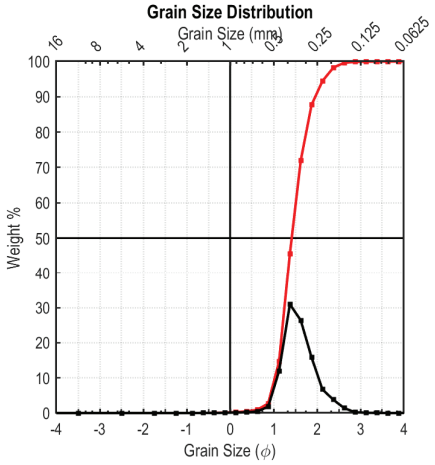
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 2.68 | 2.55 | 2.55 |
| -1.5 | -1.75 | 1.90 | 1.81 | 4.35 |
| -1 | -1.25 | 1.81 | 1.72 | 6.08 |
| -0.75 | -0.875 | 1.00 | 0.95 | 7.03 |
| -0.5 | -0.625 | 1.59 | 1.51 | 8.54 |
| -0.25 | -0.375 | 1.14 | 1.08 | 9.62 |
| 0 | -0.125 | 1.69 | 1.61 | 11.23 |
| 0.25 | 0.125 | 1.85 | 1.76 | 12.99 |
| 0.5 | 0.375 | 2.93 | 2.79 | 15.77 |
| 0.75 | 0.625 | 5.29 | 5.03 | 20.80 |
| 1 | 0.875 | 8.20 | 7.80 | 28.60 |
| 1.25 | 1.125 | 14.51 | 13.80 | 42.39 |
| 1.5 | 1.375 | 21.14 | 20.10 | 62.49 |
| 1.75 | 1.625 | 17.95 | 17.07 | 79.56 |
| 2 | 1.875 | 12.33 | 11.72 | 91.28 |
| 2.25 | 2.125 | 5.28 | 5.02 | 96.30 |
| 2.5 | 2.375 | 2.50 | 2.38 | 98.68 |
| 2.75 | 2.625 | 0.92 | 0.87 | 99.55 |
| 3 | 2.875 | 0.26 | 0.25 | 99.80 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.93 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.110 |
| **5** | -1.560 |
| **16** | 0.385 |
| **25** | 0.760 |
| **50** | 1.220 |
| **75** | 1.560 |
| **84** | 1.720 |
| **95** | 2.060 |
| **99** | 2.465 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.100 | 0.466 |
| Standard Deviation | 1.005 | 0.498 |
| Skewness | -1.794 | |
| Kurtosis | 6.553 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.052 | 1.108 |
| Standard Deviation | 0.667 | 0.882 |
| Skewness (1) | -0.251 | -0.393 |
| Skewness (2) | -1.453 | |
| Kurtosis | 1.712 | 1.855 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1890+00** |
| **Sample** | **Swash** |
| **Mean** | **0.334 mm** |
| **STD** | **0.769 mm** |
| **Skewness** | **0.452** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

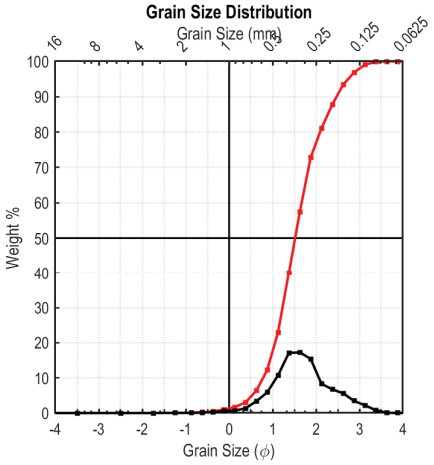
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.03 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.05 |
| 0 | -0.125 | 0.07 | 0.07 | 0.11 |
| 0.25 | 0.125 | 0.16 | 0.15 | 0.27 |
| 0.5 | 0.375 | 0.20 | 0.19 | 0.46 |
| 0.75 | 0.625 | 0.50 | 0.48 | 0.93 |
| 1 | 0.875 | 1.88 | 1.79 | 2.72 |
| 1.25 | 1.125 | 12.49 | 11.88 | 14.60 |
| 1.5 | 1.375 | 32.53 | 30.95 | 45.55 |
| 1.75 | 1.625 | 27.74 | 26.39 | 71.94 |
| 2 | 1.875 | 16.60 | 15.79 | 87.74 |
| 2.25 | 2.125 | 7.05 | 6.71 | 94.44 |
| 2.5 | 2.375 | 3.98 | 3.79 | 98.23 |
| 2.75 | 2.625 | 1.47 | 1.40 | 99.63 |
| 3 | 2.875 | 0.24 | 0.23 | 99.86 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.94 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.96 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.96 |
| 4 | 3.875 | 0.00 | 0.00 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.635 |
| **5** | 0.925 |
| **16** | 1.135 |
| **25** | 1.210 |
| **50** | 1.415 |
| **75** | 1.675 |
| **84** | 1.815 |
| **95** | 2.160 |
| **99** | 2.515 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.584 | 0.334 |
| Standard Deviation | 0.379 | 0.769 |
| Skewness | 0.452 | |
| Kurtosis | 5.400 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.475 | 1.455 |
| Standard Deviation | 0.340 | 0.357 |
| Skewness (1) | 0.176 | 0.191 |
| Skewness (2) | 0.375 | |
| Kurtosis | 0.816 | 1.088 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1900+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.311 mm** |
| **STD** | **0.634 mm** |
| **Skewness** | **0.045** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.20 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.5 |

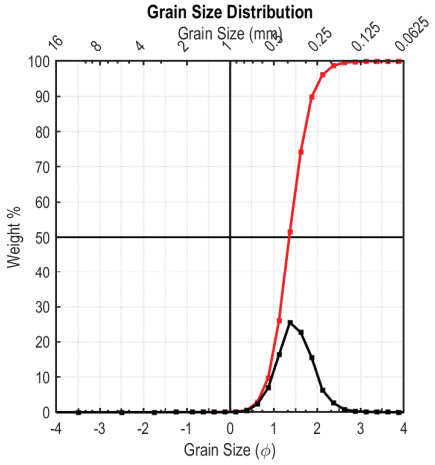
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.08 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.20 |
| -0.25 | -0.375 | 0.28 | 0.26 | 0.46 |
| 0 | -0.125 | 0.57 | 0.54 | 1.00 |
| 0.25 | 0.125 | 0.71 | 0.67 | 1.67 |
| 0.5 | 0.375 | 1.43 | 1.35 | 3.01 |
| 0.75 | 0.625 | 3.54 | 3.33 | 6.35 |
| 1 | 0.875 | 6.23 | 5.87 | 12.21 |
| 1.25 | 1.125 | 11.39 | 10.73 | 22.94 |
| 1.5 | 1.375 | 18.18 | 17.12 | 40.06 |
| 1.75 | 1.625 | 18.34 | 17.27 | 57.33 |
| 2 | 1.875 | 16.37 | 15.41 | 72.74 |
| 2.25 | 2.125 | 8.85 | 8.33 | 81.07 |
| 2.5 | 2.375 | 7.15 | 6.73 | 87.81 |
| 2.75 | 2.625 | 5.98 | 5.63 | 93.44 |
| 3 | 2.875 | 3.65 | 3.44 | 96.87 |
| 3.25 | 3.125 | 2.34 | 2.20 | 99.08 |
| 3.5 | 3.375 | 0.87 | 0.82 | 99.90 |
| 3.75 | 3.625 | 0.09 | 0.08 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.125 |
| **5** | 0.525 |
| **16** | 0.965 |
| **25** | 1.155 |
| **50** | 1.520 |
| **75** | 1.945 |
| **84** | 2.235 |
| **95** | 2.740 |
| **99** | 3.115 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.684 | 0.311 |
| Standard Deviation | 0.658 | 0.634 |
| Skewness | 0.045 | |
| Kurtosis | 3.508 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.600 | 1.573 |
| Standard Deviation | 0.635 | 0.653 |
| Skewness (1) | 0.126 | 0.114 |
| Skewness (2) | 0.177 | |
| Kurtosis | 0.744 | 1.149 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1900+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.353 mm** |
| **STD** | **0.750 mm** |
| **Skewness** | **0.135** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.75 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

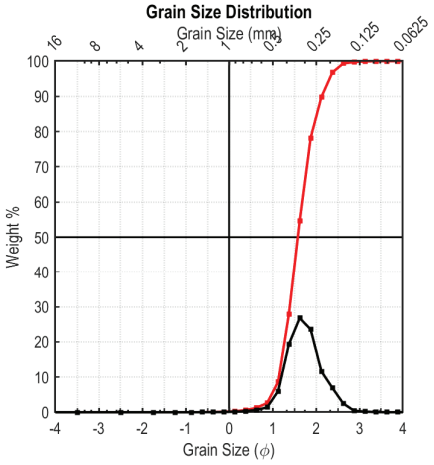
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.04 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.05 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.06 |
| 0 | -0.125 | 0.02 | 0.02 | 0.08 |
| 0.25 | 0.125 | 0.09 | 0.09 | 0.16 |
| 0.5 | 0.375 | 0.40 | 0.38 | 0.54 |
| 0.75 | 0.625 | 2.42 | 2.29 | 2.83 |
| 1 | 0.875 | 7.29 | 6.89 | 9.72 |
| 1.25 | 1.125 | 17.26 | 16.32 | 26.04 |
| 1.5 | 1.375 | 26.99 | 25.52 | 51.57 |
| 1.75 | 1.625 | 23.97 | 22.67 | 74.23 |
| 2 | 1.875 | 16.49 | 15.59 | 89.83 |
| 2.25 | 2.125 | 6.64 | 6.28 | 96.10 |
| 2.5 | 2.375 | 2.78 | 2.63 | 98.73 |
| 2.75 | 2.625 | 0.89 | 0.84 | 99.57 |
| 3 | 2.875 | 0.26 | 0.25 | 99.82 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.96 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.425 |
| **5** | 0.705 |
| **16** | 0.970 |
| **25** | 1.110 |
| **50** | 1.360 |
| **75** | 1.635 |
| **84** | 1.780 |
| **95** | 2.080 |
| **99** | 2.455 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.502 | 0.353 |
| Standard Deviation | 0.415 | 0.750 |
| Skewness | 0.135 | |
| Kurtosis | 4.231 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.375 | 1.370 |
| Standard Deviation | 0.405 | 0.411 |
| Skewness (1) | 0.037 | 0.042 |
| Skewness (2) | 0.080 | |
| Kurtosis | 0.698 | 1.073 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1900+00** |
| **Sample** | **Swash** |
| **Mean** | **0.302 mm** |
| **STD** | **0.754 mm** |
| **Skewness** | **-0.036** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.85 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.5 |

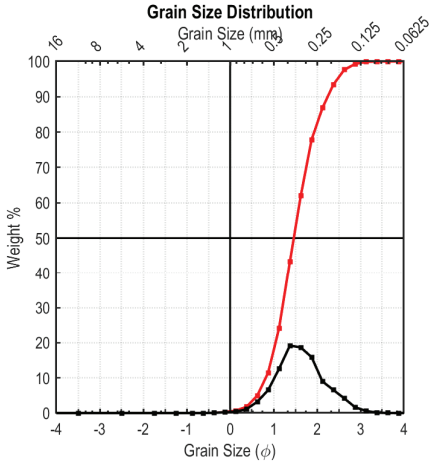
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.03 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.06 |
| 0 | -0.125 | 0.08 | 0.08 | 0.13 |
| 0.25 | 0.125 | 0.16 | 0.15 | 0.28 |
| 0.5 | 0.375 | 0.32 | 0.30 | 0.59 |
| 0.75 | 0.625 | 0.70 | 0.66 | 1.25 |
| 1 | 0.875 | 1.46 | 1.38 | 2.63 |
| 1.25 | 1.125 | 6.30 | 5.95 | 8.58 |
| 1.5 | 1.375 | 20.48 | 19.35 | 27.93 |
| 1.75 | 1.625 | 28.33 | 26.76 | 54.69 |
| 2 | 1.875 | 24.90 | 23.52 | 78.21 |
| 2.25 | 2.125 | 12.31 | 11.63 | 89.84 |
| 2.5 | 2.375 | 7.35 | 6.94 | 96.79 |
| 2.75 | 2.625 | 2.68 | 2.53 | 99.32 |
| 3 | 2.875 | 0.46 | 0.43 | 99.75 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.530 |
| **5** | 0.975 |
| **16** | 1.220 |
| **25** | 1.335 |
| **50** | 1.580 |
| **75** | 1.840 |
| **84** | 2.000 |
| **95** | 2.310 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.725 | 0.302 |
| Standard Deviation | 0.407 | 0.754 |
| Skewness | -0.036 | |
| Kurtosis | 4.514 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.610 | 1.600 |
| Standard Deviation | 0.390 | 0.397 |
| Skewness (1) | 0.077 | 0.085 |
| Skewness (2) | 0.160 | |
| Kurtosis | 0.712 | 1.083 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1910+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.326 mm** |
| **STD** | **0.683 mm** |
| **Skewness** | **0.134** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.23 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

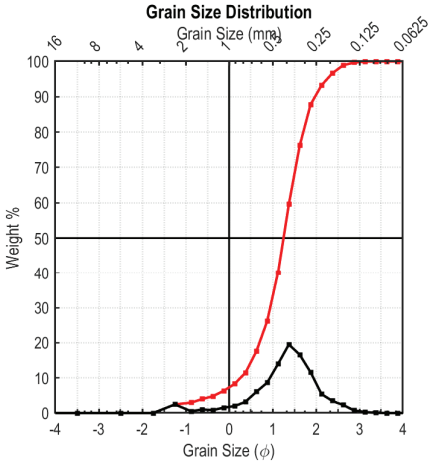
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.05 |
| 0 | -0.125 | 0.23 | 0.22 | 0.27 |
| 0.25 | 0.125 | 0.42 | 0.40 | 0.67 |
| 0.5 | 0.375 | 1.14 | 1.08 | 1.75 |
| 0.75 | 0.625 | 3.38 | 3.21 | 4.96 |
| 1 | 0.875 | 6.87 | 6.53 | 11.49 |
| 1.25 | 1.125 | 13.23 | 12.57 | 24.06 |
| 1.5 | 1.375 | 20.21 | 19.21 | 43.27 |
| 1.75 | 1.625 | 19.65 | 18.67 | 61.94 |
| 2 | 1.875 | 16.74 | 15.91 | 77.85 |
| 2.25 | 2.125 | 9.46 | 8.99 | 86.84 |
| 2.5 | 2.375 | 6.92 | 6.58 | 93.41 |
| 2.75 | 2.625 | 4.41 | 4.19 | 97.61 |
| 3 | 2.875 | 1.75 | 1.66 | 99.27 |
| 3.25 | 3.125 | 0.64 | 0.61 | 99.88 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.200 |
| **5** | 0.625 |
| **16** | 0.965 |
| **25** | 1.135 |
| **50** | 1.465 |
| **75** | 1.830 |
| **84** | 2.045 |
| **95** | 2.470 |
| **99** | 2.835 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.617 | 0.326 |
| Standard Deviation | 0.549 | 0.683 |
| Skewness | 0.134 | |
| Kurtosis | 3.181 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.505 | 1.492 |
| Standard Deviation | 0.540 | 0.550 |
| Skewness (1) | 0.074 | 0.082 |
| Skewness (2) | 0.153 | |
| Kurtosis | 0.708 | 1.088 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1910+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.411 mm** |
| **STD** | **0.590 mm** |
| **Skewness** | **-1.041** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.50 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 2.45 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.6 |

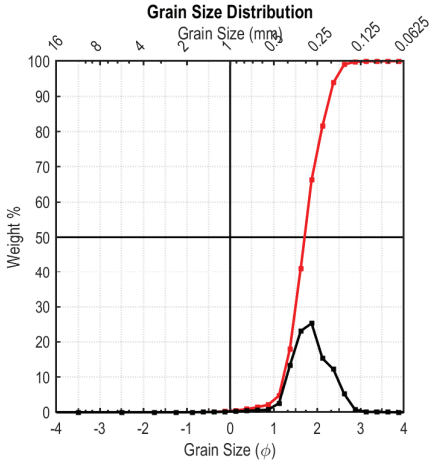
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.58 | 2.45 | 2.45 |
| -0.75 | -0.875 | 0.54 | 0.51 | 2.96 |
| -0.5 | -0.625 | 1.05 | 1.00 | 3.95 |
| -0.25 | -0.375 | 0.88 | 0.83 | 4.79 |
| 0 | -0.125 | 1.62 | 1.54 | 6.32 |
| 0.25 | 0.125 | 2.07 | 1.96 | 8.28 |
| 0.5 | 0.375 | 3.37 | 3.19 | 11.48 |
| 0.75 | 0.625 | 6.35 | 6.02 | 17.50 |
| 1 | 0.875 | 9.12 | 8.64 | 26.14 |
| 1.25 | 1.125 | 14.72 | 13.95 | 40.09 |
| 1.5 | 1.375 | 20.59 | 19.52 | 59.61 |
| 1.75 | 1.625 | 17.51 | 16.60 | 76.21 |
| 2 | 1.875 | 12.23 | 11.59 | 87.80 |
| 2.25 | 2.125 | 5.71 | 5.41 | 93.21 |
| 2.5 | 2.375 | 3.62 | 3.43 | 96.64 |
| 2.75 | 2.625 | 2.41 | 2.28 | 98.93 |
| 3 | 2.875 | 0.77 | 0.73 | 99.66 |
| 3.25 | 3.125 | 0.30 | 0.28 | 99.94 |
| 3.5 | 3.375 | 0.06 | 0.06 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.545 |
| **5** | -0.340 |
| **16** | 0.565 |
| **25** | 0.840 |
| **50** | 1.250 |
| **75** | 1.605 |
| **84** | 1.795 |
| **95** | 2.255 |
| **99** | 2.650 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.282 | 0.411 |
| Standard Deviation | 0.761 | 0.590 |
| Skewness | -1.041 | |
| Kurtosis | 5.056 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.180 | 1.203 |
| Standard Deviation | 0.615 | 0.701 |
| Skewness (1) | -0.114 | -0.170 |
| Skewness (2) | -0.476 | |
| Kurtosis | 1.110 | 1.390 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1910+00** |
| **Sample** | **Swash** |
| **Mean** | **0.277 mm** |
| **STD** | **0.742 mm** |
| **Skewness** | **-0.435** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.79 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

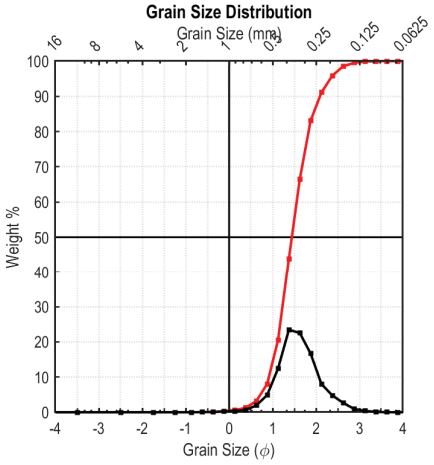
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.05 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.09 |
| 0 | -0.125 | 0.17 | 0.16 | 0.26 |
| 0.25 | 0.125 | 0.25 | 0.24 | 0.49 |
| 0.5 | 0.375 | 0.40 | 0.38 | 0.87 |
| 0.75 | 0.625 | 0.59 | 0.56 | 1.43 |
| 1 | 0.875 | 0.75 | 0.71 | 2.14 |
| 1.25 | 1.125 | 2.72 | 2.57 | 4.71 |
| 1.5 | 1.375 | 14.03 | 13.26 | 17.97 |
| 1.75 | 1.625 | 24.42 | 23.08 | 41.05 |
| 2 | 1.875 | 26.72 | 25.26 | 66.31 |
| 2.25 | 2.125 | 16.18 | 15.29 | 81.61 |
| 2.5 | 2.375 | 12.94 | 12.23 | 93.84 |
| 2.75 | 2.625 | 5.51 | 5.21 | 99.05 |
| 3 | 2.875 | 0.81 | 0.77 | 99.81 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.94 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.435 |
| **5** | 1.130 |
| **16** | 1.340 |
| **25** | 1.450 |
| **50** | 1.715 |
| **75** | 2.015 |
| **84** | 2.175 |
| **95** | 2.430 |
| **99** | 2.625 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.851 | 0.277 |
| Standard Deviation | 0.430 | 0.742 |
| Skewness | -0.435 | |
| Kurtosis | 4.967 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.757 | 1.743 |
| Standard Deviation | 0.417 | 0.406 |
| Skewness (1) | 0.102 | 0.101 |
| Skewness (2) | 0.156 | |
| Kurtosis | 0.557 | 0.943 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1920+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.331 mm** |
| **STD** | **0.717 mm** |
| **Skewness** | **0.151** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.32 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

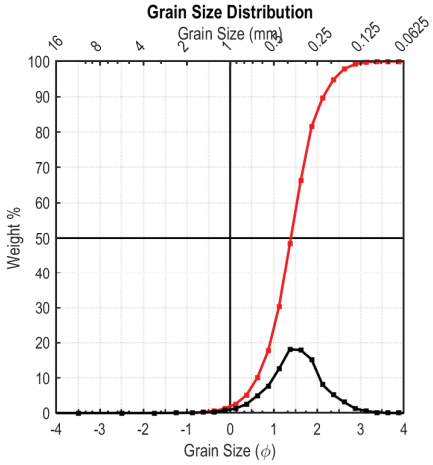
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.04 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.10 |
| 0 | -0.125 | 0.22 | 0.21 | 0.31 |
| 0.25 | 0.125 | 0.31 | 0.29 | 0.61 |
| 0.5 | 0.375 | 0.65 | 0.62 | 1.22 |
| 0.75 | 0.625 | 2.04 | 1.94 | 3.16 |
| 1 | 0.875 | 5.13 | 4.87 | 8.03 |
| 1.25 | 1.125 | 13.07 | 12.41 | 20.44 |
| 1.5 | 1.375 | 24.66 | 23.41 | 43.86 |
| 1.75 | 1.625 | 23.74 | 22.54 | 66.40 |
| 2 | 1.875 | 17.58 | 16.69 | 83.09 |
| 2.25 | 2.125 | 8.43 | 8.00 | 91.09 |
| 2.5 | 2.375 | 5.04 | 4.79 | 95.88 |
| 2.75 | 2.625 | 2.81 | 2.67 | 98.55 |
| 3 | 2.875 | 1.00 | 0.95 | 99.50 |
| 3.25 | 3.125 | 0.41 | 0.39 | 99.89 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.285 |
| **5** | 0.720 |
| **16** | 1.035 |
| **25** | 1.175 |
| **50** | 1.445 |
| **75** | 1.755 |
| **84** | 1.905 |
| **95** | 2.330 |
| **99** | 2.745 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.595 | 0.331 |
| Standard Deviation | 0.480 | 0.717 |
| Skewness | 0.151 | |
| Kurtosis | 4.081 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.470 | 1.462 |
| Standard Deviation | 0.435 | 0.461 |
| Skewness (1) | 0.057 | 0.078 |
| Skewness (2) | 0.184 | |
| Kurtosis | 0.851 | 1.138 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1920+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.351 mm** |
| **STD** | **0.656 mm** |
| **Skewness** | **-0.187** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.58 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.8 |

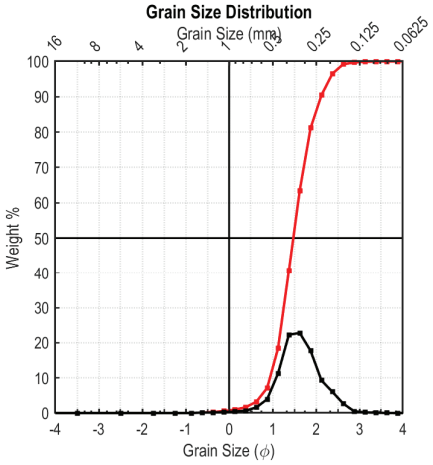
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.09 |
| -0.5 | -0.625 | 0.19 | 0.18 | 0.27 |
| -0.25 | -0.375 | 0.28 | 0.27 | 0.54 |
| 0 | -0.125 | 0.78 | 0.74 | 1.28 |
| 0.25 | 0.125 | 1.36 | 1.29 | 2.57 |
| 0.5 | 0.375 | 2.67 | 2.53 | 5.10 |
| 0.75 | 0.625 | 5.22 | 4.94 | 10.04 |
| 1 | 0.875 | 8.07 | 7.64 | 17.68 |
| 1.25 | 1.125 | 13.28 | 12.58 | 30.26 |
| 1.5 | 1.375 | 19.16 | 18.15 | 48.41 |
| 1.75 | 1.625 | 18.91 | 17.91 | 66.32 |
| 2 | 1.875 | 16.10 | 15.25 | 81.57 |
| 2.25 | 2.125 | 8.52 | 8.07 | 89.64 |
| 2.5 | 2.375 | 5.45 | 5.16 | 94.80 |
| 2.75 | 2.625 | 3.27 | 3.10 | 97.90 |
| 3 | 2.875 | 1.37 | 1.30 | 99.19 |
| 3.25 | 3.125 | 0.63 | 0.60 | 99.79 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.220 |
| **5** | 0.365 |
| **16** | 0.820 |
| **25** | 1.020 |
| **50** | 1.395 |
| **75** | 1.765 |
| **84** | 1.950 |
| **95** | 2.390 |
| **99** | 2.835 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.511 | 0.351 |
| Standard Deviation | 0.608 | 0.656 |
| Skewness | -0.187 | |
| Kurtosis | 3.703 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.385 | 1.388 |
| Standard Deviation | 0.565 | 0.589 |
| Skewness (1) | -0.018 | -0.017 |
| Skewness (2) | -0.031 | |
| Kurtosis | 0.792 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1920+00** |
| **Sample** | **Swash** |
| **Mean** | **0.326 mm** |
| **STD** | **0.717 mm** |
| **Skewness** | **-0.210** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.18 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

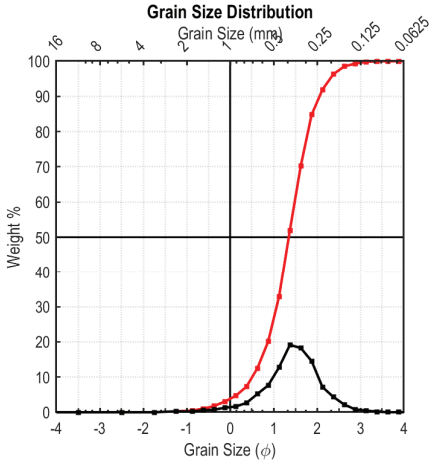
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.13 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.28 |
| 0 | -0.125 | 0.30 | 0.29 | 0.56 |
| 0.25 | 0.125 | 0.42 | 0.40 | 0.96 |
| 0.5 | 0.375 | 0.68 | 0.65 | 1.61 |
| 0.75 | 0.625 | 1.68 | 1.60 | 3.20 |
| 1 | 0.875 | 4.14 | 3.94 | 7.14 |
| 1.25 | 1.125 | 11.82 | 11.24 | 18.38 |
| 1.5 | 1.375 | 23.44 | 22.29 | 40.66 |
| 1.75 | 1.625 | 23.98 | 22.80 | 63.46 |
| 2 | 1.875 | 18.62 | 17.70 | 81.17 |
| 2.25 | 2.125 | 9.76 | 9.28 | 90.44 |
| 2.5 | 2.375 | 6.37 | 6.06 | 96.50 |
| 2.75 | 2.625 | 2.84 | 2.70 | 99.20 |
| 3 | 2.875 | 0.53 | 0.50 | 99.71 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.90 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.140 |
| **5** | 0.740 |
| **16** | 1.070 |
| **25** | 1.200 |
| **50** | 1.475 |
| **75** | 1.790 |
| **84** | 1.950 |
| **95** | 2.315 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.617 | 0.326 |
| Standard Deviation | 0.481 | 0.717 |
| Skewness | -0.210 | |
| Kurtosis | 4.497 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.510 | 1.498 |
| Standard Deviation | 0.440 | 0.459 |
| Skewness (1) | 0.080 | 0.073 |
| Skewness (2) | 0.119 | |
| Kurtosis | 0.790 | 1.094 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.370 mm** |
| **STD** | **0.640 mm** |
| **Skewness** | **-0.560** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.3 |

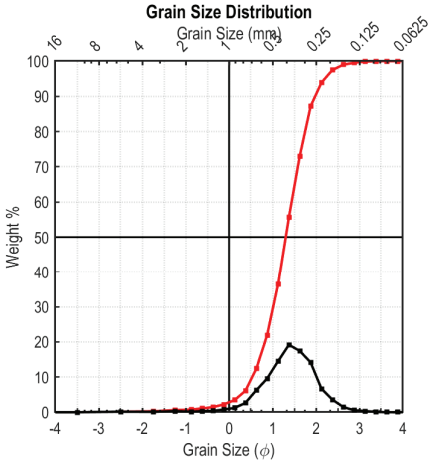
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.29 | 0.27 | 0.27 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.46 |
| -0.5 | -0.625 | 0.59 | 0.56 | 1.02 |
| -0.25 | -0.375 | 0.75 | 0.71 | 1.74 |
| 0 | -0.125 | 1.36 | 1.29 | 3.03 |
| 0.25 | 0.125 | 1.69 | 1.61 | 4.64 |
| 0.5 | 0.375 | 2.77 | 2.63 | 7.27 |
| 0.75 | 0.625 | 5.45 | 5.18 | 12.45 |
| 1 | 0.875 | 8.04 | 7.64 | 20.08 |
| 1.25 | 1.125 | 13.40 | 12.73 | 32.82 |
| 1.5 | 1.375 | 20.13 | 19.13 | 51.95 |
| 1.75 | 1.625 | 19.22 | 18.27 | 70.22 |
| 2 | 1.875 | 15.31 | 14.55 | 84.77 |
| 2.25 | 2.125 | 7.53 | 7.16 | 91.93 |
| 2.5 | 2.375 | 4.58 | 4.35 | 96.28 |
| 2.75 | 2.625 | 2.32 | 2.20 | 98.48 |
| 3 | 2.875 | 0.86 | 0.82 | 99.30 |
| 3.25 | 3.125 | 0.52 | 0.49 | 99.79 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.635 |
| **5** | 0.160 |
| **16** | 0.740 |
| **25** | 0.970 |
| **50** | 1.350 |
| **75** | 1.705 |
| **84** | 1.860 |
| **95** | 2.300 |
| **99** | 2.785 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.434 | 0.370 |
| Standard Deviation | 0.644 | 0.640 |
| Skewness | -0.560 | |
| Kurtosis | 4.516 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.300 | 1.317 |
| Standard Deviation | 0.560 | 0.604 |
| Skewness (1) | -0.089 | -0.101 |
| Skewness (2) | -0.214 | |
| Kurtosis | 0.911 | 1.193 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.381 mm** |
| **STD** | **0.648 mm** |
| **Skewness** | **-0.908** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.20 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.44 |
| % gravel (>4 mm) | 0.16 |
| CaCO3 | 4.9 |

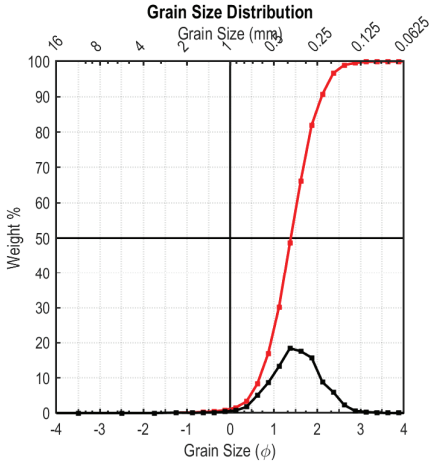
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.17 | 0.16 | 0.16 |
| -1.5 | -1.75 | 0.12 | 0.11 | 0.27 |
| -1 | -1.25 | 0.34 | 0.33 | 0.60 |
| -0.75 | -0.875 | 0.16 | 0.15 | 0.75 |
| -0.5 | -0.625 | 0.34 | 0.33 | 1.08 |
| -0.25 | -0.375 | 0.39 | 0.37 | 1.44 |
| 0 | -0.125 | 0.82 | 0.78 | 2.22 |
| 0.25 | 0.125 | 1.30 | 1.23 | 3.45 |
| 0.5 | 0.375 | 2.79 | 2.65 | 6.10 |
| 0.75 | 0.625 | 6.58 | 6.26 | 12.36 |
| 1 | 0.875 | 10.09 | 9.59 | 21.95 |
| 1.25 | 1.125 | 15.25 | 14.50 | 36.45 |
| 1.5 | 1.375 | 20.17 | 19.17 | 55.62 |
| 1.75 | 1.625 | 18.34 | 17.43 | 73.05 |
| 2 | 1.875 | 14.89 | 14.16 | 87.21 |
| 2.25 | 2.125 | 7.03 | 6.68 | 93.89 |
| 2.5 | 2.375 | 3.77 | 3.58 | 97.48 |
| 2.75 | 2.625 | 1.58 | 1.50 | 98.98 |
| 3 | 2.875 | 0.59 | 0.56 | 99.54 |
| 3.25 | 3.125 | 0.36 | 0.34 | 99.88 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.02 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.685 |
| **5** | 0.270 |
| **16** | 0.720 |
| **25** | 0.930 |
| **50** | 1.300 |
| **75** | 1.660 |
| **84** | 1.820 |
| **95** | 2.200 |
| **99** | 2.635 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.392 | 0.381 |
| Standard Deviation | 0.626 | 0.648 |
| Skewness | -0.908 | |
| Kurtosis | 6.984 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.270 | 1.280 |
| Standard Deviation | 0.550 | 0.567 |
| Skewness (1) | -0.055 | -0.061 |
| Skewness (2) | -0.118 | |
| Kurtosis | 0.755 | 1.084 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.350 mm** |
| **STD** | **0.676 mm** |
| **Skewness** | **-0.249** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.18 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.4 |

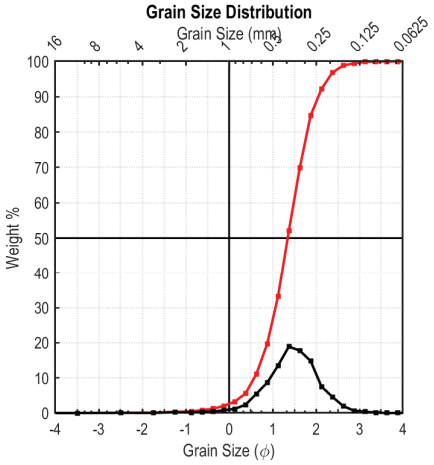
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.12 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.16 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.29 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.46 |
| 0 | -0.125 | 0.39 | 0.37 | 0.83 |
| 0.25 | 0.125 | 0.74 | 0.70 | 1.53 |
| 0.5 | 0.375 | 1.82 | 1.73 | 3.26 |
| 0.75 | 0.625 | 5.28 | 5.02 | 8.29 |
| 1 | 0.875 | 9.05 | 8.60 | 16.89 |
| 1.25 | 1.125 | 13.96 | 13.27 | 30.16 |
| 1.5 | 1.375 | 19.39 | 18.43 | 48.59 |
| 1.75 | 1.625 | 18.50 | 17.59 | 66.18 |
| 2 | 1.875 | 16.57 | 15.76 | 81.94 |
| 2.25 | 2.125 | 9.24 | 8.78 | 90.72 |
| 2.5 | 2.375 | 6.26 | 5.95 | 96.67 |
| 2.75 | 2.625 | 2.41 | 2.29 | 98.96 |
| 3 | 2.875 | 0.63 | 0.60 | 99.56 |
| 3.25 | 3.125 | 0.34 | 0.32 | 99.88 |
| 3.5 | 3.375 | 0.10 | 0.09 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.065 |
| **5** | 0.460 |
| **16** | 0.850 |
| **25** | 1.030 |
| **50** | 1.395 |
| **75** | 1.765 |
| **84** | 1.935 |
| **95** | 2.305 |
| **99** | 2.640 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.514 | 0.350 |
| Standard Deviation | 0.566 | 0.676 |
| Skewness | -0.249 | |
| Kurtosis | 3.992 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.393 | 1.393 |
| Standard Deviation | 0.542 | 0.551 |
| Skewness (1) | -0.005 | -0.009 |
| Skewness (2) | -0.023 | |
| Kurtosis | 0.700 | 1.029 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.367 mm** |
| **STD** | **0.653 mm** |
| **Skewness** | **-0.621** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.20 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.28 |
| % gravel (>4 mm) | 0.05 |
| CaCO3 | 5.6 |

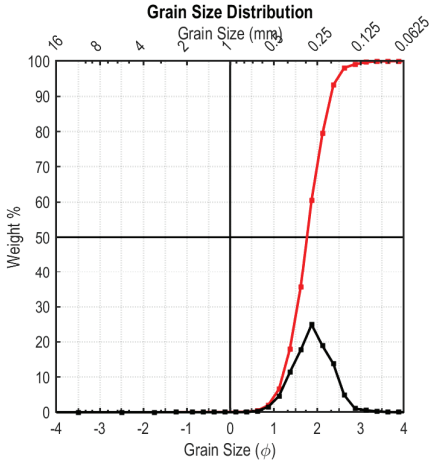
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.06 | 0.05 | 0.05 |
| -1.5 | -1.75 | 0.04 | 0.04 | 0.09 |
| -1 | -1.25 | 0.25 | 0.24 | 0.33 |
| -0.75 | -0.875 | 0.14 | 0.13 | 0.46 |
| -0.5 | -0.625 | 0.36 | 0.34 | 0.80 |
| -0.25 | -0.375 | 0.44 | 0.41 | 1.21 |
| 0 | -0.125 | 0.86 | 0.81 | 2.02 |
| 0.25 | 0.125 | 1.24 | 1.18 | 3.21 |
| 0.5 | 0.375 | 2.46 | 2.34 | 5.54 |
| 0.75 | 0.625 | 5.77 | 5.49 | 11.03 |
| 1 | 0.875 | 9.06 | 8.61 | 19.64 |
| 1.25 | 1.125 | 14.20 | 13.50 | 33.14 |
| 1.5 | 1.375 | 19.90 | 18.91 | 52.05 |
| 1.75 | 1.625 | 18.69 | 17.76 | 69.82 |
| 2 | 1.875 | 15.59 | 14.82 | 84.64 |
| 2.25 | 2.125 | 7.93 | 7.54 | 92.18 |
| 2.5 | 2.375 | 4.87 | 4.63 | 96.81 |
| 2.75 | 2.625 | 2.10 | 2.00 | 98.81 |
| 3 | 2.875 | 0.69 | 0.66 | 99.47 |
| 3.25 | 3.125 | 0.40 | 0.38 | 99.85 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.505 |
| **5** | 0.315 |
| **16** | 0.770 |
| **25** | 0.975 |
| **50** | 1.350 |
| **75** | 1.710 |
| **84** | 1.865 |
| **95** | 2.275 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.446 | 0.367 |
| Standard Deviation | 0.615 | 0.653 |
| Skewness | -0.621 | |
| Kurtosis | 5.407 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.317 | 1.328 |
| Standard Deviation | 0.547 | 0.571 |
| Skewness (1) | -0.059 | -0.058 |
| Skewness (2) | -0.100 | |
| Kurtosis | 0.790 | 1.093 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **980+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.269 mm** |
| **STD** | **0.738 mm** |
| **Skewness** | **-0.080** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.67 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.4 |

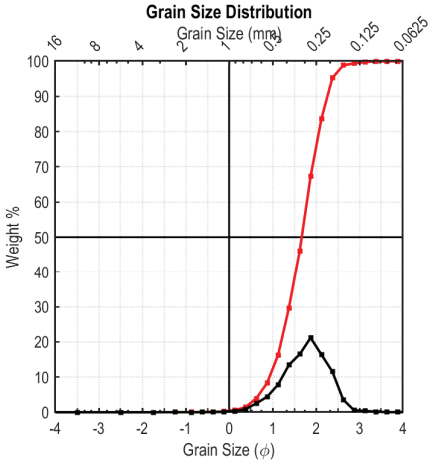
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.03 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.04 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.05 |
| 0 | -0.125 | 0.01 | 0.01 | 0.06 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.08 |
| 0.5 | 0.375 | 0.04 | 0.04 | 0.11 |
| 0.75 | 0.625 | 0.36 | 0.34 | 0.45 |
| 1 | 0.875 | 1.61 | 1.52 | 1.98 |
| 1.25 | 1.125 | 4.87 | 4.61 | 6.59 |
| 1.5 | 1.375 | 12.03 | 11.38 | 17.97 |
| 1.75 | 1.625 | 18.68 | 17.68 | 35.65 |
| 2 | 1.875 | 26.31 | 24.90 | 60.55 |
| 2.25 | 2.125 | 19.94 | 18.87 | 79.42 |
| 2.5 | 2.375 | 14.56 | 13.78 | 93.20 |
| 2.75 | 2.625 | 5.17 | 4.89 | 98.09 |
| 3 | 2.875 | 1.09 | 1.03 | 99.12 |
| 3.25 | 3.125 | 0.60 | 0.57 | 99.69 |
| 3.5 | 3.375 | 0.26 | 0.25 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.715 |
| **5** | 1.040 |
| **16** | 1.330 |
| **25** | 1.475 |
| **50** | 1.770 |
| **75** | 2.065 |
| **84** | 2.210 |
| **95** | 2.465 |
| **99** | 2.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.893 | 0.269 |
| Standard Deviation | 0.438 | 0.738 |
| Skewness | -0.080 | |
| Kurtosis | 4.105 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.770 | 1.770 |
| Standard Deviation | 0.440 | 0.436 |
| Skewness (1) | 0.000 | -0.012 |
| Skewness (2) | -0.040 | |
| Kurtosis | 0.619 | 0.990 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **980+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.298 mm** |
| **STD** | **0.695 mm** |
| **Skewness** | **-0.367** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.53 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

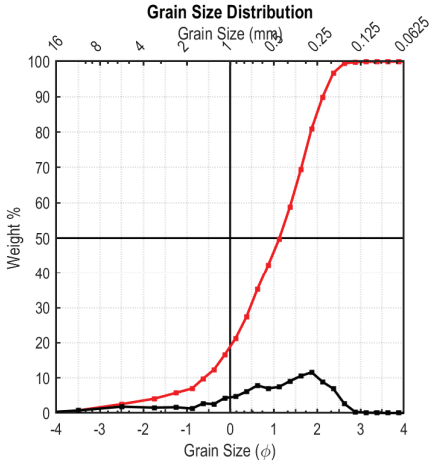
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.02 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.06 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.10 |
| 0 | -0.125 | 0.13 | 0.12 | 0.23 |
| 0.25 | 0.125 | 0.36 | 0.34 | 0.57 |
| 0.5 | 0.375 | 0.90 | 0.85 | 1.42 |
| 0.75 | 0.625 | 2.66 | 2.52 | 3.94 |
| 1 | 0.875 | 4.65 | 4.41 | 8.35 |
| 1.25 | 1.125 | 8.27 | 7.84 | 16.18 |
| 1.5 | 1.375 | 14.18 | 13.44 | 29.62 |
| 1.75 | 1.625 | 17.40 | 16.49 | 46.11 |
| 2 | 1.875 | 22.33 | 21.16 | 67.27 |
| 2.25 | 2.125 | 17.28 | 16.37 | 83.64 |
| 2.5 | 2.375 | 12.20 | 11.56 | 95.21 |
| 2.75 | 2.625 | 3.80 | 3.60 | 98.81 |
| 3 | 2.875 | 0.60 | 0.57 | 99.37 |
| 3.25 | 3.125 | 0.37 | 0.35 | 99.73 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.90 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.93 |
| 4 | 3.875 | 0.02 | 0.02 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.250 |
| **5** | 0.685 |
| **16** | 1.120 |
| **25** | 1.290 |
| **50** | 1.670 |
| **75** | 1.995 |
| **84** | 2.135 |
| **95** | 2.370 |
| **99** | 2.710 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.749 | 0.298 |
| Standard Deviation | 0.525 | 0.695 |
| Skewness | -0.367 | |
| Kurtosis | 3.813 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.627 | 1.642 |
| Standard Deviation | 0.507 | 0.509 |
| Skewness (1) | -0.084 | -0.126 |
| Skewness (2) | -0.281 | |
| Kurtosis | 0.660 | 0.980 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **980+00** |
| **Sample** | **Swash** |
| **Mean** | **0.494 mm** |
| **STD** | **0.448 mm** |
| **Skewness** | **-1.160** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.71 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 3.19 |
| % gravel (>4 mm) | 2.54 |
| CaCO3 | 1.9 |

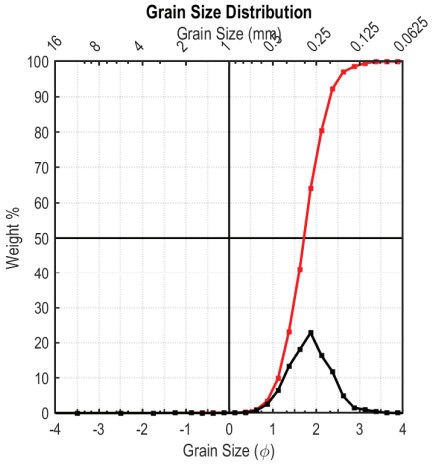
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.77 | 0.73 | 0.73 |
| -2 | -2.5 | 1.91 | 1.81 | 2.54 |
| -1.5 | -1.75 | 1.63 | 1.54 | 4.08 |
| -1 | -1.25 | 1.74 | 1.65 | 5.72 |
| -0.75 | -0.875 | 1.36 | 1.29 | 7.01 |
| -0.5 | -0.625 | 2.90 | 2.74 | 9.75 |
| -0.25 | -0.375 | 2.70 | 2.55 | 12.31 |
| 0 | -0.125 | 4.53 | 4.29 | 16.59 |
| 0.25 | 0.125 | 4.92 | 4.65 | 21.25 |
| 0.5 | 0.375 | 6.48 | 6.13 | 27.38 |
| 0.75 | 0.625 | 8.30 | 7.85 | 35.23 |
| 1 | 0.875 | 7.42 | 7.02 | 42.25 |
| 1.25 | 1.125 | 7.85 | 7.43 | 49.67 |
| 1.5 | 1.375 | 9.61 | 9.09 | 58.76 |
| 1.75 | 1.625 | 11.15 | 10.55 | 69.31 |
| 2 | 1.875 | 12.27 | 11.61 | 80.92 |
| 2.25 | 2.125 | 9.42 | 8.91 | 89.83 |
| 2.5 | 2.375 | 7.30 | 6.91 | 96.74 |
| 2.75 | 2.625 | 2.87 | 2.71 | 99.45 |
| 3 | 2.875 | 0.34 | 0.32 | 99.77 |
| 3.25 | 3.125 | 0.13 | 0.12 | 99.90 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.94 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.350 |
| **5** | -1.470 |
| **16** | -0.160 |
| **25** | 0.280 |
| **50** | 1.135 |
| **75** | 1.750 |
| **84** | 1.960 |
| **95** | 2.310 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.017 | 0.494 |
| Standard Deviation | 1.159 | 0.448 |
| Skewness | -1.160 | |
| Kurtosis | 4.685 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.900 | 0.978 |
| Standard Deviation | 1.060 | 1.103 |
| Skewness (1) | -0.222 | -0.300 |
| Skewness (2) | -0.675 | |
| Kurtosis | 0.783 | 1.054 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **990+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.278 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **0.030** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.52 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.4 |

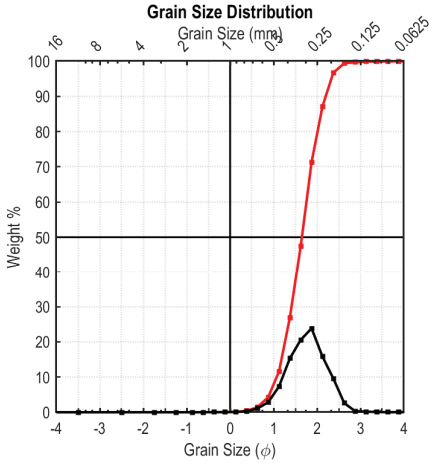
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.06 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.06 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.06 |
| 0 | -0.125 | 0.02 | 0.02 | 0.08 |
| 0.25 | 0.125 | 0.04 | 0.04 | 0.11 |
| 0.5 | 0.375 | 0.10 | 0.09 | 0.21 |
| 0.75 | 0.625 | 0.77 | 0.73 | 0.94 |
| 1 | 0.875 | 2.60 | 2.46 | 3.40 |
| 1.25 | 1.125 | 6.78 | 6.43 | 9.83 |
| 1.5 | 1.375 | 14.00 | 13.27 | 23.10 |
| 1.75 | 1.625 | 19.03 | 18.03 | 41.13 |
| 2 | 1.875 | 24.13 | 22.87 | 64.00 |
| 2.25 | 2.125 | 17.26 | 16.36 | 80.35 |
| 2.5 | 2.375 | 12.47 | 11.82 | 92.17 |
| 2.75 | 2.625 | 5.10 | 4.83 | 97.01 |
| 3 | 2.875 | 1.62 | 1.54 | 98.54 |
| 3.25 | 3.125 | 0.99 | 0.94 | 99.48 |
| 3.5 | 3.375 | 0.45 | 0.43 | 99.91 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.630 |
| **5** | 0.935 |
| **16** | 1.240 |
| **25** | 1.400 |
| **50** | 1.720 |
| **75** | 2.045 |
| **84** | 2.200 |
| **95** | 2.520 |
| **99** | 2.995 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.849 | 0.278 |
| Standard Deviation | 0.485 | 0.715 |
| Skewness | 0.030 | |
| Kurtosis | 4.095 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.720 | 1.720 |
| Standard Deviation | 0.480 | 0.480 |
| Skewness (1) | 0.000 | 0.005 |
| Skewness (2) | 0.016 | |
| Kurtosis | 0.651 | 1.007 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **990+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.295 mm** |
| **STD** | **0.737 mm** |
| **Skewness** | **-0.102** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.24 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

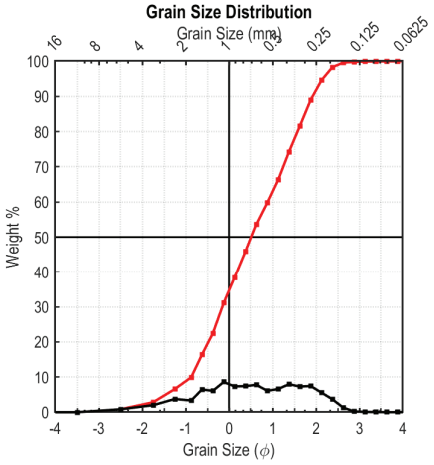
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.03 |
| 0 | -0.125 | 0.02 | 0.02 | 0.05 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.12 |
| 0.5 | 0.375 | 0.25 | 0.24 | 0.36 |
| 0.75 | 0.625 | 1.12 | 1.06 | 1.43 |
| 1 | 0.875 | 2.97 | 2.82 | 4.25 |
| 1.25 | 1.125 | 7.72 | 7.34 | 11.58 |
| 1.5 | 1.375 | 16.12 | 15.32 | 26.90 |
| 1.75 | 1.625 | 21.66 | 20.58 | 47.48 |
| 2 | 1.875 | 25.08 | 23.83 | 71.31 |
| 2.25 | 2.125 | 16.64 | 15.81 | 87.12 |
| 2.5 | 2.375 | 10.10 | 9.60 | 96.72 |
| 2.75 | 2.625 | 2.78 | 2.64 | 99.36 |
| 3 | 2.875 | 0.34 | 0.32 | 99.69 |
| 3.25 | 3.125 | 0.18 | 0.17 | 99.86 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.92 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.525 |
| **5** | 0.900 |
| **16** | 1.195 |
| **25** | 1.345 |
| **50** | 1.650 |
| **75** | 1.935 |
| **84** | 2.075 |
| **95** | 2.330 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.760 | 0.295 |
| Standard Deviation | 0.440 | 0.737 |
| Skewness | -0.102 | |
| Kurtosis | 3.749 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.635 | 1.640 |
| Standard Deviation | 0.440 | 0.437 |
| Skewness (1) | -0.034 | -0.042 |
| Skewness (2) | -0.080 | |
| Kurtosis | 0.625 | 0.993 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **990+00** |
| **Sample** | **Swash** |
| **Mean** | **0.647 mm** |
| **STD** | **0.467 mm** |
| **Skewness** | **-0.226** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.24 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 5.76 |
| % gravel (>4 mm) | 0.84 |
| CaCO3 | 4.0 |

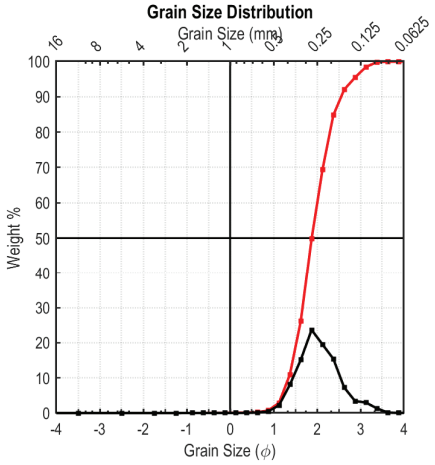
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.88 | 0.84 | 0.84 |
| -1.5 | -1.75 | 2.10 | 2.00 | 2.83 |
| -1 | -1.25 | 3.96 | 3.76 | 6.59 |
| -0.75 | -0.875 | 3.50 | 3.33 | 9.92 |
| -0.5 | -0.625 | 6.80 | 6.46 | 16.38 |
| -0.25 | -0.375 | 6.40 | 6.08 | 22.46 |
| 0 | -0.125 | 9.04 | 8.59 | 31.05 |
| 0.25 | 0.125 | 7.72 | 7.34 | 38.39 |
| 0.5 | 0.375 | 7.81 | 7.42 | 45.81 |
| 0.75 | 0.625 | 8.20 | 7.79 | 53.60 |
| 1 | 0.875 | 6.42 | 6.10 | 59.70 |
| 1.25 | 1.125 | 6.92 | 6.58 | 66.28 |
| 1.5 | 1.375 | 8.39 | 7.97 | 74.25 |
| 1.75 | 1.625 | 7.68 | 7.30 | 81.55 |
| 2 | 1.875 | 7.84 | 7.45 | 89.00 |
| 2.25 | 2.125 | 5.86 | 5.57 | 94.56 |
| 2.5 | 2.375 | 3.89 | 3.70 | 98.26 |
| 2.75 | 2.625 | 1.38 | 1.31 | 99.57 |
| 3 | 2.875 | 0.23 | 0.22 | 99.79 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.89 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.92 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.94 |
| 4 | 3.875 | 0.01 | 0.01 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.440 |
| **5** | -1.460 |
| **16** | -0.640 |
| **25** | -0.300 |
| **50** | 0.510 |
| **75** | 1.400 |
| **84** | 1.705 |
| **95** | 2.155 |
| **99** | 2.515 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.629 | 0.647 |
| Standard Deviation | 1.099 | 0.467 |
| Skewness | -0.226 | |
| Kurtosis | 2.510 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.532 | 0.525 |
| Standard Deviation | 1.173 | 1.134 |
| Skewness (1) | 0.019 | -0.035 |
| Skewness (2) | -0.139 | |
| Kurtosis | 0.542 | 0.872 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1000+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.242 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **0.376** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.38 |
| % finer than 0.0625 mm (dry) | 0.06 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

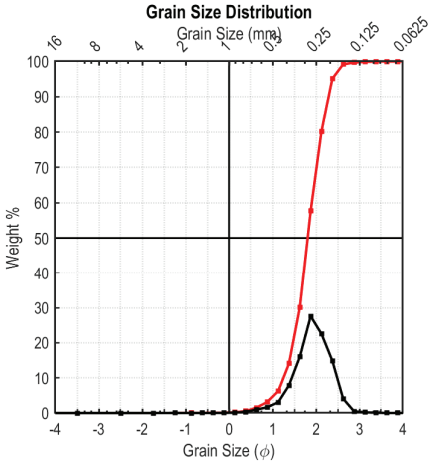
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.04 |
| 0 | -0.125 | 0.02 | 0.02 | 0.06 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.08 |
| 0.5 | 0.375 | 0.04 | 0.04 | 0.11 |
| 0.75 | 0.625 | 0.13 | 0.12 | 0.24 |
| 1 | 0.875 | 0.48 | 0.46 | 0.69 |
| 1.25 | 1.125 | 2.33 | 2.21 | 2.90 |
| 1.5 | 1.375 | 8.50 | 8.07 | 10.97 |
| 1.75 | 1.625 | 15.95 | 15.14 | 26.11 |
| 2 | 1.875 | 24.94 | 23.67 | 49.77 |
| 2.25 | 2.125 | 20.60 | 19.55 | 69.32 |
| 2.5 | 2.375 | 16.26 | 15.43 | 84.75 |
| 2.75 | 2.625 | 7.66 | 7.27 | 92.02 |
| 3 | 2.875 | 3.61 | 3.43 | 95.45 |
| 3.25 | 3.125 | 3.14 | 2.98 | 98.42 |
| 3.5 | 3.375 | 1.43 | 1.36 | 99.78 |
| 3.75 | 3.625 | 0.15 | 0.14 | 99.92 |
| 4 | 3.875 | 0.02 | 0.02 | 99.94 |
| >4.0 | 4.25 | 0.06 | 0.06 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.910 |
| **5** | 1.190 |
| **16** | 1.460 |
| **25** | 1.605 |
| **50** | 1.880 |
| **75** | 2.215 |
| **84** | 2.365 |
| **95** | 2.845 |
| **99** | 3.230 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.049 | 0.242 |
| Standard Deviation | 0.484 | 0.715 |
| Skewness | 0.376 | |
| Kurtosis | 3.858 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.913 | 1.902 |
| Standard Deviation | 0.453 | 0.477 |
| Skewness (1) | 0.072 | 0.119 |
| Skewness (2) | 0.304 | |
| Kurtosis | 0.829 | 1.112 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1000+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.267 mm** |
| **STD** | **0.745 mm** |
| **Skewness** | **-0.694** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

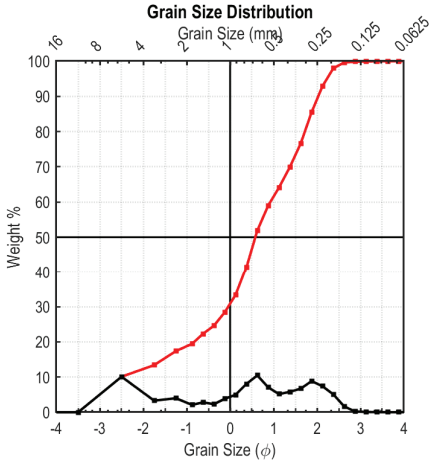
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.02 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.03 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.05 |
| 0 | -0.125 | 0.04 | 0.04 | 0.09 |
| 0.25 | 0.125 | 0.11 | 0.10 | 0.20 |
| 0.5 | 0.375 | 0.34 | 0.32 | 0.52 |
| 0.75 | 0.625 | 1.03 | 0.98 | 1.50 |
| 1 | 0.875 | 1.71 | 1.63 | 3.13 |
| 1.25 | 1.125 | 3.22 | 3.06 | 6.19 |
| 1.5 | 1.375 | 8.28 | 7.88 | 14.07 |
| 1.75 | 1.625 | 16.82 | 16.00 | 30.07 |
| 2 | 1.875 | 29.01 | 27.60 | 57.67 |
| 2.25 | 2.125 | 23.71 | 22.56 | 80.22 |
| 2.5 | 2.375 | 15.63 | 14.87 | 95.09 |
| 2.75 | 2.625 | 4.29 | 4.08 | 99.17 |
| 3 | 2.875 | 0.52 | 0.49 | 99.67 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.88 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.500 |
| **5** | 1.030 |
| **16** | 1.405 |
| **25** | 1.545 |
| **50** | 1.805 |
| **75** | 2.065 |
| **84** | 2.190 |
| **95** | 2.375 |
| **99** | 2.615 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.906 | 0.267 |
| Standard Deviation | 0.424 | 0.745 |
| Skewness | -0.694 | |
| Kurtosis | 5.298 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.797 | 1.800 |
| Standard Deviation | 0.393 | 0.400 |
| Skewness (1) | -0.019 | -0.086 |
| Skewness (2) | -0.261 | |
| Kurtosis | 0.713 | 1.060 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1000+00** |
| **Sample** | **Swash** |
| **Mean** | **0.707 mm** |
| **STD** | **0.365 mm** |
| **Skewness** | **-0.707** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.28 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 7.28 |
| % gravel (>4 mm) | 10.10 |
| CaCO3 | 3.0 |

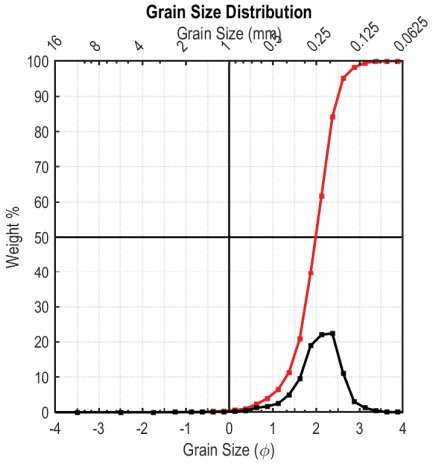
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 10.63 | 10.10 | 10.10 |
| -1.5 | -1.75 | 3.47 | 3.30 | 13.39 |
| -1 | -1.25 | 4.19 | 3.98 | 17.37 |
| -0.75 | -0.875 | 2.20 | 2.09 | 19.46 |
| -0.5 | -0.625 | 2.98 | 2.83 | 22.29 |
| -0.25 | -0.375 | 2.41 | 2.29 | 24.58 |
| 0 | -0.125 | 4.02 | 3.82 | 28.40 |
| 0.25 | 0.125 | 5.23 | 4.97 | 33.37 |
| 0.5 | 0.375 | 8.48 | 8.05 | 41.42 |
| 0.75 | 0.625 | 11.02 | 10.47 | 51.89 |
| 1 | 0.875 | 7.46 | 7.09 | 58.98 |
| 1.25 | 1.125 | 5.42 | 5.15 | 64.12 |
| 1.5 | 1.375 | 6.12 | 5.81 | 69.94 |
| 1.75 | 1.625 | 7.06 | 6.71 | 76.64 |
| 2 | 1.875 | 9.32 | 8.85 | 85.50 |
| 2.25 | 2.125 | 7.77 | 7.38 | 92.88 |
| 2.5 | 2.375 | 5.36 | 5.09 | 97.97 |
| 2.75 | 2.625 | 1.74 | 1.65 | 99.62 |
| 3 | 2.875 | 0.23 | 0.22 | 99.84 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.92 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.400 |
| **5** | -3.005 |
| **16** | -1.420 |
| **25** | -0.350 |
| **50** | 0.580 |
| **75** | 1.565 |
| **84** | 1.835 |
| **95** | 2.230 |
| **99** | 2.530 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.500 | 0.707 |
| Standard Deviation | 1.455 | 0.365 |
| Skewness | -0.707 | |
| Kurtosis | 2.608 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.208 | 0.332 |
| Standard Deviation | 1.627 | 1.607 |
| Skewness (1) | -0.229 | -0.299 |
| Skewness (2) | -0.594 | |
| Kurtosis | 0.608 | 1.120 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1010+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.240 mm** |
| **STD** | **0.701 mm** |
| **Skewness** | **-0.963** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.00 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

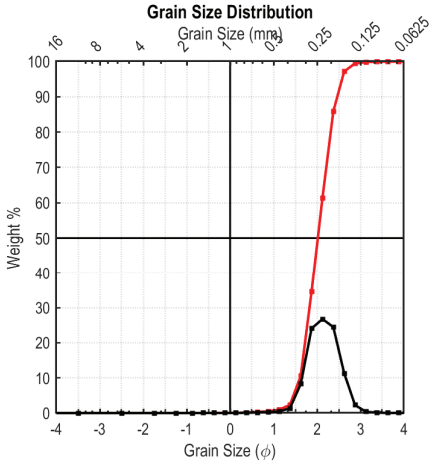
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.06 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.10 |
| -0.25 | -0.375 | 0.12 | 0.11 | 0.21 |
| 0 | -0.125 | 0.12 | 0.11 | 0.32 |
| 0.25 | 0.125 | 0.21 | 0.20 | 0.52 |
| 0.5 | 0.375 | 0.53 | 0.50 | 1.03 |
| 0.75 | 0.625 | 1.27 | 1.21 | 2.24 |
| 1 | 0.875 | 1.77 | 1.69 | 3.92 |
| 1.25 | 1.125 | 2.58 | 2.46 | 6.38 |
| 1.5 | 1.375 | 5.17 | 4.92 | 11.30 |
| 1.75 | 1.625 | 9.98 | 9.50 | 20.81 |
| 2 | 1.875 | 19.85 | 18.90 | 39.71 |
| 2.25 | 2.125 | 23.10 | 22.00 | 61.71 |
| 2.5 | 2.375 | 23.54 | 22.42 | 84.13 |
| 2.75 | 2.625 | 11.60 | 11.05 | 95.18 |
| 3 | 2.875 | 3.20 | 3.05 | 98.23 |
| 3.25 | 3.125 | 1.31 | 1.25 | 99.48 |
| 3.5 | 3.375 | 0.47 | 0.45 | 99.92 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.360 |
| **5** | 0.985 |
| **16** | 1.500 |
| **25** | 1.680 |
| **50** | 1.990 |
| **75** | 2.275 |
| **84** | 2.375 |
| **95** | 2.620 |
| **99** | 3.030 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.062 | 0.240 |
| Standard Deviation | 0.513 | 0.701 |
| Skewness | -0.963 | |
| Kurtosis | 5.677 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.938 | 1.955 |
| Standard Deviation | 0.438 | 0.466 |
| Skewness (1) | -0.120 | -0.175 |
| Skewness (2) | -0.429 | |
| Kurtosis | 0.869 | 1.126 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1010+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.226 mm** |
| **STD** | **0.783 mm** |
| **Skewness** | **-0.251** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.99 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

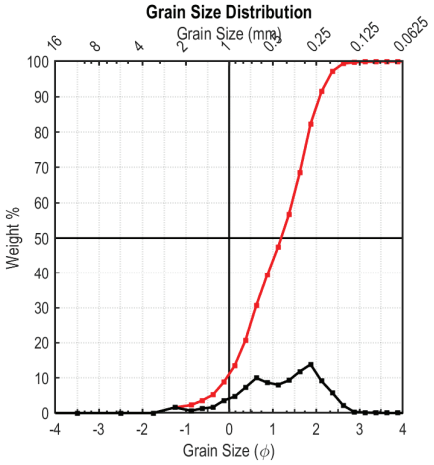
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.02 |
| 0 | -0.125 | 0.01 | 0.01 | 0.03 |
| 0.25 | 0.125 | 0.03 | 0.03 | 0.06 |
| 0.5 | 0.375 | 0.06 | 0.06 | 0.11 |
| 0.75 | 0.625 | 0.18 | 0.17 | 0.29 |
| 1 | 0.875 | 0.23 | 0.22 | 0.50 |
| 1.25 | 1.125 | 0.48 | 0.46 | 0.96 |
| 1.5 | 1.375 | 1.41 | 1.34 | 2.30 |
| 1.75 | 1.625 | 8.67 | 8.26 | 10.56 |
| 2 | 1.875 | 25.27 | 24.07 | 34.63 |
| 2.25 | 2.125 | 28.08 | 26.75 | 61.38 |
| 2.5 | 2.375 | 25.69 | 24.47 | 85.85 |
| 2.75 | 2.625 | 11.88 | 11.32 | 97.16 |
| 3 | 2.875 | 2.38 | 2.27 | 99.43 |
| 3.25 | 3.125 | 0.38 | 0.36 | 99.79 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.90 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.93 |
| 4 | 3.875 | 0.02 | 0.02 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.130 |
| **5** | 1.455 |
| **16** | 1.680 |
| **25** | 1.775 |
| **50** | 2.020 |
| **75** | 2.265 |
| **84** | 2.355 |
| **95** | 2.575 |
| **99** | 2.830 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.143 | 0.226 |
| Standard Deviation | 0.353 | 0.783 |
| Skewness | -0.251 | |
| Kurtosis | 5.515 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.018 | 2.018 |
| Standard Deviation | 0.337 | 0.338 |
| Skewness (1) | -0.007 | -0.008 |
| Skewness (2) | -0.015 | |
| Kurtosis | 0.659 | 0.937 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1010+00** |
| **Sample** | **Swash** |
| **Mean** | **0.434 mm** |
| **STD** | **0.553 mm** |
| **Skewness** | **-0.514** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.35 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 1.59 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

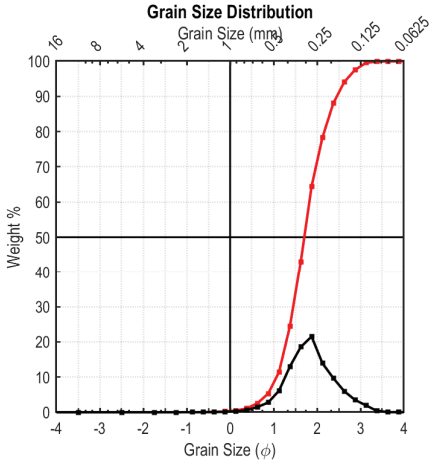
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.68 | 1.59 | 1.59 |
| -0.75 | -0.875 | 0.70 | 0.66 | 2.26 |
| -0.5 | -0.625 | 1.36 | 1.29 | 3.55 |
| -0.25 | -0.375 | 1.73 | 1.64 | 5.19 |
| 0 | -0.125 | 3.76 | 3.57 | 8.76 |
| 0.25 | 0.125 | 4.92 | 4.67 | 13.43 |
| 0.5 | 0.375 | 7.66 | 7.27 | 20.70 |
| 0.75 | 0.625 | 10.49 | 9.96 | 30.66 |
| 1 | 0.875 | 9.14 | 8.68 | 39.34 |
| 1.25 | 1.125 | 8.48 | 8.05 | 47.38 |
| 1.5 | 1.375 | 9.78 | 9.28 | 56.67 |
| 1.75 | 1.625 | 12.44 | 11.81 | 68.48 |
| 2 | 1.875 | 14.59 | 13.85 | 82.33 |
| 2.25 | 2.125 | 9.60 | 9.11 | 91.44 |
| 2.5 | 2.375 | 6.09 | 5.78 | 97.22 |
| 2.75 | 2.625 | 2.29 | 2.17 | 99.39 |
| 3 | 2.875 | 0.36 | 0.34 | 99.73 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.88 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.435 |
| **5** | -0.405 |
| **16** | 0.215 |
| **25** | 0.485 |
| **50** | 1.195 |
| **75** | 1.745 |
| **84** | 1.920 |
| **95** | 2.280 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.203 | 0.434 |
| Standard Deviation | 0.854 | 0.553 |
| Skewness | -0.514 | |
| Kurtosis | 2.950 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.067 | 1.110 |
| Standard Deviation | 0.853 | 0.833 |
| Skewness (1) | -0.150 | -0.171 |
| Skewness (2) | -0.302 | |
| Kurtosis | 0.575 | 0.873 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1020+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.277 mm** |
| **STD** | **0.682 mm** |
| **Skewness** | **0.011** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.36 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

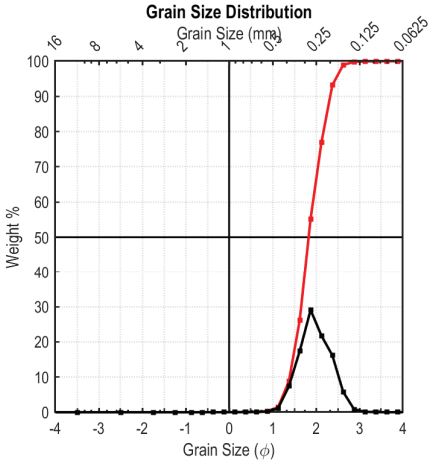
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.03 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.09 |
| 0 | -0.125 | 0.13 | 0.12 | 0.21 |
| 0.25 | 0.125 | 0.28 | 0.27 | 0.47 |
| 0.5 | 0.375 | 0.61 | 0.58 | 1.05 |
| 0.75 | 0.625 | 1.55 | 1.47 | 2.52 |
| 1 | 0.875 | 2.91 | 2.76 | 5.29 |
| 1.25 | 1.125 | 6.45 | 6.12 | 11.41 |
| 1.5 | 1.375 | 13.68 | 12.98 | 24.39 |
| 1.75 | 1.625 | 19.54 | 18.55 | 42.94 |
| 2 | 1.875 | 22.66 | 21.51 | 64.45 |
| 2.25 | 2.125 | 14.65 | 13.90 | 78.35 |
| 2.5 | 2.375 | 10.21 | 9.69 | 88.04 |
| 2.75 | 2.625 | 6.32 | 6.00 | 94.04 |
| 3 | 2.875 | 3.68 | 3.49 | 97.53 |
| 3.25 | 3.125 | 2.06 | 1.96 | 99.49 |
| 3.5 | 3.375 | 0.44 | 0.42 | 99.91 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.350 |
| **5** | 0.850 |
| **16** | 1.215 |
| **25** | 1.385 |
| **50** | 1.705 |
| **75** | 2.065 |
| **84** | 2.270 |
| **95** | 2.695 |
| **99** | 3.065 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.850 | 0.277 |
| Standard Deviation | 0.552 | 0.682 |
| Skewness | 0.011 | |
| Kurtosis | 3.654 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.742 | 1.730 |
| Standard Deviation | 0.528 | 0.543 |
| Skewness (1) | 0.071 | 0.072 |
| Skewness (2) | 0.128 | |
| Kurtosis | 0.749 | 1.112 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1020+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.255 mm** |
| **STD** | **0.778 mm** |
| **Skewness** | **0.031** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.02 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

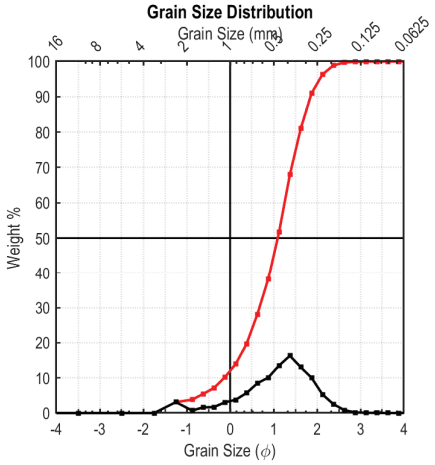
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.01 | 0.01 | 0.02 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.04 |
| 0.5 | 0.375 | 0.03 | 0.03 | 0.07 |
| 0.75 | 0.625 | 0.07 | 0.07 | 0.13 |
| 1 | 0.875 | 0.20 | 0.19 | 0.32 |
| 1.25 | 1.125 | 1.13 | 1.08 | 1.40 |
| 1.5 | 1.375 | 7.75 | 7.38 | 8.78 |
| 1.75 | 1.625 | 18.26 | 17.39 | 26.17 |
| 2 | 1.875 | 30.52 | 29.06 | 55.23 |
| 2.25 | 2.125 | 22.84 | 21.75 | 76.98 |
| 2.5 | 2.375 | 16.99 | 16.18 | 93.15 |
| 2.75 | 2.625 | 6.07 | 5.78 | 98.93 |
| 3 | 2.875 | 0.90 | 0.86 | 99.79 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.92 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.030 |
| **5** | 1.245 |
| **16** | 1.480 |
| **25** | 1.610 |
| **50** | 1.830 |
| **75** | 2.100 |
| **84** | 2.235 |
| **95** | 2.455 |
| **99** | 2.645 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.973 | 0.255 |
| Standard Deviation | 0.361 | 0.778 |
| Skewness | 0.031 | |
| Kurtosis | 3.676 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.857 | 1.848 |
| Standard Deviation | 0.377 | 0.372 |
| Skewness (1) | 0.073 | 0.053 |
| Skewness (2) | 0.053 | |
| Kurtosis | 0.603 | 1.012 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1020+00** |
| **Sample** | **Swash** |
| **Mean** | **0.472 mm** |
| **STD** | **0.570 mm** |
| **Skewness** | **-0.841** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.30 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 3.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.8 |

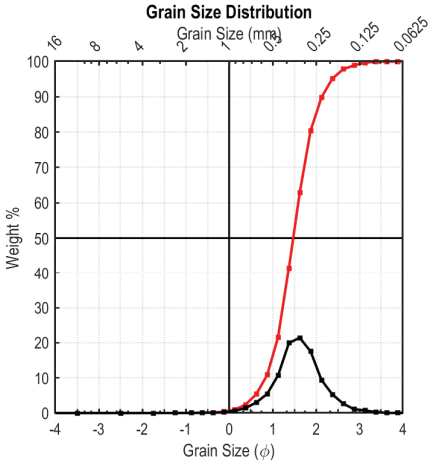
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.28 | 3.11 | 3.11 |
| -0.75 | -0.875 | 0.73 | 0.69 | 3.81 |
| -0.5 | -0.625 | 1.70 | 1.61 | 5.42 |
| -0.25 | -0.375 | 1.78 | 1.69 | 7.11 |
| 0 | -0.125 | 3.19 | 3.03 | 10.14 |
| 0.25 | 0.125 | 3.97 | 3.77 | 13.91 |
| 0.5 | 0.375 | 5.98 | 5.68 | 19.59 |
| 0.75 | 0.625 | 8.90 | 8.45 | 28.04 |
| 1 | 0.875 | 10.62 | 10.09 | 38.13 |
| 1.25 | 1.125 | 14.22 | 13.50 | 51.63 |
| 1.5 | 1.375 | 17.17 | 16.31 | 67.94 |
| 1.75 | 1.625 | 13.74 | 13.05 | 80.99 |
| 2 | 1.875 | 10.55 | 10.02 | 91.01 |
| 2.25 | 2.125 | 5.58 | 5.30 | 96.31 |
| 2.5 | 2.375 | 2.68 | 2.55 | 98.85 |
| 2.75 | 2.625 | 0.89 | 0.85 | 99.70 |
| 3 | 2.875 | 0.18 | 0.17 | 99.87 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.94 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.590 |
| **5** | -0.690 |
| **16** | 0.215 |
| **25** | 0.535 |
| **50** | 1.095 |
| **75** | 1.510 |
| **84** | 1.700 |
| **95** | 2.065 |
| **99** | 2.420 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.083 | 0.472 |
| Standard Deviation | 0.810 | 0.570 |
| Skewness | -0.841 | |
| Kurtosis | 3.820 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.957 | 1.003 |
| Standard Deviation | 0.742 | 0.789 |
| Skewness (1) | -0.185 | -0.241 |
| Skewness (2) | -0.549 | |
| Kurtosis | 0.855 | 1.158 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1030+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.328 mm** |
| **STD** | **0.689 mm** |
| **Skewness** | **0.041** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.81 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

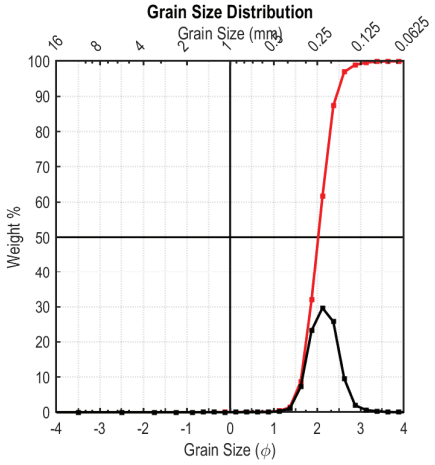
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.03 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.09 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.17 |
| 0 | -0.125 | 0.20 | 0.19 | 0.36 |
| 0.25 | 0.125 | 0.63 | 0.60 | 0.95 |
| 0.5 | 0.375 | 1.49 | 1.41 | 2.36 |
| 0.75 | 0.625 | 3.18 | 3.01 | 5.37 |
| 1 | 0.875 | 5.77 | 5.45 | 10.82 |
| 1.25 | 1.125 | 11.33 | 10.71 | 21.53 |
| 1.5 | 1.375 | 21.07 | 19.91 | 41.44 |
| 1.75 | 1.625 | 22.66 | 21.42 | 62.86 |
| 2 | 1.875 | 18.55 | 17.53 | 80.39 |
| 2.25 | 2.125 | 9.97 | 9.42 | 89.81 |
| 2.5 | 2.375 | 5.61 | 5.30 | 95.11 |
| 2.75 | 2.625 | 2.83 | 2.67 | 97.79 |
| 3 | 2.875 | 1.15 | 1.09 | 98.88 |
| 3.25 | 3.125 | 0.81 | 0.77 | 99.64 |
| 3.5 | 3.375 | 0.27 | 0.26 | 99.90 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.135 |
| **5** | 0.595 |
| **16** | 0.995 |
| **25** | 1.170 |
| **50** | 1.475 |
| **75** | 1.800 |
| **84** | 1.970 |
| **95** | 2.370 |
| **99** | 2.915 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.606 | 0.328 |
| Standard Deviation | 0.537 | 0.689 |
| Skewness | 0.041 | |
| Kurtosis | 4.250 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.482 | 1.480 |
| Standard Deviation | 0.487 | 0.513 |
| Skewness (1) | 0.015 | 0.012 |
| Skewness (2) | 0.015 | |
| Kurtosis | 0.821 | 1.155 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1030+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.224 mm** |
| **STD** | **0.794 mm** |
| **Skewness** | **0.153** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Very Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.13 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

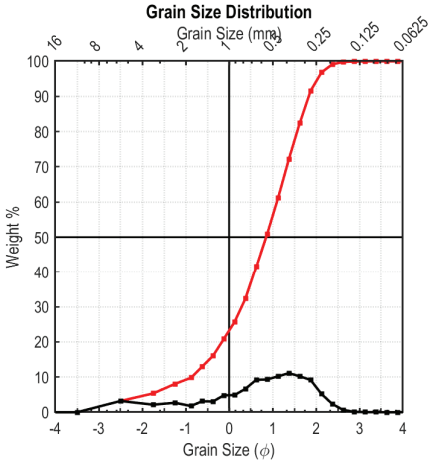
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.02 |
| 0 | -0.125 | 0.00 | 0.00 | 0.02 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.04 |
| 0.5 | 0.375 | 0.02 | 0.02 | 0.06 |
| 0.75 | 0.625 | 0.03 | 0.03 | 0.09 |
| 1 | 0.875 | 0.06 | 0.06 | 0.14 |
| 1.25 | 1.125 | 0.23 | 0.22 | 0.36 |
| 1.5 | 1.375 | 1.12 | 1.07 | 1.43 |
| 1.75 | 1.625 | 7.64 | 7.27 | 8.69 |
| 2 | 1.875 | 24.44 | 23.25 | 31.94 |
| 2.25 | 2.125 | 31.17 | 29.65 | 61.59 |
| 2.5 | 2.375 | 27.06 | 25.74 | 87.33 |
| 2.75 | 2.625 | 10.09 | 9.60 | 96.93 |
| 3 | 2.875 | 2.11 | 2.01 | 98.93 |
| 3.25 | 3.125 | 0.69 | 0.66 | 99.59 |
| 3.5 | 3.375 | 0.30 | 0.29 | 99.88 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.94 |
| 4 | 3.875 | 0.01 | 0.01 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.275 |
| **5** | 1.500 |
| **16** | 1.705 |
| **25** | 1.800 |
| **50** | 2.025 |
| **75** | 2.255 |
| **84** | 2.345 |
| **95** | 2.575 |
| **99** | 2.900 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.158 | 0.224 |
| Standard Deviation | 0.332 | 0.794 |
| Skewness | 0.153 | |
| Kurtosis | 5.523 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.025 | 2.025 |
| Standard Deviation | 0.320 | 0.323 |
| Skewness (1) | 0.000 | 0.012 |
| Skewness (2) | 0.039 | |
| Kurtosis | 0.680 | 0.968 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1030+00** |
| **Sample** | **Swash** |
| **Mean** | **0.589 mm** |
| **STD** | **0.462 mm** |
| **Skewness** | **-1.007** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.58 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 4.84 |
| % gravel (>4 mm) | 3.20 |
| CaCO3 | 4.1 |

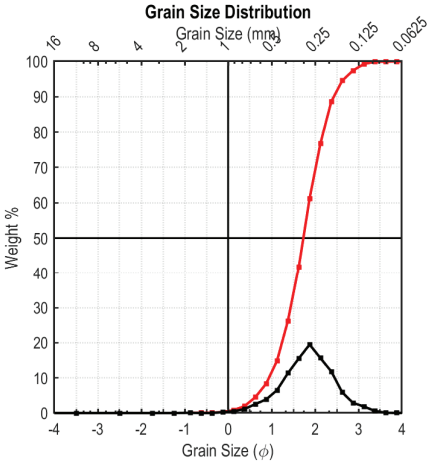
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 3.38 | 3.20 | 3.20 |
| -1.5 | -1.75 | 2.27 | 2.15 | 5.35 |
| -1 | -1.25 | 2.84 | 2.69 | 8.04 |
| -0.75 | -0.875 | 1.87 | 1.77 | 9.81 |
| -0.5 | -0.625 | 3.30 | 3.13 | 12.94 |
| -0.25 | -0.375 | 3.21 | 3.04 | 15.98 |
| 0 | -0.125 | 5.07 | 4.80 | 20.78 |
| 0.25 | 0.125 | 5.16 | 4.89 | 25.67 |
| 0.5 | 0.375 | 7.04 | 6.67 | 32.34 |
| 0.75 | 0.625 | 9.74 | 9.23 | 41.56 |
| 1 | 0.875 | 9.83 | 9.31 | 50.87 |
| 1.25 | 1.125 | 10.78 | 10.21 | 61.08 |
| 1.5 | 1.375 | 11.73 | 11.11 | 72.19 |
| 1.75 | 1.625 | 10.78 | 10.21 | 82.40 |
| 2 | 1.875 | 9.68 | 9.17 | 91.57 |
| 2.25 | 2.125 | 5.50 | 5.21 | 96.78 |
| 2.5 | 2.375 | 2.45 | 2.32 | 99.10 |
| 2.75 | 2.625 | 0.71 | 0.67 | 99.77 |
| 3 | 2.875 | 0.12 | 0.11 | 99.89 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.93 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.95 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.95 |
| 4 | 3.875 | 0.00 | 0.00 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.190 |
| **5** | -1.875 |
| **16** | -0.375 |
| **25** | 0.090 |
| **50** | 0.850 |
| **75** | 1.445 |
| **84** | 1.670 |
| **95** | 2.040 |
| **99** | 2.365 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.763 | 0.589 |
| Standard Deviation | 1.115 | 0.462 |
| Skewness | -1.007 | |
| Kurtosis | 3.891 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.647 | 0.715 |
| Standard Deviation | 1.022 | 1.104 |
| Skewness (1) | -0.198 | -0.295 |
| Skewness (2) | -0.751 | |
| Kurtosis | 0.914 | 1.184 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1040+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.281 mm** |
| **STD** | **0.661 mm** |
| **Skewness** | **-0.235** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.54 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

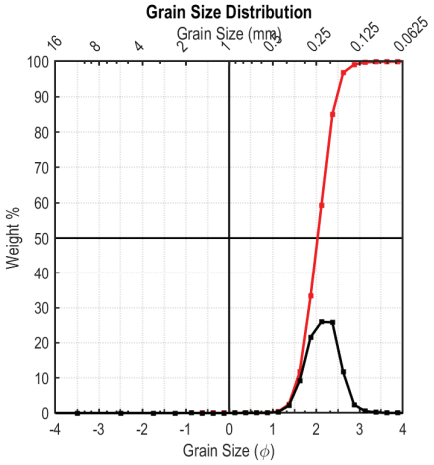
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.07 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.07 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.07 |
| 0 | -0.125 | 0.26 | 0.25 | 0.31 |
| 0.25 | 0.125 | 0.53 | 0.50 | 0.81 |
| 0.5 | 0.375 | 1.20 | 1.14 | 1.95 |
| 0.75 | 0.625 | 2.68 | 2.54 | 4.49 |
| 1 | 0.875 | 4.08 | 3.87 | 8.36 |
| 1.25 | 1.125 | 6.87 | 6.51 | 14.87 |
| 1.5 | 1.375 | 11.96 | 11.33 | 26.20 |
| 1.75 | 1.625 | 16.37 | 15.51 | 41.71 |
| 2 | 1.875 | 20.58 | 19.50 | 61.21 |
| 2.25 | 2.125 | 16.49 | 15.62 | 76.83 |
| 2.5 | 2.375 | 12.47 | 11.82 | 88.65 |
| 2.75 | 2.625 | 6.22 | 5.89 | 94.54 |
| 3 | 2.875 | 3.04 | 2.88 | 97.42 |
| 3.25 | 3.125 | 1.95 | 1.85 | 99.27 |
| 3.5 | 3.375 | 0.64 | 0.61 | 99.88 |
| 3.75 | 3.625 | 0.08 | 0.08 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.165 |
| **5** | 0.660 |
| **16** | 1.150 |
| **25** | 1.350 |
| **50** | 1.730 |
| **75** | 2.095 |
| **84** | 2.275 |
| **95** | 2.665 |
| **99** | 3.090 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.833 | 0.281 |
| Standard Deviation | 0.596 | 0.661 |
| Skewness | -0.235 | |
| Kurtosis | 3.555 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.712 | 1.718 |
| Standard Deviation | 0.562 | 0.585 |
| Skewness (1) | -0.031 | -0.049 |
| Skewness (2) | -0.120 | |
| Kurtosis | 0.782 | 1.103 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1040+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.224 mm** |
| **STD** | **0.783 mm** |
| **Skewness** | **0.018** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.91 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

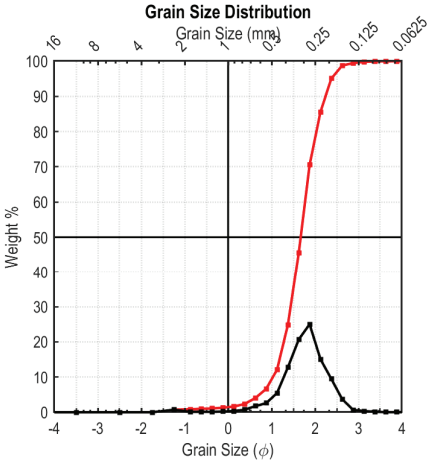
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.01 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.01 |
| 0 | -0.125 | 0.00 | 0.00 | 0.01 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.03 |
| 0.5 | 0.375 | 0.01 | 0.01 | 0.04 |
| 0.75 | 0.625 | 0.02 | 0.02 | 0.06 |
| 1 | 0.875 | 0.05 | 0.05 | 0.10 |
| 1.25 | 1.125 | 0.29 | 0.28 | 0.38 |
| 1.5 | 1.375 | 2.21 | 2.11 | 2.49 |
| 1.75 | 1.625 | 9.65 | 9.20 | 11.69 |
| 2 | 1.875 | 22.67 | 21.61 | 33.30 |
| 2.25 | 2.125 | 27.21 | 25.94 | 59.23 |
| 2.5 | 2.375 | 27.09 | 25.82 | 85.05 |
| 2.75 | 2.625 | 12.27 | 11.70 | 96.75 |
| 3 | 2.875 | 2.50 | 2.38 | 99.13 |
| 3.25 | 3.125 | 0.60 | 0.57 | 99.70 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.89 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.92 |
| 4 | 3.875 | 0.04 | 0.04 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.200 |
| **5** | 1.445 |
| **16** | 1.675 |
| **25** | 1.780 |
| **50** | 2.035 |
| **75** | 2.280 |
| **84** | 2.365 |
| **95** | 2.590 |
| **99** | 2.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.156 | 0.224 |
| Standard Deviation | 0.353 | 0.783 |
| Skewness | 0.018 | |
| Kurtosis | 4.418 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.020 | 2.025 |
| Standard Deviation | 0.345 | 0.346 |
| Skewness (1) | -0.043 | -0.037 |
| Skewness (2) | -0.051 | |
| Kurtosis | 0.659 | 0.939 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1040+00** |
| **Sample** | **Swash** |
| **Mean** | **0.298 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **-1.495** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.46 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.72 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

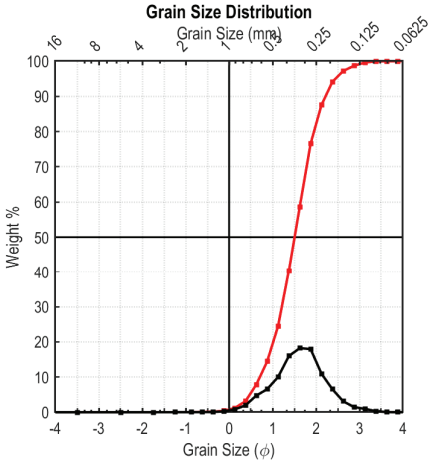
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.76 | 0.72 | 0.72 |
| -0.75 | -0.875 | 0.12 | 0.11 | 0.83 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.97 |
| -0.25 | -0.375 | 0.12 | 0.11 | 1.08 |
| 0 | -0.125 | 0.21 | 0.20 | 1.28 |
| 0.25 | 0.125 | 0.36 | 0.34 | 1.62 |
| 0.5 | 0.375 | 0.74 | 0.70 | 2.32 |
| 0.75 | 0.625 | 1.81 | 1.72 | 4.04 |
| 1 | 0.875 | 2.73 | 2.59 | 6.63 |
| 1.25 | 1.125 | 5.74 | 5.44 | 12.07 |
| 1.5 | 1.375 | 13.44 | 12.74 | 24.82 |
| 1.75 | 1.625 | 21.80 | 20.67 | 45.49 |
| 2 | 1.875 | 26.38 | 25.01 | 70.50 |
| 2.25 | 2.125 | 15.90 | 15.08 | 85.58 |
| 2.5 | 2.375 | 9.98 | 9.46 | 95.04 |
| 2.75 | 2.625 | 3.92 | 3.72 | 98.76 |
| 3 | 2.875 | 0.72 | 0.68 | 99.44 |
| 3.25 | 3.125 | 0.36 | 0.34 | 99.78 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.555 |
| **5** | 0.720 |
| **16** | 1.200 |
| **25** | 1.375 |
| **50** | 1.670 |
| **75** | 1.950 |
| **84** | 2.100 |
| **95** | 2.375 |
| **99** | 2.715 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.747 | 0.298 |
| Standard Deviation | 0.558 | 0.679 |
| Skewness | -1.495 | |
| Kurtosis | 9.457 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.650 | 1.657 |
| Standard Deviation | 0.450 | 0.476 |
| Skewness (1) | -0.044 | -0.096 |
| Skewness (2) | -0.272 | |
| Kurtosis | 0.839 | 1.180 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1050+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.327 mm** |
| **STD** | **0.665 mm** |
| **Skewness** | **-0.068** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.58 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

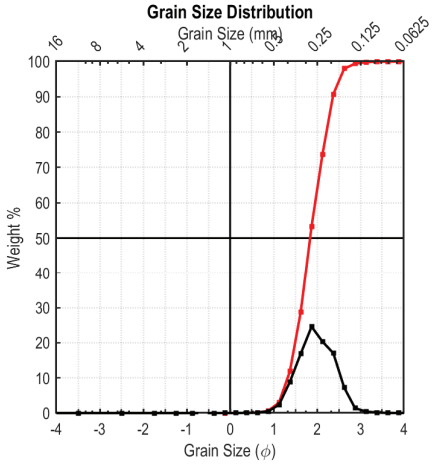
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.04 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.08 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.15 |
| 0 | -0.125 | 0.25 | 0.24 | 0.39 |
| 0.25 | 0.125 | 0.84 | 0.80 | 1.18 |
| 0.5 | 0.375 | 2.04 | 1.93 | 3.12 |
| 0.75 | 0.625 | 5.01 | 4.75 | 7.86 |
| 1 | 0.875 | 6.92 | 6.55 | 14.42 |
| 1.25 | 1.125 | 10.55 | 9.99 | 24.41 |
| 1.5 | 1.375 | 16.87 | 15.98 | 40.39 |
| 1.75 | 1.625 | 19.23 | 18.21 | 58.60 |
| 2 | 1.875 | 18.96 | 17.96 | 76.56 |
| 2.25 | 2.125 | 11.59 | 10.98 | 87.54 |
| 2.5 | 2.375 | 6.92 | 6.55 | 94.09 |
| 2.75 | 2.625 | 3.29 | 3.12 | 97.21 |
| 3 | 2.875 | 1.54 | 1.46 | 98.66 |
| 3.25 | 3.125 | 1.01 | 0.96 | 99.62 |
| 3.5 | 3.375 | 0.33 | 0.31 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.065 |
| **5** | 0.475 |
| **16** | 0.915 |
| **25** | 1.135 |
| **50** | 1.505 |
| **75** | 1.855 |
| **84** | 2.045 |
| **95** | 2.450 |
| **99** | 2.965 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.614 | 0.327 |
| Standard Deviation | 0.588 | 0.665 |
| Skewness | -0.068 | |
| Kurtosis | 3.476 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.480 | 1.488 |
| Standard Deviation | 0.565 | 0.582 |
| Skewness (1) | -0.044 | -0.044 |
| Skewness (2) | -0.075 | |
| Kurtosis | 0.748 | 1.124 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1050+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.254 mm** |
| **STD** | **0.754 mm** |
| **Skewness** | **0.128** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.45 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

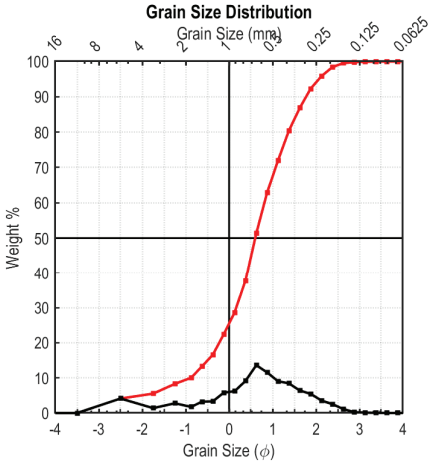
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | -0.02 | -0.02 | -0.02 |
| -0.25 | -0.375 | 0.00 | 0.00 | -0.02 |
| 0 | -0.125 | 0.01 | 0.01 | -0.01 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.01 |
| 0.5 | 0.375 | 0.03 | 0.03 | 0.04 |
| 0.75 | 0.625 | 0.10 | 0.09 | 0.13 |
| 1 | 0.875 | 0.51 | 0.48 | 0.61 |
| 1.25 | 1.125 | 2.49 | 2.36 | 2.98 |
| 1.5 | 1.375 | 9.36 | 8.88 | 11.85 |
| 1.75 | 1.625 | 17.83 | 16.91 | 28.76 |
| 2 | 1.875 | 25.92 | 24.58 | 53.34 |
| 2.25 | 2.125 | 21.44 | 20.33 | 73.67 |
| 2.5 | 2.375 | 17.97 | 17.04 | 90.72 |
| 2.75 | 2.625 | 7.63 | 7.24 | 97.95 |
| 3 | 2.875 | 1.47 | 1.39 | 99.35 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.77 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.91 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.94 |
| 4 | 3.875 | 0.01 | 0.01 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.915 |
| **5** | 1.180 |
| **16** | 1.435 |
| **25** | 1.570 |
| **50** | 1.840 |
| **75** | 2.145 |
| **84** | 2.275 |
| **95** | 2.525 |
| **99** | 2.815 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.978 | 0.254 |
| Standard Deviation | 0.407 | 0.754 |
| Skewness | 0.128 | |
| Kurtosis | 3.214 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.855 | 1.850 |
| Standard Deviation | 0.420 | 0.414 |
| Skewness (1) | 0.036 | 0.027 |
| Skewness (2) | 0.030 | |
| Kurtosis | 0.601 | 0.959 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1050+00** |
| **Sample** | **Swash** |
| **Mean** | **0.652 mm** |
| **STD** | **0.465 mm** |
| **Skewness** | **-0.848** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.58 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 4.17 |
| % gravel (>4 mm) | 4.13 |
| CaCO3 | 10.9 |

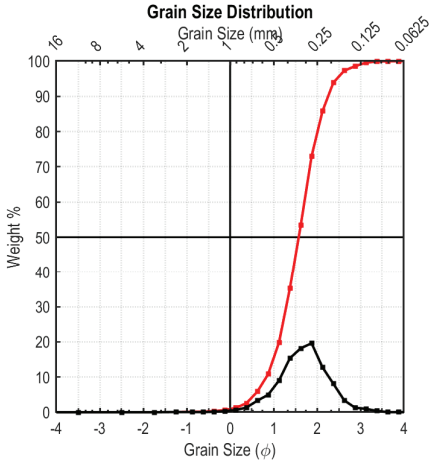
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 4.36 | 4.13 | 4.13 |
| -1.5 | -1.75 | 1.47 | 1.39 | 5.52 |
| -1 | -1.25 | 2.93 | 2.78 | 8.30 |
| -0.75 | -0.875 | 1.85 | 1.75 | 10.05 |
| -0.5 | -0.625 | 3.41 | 3.23 | 13.28 |
| -0.25 | -0.375 | 3.51 | 3.32 | 16.60 |
| 0 | -0.125 | 6.13 | 5.81 | 22.41 |
| 0.25 | 0.125 | 6.56 | 6.21 | 28.62 |
| 0.5 | 0.375 | 9.62 | 9.11 | 37.73 |
| 0.75 | 0.625 | 14.38 | 13.62 | 51.35 |
| 1 | 0.875 | 12.20 | 11.56 | 62.91 |
| 1.25 | 1.125 | 9.54 | 9.04 | 71.95 |
| 1.5 | 1.375 | 8.93 | 8.46 | 80.40 |
| 1.75 | 1.625 | 6.76 | 6.40 | 86.81 |
| 2 | 1.875 | 5.77 | 5.47 | 92.27 |
| 2.25 | 2.125 | 3.75 | 3.55 | 95.82 |
| 2.5 | 2.375 | 2.68 | 2.54 | 98.36 |
| 2.75 | 2.625 | 1.22 | 1.16 | 99.52 |
| 3 | 2.875 | 0.27 | 0.26 | 99.77 |
| 3.25 | 3.125 | 0.13 | 0.12 | 99.90 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.260 |
| **5** | -2.030 |
| **16** | -0.420 |
| **25** | -0.020 |
| **50** | 0.600 |
| **75** | 1.215 |
| **84** | 1.515 |
| **95** | 2.065 |
| **99** | 2.515 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.616 | 0.652 |
| Standard Deviation | 1.103 | 0.465 |
| Skewness | -0.848 | |
| Kurtosis | 4.017 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.548 | 0.565 |
| Standard Deviation | 0.968 | 1.104 |
| Skewness (1) | -0.054 | -0.169 |
| Skewness (2) | -0.602 | |
| Kurtosis | 1.116 | 1.359 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1060+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.312 mm** |
| **STD** | **0.671 mm** |
| **Skewness** | **-0.268** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.47 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

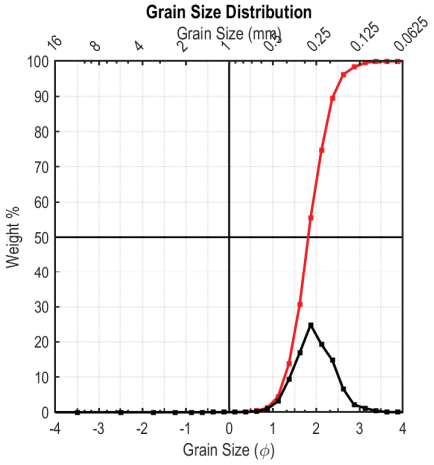
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.11 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.16 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.30 |
| 0 | -0.125 | 0.33 | 0.31 | 0.62 |
| 0.25 | 0.125 | 0.64 | 0.61 | 1.22 |
| 0.5 | 0.375 | 1.41 | 1.34 | 2.56 |
| 0.75 | 0.625 | 3.47 | 3.29 | 5.85 |
| 1 | 0.875 | 5.24 | 4.97 | 10.82 |
| 1.25 | 1.125 | 9.53 | 9.04 | 19.85 |
| 1.5 | 1.375 | 16.19 | 15.35 | 35.20 |
| 1.75 | 1.625 | 19.17 | 18.18 | 53.38 |
| 2 | 1.875 | 20.69 | 19.62 | 73.00 |
| 2.25 | 2.125 | 13.47 | 12.77 | 85.77 |
| 2.5 | 2.375 | 8.56 | 8.12 | 93.88 |
| 2.75 | 2.625 | 3.58 | 3.39 | 97.28 |
| 3 | 2.875 | 1.37 | 1.30 | 98.58 |
| 3.25 | 3.125 | 1.02 | 0.97 | 99.54 |
| 3.5 | 3.375 | 0.39 | 0.37 | 99.91 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.035 |
| **5** | 0.560 |
| **16** | 1.020 |
| **25** | 1.210 |
| **50** | 1.580 |
| **75** | 1.915 |
| **84** | 2.090 |
| **95** | 2.455 |
| **99** | 2.985 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.680 | 0.312 |
| Standard Deviation | 0.576 | 0.671 |
| Skewness | -0.268 | |
| Kurtosis | 4.143 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.555 | 1.563 |
| Standard Deviation | 0.535 | 0.555 |
| Skewness (1) | -0.047 | -0.062 |
| Skewness (2) | -0.136 | |
| Kurtosis | 0.771 | 1.102 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1060+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.256 mm** |
| **STD** | **0.734 mm** |
| **Skewness** | **0.164** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.51 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

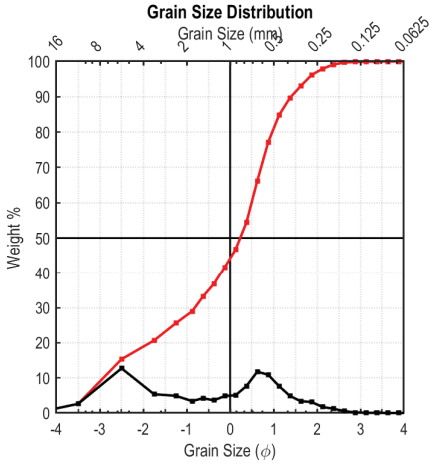
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.01 | 0.01 | 0.03 |
| 0.25 | 0.125 | 0.03 | 0.03 | 0.06 |
| 0.5 | 0.375 | 0.06 | 0.06 | 0.11 |
| 0.75 | 0.625 | 0.25 | 0.24 | 0.35 |
| 1 | 0.875 | 0.96 | 0.91 | 1.26 |
| 1.25 | 1.125 | 3.30 | 3.13 | 4.39 |
| 1.5 | 1.375 | 9.85 | 9.34 | 13.72 |
| 1.75 | 1.625 | 17.86 | 16.93 | 30.65 |
| 2 | 1.875 | 26.21 | 24.84 | 55.49 |
| 2.25 | 2.125 | 20.34 | 19.28 | 74.77 |
| 2.5 | 2.375 | 15.58 | 14.77 | 89.54 |
| 2.75 | 2.625 | 7.01 | 6.64 | 96.18 |
| 3 | 2.875 | 2.23 | 2.11 | 98.29 |
| 3.25 | 3.125 | 1.26 | 1.19 | 99.49 |
| 3.5 | 3.375 | 0.42 | 0.40 | 99.89 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.94 |
| 4 | 3.875 | 0.03 | 0.03 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.805 |
| **5** | 1.140 |
| **16** | 1.410 |
| **25** | 1.540 |
| **50** | 1.820 |
| **75** | 2.130 |
| **84** | 2.280 |
| **95** | 2.580 |
| **99** | 3.025 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.965 | 0.256 |
| Standard Deviation | 0.446 | 0.734 |
| Skewness | 0.164 | |
| Kurtosis | 3.741 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.845 | 1.837 |
| Standard Deviation | 0.435 | 0.436 |
| Skewness (1) | 0.057 | 0.057 |
| Skewness (2) | 0.092 | |
| Kurtosis | 0.655 | 1.000 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1060+00** |
| **Sample** | **Swash** |
| **Mean** | **1.056 mm** |
| **STD** | **0.362 mm** |
| **Skewness** | **-0.570** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Very Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.48 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 10.25 |
| % gravel (>4 mm) | 15.34 |
| CaCO3 | 12.6 |

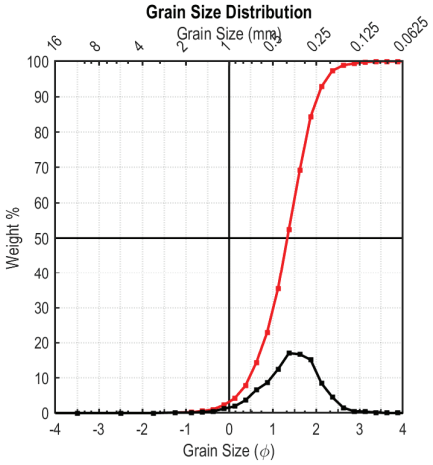
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 2.76 | 2.62 | 2.62 |
| -2 | -2.5 | 13.42 | 12.72 | 15.34 |
| -1.5 | -1.75 | 5.63 | 5.34 | 20.68 |
| -1 | -1.25 | 5.19 | 4.92 | 25.59 |
| -0.75 | -0.875 | 3.58 | 3.39 | 28.99 |
| -0.5 | -0.625 | 4.47 | 4.24 | 33.22 |
| -0.25 | -0.375 | 3.80 | 3.60 | 36.83 |
| 0 | -0.125 | 5.11 | 4.84 | 41.67 |
| 0.25 | 0.125 | 5.35 | 5.07 | 46.74 |
| 0.5 | 0.375 | 8.10 | 7.68 | 54.42 |
| 0.75 | 0.625 | 12.43 | 11.78 | 66.20 |
| 1 | 0.875 | 11.49 | 10.89 | 77.10 |
| 1.25 | 1.125 | 8.11 | 7.69 | 84.78 |
| 1.5 | 1.375 | 5.14 | 4.87 | 89.66 |
| 1.75 | 1.625 | 3.56 | 3.37 | 93.03 |
| 2 | 1.875 | 3.31 | 3.14 | 96.17 |
| 2.25 | 2.125 | 1.82 | 1.73 | 97.90 |
| 2.5 | 2.375 | 1.30 | 1.23 | 99.13 |
| 2.75 | 2.625 | 0.58 | 0.55 | 99.68 |
| 3 | 2.875 | 0.17 | 0.16 | 99.84 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.91 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -4.120 |
| **5** | -3.315 |
| **16** | -2.405 |
| **25** | -1.310 |
| **50** | 0.230 |
| **75** | 0.825 |
| **84** | 1.100 |
| **95** | 1.780 |
| **99** | 2.350 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | -0.078 | 1.056 |
| Standard Deviation | 1.465 | 0.362 |
| Skewness | -0.570 | |
| Kurtosis | 2.445 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | -0.652 | -0.358 |
| Standard Deviation | 1.752 | 1.648 |
| Skewness (1) | -0.504 | -0.448 |
| Skewness (2) | -0.569 | |
| Kurtosis | 0.454 | 0.978 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1070+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.374 mm** |
| **STD** | **0.646 mm** |
| **Skewness** | **-0.416** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

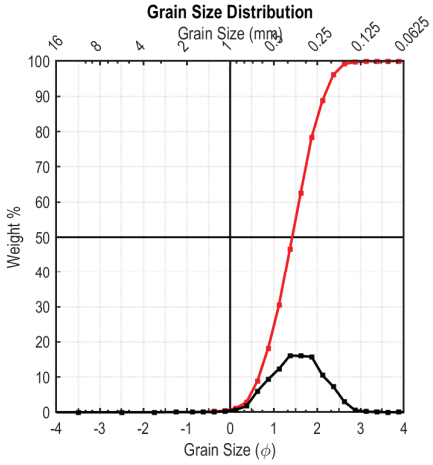
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.24 |
| -0.5 | -0.625 | 0.32 | 0.30 | 0.54 |
| -0.25 | -0.375 | 0.51 | 0.48 | 1.03 |
| 0 | -0.125 | 1.29 | 1.23 | 2.25 |
| 0.25 | 0.125 | 2.00 | 1.90 | 4.15 |
| 0.5 | 0.375 | 3.82 | 3.63 | 7.78 |
| 0.75 | 0.625 | 6.92 | 6.57 | 14.35 |
| 1 | 0.875 | 9.06 | 8.61 | 22.96 |
| 1.25 | 1.125 | 13.11 | 12.45 | 35.41 |
| 1.5 | 1.375 | 17.93 | 17.03 | 52.45 |
| 1.75 | 1.625 | 17.60 | 16.72 | 69.17 |
| 2 | 1.875 | 15.98 | 15.18 | 84.35 |
| 2.25 | 2.125 | 8.92 | 8.47 | 92.82 |
| 2.5 | 2.375 | 4.78 | 4.54 | 97.36 |
| 2.75 | 2.625 | 1.62 | 1.54 | 98.90 |
| 3 | 2.875 | 0.54 | 0.51 | 99.41 |
| 3.25 | 3.125 | 0.43 | 0.41 | 99.82 |
| 3.5 | 3.375 | 0.16 | 0.15 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.390 |
| **5** | 0.185 |
| **16** | 0.675 |
| **25** | 0.915 |
| **50** | 1.340 |
| **75** | 1.720 |
| **84** | 1.870 |
| **95** | 2.245 |
| **99** | 2.675 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.417 | 0.374 |
| Standard Deviation | 0.630 | 0.646 |
| Skewness | -0.416 | |
| Kurtosis | 3.722 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.272 | 1.295 |
| Standard Deviation | 0.598 | 0.611 |
| Skewness (1) | -0.113 | -0.117 |
| Skewness (2) | -0.209 | |
| Kurtosis | 0.724 | 1.049 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1070+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.344 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.158** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.09 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

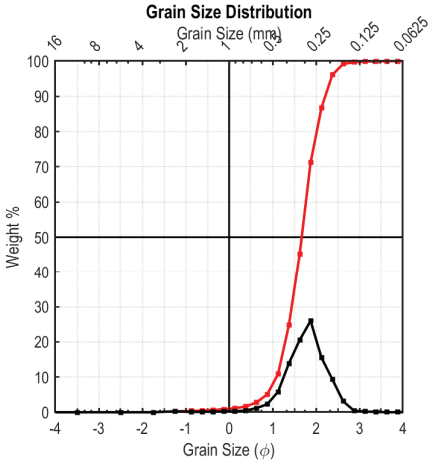
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.06 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.13 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.19 |
| 0 | -0.125 | 0.28 | 0.27 | 0.46 |
| 0.25 | 0.125 | 0.70 | 0.67 | 1.12 |
| 0.5 | 0.375 | 1.81 | 1.72 | 2.85 |
| 0.75 | 0.625 | 6.25 | 5.95 | 8.79 |
| 1 | 0.875 | 9.84 | 9.36 | 18.16 |
| 1.25 | 1.125 | 12.96 | 12.33 | 30.49 |
| 1.5 | 1.375 | 16.93 | 16.11 | 46.60 |
| 1.75 | 1.625 | 16.80 | 15.99 | 62.58 |
| 2 | 1.875 | 16.58 | 15.78 | 78.36 |
| 2.25 | 2.125 | 11.02 | 10.49 | 88.85 |
| 2.5 | 2.375 | 7.67 | 7.30 | 96.15 |
| 2.75 | 2.625 | 3.18 | 3.03 | 99.17 |
| 3 | 2.875 | 0.60 | 0.57 | 99.74 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.080 |
| **5** | 0.465 |
| **16** | 0.815 |
| **25** | 1.015 |
| **50** | 1.430 |
| **75** | 1.820 |
| **84** | 2.010 |
| **95** | 2.335 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.541 | 0.344 |
| Standard Deviation | 0.574 | 0.672 |
| Skewness | -0.158 | |
| Kurtosis | 3.073 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.412 | 1.418 |
| Standard Deviation | 0.597 | 0.582 |
| Skewness (1) | -0.029 | -0.031 |
| Skewness (2) | -0.050 | |
| Kurtosis | 0.565 | 0.952 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **1070+00** |
| **Sample** | **Swash** |
| **Mean** | **0.296 mm** |
| **STD** | **0.709 mm** |
| **Skewness** | **-1.199** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.00 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

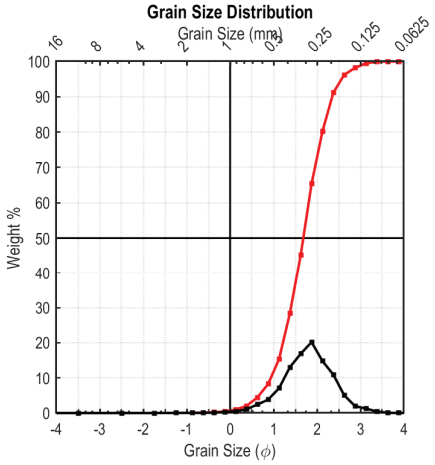
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.28 | 0.27 | 0.27 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.35 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.48 |
| -0.25 | -0.375 | 0.16 | 0.15 | 0.63 |
| 0 | -0.125 | 0.24 | 0.23 | 0.86 |
| 0.25 | 0.125 | 0.29 | 0.28 | 1.13 |
| 0.5 | 0.375 | 0.50 | 0.48 | 1.61 |
| 0.75 | 0.625 | 1.23 | 1.17 | 2.78 |
| 1 | 0.875 | 2.37 | 2.26 | 5.04 |
| 1.25 | 1.125 | 6.08 | 5.79 | 10.83 |
| 1.5 | 1.375 | 14.58 | 13.89 | 24.71 |
| 1.75 | 1.625 | 21.59 | 20.56 | 45.28 |
| 2 | 1.875 | 27.27 | 25.97 | 71.25 |
| 2.25 | 2.125 | 16.29 | 15.51 | 86.76 |
| 2.5 | 2.375 | 9.82 | 9.35 | 96.11 |
| 2.75 | 2.625 | 3.26 | 3.10 | 99.22 |
| 3 | 2.875 | 0.47 | 0.45 | 99.67 |
| 3.25 | 3.125 | 0.21 | 0.20 | 99.87 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.005 |
| **5** | 0.870 |
| **16** | 1.220 |
| **25** | 1.380 |
| **50** | 1.670 |
| **75** | 1.935 |
| **84** | 2.080 |
| **95** | 2.345 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.758 | 0.296 |
| Standard Deviation | 0.495 | 0.709 |
| Skewness | -1.199 | |
| Kurtosis | 8.378 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.650 | 1.657 |
| Standard Deviation | 0.430 | 0.438 |
| Skewness (1) | -0.047 | -0.066 |
| Skewness (2) | -0.145 | |
| Kurtosis | 0.715 | 1.089 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.290 mm** |
| **STD** | **0.671 mm** |
| **Skewness** | **-0.301** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.46 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

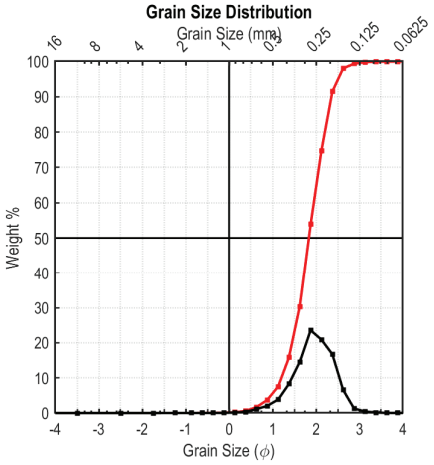
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.06 |
| -0.5 | -0.625 | 0.06 | 0.05 | 0.12 |
| -0.25 | -0.375 | 0.10 | 0.10 | 0.22 |
| 0 | -0.125 | 0.26 | 0.25 | 0.46 |
| 0.25 | 0.125 | 0.52 | 0.49 | 0.96 |
| 0.5 | 0.375 | 1.13 | 1.07 | 2.03 |
| 0.75 | 0.625 | 2.53 | 2.40 | 4.43 |
| 1 | 0.875 | 4.04 | 3.83 | 8.27 |
| 1.25 | 1.125 | 7.44 | 7.05 | 15.32 |
| 1.5 | 1.375 | 13.74 | 13.03 | 28.35 |
| 1.75 | 1.625 | 17.82 | 16.90 | 45.25 |
| 2 | 1.875 | 21.26 | 20.16 | 65.41 |
| 2.25 | 2.125 | 15.60 | 14.79 | 80.20 |
| 2.5 | 2.375 | 11.54 | 10.94 | 91.14 |
| 2.75 | 2.625 | 5.34 | 5.06 | 96.21 |
| 3 | 2.875 | 2.08 | 1.98 | 98.18 |
| 3.25 | 3.125 | 1.33 | 1.26 | 99.45 |
| 3.5 | 3.375 | 0.48 | 0.46 | 99.90 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.03 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.135 |
| **5** | 0.660 |
| **16** | 1.140 |
| **25** | 1.310 |
| **50** | 1.685 |
| **75** | 2.035 |
| **84** | 2.210 |
| **95** | 2.565 |
| **99** | 3.035 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.785 | 0.290 |
| Standard Deviation | 0.576 | 0.671 |
| Skewness | -0.301 | |
| Kurtosis | 3.978 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.675 | 1.678 |
| Standard Deviation | 0.535 | 0.556 |
| Skewness (1) | -0.019 | -0.047 |
| Skewness (2) | -0.136 | |
| Kurtosis | 0.780 | 1.077 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.262 mm** |
| **STD** | **0.722 mm** |
| **Skewness** | **-0.508** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.20 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.9 |

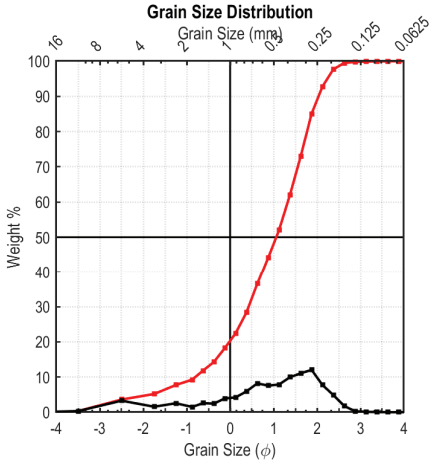
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.04 |
| 0 | -0.125 | 0.05 | 0.05 | 0.09 |
| 0.25 | 0.125 | 0.14 | 0.13 | 0.22 |
| 0.5 | 0.375 | 0.35 | 0.33 | 0.56 |
| 0.75 | 0.625 | 1.17 | 1.11 | 1.67 |
| 1 | 0.875 | 2.12 | 2.01 | 3.68 |
| 1.25 | 1.125 | 4.01 | 3.81 | 7.49 |
| 1.5 | 1.375 | 8.72 | 8.29 | 15.78 |
| 1.75 | 1.625 | 15.26 | 14.50 | 30.29 |
| 2 | 1.875 | 24.80 | 23.58 | 53.87 |
| 2.25 | 2.125 | 21.97 | 20.89 | 74.75 |
| 2.5 | 2.375 | 17.60 | 16.73 | 91.48 |
| 2.75 | 2.625 | 6.90 | 6.56 | 98.04 |
| 3 | 2.875 | 1.36 | 1.30 | 99.34 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.77 |
| 3.5 | 3.375 | 0.16 | 0.15 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.04 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.475 |
| **5** | 0.960 |
| **16** | 1.380 |
| **25** | 1.535 |
| **50** | 1.835 |
| **75** | 2.130 |
| **84** | 2.265 |
| **95** | 2.510 |
| **99** | 2.810 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.933 | 0.262 |
| Standard Deviation | 0.469 | 0.722 |
| Skewness | -0.508 | |
| Kurtosis | 4.315 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.822 | 1.827 |
| Standard Deviation | 0.442 | 0.456 |
| Skewness (1) | -0.028 | -0.079 |
| Skewness (2) | -0.226 | |
| Kurtosis | 0.751 | 1.068 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.527 mm** |
| **STD** | **0.439 mm** |
| **Skewness** | **-1.136** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.40 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 4.12 |
| % gravel (>4 mm) | 3.62 |
| CaCO3 | 1.1 |

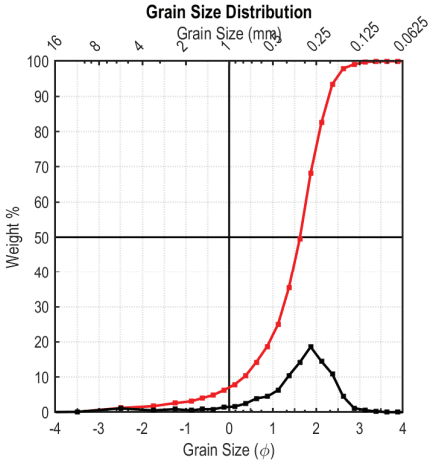
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.35 | 0.33 | 0.33 |
| -2 | -2.5 | 3.46 | 3.28 | 3.62 |
| -1.5 | -1.75 | 1.66 | 1.57 | 5.19 |
| -1 | -1.25 | 2.68 | 2.55 | 7.73 |
| -0.75 | -0.875 | 1.60 | 1.52 | 9.25 |
| -0.5 | -0.625 | 2.72 | 2.58 | 11.83 |
| -0.25 | -0.375 | 2.58 | 2.45 | 14.28 |
| 0 | -0.125 | 4.13 | 3.92 | 18.20 |
| 0.25 | 0.125 | 4.45 | 4.22 | 22.42 |
| 0.5 | 0.375 | 6.24 | 5.92 | 28.34 |
| 0.75 | 0.625 | 8.65 | 8.21 | 36.55 |
| 1 | 0.875 | 7.97 | 7.56 | 44.11 |
| 1.25 | 1.125 | 8.31 | 7.89 | 52.00 |
| 1.5 | 1.375 | 10.49 | 9.95 | 61.95 |
| 1.75 | 1.625 | 11.66 | 11.06 | 73.01 |
| 2 | 1.875 | 12.70 | 12.05 | 85.06 |
| 2.25 | 2.125 | 8.15 | 7.73 | 92.79 |
| 2.5 | 2.375 | 5.15 | 4.89 | 97.68 |
| 2.75 | 2.625 | 1.89 | 1.79 | 99.47 |
| 3 | 2.875 | 0.31 | 0.29 | 99.76 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.89 |
| 3.5 | 3.375 | 0.06 | 0.05 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.295 |
| **5** | -1.840 |
| **16** | -0.265 |
| **25** | 0.235 |
| **50** | 1.060 |
| **75** | 1.665 |
| **84** | 1.855 |
| **95** | 2.240 |
| **99** | 2.560 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.923 | 0.527 |
| Standard Deviation | 1.187 | 0.439 |
| Skewness | -1.136 | |
| Kurtosis | 4.232 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.795 | 0.883 |
| Standard Deviation | 1.060 | 1.148 |
| Skewness (1) | -0.250 | -0.336 |
| Skewness (2) | -0.811 | |
| Kurtosis | 0.925 | 1.169 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Feb 22 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.342 mm** |
| **STD** | **0.527 mm** |
| **Skewness** | **-1.834** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.35 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 1.39 |
| % gravel (>4 mm) | 1.21 |
| CaCO3 | 2.1 |

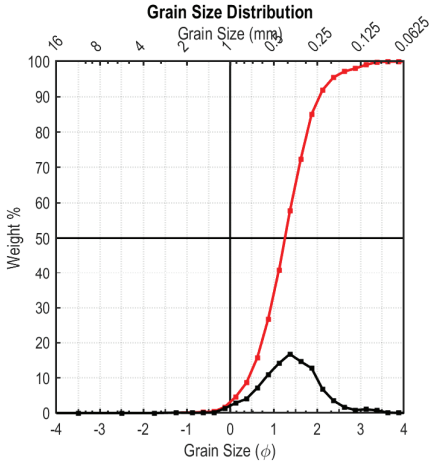
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.12 | 0.11 | 0.11 |
| -2 | -2.5 | 1.15 | 1.09 | 1.21 |
| -1.5 | -1.75 | 0.55 | 0.52 | 1.73 |
| -1 | -1.25 | 0.91 | 0.86 | 2.59 |
| -0.75 | -0.875 | 0.55 | 0.52 | 3.11 |
| -0.5 | -0.625 | 0.93 | 0.88 | 3.99 |
| -0.25 | -0.375 | 0.90 | 0.86 | 4.85 |
| 0 | -0.125 | 1.48 | 1.41 | 6.26 |
| 0.25 | 0.125 | 1.70 | 1.62 | 7.87 |
| 0.5 | 0.375 | 2.57 | 2.44 | 10.31 |
| 0.75 | 0.625 | 4.12 | 3.91 | 14.22 |
| 1 | 0.875 | 4.71 | 4.47 | 18.69 |
| 1.25 | 1.125 | 6.59 | 6.25 | 24.95 |
| 1.5 | 1.375 | 10.98 | 10.43 | 35.37 |
| 1.75 | 1.625 | 14.91 | 14.15 | 49.53 |
| 2 | 1.875 | 19.59 | 18.59 | 68.12 |
| 2.25 | 2.125 | 15.24 | 14.47 | 82.59 |
| 2.5 | 2.375 | 11.43 | 10.85 | 93.44 |
| 2.75 | 2.625 | 4.71 | 4.47 | 97.90 |
| 3 | 2.875 | 1.25 | 1.19 | 99.09 |
| 3.25 | 3.125 | 0.64 | 0.61 | 99.70 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.92 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.690 |
| **5** | -0.350 |
| **16** | 0.725 |
| **25** | 1.125 |
| **50** | 1.630 |
| **75** | 1.995 |
| **84** | 2.160 |
| **95** | 2.465 |
| **99** | 2.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.547 | 0.342 |
| Standard Deviation | 0.923 | 0.527 |
| Skewness | -1.834 | |
| Kurtosis | 8.004 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.443 | 1.505 |
| Standard Deviation | 0.718 | 0.785 |
| Skewness (1) | -0.261 | -0.334 |
| Skewness (2) | -0.798 | |
| Kurtosis | 0.962 | 1.326 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1550+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.382 mm** |
| **STD** | **0.630 mm** |
| **Skewness** | **0.160** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.36 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

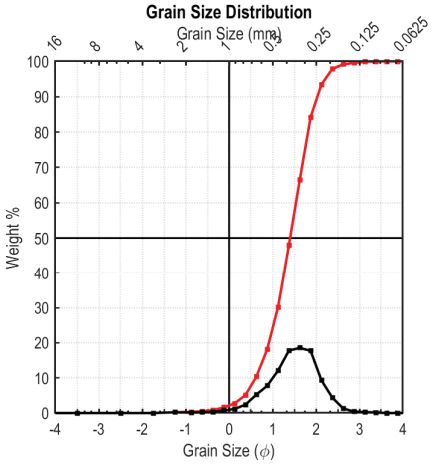
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.16 |
| -0.5 | -0.625 | 0.10 | 0.10 | 0.26 |
| -0.25 | -0.375 | 0.15 | 0.15 | 0.41 |
| 0 | -0.125 | 1.35 | 1.31 | 1.71 |
| 0.25 | 0.125 | 2.95 | 2.85 | 4.57 |
| 0.5 | 0.375 | 4.16 | 4.02 | 8.59 |
| 0.75 | 0.625 | 7.41 | 7.17 | 15.76 |
| 1 | 0.875 | 11.29 | 10.92 | 26.68 |
| 1.25 | 1.125 | 14.65 | 14.17 | 40.86 |
| 1.5 | 1.375 | 17.35 | 16.79 | 57.64 |
| 1.75 | 1.625 | 15.16 | 14.67 | 72.31 |
| 2 | 1.875 | 13.19 | 12.76 | 85.07 |
| 2.25 | 2.125 | 7.04 | 6.81 | 91.88 |
| 2.5 | 2.375 | 3.68 | 3.56 | 95.44 |
| 2.75 | 2.625 | 1.75 | 1.69 | 97.14 |
| 3 | 2.875 | 0.88 | 0.85 | 97.99 |
| 3.25 | 3.125 | 1.08 | 1.04 | 99.03 |
| 3.5 | 3.375 | 0.80 | 0.77 | 99.81 |
| 3.75 | 3.625 | 0.13 | 0.13 | 99.93 |
| 4 | 3.875 | 0.03 | 0.03 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.260 |
| **5** | 0.150 |
| **16** | 0.630 |
| **25** | 0.835 |
| **50** | 1.260 |
| **75** | 1.680 |
| **84** | 1.855 |
| **95** | 2.345 |
| **99** | 3.115 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.387 | 0.382 |
| Standard Deviation | 0.666 | 0.630 |
| Skewness | 0.160 | |
| Kurtosis | 3.752 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.242 | 1.248 |
| Standard Deviation | 0.613 | 0.639 |
| Skewness (1) | -0.029 | -0.020 |
| Skewness (2) | -0.020 | |
| Kurtosis | 0.792 | 1.065 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1550+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.359 mm** |
| **STD** | **0.669 mm** |
| **Skewness** | **-0.616** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.36 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.21 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.2 |

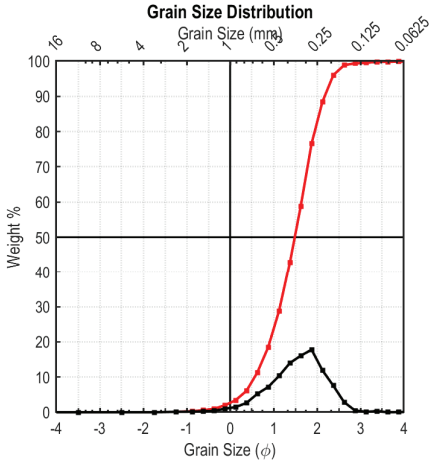
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.22 | 0.21 | 0.21 |
| -0.75 | -0.875 | 0.12 | 0.12 | 0.33 |
| -0.5 | -0.625 | 0.18 | 0.18 | 0.51 |
| -0.25 | -0.375 | 0.33 | 0.32 | 0.83 |
| 0 | -0.125 | 0.74 | 0.72 | 1.55 |
| 0.25 | 0.125 | 1.20 | 1.17 | 2.73 |
| 0.5 | 0.375 | 2.42 | 2.36 | 5.09 |
| 0.75 | 0.625 | 5.35 | 5.23 | 10.32 |
| 1 | 0.875 | 7.93 | 7.75 | 18.06 |
| 1.25 | 1.125 | 12.35 | 12.07 | 30.13 |
| 1.5 | 1.375 | 18.20 | 17.78 | 47.91 |
| 1.75 | 1.625 | 18.97 | 18.53 | 66.44 |
| 2 | 1.875 | 18.15 | 17.73 | 84.17 |
| 2.25 | 2.125 | 9.52 | 9.30 | 93.47 |
| 2.5 | 2.375 | 4.49 | 4.39 | 97.86 |
| 2.75 | 2.625 | 1.34 | 1.31 | 99.17 |
| 3 | 2.875 | 0.41 | 0.40 | 99.57 |
| 3.25 | 3.125 | 0.30 | 0.29 | 99.86 |
| 3.5 | 3.375 | 0.14 | 0.14 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.315 |
| **5** | 0.365 |
| **16** | 0.810 |
| **25** | 1.020 |
| **50** | 1.405 |
| **75** | 1.745 |
| **84** | 1.875 |
| **95** | 2.210 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.479 | 0.359 |
| Standard Deviation | 0.581 | 0.669 |
| Skewness | -0.616 | |
| Kurtosis | 4.535 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.343 | 1.363 |
| Standard Deviation | 0.532 | 0.546 |
| Skewness (1) | -0.117 | -0.122 |
| Skewness (2) | -0.221 | |
| Kurtosis | 0.732 | 1.043 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1550+00** |
| **Sample** | **Swash** |
| **Mean** | **0.343 mm** |
| **STD** | **0.638 mm** |
| **Skewness** | **-0.475** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.61 |
| % finer than 0.0625 mm (dry) | 0.15 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.5 |

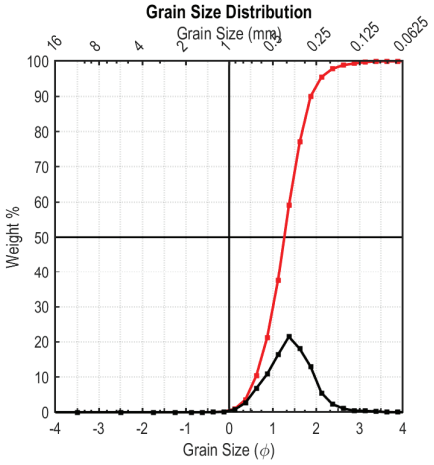
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.13 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.29 |
| -0.5 | -0.625 | 0.29 | 0.28 | 0.57 |
| -0.25 | -0.375 | 0.41 | 0.40 | 0.97 |
| 0 | -0.125 | 1.03 | 0.99 | 1.96 |
| 0.25 | 0.125 | 1.51 | 1.46 | 3.42 |
| 0.5 | 0.375 | 2.74 | 2.64 | 6.06 |
| 0.75 | 0.625 | 5.41 | 5.22 | 11.28 |
| 1 | 0.875 | 7.44 | 7.18 | 18.46 |
| 1.25 | 1.125 | 10.68 | 10.31 | 28.77 |
| 1.5 | 1.375 | 14.49 | 13.99 | 42.76 |
| 1.75 | 1.625 | 16.64 | 16.06 | 58.82 |
| 2 | 1.875 | 18.42 | 17.78 | 76.59 |
| 2.25 | 2.125 | 12.32 | 11.89 | 88.49 |
| 2.5 | 2.375 | 7.82 | 7.55 | 96.03 |
| 2.75 | 2.625 | 2.94 | 2.84 | 98.87 |
| 3 | 2.875 | 0.52 | 0.50 | 99.37 |
| 3.25 | 3.125 | 0.14 | 0.14 | 99.51 |
| 3.5 | 3.375 | 0.30 | 0.29 | 99.80 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.82 |
| 4 | 3.875 | 0.03 | 0.03 | 99.85 |
| >4.0 | 4.25 | 0.16 | 0.15 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.365 |
| **5** | 0.275 |
| **16** | 0.790 |
| **25** | 1.035 |
| **50** | 1.490 |
| **75** | 1.855 |
| **84** | 2.030 |
| **95** | 2.340 |
| **99** | 2.690 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.546 | 0.343 |
| Standard Deviation | 0.648 | 0.638 |
| Skewness | -0.475 | |
| Kurtosis | 4.142 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.410 | 1.437 |
| Standard Deviation | 0.620 | 0.623 |
| Skewness (1) | -0.129 | -0.153 |
| Skewness (2) | -0.294 | |
| Kurtosis | 0.665 | 1.032 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1560+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.380 mm** |
| **STD** | **0.699 mm** |
| **Skewness** | **0.310** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.16 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.2 |

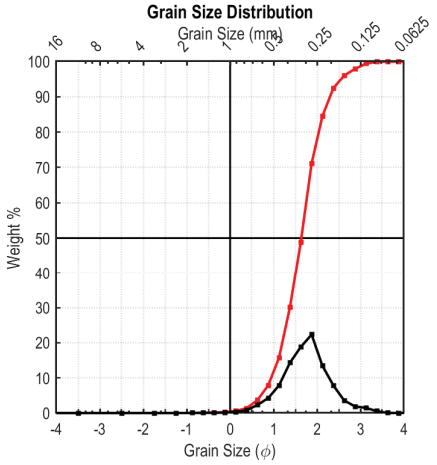
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.15 | 0.15 | 0.16 |
| 0.25 | 0.125 | 0.77 | 0.75 | 0.91 |
| 0.5 | 0.375 | 2.77 | 2.69 | 3.60 |
| 0.75 | 0.625 | 7.00 | 6.79 | 10.38 |
| 1 | 0.875 | 11.18 | 10.84 | 21.22 |
| 1.25 | 1.125 | 16.84 | 16.32 | 37.54 |
| 1.5 | 1.375 | 22.14 | 21.46 | 59.01 |
| 1.75 | 1.625 | 18.60 | 18.03 | 77.04 |
| 2 | 1.875 | 13.37 | 12.96 | 90.00 |
| 2.25 | 2.125 | 5.66 | 5.49 | 95.48 |
| 2.5 | 2.375 | 2.40 | 2.33 | 97.81 |
| 2.75 | 2.625 | 1.09 | 1.06 | 98.87 |
| 3 | 2.875 | 0.47 | 0.46 | 99.32 |
| 3.25 | 3.125 | 0.40 | 0.39 | 99.71 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.92 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.135 |
| **5** | 0.425 |
| **16** | 0.755 |
| **25** | 0.935 |
| **50** | 1.270 |
| **75** | 1.595 |
| **84** | 1.760 |
| **95** | 2.105 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.398 | 0.380 |
| Standard Deviation | 0.517 | 0.699 |
| Skewness | 0.310 | |
| Kurtosis | 3.979 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.257 | 1.262 |
| Standard Deviation | 0.502 | 0.506 |
| Skewness (1) | -0.025 | -0.015 |
| Skewness (2) | -0.010 | |
| Kurtosis | 0.672 | 1.043 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1560+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.297 mm** |
| **STD** | **0.683 mm** |
| **Skewness** | **0.024** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 100.49 |
| % finer than 0.0625 mm (dry) | 0.07 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.3 |

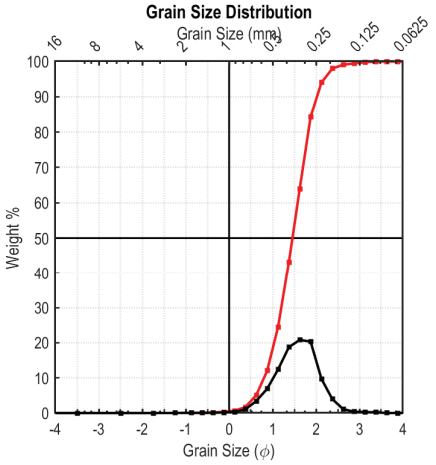
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.03 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.08 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.13 |
| 0 | -0.125 | 0.14 | 0.14 | 0.27 |
| 0.25 | 0.125 | 0.31 | 0.31 | 0.58 |
| 0.5 | 0.375 | 0.79 | 0.79 | 1.36 |
| 0.75 | 0.625 | 2.28 | 2.27 | 3.63 |
| 1 | 0.875 | 4.26 | 4.24 | 7.87 |
| 1.25 | 1.125 | 7.90 | 7.86 | 15.73 |
| 1.5 | 1.375 | 14.37 | 14.30 | 30.03 |
| 1.75 | 1.625 | 18.88 | 18.79 | 48.82 |
| 2 | 1.875 | 22.43 | 22.32 | 71.14 |
| 2.25 | 2.125 | 13.48 | 13.41 | 84.56 |
| 2.5 | 2.375 | 7.91 | 7.87 | 92.43 |
| 2.75 | 2.625 | 3.59 | 3.57 | 96.00 |
| 3 | 2.875 | 1.89 | 1.88 | 97.88 |
| 3.25 | 3.125 | 1.47 | 1.46 | 99.34 |
| 3.5 | 3.375 | 0.55 | 0.55 | 99.89 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.93 |
| 4 | 3.875 | 0.00 | 0.00 | 99.93 |
| >4.0 | 4.25 | 0.07 | 0.07 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.260 |
| **5** | 0.705 |
| **16** | 1.130 |
| **25** | 1.285 |
| **50** | 1.640 |
| **75** | 1.945 |
| **84** | 2.115 |
| **95** | 2.555 |
| **99** | 3.065 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.751 | 0.297 |
| Standard Deviation | 0.550 | 0.683 |
| Skewness | 0.024 | |
| Kurtosis | 4.071 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.623 | 1.628 |
| Standard Deviation | 0.493 | 0.527 |
| Skewness (1) | -0.036 | -0.023 |
| Skewness (2) | -0.020 | |
| Kurtosis | 0.878 | 1.149 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1560+00** |
| **Sample** | **Swash** |
| **Mean** | **0.339 mm** |
| **STD** | **0.711 mm** |
| **Skewness** | **-0.118** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.09 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.3 |

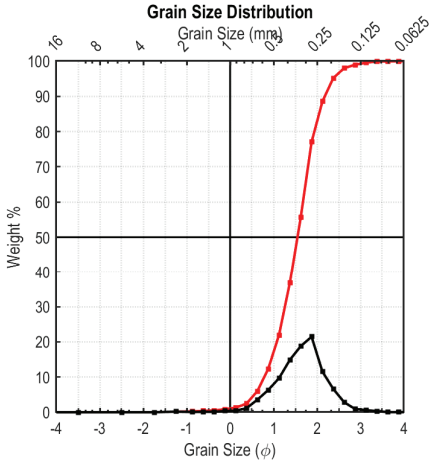
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.07 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.09 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.16 |
| 0 | -0.125 | 0.17 | 0.17 | 0.32 |
| 0.25 | 0.125 | 0.34 | 0.33 | 0.66 |
| 0.5 | 0.375 | 1.06 | 1.04 | 1.69 |
| 0.75 | 0.625 | 3.49 | 3.42 | 5.11 |
| 1 | 0.875 | 7.05 | 6.91 | 12.02 |
| 1.25 | 1.125 | 12.63 | 12.37 | 24.39 |
| 1.5 | 1.375 | 19.15 | 18.76 | 43.15 |
| 1.75 | 1.625 | 21.25 | 20.81 | 63.96 |
| 2 | 1.875 | 20.75 | 20.33 | 84.29 |
| 2.25 | 2.125 | 9.92 | 9.72 | 94.01 |
| 2.5 | 2.375 | 4.04 | 3.96 | 97.96 |
| 2.75 | 2.625 | 1.13 | 1.11 | 99.07 |
| 3 | 2.875 | 0.38 | 0.37 | 99.44 |
| 3.25 | 3.125 | 0.32 | 0.31 | 99.76 |
| 3.5 | 3.375 | 0.18 | 0.18 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.00 | 0.00 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.210 |
| **5** | 0.615 |
| **16** | 0.955 |
| **25** | 1.135 |
| **50** | 1.455 |
| **75** | 1.760 |
| **84** | 1.870 |
| **95** | 2.190 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.560 | 0.339 |
| Standard Deviation | 0.491 | 0.711 |
| Skewness | -0.118 | |
| Kurtosis | 4.450 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.413 | 1.427 |
| Standard Deviation | 0.458 | 0.467 |
| Skewness (1) | -0.093 | -0.080 |
| Skewness (2) | -0.115 | |
| Kurtosis | 0.721 | 1.033 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1570+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.322 mm** |
| **STD** | **0.674 mm** |
| **Skewness** | **-0.413** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.88 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

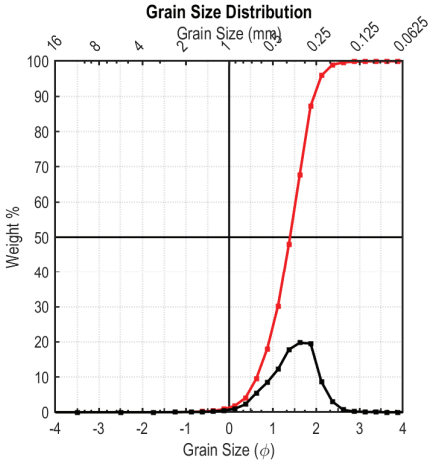
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.24 |
| -0.5 | -0.625 | 0.13 | 0.13 | 0.37 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.50 |
| 0 | -0.125 | 0.36 | 0.35 | 0.85 |
| 0.25 | 0.125 | 0.47 | 0.45 | 1.30 |
| 0.5 | 0.375 | 1.18 | 1.14 | 2.44 |
| 0.75 | 0.625 | 3.68 | 3.54 | 5.98 |
| 1 | 0.875 | 6.54 | 6.30 | 12.27 |
| 1.25 | 1.125 | 10.05 | 9.67 | 21.95 |
| 1.5 | 1.375 | 15.47 | 14.89 | 36.84 |
| 1.75 | 1.625 | 19.51 | 18.78 | 55.62 |
| 2 | 1.875 | 22.28 | 21.45 | 77.07 |
| 2.25 | 2.125 | 11.97 | 11.52 | 88.59 |
| 2.5 | 2.375 | 6.86 | 6.60 | 95.20 |
| 2.75 | 2.625 | 2.94 | 2.83 | 98.03 |
| 3 | 2.875 | 0.97 | 0.93 | 98.96 |
| 3.25 | 3.125 | 0.64 | 0.62 | 99.58 |
| 3.5 | 3.375 | 0.33 | 0.32 | 99.89 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.94 |
| 4 | 3.875 | 0.02 | 0.02 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.040 |
| **5** | 0.555 |
| **16** | 0.970 |
| **25** | 1.175 |
| **50** | 1.550 |
| **75** | 1.850 |
| **84** | 2.025 |
| **95** | 2.370 |
| **99** | 2.890 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.635 | 0.322 |
| Standard Deviation | 0.570 | 0.674 |
| Skewness | -0.413 | |
| Kurtosis | 4.925 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.497 | 1.515 |
| Standard Deviation | 0.528 | 0.539 |
| Skewness (1) | -0.100 | -0.098 |
| Skewness (2) | -0.166 | |
| Kurtosis | 0.720 | 1.102 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1570+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.361 mm** |
| **STD** | **0.695 mm** |
| **Skewness** | **-0.512** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.93 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

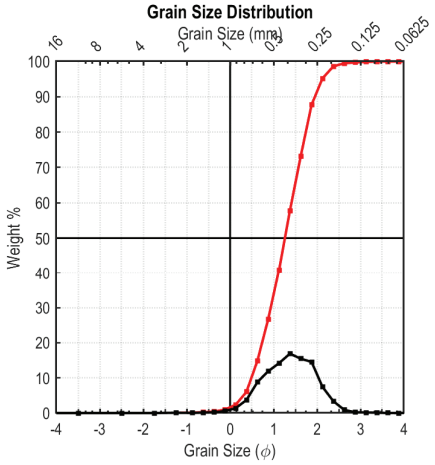
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.10 |
| -0.5 | -0.625 | 0.10 | 0.10 | 0.19 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.38 |
| 0 | -0.125 | 0.50 | 0.48 | 0.86 |
| 0.25 | 0.125 | 0.99 | 0.94 | 1.80 |
| 0.5 | 0.375 | 2.38 | 2.27 | 4.07 |
| 0.75 | 0.625 | 5.74 | 5.47 | 9.54 |
| 1 | 0.875 | 8.87 | 8.45 | 17.99 |
| 1.25 | 1.125 | 12.79 | 12.19 | 30.18 |
| 1.5 | 1.375 | 18.67 | 17.79 | 47.97 |
| 1.75 | 1.625 | 20.71 | 19.74 | 67.71 |
| 2 | 1.875 | 20.51 | 19.55 | 87.26 |
| 2.25 | 2.125 | 9.06 | 8.63 | 95.89 |
| 2.5 | 2.375 | 3.21 | 3.06 | 98.95 |
| 2.75 | 2.625 | 0.73 | 0.70 | 99.65 |
| 3 | 2.875 | 0.20 | 0.19 | 99.84 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.085 |
| **5** | 0.420 |
| **16** | 0.815 |
| **25** | 1.020 |
| **50** | 1.400 |
| **75** | 1.720 |
| **84** | 1.835 |
| **95** | 2.100 |
| **99** | 2.390 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.469 | 0.361 |
| Standard Deviation | 0.525 | 0.695 |
| Skewness | -0.512 | |
| Kurtosis | 3.907 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.325 | 1.350 |
| Standard Deviation | 0.510 | 0.510 |
| Skewness (1) | -0.147 | -0.157 |
| Skewness (2) | -0.275 | |
| Kurtosis | 0.647 | 0.984 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1570+00** |
| **Sample** | **Swash** |
| **Mean** | **0.388 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.150** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.75 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

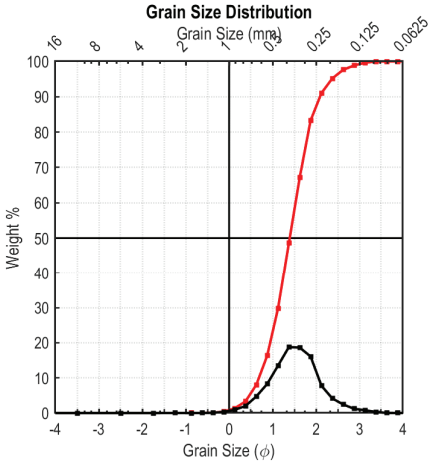
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.11 |
| -0.5 | -0.625 | 0.13 | 0.13 | 0.23 |
| -0.25 | -0.375 | 0.18 | 0.18 | 0.41 |
| 0 | -0.125 | 0.57 | 0.55 | 0.96 |
| 0.25 | 0.125 | 1.40 | 1.36 | 2.33 |
| 0.5 | 0.375 | 3.79 | 3.69 | 6.01 |
| 0.75 | 0.625 | 8.99 | 8.75 | 14.76 |
| 1 | 0.875 | 12.23 | 11.90 | 26.67 |
| 1.25 | 1.125 | 14.57 | 14.18 | 40.85 |
| 1.5 | 1.375 | 17.35 | 16.89 | 57.73 |
| 1.75 | 1.625 | 15.89 | 15.46 | 73.20 |
| 2 | 1.875 | 14.94 | 14.54 | 87.74 |
| 2.25 | 2.125 | 7.66 | 7.45 | 95.19 |
| 2.5 | 2.375 | 3.48 | 3.39 | 98.58 |
| 2.75 | 2.625 | 0.93 | 0.91 | 99.48 |
| 3 | 2.875 | 0.22 | 0.21 | 99.70 |
| 3.25 | 3.125 | 0.17 | 0.17 | 99.86 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.120 |
| **5** | 0.305 |
| **16** | 0.650 |
| **25** | 0.840 |
| **50** | 1.260 |
| **75** | 1.655 |
| **84** | 1.810 |
| **95** | 2.120 |
| **99** | 2.490 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.365 | 0.388 |
| Standard Deviation | 0.573 | 0.672 |
| Skewness | -0.150 | |
| Kurtosis | 3.408 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.230 | 1.240 |
| Standard Deviation | 0.580 | 0.565 |
| Skewness (1) | -0.052 | -0.052 |
| Skewness (2) | -0.082 | |
| Kurtosis | 0.565 | 0.913 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1580+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.348 mm** |
| **STD** | **0.676 mm** |
| **Skewness** | **0.153** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.81 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

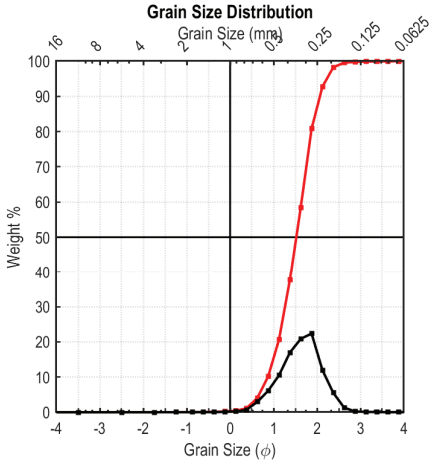
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.09 |
| 0 | -0.125 | 0.33 | 0.32 | 0.41 |
| 0.25 | 0.125 | 0.92 | 0.90 | 1.32 |
| 0.5 | 0.375 | 2.02 | 1.98 | 3.30 |
| 0.75 | 0.625 | 4.81 | 4.72 | 8.02 |
| 1 | 0.875 | 8.42 | 8.27 | 16.30 |
| 1.25 | 1.125 | 13.73 | 13.49 | 29.78 |
| 1.5 | 1.375 | 19.12 | 18.78 | 48.56 |
| 1.75 | 1.625 | 18.96 | 18.62 | 67.18 |
| 2 | 1.875 | 16.39 | 16.10 | 83.28 |
| 2.25 | 2.125 | 7.90 | 7.76 | 91.04 |
| 2.5 | 2.375 | 4.22 | 4.14 | 95.19 |
| 2.75 | 2.625 | 2.48 | 2.44 | 97.62 |
| 3 | 2.875 | 1.24 | 1.22 | 98.84 |
| 3.25 | 3.125 | 0.81 | 0.80 | 99.64 |
| 3.5 | 3.375 | 0.32 | 0.31 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.040 |
| **5** | 0.465 |
| **16** | 0.865 |
| **25** | 1.035 |
| **50** | 1.395 |
| **75** | 1.745 |
| **84** | 1.900 |
| **95** | 2.365 |
| **99** | 2.925 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.524 | 0.348 |
| Standard Deviation | 0.566 | 0.676 |
| Skewness | 0.153 | |
| Kurtosis | 3.637 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.382 | 1.387 |
| Standard Deviation | 0.518 | 0.547 |
| Skewness (1) | -0.024 | -0.002 |
| Skewness (2) | 0.039 | |
| Kurtosis | 0.836 | 1.097 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1580+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.326 mm** |
| **STD** | **0.721 mm** |
| **Skewness** | **-0.283** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.54 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.3 |

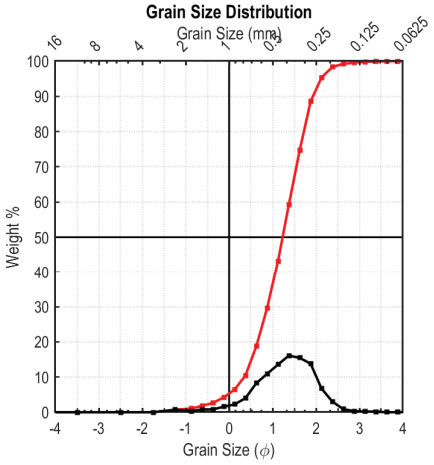
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.03 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.07 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.10 |
| 0 | -0.125 | 0.12 | 0.12 | 0.21 |
| 0.25 | 0.125 | 0.21 | 0.20 | 0.42 |
| 0.5 | 0.375 | 0.71 | 0.69 | 1.10 |
| 0.75 | 0.625 | 3.05 | 2.95 | 4.05 |
| 1 | 0.875 | 6.32 | 6.10 | 10.15 |
| 1.25 | 1.125 | 10.88 | 10.51 | 20.66 |
| 1.5 | 1.375 | 17.56 | 16.96 | 37.62 |
| 1.75 | 1.625 | 21.58 | 20.84 | 58.46 |
| 2 | 1.875 | 23.15 | 22.36 | 80.82 |
| 2.25 | 2.125 | 12.37 | 11.95 | 92.77 |
| 2.5 | 2.375 | 5.69 | 5.50 | 98.26 |
| 2.75 | 2.625 | 1.34 | 1.29 | 99.56 |
| 3 | 2.875 | 0.23 | 0.22 | 99.78 |
| 3.25 | 3.125 | 0.11 | 0.11 | 99.88 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.340 |
| **5** | 0.665 |
| **16** | 1.015 |
| **25** | 1.190 |
| **50** | 1.525 |
| **75** | 1.810 |
| **84** | 1.940 |
| **95** | 2.225 |
| **99** | 2.520 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.616 | 0.326 |
| Standard Deviation | 0.473 | 0.721 |
| Skewness | -0.283 | |
| Kurtosis | 4.003 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.478 | 1.493 |
| Standard Deviation | 0.462 | 0.468 |
| Skewness (1) | -0.103 | -0.103 |
| Skewness (2) | -0.173 | |
| Kurtosis | 0.686 | 1.031 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1580+00** |
| **Sample** | **Swash** |
| **Mean** | **0.409 mm** |
| **STD** | **0.625 mm** |
| **Skewness** | **-0.645** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 100.45 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.72 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.6 |

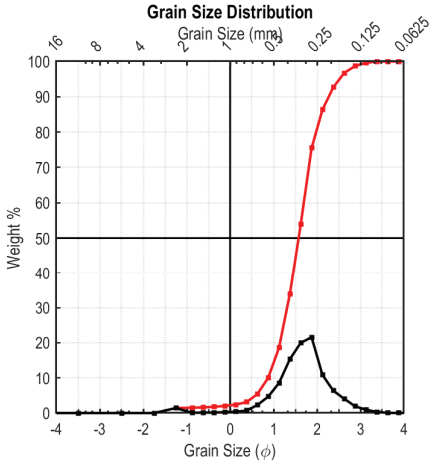
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.72 | 0.72 | 0.72 |
| -0.75 | -0.875 | 0.32 | 0.32 | 1.04 |
| -0.5 | -0.625 | 0.78 | 0.78 | 1.81 |
| -0.25 | -0.375 | 0.83 | 0.83 | 2.64 |
| 0 | -0.125 | 1.57 | 1.56 | 4.20 |
| 0.25 | 0.125 | 2.25 | 2.24 | 6.44 |
| 0.5 | 0.375 | 4.03 | 4.01 | 10.45 |
| 0.75 | 0.625 | 8.30 | 8.26 | 18.72 |
| 1 | 0.875 | 10.96 | 10.91 | 29.63 |
| 1.25 | 1.125 | 13.62 | 13.56 | 43.19 |
| 1.5 | 1.375 | 16.18 | 16.11 | 59.29 |
| 1.75 | 1.625 | 15.51 | 15.44 | 74.73 |
| 2 | 1.875 | 13.87 | 13.81 | 88.54 |
| 2.25 | 2.125 | 6.79 | 6.76 | 95.30 |
| 2.5 | 2.375 | 3.05 | 3.04 | 98.34 |
| 2.75 | 2.625 | 0.90 | 0.90 | 99.23 |
| 3 | 2.875 | 0.31 | 0.31 | 99.54 |
| 3.25 | 3.125 | 0.26 | 0.26 | 99.80 |
| 3.5 | 3.375 | 0.14 | 0.14 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.915 |
| **5** | -0.035 |
| **16** | 0.545 |
| **25** | 0.770 |
| **50** | 1.230 |
| **75** | 1.630 |
| **84** | 1.795 |
| **95** | 2.115 |
| **99** | 2.560 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.290 | 0.409 |
| Standard Deviation | 0.677 | 0.625 |
| Skewness | -0.645 | |
| Kurtosis | 4.370 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.170 | 1.190 |
| Standard Deviation | 0.625 | 0.638 |
| Skewness (1) | -0.096 | -0.136 |
| Skewness (2) | -0.304 | |
| Kurtosis | 0.720 | 1.025 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** May 10 2023
**Station** 1590+00
**Sample** Toe of Dune

**Mean** 0.316 mm
**STD** 0.638 mm
**Skewness** -1.234

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.09 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.43 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

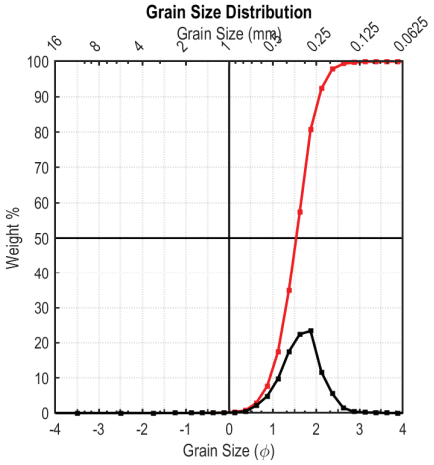
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.47 | 1.43 | 1.43 |
| -0.75 | -0.875 | 0.08 | 0.08 | 1.50 |
| -0.5 | -0.625 | 0.13 | 0.13 | 1.63 |
| -0.25 | -0.375 | 0.13 | 0.13 | 1.76 |
| 0 | -0.125 | 0.27 | 0.26 | 2.02 |
| 0.25 | 0.125 | 0.39 | 0.38 | 2.40 |
| 0.5 | 0.375 | 0.72 | 0.70 | 3.09 |
| 0.75 | 0.625 | 2.35 | 2.28 | 5.37 |
| 1 | 0.875 | 4.79 | 4.65 | 10.02 |
| 1.25 | 1.125 | 8.82 | 8.56 | 18.58 |
| 1.5 | 1.375 | 15.80 | 15.33 | 33.90 |
| 1.75 | 1.625 | 20.61 | 19.99 | 53.89 |
| 2 | 1.875 | 22.25 | 21.58 | 75.48 |
| 2.25 | 2.125 | 11.18 | 10.84 | 86.32 |
| 2.5 | 2.375 | 6.55 | 6.35 | 92.68 |
| 2.75 | 2.625 | 4.18 | 4.05 | 96.73 |
| 3 | 2.875 | 2.00 | 1.94 | 98.67 |
| 3.25 | 3.125 | 0.97 | 0.94 | 99.61 |
| 3.5 | 3.375 | 0.33 | 0.32 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| Percentiles | |
|---|---|
| 1 | -1.400 |
| 5 | 0.585 |
| 16 | 1.050 |
| 25 | 1.230 |
| 50 | 1.575 |
| 75 | 1.870 |
| 84 | 2.070 |
| 95 | 2.520 |
| 99 | 2.960 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.661 | 0.316 |
| Standard Deviation | 0.649 | 0.638 |
| Skewness | -1.234 | |
| Kurtosis | 7.969 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.560 | 1.565 |
| Standard Deviation | 0.510 | 0.548 |
| Skewness (1) | -0.029 | -0.026 |
| Skewness (2) | -0.044 | |
| Kurtosis | 0.897 | 1.239 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** May 10 2023
**Station** 1590+00
**Sample** Beach Face

**Mean** 0.319 mm
**STD** 0.731 mm
**Skewness** -0.173

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 100.02 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.7 |

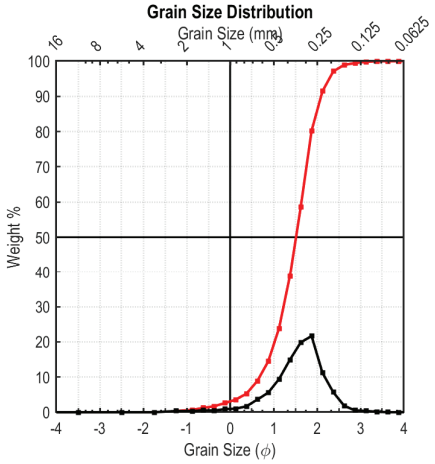
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.02 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.05 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.07 |
| 0 | -0.125 | 0.07 | 0.07 | 0.14 |
| 0.25 | 0.125 | 0.12 | 0.12 | 0.26 |
| 0.5 | 0.375 | 0.50 | 0.50 | 0.76 |
| 0.75 | 0.625 | 2.10 | 2.10 | 2.86 |
| 1 | 0.875 | 4.79 | 4.79 | 7.65 |
| 1.25 | 1.125 | 9.77 | 9.77 | 17.42 |
| 1.5 | 1.375 | 17.49 | 17.49 | 34.90 |
| 1.75 | 1.625 | 22.44 | 22.44 | 57.34 |
| 2 | 1.875 | 23.36 | 23.36 | 80.69 |
| 2.25 | 2.125 | 11.63 | 11.63 | 92.32 |
| 2.5 | 2.375 | 5.51 | 5.51 | 97.83 |
| 2.75 | 2.625 | 1.50 | 1.50 | 99.33 |
| 3 | 2.875 | 0.36 | 0.36 | 99.69 |
| 3.25 | 3.125 | 0.19 | 0.19 | 99.88 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| Percentiles | |
|---|---|
| 1 | 0.405 |
| 5 | 0.735 |
| 16 | 1.090 |
| 25 | 1.235 |
| 50 | 1.545 |
| 75 | 1.815 |
| 84 | 1.945 |
| 95 | 2.245 |
| 99 | 2.570 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.647 | 0.319 |
| Standard Deviation | 0.451 | 0.731 |
| Skewness | -0.173 | |
| Kurtosis | 4.160 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.517 | 1.527 |
| Standard Deviation | 0.427 | 0.443 |
| Skewness (1) | -0.064 | -0.069 |
| Skewness (2) | -0.129 | |
| Kurtosis | 0.766 | 1.067 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** May 10 2023
**Station** 1590+00
**Sample** Swash

**Mean** 0.340 mm
**STD** 0.652 mm
**Skewness** -1.059

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.96 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.35 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

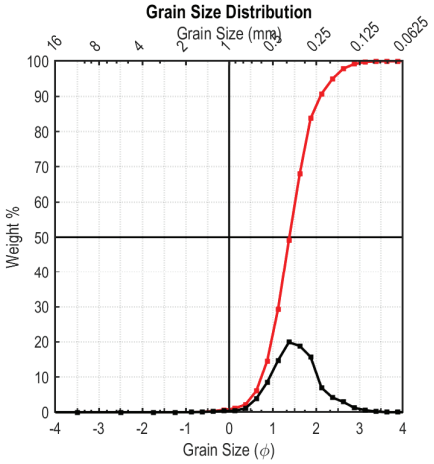
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.36 | 0.35 | 0.35 |
| -0.75 | -0.875 | 0.33 | 0.32 | 0.67 |
| -0.5 | -0.625 | 0.56 | 0.54 | 1.21 |
| -0.25 | -0.375 | 0.50 | 0.49 | 1.70 |
| 0 | -0.125 | 0.90 | 0.87 | 2.57 |
| 0.25 | 0.125 | 1.05 | 1.02 | 3.59 |
| 0.5 | 0.375 | 1.72 | 1.67 | 5.26 |
| 0.75 | 0.625 | 3.71 | 3.60 | 8.87 |
| 1 | 0.875 | 5.71 | 5.55 | 14.41 |
| 1.25 | 1.125 | 9.69 | 9.41 | 23.82 |
| 1.5 | 1.375 | 15.35 | 14.91 | 38.73 |
| 1.75 | 1.625 | 20.44 | 19.85 | 58.59 |
| 2 | 1.875 | 22.30 | 21.66 | 80.24 |
| 2.25 | 2.125 | 11.53 | 11.20 | 91.44 |
| 2.5 | 2.375 | 5.83 | 5.66 | 97.11 |
| 2.75 | 2.625 | 1.89 | 1.84 | 98.94 |
| 3 | 2.875 | 0.53 | 0.51 | 99.46 |
| 3.25 | 3.125 | 0.38 | 0.37 | 99.83 |
| 3.5 | 3.375 | 0.14 | 0.14 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| Percentiles | |
|---|---|
| 1 | -0.725 |
| 5 | 0.335 |
| 16 | 0.915 |
| 25 | 1.145 |
| 50 | 1.515 |
| 75 | 1.815 |
| 84 | 1.960 |
| 95 | 2.280 |
| 99 | 2.655 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.558 | 0.340 |
| Standard Deviation | 0.618 | 0.652 |
| Skewness | -1.059 | |
| Kurtosis | 5.758 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.438 | 1.463 |
| Standard Deviation | 0.522 | 0.556 |
| Skewness (1) | -0.148 | -0.181 |
| Skewness (2) | -0.397 | |
| Kurtosis | 0.861 | 1.190 |

## Grain Size Distribution




**Project** 2525
**Location** Avon, NC

**Date** May 10 2023
**Station** 1600+00
**Sample** Toe of Dune

**Mean** 0.346 mm
**STD** 0.684 mm
**Skewness** 0.157

| USCS | Wentworth |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.66 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

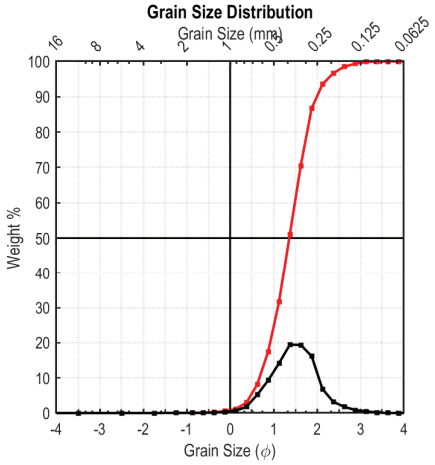
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.11 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.31 |
| 0 | -0.125 | 0.37 | 0.36 | 0.67 |
| 0.25 | 0.125 | 0.41 | 0.40 | 1.07 |
| 0.5 | 0.375 | 1.15 | 1.12 | 2.19 |
| 0.75 | 0.625 | 3.97 | 3.87 | 6.06 |
| 1 | 0.875 | 8.72 | 8.49 | 14.55 |
| 1.25 | 1.125 | 15.09 | 14.70 | 29.25 |
| 1.5 | 1.375 | 20.43 | 19.90 | 49.15 |
| 1.75 | 1.625 | 19.34 | 18.84 | 67.99 |
| 2 | 1.875 | 16.14 | 15.72 | 83.71 |
| 2.25 | 2.125 | 7.17 | 6.98 | 90.70 |
| 2.5 | 2.375 | 4.32 | 4.21 | 94.91 |
| 2.75 | 2.625 | 3.03 | 2.95 | 97.86 |
| 3 | 2.875 | 1.33 | 1.30 | 99.15 |
| 3.25 | 3.125 | 0.62 | 0.60 | 99.76 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| Percentiles | |
|---|---|
| 1 | 0.080 |
| 5 | 0.555 |
| 16 | 0.900 |
| 25 | 1.055 |
| 50 | 1.385 |
| 75 | 1.735 |
| 84 | 1.885 |
| 95 | 2.385 |
| 99 | 2.845 |

| Moment Measures | (phi) | (mm) |
|---|---|---|
| Mean | 1.532 | 0.346 |
| Standard Deviation | 0.549 | 0.684 |
| Skewness | 0.157 | |
| Kurtosis | 3.933 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| Graphic Phi Parameters | Inman 1952 | Folk & Ward 1957 |
|---|---|---|
| Mean | 1.392 | 1.390 |
| Standard Deviation | 0.492 | 0.524 |
| Skewness (1) | 0.015 | 0.054 |
| Skewness (2) | 0.173 | |
| Kurtosis | 0.858 | 1.103 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1600+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.359 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **-0.002** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.22 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.8 |

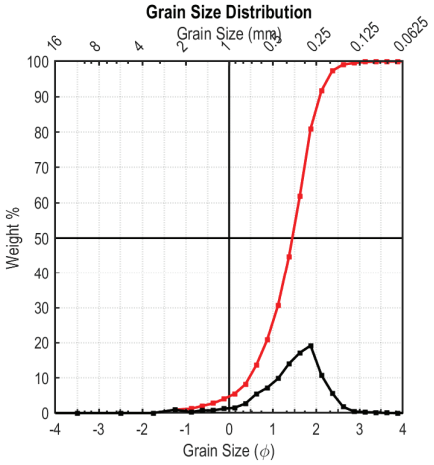
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.07 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.12 |
| -0.25 | -0.375 | 0.12 | 0.12 | 0.23 |
| 0 | -0.125 | 0.31 | 0.30 | 0.54 |
| 0.25 | 0.125 | 0.64 | 0.63 | 1.16 |
| 0.5 | 0.375 | 1.81 | 1.77 | 2.93 |
| 0.75 | 0.625 | 5.35 | 5.23 | 8.17 |
| 1 | 0.875 | 9.49 | 9.28 | 17.45 |
| 1.25 | 1.125 | 14.50 | 14.19 | 31.64 |
| 1.5 | 1.375 | 19.89 | 19.46 | 51.10 |
| 1.75 | 1.625 | 19.81 | 19.38 | 70.48 |
| 2 | 1.875 | 16.56 | 16.20 | 86.68 |
| 2.25 | 2.125 | 7.00 | 6.85 | 93.52 |
| 2.5 | 2.375 | 3.23 | 3.16 | 96.68 |
| 2.75 | 2.625 | 1.85 | 1.81 | 98.49 |
| 3 | 2.875 | 0.87 | 0.85 | 99.34 |
| 3.25 | 3.125 | 0.51 | 0.50 | 99.84 |
| 3.5 | 3.375 | 0.15 | 0.15 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.060 |
| **5** | 0.475 |
| **16** | 0.835 |
| **25** | 1.010 |
| **50** | 1.360 |
| **75** | 1.695 |
| **84** | 1.835 |
| **95** | 2.240 |
| **99** | 2.775 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.479 | 0.359 |
| Standard Deviation | 0.536 | 0.690 |
| Skewness | -0.002 | |
| Kurtosis | 3.940 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.335 | 1.343 |
| Standard Deviation | 0.500 | 0.517 |
| Skewness (1) | -0.050 | -0.026 |
| Skewness (2) | -0.005 | |
| Kurtosis | 0.765 | 1.056 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1600+00** |
| **Sample** | **Swash** |
| **Mean** | **0.363 mm** |
| **STD** | **0.616 mm** |
| **Skewness** | **-1.041** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.07 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.94 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.4 |

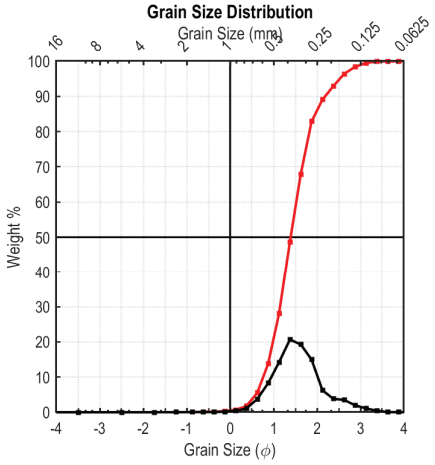
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.97 | 0.94 | 0.94 |
| -0.75 | -0.875 | 0.30 | 0.29 | 1.23 |
| -0.5 | -0.625 | 0.79 | 0.77 | 2.00 |
| -0.25 | -0.375 | 0.77 | 0.75 | 2.75 |
| 0 | -0.125 | 1.27 | 1.23 | 3.98 |
| 0.25 | 0.125 | 1.55 | 1.50 | 5.48 |
| 0.5 | 0.375 | 2.78 | 2.70 | 8.18 |
| 0.75 | 0.625 | 5.60 | 5.43 | 13.61 |
| 1 | 0.875 | 7.41 | 7.19 | 20.80 |
| 1.25 | 1.125 | 10.10 | 9.80 | 30.60 |
| 1.5 | 1.375 | 14.44 | 14.01 | 44.61 |
| 1.75 | 1.625 | 17.67 | 17.14 | 61.75 |
| 2 | 1.875 | 19.79 | 19.20 | 80.95 |
| 2.25 | 2.125 | 11.09 | 10.76 | 91.71 |
| 2.5 | 2.375 | 5.82 | 5.65 | 97.36 |
| 2.75 | 2.625 | 1.81 | 1.76 | 99.12 |
| 3 | 2.875 | 0.45 | 0.44 | 99.55 |
| 3.25 | 3.125 | 0.29 | 0.28 | 99.84 |
| 3.5 | 3.375 | 0.13 | 0.13 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.175 |
| **5** | 0.045 |
| **16** | 0.710 |
| **25** | 0.980 |
| **50** | 1.455 |
| **75** | 1.795 |
| **84** | 1.945 |
| **95** | 2.270 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.463 | 0.363 |
| Standard Deviation | 0.698 | 0.616 |
| Skewness | -1.041 | |
| Kurtosis | 5.050 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.327 | 1.370 |
| Standard Deviation | 0.617 | 0.646 |
| Skewness (1) | -0.206 | -0.237 |
| Skewness (2) | -0.482 | |
| Kurtosis | 0.802 | 1.119 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1610+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.339 mm** |
| **STD** | **0.675 mm** |
| **Skewness** | **0.434** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.50 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

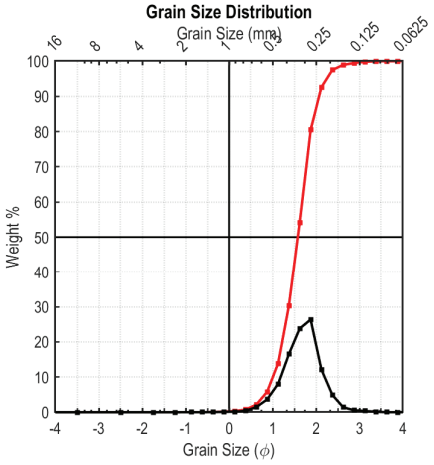
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.05 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.12 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.16 |
| 0 | -0.125 | 0.17 | 0.17 | 0.32 |
| 0.25 | 0.125 | 0.37 | 0.36 | 0.68 |
| 0.5 | 0.375 | 1.11 | 1.08 | 1.77 |
| 0.75 | 0.625 | 3.86 | 3.77 | 5.53 |
| 1 | 0.875 | 8.47 | 8.26 | 13.80 |
| 1.25 | 1.125 | 14.55 | 14.20 | 27.99 |
| 1.5 | 1.375 | 21.16 | 20.64 | 48.63 |
| 1.75 | 1.625 | 19.76 | 19.28 | 67.91 |
| 2 | 1.875 | 15.32 | 14.95 | 82.86 |
| 2.25 | 2.125 | 6.37 | 6.21 | 89.07 |
| 2.5 | 2.375 | 3.92 | 3.82 | 92.90 |
| 2.75 | 2.625 | 3.58 | 3.49 | 96.39 |
| 3 | 2.875 | 2.03 | 1.98 | 98.37 |
| 3.25 | 3.125 | 1.12 | 1.09 | 99.46 |
| 3.5 | 3.375 | 0.44 | 0.43 | 99.89 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.200 |
| **5** | 0.590 |
| **16** | 0.915 |
| **25** | 1.070 |
| **50** | 1.395 |
| **75** | 1.745 |
| **84** | 1.920 |
| **95** | 2.525 |
| **99** | 3.020 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.560 | 0.339 |
| Standard Deviation | 0.568 | 0.675 |
| Skewness | 0.434 | |
| Kurtosis | 4.044 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.417 | 1.410 |
| Standard Deviation | 0.502 | 0.544 |
| Skewness (1) | 0.045 | 0.106 |
| Skewness (2) | 0.323 | |
| Kurtosis | 0.925 | 1.175 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1610+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.311 mm** |
| **STD** | **0.740 mm** |
| **Skewness** | **-0.141** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.60 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.2 |

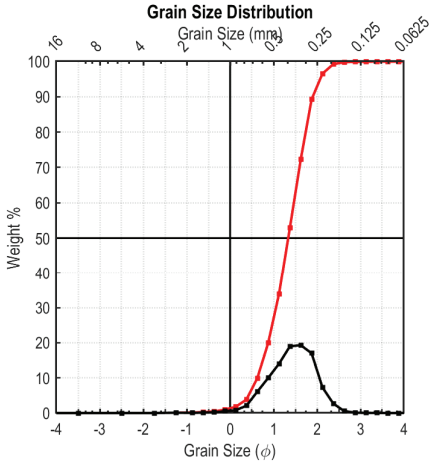
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.06 |
| 0 | -0.125 | 0.11 | 0.11 | 0.16 |
| 0.25 | 0.125 | 0.17 | 0.16 | 0.33 |
| 0.5 | 0.375 | 0.40 | 0.38 | 0.71 |
| 0.75 | 0.625 | 1.52 | 1.45 | 2.16 |
| 1 | 0.875 | 3.81 | 3.64 | 5.80 |
| 1.25 | 1.125 | 8.35 | 7.98 | 13.79 |
| 1.5 | 1.375 | 17.28 | 16.52 | 30.31 |
| 1.75 | 1.625 | 24.89 | 23.80 | 54.10 |
| 2 | 1.875 | 27.57 | 26.36 | 80.46 |
| 2.25 | 2.125 | 12.69 | 12.13 | 92.59 |
| 2.5 | 2.375 | 5.14 | 4.91 | 97.50 |
| 2.75 | 2.625 | 1.48 | 1.41 | 98.92 |
| 3 | 2.875 | 0.58 | 0.55 | 99.47 |
| 3.25 | 3.125 | 0.37 | 0.35 | 99.83 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.425 |
| **5** | 0.820 |
| **16** | 1.160 |
| **25** | 1.295 |
| **50** | 1.580 |
| **75** | 1.825 |
| **84** | 1.950 |
| **95** | 2.250 |
| **99** | 2.660 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.685 | 0.311 |
| Standard Deviation | 0.434 | 0.740 |
| Skewness | -0.141 | |
| Kurtosis | 4.627 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.555 | 1.563 |
| Standard Deviation | 0.395 | 0.414 |
| Skewness (1) | -0.063 | -0.063 |
| Skewness (2) | -0.114 | |
| Kurtosis | 0.810 | 1.106 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1610+00** |
| **Sample** | **Swash** |
| **Mean** | **0.373 mm** |
| **STD** | **0.698 mm** |
| **Skewness** | **-0.444** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.88 |
| % finer than 0.0625 mm (dry) | 0.05 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

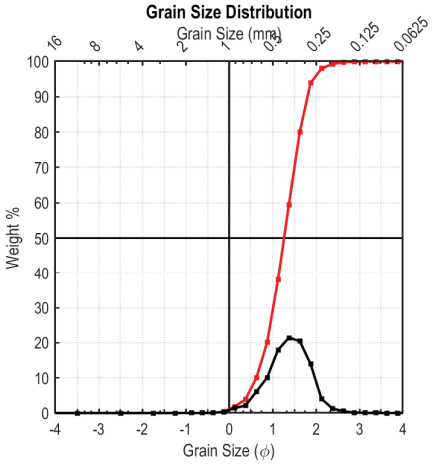
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.13 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.26 |
| -0.25 | -0.375 | 0.19 | 0.18 | 0.44 |
| 0 | -0.125 | 0.54 | 0.51 | 0.95 |
| 0.25 | 0.125 | 0.85 | 0.81 | 1.76 |
| 0.5 | 0.375 | 2.17 | 2.07 | 3.83 |
| 0.75 | 0.625 | 6.38 | 6.08 | 9.92 |
| 1 | 0.875 | 10.47 | 9.98 | 19.90 |
| 1.25 | 1.125 | 14.71 | 14.03 | 33.92 |
| 1.5 | 1.375 | 19.91 | 18.98 | 52.91 |
| 1.75 | 1.625 | 20.27 | 19.33 | 72.23 |
| 2 | 1.875 | 17.84 | 17.01 | 89.24 |
| 2.25 | 2.125 | 7.65 | 7.29 | 96.54 |
| 2.5 | 2.375 | 2.81 | 2.68 | 99.22 |
| 2.75 | 2.625 | 0.59 | 0.56 | 99.78 |
| 3 | 2.875 | 0.10 | 0.10 | 99.88 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.92 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.95 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.95 |
| 4 | 3.875 | 0.00 | 0.00 | 99.95 |
| >4.0 | 4.25 | 0.05 | 0.05 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.110 |
| **5** | 0.425 |
| **16** | 0.775 |
| **25** | 0.965 |
| **50** | 1.335 |
| **75** | 1.665 |
| **84** | 1.800 |
| **95** | 2.070 |
| **99** | 2.355 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.423 | 0.373 |
| Standard Deviation | 0.519 | 0.698 |
| Skewness | -0.444 | |
| Kurtosis | 4.324 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.287 | 1.303 |
| Standard Deviation | 0.512 | 0.505 |
| Skewness (1) | -0.093 | -0.100 |
| Skewness (2) | -0.171 | |
| Kurtosis | 0.605 | 0.963 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1620+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.389 mm** |
| **STD** | **0.722 mm** |
| **Skewness** | **-0.228** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.37 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

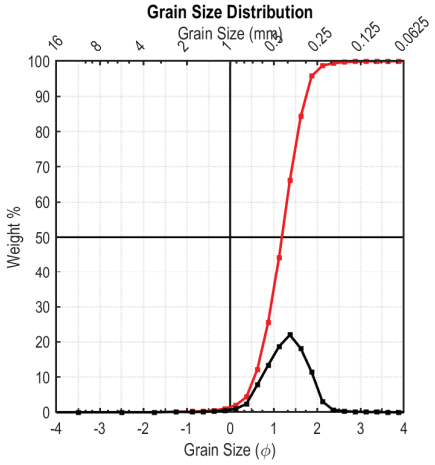
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.05 |
| 0 | -0.125 | 0.35 | 0.34 | 0.39 |
| 0.25 | 0.125 | 1.45 | 1.40 | 1.79 |
| 0.5 | 0.375 | 2.18 | 2.11 | 3.90 |
| 0.75 | 0.625 | 6.28 | 6.08 | 9.97 |
| 1 | 0.875 | 10.46 | 10.12 | 20.09 |
| 1.25 | 1.125 | 18.58 | 17.97 | 38.07 |
| 1.5 | 1.375 | 22.15 | 21.43 | 59.50 |
| 1.75 | 1.625 | 21.17 | 20.48 | 79.97 |
| 2 | 1.875 | 14.40 | 13.93 | 93.91 |
| 2.25 | 2.125 | 4.21 | 4.07 | 97.98 |
| 2.5 | 2.375 | 1.33 | 1.29 | 99.26 |
| 2.75 | 2.625 | 0.55 | 0.53 | 99.80 |
| 3 | 2.875 | 0.13 | 0.13 | 99.92 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.015 |
| **5** | 0.420 |
| **16** | 0.775 |
| **25** | 0.945 |
| **50** | 1.265 |
| **75** | 1.565 |
| **84** | 1.695 |
| **95** | 1.940 |
| **99** | 2.325 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.364 | 0.389 |
| Standard Deviation | 0.470 | 0.722 |
| Skewness | -0.228 | |
| Kurtosis | 3.648 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.235 | 1.245 |
| Standard Deviation | 0.460 | 0.460 |
| Skewness (1) | -0.065 | -0.089 |
| Skewness (2) | -0.185 | |
| Kurtosis | 0.652 | 1.005 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1620+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.409 mm** |
| **STD** | **0.716 mm** |
| **Skewness** | **-0.378** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.44 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.9 |

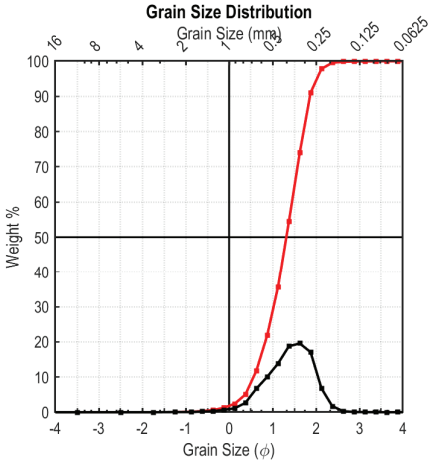
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.13 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.17 |
| -0.5 | -0.625 | 0.14 | 0.14 | 0.31 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.51 |
| 0 | -0.125 | 0.51 | 0.49 | 1.01 |
| 0.25 | 0.125 | 0.97 | 0.94 | 1.94 |
| 0.5 | 0.375 | 2.48 | 2.40 | 4.34 |
| 0.75 | 0.625 | 8.06 | 7.79 | 12.13 |
| 1 | 0.875 | 13.83 | 13.37 | 25.50 |
| 1.25 | 1.125 | 19.31 | 18.67 | 44.17 |
| 1.5 | 1.375 | 22.74 | 21.98 | 66.15 |
| 1.75 | 1.625 | 18.76 | 18.14 | 84.29 |
| 2 | 1.875 | 11.83 | 11.44 | 95.73 |
| 2.25 | 2.125 | 3.12 | 3.02 | 98.74 |
| 2.5 | 2.375 | 0.68 | 0.66 | 99.40 |
| 2.75 | 2.625 | 0.33 | 0.32 | 99.72 |
| 3 | 2.875 | 0.14 | 0.14 | 99.85 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.94 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.130 |
| **5** | 0.395 |
| **16** | 0.695 |
| **25** | 0.865 |
| **50** | 1.190 |
| **75** | 1.495 |
| **84** | 1.620 |
| **95** | 1.860 |
| **99** | 2.225 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.290 | 0.409 |
| Standard Deviation | 0.481 | 0.716 |
| Skewness | -0.378 | |
| Kurtosis | 4.855 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.157 | 1.168 |
| Standard Deviation | 0.463 | 0.453 |
| Skewness (1) | -0.070 | -0.078 |
| Skewness (2) | -0.135 | |
| Kurtosis | 0.584 | 0.953 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1620+00** |
| **Sample** | **Swash** |
| **Mean** | **0.382 mm** |
| **STD** | **0.695 mm** |
| **Skewness** | **-0.563** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.66 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.9 |

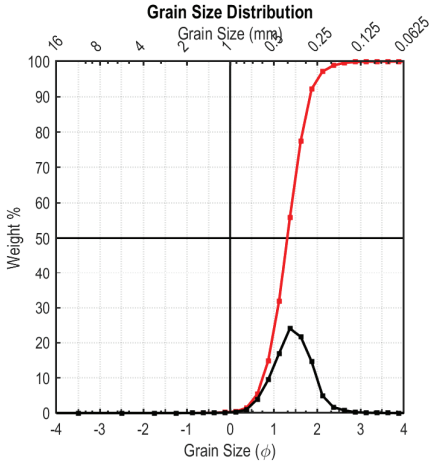
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.12 |
| -0.5 | -0.625 | 0.20 | 0.19 | 0.31 |
| -0.25 | -0.375 | 0.30 | 0.29 | 0.60 |
| 0 | -0.125 | 0.69 | 0.67 | 1.26 |
| 0.25 | 0.125 | 1.16 | 1.12 | 2.38 |
| 0.5 | 0.375 | 2.77 | 2.67 | 5.05 |
| 0.75 | 0.625 | 6.94 | 6.69 | 11.75 |
| 1 | 0.875 | 10.41 | 10.04 | 21.79 |
| 1.25 | 1.125 | 14.35 | 13.84 | 35.64 |
| 1.5 | 1.375 | 19.45 | 18.76 | 54.40 |
| 1.75 | 1.625 | 20.28 | 19.56 | 73.96 |
| 2 | 1.875 | 17.70 | 17.08 | 91.04 |
| 2.25 | 2.125 | 7.03 | 6.78 | 97.82 |
| 2.5 | 2.375 | 1.77 | 1.71 | 99.53 |
| 2.75 | 2.625 | 0.32 | 0.31 | 99.84 |
| 3 | 2.875 | 0.07 | 0.07 | 99.90 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.94 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.96 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.96 |
| 4 | 3.875 | 0.01 | 0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.225 |
| **5** | 0.370 |
| **16** | 0.730 |
| **25** | 0.935 |
| **50** | 1.315 |
| **75** | 1.640 |
| **84** | 1.770 |
| **95** | 2.020 |
| **99** | 2.300 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.387 | 0.382 |
| Standard Deviation | 0.525 | 0.695 |
| Skewness | -0.563 | |
| Kurtosis | 4.099 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.250 | 1.272 |
| Standard Deviation | 0.520 | 0.510 |
| Skewness (1) | -0.125 | -0.135 |
| Skewness (2) | -0.231 | |
| Kurtosis | 0.587 | 0.959 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1630+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.369 mm** |
| **STD** | **0.739 mm** |
| **Skewness** | **0.082** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.50 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

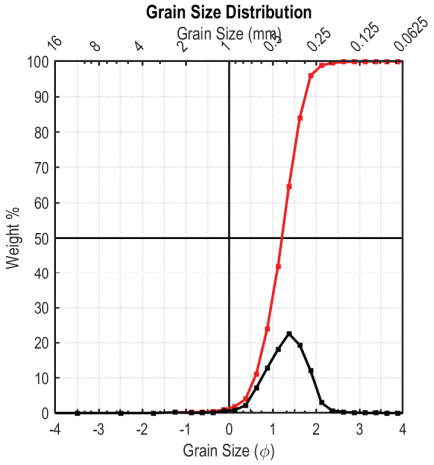
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.03 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.08 |
| 0 | -0.125 | 0.10 | 0.10 | 0.17 |
| 0.25 | 0.125 | 0.31 | 0.30 | 0.47 |
| 0.5 | 0.375 | 1.01 | 0.97 | 1.44 |
| 0.75 | 0.625 | 4.10 | 3.92 | 5.36 |
| 1 | 0.875 | 9.87 | 9.44 | 14.80 |
| 1.25 | 1.125 | 17.70 | 16.94 | 31.74 |
| 1.5 | 1.375 | 25.15 | 24.07 | 55.81 |
| 1.75 | 1.625 | 22.68 | 21.70 | 77.51 |
| 2 | 1.875 | 15.32 | 14.66 | 92.17 |
| 2.25 | 2.125 | 5.19 | 4.97 | 97.14 |
| 2.5 | 2.375 | 1.76 | 1.68 | 98.82 |
| 2.75 | 2.625 | 0.81 | 0.78 | 99.60 |
| 3 | 2.875 | 0.25 | 0.24 | 99.84 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.93 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.260 |
| **5** | 0.600 |
| **16** | 0.895 |
| **25** | 1.025 |
| **50** | 1.315 |
| **75** | 1.595 |
| **84** | 1.735 |
| **95** | 2.015 |
| **99** | 2.430 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.438 | 0.369 |
| Standard Deviation | 0.437 | 0.739 |
| Skewness | 0.082 | |
| Kurtosis | 4.217 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.315 | 1.315 |
| Standard Deviation | 0.420 | 0.424 |
| Skewness (1) | 0.000 | -0.005 |
| Skewness (2) | -0.018 | |
| Kurtosis | 0.685 | 1.017 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1630+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.405 mm** |
| **STD** | **0.722 mm** |
| **Skewness** | **-0.559** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.88 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.4 |

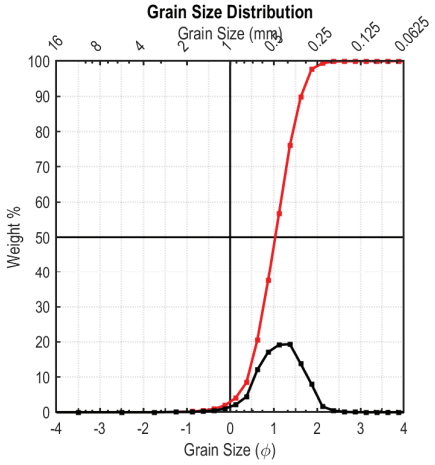
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.22 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.29 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.45 |
| 0 | -0.125 | 0.54 | 0.52 | 0.97 |
| 0.25 | 0.125 | 0.87 | 0.84 | 1.81 |
| 0.5 | 0.375 | 2.23 | 2.15 | 3.96 |
| 0.75 | 0.625 | 7.43 | 7.15 | 11.11 |
| 1 | 0.875 | 13.28 | 12.78 | 23.89 |
| 1.25 | 1.125 | 18.82 | 18.12 | 42.01 |
| 1.5 | 1.375 | 23.48 | 22.60 | 64.61 |
| 1.75 | 1.625 | 20.09 | 19.34 | 83.95 |
| 2 | 1.875 | 12.48 | 12.01 | 95.97 |
| 2.25 | 2.125 | 3.04 | 2.93 | 98.89 |
| 2.5 | 2.375 | 0.69 | 0.66 | 99.56 |
| 2.75 | 2.625 | 0.31 | 0.30 | 99.86 |
| 3 | 2.875 | 0.09 | 0.09 | 99.94 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.115 |
| **5** | 0.410 |
| **16** | 0.720 |
| **25** | 0.890 |
| **50** | 1.215 |
| **75** | 1.510 |
| **84** | 1.625 |
| **95** | 1.855 |
| **99** | 2.165 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.306 | 0.405 |
| Standard Deviation | 0.470 | 0.722 |
| Skewness | -0.559 | |
| Kurtosis | 5.012 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.172 | 1.187 |
| Standard Deviation | 0.453 | 0.445 |
| Skewness (1) | -0.094 | -0.104 |
| Skewness (2) | -0.182 | |
| Kurtosis | 0.597 | 0.955 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1630+00** |
| **Sample** | **Swash** |
| **Mean** | **0.454 mm** |
| **STD** | **0.708 mm** |
| **Skewness** | **-0.441** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 101.91 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.1 |

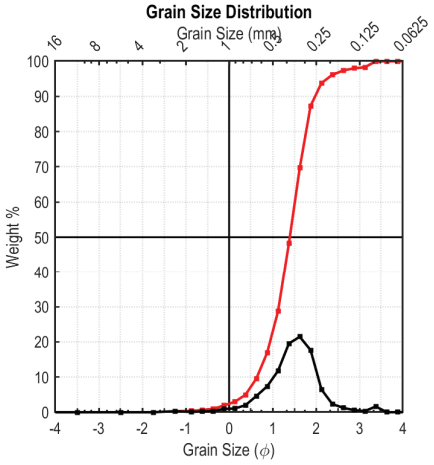
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.09 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.18 |
| -0.5 | -0.625 | 0.31 | 0.30 | 0.48 |
| -0.25 | -0.375 | 0.44 | 0.43 | 0.91 |
| 0 | -0.125 | 1.02 | 1.00 | 1.91 |
| 0.25 | 0.125 | 2.17 | 2.13 | 4.04 |
| 0.5 | 0.375 | 4.48 | 4.40 | 8.44 |
| 0.75 | 0.625 | 12.26 | 12.03 | 20.47 |
| 1 | 0.875 | 17.42 | 17.09 | 37.56 |
| 1.25 | 1.125 | 19.54 | 19.17 | 56.74 |
| 1.5 | 1.375 | 19.72 | 19.35 | 76.09 |
| 1.75 | 1.625 | 14.00 | 13.74 | 89.82 |
| 2 | 1.875 | 8.07 | 7.92 | 97.74 |
| 2.25 | 2.125 | 1.68 | 1.65 | 99.39 |
| 2.5 | 2.375 | 0.50 | 0.49 | 99.88 |
| 2.75 | 2.625 | 0.10 | 0.10 | 99.98 |
| 3 | 2.875 | 0.02 | 0.02 | 100.00 |
| 3.25 | 3.125 | 0.00 | 0.00 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.355 |
| **5** | 0.180 |
| **16** | 0.530 |
| **25** | 0.690 |
| **50** | 1.035 |
| **75** | 1.360 |
| **84** | 1.520 |
| **95** | 1.790 |
| **99** | 2.065 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.141 | 0.454 |
| Standard Deviation | 0.498 | 0.708 |
| Skewness | -0.441 | |
| Kurtosis | 3.801 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.025 | 1.028 |
| Standard Deviation | 0.495 | 0.491 |
| Skewness (1) | -0.020 | -0.041 |
| Skewness (2) | -0.101 | |
| Kurtosis | 0.626 | 0.985 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1640+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.357 mm** |
| **STD** | **0.655 mm** |
| **Skewness** | **-0.204** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.19 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 0.31 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.9 |

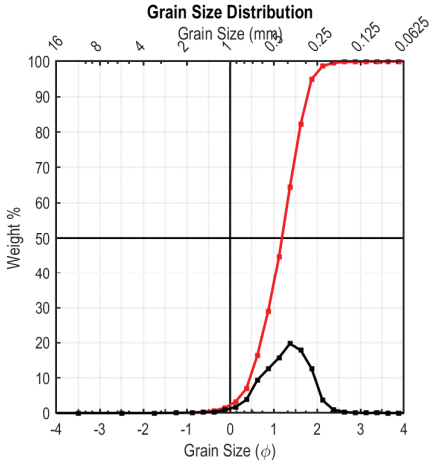
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.32 | 0.31 | 0.31 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.40 |
| -0.5 | -0.625 | 0.24 | 0.23 | 0.63 |
| -0.25 | -0.375 | 0.33 | 0.32 | 0.95 |
| 0 | -0.125 | 0.97 | 0.94 | 1.89 |
| 0.25 | 0.125 | 1.09 | 1.06 | 2.95 |
| 0.5 | 0.375 | 2.06 | 2.00 | 4.94 |
| 0.75 | 0.625 | 4.75 | 4.60 | 9.55 |
| 1 | 0.875 | 7.60 | 7.37 | 16.91 |
| 1.25 | 1.125 | 12.14 | 11.76 | 28.68 |
| 1.5 | 1.375 | 20.15 | 19.53 | 48.20 |
| 1.75 | 1.625 | 22.13 | 21.45 | 69.65 |
| 2 | 1.875 | 18.21 | 17.65 | 87.30 |
| 2.25 | 2.125 | 6.68 | 6.47 | 93.77 |
| 2.5 | 2.375 | 2.41 | 2.34 | 96.10 |
| 2.75 | 2.625 | 1.29 | 1.25 | 97.35 |
| 3 | 2.875 | 0.62 | 0.60 | 97.96 |
| 3.25 | 3.125 | 0.34 | 0.33 | 98.28 |
| 3.5 | 3.375 | 1.70 | 1.65 | 99.93 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.95 |
| 4 | 3.875 | 0.01 | 0.01 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | 0.380 |
| **16** | 0.845 |
| **25** | 1.045 |
| **50** | 1.395 |
| **75** | 1.700 |
| **84** | 1.830 |
| **95** | 2.255 |
| **99** | 3.235 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.486 | 0.357 |
| Standard Deviation | 0.611 | 0.655 |
| Skewness | -0.204 | |
| Kurtosis | 5.670 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.337 | 1.357 |
| Standard Deviation | 0.493 | 0.530 |
| Skewness (1) | -0.117 | -0.100 |
| Skewness (2) | -0.157 | |
| Kurtosis | 0.904 | 1.173 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1640+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.415 mm** |
| **STD** | **0.696 mm** |
| **Skewness** | **-0.408** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.74 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

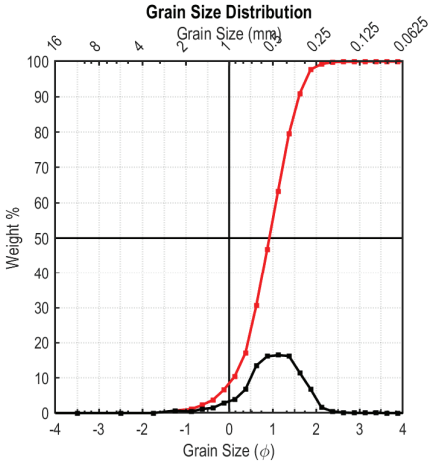
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.14 |
| -0.5 | -0.625 | 0.20 | 0.19 | 0.33 |
| -0.25 | -0.375 | 0.30 | 0.29 | 0.62 |
| 0 | -0.125 | 0.89 | 0.87 | 1.49 |
| 0.25 | 0.125 | 1.76 | 1.71 | 3.20 |
| 0.5 | 0.375 | 3.88 | 3.78 | 6.98 |
| 0.75 | 0.625 | 9.65 | 9.39 | 16.37 |
| 1 | 0.875 | 12.92 | 12.58 | 28.95 |
| 1.25 | 1.125 | 16.18 | 15.75 | 44.70 |
| 1.5 | 1.375 | 20.30 | 19.76 | 64.45 |
| 1.75 | 1.625 | 18.34 | 17.85 | 82.30 |
| 2 | 1.875 | 13.00 | 12.65 | 94.96 |
| 2.25 | 2.125 | 3.78 | 3.68 | 98.64 |
| 2.5 | 2.375 | 0.97 | 0.94 | 99.58 |
| 2.75 | 2.625 | 0.28 | 0.27 | 99.85 |
| 3 | 2.875 | 0.07 | 0.07 | 99.92 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.95 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.265 |
| **5** | 0.245 |
| **16** | 0.615 |
| **25** | 0.795 |
| **50** | 1.190 |
| **75** | 1.525 |
| **84** | 1.660 |
| **95** | 1.880 |
| **99** | 2.220 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.269 | 0.415 |
| Standard Deviation | 0.524 | 0.696 |
| Skewness | -0.408 | |
| Kurtosis | 3.828 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.137 | 1.155 |
| Standard Deviation | 0.523 | 0.509 |
| Skewness (1) | -0.100 | -0.128 |
| Skewness (2) | -0.244 | |
| Kurtosis | 0.565 | 0.918 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1640+00** |
| **Sample** | **Swash** |
| **Mean** | **0.500 mm** |
| **STD** | **0.652 mm** |
| **Skewness** | **-0.629** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.71 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.68 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.0 |

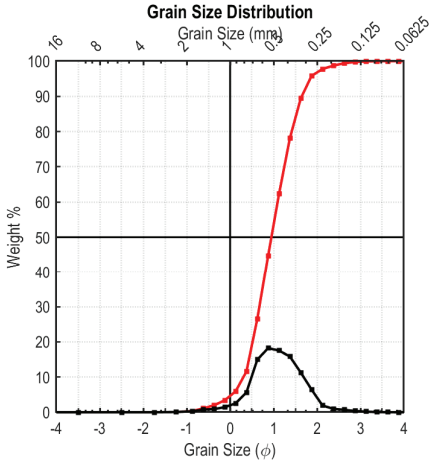
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.71 | 0.68 | 0.68 |
| -0.75 | -0.875 | 0.44 | 0.42 | 1.11 |
| -0.5 | -0.625 | 1.18 | 1.14 | 2.25 |
| -0.25 | -0.375 | 1.52 | 1.47 | 3.71 |
| 0 | -0.125 | 2.96 | 2.85 | 6.57 |
| 0.25 | 0.125 | 3.96 | 3.82 | 10.38 |
| 0.5 | 0.375 | 6.96 | 6.71 | 17.10 |
| 0.75 | 0.625 | 14.00 | 13.50 | 30.59 |
| 1 | 0.875 | 16.73 | 16.13 | 46.73 |
| 1.25 | 1.125 | 17.08 | 16.47 | 63.20 |
| 1.5 | 1.375 | 16.85 | 16.25 | 79.44 |
| 1.75 | 1.625 | 11.89 | 11.46 | 90.91 |
| 2 | 1.875 | 7.04 | 6.79 | 97.70 |
| 2.25 | 2.125 | 1.63 | 1.57 | 99.27 |
| 2.5 | 2.375 | 0.52 | 0.50 | 99.77 |
| 2.75 | 2.625 | 0.15 | 0.14 | 99.91 |
| 3 | 2.875 | 0.03 | 0.03 | 99.94 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.970 |
| **5** | -0.260 |
| **16** | 0.335 |
| **25** | 0.520 |
| **50** | 0.925 |
| **75** | 1.305 |
| **84** | 1.475 |
| **95** | 1.775 |
| **99** | 2.085 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.001 | 0.500 |
| Standard Deviation | 0.617 | 0.652 |
| Skewness | -0.629 | |
| Kurtosis | 4.066 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.905 | 0.912 |
| Standard Deviation | 0.570 | 0.593 |
| Skewness (1) | -0.035 | -0.100 |
| Skewness (2) | -0.294 | |
| Kurtosis | 0.785 | 1.062 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1650+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.472 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.046** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.84 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.9 |

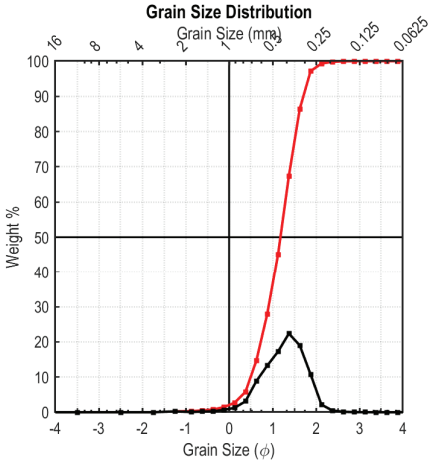
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.29 | 0.28 | 0.34 |
| -0.5 | -0.625 | 0.74 | 0.72 | 1.06 |
| -0.25 | -0.375 | 0.93 | 0.90 | 1.96 |
| 0 | -0.125 | 1.47 | 1.43 | 3.39 |
| 0.25 | 0.125 | 2.60 | 2.53 | 5.92 |
| 0.5 | 0.375 | 5.81 | 5.65 | 11.57 |
| 0.75 | 0.625 | 15.37 | 14.95 | 26.52 |
| 1 | 0.875 | 18.75 | 18.23 | 44.75 |
| 1.25 | 1.125 | 18.03 | 17.53 | 62.28 |
| 1.5 | 1.375 | 16.27 | 15.82 | 78.10 |
| 1.75 | 1.625 | 11.62 | 11.30 | 89.40 |
| 2 | 1.875 | 6.61 | 6.43 | 95.83 |
| 2.25 | 2.125 | 1.98 | 1.93 | 97.75 |
| 2.5 | 2.375 | 0.99 | 0.96 | 98.72 |
| 2.75 | 2.625 | 0.71 | 0.69 | 99.41 |
| 3 | 2.875 | 0.36 | 0.35 | 99.76 |
| 3.25 | 3.125 | 0.18 | 0.18 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.645 |
| **5** | 0.035 |
| **16** | 0.450 |
| **25** | 0.600 |
| **50** | 0.950 |
| **75** | 1.325 |
| **84** | 1.505 |
| **95** | 1.845 |
| **99** | 2.480 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.083 | 0.472 |
| Standard Deviation | 0.574 | 0.672 |
| Skewness | -0.046 | |
| Kurtosis | 4.172 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.977 | 0.968 |
| Standard Deviation | 0.528 | 0.538 |
| Skewness (1) | 0.052 | 0.021 |
| Skewness (2) | -0.019 | |
| Kurtosis | 0.716 | 1.023 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1650+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.420 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **-0.794** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 101.21 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.25 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

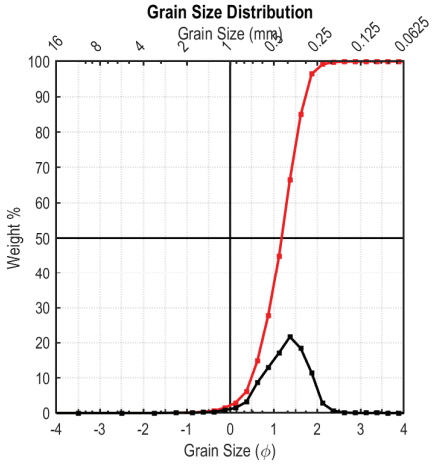
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.25 | 0.25 | 0.25 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.31 |
| -0.5 | -0.625 | 0.20 | 0.20 | 0.50 |
| -0.25 | -0.375 | 0.27 | 0.27 | 0.77 |
| 0 | -0.125 | 0.67 | 0.66 | 1.43 |
| 0.25 | 0.125 | 1.28 | 1.26 | 2.70 |
| 0.5 | 0.375 | 3.13 | 3.09 | 5.79 |
| 0.75 | 0.625 | 8.92 | 8.81 | 14.60 |
| 1 | 0.875 | 13.37 | 13.21 | 27.81 |
| 1.25 | 1.125 | 17.44 | 17.23 | 45.04 |
| 1.5 | 1.375 | 22.64 | 22.37 | 67.41 |
| 1.75 | 1.625 | 19.23 | 19.00 | 86.41 |
| 2 | 1.875 | 10.89 | 10.76 | 97.17 |
| 2.25 | 2.125 | 2.17 | 2.14 | 99.32 |
| 2.5 | 2.375 | 0.52 | 0.51 | 99.83 |
| 2.75 | 2.625 | 0.14 | 0.14 | 99.97 |
| 3 | 2.875 | 0.03 | 0.03 | 100.00 |
| 3.25 | 3.125 | 0.01 | 0.01 | 100.01 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.01 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.01 |
| 4 | 3.875 | -0.01 | -0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.290 |
| **5** | 0.310 |
| **16** | 0.650 |
| **25** | 0.820 |
| **50** | 1.180 |
| **75** | 1.475 |
| **84** | 1.595 |
| **95** | 1.825 |
| **99** | 2.090 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.251 | 0.420 |
| Standard Deviation | 0.488 | 0.713 |
| Skewness | -0.794 | |
| Kurtosis | 4.842 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.122 | 1.142 |
| Standard Deviation | 0.472 | 0.466 |
| Skewness (1) | -0.122 | -0.135 |
| Skewness (2) | -0.238 | |
| Kurtosis | 0.603 | 0.948 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1650+00** |
| **Sample** | **Swash** |
| **Mean** | **0.417 mm** |
| **STD** | **0.710 mm** |
| **Skewness** | **-0.573** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.31 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.2 |

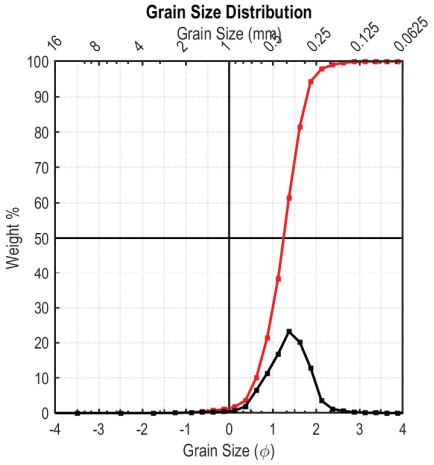
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.14 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.34 |
| -0.25 | -0.375 | 0.30 | 0.29 | 0.63 |
| 0 | -0.125 | 0.88 | 0.85 | 1.48 |
| 0.25 | 0.125 | 1.48 | 1.43 | 2.91 |
| 0.5 | 0.375 | 3.33 | 3.22 | 6.14 |
| 0.75 | 0.625 | 8.91 | 8.62 | 14.76 |
| 1 | 0.875 | 13.36 | 12.93 | 27.69 |
| 1.25 | 1.125 | 17.69 | 17.12 | 44.82 |
| 1.5 | 1.375 | 22.41 | 21.69 | 66.51 |
| 1.75 | 1.625 | 19.03 | 18.42 | 84.93 |
| 2 | 1.875 | 11.85 | 11.47 | 96.40 |
| 2.25 | 2.125 | 2.85 | 2.76 | 99.16 |
| 2.5 | 2.375 | 0.66 | 0.64 | 99.80 |
| 2.75 | 2.625 | 0.16 | 0.15 | 99.95 |
| 3 | 2.875 | 0.02 | 0.02 | 99.97 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.265 |
| **5** | 0.285 |
| **16** | 0.650 |
| **25** | 0.825 |
| **50** | 1.185 |
| **75** | 1.490 |
| **84** | 1.610 |
| **95** | 1.845 |
| **99** | 2.110 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.261 | 0.417 |
| Standard Deviation | 0.494 | 0.710 |
| Skewness | -0.573 | |
| Kurtosis | 4.095 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.130 | 1.148 |
| Standard Deviation | 0.480 | 0.476 |
| Skewness (1) | -0.115 | -0.134 |
| Skewness (2) | -0.250 | |
| Kurtosis | 0.625 | 0.961 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1660+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.393 mm** |
| **STD** | **0.714 mm** |
| **Skewness** | **-0.448** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.17 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.4 |

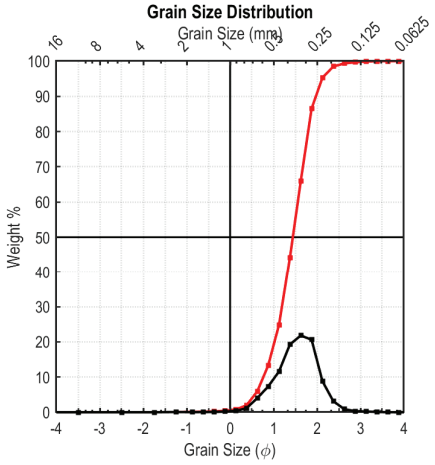
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.13 | 0.13 | 0.17 |
| -0.5 | -0.625 | 0.29 | 0.28 | 0.45 |
| -0.25 | -0.375 | 0.26 | 0.25 | 0.70 |
| 0 | -0.125 | 0.37 | 0.36 | 1.07 |
| 0.25 | 0.125 | 0.68 | 0.67 | 1.73 |
| 0.5 | 0.375 | 1.90 | 1.86 | 3.59 |
| 0.75 | 0.625 | 6.61 | 6.47 | 10.06 |
| 1 | 0.875 | 11.56 | 11.31 | 21.38 |
| 1.25 | 1.125 | 17.12 | 16.76 | 38.13 |
| 1.5 | 1.375 | 23.68 | 23.18 | 61.31 |
| 1.75 | 1.625 | 20.60 | 20.16 | 81.47 |
| 2 | 1.875 | 13.13 | 12.85 | 94.32 |
| 2.25 | 2.125 | 3.61 | 3.53 | 97.86 |
| 2.5 | 2.375 | 1.21 | 1.18 | 99.04 |
| 2.75 | 2.625 | 0.60 | 0.59 | 99.63 |
| 3 | 2.875 | 0.23 | 0.23 | 99.85 |
| 3.25 | 3.125 | 0.11 | 0.11 | 99.96 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.170 |
| **5** | 0.430 |
| **16** | 0.755 |
| **25** | 0.930 |
| **50** | 1.255 |
| **75** | 1.545 |
| **84** | 1.675 |
| **95** | 1.925 |
| **99** | 2.365 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.348 | 0.393 |
| Standard Deviation | 0.486 | 0.714 |
| Skewness | -0.448 | |
| Kurtosis | 4.934 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.215 | 1.228 |
| Standard Deviation | 0.460 | 0.457 |
| Skewness (1) | -0.087 | -0.095 |
| Skewness (2) | -0.168 | |
| Kurtosis | 0.625 | 0.996 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1660+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.346 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **-0.388** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.23 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

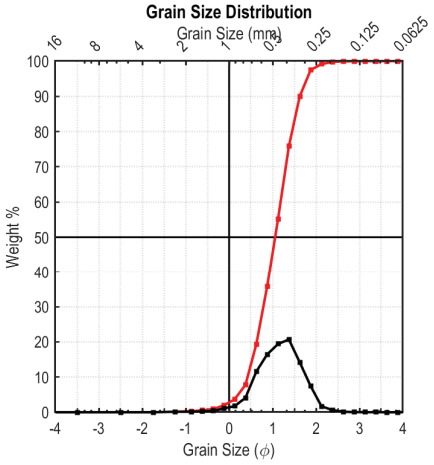
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.10 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.16 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.23 |
| 0 | -0.125 | 0.19 | 0.19 | 0.42 |
| 0.25 | 0.125 | 0.38 | 0.37 | 0.79 |
| 0.5 | 0.375 | 1.16 | 1.13 | 1.93 |
| 0.75 | 0.625 | 4.11 | 4.02 | 5.95 |
| 1 | 0.875 | 7.47 | 7.31 | 13.25 |
| 1.25 | 1.125 | 11.86 | 11.60 | 24.86 |
| 1.5 | 1.375 | 19.68 | 19.25 | 44.11 |
| 1.75 | 1.625 | 22.28 | 21.79 | 65.90 |
| 2 | 1.875 | 21.08 | 20.62 | 86.52 |
| 2.25 | 2.125 | 9.00 | 8.80 | 95.32 |
| 2.5 | 2.375 | 3.21 | 3.14 | 98.46 |
| 2.75 | 2.625 | 0.91 | 0.89 | 99.35 |
| 3 | 2.875 | 0.33 | 0.32 | 99.68 |
| 3.25 | 3.125 | 0.22 | 0.22 | 99.89 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.170 |
| **5** | 0.565 |
| **16** | 0.935 |
| **25** | 1.125 |
| **50** | 1.445 |
| **75** | 1.735 |
| **84** | 1.845 |
| **95** | 2.115 |
| **99** | 2.525 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.533 | 0.346 |
| Standard Deviation | 0.484 | 0.715 |
| Skewness | -0.388 | |
| Kurtosis | 4.575 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.390 | 1.408 |
| Standard Deviation | 0.455 | 0.462 |
| Skewness (1) | -0.121 | -0.128 |
| Skewness (2) | -0.231 | |
| Kurtosis | 0.703 | 1.041 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1660+00** |
| **Sample** | **Swash** |
| **Mean** | **0.449 mm** |
| **STD** | **0.709 mm** |
| **Skewness** | **-0.487** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 101.82 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.15 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.8 |

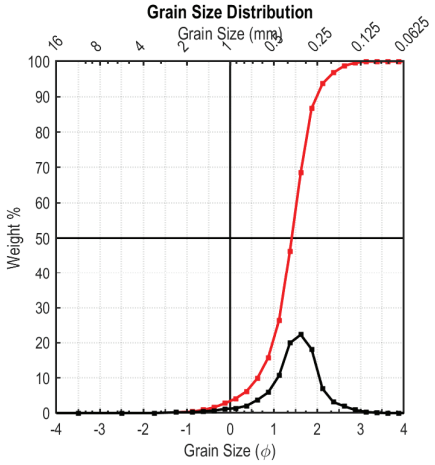
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.15 | 0.15 | 0.15 |
| -0.75 | -0.875 | 0.14 | 0.14 | 0.28 |
| -0.5 | -0.625 | 0.25 | 0.25 | 0.53 |
| -0.25 | -0.375 | 0.36 | 0.35 | 0.88 |
| 0 | -0.125 | 1.08 | 1.06 | 1.94 |
| 0.25 | 0.125 | 1.75 | 1.72 | 3.66 |
| 0.5 | 0.375 | 4.18 | 4.11 | 7.77 |
| 0.75 | 0.625 | 11.75 | 11.54 | 19.31 |
| 1 | 0.875 | 16.74 | 16.44 | 35.75 |
| 1.25 | 1.125 | 19.74 | 19.39 | 55.14 |
| 1.5 | 1.375 | 21.06 | 20.68 | 75.82 |
| 1.75 | 1.625 | 14.45 | 14.19 | 90.01 |
| 2 | 1.875 | 7.58 | 7.44 | 97.46 |
| 2.25 | 2.125 | 1.73 | 1.70 | 99.16 |
| 2.5 | 2.375 | 0.64 | 0.63 | 99.78 |
| 2.75 | 2.625 | 0.16 | 0.16 | 99.94 |
| 3 | 2.875 | 0.03 | 0.03 | 99.97 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.350 |
| **5** | 0.205 |
| **16** | 0.555 |
| **25** | 0.710 |
| **50** | 1.060 |
| **75** | 1.365 |
| **84** | 1.520 |
| **95** | 1.795 |
| **99** | 2.100 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.156 | 0.449 |
| Standard Deviation | 0.497 | 0.709 |
| Skewness | -0.487 | |
| Kurtosis | 4.285 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.037 | 1.045 |
| Standard Deviation | 0.483 | 0.482 |
| Skewness (1) | -0.047 | -0.061 |
| Skewness (2) | -0.124 | |
| Kurtosis | 0.648 | 0.995 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1670+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.359 mm** |
| **STD** | **0.661 mm** |
| **Skewness** | **-0.854** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.43 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.20 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

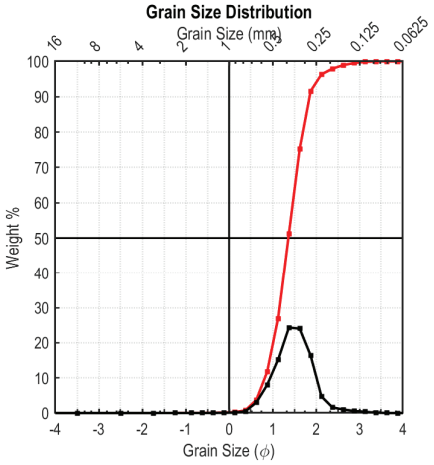
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.21 | 0.20 | 0.20 |
| -0.75 | -0.875 | 0.19 | 0.18 | 0.39 |
| -0.5 | -0.625 | 0.53 | 0.51 | 0.90 |
| -0.25 | -0.375 | 0.70 | 0.68 | 1.58 |
| 0 | -0.125 | 1.21 | 1.17 | 2.75 |
| 0.25 | 0.125 | 1.41 | 1.36 | 4.11 |
| 0.5 | 0.375 | 2.10 | 2.03 | 6.14 |
| 0.75 | 0.625 | 3.84 | 3.71 | 9.85 |
| 1 | 0.875 | 6.06 | 5.86 | 15.71 |
| 1.25 | 1.125 | 11.00 | 10.64 | 26.35 |
| 1.5 | 1.375 | 20.59 | 19.91 | 46.25 |
| 1.75 | 1.625 | 23.07 | 22.30 | 68.56 |
| 2 | 1.875 | 18.80 | 18.18 | 86.73 |
| 2.25 | 2.125 | 7.18 | 6.94 | 93.68 |
| 2.5 | 2.375 | 3.22 | 3.11 | 96.79 |
| 2.75 | 2.625 | 2.01 | 1.94 | 98.73 |
| 3 | 2.875 | 0.90 | 0.87 | 99.60 |
| 3.25 | 3.125 | 0.34 | 0.33 | 99.93 |
| 3.5 | 3.375 | 0.07 | 0.07 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.590 |
| **5** | 0.235 |
| **16** | 0.880 |
| **25** | 1.095 |
| **50** | 1.415 |
| **75** | 1.715 |
| **84** | 1.835 |
| **95** | 2.230 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.479 | 0.359 |
| Standard Deviation | 0.597 | 0.661 |
| Skewness | -0.854 | |
| Kurtosis | 5.272 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.357 | 1.377 |
| Standard Deviation | 0.478 | 0.541 |
| Skewness (1) | -0.120 | -0.152 |
| Skewness (2) | -0.382 | |
| Kurtosis | 1.089 | 1.319 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1670+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.356 mm** |
| **STD** | **0.740 mm** |
| **Skewness** | **0.265** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.87 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

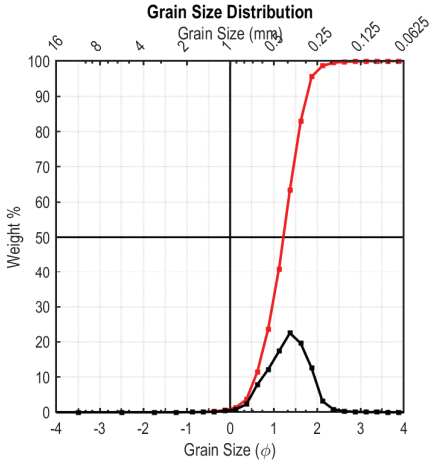
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.03 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.04 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.07 |
| 0 | -0.125 | 0.07 | 0.07 | 0.14 |
| 0.25 | 0.125 | 0.12 | 0.12 | 0.25 |
| 0.5 | 0.375 | 0.51 | 0.50 | 0.75 |
| 0.75 | 0.625 | 3.07 | 2.98 | 3.73 |
| 1 | 0.875 | 8.23 | 8.00 | 11.73 |
| 1.25 | 1.125 | 15.56 | 15.13 | 26.86 |
| 1.5 | 1.375 | 25.04 | 24.34 | 51.20 |
| 1.75 | 1.625 | 24.71 | 24.02 | 75.22 |
| 2 | 1.875 | 16.84 | 16.37 | 91.59 |
| 2.25 | 2.125 | 4.88 | 4.74 | 96.34 |
| 2.5 | 2.375 | 1.64 | 1.59 | 97.93 |
| 2.75 | 2.625 | 1.05 | 1.02 | 98.95 |
| 3 | 2.875 | 0.60 | 0.58 | 99.53 |
| 3.25 | 3.125 | 0.36 | 0.35 | 99.88 |
| 3.5 | 3.375 | 0.11 | 0.11 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | -0.01 | -0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.395 |
| **5** | 0.665 |
| **16** | 0.945 |
| **25** | 1.095 |
| **50** | 1.365 |
| **75** | 1.625 |
| **84** | 1.760 |
| **95** | 2.055 |
| **99** | 2.645 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.489 | 0.356 |
| Standard Deviation | 0.433 | 0.740 |
| Skewness | 0.265 | |
| Kurtosis | 4.796 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.352 | 1.357 |
| Standard Deviation | 0.407 | 0.414 |
| Skewness (1) | -0.031 | -0.019 |
| Skewness (2) | -0.012 | |
| Kurtosis | 0.706 | 1.075 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1670+00** |
| **Sample** | **Swash** |
| **Mean** | **0.400 mm** |
| **STD** | **0.727 mm** |
| **Skewness** | **-0.282** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.67 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.1 |

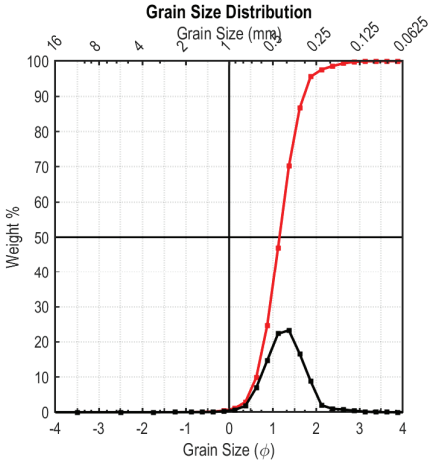
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.09 |
| -0.25 | -0.375 | 0.14 | 0.14 | 0.22 |
| 0 | -0.125 | 0.36 | 0.35 | 0.57 |
| 0.25 | 0.125 | 0.77 | 0.75 | 1.32 |
| 0.5 | 0.375 | 2.35 | 2.29 | 3.61 |
| 0.75 | 0.625 | 8.04 | 7.83 | 11.44 |
| 1 | 0.875 | 12.49 | 12.17 | 23.61 |
| 1.25 | 1.125 | 17.79 | 17.33 | 40.94 |
| 1.5 | 1.375 | 23.11 | 22.51 | 63.45 |
| 1.75 | 1.625 | 20.08 | 19.56 | 83.00 |
| 2 | 1.875 | 12.89 | 12.55 | 95.56 |
| 2.25 | 2.125 | 3.21 | 3.13 | 98.69 |
| 2.5 | 2.375 | 0.87 | 0.85 | 99.53 |
| 2.75 | 2.625 | 0.30 | 0.29 | 99.82 |
| 3 | 2.875 | 0.11 | 0.11 | 99.93 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.99 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.01 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.01 |
| 4 | 3.875 | -0.01 | -0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.015 |
| **5** | 0.420 |
| **16** | 0.720 |
| **25** | 0.895 |
| **50** | 1.225 |
| **75** | 1.525 |
| **84** | 1.645 |
| **95** | 1.865 |
| **99** | 2.220 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.320 | 0.400 |
| Standard Deviation | 0.460 | 0.727 |
| Skewness | -0.282 | |
| Kurtosis | 3.460 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.182 | 1.197 |
| Standard Deviation | 0.463 | 0.450 |
| Skewness (1) | -0.092 | -0.103 |
| Skewness (2) | -0.178 | |
| Kurtosis | 0.562 | 0.940 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1680+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.409 mm** |
| **STD** | **0.730 mm** |
| **Skewness** | **0.240** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.20 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.8 |

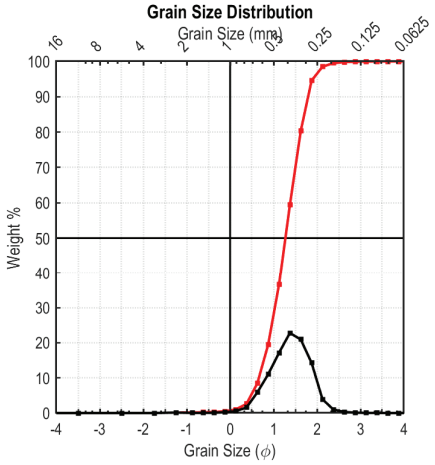
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.04 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.09 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.17 |
| 0 | -0.125 | 0.30 | 0.29 | 0.46 |
| 0.25 | 0.125 | 0.65 | 0.64 | 1.10 |
| 0.5 | 0.375 | 1.86 | 1.82 | 2.92 |
| 0.75 | 0.625 | 7.14 | 6.99 | 9.90 |
| 1 | 0.875 | 14.98 | 14.66 | 24.56 |
| 1.25 | 1.125 | 22.81 | 22.32 | 46.88 |
| 1.5 | 1.375 | 23.79 | 23.28 | 70.16 |
| 1.75 | 1.625 | 16.93 | 16.57 | 86.72 |
| 2 | 1.875 | 9.04 | 8.85 | 95.57 |
| 2.25 | 2.125 | 2.06 | 2.02 | 97.58 |
| 2.5 | 2.375 | 1.01 | 0.99 | 98.57 |
| 2.75 | 2.625 | 0.80 | 0.78 | 99.35 |
| 3 | 2.875 | 0.45 | 0.44 | 99.79 |
| 3.25 | 3.125 | 0.17 | 0.17 | 99.96 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.085 |
| **5** | 0.450 |
| **16** | 0.730 |
| **25** | 0.880 |
| **50** | 1.160 |
| **75** | 1.450 |
| **84** | 1.585 |
| **95** | 1.860 |
| **99** | 2.510 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.290 | 0.409 |
| Standard Deviation | 0.455 | 0.730 |
| Skewness | 0.240 | |
| Kurtosis | 4.532 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.157 | 1.158 |
| Standard Deviation | 0.427 | 0.427 |
| Skewness (1) | -0.006 | -0.006 |
| Skewness (2) | -0.012 | |
| Kurtosis | 0.649 | 1.014 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1680+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.386 mm** |
| **STD** | **0.730 mm** |
| **Skewness** | **-0.467** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.39 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.14 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

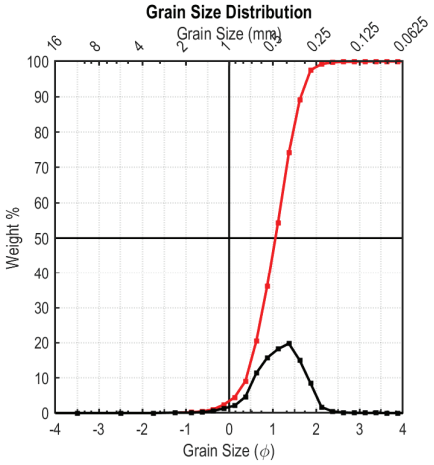
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.14 | 0.14 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.17 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.21 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.28 |
| 0 | -0.125 | 0.22 | 0.21 | 0.50 |
| 0.25 | 0.125 | 0.53 | 0.52 | 1.02 |
| 0.5 | 0.375 | 1.60 | 1.56 | 2.58 |
| 0.75 | 0.625 | 5.99 | 5.85 | 8.43 |
| 1 | 0.875 | 11.28 | 11.02 | 19.45 |
| 1.25 | 1.125 | 17.55 | 17.14 | 36.59 |
| 1.5 | 1.375 | 23.33 | 22.79 | 59.37 |
| 1.75 | 1.625 | 21.43 | 20.93 | 80.30 |
| 2 | 1.875 | 14.61 | 14.27 | 94.57 |
| 2.25 | 2.125 | 4.02 | 3.93 | 98.50 |
| 2.5 | 2.375 | 1.03 | 1.01 | 99.50 |
| 2.75 | 2.625 | 0.33 | 0.32 | 99.82 |
| 3 | 2.875 | 0.10 | 0.10 | 99.92 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.115 |
| **5** | 0.480 |
| **16** | 0.795 |
| **25** | 0.955 |
| **50** | 1.270 |
| **75** | 1.560 |
| **84** | 1.690 |
| **95** | 1.900 |
| **99** | 2.250 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.372 | 0.386 |
| Standard Deviation | 0.454 | 0.730 |
| Skewness | -0.467 | |
| Kurtosis | 4.960 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.242 | 1.252 |
| Standard Deviation | 0.448 | 0.439 |
| Skewness (1) | -0.061 | -0.087 |
| Skewness (2) | -0.179 | |
| Kurtosis | 0.587 | 0.962 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1680+00** |
| **Sample** | **Swash** |
| **Mean** | **0.449 mm** |
| **STD** | **0.699 mm** |
| **Skewness** | **-0.456** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 101.71 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.12 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.6 |

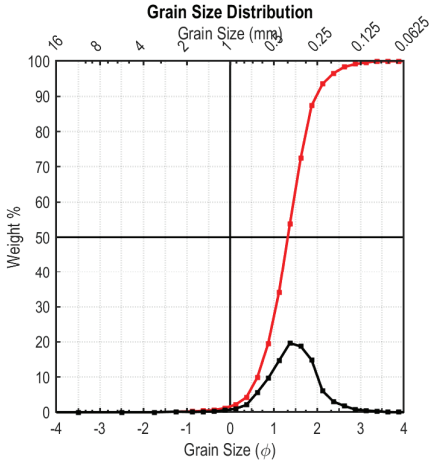
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.12 | 0.12 | 0.12 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.21 |
| -0.5 | -0.625 | 0.27 | 0.27 | 0.47 |
| -0.25 | -0.375 | 0.56 | 0.55 | 1.02 |
| 0 | -0.125 | 1.38 | 1.36 | 2.38 |
| 0.25 | 0.125 | 2.11 | 2.07 | 4.45 |
| 0.5 | 0.375 | 4.71 | 4.63 | 9.08 |
| 0.75 | 0.625 | 11.55 | 11.36 | 20.44 |
| 1 | 0.875 | 15.98 | 15.71 | 36.15 |
| 1.25 | 1.125 | 18.52 | 18.21 | 54.36 |
| 1.5 | 1.375 | 20.13 | 19.79 | 74.15 |
| 1.75 | 1.625 | 15.22 | 14.96 | 89.12 |
| 2 | 1.875 | 8.57 | 8.43 | 97.54 |
| 2.25 | 2.125 | 1.73 | 1.70 | 99.24 |
| 2.5 | 2.375 | 0.50 | 0.49 | 99.73 |
| 2.75 | 2.625 | 0.15 | 0.15 | 99.88 |
| 3 | 2.875 | 0.05 | 0.05 | 99.93 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.385 |
| **5** | 0.155 |
| **16** | 0.525 |
| **25** | 0.700 |
| **50** | 1.065 |
| **75** | 1.390 |
| **84** | 1.540 |
| **95** | 1.800 |
| **99** | 2.090 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.154 | 0.449 |
| Standard Deviation | 0.516 | 0.699 |
| Skewness | -0.456 | |
| Kurtosis | 4.023 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.032 | 1.043 |
| Standard Deviation | 0.508 | 0.503 |
| Skewness (1) | -0.064 | -0.085 |
| Skewness (2) | -0.172 | |
| Kurtosis | 0.621 | 0.977 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.368 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.134** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.01 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.9 |

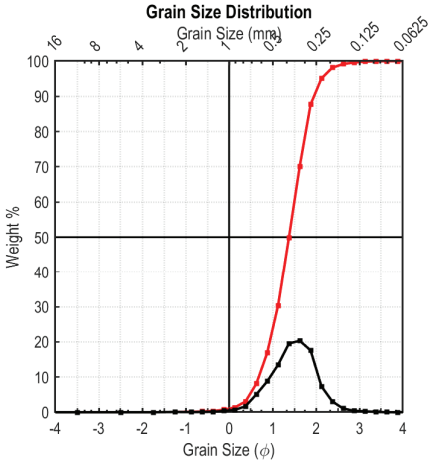
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.24 |
| -0.5 | -0.625 | 0.17 | 0.17 | 0.41 |
| -0.25 | -0.375 | 0.22 | 0.22 | 0.62 |
| 0 | -0.125 | 0.55 | 0.54 | 1.16 |
| 0.25 | 0.125 | 1.03 | 1.00 | 2.17 |
| 0.5 | 0.375 | 2.15 | 2.08 | 4.25 |
| 0.75 | 0.625 | 5.80 | 5.63 | 9.88 |
| 1 | 0.875 | 9.91 | 9.62 | 19.49 |
| 1.25 | 1.125 | 15.08 | 14.64 | 34.13 |
| 1.5 | 1.375 | 20.23 | 19.64 | 53.77 |
| 1.75 | 1.625 | 19.30 | 18.73 | 72.50 |
| 2 | 1.875 | 15.32 | 14.87 | 87.37 |
| 2.25 | 2.125 | 6.30 | 6.12 | 93.49 |
| 2.5 | 2.375 | 3.13 | 3.04 | 96.53 |
| 2.75 | 2.625 | 1.84 | 1.79 | 98.32 |
| 3 | 2.875 | 0.85 | 0.82 | 99.15 |
| 3.25 | 3.125 | 0.49 | 0.48 | 99.63 |
| 3.5 | 3.375 | 0.33 | 0.32 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.200 |
| **5** | 0.410 |
| **16** | 0.785 |
| **25** | 0.970 |
| **50** | 1.325 |
| **75** | 1.665 |
| **84** | 1.820 |
| **95** | 2.250 |
| **99** | 2.830 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.442 | 0.368 |
| Standard Deviation | 0.573 | 0.672 |
| Skewness | -0.134 | |
| Kurtosis | 4.682 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.302 | 1.310 |
| Standard Deviation | 0.517 | 0.538 |
| Skewness (1) | -0.043 | -0.019 |
| Skewness (2) | 0.010 | |
| Kurtosis | 0.778 | 1.085 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.360 mm** |
| **STD** | **0.699 mm** |
| **Skewness** | **-0.291** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.64 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

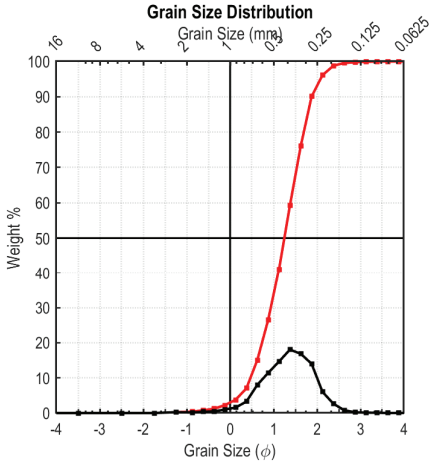
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.12 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.20 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.34 |
| 0 | -0.125 | 0.36 | 0.35 | 0.69 |
| 0.25 | 0.125 | 0.68 | 0.66 | 1.36 |
| 0.5 | 0.375 | 1.71 | 1.67 | 3.03 |
| 0.75 | 0.625 | 5.19 | 5.05 | 8.08 |
| 1 | 0.875 | 8.99 | 8.76 | 16.84 |
| 1.25 | 1.125 | 13.80 | 13.45 | 30.29 |
| 1.5 | 1.375 | 20.05 | 19.53 | 49.82 |
| 1.75 | 1.625 | 20.87 | 20.33 | 70.15 |
| 2 | 1.875 | 18.03 | 17.57 | 87.72 |
| 2.25 | 2.125 | 7.55 | 7.36 | 95.08 |
| 2.5 | 2.375 | 3.14 | 3.06 | 98.14 |
| 2.75 | 2.625 | 1.08 | 1.06 | 99.19 |
| 3 | 2.875 | 0.42 | 0.41 | 99.60 |
| 3.25 | 3.125 | 0.27 | 0.27 | 99.87 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.010 |
| **5** | 0.475 |
| **16** | 0.850 |
| **25** | 1.025 |
| **50** | 1.375 |
| **75** | 1.695 |
| **84** | 1.820 |
| **95** | 2.120 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.474 | 0.360 |
| Standard Deviation | 0.517 | 0.699 |
| Skewness | -0.291 | |
| Kurtosis | 4.410 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.335 | 1.348 |
| Standard Deviation | 0.485 | 0.492 |
| Skewness (1) | -0.082 | -0.088 |
| Skewness (2) | -0.160 | |
| Kurtosis | 0.696 | 1.006 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.398 mm** |
| **STD** | **0.665 mm** |
| **Skewness** | **-0.493** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.76 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.25 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

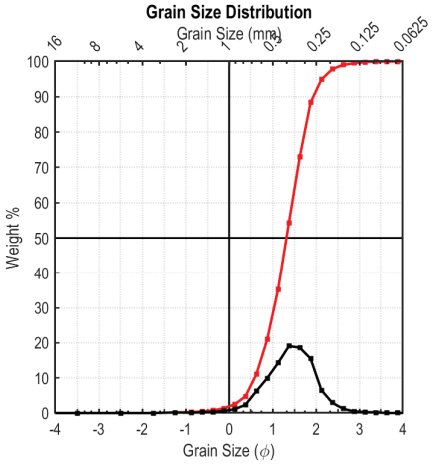
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.26 | 0.25 | 0.25 |
| -0.75 | -0.875 | 0.15 | 0.15 | 0.40 |
| -0.5 | -0.625 | 0.37 | 0.36 | 0.76 |
| -0.25 | -0.375 | 0.47 | 0.46 | 1.22 |
| 0 | -0.125 | 1.03 | 1.00 | 2.22 |
| 0.25 | 0.125 | 1.60 | 1.55 | 3.77 |
| 0.5 | 0.375 | 3.36 | 3.27 | 7.04 |
| 0.75 | 0.625 | 8.24 | 8.02 | 15.06 |
| 1 | 0.875 | 11.74 | 11.43 | 26.49 |
| 1.25 | 1.125 | 15.05 | 14.65 | 41.14 |
| 1.5 | 1.375 | 18.54 | 18.05 | 59.18 |
| 1.75 | 1.625 | 17.33 | 16.87 | 76.05 |
| 2 | 1.875 | 14.40 | 14.01 | 90.06 |
| 2.25 | 2.125 | 6.20 | 6.04 | 96.09 |
| 2.5 | 2.375 | 2.74 | 2.66 | 98.76 |
| 2.75 | 2.625 | 0.82 | 0.80 | 99.56 |
| 3 | 2.875 | 0.20 | 0.20 | 99.76 |
| 3.25 | 3.125 | 0.13 | 0.13 | 99.88 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.495 |
| **5** | 0.220 |
| **16** | 0.645 |
| **25** | 0.840 |
| **50** | 1.250 |
| **75** | 1.610 |
| **84** | 1.765 |
| **95** | 2.080 |
| **99** | 2.450 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.331 | 0.398 |
| Standard Deviation | 0.589 | 0.665 |
| Skewness | -0.493 | |
| Kurtosis | 4.346 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.205 | 1.220 |
| Standard Deviation | 0.560 | 0.562 |
| Skewness (1) | -0.080 | -0.094 |
| Skewness (2) | -0.179 | |
| Kurtosis | 0.661 | 0.990 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.375 mm** |
| **STD** | **0.676 mm** |
| **Skewness** | **-0.337** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.80 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

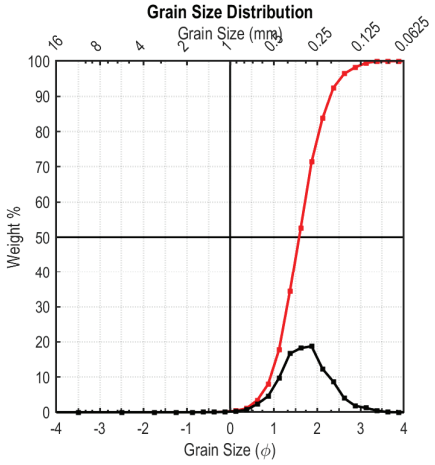
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.25 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.46 |
| -0.25 | -0.375 | 0.28 | 0.27 | 0.73 |
| 0 | -0.125 | 0.65 | 0.63 | 1.36 |
| 0.25 | 0.125 | 1.10 | 1.07 | 2.43 |
| 0.5 | 0.375 | 2.41 | 2.34 | 4.77 |
| 0.75 | 0.625 | 6.41 | 6.23 | 11.01 |
| 1 | 0.875 | 10.21 | 9.93 | 20.94 |
| 1.25 | 1.125 | 14.64 | 14.25 | 35.19 |
| 1.5 | 1.375 | 19.61 | 19.07 | 54.26 |
| 1.75 | 1.625 | 19.16 | 18.64 | 72.90 |
| 2 | 1.875 | 15.92 | 15.48 | 88.38 |
| 2.25 | 2.125 | 6.69 | 6.50 | 94.89 |
| 2.5 | 2.375 | 3.00 | 2.92 | 97.81 |
| 2.75 | 2.625 | 1.25 | 1.22 | 99.02 |
| 3 | 2.875 | 0.49 | 0.48 | 99.50 |
| 3.25 | 3.125 | 0.30 | 0.29 | 99.79 |
| 3.5 | 3.375 | 0.17 | 0.16 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.265 |
| **5** | 0.385 |
| **16** | 0.750 |
| **25** | 0.945 |
| **50** | 1.320 |
| **75** | 1.660 |
| **84** | 1.805 |
| **95** | 2.135 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.415 | 0.375 |
| Standard Deviation | 0.564 | 0.676 |
| Skewness | -0.337 | |
| Kurtosis | 4.573 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.278 | 1.292 |
| Standard Deviation | 0.528 | 0.529 |
| Skewness (1) | -0.081 | -0.075 |
| Skewness (2) | -0.114 | |
| Kurtosis | 0.659 | 1.003 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1770+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.302 mm** |
| **STD** | **0.684 mm** |
| **Skewness** | **0.129** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.27 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

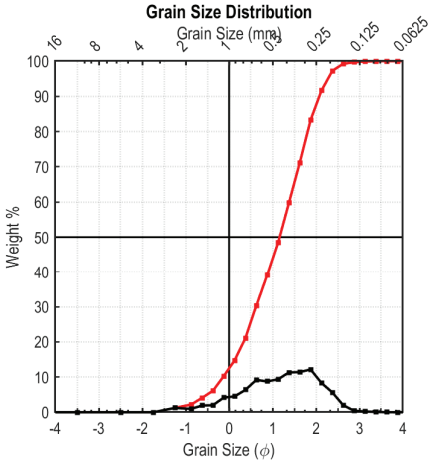
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.04 |
| 0 | -0.125 | 0.11 | 0.10 | 0.14 |
| 0.25 | 0.125 | 0.27 | 0.26 | 0.40 |
| 0.5 | 0.375 | 0.73 | 0.69 | 1.09 |
| 0.75 | 0.625 | 2.45 | 2.33 | 3.42 |
| 1 | 0.875 | 4.81 | 4.57 | 7.99 |
| 1.25 | 1.125 | 10.25 | 9.74 | 17.73 |
| 1.5 | 1.375 | 17.52 | 16.64 | 34.37 |
| 1.75 | 1.625 | 19.20 | 18.24 | 52.61 |
| 2 | 1.875 | 19.74 | 18.75 | 71.36 |
| 2.25 | 2.125 | 13.00 | 12.35 | 83.71 |
| 2.5 | 2.375 | 9.16 | 8.70 | 92.41 |
| 2.75 | 2.625 | 4.20 | 3.99 | 96.40 |
| 3 | 2.875 | 1.94 | 1.84 | 98.24 |
| 3.25 | 3.125 | 1.29 | 1.23 | 99.47 |
| 3.5 | 3.375 | 0.52 | 0.49 | 99.96 |
| 3.75 | 3.625 | 0.04 | 0.04 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.340 |
| **5** | 0.710 |
| **16** | 1.080 |
| **25** | 1.235 |
| **50** | 1.590 |
| **75** | 1.950 |
| **84** | 2.135 |
| **95** | 2.535 |
| **99** | 3.030 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.727 | 0.302 |
| Standard Deviation | 0.547 | 0.684 |
| Skewness | 0.129 | |
| Kurtosis | 3.342 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.607 | 1.602 |
| Standard Deviation | 0.527 | 0.540 |
| Skewness (1) | 0.033 | 0.034 |
| Skewness (2) | 0.062 | |
| Kurtosis | 0.730 | 1.046 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1770+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.443 mm** |
| **STD** | **0.553 mm** |
| **Skewness** | **-0.492** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.69 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.23 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.2 |

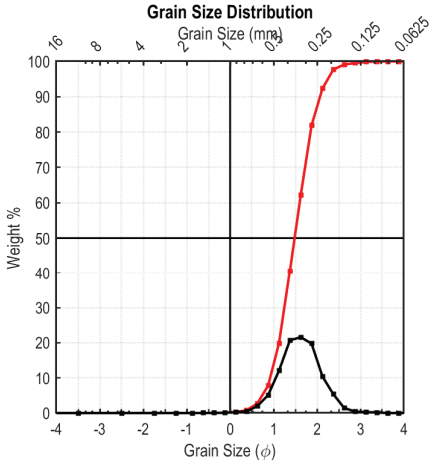
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.29 | 1.23 | 1.23 |
| -0.75 | -0.875 | 0.99 | 0.95 | 2.18 |
| -0.5 | -0.625 | 2.00 | 1.91 | 4.09 |
| -0.25 | -0.375 | 2.09 | 2.00 | 6.08 |
| 0 | -0.125 | 4.35 | 4.16 | 10.24 |
| 0.25 | 0.125 | 4.71 | 4.50 | 14.74 |
| 0.5 | 0.375 | 6.65 | 6.35 | 21.09 |
| 0.75 | 0.625 | 9.62 | 9.19 | 30.28 |
| 1 | 0.875 | 9.16 | 8.75 | 39.03 |
| 1.25 | 1.125 | 9.81 | 9.37 | 48.40 |
| 1.5 | 1.375 | 11.84 | 11.31 | 59.71 |
| 1.75 | 1.625 | 11.95 | 11.41 | 71.12 |
| 2 | 1.875 | 12.74 | 12.17 | 83.29 |
| 2.25 | 2.125 | 8.72 | 8.33 | 91.62 |
| 2.5 | 2.375 | 5.89 | 5.63 | 97.25 |
| 2.75 | 2.625 | 2.10 | 2.01 | 99.25 |
| 3 | 2.875 | 0.45 | 0.43 | 99.68 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.345 |
| **5** | -0.510 |
| **16** | 0.175 |
| **25** | 0.480 |
| **50** | 1.160 |
| **75** | 1.705 |
| **84** | 1.895 |
| **95** | 2.275 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.175 | 0.443 |
| Standard Deviation | 0.854 | 0.553 |
| Skewness | -0.492 | |
| Kurtosis | 2.850 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.035 | 1.077 |
| Standard Deviation | 0.860 | 0.852 |
| Skewness (1) | -0.145 | -0.172 |
| Skewness (2) | -0.323 | |
| Kurtosis | 0.619 | 0.932 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1770+00** |
| **Sample** | **Swash** |
| **Mean** | **0.327 mm** |
| **STD** | **0.729 mm** |
| **Skewness** | **0.071** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.28 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

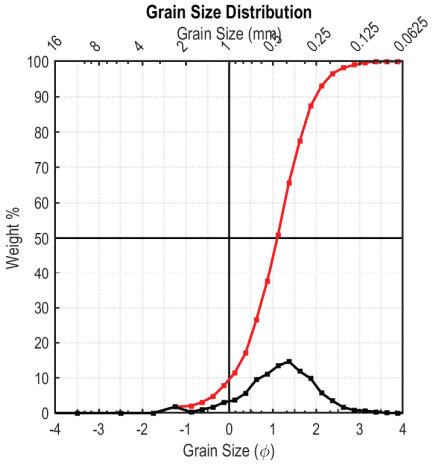
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.03 |
| 0 | -0.125 | 0.08 | 0.08 | 0.10 |
| 0.25 | 0.125 | 0.21 | 0.20 | 0.30 |
| 0.5 | 0.375 | 0.49 | 0.47 | 0.77 |
| 0.75 | 0.625 | 2.05 | 1.95 | 2.72 |
| 1 | 0.875 | 5.38 | 5.11 | 7.83 |
| 1.25 | 1.125 | 12.70 | 12.06 | 19.89 |
| 1.5 | 1.375 | 21.79 | 20.70 | 40.59 |
| 1.75 | 1.625 | 22.72 | 21.58 | 62.17 |
| 2 | 1.875 | 20.80 | 19.76 | 81.92 |
| 2.25 | 2.125 | 10.95 | 10.40 | 92.33 |
| 2.5 | 2.375 | 5.64 | 5.36 | 97.68 |
| 2.75 | 2.625 | 1.52 | 1.44 | 99.13 |
| 3 | 2.875 | 0.44 | 0.42 | 99.54 |
| 3.25 | 3.125 | 0.31 | 0.29 | 99.84 |
| 3.5 | 3.375 | 0.16 | 0.15 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.405 |
| **5** | 0.735 |
| **16** | 1.045 |
| **25** | 1.185 |
| **50** | 1.485 |
| **75** | 1.785 |
| **84** | 1.925 |
| **95** | 2.250 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.613 | 0.327 |
| Standard Deviation | 0.456 | 0.729 |
| Skewness | 0.071 | |
| Kurtosis | 3.719 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.485 | 1.485 |
| Standard Deviation | 0.440 | 0.450 |
| Skewness (1) | 0.000 | 0.005 |
| Skewness (2) | 0.017 | |
| Kurtosis | 0.722 | 1.035 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1780+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.443 mm** |
| **STD** | **0.576 mm** |
| **Skewness** | **-0.433** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.69 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.76 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.1 |

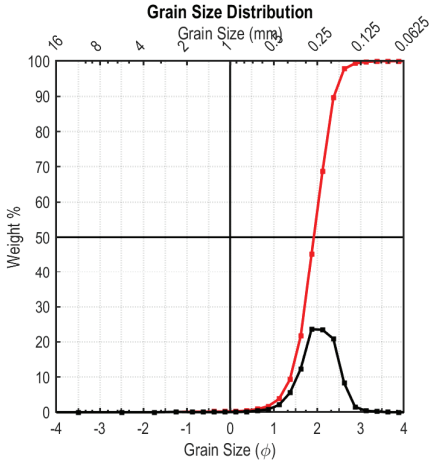
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.84 | 1.76 | 1.76 |
| -0.75 | -0.875 | 0.30 | 0.29 | 2.04 |
| -0.5 | -0.625 | 1.07 | 1.02 | 3.07 |
| -0.25 | -0.375 | 1.72 | 1.64 | 4.71 |
| 0 | -0.125 | 3.19 | 3.05 | 7.76 |
| 0.25 | 0.125 | 3.79 | 3.62 | 11.38 |
| 0.5 | 0.375 | 5.87 | 5.61 | 16.98 |
| 0.75 | 0.625 | 9.89 | 9.45 | 26.43 |
| 1 | 0.875 | 11.59 | 11.07 | 37.50 |
| 1.25 | 1.125 | 14.04 | 13.41 | 50.91 |
| 1.5 | 1.375 | 15.41 | 14.72 | 65.63 |
| 1.75 | 1.625 | 12.40 | 11.84 | 77.48 |
| 2 | 1.875 | 10.32 | 9.86 | 87.33 |
| 2.25 | 2.125 | 5.96 | 5.69 | 93.03 |
| 2.5 | 2.375 | 3.66 | 3.50 | 96.52 |
| 2.75 | 2.625 | 1.73 | 1.65 | 98.18 |
| 3 | 2.875 | 0.85 | 0.81 | 98.99 |
| 3.25 | 3.125 | 0.70 | 0.67 | 99.66 |
| 3.5 | 3.375 | 0.33 | 0.32 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.465 |
| **5** | -0.350 |
| **16** | 0.330 |
| **25** | 0.585 |
| **50** | 1.110 |
| **75** | 1.575 |
| **84** | 1.790 |
| **95** | 2.265 |
| **99** | 2.880 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.175 | 0.443 |
| Standard Deviation | 0.797 | 0.576 |
| Skewness | -0.433 | |
| Kurtosis | 3.707 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.060 | 1.077 |
| Standard Deviation | 0.730 | 0.761 |
| Skewness (1) | -0.068 | -0.093 |
| Skewness (2) | -0.209 | |
| Kurtosis | 0.791 | 1.083 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1780+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.245 mm** |
| **STD** | **0.741 mm** |
| **Skewness** | **-1.000** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.58 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

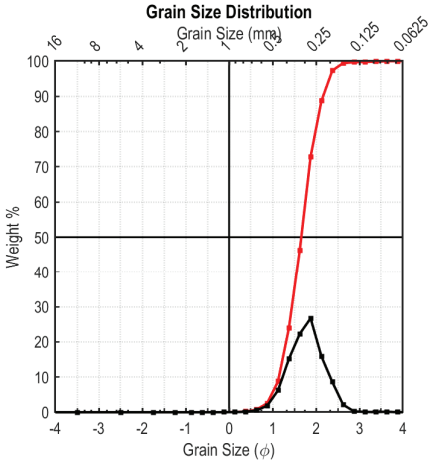
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.11 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.15 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.18 |
| 0 | -0.125 | 0.04 | 0.04 | 0.22 |
| 0.25 | 0.125 | 0.06 | 0.06 | 0.28 |
| 0.5 | 0.375 | 0.16 | 0.15 | 0.43 |
| 0.75 | 0.625 | 0.46 | 0.44 | 0.87 |
| 1 | 0.875 | 0.88 | 0.84 | 1.71 |
| 1.25 | 1.125 | 2.16 | 2.07 | 3.78 |
| 1.5 | 1.375 | 5.75 | 5.50 | 9.28 |
| 1.75 | 1.625 | 12.91 | 12.34 | 21.62 |
| 2 | 1.875 | 24.68 | 23.60 | 45.22 |
| 2.25 | 2.125 | 24.51 | 23.44 | 68.66 |
| 2.5 | 2.375 | 21.84 | 20.88 | 89.54 |
| 2.75 | 2.625 | 8.65 | 8.27 | 97.81 |
| 3 | 2.875 | 1.61 | 1.54 | 99.35 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.78 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.665 |
| **5** | 1.180 |
| **16** | 1.510 |
| **25** | 1.660 |
| **50** | 1.925 |
| **75** | 2.200 |
| **84** | 2.310 |
| **95** | 2.540 |
| **99** | 2.820 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.027 | 0.245 |
| Standard Deviation | 0.433 | 0.741 |
| Skewness | -1.000 | |
| Kurtosis | 7.823 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.910 | 1.915 |
| Standard Deviation | 0.400 | 0.406 |
| Skewness (1) | -0.037 | -0.067 |
| Skewness (2) | -0.162 | |
| Kurtosis | 0.700 | 1.032 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1780+00** |
| **Sample** | **Swash** |
| **Mean** | **0.292 mm** |
| **STD** | **0.757 mm** |
| **Skewness** | **0.026** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.62 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.5 |

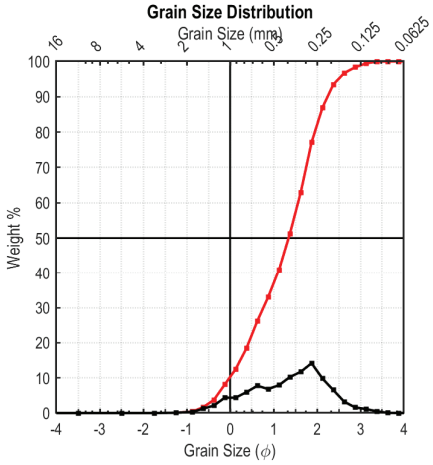
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.00 |
| 0 | -0.125 | 0.01 | 0.01 | 0.01 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.06 |
| 0.5 | 0.375 | 0.13 | 0.12 | 0.18 |
| 0.75 | 0.625 | 0.56 | 0.54 | 0.72 |
| 1 | 0.875 | 1.92 | 1.84 | 2.55 |
| 1.25 | 1.125 | 6.50 | 6.21 | 8.77 |
| 1.5 | 1.375 | 15.83 | 15.13 | 23.90 |
| 1.75 | 1.625 | 23.31 | 22.28 | 46.18 |
| 2 | 1.875 | 27.94 | 26.71 | 72.88 |
| 2.25 | 2.125 | 16.58 | 15.85 | 88.73 |
| 2.5 | 2.375 | 8.98 | 8.58 | 97.31 |
| 2.75 | 2.625 | 2.23 | 2.13 | 99.45 |
| 3 | 2.875 | 0.26 | 0.25 | 99.69 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.79 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.84 |
| 3.75 | 3.625 | 0.16 | 0.15 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.665 |
| **5** | 0.975 |
| **16** | 1.245 |
| **25** | 1.385 |
| **50** | 1.660 |
| **75** | 1.910 |
| **84** | 2.050 |
| **95** | 2.310 |
| **99** | 2.575 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.775 | 0.292 |
| Standard Deviation | 0.402 | 0.757 |
| Skewness | 0.026 | |
| Kurtosis | 3.849 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.647 | 1.652 |
| Standard Deviation | 0.402 | 0.404 |
| Skewness (1) | -0.031 | -0.029 |
| Skewness (2) | -0.043 | |
| Kurtosis | 0.658 | 1.042 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1790+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.393 mm** |
| **STD** | **0.552 mm** |
| **Skewness** | **-0.294** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 105.76 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.3 |

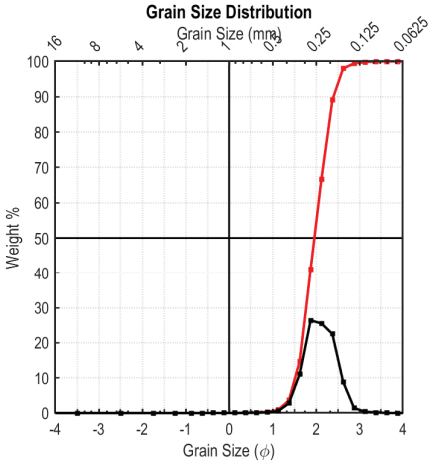
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.35 | 0.33 | 0.41 |
| -0.5 | -0.625 | 1.28 | 1.21 | 1.62 |
| -0.25 | -0.375 | 2.25 | 2.13 | 3.74 |
| 0 | -0.125 | 4.61 | 4.36 | 8.10 |
| 0.25 | 0.125 | 4.61 | 4.36 | 12.46 |
| 0.5 | 0.375 | 6.30 | 5.96 | 18.42 |
| 0.75 | 0.625 | 8.20 | 7.75 | 26.17 |
| 1 | 0.875 | 7.24 | 6.85 | 33.02 |
| 1.25 | 1.125 | 8.38 | 7.92 | 40.94 |
| 1.5 | 1.375 | 10.86 | 10.27 | 51.21 |
| 1.75 | 1.625 | 12.40 | 11.72 | 62.93 |
| 2 | 1.875 | 15.00 | 14.18 | 77.12 |
| 2.25 | 2.125 | 10.38 | 9.81 | 86.93 |
| 2.5 | 2.375 | 6.91 | 6.53 | 93.47 |
| 2.75 | 2.625 | 3.42 | 3.23 | 96.70 |
| 3 | 2.875 | 1.71 | 1.62 | 98.32 |
| 3.25 | 3.125 | 1.19 | 1.13 | 99.44 |
| 3.5 | 3.375 | 0.53 | 0.50 | 99.94 |
| 3.75 | 3.625 | 0.06 | 0.06 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.750 |
| **5** | -0.305 |
| **16** | 0.275 |
| **25** | 0.585 |
| **50** | 1.345 |
| **75** | 1.840 |
| **84** | 2.050 |
| **95** | 2.495 |
| **99** | 3.025 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.347 | 0.393 |
| Standard Deviation | 0.857 | 0.552 |
| Skewness | -0.294 | |
| Kurtosis | 2.549 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.162 | 1.223 |
| Standard Deviation | 0.887 | 0.868 |
| Skewness (1) | -0.206 | -0.192 |
| Skewness (2) | -0.282 | |
| Kurtosis | 0.577 | 0.914 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1790+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.235 mm** |
| **STD** | **0.785 mm** |
| **Skewness** | **-0.121** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Very Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.79 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.3 |

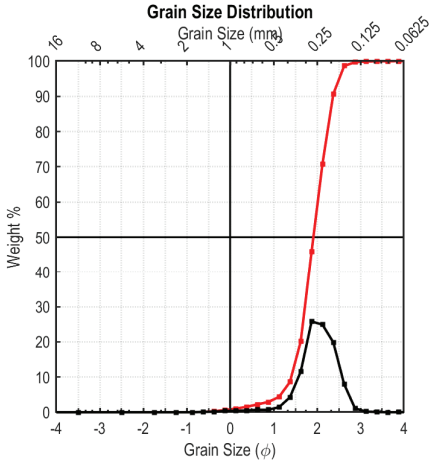
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.01 | 0.01 | 0.02 |
| 0.25 | 0.125 | 0.01 | 0.01 | 0.03 |
| 0.5 | 0.375 | 0.03 | 0.03 | 0.06 |
| 0.75 | 0.625 | 0.09 | 0.09 | 0.14 |
| 1 | 0.875 | 0.18 | 0.17 | 0.31 |
| 1.25 | 1.125 | 0.58 | 0.55 | 0.87 |
| 1.5 | 1.375 | 2.88 | 2.75 | 3.62 |
| 1.75 | 1.625 | 11.61 | 11.08 | 14.70 |
| 2 | 1.875 | 27.68 | 26.41 | 41.11 |
| 2.25 | 2.125 | 26.73 | 25.51 | 66.62 |
| 2.5 | 2.375 | 23.59 | 22.51 | 89.13 |
| 2.75 | 2.625 | 9.29 | 8.87 | 98.00 |
| 3 | 2.875 | 1.50 | 1.43 | 99.43 |
| 3.25 | 3.125 | 0.41 | 0.39 | 99.82 |
| 3.5 | 3.375 | 0.17 | 0.16 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.135 |
| **5** | 1.405 |
| **16** | 1.635 |
| **25** | 1.725 |
| **50** | 1.960 |
| **75** | 2.220 |
| **84** | 2.320 |
| **95** | 2.540 |
| **99** | 2.800 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.090 | 0.235 |
| Standard Deviation | 0.349 | 0.785 |
| Skewness | -0.121 | |
| Kurtosis | 3.977 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.978 | 1.972 |
| Standard Deviation | 0.343 | 0.343 |
| Skewness (1) | 0.051 | 0.037 |
| Skewness (2) | 0.036 | |
| Kurtosis | 0.657 | 0.940 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1790+00** |
| **Sample** | **Swash** |
| **Mean** | **0.249 mm** |
| **STD** | **0.730 mm** |
| **Skewness** | **-1.465** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.92 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

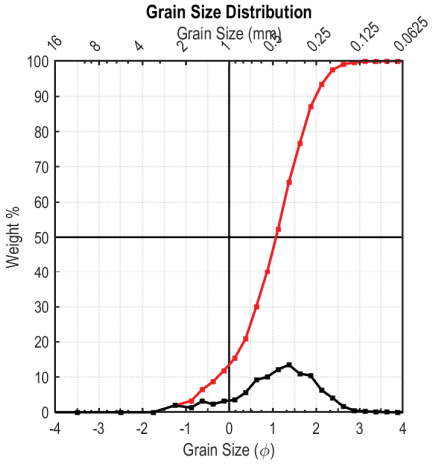
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.10 | 0.10 | 0.10 |
| -0.25 | -0.375 | 0.17 | 0.17 | 0.26 |
| 0 | -0.125 | 0.37 | 0.36 | 0.62 |
| 0.25 | 0.125 | 0.41 | 0.40 | 1.02 |
| 0.5 | 0.375 | 0.52 | 0.51 | 1.53 |
| 0.75 | 0.625 | 0.72 | 0.70 | 2.23 |
| 1 | 0.875 | 0.71 | 0.69 | 2.91 |
| 1.25 | 1.125 | 1.48 | 1.44 | 4.35 |
| 1.5 | 1.375 | 4.35 | 4.23 | 8.58 |
| 1.75 | 1.625 | 11.88 | 11.54 | 20.12 |
| 2 | 1.875 | 26.54 | 25.79 | 45.91 |
| 2.25 | 2.125 | 25.63 | 24.90 | 70.81 |
| 2.5 | 2.375 | 20.44 | 19.86 | 90.67 |
| 2.75 | 2.625 | 8.19 | 7.96 | 98.63 |
| 3 | 2.875 | 1.11 | 1.08 | 99.71 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.90 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.110 |
| **5** | 1.165 |
| **16** | 1.535 |
| **25** | 1.670 |
| **50** | 1.915 |
| **75** | 2.180 |
| **84** | 2.290 |
| **95** | 2.510 |
| **99** | 2.710 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.007 | 0.249 |
| Standard Deviation | 0.453 | 0.730 |
| Skewness | -1.465 | |
| Kurtosis | 8.210 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.913 | 1.913 |
| Standard Deviation | 0.377 | 0.393 |
| Skewness (1) | -0.007 | -0.061 |
| Skewness (2) | -0.205 | |
| Kurtosis | 0.781 | 1.081 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1800+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.466 mm** |
| **STD** | **0.550 mm** |
| **Skewness** | **-0.567** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.70 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.93 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.1 |

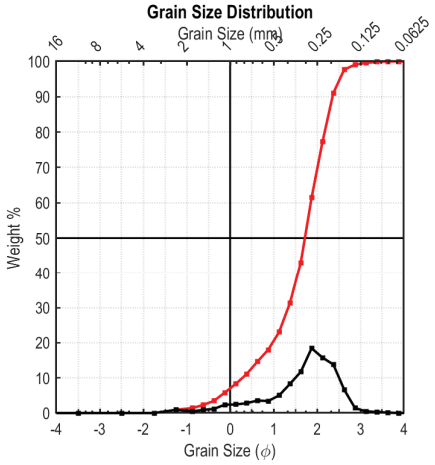
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.04 | 1.93 | 1.93 |
| -0.75 | -0.875 | 1.38 | 1.31 | 3.24 |
| -0.5 | -0.625 | 3.32 | 3.14 | 6.38 |
| -0.25 | -0.375 | 2.42 | 2.29 | 8.67 |
| 0 | -0.125 | 3.28 | 3.10 | 11.77 |
| 0.25 | 0.125 | 3.71 | 3.51 | 15.28 |
| 0.5 | 0.375 | 5.86 | 5.54 | 20.82 |
| 0.75 | 0.625 | 9.71 | 9.19 | 30.01 |
| 1 | 0.875 | 10.60 | 10.03 | 40.04 |
| 1.25 | 1.125 | 12.83 | 12.14 | 52.18 |
| 1.5 | 1.375 | 14.24 | 13.47 | 65.65 |
| 1.75 | 1.625 | 11.60 | 10.97 | 76.62 |
| 2 | 1.875 | 11.01 | 10.42 | 87.04 |
| 2.25 | 2.125 | 6.67 | 6.31 | 93.35 |
| 2.5 | 2.375 | 4.34 | 4.11 | 97.46 |
| 2.75 | 2.625 | 1.75 | 1.66 | 99.11 |
| 3 | 2.875 | 0.53 | 0.50 | 99.61 |
| 3.25 | 3.125 | 0.28 | 0.26 | 99.88 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.490 |
| **5** | -0.735 |
| **16** | 0.160 |
| **25** | 0.490 |
| **50** | 1.080 |
| **75** | 1.590 |
| **84** | 1.800 |
| **95** | 2.225 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.100 | 0.466 |
| Standard Deviation | 0.862 | 0.550 |
| Skewness | -0.567 | |
| Kurtosis | 3.146 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.980 | 1.013 |
| Standard Deviation | 0.820 | 0.858 |
| Skewness (1) | -0.122 | -0.174 |
| Skewness (2) | -0.409 | |
| Kurtosis | 0.805 | 1.103 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1800+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.318 mm** |
| **STD** | **0.564 mm** |
| **Skewness** | **-1.144** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.95 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.92 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.1 |

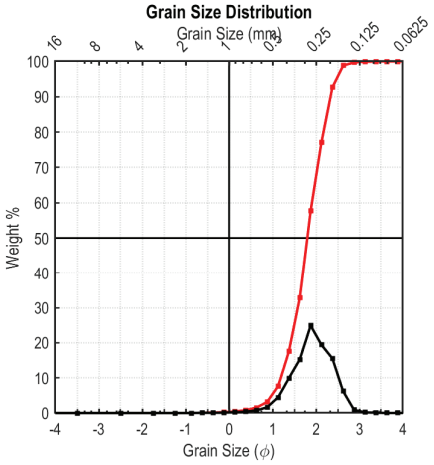
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.97 | 0.92 | 0.92 |
| -0.75 | -0.875 | 0.49 | 0.47 | 1.39 |
| -0.5 | -0.625 | 0.93 | 0.89 | 2.28 |
| -0.25 | -0.375 | 1.23 | 1.17 | 3.45 |
| 0 | -0.125 | 2.48 | 2.36 | 5.81 |
| 0.25 | 0.125 | 2.56 | 2.44 | 8.25 |
| 0.5 | 0.375 | 2.92 | 2.78 | 11.03 |
| 0.75 | 0.625 | 3.73 | 3.55 | 14.59 |
| 1 | 0.875 | 3.59 | 3.42 | 18.01 |
| 1.25 | 1.125 | 5.23 | 4.98 | 22.99 |
| 1.5 | 1.375 | 8.68 | 8.27 | 31.26 |
| 1.75 | 1.625 | 12.30 | 11.72 | 42.98 |
| 2 | 1.875 | 19.35 | 18.44 | 61.42 |
| 2.25 | 2.125 | 16.56 | 15.78 | 77.20 |
| 2.5 | 2.375 | 14.51 | 13.83 | 91.02 |
| 2.75 | 2.625 | 6.98 | 6.65 | 97.68 |
| 3 | 2.875 | 1.47 | 1.40 | 99.08 |
| 3.25 | 3.125 | 0.53 | 0.51 | 99.58 |
| 3.5 | 3.375 | 0.29 | 0.28 | 99.86 |
| 3.75 | 3.625 | 0.15 | 0.14 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.190 |
| **5** | -0.210 |
| **16** | 0.730 |
| **25** | 1.185 |
| **50** | 1.720 |
| **75** | 2.090 |
| **84** | 2.250 |
| **95** | 2.525 |
| **99** | 2.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.652 | 0.318 |
| Standard Deviation | 0.826 | 0.564 |
| Skewness | -1.144 | |
| Kurtosis | 4.267 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.490 | 1.567 |
| Standard Deviation | 0.760 | 0.794 |
| Skewness (1) | -0.303 | -0.357 |
| Skewness (2) | -0.740 | |
| Kurtosis | 0.799 | 1.239 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1800+00** |
| **Sample** | **Swash** |
| **Mean** | **0.268 mm** |
| **STD** | **0.727 mm** |
| **Skewness** | **-0.645** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.66 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.7 |

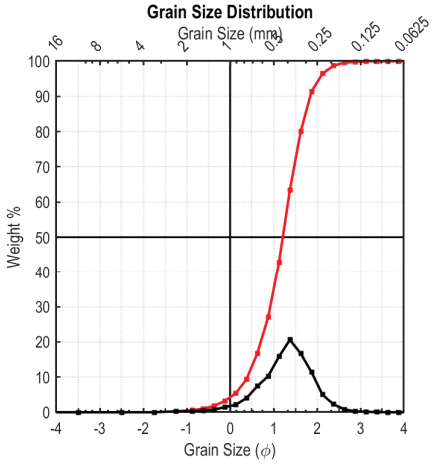
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.07 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.12 |
| 0 | -0.125 | 0.11 | 0.11 | 0.23 |
| 0.25 | 0.125 | 0.21 | 0.20 | 0.43 |
| 0.5 | 0.375 | 0.37 | 0.35 | 0.78 |
| 0.75 | 0.625 | 0.78 | 0.75 | 1.53 |
| 1 | 0.875 | 1.69 | 1.61 | 3.14 |
| 1.25 | 1.125 | 4.66 | 4.45 | 7.60 |
| 1.5 | 1.375 | 10.39 | 9.93 | 17.52 |
| 1.75 | 1.625 | 15.96 | 15.25 | 32.77 |
| 2 | 1.875 | 26.07 | 24.91 | 57.68 |
| 2.25 | 2.125 | 20.32 | 19.42 | 77.10 |
| 2.5 | 2.375 | 16.26 | 15.54 | 92.63 |
| 2.75 | 2.625 | 6.47 | 6.18 | 98.82 |
| 3 | 2.875 | 0.94 | 0.90 | 99.71 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.89 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.450 |
| **5** | 0.980 |
| **16** | 1.335 |
| **25** | 1.500 |
| **50** | 1.800 |
| **75** | 2.100 |
| **84** | 2.235 |
| **95** | 2.470 |
| **99** | 2.675 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.900 | 0.268 |
| Standard Deviation | 0.461 | 0.727 |
| Skewness | -0.645 | |
| Kurtosis | 4.563 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.785 | 1.790 |
| Standard Deviation | 0.450 | 0.451 |
| Skewness (1) | -0.033 | -0.067 |
| Skewness (2) | -0.167 | |
| Kurtosis | 0.656 | 1.018 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1810+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.411 mm** |
| **STD** | **0.658 mm** |
| **Skewness** | **-0.595** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.9 |

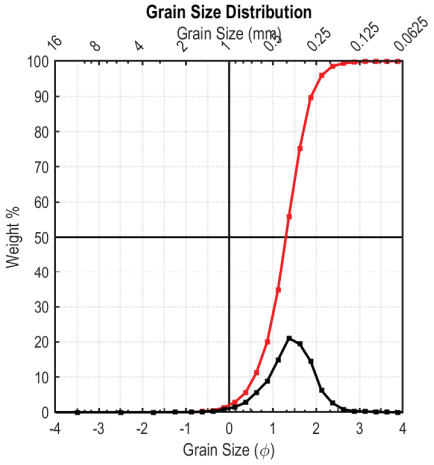
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.28 | 0.27 | 0.27 |
| -0.75 | -0.875 | 0.30 | 0.29 | 0.55 |
| -0.5 | -0.625 | 0.50 | 0.48 | 1.03 |
| -0.25 | -0.375 | 0.77 | 0.73 | 1.76 |
| 0 | -0.125 | 1.52 | 1.45 | 3.21 |
| 0.25 | 0.125 | 2.22 | 2.11 | 5.32 |
| 0.5 | 0.375 | 4.20 | 4.00 | 9.32 |
| 0.75 | 0.625 | 7.77 | 7.40 | 16.72 |
| 1 | 0.875 | 10.79 | 10.27 | 26.99 |
| 1.25 | 1.125 | 16.62 | 15.82 | 42.82 |
| 1.5 | 1.375 | 21.62 | 20.58 | 63.40 |
| 1.75 | 1.625 | 17.51 | 16.67 | 80.07 |
| 2 | 1.875 | 11.92 | 11.35 | 91.42 |
| 2.25 | 2.125 | 5.23 | 4.98 | 96.40 |
| 2.5 | 2.375 | 2.42 | 2.30 | 98.71 |
| 2.75 | 2.625 | 0.88 | 0.84 | 99.54 |
| 3 | 2.875 | 0.27 | 0.26 | 99.80 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.640 |
| **5** | 0.085 |
| **16** | 0.600 |
| **25** | 0.825 |
| **50** | 1.210 |
| **75** | 1.550 |
| **84** | 1.710 |
| **95** | 2.055 |
| **99** | 2.465 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.282 | 0.411 |
| Standard Deviation | 0.604 | 0.658 |
| Skewness | -0.595 | |
| Kurtosis | 4.395 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.155 | 1.173 |
| Standard Deviation | 0.555 | 0.576 |
| Skewness (1) | -0.099 | -0.121 |
| Skewness (2) | -0.252 | |
| Kurtosis | 0.775 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1810+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.379 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.340** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

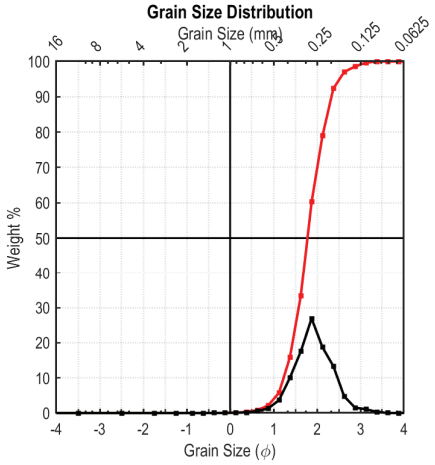
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.05 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.20 |
| -0.25 | -0.375 | 0.31 | 0.30 | 0.49 |
| 0 | -0.125 | 0.87 | 0.83 | 1.32 |
| 0.25 | 0.125 | 1.52 | 1.45 | 2.77 |
| 0.5 | 0.375 | 2.89 | 2.75 | 5.52 |
| 0.75 | 0.625 | 5.93 | 5.64 | 11.16 |
| 1 | 0.875 | 9.23 | 8.78 | 19.95 |
| 1.25 | 1.125 | 15.60 | 14.85 | 34.80 |
| 1.5 | 1.375 | 22.08 | 21.01 | 55.81 |
| 1.75 | 1.625 | 20.37 | 19.39 | 75.20 |
| 2 | 1.875 | 15.24 | 14.50 | 89.70 |
| 2.25 | 2.125 | 6.51 | 6.20 | 95.90 |
| 2.5 | 2.375 | 2.77 | 2.64 | 98.53 |
| 2.75 | 2.625 | 0.89 | 0.85 | 99.38 |
| 3 | 2.875 | 0.29 | 0.28 | 99.66 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.90 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.225 |
| **5** | 0.330 |
| **16** | 0.765 |
| **25** | 0.960 |
| **50** | 1.305 |
| **75** | 1.620 |
| **84** | 1.775 |
| **95** | 2.090 |
| **99** | 2.510 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.399 | 0.379 |
| Standard Deviation | 0.539 | 0.688 |
| Skewness | -0.340 | |
| Kurtosis | 4.069 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.270 | 1.282 |
| Standard Deviation | 0.505 | 0.519 |
| Skewness (1) | -0.069 | -0.089 |
| Skewness (2) | -0.188 | |
| Kurtosis | 0.743 | 1.093 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1810+00** |
| **Sample** | **Swash** |
| **Mean** | **0.266 mm** |
| **STD** | **0.735 mm** |
| **Skewness** | **0.014** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

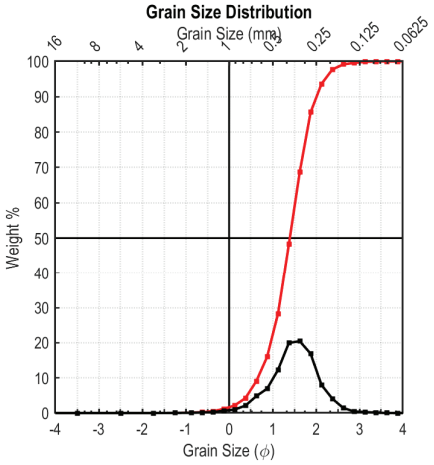
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.03 | 0.03 | 0.04 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.11 |
| 0.5 | 0.375 | 0.18 | 0.17 | 0.29 |
| 0.75 | 0.625 | 0.58 | 0.55 | 0.84 |
| 1 | 0.875 | 1.36 | 1.29 | 2.13 |
| 1.25 | 1.125 | 3.85 | 3.66 | 5.79 |
| 1.5 | 1.375 | 10.54 | 10.02 | 15.80 |
| 1.75 | 1.625 | 18.41 | 17.50 | 33.30 |
| 2 | 1.875 | 28.31 | 26.91 | 60.21 |
| 2.25 | 2.125 | 19.69 | 18.71 | 78.92 |
| 2.5 | 2.375 | 14.06 | 13.36 | 92.28 |
| 2.75 | 2.625 | 4.98 | 4.73 | 97.02 |
| 3 | 2.875 | 1.62 | 1.54 | 98.56 |
| 3.25 | 3.125 | 1.14 | 1.08 | 99.64 |
| 3.5 | 3.375 | 0.34 | 0.32 | 99.96 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.655 |
| **5** | 1.070 |
| **16** | 1.380 |
| **25** | 1.505 |
| **50** | 1.780 |
| **75** | 2.075 |
| **84** | 2.220 |
| **95** | 2.520 |
| **99** | 2.980 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.913 | 0.266 |
| Standard Deviation | 0.445 | 0.735 |
| Skewness | 0.014 | |
| Kurtosis | 4.044 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.800 | 1.793 |
| Standard Deviation | 0.420 | 0.430 |
| Skewness (1) | 0.048 | 0.034 |
| Skewness (2) | 0.036 | |
| Kurtosis | 0.726 | 1.043 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1820+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.356 mm** |
| **STD** | **0.685 mm** |
| **Skewness** | **-0.414** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.10 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

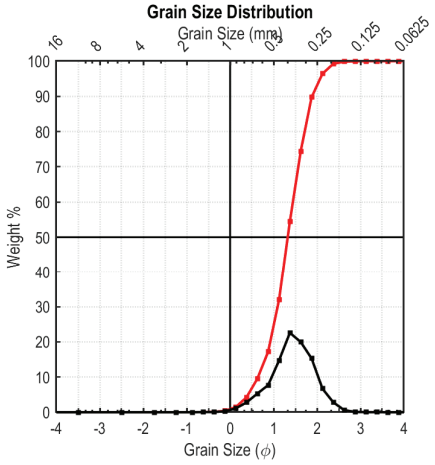
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.10 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.26 |
| -0.25 | -0.375 | 0.27 | 0.26 | 0.51 |
| 0 | -0.125 | 0.68 | 0.65 | 1.16 |
| 0.25 | 0.125 | 1.04 | 0.99 | 2.15 |
| 0.5 | 0.375 | 2.21 | 2.10 | 4.25 |
| 0.75 | 0.625 | 5.05 | 4.80 | 9.06 |
| 1 | 0.875 | 7.31 | 6.96 | 16.01 |
| 1.25 | 1.125 | 12.90 | 12.27 | 28.29 |
| 1.5 | 1.375 | 20.98 | 19.96 | 48.25 |
| 1.75 | 1.625 | 21.49 | 20.45 | 68.70 |
| 2 | 1.875 | 17.76 | 16.90 | 85.59 |
| 2.25 | 2.125 | 8.42 | 8.01 | 93.61 |
| 2.5 | 2.375 | 4.30 | 4.09 | 97.70 |
| 2.75 | 2.625 | 1.53 | 1.46 | 99.15 |
| 3 | 2.875 | 0.45 | 0.43 | 99.58 |
| 3.25 | 3.125 | 0.32 | 0.30 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.185 |
| **5** | 0.415 |
| **16** | 0.875 |
| **25** | 1.060 |
| **50** | 1.395 |
| **75** | 1.720 |
| **84** | 1.850 |
| **95** | 2.210 |
| **99** | 2.600 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.489 | 0.356 |
| Standard Deviation | 0.546 | 0.685 |
| Skewness | -0.414 | |
| Kurtosis | 4.226 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.363 | 1.373 |
| Standard Deviation | 0.488 | 0.516 |
| Skewness (1) | -0.067 | -0.079 |
| Skewness (2) | -0.169 | |
| Kurtosis | 0.841 | 1.115 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1820+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.372 mm** |
| **STD** | **0.712 mm** |
| **Skewness** | **-0.329** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.13 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

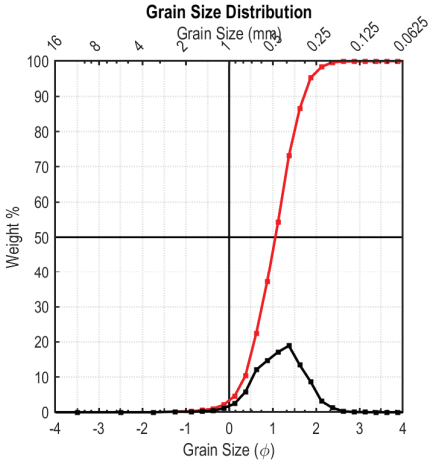
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.05 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.10 |
| 0 | -0.125 | 0.29 | 0.28 | 0.38 |
| 0.25 | 0.125 | 1.11 | 1.06 | 1.44 |
| 0.5 | 0.375 | 2.91 | 2.77 | 4.20 |
| 0.75 | 0.625 | 5.56 | 5.29 | 9.49 |
| 1 | 0.875 | 8.11 | 7.71 | 17.21 |
| 1.25 | 1.125 | 15.46 | 14.71 | 31.91 |
| 1.5 | 1.375 | 23.74 | 22.58 | 54.49 |
| 1.75 | 1.625 | 20.97 | 19.95 | 74.44 |
| 2 | 1.875 | 16.08 | 15.30 | 89.74 |
| 2.25 | 2.125 | 7.04 | 6.70 | 96.43 |
| 2.5 | 2.375 | 2.96 | 2.82 | 99.25 |
| 2.75 | 2.625 | 0.65 | 0.62 | 99.87 |
| 3 | 2.875 | 0.09 | 0.09 | 99.95 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.020 |
| **5** | 0.415 |
| **16** | 0.835 |
| **25** | 1.005 |
| **50** | 1.325 |
| **75** | 1.635 |
| **84** | 1.780 |
| **95** | 2.070 |
| **99** | 2.355 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.428 | 0.372 |
| Standard Deviation | 0.490 | 0.712 |
| Skewness | -0.329 | |
| Kurtosis | 3.421 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.307 | 1.313 |
| Standard Deviation | 0.472 | 0.487 |
| Skewness (1) | -0.037 | -0.068 |
| Skewness (2) | -0.175 | |
| Kurtosis | 0.751 | 1.077 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1820+00** |
| **Sample** | **Swash** |
| **Mean** | **0.447 mm** |
| **STD** | **0.684 mm** |
| **Skewness** | **-0.316** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

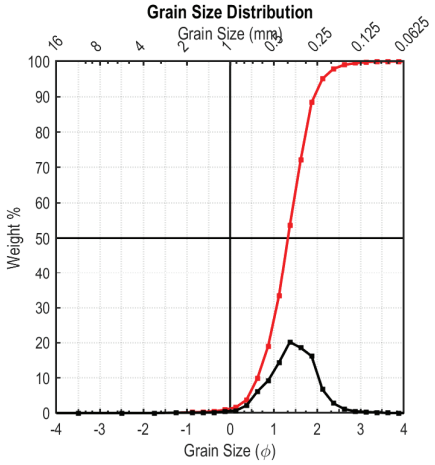
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.28 |
| -0.5 | -0.625 | 0.30 | 0.29 | 0.56 |
| -0.25 | -0.375 | 0.44 | 0.42 | 0.98 |
| 0 | -0.125 | 1.22 | 1.16 | 2.14 |
| 0.25 | 0.125 | 2.56 | 2.44 | 4.58 |
| 0.5 | 0.375 | 6.09 | 5.80 | 10.38 |
| 0.75 | 0.625 | 12.69 | 12.08 | 22.46 |
| 1 | 0.875 | 15.39 | 14.65 | 37.11 |
| 1.25 | 1.125 | 17.95 | 17.09 | 54.20 |
| 1.5 | 1.375 | 19.85 | 18.90 | 73.10 |
| 1.75 | 1.625 | 14.10 | 13.42 | 86.53 |
| 2 | 1.875 | 9.13 | 8.69 | 95.22 |
| 2.25 | 2.125 | 3.31 | 3.15 | 98.37 |
| 2.5 | 2.375 | 1.32 | 1.26 | 99.63 |
| 2.75 | 2.625 | 0.29 | 0.28 | 99.90 |
| 3 | 2.875 | 0.06 | 0.06 | 99.96 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.99 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.370 |
| **5** | 0.145 |
| **16** | 0.490 |
| **25** | 0.670 |
| **50** | 1.065 |
| **75** | 1.410 |
| **84** | 1.580 |
| **95** | 1.870 |
| **99** | 2.250 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.161 | 0.447 |
| Standard Deviation | 0.548 | 0.684 |
| Skewness | -0.316 | |
| Kurtosis | 3.710 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.035 | 1.045 |
| Standard Deviation | 0.545 | 0.534 |
| Skewness (1) | -0.055 | -0.061 |
| Skewness (2) | -0.106 | |
| Kurtosis | 0.583 | 0.955 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1830+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.369 mm** |
| **STD** | **0.689 mm** |
| **Skewness** | **-0.250** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.49 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

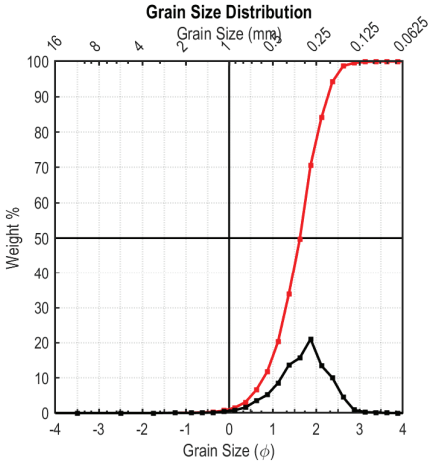
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.10 | 0.09 | 0.19 |
| -0.5 | -0.625 | 0.12 | 0.11 | 0.30 |
| -0.25 | -0.375 | 0.18 | 0.17 | 0.47 |
| 0 | -0.125 | 0.46 | 0.44 | 0.91 |
| 0.25 | 0.125 | 0.72 | 0.68 | 1.59 |
| 0.5 | 0.375 | 2.23 | 2.11 | 3.71 |
| 0.75 | 0.625 | 6.44 | 6.10 | 9.81 |
| 1 | 0.875 | 9.73 | 9.22 | 19.03 |
| 1.25 | 1.125 | 15.18 | 14.39 | 33.42 |
| 1.5 | 1.375 | 21.33 | 20.22 | 53.64 |
| 1.75 | 1.625 | 19.57 | 18.55 | 72.20 |
| 2 | 1.875 | 17.08 | 16.19 | 88.39 |
| 2.25 | 2.125 | 7.06 | 6.69 | 95.08 |
| 2.5 | 2.375 | 2.94 | 2.79 | 97.87 |
| 2.75 | 2.625 | 1.21 | 1.15 | 99.01 |
| 3 | 2.875 | 0.51 | 0.48 | 99.50 |
| 3.25 | 3.125 | 0.34 | 0.32 | 99.82 |
| 3.5 | 3.375 | 0.17 | 0.16 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.090 |
| **5** | 0.430 |
| **16** | 0.795 |
| **25** | 0.980 |
| **50** | 1.330 |
| **75** | 1.670 |
| **84** | 1.805 |
| **95** | 2.120 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.437 | 0.369 |
| Standard Deviation | 0.537 | 0.689 |
| Skewness | -0.250 | |
| Kurtosis | 4.376 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.300 | 1.310 |
| Standard Deviation | 0.505 | 0.509 |
| Skewness (1) | -0.059 | -0.062 |
| Skewness (2) | -0.109 | |
| Kurtosis | 0.673 | 1.004 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1830+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.310 mm** |
| **STD** | **0.670 mm** |
| **Skewness** | **-0.549** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.1 |

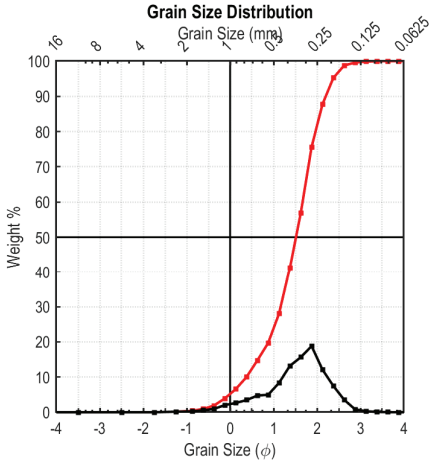
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.08 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.16 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.29 |
| 0 | -0.125 | 0.42 | 0.40 | 0.69 |
| 0.25 | 0.125 | 0.85 | 0.81 | 1.50 |
| 0.5 | 0.375 | 1.66 | 1.58 | 3.08 |
| 0.75 | 0.625 | 3.68 | 3.50 | 6.58 |
| 1 | 0.875 | 5.42 | 5.15 | 11.73 |
| 1.25 | 1.125 | 8.98 | 8.53 | 20.26 |
| 1.5 | 1.375 | 14.37 | 13.66 | 33.92 |
| 1.75 | 1.625 | 16.50 | 15.68 | 49.60 |
| 2 | 1.875 | 22.15 | 21.05 | 70.65 |
| 2.25 | 2.125 | 14.18 | 13.48 | 84.13 |
| 2.5 | 2.375 | 10.59 | 10.06 | 94.19 |
| 2.75 | 2.625 | 4.74 | 4.50 | 98.70 |
| 3 | 2.875 | 0.92 | 0.87 | 99.57 |
| 3.25 | 3.125 | 0.30 | 0.29 | 99.86 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.030 |
| **5** | 0.510 |
| **16** | 1.000 |
| **25** | 1.210 |
| **50** | 1.630 |
| **75** | 1.955 |
| **84** | 2.125 |
| **95** | 2.420 |
| **99** | 2.710 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.687 | 0.310 |
| Standard Deviation | 0.578 | 0.670 |
| Skewness | -0.549 | |
| Kurtosis | 3.765 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.562 | 1.585 |
| Standard Deviation | 0.562 | 0.571 |
| Skewness (1) | -0.120 | -0.146 |
| Skewness (2) | -0.293 | |
| Kurtosis | 0.698 | 1.051 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1830+00** |
| **Sample** | **Swash** |
| **Mean** | **0.348 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **-0.788** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.62 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.16 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

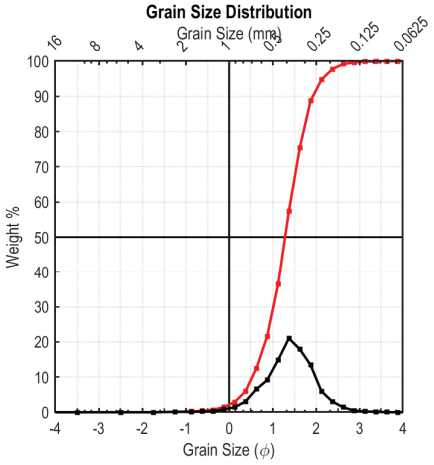
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.16 | 0.16 |
| -0.75 | -0.875 | 0.24 | 0.23 | 0.39 |
| -0.5 | -0.625 | 0.57 | 0.54 | 0.94 |
| -0.25 | -0.375 | 0.99 | 0.95 | 1.88 |
| 0 | -0.125 | 2.11 | 2.02 | 3.90 |
| 0.25 | 0.125 | 2.75 | 2.63 | 6.53 |
| 0.5 | 0.375 | 3.60 | 3.44 | 9.97 |
| 0.75 | 0.625 | 4.96 | 4.74 | 14.71 |
| 1 | 0.875 | 5.20 | 4.97 | 19.68 |
| 1.25 | 1.125 | 8.72 | 8.33 | 28.02 |
| 1.5 | 1.375 | 13.80 | 13.19 | 41.21 |
| 1.75 | 1.625 | 16.34 | 15.62 | 56.82 |
| 2 | 1.875 | 19.67 | 18.80 | 75.63 |
| 2.25 | 2.125 | 12.67 | 12.11 | 87.74 |
| 2.5 | 2.375 | 7.84 | 7.49 | 95.23 |
| 2.75 | 2.625 | 3.70 | 3.54 | 98.77 |
| 3 | 2.875 | 0.87 | 0.83 | 99.60 |
| 3.25 | 3.125 | 0.29 | 0.28 | 99.88 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.610 |
| **5** | -0.020 |
| **16** | 0.690 |
| **25** | 1.035 |
| **50** | 1.515 |
| **75** | 1.865 |
| **84** | 2.050 |
| **95** | 2.365 |
| **99** | 2.695 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.522 | 0.348 |
| Standard Deviation | 0.710 | 0.611 |
| Skewness | -0.788 | |
| Kurtosis | 3.668 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.370 | 1.418 |
| Standard Deviation | 0.680 | 0.701 |
| Skewness (1) | -0.213 | -0.250 |
| Skewness (2) | -0.504 | |
| Kurtosis | 0.754 | 1.178 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1840+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.382 mm** |
| **STD** | **0.675 mm** |
| **Skewness** | **-0.318** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.92 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.2 |

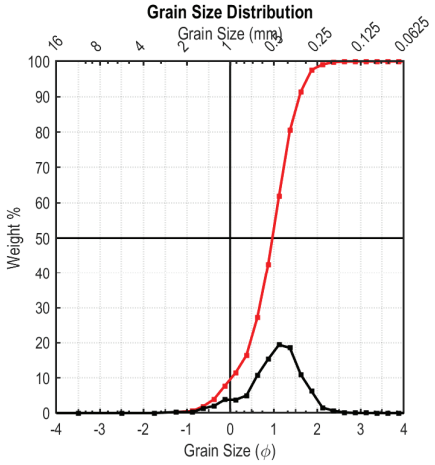
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.12 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.22 |
| -0.5 | -0.625 | 0.20 | 0.19 | 0.41 |
| -0.25 | -0.375 | 0.27 | 0.26 | 0.67 |
| 0 | -0.125 | 0.84 | 0.80 | 1.47 |
| 0.25 | 0.125 | 1.47 | 1.40 | 2.87 |
| 0.5 | 0.375 | 3.18 | 3.03 | 5.90 |
| 0.75 | 0.625 | 6.85 | 6.53 | 12.43 |
| 1 | 0.875 | 9.59 | 9.14 | 21.57 |
| 1.25 | 1.125 | 15.58 | 14.85 | 36.42 |
| 1.5 | 1.375 | 22.06 | 21.03 | 57.44 |
| 1.75 | 1.625 | 18.80 | 17.92 | 75.36 |
| 2 | 1.875 | 14.07 | 13.41 | 88.77 |
| 2.25 | 2.125 | 6.23 | 5.94 | 94.71 |
| 2.5 | 2.375 | 3.21 | 3.06 | 97.77 |
| 2.75 | 2.625 | 1.47 | 1.40 | 99.17 |
| 3 | 2.875 | 0.49 | 0.47 | 99.64 |
| 3.25 | 3.125 | 0.24 | 0.23 | 99.87 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.270 |
| **5** | 0.300 |
| **16** | 0.725 |
| **25** | 0.935 |
| **50** | 1.285 |
| **75** | 1.620 |
| **84** | 1.785 |
| **95** | 2.150 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.388 | 0.382 |
| Standard Deviation | 0.567 | 0.675 |
| Skewness | -0.318 | |
| Kurtosis | 4.186 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.255 | 1.265 |
| Standard Deviation | 0.530 | 0.545 |
| Skewness (1) | -0.057 | -0.061 |
| Skewness (2) | -0.113 | |
| Kurtosis | 0.745 | 1.107 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1840+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.493 mm** |
| **STD** | **0.657 mm** |
| **Skewness** | **-0.677** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.30 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.28 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 11.9 |

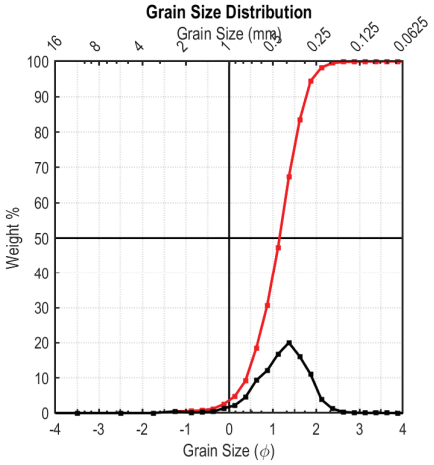
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.30 | 0.28 | 0.28 |
| -0.75 | -0.875 | 0.28 | 0.27 | 0.55 |
| -0.5 | -0.625 | 1.40 | 1.33 | 1.88 |
| -0.25 | -0.375 | 2.11 | 2.00 | 3.88 |
| 0 | -0.125 | 4.00 | 3.80 | 7.68 |
| 0.25 | 0.125 | 3.97 | 3.77 | 11.45 |
| 0.5 | 0.375 | 5.23 | 4.97 | 16.42 |
| 0.75 | 0.625 | 11.28 | 10.71 | 27.13 |
| 1 | 0.875 | 16.15 | 15.34 | 42.47 |
| 1.25 | 1.125 | 20.47 | 19.44 | 61.91 |
| 1.5 | 1.375 | 19.52 | 18.54 | 80.45 |
| 1.75 | 1.625 | 11.54 | 10.96 | 91.41 |
| 2 | 1.875 | 6.51 | 6.18 | 97.59 |
| 2.25 | 2.125 | 1.62 | 1.54 | 99.13 |
| 2.5 | 2.375 | 0.71 | 0.67 | 99.80 |
| 2.75 | 2.625 | 0.17 | 0.16 | 99.96 |
| 3 | 2.875 | 0.03 | 0.03 | 99.99 |
| 3.25 | 3.125 | 0.01 | 0.01 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.790 |
| **5** | -0.300 |
| **16** | 0.355 |
| **25** | 0.575 |
| **50** | 0.970 |
| **75** | 1.300 |
| **84** | 1.455 |
| **95** | 1.770 |
| **99** | 2.105 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.020 | 0.493 |
| Standard Deviation | 0.606 | 0.657 |
| Skewness | -0.677 | |
| Kurtosis | 3.676 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.905 | 0.927 |
| Standard Deviation | 0.550 | 0.589 |
| Skewness (1) | -0.118 | -0.173 |
| Skewness (2) | -0.427 | |
| Kurtosis | 0.882 | 1.170 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1840+00** |
| **Sample** | **Swash** |
| **Mean** | **0.427 mm** |
| **STD** | **0.676 mm** |
| **Skewness** | **-0.675** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 106.04 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.47 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.5 |

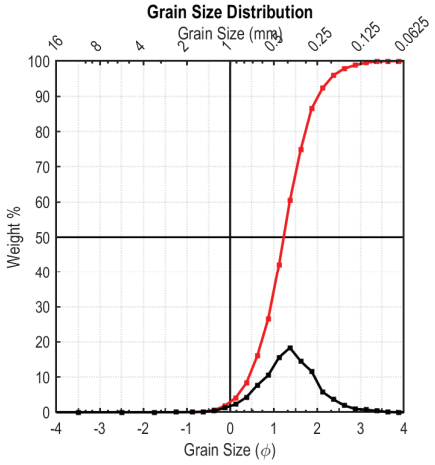
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.50 | 0.47 | 0.47 |
| -0.75 | -0.875 | 0.12 | 0.11 | 0.58 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.78 |
| -0.25 | -0.375 | 0.44 | 0.41 | 1.20 |
| 0 | -0.125 | 1.43 | 1.35 | 2.55 |
| 0.25 | 0.125 | 2.27 | 2.14 | 4.69 |
| 0.5 | 0.375 | 4.75 | 4.48 | 9.17 |
| 0.75 | 0.625 | 9.86 | 9.30 | 18.46 |
| 1 | 0.875 | 12.83 | 12.10 | 30.56 |
| 1.25 | 1.125 | 17.76 | 16.75 | 47.31 |
| 1.5 | 1.375 | 21.24 | 20.03 | 67.34 |
| 1.75 | 1.625 | 17.06 | 16.09 | 83.43 |
| 2 | 1.875 | 11.68 | 11.01 | 94.45 |
| 2.25 | 2.125 | 4.07 | 3.84 | 98.28 |
| 2.5 | 2.375 | 1.30 | 1.23 | 99.51 |
| 2.75 | 2.625 | 0.36 | 0.34 | 99.85 |
| 3 | 2.875 | 0.08 | 0.08 | 99.92 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.495 |
| **5** | 0.140 |
| **16** | 0.560 |
| **25** | 0.760 |
| **50** | 1.160 |
| **75** | 1.495 |
| **84** | 1.640 |
| **95** | 1.910 |
| **99** | 2.270 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.228 | 0.427 |
| Standard Deviation | 0.566 | 0.676 |
| Skewness | -0.675 | |
| Kurtosis | 4.558 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.100 | 1.120 |
| Standard Deviation | 0.540 | 0.538 |
| Skewness (1) | -0.111 | -0.132 |
| Skewness (2) | -0.250 | |
| Kurtosis | 0.639 | 0.987 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1850+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.390 mm** |
| **STD** | **0.644 mm** |
| **Skewness** | **0.107** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.29 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.3 |

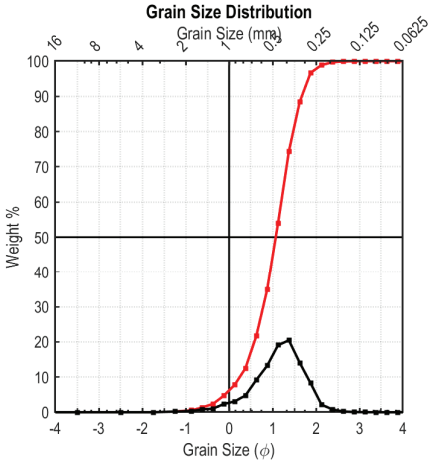
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.05 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.17 |
| -0.25 | -0.375 | 0.42 | 0.40 | 0.57 |
| 0 | -0.125 | 1.30 | 1.23 | 1.80 |
| 0.25 | 0.125 | 2.38 | 2.26 | 4.06 |
| 0.5 | 0.375 | 4.49 | 4.26 | 8.33 |
| 0.75 | 0.625 | 8.10 | 7.69 | 16.02 |
| 1 | 0.875 | 11.02 | 10.47 | 26.49 |
| 1.25 | 1.125 | 16.41 | 15.59 | 42.07 |
| 1.5 | 1.375 | 19.31 | 18.34 | 60.41 |
| 1.75 | 1.625 | 15.26 | 14.49 | 74.91 |
| 2 | 1.875 | 12.23 | 11.62 | 86.52 |
| 2.25 | 2.125 | 6.08 | 5.77 | 92.30 |
| 2.5 | 2.375 | 3.85 | 3.66 | 95.95 |
| 2.75 | 2.625 | 2.04 | 1.94 | 97.89 |
| 3 | 2.875 | 1.00 | 0.95 | 98.84 |
| 3.25 | 3.125 | 0.74 | 0.70 | 99.54 |
| 3.5 | 3.375 | 0.41 | 0.39 | 99.93 |
| 3.75 | 3.625 | 0.07 | 0.07 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.290 |
| **5** | 0.180 |
| **16** | 0.625 |
| **25** | 0.840 |
| **50** | 1.235 |
| **75** | 1.625 |
| **84** | 1.820 |
| **95** | 2.310 |
| **99** | 2.930 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.360 | 0.390 |
| Standard Deviation | 0.636 | 0.644 |
| Skewness | 0.107 | |
| Kurtosis | 3.493 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.222 | 1.227 |
| Standard Deviation | 0.597 | 0.621 |
| Skewness (1) | -0.021 | -0.006 |
| Skewness (2) | 0.017 | |
| Kurtosis | 0.782 | 1.112 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1850+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.457 mm** |
| **STD** | **0.671 mm** |
| **Skewness** | **-0.742** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.11 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.20 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.6 |

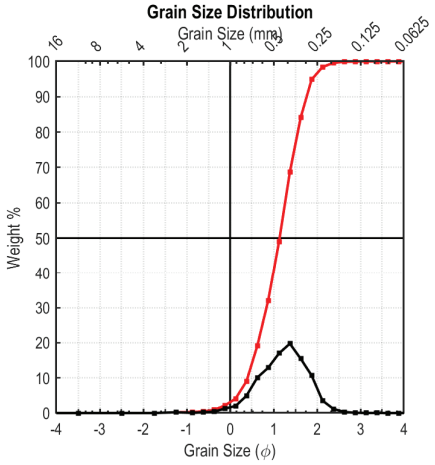
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.21 | 0.20 | 0.20 |
| -0.75 | -0.875 | 0.34 | 0.32 | 0.52 |
| -0.5 | -0.625 | 0.86 | 0.82 | 1.34 |
| -0.25 | -0.375 | 1.05 | 1.00 | 2.34 |
| 0 | -0.125 | 2.45 | 2.33 | 4.67 |
| 0.25 | 0.125 | 3.23 | 3.07 | 7.74 |
| 0.5 | 0.375 | 5.00 | 4.76 | 12.50 |
| 0.75 | 0.625 | 9.64 | 9.17 | 21.67 |
| 1 | 0.875 | 13.90 | 13.22 | 34.90 |
| 1.25 | 1.125 | 20.03 | 19.06 | 53.95 |
| 1.5 | 1.375 | 21.50 | 20.45 | 74.41 |
| 1.75 | 1.625 | 14.78 | 14.06 | 88.47 |
| 2 | 1.875 | 8.67 | 8.25 | 96.72 |
| 2.25 | 2.125 | 2.29 | 2.18 | 98.90 |
| 2.5 | 2.375 | 0.86 | 0.82 | 99.71 |
| 2.75 | 2.625 | 0.23 | 0.22 | 99.93 |
| 3 | 2.875 | 0.06 | 0.06 | 99.99 |
| 3.25 | 3.125 | 0.03 | 0.03 | 100.02 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.02 |
| 3.75 | 3.625 | -0.01 | -0.01 | 100.01 |
| 4 | 3.875 | -0.01 | -0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.730 |
| **5** | -0.100 |
| **16** | 0.470 |
| **25** | 0.690 |
| **50** | 1.075 |
| **75** | 1.385 |
| **84** | 1.545 |
| **95** | 1.825 |
| **99** | 2.160 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.130 | 0.457 |
| Standard Deviation | 0.576 | 0.671 |
| Skewness | -0.742 | |
| Kurtosis | 4.018 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.007 | 1.030 |
| Standard Deviation | 0.538 | 0.560 |
| Skewness (1) | -0.126 | -0.173 |
| Skewness (2) | -0.395 | |
| Kurtosis | 0.791 | 1.135 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1850+00** |
| **Sample** | **Swash** |
| **Mean** | **0.430 mm** |
| **STD** | **0.685 mm** |
| **Skewness** | **-0.477** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.22 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.1 |

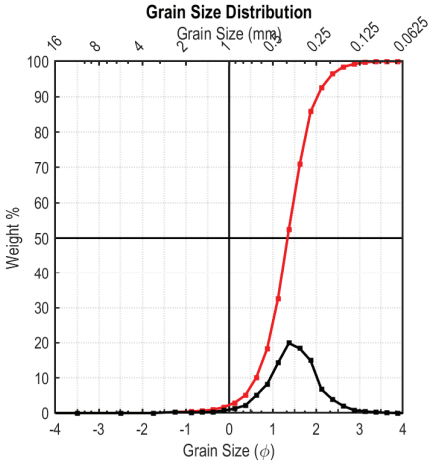
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.23 | 0.22 | 0.22 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.27 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.47 |
| -0.25 | -0.375 | 0.43 | 0.41 | 0.87 |
| 0 | -0.125 | 1.30 | 1.24 | 2.11 |
| 0.25 | 0.125 | 2.10 | 2.00 | 4.11 |
| 0.5 | 0.375 | 5.16 | 4.91 | 9.01 |
| 0.75 | 0.625 | 10.61 | 10.09 | 19.10 |
| 1 | 0.875 | 13.55 | 12.89 | 31.99 |
| 1.25 | 1.125 | 17.86 | 16.98 | 48.97 |
| 1.5 | 1.375 | 20.77 | 19.75 | 68.72 |
| 1.75 | 1.625 | 16.24 | 15.44 | 84.17 |
| 2 | 1.875 | 11.24 | 10.69 | 94.86 |
| 2.25 | 2.125 | 3.72 | 3.54 | 98.39 |
| 2.5 | 2.375 | 1.25 | 1.19 | 99.58 |
| 2.75 | 2.625 | 0.33 | 0.31 | 99.90 |
| 3 | 2.875 | 0.07 | 0.07 | 99.96 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.350 |
| **5** | 0.170 |
| **16** | 0.550 |
| **25** | 0.740 |
| **50** | 1.140 |
| **75** | 1.475 |
| **84** | 1.620 |
| **95** | 1.885 |
| **99** | 2.255 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.218 | 0.430 |
| Standard Deviation | 0.545 | 0.685 |
| Skewness | -0.477 | |
| Kurtosis | 3.860 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.085 | 1.103 |
| Standard Deviation | 0.535 | 0.527 |
| Skewness (1) | -0.103 | -0.117 |
| Skewness (2) | -0.210 | |
| Kurtosis | 0.603 | 0.956 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1860+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.365 mm** |
| **STD** | **0.661 mm** |
| **Skewness** | **-0.397** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.09 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.29 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.6 |

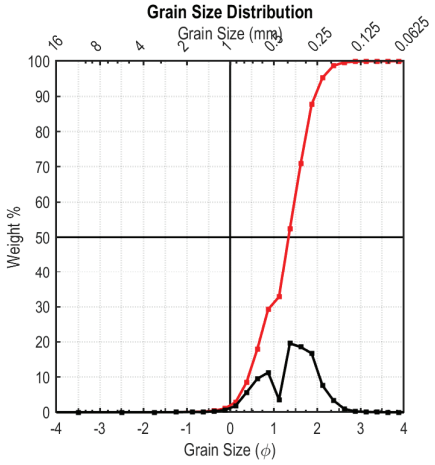
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.31 | 0.29 | 0.29 |
| -0.75 | -0.875 | 0.14 | 0.13 | 0.43 |
| -0.5 | -0.625 | 0.23 | 0.22 | 0.65 |
| -0.25 | -0.375 | 0.32 | 0.30 | 0.95 |
| 0 | -0.125 | 0.73 | 0.69 | 1.65 |
| 0.25 | 0.125 | 1.32 | 1.26 | 2.90 |
| 0.5 | 0.375 | 2.30 | 2.19 | 5.09 |
| 0.75 | 0.625 | 5.28 | 5.02 | 10.12 |
| 1 | 0.875 | 8.63 | 8.21 | 18.33 |
| 1.25 | 1.125 | 14.97 | 14.24 | 32.57 |
| 1.5 | 1.375 | 20.92 | 19.91 | 52.48 |
| 1.75 | 1.625 | 19.31 | 18.37 | 70.85 |
| 2 | 1.875 | 15.69 | 14.93 | 85.78 |
| 2.25 | 2.125 | 7.07 | 6.73 | 92.51 |
| 2.5 | 2.375 | 4.10 | 3.90 | 96.41 |
| 2.75 | 2.625 | 2.12 | 2.02 | 98.43 |
| 3 | 2.875 | 0.86 | 0.82 | 99.25 |
| 3.25 | 3.125 | 0.51 | 0.49 | 99.73 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.91 |
| 3.75 | 3.625 | 0.09 | 0.09 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | 0.365 |
| **16** | 0.805 |
| **25** | 0.990 |
| **50** | 1.345 |
| **75** | 1.695 |
| **84** | 1.845 |
| **95** | 2.285 |
| **99** | 2.800 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.454 | 0.365 |
| Standard Deviation | 0.596 | 0.661 |
| Skewness | -0.397 | |
| Kurtosis | 4.880 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.325 | 1.332 |
| Standard Deviation | 0.520 | 0.551 |
| Skewness (1) | -0.038 | -0.030 |
| Skewness (2) | -0.038 | |
| Kurtosis | 0.846 | 1.116 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1860+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.384 mm** |
| **STD** | **0.663 mm** |
| **Skewness** | **-0.389** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.40 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.5 |

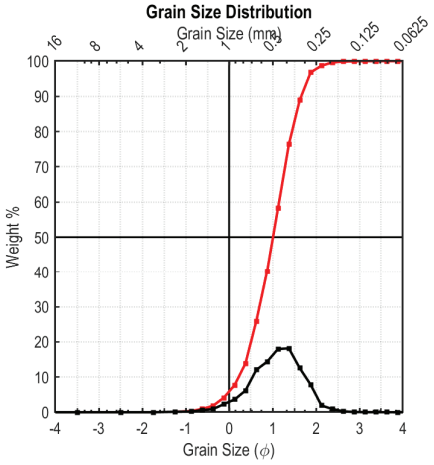
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.10 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.16 |
| -0.25 | -0.375 | 0.28 | 0.27 | 0.43 |
| 0 | -0.125 | 0.65 | 0.62 | 1.04 |
| 0.25 | 0.125 | 1.90 | 1.80 | 2.85 |
| 0.5 | 0.375 | 5.89 | 5.59 | 8.43 |
| 0.75 | 0.625 | 10.02 | 9.51 | 17.94 |
| 1 | 0.875 | 11.90 | 11.29 | 29.23 |
| 1.25 | 1.125 | 3.77 | 3.58 | 32.81 |
| 1.5 | 1.375 | 20.63 | 19.57 | 52.38 |
| 1.75 | 1.625 | 19.53 | 18.53 | 70.91 |
| 2 | 1.875 | 17.66 | 16.76 | 87.67 |
| 2.25 | 2.125 | 8.02 | 7.61 | 95.28 |
| 2.5 | 2.375 | 3.58 | 3.40 | 98.67 |
| 2.75 | 2.625 | 1.03 | 0.98 | 99.65 |
| 3 | 2.875 | 0.24 | 0.23 | 99.88 |
| 3.25 | 3.125 | 0.10 | 0.09 | 99.97 |
| 3.5 | 3.375 | 0.03 | 0.03 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.145 |
| **5** | 0.220 |
| **16** | 0.575 |
| **25** | 0.780 |
| **50** | 1.345 |
| **75** | 1.685 |
| **84** | 1.820 |
| **95** | 2.115 |
| **99** | 2.460 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.381 | 0.384 |
| Standard Deviation | 0.594 | 0.663 |
| Skewness | -0.389 | |
| Kurtosis | 2.843 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.197 | 1.247 |
| Standard Deviation | 0.623 | 0.598 |
| Skewness (1) | -0.237 | -0.212 |
| Skewness (2) | -0.285 | |
| Kurtosis | 0.522 | 0.858 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1860+00** |
| **Sample** | **Swash** |
| **Mean** | **0.469 mm** |
| **STD** | **0.672 mm** |
| **Skewness** | **-0.423** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.95 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.0 |

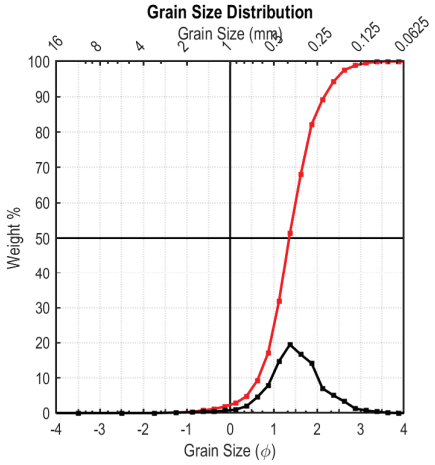
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.19 | 0.18 | 0.31 |
| -0.5 | -0.625 | 0.65 | 0.62 | 0.93 |
| -0.25 | -0.375 | 0.92 | 0.88 | 1.81 |
| 0 | -0.125 | 2.40 | 2.29 | 4.10 |
| 0.25 | 0.125 | 3.79 | 3.61 | 7.71 |
| 0.5 | 0.375 | 6.46 | 6.16 | 13.86 |
| 0.75 | 0.625 | 12.62 | 12.02 | 25.89 |
| 1 | 0.875 | 15.10 | 14.39 | 40.28 |
| 1.25 | 1.125 | 18.87 | 17.98 | 58.26 |
| 1.5 | 1.375 | 19.05 | 18.15 | 76.41 |
| 1.75 | 1.625 | 13.15 | 12.53 | 88.94 |
| 2 | 1.875 | 8.24 | 7.85 | 96.79 |
| 2.25 | 2.125 | 2.00 | 1.91 | 98.69 |
| 2.5 | 2.375 | 0.98 | 0.93 | 99.63 |
| 2.75 | 2.625 | 0.27 | 0.26 | 99.89 |
| 3 | 2.875 | 0.07 | 0.07 | 99.95 |
| 3.25 | 3.125 | 0.03 | 0.03 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.605 |
| **5** | -0.060 |
| **16** | 0.420 |
| **25** | 0.605 |
| **50** | 1.010 |
| **75** | 1.355 |
| **84** | 1.525 |
| **95** | 1.820 |
| **99** | 2.205 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.091 | 0.469 |
| Standard Deviation | 0.573 | 0.672 |
| Skewness | -0.423 | |
| Kurtosis | 3.576 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.972 | 0.985 |
| Standard Deviation | 0.552 | 0.561 |
| Skewness (1) | -0.068 | -0.103 |
| Skewness (2) | -0.235 | |
| Kurtosis | 0.701 | 1.027 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1870+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.354 mm** |
| **STD** | **0.647 mm** |
| **Skewness** | **-0.228** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.12 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.6 |

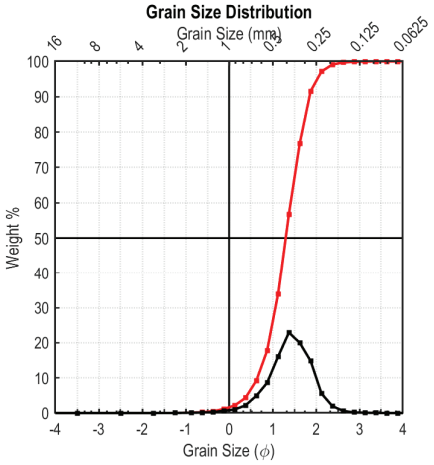
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.21 | 0.20 | 0.33 |
| -0.5 | -0.625 | 0.46 | 0.44 | 0.77 |
| -0.25 | -0.375 | 0.40 | 0.38 | 1.15 |
| 0 | -0.125 | 0.74 | 0.70 | 1.86 |
| 0.25 | 0.125 | 1.01 | 0.96 | 2.82 |
| 0.5 | 0.375 | 2.03 | 1.93 | 4.75 |
| 0.75 | 0.625 | 4.74 | 4.51 | 9.26 |
| 1 | 0.875 | 8.24 | 7.84 | 17.09 |
| 1.25 | 1.125 | 15.48 | 14.73 | 31.82 |
| 1.5 | 1.375 | 20.48 | 19.48 | 51.30 |
| 1.75 | 1.625 | 17.53 | 16.68 | 67.98 |
| 2 | 1.875 | 14.90 | 14.17 | 82.15 |
| 2.25 | 2.125 | 7.39 | 7.03 | 89.18 |
| 2.5 | 2.375 | 5.28 | 5.02 | 94.21 |
| 2.75 | 2.625 | 3.50 | 3.33 | 97.54 |
| 3 | 2.875 | 1.35 | 1.28 | 98.82 |
| 3.25 | 3.125 | 0.77 | 0.73 | 99.55 |
| 3.5 | 3.375 | 0.38 | 0.36 | 99.91 |
| 3.75 | 3.625 | 0.09 | 0.09 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.475 |
| **5** | 0.390 |
| **16** | 0.840 |
| **25** | 1.010 |
| **50** | 1.360 |
| **75** | 1.750 |
| **84** | 1.940 |
| **95** | 2.435 |
| **99** | 2.935 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.498 | 0.354 |
| Standard Deviation | 0.629 | 0.647 |
| Skewness | -0.228 | |
| Kurtosis | 4.394 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.390 | 1.380 |
| Standard Deviation | 0.550 | 0.585 |
| Skewness (1) | 0.055 | 0.053 |
| Skewness (2) | 0.095 | |
| Kurtosis | 0.859 | 1.133 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1870+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.379 mm** |
| **STD** | **0.709 mm** |
| **Skewness** | **-0.512** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.79 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.2 |

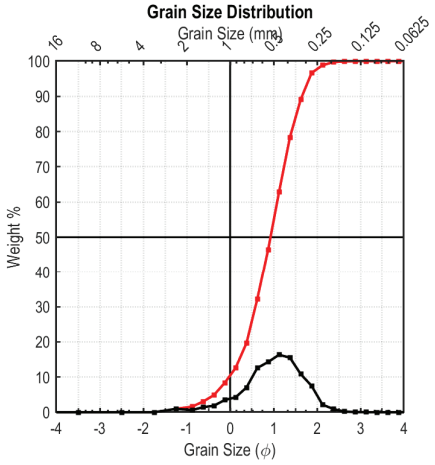
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.10 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.24 |
| -0.25 | -0.375 | 0.28 | 0.27 | 0.51 |
| 0 | -0.125 | 0.65 | 0.62 | 1.13 |
| 0.25 | 0.125 | 1.06 | 1.01 | 2.14 |
| 0.5 | 0.375 | 2.26 | 2.16 | 4.29 |
| 0.75 | 0.625 | 5.13 | 4.90 | 9.19 |
| 1 | 0.875 | 9.04 | 8.63 | 17.82 |
| 1.25 | 1.125 | 16.78 | 16.01 | 33.83 |
| 1.5 | 1.375 | 24.02 | 22.92 | 56.75 |
| 1.75 | 1.625 | 20.95 | 19.99 | 76.74 |
| 2 | 1.875 | 15.53 | 14.82 | 91.56 |
| 2.25 | 2.125 | 5.84 | 5.57 | 97.14 |
| 2.5 | 2.375 | 2.07 | 1.98 | 99.11 |
| 2.75 | 2.625 | 0.62 | 0.59 | 99.70 |
| 3 | 2.875 | 0.18 | 0.17 | 99.88 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.96 |
| 3.5 | 3.375 | 0.04 | 0.04 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.175 |
| **5** | 0.410 |
| **16** | 0.820 |
| **25** | 0.985 |
| **50** | 1.300 |
| **75** | 1.605 |
| **84** | 1.745 |
| **95** | 2.030 |
| **99** | 2.360 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.400 | 0.379 |
| Standard Deviation | 0.497 | 0.709 |
| Skewness | -0.512 | |
| Kurtosis | 4.374 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.282 | 1.288 |
| Standard Deviation | 0.463 | 0.477 |
| Skewness (1) | -0.038 | -0.068 |
| Skewness (2) | -0.173 | |
| Kurtosis | 0.751 | 1.071 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.505 mm** |
| **STD** | **0.630 mm** |
| **Skewness** | **-0.643** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.08 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.96 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.8 |

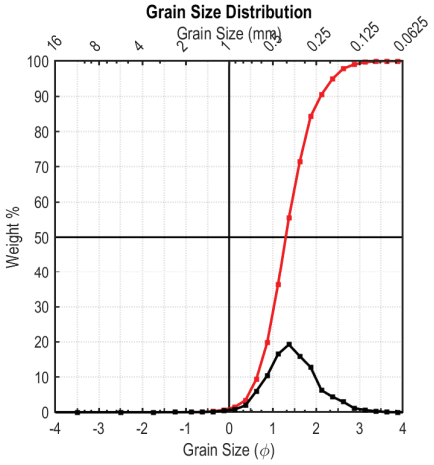
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.01 | 0.96 | 0.96 |
| -0.75 | -0.875 | 0.66 | 0.63 | 1.59 |
| -0.5 | -0.625 | 1.50 | 1.43 | 3.02 |
| -0.25 | -0.375 | 1.94 | 1.85 | 4.86 |
| 0 | -0.125 | 3.66 | 3.48 | 8.35 |
| 0.25 | 0.125 | 4.46 | 4.24 | 12.59 |
| 0.5 | 0.375 | 7.38 | 7.02 | 19.61 |
| 0.75 | 0.625 | 13.23 | 12.59 | 32.20 |
| 1 | 0.875 | 15.00 | 14.27 | 46.48 |
| 1.25 | 1.125 | 17.15 | 16.32 | 62.80 |
| 1.5 | 1.375 | 16.31 | 15.52 | 78.32 |
| 1.75 | 1.625 | 11.38 | 10.83 | 89.15 |
| 2 | 1.875 | 7.88 | 7.50 | 96.65 |
| 2.25 | 2.125 | 2.27 | 2.16 | 98.81 |
| 2.5 | 2.375 | 0.97 | 0.92 | 99.73 |
| 2.75 | 2.625 | 0.20 | 0.19 | 99.92 |
| 3 | 2.875 | 0.06 | 0.06 | 99.98 |
| 3.25 | 3.125 | 0.02 | 0.02 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.225 |
| **5** | -0.365 |
| **16** | 0.245 |
| **25** | 0.480 |
| **50** | 0.930 |
| **75** | 1.320 |
| **84** | 1.505 |
| **95** | 1.820 |
| **99** | 2.175 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.986 | 0.505 |
| Standard Deviation | 0.666 | 0.630 |
| Skewness | -0.643 | |
| Kurtosis | 3.694 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.875 | 0.893 |
| Standard Deviation | 0.630 | 0.646 |
| Skewness (1) | -0.087 | -0.136 |
| Skewness (2) | -0.321 | |
| Kurtosis | 0.734 | 1.066 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1880+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.362 mm** |
| **STD** | **0.668 mm** |
| **Skewness** | **0.255** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.1 |

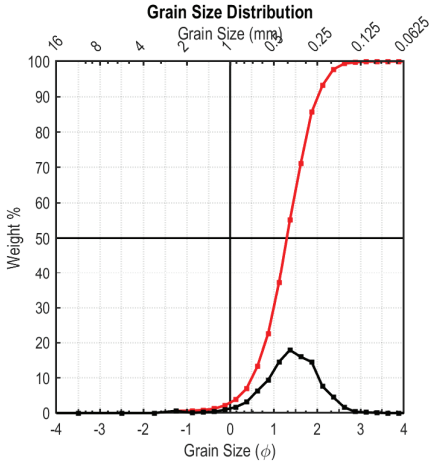
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.08 |
| -0.25 | -0.375 | 0.18 | 0.17 | 0.25 |
| 0 | -0.125 | 0.45 | 0.43 | 0.68 |
| 0.25 | 0.125 | 0.82 | 0.78 | 1.46 |
| 0.5 | 0.375 | 2.03 | 1.93 | 3.39 |
| 0.75 | 0.625 | 6.29 | 5.99 | 9.37 |
| 1 | 0.875 | 10.91 | 10.38 | 19.76 |
| 1.25 | 1.125 | 17.34 | 16.50 | 36.26 |
| 1.5 | 1.375 | 20.21 | 19.23 | 55.50 |
| 1.75 | 1.625 | 16.74 | 15.93 | 71.43 |
| 2 | 1.875 | 13.46 | 12.81 | 84.24 |
| 2.25 | 2.125 | 6.57 | 6.25 | 90.49 |
| 2.5 | 2.375 | 4.63 | 4.41 | 94.90 |
| 2.75 | 2.625 | 3.12 | 2.97 | 97.87 |
| 3 | 2.875 | 1.23 | 1.17 | 99.04 |
| 3.25 | 3.125 | 0.66 | 0.63 | 99.67 |
| 3.5 | 3.375 | 0.30 | 0.29 | 99.95 |
| 3.75 | 3.625 | 0.05 | 0.05 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.020 |
| **5** | 0.440 |
| **16** | 0.785 |
| **25** | 0.955 |
| **50** | 1.305 |
| **75** | 1.695 |
| **84** | 1.870 |
| **95** | 2.385 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.464 | 0.362 |
| Standard Deviation | 0.582 | 0.668 |
| Skewness | 0.255 | |
| Kurtosis | 3.535 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.328 | 1.320 |
| Standard Deviation | 0.542 | 0.566 |
| Skewness (1) | 0.041 | 0.076 |
| Skewness (2) | 0.198 | |
| Kurtosis | 0.793 | 1.077 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1880+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.380 mm** |
| **STD** | **0.650 mm** |
| **Skewness** | **-0.640** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.26 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.61 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

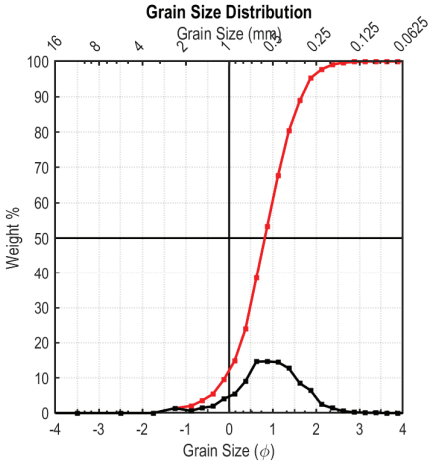
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.64 | 0.61 | 0.61 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.67 |
| -0.5 | -0.625 | 0.20 | 0.19 | 0.86 |
| -0.25 | -0.375 | 0.37 | 0.35 | 1.21 |
| 0 | -0.125 | 0.99 | 0.94 | 2.15 |
| 0.25 | 0.125 | 1.75 | 1.66 | 3.81 |
| 0.5 | 0.375 | 3.25 | 3.09 | 6.90 |
| 0.75 | 0.625 | 6.66 | 6.33 | 13.22 |
| 1 | 0.875 | 9.86 | 9.37 | 22.59 |
| 1.25 | 1.125 | 15.32 | 14.55 | 37.15 |
| 1.5 | 1.375 | 18.88 | 17.94 | 55.08 |
| 1.75 | 1.625 | 16.81 | 15.97 | 71.05 |
| 2 | 1.875 | 15.32 | 14.55 | 85.61 |
| 2.25 | 2.125 | 8.00 | 7.60 | 93.21 |
| 2.5 | 2.375 | 4.75 | 4.51 | 97.72 |
| 2.75 | 2.625 | 1.74 | 1.65 | 99.37 |
| 3 | 2.875 | 0.38 | 0.36 | 99.73 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.92 |
| 3.5 | 3.375 | 0.08 | 0.08 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.520 |
| **5** | 0.220 |
| **16** | 0.700 |
| **25** | 0.915 |
| **50** | 1.305 |
| **75** | 1.695 |
| **84** | 1.845 |
| **95** | 2.225 |
| **99** | 2.570 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.397 | 0.380 |
| Standard Deviation | 0.621 | 0.650 |
| Skewness | -0.640 | |
| Kurtosis | 4.649 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.272 | 1.283 |
| Standard Deviation | 0.573 | 0.590 |
| Skewness (1) | -0.057 | -0.070 |
| Skewness (2) | -0.144 | |
| Kurtosis | 0.751 | 1.053 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.528 mm** |
| **STD** | **0.613 mm** |
| **Skewness** | **-0.349** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.92 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.36 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 12.7 |

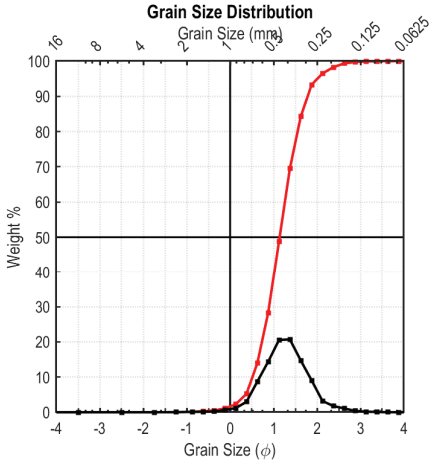
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.43 | 1.36 | 1.36 |
| -0.75 | -0.875 | 0.69 | 0.66 | 2.02 |
| -0.5 | -0.625 | 1.56 | 1.49 | 3.51 |
| -0.25 | -0.375 | 1.99 | 1.90 | 5.40 |
| 0 | -0.125 | 4.24 | 4.04 | 9.45 |
| 0.25 | 0.125 | 5.67 | 5.40 | 14.85 |
| 0.5 | 0.375 | 9.46 | 9.02 | 23.87 |
| 0.75 | 0.625 | 15.36 | 14.64 | 38.51 |
| 1 | 0.875 | 15.41 | 14.69 | 53.19 |
| 1.25 | 1.125 | 15.20 | 14.49 | 67.68 |
| 1.5 | 1.375 | 13.33 | 12.70 | 80.39 |
| 1.75 | 1.625 | 8.89 | 8.47 | 88.86 |
| 2 | 1.875 | 6.76 | 6.44 | 95.30 |
| 2.25 | 2.125 | 2.54 | 2.42 | 97.72 |
| 2.5 | 2.375 | 1.46 | 1.39 | 99.11 |
| 2.75 | 2.625 | 0.56 | 0.53 | 99.65 |
| 3 | 2.875 | 0.20 | 0.19 | 99.84 |
| 3.25 | 3.125 | 0.12 | 0.11 | 99.95 |
| 3.5 | 3.375 | 0.05 | 0.05 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.385 |
| **5** | -0.430 |
| **16** | 0.155 |
| **25** | 0.395 |
| **50** | 0.820 |
| **75** | 1.270 |
| **84** | 1.480 |
| **95** | 1.865 |
| **99** | 2.355 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.922 | 0.528 |
| Standard Deviation | 0.707 | 0.613 |
| Skewness | -0.349 | |
| Kurtosis | 3.598 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.817 | 0.818 |
| Standard Deviation | 0.663 | 0.679 |
| Skewness (1) | -0.004 | -0.047 |
| Skewness (2) | -0.155 | |
| Kurtosis | 0.732 | 1.075 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1890+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.414 mm** |
| **STD** | **0.698 mm** |
| **Skewness** | **0.072** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.90 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.5 |

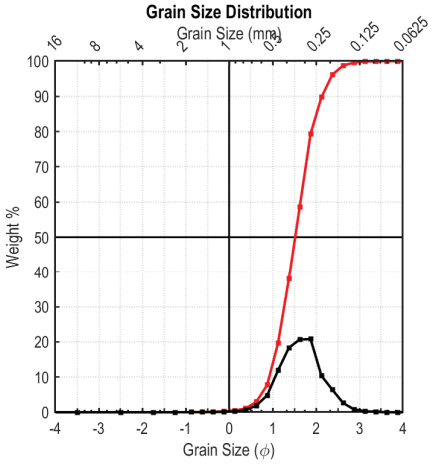
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.11 | 0.10 | 0.13 |
| -0.5 | -0.625 | 0.16 | 0.15 | 0.28 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.47 |
| 0 | -0.125 | 0.64 | 0.60 | 1.08 |
| 0.25 | 0.125 | 1.24 | 1.17 | 2.25 |
| 0.5 | 0.375 | 3.13 | 2.96 | 5.20 |
| 0.75 | 0.625 | 9.21 | 8.70 | 13.90 |
| 1 | 0.875 | 15.21 | 14.36 | 28.26 |
| 1.25 | 1.125 | 21.77 | 20.56 | 48.82 |
| 1.5 | 1.375 | 21.92 | 20.70 | 69.52 |
| 1.75 | 1.625 | 15.58 | 14.71 | 84.23 |
| 2 | 1.875 | 9.60 | 9.07 | 93.30 |
| 2.25 | 2.125 | 3.39 | 3.20 | 96.50 |
| 2.5 | 2.375 | 1.88 | 1.78 | 98.27 |
| 2.75 | 2.625 | 1.15 | 1.09 | 99.36 |
| 3 | 2.875 | 0.41 | 0.39 | 99.75 |
| 3.25 | 3.125 | 0.18 | 0.17 | 99.92 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.155 |
| **5** | 0.360 |
| **16** | 0.660 |
| **25** | 0.820 |
| **50** | 1.140 |
| **75** | 1.470 |
| **84** | 1.620 |
| **95** | 2.010 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.272 | 0.414 |
| Standard Deviation | 0.519 | 0.698 |
| Skewness | 0.072 | |
| Kurtosis | 4.206 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.140 | 1.140 |
| Standard Deviation | 0.480 | 0.490 |
| Skewness (1) | 0.000 | 0.027 |
| Skewness (2) | 0.094 | |
| Kurtosis | 0.719 | 1.040 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1890+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.320 mm** |
| **STD** | **0.715 mm** |
| **Skewness** | **-0.069** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.53 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

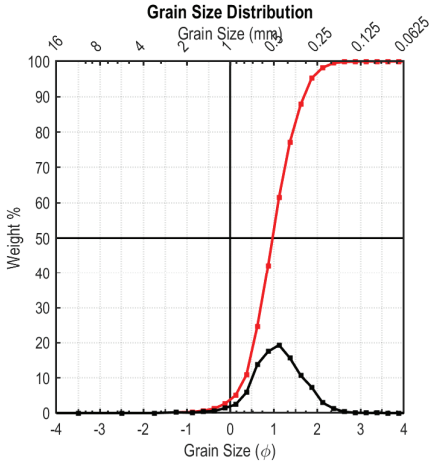
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.03 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.07 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.12 |
| 0 | -0.125 | 0.14 | 0.13 | 0.26 |
| 0.25 | 0.125 | 0.24 | 0.23 | 0.49 |
| 0.5 | 0.375 | 0.59 | 0.56 | 1.05 |
| 0.75 | 0.625 | 1.97 | 1.88 | 2.94 |
| 1 | 0.875 | 5.02 | 4.80 | 7.74 |
| 1.25 | 1.125 | 12.42 | 11.88 | 19.62 |
| 1.5 | 1.375 | 19.16 | 18.33 | 37.95 |
| 1.75 | 1.625 | 21.61 | 20.67 | 58.62 |
| 2 | 1.875 | 21.71 | 20.77 | 79.39 |
| 2.25 | 2.125 | 10.82 | 10.35 | 89.74 |
| 2.5 | 2.375 | 6.70 | 6.41 | 96.15 |
| 2.75 | 2.625 | 2.73 | 2.61 | 98.77 |
| 3 | 2.875 | 0.85 | 0.81 | 99.58 |
| 3.25 | 3.125 | 0.32 | 0.31 | 99.89 |
| 3.5 | 3.375 | 0.12 | 0.11 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.350 |
| **5** | 0.730 |
| **16** | 1.050 |
| **25** | 1.200 |
| **50** | 1.520 |
| **75** | 1.820 |
| **84** | 1.985 |
| **95** | 2.330 |
| **99** | 2.695 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.644 | 0.320 |
| Standard Deviation | 0.485 | 0.715 |
| Skewness | -0.069 | |
| Kurtosis | 3.810 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.517 | 1.518 |
| Standard Deviation | 0.468 | 0.476 |
| Skewness (1) | -0.005 | 0.004 |
| Skewness (2) | 0.021 | |
| Kurtosis | 0.711 | 1.058 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1890+00** |
| **Sample** | **Swash** |
| **Mean** | **0.464 mm** |
| **STD** | **0.683 mm** |
| **Skewness** | **-0.179** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.22 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.20 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 13.0 |

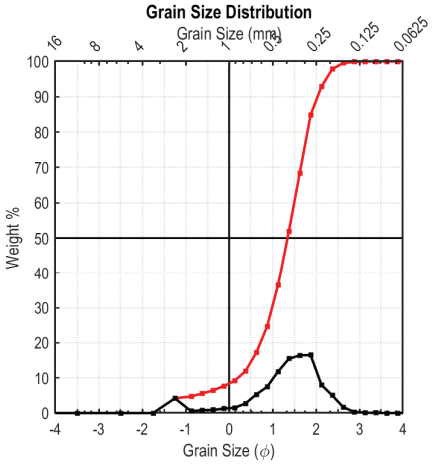
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.21 | 0.20 | 0.20 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.29 |
| -0.5 | -0.625 | 0.42 | 0.40 | 0.68 |
| -0.25 | -0.375 | 0.56 | 0.53 | 1.22 |
| 0 | -0.125 | 1.47 | 1.40 | 2.61 |
| 0.25 | 0.125 | 2.53 | 2.40 | 5.02 |
| 0.5 | 0.375 | 6.15 | 5.84 | 10.86 |
| 0.75 | 0.625 | 14.51 | 13.79 | 24.65 |
| 1 | 0.875 | 18.43 | 17.52 | 42.17 |
| 1.25 | 1.125 | 20.36 | 19.35 | 61.52 |
| 1.5 | 1.375 | 16.48 | 15.66 | 77.18 |
| 1.75 | 1.625 | 11.22 | 10.66 | 87.84 |
| 2 | 1.875 | 7.76 | 7.38 | 95.22 |
| 2.25 | 2.125 | 3.14 | 2.98 | 98.20 |
| 2.5 | 2.375 | 1.38 | 1.31 | 99.52 |
| 2.75 | 2.625 | 0.38 | 0.36 | 99.88 |
| 3 | 2.875 | 0.08 | 0.08 | 99.95 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.475 |
| **5** | 0.125 |
| **16** | 0.470 |
| **25** | 0.630 |
| **50** | 0.975 |
| **75** | 1.340 |
| **84** | 1.535 |
| **95** | 1.870 |
| **99** | 2.275 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.107 | 0.464 |
| Standard Deviation | 0.551 | 0.683 |
| Skewness | -0.179 | |
| Kurtosis | 3.814 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.002 | 0.993 |
| Standard Deviation | 0.533 | 0.531 |
| Skewness (1) | 0.052 | 0.039 |
| Skewness (2) | 0.042 | |
| Kurtosis | 0.638 | 1.007 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1900+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.403 mm** |
| **STD** | **0.562 mm** |
| **Skewness** | **-1.346** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.16 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 4.19 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.0 |

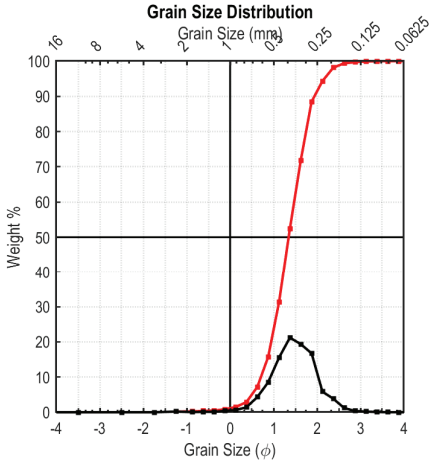
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 4.41 | 4.19 | 4.19 |
| -0.75 | -0.875 | 0.55 | 0.52 | 4.72 |
| -0.5 | -0.625 | 0.87 | 0.83 | 5.54 |
| -0.25 | -0.375 | 0.92 | 0.88 | 6.42 |
| 0 | -0.125 | 1.32 | 1.26 | 7.68 |
| 0.25 | 0.125 | 1.58 | 1.50 | 9.18 |
| 0.5 | 0.375 | 2.85 | 2.71 | 11.89 |
| 0.75 | 0.625 | 5.58 | 5.31 | 17.20 |
| 1 | 0.875 | 7.85 | 7.46 | 24.66 |
| 1.25 | 1.125 | 12.41 | 11.80 | 36.46 |
| 1.5 | 1.375 | 16.25 | 15.45 | 51.91 |
| 1.75 | 1.625 | 17.28 | 16.43 | 68.34 |
| 2 | 1.875 | 17.35 | 16.50 | 84.84 |
| 2.25 | 2.125 | 8.42 | 8.01 | 92.85 |
| 2.5 | 2.375 | 5.25 | 4.99 | 97.84 |
| 2.75 | 2.625 | 1.77 | 1.68 | 99.52 |
| 3 | 2.875 | 0.35 | 0.33 | 99.86 |
| 3.25 | 3.125 | 0.11 | 0.10 | 99.96 |
| 3.5 | 3.375 | 0.04 | 0.04 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.630 |
| **5** | -0.790 |
| **16** | 0.570 |
| **25** | 0.880 |
| **50** | 1.345 |
| **75** | 1.725 |
| **84** | 1.860 |
| **95** | 2.235 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.312 | 0.403 |
| Standard Deviation | 0.831 | 0.562 |
| Skewness | -1.346 | |
| Kurtosis | 5.104 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.215 | 1.258 |
| Standard Deviation | 0.645 | 0.781 |
| Skewness (1) | -0.202 | -0.307 |
| Skewness (2) | -0.965 | |
| Kurtosis | 1.345 | 1.467 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1900+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.363 mm** |
| **STD** | **0.700 mm** |
| **Skewness** | **-0.410** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.87 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.19 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

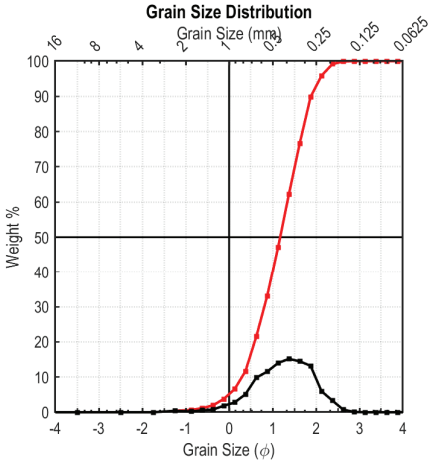
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.20 | 0.19 | 0.19 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.23 |
| -0.5 | -0.625 | 0.12 | 0.12 | 0.35 |
| -0.25 | -0.375 | 0.12 | 0.12 | 0.47 |
| 0 | -0.125 | 0.39 | 0.38 | 0.84 |
| 0.25 | 0.125 | 0.65 | 0.63 | 1.47 |
| 0.5 | 0.375 | 1.47 | 1.42 | 2.88 |
| 0.75 | 0.625 | 4.47 | 4.30 | 7.19 |
| 1 | 0.875 | 8.85 | 8.52 | 15.71 |
| 1.25 | 1.125 | 16.12 | 15.52 | 31.22 |
| 1.5 | 1.375 | 22.01 | 21.19 | 52.41 |
| 1.75 | 1.625 | 20.12 | 19.37 | 71.78 |
| 2 | 1.875 | 17.37 | 16.72 | 88.51 |
| 2.25 | 2.125 | 6.06 | 5.83 | 94.34 |
| 2.5 | 2.375 | 3.98 | 3.83 | 98.17 |
| 2.75 | 2.625 | 1.25 | 1.20 | 99.37 |
| 3 | 2.875 | 0.36 | 0.35 | 99.72 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.91 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.060 |
| **5** | 0.500 |
| **16** | 0.880 |
| **25** | 1.025 |
| **50** | 1.345 |
| **75** | 1.675 |
| **84** | 1.810 |
| **95** | 2.170 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.463 | 0.363 |
| Standard Deviation | 0.514 | 0.700 |
| Skewness | -0.410 | |
| Kurtosis | 5.077 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.345 | 1.345 |
| Standard Deviation | 0.465 | 0.486 |
| Skewness (1) | 0.000 | -0.006 |
| Skewness (2) | -0.022 | |
| Kurtosis | 0.796 | 1.053 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1900+00** |
| **Sample** | **Swash** |
| **Mean** | **0.421 mm** |
| **STD** | **0.638 mm** |
| **Skewness** | **-0.553** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.98 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.41 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.3 |

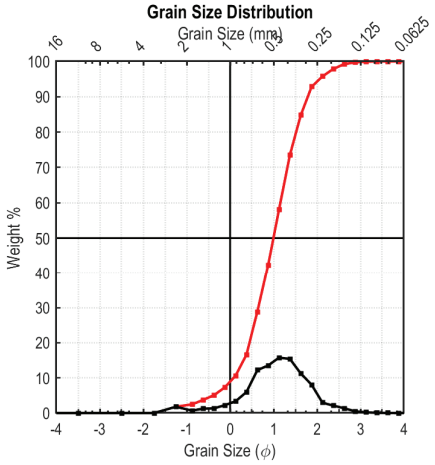
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.43 | 0.41 | 0.41 |
| -0.75 | -0.875 | 0.24 | 0.23 | 0.64 |
| -0.5 | -0.625 | 0.55 | 0.52 | 1.16 |
| -0.25 | -0.375 | 0.82 | 0.78 | 1.94 |
| 0 | -0.125 | 1.92 | 1.83 | 3.77 |
| 0.25 | 0.125 | 2.91 | 2.77 | 6.54 |
| 0.5 | 0.375 | 5.37 | 5.12 | 11.66 |
| 0.75 | 0.625 | 10.33 | 9.84 | 21.50 |
| 1 | 0.875 | 12.10 | 11.53 | 33.03 |
| 1.25 | 1.125 | 14.68 | 13.98 | 47.01 |
| 1.5 | 1.375 | 15.92 | 15.16 | 62.17 |
| 1.75 | 1.625 | 15.19 | 14.47 | 76.64 |
| 2 | 1.875 | 13.85 | 13.19 | 89.84 |
| 2.25 | 2.125 | 6.30 | 6.00 | 95.84 |
| 2.5 | 2.375 | 3.49 | 3.32 | 99.16 |
| 2.75 | 2.625 | 0.79 | 0.75 | 99.91 |
| 3 | 2.875 | 0.09 | 0.09 | 100.00 |
| 3.25 | 3.125 | 0.00 | 0.00 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.700 |
| **5** | -0.015 |
| **16** | 0.485 |
| **25** | 0.700 |
| **50** | 1.175 |
| **75** | 1.595 |
| **84** | 1.765 |
| **95** | 2.090 |
| **99** | 2.365 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.246 | 0.421 |
| Standard Deviation | 0.648 | 0.638 |
| Skewness | -0.553 | |
| Kurtosis | 3.554 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.125 | 1.142 |
| Standard Deviation | 0.640 | 0.639 |
| Skewness (1) | -0.078 | -0.104 |
| Skewness (2) | -0.215 | |
| Kurtosis | 0.645 | 0.964 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1910+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.476 mm** |
| **STD** | **0.602 mm** |
| **Skewness** | **-0.563** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.21 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.79 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 14.8 |

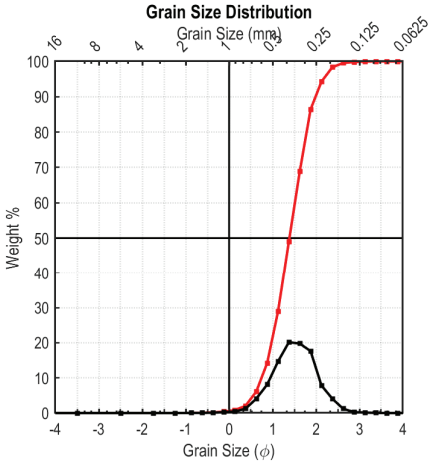
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.88 | 1.79 | 1.79 |
| -0.75 | -0.875 | 0.72 | 0.68 | 2.47 |
| -0.5 | -0.625 | 1.32 | 1.25 | 3.73 |
| -0.25 | -0.375 | 1.40 | 1.33 | 5.06 |
| 0 | -0.125 | 2.34 | 2.22 | 7.28 |
| 0.25 | 0.125 | 3.52 | 3.35 | 10.63 |
| 0.5 | 0.375 | 6.28 | 5.97 | 16.60 |
| 0.75 | 0.625 | 12.83 | 12.19 | 28.79 |
| 1 | 0.875 | 14.25 | 13.54 | 42.33 |
| 1.25 | 1.125 | 16.58 | 15.76 | 58.09 |
| 1.5 | 1.375 | 16.21 | 15.41 | 73.50 |
| 1.75 | 1.625 | 11.85 | 11.26 | 84.76 |
| 2 | 1.875 | 8.48 | 8.06 | 92.82 |
| 2.25 | 2.125 | 3.09 | 2.94 | 95.76 |
| 2.5 | 2.375 | 2.22 | 2.11 | 97.87 |
| 2.75 | 2.625 | 1.43 | 1.36 | 99.23 |
| 3 | 2.875 | 0.52 | 0.49 | 99.72 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.93 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.470 |
| **5** | -0.385 |
| **16** | 0.350 |
| **25** | 0.545 |
| **50** | 0.995 |
| **75** | 1.410 |
| **84** | 1.610 |
| **95** | 2.060 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.072 | 0.476 |
| Standard Deviation | 0.733 | 0.602 |
| Skewness | -0.563 | |
| Kurtosis | 4.163 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.980 | 0.985 |
| Standard Deviation | 0.630 | 0.685 |
| Skewness (1) | -0.024 | -0.076 |
| Skewness (2) | -0.250 | |
| Kurtosis | 0.940 | 1.158 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1910+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.353 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **-0.177** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.88 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.1 |

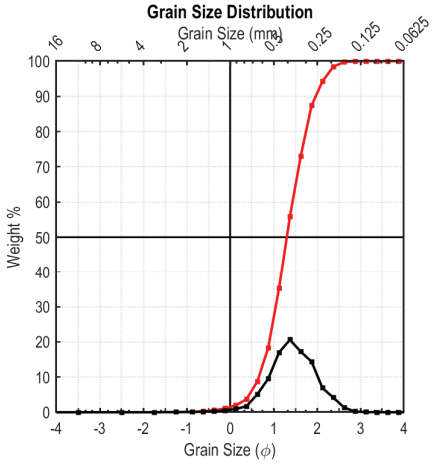
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.03 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.07 |
| -0.25 | -0.375 | 0.10 | 0.10 | 0.16 |
| 0 | -0.125 | 0.25 | 0.24 | 0.40 |
| 0.25 | 0.125 | 0.44 | 0.42 | 0.82 |
| 0.5 | 0.375 | 1.27 | 1.21 | 2.03 |
| 0.75 | 0.625 | 4.28 | 4.08 | 6.11 |
| 1 | 0.875 | 8.50 | 8.10 | 14.22 |
| 1.25 | 1.125 | 15.39 | 14.67 | 28.89 |
| 1.5 | 1.375 | 21.14 | 20.16 | 49.05 |
| 1.75 | 1.625 | 20.74 | 19.77 | 68.82 |
| 2 | 1.875 | 18.47 | 17.61 | 86.43 |
| 2.25 | 2.125 | 8.22 | 7.84 | 94.27 |
| 2.5 | 2.375 | 4.28 | 4.08 | 98.35 |
| 2.75 | 2.625 | 1.26 | 1.20 | 99.55 |
| 3 | 2.875 | 0.29 | 0.28 | 99.83 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.96 |
| 3.5 | 3.375 | 0.04 | 0.04 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.160 |
| **5** | 0.555 |
| **16** | 0.905 |
| **25** | 1.060 |
| **50** | 1.385 |
| **75** | 1.715 |
| **84** | 1.840 |
| **95** | 2.170 |
| **99** | 2.510 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.503 | 0.353 |
| Standard Deviation | 0.488 | 0.713 |
| Skewness | -0.177 | |
| Kurtosis | 3.562 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.372 | 1.377 |
| Standard Deviation | 0.468 | 0.478 |
| Skewness (1) | -0.027 | -0.027 |
| Skewness (2) | -0.048 | |
| Kurtosis | 0.727 | 1.011 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1910+00** |
| **Sample** | **Swash** |
| **Mean** | **0.371 mm** |
| **STD** | **0.694 mm** |
| **Skewness** | **-0.344** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.34 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.9 |

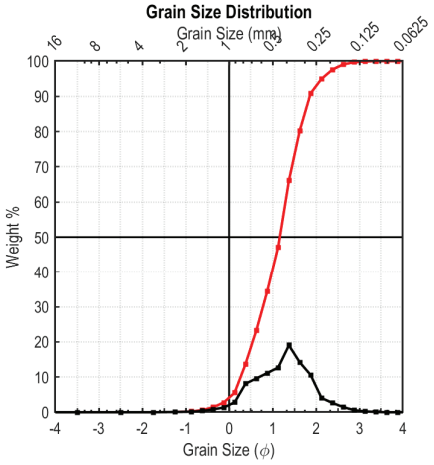
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.12 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.28 |
| -0.25 | -0.375 | 0.26 | 0.25 | 0.53 |
| 0 | -0.125 | 0.54 | 0.51 | 1.04 |
| 0.25 | 0.125 | 0.96 | 0.91 | 1.96 |
| 0.5 | 0.375 | 1.79 | 1.70 | 3.65 |
| 0.75 | 0.625 | 5.36 | 5.09 | 8.74 |
| 1 | 0.875 | 10.01 | 9.50 | 18.25 |
| 1.25 | 1.125 | 17.88 | 16.97 | 35.22 |
| 1.5 | 1.375 | 21.69 | 20.59 | 55.81 |
| 1.75 | 1.625 | 18.14 | 17.22 | 73.03 |
| 2 | 1.875 | 15.13 | 14.36 | 87.39 |
| 2.25 | 2.125 | 7.24 | 6.87 | 94.27 |
| 2.5 | 2.375 | 4.39 | 4.17 | 98.43 |
| 2.75 | 2.625 | 1.38 | 1.31 | 99.74 |
| 3 | 2.875 | 0.21 | 0.20 | 99.94 |
| 3.25 | 3.125 | 0.06 | 0.06 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.145 |
| **5** | 0.440 |
| **16** | 0.815 |
| **25** | 0.975 |
| **50** | 1.305 |
| **75** | 1.660 |
| **84** | 1.815 |
| **95** | 2.170 |
| **99** | 2.485 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.429 | 0.371 |
| Standard Deviation | 0.527 | 0.694 |
| Skewness | -0.344 | |
| Kurtosis | 3.982 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.315 | 1.312 |
| Standard Deviation | 0.500 | 0.512 |
| Skewness (1) | 0.020 | 0.010 |
| Skewness (2) | -0.000 | |
| Kurtosis | 0.730 | 1.035 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1920+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.426 mm** |
| **STD** | **0.642 mm** |
| **Skewness** | **-0.129** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.41 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.8 |

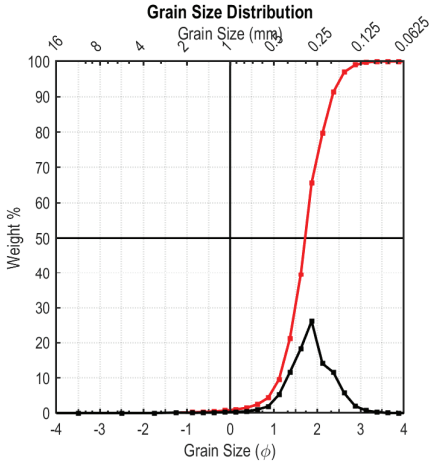
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.08 | 0.08 |
| -0.75 | -0.875 | 0.16 | 0.15 | 0.23 |
| -0.5 | -0.625 | 0.38 | 0.36 | 0.58 |
| -0.25 | -0.375 | 0.88 | 0.83 | 1.41 |
| 0 | -0.125 | 1.42 | 1.33 | 2.74 |
| 0.25 | 0.125 | 2.97 | 2.79 | 5.54 |
| 0.5 | 0.375 | 8.61 | 8.09 | 13.63 |
| 0.75 | 0.625 | 10.21 | 9.59 | 23.22 |
| 1 | 0.875 | 11.84 | 11.13 | 34.35 |
| 1.25 | 1.125 | 13.48 | 12.67 | 47.02 |
| 1.5 | 1.375 | 20.26 | 19.04 | 66.06 |
| 1.75 | 1.625 | 15.11 | 14.20 | 80.26 |
| 2 | 1.875 | 11.28 | 10.60 | 90.86 |
| 2.25 | 2.125 | 4.35 | 4.09 | 94.94 |
| 2.5 | 2.375 | 2.81 | 2.64 | 97.58 |
| 2.75 | 2.625 | 1.59 | 1.49 | 99.08 |
| 3 | 2.875 | 0.62 | 0.58 | 99.66 |
| 3.25 | 3.125 | 0.26 | 0.24 | 99.91 |
| 3.5 | 3.375 | 0.10 | 0.09 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.500 |
| **5** | 0.075 |
| **16** | 0.435 |
| **25** | 0.665 |
| **50** | 1.165 |
| **75** | 1.530 |
| **84** | 1.715 |
| **95** | 2.130 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.232 | 0.426 |
| Standard Deviation | 0.639 | 0.642 |
| Skewness | -0.129 | |
| Kurtosis | 3.257 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.075 | 1.105 |
| Standard Deviation | 0.640 | 0.631 |
| Skewness (1) | -0.141 | -0.101 |
| Skewness (2) | -0.098 | |
| Kurtosis | 0.605 | 0.974 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1920+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.279 mm** |
| **STD** | **0.697 mm** |
| **Skewness** | **-0.715** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.67 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.12 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.7 |

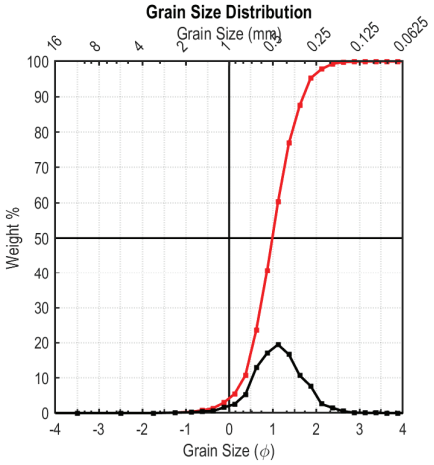
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.13 | 0.12 | 0.12 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.19 |
| -0.5 | -0.625 | 0.11 | 0.11 | 0.30 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.44 |
| 0 | -0.125 | 0.26 | 0.25 | 0.69 |
| 0.25 | 0.125 | 0.34 | 0.32 | 1.01 |
| 0.5 | 0.375 | 0.48 | 0.46 | 1.47 |
| 0.75 | 0.625 | 1.02 | 0.97 | 2.45 |
| 1 | 0.875 | 1.97 | 1.88 | 4.33 |
| 1.25 | 1.125 | 5.49 | 5.25 | 9.57 |
| 1.5 | 1.375 | 12.16 | 11.62 | 21.19 |
| 1.75 | 1.625 | 19.15 | 18.30 | 39.49 |
| 2 | 1.875 | 27.35 | 26.13 | 65.62 |
| 2.25 | 2.125 | 14.73 | 14.07 | 79.69 |
| 2.5 | 2.375 | 12.14 | 11.60 | 91.29 |
| 2.75 | 2.625 | 5.94 | 5.67 | 96.96 |
| 3 | 2.875 | 2.12 | 2.03 | 98.99 |
| 3.25 | 3.125 | 0.75 | 0.72 | 99.70 |
| 3.5 | 3.375 | 0.28 | 0.27 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.115 |
| **5** | 0.905 |
| **16** | 1.265 |
| **25** | 1.425 |
| **50** | 1.725 |
| **75** | 2.040 |
| **84** | 2.220 |
| **95** | 2.540 |
| **99** | 2.880 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.841 | 0.279 |
| Standard Deviation | 0.522 | 0.697 |
| Skewness | -0.715 | |
| Kurtosis | 6.200 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.742 | 1.737 |
| Standard Deviation | 0.477 | 0.486 |
| Skewness (1) | 0.037 | 0.017 |
| Skewness (2) | -0.005 | |
| Kurtosis | 0.712 | 1.090 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1920+00** |
| **Sample** | **Swash** |
| **Mean** | **0.461 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **-0.190** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.86 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.4 |

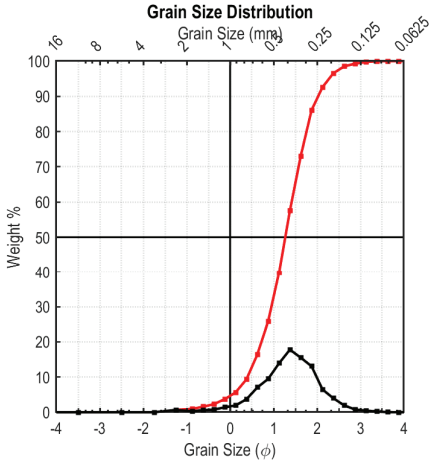
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.12 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.21 | 0.20 | 0.31 |
| -0.5 | -0.625 | 0.48 | 0.46 | 0.77 |
| -0.25 | -0.375 | 0.60 | 0.57 | 1.34 |
| 0 | -0.125 | 1.65 | 1.57 | 2.92 |
| 0.25 | 0.125 | 2.65 | 2.53 | 5.45 |
| 0.5 | 0.375 | 5.56 | 5.30 | 10.75 |
| 0.75 | 0.625 | 13.55 | 12.92 | 23.67 |
| 1 | 0.875 | 17.88 | 17.05 | 40.72 |
| 1.25 | 1.125 | 20.44 | 19.49 | 60.21 |
| 1.5 | 1.375 | 17.47 | 16.66 | 76.87 |
| 1.75 | 1.625 | 11.18 | 10.66 | 87.54 |
| 2 | 1.875 | 8.08 | 7.71 | 95.24 |
| 2.25 | 2.125 | 2.70 | 2.57 | 97.82 |
| 2.5 | 2.375 | 1.56 | 1.49 | 99.30 |
| 2.75 | 2.625 | 0.55 | 0.52 | 99.83 |
| 3 | 2.875 | 0.10 | 0.10 | 99.92 |
| 3.25 | 3.125 | 0.06 | 0.06 | 99.98 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.525 |
| **5** | 0.080 |
| **16** | 0.475 |
| **25** | 0.645 |
| **50** | 0.995 |
| **75** | 1.345 |
| **84** | 1.540 |
| **95** | 1.865 |
| **99** | 2.325 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.118 | 0.461 |
| Standard Deviation | 0.558 | 0.679 |
| Skewness | -0.190 | |
| Kurtosis | 3.836 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.008 | 1.003 |
| Standard Deviation | 0.532 | 0.537 |
| Skewness (1) | 0.023 | -0.001 |
| Skewness (2) | -0.042 | |
| Kurtosis | 0.676 | 1.045 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.392 mm** |
| **STD** | **0.622 mm** |
| **Skewness** | **-0.552** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.33 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.67 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.1 |

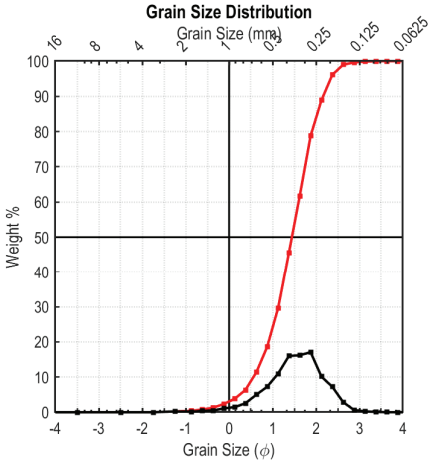
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.71 | 0.67 | 0.67 |
| -0.75 | -0.875 | 0.29 | 0.27 | 0.95 |
| -0.5 | -0.625 | 0.64 | 0.61 | 1.55 |
| -0.25 | -0.375 | 0.79 | 0.75 | 2.30 |
| 0 | -0.125 | 1.48 | 1.40 | 3.71 |
| 0.25 | 0.125 | 2.04 | 1.94 | 5.64 |
| 0.5 | 0.375 | 3.89 | 3.70 | 9.34 |
| 0.75 | 0.625 | 7.41 | 7.04 | 16.38 |
| 1 | 0.875 | 9.98 | 9.47 | 25.85 |
| 1.25 | 1.125 | 14.64 | 13.90 | 39.75 |
| 1.5 | 1.375 | 18.72 | 17.78 | 57.53 |
| 1.75 | 1.625 | 16.35 | 15.53 | 73.05 |
| 2 | 1.875 | 13.74 | 13.05 | 86.10 |
| 2.25 | 2.125 | 6.83 | 6.49 | 92.59 |
| 2.5 | 2.375 | 4.19 | 3.97 | 96.56 |
| 2.75 | 2.625 | 2.06 | 1.95 | 98.51 |
| 3 | 2.875 | 0.82 | 0.78 | 99.29 |
| 3.25 | 3.125 | 0.50 | 0.47 | 99.76 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.855 |
| **5** | 0.040 |
| **16** | 0.610 |
| **25** | 0.855 |
| **50** | 1.270 |
| **75** | 1.660 |
| **84** | 1.835 |
| **95** | 2.275 |
| **99** | 2.780 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.350 | 0.392 |
| Standard Deviation | 0.685 | 0.622 |
| Skewness | -0.552 | |
| Kurtosis | 4.393 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.222 | 1.238 |
| Standard Deviation | 0.613 | 0.645 |
| Skewness (1) | -0.078 | -0.089 |
| Skewness (2) | -0.184 | |
| Kurtosis | 0.824 | 1.138 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.350 mm** |
| **STD** | **0.640 mm** |
| **Skewness** | **-0.658** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.89 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.24 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.6 |

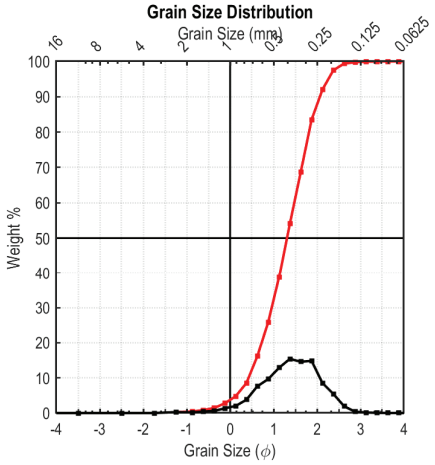
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.25 | 0.24 | 0.24 |
| -0.75 | -0.875 | 0.16 | 0.15 | 0.39 |
| -0.5 | -0.625 | 0.39 | 0.37 | 0.76 |
| -0.25 | -0.375 | 0.52 | 0.50 | 1.26 |
| 0 | -0.125 | 1.14 | 1.09 | 2.35 |
| 0.25 | 0.125 | 1.52 | 1.45 | 3.80 |
| 0.5 | 0.375 | 2.67 | 2.54 | 6.34 |
| 0.75 | 0.625 | 5.22 | 4.98 | 11.32 |
| 1 | 0.875 | 7.61 | 7.26 | 18.58 |
| 1.25 | 1.125 | 11.48 | 10.94 | 29.52 |
| 1.5 | 1.375 | 16.77 | 15.99 | 45.51 |
| 1.75 | 1.625 | 16.99 | 16.20 | 61.71 |
| 2 | 1.875 | 17.91 | 17.07 | 78.78 |
| 2.25 | 2.125 | 10.62 | 10.12 | 88.90 |
| 2.5 | 2.375 | 7.58 | 7.22 | 96.12 |
| 2.75 | 2.625 | 3.02 | 2.88 | 99.00 |
| 3 | 2.875 | 0.68 | 0.65 | 99.64 |
| 3.25 | 3.125 | 0.25 | 0.24 | 99.88 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | -0.00 | -0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.505 |
| **5** | 0.245 |
| **16** | 0.785 |
| **25** | 1.020 |
| **50** | 1.445 |
| **75** | 1.820 |
| **84** | 2.005 |
| **95** | 2.335 |
| **99** | 2.625 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.514 | 0.350 |
| Standard Deviation | 0.643 | 0.640 |
| Skewness | -0.658 | |
| Kurtosis | 4.117 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.395 | 1.412 |
| Standard Deviation | 0.610 | 0.622 |
| Skewness (1) | -0.082 | -0.115 |
| Skewness (2) | -0.254 | |
| Kurtosis | 0.713 | 1.071 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.382 mm** |
| **STD** | **0.635 mm** |
| **Skewness** | **-0.493** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.93 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.1 |

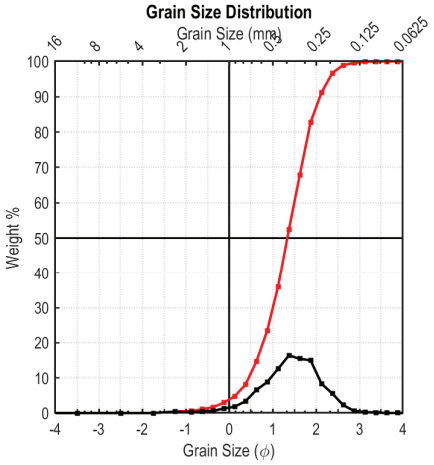
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.28 | 0.27 | 0.27 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.43 |
| -0.5 | -0.625 | 0.43 | 0.41 | 0.83 |
| -0.25 | -0.375 | 0.60 | 0.57 | 1.41 |
| 0 | -0.125 | 1.41 | 1.34 | 2.75 |
| 0.25 | 0.125 | 2.10 | 2.00 | 4.75 |
| 0.5 | 0.375 | 3.97 | 3.78 | 8.53 |
| 0.75 | 0.625 | 7.99 | 7.61 | 16.14 |
| 1 | 0.875 | 10.12 | 9.65 | 25.79 |
| 1.25 | 1.125 | 13.50 | 12.87 | 38.66 |
| 1.5 | 1.375 | 16.18 | 15.42 | 54.07 |
| 1.75 | 1.625 | 15.32 | 14.60 | 68.67 |
| 2 | 1.875 | 15.57 | 14.84 | 83.51 |
| 2.25 | 2.125 | 8.95 | 8.53 | 92.04 |
| 2.5 | 2.375 | 5.71 | 5.44 | 97.48 |
| 2.75 | 2.625 | 2.01 | 1.92 | 99.39 |
| 3 | 2.875 | 0.39 | 0.37 | 99.77 |
| 3.25 | 3.125 | 0.17 | 0.16 | 99.92 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.550 |
| **5** | 0.140 |
| **16** | 0.620 |
| **25** | 0.855 |
| **50** | 1.310 |
| **75** | 1.730 |
| **84** | 1.890 |
| **95** | 2.260 |
| **99** | 2.575 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.389 | 0.382 |
| Standard Deviation | 0.655 | 0.635 |
| Skewness | -0.493 | |
| Kurtosis | 3.612 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.255 | 1.273 |
| Standard Deviation | 0.635 | 0.639 |
| Skewness (1) | -0.087 | -0.095 |
| Skewness (2) | -0.173 | |
| Kurtosis | 0.669 | 0.993 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.374 mm** |
| **STD** | **0.631 mm** |
| **Skewness** | **-0.570** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.05 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.39 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.3 |

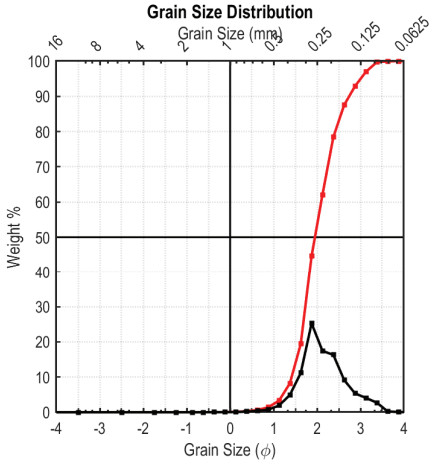
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.41 | 0.39 | 0.39 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.59 |
| -0.5 | -0.625 | 0.49 | 0.46 | 1.05 |
| -0.25 | -0.375 | 0.64 | 0.61 | 1.66 |
| 0 | -0.125 | 1.34 | 1.28 | 2.94 |
| 0.25 | 0.125 | 1.89 | 1.80 | 4.73 |
| 0.5 | 0.375 | 3.51 | 3.34 | 8.07 |
| 0.75 | 0.625 | 6.87 | 6.54 | 14.62 |
| 1 | 0.875 | 9.24 | 8.79 | 23.41 |
| 1.25 | 1.125 | 13.21 | 12.57 | 35.98 |
| 1.5 | 1.375 | 17.22 | 16.40 | 52.38 |
| 1.75 | 1.625 | 16.22 | 15.44 | 67.82 |
| 2 | 1.875 | 15.74 | 14.98 | 82.80 |
| 2.25 | 2.125 | 8.80 | 8.37 | 91.18 |
| 2.5 | 2.375 | 5.82 | 5.54 | 96.72 |
| 2.75 | 2.625 | 2.36 | 2.25 | 98.97 |
| 3 | 2.875 | 0.63 | 0.60 | 99.57 |
| 3.25 | 3.125 | 0.31 | 0.29 | 99.86 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.650 |
| **5** | 0.145 |
| **16** | 0.665 |
| **25** | 0.905 |
| **50** | 1.340 |
| **75** | 1.745 |
| **84** | 1.910 |
| **95** | 2.295 |
| **99** | 2.640 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.418 | 0.374 |
| Standard Deviation | 0.665 | 0.631 |
| Skewness | -0.570 | |
| Kurtosis | 4.041 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.288 | 1.305 |
| Standard Deviation | 0.623 | 0.637 |
| Skewness (1) | -0.084 | -0.098 |
| Skewness (2) | -0.193 | |
| Kurtosis | 0.727 | 1.049 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **980+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.227 mm** |
| **STD** | **0.696 mm** |
| **Skewness** | **0.193** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.72 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.4 |

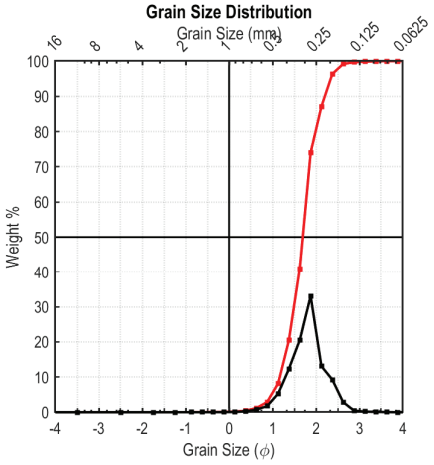
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.03 | 0.03 | 0.05 |
| 0.25 | 0.125 | 0.06 | 0.06 | 0.11 |
| 0.5 | 0.375 | 0.18 | 0.17 | 0.28 |
| 0.75 | 0.625 | 0.39 | 0.37 | 0.65 |
| 1 | 0.875 | 0.78 | 0.74 | 1.39 |
| 1.25 | 1.125 | 1.99 | 1.90 | 3.29 |
| 1.5 | 1.375 | 5.16 | 4.93 | 8.22 |
| 1.75 | 1.625 | 11.69 | 11.16 | 19.39 |
| 2 | 1.875 | 26.45 | 25.26 | 44.64 |
| 2.25 | 2.125 | 18.25 | 17.43 | 62.07 |
| 2.5 | 2.375 | 17.09 | 16.32 | 78.39 |
| 2.75 | 2.625 | 9.59 | 9.16 | 87.55 |
| 3 | 2.875 | 5.60 | 5.35 | 92.90 |
| 3.25 | 3.125 | 4.27 | 4.08 | 96.97 |
| 3.5 | 3.375 | 2.86 | 2.73 | 99.70 |
| 3.75 | 3.625 | 0.26 | 0.25 | 99.95 |
| 4 | 3.875 | 0.05 | 0.05 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.745 |
| **5** | 1.210 |
| **16** | 1.550 |
| **25** | 1.680 |
| **50** | 1.950 |
| **75** | 2.325 |
| **84** | 2.530 |
| **95** | 3.005 |
| **99** | 3.310 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.136 | 0.227 |
| Standard Deviation | 0.524 | 0.696 |
| Skewness | 0.193 | |
| Kurtosis | 3.539 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.040 | 2.010 |
| Standard Deviation | 0.490 | 0.517 |
| Skewness (1) | 0.184 | 0.180 |
| Skewness (2) | 0.321 | |
| Kurtosis | 0.832 | 1.141 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **980+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.287 mm** |
| **STD** | **0.753 mm** |
| **Skewness** | **-0.263** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.07 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

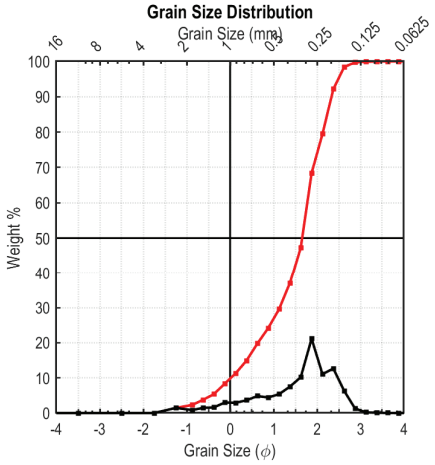
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.03 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.05 |
| 0 | -0.125 | 0.05 | 0.05 | 0.10 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.17 |
| 0.5 | 0.375 | 0.26 | 0.25 | 0.42 |
| 0.75 | 0.625 | 0.79 | 0.75 | 1.17 |
| 1 | 0.875 | 1.81 | 1.72 | 2.89 |
| 1.25 | 1.125 | 5.51 | 5.24 | 8.14 |
| 1.5 | 1.375 | 12.94 | 12.32 | 20.45 |
| 1.75 | 1.625 | 21.54 | 20.50 | 40.95 |
| 2 | 1.875 | 34.76 | 33.08 | 74.04 |
| 2.25 | 2.125 | 13.74 | 13.08 | 87.11 |
| 2.5 | 2.375 | 9.71 | 9.24 | 96.35 |
| 2.75 | 2.625 | 3.00 | 2.86 | 99.21 |
| 3 | 2.875 | 0.49 | 0.47 | 99.68 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.86 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.95 |
| 3.75 | 3.625 | 0.05 | 0.05 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.570 |
| **5** | 0.975 |
| **16** | 1.285 |
| **25** | 1.430 |
| **50** | 1.695 |
| **75** | 1.895 |
| **84** | 2.065 |
| **95** | 2.340 |
| **99** | 2.605 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.799 | 0.287 |
| Standard Deviation | 0.409 | 0.753 |
| Skewness | -0.263 | |
| Kurtosis | 4.625 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.675 | 1.682 |
| Standard Deviation | 0.390 | 0.402 |
| Skewness (1) | -0.051 | -0.053 |
| Skewness (2) | -0.096 | |
| Kurtosis | 0.750 | 1.203 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **980+00** |
| **Sample** | **Swash** |
| **Mean** | **0.350 mm** |
| **STD** | **0.536 mm** |
| **Skewness** | **-1.021** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.29 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.46 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.6 |

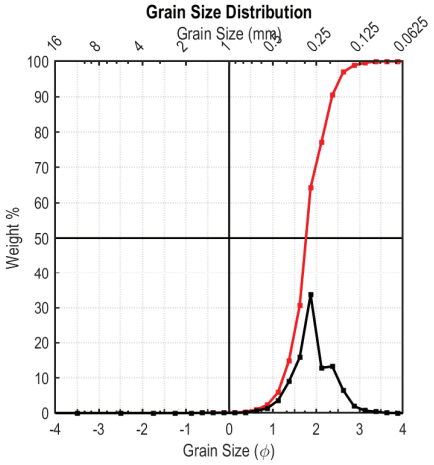
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.54 | 1.46 | 1.46 |
| -0.75 | -0.875 | 0.88 | 0.84 | 2.30 |
| -0.5 | -0.625 | 1.55 | 1.47 | 3.77 |
| -0.25 | -0.375 | 1.68 | 1.60 | 5.37 |
| 0 | -0.125 | 3.15 | 2.99 | 8.36 |
| 0.25 | 0.125 | 3.07 | 2.92 | 11.27 |
| 0.5 | 0.375 | 3.82 | 3.63 | 14.90 |
| 0.75 | 0.625 | 5.08 | 4.82 | 19.73 |
| 1 | 0.875 | 4.67 | 4.44 | 24.16 |
| 1.25 | 1.125 | 5.65 | 5.37 | 29.53 |
| 1.5 | 1.375 | 7.90 | 7.50 | 37.03 |
| 1.75 | 1.625 | 10.74 | 10.20 | 47.23 |
| 2 | 1.875 | 22.26 | 21.14 | 68.37 |
| 2.25 | 2.125 | 11.67 | 11.08 | 79.46 |
| 2.5 | 2.375 | 13.33 | 12.66 | 92.12 |
| 2.75 | 2.625 | 6.64 | 6.31 | 98.42 |
| 3 | 2.875 | 1.36 | 1.29 | 99.72 |
| 3.25 | 3.125 | 0.20 | 0.19 | 99.91 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.410 |
| **5** | -0.430 |
| **16** | 0.430 |
| **25** | 0.915 |
| **50** | 1.660 |
| **75** | 2.025 |
| **84** | 2.215 |
| **95** | 2.490 |
| **99** | 2.735 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.515 | 0.350 |
| Standard Deviation | 0.899 | 0.536 |
| Skewness | -1.021 | |
| Kurtosis | 3.559 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.322 | 1.435 |
| Standard Deviation | 0.893 | 0.889 |
| Skewness (1) | -0.378 | -0.405 |
| Skewness (2) | -0.706 | |
| Kurtosis | 0.636 | 1.078 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **990+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.265 mm** |
| **STD** | **0.732 mm** |
| **Skewness** | **-0.114** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.79 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.4 |

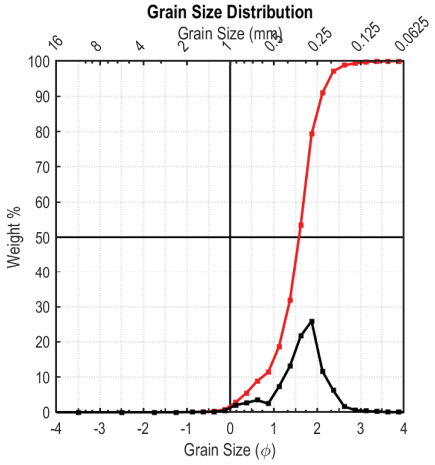
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.05 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.10 |
| 0 | -0.125 | 0.05 | 0.05 | 0.14 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.16 |
| 0.5 | 0.375 | 0.15 | 0.14 | 0.31 |
| 0.75 | 0.625 | 0.70 | 0.67 | 0.97 |
| 1 | 0.875 | 1.37 | 1.31 | 2.28 |
| 1.25 | 1.125 | 3.75 | 3.58 | 5.86 |
| 1.5 | 1.375 | 9.36 | 8.93 | 14.79 |
| 1.75 | 1.625 | 16.60 | 15.84 | 30.63 |
| 2 | 1.875 | 35.28 | 33.67 | 64.30 |
| 2.25 | 2.125 | 13.48 | 12.86 | 77.16 |
| 2.5 | 2.375 | 13.91 | 13.27 | 90.44 |
| 2.75 | 2.625 | 6.82 | 6.51 | 96.95 |
| 3 | 2.875 | 2.05 | 1.96 | 98.90 |
| 3.25 | 3.125 | 0.73 | 0.70 | 99.60 |
| 3.5 | 3.375 | 0.38 | 0.36 | 99.96 |
| 3.75 | 3.625 | 0.04 | 0.04 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.630 |
| **5** | 1.065 |
| **16** | 1.395 |
| **25** | 1.535 |
| **50** | 1.770 |
| **75** | 2.085 |
| **84** | 2.255 |
| **95** | 2.550 |
| **99** | 2.910 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.918 | 0.265 |
| Standard Deviation | 0.450 | 0.732 |
| Skewness | -0.114 | |
| Kurtosis | 4.426 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.825 | 1.807 |
| Standard Deviation | 0.430 | 0.440 |
| Skewness (1) | 0.128 | 0.089 |
| Skewness (2) | 0.087 | |
| Kurtosis | 0.727 | 1.107 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **990+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.324 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **-0.764** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.91 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

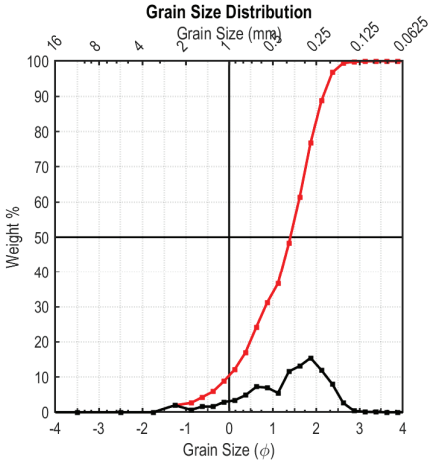
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.06 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.14 |
| -0.25 | -0.375 | 0.14 | 0.13 | 0.28 |
| 0 | -0.125 | 0.52 | 0.50 | 0.77 |
| 0.25 | 0.125 | 2.12 | 2.02 | 2.79 |
| 0.5 | 0.375 | 2.81 | 2.68 | 5.47 |
| 0.75 | 0.625 | 3.61 | 3.44 | 8.91 |
| 1 | 0.875 | 2.55 | 2.43 | 11.34 |
| 1.25 | 1.125 | 7.67 | 7.31 | 18.65 |
| 1.5 | 1.375 | 13.73 | 13.09 | 31.74 |
| 1.75 | 1.625 | 22.75 | 21.69 | 53.43 |
| 2 | 1.875 | 27.16 | 25.89 | 79.32 |
| 2.25 | 2.125 | 12.22 | 11.65 | 90.96 |
| 2.5 | 2.375 | 6.49 | 6.19 | 97.15 |
| 2.75 | 2.625 | 1.74 | 1.66 | 98.81 |
| 3 | 2.875 | 0.61 | 0.58 | 99.39 |
| 3.25 | 3.125 | 0.37 | 0.35 | 99.74 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.03 | 0.03 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.095 |
| **5** | 0.330 |
| **16** | 1.035 |
| **25** | 1.245 |
| **50** | 1.585 |
| **75** | 1.835 |
| **84** | 1.975 |
| **95** | 2.290 |
| **99** | 2.705 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.628 | 0.324 |
| Standard Deviation | 0.559 | 0.679 |
| Skewness | -0.764 | |
| Kurtosis | 4.464 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.505 | 1.532 |
| Standard Deviation | 0.470 | 0.532 |
| Skewness (1) | -0.170 | -0.225 |
| Skewness (2) | -0.585 | |
| Kurtosis | 1.085 | 1.361 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **990+00** |
| **Sample** | **Swash** |
| **Mean** | **0.397 mm** |
| **STD** | **0.547 mm** |
| **Skewness** | **-0.871** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.70 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 1.98 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

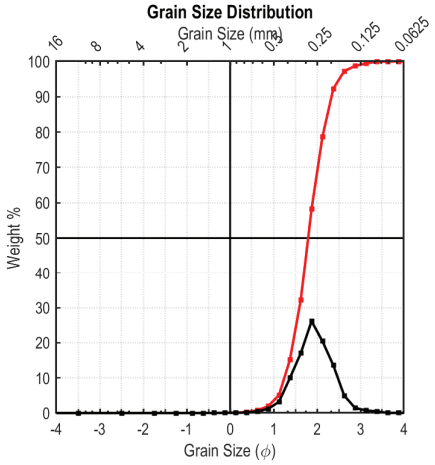
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.07 | 1.98 | 1.98 |
| -0.75 | -0.875 | 0.71 | 0.68 | 2.66 |
| -0.5 | -0.625 | 1.68 | 1.60 | 4.26 |
| -0.25 | -0.375 | 1.68 | 1.60 | 5.86 |
| 0 | -0.125 | 3.02 | 2.88 | 8.75 |
| 0.25 | 0.125 | 3.53 | 3.37 | 12.12 |
| 0.5 | 0.375 | 5.06 | 4.83 | 16.95 |
| 0.75 | 0.625 | 7.57 | 7.23 | 24.18 |
| 1 | 0.875 | 7.33 | 7.00 | 31.18 |
| 1.25 | 1.125 | 5.73 | 5.47 | 36.66 |
| 1.5 | 1.375 | 12.14 | 11.60 | 48.25 |
| 1.75 | 1.625 | 13.77 | 13.15 | 61.40 |
| 2 | 1.875 | 16.16 | 15.43 | 76.84 |
| 2.25 | 2.125 | 12.51 | 11.95 | 88.79 |
| 2.5 | 2.375 | 8.36 | 7.98 | 96.77 |
| 2.75 | 2.625 | 2.78 | 2.66 | 99.43 |
| 3 | 2.875 | 0.42 | 0.40 | 99.83 |
| 3.25 | 3.125 | 0.12 | 0.11 | 99.94 |
| 3.5 | 3.375 | 0.06 | 0.06 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.495 |
| **5** | -0.510 |
| **16** | 0.325 |
| **25** | 0.655 |
| **50** | 1.410 |
| **75** | 1.845 |
| **84** | 2.025 |
| **95** | 2.320 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.333 | 0.397 |
| Standard Deviation | 0.872 | 0.547 |
| Skewness | -0.871 | |
| Kurtosis | 3.380 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.175 | 1.253 |
| Standard Deviation | 0.850 | 0.854 |
| Skewness (1) | -0.276 | -0.317 |
| Skewness (2) | -0.594 | |
| Kurtosis | 0.665 | 0.975 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1000+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.263 mm** |
| **STD** | **0.738 mm** |
| **Skewness** | **-0.009** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.60 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.3 |

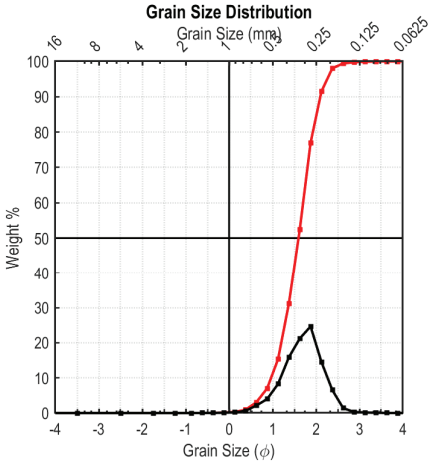
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.02 |
| 0 | -0.125 | 0.05 | 0.05 | 0.07 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.11 |
| 0.5 | 0.375 | 0.14 | 0.13 | 0.25 |
| 0.75 | 0.625 | 0.53 | 0.51 | 0.76 |
| 1 | 0.875 | 1.24 | 1.19 | 1.94 |
| 1.25 | 1.125 | 3.35 | 3.20 | 5.14 |
| 1.5 | 1.375 | 10.42 | 9.96 | 15.11 |
| 1.75 | 1.625 | 17.80 | 17.02 | 32.12 |
| 2 | 1.875 | 27.34 | 26.14 | 58.26 |
| 2.25 | 2.125 | 21.37 | 20.43 | 78.69 |
| 2.5 | 2.375 | 14.21 | 13.59 | 92.28 |
| 2.75 | 2.625 | 5.20 | 4.97 | 97.25 |
| 3 | 2.875 | 1.52 | 1.45 | 98.70 |
| 3.25 | 3.125 | 0.78 | 0.75 | 99.45 |
| 3.5 | 3.375 | 0.49 | 0.47 | 99.91 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.96 |
| 4 | 3.875 | 0.04 | 0.04 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.675 |
| **5** | 1.115 |
| **16** | 1.390 |
| **25** | 1.520 |
| **50** | 1.795 |
| **75** | 2.080 |
| **84** | 2.225 |
| **95** | 2.510 |
| **99** | 2.975 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.925 | 0.263 |
| Standard Deviation | 0.439 | 0.738 |
| Skewness | -0.009 | |
| Kurtosis | 4.162 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.807 | 1.803 |
| Standard Deviation | 0.417 | 0.420 |
| Skewness (1) | 0.030 | 0.028 |
| Skewness (2) | 0.042 | |
| Kurtosis | 0.671 | 1.021 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1000+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.311 mm** |
| **STD** | **0.732 mm** |
| **Skewness** | **-0.373** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.38 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

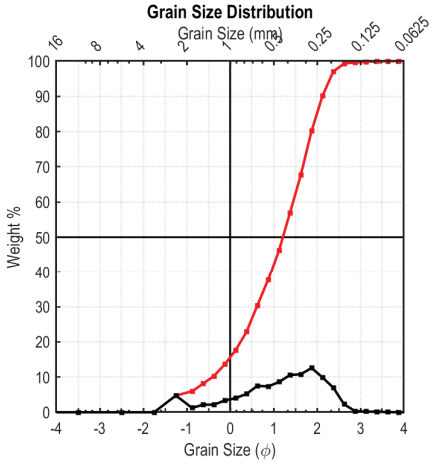
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.04 |
| 0 | -0.125 | 0.10 | 0.10 | 0.13 |
| 0.25 | 0.125 | 0.18 | 0.17 | 0.31 |
| 0.5 | 0.375 | 0.64 | 0.61 | 0.92 |
| 0.75 | 0.625 | 2.22 | 2.13 | 3.05 |
| 1 | 0.875 | 4.16 | 3.99 | 7.03 |
| 1.25 | 1.125 | 8.62 | 8.26 | 15.29 |
| 1.5 | 1.375 | 16.56 | 15.87 | 31.16 |
| 1.75 | 1.625 | 22.13 | 21.20 | 52.36 |
| 2 | 1.875 | 25.73 | 24.65 | 77.01 |
| 2.25 | 2.125 | 15.15 | 14.51 | 91.52 |
| 2.5 | 2.375 | 6.81 | 6.52 | 98.05 |
| 2.75 | 2.625 | 1.46 | 1.40 | 99.44 |
| 3 | 2.875 | 0.32 | 0.31 | 99.75 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.90 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.385 |
| **5** | 0.750 |
| **16** | 1.135 |
| **25** | 1.280 |
| **50** | 1.595 |
| **75** | 1.855 |
| **84** | 1.995 |
| **95** | 2.260 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.685 | 0.311 |
| Standard Deviation | 0.450 | 0.732 |
| Skewness | -0.373 | |
| Kurtosis | 3.762 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.565 | 1.575 |
| Standard Deviation | 0.430 | 0.444 |
| Skewness (1) | -0.070 | -0.094 |
| Skewness (2) | -0.209 | |
| Kurtosis | 0.756 | 1.076 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1000+00** |
| **Sample** | **Swash** |
| **Mean** | **0.451 mm** |
| **STD** | **0.506 mm** |
| **Skewness** | **-0.733** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.50 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 4.75 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

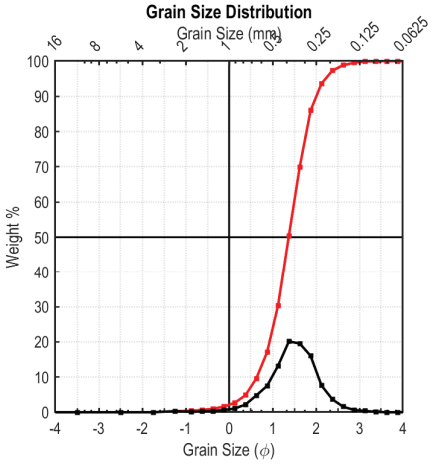
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 5.01 | 4.75 | 4.75 |
| -0.75 | -0.875 | 1.28 | 1.21 | 5.96 |
| -0.5 | -0.625 | 2.27 | 2.15 | 8.11 |
| -0.25 | -0.375 | 2.28 | 2.16 | 10.27 |
| 0 | -0.125 | 3.51 | 3.33 | 13.60 |
| 0.25 | 0.125 | 4.23 | 4.01 | 17.61 |
| 0.5 | 0.375 | 5.50 | 5.22 | 22.83 |
| 0.75 | 0.625 | 7.91 | 7.50 | 30.32 |
| 1 | 0.875 | 7.76 | 7.36 | 37.68 |
| 1.25 | 1.125 | 9.05 | 8.58 | 46.26 |
| 1.5 | 1.375 | 11.16 | 10.58 | 56.83 |
| 1.75 | 1.625 | 11.39 | 10.80 | 67.63 |
| 2 | 1.875 | 13.26 | 12.57 | 80.20 |
| 2.25 | 2.125 | 10.46 | 9.91 | 90.11 |
| 2.5 | 2.375 | 7.34 | 6.96 | 97.07 |
| 2.75 | 2.625 | 2.36 | 2.24 | 99.31 |
| 3 | 2.875 | 0.34 | 0.32 | 99.63 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.81 |
| 3.5 | 3.375 | 0.14 | 0.13 | 99.94 |
| 3.75 | 3.625 | 0.06 | 0.06 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.645 |
| **5** | -1.170 |
| **16** | 0.025 |
| **25** | 0.445 |
| **50** | 1.215 |
| **75** | 1.770 |
| **84** | 1.970 |
| **95** | 2.300 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.149 | 0.451 |
| Standard Deviation | 0.982 | 0.506 |
| Skewness | -0.733 | |
| Kurtosis | 2.972 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.997 | 1.070 |
| Standard Deviation | 0.972 | 1.012 |
| Skewness (1) | -0.224 | -0.299 |
| Skewness (2) | -0.668 | |
| Kurtosis | 0.784 | 1.073 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1010+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.362 mm** |
| **STD** | **0.671 mm** |
| **Skewness** | **-0.604** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.99 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.31 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

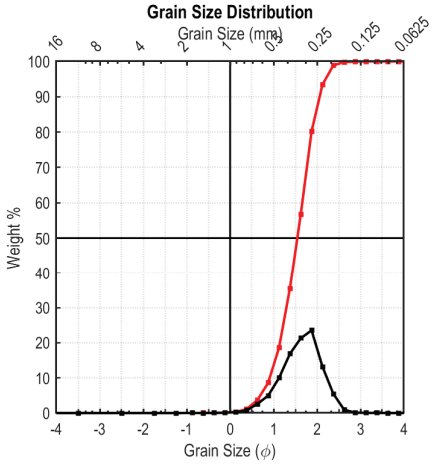
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.33 | 0.31 | 0.31 |
| -0.75 | -0.875 | 0.10 | 0.10 | 0.41 |
| -0.5 | -0.625 | 0.26 | 0.25 | 0.66 |
| -0.25 | -0.375 | 0.32 | 0.30 | 0.96 |
| 0 | -0.125 | 0.67 | 0.64 | 1.60 |
| 0.25 | 0.125 | 1.09 | 1.04 | 2.64 |
| 0.5 | 0.375 | 2.29 | 2.18 | 4.82 |
| 0.75 | 0.625 | 5.02 | 4.78 | 9.60 |
| 1 | 0.875 | 7.90 | 7.52 | 17.13 |
| 1.25 | 1.125 | 13.83 | 13.17 | 30.30 |
| 1.5 | 1.375 | 21.13 | 20.13 | 50.42 |
| 1.75 | 1.625 | 20.52 | 19.54 | 69.97 |
| 2 | 1.875 | 16.82 | 16.02 | 85.99 |
| 2.25 | 2.125 | 8.01 | 7.63 | 93.62 |
| 2.5 | 2.375 | 3.86 | 3.68 | 97.29 |
| 2.75 | 2.625 | 1.64 | 1.56 | 98.86 |
| 3 | 2.875 | 0.69 | 0.66 | 99.51 |
| 3.25 | 3.125 | 0.39 | 0.37 | 99.89 |
| 3.5 | 3.375 | 0.12 | 0.11 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | 0.385 |
| **16** | 0.840 |
| **25** | 1.025 |
| **50** | 1.370 |
| **75** | 1.705 |
| **84** | 1.845 |
| **95** | 2.220 |
| **99** | 2.680 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.465 | 0.362 |
| Standard Deviation | 0.575 | 0.671 |
| Skewness | -0.604 | |
| Kurtosis | 5.137 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.342 | 1.352 |
| Standard Deviation | 0.502 | 0.529 |
| Skewness (1) | -0.055 | -0.064 |
| Skewness (2) | -0.134 | |
| Kurtosis | 0.826 | 1.106 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1010+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.322 mm** |
| **STD** | **0.733 mm** |
| **Skewness** | **-0.433** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.75 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

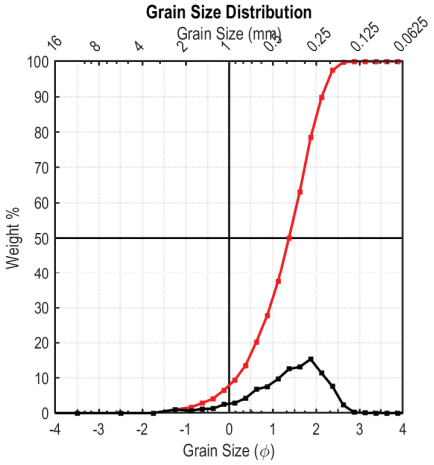
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.01 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.04 |
| 0 | -0.125 | 0.08 | 0.08 | 0.11 |
| 0.25 | 0.125 | 0.23 | 0.22 | 0.33 |
| 0.5 | 0.375 | 0.78 | 0.74 | 1.08 |
| 0.75 | 0.625 | 2.69 | 2.57 | 3.65 |
| 1 | 0.875 | 5.18 | 4.95 | 8.59 |
| 1.25 | 1.125 | 10.47 | 10.00 | 18.59 |
| 1.5 | 1.375 | 17.63 | 16.83 | 35.42 |
| 1.75 | 1.625 | 22.29 | 21.28 | 56.70 |
| 2 | 1.875 | 24.64 | 23.52 | 80.22 |
| 2.25 | 2.125 | 13.82 | 13.19 | 93.41 |
| 2.5 | 2.375 | 5.74 | 5.48 | 98.89 |
| 2.75 | 2.625 | 0.97 | 0.93 | 99.82 |
| 3 | 2.875 | 0.12 | 0.11 | 99.93 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.98 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.350 |
| **5** | 0.695 |
| **16** | 1.060 |
| **25** | 1.220 |
| **50** | 1.545 |
| **75** | 1.820 |
| **84** | 1.945 |
| **95** | 2.195 |
| **99** | 2.405 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.633 | 0.322 |
| Standard Deviation | 0.448 | 0.733 |
| Skewness | -0.433 | |
| Kurtosis | 3.396 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.502 | 1.517 |
| Standard Deviation | 0.442 | 0.449 |
| Skewness (1) | -0.096 | -0.115 |
| Skewness (2) | -0.226 | |
| Kurtosis | 0.695 | 1.025 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1010+00** |
| **Sample** | **Swash** |
| **Mean** | **0.388 mm** |
| **STD** | **0.580 mm** |
| **Skewness** | **-0.858** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.75 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.97 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.6 |

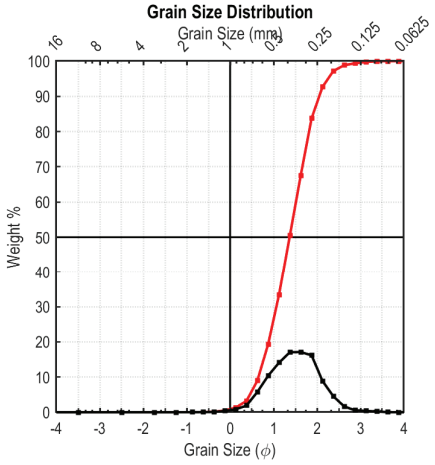
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.02 | 0.97 | 0.97 |
| -0.75 | -0.875 | 0.71 | 0.68 | 1.65 |
| -0.5 | -0.625 | 1.22 | 1.16 | 2.82 |
| -0.25 | -0.375 | 1.30 | 1.24 | 4.06 |
| 0 | -0.125 | 2.53 | 2.42 | 6.47 |
| 0.25 | 0.125 | 2.98 | 2.84 | 9.32 |
| 0.5 | 0.375 | 4.39 | 4.19 | 13.51 |
| 0.75 | 0.625 | 7.01 | 6.69 | 20.20 |
| 1 | 0.875 | 7.90 | 7.54 | 27.74 |
| 1.25 | 1.125 | 10.15 | 9.69 | 37.43 |
| 1.5 | 1.375 | 13.12 | 12.53 | 49.96 |
| 1.75 | 1.625 | 13.73 | 13.11 | 63.06 |
| 2 | 1.875 | 16.07 | 15.34 | 78.41 |
| 2.25 | 2.125 | 11.93 | 11.39 | 89.79 |
| 2.5 | 2.375 | 8.01 | 7.65 | 97.44 |
| 2.75 | 2.625 | 2.42 | 2.31 | 99.75 |
| 3 | 2.875 | 0.21 | 0.20 | 99.95 |
| 3.25 | 3.125 | 0.05 | 0.05 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.235 |
| **5** | -0.275 |
| **16** | 0.470 |
| **25** | 0.785 |
| **50** | 1.375 |
| **75** | 1.820 |
| **84** | 2.000 |
| **95** | 2.295 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.367 | 0.388 |
| Standard Deviation | 0.786 | 0.580 |
| Skewness | -0.858 | |
| Kurtosis | 3.608 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.235 | 1.282 |
| Standard Deviation | 0.765 | 0.772 |
| Skewness (1) | -0.183 | -0.234 |
| Skewness (2) | -0.477 | |
| Kurtosis | 0.680 | 1.018 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1020+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.358 mm** |
| **STD** | **0.682 mm** |
| **Skewness** | **0.001** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.31 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

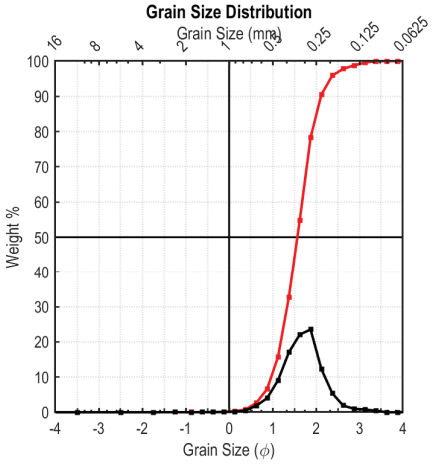
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.05 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.13 |
| 0 | -0.125 | 0.37 | 0.35 | 0.49 |
| 0.25 | 0.125 | 0.86 | 0.82 | 1.31 |
| 0.5 | 0.375 | 1.97 | 1.89 | 3.20 |
| 0.75 | 0.625 | 5.98 | 5.73 | 8.93 |
| 1 | 0.875 | 10.84 | 10.39 | 19.33 |
| 1.25 | 1.125 | 14.69 | 14.08 | 33.41 |
| 1.5 | 1.375 | 17.79 | 17.05 | 50.46 |
| 1.75 | 1.625 | 17.85 | 17.11 | 67.58 |
| 2 | 1.875 | 16.87 | 16.17 | 83.75 |
| 2.25 | 2.125 | 9.29 | 8.91 | 92.66 |
| 2.5 | 2.375 | 4.73 | 4.53 | 97.19 |
| 2.75 | 2.625 | 1.72 | 1.65 | 98.84 |
| 3 | 2.875 | 0.57 | 0.55 | 99.39 |
| 3.25 | 3.125 | 0.39 | 0.37 | 99.76 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.030 |
| **5** | 0.455 |
| **16** | 0.795 |
| **25** | 0.975 |
| **50** | 1.370 |
| **75** | 1.740 |
| **84** | 1.880 |
| **95** | 2.255 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.484 | 0.358 |
| Standard Deviation | 0.553 | 0.682 |
| Skewness | 0.001 | |
| Kurtosis | 3.278 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.337 | 1.348 |
| Standard Deviation | 0.542 | 0.544 |
| Skewness (1) | -0.060 | -0.038 |
| Skewness (2) | -0.028 | |
| Kurtosis | 0.659 | 0.964 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1020+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.310 mm** |
| **STD** | **0.719 mm** |
| **Skewness** | **0.110** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.66 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

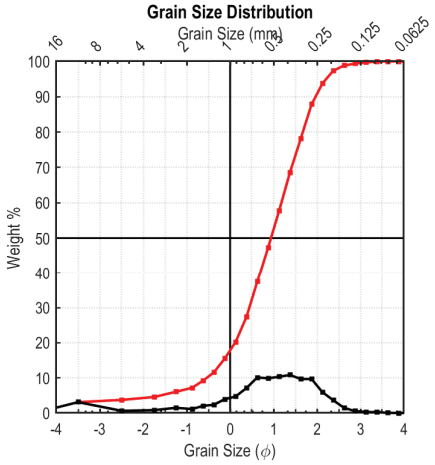
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.01 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.03 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.05 |
| 0 | -0.125 | 0.08 | 0.08 | 0.12 |
| 0.25 | 0.125 | 0.15 | 0.14 | 0.27 |
| 0.5 | 0.375 | 0.52 | 0.50 | 0.76 |
| 0.75 | 0.625 | 1.96 | 1.87 | 2.64 |
| 1 | 0.875 | 4.18 | 3.99 | 6.63 |
| 1.25 | 1.125 | 9.51 | 9.09 | 15.72 |
| 1.5 | 1.375 | 17.83 | 17.04 | 32.75 |
| 1.75 | 1.625 | 23.09 | 22.06 | 54.82 |
| 2 | 1.875 | 24.62 | 23.52 | 78.34 |
| 2.25 | 2.125 | 12.77 | 12.20 | 90.54 |
| 2.5 | 2.375 | 5.62 | 5.37 | 95.91 |
| 2.75 | 2.625 | 1.98 | 1.89 | 97.80 |
| 3 | 2.875 | 1.03 | 0.98 | 98.79 |
| 3.25 | 3.125 | 0.81 | 0.77 | 99.56 |
| 3.5 | 3.375 | 0.46 | 0.44 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.405 |
| **5** | 0.775 |
| **16** | 1.130 |
| **25** | 1.260 |
| **50** | 1.570 |
| **75** | 1.840 |
| **84** | 1.990 |
| **95** | 2.335 |
| **99** | 2.945 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.688 | 0.310 |
| Standard Deviation | 0.476 | 0.719 |
| Skewness | 0.110 | |
| Kurtosis | 4.253 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.560 | 1.563 |
| Standard Deviation | 0.430 | 0.451 |
| Skewness (1) | -0.023 | -0.021 |
| Skewness (2) | -0.035 | |
| Kurtosis | 0.814 | 1.102 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1020+00** |
| **Sample** | **Swash** |
| **Mean** | **0.544 mm** |
| **STD** | **0.433 mm** |
| **Skewness** | **-1.587** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.16 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 2.31 |
| % gravel (>4 mm) | 3.73 |
| CaCO3 | 2.6 |

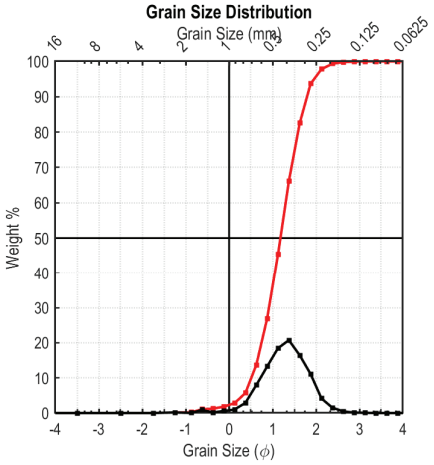
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 3.23 | 3.10 | 3.10 |
| -2 | -2.5 | 0.66 | 0.63 | 3.73 |
| -1.5 | -1.75 | 0.86 | 0.83 | 4.56 |
| -1 | -1.25 | 1.55 | 1.49 | 6.05 |
| -0.75 | -0.875 | 1.18 | 1.13 | 7.18 |
| -0.5 | -0.625 | 2.12 | 2.04 | 9.22 |
| -0.25 | -0.375 | 2.45 | 2.35 | 11.57 |
| 0 | -0.125 | 4.10 | 3.94 | 15.50 |
| 0.25 | 0.125 | 4.90 | 4.70 | 20.21 |
| 0.5 | 0.375 | 7.41 | 7.11 | 27.32 |
| 0.75 | 0.625 | 10.54 | 10.12 | 37.44 |
| 1 | 0.875 | 10.29 | 9.88 | 47.32 |
| 1.25 | 1.125 | 10.75 | 10.32 | 57.64 |
| 1.5 | 1.375 | 11.29 | 10.84 | 68.48 |
| 1.75 | 1.625 | 10.09 | 9.69 | 78.17 |
| 2 | 1.875 | 10.08 | 9.68 | 87.85 |
| 2.25 | 2.125 | 6.17 | 5.92 | 93.77 |
| 2.5 | 2.375 | 3.76 | 3.61 | 97.38 |
| 2.75 | 2.625 | 1.52 | 1.46 | 98.84 |
| 3 | 2.875 | 0.57 | 0.55 | 99.39 |
| 3.25 | 3.125 | 0.33 | 0.32 | 99.70 |
| 3.5 | 3.375 | 0.24 | 0.23 | 99.93 |
| 3.75 | 3.625 | 0.07 | 0.07 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -4.180 |
| **5** | -1.600 |
| **16** | -0.100 |
| **25** | 0.295 |
| **50** | 0.940 |
| **75** | 1.545 |
| **84** | 1.775 |
| **95** | 2.210 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.878 | 0.544 |
| Standard Deviation | 1.207 | 0.433 |
| Skewness | -1.587 | |
| Kurtosis | 6.653 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.838 | 0.872 |
| Standard Deviation | 0.937 | 1.046 |
| Skewness (1) | -0.109 | -0.221 |
| Skewness (2) | -0.677 | |
| Kurtosis | 1.032 | 1.249 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1030+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.412 mm** |
| **STD** | **0.693 mm** |
| **Skewness** | **-0.582** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.99 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

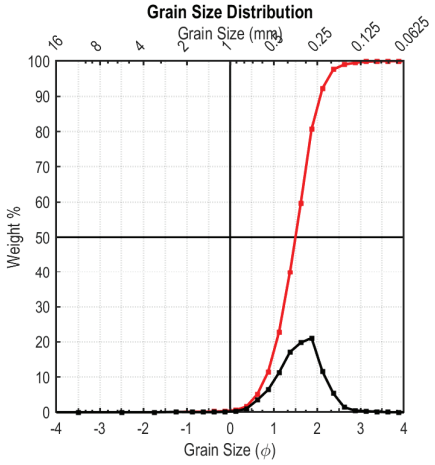
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.20 |
| -0.5 | -0.625 | 0.91 | 0.87 | 1.07 |
| -0.25 | -0.375 | 0.18 | 0.17 | 1.24 |
| 0 | -0.125 | 0.60 | 0.57 | 1.81 |
| 0.25 | 0.125 | 1.05 | 1.00 | 2.81 |
| 0.5 | 0.375 | 3.05 | 2.91 | 5.71 |
| 0.75 | 0.625 | 8.36 | 7.96 | 13.68 |
| 1 | 0.875 | 13.91 | 13.25 | 26.93 |
| 1.25 | 1.125 | 19.39 | 18.47 | 45.39 |
| 1.5 | 1.375 | 21.77 | 20.74 | 66.13 |
| 1.75 | 1.625 | 17.24 | 16.42 | 82.55 |
| 2 | 1.875 | 11.66 | 11.11 | 93.66 |
| 2.25 | 2.125 | 4.36 | 4.15 | 97.81 |
| 2.5 | 2.375 | 1.60 | 1.52 | 99.33 |
| 2.75 | 2.625 | 0.50 | 0.48 | 99.81 |
| 3 | 2.875 | 0.13 | 0.12 | 99.93 |
| 3.25 | 3.125 | 0.07 | 0.07 | 100.00 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.645 |
| **5** | 0.315 |
| **16** | 0.670 |
| **25** | 0.840 |
| **50** | 1.180 |
| **75** | 1.510 |
| **84** | 1.660 |
| **95** | 1.955 |
| **99** | 2.320 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.279 | 0.412 |
| Standard Deviation | 0.529 | 0.693 |
| Skewness | -0.582 | |
| Kurtosis | 4.745 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.165 | 1.170 |
| Standard Deviation | 0.495 | 0.496 |
| Skewness (1) | -0.030 | -0.043 |
| Skewness (2) | -0.091 | |
| Kurtosis | 0.657 | 1.003 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1030+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.330 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **-0.337** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.81 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

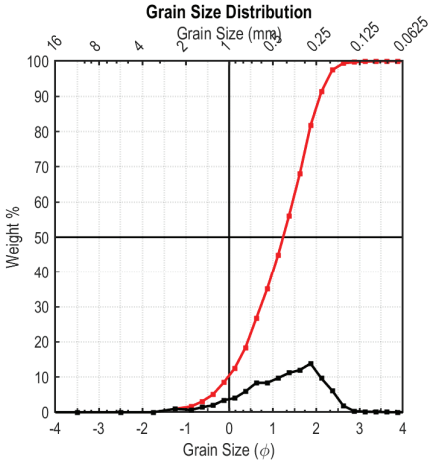
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.09 | 0.09 | 0.09 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.12 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.15 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.19 |
| 0 | -0.125 | 0.13 | 0.12 | 0.31 |
| 0.25 | 0.125 | 0.33 | 0.31 | 0.62 |
| 0.5 | 0.375 | 1.06 | 1.00 | 1.63 |
| 0.75 | 0.625 | 3.67 | 3.47 | 5.09 |
| 1 | 0.875 | 6.76 | 6.39 | 11.48 |
| 1.25 | 1.125 | 11.93 | 11.27 | 22.76 |
| 1.5 | 1.375 | 18.07 | 17.08 | 39.84 |
| 1.75 | 1.625 | 20.92 | 19.77 | 59.61 |
| 2 | 1.875 | 22.32 | 21.09 | 80.70 |
| 2.25 | 2.125 | 12.24 | 11.57 | 92.27 |
| 2.5 | 2.375 | 5.66 | 5.35 | 97.62 |
| 2.75 | 2.625 | 1.51 | 1.43 | 99.05 |
| 3 | 2.875 | 0.51 | 0.48 | 99.53 |
| 3.25 | 3.125 | 0.33 | 0.31 | 99.84 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.220 |
| **5** | 0.620 |
| **16** | 0.975 |
| **25** | 1.160 |
| **50** | 1.505 |
| **75** | 1.805 |
| **84** | 1.945 |
| **95** | 2.255 |
| **99** | 2.615 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.598 | 0.330 |
| Standard Deviation | 0.504 | 0.705 |
| Skewness | -0.337 | |
| Kurtosis | 4.320 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.460 | 1.475 |
| Standard Deviation | 0.485 | 0.490 |
| Skewness (1) | -0.093 | -0.088 |
| Skewness (2) | -0.139 | |
| Kurtosis | 0.686 | 1.039 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1030+00** |
| **Sample** | **Swash** |
| **Mean** | **0.421 mm** |
| **STD** | **0.565 mm** |
| **Skewness** | **-0.576** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.44 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.96 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

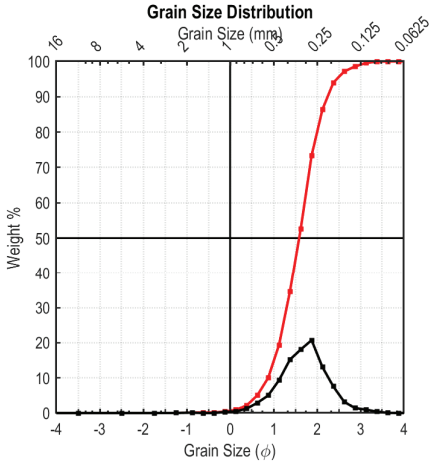
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.01 | 0.96 | 0.96 |
| -0.75 | -0.875 | 0.72 | 0.68 | 1.64 |
| -0.5 | -0.625 | 1.49 | 1.41 | 3.05 |
| -0.25 | -0.375 | 2.07 | 1.96 | 5.02 |
| 0 | -0.125 | 3.61 | 3.42 | 8.44 |
| 0.25 | 0.125 | 4.22 | 4.00 | 12.44 |
| 0.5 | 0.375 | 6.23 | 5.91 | 18.35 |
| 0.75 | 0.625 | 8.82 | 8.36 | 26.72 |
| 1 | 0.875 | 8.82 | 8.36 | 35.08 |
| 1.25 | 1.125 | 10.22 | 9.69 | 44.77 |
| 1.5 | 1.375 | 11.77 | 11.16 | 55.94 |
| 1.75 | 1.625 | 12.64 | 11.99 | 67.92 |
| 2 | 1.875 | 14.60 | 13.85 | 81.77 |
| 2.25 | 2.125 | 10.13 | 9.61 | 91.38 |
| 2.5 | 2.375 | 6.45 | 6.12 | 97.50 |
| 2.75 | 2.625 | 1.98 | 1.88 | 99.37 |
| 3 | 2.875 | 0.36 | 0.34 | 99.72 |
| 3.25 | 3.125 | 0.16 | 0.15 | 99.87 |
| 3.5 | 3.375 | 0.11 | 0.10 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.225 |
| **5** | -0.375 |
| **16** | 0.275 |
| **25** | 0.575 |
| **50** | 1.240 |
| **75** | 1.755 |
| **84** | 1.935 |
| **95** | 2.275 |
| **99** | 2.575 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.249 | 0.421 |
| Standard Deviation | 0.824 | 0.565 |
| Skewness | -0.576 | |
| Kurtosis | 2.990 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.105 | 1.150 |
| Standard Deviation | 0.830 | 0.817 |
| Skewness (1) | -0.163 | -0.191 |
| Skewness (2) | -0.349 | |
| Kurtosis | 0.596 | 0.920 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1040+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.310 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **-0.186** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.64 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

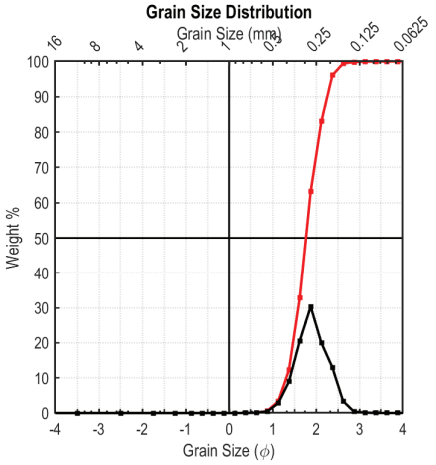
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.12 | 0.11 | 0.13 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.13 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.13 |
| 0 | -0.125 | 0.31 | 0.30 | 0.43 |
| 0.25 | 0.125 | 0.49 | 0.47 | 0.90 |
| 0.5 | 0.375 | 1.27 | 1.21 | 2.11 |
| 0.75 | 0.625 | 3.04 | 2.91 | 5.02 |
| 1 | 0.875 | 5.22 | 4.99 | 10.01 |
| 1.25 | 1.125 | 9.78 | 9.35 | 19.35 |
| 1.5 | 1.375 | 15.89 | 15.19 | 34.54 |
| 1.75 | 1.625 | 18.92 | 18.08 | 52.62 |
| 2 | 1.875 | 21.70 | 20.74 | 73.36 |
| 2.25 | 2.125 | 13.66 | 13.05 | 86.41 |
| 2.5 | 2.375 | 7.91 | 7.56 | 93.97 |
| 2.75 | 2.625 | 3.34 | 3.19 | 97.16 |
| 3 | 2.875 | 1.47 | 1.40 | 98.57 |
| 3.25 | 3.125 | 1.02 | 0.97 | 99.54 |
| 3.5 | 3.375 | 0.42 | 0.40 | 99.94 |
| 3.75 | 3.625 | 0.06 | 0.06 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.145 |
| **5** | 0.625 |
| **16** | 1.035 |
| **25** | 1.220 |
| **50** | 1.590 |
| **75** | 1.905 |
| **84** | 2.080 |
| **95** | 2.455 |
| **99** | 2.985 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.689 | 0.310 |
| Standard Deviation | 0.558 | 0.679 |
| Skewness | -0.186 | |
| Kurtosis | 3.975 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.558 | 1.568 |
| Standard Deviation | 0.522 | 0.539 |
| Skewness (1) | -0.062 | -0.058 |
| Skewness (2) | -0.096 | |
| Kurtosis | 0.751 | 1.095 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1040+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.268 mm** |
| **STD** | **0.781 mm** |
| **Skewness** | **0.019** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 105.70 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.3 |

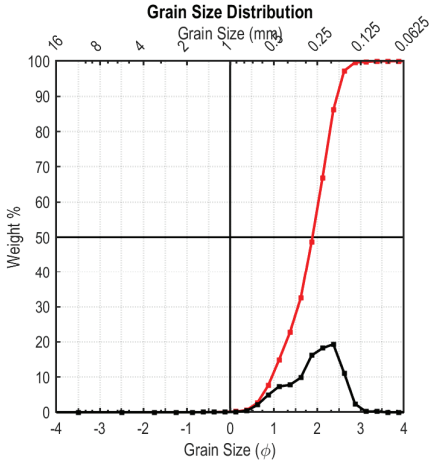
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.00 |
| 0 | -0.125 | 0.00 | 0.00 | 0.00 |
| 0.25 | 0.125 | 0.00 | 0.00 | 0.00 |
| 0.5 | 0.375 | 0.02 | 0.02 | 0.02 |
| 0.75 | 0.625 | 0.09 | 0.09 | 0.10 |
| 1 | 0.875 | 0.46 | 0.44 | 0.54 |
| 1.25 | 1.125 | 2.92 | 2.76 | 3.30 |
| 1.5 | 1.375 | 9.45 | 8.94 | 12.24 |
| 1.75 | 1.625 | 21.72 | 20.55 | 32.79 |
| 2 | 1.875 | 32.09 | 30.36 | 63.15 |
| 2.25 | 2.125 | 21.07 | 19.93 | 83.08 |
| 2.5 | 2.375 | 13.72 | 12.98 | 96.06 |
| 2.75 | 2.625 | 3.55 | 3.36 | 99.42 |
| 3 | 2.875 | 0.42 | 0.40 | 99.82 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.95 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.02 | 0.02 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.915 |
| **5** | 1.170 |
| **16** | 1.420 |
| **25** | 1.530 |
| **50** | 1.765 |
| **75** | 2.025 |
| **84** | 2.145 |
| **95** | 2.355 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.899 | 0.268 |
| Standard Deviation | 0.357 | 0.781 |
| Skewness | 0.019 | |
| Kurtosis | 3.292 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.782 | 1.777 |
| Standard Deviation | 0.363 | 0.361 |
| Skewness (1) | 0.048 | 0.022 |
| Skewness (2) | -0.007 | |
| Kurtosis | 0.634 | 0.981 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1040+00** |
| **Sample** | **Swash** |
| **Mean** | **0.263 mm** |
| **STD** | **0.678 mm** |
| **Skewness** | **-0.562** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 106.02 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

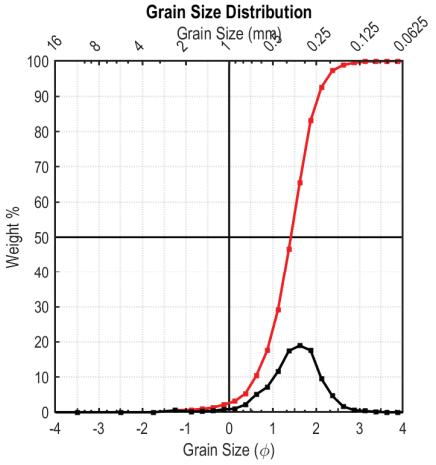
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.05 |
| 0 | -0.125 | 0.03 | 0.03 | 0.08 |
| 0.25 | 0.125 | 0.12 | 0.11 | 0.19 |
| 0.5 | 0.375 | 0.41 | 0.39 | 0.58 |
| 0.75 | 0.625 | 2.19 | 2.07 | 2.64 |
| 1 | 0.875 | 5.21 | 4.91 | 7.56 |
| 1.25 | 1.125 | 7.76 | 7.32 | 14.87 |
| 1.5 | 1.375 | 8.24 | 7.77 | 22.65 |
| 1.75 | 1.625 | 10.41 | 9.82 | 32.47 |
| 2 | 1.875 | 17.12 | 16.15 | 48.61 |
| 2.25 | 2.125 | 19.29 | 18.19 | 66.81 |
| 2.5 | 2.375 | 20.49 | 19.33 | 86.13 |
| 2.75 | 2.625 | 11.79 | 11.12 | 97.26 |
| 3 | 2.875 | 2.50 | 2.36 | 99.61 |
| 3.25 | 3.125 | 0.21 | 0.20 | 99.81 |
| 3.5 | 3.375 | 0.20 | 0.19 | 100.00 |
| 3.75 | 3.625 | -0.01 | -0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.425 |
| **5** | 0.745 |
| **16** | 1.160 |
| **25** | 1.435 |
| **50** | 1.895 |
| **75** | 2.230 |
| **84** | 2.345 |
| **95** | 2.575 |
| **99** | 2.810 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.927 | 0.263 |
| Standard Deviation | 0.561 | 0.678 |
| Skewness | -0.562 | |
| Kurtosis | 2.824 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.752 | 1.800 |
| Standard Deviation | 0.592 | 0.574 |
| Skewness (1) | -0.241 | -0.249 |
| Skewness (2) | -0.397 | |
| Kurtosis | 0.544 | 0.943 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1050+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.356 mm** |
| **STD** | **0.654 mm** |
| **Skewness** | **-0.821** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.96 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.52 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.8 |

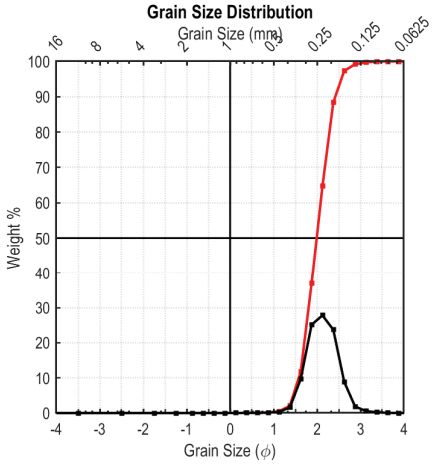
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.55 | 0.52 | 0.52 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.69 |
| -0.5 | -0.625 | 0.25 | 0.24 | 0.92 |
| -0.25 | -0.375 | 0.43 | 0.41 | 1.33 |
| 0 | -0.125 | 0.85 | 0.81 | 2.14 |
| 0.25 | 0.125 | 1.02 | 0.97 | 3.12 |
| 0.5 | 0.375 | 2.30 | 2.19 | 5.31 |
| 0.75 | 0.625 | 5.34 | 5.09 | 10.39 |
| 1 | 0.875 | 7.48 | 7.13 | 17.52 |
| 1.25 | 1.125 | 12.19 | 11.61 | 29.13 |
| 1.5 | 1.375 | 18.33 | 17.46 | 46.60 |
| 1.75 | 1.625 | 19.85 | 18.91 | 65.51 |
| 2 | 1.875 | 18.46 | 17.59 | 83.10 |
| 2.25 | 2.125 | 9.98 | 9.51 | 92.61 |
| 2.5 | 2.375 | 4.88 | 4.65 | 97.26 |
| 2.75 | 2.625 | 1.73 | 1.65 | 98.90 |
| 3 | 2.875 | 0.64 | 0.61 | 99.51 |
| 3.25 | 3.125 | 0.37 | 0.35 | 99.87 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.580 |
| **5** | 0.340 |
| **16** | 0.820 |
| **25** | 1.035 |
| **50** | 1.420 |
| **75** | 1.760 |
| **84** | 1.900 |
| **95** | 2.255 |
| **99** | 2.665 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.488 | 0.356 |
| Standard Deviation | 0.612 | 0.654 |
| Skewness | -0.821 | |
| Kurtosis | 5.349 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.360 | 1.380 |
| Standard Deviation | 0.540 | 0.560 |
| Skewness (1) | -0.111 | -0.120 |
| Skewness (2) | -0.227 | |
| Kurtosis | 0.773 | 1.083 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1050+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.230 mm** |
| **STD** | **0.792 mm** |
| **Skewness** | **0.098** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Very Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.25 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.5 |

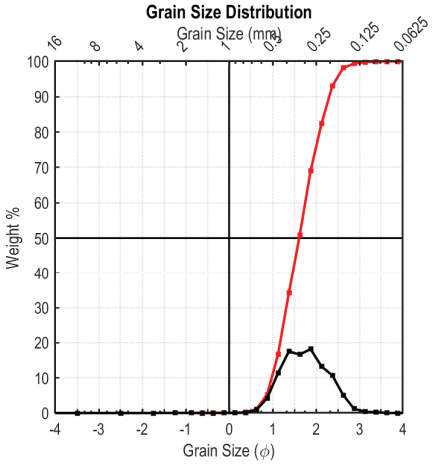
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.00 |
| 0 | -0.125 | 0.00 | 0.00 | 0.00 |
| 0.25 | 0.125 | 0.01 | 0.01 | 0.01 |
| 0.5 | 0.375 | 0.02 | 0.02 | 0.03 |
| 0.75 | 0.625 | 0.05 | 0.05 | 0.08 |
| 1 | 0.875 | 0.09 | 0.09 | 0.16 |
| 1.25 | 1.125 | 0.34 | 0.33 | 0.49 |
| 1.5 | 1.375 | 1.66 | 1.59 | 2.08 |
| 1.75 | 1.625 | 10.11 | 9.70 | 11.78 |
| 2 | 1.875 | 26.21 | 25.14 | 36.92 |
| 2.25 | 2.125 | 28.97 | 27.79 | 64.71 |
| 2.5 | 2.375 | 24.71 | 23.70 | 88.41 |
| 2.75 | 2.625 | 9.27 | 8.89 | 97.30 |
| 3 | 2.875 | 1.96 | 1.88 | 99.18 |
| 3.25 | 3.125 | 0.57 | 0.55 | 99.73 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.95 |
| 3.75 | 3.625 | 0.05 | 0.05 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.205 |
| **5** | 1.450 |
| **16** | 1.665 |
| **25** | 1.755 |
| **50** | 1.995 |
| **75** | 2.235 |
| **84** | 2.330 |
| **95** | 2.560 |
| **99** | 2.850 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.123 | 0.230 |
| Standard Deviation | 0.336 | 0.792 |
| Skewness | 0.098 | |
| Kurtosis | 3.821 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.998 | 1.997 |
| Standard Deviation | 0.333 | 0.334 |
| Skewness (1) | 0.008 | 0.013 |
| Skewness (2) | 0.030 | |
| Kurtosis | 0.669 | 0.948 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1050+00** |
| **Sample** | **Swash** |
| **Mean** | **0.298 mm** |
| **STD** | **0.705 mm** |
| **Skewness** | **0.071** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.54 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

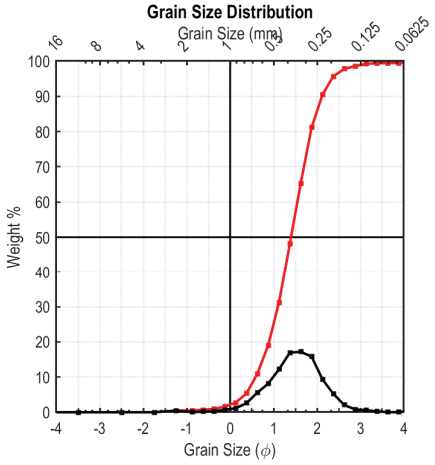
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.06 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.06 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.06 |
| 0 | -0.125 | 0.01 | 0.01 | 0.07 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.09 |
| 0.5 | 0.375 | 0.12 | 0.11 | 0.20 |
| 0.75 | 0.625 | 0.91 | 0.87 | 1.07 |
| 1 | 0.875 | 4.40 | 4.21 | 5.28 |
| 1.25 | 1.125 | 11.89 | 11.37 | 16.65 |
| 1.5 | 1.375 | 18.34 | 17.54 | 34.20 |
| 1.75 | 1.625 | 17.41 | 16.65 | 50.85 |
| 2 | 1.875 | 19.03 | 18.20 | 69.05 |
| 2.25 | 2.125 | 13.89 | 13.29 | 82.34 |
| 2.5 | 2.375 | 11.19 | 10.70 | 93.05 |
| 2.75 | 2.625 | 5.37 | 5.14 | 98.18 |
| 3 | 2.875 | 1.26 | 1.21 | 99.39 |
| 3.25 | 3.125 | 0.39 | 0.37 | 99.76 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.97 |
| 3.75 | 3.625 | 0.04 | 0.04 | 100.01 |
| 4 | 3.875 | -0.01 | -0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.605 |
| **5** | 0.860 |
| **16** | 1.110 |
| **25** | 1.245 |
| **50** | 1.610 |
| **75** | 1.985 |
| **84** | 2.165 |
| **95** | 2.470 |
| **99** | 2.795 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.749 | 0.298 |
| Standard Deviation | 0.504 | 0.705 |
| Skewness | 0.071 | |
| Kurtosis | 3.224 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.637 | 1.628 |
| Standard Deviation | 0.528 | 0.508 |
| Skewness (1) | 0.052 | 0.060 |
| Skewness (2) | 0.104 | |
| Kurtosis | 0.526 | 0.892 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1060+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.352 mm** |
| **STD** | **0.635 mm** |
| **Skewness** | **-0.100** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.25 |
| % finer than 0.0625 mm (dry) | 0.54 |
| % granule (2-4 mm) | 0.49 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

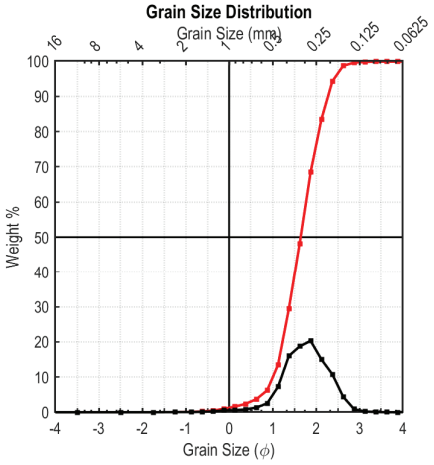
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.50 | 0.49 | 0.49 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.51 |
| -0.5 | -0.625 | 0.18 | 0.18 | 0.68 |
| -0.25 | -0.375 | 0.25 | 0.24 | 0.93 |
| 0 | -0.125 | 0.70 | 0.68 | 1.61 |
| 0.25 | 0.125 | 1.15 | 1.12 | 2.74 |
| 0.5 | 0.375 | 2.64 | 2.58 | 5.32 |
| 0.75 | 0.625 | 5.70 | 5.57 | 10.89 |
| 1 | 0.875 | 8.30 | 8.12 | 19.01 |
| 1.25 | 1.125 | 12.48 | 12.21 | 31.22 |
| 1.5 | 1.375 | 17.34 | 16.96 | 48.18 |
| 1.75 | 1.625 | 17.55 | 17.16 | 65.34 |
| 2 | 1.875 | 16.16 | 15.80 | 81.14 |
| 2.25 | 2.125 | 9.54 | 9.33 | 90.47 |
| 2.5 | 2.375 | 5.35 | 5.23 | 95.71 |
| 2.75 | 2.625 | 2.12 | 2.07 | 97.78 |
| 3 | 2.875 | 0.82 | 0.80 | 98.58 |
| 3.25 | 3.125 | 0.61 | 0.60 | 99.18 |
| 3.5 | 3.375 | 0.25 | 0.24 | 99.42 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.45 |
| 4 | 3.875 | 0.01 | 0.01 | 99.46 |
| >4.0 | 4.25 | 0.55 | 0.54 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.350 |
| **5** | 0.345 |
| **16** | 0.780 |
| **25** | 1.000 |
| **50** | 1.400 |
| **75** | 1.780 |
| **84** | 1.950 |
| **95** | 2.340 |
| **99** | 3.050 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.505 | 0.352 |
| Standard Deviation | 0.656 | 0.635 |
| Skewness | -0.100 | |
| Kurtosis | 5.545 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.365 | 1.377 |
| Standard Deviation | 0.585 | 0.595 |
| Skewness (1) | -0.060 | -0.059 |
| Skewness (2) | -0.098 | |
| Kurtosis | 0.705 | 1.048 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1060+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.298 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.605** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 108.02 |
| % finer than 0.0625 mm (dry) | 0.14 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

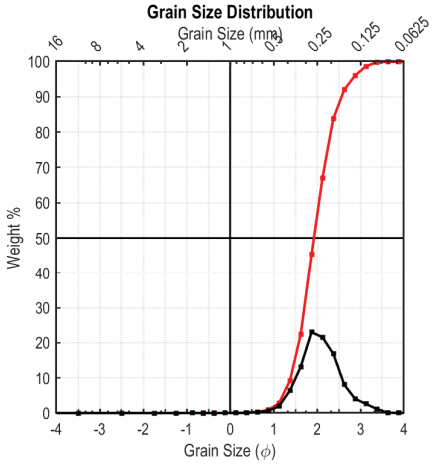
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.09 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.22 |
| -0.25 | -0.375 | 0.25 | 0.23 | 0.45 |
| 0 | -0.125 | 0.56 | 0.52 | 0.97 |
| 0.25 | 0.125 | 0.66 | 0.61 | 1.58 |
| 0.5 | 0.375 | 0.85 | 0.79 | 2.37 |
| 0.75 | 0.625 | 1.44 | 1.33 | 3.70 |
| 1 | 0.875 | 2.72 | 2.52 | 6.22 |
| 1.25 | 1.125 | 7.80 | 7.22 | 13.44 |
| 1.5 | 1.375 | 17.30 | 16.02 | 29.46 |
| 1.75 | 1.625 | 20.23 | 18.73 | 48.19 |
| 2 | 1.875 | 21.93 | 20.30 | 68.49 |
| 2.25 | 2.125 | 16.21 | 15.01 | 83.49 |
| 2.5 | 2.375 | 11.65 | 10.79 | 94.28 |
| 2.75 | 2.625 | 4.76 | 4.41 | 98.69 |
| 3 | 2.875 | 0.96 | 0.89 | 99.57 |
| 3.25 | 3.125 | 0.22 | 0.20 | 99.78 |
| 3.5 | 3.375 | 0.08 | 0.07 | 99.85 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.86 |
| 4 | 3.875 | 0.00 | 0.00 | 99.86 |
| >4.0 | 4.25 | 0.15 | 0.14 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.115 |
| **5** | 0.755 |
| **16** | 1.165 |
| **25** | 1.305 |
| **50** | 1.645 |
| **75** | 1.985 |
| **84** | 2.135 |
| **95** | 2.415 |
| **99** | 2.715 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.749 | 0.298 |
| Standard Deviation | 0.539 | 0.688 |
| Skewness | -0.605 | |
| Kurtosis | 5.455 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.650 | 1.648 |
| Standard Deviation | 0.485 | 0.494 |
| Skewness (1) | 0.010 | -0.031 |
| Skewness (2) | -0.124 | |
| Kurtosis | 0.711 | 1.000 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1060+00** |
| **Sample** | **Swash** |
| **Mean** | **0.236 mm** |
| **STD** | **0.720 mm** |
| **Skewness** | **0.310** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.84 |
| % finer than 0.0625 mm (dry) | 0.13 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

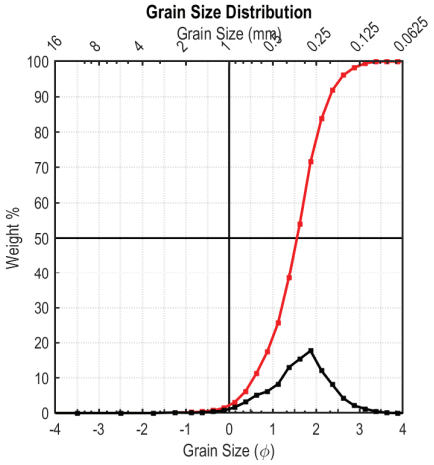
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.01 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.01 |
| 0 | -0.125 | 0.01 | 0.01 | 0.02 |
| 0.25 | 0.125 | 0.01 | 0.01 | 0.03 |
| 0.5 | 0.375 | 0.04 | 0.04 | 0.07 |
| 0.75 | 0.625 | 0.22 | 0.21 | 0.28 |
| 1 | 0.875 | 0.63 | 0.61 | 0.89 |
| 1.25 | 1.125 | 1.95 | 1.90 | 2.79 |
| 1.5 | 1.375 | 6.60 | 6.42 | 9.21 |
| 1.75 | 1.625 | 13.56 | 13.19 | 22.39 |
| 2 | 1.875 | 23.64 | 22.99 | 45.38 |
| 2.25 | 2.125 | 22.21 | 21.60 | 66.98 |
| 2.5 | 2.375 | 17.33 | 16.85 | 83.83 |
| 2.75 | 2.625 | 8.34 | 8.11 | 91.94 |
| 3 | 2.875 | 4.18 | 4.06 | 96.00 |
| 3.25 | 3.125 | 2.68 | 2.61 | 98.61 |
| 3.5 | 3.375 | 1.18 | 1.15 | 99.76 |
| 3.75 | 3.625 | 0.11 | 0.11 | 99.86 |
| 4 | 3.875 | 0.01 | 0.01 | 99.87 |
| >4.0 | 4.25 | 0.13 | 0.13 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.890 |
| **5** | 1.210 |
| **16** | 1.505 |
| **25** | 1.655 |
| **50** | 1.930 |
| **75** | 2.245 |
| **84** | 2.380 |
| **95** | 2.815 |
| **99** | 3.210 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.080 | 0.236 |
| Standard Deviation | 0.473 | 0.720 |
| Skewness | 0.310 | |
| Kurtosis | 3.948 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.942 | 1.938 |
| Standard Deviation | 0.438 | 0.462 |
| Skewness (1) | 0.029 | 0.066 |
| Skewness (2) | 0.189 | |
| Kurtosis | 0.834 | 1.115 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1070+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.324 mm** |
| **STD** | **0.623 mm** |
| **Skewness** | **-0.380** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 99.68 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.15 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

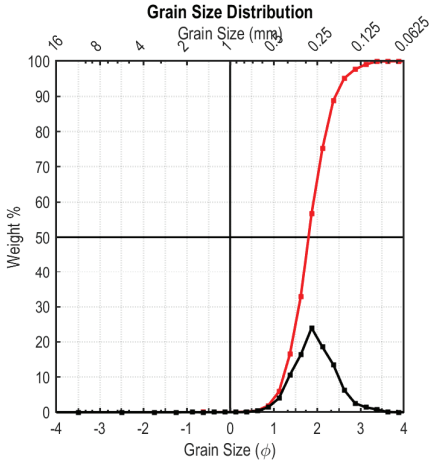
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.15 | 0.15 | 0.15 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.20 |
| -0.5 | -0.625 | 0.16 | 0.16 | 0.36 |
| -0.25 | -0.375 | 0.35 | 0.35 | 0.71 |
| 0 | -0.125 | 0.70 | 0.70 | 1.41 |
| 0.25 | 0.125 | 1.61 | 1.62 | 3.03 |
| 0.5 | 0.375 | 3.10 | 3.11 | 6.14 |
| 0.75 | 0.625 | 5.06 | 5.08 | 11.22 |
| 1 | 0.875 | 6.11 | 6.13 | 17.35 |
| 1.25 | 1.125 | 8.20 | 8.23 | 25.57 |
| 1.5 | 1.375 | 12.95 | 12.99 | 38.56 |
| 1.75 | 1.625 | 15.33 | 15.38 | 53.94 |
| 2 | 1.875 | 17.65 | 17.71 | 71.65 |
| 2.25 | 2.125 | 12.04 | 12.08 | 83.73 |
| 2.5 | 2.375 | 8.07 | 8.10 | 91.82 |
| 2.75 | 2.625 | 4.23 | 4.24 | 96.07 |
| 3 | 2.875 | 2.15 | 2.16 | 98.22 |
| 3.25 | 3.125 | 1.19 | 1.19 | 99.42 |
| 3.5 | 3.375 | 0.50 | 0.50 | 99.92 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.275 |
| **5** | 0.285 |
| **16** | 0.820 |
| **25** | 1.110 |
| **50** | 1.560 |
| **75** | 1.945 |
| **84** | 2.135 |
| **95** | 2.560 |
| **99** | 3.035 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.626 | 0.324 |
| Standard Deviation | 0.683 | 0.623 |
| Skewness | -0.380 | |
| Kurtosis | 3.554 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.477 | 1.505 |
| Standard Deviation | 0.657 | 0.673 |
| Skewness (1) | -0.125 | -0.123 |
| Skewness (2) | -0.209 | |
| Kurtosis | 0.730 | 1.117 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1070+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.259 mm** |
| **STD** | **0.718 mm** |
| **Skewness** | **0.202** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.72 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

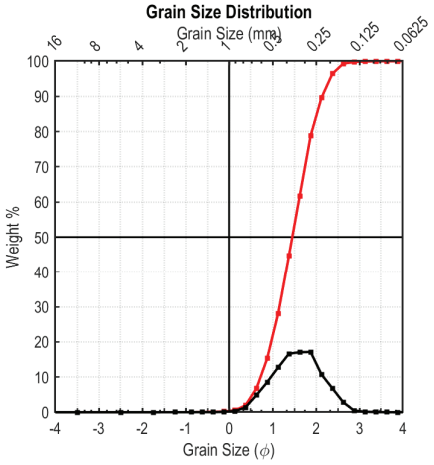
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.01 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.02 |
| 0 | -0.125 | 0.02 | 0.02 | 0.04 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.06 |
| 0.5 | 0.375 | 0.06 | 0.06 | 0.12 |
| 0.75 | 0.625 | 0.37 | 0.36 | 0.48 |
| 1 | 0.875 | 1.44 | 1.40 | 1.88 |
| 1.25 | 1.125 | 4.11 | 4.00 | 5.88 |
| 1.5 | 1.375 | 10.89 | 10.60 | 16.48 |
| 1.75 | 1.625 | 16.75 | 16.31 | 32.79 |
| 2 | 1.875 | 24.61 | 23.96 | 56.75 |
| 2.25 | 2.125 | 19.03 | 18.53 | 75.27 |
| 2.5 | 2.375 | 13.89 | 13.52 | 88.79 |
| 2.75 | 2.625 | 6.50 | 6.33 | 95.12 |
| 3 | 2.875 | 2.63 | 2.56 | 97.68 |
| 3.25 | 3.125 | 1.44 | 1.40 | 99.08 |
| 3.5 | 3.375 | 0.84 | 0.82 | 99.90 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.720 |
| **5** | 1.070 |
| **16** | 1.365 |
| **25** | 1.505 |
| **50** | 1.805 |
| **75** | 2.120 |
| **84** | 2.285 |
| **95** | 2.620 |
| **99** | 3.110 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.949 | 0.259 |
| Standard Deviation | 0.477 | 0.718 |
| Skewness | 0.202 | |
| Kurtosis | 3.672 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.825 | 1.818 |
| Standard Deviation | 0.460 | 0.465 |
| Skewness (1) | 0.043 | 0.048 |
| Skewness (2) | 0.087 | |
| Kurtosis | 0.685 | 1.033 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **1070+00** |
| **Sample** | **Swash** |
| **Mean** | **0.337 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.080** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.71 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

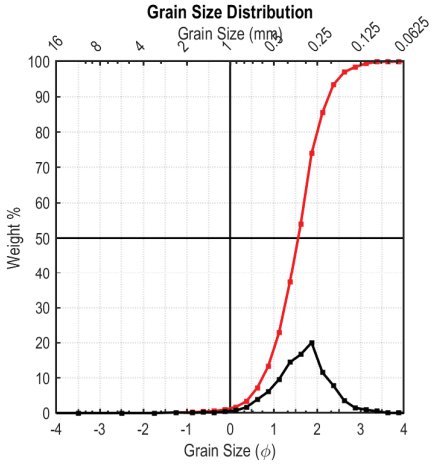
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.02 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.07 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.10 |
| 0 | -0.125 | 0.12 | 0.12 | 0.21 |
| 0.25 | 0.125 | 0.34 | 0.33 | 0.54 |
| 0.5 | 0.375 | 1.41 | 1.36 | 1.90 |
| 0.75 | 0.625 | 5.00 | 4.82 | 6.72 |
| 1 | 0.875 | 8.87 | 8.55 | 15.27 |
| 1.25 | 1.125 | 13.19 | 12.72 | 27.99 |
| 1.5 | 1.375 | 17.25 | 16.63 | 44.62 |
| 1.75 | 1.625 | 17.70 | 17.07 | 61.69 |
| 2 | 1.875 | 17.77 | 17.13 | 78.83 |
| 2.25 | 2.125 | 11.16 | 10.76 | 89.59 |
| 2.5 | 2.375 | 7.07 | 6.82 | 96.40 |
| 2.75 | 2.625 | 2.98 | 2.87 | 99.28 |
| 3 | 2.875 | 0.51 | 0.49 | 99.77 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.91 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.210 |
| **5** | 0.535 |
| **16** | 0.890 |
| **25** | 1.065 |
| **50** | 1.455 |
| **75** | 1.820 |
| **84** | 1.995 |
| **95** | 2.325 |
| **99** | 2.600 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.568 | 0.337 |
| Standard Deviation | 0.540 | 0.688 |
| Skewness | -0.080 | |
| Kurtosis | 3.017 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.443 | 1.447 |
| Standard Deviation | 0.552 | 0.547 |
| Skewness (1) | -0.023 | -0.025 |
| Skewness (2) | -0.045 | |
| Kurtosis | 0.620 | 0.972 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.318 mm** |
| **STD** | **0.652 mm** |
| **Skewness** | **-0.332** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.99 |
| % finer than 0.0625 mm (dry) | 0.06 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

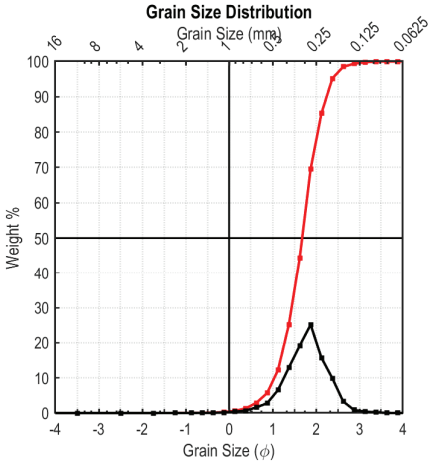
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.22 |
| -0.5 | -0.625 | 0.18 | 0.18 | 0.39 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.56 |
| 0 | -0.125 | 0.43 | 0.42 | 0.97 |
| 0.25 | 0.125 | 0.74 | 0.71 | 1.68 |
| 0.5 | 0.375 | 1.71 | 1.64 | 3.33 |
| 0.75 | 0.625 | 4.01 | 3.86 | 7.19 |
| 1 | 0.875 | 6.32 | 6.07 | 13.26 |
| 1.25 | 1.125 | 9.96 | 9.58 | 22.84 |
| 1.5 | 1.375 | 15.01 | 14.44 | 37.28 |
| 1.75 | 1.625 | 17.34 | 16.67 | 53.95 |
| 2 | 1.875 | 20.84 | 20.04 | 73.99 |
| 2.25 | 2.125 | 12.00 | 11.54 | 85.52 |
| 2.5 | 2.375 | 8.16 | 7.85 | 93.37 |
| 2.75 | 2.625 | 3.69 | 3.55 | 96.92 |
| 3 | 2.875 | 1.56 | 1.50 | 98.42 |
| 3.25 | 3.125 | 0.98 | 0.94 | 99.37 |
| 3.5 | 3.375 | 0.54 | 0.52 | 99.88 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.93 |
| 4 | 3.875 | 0.01 | 0.01 | 99.94 |
| >4.0 | 4.25 | 0.06 | 0.06 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.115 |
| **5** | 0.485 |
| **16** | 0.945 |
| **25** | 1.160 |
| **50** | 1.565 |
| **75** | 1.895 |
| **84** | 2.090 |
| **95** | 2.490 |
| **99** | 3.030 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.652 | 0.318 |
| Standard Deviation | 0.616 | 0.652 |
| Skewness | -0.332 | |
| Kurtosis | 4.363 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.517 | 1.533 |
| Standard Deviation | 0.573 | 0.590 |
| Skewness (1) | -0.083 | -0.080 |
| Skewness (2) | -0.135 | |
| Kurtosis | 0.751 | 1.118 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.292 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **-0.421** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 105.03 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.0 |

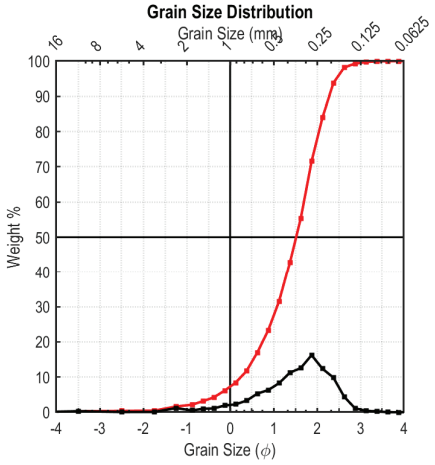
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.06 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.11 |
| 0 | -0.125 | 0.15 | 0.15 | 0.26 |
| 0.25 | 0.125 | 0.38 | 0.36 | 0.62 |
| 0.5 | 0.375 | 0.70 | 0.67 | 1.29 |
| 0.75 | 0.625 | 1.69 | 1.61 | 2.90 |
| 1 | 0.875 | 2.94 | 2.79 | 5.69 |
| 1.25 | 1.125 | 6.89 | 6.56 | 12.25 |
| 1.5 | 1.375 | 13.61 | 12.95 | 25.20 |
| 1.75 | 1.625 | 20.15 | 19.19 | 44.39 |
| 2 | 1.875 | 26.41 | 25.14 | 69.53 |
| 2.25 | 2.125 | 16.52 | 15.73 | 85.27 |
| 2.5 | 2.375 | 10.40 | 9.90 | 95.17 |
| 2.75 | 2.625 | 3.47 | 3.31 | 98.48 |
| 3 | 2.875 | 0.90 | 0.86 | 99.34 |
| 3.25 | 3.125 | 0.43 | 0.41 | 99.74 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.270 |
| **5** | 0.815 |
| **16** | 1.195 |
| **25** | 1.370 |
| **50** | 1.680 |
| **75** | 1.960 |
| **84** | 2.105 |
| **95** | 2.370 |
| **99** | 2.775 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.774 | 0.292 |
| Standard Deviation | 0.488 | 0.713 |
| Skewness | -0.421 | |
| Kurtosis | 4.534 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.650 | 1.660 |
| Standard Deviation | 0.455 | 0.463 |
| Skewness (1) | -0.066 | -0.089 |
| Skewness (2) | -0.192 | |
| Kurtosis | 0.709 | 1.080 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.358 mm** |
| **STD** | **0.547 mm** |
| **Skewness** | **-1.364** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.70 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 1.25 |
| % gravel (>4 mm) | 0.37 |
| CaCO3 | 0.8 |

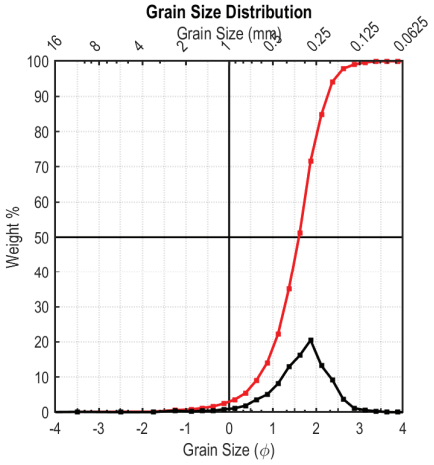
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.32 | 0.31 | 0.31 |
| -2 | -2.5 | 0.07 | 0.06 | 0.37 |
| -1.5 | -1.75 | 0.09 | 0.08 | 0.45 |
| -1 | -1.25 | 1.23 | 1.17 | 1.62 |
| -0.75 | -0.875 | 0.55 | 0.53 | 2.15 |
| -0.5 | -0.625 | 1.04 | 0.99 | 3.14 |
| -0.25 | -0.375 | 1.15 | 1.10 | 4.24 |
| 0 | -0.125 | 2.01 | 1.92 | 6.16 |
| 0.25 | 0.125 | 2.34 | 2.24 | 8.40 |
| 0.5 | 0.375 | 3.44 | 3.28 | 11.69 |
| 0.75 | 0.625 | 5.52 | 5.28 | 16.96 |
| 1 | 0.875 | 6.59 | 6.29 | 23.26 |
| 1.25 | 1.125 | 8.63 | 8.25 | 31.50 |
| 1.5 | 1.375 | 11.78 | 11.25 | 42.75 |
| 1.75 | 1.625 | 13.14 | 12.55 | 55.31 |
| 2 | 1.875 | 17.00 | 16.24 | 71.55 |
| 2.25 | 2.125 | 12.94 | 12.36 | 83.91 |
| 2.5 | 2.375 | 10.33 | 9.87 | 93.78 |
| 2.75 | 2.625 | 4.62 | 4.41 | 98.19 |
| 3 | 2.875 | 1.17 | 1.12 | 99.31 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.73 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.515 |
| **5** | -0.275 |
| **16** | 0.580 |
| **25** | 0.930 |
| **50** | 1.520 |
| **75** | 1.945 |
| **84** | 2.125 |
| **95** | 2.445 |
| **99** | 2.805 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.481 | 0.358 |
| Standard Deviation | 0.870 | 0.547 |
| Skewness | -1.364 | |
| Kurtosis | 6.725 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.353 | 1.408 |
| Standard Deviation | 0.772 | 0.798 |
| Skewness (1) | -0.217 | -0.268 |
| Skewness (2) | -0.563 | |
| Kurtosis | 0.761 | 1.098 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **May 10 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.322 mm** |
| **STD** | **0.621 mm** |
| **Skewness** | **-1.294** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.57 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.48 |
| % gravel (>4 mm) | 0.12 |
| CaCO3 | 1.2 |

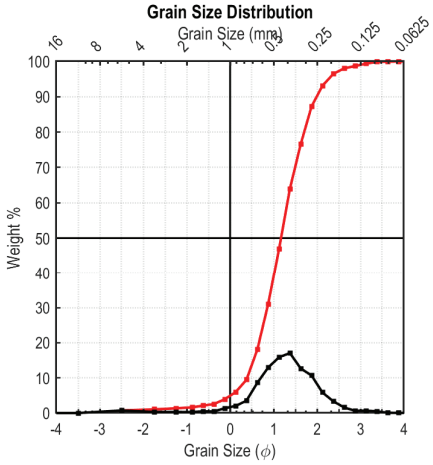
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.11 | 0.10 | 0.10 |
| -2 | -2.5 | 0.02 | 0.02 | 0.12 |
| -1.5 | -1.75 | 0.03 | 0.03 | 0.15 |
| -1 | -1.25 | 0.47 | 0.45 | 0.60 |
| -0.75 | -0.875 | 0.21 | 0.20 | 0.80 |
| -0.5 | -0.625 | 0.42 | 0.40 | 1.20 |
| -0.25 | -0.375 | 0.46 | 0.44 | 1.64 |
| 0 | -0.125 | 0.87 | 0.83 | 2.47 |
| 0.25 | 0.125 | 1.15 | 1.10 | 3.57 |
| 0.5 | 0.375 | 1.95 | 1.86 | 5.43 |
| 0.75 | 0.625 | 3.74 | 3.58 | 9.01 |
| 1 | 0.875 | 5.28 | 5.05 | 14.06 |
| 1.25 | 1.125 | 8.50 | 8.12 | 22.19 |
| 1.5 | 1.375 | 13.47 | 12.88 | 35.06 |
| 1.75 | 1.625 | 16.88 | 16.14 | 51.20 |
| 2 | 1.875 | 21.41 | 20.48 | 71.68 |
| 2.25 | 2.125 | 13.82 | 13.22 | 84.90 |
| 2.5 | 2.375 | 9.63 | 9.21 | 94.11 |
| 2.75 | 2.625 | 3.93 | 3.76 | 97.86 |
| 3 | 2.875 | 1.21 | 1.16 | 99.02 |
| 3.25 | 3.125 | 0.62 | 0.59 | 99.62 |
| 3.5 | 3.375 | 0.33 | 0.31 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.750 |
| **5** | 0.315 |
| **16** | 0.935 |
| **25** | 1.180 |
| **50** | 1.605 |
| **75** | 1.940 |
| **84** | 2.110 |
| **95** | 2.435 |
| **99** | 2.870 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.636 | 0.322 |
| Standard Deviation | 0.688 | 0.621 |
| Skewness | -1.294 | |
| Kurtosis | 8.065 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.522 | 1.550 |
| Standard Deviation | 0.587 | 0.615 |
| Skewness (1) | -0.140 | -0.179 |
| Skewness (2) | -0.391 | |
| Kurtosis | 0.804 | 1.143 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1550+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.414 mm** |
| **STD** | **0.591 mm** |
| **Skewness** | **-1.020** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.37 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.60 |
| % gravel (>4 mm) | 0.74 |
| CaCO3 | 2.6 |

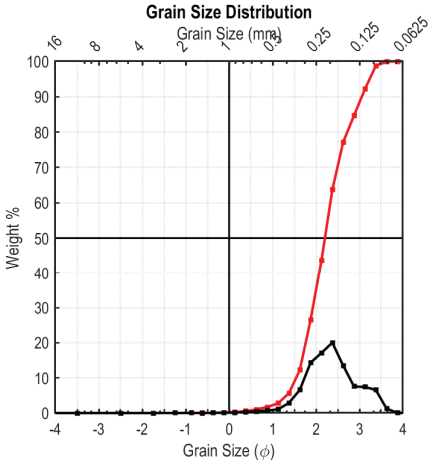
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.77 | 0.74 | 0.74 |
| -1.5 | -1.75 | 0.31 | 0.30 | 1.03 |
| -1 | -1.25 | 0.32 | 0.31 | 1.34 |
| -0.75 | -0.875 | 0.29 | 0.28 | 1.62 |
| -0.5 | -0.625 | 0.51 | 0.49 | 2.11 |
| -0.25 | -0.375 | 0.47 | 0.45 | 2.56 |
| 0 | -0.125 | 1.43 | 1.37 | 3.93 |
| 0.25 | 0.125 | 2.10 | 2.01 | 5.94 |
| 0.5 | 0.375 | 3.67 | 3.52 | 9.46 |
| 0.75 | 0.625 | 8.96 | 8.58 | 18.04 |
| 1 | 0.875 | 13.51 | 12.94 | 30.99 |
| 1.25 | 1.125 | 16.56 | 15.87 | 46.85 |
| 1.5 | 1.375 | 17.82 | 17.07 | 63.93 |
| 1.75 | 1.625 | 13.24 | 12.69 | 76.61 |
| 2 | 1.875 | 11.14 | 10.67 | 87.29 |
| 2.25 | 2.125 | 6.09 | 5.84 | 93.12 |
| 2.5 | 2.375 | 3.49 | 3.34 | 96.46 |
| 2.75 | 2.625 | 1.64 | 1.57 | 98.04 |
| 3 | 2.875 | 0.67 | 0.64 | 98.68 |
| 3.25 | 3.125 | 0.71 | 0.68 | 99.36 |
| 3.5 | 3.375 | 0.52 | 0.50 | 99.86 |
| 3.75 | 3.625 | 0.09 | 0.09 | 99.94 |
| 4 | 3.875 | 0.03 | 0.03 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.840 |
| **5** | 0.010 |
| **16** | 0.565 |
| **25** | 0.760 |
| **50** | 1.170 |
| **75** | 1.595 |
| **84** | 1.800 |
| **95** | 2.265 |
| **99** | 2.995 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.272 | 0.414 |
| Standard Deviation | 0.758 | 0.591 |
| Skewness | -1.020 | |
| Kurtosis | 7.807 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.182 | 1.178 |
| Standard Deviation | 0.617 | 0.650 |
| Skewness (1) | 0.020 | -0.004 |
| Skewness (2) | -0.053 | |
| Kurtosis | 0.826 | 1.107 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1550+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.196 mm** |
| **STD** | **0.667 mm** |
| **Skewness** | **-0.250** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.05 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

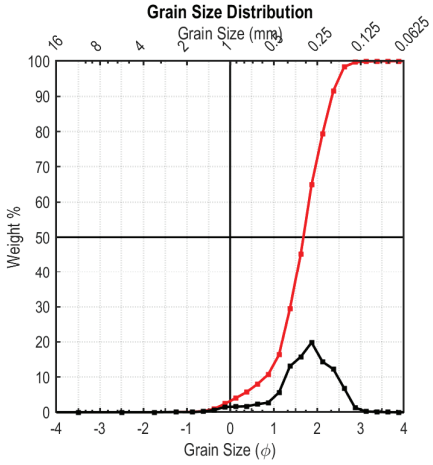
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.03 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.06 |
| 0 | -0.125 | 0.09 | 0.09 | 0.15 |
| 0.25 | 0.125 | 0.11 | 0.11 | 0.25 |
| 0.5 | 0.375 | 0.29 | 0.28 | 0.53 |
| 0.75 | 0.625 | 0.49 | 0.48 | 1.01 |
| 1 | 0.875 | 0.71 | 0.69 | 1.70 |
| 1.25 | 1.125 | 1.09 | 1.06 | 2.76 |
| 1.5 | 1.375 | 2.95 | 2.86 | 5.62 |
| 1.75 | 1.625 | 6.76 | 6.56 | 12.18 |
| 2 | 1.875 | 14.76 | 14.32 | 26.50 |
| 2.25 | 2.125 | 17.65 | 17.13 | 43.63 |
| 2.5 | 2.375 | 20.64 | 20.03 | 63.66 |
| 2.75 | 2.625 | 13.91 | 13.50 | 77.16 |
| 3 | 2.875 | 7.78 | 7.55 | 84.71 |
| 3.25 | 3.125 | 7.64 | 7.41 | 92.12 |
| 3.5 | 3.375 | 6.79 | 6.59 | 98.71 |
| 3.75 | 3.625 | 1.28 | 1.24 | 99.95 |
| 4 | 3.875 | 0.05 | 0.05 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.620 |
| **5** | 1.320 |
| **16** | 1.690 |
| **25** | 1.850 |
| **50** | 2.205 |
| **75** | 2.585 |
| **84** | 2.850 |
| **95** | 3.235 |
| **99** | 3.435 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.348 | 0.196 |
| Standard Deviation | 0.584 | 0.667 |
| Skewness | -0.250 | |
| Kurtosis | 3.840 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.270 | 2.248 |
| Standard Deviation | 0.580 | 0.580 |
| Skewness (1) | 0.112 | 0.094 |
| Skewness (2) | 0.125 | |
| Kurtosis | 0.651 | 1.068 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1550+00** |
| **Sample** | **Swash** |
| **Mean** | **0.301 mm** |
| **STD** | **0.641 mm** |
| **Skewness** | **-0.971** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.35 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.3 |

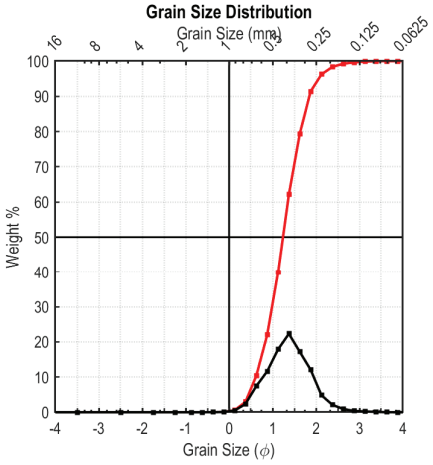
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.09 |
| -0.5 | -0.625 | 0.22 | 0.21 | 0.30 |
| -0.25 | -0.375 | 0.62 | 0.61 | 0.91 |
| 0 | -0.125 | 1.53 | 1.49 | 2.40 |
| 0.25 | 0.125 | 1.63 | 1.59 | 4.00 |
| 0.5 | 0.375 | 1.74 | 1.70 | 5.70 |
| 0.75 | 0.625 | 2.33 | 2.28 | 7.97 |
| 1 | 0.875 | 2.80 | 2.74 | 10.71 |
| 1.25 | 1.125 | 5.76 | 5.63 | 16.34 |
| 1.5 | 1.375 | 13.35 | 13.04 | 29.38 |
| 1.75 | 1.625 | 16.13 | 15.76 | 45.14 |
| 2 | 1.875 | 20.28 | 19.81 | 64.95 |
| 2.25 | 2.125 | 14.69 | 14.35 | 79.31 |
| 2.5 | 2.375 | 12.54 | 12.25 | 91.56 |
| 2.75 | 2.625 | 6.98 | 6.82 | 98.38 |
| 3 | 2.875 | 1.32 | 1.29 | 99.67 |
| 3.25 | 3.125 | 0.23 | 0.22 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | 0.275 |
| **16** | 1.110 |
| **25** | 1.290 |
| **50** | 1.685 |
| **75** | 2.050 |
| **84** | 2.220 |
| **95** | 2.500 |
| **99** | 2.745 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.733 | 0.301 |
| Standard Deviation | 0.642 | 0.641 |
| Skewness | -0.971 | |
| Kurtosis | 4.427 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.665 | 1.672 |
| Standard Deviation | 0.555 | 0.615 |
| Skewness (1) | -0.036 | -0.152 |
| Skewness (2) | -0.536 | |
| Kurtosis | 1.005 | 1.200 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1560+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.387 mm** |
| **STD** | **0.712 mm** |
| **Skewness** | **0.278** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.76 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.5 |

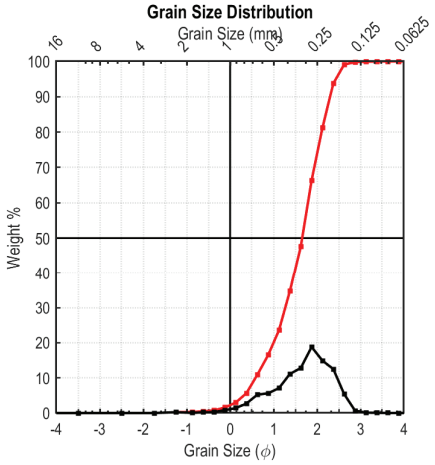
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.00 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.01 |
| 0 | -0.125 | 0.09 | 0.09 | 0.10 |
| 0.25 | 0.125 | 0.50 | 0.48 | 0.58 |
| 0.5 | 0.375 | 2.43 | 2.34 | 2.92 |
| 0.75 | 0.625 | 7.71 | 7.43 | 10.35 |
| 1 | 0.875 | 12.05 | 11.61 | 21.96 |
| 1.25 | 1.125 | 18.53 | 17.86 | 39.82 |
| 1.5 | 1.375 | 23.14 | 22.30 | 62.12 |
| 1.75 | 1.625 | 17.83 | 17.18 | 79.31 |
| 2 | 1.875 | 12.54 | 12.09 | 91.39 |
| 2.25 | 2.125 | 5.02 | 4.84 | 96.23 |
| 2.5 | 2.375 | 2.20 | 2.12 | 98.35 |
| 2.75 | 2.625 | 0.96 | 0.93 | 99.28 |
| 3 | 2.875 | 0.38 | 0.37 | 99.64 |
| 3.25 | 3.125 | 0.24 | 0.23 | 99.87 |
| 3.5 | 3.375 | 0.11 | 0.11 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.170 |
| **5** | 0.445 |
| **16** | 0.745 |
| **25** | 0.915 |
| **50** | 1.240 |
| **75** | 1.560 |
| **84** | 1.720 |
| **95** | 2.060 |
| **99** | 2.550 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.370 | 0.387 |
| Standard Deviation | 0.490 | 0.712 |
| Skewness | 0.278 | |
| Kurtosis | 3.583 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.232 | 1.235 |
| Standard Deviation | 0.487 | 0.488 |
| Skewness (1) | -0.015 | 0.000 |
| Skewness (2) | 0.026 | |
| Kurtosis | 0.656 | 1.026 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1560+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.316 mm** |
| **STD** | **0.632 mm** |
| **Skewness** | **-0.814** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.80 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.24 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.1 |

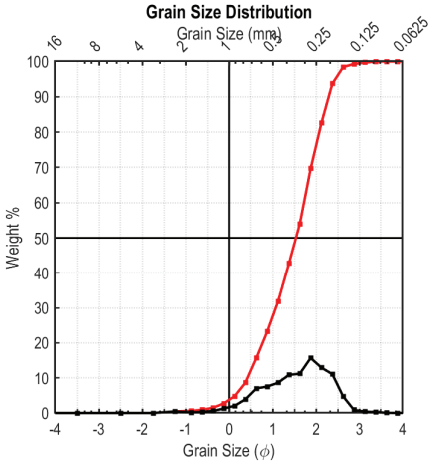
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.25 | 0.24 | 0.24 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.29 |
| -0.5 | -0.625 | 0.20 | 0.19 | 0.49 |
| -0.25 | -0.375 | 0.27 | 0.26 | 0.75 |
| 0 | -0.125 | 0.83 | 0.81 | 1.56 |
| 0.25 | 0.125 | 1.42 | 1.38 | 2.94 |
| 0.5 | 0.375 | 2.79 | 2.71 | 5.65 |
| 0.75 | 0.625 | 5.36 | 5.21 | 10.87 |
| 1 | 0.875 | 5.79 | 5.63 | 16.50 |
| 1.25 | 1.125 | 7.30 | 7.10 | 23.60 |
| 1.5 | 1.375 | 11.44 | 11.13 | 34.73 |
| 1.75 | 1.625 | 13.16 | 12.80 | 47.53 |
| 2 | 1.875 | 19.33 | 18.80 | 66.33 |
| 2.25 | 2.125 | 15.32 | 14.90 | 81.24 |
| 2.5 | 2.375 | 12.86 | 12.51 | 93.75 |
| 2.75 | 2.625 | 5.53 | 5.38 | 99.12 |
| 3 | 2.875 | 0.70 | 0.68 | 99.81 |
| 3.25 | 3.125 | 0.12 | 0.12 | 99.92 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.295 |
| **5** | 0.315 |
| **16** | 0.855 |
| **25** | 1.155 |
| **50** | 1.660 |
| **75** | 2.020 |
| **84** | 2.180 |
| **95** | 2.435 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.661 | 0.316 |
| Standard Deviation | 0.662 | 0.632 |
| Skewness | -0.814 | |
| Kurtosis | 3.803 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.517 | 1.565 |
| Standard Deviation | 0.662 | 0.652 |
| Skewness (1) | -0.215 | -0.242 |
| Skewness (2) | -0.430 | |
| Kurtosis | 0.600 | 1.004 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1560+00** |
| **Sample** | **Swash** |
| **Mean** | **0.342 mm** |
| **STD** | **0.598 mm** |
| **Skewness** | **-0.604** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.51 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.45 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

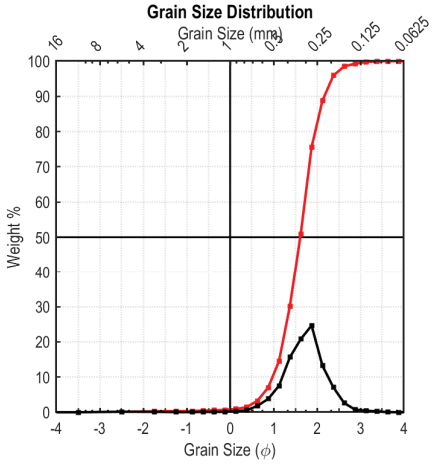
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.46 | 0.45 | 0.45 |
| -0.75 | -0.875 | 0.17 | 0.17 | 0.61 |
| -0.5 | -0.625 | 0.30 | 0.29 | 0.91 |
| -0.25 | -0.375 | 0.57 | 0.56 | 1.46 |
| 0 | -0.125 | 1.31 | 1.28 | 2.74 |
| 0.25 | 0.125 | 2.08 | 2.03 | 4.77 |
| 0.5 | 0.375 | 4.01 | 3.91 | 8.68 |
| 0.75 | 0.625 | 7.19 | 7.01 | 15.70 |
| 1 | 0.875 | 7.72 | 7.53 | 23.23 |
| 1.25 | 1.125 | 8.86 | 8.64 | 31.87 |
| 1.5 | 1.375 | 11.15 | 10.88 | 42.75 |
| 1.75 | 1.625 | 11.49 | 11.21 | 53.96 |
| 2 | 1.875 | 16.09 | 15.70 | 69.65 |
| 2.25 | 2.125 | 13.25 | 12.93 | 82.58 |
| 2.5 | 2.375 | 11.37 | 11.09 | 93.67 |
| 2.75 | 2.625 | 4.86 | 4.74 | 98.41 |
| 3 | 2.875 | 0.89 | 0.87 | 99.28 |
| 3.25 | 3.125 | 0.39 | 0.38 | 99.66 |
| 3.5 | 3.375 | 0.28 | 0.27 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.585 |
| **5** | 0.140 |
| **16** | 0.635 |
| **25** | 0.925 |
| **50** | 1.535 |
| **75** | 1.980 |
| **84** | 2.155 |
| **95** | 2.445 |
| **99** | 2.795 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.549 | 0.342 |
| Standard Deviation | 0.742 | 0.598 |
| Skewness | -0.604 | |
| Kurtosis | 3.400 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.395 | 1.442 |
| Standard Deviation | 0.760 | 0.729 |
| Skewness (1) | -0.184 | -0.197 |
| Skewness (2) | -0.319 | |
| Kurtosis | 0.516 | 0.895 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1570+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.307 mm** |
| **STD** | **0.694 mm** |
| **Skewness** | **-1.341** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.49 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.15 |
| CaCO3 | 2.2 |

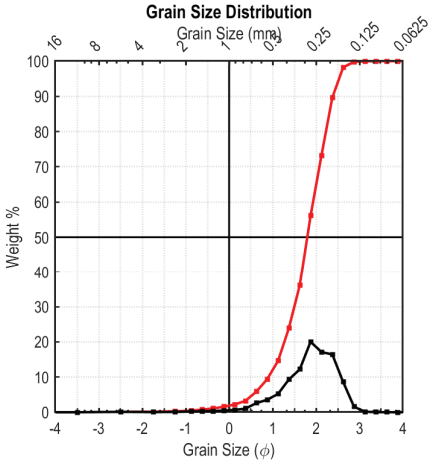
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.15 | 0.15 | 0.15 |
| -1.5 | -1.75 | 0.12 | 0.12 | 0.26 |
| -1 | -1.25 | 0.05 | 0.05 | 0.31 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.34 |
| -0.5 | -0.625 | 0.12 | 0.12 | 0.46 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.53 |
| 0 | -0.125 | 0.15 | 0.15 | 0.67 |
| 0.25 | 0.125 | 0.24 | 0.23 | 0.91 |
| 0.5 | 0.375 | 0.53 | 0.52 | 1.42 |
| 0.75 | 0.625 | 1.85 | 1.81 | 3.23 |
| 1 | 0.875 | 3.87 | 3.78 | 7.01 |
| 1.25 | 1.125 | 7.72 | 7.53 | 14.54 |
| 1.5 | 1.375 | 16.01 | 15.62 | 30.16 |
| 1.75 | 1.625 | 21.29 | 20.77 | 50.93 |
| 2 | 1.875 | 25.26 | 24.65 | 75.58 |
| 2.25 | 2.125 | 13.54 | 13.21 | 88.79 |
| 2.5 | 2.375 | 7.28 | 7.10 | 95.89 |
| 2.75 | 2.625 | 2.69 | 2.62 | 98.52 |
| 3 | 2.875 | 0.77 | 0.75 | 99.27 |
| 3.25 | 3.125 | 0.48 | 0.47 | 99.74 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.96 |
| 3.75 | 3.625 | 0.04 | 0.04 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.170 |
| **5** | 0.740 |
| **16** | 1.150 |
| **25** | 1.290 |
| **50** | 1.615 |
| **75** | 1.870 |
| **84** | 2.035 |
| **95** | 2.345 |
| **99** | 2.785 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.702 | 0.307 |
| Standard Deviation | 0.527 | 0.694 |
| Skewness | -1.341 | |
| Kurtosis | 11.811 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.593 | 1.600 |
| Standard Deviation | 0.443 | 0.464 |
| Skewness (1) | -0.051 | -0.071 |
| Skewness (2) | -0.164 | |
| Kurtosis | 0.814 | 1.134 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1570+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.281 mm** |
| **STD** | **0.644 mm** |
| **Skewness** | **-1.449** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.15 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.15 |
| % gravel (>4 mm) | 0.12 |
| CaCO3 | 2.9 |

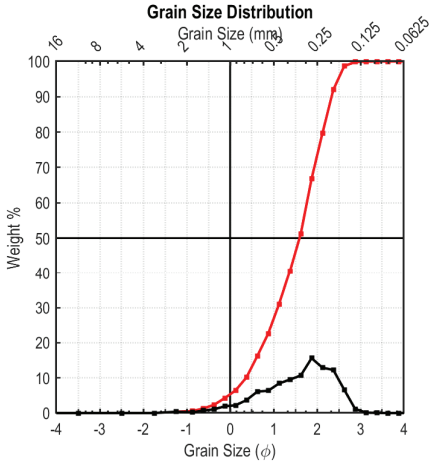
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.12 | 0.12 | 0.12 |
| -1.5 | -1.75 | 0.05 | 0.05 | 0.16 |
| -1 | -1.25 | 0.10 | 0.10 | 0.26 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.46 |
| -0.5 | -0.625 | 0.30 | 0.29 | 0.75 |
| -0.25 | -0.375 | 0.32 | 0.31 | 1.06 |
| 0 | -0.125 | 0.51 | 0.49 | 1.55 |
| 0.25 | 0.125 | 0.67 | 0.65 | 2.20 |
| 0.5 | 0.375 | 1.07 | 1.04 | 3.24 |
| 0.75 | 0.625 | 2.69 | 2.61 | 5.85 |
| 1 | 0.875 | 3.65 | 3.54 | 9.38 |
| 1.25 | 1.125 | 5.37 | 5.21 | 14.59 |
| 1.5 | 1.375 | 9.60 | 9.31 | 23.90 |
| 1.75 | 1.625 | 12.57 | 12.19 | 36.08 |
| 2 | 1.875 | 20.67 | 20.04 | 56.12 |
| 2.25 | 2.125 | 17.64 | 17.10 | 73.22 |
| 2.5 | 2.375 | 16.95 | 16.43 | 89.66 |
| 2.75 | 2.625 | 8.85 | 8.58 | 98.24 |
| 3 | 2.875 | 1.62 | 1.57 | 99.81 |
| 3.25 | 3.125 | 0.16 | 0.16 | 99.96 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.420 |
| **5** | 0.545 |
| **16** | 1.165 |
| **25** | 1.400 |
| **50** | 1.800 |
| **75** | 2.150 |
| **84** | 2.290 |
| **95** | 2.530 |
| **99** | 2.745 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.832 | 0.281 |
| Standard Deviation | 0.635 | 0.644 |
| Skewness | -1.449 | |
| Kurtosis | 7.459 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.728 | 1.752 |
| Standard Deviation | 0.562 | 0.582 |
| Skewness (1) | -0.129 | -0.197 |
| Skewness (2) | -0.467 | |
| Kurtosis | 0.764 | 1.085 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1570+00** |
| **Sample** | **Swash** |
| **Mean** | **0.338 mm** |
| **STD** | **0.583 mm** |
| **Skewness** | **-0.752** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 98.43 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.37 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

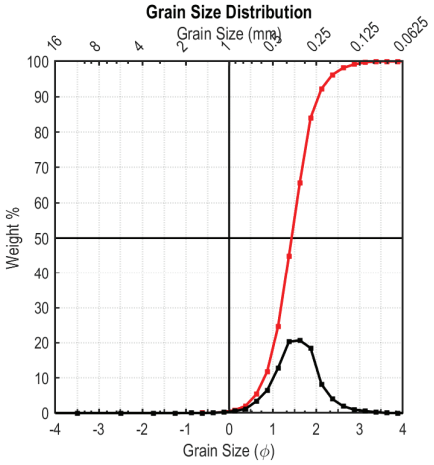
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.36 | 0.37 | 0.37 |
| -0.75 | -0.875 | 0.20 | 0.20 | 0.57 |
| -0.5 | -0.625 | 0.68 | 0.69 | 1.26 |
| -0.25 | -0.375 | 1.04 | 1.06 | 2.32 |
| 0 | -0.125 | 1.89 | 1.92 | 4.24 |
| 0.25 | 0.125 | 2.18 | 2.21 | 6.45 |
| 0.5 | 0.375 | 3.62 | 3.68 | 10.13 |
| 0.75 | 0.625 | 6.00 | 6.10 | 16.22 |
| 1 | 0.875 | 6.25 | 6.35 | 22.57 |
| 1.25 | 1.125 | 8.29 | 8.42 | 31.00 |
| 1.5 | 1.375 | 9.37 | 9.52 | 40.52 |
| 1.75 | 1.625 | 10.51 | 10.68 | 51.19 |
| 2 | 1.875 | 15.37 | 15.62 | 66.81 |
| 2.25 | 2.125 | 12.70 | 12.90 | 79.71 |
| 2.5 | 2.375 | 12.07 | 12.26 | 91.97 |
| 2.75 | 2.625 | 6.56 | 6.66 | 98.64 |
| 3 | 2.875 | 1.18 | 1.20 | 99.84 |
| 3.25 | 3.125 | 0.12 | 0.12 | 99.96 |
| 3.5 | 3.375 | 0.04 | 0.04 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.720 |
| **5** | -0.040 |
| **16** | 0.615 |
| **25** | 0.945 |
| **50** | 1.595 |
| **75** | 2.035 |
| **84** | 2.210 |
| **95** | 2.490 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.565 | 0.338 |
| Standard Deviation | 0.779 | 0.583 |
| Skewness | -0.752 | |
| Kurtosis | 3.258 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.412 | 1.473 |
| Standard Deviation | 0.798 | 0.782 |
| Skewness (1) | -0.229 | -0.261 |
| Skewness (2) | -0.464 | |
| Kurtosis | 0.586 | 0.951 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1580+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.338 mm** |
| **STD** | **0.701 mm** |
| **Skewness** | **0.111** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 100.40 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.8 |

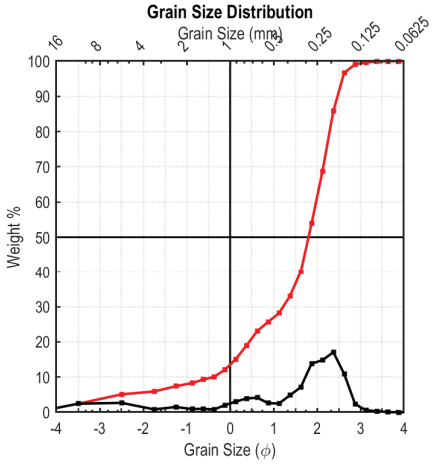
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.01 |
| -0.25 | -0.375 | 0.05 | 0.05 | 0.06 |
| 0 | -0.125 | 0.23 | 0.23 | 0.29 |
| 0.25 | 0.125 | 0.54 | 0.54 | 0.83 |
| 0.5 | 0.375 | 1.18 | 1.18 | 2.00 |
| 0.75 | 0.625 | 3.33 | 3.32 | 5.32 |
| 1 | 0.875 | 6.49 | 6.46 | 11.78 |
| 1.25 | 1.125 | 12.82 | 12.77 | 24.55 |
| 1.5 | 1.375 | 20.36 | 20.28 | 44.83 |
| 1.75 | 1.625 | 20.79 | 20.71 | 65.54 |
| 2 | 1.875 | 18.57 | 18.50 | 84.03 |
| 2.25 | 2.125 | 8.23 | 8.20 | 92.23 |
| 2.5 | 2.375 | 4.00 | 3.98 | 96.22 |
| 2.75 | 2.625 | 1.95 | 1.94 | 98.16 |
| 3 | 2.875 | 0.99 | 0.99 | 99.14 |
| 3.25 | 3.125 | 0.59 | 0.59 | 99.73 |
| 3.5 | 3.375 | 0.24 | 0.24 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.160 |
| **5** | 0.600 |
| **16** | 0.960 |
| **25** | 1.130 |
| **50** | 1.435 |
| **75** | 1.755 |
| **84** | 1.875 |
| **95** | 2.300 |
| **99** | 2.840 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.563 | 0.338 |
| Standard Deviation | 0.512 | 0.701 |
| Skewness | 0.111 | |
| Kurtosis | 3.961 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.417 | 1.423 |
| Standard Deviation | 0.458 | 0.486 |
| Skewness (1) | -0.038 | -0.010 |
| Skewness (2) | 0.033 | |
| Kurtosis | 0.858 | 1.115 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1580+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.369 mm** |
| **STD** | **0.378 mm** |
| **Skewness** | **-1.818** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Poorly Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.75 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 2.30 |
| % gravel (>4 mm) | 5.09 |
| CaCO3 | 9.8 |

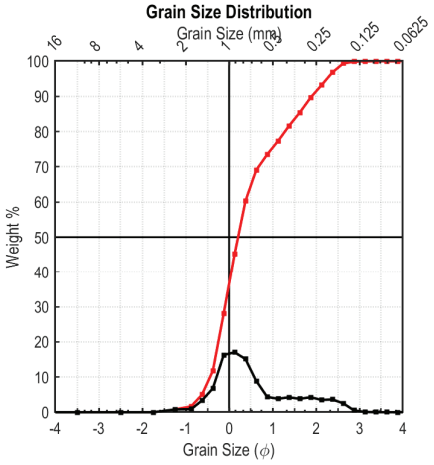
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 2.51 | 2.42 | 2.42 |
| -2 | -2.5 | 2.77 | 2.67 | 5.09 |
| -1.5 | -1.75 | 0.85 | 0.82 | 5.91 |
| -1 | -1.25 | 1.54 | 1.48 | 7.39 |
| -0.75 | -0.875 | 0.94 | 0.91 | 8.30 |
| -0.5 | -0.625 | 1.01 | 0.97 | 9.27 |
| -0.25 | -0.375 | 0.81 | 0.78 | 10.05 |
| 0 | -0.125 | 2.05 | 1.98 | 12.03 |
| 0.25 | 0.125 | 3.12 | 3.01 | 15.04 |
| 0.5 | 0.375 | 4.07 | 3.92 | 18.96 |
| 0.75 | 0.625 | 4.29 | 4.13 | 23.09 |
| 1 | 0.875 | 2.68 | 2.58 | 25.68 |
| 1.25 | 1.125 | 2.58 | 2.49 | 28.16 |
| 1.5 | 1.375 | 5.00 | 4.82 | 32.98 |
| 1.75 | 1.625 | 7.37 | 7.10 | 40.09 |
| 2 | 1.875 | 14.37 | 13.85 | 53.94 |
| 2.25 | 2.125 | 15.35 | 14.80 | 68.73 |
| 2.5 | 2.375 | 17.71 | 17.07 | 85.80 |
| 2.75 | 2.625 | 11.30 | 10.89 | 96.69 |
| 3 | 2.875 | 2.47 | 2.38 | 99.07 |
| 3.25 | 3.125 | 0.55 | 0.53 | 99.60 |
| 3.5 | 3.375 | 0.35 | 0.34 | 99.94 |
| 3.75 | 3.625 | 0.06 | 0.06 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -4.085 |
| **5** | -2.535 |
| **16** | 0.185 |
| **25** | 0.810 |
| **50** | 1.805 |
| **75** | 2.215 |
| **84** | 2.350 |
| **95** | 2.585 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.437 | 0.369 |
| Standard Deviation | 1.405 | 0.378 |
| Skewness | -1.818 | |
| Kurtosis | 6.103 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.267 | 1.447 |
| Standard Deviation | 1.082 | 1.317 |
| Skewness (1) | -0.497 | -0.596 |
| Skewness (2) | -1.644 | |
| Kurtosis | 1.365 | 1.493 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1580+00** |
| **Sample** | **Swash** |
| **Mean** | **0.670 mm** |
| **STD** | **0.542 mm** |
| **Skewness** | **0.805** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Fine Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.00 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.79 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 20.1 |

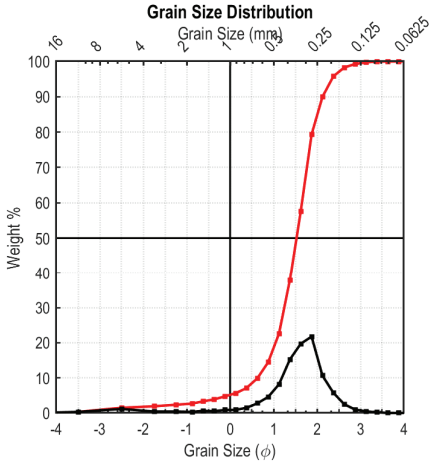
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.80 | 0.79 | 0.79 |
| -0.75 | -0.875 | 0.88 | 0.87 | 1.66 |
| -0.5 | -0.625 | 3.37 | 3.34 | 5.00 |
| -0.25 | -0.375 | 6.87 | 6.80 | 11.80 |
| 0 | -0.125 | 16.45 | 16.29 | 28.09 |
| 0.25 | 0.125 | 17.20 | 17.03 | 45.12 |
| 0.5 | 0.375 | 15.28 | 15.13 | 60.25 |
| 0.75 | 0.625 | 8.96 | 8.87 | 69.12 |
| 1 | 0.875 | 4.41 | 4.37 | 73.49 |
| 1.25 | 1.125 | 3.87 | 3.83 | 77.32 |
| 1.5 | 1.375 | 4.30 | 4.26 | 81.57 |
| 1.75 | 1.625 | 3.85 | 3.81 | 85.39 |
| 2 | 1.875 | 4.32 | 4.28 | 89.66 |
| 2.25 | 2.125 | 3.53 | 3.50 | 93.16 |
| 2.5 | 2.375 | 3.67 | 3.63 | 96.79 |
| 2.75 | 2.625 | 2.57 | 2.54 | 99.34 |
| 3 | 2.875 | 0.53 | 0.52 | 99.86 |
| 3.25 | 3.125 | 0.09 | 0.09 | 99.95 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.160 |
| **5** | -0.625 |
| **16** | -0.310 |
| **25** | -0.170 |
| **50** | 0.205 |
| **75** | 0.975 |
| **84** | 1.535 |
| **95** | 2.250 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.578 | 0.670 |
| Standard Deviation | 0.883 | 0.542 |
| Skewness | 0.805 | |
| Kurtosis | 2.889 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.613 | 0.477 |
| Standard Deviation | 0.922 | 0.897 |
| Skewness (1) | 0.442 | 0.432 |
| Skewness (2) | 0.659 | |
| Kurtosis | 0.558 | 1.029 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1590+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.351 mm** |
| **STD** | **0.556 mm** |
| **Skewness** | **-2.462** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.94 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.86 |
| % gravel (>4 mm) | 1.50 |
| CaCO3 | 4.9 |

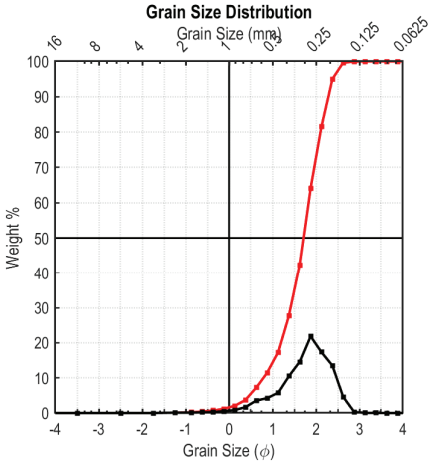
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.34 | 0.33 | 0.33 |
| -2 | -2.5 | 1.20 | 1.17 | 1.50 |
| -1.5 | -1.75 | 0.44 | 0.43 | 1.92 |
| -1 | -1.25 | 0.45 | 0.44 | 2.36 |
| -0.75 | -0.875 | 0.34 | 0.33 | 2.69 |
| -0.5 | -0.625 | 0.65 | 0.63 | 3.32 |
| -0.25 | -0.375 | 0.55 | 0.53 | 3.86 |
| 0 | -0.125 | 0.90 | 0.87 | 4.73 |
| 0.25 | 0.125 | 0.93 | 0.90 | 5.63 |
| 0.5 | 0.375 | 1.52 | 1.48 | 7.11 |
| 0.75 | 0.625 | 2.84 | 2.76 | 9.87 |
| 1 | 0.875 | 4.71 | 4.58 | 14.45 |
| 1.25 | 1.125 | 8.42 | 8.18 | 22.62 |
| 1.5 | 1.375 | 15.70 | 15.25 | 37.88 |
| 1.75 | 1.625 | 20.29 | 19.71 | 57.59 |
| 2 | 1.875 | 22.39 | 21.75 | 79.34 |
| 2.25 | 2.125 | 10.95 | 10.64 | 89.97 |
| 2.5 | 2.375 | 5.95 | 5.78 | 95.75 |
| 2.75 | 2.625 | 2.58 | 2.51 | 98.26 |
| 3 | 2.875 | 1.02 | 0.99 | 99.25 |
| 3.25 | 3.125 | 0.49 | 0.48 | 99.73 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.925 |
| **5** | -0.050 |
| **16** | 0.925 |
| **25** | 1.165 |
| **50** | 1.530 |
| **75** | 1.825 |
| **84** | 1.985 |
| **95** | 2.340 |
| **99** | 2.810 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.512 | 0.351 |
| Standard Deviation | 0.847 | 0.556 |
| Skewness | -2.462 | |
| Kurtosis | 12.601 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.455 | 1.480 |
| Standard Deviation | 0.530 | 0.627 |
| Skewness (1) | -0.142 | -0.232 |
| Skewness (2) | -0.726 | |
| Kurtosis | 1.255 | 1.484 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1590+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.300 mm** |
| **STD** | **0.664 mm** |
| **Skewness** | **-1.066** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.04 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.7 |

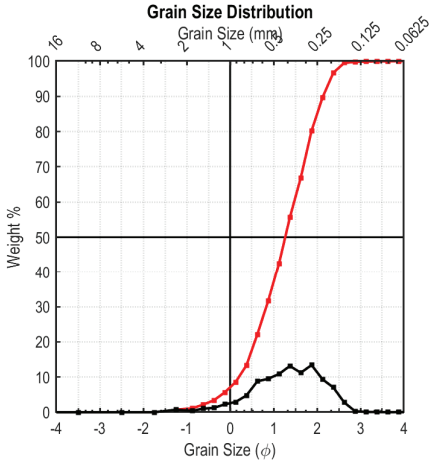
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.11 | 0.11 | 0.21 |
| -0.5 | -0.625 | 0.20 | 0.19 | 0.41 |
| -0.25 | -0.375 | 0.29 | 0.28 | 0.69 |
| 0 | -0.125 | 0.52 | 0.50 | 1.19 |
| 0.25 | 0.125 | 0.87 | 0.84 | 2.04 |
| 0.5 | 0.375 | 1.71 | 1.66 | 3.70 |
| 0.75 | 0.625 | 3.65 | 3.54 | 7.24 |
| 1 | 0.875 | 4.37 | 4.24 | 11.48 |
| 1.25 | 1.125 | 5.92 | 5.75 | 17.23 |
| 1.5 | 1.375 | 10.81 | 10.49 | 27.72 |
| 1.75 | 1.625 | 15.01 | 14.57 | 42.28 |
| 2 | 1.875 | 22.53 | 21.87 | 64.15 |
| 2.25 | 2.125 | 17.86 | 17.33 | 81.48 |
| 2.5 | 2.375 | 13.93 | 13.52 | 95.00 |
| 2.75 | 2.625 | 4.76 | 4.62 | 99.62 |
| 3 | 2.875 | 0.33 | 0.32 | 99.94 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.98 |
| 3.5 | 3.375 | 0.02 | 0.02 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.220 |
| **5** | 0.465 |
| **16** | 1.070 |
| **25** | 1.310 |
| **50** | 1.715 |
| **75** | 2.030 |
| **84** | 2.170 |
| **95** | 2.375 |
| **99** | 2.590 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.739 | 0.300 |
| Standard Deviation | 0.592 | 0.664 |
| Skewness | -1.066 | |
| Kurtosis | 4.721 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.620 | 1.652 |
| Standard Deviation | 0.550 | 0.564 |
| Skewness (1) | -0.173 | -0.241 |
| Skewness (2) | -0.536 | |
| Kurtosis | 0.736 | 1.087 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1590+00** |
| **Sample** | **Swash** |
| **Mean** | **0.399 mm** |
| **STD** | **0.586 mm** |
| **Skewness** | **-0.560** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.95 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.72 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.4 |

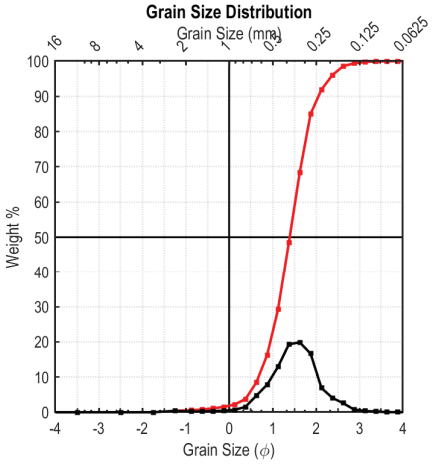
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.75 | 0.72 | 0.72 |
| -0.75 | -0.875 | 0.41 | 0.39 | 1.12 |
| -0.5 | -0.625 | 1.07 | 1.03 | 2.15 |
| -0.25 | -0.375 | 1.30 | 1.25 | 3.40 |
| 0 | -0.125 | 2.33 | 2.24 | 5.64 |
| 0.25 | 0.125 | 3.03 | 2.91 | 8.55 |
| 0.5 | 0.375 | 4.96 | 4.77 | 13.32 |
| 0.75 | 0.625 | 9.13 | 8.78 | 22.11 |
| 1 | 0.875 | 9.89 | 9.51 | 31.62 |
| 1.25 | 1.125 | 11.30 | 10.87 | 42.49 |
| 1.5 | 1.375 | 13.66 | 13.14 | 55.63 |
| 1.75 | 1.625 | 11.67 | 11.23 | 66.86 |
| 2 | 1.875 | 13.94 | 13.41 | 80.27 |
| 2.25 | 2.125 | 9.74 | 9.37 | 89.64 |
| 2.5 | 2.375 | 7.33 | 7.05 | 96.69 |
| 2.75 | 2.625 | 2.91 | 2.80 | 99.49 |
| 3 | 2.875 | 0.31 | 0.30 | 99.79 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.88 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.94 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.96 |
| 4 | 3.875 | 0.03 | 0.03 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.985 |
| **5** | -0.195 |
| **16** | 0.450 |
| **25** | 0.700 |
| **50** | 1.270 |
| **75** | 1.775 |
| **84** | 1.975 |
| **95** | 2.315 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.326 | 0.399 |
| Standard Deviation | 0.770 | 0.586 |
| Skewness | -0.560 | |
| Kurtosis | 3.313 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.212 | 1.232 |
| Standard Deviation | 0.763 | 0.762 |
| Skewness (1) | -0.075 | -0.121 |
| Skewness (2) | -0.275 | |
| Kurtosis | 0.646 | 0.957 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1600+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.355 mm** |
| **STD** | **0.666 mm** |
| **Skewness** | **-0.545** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.94 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.40 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.4 |

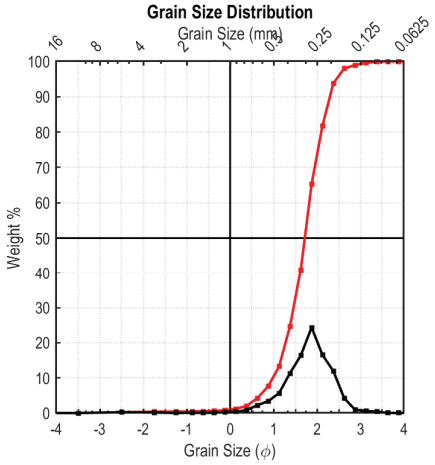
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.41 | 0.40 | 0.40 |
| -0.75 | -0.875 | 0.18 | 0.17 | 0.57 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.78 |
| -0.25 | -0.375 | 0.32 | 0.31 | 1.09 |
| 0 | -0.125 | 0.45 | 0.44 | 1.53 |
| 0.25 | 0.125 | 0.70 | 0.68 | 2.21 |
| 0.5 | 0.375 | 1.57 | 1.53 | 3.73 |
| 0.75 | 0.625 | 4.85 | 4.71 | 8.44 |
| 1 | 0.875 | 8.06 | 7.83 | 16.27 |
| 1.25 | 1.125 | 13.32 | 12.94 | 29.21 |
| 1.5 | 1.375 | 19.87 | 19.30 | 48.51 |
| 1.75 | 1.625 | 20.46 | 19.88 | 68.39 |
| 2 | 1.875 | 17.13 | 16.64 | 85.03 |
| 2.25 | 2.125 | 7.09 | 6.89 | 91.92 |
| 2.5 | 2.375 | 4.22 | 4.10 | 96.02 |
| 2.75 | 2.625 | 2.65 | 2.57 | 98.59 |
| 3 | 2.875 | 0.80 | 0.78 | 99.37 |
| 3.25 | 3.125 | 0.38 | 0.37 | 99.74 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.92 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.445 |
| **5** | 0.440 |
| **16** | 0.865 |
| **25** | 1.045 |
| **50** | 1.395 |
| **75** | 1.725 |
| **84** | 1.860 |
| **95** | 2.315 |
| **99** | 2.755 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.495 | 0.355 |
| Standard Deviation | 0.587 | 0.666 |
| Skewness | -0.545 | |
| Kurtosis | 5.576 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.362 | 1.373 |
| Standard Deviation | 0.498 | 0.533 |
| Skewness (1) | -0.065 | -0.042 |
| Skewness (2) | -0.035 | |
| Kurtosis | 0.884 | 1.130 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1600+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.290 mm** |
| **STD** | **0.667 mm** |
| **Skewness** | **-1.613** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.11 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.16 |
| % gravel (>4 mm) | 0.23 |
| CaCO3 | 3.2 |

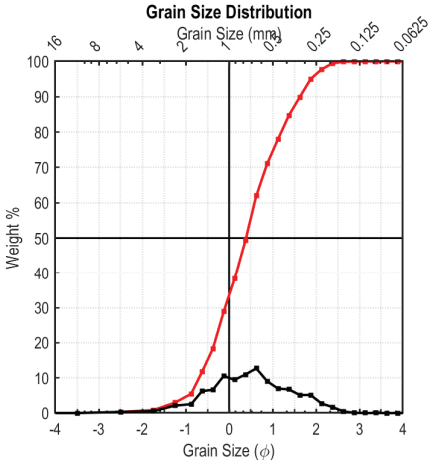
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.24 | 0.23 | 0.23 |
| -1.5 | -1.75 | 0.16 | 0.16 | 0.39 |
| -1 | -1.25 | 0.01 | 0.01 | 0.40 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.45 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.49 |
| -0.25 | -0.375 | 0.10 | 0.10 | 0.59 |
| 0 | -0.125 | 0.24 | 0.23 | 0.82 |
| 0.25 | 0.125 | 0.36 | 0.35 | 1.17 |
| 0.5 | 0.375 | 0.88 | 0.85 | 2.03 |
| 0.75 | 0.625 | 2.27 | 2.20 | 4.23 |
| 1 | 0.875 | 3.48 | 3.38 | 7.60 |
| 1.25 | 1.125 | 5.81 | 5.63 | 13.24 |
| 1.5 | 1.375 | 11.67 | 11.32 | 24.56 |
| 1.75 | 1.625 | 16.86 | 16.35 | 40.91 |
| 2 | 1.875 | 25.11 | 24.35 | 65.26 |
| 2.25 | 2.125 | 17.06 | 16.55 | 81.81 |
| 2.5 | 2.375 | 12.34 | 11.97 | 93.77 |
| 2.75 | 2.625 | 4.36 | 4.23 | 98.00 |
| 3 | 2.875 | 0.98 | 0.95 | 98.95 |
| 3.25 | 3.125 | 0.65 | 0.63 | 99.58 |
| 3.5 | 3.375 | 0.39 | 0.38 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.000 |
| **5** | 0.680 |
| **16** | 1.185 |
| **25** | 1.380 |
| **50** | 1.720 |
| **75** | 2.020 |
| **84** | 2.170 |
| **95** | 2.450 |
| **99** | 2.895 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.786 | 0.290 |
| Standard Deviation | 0.583 | 0.667 |
| Skewness | -1.613 | |
| Kurtosis | 11.805 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.677 | 1.692 |
| Standard Deviation | 0.492 | 0.514 |
| Skewness (1) | -0.086 | -0.131 |
| Skewness (2) | -0.315 | |
| Kurtosis | 0.797 | 1.133 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1600+00** |
| **Sample** | **Swash** |
| **Mean** | **0.691 mm** |
| **STD** | **0.545 mm** |
| **Skewness** | **0.004** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.58 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.62 |
| % gravel (>4 mm) | 0.32 |
| CaCO3 | 17.6 |

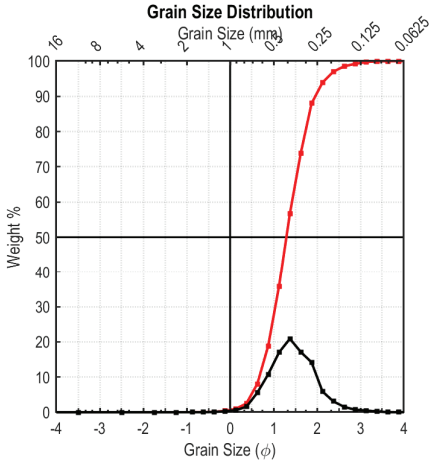
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.33 | 0.32 | 0.32 |
| -1.5 | -1.75 | 0.54 | 0.52 | 0.83 |
| -1 | -1.25 | 2.20 | 2.10 | 2.94 |
| -0.75 | -0.875 | 2.64 | 2.52 | 5.46 |
| -0.5 | -0.625 | 6.51 | 6.22 | 11.68 |
| -0.25 | -0.375 | 6.93 | 6.63 | 18.31 |
| 0 | -0.125 | 11.03 | 10.55 | 28.86 |
| 0.25 | 0.125 | 9.89 | 9.46 | 38.32 |
| 0.5 | 0.375 | 11.48 | 10.98 | 49.29 |
| 0.75 | 0.625 | 13.28 | 12.70 | 61.99 |
| 1 | 0.875 | 9.46 | 9.05 | 71.04 |
| 1.25 | 1.125 | 7.29 | 6.97 | 78.01 |
| 1.5 | 1.375 | 7.03 | 6.72 | 84.73 |
| 1.75 | 1.625 | 5.38 | 5.14 | 89.87 |
| 2 | 1.875 | 5.37 | 5.13 | 95.01 |
| 2.25 | 2.125 | 2.84 | 2.72 | 97.72 |
| 2.5 | 2.375 | 1.79 | 1.71 | 99.44 |
| 2.75 | 2.625 | 0.50 | 0.48 | 99.91 |
| 3 | 2.875 | 0.05 | 0.05 | 99.96 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.710 |
| **5** | -0.945 |
| **16** | -0.460 |
| **25** | -0.215 |
| **50** | 0.390 |
| **75** | 1.015 |
| **84** | 1.350 |
| **95** | 1.875 |
| **99** | 2.310 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.534 | 0.691 |
| Standard Deviation | 0.876 | 0.545 |
| Skewness | 0.004 | |
| Kurtosis | 2.881 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.445 | 0.427 |
| Standard Deviation | 0.905 | 0.880 |
| Skewness (1) | 0.061 | 0.057 |
| Skewness (2) | 0.083 | |
| Kurtosis | 0.558 | 0.940 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1610+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.368 mm** |
| **STD** | **0.695 mm** |
| **Skewness** | **0.302** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.57 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

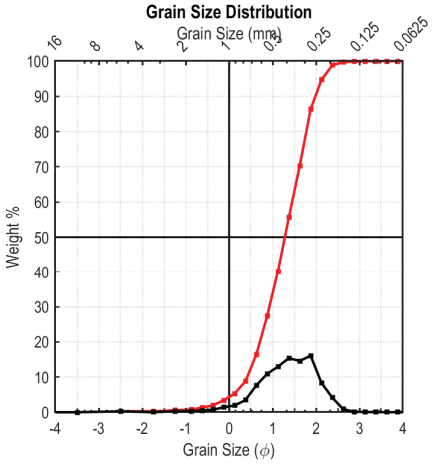
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.03 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.11 |
| 0 | -0.125 | 0.28 | 0.27 | 0.38 |
| 0.25 | 0.125 | 0.59 | 0.57 | 0.95 |
| 0.5 | 0.375 | 1.62 | 1.56 | 2.51 |
| 0.75 | 0.625 | 5.74 | 5.54 | 8.05 |
| 1 | 0.875 | 11.15 | 10.77 | 18.82 |
| 1.25 | 1.125 | 17.60 | 16.99 | 35.81 |
| 1.5 | 1.375 | 21.63 | 20.88 | 56.70 |
| 1.75 | 1.625 | 17.76 | 17.15 | 73.84 |
| 2 | 1.875 | 14.67 | 14.16 | 88.01 |
| 2.25 | 2.125 | 6.11 | 5.90 | 93.91 |
| 2.5 | 2.375 | 3.20 | 3.09 | 97.00 |
| 2.75 | 2.625 | 1.58 | 1.53 | 98.52 |
| 3 | 2.875 | 0.74 | 0.71 | 99.24 |
| 3.25 | 3.125 | 0.52 | 0.50 | 99.74 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.135 |
| **5** | 0.485 |
| **16** | 0.810 |
| **25** | 0.965 |
| **50** | 1.295 |
| **75** | 1.645 |
| **84** | 1.805 |
| **95** | 2.215 |
| **99** | 2.790 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.441 | 0.368 |
| Standard Deviation | 0.525 | 0.695 |
| Skewness | 0.302 | |
| Kurtosis | 3.878 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.308 | 1.303 |
| Standard Deviation | 0.498 | 0.511 |
| Skewness (1) | 0.025 | 0.044 |
| Skewness (2) | 0.111 | |
| Kurtosis | 0.739 | 1.043 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1610+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.394 mm** |
| **STD** | **0.629 mm** |
| **Skewness** | **-1.013** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.23 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.26 |
| CaCO3 | 7.2 |

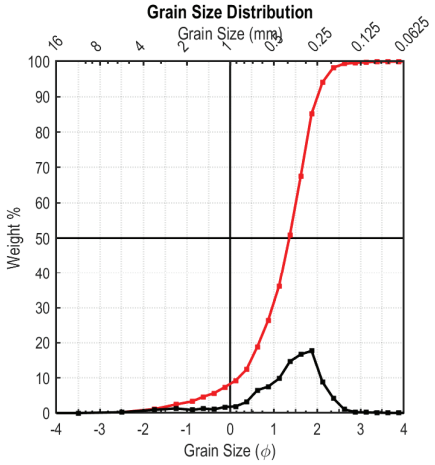
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.27 | 0.26 | 0.26 |
| -1.5 | -1.75 | 0.01 | 0.01 | 0.27 |
| -1 | -1.25 | 0.27 | 0.26 | 0.53 |
| -0.75 | -0.875 | 0.26 | 0.25 | 0.78 |
| -0.5 | -0.625 | 0.52 | 0.50 | 1.29 |
| -0.25 | -0.375 | 0.71 | 0.69 | 1.98 |
| 0 | -0.125 | 1.48 | 1.43 | 3.41 |
| 0.25 | 0.125 | 1.96 | 1.90 | 5.31 |
| 0.5 | 0.375 | 3.58 | 3.47 | 8.78 |
| 0.75 | 0.625 | 7.88 | 7.63 | 16.41 |
| 1 | 0.875 | 11.26 | 10.91 | 27.32 |
| 1.25 | 1.125 | 13.40 | 12.98 | 40.30 |
| 1.5 | 1.375 | 15.88 | 15.38 | 55.68 |
| 1.75 | 1.625 | 15.05 | 14.58 | 70.26 |
| 2 | 1.875 | 16.59 | 16.07 | 86.33 |
| 2.25 | 2.125 | 8.64 | 8.37 | 94.70 |
| 2.5 | 2.375 | 4.27 | 4.14 | 98.84 |
| 2.75 | 2.625 | 0.90 | 0.87 | 99.71 |
| 3 | 2.875 | 0.16 | 0.15 | 99.86 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.94 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.770 |
| **5** | 0.085 |
| **16** | 0.610 |
| **25** | 0.820 |
| **50** | 1.285 |
| **75** | 1.700 |
| **84** | 1.840 |
| **95** | 2.145 |
| **99** | 2.420 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.343 | 0.394 |
| Standard Deviation | 0.668 | 0.629 |
| Skewness | -1.013 | |
| Kurtosis | 6.050 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.225 | 1.245 |
| Standard Deviation | 0.615 | 0.620 |
| Skewness (1) | -0.098 | -0.131 |
| Skewness (2) | -0.276 | |
| Kurtosis | 0.675 | 0.959 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1610+00** |
| **Sample** | **Swash** |
| **Mean** | **0.403 mm** |
| **STD** | **0.564 mm** |
| **Skewness** | **-1.360** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.90 |
| % finer than 0.0625 mm (dry) | 0.04 |
| % granule (2-4 mm) | 2.20 |
| % gravel (>4 mm) | 0.23 |
| CaCO3 | 5.2 |

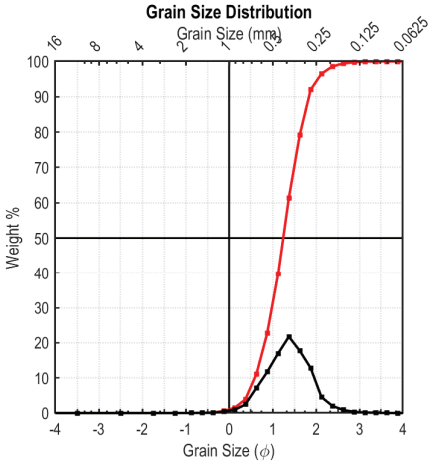
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.24 | 0.23 | 0.23 |
| -1.5 | -1.75 | 0.93 | 0.90 | 1.13 |
| -1 | -1.25 | 1.36 | 1.31 | 2.44 |
| -0.75 | -0.875 | 0.92 | 0.89 | 3.32 |
| -0.5 | -0.625 | 1.33 | 1.28 | 4.60 |
| -0.25 | -0.375 | 1.08 | 1.04 | 5.64 |
| 0 | -0.125 | 1.78 | 1.71 | 7.35 |
| 0.25 | 0.125 | 1.96 | 1.89 | 9.24 |
| 0.5 | 0.375 | 3.24 | 3.12 | 12.36 |
| 0.75 | 0.625 | 6.74 | 6.49 | 18.85 |
| 1 | 0.875 | 7.82 | 7.53 | 26.37 |
| 1.25 | 1.125 | 10.17 | 9.79 | 36.16 |
| 1.5 | 1.375 | 15.24 | 14.67 | 50.83 |
| 1.75 | 1.625 | 17.35 | 16.70 | 67.53 |
| 2 | 1.875 | 18.39 | 17.70 | 85.23 |
| 2.25 | 2.125 | 9.19 | 8.85 | 94.07 |
| 2.5 | 2.375 | 4.35 | 4.19 | 98.26 |
| 2.75 | 2.625 | 1.11 | 1.07 | 99.33 |
| 3 | 2.875 | 0.27 | 0.26 | 99.59 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.77 |
| 3.5 | 3.375 | 0.12 | 0.12 | 99.88 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.93 |
| 4 | 3.875 | 0.03 | 0.03 | 99.96 |
| >4.0 | 4.25 | 0.04 | 0.04 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.855 |
| **5** | -0.530 |
| **16** | 0.515 |
| **25** | 0.830 |
| **50** | 1.360 |
| **75** | 1.730 |
| **84** | 1.860 |
| **95** | 2.180 |
| **99** | 2.550 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.313 | 0.403 |
| Standard Deviation | 0.827 | 0.564 |
| Skewness | -1.360 | |
| Kurtosis | 5.812 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.188 | 1.245 |
| Standard Deviation | 0.672 | 0.747 |
| Skewness (1) | -0.257 | -0.326 |
| Skewness (2) | -0.796 | |
| Kurtosis | 1.015 | 1.234 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1620+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.390 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **0.006** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.70 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

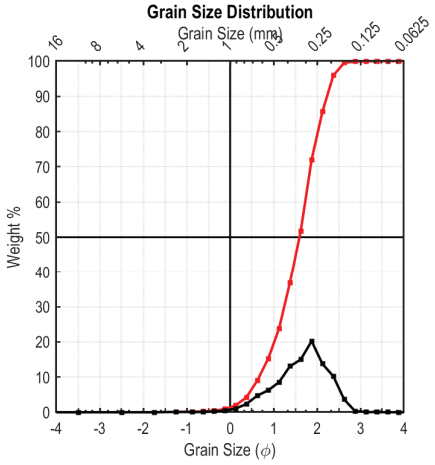
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.06 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.14 |
| 0 | -0.125 | 0.43 | 0.42 | 0.56 |
| 0.25 | 0.125 | 0.93 | 0.91 | 1.46 |
| 0.5 | 0.375 | 2.50 | 2.43 | 3.89 |
| 0.75 | 0.625 | 7.30 | 7.11 | 11.00 |
| 1 | 0.875 | 12.00 | 11.68 | 22.69 |
| 1.25 | 1.125 | 17.41 | 16.95 | 39.64 |
| 1.5 | 1.375 | 22.34 | 21.75 | 61.39 |
| 1.75 | 1.625 | 18.22 | 17.74 | 79.13 |
| 2 | 1.875 | 13.18 | 12.83 | 91.97 |
| 2.25 | 2.125 | 4.66 | 4.54 | 96.50 |
| 2.5 | 2.375 | 2.10 | 2.04 | 98.55 |
| 2.75 | 2.625 | 0.90 | 0.88 | 99.43 |
| 3 | 2.875 | 0.34 | 0.33 | 99.76 |
| 3.25 | 3.125 | 0.17 | 0.17 | 99.92 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.000 |
| **5** | 0.415 |
| **16** | 0.730 |
| **25** | 0.910 |
| **50** | 1.245 |
| **75** | 1.565 |
| **84** | 1.720 |
| **95** | 2.040 |
| **99** | 2.505 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.360 | 0.390 |
| Standard Deviation | 0.501 | 0.707 |
| Skewness | 0.006 | |
| Kurtosis | 3.603 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.225 | 1.232 |
| Standard Deviation | 0.495 | 0.494 |
| Skewness (1) | -0.040 | -0.031 |
| Skewness (2) | -0.035 | |
| Kurtosis | 0.641 | 1.017 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1620+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.323 mm** |
| **STD** | **0.660 mm** |
| **Skewness** | **-0.663** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.47 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.6 |

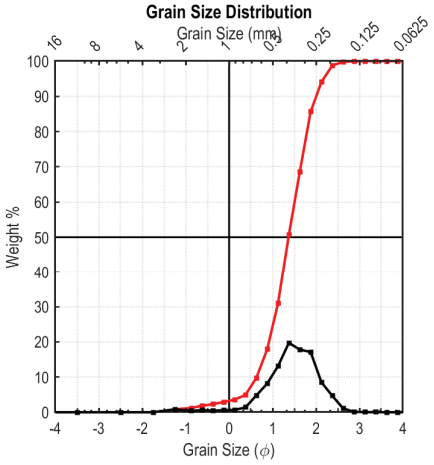
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.15 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.23 |
| -0.25 | -0.375 | 0.22 | 0.21 | 0.44 |
| 0 | -0.125 | 0.46 | 0.44 | 0.89 |
| 0.25 | 0.125 | 1.05 | 1.01 | 1.90 |
| 0.5 | 0.375 | 2.45 | 2.37 | 4.27 |
| 0.75 | 0.625 | 4.88 | 4.72 | 8.99 |
| 1 | 0.875 | 6.43 | 6.21 | 15.20 |
| 1.25 | 1.125 | 8.83 | 8.53 | 23.74 |
| 1.5 | 1.375 | 13.50 | 13.05 | 36.78 |
| 1.75 | 1.625 | 15.49 | 14.97 | 51.75 |
| 2 | 1.875 | 20.92 | 20.22 | 71.97 |
| 2.25 | 2.125 | 14.20 | 13.72 | 85.70 |
| 2.5 | 2.375 | 10.58 | 10.23 | 95.92 |
| 2.75 | 2.625 | 3.75 | 3.62 | 99.55 |
| 3 | 2.875 | 0.34 | 0.33 | 99.87 |
| 3.25 | 3.125 | 0.08 | 0.08 | 99.95 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.100 |
| **5** | 0.415 |
| **16** | 0.900 |
| **25** | 1.150 |
| **50** | 1.595 |
| **75** | 1.930 |
| **84** | 2.095 |
| **95** | 2.350 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.631 | 0.323 |
| Standard Deviation | 0.599 | 0.660 |
| Skewness | -0.663 | |
| Kurtosis | 3.643 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.497 | 1.530 |
| Standard Deviation | 0.597 | 0.592 |
| Skewness (1) | -0.163 | -0.191 |
| Skewness (2) | -0.356 | |
| Kurtosis | 0.619 | 1.017 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1620+00** |
| **Sample** | **Swash** |
| **Mean** | **0.369 mm** |
| **STD** | **0.654 mm** |
| **Skewness** | **-1.256** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.26 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.84 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.9 |

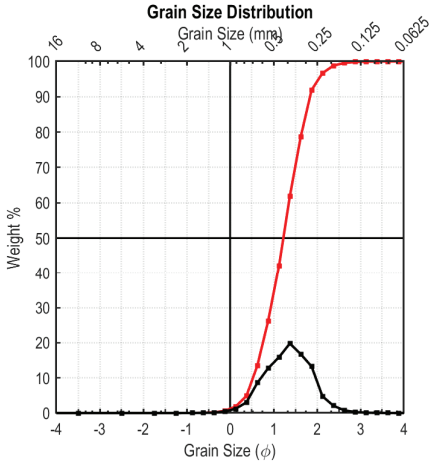
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.87 | 0.84 | 0.84 |
| -0.75 | -0.875 | 0.36 | 0.35 | 1.19 |
| -0.5 | -0.625 | 0.69 | 0.67 | 1.86 |
| -0.25 | -0.375 | 0.46 | 0.45 | 2.30 |
| 0 | -0.125 | 0.63 | 0.61 | 2.91 |
| 0.25 | 0.125 | 0.67 | 0.65 | 3.56 |
| 0.5 | 0.375 | 1.42 | 1.38 | 4.94 |
| 0.75 | 0.625 | 4.94 | 4.78 | 9.72 |
| 1 | 0.875 | 8.39 | 8.13 | 17.85 |
| 1.25 | 1.125 | 13.53 | 13.10 | 30.95 |
| 1.5 | 1.375 | 20.36 | 19.72 | 50.67 |
| 1.75 | 1.625 | 18.39 | 17.81 | 68.48 |
| 2 | 1.875 | 17.68 | 17.12 | 85.60 |
| 2.25 | 2.125 | 8.78 | 8.50 | 94.10 |
| 2.5 | 2.375 | 4.80 | 4.65 | 98.75 |
| 2.75 | 2.625 | 1.11 | 1.07 | 99.83 |
| 3 | 2.875 | 0.13 | 0.13 | 99.95 |
| 3.25 | 3.125 | 0.04 | 0.04 | 99.99 |
| 3.5 | 3.375 | 0.01 | 0.01 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.080 |
| **5** | 0.380 |
| **16** | 0.820 |
| **25** | 1.010 |
| **50** | 1.365 |
| **75** | 1.720 |
| **84** | 1.850 |
| **95** | 2.175 |
| **99** | 2.435 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.440 | 0.369 |
| Standard Deviation | 0.612 | 0.654 |
| Skewness | -1.256 | |
| Kurtosis | 6.476 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.335 | 1.345 |
| Standard Deviation | 0.515 | 0.529 |
| Skewness (1) | -0.058 | -0.078 |
| Skewness (2) | -0.170 | |
| Kurtosis | 0.743 | 1.036 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1630+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.397 mm** |
| **STD** | **0.698 mm** |
| **Skewness** | **-0.045** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.42 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.9 |

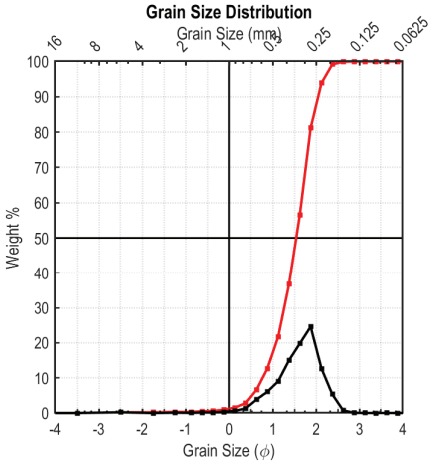
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.06 | 0.06 | 0.07 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.15 |
| 0 | -0.125 | 0.49 | 0.47 | 0.63 |
| 0.25 | 0.125 | 1.24 | 1.20 | 1.83 |
| 0.5 | 0.375 | 3.15 | 3.05 | 4.87 |
| 0.75 | 0.625 | 8.87 | 8.58 | 13.45 |
| 1 | 0.875 | 13.19 | 12.75 | 26.20 |
| 1.25 | 1.125 | 16.44 | 15.90 | 42.10 |
| 1.5 | 1.375 | 20.48 | 19.80 | 61.90 |
| 1.75 | 1.625 | 17.34 | 16.77 | 78.67 |
| 2 | 1.875 | 13.70 | 13.25 | 91.92 |
| 2.25 | 2.125 | 4.93 | 4.77 | 96.68 |
| 2.5 | 2.375 | 2.17 | 2.10 | 98.78 |
| 2.75 | 2.625 | 0.80 | 0.77 | 99.56 |
| 3 | 2.875 | 0.30 | 0.29 | 99.85 |
| 3.25 | 3.125 | 0.11 | 0.11 | 99.95 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.050 |
| **5** | 0.380 |
| **16** | 0.675 |
| **25** | 0.850 |
| **50** | 1.225 |
| **75** | 1.570 |
| **84** | 1.725 |
| **95** | 2.035 |
| **99** | 2.445 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.333 | 0.397 |
| Standard Deviation | 0.519 | 0.698 |
| Skewness | -0.045 | |
| Kurtosis | 3.217 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.200 | 1.208 |
| Standard Deviation | 0.525 | 0.513 |
| Skewness (1) | -0.048 | -0.034 |
| Skewness (2) | -0.033 | |
| Kurtosis | 0.576 | 0.942 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1630+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.334 mm** |
| **STD** | **0.689 mm** |
| **Skewness** | **-1.603** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.56 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.21 |
| CaCO3 | 4.5 |

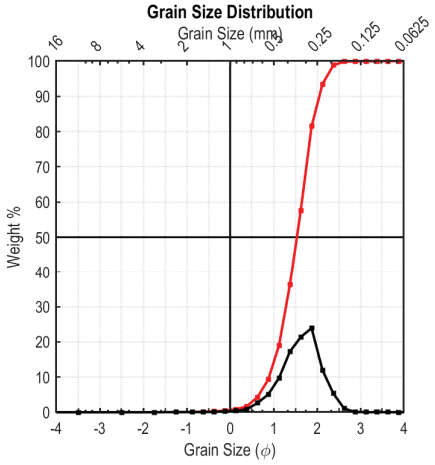
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.22 | 0.21 | 0.21 |
| -1.5 | -1.75 | -0.01 | -0.01 | 0.20 |
| -1 | -1.25 | 0.10 | 0.10 | 0.30 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.33 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.47 |
| -0.25 | -0.375 | 0.13 | 0.13 | 0.60 |
| 0 | -0.125 | 0.34 | 0.33 | 0.93 |
| 0.25 | 0.125 | 0.58 | 0.56 | 1.49 |
| 0.5 | 0.375 | 1.34 | 1.29 | 2.78 |
| 0.75 | 0.625 | 3.98 | 3.84 | 6.62 |
| 1 | 0.875 | 6.25 | 6.04 | 12.66 |
| 1.25 | 1.125 | 9.38 | 9.06 | 21.72 |
| 1.5 | 1.375 | 15.56 | 15.03 | 36.74 |
| 1.75 | 1.625 | 20.51 | 19.80 | 56.55 |
| 2 | 1.875 | 25.49 | 24.61 | 81.16 |
| 2.25 | 2.125 | 13.14 | 12.69 | 93.85 |
| 2.5 | 2.375 | 5.51 | 5.32 | 99.17 |
| 2.75 | 2.625 | 0.77 | 0.74 | 99.91 |
| 3 | 2.875 | 0.06 | 0.06 | 99.97 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.98 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.090 |
| **5** | 0.520 |
| **16** | 0.965 |
| **25** | 1.180 |
| **50** | 1.540 |
| **75** | 1.810 |
| **84** | 1.930 |
| **95** | 2.180 |
| **99** | 2.365 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.584 | 0.334 |
| Standard Deviation | 0.538 | 0.689 |
| Skewness | -1.603 | |
| Kurtosis | 10.611 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.448 | 1.478 |
| Standard Deviation | 0.483 | 0.493 |
| Skewness (1) | -0.192 | -0.210 |
| Skewness (2) | -0.394 | |
| Kurtosis | 0.720 | 1.080 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1630+00** |
| **Sample** | **Swash** |
| **Mean** | **0.326 mm** |
| **STD** | **0.723 mm** |
| **Skewness** | **-0.702** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.84 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.0 |

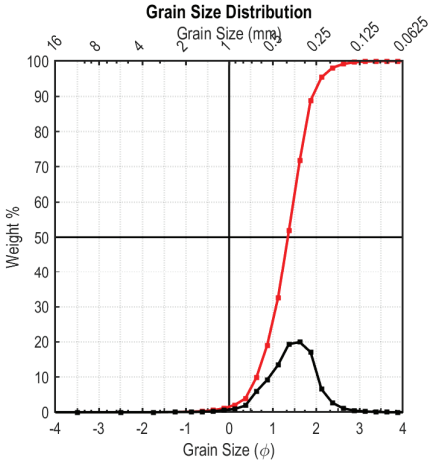
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.09 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.15 |
| -0.25 | -0.375 | 0.10 | 0.10 | 0.25 |
| 0 | -0.125 | 0.23 | 0.22 | 0.47 |
| 0.25 | 0.125 | 0.36 | 0.35 | 0.82 |
| 0.5 | 0.375 | 0.85 | 0.82 | 1.64 |
| 0.75 | 0.625 | 2.68 | 2.58 | 4.22 |
| 1 | 0.875 | 5.24 | 5.05 | 9.26 |
| 1.25 | 1.125 | 10.11 | 9.74 | 19.00 |
| 1.5 | 1.375 | 17.88 | 17.22 | 36.22 |
| 1.75 | 1.625 | 22.18 | 21.36 | 57.58 |
| 2 | 1.875 | 24.82 | 23.90 | 81.48 |
| 2.25 | 2.125 | 12.45 | 11.99 | 93.47 |
| 2.5 | 2.375 | 5.56 | 5.35 | 98.83 |
| 2.75 | 2.625 | 1.08 | 1.04 | 99.87 |
| 3 | 2.875 | 0.09 | 0.09 | 99.95 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.180 |
| **5** | 0.665 |
| **16** | 1.050 |
| **25** | 1.210 |
| **50** | 1.535 |
| **75** | 1.805 |
| **84** | 1.930 |
| **95** | 2.195 |
| **99** | 2.415 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.617 | 0.326 |
| Standard Deviation | 0.468 | 0.723 |
| Skewness | -0.702 | |
| Kurtosis | 4.822 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.490 | 1.505 |
| Standard Deviation | 0.440 | 0.452 |
| Skewness (1) | -0.102 | -0.120 |
| Skewness (2) | -0.239 | |
| Kurtosis | 0.739 | 1.054 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1640+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.369 mm** |
| **STD** | **0.690 mm** |
| **Skewness** | **-0.380** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.20 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.5 |

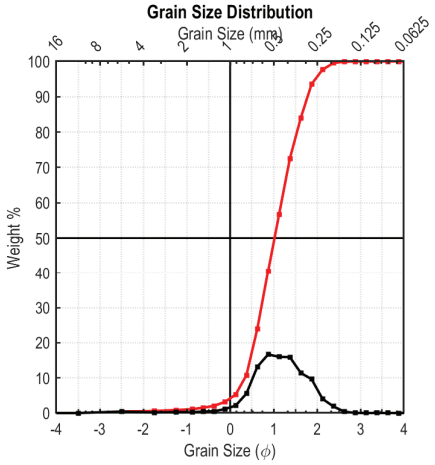
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.14 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.29 |
| -0.25 | -0.375 | 0.26 | 0.25 | 0.54 |
| 0 | -0.125 | 0.60 | 0.58 | 1.11 |
| 0.25 | 0.125 | 0.96 | 0.92 | 2.03 |
| 0.5 | 0.375 | 1.97 | 1.89 | 3.93 |
| 0.75 | 0.625 | 6.14 | 5.89 | 9.82 |
| 1 | 0.875 | 9.58 | 9.19 | 19.01 |
| 1.25 | 1.125 | 13.99 | 13.43 | 32.44 |
| 1.5 | 1.375 | 20.19 | 19.38 | 51.81 |
| 1.75 | 1.625 | 20.76 | 19.92 | 71.74 |
| 2 | 1.875 | 17.81 | 17.09 | 88.83 |
| 2.25 | 2.125 | 6.83 | 6.55 | 95.38 |
| 2.5 | 2.375 | 2.82 | 2.71 | 98.09 |
| 2.75 | 2.625 | 1.15 | 1.10 | 99.19 |
| 3 | 2.875 | 0.50 | 0.48 | 99.67 |
| 3.25 | 3.125 | 0.23 | 0.22 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | -0.01 | -0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.175 |
| **5** | 0.420 |
| **16** | 0.795 |
| **25** | 0.985 |
| **50** | 1.350 |
| **75** | 1.675 |
| **84** | 1.805 |
| **95** | 2.110 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.440 | 0.369 |
| Standard Deviation | 0.536 | 0.690 |
| Skewness | -0.380 | |
| Kurtosis | 4.291 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.300 | 1.317 |
| Standard Deviation | 0.505 | 0.509 |
| Skewness (1) | -0.099 | -0.100 |
| Skewness (2) | -0.168 | |
| Kurtosis | 0.673 | 1.004 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1640+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.455 mm** |
| **STD** | **0.643 mm** |
| **Skewness** | **-1.073** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.87 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.41 |
| % gravel (>4 mm) | 0.43 |
| CaCO3 | 10.3 |

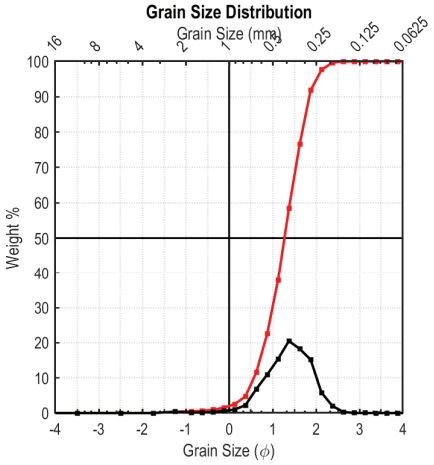
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.45 | 0.43 | 0.43 |
| -1.5 | -1.75 | 0.15 | 0.14 | 0.58 |
| -1 | -1.25 | 0.28 | 0.27 | 0.85 |
| -0.75 | -0.875 | 0.25 | 0.24 | 1.09 |
| -0.5 | -0.625 | 0.45 | 0.43 | 1.52 |
| -0.25 | -0.375 | 0.53 | 0.51 | 2.03 |
| 0 | -0.125 | 1.15 | 1.11 | 3.14 |
| 0.25 | 0.125 | 2.18 | 2.10 | 5.24 |
| 0.5 | 0.375 | 5.76 | 5.55 | 10.78 |
| 0.75 | 0.625 | 13.67 | 13.16 | 23.94 |
| 1 | 0.875 | 17.33 | 16.68 | 40.63 |
| 1.25 | 1.125 | 16.61 | 15.99 | 56.62 |
| 1.5 | 1.375 | 16.53 | 15.91 | 72.53 |
| 1.75 | 1.625 | 11.87 | 11.43 | 83.96 |
| 2 | 1.875 | 10.00 | 9.63 | 93.59 |
| 2.25 | 2.125 | 4.21 | 4.05 | 97.64 |
| 2.5 | 2.375 | 1.96 | 1.89 | 99.53 |
| 2.75 | 2.625 | 0.41 | 0.39 | 99.92 |
| 3 | 2.875 | 0.04 | 0.04 | 99.96 |
| 3.25 | 3.125 | 0.01 | 0.01 | 99.97 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.010 |
| **5** | 0.095 |
| **16** | 0.475 |
| **25** | 0.640 |
| **50** | 1.020 |
| **75** | 1.430 |
| **84** | 1.625 |
| **95** | 1.960 |
| **99** | 2.305 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.136 | 0.455 |
| Standard Deviation | 0.637 | 0.643 |
| Skewness | -1.073 | |
| Kurtosis | 7.807 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.050 | 1.040 |
| Standard Deviation | 0.575 | 0.570 |
| Skewness (1) | 0.052 | 0.030 |
| Skewness (2) | 0.013 | |
| Kurtosis | 0.622 | 0.968 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1640+00** |
| **Sample** | **Swash** |
| **Mean** | **0.390 mm** |
| **STD** | **0.693 mm** |
| **Skewness** | **-0.848** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.54 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.37 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.6 |

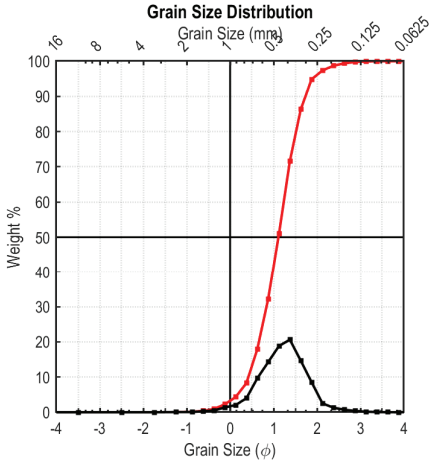
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.39 | 0.37 | 0.37 |
| -0.75 | -0.875 | 0.11 | 0.11 | 0.48 |
| -0.5 | -0.625 | 0.17 | 0.16 | 0.64 |
| -0.25 | -0.375 | 0.25 | 0.24 | 0.88 |
| 0 | -0.125 | 0.66 | 0.63 | 1.51 |
| 0.25 | 0.125 | 1.04 | 0.99 | 2.51 |
| 0.5 | 0.375 | 2.32 | 2.22 | 4.73 |
| 0.75 | 0.625 | 7.15 | 6.84 | 11.56 |
| 1 | 0.875 | 11.43 | 10.93 | 22.50 |
| 1.25 | 1.125 | 16.06 | 15.36 | 37.86 |
| 1.5 | 1.375 | 21.43 | 20.50 | 58.36 |
| 1.75 | 1.625 | 19.08 | 18.25 | 76.61 |
| 2 | 1.875 | 15.88 | 15.19 | 91.80 |
| 2.25 | 2.125 | 6.09 | 5.83 | 97.63 |
| 2.5 | 2.375 | 2.13 | 2.04 | 99.67 |
| 2.75 | 2.625 | 0.33 | 0.32 | 99.98 |
| 3 | 2.875 | 0.02 | 0.02 | 100.00 |
| 3.25 | 3.125 | 0.01 | 0.01 | 100.01 |
| 3.5 | 3.375 | 0.00 | 0.00 | 100.01 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.01 |
| 4 | 3.875 | -0.01 | -0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.325 |
| **5** | 0.385 |
| **16** | 0.725 |
| **25** | 0.915 |
| **50** | 1.275 |
| **75** | 1.605 |
| **84** | 1.745 |
| **95** | 2.015 |
| **99** | 2.295 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.357 | 0.390 |
| Standard Deviation | 0.529 | 0.693 |
| Skewness | -0.848 | |
| Kurtosis | 5.188 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.235 | 1.248 |
| Standard Deviation | 0.510 | 0.502 |
| Skewness (1) | -0.078 | -0.085 |
| Skewness (2) | -0.147 | |
| Kurtosis | 0.598 | 0.968 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1650+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.432 mm** |
| **STD** | **0.685 mm** |
| **Skewness** | **-0.130** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.16 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.1 |

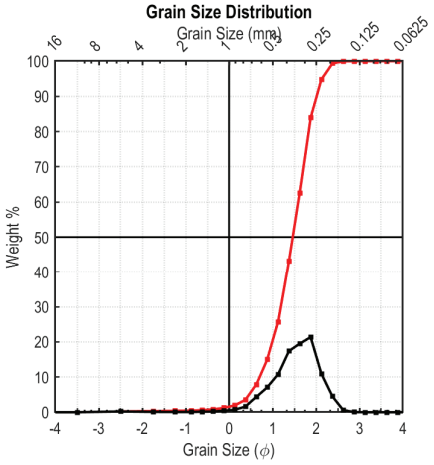
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.12 |
| -0.5 | -0.625 | 0.29 | 0.28 | 0.40 |
| -0.25 | -0.375 | 0.51 | 0.49 | 0.89 |
| 0 | -0.125 | 1.41 | 1.37 | 2.26 |
| 0.25 | 0.125 | 2.10 | 2.04 | 4.29 |
| 0.5 | 0.375 | 4.12 | 3.99 | 8.29 |
| 0.75 | 0.625 | 9.95 | 9.65 | 17.93 |
| 1 | 0.875 | 14.69 | 14.24 | 32.17 |
| 1.25 | 1.125 | 19.44 | 18.84 | 51.02 |
| 1.5 | 1.375 | 21.27 | 20.62 | 71.64 |
| 1.75 | 1.625 | 15.11 | 14.65 | 86.28 |
| 2 | 1.875 | 8.83 | 8.56 | 94.84 |
| 2.25 | 2.125 | 2.59 | 2.51 | 97.35 |
| 2.5 | 2.375 | 1.36 | 1.32 | 98.67 |
| 2.75 | 2.625 | 0.73 | 0.71 | 99.38 |
| 3 | 2.875 | 0.39 | 0.38 | 99.76 |
| 3.25 | 3.125 | 0.16 | 0.16 | 99.91 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.355 |
| **5** | 0.170 |
| **16** | 0.575 |
| **25** | 0.750 |
| **50** | 1.110 |
| **75** | 1.430 |
| **84** | 1.585 |
| **95** | 1.890 |
| **99** | 2.490 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.212 | 0.432 |
| Standard Deviation | 0.545 | 0.685 |
| Skewness | -0.130 | |
| Kurtosis | 4.208 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.080 | 1.090 |
| Standard Deviation | 0.505 | 0.513 |
| Skewness (1) | -0.059 | -0.076 |
| Skewness (2) | -0.158 | |
| Kurtosis | 0.703 | 1.037 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1650+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.349 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **-1.592** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 101.98 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.23 |
| CaCO3 | 5.9 |

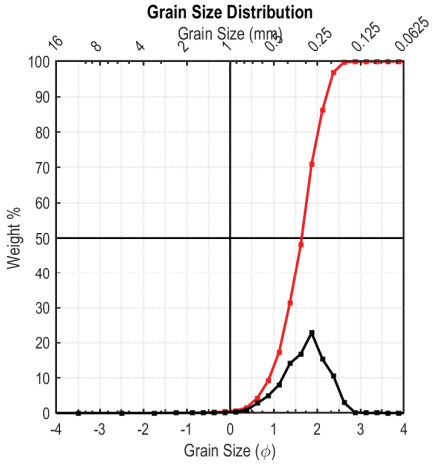
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.23 | 0.23 | 0.23 |
| -1.5 | -1.75 | 0.10 | 0.10 | 0.32 |
| -1 | -1.25 | 0.07 | 0.07 | 0.39 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.45 |
| -0.5 | -0.625 | 0.16 | 0.16 | 0.61 |
| -0.25 | -0.375 | 0.19 | 0.19 | 0.79 |
| 0 | -0.125 | 0.44 | 0.43 | 1.23 |
| 0.25 | 0.125 | 0.71 | 0.70 | 1.92 |
| 0.5 | 0.375 | 1.63 | 1.60 | 3.52 |
| 0.75 | 0.625 | 4.44 | 4.35 | 7.87 |
| 1 | 0.875 | 7.19 | 7.05 | 14.92 |
| 1.25 | 1.125 | 10.96 | 10.75 | 25.67 |
| 1.5 | 1.375 | 17.73 | 17.39 | 43.06 |
| 1.75 | 1.625 | 19.88 | 19.49 | 62.55 |
| 2 | 1.875 | 21.79 | 21.37 | 83.92 |
| 2.25 | 2.125 | 11.12 | 10.90 | 94.82 |
| 2.5 | 2.375 | 4.60 | 4.51 | 99.33 |
| 2.75 | 2.625 | 0.63 | 0.62 | 99.95 |
| 3 | 2.875 | 0.04 | 0.04 | 99.99 |
| 3.25 | 3.125 | 0.00 | 0.00 | 99.99 |
| 3.5 | 3.375 | 0.00 | 0.00 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.255 |
| **5** | 0.460 |
| **16** | 0.900 |
| **25** | 1.110 |
| **50** | 1.465 |
| **75** | 1.770 |
| **84** | 1.875 |
| **95** | 2.135 |
| **99** | 2.355 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.519 | 0.349 |
| Standard Deviation | 0.558 | 0.679 |
| Skewness | -1.592 | |
| Kurtosis | 10.355 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.387 | 1.413 |
| Standard Deviation | 0.488 | 0.498 |
| Skewness (1) | -0.159 | -0.179 |
| Skewness (2) | -0.344 | |
| Kurtosis | 0.718 | 1.040 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1650+00** |
| **Sample** | **Swash** |
| **Mean** | **0.306 mm** |
| **STD** | **0.703 mm** |
| **Skewness** | **-0.635** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.23 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

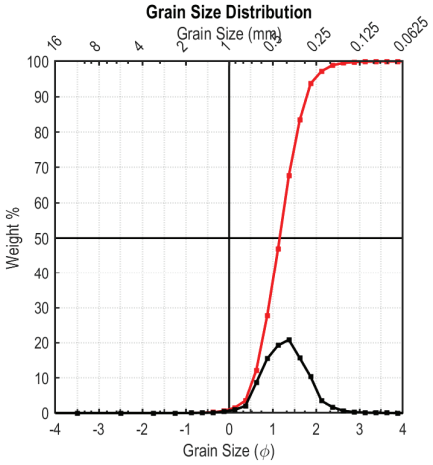
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.07 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.12 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.20 |
| 0 | -0.125 | 0.17 | 0.16 | 0.36 |
| 0.25 | 0.125 | 0.31 | 0.30 | 0.66 |
| 0.5 | 0.375 | 0.89 | 0.85 | 1.52 |
| 0.75 | 0.625 | 2.87 | 2.75 | 4.27 |
| 1 | 0.875 | 5.11 | 4.90 | 9.17 |
| 1.25 | 1.125 | 8.39 | 8.05 | 17.22 |
| 1.5 | 1.375 | 14.68 | 14.08 | 31.31 |
| 1.75 | 1.625 | 17.50 | 16.79 | 48.10 |
| 2 | 1.875 | 23.78 | 22.81 | 70.91 |
| 2.25 | 2.125 | 16.00 | 15.35 | 86.26 |
| 2.5 | 2.375 | 11.06 | 10.61 | 96.87 |
| 2.75 | 2.625 | 3.06 | 2.94 | 99.81 |
| 3 | 2.875 | 0.16 | 0.15 | 99.96 |
| 3.25 | 3.125 | 0.02 | 0.02 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | -0.01 | -0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.225 |
| **5** | 0.660 |
| **16** | 1.085 |
| **25** | 1.265 |
| **50** | 1.645 |
| **75** | 1.940 |
| **84** | 2.090 |
| **95** | 2.330 |
| **99** | 2.555 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.708 | 0.306 |
| Standard Deviation | 0.509 | 0.703 |
| Skewness | -0.635 | |
| Kurtosis | 3.977 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.587 | 1.607 |
| Standard Deviation | 0.502 | 0.504 |
| Skewness (1) | -0.114 | -0.147 |
| Skewness (2) | -0.299 | |
| Kurtosis | 0.662 | 1.014 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1660+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.408 mm** |
| **STD** | **0.713 mm** |
| **Skewness** | **0.152** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.83 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.0 |

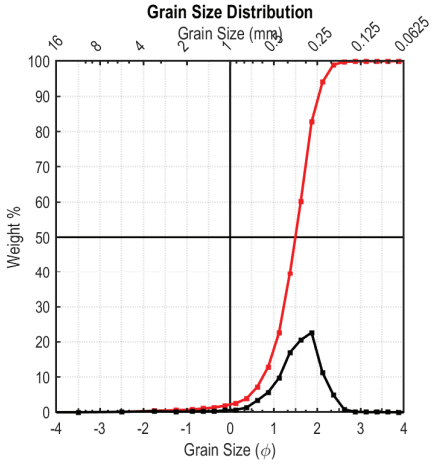
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.09 |
| -0.25 | -0.375 | 0.11 | 0.11 | 0.19 |
| 0 | -0.125 | 0.43 | 0.42 | 0.61 |
| 0.25 | 0.125 | 0.90 | 0.88 | 1.49 |
| 0.5 | 0.375 | 2.10 | 2.04 | 3.53 |
| 0.75 | 0.625 | 8.89 | 8.65 | 12.18 |
| 1 | 0.875 | 15.89 | 15.45 | 27.63 |
| 1.25 | 1.125 | 19.79 | 19.25 | 46.87 |
| 1.5 | 1.375 | 21.44 | 20.85 | 67.72 |
| 1.75 | 1.625 | 16.10 | 15.66 | 83.38 |
| 2 | 1.875 | 10.63 | 10.34 | 93.72 |
| 2.25 | 2.125 | 3.59 | 3.49 | 97.21 |
| 2.5 | 2.375 | 1.74 | 1.69 | 98.90 |
| 2.75 | 2.625 | 0.66 | 0.64 | 99.54 |
| 3 | 2.875 | 0.28 | 0.27 | 99.82 |
| 3.25 | 3.125 | 0.12 | 0.12 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.015 |
| **5** | 0.420 |
| **16** | 0.685 |
| **25** | 0.830 |
| **50** | 1.160 |
| **75** | 1.490 |
| **84** | 1.640 |
| **95** | 1.965 |
| **99** | 2.415 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.293 | 0.408 |
| Standard Deviation | 0.488 | 0.713 |
| Skewness | 0.152 | |
| Kurtosis | 3.791 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.163 | 1.162 |
| Standard Deviation | 0.478 | 0.473 |
| Skewness (1) | 0.005 | 0.024 |
| Skewness (2) | 0.068 | |
| Kurtosis | 0.618 | 0.959 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1660+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.342 mm** |
| **STD** | **0.670 mm** |
| **Skewness** | **-1.723** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.77 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.46 |
| % gravel (>4 mm) | 0.11 |
| CaCO3 | 4.8 |

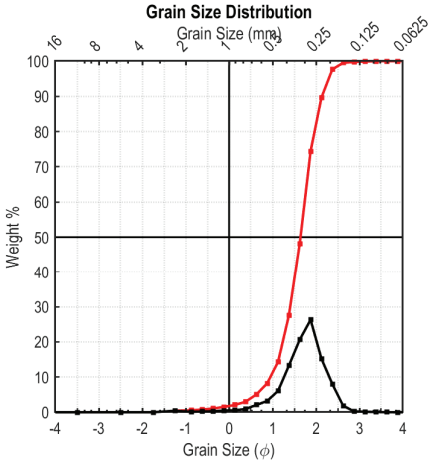
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.11 | 0.11 | 0.11 |
| -1.5 | -1.75 | 0.31 | 0.30 | 0.40 |
| -1 | -1.25 | 0.17 | 0.16 | 0.57 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.76 |
| -0.5 | -0.625 | 0.31 | 0.30 | 1.06 |
| -0.25 | -0.375 | 0.29 | 0.28 | 1.34 |
| 0 | -0.125 | 0.54 | 0.52 | 1.86 |
| 0.25 | 0.125 | 0.70 | 0.67 | 2.53 |
| 0.5 | 0.375 | 1.37 | 1.32 | 3.85 |
| 0.75 | 0.625 | 3.47 | 3.34 | 7.20 |
| 1 | 0.875 | 5.87 | 5.66 | 12.86 |
| 1.25 | 1.125 | 10.12 | 9.75 | 22.61 |
| 1.5 | 1.375 | 17.61 | 16.97 | 39.58 |
| 1.75 | 1.625 | 21.30 | 20.53 | 60.10 |
| 2 | 1.875 | 23.48 | 22.63 | 82.73 |
| 2.25 | 2.125 | 11.72 | 11.29 | 94.03 |
| 2.5 | 2.375 | 5.13 | 4.94 | 98.97 |
| 2.75 | 2.625 | 0.86 | 0.83 | 99.80 |
| 3 | 2.875 | 0.12 | 0.12 | 99.91 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.96 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.675 |
| **5** | 0.460 |
| **16** | 0.955 |
| **25** | 1.160 |
| **50** | 1.500 |
| **75** | 1.790 |
| **84** | 1.905 |
| **95** | 2.175 |
| **99** | 2.385 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.547 | 0.342 |
| Standard Deviation | 0.577 | 0.670 |
| Skewness | -1.723 | |
| Kurtosis | 9.983 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.430 | 1.453 |
| Standard Deviation | 0.475 | 0.497 |
| Skewness (1) | -0.147 | -0.180 |
| Skewness (2) | -0.384 | |
| Kurtosis | 0.805 | 1.116 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1660+00** |
| **Sample** | **Swash** |
| **Mean** | **0.310 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-1.515** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.88 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.43 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.8 |

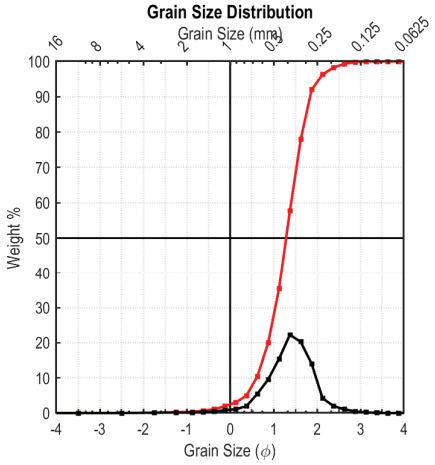
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.44 | 0.43 | 0.43 |
| -0.75 | -0.875 | 0.12 | 0.12 | 0.54 |
| -0.5 | -0.625 | 0.23 | 0.22 | 0.77 |
| -0.25 | -0.375 | 0.28 | 0.27 | 1.04 |
| 0 | -0.125 | 0.48 | 0.47 | 1.51 |
| 0.25 | 0.125 | 0.57 | 0.55 | 2.06 |
| 0.5 | 0.375 | 0.93 | 0.90 | 2.96 |
| 0.75 | 0.625 | 2.12 | 2.06 | 5.03 |
| 1 | 0.875 | 3.29 | 3.20 | 8.22 |
| 1.25 | 1.125 | 6.23 | 6.06 | 14.28 |
| 1.5 | 1.375 | 13.62 | 13.24 | 27.52 |
| 1.75 | 1.625 | 21.22 | 20.63 | 48.14 |
| 2 | 1.875 | 27.05 | 26.29 | 74.44 |
| 2.25 | 2.125 | 15.65 | 15.21 | 89.65 |
| 2.5 | 2.375 | 8.25 | 8.02 | 97.67 |
| 2.75 | 2.625 | 1.90 | 1.85 | 99.51 |
| 3 | 2.875 | 0.26 | 0.25 | 99.77 |
| 3.25 | 3.125 | 0.15 | 0.15 | 99.91 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.410 |
| **5** | 0.620 |
| **16** | 1.160 |
| **25** | 1.325 |
| **50** | 1.645 |
| **75** | 1.885 |
| **84** | 2.030 |
| **95** | 2.290 |
| **99** | 2.555 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.691 | 0.310 |
| Standard Deviation | 0.540 | 0.688 |
| Skewness | -1.515 | |
| Kurtosis | 8.261 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.595 | 1.612 |
| Standard Deviation | 0.435 | 0.471 |
| Skewness (1) | -0.115 | -0.171 |
| Skewness (2) | -0.437 | |
| Kurtosis | 0.920 | 1.222 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1670+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.385 mm** |
| **STD** | **0.686 mm** |
| **Skewness** | **-0.719** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.08 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.24 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.6 |

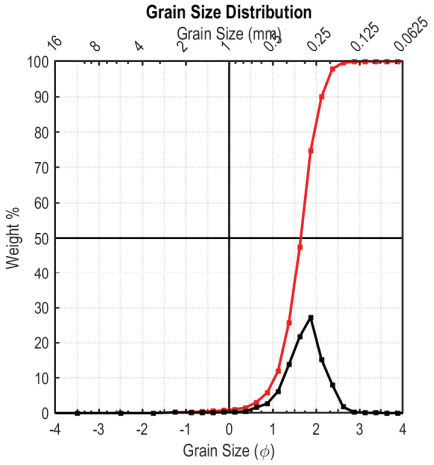
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.10 | 0.10 | 0.10 |
| -1 | -1.25 | 0.15 | 0.15 | 0.24 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.33 |
| -0.5 | -0.625 | 0.35 | 0.34 | 0.67 |
| -0.25 | -0.375 | 0.43 | 0.42 | 1.09 |
| 0 | -0.125 | 0.85 | 0.82 | 1.91 |
| 0.25 | 0.125 | 1.11 | 1.08 | 2.99 |
| 0.5 | 0.375 | 2.01 | 1.95 | 4.94 |
| 0.75 | 0.625 | 5.63 | 5.46 | 10.40 |
| 1 | 0.875 | 9.86 | 9.57 | 19.97 |
| 1.25 | 1.125 | 15.90 | 15.42 | 35.39 |
| 1.5 | 1.375 | 22.97 | 22.28 | 57.67 |
| 1.75 | 1.625 | 20.87 | 20.25 | 77.92 |
| 2 | 1.875 | 14.49 | 14.06 | 91.98 |
| 2.25 | 2.125 | 4.40 | 4.27 | 96.25 |
| 2.5 | 2.375 | 2.06 | 2.00 | 98.24 |
| 2.75 | 2.625 | 1.11 | 1.08 | 99.32 |
| 3 | 2.875 | 0.49 | 0.48 | 99.80 |
| 3.25 | 3.125 | 0.18 | 0.17 | 99.97 |
| 3.5 | 3.375 | 0.04 | 0.04 | 100.01 |
| 3.75 | 3.625 | -0.01 | -0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.425 |
| **5** | 0.380 |
| **16** | 0.770 |
| **25** | 0.955 |
| **50** | 1.290 |
| **75** | 1.590 |
| **84** | 1.735 |
| **95** | 2.055 |
| **99** | 2.555 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.377 | 0.385 |
| Standard Deviation | 0.543 | 0.686 |
| Skewness | -0.719 | |
| Kurtosis | 5.775 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.252 | 1.265 |
| Standard Deviation | 0.482 | 0.495 |
| Skewness (1) | -0.078 | -0.082 |
| Skewness (2) | -0.150 | |
| Kurtosis | 0.736 | 1.081 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1670+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.303 mm** |
| **STD** | **0.721 mm** |
| **Skewness** | **-1.267** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.12 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

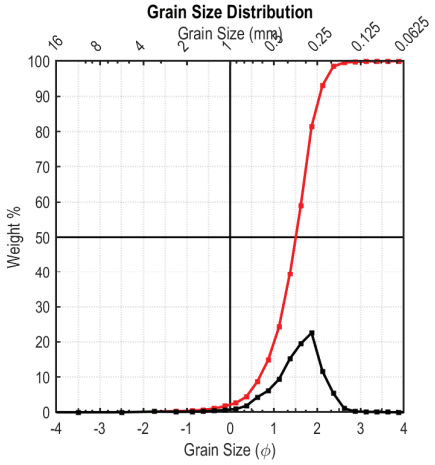
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.12 | 0.12 | 0.29 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.42 |
| -0.25 | -0.375 | 0.12 | 0.12 | 0.54 |
| 0 | -0.125 | 0.24 | 0.23 | 0.77 |
| 0.25 | 0.125 | 0.26 | 0.25 | 1.02 |
| 0.5 | 0.375 | 0.51 | 0.49 | 1.51 |
| 0.75 | 0.625 | 1.63 | 1.57 | 3.07 |
| 1 | 0.875 | 2.79 | 2.68 | 5.75 |
| 1.25 | 1.125 | 6.41 | 6.16 | 11.91 |
| 1.5 | 1.375 | 14.34 | 13.77 | 25.68 |
| 1.75 | 1.625 | 22.64 | 21.74 | 47.43 |
| 2 | 1.875 | 28.33 | 27.21 | 74.64 |
| 2.25 | 2.125 | 15.89 | 15.26 | 89.90 |
| 2.5 | 2.375 | 8.34 | 8.01 | 97.91 |
| 2.75 | 2.625 | 1.81 | 1.74 | 99.64 |
| 3 | 2.875 | 0.24 | 0.23 | 99.88 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.97 |
| 3.5 | 3.375 | 0.03 | 0.03 | 100.00 |
| 3.75 | 3.625 | 0.00 | 0.00 | 100.00 |
| 4 | 3.875 | -0.01 | -0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.105 |
| **5** | 0.805 |
| **16** | 1.200 |
| **25** | 1.365 |
| **50** | 1.650 |
| **75** | 1.880 |
| **84** | 2.030 |
| **95** | 2.285 |
| **99** | 2.530 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.724 | 0.303 |
| Standard Deviation | 0.472 | 0.721 |
| Skewness | -1.267 | |
| Kurtosis | 8.044 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.615 | 1.627 |
| Standard Deviation | 0.415 | 0.432 |
| Skewness (1) | -0.084 | -0.113 |
| Skewness (2) | -0.253 | |
| Kurtosis | 0.783 | 1.178 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1670+00** |
| **Sample** | **Swash** |
| **Mean** | **0.342 mm** |
| **STD** | **0.671 mm** |
| **Skewness** | **-1.141** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.20 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.30 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.3 |

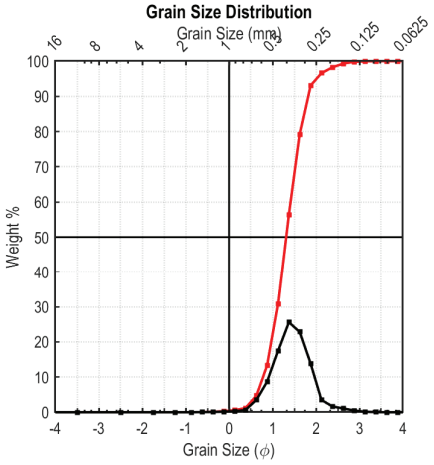
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.18 | 0.17 | 0.17 |
| -1 | -1.25 | 0.13 | 0.12 | 0.30 |
| -0.75 | -0.875 | 0.14 | 0.13 | 0.43 |
| -0.5 | -0.625 | 0.26 | 0.25 | 0.68 |
| -0.25 | -0.375 | 0.37 | 0.36 | 1.04 |
| 0 | -0.125 | 0.71 | 0.68 | 1.72 |
| 0.25 | 0.125 | 0.91 | 0.87 | 2.59 |
| 0.5 | 0.375 | 1.91 | 1.83 | 4.42 |
| 0.75 | 0.625 | 4.46 | 4.28 | 8.70 |
| 1 | 0.875 | 6.38 | 6.12 | 14.83 |
| 1.25 | 1.125 | 9.78 | 9.39 | 24.21 |
| 1.5 | 1.375 | 15.85 | 15.21 | 39.42 |
| 1.75 | 1.625 | 20.28 | 19.46 | 58.89 |
| 2 | 1.875 | 23.50 | 22.55 | 81.44 |
| 2.25 | 2.125 | 12.14 | 11.65 | 93.09 |
| 2.5 | 2.375 | 5.62 | 5.39 | 98.48 |
| 2.75 | 2.625 | 1.14 | 1.09 | 99.58 |
| 3 | 2.875 | 0.23 | 0.22 | 99.80 |
| 3.25 | 3.125 | 0.13 | 0.12 | 99.92 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.400 |
| **5** | 0.410 |
| **16** | 0.905 |
| **25** | 1.140 |
| **50** | 1.510 |
| **75** | 1.805 |
| **84** | 1.930 |
| **95** | 2.215 |
| **99** | 2.495 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.550 | 0.342 |
| Standard Deviation | 0.576 | 0.671 |
| Skewness | -1.141 | |
| Kurtosis | 6.190 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.417 | 1.448 |
| Standard Deviation | 0.513 | 0.530 |
| Skewness (1) | -0.180 | -0.200 |
| Skewness (2) | -0.385 | |
| Kurtosis | 0.761 | 1.112 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1680+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.368 mm** |
| **STD** | **0.741 mm** |
| **Skewness** | **0.156** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.88 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.7 |

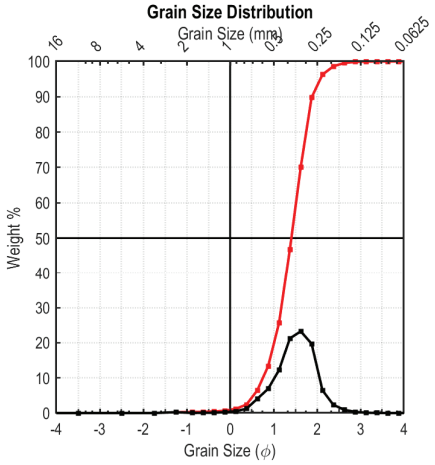
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.05 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.13 |
| 0 | -0.125 | 0.17 | 0.16 | 0.29 |
| 0.25 | 0.125 | 0.30 | 0.29 | 0.58 |
| 0.5 | 0.375 | 0.63 | 0.61 | 1.18 |
| 0.75 | 0.625 | 3.60 | 3.47 | 4.65 |
| 1 | 0.875 | 9.05 | 8.71 | 13.36 |
| 1.25 | 1.125 | 18.14 | 17.46 | 30.82 |
| 1.5 | 1.375 | 26.60 | 25.61 | 56.43 |
| 1.75 | 1.625 | 23.70 | 22.81 | 79.25 |
| 2 | 1.875 | 14.37 | 13.83 | 93.08 |
| 2.25 | 2.125 | 3.64 | 3.50 | 96.58 |
| 2.5 | 2.375 | 1.72 | 1.66 | 98.24 |
| 2.75 | 2.625 | 1.11 | 1.07 | 99.31 |
| 3 | 2.875 | 0.52 | 0.50 | 99.81 |
| 3.25 | 3.125 | 0.15 | 0.14 | 99.95 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.300 |
| **5** | 0.635 |
| **16** | 0.915 |
| **25** | 1.040 |
| **50** | 1.310 |
| **75** | 1.580 |
| **84** | 1.710 |
| **95** | 2.010 |
| **99** | 2.555 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.441 | 0.368 |
| Standard Deviation | 0.432 | 0.741 |
| Skewness | 0.156 | |
| Kurtosis | 4.618 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.312 | 1.312 |
| Standard Deviation | 0.397 | 0.407 |
| Skewness (1) | 0.006 | 0.012 |
| Skewness (2) | 0.031 | |
| Kurtosis | 0.730 | 1.044 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1680+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.355 mm** |
| **STD** | **0.716 mm** |
| **Skewness** | **-0.744** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.17 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.24 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.3 |

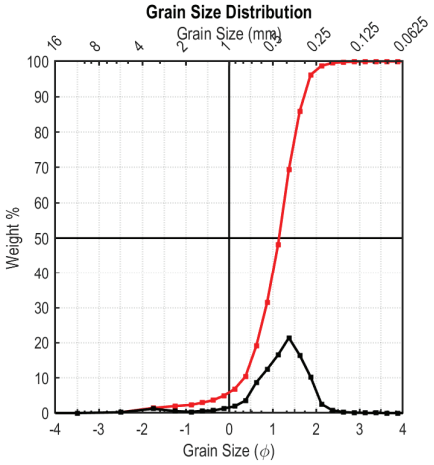
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.25 | 0.24 | 0.24 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.27 |
| -0.5 | -0.625 | 0.07 | 0.07 | 0.34 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.43 |
| 0 | -0.125 | 0.24 | 0.23 | 0.67 |
| 0.25 | 0.125 | 0.52 | 0.51 | 1.17 |
| 0.5 | 0.375 | 1.25 | 1.22 | 2.40 |
| 0.75 | 0.625 | 4.14 | 4.05 | 6.45 |
| 1 | 0.875 | 7.05 | 6.90 | 13.35 |
| 1.25 | 1.125 | 12.50 | 12.23 | 25.58 |
| 1.5 | 1.375 | 21.70 | 21.24 | 46.82 |
| 1.75 | 1.625 | 23.76 | 23.26 | 70.08 |
| 2 | 1.875 | 20.14 | 19.71 | 89.79 |
| 2.25 | 2.125 | 6.61 | 6.47 | 96.26 |
| 2.5 | 2.375 | 2.40 | 2.35 | 98.61 |
| 2.75 | 2.625 | 0.95 | 0.93 | 99.54 |
| 3 | 2.875 | 0.34 | 0.33 | 99.87 |
| 3.25 | 3.125 | 0.10 | 0.10 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.040 |
| **5** | 0.535 |
| **16** | 0.930 |
| **25** | 1.115 |
| **50** | 1.410 |
| **75** | 1.685 |
| **84** | 1.800 |
| **95** | 2.075 |
| **99** | 2.480 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.495 | 0.355 |
| Standard Deviation | 0.483 | 0.716 |
| Skewness | -0.744 | |
| Kurtosis | 6.136 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.365 | 1.380 |
| Standard Deviation | 0.435 | 0.451 |
| Skewness (1) | -0.103 | -0.120 |
| Skewness (2) | -0.241 | |
| Kurtosis | 0.770 | 1.107 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1680+00** |
| **Sample** | **Swash** |
| **Mean** | **0.447 mm** |
| **STD** | **0.625 mm** |
| **Skewness** | **-1.733** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.95 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.77 |
| % gravel (>4 mm) | 0.21 |
| CaCO3 | 8.1 |

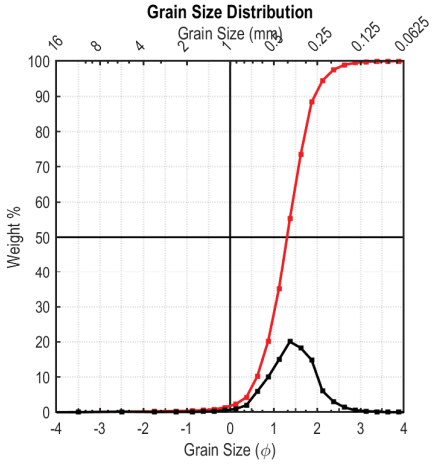
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.22 | 0.21 | 0.21 |
| -1.5 | -1.75 | 1.27 | 1.22 | 1.43 |
| -1 | -1.25 | 0.57 | 0.55 | 1.98 |
| -0.75 | -0.875 | 0.35 | 0.34 | 2.32 |
| -0.5 | -0.625 | 0.64 | 0.62 | 2.93 |
| -0.25 | -0.375 | 0.73 | 0.70 | 3.64 |
| 0 | -0.125 | 1.34 | 1.29 | 4.93 |
| 0.25 | 0.125 | 1.97 | 1.90 | 6.82 |
| 0.5 | 0.375 | 3.70 | 3.56 | 10.38 |
| 0.75 | 0.625 | 9.05 | 8.71 | 19.09 |
| 1 | 0.875 | 12.94 | 12.45 | 31.53 |
| 1.25 | 1.125 | 17.17 | 16.52 | 48.05 |
| 1.5 | 1.375 | 22.26 | 21.41 | 69.47 |
| 1.75 | 1.625 | 17.10 | 16.45 | 85.92 |
| 2 | 1.875 | 10.69 | 10.28 | 96.20 |
| 2.25 | 2.125 | 2.66 | 2.56 | 98.76 |
| 2.5 | 2.375 | 0.82 | 0.79 | 99.55 |
| 2.75 | 2.625 | 0.29 | 0.28 | 99.83 |
| 3 | 2.875 | 0.11 | 0.11 | 99.93 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.98 |
| 3.5 | 3.375 | 0.01 | 0.01 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.015 |
| **5** | -0.115 |
| **16** | 0.535 |
| **25** | 0.745 |
| **50** | 1.150 |
| **75** | 1.460 |
| **84** | 1.595 |
| **95** | 1.845 |
| **99** | 2.200 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.161 | 0.447 |
| Standard Deviation | 0.677 | 0.625 |
| Skewness | -1.733 | |
| Kurtosis | 8.540 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.065 | 1.093 |
| Standard Deviation | 0.530 | 0.562 |
| Skewness (1) | -0.160 | -0.226 |
| Skewness (2) | -0.538 | |
| Kurtosis | 0.849 | 1.123 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.375 mm** |
| **STD** | **0.668 mm** |
| **Skewness** | **-0.837** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.12 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.17 |
| CaCO3 | 4.9 |

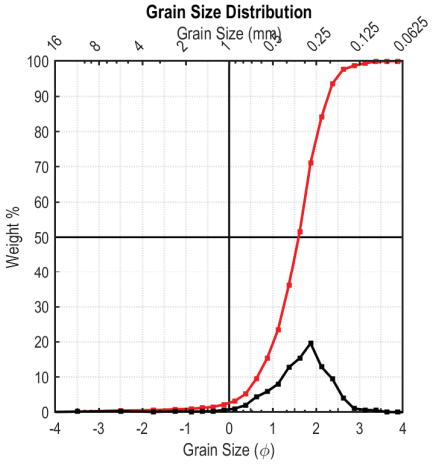
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.02 | 0.02 | 0.02 |
| -2 | -2.5 | 0.15 | 0.15 | 0.17 |
| -1.5 | -1.75 | 0.07 | 0.07 | 0.24 |
| -1 | -1.25 | 0.11 | 0.10 | 0.34 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.42 |
| -0.5 | -0.625 | 0.18 | 0.17 | 0.60 |
| -0.25 | -0.375 | 0.22 | 0.22 | 0.81 |
| 0 | -0.125 | 0.56 | 0.55 | 1.36 |
| 0.25 | 0.125 | 0.94 | 0.91 | 2.27 |
| 0.5 | 0.375 | 2.07 | 2.01 | 4.28 |
| 0.75 | 0.625 | 6.12 | 5.93 | 10.21 |
| 1 | 0.875 | 10.29 | 9.98 | 20.19 |
| 1.25 | 1.125 | 15.43 | 14.97 | 35.16 |
| 1.5 | 1.375 | 20.70 | 20.07 | 55.23 |
| 1.75 | 1.625 | 18.84 | 18.27 | 73.50 |
| 2 | 1.875 | 15.34 | 14.87 | 88.37 |
| 2.25 | 2.125 | 6.26 | 6.07 | 94.45 |
| 2.5 | 2.375 | 3.17 | 3.07 | 97.52 |
| 2.75 | 2.625 | 1.46 | 1.42 | 98.94 |
| 3 | 2.875 | 0.58 | 0.57 | 99.50 |
| 3.25 | 3.125 | 0.32 | 0.31 | 99.82 |
| 3.5 | 3.375 | 0.15 | 0.15 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.290 |
| **5** | 0.405 |
| **16** | 0.770 |
| **25** | 0.955 |
| **50** | 1.310 |
| **75** | 1.650 |
| **84** | 1.800 |
| **95** | 2.170 |
| **99** | 2.655 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.415 | 0.375 |
| Standard Deviation | 0.581 | 0.668 |
| Skewness | -0.837 | |
| Kurtosis | 8.367 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.285 | 1.293 |
| Standard Deviation | 0.515 | 0.525 |
| Skewness (1) | -0.049 | -0.037 |
| Skewness (2) | -0.044 | |
| Kurtosis | 0.714 | 1.041 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.324 mm** |
| **STD** | **0.603 mm** |
| **Skewness** | **-1.629** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.22 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.35 |
| % gravel (>4 mm) | 0.48 |
| CaCO3 | 5.2 |

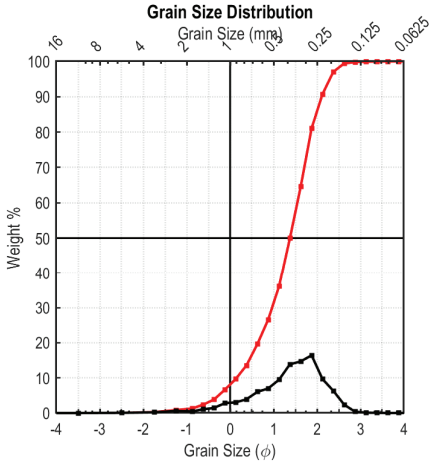
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.18 | 0.17 | 0.17 |
| -2 | -2.5 | 0.32 | 0.31 | 0.48 |
| -1.5 | -1.75 | 0.12 | 0.11 | 0.59 |
| -1 | -1.25 | 0.25 | 0.24 | 0.83 |
| -0.75 | -0.875 | 0.17 | 0.16 | 0.99 |
| -0.5 | -0.625 | 0.26 | 0.25 | 1.25 |
| -0.25 | -0.375 | 0.29 | 0.28 | 1.53 |
| 0 | -0.125 | 0.65 | 0.63 | 2.16 |
| 0.25 | 0.125 | 1.04 | 1.00 | 3.17 |
| 0.5 | 0.375 | 2.05 | 1.99 | 5.15 |
| 0.75 | 0.625 | 4.49 | 4.35 | 9.50 |
| 1 | 0.875 | 6.06 | 5.87 | 15.37 |
| 1.25 | 1.125 | 8.31 | 8.05 | 23.42 |
| 1.5 | 1.375 | 13.17 | 12.76 | 36.17 |
| 1.75 | 1.625 | 15.87 | 15.38 | 51.55 |
| 2 | 1.875 | 20.25 | 19.62 | 71.17 |
| 2.25 | 2.125 | 13.32 | 12.90 | 84.07 |
| 2.5 | 2.375 | 9.80 | 9.50 | 93.57 |
| 2.75 | 2.625 | 4.20 | 4.07 | 97.63 |
| 3 | 2.875 | 1.09 | 1.05 | 98.69 |
| 3.25 | 3.125 | 0.69 | 0.66 | 99.35 |
| 3.5 | 3.375 | 0.56 | 0.54 | 99.89 |
| 3.75 | 3.625 | 0.10 | 0.10 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.01 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.870 |
| **5** | 0.355 |
| **16** | 0.895 |
| **25** | 1.155 |
| **50** | 1.600 |
| **75** | 1.950 |
| **84** | 2.125 |
| **95** | 2.465 |
| **99** | 2.995 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.627 | 0.324 |
| Standard Deviation | 0.730 | 0.603 |
| Skewness | -1.629 | |
| Kurtosis | 10.575 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.510 | 1.540 |
| Standard Deviation | 0.615 | 0.627 |
| Skewness (1) | -0.146 | -0.163 |
| Skewness (2) | -0.309 | |
| Kurtosis | 0.715 | 1.088 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.388 mm** |
| **STD** | **0.583 mm** |
| **Skewness** | **-0.899** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.12 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.79 |
| % gravel (>4 mm) | 0.05 |
| CaCO3 | 7.1 |

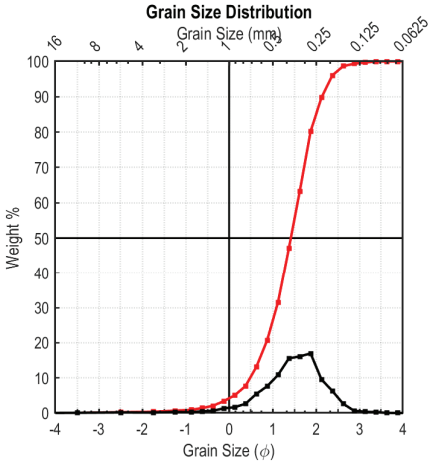
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.06 | 0.05 | 0.05 |
| -1.5 | -1.75 | 0.21 | 0.20 | 0.26 |
| -1 | -1.25 | 0.61 | 0.59 | 0.84 |
| -0.75 | -0.875 | 0.46 | 0.44 | 1.29 |
| -0.5 | -0.625 | 1.11 | 1.08 | 2.37 |
| -0.25 | -0.375 | 1.48 | 1.43 | 3.80 |
| 0 | -0.125 | 2.90 | 2.81 | 6.61 |
| 0.25 | 0.125 | 3.13 | 3.03 | 9.64 |
| 0.5 | 0.375 | 4.03 | 3.90 | 13.55 |
| 0.75 | 0.625 | 6.21 | 6.02 | 19.57 |
| 1 | 0.875 | 7.22 | 7.01 | 26.57 |
| 1.25 | 1.125 | 9.77 | 9.48 | 36.05 |
| 1.5 | 1.375 | 14.30 | 13.87 | 49.91 |
| 1.75 | 1.625 | 15.15 | 14.69 | 64.61 |
| 2 | 1.875 | 16.94 | 16.43 | 81.04 |
| 2.25 | 2.125 | 9.98 | 9.68 | 90.72 |
| 2.5 | 2.375 | 6.53 | 6.33 | 97.04 |
| 2.75 | 2.625 | 2.46 | 2.38 | 99.43 |
| 3 | 2.875 | 0.40 | 0.38 | 99.81 |
| 3.25 | 3.125 | 0.11 | 0.11 | 99.92 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.120 |
| **5** | -0.270 |
| **16** | 0.475 |
| **25** | 0.820 |
| **50** | 1.375 |
| **75** | 1.785 |
| **84** | 1.950 |
| **95** | 2.295 |
| **99** | 2.580 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.365 | 0.388 |
| Standard Deviation | 0.778 | 0.583 |
| Skewness | -0.899 | |
| Kurtosis | 4.063 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.213 | 1.267 |
| Standard Deviation | 0.738 | 0.757 |
| Skewness (1) | -0.220 | -0.251 |
| Skewness (2) | -0.492 | |
| Kurtosis | 0.739 | 1.089 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2525** |
| **Location** | **Avon, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.361 mm** |
| **STD** | **0.611 mm** |
| **Skewness** | **-1.124** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.15 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.44 |
| % gravel (>4 mm) | 0.23 |
| CaCO3 | 5.7 |

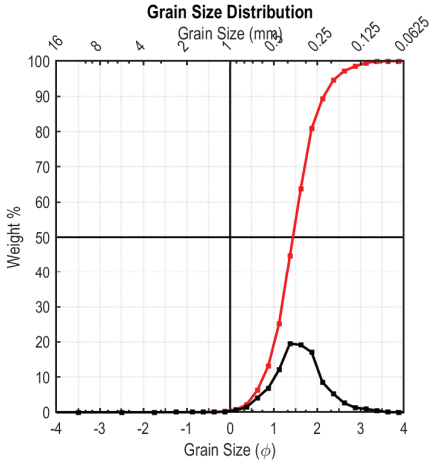
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.07 | 0.07 | 0.07 |
| -2 | -2.5 | 0.17 | 0.17 | 0.23 |
| -1.5 | -1.75 | 0.13 | 0.13 | 0.36 |
| -1 | -1.25 | 0.32 | 0.31 | 0.67 |
| -0.75 | -0.875 | 0.24 | 0.23 | 0.90 |
| -0.5 | -0.625 | 0.52 | 0.50 | 1.40 |
| -0.25 | -0.375 | 0.66 | 0.64 | 2.05 |
| 0 | -0.125 | 1.37 | 1.33 | 3.38 |
| 0.25 | 0.125 | 1.70 | 1.65 | 5.03 |
| 0.5 | 0.375 | 2.72 | 2.63 | 7.66 |
| 0.75 | 0.625 | 5.60 | 5.43 | 13.09 |
| 1 | 0.875 | 7.86 | 7.62 | 20.71 |
| 1.25 | 1.125 | 11.17 | 10.83 | 31.54 |
| 1.5 | 1.375 | 16.06 | 15.56 | 47.10 |
| 1.75 | 1.625 | 16.62 | 16.11 | 63.22 |
| 2 | 1.875 | 17.51 | 16.97 | 80.19 |
| 2.25 | 2.125 | 9.85 | 9.55 | 89.74 |
| 2.5 | 2.375 | 6.50 | 6.30 | 96.04 |
| 2.75 | 2.625 | 2.71 | 2.62 | 98.67 |
| 3 | 2.875 | 0.69 | 0.67 | 99.33 |
| 3.25 | 3.125 | 0.37 | 0.36 | 99.70 |
| 3.5 | 3.375 | 0.26 | 0.25 | 99.94 |
| 3.75 | 3.625 | 0.05 | 0.04 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.825 |
| **5** | 0.120 |
| **16** | 0.720 |
| **25** | 0.975 |
| **50** | 1.420 |
| **75** | 1.800 |
| **84** | 1.975 |
| **95** | 2.335 |
| **99** | 2.750 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.469 | 0.361 |
| Standard Deviation | 0.711 | 0.611 |
| Skewness | -1.124 | |
| Kurtosis | 7.039 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.347 | 1.372 |
| Standard Deviation | 0.628 | 0.649 |
| Skewness (1) | -0.116 | -0.145 |
| Skewness (2) | -0.307 | |
| Kurtosis | 0.765 | 1.100 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1770+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.333 mm** |
| **STD** | **0.680 mm** |
| **Skewness** | **0.211** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.01 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.8 |

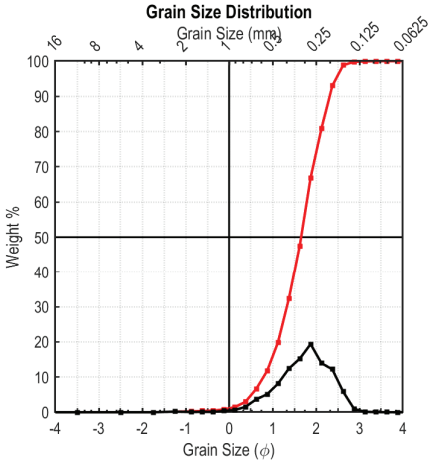
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.03 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.04 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.08 |
| 0 | -0.125 | 0.15 | 0.15 | 0.22 |
| 0.25 | 0.125 | 0.54 | 0.52 | 0.75 |
| 0.5 | 0.375 | 1.42 | 1.38 | 2.13 |
| 0.75 | 0.625 | 4.22 | 4.10 | 6.22 |
| 1 | 0.875 | 7.02 | 6.81 | 13.04 |
| 1.25 | 1.125 | 12.41 | 12.05 | 25.08 |
| 1.5 | 1.375 | 20.12 | 19.53 | 44.62 |
| 1.75 | 1.625 | 19.71 | 19.13 | 63.75 |
| 2 | 1.875 | 17.58 | 17.07 | 80.82 |
| 2.25 | 2.125 | 8.78 | 8.52 | 89.34 |
| 2.5 | 2.375 | 5.41 | 5.25 | 94.59 |
| 2.75 | 2.625 | 2.69 | 2.61 | 97.20 |
| 3 | 2.875 | 1.37 | 1.33 | 98.53 |
| 3.25 | 3.125 | 0.96 | 0.93 | 99.47 |
| 3.5 | 3.375 | 0.50 | 0.49 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.170 |
| **5** | 0.550 |
| **16** | 0.935 |
| **25** | 1.125 |
| **50** | 1.445 |
| **75** | 1.790 |
| **84** | 1.970 |
| **95** | 2.415 |
| **99** | 3.000 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.585 | 0.333 |
| Standard Deviation | 0.555 | 0.680 |
| Skewness | 0.211 | |
| Kurtosis | 3.759 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.452 | 1.450 |
| Standard Deviation | 0.517 | 0.541 |
| Skewness (1) | 0.014 | 0.027 |
| Skewness (2) | 0.072 | |
| Kurtosis | 0.802 | 1.149 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1770+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.305 mm** |
| **STD** | **0.661 mm** |
| **Skewness** | **-0.712** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.06 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

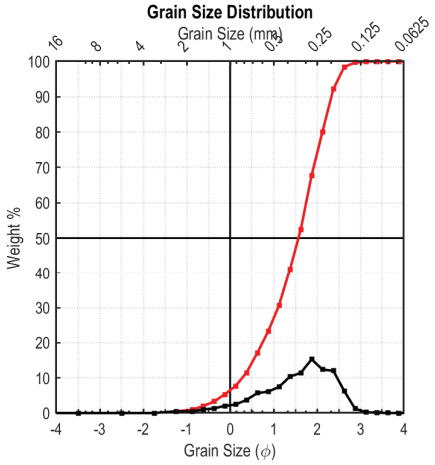
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.18 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.24 |
| -0.5 | -0.625 | 0.11 | 0.11 | 0.35 |
| -0.25 | -0.375 | 0.11 | 0.11 | 0.45 |
| 0 | -0.125 | 0.36 | 0.35 | 0.80 |
| 0.25 | 0.125 | 0.66 | 0.63 | 1.43 |
| 0.5 | 0.375 | 1.58 | 1.52 | 2.95 |
| 0.75 | 0.625 | 3.85 | 3.70 | 6.65 |
| 1 | 0.875 | 5.32 | 5.11 | 11.76 |
| 1.25 | 1.125 | 8.46 | 8.13 | 19.89 |
| 1.5 | 1.375 | 12.92 | 12.42 | 32.31 |
| 1.75 | 1.625 | 15.82 | 15.20 | 47.51 |
| 2 | 1.875 | 20.16 | 19.37 | 66.88 |
| 2.25 | 2.125 | 14.51 | 13.94 | 80.83 |
| 2.5 | 2.375 | 12.68 | 12.19 | 93.01 |
| 2.75 | 2.625 | 6.07 | 5.83 | 98.85 |
| 3 | 2.875 | 1.00 | 0.96 | 99.81 |
| 3.25 | 3.125 | 0.14 | 0.13 | 99.94 |
| 3.5 | 3.375 | 0.04 | 0.04 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.045 |
| **5** | 0.515 |
| **16** | 1.005 |
| **25** | 1.230 |
| **50** | 1.655 |
| **75** | 2.020 |
| **84** | 2.190 |
| **95** | 2.460 |
| **99** | 2.665 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.715 | 0.305 |
| Standard Deviation | 0.597 | 0.661 |
| Skewness | -0.712 | |
| Kurtosis | 4.190 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.597 | 1.617 |
| Standard Deviation | 0.593 | 0.591 |
| Skewness (1) | -0.097 | -0.135 |
| Skewness (2) | -0.283 | |
| Kurtosis | 0.641 | 1.009 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1770+00** |
| **Sample** | **Swash** |
| **Mean** | **0.344 mm** |
| **STD** | **0.570 mm** |
| **Skewness** | **-0.808** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.61 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.51 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 6.7 |

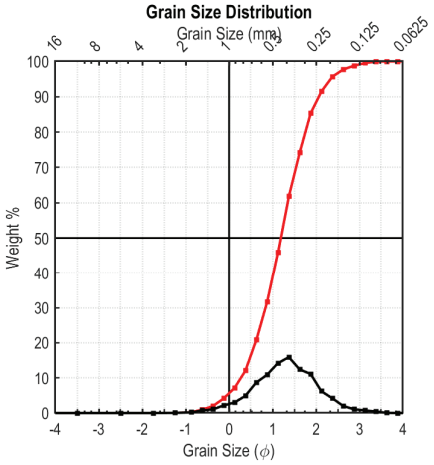
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.52 | 0.51 | 0.51 |
| -0.75 | -0.875 | 0.44 | 0.43 | 0.94 |
| -0.5 | -0.625 | 1.04 | 1.01 | 1.95 |
| -0.25 | -0.375 | 1.35 | 1.32 | 3.26 |
| 0 | -0.125 | 2.09 | 2.04 | 5.30 |
| 0.25 | 0.125 | 2.48 | 2.42 | 7.72 |
| 0.5 | 0.375 | 3.84 | 3.74 | 11.46 |
| 0.75 | 0.625 | 5.81 | 5.66 | 17.12 |
| 1 | 0.875 | 6.26 | 6.10 | 23.22 |
| 1.25 | 1.125 | 7.63 | 7.44 | 30.66 |
| 1.5 | 1.375 | 10.63 | 10.36 | 41.02 |
| 1.75 | 1.625 | 11.71 | 11.41 | 52.43 |
| 2 | 1.875 | 15.70 | 15.30 | 67.73 |
| 2.25 | 2.125 | 12.69 | 12.37 | 80.10 |
| 2.5 | 2.375 | 12.34 | 12.03 | 92.13 |
| 2.75 | 2.625 | 6.47 | 6.31 | 98.43 |
| 3 | 2.875 | 1.27 | 1.24 | 99.67 |
| 3.25 | 3.125 | 0.23 | 0.22 | 99.89 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.860 |
| **5** | -0.160 |
| **16** | 0.575 |
| **25** | 0.935 |
| **50** | 1.570 |
| **75** | 2.020 |
| **84** | 2.205 |
| **95** | 2.490 |
| **99** | 2.740 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.541 | 0.344 |
| Standard Deviation | 0.810 | 0.570 |
| Skewness | -0.808 | |
| Kurtosis | 3.392 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.390 | 1.450 |
| Standard Deviation | 0.815 | 0.809 |
| Skewness (1) | -0.221 | -0.263 |
| Skewness (2) | -0.497 | |
| Kurtosis | 0.626 | 1.001 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1780+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.406 mm** |
| **STD** | **0.610 mm** |
| **Skewness** | **-0.061** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.21 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.0 |

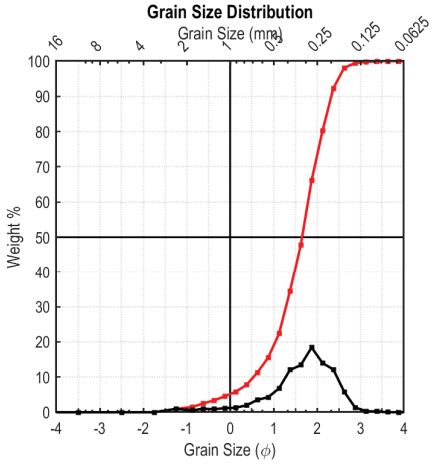
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.20 | 0.19 | 0.23 |
| -0.5 | -0.625 | 0.74 | 0.71 | 0.94 |
| -0.25 | -0.375 | 1.09 | 1.05 | 1.99 |
| 0 | -0.125 | 2.25 | 2.16 | 4.15 |
| 0.25 | 0.125 | 3.15 | 3.02 | 7.17 |
| 0.5 | 0.375 | 5.10 | 4.89 | 12.06 |
| 0.75 | 0.625 | 9.06 | 8.69 | 20.76 |
| 1 | 0.875 | 11.37 | 10.91 | 31.67 |
| 1.25 | 1.125 | 14.82 | 14.22 | 45.89 |
| 1.5 | 1.375 | 16.58 | 15.91 | 61.80 |
| 1.75 | 1.625 | 12.91 | 12.39 | 74.19 |
| 2 | 1.875 | 11.59 | 11.12 | 85.31 |
| 2.25 | 2.125 | 6.44 | 6.18 | 91.49 |
| 2.5 | 2.375 | 4.37 | 4.19 | 95.68 |
| 2.75 | 2.625 | 2.11 | 2.02 | 97.71 |
| 3 | 2.875 | 1.11 | 1.07 | 98.77 |
| 3.25 | 3.125 | 0.78 | 0.75 | 99.52 |
| 3.5 | 3.375 | 0.44 | 0.42 | 99.94 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.610 |
| **5** | -0.055 |
| **16** | 0.490 |
| **25** | 0.720 |
| **50** | 1.190 |
| **75** | 1.645 |
| **84** | 1.845 |
| **95** | 2.335 |
| **99** | 2.950 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.302 | 0.406 |
| Standard Deviation | 0.713 | 0.610 |
| Skewness | -0.061 | |
| Kurtosis | 3.300 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.167 | 1.175 |
| Standard Deviation | 0.677 | 0.701 |
| Skewness (1) | -0.033 | -0.038 |
| Skewness (2) | -0.074 | |
| Kurtosis | 0.764 | 1.059 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1780+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.321 mm** |
| **STD** | **0.589 mm** |
| **Skewness** | **-1.225** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.09 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.96 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.5 |

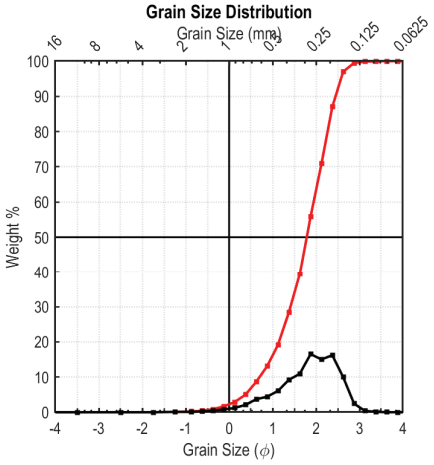
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 1.00 | 0.96 | 0.96 |
| -0.75 | -0.875 | 0.55 | 0.53 | 1.49 |
| -0.5 | -0.625 | 1.04 | 1.00 | 2.49 |
| -0.25 | -0.375 | 0.90 | 0.86 | 3.35 |
| 0 | -0.125 | 1.21 | 1.16 | 4.52 |
| 0.25 | 0.125 | 1.33 | 1.28 | 5.79 |
| 0.5 | 0.375 | 2.04 | 1.96 | 7.75 |
| 0.75 | 0.625 | 3.64 | 3.50 | 11.25 |
| 1 | 0.875 | 4.45 | 4.28 | 15.53 |
| 1.25 | 1.125 | 7.06 | 6.78 | 22.31 |
| 1.5 | 1.375 | 12.50 | 12.01 | 34.32 |
| 1.75 | 1.625 | 13.93 | 13.38 | 47.70 |
| 2 | 1.875 | 19.16 | 18.41 | 66.11 |
| 2.25 | 2.125 | 14.59 | 14.02 | 80.12 |
| 2.5 | 2.375 | 12.64 | 12.14 | 92.27 |
| 2.75 | 2.625 | 6.07 | 5.83 | 98.10 |
| 3 | 2.875 | 1.42 | 1.36 | 99.46 |
| 3.25 | 3.125 | 0.34 | 0.33 | 99.79 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.220 |
| **5** | -0.030 |
| **16** | 0.895 |
| **25** | 1.180 |
| **50** | 1.655 |
| **75** | 2.035 |
| **84** | 2.205 |
| **95** | 2.490 |
| **99** | 2.790 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.641 | 0.321 |
| Standard Deviation | 0.765 | 0.589 |
| Skewness | -1.225 | |
| Kurtosis | 5.109 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.550 | 1.585 |
| Standard Deviation | 0.655 | 0.709 |
| Skewness (1) | -0.160 | -0.249 |
| Skewness (2) | -0.649 | |
| Kurtosis | 0.924 | 1.208 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1780+00** |
| **Sample** | **Swash** |
| **Mean** | **0.287 mm** |
| **STD** | **0.622 mm** |
| **Skewness** | **-0.882** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.05 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.11 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.0 |

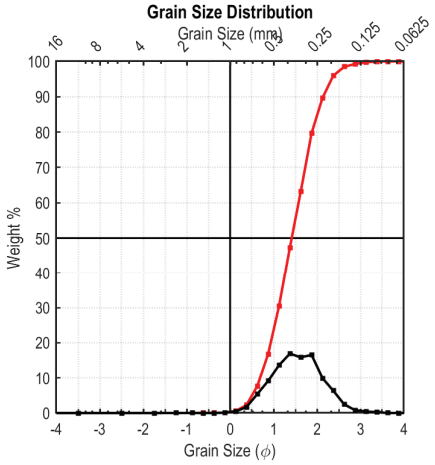
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.11 | 0.11 | 0.11 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.19 |
| -0.5 | -0.625 | 0.25 | 0.24 | 0.44 |
| -0.25 | -0.375 | 0.42 | 0.41 | 0.84 |
| 0 | -0.125 | 0.86 | 0.83 | 1.68 |
| 0.25 | 0.125 | 1.24 | 1.20 | 2.88 |
| 0.5 | 0.375 | 2.16 | 2.10 | 4.98 |
| 0.75 | 0.625 | 3.81 | 3.70 | 8.68 |
| 1 | 0.875 | 4.55 | 4.42 | 13.09 |
| 1.25 | 1.125 | 6.27 | 6.08 | 19.18 |
| 1.5 | 1.375 | 9.49 | 9.21 | 28.38 |
| 1.75 | 1.625 | 11.26 | 10.93 | 39.31 |
| 2 | 1.875 | 17.03 | 16.53 | 55.84 |
| 2.25 | 2.125 | 15.47 | 15.01 | 70.85 |
| 2.5 | 2.375 | 16.69 | 16.20 | 87.05 |
| 2.75 | 2.625 | 10.26 | 9.96 | 97.00 |
| 3 | 2.875 | 2.55 | 2.47 | 99.48 |
| 3.25 | 3.125 | 0.40 | 0.39 | 99.86 |
| 3.5 | 3.375 | 0.12 | 0.12 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.330 |
| **5** | 0.375 |
| **16** | 0.995 |
| **25** | 1.285 |
| **50** | 1.785 |
| **75** | 2.190 |
| **84** | 2.330 |
| **95** | 2.575 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.800 | 0.287 |
| Standard Deviation | 0.686 | 0.622 |
| Skewness | -0.882 | |
| Kurtosis | 3.824 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.663 | 1.703 |
| Standard Deviation | 0.667 | 0.667 |
| Skewness (1) | -0.184 | -0.233 |
| Skewness (2) | -0.464 | |
| Kurtosis | 0.648 | 0.996 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1790+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.342 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **0.099** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.99 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

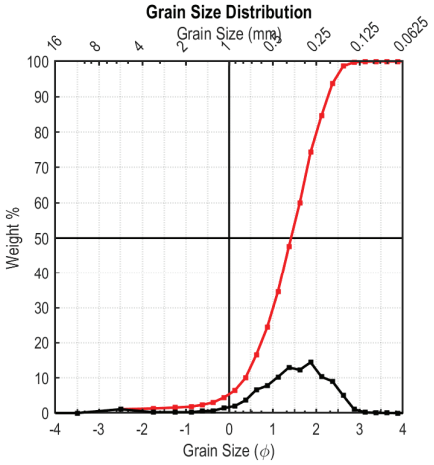
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.02 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.02 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.02 |
| 0 | -0.125 | 0.11 | 0.11 | 0.13 |
| 0.25 | 0.125 | 0.47 | 0.45 | 0.58 |
| 0.5 | 0.375 | 1.76 | 1.69 | 2.27 |
| 0.75 | 0.625 | 5.61 | 5.39 | 7.66 |
| 1 | 0.875 | 9.51 | 9.15 | 16.81 |
| 1.25 | 1.125 | 14.14 | 13.60 | 30.41 |
| 1.5 | 1.375 | 17.59 | 16.92 | 47.32 |
| 1.75 | 1.625 | 16.47 | 15.84 | 63.16 |
| 2 | 1.875 | 17.20 | 16.54 | 79.70 |
| 2.25 | 2.125 | 10.34 | 9.94 | 89.64 |
| 2.5 | 2.375 | 6.60 | 6.35 | 95.99 |
| 2.75 | 2.625 | 2.57 | 2.47 | 98.46 |
| 3 | 2.875 | 0.86 | 0.83 | 99.29 |
| 3.25 | 3.125 | 0.46 | 0.44 | 99.73 |
| 3.5 | 3.375 | 0.25 | 0.24 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.185 |
| **5** | 0.500 |
| **16** | 0.855 |
| **25** | 1.025 |
| **50** | 1.415 |
| **75** | 1.805 |
| **84** | 1.985 |
| **95** | 2.335 |
| **99** | 2.790 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.547 | 0.342 |
| Standard Deviation | 0.559 | 0.679 |
| Skewness | 0.099 | |
| Kurtosis | 3.021 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.420 | 1.418 |
| Standard Deviation | 0.565 | 0.561 |
| Skewness (1) | 0.009 | 0.006 |
| Skewness (2) | 0.004 | |
| Kurtosis | 0.624 | 0.964 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1790+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.366 mm** |
| **STD** | **0.557 mm** |
| **Skewness** | **-1.435** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.36 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.48 |
| % gravel (>4 mm) | 1.07 |
| CaCO3 | 7.5 |

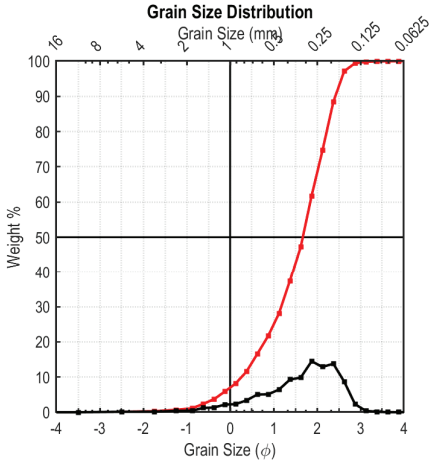
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 1.11 | 1.07 | 1.07 |
| -1.5 | -1.75 | 0.24 | 0.23 | 1.31 |
| -1 | -1.25 | 0.26 | 0.25 | 1.56 |
| -0.75 | -0.875 | 0.26 | 0.25 | 1.81 |
| -0.5 | -0.625 | 0.54 | 0.52 | 2.33 |
| -0.25 | -0.375 | 0.68 | 0.66 | 2.99 |
| 0 | -0.125 | 1.45 | 1.40 | 4.39 |
| 0.25 | 0.125 | 2.03 | 1.96 | 6.36 |
| 0.5 | 0.375 | 3.73 | 3.61 | 9.97 |
| 0.75 | 0.625 | 6.83 | 6.61 | 16.57 |
| 1 | 0.875 | 8.05 | 7.79 | 24.36 |
| 1.25 | 1.125 | 10.63 | 10.28 | 34.65 |
| 1.5 | 1.375 | 13.40 | 12.96 | 47.61 |
| 1.75 | 1.625 | 12.69 | 12.28 | 59.89 |
| 2 | 1.875 | 14.93 | 14.44 | 74.33 |
| 2.25 | 2.125 | 10.65 | 10.30 | 84.64 |
| 2.5 | 2.375 | 9.35 | 9.05 | 93.68 |
| 2.75 | 2.625 | 5.15 | 4.98 | 98.66 |
| 3 | 2.875 | 1.12 | 1.08 | 99.75 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.93 |
| 3.5 | 3.375 | 0.06 | 0.06 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.570 |
| **5** | -0.050 |
| **16** | 0.605 |
| **25** | 0.890 |
| **50** | 1.425 |
| **75** | 1.890 |
| **84** | 2.110 |
| **95** | 2.440 |
| **99** | 2.700 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.450 | 0.366 |
| Standard Deviation | 0.845 | 0.557 |
| Skewness | -1.435 | |
| Kurtosis | 7.315 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.357 | 1.380 |
| Standard Deviation | 0.752 | 0.754 |
| Skewness (1) | -0.090 | -0.137 |
| Skewness (2) | -0.306 | |
| Kurtosis | 0.654 | 1.020 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1790+00** |
| **Sample** | **Swash** |
| **Mean** | **0.328 mm** |
| **STD** | **0.550 mm** |
| **Skewness** | **-0.980** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.15 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.54 |
| % gravel (>4 mm) | 0.14 |
| CaCO3 | 6.3 |

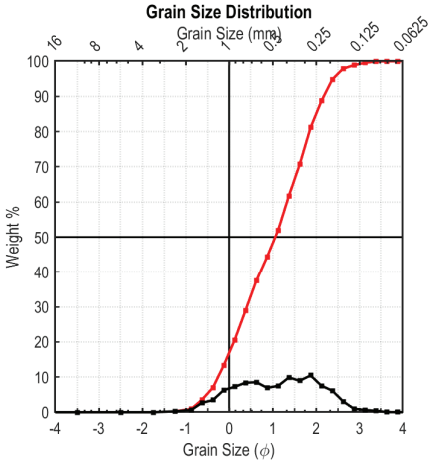
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.14 | 0.14 | 0.14 |
| -1.5 | -1.75 | 0.16 | 0.16 | 0.29 |
| -1 | -1.25 | 0.40 | 0.39 | 0.68 |
| -0.75 | -0.875 | 0.46 | 0.45 | 1.12 |
| -0.5 | -0.625 | 1.26 | 1.22 | 2.35 |
| -0.25 | -0.375 | 1.38 | 1.34 | 3.68 |
| 0 | -0.125 | 2.24 | 2.17 | 5.86 |
| 0.25 | 0.125 | 2.38 | 2.31 | 8.16 |
| 0.5 | 0.375 | 3.48 | 3.37 | 11.54 |
| 0.75 | 0.625 | 5.19 | 5.03 | 16.57 |
| 1 | 0.875 | 5.27 | 5.11 | 21.68 |
| 1.25 | 1.125 | 6.64 | 6.44 | 28.11 |
| 1.5 | 1.375 | 9.57 | 9.28 | 37.39 |
| 1.75 | 1.625 | 10.18 | 9.87 | 47.26 |
| 2 | 1.875 | 14.94 | 14.48 | 61.75 |
| 2.25 | 2.125 | 13.28 | 12.87 | 74.62 |
| 2.5 | 2.375 | 14.23 | 13.80 | 88.41 |
| 2.75 | 2.625 | 8.99 | 8.72 | 97.13 |
| 3 | 2.875 | 2.36 | 2.29 | 99.42 |
| 3.25 | 3.125 | 0.40 | 0.39 | 99.81 |
| 3.5 | 3.375 | 0.14 | 0.14 | 99.94 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.980 |
| **5** | -0.225 |
| **16** | 0.595 |
| **25** | 1.005 |
| **50** | 1.670 |
| **75** | 2.130 |
| **84** | 2.295 |
| **95** | 2.565 |
| **99** | 2.830 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.608 | 0.328 |
| Standard Deviation | 0.863 | 0.550 |
| Skewness | -0.980 | |
| Kurtosis | 4.021 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.445 | 1.520 |
| Standard Deviation | 0.850 | 0.848 |
| Skewness (1) | -0.265 | -0.312 |
| Skewness (2) | -0.588 | |
| Kurtosis | 0.641 | 1.016 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1800+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.460 mm** |
| **STD** | **0.527 mm** |
| **Skewness** | **-0.070** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 102.15 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.25 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.5 |

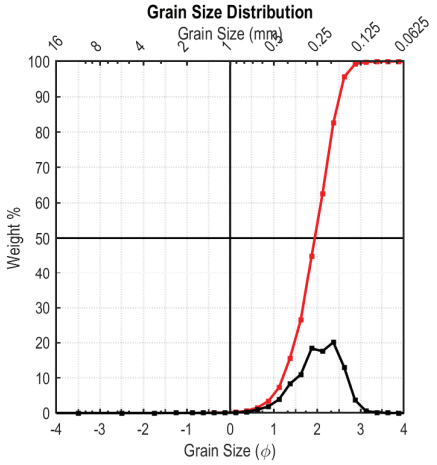
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.26 | 0.25 | 0.25 |
| -0.75 | -0.875 | 0.65 | 0.64 | 0.89 |
| -0.5 | -0.625 | 2.73 | 2.67 | 3.56 |
| -0.25 | -0.375 | 3.52 | 3.45 | 7.01 |
| 0 | -0.125 | 6.43 | 6.29 | 13.30 |
| 0.25 | 0.125 | 7.37 | 7.21 | 20.52 |
| 0.5 | 0.375 | 8.57 | 8.39 | 28.91 |
| 0.75 | 0.625 | 8.72 | 8.54 | 37.44 |
| 1 | 0.875 | 7.09 | 6.94 | 44.39 |
| 1.25 | 1.125 | 7.63 | 7.47 | 51.86 |
| 1.5 | 1.375 | 10.09 | 9.88 | 61.73 |
| 1.75 | 1.625 | 9.14 | 8.95 | 70.68 |
| 2 | 1.875 | 10.69 | 10.47 | 81.15 |
| 2.25 | 2.125 | 7.70 | 7.54 | 88.68 |
| 2.5 | 2.375 | 6.26 | 6.13 | 94.81 |
| 2.75 | 2.625 | 3.14 | 3.07 | 97.89 |
| 3 | 2.875 | 1.00 | 0.98 | 98.86 |
| 3.25 | 3.125 | 0.66 | 0.65 | 99.51 |
| 3.5 | 3.375 | 0.41 | 0.40 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.865 |
| **5** | -0.520 |
| **16** | -0.030 |
| **25** | 0.260 |
| **50** | 1.065 |
| **75** | 1.730 |
| **84** | 1.970 |
| **95** | 2.390 |
| **99** | 2.925 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.121 | 0.460 |
| Standard Deviation | 0.923 | 0.527 |
| Skewness | -0.070 | |
| Kurtosis | 2.242 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.970 | 1.002 |
| Standard Deviation | 1.000 | 0.941 |
| Skewness (1) | -0.095 | -0.092 |
| Skewness (2) | -0.130 | |
| Kurtosis | 0.455 | 0.811 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1800+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.246 mm** |
| **STD** | **0.701 mm** |
| **Skewness** | **-0.634** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.00 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.2 |

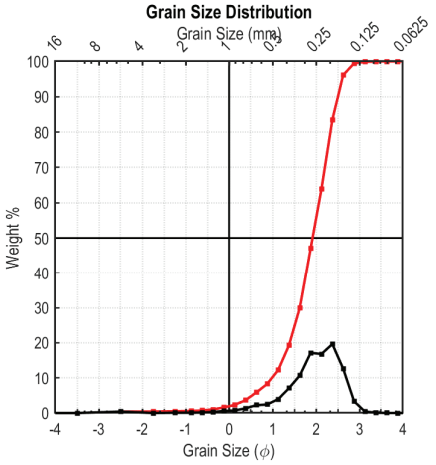
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.05 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.09 |
| 0 | -0.125 | 0.05 | 0.05 | 0.13 |
| 0.25 | 0.125 | 0.12 | 0.12 | 0.25 |
| 0.5 | 0.375 | 0.33 | 0.32 | 0.57 |
| 0.75 | 0.625 | 0.98 | 0.94 | 1.51 |
| 1 | 0.875 | 1.92 | 1.85 | 3.36 |
| 1.25 | 1.125 | 4.03 | 3.87 | 7.23 |
| 1.5 | 1.375 | 8.63 | 8.30 | 15.53 |
| 1.75 | 1.625 | 11.38 | 10.94 | 26.47 |
| 2 | 1.875 | 19.10 | 18.37 | 44.84 |
| 2.25 | 2.125 | 18.31 | 17.61 | 62.44 |
| 2.5 | 2.375 | 20.92 | 20.12 | 82.56 |
| 2.75 | 2.625 | 13.55 | 13.03 | 95.59 |
| 3 | 2.875 | 3.80 | 3.65 | 99.24 |
| 3.25 | 3.125 | 0.61 | 0.59 | 99.83 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.490 |
| **5** | 0.980 |
| **16** | 1.385 |
| **25** | 1.590 |
| **50** | 1.950 |
| **75** | 2.280 |
| **84** | 2.405 |
| **95** | 2.615 |
| **99** | 2.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.026 | 0.246 |
| Standard Deviation | 0.512 | 0.701 |
| Skewness | -0.634 | |
| Kurtosis | 3.804 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.895 | 1.913 |
| Standard Deviation | 0.510 | 0.503 |
| Skewness (1) | -0.108 | -0.147 |
| Skewness (2) | -0.299 | |
| Kurtosis | 0.603 | 0.971 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1800+00** |
| **Sample** | **Swash** |
| **Mean** | **0.262 mm** |
| **STD** | **0.622 mm** |
| **Skewness** | **-1.933** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.01 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.09 |
| % gravel (>4 mm) | 0.41 |
| CaCO3 | 5.8 |

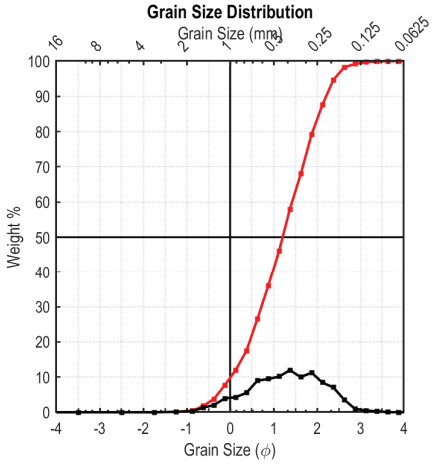
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.43 | 0.41 | 0.41 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.41 |
| -1 | -1.25 | 0.09 | 0.09 | 0.50 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.59 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.73 |
| -0.25 | -0.375 | 0.30 | 0.29 | 1.02 |
| 0 | -0.125 | 0.58 | 0.56 | 1.58 |
| 0.25 | 0.125 | 0.76 | 0.73 | 2.31 |
| 0.5 | 0.375 | 1.37 | 1.32 | 3.62 |
| 0.75 | 0.625 | 2.32 | 2.23 | 5.86 |
| 1 | 0.875 | 2.51 | 2.41 | 8.27 |
| 1.25 | 1.125 | 4.08 | 3.92 | 12.19 |
| 1.5 | 1.375 | 7.33 | 7.05 | 19.24 |
| 1.75 | 1.625 | 11.09 | 10.66 | 29.90 |
| 2 | 1.875 | 17.84 | 17.15 | 47.05 |
| 2.25 | 2.125 | 17.47 | 16.80 | 63.85 |
| 2.5 | 2.375 | 20.43 | 19.64 | 83.49 |
| 2.75 | 2.625 | 13.13 | 12.62 | 96.12 |
| 3 | 2.875 | 3.47 | 3.34 | 99.45 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.88 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.390 |
| **5** | 0.530 |
| **16** | 1.260 |
| **25** | 1.510 |
| **50** | 1.920 |
| **75** | 2.265 |
| **84** | 2.385 |
| **95** | 2.605 |
| **99** | 2.840 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.930 | 0.262 |
| Standard Deviation | 0.684 | 0.622 |
| Skewness | -1.933 | |
| Kurtosis | 10.637 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.822 | 1.855 |
| Standard Deviation | 0.562 | 0.596 |
| Skewness (1) | -0.173 | -0.257 |
| Skewness (2) | -0.627 | |
| Kurtosis | 0.844 | 1.126 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1810+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.410 mm** |
| **STD** | **0.565 mm** |
| **Skewness** | **-0.234** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.56 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.4 |

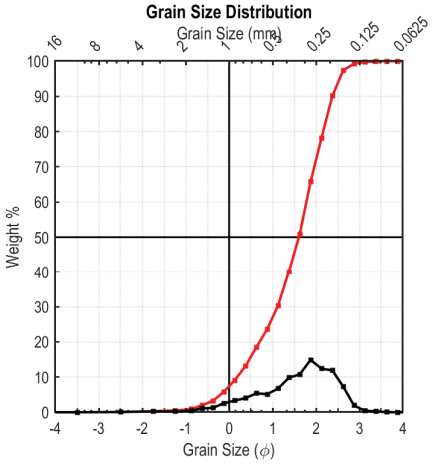
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.13 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.31 | 0.30 | 0.42 |
| -0.5 | -0.625 | 1.34 | 1.29 | 1.72 |
| -0.25 | -0.375 | 2.09 | 2.02 | 3.74 |
| 0 | -0.125 | 4.07 | 3.93 | 7.67 |
| 0.25 | 0.125 | 4.42 | 4.27 | 11.94 |
| 0.5 | 0.375 | 5.71 | 5.51 | 17.45 |
| 0.75 | 0.625 | 9.29 | 8.97 | 26.42 |
| 1 | 0.875 | 9.79 | 9.45 | 35.87 |
| 1.25 | 1.125 | 10.49 | 10.13 | 46.00 |
| 1.5 | 1.375 | 12.38 | 11.95 | 57.96 |
| 1.75 | 1.625 | 10.34 | 9.98 | 67.94 |
| 2 | 1.875 | 11.65 | 11.25 | 79.19 |
| 2.25 | 2.125 | 8.72 | 8.42 | 87.61 |
| 2.5 | 2.375 | 7.31 | 7.06 | 94.67 |
| 2.75 | 2.625 | 3.70 | 3.57 | 98.24 |
| 3 | 2.875 | 0.99 | 0.96 | 99.20 |
| 3.25 | 3.125 | 0.52 | 0.50 | 99.70 |
| 3.5 | 3.375 | 0.27 | 0.26 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.765 |
| **5** | -0.295 |
| **16** | 0.310 |
| **25** | 0.585 |
| **50** | 1.210 |
| **75** | 1.780 |
| **84** | 2.020 |
| **95** | 2.400 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.285 | 0.410 |
| Standard Deviation | 0.823 | 0.565 |
| Skewness | -0.234 | |
| Kurtosis | 2.589 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.165 | 1.180 |
| Standard Deviation | 0.855 | 0.836 |
| Skewness (1) | -0.053 | -0.085 |
| Skewness (2) | -0.184 | |
| Kurtosis | 0.576 | 0.924 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1810+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.341 mm** |
| **STD** | **0.554 mm** |
| **Skewness** | **-0.821** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.82 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.42 |
| % gravel (>4 mm) | 0.07 |
| CaCO3 | 7.5 |

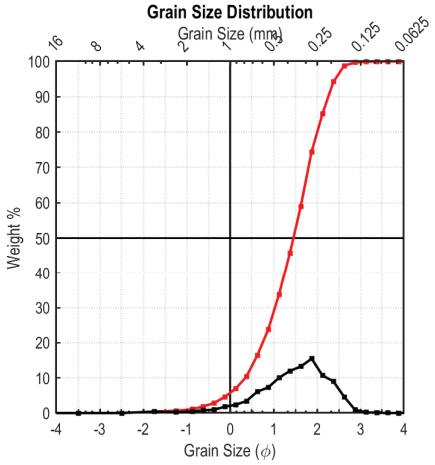
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.07 | 0.07 | 0.07 |
| -1.5 | -1.75 | 0.24 | 0.23 | 0.30 |
| -1 | -1.25 | 0.19 | 0.18 | 0.49 |
| -0.75 | -0.875 | 0.39 | 0.38 | 0.87 |
| -0.5 | -0.625 | 1.13 | 1.10 | 1.96 |
| -0.25 | -0.375 | 1.29 | 1.25 | 3.22 |
| 0 | -0.125 | 2.62 | 2.55 | 5.77 |
| 0.25 | 0.125 | 3.38 | 3.29 | 9.05 |
| 0.5 | 0.375 | 4.15 | 4.04 | 13.09 |
| 0.75 | 0.625 | 5.51 | 5.36 | 18.45 |
| 1 | 0.875 | 5.29 | 5.14 | 23.59 |
| 1.25 | 1.125 | 6.90 | 6.71 | 30.31 |
| 1.5 | 1.375 | 10.09 | 9.81 | 40.12 |
| 1.75 | 1.625 | 11.07 | 10.77 | 50.89 |
| 2 | 1.875 | 15.32 | 14.90 | 65.78 |
| 2.25 | 2.125 | 12.73 | 12.38 | 78.17 |
| 2.5 | 2.375 | 12.24 | 11.90 | 90.07 |
| 2.75 | 2.625 | 7.51 | 7.30 | 97.37 |
| 3 | 2.875 | 1.95 | 1.90 | 99.27 |
| 3.25 | 3.125 | 0.47 | 0.46 | 99.73 |
| 3.5 | 3.375 | 0.24 | 0.23 | 99.96 |
| 3.75 | 3.625 | 0.04 | 0.04 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.845 |
| **5** | -0.200 |
| **16** | 0.510 |
| **25** | 0.925 |
| **50** | 1.605 |
| **75** | 2.060 |
| **84** | 2.250 |
| **95** | 2.545 |
| **99** | 2.840 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.552 | 0.341 |
| Standard Deviation | 0.853 | 0.554 |
| Skewness | -0.821 | |
| Kurtosis | 3.556 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.380 | 1.455 |
| Standard Deviation | 0.870 | 0.851 |
| Skewness (1) | -0.259 | -0.287 |
| Skewness (2) | -0.497 | |
| Kurtosis | 0.578 | 0.991 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1810+00** |
| **Sample** | **Swash** |
| **Mean** | **0.360 mm** |
| **STD** | **0.585 mm** |
| **Skewness** | **-0.840** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.72 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.65 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 5.5 |

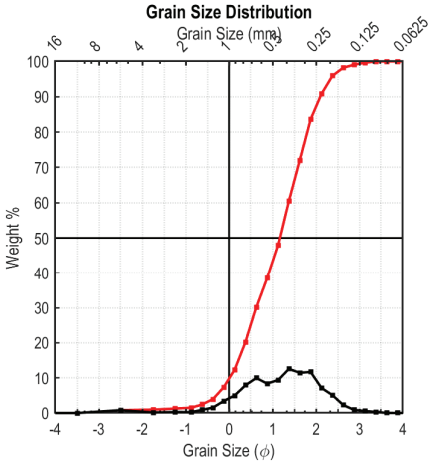
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.43 | 0.42 | 0.42 |
| -1 | -1.25 | 0.24 | 0.23 | 0.65 |
| -0.75 | -0.875 | 0.42 | 0.41 | 1.06 |
| -0.5 | -0.625 | 0.83 | 0.81 | 1.87 |
| -0.25 | -0.375 | 0.96 | 0.93 | 2.80 |
| 0 | -0.125 | 1.84 | 1.79 | 4.60 |
| 0.25 | 0.125 | 2.39 | 2.33 | 6.92 |
| 0.5 | 0.375 | 3.52 | 3.43 | 10.35 |
| 0.75 | 0.625 | 6.25 | 6.08 | 16.43 |
| 1 | 0.875 | 7.48 | 7.28 | 23.71 |
| 1.25 | 1.125 | 10.31 | 10.04 | 33.75 |
| 1.5 | 1.375 | 12.31 | 11.98 | 45.74 |
| 1.75 | 1.625 | 13.58 | 13.22 | 58.96 |
| 2 | 1.875 | 15.90 | 15.48 | 74.44 |
| 2.25 | 2.125 | 10.99 | 10.70 | 85.13 |
| 2.5 | 2.375 | 9.28 | 9.03 | 94.17 |
| 2.75 | 2.625 | 4.74 | 4.61 | 98.78 |
| 3 | 2.875 | 0.95 | 0.92 | 99.71 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.89 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.930 |
| **5** | -0.080 |
| **16** | 0.605 |
| **25** | 0.905 |
| **50** | 1.455 |
| **75** | 1.890 |
| **84** | 2.100 |
| **95** | 2.420 |
| **99** | 2.685 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.475 | 0.360 |
| Standard Deviation | 0.774 | 0.585 |
| Skewness | -0.840 | |
| Kurtosis | 4.156 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.352 | 1.387 |
| Standard Deviation | 0.747 | 0.753 |
| Skewness (1) | -0.137 | -0.183 |
| Skewness (2) | -0.381 | |
| Kurtosis | 0.672 | 1.040 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1820+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.435 mm** |
| **STD** | **0.548 mm** |
| **Skewness** | **-0.708** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.10 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.44 |
| % gravel (>4 mm) | 0.82 |
| CaCO3 | 9.4 |

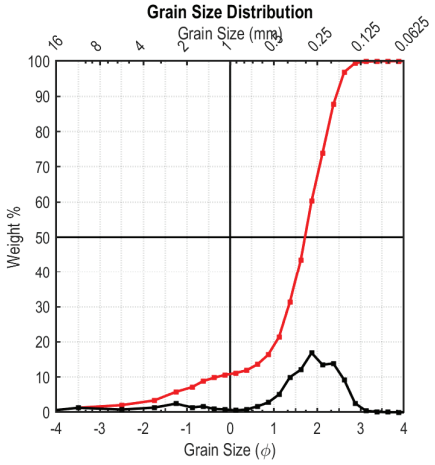
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.85 | 0.82 | 0.82 |
| -1.5 | -1.75 | 0.15 | 0.14 | 0.96 |
| -1 | -1.25 | 0.31 | 0.30 | 1.26 |
| -0.75 | -0.875 | 0.26 | 0.25 | 1.51 |
| -0.5 | -0.625 | 0.93 | 0.89 | 2.40 |
| -0.25 | -0.375 | 1.59 | 1.53 | 3.93 |
| 0 | -0.125 | 3.54 | 3.40 | 7.33 |
| 0.25 | 0.125 | 5.16 | 4.96 | 12.29 |
| 0.5 | 0.375 | 8.22 | 7.90 | 20.18 |
| 0.75 | 0.625 | 10.37 | 9.96 | 30.14 |
| 1 | 0.875 | 8.71 | 8.37 | 38.51 |
| 1.25 | 1.125 | 9.78 | 9.39 | 47.91 |
| 1.5 | 1.375 | 13.07 | 12.56 | 60.46 |
| 1.75 | 1.625 | 11.94 | 11.47 | 71.93 |
| 2 | 1.875 | 12.17 | 11.69 | 83.62 |
| 2.25 | 2.125 | 7.45 | 7.16 | 90.78 |
| 2.5 | 2.375 | 5.32 | 5.11 | 95.89 |
| 2.75 | 2.625 | 2.39 | 2.30 | 98.18 |
| 3 | 2.875 | 0.92 | 0.88 | 99.07 |
| 3.25 | 3.125 | 0.60 | 0.58 | 99.64 |
| 3.5 | 3.375 | 0.32 | 0.31 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.685 |
| **5** | -0.295 |
| **16** | 0.245 |
| **25** | 0.495 |
| **50** | 1.165 |
| **75** | 1.690 |
| **84** | 1.890 |
| **95** | 2.330 |
| **99** | 2.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.200 | 0.435 |
| Standard Deviation | 0.868 | 0.548 |
| Skewness | -0.708 | |
| Kurtosis | 4.785 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.068 | 1.100 |
| Standard Deviation | 0.823 | 0.809 |
| Skewness (1) | -0.119 | -0.115 |
| Skewness (2) | -0.179 | |
| Kurtosis | 0.596 | 0.900 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1820+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.341 mm** |
| **STD** | **0.442 mm** |
| **Skewness** | **-2.064** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Poorly Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.64 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 3.76 |
| % gravel (>4 mm) | 2.03 |
| CaCO3 | 8.4 |

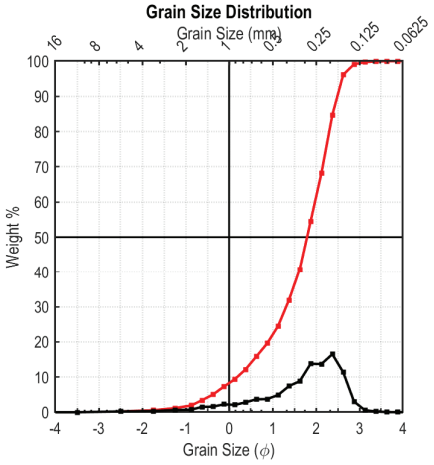
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 1.32 | 1.26 | 1.26 |
| -2 | -2.5 | 0.80 | 0.76 | 2.03 |
| -1.5 | -1.75 | 1.38 | 1.32 | 3.34 |
| -1 | -1.25 | 2.55 | 2.44 | 5.78 |
| -0.75 | -0.875 | 1.43 | 1.37 | 7.15 |
| -0.5 | -0.625 | 1.77 | 1.69 | 8.84 |
| -0.25 | -0.375 | 1.00 | 0.96 | 9.80 |
| 0 | -0.125 | 0.84 | 0.80 | 10.60 |
| 0.25 | 0.125 | 0.56 | 0.54 | 11.13 |
| 0.5 | 0.375 | 0.81 | 0.77 | 11.91 |
| 0.75 | 0.625 | 1.74 | 1.66 | 13.57 |
| 1 | 0.875 | 2.90 | 2.77 | 16.34 |
| 1.25 | 1.125 | 5.29 | 5.06 | 21.40 |
| 1.5 | 1.375 | 10.41 | 9.95 | 31.35 |
| 1.75 | 1.625 | 12.64 | 12.08 | 43.43 |
| 2 | 1.875 | 17.66 | 16.88 | 60.30 |
| 2.25 | 2.125 | 14.13 | 13.50 | 73.81 |
| 2.5 | 2.375 | 14.51 | 13.87 | 87.67 |
| 2.75 | 2.625 | 9.64 | 9.21 | 96.88 |
| 3 | 2.875 | 2.68 | 2.56 | 99.45 |
| 3.25 | 3.125 | 0.44 | 0.42 | 99.87 |
| 3.5 | 3.375 | 0.12 | 0.11 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.705 |
| **5** | -1.410 |
| **16** | 0.845 |
| **25** | 1.215 |
| **50** | 1.720 |
| **75** | 2.145 |
| **84** | 2.310 |
| **95** | 2.575 |
| **99** | 2.830 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.550 | 0.341 |
| Standard Deviation | 1.177 | 0.442 |
| Skewness | -2.064 | |
| Kurtosis | 7.694 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.577 | 1.625 |
| Standard Deviation | 0.733 | 0.970 |
| Skewness (1) | -0.195 | -0.383 |
| Skewness (2) | -1.553 | |
| Kurtosis | 1.720 | 1.756 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1820+00** |
| **Sample** | **Swash** |
| **Mean** | **0.312 mm** |
| **STD** | **0.525 mm** |
| **Skewness** | **-1.244** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.67 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.95 |
| % gravel (>4 mm) | 0.23 |
| CaCO3 | 6.7 |

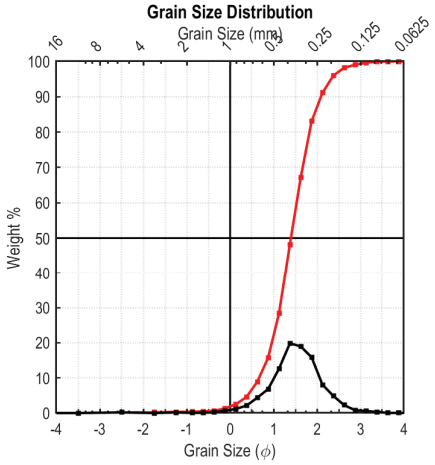
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.24 | 0.23 | 0.23 |
| -1.5 | -1.75 | 0.34 | 0.32 | 0.55 |
| -1 | -1.25 | 0.65 | 0.62 | 1.18 |
| -0.75 | -0.875 | 0.77 | 0.74 | 1.91 |
| -0.5 | -0.625 | 1.59 | 1.52 | 3.43 |
| -0.25 | -0.375 | 1.66 | 1.59 | 5.02 |
| 0 | -0.125 | 2.34 | 2.24 | 7.25 |
| 0.25 | 0.125 | 2.19 | 2.09 | 9.34 |
| 0.5 | 0.375 | 2.93 | 2.80 | 12.14 |
| 0.75 | 0.625 | 3.86 | 3.69 | 15.83 |
| 1 | 0.875 | 3.91 | 3.74 | 19.57 |
| 1.25 | 1.125 | 5.13 | 4.90 | 24.47 |
| 1.5 | 1.375 | 7.76 | 7.41 | 31.88 |
| 1.75 | 1.625 | 9.25 | 8.84 | 40.72 |
| 2 | 1.875 | 14.42 | 13.78 | 54.50 |
| 2.25 | 2.125 | 14.35 | 13.71 | 68.20 |
| 2.5 | 2.375 | 17.28 | 16.51 | 84.71 |
| 2.75 | 2.625 | 11.92 | 11.39 | 96.10 |
| 3 | 2.875 | 3.17 | 3.03 | 99.13 |
| 3.25 | 3.125 | 0.61 | 0.58 | 99.71 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.92 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.390 |
| **5** | -0.375 |
| **16** | 0.635 |
| **25** | 1.145 |
| **50** | 1.795 |
| **75** | 2.230 |
| **84** | 2.365 |
| **95** | 2.600 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.682 | 0.312 |
| Standard Deviation | 0.930 | 0.525 |
| Skewness | -1.244 | |
| Kurtosis | 4.550 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.500 | 1.598 |
| Standard Deviation | 0.865 | 0.883 |
| Skewness (1) | -0.341 | -0.400 |
| Skewness (2) | -0.789 | |
| Kurtosis | 0.720 | 1.124 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1830+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.351 mm** |
| **STD** | **0.657 mm** |
| **Skewness** | **-0.688** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.62 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.18 |
| CaCO3 | 6.4 |

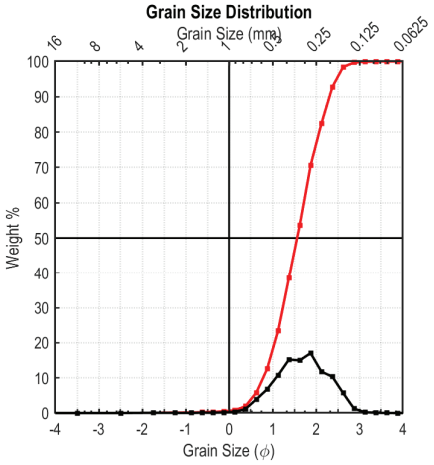
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.18 | 0.18 | 0.18 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.18 |
| -1 | -1.25 | 0.17 | 0.17 | 0.34 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.37 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.45 |
| -0.25 | -0.375 | 0.19 | 0.19 | 0.63 |
| 0 | -0.125 | 0.67 | 0.65 | 1.29 |
| 0.25 | 0.125 | 1.20 | 1.17 | 2.46 |
| 0.5 | 0.375 | 2.15 | 2.10 | 4.55 |
| 0.75 | 0.625 | 4.48 | 4.37 | 8.92 |
| 1 | 0.875 | 7.01 | 6.83 | 15.75 |
| 1.25 | 1.125 | 12.94 | 12.61 | 28.36 |
| 1.5 | 1.375 | 20.36 | 19.84 | 48.20 |
| 1.75 | 1.625 | 19.47 | 18.97 | 67.17 |
| 2 | 1.875 | 16.28 | 15.86 | 83.03 |
| 2.25 | 2.125 | 8.27 | 8.06 | 91.09 |
| 2.5 | 2.375 | 5.01 | 4.88 | 95.98 |
| 2.75 | 2.625 | 2.29 | 2.23 | 98.21 |
| 3 | 2.875 | 0.85 | 0.83 | 99.04 |
| 3.25 | 3.125 | 0.60 | 0.58 | 99.62 |
| 3.5 | 3.375 | 0.32 | 0.31 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.235 |
| **5** | 0.400 |
| **16** | 0.880 |
| **25** | 1.060 |
| **50** | 1.400 |
| **75** | 1.750 |
| **84** | 1.905 |
| **95** | 2.325 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.509 | 0.351 |
| Standard Deviation | 0.606 | 0.657 |
| Skewness | -0.688 | |
| Kurtosis | 7.165 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.392 | 1.395 |
| Standard Deviation | 0.512 | 0.548 |
| Skewness (1) | -0.015 | -0.027 |
| Skewness (2) | -0.073 | |
| Kurtosis | 0.878 | 1.143 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1830+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.314 mm** |
| **STD** | **0.666 mm** |
| **Skewness** | **-0.361** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.62 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.12 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.5 |

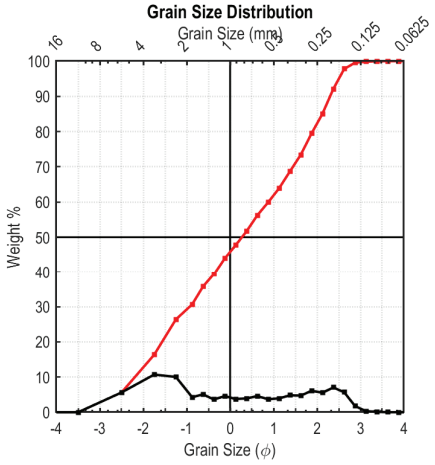
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.07 | 0.07 | 0.07 |
| -1 | -1.25 | 0.05 | 0.05 | 0.12 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.14 |
| -0.5 | -0.625 | 0.10 | 0.10 | 0.23 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.31 |
| 0 | -0.125 | 0.17 | 0.16 | 0.47 |
| 0.25 | 0.125 | 0.33 | 0.32 | 0.79 |
| 0.5 | 0.375 | 1.16 | 1.12 | 1.91 |
| 0.75 | 0.625 | 4.03 | 3.89 | 5.80 |
| 1 | 0.875 | 7.03 | 6.78 | 12.58 |
| 1.25 | 1.125 | 11.16 | 10.77 | 23.35 |
| 1.5 | 1.375 | 15.78 | 15.23 | 38.58 |
| 1.75 | 1.625 | 15.54 | 15.00 | 53.58 |
| 2 | 1.875 | 17.68 | 17.06 | 70.64 |
| 2.25 | 2.125 | 12.20 | 11.77 | 82.42 |
| 2.5 | 2.375 | 10.73 | 10.36 | 92.77 |
| 2.75 | 2.625 | 5.87 | 5.66 | 98.44 |
| 3 | 2.875 | 1.28 | 1.24 | 99.67 |
| 3.25 | 3.125 | 0.24 | 0.23 | 99.90 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.170 |
| **5** | 0.575 |
| **16** | 0.955 |
| **25** | 1.150 |
| **50** | 1.565 |
| **75** | 1.970 |
| **84** | 2.165 |
| **95** | 2.475 |
| **99** | 2.740 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.670 | 0.314 |
| Standard Deviation | 0.587 | 0.666 |
| Skewness | -0.361 | |
| Kurtosis | 3.812 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.560 | 1.562 |
| Standard Deviation | 0.605 | 0.590 |
| Skewness (1) | -0.008 | -0.025 |
| Skewness (2) | -0.066 | |
| Kurtosis | 0.570 | 0.950 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1830+00** |
| **Sample** | **Swash** |
| **Mean** | **0.790 mm** |
| **STD** | **0.331 mm** |
| **Skewness** | **-0.104** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Symmetrical |
| | Platykurtic |

| | |
|---|---|
| Total weight (gram) | 102.79 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 20.74 |
| % gravel (>4 mm) | 5.62 |
| CaCO3 | 26.3 |

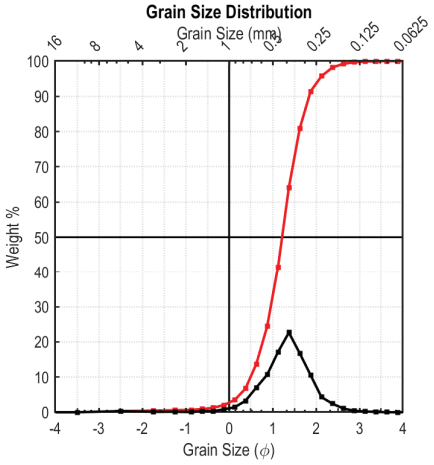
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 5.78 | 5.62 | 5.62 |
| -1.5 | -1.75 | 11.00 | 10.70 | 16.32 |
| -1 | -1.25 | 10.32 | 10.04 | 26.36 |
| -0.75 | -0.875 | 4.40 | 4.28 | 30.65 |
| -0.5 | -0.625 | 5.22 | 5.08 | 35.72 |
| -0.25 | -0.375 | 3.72 | 3.62 | 39.34 |
| 0 | -0.125 | 4.73 | 4.60 | 43.94 |
| 0.25 | 0.125 | 3.87 | 3.76 | 47.71 |
| 0.5 | 0.375 | 4.04 | 3.93 | 51.64 |
| 0.75 | 0.625 | 4.71 | 4.58 | 56.22 |
| 1 | 0.875 | 3.81 | 3.71 | 59.93 |
| 1.25 | 1.125 | 4.05 | 3.94 | 63.87 |
| 1.5 | 1.375 | 4.94 | 4.81 | 68.67 |
| 1.75 | 1.625 | 4.87 | 4.74 | 73.41 |
| 2 | 1.875 | 6.26 | 6.09 | 79.50 |
| 2.25 | 2.125 | 5.72 | 5.56 | 85.07 |
| 2.5 | 2.375 | 7.23 | 7.03 | 92.10 |
| 2.75 | 2.625 | 5.84 | 5.68 | 97.78 |
| 3 | 2.875 | 1.81 | 1.76 | 99.54 |
| 3.25 | 3.125 | 0.32 | 0.31 | 99.85 |
| 3.5 | 3.375 | 0.12 | 0.12 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.320 |
| **5** | -2.610 |
| **16** | -1.775 |
| **25** | -1.320 |
| **50** | 0.270 |
| **75** | 1.690 |
| **84** | 2.075 |
| **95** | 2.505 |
| **99** | 2.800 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.340 | 0.790 |
| Standard Deviation | 1.595 | 0.331 |
| Skewness | -0.104 | |
| Kurtosis | 1.763 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.150 | 0.190 |
| Standard Deviation | 1.925 | 1.738 |
| Skewness (1) | -0.062 | -0.094 |
| Skewness (2) | -0.168 | |
| Kurtosis | 0.329 | 0.696 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1840+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.404 mm** |
| **STD** | **0.659 mm** |
| **Skewness** | **-1.102** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.48 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.26 |
| % gravel (>4 mm) | 0.32 |
| CaCO3 | 8.1 |

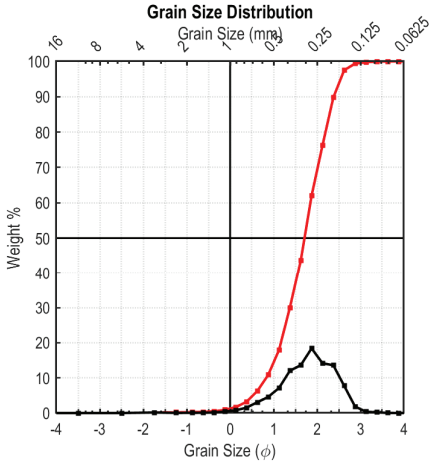
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.33 | 0.32 | 0.32 |
| -1.5 | -1.75 | 0.13 | 0.13 | 0.45 |
| -1 | -1.25 | 0.14 | 0.14 | 0.59 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.64 |
| -0.5 | -0.625 | 0.28 | 0.27 | 0.92 |
| -0.25 | -0.375 | 0.32 | 0.31 | 1.23 |
| 0 | -0.125 | 0.84 | 0.82 | 2.05 |
| 0.25 | 0.125 | 1.44 | 1.41 | 3.45 |
| 0.5 | 0.375 | 3.33 | 3.25 | 6.70 |
| 0.75 | 0.625 | 7.19 | 7.02 | 13.72 |
| 1 | 0.875 | 10.92 | 10.66 | 24.38 |
| 1.25 | 1.125 | 17.54 | 17.12 | 41.49 |
| 1.5 | 1.375 | 23.21 | 22.65 | 64.14 |
| 1.75 | 1.625 | 17.16 | 16.74 | 80.88 |
| 2 | 1.875 | 10.80 | 10.54 | 91.42 |
| 2.25 | 2.125 | 4.41 | 4.30 | 95.73 |
| 2.5 | 2.375 | 2.51 | 2.45 | 98.18 |
| 2.75 | 2.625 | 1.09 | 1.06 | 99.24 |
| 3 | 2.875 | 0.43 | 0.42 | 99.66 |
| 3.25 | 3.125 | 0.23 | 0.22 | 99.88 |
| 3.5 | 3.375 | 0.10 | 0.10 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.560 |
| **5** | 0.245 |
| **16** | 0.680 |
| **25** | 0.885 |
| **50** | 1.220 |
| **75** | 1.535 |
| **84** | 1.700 |
| **95** | 2.085 |
| **99** | 2.570 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.309 | 0.404 |
| Standard Deviation | 0.602 | 0.659 |
| Skewness | -1.102 | |
| Kurtosis | 9.151 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.190 | 1.200 |
| Standard Deviation | 0.510 | 0.534 |
| Skewness (1) | -0.059 | -0.059 |
| Skewness (2) | -0.108 | |
| Kurtosis | 0.804 | 1.160 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1840+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.292 mm** |
| **STD** | **0.647 mm** |
| **Skewness** | **-0.793** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.36 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.19 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

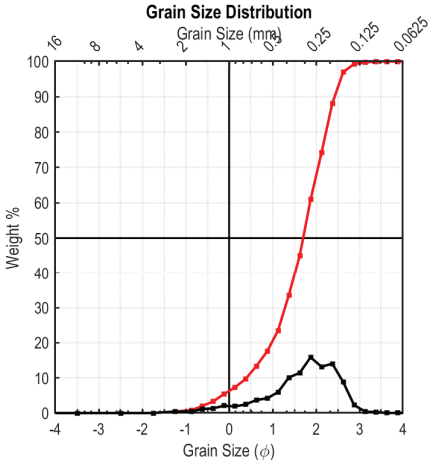
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.16 | 0.15 | 0.15 |
| -1 | -1.25 | 0.04 | 0.04 | 0.19 |
| -0.75 | -0.875 | 0.06 | 0.06 | 0.25 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.33 |
| -0.25 | -0.375 | 0.15 | 0.15 | 0.47 |
| 0 | -0.125 | 0.44 | 0.43 | 0.90 |
| 0.25 | 0.125 | 0.79 | 0.76 | 1.66 |
| 0.5 | 0.375 | 1.57 | 1.52 | 3.18 |
| 0.75 | 0.625 | 3.17 | 3.07 | 6.25 |
| 1 | 0.875 | 4.73 | 4.58 | 10.83 |
| 1.25 | 1.125 | 7.37 | 7.13 | 17.96 |
| 1.5 | 1.375 | 12.44 | 12.04 | 29.99 |
| 1.75 | 1.625 | 14.07 | 13.61 | 43.60 |
| 2 | 1.875 | 19.02 | 18.40 | 62.01 |
| 2.25 | 2.125 | 14.65 | 14.17 | 76.18 |
| 2.5 | 2.375 | 14.05 | 13.59 | 89.77 |
| 2.75 | 2.625 | 8.00 | 7.74 | 97.51 |
| 3 | 2.875 | 1.92 | 1.86 | 99.37 |
| 3.25 | 3.125 | 0.40 | 0.39 | 99.76 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.090 |
| **5** | 0.525 |
| **16** | 1.055 |
| **25** | 1.270 |
| **50** | 1.710 |
| **75** | 2.105 |
| **84** | 2.270 |
| **95** | 2.545 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.774 | 0.292 |
| Standard Deviation | 0.628 | 0.647 |
| Skewness | -0.793 | |
| Kurtosis | 4.798 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.663 | 1.678 |
| Standard Deviation | 0.607 | 0.610 |
| Skewness (1) | -0.078 | -0.126 |
| Skewness (2) | -0.288 | |
| Kurtosis | 0.663 | 0.991 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1840+00** |
| **Sample** | **Swash** |
| **Mean** | **0.314 mm** |
| **STD** | **0.569 mm** |
| **Skewness** | **-0.991** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.68 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.43 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.0 |

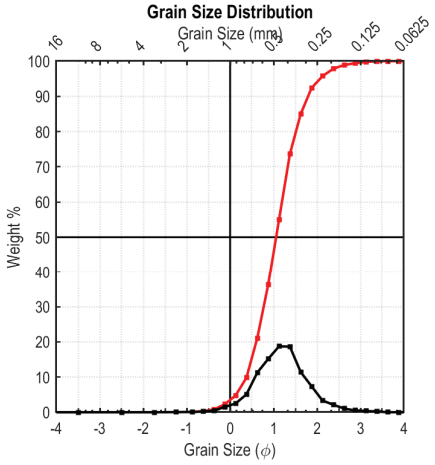
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.45 | 0.43 | 0.43 |
| -0.75 | -0.875 | 0.38 | 0.37 | 0.80 |
| -0.5 | -0.625 | 1.20 | 1.16 | 1.96 |
| -0.25 | -0.375 | 1.36 | 1.31 | 3.27 |
| 0 | -0.125 | 2.15 | 2.07 | 5.34 |
| 0.25 | 0.125 | 1.96 | 1.89 | 7.23 |
| 0.5 | 0.375 | 2.51 | 2.42 | 9.65 |
| 0.75 | 0.625 | 3.83 | 3.69 | 13.35 |
| 1 | 0.875 | 4.36 | 4.21 | 17.55 |
| 1.25 | 1.125 | 6.15 | 5.93 | 23.49 |
| 1.5 | 1.375 | 10.49 | 10.12 | 33.60 |
| 1.75 | 1.625 | 11.87 | 11.45 | 45.05 |
| 2 | 1.875 | 16.44 | 15.86 | 60.91 |
| 2.25 | 2.125 | 13.68 | 13.19 | 74.10 |
| 2.5 | 2.375 | 14.55 | 14.03 | 88.14 |
| 2.75 | 2.625 | 9.15 | 8.83 | 96.96 |
| 3 | 2.875 | 2.38 | 2.30 | 99.26 |
| 3.25 | 3.125 | 0.47 | 0.45 | 99.71 |
| 3.5 | 3.375 | 0.21 | 0.20 | 99.91 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.830 |
| **5** | -0.165 |
| **16** | 0.785 |
| **25** | 1.160 |
| **50** | 1.705 |
| **75** | 2.140 |
| **84** | 2.300 |
| **95** | 2.570 |
| **99** | 2.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.673 | 0.314 |
| Standard Deviation | 0.812 | 0.569 |
| Skewness | -0.991 | |
| Kurtosis | 3.914 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.542 | 1.597 |
| Standard Deviation | 0.757 | 0.793 |
| Skewness (1) | -0.215 | -0.291 |
| Skewness (2) | -0.663 | |
| Kurtosis | 0.805 | 1.144 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1850+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.438 mm** |
| **STD** | **0.666 mm** |
| **Skewness** | **0.211** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.29 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 10.8 |

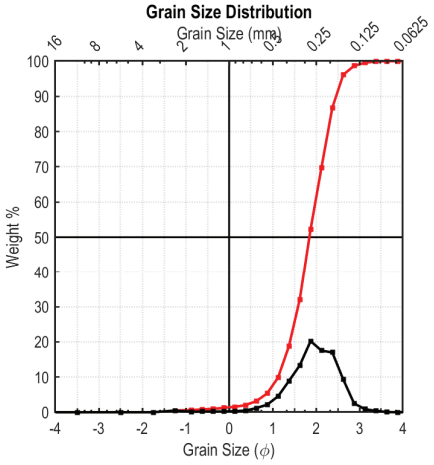
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.11 |
| -0.5 | -0.625 | 0.21 | 0.21 | 0.31 |
| -0.25 | -0.375 | 0.45 | 0.44 | 0.75 |
| 0 | -0.125 | 1.54 | 1.51 | 2.26 |
| 0.25 | 0.125 | 2.54 | 2.48 | 4.74 |
| 0.5 | 0.375 | 5.20 | 5.08 | 9.83 |
| 0.75 | 0.625 | 11.53 | 11.27 | 21.10 |
| 1 | 0.875 | 15.49 | 15.14 | 36.24 |
| 1.25 | 1.125 | 19.16 | 18.73 | 54.97 |
| 1.5 | 1.375 | 19.07 | 18.64 | 73.61 |
| 1.75 | 1.625 | 11.67 | 11.41 | 85.02 |
| 2 | 1.875 | 7.54 | 7.37 | 92.39 |
| 2.25 | 2.125 | 3.40 | 3.32 | 95.72 |
| 2.5 | 2.375 | 2.19 | 2.14 | 97.86 |
| 2.75 | 2.625 | 1.06 | 1.04 | 98.90 |
| 3 | 2.875 | 0.53 | 0.52 | 99.41 |
| 3.25 | 3.125 | 0.37 | 0.36 | 99.78 |
| 3.5 | 3.375 | 0.21 | 0.21 | 99.98 |
| 3.75 | 3.625 | 0.02 | 0.02 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.335 |
| **5** | 0.140 |
| **16** | 0.510 |
| **25** | 0.690 |
| **50** | 1.060 |
| **75** | 1.405 |
| **84** | 1.605 |
| **95** | 2.070 |
| **99** | 2.675 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.192 | 0.438 |
| Standard Deviation | 0.587 | 0.666 |
| Skewness | 0.211 | |
| Kurtosis | 3.913 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.057 | 1.058 |
| Standard Deviation | 0.548 | 0.566 |
| Skewness (1) | -0.005 | 0.021 |
| Skewness (2) | 0.082 | |
| Kurtosis | 0.763 | 1.106 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1850+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.263 mm** |
| **STD** | **0.660 mm** |
| **Skewness** | **-1.327** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.71 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.50 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.1 |

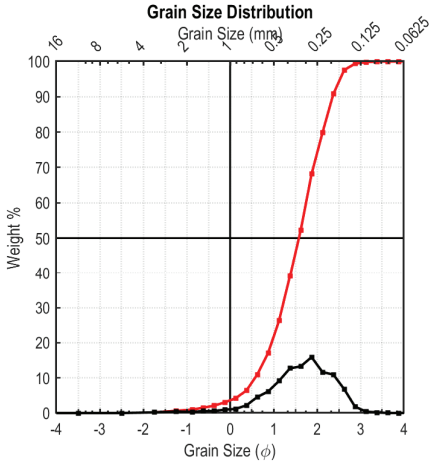
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.52 | 0.50 | 0.50 |
| -0.75 | -0.875 | 0.13 | 0.12 | 0.62 |
| -0.5 | -0.625 | 0.18 | 0.17 | 0.79 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.98 |
| 0 | -0.125 | 0.26 | 0.25 | 1.23 |
| 0.25 | 0.125 | 0.32 | 0.31 | 1.54 |
| 0.5 | 0.375 | 0.50 | 0.48 | 2.02 |
| 0.75 | 0.625 | 1.22 | 1.17 | 3.18 |
| 1 | 0.875 | 2.26 | 2.16 | 5.34 |
| 1.25 | 1.125 | 4.72 | 4.51 | 9.85 |
| 1.5 | 1.375 | 9.29 | 8.87 | 18.72 |
| 1.75 | 1.625 | 13.94 | 13.31 | 32.03 |
| 2 | 1.875 | 21.18 | 20.23 | 52.26 |
| 2.25 | 2.125 | 18.34 | 17.52 | 69.77 |
| 2.5 | 2.375 | 17.79 | 16.99 | 86.76 |
| 2.75 | 2.625 | 9.80 | 9.36 | 96.12 |
| 3 | 2.875 | 2.65 | 2.53 | 98.65 |
| 3.25 | 3.125 | 0.90 | 0.86 | 99.51 |
| 3.5 | 3.375 | 0.43 | 0.41 | 99.92 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.360 |
| **5** | 0.835 |
| **16** | 1.300 |
| **25** | 1.495 |
| **50** | 1.845 |
| **75** | 2.200 |
| **84** | 2.335 |
| **95** | 2.595 |
| **99** | 2.975 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.925 | 0.263 |
| Standard Deviation | 0.598 | 0.660 |
| Skewness | -1.327 | |
| Kurtosis | 7.738 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.817 | 1.827 |
| Standard Deviation | 0.518 | 0.525 |
| Skewness (1) | -0.053 | -0.100 |
| Skewness (2) | -0.251 | |
| Kurtosis | 0.700 | 1.023 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1850+00** |
| **Sample** | **Swash** |
| **Mean** | **0.324 mm** |
| **STD** | **0.600 mm** |
| **Skewness** | **-0.896** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.03 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.63 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.4 |

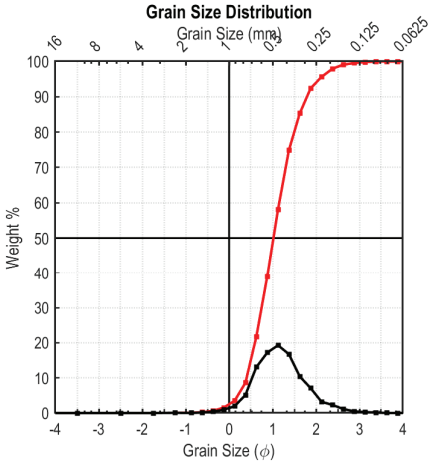
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.20 | 0.19 | 0.19 |
| -1 | -1.25 | 0.46 | 0.44 | 0.63 |
| -0.75 | -0.875 | 0.35 | 0.34 | 0.97 |
| -0.5 | -0.625 | 0.55 | 0.53 | 1.50 |
| -0.25 | -0.375 | 0.61 | 0.59 | 2.09 |
| 0 | -0.125 | 0.99 | 0.95 | 3.04 |
| 0.25 | 0.125 | 1.22 | 1.17 | 4.21 |
| 0.5 | 0.375 | 2.28 | 2.19 | 6.40 |
| 0.75 | 0.625 | 4.76 | 4.58 | 10.98 |
| 1 | 0.875 | 6.38 | 6.13 | 17.11 |
| 1.25 | 1.125 | 9.51 | 9.14 | 26.25 |
| 1.5 | 1.375 | 13.21 | 12.70 | 38.95 |
| 1.75 | 1.625 | 13.82 | 13.28 | 52.23 |
| 2 | 1.875 | 16.55 | 15.91 | 68.14 |
| 2.25 | 2.125 | 12.13 | 11.66 | 79.80 |
| 2.5 | 2.375 | 11.39 | 10.95 | 90.75 |
| 2.75 | 2.625 | 7.08 | 6.81 | 97.56 |
| 3 | 2.875 | 1.87 | 1.80 | 99.36 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.79 |
| 3.5 | 3.375 | 0.17 | 0.16 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.860 |
| **5** | 0.215 |
| **16** | 0.830 |
| **25** | 1.090 |
| **50** | 1.585 |
| **75** | 2.020 |
| **84** | 2.220 |
| **95** | 2.530 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.624 | 0.324 |
| Standard Deviation | 0.738 | 0.600 |
| Skewness | -0.896 | |
| Kurtosis | 4.687 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.525 | 1.545 |
| Standard Deviation | 0.695 | 0.698 |
| Skewness (1) | -0.086 | -0.135 |
| Skewness (2) | -0.306 | |
| Kurtosis | 0.665 | 1.020 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1860+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.441 mm** |
| **STD** | **0.673 mm** |
| **Skewness** | **0.389** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.39 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.06 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 8.8 |

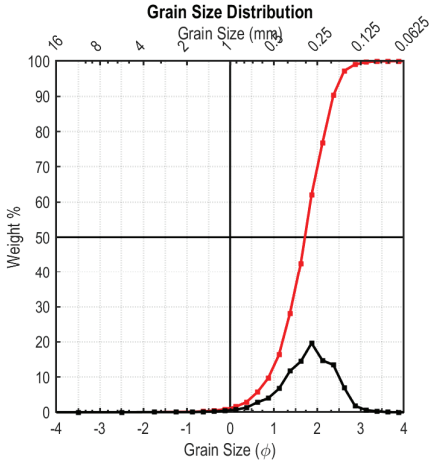
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.06 | 0.06 | 0.06 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.08 |
| -0.5 | -0.625 | 0.15 | 0.15 | 0.22 |
| -0.25 | -0.375 | 0.39 | 0.38 | 0.61 |
| 0 | -0.125 | 0.96 | 0.94 | 1.54 |
| 0.25 | 0.125 | 1.98 | 1.93 | 3.48 |
| 0.5 | 0.375 | 5.26 | 5.14 | 8.61 |
| 0.75 | 0.625 | 13.36 | 13.05 | 21.66 |
| 1 | 0.875 | 17.57 | 17.16 | 38.82 |
| 1.25 | 1.125 | 19.75 | 19.29 | 58.11 |
| 1.5 | 1.375 | 17.15 | 16.75 | 74.86 |
| 1.75 | 1.625 | 10.67 | 10.42 | 85.28 |
| 2 | 1.875 | 7.26 | 7.09 | 92.37 |
| 2.25 | 2.125 | 3.30 | 3.22 | 95.60 |
| 2.5 | 2.375 | 2.36 | 2.30 | 97.90 |
| 2.75 | 2.625 | 1.20 | 1.17 | 99.07 |
| 3 | 2.875 | 0.48 | 0.47 | 99.54 |
| 3.25 | 3.125 | 0.29 | 0.28 | 99.82 |
| 3.5 | 3.375 | 0.13 | 0.13 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.00 | 0.00 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.270 |
| **5** | 0.200 |
| **16** | 0.515 |
| **25** | 0.675 |
| **50** | 1.020 |
| **75** | 1.380 |
| **84** | 1.595 |
| **95** | 2.080 |
| **99** | 2.610 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.181 | 0.441 |
| Standard Deviation | 0.572 | 0.673 |
| Skewness | 0.389 | |
| Kurtosis | 4.051 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.055 | 1.043 |
| Standard Deviation | 0.540 | 0.555 |
| Skewness (1) | 0.065 | 0.096 |
| Skewness (2) | 0.222 | |
| Kurtosis | 0.741 | 1.093 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1860+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.289 mm** |
| **STD** | **0.657 mm** |
| **Skewness** | **-0.681** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.99 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.8 |

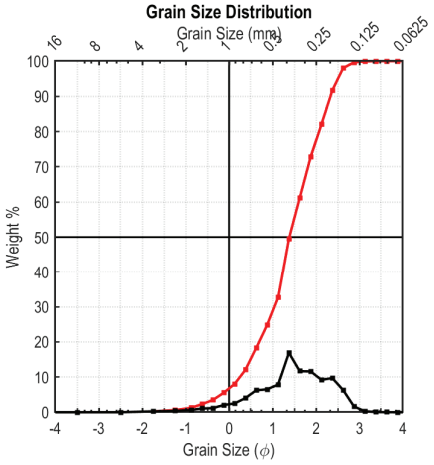
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.04 | 0.04 | 0.04 |
| -1 | -1.25 | 0.04 | 0.04 | 0.08 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.12 |
| -0.5 | -0.625 | 0.14 | 0.14 | 0.25 |
| -0.25 | -0.375 | 0.20 | 0.19 | 0.45 |
| 0 | -0.125 | 0.42 | 0.41 | 0.85 |
| 0.25 | 0.125 | 0.71 | 0.69 | 1.54 |
| 0.5 | 0.375 | 1.38 | 1.34 | 2.88 |
| 0.75 | 0.625 | 2.88 | 2.80 | 5.68 |
| 1 | 0.875 | 4.10 | 3.98 | 9.66 |
| 1.25 | 1.125 | 6.90 | 6.70 | 16.36 |
| 1.5 | 1.375 | 12.03 | 11.68 | 28.04 |
| 1.75 | 1.625 | 14.85 | 14.42 | 42.46 |
| 2 | 1.875 | 20.21 | 19.62 | 62.08 |
| 2.25 | 2.125 | 15.15 | 14.71 | 76.79 |
| 2.5 | 2.375 | 13.87 | 13.47 | 90.26 |
| 2.75 | 2.625 | 7.19 | 6.98 | 97.24 |
| 3 | 2.875 | 1.87 | 1.82 | 99.06 |
| 3.25 | 3.125 | 0.65 | 0.63 | 99.69 |
| 3.5 | 3.375 | 0.28 | 0.27 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.070 |
| **5** | 0.565 |
| **16** | 1.110 |
| **25** | 1.310 |
| **50** | 1.720 |
| **75** | 2.095 |
| **84** | 2.260 |
| **95** | 2.545 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.791 | 0.289 |
| Standard Deviation | 0.606 | 0.657 |
| Skewness | -0.681 | |
| Kurtosis | 4.300 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.685 | 1.697 |
| Standard Deviation | 0.575 | 0.587 |
| Skewness (1) | -0.061 | -0.114 |
| Skewness (2) | -0.287 | |
| Kurtosis | 0.722 | 1.034 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1860+00** |
| **Sample** | **Swash** |
| **Mean** | **0.363 mm** |
| **STD** | **0.568 mm** |
| **Skewness** | **-0.702** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 112.72 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.60 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 9.1 |

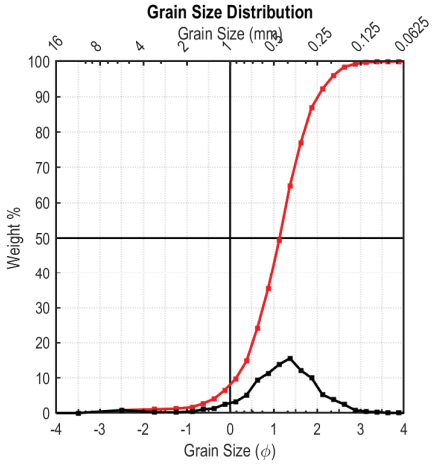
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.28 | 0.25 | 0.25 |
| -1 | -1.25 | 0.40 | 0.35 | 0.60 |
| -0.75 | -0.875 | 0.73 | 0.65 | 1.25 |
| -0.5 | -0.625 | 1.18 | 1.05 | 2.30 |
| -0.25 | -0.375 | 1.33 | 1.18 | 3.48 |
| 0 | -0.125 | 2.30 | 2.04 | 5.52 |
| 0.25 | 0.125 | 2.82 | 2.50 | 8.02 |
| 0.5 | 0.375 | 4.54 | 4.03 | 12.05 |
| 0.75 | 0.625 | 7.03 | 6.24 | 18.28 |
| 1 | 0.875 | 7.34 | 6.51 | 24.80 |
| 1.25 | 1.125 | 8.86 | 7.86 | 32.66 |
| 1.5 | 1.375 | 19.05 | 16.90 | 49.56 |
| 1.75 | 1.625 | 13.15 | 11.67 | 61.22 |
| 2 | 1.875 | 13.07 | 11.60 | 72.82 |
| 2.25 | 2.125 | 10.40 | 9.23 | 82.04 |
| 2.5 | 2.375 | 10.93 | 9.70 | 91.74 |
| 2.75 | 2.625 | 7.10 | 6.30 | 98.04 |
| 3 | 2.875 | 1.82 | 1.61 | 99.65 |
| 3.25 | 3.125 | 0.31 | 0.28 | 99.93 |
| 3.5 | 3.375 | 0.07 | 0.06 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.020 |
| **5** | -0.190 |
| **16** | 0.535 |
| **25** | 0.880 |
| **50** | 1.385 |
| **75** | 1.935 |
| **84** | 2.175 |
| **95** | 2.505 |
| **99** | 2.775 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.463 | 0.363 |
| Standard Deviation | 0.815 | 0.568 |
| Skewness | -0.702 | |
| Kurtosis | 3.598 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.355 | 1.365 |
| Standard Deviation | 0.820 | 0.818 |
| Skewness (1) | -0.037 | -0.103 |
| Skewness (2) | -0.277 | |
| Kurtosis | 0.643 | 1.047 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1870+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.434 mm** |
| **STD** | **0.569 mm** |
| **Skewness** | **-0.903** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.06 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.40 |
| % gravel (>4 mm) | 0.83 |
| CaCO3 | 10.6 |

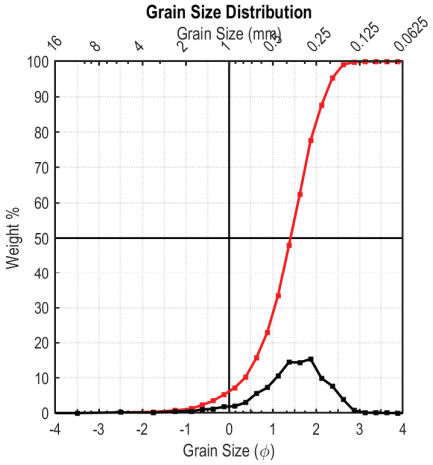
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.86 | 0.83 | 0.83 |
| -1.5 | -1.75 | 0.24 | 0.23 | 1.06 |
| -1 | -1.25 | 0.18 | 0.17 | 1.23 |
| -0.75 | -0.875 | 0.48 | 0.46 | 1.69 |
| -0.5 | -0.625 | 1.08 | 1.04 | 2.73 |
| -0.25 | -0.375 | 1.35 | 1.30 | 4.03 |
| 0 | -0.125 | 2.58 | 2.48 | 6.51 |
| 0.25 | 0.125 | 3.33 | 3.20 | 9.71 |
| 0.5 | 0.375 | 5.27 | 5.06 | 14.77 |
| 0.75 | 0.625 | 9.76 | 9.38 | 24.15 |
| 1 | 0.875 | 11.76 | 11.30 | 35.45 |
| 1.25 | 1.125 | 14.34 | 13.78 | 49.23 |
| 1.5 | 1.375 | 16.22 | 15.59 | 64.82 |
| 1.75 | 1.625 | 12.66 | 12.17 | 76.98 |
| 2 | 1.875 | 10.38 | 9.98 | 86.96 |
| 2.25 | 2.125 | 5.45 | 5.24 | 92.20 |
| 2.5 | 2.375 | 3.96 | 3.81 | 96.00 |
| 2.75 | 2.625 | 2.54 | 2.44 | 98.44 |
| 3 | 2.875 | 0.85 | 0.82 | 99.26 |
| 3.25 | 3.125 | 0.44 | 0.42 | 99.68 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.90 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.96 |
| 4 | 3.875 | 0.02 | 0.02 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.935 |
| **5** | -0.275 |
| **16** | 0.410 |
| **25** | 0.645 |
| **50** | 1.135 |
| **75** | 1.585 |
| **84** | 1.800 |
| **95** | 2.310 |
| **99** | 2.795 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.203 | 0.434 |
| Standard Deviation | 0.815 | 0.569 |
| Skewness | -0.903 | |
| Kurtosis | 6.087 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.105 | 1.115 |
| Standard Deviation | 0.695 | 0.739 |
| Skewness (1) | -0.043 | -0.067 |
| Skewness (2) | -0.169 | |
| Kurtosis | 0.860 | 1.127 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1870+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.368 mm** |
| **STD** | **0.588 mm** |
| **Skewness** | **-1.006** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.87 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.55 |
| % gravel (>4 mm) | 0.18 |
| CaCO3 | 10.4 |

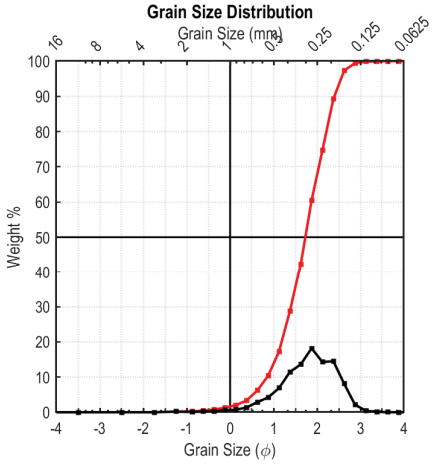
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.19 | 0.18 | 0.18 |
| -1.5 | -1.75 | 0.13 | 0.13 | 0.31 |
| -1 | -1.25 | 0.44 | 0.42 | 0.73 |
| -0.75 | -0.875 | 0.53 | 0.51 | 1.24 |
| -0.5 | -0.625 | 1.05 | 1.01 | 2.25 |
| -0.25 | -0.375 | 1.23 | 1.18 | 3.44 |
| 0 | -0.125 | 1.85 | 1.78 | 5.22 |
| 0.25 | 0.125 | 2.01 | 1.94 | 7.15 |
| 0.5 | 0.375 | 3.10 | 2.98 | 10.14 |
| 0.75 | 0.625 | 5.74 | 5.53 | 15.66 |
| 1 | 0.875 | 7.50 | 7.22 | 22.88 |
| 1.25 | 1.125 | 10.96 | 10.55 | 33.44 |
| 1.5 | 1.375 | 15.02 | 14.46 | 47.90 |
| 1.75 | 1.625 | 14.95 | 14.39 | 62.29 |
| 2 | 1.875 | 15.97 | 15.37 | 77.66 |
| 2.25 | 2.125 | 10.30 | 9.92 | 87.58 |
| 2.5 | 2.375 | 8.00 | 7.70 | 95.28 |
| 2.75 | 2.625 | 3.98 | 3.83 | 99.11 |
| 3 | 2.875 | 0.72 | 0.69 | 99.81 |
| 3.25 | 3.125 | 0.13 | 0.13 | 99.93 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.055 |
| **5** | -0.155 |
| **16** | 0.635 |
| **25** | 0.925 |
| **50** | 1.410 |
| **75** | 1.830 |
| **84** | 2.035 |
| **95** | 2.365 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.442 | 0.368 |
| Standard Deviation | 0.765 | 0.588 |
| Skewness | -1.006 | |
| Kurtosis | 4.978 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.335 | 1.360 |
| Standard Deviation | 0.700 | 0.732 |
| Skewness (1) | -0.107 | -0.175 |
| Skewness (2) | -0.436 | |
| Kurtosis | 0.800 | 1.141 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.289 mm** |
| **STD** | **0.645 mm** |
| **Skewness** | **-0.831** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.88 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.18 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.4 |

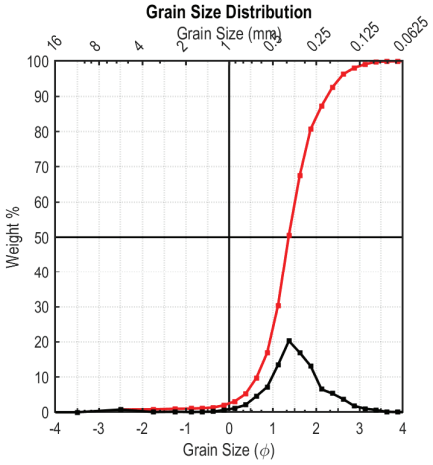
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.19 | 0.18 | 0.18 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.25 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.46 |
| -0.25 | -0.375 | 0.29 | 0.28 | 0.74 |
| 0 | -0.125 | 0.56 | 0.54 | 1.28 |
| 0.25 | 0.125 | 0.71 | 0.69 | 1.97 |
| 0.5 | 0.375 | 1.39 | 1.35 | 3.32 |
| 0.75 | 0.625 | 2.94 | 2.86 | 6.18 |
| 1 | 0.875 | 4.33 | 4.21 | 10.39 |
| 1.25 | 1.125 | 7.07 | 6.87 | 17.26 |
| 1.5 | 1.375 | 11.77 | 11.44 | 28.70 |
| 1.75 | 1.625 | 13.98 | 13.59 | 42.29 |
| 2 | 1.875 | 18.70 | 18.18 | 60.47 |
| 2.25 | 2.125 | 14.66 | 14.25 | 74.72 |
| 2.5 | 2.375 | 14.94 | 14.52 | 89.24 |
| 2.75 | 2.625 | 8.31 | 8.08 | 97.32 |
| 3 | 2.875 | 2.19 | 2.13 | 99.45 |
| 3.25 | 3.125 | 0.42 | 0.41 | 99.85 |
| 3.5 | 3.375 | 0.12 | 0.12 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.255 |
| **5** | 0.520 |
| **16** | 1.080 |
| **25** | 1.295 |
| **50** | 1.730 |
| **75** | 2.130 |
| **84** | 2.285 |
| **95** | 2.555 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.790 | 0.289 |
| Standard Deviation | 0.633 | 0.645 |
| Skewness | -0.831 | |
| Kurtosis | 4.459 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.683 | 1.698 |
| Standard Deviation | 0.603 | 0.610 |
| Skewness (1) | -0.079 | -0.134 |
| Skewness (2) | -0.320 | |
| Kurtosis | 0.689 | 0.999 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1880+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.352 mm** |
| **STD** | **0.602 mm** |
| **Skewness** | **-1.154** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.09 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.21 |
| % gravel (>4 mm) | 0.77 |
| CaCO3 | 7.2 |

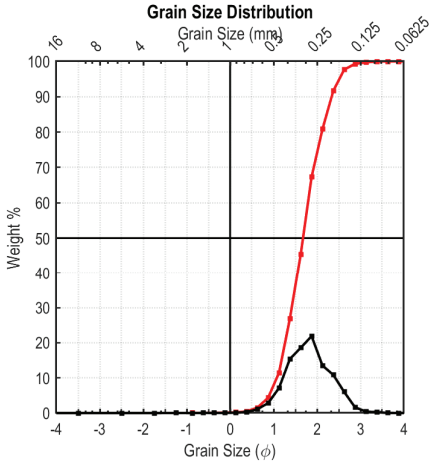
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.79 | 0.77 | 0.77 |
| -1.5 | -1.75 | 0.07 | 0.07 | 0.83 |
| -1 | -1.25 | 0.15 | 0.15 | 0.98 |
| -0.75 | -0.875 | 0.07 | 0.07 | 1.05 |
| -0.5 | -0.625 | 0.12 | 0.12 | 1.16 |
| -0.25 | -0.375 | 0.18 | 0.17 | 1.34 |
| 0 | -0.125 | 0.65 | 0.63 | 1.97 |
| 0.25 | 0.125 | 1.15 | 1.12 | 3.08 |
| 0.5 | 0.375 | 2.15 | 2.09 | 5.17 |
| 0.75 | 0.625 | 4.67 | 4.53 | 9.70 |
| 1 | 0.875 | 7.41 | 7.19 | 16.89 |
| 1.25 | 1.125 | 13.85 | 13.43 | 30.32 |
| 1.5 | 1.375 | 20.90 | 20.27 | 50.60 |
| 1.75 | 1.625 | 17.46 | 16.94 | 67.53 |
| 2 | 1.875 | 13.56 | 13.15 | 80.69 |
| 2.25 | 2.125 | 6.73 | 6.53 | 87.22 |
| 2.5 | 2.375 | 5.49 | 5.33 | 92.54 |
| 2.75 | 2.625 | 3.85 | 3.73 | 96.28 |
| 3 | 2.875 | 1.87 | 1.81 | 98.09 |
| 3.25 | 3.125 | 1.06 | 1.03 | 99.12 |
| 3.5 | 3.375 | 0.69 | 0.67 | 99.79 |
| 3.75 | 3.625 | 0.14 | 0.14 | 99.92 |
| 4 | 3.875 | 0.05 | 0.05 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.140 |
| **5** | 0.355 |
| **16** | 0.845 |
| **25** | 1.025 |
| **50** | 1.370 |
| **75** | 1.765 |
| **84** | 2.000 |
| **95** | 2.540 |
| **99** | 3.095 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.505 | 0.352 |
| Standard Deviation | 0.732 | 0.602 |
| Skewness | -1.154 | |
| Kurtosis | 9.540 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.422 | 1.405 |
| Standard Deviation | 0.578 | 0.620 |
| Skewness (1) | 0.091 | 0.081 |
| Skewness (2) | 0.134 | |
| Kurtosis | 0.892 | 1.210 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1880+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.286 mm** |
| **STD** | **0.710 mm** |
| **Skewness** | **-0.026** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.67 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.0 |

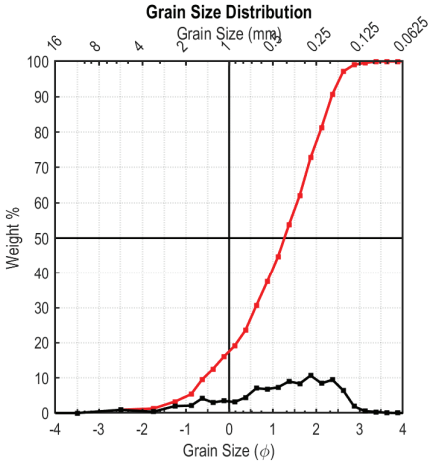
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.01 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.04 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.06 |
| 0 | -0.125 | 0.04 | 0.04 | 0.10 |
| 0.25 | 0.125 | 0.09 | 0.09 | 0.19 |
| 0.5 | 0.375 | 0.27 | 0.26 | 0.45 |
| 0.75 | 0.625 | 1.10 | 1.07 | 1.52 |
| 1 | 0.875 | 2.91 | 2.83 | 4.35 |
| 1.25 | 1.125 | 7.31 | 7.12 | 11.47 |
| 1.5 | 1.375 | 15.80 | 15.39 | 26.86 |
| 1.75 | 1.625 | 19.06 | 18.56 | 45.43 |
| 2 | 1.875 | 22.46 | 21.88 | 67.30 |
| 2.25 | 2.125 | 13.88 | 13.52 | 80.82 |
| 2.5 | 2.375 | 11.14 | 10.85 | 91.67 |
| 2.75 | 2.625 | 6.17 | 6.01 | 97.68 |
| 3 | 2.875 | 1.67 | 1.63 | 99.31 |
| 3.25 | 3.125 | 0.44 | 0.43 | 99.74 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.96 |
| 3.75 | 3.625 | 0.04 | 0.04 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.505 |
| **5** | 0.900 |
| **16** | 1.200 |
| **25** | 1.345 |
| **50** | 1.675 |
| **75** | 2.015 |
| **84** | 2.200 |
| **95** | 2.515 |
| **99** | 2.830 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.808 | 0.286 |
| Standard Deviation | 0.493 | 0.710 |
| Skewness | -0.026 | |
| Kurtosis | 3.406 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.700 | 1.692 |
| Standard Deviation | 0.500 | 0.495 |
| Skewness (1) | 0.050 | 0.045 |
| Skewness (2) | 0.065 | |
| Kurtosis | 0.615 | 0.988 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1880+00** |
| **Sample** | **Swash** |
| **Mean** | **0.431 mm** |
| **STD** | **0.463 mm** |
| **Skewness** | **-0.722** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 102.94 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 2.34 |
| % gravel (>4 mm) | 0.90 |
| CaCO3 | 11.1 |

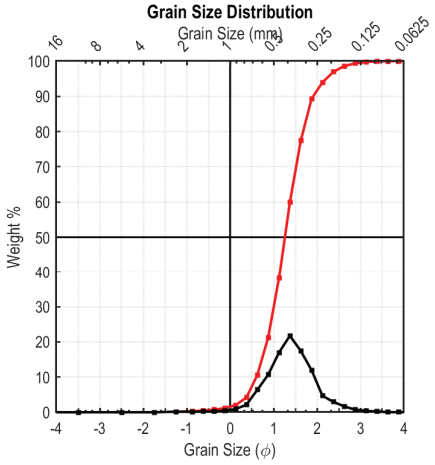
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.93 | 0.90 | 0.90 |
| -1.5 | -1.75 | 0.38 | 0.37 | 1.27 |
| -1 | -1.25 | 2.03 | 1.97 | 3.24 |
| -0.75 | -0.875 | 2.18 | 2.12 | 5.36 |
| -0.5 | -0.625 | 4.26 | 4.14 | 9.50 |
| -0.25 | -0.375 | 3.09 | 3.00 | 12.50 |
| 0 | -0.125 | 3.59 | 3.49 | 15.99 |
| 0.25 | 0.125 | 3.21 | 3.12 | 19.11 |
| 0.5 | 0.375 | 4.57 | 4.44 | 23.55 |
| 0.75 | 0.625 | 7.25 | 7.04 | 30.59 |
| 1 | 0.875 | 7.01 | 6.81 | 37.40 |
| 1.25 | 1.125 | 7.53 | 7.31 | 44.72 |
| 1.5 | 1.375 | 9.26 | 9.00 | 53.71 |
| 1.75 | 1.625 | 8.61 | 8.36 | 62.07 |
| 2 | 1.875 | 11.00 | 10.69 | 72.76 |
| 2.25 | 2.125 | 8.69 | 8.44 | 81.20 |
| 2.5 | 2.375 | 9.75 | 9.47 | 90.67 |
| 2.75 | 2.625 | 6.66 | 6.47 | 97.14 |
| 3 | 2.875 | 1.97 | 1.91 | 99.06 |
| 3.25 | 3.125 | 0.54 | 0.52 | 99.58 |
| 3.5 | 3.375 | 0.35 | 0.34 | 99.92 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.305 |
| **5** | -0.940 |
| **16** | -0.125 |
| **25** | 0.425 |
| **50** | 1.270 |
| **75** | 1.940 |
| **84** | 2.200 |
| **95** | 2.540 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.213 | 0.431 |
| Standard Deviation | 1.109 | 0.463 |
| Skewness | -0.722 | |
| Kurtosis | 3.174 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.038 | 1.115 |
| Standard Deviation | 1.163 | 1.109 |
| Skewness (1) | -0.200 | -0.235 |
| Skewness (2) | -0.404 | |
| Kurtosis | 0.497 | 0.941 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1890+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.382 mm** |
| **STD** | **0.679 mm** |
| **Skewness** | **-0.070** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.59 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 7.7 |

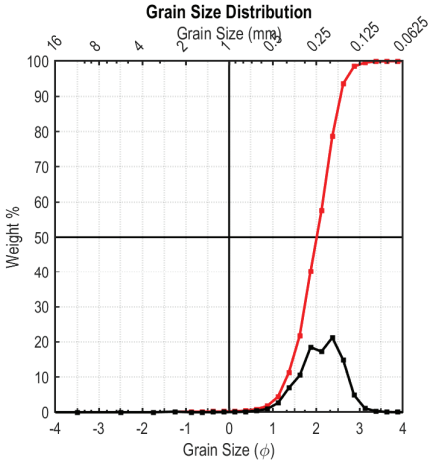
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.12 | 0.12 | 0.28 |
| -0.5 | -0.625 | 0.21 | 0.20 | 0.49 |
| -0.25 | -0.375 | 0.21 | 0.20 | 0.69 |
| 0 | -0.125 | 0.49 | 0.48 | 1.17 |
| 0.25 | 0.125 | 0.88 | 0.86 | 2.03 |
| 0.5 | 0.375 | 2.22 | 2.16 | 4.19 |
| 0.75 | 0.625 | 6.52 | 6.36 | 10.55 |
| 1 | 0.875 | 10.95 | 10.67 | 21.22 |
| 1.25 | 1.125 | 17.42 | 16.98 | 38.20 |
| 1.5 | 1.375 | 22.30 | 21.74 | 59.94 |
| 1.75 | 1.625 | 17.90 | 17.45 | 77.39 |
| 2 | 1.875 | 12.24 | 11.93 | 89.32 |
| 2.25 | 2.125 | 4.78 | 4.66 | 93.98 |
| 2.5 | 2.375 | 3.03 | 2.95 | 96.93 |
| 2.75 | 2.625 | 1.72 | 1.68 | 98.61 |
| 3 | 2.875 | 0.76 | 0.74 | 99.35 |
| 3.25 | 3.125 | 0.42 | 0.41 | 99.76 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.215 |
| **5** | 0.405 |
| **16** | 0.755 |
| **25** | 0.930 |
| **50** | 1.260 |
| **75** | 1.590 |
| **84** | 1.765 |
| **95** | 2.210 |
| **99** | 2.760 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.389 | 0.382 |
| Standard Deviation | 0.559 | 0.679 |
| Skewness | -0.070 | |
| Kurtosis | 4.834 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.260 | 1.260 |
| Standard Deviation | 0.505 | 0.526 |
| Skewness (1) | 0.000 | 0.026 |
| Skewness (2) | 0.094 | |
| Kurtosis | 0.787 | 1.121 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1890+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.233 mm** |
| **STD** | **0.706 mm** |
| **Skewness** | **-0.835** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 101.76 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.17 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.3 |

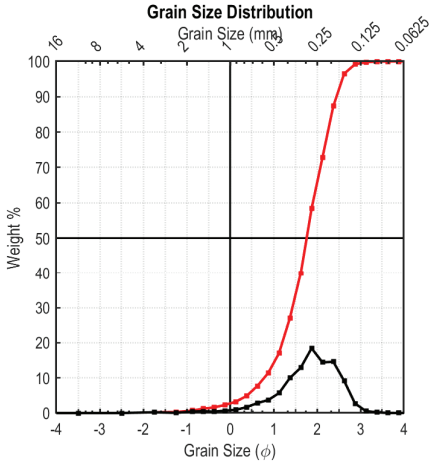
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.17 | 0.17 | 0.17 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.17 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.17 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.19 |
| 0 | -0.125 | 0.03 | 0.03 | 0.22 |
| 0.25 | 0.125 | 0.07 | 0.07 | 0.28 |
| 0.5 | 0.375 | 0.15 | 0.15 | 0.43 |
| 0.75 | 0.625 | 0.43 | 0.42 | 0.85 |
| 1 | 0.875 | 0.93 | 0.91 | 1.77 |
| 1.25 | 1.125 | 2.68 | 2.63 | 4.40 |
| 1.5 | 1.375 | 7.03 | 6.91 | 11.31 |
| 1.75 | 1.625 | 10.65 | 10.47 | 21.78 |
| 2 | 1.875 | 18.83 | 18.50 | 40.28 |
| 2.25 | 2.125 | 17.54 | 17.24 | 57.52 |
| 2.5 | 2.375 | 21.58 | 21.21 | 78.72 |
| 2.75 | 2.625 | 15.13 | 14.87 | 93.59 |
| 3 | 2.875 | 4.97 | 4.88 | 98.48 |
| 3.25 | 3.125 | 1.13 | 1.11 | 99.59 |
| 3.5 | 3.375 | 0.33 | 0.32 | 99.91 |
| 3.75 | 3.625 | 0.07 | 0.07 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.665 |
| **5** | 1.145 |
| **16** | 1.485 |
| **25** | 1.670 |
| **50** | 2.015 |
| **75** | 2.330 |
| **84** | 2.465 |
| **95** | 2.695 |
| **99** | 2.995 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.100 | 0.233 |
| Standard Deviation | 0.501 | 0.706 |
| Skewness | -0.835 | |
| Kurtosis | 6.256 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.975 | 1.988 |
| Standard Deviation | 0.490 | 0.480 |
| Skewness (1) | -0.082 | -0.102 |
| Skewness (2) | -0.194 | |
| Kurtosis | 0.582 | 0.962 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1890+00** |
| **Sample** | **Swash** |
| **Mean** | **0.288 mm** |
| **STD** | **0.616 mm** |
| **Skewness** | **-1.176** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.13 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

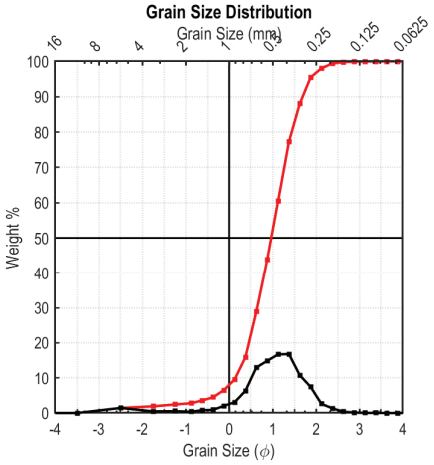
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.23 | 0.22 | 0.22 |
| -1 | -1.25 | 0.05 | 0.05 | 0.27 |
| -0.75 | -0.875 | 0.44 | 0.43 | 0.70 |
| -0.5 | -0.625 | 0.53 | 0.51 | 1.21 |
| -0.25 | -0.375 | 0.40 | 0.39 | 1.60 |
| 0 | -0.125 | 0.70 | 0.68 | 2.28 |
| 0.25 | 0.125 | 0.94 | 0.91 | 3.19 |
| 0.5 | 0.375 | 1.70 | 1.65 | 4.84 |
| 0.75 | 0.625 | 2.93 | 2.84 | 7.68 |
| 1 | 0.875 | 3.81 | 3.69 | 11.37 |
| 1.25 | 1.125 | 5.84 | 5.66 | 17.04 |
| 1.5 | 1.375 | 10.29 | 9.98 | 27.01 |
| 1.75 | 1.625 | 13.31 | 12.91 | 39.92 |
| 2 | 1.875 | 19.02 | 18.44 | 58.36 |
| 2.25 | 2.125 | 14.86 | 14.41 | 72.77 |
| 2.5 | 2.375 | 15.05 | 14.59 | 87.37 |
| 2.75 | 2.625 | 9.43 | 9.14 | 96.51 |
| 3 | 2.875 | 2.78 | 2.70 | 99.20 |
| 3.25 | 3.125 | 0.58 | 0.56 | 99.77 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.01 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.730 |
| **5** | 0.390 |
| **16** | 1.080 |
| **25** | 1.325 |
| **50** | 1.760 |
| **75** | 2.165 |
| **84** | 2.315 |
| **95** | 2.585 |
| **99** | 2.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.796 | 0.288 |
| Standard Deviation | 0.699 | 0.616 |
| Skewness | -1.176 | |
| Kurtosis | 5.583 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.698 | 1.718 |
| Standard Deviation | 0.617 | 0.641 |
| Skewness (1) | -0.101 | -0.175 |
| Skewness (2) | -0.441 | |
| Kurtosis | 0.777 | 1.071 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1900+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.496 mm** |
| **STD** | **0.588 mm** |
| **Skewness** | **-1.683** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Medium Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.01 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.98 |
| % gravel (>4 mm) | 1.44 |
| CaCO3 | 10.4 |

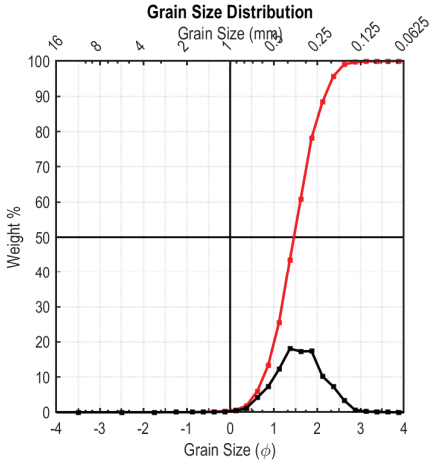
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 1.50 | 1.44 | 1.44 |
| -1.5 | -1.75 | 0.48 | 0.46 | 1.90 |
| -1 | -1.25 | 0.54 | 0.52 | 2.42 |
| -0.75 | -0.875 | 0.38 | 0.37 | 2.79 |
| -0.5 | -0.625 | 0.83 | 0.80 | 3.59 |
| -0.25 | -0.375 | 0.92 | 0.88 | 4.47 |
| 0 | -0.125 | 2.10 | 2.02 | 6.49 |
| 0.25 | 0.125 | 3.21 | 3.09 | 9.58 |
| 0.5 | 0.375 | 6.58 | 6.33 | 15.90 |
| 0.75 | 0.625 | 13.50 | 12.98 | 28.88 |
| 1 | 0.875 | 15.46 | 14.86 | 43.75 |
| 1.25 | 1.125 | 17.37 | 16.70 | 60.45 |
| 1.5 | 1.375 | 17.48 | 16.81 | 77.25 |
| 1.75 | 1.625 | 11.21 | 10.78 | 88.03 |
| 2 | 1.875 | 7.74 | 7.44 | 95.47 |
| 2.25 | 2.125 | 2.70 | 2.60 | 98.07 |
| 2.5 | 2.375 | 1.40 | 1.35 | 99.41 |
| 2.75 | 2.625 | 0.40 | 0.38 | 99.80 |
| 3 | 2.875 | 0.13 | 0.12 | 99.92 |
| 3.25 | 3.125 | 0.05 | 0.05 | 99.97 |
| 3.5 | 3.375 | 0.02 | 0.02 | 99.99 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.805 |
| **5** | -0.310 |
| **16** | 0.375 |
| **25** | 0.550 |
| **50** | 0.970 |
| **75** | 1.340 |
| **84** | 1.530 |
| **95** | 1.860 |
| **99** | 2.300 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.011 | 0.496 |
| Standard Deviation | 0.765 | 0.588 |
| Skewness | -1.683 | |
| Kurtosis | 8.791 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.952 | 0.958 |
| Standard Deviation | 0.577 | 0.618 |
| Skewness (1) | -0.030 | -0.105 |
| Skewness (2) | -0.338 | |
| Kurtosis | 0.879 | 1.126 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1900+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.332 mm** |
| **STD** | **0.688 mm** |
| **Skewness** | **-0.116** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.40 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

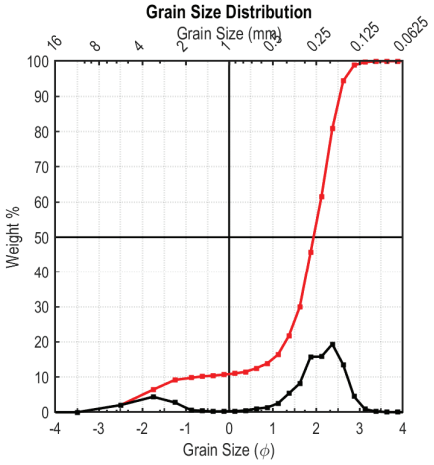
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.02 |
| -0.5 | -0.625 | 0.08 | 0.08 | 0.10 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.16 |
| 0 | -0.125 | 0.17 | 0.16 | 0.33 |
| 0.25 | 0.125 | 0.36 | 0.34 | 0.67 |
| 0.5 | 0.375 | 1.22 | 1.17 | 1.84 |
| 0.75 | 0.625 | 4.34 | 4.16 | 6.00 |
| 1 | 0.875 | 7.59 | 7.27 | 13.27 |
| 1.25 | 1.125 | 12.76 | 12.22 | 25.49 |
| 1.5 | 1.375 | 18.86 | 18.07 | 43.55 |
| 1.75 | 1.625 | 18.06 | 17.30 | 60.85 |
| 2 | 1.875 | 18.12 | 17.36 | 78.21 |
| 2.25 | 2.125 | 10.65 | 10.20 | 88.41 |
| 2.5 | 2.375 | 7.61 | 7.29 | 95.70 |
| 2.75 | 2.625 | 3.51 | 3.36 | 99.06 |
| 3 | 2.875 | 0.68 | 0.65 | 99.71 |
| 3.25 | 3.125 | 0.21 | 0.20 | 99.91 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.195 |
| **5** | 0.565 |
| **16** | 0.930 |
| **25** | 1.115 |
| **50** | 1.470 |
| **75** | 1.830 |
| **84** | 2.015 |
| **95** | 2.350 |
| **99** | 2.620 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.592 | 0.332 |
| Standard Deviation | 0.539 | 0.688 |
| Skewness | -0.116 | |
| Kurtosis | 3.186 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.472 | 1.472 |
| Standard Deviation | 0.542 | 0.542 |
| Skewness (1) | 0.005 | -0.005 |
| Skewness (2) | -0.023 | |
| Kurtosis | 0.645 | 1.023 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1900+00** |
| **Sample** | **Swash** |
| **Mean** | **0.309 mm** |
| **STD** | **0.418 mm** |
| **Skewness** | **-1.988** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Poorly Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.99 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 7.16 |
| % gravel (>4 mm) | 2.03 |
| CaCO3 | 5.1 |

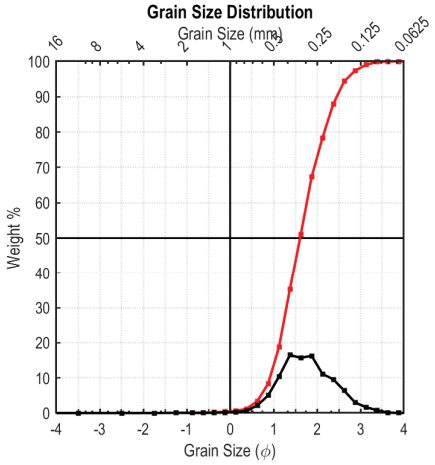
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 2.11 | 2.03 | 2.03 |
| -1.5 | -1.75 | 4.57 | 4.39 | 6.42 |
| -1 | -1.25 | 2.88 | 2.77 | 9.19 |
| -0.75 | -0.875 | 0.61 | 0.59 | 9.78 |
| -0.5 | -0.625 | 0.43 | 0.41 | 10.19 |
| -0.25 | -0.375 | 0.22 | 0.21 | 10.40 |
| 0 | -0.125 | 0.29 | 0.28 | 10.68 |
| 0.25 | 0.125 | 0.32 | 0.31 | 10.99 |
| 0.5 | 0.375 | 0.52 | 0.50 | 11.49 |
| 0.75 | 0.625 | 1.06 | 1.02 | 12.51 |
| 1 | 0.875 | 1.40 | 1.35 | 13.86 |
| 1.25 | 1.125 | 2.62 | 2.52 | 16.38 |
| 1.5 | 1.375 | 5.56 | 5.35 | 21.72 |
| 1.75 | 1.625 | 8.52 | 8.19 | 29.92 |
| 2 | 1.875 | 16.39 | 15.76 | 45.68 |
| 2.25 | 2.125 | 16.44 | 15.81 | 61.49 |
| 2.5 | 2.375 | 20.12 | 19.35 | 80.83 |
| 2.75 | 2.625 | 14.05 | 13.51 | 94.35 |
| 3 | 2.875 | 4.65 | 4.47 | 98.82 |
| 3.25 | 3.125 | 0.93 | 0.89 | 99.71 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.005 |
| **5** | -1.995 |
| **16** | 1.090 |
| **25** | 1.475 |
| **50** | 1.945 |
| **75** | 2.300 |
| **84** | 2.435 |
| **95** | 2.660 |
| **99** | 2.925 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.696 | 0.309 |
| Standard Deviation | 1.257 | 0.418 |
| Skewness | -1.988 | |
| Kurtosis | 6.166 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.762 | 1.823 |
| Standard Deviation | 0.673 | 1.042 |
| Skewness (1) | -0.271 | -0.482 |
| Skewness (2) | -2.398 | |
| Kurtosis | 2.461 | 2.312 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1910+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.294 mm** |
| **STD** | **0.656 mm** |
| **Skewness** | **0.088** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.39 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.8 |

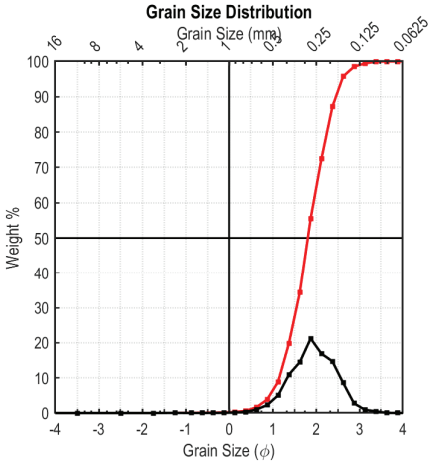
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.07 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.09 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.11 |
| -0.25 | -0.375 | 0.07 | 0.07 | 0.18 |
| 0 | -0.125 | 0.17 | 0.16 | 0.34 |
| 0.25 | 0.125 | 0.26 | 0.25 | 0.59 |
| 0.5 | 0.375 | 0.63 | 0.60 | 1.20 |
| 0.75 | 0.625 | 2.26 | 2.16 | 3.36 |
| 1 | 0.875 | 5.23 | 5.01 | 8.37 |
| 1.25 | 1.125 | 10.85 | 10.39 | 18.77 |
| 1.5 | 1.375 | 17.21 | 16.49 | 35.25 |
| 1.75 | 1.625 | 16.40 | 15.71 | 50.96 |
| 2 | 1.875 | 17.00 | 16.29 | 67.25 |
| 2.25 | 2.125 | 11.62 | 11.13 | 78.38 |
| 2.5 | 2.375 | 10.02 | 9.60 | 87.98 |
| 2.75 | 2.625 | 6.65 | 6.37 | 94.35 |
| 3 | 2.875 | 3.14 | 3.01 | 97.36 |
| 3.25 | 3.125 | 1.73 | 1.66 | 99.01 |
| 3.5 | 3.375 | 0.87 | 0.83 | 99.85 |
| 3.75 | 3.625 | 0.13 | 0.12 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.295 |
| **5** | 0.705 |
| **16** | 1.060 |
| **25** | 1.220 |
| **50** | 1.610 |
| **75** | 2.050 |
| **84** | 2.270 |
| **95** | 2.680 |
| **99** | 3.125 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.766 | 0.294 |
| Standard Deviation | 0.608 | 0.656 |
| Skewness | 0.088 | |
| Kurtosis | 3.445 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.665 | 1.647 |
| Standard Deviation | 0.605 | 0.602 |
| Skewness (1) | 0.091 | 0.087 |
| Skewness (2) | 0.136 | |
| Kurtosis | 0.632 | 0.975 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1910+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.263 mm** |
| **STD** | **0.697 mm** |
| **Skewness** | **-0.291** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.25 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.04 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.5 |

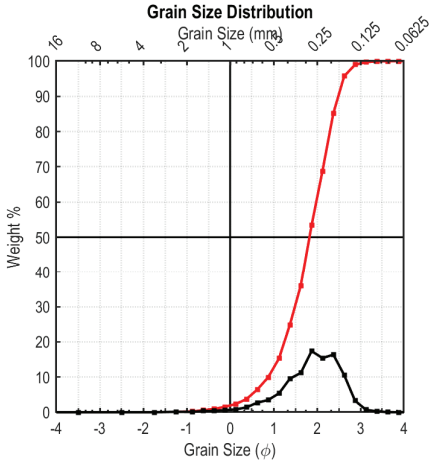
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.04 | 0.04 | 0.04 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.05 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.07 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.10 |
| 0 | -0.125 | 0.06 | 0.06 | 0.16 |
| 0.25 | 0.125 | 0.13 | 0.13 | 0.28 |
| 0.5 | 0.375 | 0.32 | 0.31 | 0.60 |
| 0.75 | 0.625 | 1.03 | 1.01 | 1.60 |
| 1 | 0.875 | 2.31 | 2.26 | 3.86 |
| 1.25 | 1.125 | 5.14 | 5.03 | 8.89 |
| 1.5 | 1.375 | 11.20 | 10.95 | 19.84 |
| 1.75 | 1.625 | 14.79 | 14.46 | 34.31 |
| 2 | 1.875 | 21.70 | 21.22 | 55.53 |
| 2.25 | 2.125 | 17.27 | 16.89 | 72.42 |
| 2.5 | 2.375 | 15.07 | 14.74 | 87.16 |
| 2.75 | 2.625 | 8.78 | 8.59 | 95.75 |
| 3 | 2.875 | 2.82 | 2.76 | 98.50 |
| 3.25 | 3.125 | 0.96 | 0.94 | 99.44 |
| 3.5 | 3.375 | 0.49 | 0.48 | 99.92 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.475 |
| **5** | 0.930 |
| **16** | 1.285 |
| **25** | 1.465 |
| **50** | 1.810 |
| **75** | 2.170 |
| **84** | 2.320 |
| **95** | 2.605 |
| **99** | 3.005 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.929 | 0.263 |
| Standard Deviation | 0.522 | 0.697 |
| Skewness | -0.291 | |
| Kurtosis | 3.940 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.803 | 1.805 |
| Standard Deviation | 0.518 | 0.513 |
| Skewness (1) | -0.014 | -0.033 |
| Skewness (2) | -0.082 | |
| Kurtosis | 0.618 | 0.974 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1910+00** |
| **Sample** | **Swash** |
| **Mean** | **0.274 mm** |
| **STD** | **0.632 mm** |
| **Skewness** | **-0.956** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.85 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.13 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 4.2 |

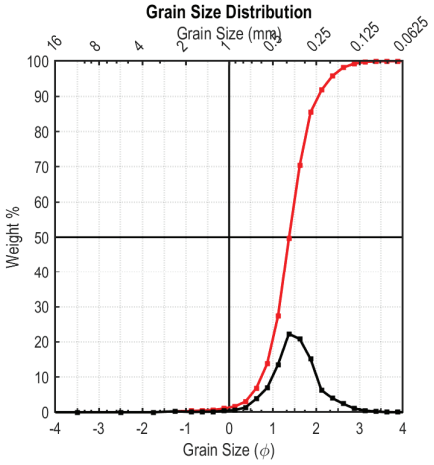
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.13 | 0.13 | 0.13 |
| -0.75 | -0.875 | 0.10 | 0.10 | 0.22 |
| -0.5 | -0.625 | 0.36 | 0.35 | 0.57 |
| -0.25 | -0.375 | 0.37 | 0.36 | 0.92 |
| 0 | -0.125 | 0.63 | 0.61 | 1.53 |
| 0.25 | 0.125 | 0.83 | 0.80 | 2.33 |
| 0.5 | 0.375 | 1.45 | 1.40 | 3.73 |
| 0.75 | 0.625 | 2.83 | 2.73 | 6.45 |
| 1 | 0.875 | 3.61 | 3.48 | 9.93 |
| 1.25 | 1.125 | 5.58 | 5.37 | 15.30 |
| 1.5 | 1.375 | 9.91 | 9.54 | 24.84 |
| 1.75 | 1.625 | 11.59 | 11.16 | 36.00 |
| 2 | 1.875 | 18.05 | 17.38 | 53.38 |
| 2.25 | 2.125 | 15.98 | 15.39 | 68.77 |
| 2.5 | 2.375 | 17.02 | 16.39 | 85.16 |
| 2.75 | 2.625 | 10.96 | 10.55 | 95.71 |
| 3 | 2.875 | 3.40 | 3.27 | 98.99 |
| 3.25 | 3.125 | 0.74 | 0.71 | 99.70 |
| 3.5 | 3.375 | 0.26 | 0.25 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.345 |
| **5** | 0.490 |
| **16** | 1.145 |
| **25** | 1.380 |
| **50** | 1.825 |
| **75** | 2.220 |
| **84** | 2.355 |
| **95** | 2.610 |
| **99** | 2.880 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.866 | 0.274 |
| Standard Deviation | 0.662 | 0.632 |
| Skewness | -0.956 | |
| Kurtosis | 4.527 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.750 | 1.775 |
| Standard Deviation | 0.605 | 0.624 |
| Skewness (1) | -0.124 | -0.192 |
| Skewness (2) | -0.455 | |
| Kurtosis | 0.752 | 1.034 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1920+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.351 mm** |
| **STD** | **0.681 mm** |
| **Skewness** | **-0.289** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.88 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.27 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.7 |

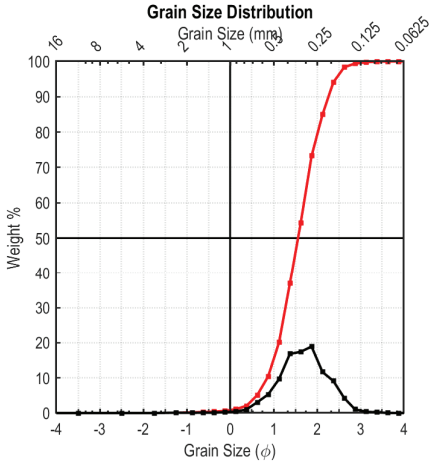
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.28 | 0.27 | 0.27 |
| -0.75 | -0.875 | 0.08 | 0.08 | 0.35 |
| -0.5 | -0.625 | 0.14 | 0.13 | 0.48 |
| -0.25 | -0.375 | 0.17 | 0.16 | 0.64 |
| 0 | -0.125 | 0.40 | 0.39 | 1.03 |
| 0.25 | 0.125 | 0.64 | 0.62 | 1.65 |
| 0.5 | 0.375 | 1.40 | 1.35 | 2.99 |
| 0.75 | 0.625 | 3.99 | 3.84 | 6.83 |
| 1 | 0.875 | 7.21 | 6.94 | 13.78 |
| 1.25 | 1.125 | 14.06 | 13.53 | 27.31 |
| 1.5 | 1.375 | 23.16 | 22.29 | 49.61 |
| 1.75 | 1.625 | 21.61 | 20.80 | 70.41 |
| 2 | 1.875 | 15.69 | 15.10 | 85.51 |
| 2.25 | 2.125 | 6.50 | 6.26 | 91.77 |
| 2.5 | 2.375 | 4.15 | 3.99 | 95.76 |
| 2.75 | 2.625 | 2.52 | 2.43 | 98.19 |
| 3 | 2.875 | 1.12 | 1.08 | 99.27 |
| 3.25 | 3.125 | 0.51 | 0.49 | 99.76 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.145 |
| **5** | 0.505 |
| **16** | 0.915 |
| **25** | 1.080 |
| **50** | 1.380 |
| **75** | 1.700 |
| **84** | 1.850 |
| **95** | 2.325 |
| **99** | 2.815 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.511 | 0.351 |
| Standard Deviation | 0.554 | 0.681 |
| Skewness | -0.289 | |
| Kurtosis | 5.512 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.383 | 1.382 |
| Standard Deviation | 0.468 | 0.510 |
| Skewness (1) | 0.005 | 0.022 |
| Skewness (2) | 0.075 | |
| Kurtosis | 0.947 | 1.203 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1920+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.314 mm** |
| **STD** | **0.677 mm** |
| **Skewness** | **-0.378** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.56 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.10 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.9 |

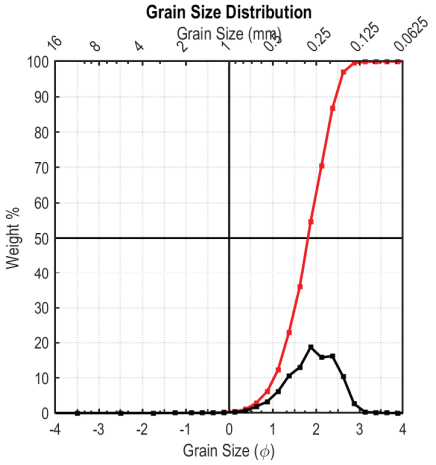
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.10 | 0.10 | 0.10 |
| -0.75 | -0.875 | 0.07 | 0.07 | 0.16 |
| -0.5 | -0.625 | 0.12 | 0.12 | 0.28 |
| -0.25 | -0.375 | 0.10 | 0.10 | 0.38 |
| 0 | -0.125 | 0.26 | 0.25 | 0.63 |
| 0.25 | 0.125 | 0.44 | 0.42 | 1.05 |
| 0.5 | 0.375 | 1.03 | 0.99 | 2.05 |
| 0.75 | 0.625 | 3.19 | 3.08 | 5.13 |
| 1 | 0.875 | 5.48 | 5.29 | 10.42 |
| 1.25 | 1.125 | 10.00 | 9.66 | 20.08 |
| 1.5 | 1.375 | 17.43 | 16.83 | 36.91 |
| 1.75 | 1.625 | 18.05 | 17.43 | 54.34 |
| 2 | 1.875 | 19.59 | 18.92 | 73.25 |
| 2.25 | 2.125 | 12.09 | 11.67 | 84.93 |
| 2.5 | 2.375 | 9.46 | 9.13 | 94.06 |
| 2.75 | 2.625 | 4.44 | 4.29 | 98.35 |
| 3 | 2.875 | 1.07 | 1.03 | 99.38 |
| 3.25 | 3.125 | 0.39 | 0.38 | 99.76 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.095 |
| **5** | 0.615 |
| **16** | 1.020 |
| **25** | 1.200 |
| **50** | 1.565 |
| **75** | 1.910 |
| **84** | 2.105 |
| **95** | 2.430 |
| **99** | 2.785 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.672 | 0.314 |
| Standard Deviation | 0.562 | 0.677 |
| Skewness | -0.378 | |
| Kurtosis | 4.238 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.562 | 1.563 |
| Standard Deviation | 0.542 | 0.546 |
| Skewness (1) | -0.005 | -0.026 |
| Skewness (2) | -0.078 | |
| Kurtosis | 0.673 | 1.048 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1920+00** |
| **Sample** | **Swash** |
| **Mean** | **0.268 mm** |
| **STD** | **0.683 mm** |
| **Skewness** | **-0.518** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.29 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 3.2 |

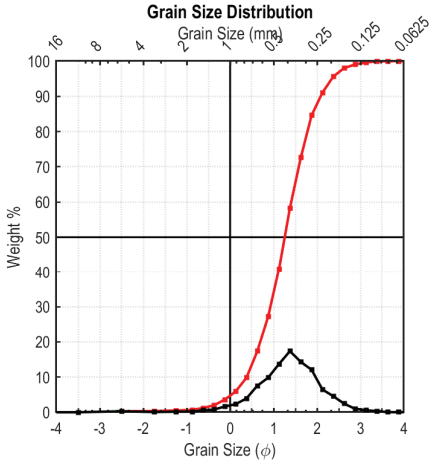
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.05 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.06 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.09 |
| 0 | -0.125 | 0.09 | 0.09 | 0.17 |
| 0.25 | 0.125 | 0.28 | 0.27 | 0.45 |
| 0.5 | 0.375 | 0.61 | 0.59 | 1.04 |
| 0.75 | 0.625 | 1.92 | 1.86 | 2.89 |
| 1 | 0.875 | 3.35 | 3.24 | 6.14 |
| 1.25 | 1.125 | 6.34 | 6.14 | 12.28 |
| 1.5 | 1.375 | 10.94 | 10.59 | 22.87 |
| 1.75 | 1.625 | 13.45 | 13.02 | 35.89 |
| 2 | 1.875 | 19.33 | 18.71 | 54.60 |
| 2.25 | 2.125 | 16.34 | 15.82 | 70.42 |
| 2.5 | 2.375 | 16.74 | 16.21 | 86.63 |
| 2.75 | 2.625 | 10.64 | 10.30 | 96.93 |
| 3 | 2.875 | 2.73 | 2.64 | 99.57 |
| 3.25 | 3.125 | 0.34 | 0.33 | 99.90 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.360 |
| **5** | 0.785 |
| **16** | 1.215 |
| **25** | 1.415 |
| **50** | 1.815 |
| **75** | 2.195 |
| **84** | 2.335 |
| **95** | 2.580 |
| **99** | 2.820 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.900 | 0.268 |
| Standard Deviation | 0.551 | 0.683 |
| Skewness | -0.518 | |
| Kurtosis | 3.360 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.775 | 1.788 |
| Standard Deviation | 0.560 | 0.552 |
| Skewness (1) | -0.071 | -0.110 |
| Skewness (2) | -0.237 | |
| Kurtosis | 0.603 | 0.943 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.392 mm** |
| **STD** | **0.609 mm** |
| **Skewness** | **-0.604** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.30 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.22 |
| % gravel (>4 mm) | 0.27 |
| CaCO3 | 7.5 |

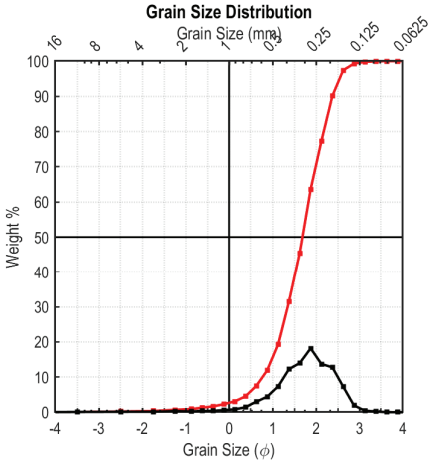
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.28 | 0.27 | 0.27 |
| -1.5 | -1.75 | 0.07 | 0.06 | 0.34 |
| -1 | -1.25 | 0.16 | 0.16 | 0.49 |
| -0.75 | -0.875 | 0.17 | 0.17 | 0.66 |
| -0.5 | -0.625 | 0.56 | 0.54 | 1.20 |
| -0.25 | -0.375 | 0.79 | 0.76 | 1.96 |
| 0 | -0.125 | 1.68 | 1.63 | 3.59 |
| 0.25 | 0.125 | 2.36 | 2.28 | 5.87 |
| 0.5 | 0.375 | 4.06 | 3.93 | 9.80 |
| 0.75 | 0.625 | 7.78 | 7.53 | 17.34 |
| 1 | 0.875 | 10.16 | 9.83 | 27.17 |
| 1.25 | 1.125 | 14.16 | 13.71 | 40.88 |
| 1.5 | 1.375 | 17.93 | 17.36 | 58.23 |
| 1.75 | 1.625 | 14.80 | 14.32 | 72.56 |
| 2 | 1.875 | 12.46 | 12.06 | 84.62 |
| 2.25 | 2.125 | 6.66 | 6.45 | 91.07 |
| 2.5 | 2.375 | 4.71 | 4.56 | 95.63 |
| 2.75 | 2.625 | 2.49 | 2.42 | 98.04 |
| 3 | 2.875 | 1.03 | 0.99 | 99.04 |
| 3.25 | 3.125 | 0.60 | 0.59 | 99.62 |
| 3.5 | 3.375 | 0.32 | 0.31 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.715 |
| **5** | 0.030 |
| **16** | 0.580 |
| **25** | 0.820 |
| **50** | 1.255 |
| **75** | 1.675 |
| **84** | 1.860 |
| **95** | 2.340 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.351 | 0.392 |
| Standard Deviation | 0.716 | 0.609 |
| Skewness | -0.604 | |
| Kurtosis | 5.498 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.220 | 1.232 |
| Standard Deviation | 0.640 | 0.670 |
| Skewness (1) | -0.055 | -0.058 |
| Skewness (2) | -0.109 | |
| Kurtosis | 0.805 | 1.107 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.302 mm** |
| **STD** | **0.612 mm** |
| **Skewness** | **-1.482** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.51 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.48 |
| % gravel (>4 mm) | 0.21 |
| CaCO3 | 7.5 |

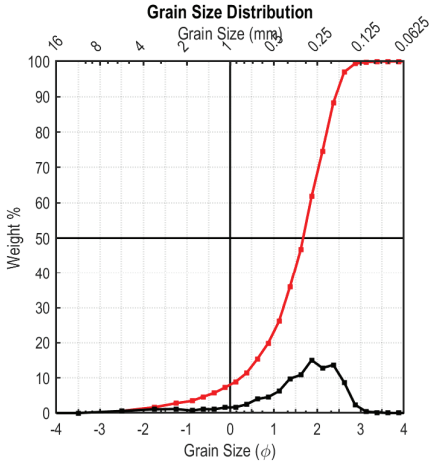
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.08 | 0.08 | 0.08 |
| -2 | -2.5 | 0.14 | 0.13 | 0.21 |
| -1.5 | -1.75 | 0.14 | 0.14 | 0.35 |
| -1 | -1.25 | 0.35 | 0.34 | 0.69 |
| -0.75 | -0.875 | 0.22 | 0.22 | 0.90 |
| -0.5 | -0.625 | 0.40 | 0.39 | 1.29 |
| -0.25 | -0.375 | 0.38 | 0.37 | 1.66 |
| 0 | -0.125 | 0.64 | 0.62 | 2.28 |
| 0.25 | 0.125 | 0.83 | 0.80 | 3.08 |
| 0.5 | 0.375 | 1.46 | 1.41 | 4.49 |
| 0.75 | 0.625 | 3.11 | 3.00 | 7.49 |
| 1 | 0.875 | 4.55 | 4.39 | 11.88 |
| 1.25 | 1.125 | 7.59 | 7.33 | 19.21 |
| 1.5 | 1.375 | 12.68 | 12.25 | 31.46 |
| 1.75 | 1.625 | 14.47 | 13.98 | 45.44 |
| 2 | 1.875 | 18.82 | 18.18 | 63.62 |
| 2.25 | 2.125 | 14.19 | 13.71 | 77.32 |
| 2.5 | 2.375 | 13.23 | 12.78 | 90.10 |
| 2.75 | 2.625 | 7.55 | 7.30 | 97.40 |
| 3 | 2.875 | 1.98 | 1.91 | 99.31 |
| 3.25 | 3.125 | 0.48 | 0.46 | 99.77 |
| 3.5 | 3.375 | 0.20 | 0.19 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.810 |
| **5** | 0.415 |
| **16** | 1.015 |
| **25** | 1.245 |
| **50** | 1.690 |
| **75** | 2.085 |
| **84** | 2.255 |
| **95** | 2.545 |
| **99** | 2.835 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.727 | 0.302 |
| Standard Deviation | 0.709 | 0.612 |
| Skewness | -1.482 | |
| Kurtosis | 8.578 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.635 | 1.653 |
| Standard Deviation | 0.620 | 0.633 |
| Skewness (1) | -0.089 | -0.143 |
| Skewness (2) | -0.339 | |
| Kurtosis | 0.718 | 1.039 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.333 mm** |
| **STD** | **0.513 mm** |
| **Skewness** | **-1.485** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.97 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.20 |
| % gravel (>4 mm) | 0.58 |
| CaCO3 | 5.0 |

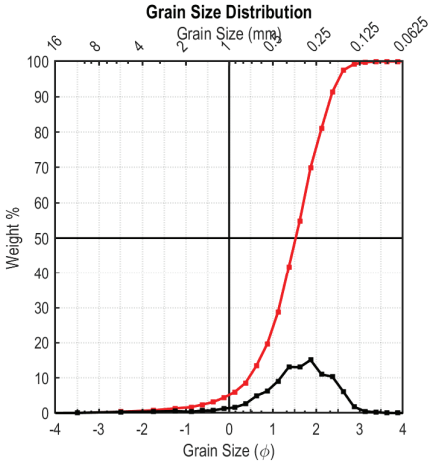
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.60 | 0.58 | 0.58 |
| -1.5 | -1.75 | 1.10 | 1.06 | 1.64 |
| -1 | -1.25 | 1.18 | 1.14 | 2.77 |
| -0.75 | -0.875 | 0.72 | 0.70 | 3.47 |
| -0.5 | -0.625 | 1.19 | 1.15 | 4.62 |
| -0.25 | -0.375 | 1.09 | 1.05 | 5.67 |
| 0 | -0.125 | 1.62 | 1.56 | 7.23 |
| 0.25 | 0.125 | 1.73 | 1.66 | 8.89 |
| 0.5 | 0.375 | 2.56 | 2.46 | 11.35 |
| 0.75 | 0.625 | 4.16 | 4.00 | 15.35 |
| 1 | 0.875 | 4.71 | 4.53 | 19.88 |
| 1.25 | 1.125 | 6.48 | 6.23 | 26.11 |
| 1.5 | 1.375 | 10.16 | 9.77 | 35.87 |
| 1.75 | 1.625 | 11.27 | 10.83 | 46.71 |
| 2 | 1.875 | 15.67 | 15.07 | 61.78 |
| 2.25 | 2.125 | 13.32 | 12.81 | 74.59 |
| 2.5 | 2.375 | 14.25 | 13.70 | 88.29 |
| 2.75 | 2.625 | 9.05 | 8.70 | 96.99 |
| 3 | 2.875 | 2.46 | 2.37 | 99.36 |
| 3.25 | 3.125 | 0.46 | 0.44 | 99.80 |
| 3.5 | 3.375 | 0.16 | 0.15 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -2.200 |
| **5** | -0.535 |
| **16** | 0.660 |
| **25** | 1.080 |
| **50** | 1.680 |
| **75** | 2.130 |
| **84** | 2.295 |
| **95** | 2.570 |
| **99** | 2.835 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.587 | 0.333 |
| Standard Deviation | 0.962 | 0.513 |
| Skewness | -1.485 | |
| Kurtosis | 5.779 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.478 | 1.545 |
| Standard Deviation | 0.817 | 0.879 |
| Skewness (1) | -0.248 | -0.337 |
| Skewness (2) | -0.810 | |
| Kurtosis | 0.899 | 1.212 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403** |
| **Location** | **Buxton, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.340 mm** |
| **STD** | **0.567 mm** |
| **Skewness** | **-1.239** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.59 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.97 |
| % gravel (>4 mm) | 0.35 |
| CaCO3 | 6.6 |

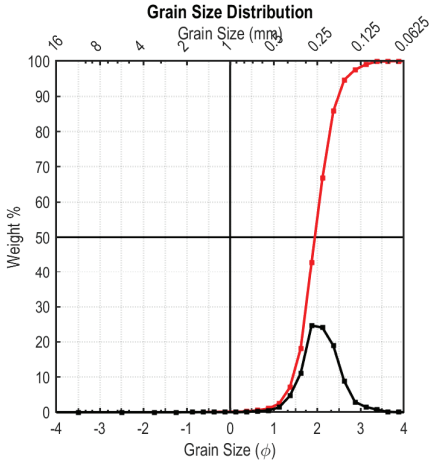
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.03 | 0.03 | 0.03 |
| -2 | -2.5 | 0.34 | 0.33 | 0.35 |
| -1.5 | -1.75 | 0.44 | 0.42 | 0.78 |
| -1 | -1.25 | 0.56 | 0.55 | 1.32 |
| -0.75 | -0.875 | 0.37 | 0.36 | 1.68 |
| -0.5 | -0.625 | 0.72 | 0.69 | 2.37 |
| -0.25 | -0.375 | 0.75 | 0.73 | 3.10 |
| 0 | -0.125 | 1.32 | 1.27 | 4.37 |
| 0.25 | 0.125 | 1.64 | 1.58 | 5.95 |
| 0.5 | 0.375 | 2.69 | 2.60 | 8.55 |
| 0.75 | 0.625 | 5.01 | 4.84 | 13.39 |
| 1 | 0.875 | 6.47 | 6.25 | 19.64 |
| 1.25 | 1.125 | 9.41 | 9.08 | 28.72 |
| 1.5 | 1.375 | 13.59 | 13.12 | 41.84 |
| 1.75 | 1.625 | 13.51 | 13.04 | 54.88 |
| 2 | 1.875 | 15.65 | 15.11 | 69.98 |
| 2.25 | 2.125 | 11.39 | 11.00 | 80.98 |
| 2.5 | 2.375 | 10.73 | 10.36 | 91.33 |
| 2.75 | 2.625 | 6.36 | 6.14 | 97.48 |
| 3 | 2.875 | 1.82 | 1.76 | 99.24 |
| 3.25 | 3.125 | 0.51 | 0.50 | 99.73 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.03 | 99.99 |
| 4 | 3.875 | 0.01 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.545 |
| **5** | -0.025 |
| **16** | 0.730 |
| **25** | 1.025 |
| **50** | 1.530 |
| **75** | 1.990 |
| **84** | 2.200 |
| **95** | 2.525 |
| **99** | 2.840 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.555 | 0.340 |
| Standard Deviation | 0.819 | 0.567 |
| Skewness | -1.239 | |
| Kurtosis | 6.245 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.465 | 1.487 |
| Standard Deviation | 0.735 | 0.754 |
| Skewness (1) | -0.088 | -0.154 |
| Skewness (2) | -0.381 | |
| Kurtosis | 0.735 | 1.083 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **980+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.236 mm** |
| **STD** | **0.740 mm** |
| **Skewness** | **-0.153** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.68 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

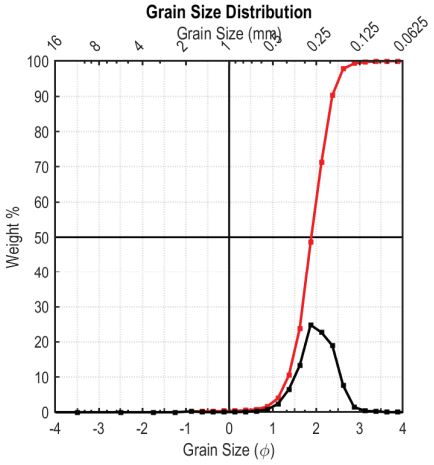
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.05 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.09 |
| 0 | -0.125 | 0.04 | 0.04 | 0.13 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.14 |
| 0.5 | 0.375 | 0.09 | 0.09 | 0.23 |
| 0.75 | 0.625 | 0.31 | 0.30 | 0.53 |
| 1 | 0.875 | 0.52 | 0.50 | 1.03 |
| 1.25 | 1.125 | 1.43 | 1.38 | 2.41 |
| 1.5 | 1.375 | 4.84 | 4.67 | 7.08 |
| 1.75 | 1.625 | 11.50 | 11.09 | 18.17 |
| 2 | 1.875 | 25.56 | 24.65 | 42.82 |
| 2.25 | 2.125 | 24.93 | 24.05 | 66.87 |
| 2.5 | 2.375 | 19.62 | 18.92 | 85.79 |
| 2.75 | 2.625 | 9.19 | 8.86 | 94.66 |
| 3 | 2.875 | 3.01 | 2.90 | 97.56 |
| 3.25 | 3.125 | 1.57 | 1.51 | 99.07 |
| 3.5 | 3.375 | 0.81 | 0.78 | 99.86 |
| 3.75 | 3.625 | 0.13 | 0.13 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.860 |
| **5** | 1.265 |
| **16** | 1.575 |
| **25** | 1.695 |
| **50** | 1.950 |
| **75** | 2.230 |
| **84** | 2.350 |
| **95** | 2.655 |
| **99** | 3.115 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.084 | 0.236 |
| Standard Deviation | 0.435 | 0.740 |
| Skewness | -0.153 | |
| Kurtosis | 5.181 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.962 | 1.958 |
| Standard Deviation | 0.387 | 0.404 |
| Skewness (1) | 0.032 | 0.023 |
| Skewness (2) | 0.026 | |
| Kurtosis | 0.794 | 1.065 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **980+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.250 mm** |
| **STD** | **0.736 mm** |
| **Skewness** | **-0.978** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.44 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

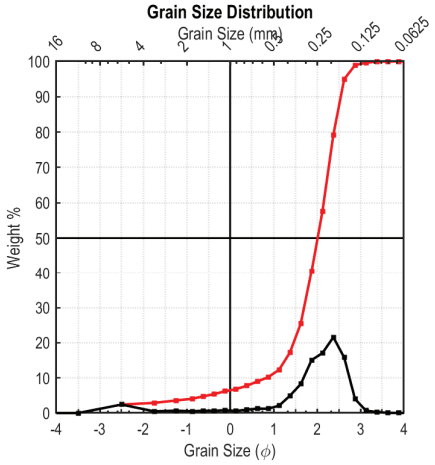
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.24 | 0.23 | 0.23 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.27 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.31 |
| 0 | -0.125 | 0.04 | 0.04 | 0.34 |
| 0.25 | 0.125 | 0.06 | 0.06 | 0.40 |
| 0.5 | 0.375 | 0.12 | 0.11 | 0.52 |
| 0.75 | 0.625 | 0.33 | 0.32 | 0.83 |
| 1 | 0.875 | 0.80 | 0.77 | 1.60 |
| 1.25 | 1.125 | 2.50 | 2.39 | 3.99 |
| 1.5 | 1.375 | 6.79 | 6.50 | 10.49 |
| 1.75 | 1.625 | 13.89 | 13.30 | 23.79 |
| 2 | 1.875 | 25.92 | 24.82 | 48.61 |
| 2.25 | 2.125 | 23.69 | 22.68 | 71.29 |
| 2.5 | 2.375 | 19.81 | 18.97 | 90.26 |
| 2.75 | 2.625 | 7.90 | 7.56 | 97.83 |
| 3 | 2.875 | 1.56 | 1.49 | 99.32 |
| 3.25 | 3.125 | 0.41 | 0.39 | 99.71 |
| 3.5 | 3.375 | 0.24 | 0.23 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.680 |
| **5** | 1.165 |
| **16** | 1.480 |
| **25** | 1.635 |
| **50** | 1.890 |
| **75** | 2.175 |
| **84** | 2.290 |
| **95** | 2.530 |
| **99** | 2.820 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.001 | 0.250 |
| Standard Deviation | 0.441 | 0.736 |
| Skewness | -0.978 | |
| Kurtosis | 8.047 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.885 | 1.887 |
| Standard Deviation | 0.405 | 0.409 |
| Skewness (1) | -0.012 | -0.037 |
| Skewness (2) | -0.105 | |
| Kurtosis | 0.685 | 1.036 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **980+00** |
| **Sample** | **Swash** |
| **Mean** | **0.272 mm** |
| **STD** | **0.492 mm** |
| **Skewness** | **-2.576** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Poorly Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.36 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 1.16 |
| % gravel (>4 mm) | 2.41 |
| CaCO3 | 2.0 |

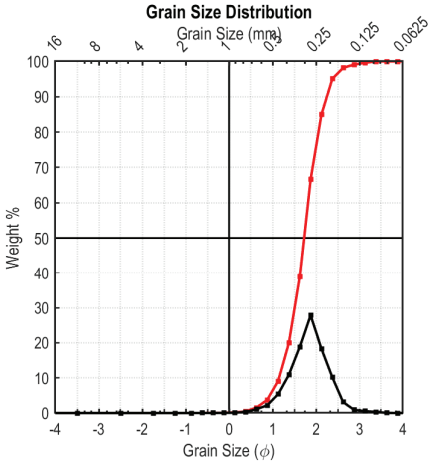
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 2.49 | 2.41 | 2.41 |
| -1.5 | -1.75 | 0.50 | 0.48 | 2.89 |
| -1 | -1.25 | 0.70 | 0.68 | 3.57 |
| -0.75 | -0.875 | 0.51 | 0.49 | 4.06 |
| -0.5 | -0.625 | 0.69 | 0.67 | 4.73 |
| -0.25 | -0.375 | 0.66 | 0.64 | 5.37 |
| 0 | -0.125 | 0.84 | 0.81 | 6.18 |
| 0.25 | 0.125 | 0.62 | 0.60 | 6.78 |
| 0.5 | 0.375 | 0.98 | 0.95 | 7.73 |
| 0.75 | 0.625 | 1.29 | 1.25 | 8.98 |
| 1 | 0.875 | 1.27 | 1.23 | 10.21 |
| 1.25 | 1.125 | 2.15 | 2.08 | 12.29 |
| 1.5 | 1.375 | 5.08 | 4.91 | 17.20 |
| 1.75 | 1.625 | 8.52 | 8.24 | 25.45 |
| 2 | 1.875 | 15.58 | 15.07 | 40.52 |
| 2.25 | 2.125 | 17.64 | 17.07 | 57.59 |
| 2.5 | 2.375 | 22.30 | 21.58 | 79.16 |
| 2.75 | 2.625 | 16.34 | 15.81 | 94.97 |
| 3 | 2.875 | 4.10 | 3.97 | 98.94 |
| 3.25 | 3.125 | 0.73 | 0.71 | 99.64 |
| 3.5 | 3.375 | 0.28 | 0.27 | 99.91 |
| 3.75 | 3.625 | 0.06 | 0.06 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -3.085 |
| **5** | -0.520 |
| **16** | 1.315 |
| **25** | 1.610 |
| **50** | 2.015 |
| **75** | 2.325 |
| **84** | 2.450 |
| **95** | 2.625 |
| **99** | 2.900 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.880 | 0.272 |
| Standard Deviation | 1.024 | 0.492 |
| Skewness | -2.576 | |
| Kurtosis | 10.458 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.883 | 1.927 |
| Standard Deviation | 0.568 | 0.760 |
| Skewness (1) | -0.233 | -0.423 |
| Skewness (2) | -1.696 | |
| Kurtosis | 1.771 | 1.803 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **990+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.281 mm** |
| **STD** | **0.734 mm** |
| **Skewness** | **-0.188** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.44 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.6 |

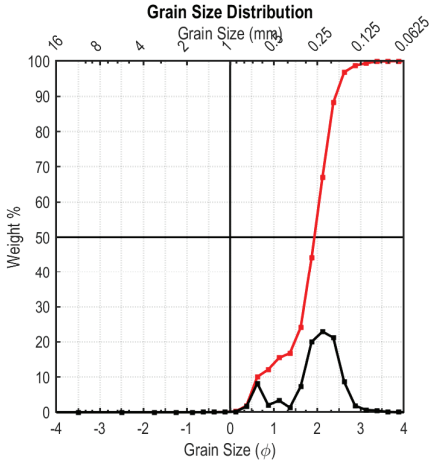
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.02 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.03 |
| 0 | -0.125 | 0.04 | 0.04 | 0.07 |
| 0.25 | 0.125 | 0.09 | 0.09 | 0.15 |
| 0.5 | 0.375 | 0.31 | 0.30 | 0.45 |
| 0.75 | 0.625 | 1.12 | 1.08 | 1.54 |
| 1 | 0.875 | 2.26 | 2.18 | 3.72 |
| 1.25 | 1.125 | 5.52 | 5.34 | 9.06 |
| 1.5 | 1.375 | 11.29 | 10.91 | 19.97 |
| 1.75 | 1.625 | 19.45 | 18.80 | 38.78 |
| 2 | 1.875 | 28.81 | 27.85 | 66.63 |
| 2.25 | 2.125 | 18.94 | 18.31 | 84.94 |
| 2.5 | 2.375 | 10.50 | 10.15 | 95.09 |
| 2.75 | 2.625 | 3.20 | 3.09 | 98.18 |
| 3 | 2.875 | 0.95 | 0.92 | 99.10 |
| 3.25 | 3.125 | 0.54 | 0.52 | 99.62 |
| 3.5 | 3.375 | 0.35 | 0.34 | 99.96 |
| 3.75 | 3.625 | 0.04 | 0.04 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.500 |
| **5** | 0.935 |
| **16** | 1.285 |
| **25** | 1.440 |
| **50** | 1.725 |
| **75** | 1.990 |
| **84** | 2.110 |
| **95** | 2.375 |
| **99** | 2.850 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.832 | 0.281 |
| Standard Deviation | 0.446 | 0.734 |
| Skewness | -0.188 | |
| Kurtosis | 4.211 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.698 | 1.707 |
| Standard Deviation | 0.412 | 0.424 |
| Skewness (1) | -0.067 | -0.082 |
| Skewness (2) | -0.170 | |
| Kurtosis | 0.745 | 1.073 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **990+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.261 mm** |
| **STD** | **0.654 mm** |
| **Skewness** | **-0.944** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 100.27 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

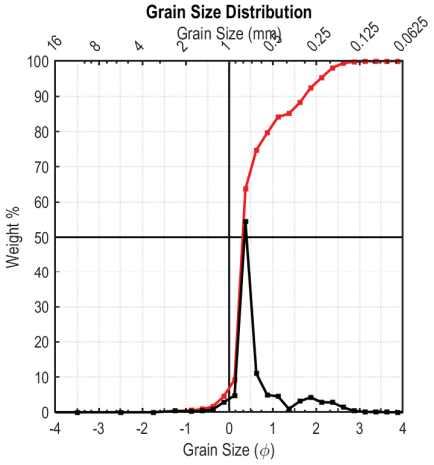
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.00 | 0.00 | 0.00 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.01 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.02 |
| 0 | -0.125 | 0.05 | 0.05 | 0.07 |
| 0.25 | 0.125 | 0.17 | 0.17 | 0.24 |
| 0.5 | 0.375 | 1.62 | 1.62 | 1.85 |
| 0.75 | 0.625 | 8.24 | 8.22 | 10.07 |
| 1 | 0.875 | 2.05 | 2.04 | 12.12 |
| 1.25 | 1.125 | 3.34 | 3.33 | 15.45 |
| 1.5 | 1.375 | 1.34 | 1.34 | 16.78 |
| 1.75 | 1.625 | 7.38 | 7.36 | 24.14 |
| 2 | 1.875 | 20.04 | 19.99 | 44.13 |
| 2.25 | 2.125 | 22.98 | 22.92 | 67.05 |
| 2.5 | 2.375 | 21.26 | 21.20 | 88.25 |
| 2.75 | 2.625 | 8.64 | 8.62 | 96.87 |
| 3 | 2.875 | 1.89 | 1.88 | 98.75 |
| 3.25 | 3.125 | 0.66 | 0.66 | 99.41 |
| 3.5 | 3.375 | 0.48 | 0.48 | 99.89 |
| 3.75 | 3.625 | 0.09 | 0.09 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.245 |
| **5** | 0.470 |
| **16** | 1.230 |
| **25** | 1.635 |
| **50** | 1.940 |
| **75** | 2.220 |
| **84** | 2.325 |
| **95** | 2.570 |
| **99** | 2.970 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.937 | 0.261 |
| Standard Deviation | 0.613 | 0.654 |
| Skewness | -0.944 | |
| Kurtosis | 3.570 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.778 | 1.832 |
| Standard Deviation | 0.548 | 0.592 |
| Skewness (1) | -0.297 | -0.348 |
| Skewness (2) | -0.767 | |
| Kurtosis | 0.918 | 1.471 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **990+00** |
| **Sample** | **Swash** |
| **Mean** | **0.624 mm** |
| **STD** | **0.631 mm** |
| **Skewness** | **1.403** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Coarse Sand |
| Medium Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Fine Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 92.93 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.34 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.5 |

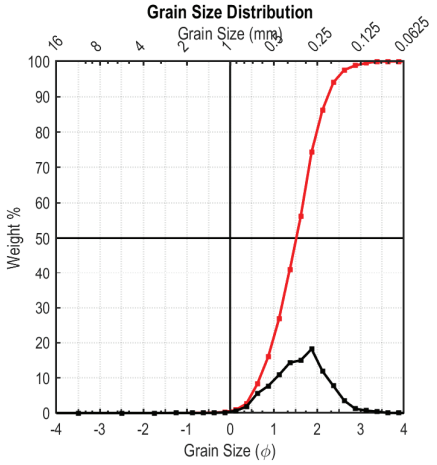
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.32 | 0.34 | 0.34 |
| -0.75 | -0.875 | 0.17 | 0.18 | 0.53 |
| -0.5 | -0.625 | 0.33 | 0.36 | 0.88 |
| -0.25 | -0.375 | 0.71 | 0.76 | 1.65 |
| 0 | -0.125 | 2.67 | 2.87 | 4.52 |
| 0.25 | 0.125 | 4.39 | 4.72 | 9.24 |
| 0.5 | 0.375 | 50.60 | 54.45 | 63.69 |
| 0.75 | 0.625 | 10.22 | 11.00 | 74.69 |
| 1 | 0.875 | 4.59 | 4.94 | 79.63 |
| 1.25 | 1.125 | 4.19 | 4.51 | 84.14 |
| 1.5 | 1.375 | 0.89 | 0.96 | 85.10 |
| 1.75 | 1.625 | 2.87 | 3.09 | 88.18 |
| 2 | 1.875 | 3.94 | 4.24 | 92.42 |
| 2.25 | 2.125 | 2.64 | 2.84 | 95.27 |
| 2.5 | 2.375 | 2.60 | 2.80 | 98.06 |
| 2.75 | 2.625 | 1.29 | 1.39 | 99.45 |
| 3 | 2.875 | 0.34 | 0.37 | 99.82 |
| 3.25 | 3.125 | 0.11 | 0.12 | 99.94 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.585 |
| **5** | -0.100 |
| **16** | 0.155 |
| **25** | 0.195 |
| **50** | 0.310 |
| **75** | 0.640 |
| **84** | 1.115 |
| **95** | 2.100 |
| **99** | 2.545 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 0.681 | 0.624 |
| Standard Deviation | 0.664 | 0.631 |
| Skewness | 1.403 | |
| Kurtosis | 4.779 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 0.635 | 0.527 |
| Standard Deviation | 0.480 | 0.573 |
| Skewness (1) | 0.677 | 0.652 |
| Skewness (2) | 1.438 | |
| Kurtosis | 1.292 | 2.026 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1000+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.326 mm** |
| **STD** | **0.660 mm** |
| **Skewness** | **-0.063** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 110.30 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

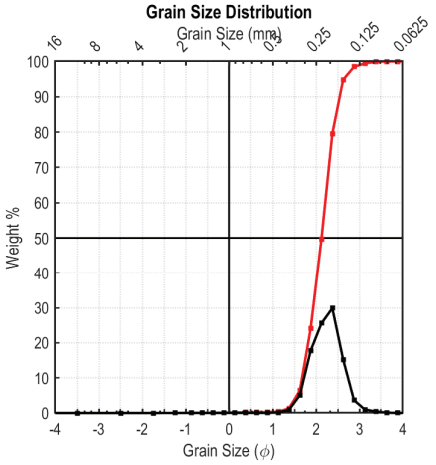
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.05 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.05 |
| -0.25 | -0.375 | 0.06 | 0.05 | 0.11 |
| 0 | -0.125 | 0.18 | 0.16 | 0.27 |
| 0.25 | 0.125 | 0.65 | 0.59 | 0.86 |
| 0.5 | 0.375 | 2.00 | 1.81 | 2.67 |
| 0.75 | 0.625 | 6.16 | 5.58 | 8.26 |
| 1 | 0.875 | 8.49 | 7.70 | 15.96 |
| 1.25 | 1.125 | 11.96 | 10.84 | 26.80 |
| 1.5 | 1.375 | 15.81 | 14.33 | 41.13 |
| 1.75 | 1.625 | 16.55 | 15.00 | 56.14 |
| 2 | 1.875 | 20.09 | 18.21 | 74.35 |
| 2.25 | 2.125 | 13.14 | 11.91 | 86.26 |
| 2.5 | 2.375 | 8.55 | 7.75 | 94.02 |
| 2.75 | 2.625 | 3.92 | 3.55 | 97.57 |
| 3 | 2.875 | 1.38 | 1.25 | 98.82 |
| 3.25 | 3.125 | 0.77 | 0.70 | 99.52 |
| 3.5 | 3.375 | 0.47 | 0.43 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.02 | 0.02 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.145 |
| **5** | 0.480 |
| **16** | 0.875 |
| **25** | 1.085 |
| **50** | 1.525 |
| **75** | 1.890 |
| **84** | 2.075 |
| **95** | 2.445 |
| **99** | 2.940 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.618 | 0.326 |
| Standard Deviation | 0.599 | 0.660 |
| Skewness | -0.063 | |
| Kurtosis | 3.090 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.475 | 1.492 |
| Standard Deviation | 0.600 | 0.598 |
| Skewness (1) | -0.083 | -0.073 |
| Skewness (2) | -0.104 | |
| Kurtosis | 0.637 | 1.000 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1000+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.212 mm** |
| **STD** | **0.782 mm** |
| **Skewness** | **-0.490** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.91 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

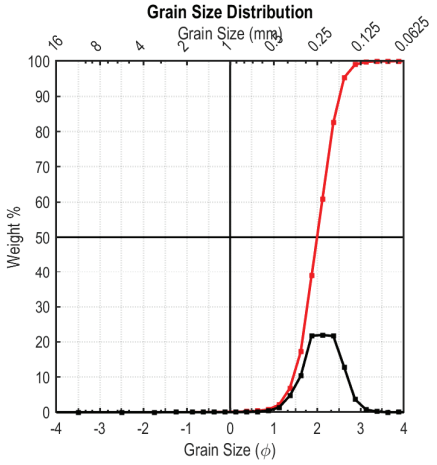
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.04 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.05 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.06 |
| 0 | -0.125 | 0.03 | 0.03 | 0.09 |
| 0.25 | 0.125 | 0.05 | 0.05 | 0.13 |
| 0.5 | 0.375 | 0.04 | 0.04 | 0.17 |
| 0.75 | 0.625 | 0.03 | 0.03 | 0.20 |
| 1 | 0.875 | 0.04 | 0.04 | 0.24 |
| 1.25 | 1.125 | 0.15 | 0.14 | 0.38 |
| 1.5 | 1.375 | 0.95 | 0.91 | 1.30 |
| 1.75 | 1.625 | 5.25 | 5.05 | 6.35 |
| 2 | 1.875 | 18.48 | 17.78 | 24.14 |
| 2.25 | 2.125 | 26.56 | 25.56 | 49.70 |
| 2.5 | 2.375 | 31.04 | 29.87 | 79.57 |
| 2.75 | 2.625 | 15.84 | 15.24 | 94.81 |
| 3 | 2.875 | 3.79 | 3.65 | 98.46 |
| 3.25 | 3.125 | 1.03 | 0.99 | 99.45 |
| 3.5 | 3.375 | 0.44 | 0.42 | 99.87 |
| 3.75 | 3.625 | 0.11 | 0.11 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.295 |
| **5** | 1.560 |
| **16** | 1.760 |
| **25** | 1.885 |
| **50** | 2.130 |
| **75** | 2.335 |
| **84** | 2.450 |
| **95** | 2.640 |
| **99** | 3.010 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.238 | 0.212 |
| Standard Deviation | 0.354 | 0.782 |
| Skewness | -0.490 | |
| Kurtosis | 7.959 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.105 | 2.113 |
| Standard Deviation | 0.345 | 0.336 |
| Skewness (1) | -0.072 | -0.064 |
| Skewness (2) | -0.087 | |
| Kurtosis | 0.565 | 0.984 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1000+00** |
| **Sample** | **Swash** |
| **Mean** | **0.231 mm** |
| **STD** | **0.747 mm** |
| **Skewness** | **-0.446** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.61 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

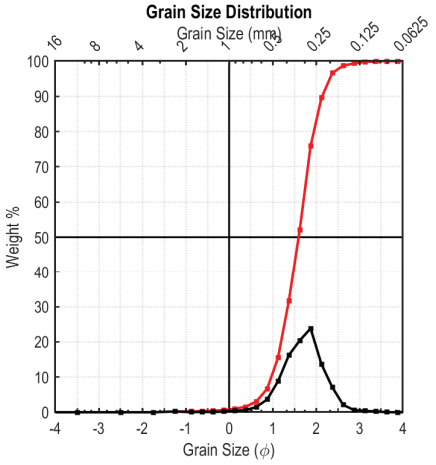
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.02 |
| -0.5 | -0.625 | 0.02 | 0.02 | 0.04 |
| -0.25 | -0.375 | 0.02 | 0.02 | 0.06 |
| 0 | -0.125 | 0.03 | 0.03 | 0.09 |
| 0.25 | 0.125 | 0.04 | 0.04 | 0.13 |
| 0.5 | 0.375 | 0.08 | 0.08 | 0.20 |
| 0.75 | 0.625 | 0.16 | 0.15 | 0.36 |
| 1 | 0.875 | 0.43 | 0.42 | 0.77 |
| 1.25 | 1.125 | 1.41 | 1.36 | 2.13 |
| 1.5 | 1.375 | 4.89 | 4.72 | 6.85 |
| 1.75 | 1.625 | 10.70 | 10.33 | 17.18 |
| 2 | 1.875 | 22.53 | 21.75 | 38.92 |
| 2.25 | 2.125 | 22.74 | 21.95 | 60.87 |
| 2.5 | 2.375 | 22.45 | 21.67 | 82.54 |
| 2.75 | 2.625 | 13.26 | 12.80 | 95.34 |
| 3 | 2.875 | 3.80 | 3.67 | 99.01 |
| 3.25 | 3.125 | 0.82 | 0.79 | 99.80 |
| 3.5 | 3.375 | 0.18 | 0.17 | 99.97 |
| 3.75 | 3.625 | 0.00 | 0.00 | 99.97 |
| 4 | 3.875 | 0.02 | 0.02 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.915 |
| **5** | 1.275 |
| **16** | 1.595 |
| **25** | 1.715 |
| **50** | 2.000 |
| **75** | 2.290 |
| **84** | 2.405 |
| **95** | 2.620 |
| **99** | 2.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.114 | 0.231 |
| Standard Deviation | 0.421 | 0.747 |
| Skewness | -0.446 | |
| Kurtosis | 4.724 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.000 | 2.000 |
| Standard Deviation | 0.405 | 0.406 |
| Skewness (1) | 0.000 | -0.039 |
| Skewness (2) | -0.130 | |
| Kurtosis | 0.660 | 0.959 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1010+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.309 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.698** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.00 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.21 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.7 |

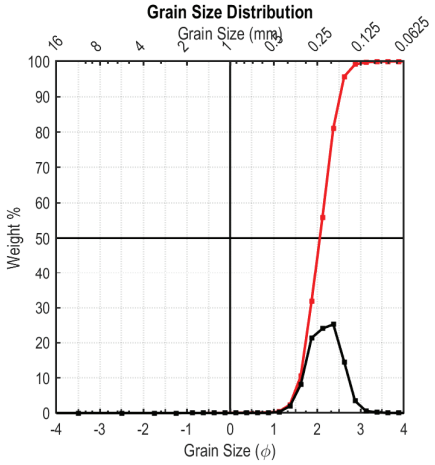
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.22 | 0.21 | 0.21 |
| -0.75 | -0.875 | 0.03 | 0.03 | 0.24 |
| -0.5 | -0.625 | 0.09 | 0.09 | 0.33 |
| -0.25 | -0.375 | 0.08 | 0.08 | 0.41 |
| 0 | -0.125 | 0.19 | 0.18 | 0.59 |
| 0.25 | 0.125 | 0.39 | 0.38 | 0.97 |
| 0.5 | 0.375 | 0.58 | 0.56 | 1.53 |
| 0.75 | 0.625 | 1.55 | 1.50 | 3.04 |
| 1 | 0.875 | 3.74 | 3.63 | 6.67 |
| 1.25 | 1.125 | 9.05 | 8.79 | 15.46 |
| 1.5 | 1.375 | 16.72 | 16.23 | 31.69 |
| 1.75 | 1.625 | 21.00 | 20.39 | 52.08 |
| 2 | 1.875 | 24.53 | 23.82 | 75.89 |
| 2.25 | 2.125 | 14.07 | 13.66 | 89.55 |
| 2.5 | 2.375 | 7.29 | 7.08 | 96.63 |
| 2.75 | 2.625 | 2.15 | 2.09 | 98.72 |
| 3 | 2.875 | 0.65 | 0.63 | 99.35 |
| 3.25 | 3.125 | 0.42 | 0.41 | 99.76 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.140 |
| **5** | 0.760 |
| **16** | 1.135 |
| **25** | 1.270 |
| **50** | 1.600 |
| **75** | 1.865 |
| **84** | 2.025 |
| **95** | 2.315 |
| **99** | 2.735 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.692 | 0.309 |
| Standard Deviation | 0.500 | 0.707 |
| Skewness | -0.698 | |
| Kurtosis | 6.541 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.580 | 1.587 |
| Standard Deviation | 0.445 | 0.458 |
| Skewness (1) | -0.045 | -0.063 |
| Skewness (2) | -0.140 | |
| Kurtosis | 0.747 | 1.071 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1010+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.220 mm** |
| **STD** | **0.777 mm** |
| **Skewness** | **-0.204** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.13 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.8 |

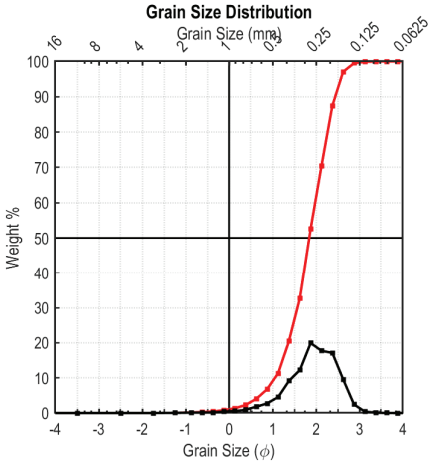
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.01 | 0.01 | 0.02 |
| -0.25 | -0.375 | 0.01 | 0.01 | 0.03 |
| 0 | -0.125 | 0.01 | 0.01 | 0.04 |
| 0.25 | 0.125 | 0.02 | 0.02 | 0.06 |
| 0.5 | 0.375 | 0.02 | 0.02 | 0.08 |
| 0.75 | 0.625 | 0.03 | 0.03 | 0.11 |
| 1 | 0.875 | 0.05 | 0.05 | 0.16 |
| 1.25 | 1.125 | 0.28 | 0.27 | 0.43 |
| 1.5 | 1.375 | 1.99 | 1.95 | 2.38 |
| 1.75 | 1.625 | 8.28 | 8.11 | 10.49 |
| 2 | 1.875 | 21.83 | 21.37 | 31.86 |
| 2.25 | 2.125 | 24.53 | 24.02 | 55.88 |
| 2.5 | 2.375 | 25.79 | 25.25 | 81.13 |
| 2.75 | 2.625 | 14.88 | 14.57 | 95.70 |
| 3 | 2.875 | 3.52 | 3.45 | 99.15 |
| 3.25 | 3.125 | 0.62 | 0.61 | 99.76 |
| 3.5 | 3.375 | 0.18 | 0.18 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 1.200 |
| **5** | 1.455 |
| **16** | 1.690 |
| **25** | 1.795 |
| **50** | 2.065 |
| **75** | 2.315 |
| **84** | 2.425 |
| **95** | 2.615 |
| **99** | 2.865 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.182 | 0.220 |
| Standard Deviation | 0.363 | 0.777 |
| Skewness | -0.204 | |
| Kurtosis | 4.527 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 2.058 | 2.060 |
| Standard Deviation | 0.367 | 0.360 |
| Skewness (1) | -0.020 | -0.036 |
| Skewness (2) | -0.082 | |
| Kurtosis | 0.578 | 0.914 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1010+00** |
| **Sample** | **Swash** |
| **Mean** | **0.267 mm** |
| **STD** | **0.671 mm** |
| **Skewness** | **-0.981** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.08 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.05 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.5 |

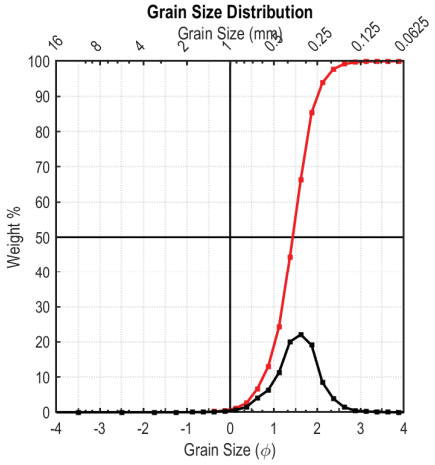
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.05 | 0.05 | 0.05 |
| -0.75 | -0.875 | 0.11 | 0.11 | 0.15 |
| -0.5 | -0.625 | 0.13 | 0.12 | 0.28 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.42 |
| 0 | -0.125 | 0.41 | 0.39 | 0.82 |
| 0.25 | 0.125 | 0.54 | 0.52 | 1.34 |
| 0.5 | 0.375 | 0.95 | 0.91 | 2.25 |
| 0.75 | 0.625 | 1.87 | 1.80 | 4.04 |
| 1 | 0.875 | 2.85 | 2.74 | 6.78 |
| 1.25 | 1.125 | 4.72 | 4.53 | 11.32 |
| 1.5 | 1.375 | 9.52 | 9.15 | 20.47 |
| 1.75 | 1.625 | 12.70 | 12.20 | 32.67 |
| 2 | 1.875 | 20.75 | 19.94 | 52.60 |
| 2.25 | 2.125 | 18.46 | 17.74 | 70.34 |
| 2.5 | 2.375 | 17.83 | 17.13 | 87.47 |
| 2.75 | 2.625 | 9.99 | 9.60 | 97.07 |
| 3 | 2.875 | 2.52 | 2.42 | 99.49 |
| 3.25 | 3.125 | 0.42 | 0.40 | 99.89 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.035 |
| **5** | 0.710 |
| **16** | 1.255 |
| **25** | 1.470 |
| **50** | 1.840 |
| **75** | 2.195 |
| **84** | 2.325 |
| **95** | 2.570 |
| **99** | 2.825 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.906 | 0.267 |
| Standard Deviation | 0.576 | 0.671 |
| Skewness | -0.981 | |
| Kurtosis | 4.977 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.790 | 1.807 |
| Standard Deviation | 0.535 | 0.549 |
| Skewness (1) | -0.093 | -0.154 |
| Skewness (2) | -0.374 | |
| Kurtosis | 0.738 | 1.051 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1020+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.344 mm** |
| **STD** | **0.707 mm** |
| **Skewness** | **-0.263** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.00 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

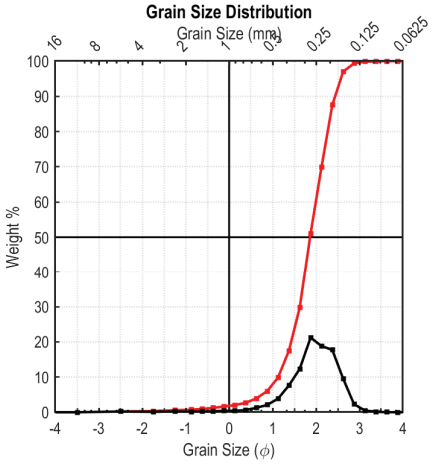
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.07 |
| -0.25 | -0.375 | 0.11 | 0.11 | 0.17 |
| 0 | -0.125 | 0.34 | 0.33 | 0.50 |
| 0.25 | 0.125 | 0.62 | 0.60 | 1.11 |
| 0.5 | 0.375 | 1.54 | 1.50 | 2.60 |
| 0.75 | 0.625 | 4.16 | 4.04 | 6.64 |
| 1 | 0.875 | 6.49 | 6.30 | 12.94 |
| 1.25 | 1.125 | 11.64 | 11.30 | 24.24 |
| 1.5 | 1.375 | 20.62 | 20.02 | 44.26 |
| 1.75 | 1.625 | 22.74 | 22.08 | 66.34 |
| 2 | 1.875 | 19.64 | 19.07 | 85.41 |
| 2.25 | 2.125 | 8.71 | 8.46 | 93.86 |
| 2.5 | 2.375 | 3.99 | 3.87 | 97.74 |
| 2.75 | 2.625 | 1.48 | 1.44 | 99.17 |
| 3 | 2.875 | 0.50 | 0.49 | 99.66 |
| 3.25 | 3.125 | 0.24 | 0.23 | 99.89 |
| 3.5 | 3.375 | 0.08 | 0.08 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.080 |
| **5** | 0.525 |
| **16** | 0.945 |
| **25** | 1.135 |
| **50** | 1.440 |
| **75** | 1.740 |
| **84** | 1.855 |
| **95** | 2.200 |
| **99** | 2.595 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.539 | 0.344 |
| Standard Deviation | 0.500 | 0.707 |
| Skewness | -0.263 | |
| Kurtosis | 4.071 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.400 | 1.413 |
| Standard Deviation | 0.455 | 0.481 |
| Skewness (1) | -0.088 | -0.090 |
| Skewness (2) | -0.170 | |
| Kurtosis | 0.841 | 1.135 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1020+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.265 mm** |
| **STD** | **0.648 mm** |
| **Skewness** | **-2.022** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.45 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.36 |
| % gravel (>4 mm) | 0.21 |
| CaCO3 | 2.1 |

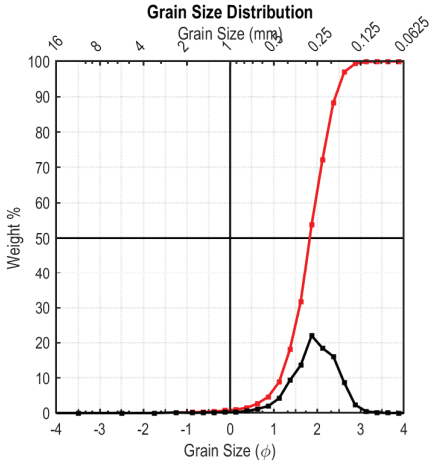
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.22 | 0.21 | 0.21 |
| -1.5 | -1.75 | 0.12 | 0.11 | 0.33 |
| -1 | -1.25 | 0.26 | 0.25 | 0.57 |
| -0.75 | -0.875 | 0.14 | 0.13 | 0.71 |
| -0.5 | -0.625 | 0.24 | 0.23 | 0.94 |
| -0.25 | -0.375 | 0.29 | 0.28 | 1.22 |
| 0 | -0.125 | 0.43 | 0.41 | 1.63 |
| 0.25 | 0.125 | 0.42 | 0.40 | 2.03 |
| 0.5 | 0.375 | 0.65 | 0.62 | 2.65 |
| 0.75 | 0.625 | 1.32 | 1.26 | 3.92 |
| 1 | 0.875 | 2.17 | 2.08 | 5.99 |
| 1.25 | 1.125 | 4.03 | 3.86 | 9.85 |
| 1.5 | 1.375 | 7.95 | 7.61 | 17.46 |
| 1.75 | 1.625 | 12.88 | 12.33 | 29.79 |
| 2 | 1.875 | 22.17 | 21.23 | 51.02 |
| 2.25 | 2.125 | 19.65 | 18.81 | 69.83 |
| 2.5 | 2.375 | 18.50 | 17.71 | 87.54 |
| 2.75 | 2.625 | 9.93 | 9.51 | 97.05 |
| 3 | 2.875 | 2.39 | 2.29 | 99.34 |
| 3.25 | 3.125 | 0.52 | 0.50 | 99.84 |
| 3.5 | 3.375 | 0.15 | 0.14 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.570 |
| **5** | 0.755 |
| **16** | 1.325 |
| **25** | 1.530 |
| **50** | 1.865 |
| **75** | 2.200 |
| **84** | 2.325 |
| **95** | 2.570 |
| **99** | 2.840 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.918 | 0.265 |
| Standard Deviation | 0.626 | 0.648 |
| Skewness | -2.022 | |
| Kurtosis | 11.804 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.825 | 1.838 |
| Standard Deviation | 0.500 | 0.525 |
| Skewness (1) | -0.080 | -0.152 |
| Skewness (2) | -0.405 | |
| Kurtosis | 0.815 | 1.110 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1020+00** |
| **Sample** | **Swash** |
| **Mean** | **0.264 mm** |
| **STD** | **0.689 mm** |
| **Skewness** | **-1.011** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.06 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.15 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

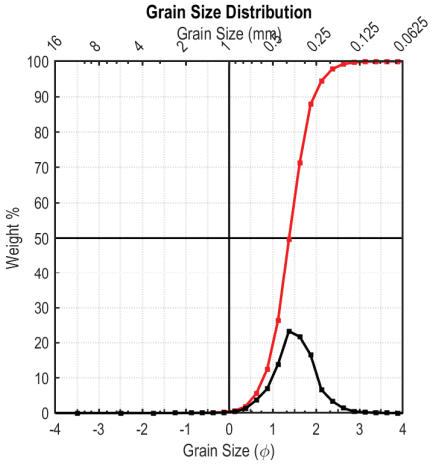
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.16 | 0.15 | 0.15 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.19 |
| -0.5 | -0.625 | 0.12 | 0.12 | 0.31 |
| -0.25 | -0.375 | 0.15 | 0.14 | 0.45 |
| 0 | -0.125 | 0.25 | 0.24 | 0.69 |
| 0.25 | 0.125 | 0.26 | 0.25 | 0.94 |
| 0.5 | 0.375 | 0.57 | 0.55 | 1.49 |
| 0.75 | 0.625 | 1.21 | 1.16 | 2.65 |
| 1 | 0.875 | 2.04 | 1.96 | 4.61 |
| 1.25 | 1.125 | 4.35 | 4.18 | 8.79 |
| 1.5 | 1.375 | 9.67 | 9.29 | 18.09 |
| 1.75 | 1.625 | 14.16 | 13.61 | 31.69 |
| 2 | 1.875 | 22.92 | 22.03 | 53.72 |
| 2.25 | 2.125 | 19.23 | 18.48 | 72.20 |
| 2.5 | 2.375 | 16.76 | 16.11 | 88.30 |
| 2.75 | 2.625 | 9.02 | 8.67 | 96.97 |
| 3 | 2.875 | 2.47 | 2.37 | 99.35 |
| 3.25 | 3.125 | 0.52 | 0.50 | 99.85 |
| 3.5 | 3.375 | 0.13 | 0.12 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.150 |
| **5** | 0.900 |
| **16** | 1.320 |
| **25** | 1.500 |
| **50** | 1.835 |
| **75** | 2.170 |
| **84** | 2.310 |
| **95** | 2.570 |
| **99** | 2.840 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.924 | 0.264 |
| Standard Deviation | 0.537 | 0.689 |
| Skewness | -1.011 | |
| Kurtosis | 6.234 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.815 | 1.822 |
| Standard Deviation | 0.495 | 0.501 |
| Skewness (1) | -0.040 | -0.080 |
| Skewness (2) | -0.202 | |
| Kurtosis | 0.687 | 1.022 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1030+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.352 mm** |
| **STD** | **0.720 mm** |
| **Skewness** | **-0.037** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.66 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

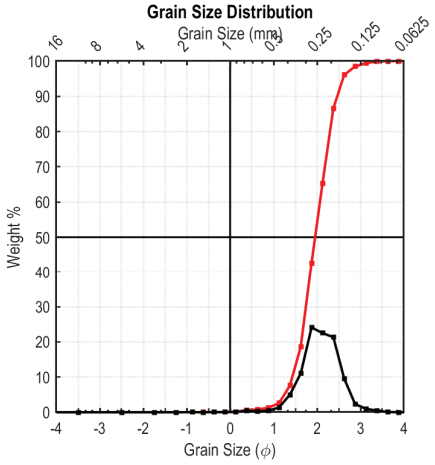
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.04 |
| -0.5 | -0.625 | 0.04 | 0.04 | 0.08 |
| -0.25 | -0.375 | 0.04 | 0.04 | 0.12 |
| 0 | -0.125 | 0.15 | 0.15 | 0.26 |
| 0.25 | 0.125 | 0.38 | 0.37 | 0.63 |
| 0.5 | 0.375 | 1.26 | 1.23 | 1.86 |
| 0.75 | 0.625 | 3.78 | 3.68 | 5.54 |
| 1 | 0.875 | 7.07 | 6.89 | 12.43 |
| 1.25 | 1.125 | 14.26 | 13.89 | 26.32 |
| 1.5 | 1.375 | 23.92 | 23.30 | 49.62 |
| 1.75 | 1.625 | 22.29 | 21.71 | 71.33 |
| 2 | 1.875 | 16.98 | 16.54 | 87.87 |
| 2.25 | 2.125 | 6.79 | 6.61 | 94.49 |
| 2.5 | 2.375 | 3.45 | 3.36 | 97.85 |
| 2.75 | 2.625 | 1.42 | 1.38 | 99.23 |
| 3 | 2.875 | 0.48 | 0.47 | 99.70 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.91 |
| 3.5 | 3.375 | 0.07 | 0.07 | 99.98 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.200 |
| **5** | 0.590 |
| **16** | 0.940 |
| **25** | 1.100 |
| **50** | 1.380 |
| **75** | 1.680 |
| **84** | 1.815 |
| **95** | 2.165 |
| **99** | 2.585 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.507 | 0.352 |
| Standard Deviation | 0.473 | 0.720 |
| Skewness | -0.037 | |
| Kurtosis | 4.202 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.377 | 1.378 |
| Standard Deviation | 0.438 | 0.457 |
| Skewness (1) | -0.006 | -0.004 |
| Skewness (2) | -0.006 | |
| Kurtosis | 0.800 | 1.113 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1030+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.237 mm** |
| **STD** | **0.743 mm** |
| **Skewness** | **-0.418** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.56 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

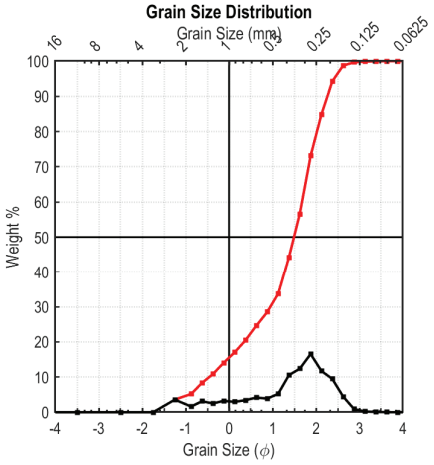
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.01 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.04 |
| 0 | -0.125 | 0.03 | 0.03 | 0.07 |
| 0.25 | 0.125 | 0.08 | 0.08 | 0.14 |
| 0.5 | 0.375 | 0.45 | 0.43 | 0.58 |
| 0.75 | 0.625 | 0.23 | 0.22 | 0.80 |
| 1 | 0.875 | 0.45 | 0.43 | 1.24 |
| 1.25 | 1.125 | 1.41 | 1.36 | 2.60 |
| 1.5 | 1.375 | 5.15 | 4.97 | 7.57 |
| 1.75 | 1.625 | 11.42 | 11.03 | 18.60 |
| 2 | 1.875 | 24.97 | 24.11 | 42.71 |
| 2.25 | 2.125 | 23.29 | 22.49 | 65.20 |
| 2.5 | 2.375 | 22.10 | 21.34 | 86.54 |
| 2.75 | 2.625 | 9.90 | 9.56 | 96.10 |
| 3 | 2.875 | 2.46 | 2.38 | 98.47 |
| 3.25 | 3.125 | 0.97 | 0.94 | 99.41 |
| 3.5 | 3.375 | 0.52 | 0.50 | 99.91 |
| 3.75 | 3.625 | 0.09 | 0.09 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.740 |
| **5** | 1.245 |
| **16** | 1.565 |
| **25** | 1.690 |
| **50** | 1.955 |
| **75** | 2.240 |
| **84** | 2.345 |
| **95** | 2.595 |
| **99** | 3.015 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.075 | 0.237 |
| Standard Deviation | 0.429 | 0.743 |
| Skewness | -0.418 | |
| Kurtosis | 5.022 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.955 | 1.955 |
| Standard Deviation | 0.390 | 0.400 |
| Skewness (1) | -0.000 | -0.026 |
| Skewness (2) | -0.090 | |
| Kurtosis | 0.731 | 1.006 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1030+00** |
| **Sample** | **Swash** |
| **Mean** | **0.399 mm** |
| **STD** | **0.495 mm** |
| **Skewness** | **-0.942** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Poorly Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 104.40 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 3.58 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.3 |

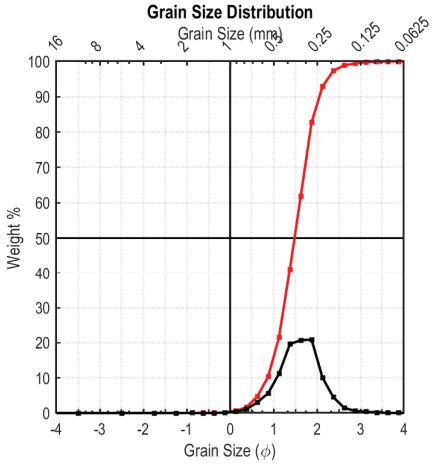
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 3.74 | 3.58 | 3.58 |
| -0.75 | -0.875 | 1.69 | 1.62 | 5.20 |
| -0.5 | -0.625 | 3.26 | 3.12 | 8.32 |
| -0.25 | -0.375 | 2.62 | 2.51 | 10.83 |
| 0 | -0.125 | 3.37 | 3.23 | 14.06 |
| 0.25 | 0.125 | 3.07 | 2.94 | 17.00 |
| 0.5 | 0.375 | 3.58 | 3.43 | 20.43 |
| 0.75 | 0.625 | 4.34 | 4.16 | 24.59 |
| 1 | 0.875 | 4.06 | 3.89 | 28.48 |
| 1.25 | 1.125 | 5.41 | 5.18 | 33.66 |
| 1.5 | 1.375 | 11.01 | 10.55 | 44.21 |
| 1.75 | 1.625 | 12.91 | 12.37 | 56.57 |
| 2 | 1.875 | 17.28 | 16.55 | 73.12 |
| 2.25 | 2.125 | 12.25 | 11.73 | 84.86 |
| 2.5 | 2.375 | 9.86 | 9.44 | 94.30 |
| 2.75 | 2.625 | 4.65 | 4.45 | 98.75 |
| 3 | 2.875 | 0.95 | 0.91 | 99.66 |
| 3.25 | 3.125 | 0.22 | 0.21 | 99.88 |
| 3.5 | 3.375 | 0.09 | 0.09 | 99.96 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.610 |
| **5** | -0.920 |
| **16** | 0.040 |
| **25** | 0.650 |
| **50** | 1.490 |
| **75** | 1.915 |
| **84** | 2.105 |
| **95** | 2.415 |
| **99** | 2.690 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.327 | 0.399 |
| Standard Deviation | 1.014 | 0.495 |
| Skewness | -0.942 | |
| Kurtosis | 3.094 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.073 | 1.212 |
| Standard Deviation | 1.032 | 1.022 |
| Skewness (1) | -0.404 | -0.425 |
| Skewness (2) | -0.719 | |
| Kurtosis | 0.615 | 1.080 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1040+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.332 mm** |
| **STD** | **0.714 mm** |
| **Skewness** | **-0.050** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.83 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.2 |

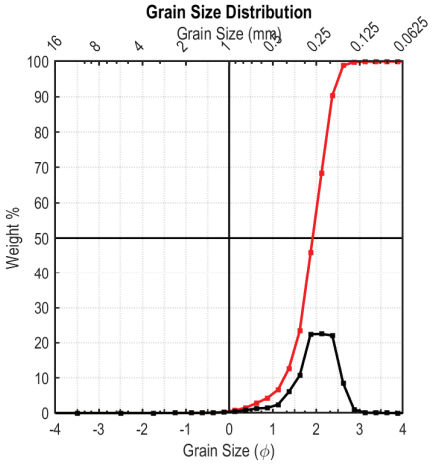
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.01 |
| -0.5 | -0.625 | 0.00 | 0.00 | 0.01 |
| -0.25 | -0.375 | 0.00 | 0.00 | 0.01 |
| 0 | -0.125 | 0.13 | 0.13 | 0.14 |
| 0.25 | 0.125 | 0.44 | 0.43 | 0.56 |
| 0.5 | 0.375 | 1.12 | 1.09 | 1.65 |
| 0.75 | 0.625 | 3.15 | 3.06 | 4.72 |
| 1 | 0.875 | 5.80 | 5.64 | 10.36 |
| 1.25 | 1.125 | 11.52 | 11.20 | 21.56 |
| 1.5 | 1.375 | 20.14 | 19.59 | 41.15 |
| 1.75 | 1.625 | 21.32 | 20.73 | 61.88 |
| 2 | 1.875 | 21.48 | 20.89 | 82.77 |
| 2.25 | 2.125 | 10.38 | 10.09 | 92.86 |
| 2.5 | 2.375 | 4.62 | 4.49 | 97.35 |
| 2.75 | 2.625 | 1.54 | 1.50 | 98.85 |
| 3 | 2.875 | 0.59 | 0.57 | 99.43 |
| 3.25 | 3.125 | 0.38 | 0.37 | 99.80 |
| 3.5 | 3.375 | 0.17 | 0.17 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.225 |
| **5** | 0.640 |
| **16** | 1.000 |
| **25** | 1.170 |
| **50** | 1.480 |
| **75** | 1.780 |
| **84** | 1.905 |
| **95** | 2.245 |
| **99** | 2.690 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.592 | 0.332 |
| Standard Deviation | 0.485 | 0.714 |
| Skewness | -0.050 | |
| Kurtosis | 3.835 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.452 | 1.462 |
| Standard Deviation | 0.452 | 0.469 |
| Skewness (1) | -0.061 | -0.054 |
| Skewness (2) | -0.083 | |
| Kurtosis | 0.773 | 1.078 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1040+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.252 mm** |
| **STD** | **0.716 mm** |
| **Skewness** | **-1.219** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.27 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 0.9 |

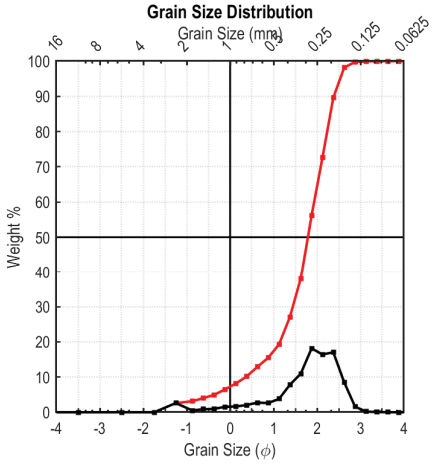
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.01 | 0.01 | 0.03 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.06 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.12 |
| 0 | -0.125 | 0.18 | 0.17 | 0.29 |
| 0.25 | 0.125 | 0.43 | 0.42 | 0.71 |
| 0.5 | 0.375 | 0.81 | 0.78 | 1.49 |
| 0.75 | 0.625 | 1.34 | 1.30 | 2.79 |
| 1 | 0.875 | 1.50 | 1.45 | 4.24 |
| 1.25 | 1.125 | 2.47 | 2.39 | 6.63 |
| 1.5 | 1.375 | 6.23 | 6.03 | 12.67 |
| 1.75 | 1.625 | 11.06 | 10.71 | 23.38 |
| 2 | 1.875 | 23.17 | 22.44 | 45.81 |
| 2.25 | 2.125 | 23.24 | 22.50 | 68.32 |
| 2.5 | 2.375 | 22.78 | 22.06 | 90.37 |
| 2.75 | 2.625 | 8.72 | 8.44 | 98.82 |
| 3 | 2.875 | 1.04 | 1.01 | 99.83 |
| 3.25 | 3.125 | 0.12 | 0.12 | 99.94 |
| 3.5 | 3.375 | 0.03 | 0.03 | 99.97 |
| 3.75 | 3.625 | 0.01 | 0.01 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.220 |
| **5** | 0.955 |
| **16** | 1.455 |
| **25** | 1.645 |
| **50** | 1.920 |
| **75** | 2.200 |
| **84** | 2.305 |
| **95** | 2.510 |
| **99** | 2.670 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.986 | 0.252 |
| Standard Deviation | 0.483 | 0.716 |
| Skewness | -1.219 | |
| Kurtosis | 5.917 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.880 | 1.893 |
| Standard Deviation | 0.425 | 0.448 |
| Skewness (1) | -0.094 | -0.168 |
| Skewness (2) | -0.441 | |
| Kurtosis | 0.829 | 1.148 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1040+00** |
| **Sample** | **Swash** |
| **Mean** | **0.308 mm** |
| **STD** | **0.546 mm** |
| **Skewness** | **-1.581** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.75 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 2.61 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

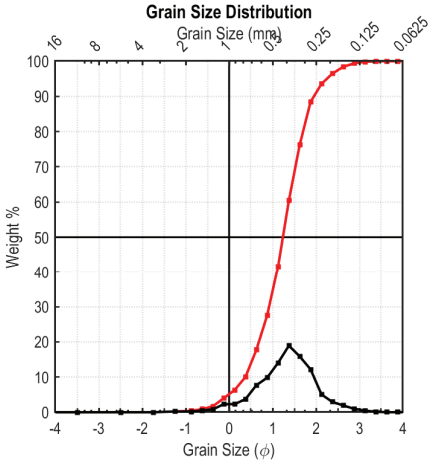
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 2.71 | 2.61 | 2.61 |
| -0.75 | -0.875 | 0.53 | 0.51 | 3.12 |
| -0.5 | -0.625 | 0.89 | 0.86 | 3.98 |
| -0.25 | -0.375 | 0.98 | 0.94 | 4.93 |
| 0 | -0.125 | 1.59 | 1.53 | 6.46 |
| 0.25 | 0.125 | 1.71 | 1.65 | 8.11 |
| 0.5 | 0.375 | 2.10 | 2.02 | 10.13 |
| 0.75 | 0.625 | 2.84 | 2.74 | 12.87 |
| 1 | 0.875 | 2.71 | 2.61 | 15.48 |
| 1.25 | 1.125 | 3.93 | 3.79 | 19.27 |
| 1.5 | 1.375 | 8.09 | 7.80 | 27.07 |
| 1.75 | 1.625 | 11.36 | 10.95 | 38.01 |
| 2 | 1.875 | 18.83 | 18.15 | 56.16 |
| 2.25 | 2.125 | 17.05 | 16.43 | 72.60 |
| 2.5 | 2.375 | 17.67 | 17.03 | 89.63 |
| 2.75 | 2.625 | 8.85 | 8.53 | 98.16 |
| 3 | 2.875 | 1.66 | 1.60 | 99.76 |
| 3.25 | 3.125 | 0.19 | 0.18 | 99.94 |
| 3.5 | 3.375 | 0.05 | 0.05 | 99.99 |
| 3.75 | 3.625 | 0.01 | 0.01 | 100.00 |
| 4 | 3.875 | -0.01 | -0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.560 |
| **5** | -0.365 |
| **16** | 0.910 |
| **25** | 1.310 |
| **50** | 1.790 |
| **75** | 2.160 |
| **84** | 2.290 |
| **95** | 2.530 |
| **99** | 2.755 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.701 | 0.308 |
| Standard Deviation | 0.872 | 0.546 |
| Skewness | -1.581 | |
| Kurtosis | 5.487 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.600 | 1.663 |
| Standard Deviation | 0.690 | 0.784 |
| Skewness (1) | -0.275 | -0.382 |
| Skewness (2) | -1.025 | |
| Kurtosis | 1.098 | 1.396 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1050+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.401 mm** |
| **STD** | **0.632 mm** |
| **Skewness** | **-0.310** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.39 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.22 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

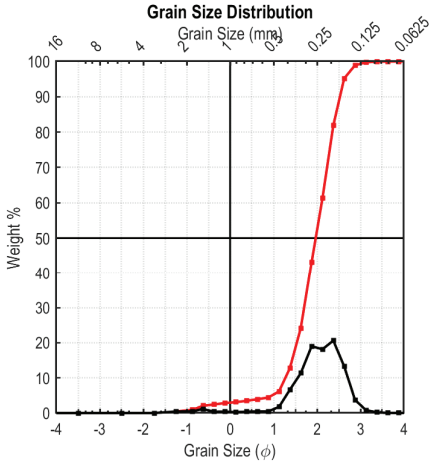
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.23 | 0.22 | 0.22 |
| -0.75 | -0.875 | 0.17 | 0.17 | 0.39 |
| -0.5 | -0.625 | 0.49 | 0.48 | 0.87 |
| -0.25 | -0.375 | 0.86 | 0.84 | 1.71 |
| 0 | -0.125 | 2.33 | 2.28 | 3.98 |
| 0.25 | 0.125 | 2.37 | 2.31 | 6.30 |
| 0.5 | 0.375 | 3.80 | 3.71 | 10.01 |
| 0.75 | 0.625 | 7.85 | 7.67 | 17.68 |
| 1 | 0.875 | 10.06 | 9.83 | 27.50 |
| 1.25 | 1.125 | 14.35 | 14.02 | 41.52 |
| 1.5 | 1.375 | 19.36 | 18.91 | 60.43 |
| 1.75 | 1.625 | 16.24 | 15.86 | 76.29 |
| 2 | 1.875 | 12.46 | 12.17 | 88.46 |
| 2.25 | 2.125 | 5.20 | 5.08 | 93.53 |
| 2.5 | 2.375 | 2.99 | 2.92 | 96.45 |
| 2.75 | 2.625 | 1.97 | 1.92 | 98.38 |
| 3 | 2.875 | 1.00 | 0.98 | 99.36 |
| 3.25 | 3.125 | 0.47 | 0.46 | 99.81 |
| 3.5 | 3.375 | 0.14 | 0.14 | 99.95 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.585 |
| **5** | -0.015 |
| **16** | 0.570 |
| **25** | 0.810 |
| **50** | 1.235 |
| **75** | 1.605 |
| **84** | 1.785 |
| **95** | 2.250 |
| **99** | 2.785 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.318 | 0.401 |
| Standard Deviation | 0.663 | 0.632 |
| Skewness | -0.310 | |
| Kurtosis | 3.897 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.177 | 1.197 |
| Standard Deviation | 0.608 | 0.647 |
| Skewness (1) | -0.095 | -0.099 |
| Skewness (2) | -0.193 | |
| Kurtosis | 0.864 | 1.168 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1050+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.249 mm** |
| **STD** | **0.637 mm** |
| **Skewness** | **-2.045** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.95 |
| % finer than 0.0625 mm (dry) | 0.02 |
| % granule (2-4 mm) | 0.44 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.7 |

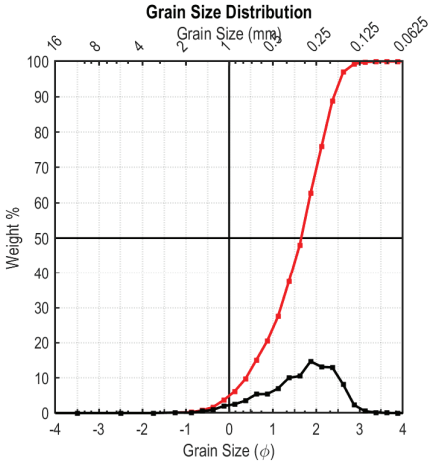
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.45 | 0.44 | 0.44 |
| -0.75 | -0.875 | 0.48 | 0.47 | 0.90 |
| -0.5 | -0.625 | 1.19 | 1.16 | 2.06 |
| -0.25 | -0.375 | 0.39 | 0.38 | 2.44 |
| 0 | -0.125 | 0.40 | 0.39 | 2.83 |
| 0.25 | 0.125 | 0.27 | 0.26 | 3.09 |
| 0.5 | 0.375 | 0.39 | 0.38 | 3.47 |
| 0.75 | 0.625 | 0.48 | 0.47 | 3.93 |
| 1 | 0.875 | 0.48 | 0.47 | 4.40 |
| 1.25 | 1.125 | 1.80 | 1.75 | 6.15 |
| 1.5 | 1.375 | 6.83 | 6.63 | 12.78 |
| 1.75 | 1.625 | 11.67 | 11.34 | 24.12 |
| 2 | 1.875 | 19.56 | 19.00 | 43.12 |
| 2.25 | 2.125 | 18.69 | 18.15 | 61.27 |
| 2.5 | 2.375 | 21.22 | 20.61 | 81.88 |
| 2.75 | 2.625 | 13.68 | 13.29 | 95.17 |
| 3 | 2.875 | 3.85 | 3.74 | 98.91 |
| 3.25 | 3.125 | 0.86 | 0.84 | 99.75 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.93 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.97 |
| 4 | 3.875 | 0.01 | 0.01 | 99.98 |
| >4.0 | 4.25 | 0.02 | 0.02 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.855 |
| **5** | 0.960 |
| **16** | 1.445 |
| **25** | 1.635 |
| **50** | 1.970 |
| **75** | 2.290 |
| **84** | 2.415 |
| **95** | 2.620 |
| **99** | 2.900 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.008 | 0.249 |
| Standard Deviation | 0.651 | 0.637 |
| Skewness | -2.045 | |
| Kurtosis | 9.748 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.930 | 1.943 |
| Standard Deviation | 0.485 | 0.494 |
| Skewness (1) | -0.082 | -0.150 |
| Skewness (2) | -0.371 | |
| Kurtosis | 0.711 | 1.039 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1050+00** |
| **Sample** | **Swash** |
| **Mean** | **0.321 mm** |
| **STD** | **0.582 mm** |
| **Skewness** | **-0.680** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 101.60 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.14 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.6 |

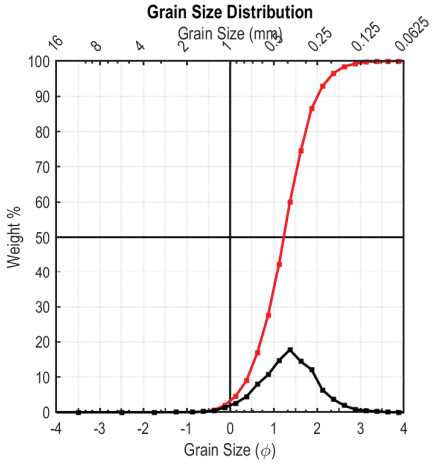
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.14 | 0.14 | 0.14 |
| -0.75 | -0.875 | 0.09 | 0.09 | 0.23 |
| -0.5 | -0.625 | 0.55 | 0.54 | 0.77 |
| -0.25 | -0.375 | 0.91 | 0.90 | 1.66 |
| 0 | -0.125 | 2.04 | 2.01 | 3.67 |
| 0.25 | 0.125 | 2.53 | 2.49 | 6.16 |
| 0.5 | 0.375 | 3.60 | 3.54 | 9.70 |
| 0.75 | 0.625 | 5.46 | 5.37 | 15.08 |
| 1 | 0.875 | 5.48 | 5.39 | 20.47 |
| 1.25 | 1.125 | 7.10 | 6.99 | 27.46 |
| 1.5 | 1.375 | 10.19 | 10.03 | 37.49 |
| 1.75 | 1.625 | 10.68 | 10.51 | 48.00 |
| 2 | 1.875 | 14.95 | 14.71 | 62.72 |
| 2.25 | 2.125 | 13.35 | 13.14 | 75.86 |
| 2.5 | 2.375 | 13.20 | 12.99 | 88.85 |
| 2.75 | 2.625 | 8.25 | 8.12 | 96.97 |
| 3 | 2.875 | 2.35 | 2.31 | 99.28 |
| 3.25 | 3.125 | 0.54 | 0.53 | 99.81 |
| 3.5 | 3.375 | 0.16 | 0.16 | 99.97 |
| 3.75 | 3.625 | 0.03 | 0.03 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.560 |
| **5** | 0.010 |
| **16** | 0.670 |
| **25** | 1.035 |
| **50** | 1.660 |
| **75** | 2.110 |
| **84** | 2.280 |
| **95** | 2.565 |
| **99** | 2.845 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.639 | 0.321 |
| Standard Deviation | 0.782 | 0.582 |
| Skewness | -0.680 | |
| Kurtosis | 3.050 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.475 | 1.537 |
| Standard Deviation | 0.805 | 0.790 |
| Skewness (1) | -0.230 | -0.261 |
| Skewness (2) | -0.463 | |
| Kurtosis | 0.587 | 0.974 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1060+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.393 mm** |
| **STD** | **0.645 mm** |
| **Skewness** | **-0.018** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.00 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.02 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.3 |

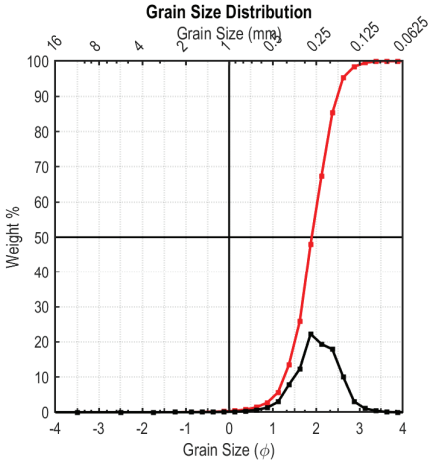
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.02 | 0.02 | 0.02 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.04 |
| -0.5 | -0.625 | 0.18 | 0.17 | 0.21 |
| -0.25 | -0.375 | 0.43 | 0.42 | 0.63 |
| 0 | -0.125 | 1.41 | 1.37 | 2.00 |
| 0.25 | 0.125 | 2.63 | 2.55 | 4.55 |
| 0.5 | 0.375 | 4.55 | 4.42 | 8.97 |
| 0.75 | 0.625 | 8.16 | 7.92 | 16.89 |
| 1 | 0.875 | 10.97 | 10.65 | 27.54 |
| 1.25 | 1.125 | 15.16 | 14.72 | 42.26 |
| 1.5 | 1.375 | 18.29 | 17.76 | 60.02 |
| 1.75 | 1.625 | 14.88 | 14.45 | 74.47 |
| 2 | 1.875 | 12.47 | 12.11 | 86.57 |
| 2.25 | 2.125 | 6.50 | 6.31 | 92.88 |
| 2.5 | 2.375 | 3.78 | 3.67 | 96.55 |
| 2.75 | 2.625 | 1.95 | 1.89 | 98.45 |
| 3 | 2.875 | 0.85 | 0.83 | 99.27 |
| 3.25 | 3.125 | 0.49 | 0.48 | 99.75 |
| 3.5 | 3.375 | 0.23 | 0.22 | 99.97 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.310 |
| **5** | 0.150 |
| **16** | 0.595 |
| **25** | 0.815 |
| **50** | 1.235 |
| **75** | 1.635 |
| **84** | 1.820 |
| **95** | 2.270 |
| **99** | 2.795 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.347 | 0.393 |
| Standard Deviation | 0.634 | 0.645 |
| Skewness | -0.018 | |
| Kurtosis | 3.299 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.207 | 1.217 |
| Standard Deviation | 0.613 | 0.627 |
| Skewness (1) | -0.045 | -0.034 |
| Skewness (2) | -0.041 | |
| Kurtosis | 0.731 | 1.060 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1060+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.248 mm** |
| **STD** | **0.709 mm** |
| **Skewness** | **-0.550** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.32 |
| % finer than 0.0625 mm (dry) | 0.00 |
| % granule (2-4 mm) | 0.01 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

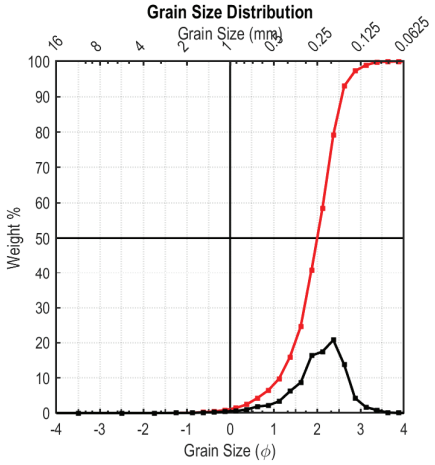
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.01 | 0.01 | 0.01 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.03 |
| -0.5 | -0.625 | 0.05 | 0.05 | 0.08 |
| -0.25 | -0.375 | 0.06 | 0.06 | 0.14 |
| 0 | -0.125 | 0.11 | 0.11 | 0.24 |
| 0.25 | 0.125 | 0.17 | 0.16 | 0.41 |
| 0.5 | 0.375 | 0.34 | 0.33 | 0.74 |
| 0.75 | 0.625 | 0.69 | 0.67 | 1.40 |
| 1 | 0.875 | 1.35 | 1.31 | 2.71 |
| 1.25 | 1.125 | 3.02 | 2.92 | 5.63 |
| 1.5 | 1.375 | 8.08 | 7.82 | 13.45 |
| 1.75 | 1.625 | 12.70 | 12.29 | 25.75 |
| 2 | 1.875 | 22.99 | 22.25 | 48.00 |
| 2.25 | 2.125 | 20.02 | 19.38 | 67.37 |
| 2.5 | 2.375 | 18.50 | 17.91 | 85.28 |
| 2.75 | 2.625 | 10.41 | 10.08 | 95.35 |
| 3 | 2.875 | 3.18 | 3.08 | 98.43 |
| 3.25 | 3.125 | 1.10 | 1.06 | 99.50 |
| 3.5 | 3.375 | 0.45 | 0.44 | 99.93 |
| 3.75 | 3.625 | 0.07 | 0.07 | 100.00 |
| 4 | 3.875 | 0.00 | 0.00 | 100.00 |
| >4.0 | 4.25 | 0.00 | 0.00 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.475 |
| **5** | 1.070 |
| **16** | 1.425 |
| **25** | 1.610 |
| **50** | 1.900 |
| **75** | 2.230 |
| **84** | 2.355 |
| **95** | 2.615 |
| **99** | 3.010 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.014 | 0.248 |
| Standard Deviation | 0.496 | 0.709 |
| Skewness | -0.550 | |
| Kurtosis | 4.711 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.890 | 1.893 |
| Standard Deviation | 0.465 | 0.467 |
| Skewness (1) | -0.022 | -0.048 |
| Skewness (2) | -0.124 | |
| Kurtosis | 0.661 | 1.021 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1060+00** |
| **Sample** | **Swash** |
| **Mean** | **0.243 mm** |
| **STD** | **0.652 mm** |
| **Skewness** | **-0.986** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.06 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.03 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.4 |

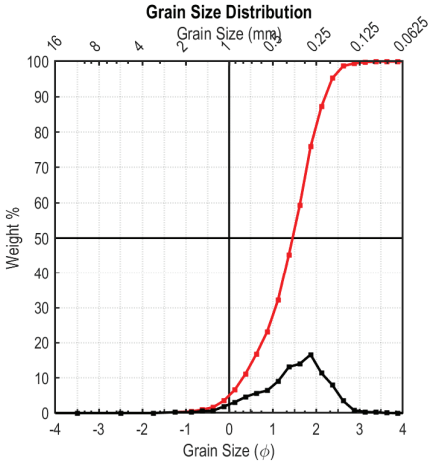
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.03 | 0.03 | 0.03 |
| -0.75 | -0.875 | 0.04 | 0.04 | 0.07 |
| -0.5 | -0.625 | 0.17 | 0.17 | 0.24 |
| -0.25 | -0.375 | 0.20 | 0.20 | 0.43 |
| 0 | -0.125 | 0.42 | 0.41 | 0.84 |
| 0.25 | 0.125 | 0.57 | 0.56 | 1.40 |
| 0.5 | 0.375 | 1.03 | 1.01 | 2.41 |
| 0.75 | 0.625 | 1.88 | 1.84 | 4.25 |
| 1 | 0.875 | 2.22 | 2.18 | 6.43 |
| 1.25 | 1.125 | 3.39 | 3.32 | 9.75 |
| 1.5 | 1.375 | 6.31 | 6.18 | 15.93 |
| 1.75 | 1.625 | 8.89 | 8.71 | 24.64 |
| 2 | 1.875 | 16.68 | 16.34 | 40.99 |
| 2.25 | 2.125 | 17.84 | 17.48 | 58.47 |
| 2.5 | 2.375 | 21.20 | 20.77 | 79.24 |
| 2.75 | 2.625 | 14.05 | 13.77 | 93.00 |
| 3 | 2.875 | 4.35 | 4.26 | 97.27 |
| 3.25 | 3.125 | 1.73 | 1.70 | 98.96 |
| 3.5 | 3.375 | 0.86 | 0.84 | 99.80 |
| 3.75 | 3.625 | 0.15 | 0.15 | 99.95 |
| 4 | 3.875 | 0.02 | 0.02 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.055 |
| **5** | 0.710 |
| **16** | 1.375 |
| **25** | 1.630 |
| **50** | 2.005 |
| **75** | 2.325 |
| **84** | 2.460 |
| **95** | 2.740 |
| **99** | 3.135 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.040 | 0.243 |
| Standard Deviation | 0.617 | 0.652 |
| Skewness | -0.986 | |
| Kurtosis | 4.944 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.917 | 1.947 |
| Standard Deviation | 0.542 | 0.579 |
| Skewness (1) | -0.161 | -0.219 |
| Skewness (2) | -0.516 | |
| Kurtosis | 0.871 | 1.197 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1070+00** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.358 mm** |
| **STD** | **0.604 mm** |
| **Skewness** | **-0.598** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Mesokurtic |

| | |
|---|---|
| Total weight (gram) | 103.79 |
| % finer than 0.0625 mm (dry) | 0.03 |
| % granule (2-4 mm) | 0.23 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.5 |

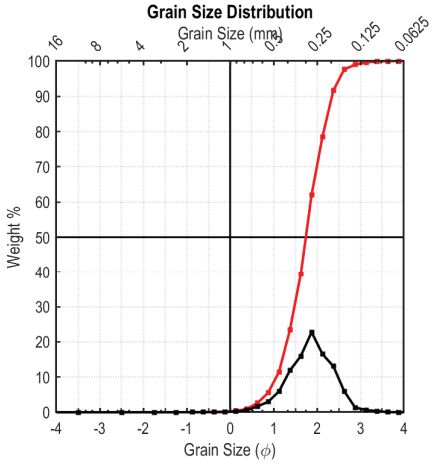
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.24 | 0.23 | 0.23 |
| -0.75 | -0.875 | 0.21 | 0.20 | 0.43 |
| -0.5 | -0.625 | 0.55 | 0.53 | 0.96 |
| -0.25 | -0.375 | 0.68 | 0.66 | 1.62 |
| 0 | -0.125 | 1.92 | 1.85 | 3.47 |
| 0.25 | 0.125 | 3.17 | 3.05 | 6.52 |
| 0.5 | 0.375 | 4.75 | 4.58 | 11.10 |
| 0.75 | 0.625 | 5.87 | 5.66 | 16.75 |
| 1 | 0.875 | 6.62 | 6.38 | 23.13 |
| 1.25 | 1.125 | 9.35 | 9.01 | 32.14 |
| 1.5 | 1.375 | 13.61 | 13.11 | 45.25 |
| 1.75 | 1.625 | 14.52 | 13.99 | 59.24 |
| 2 | 1.875 | 17.26 | 16.63 | 75.87 |
| 2.25 | 2.125 | 11.79 | 11.36 | 87.23 |
| 2.5 | 2.375 | 8.29 | 7.99 | 95.22 |
| 2.75 | 2.625 | 3.58 | 3.45 | 98.67 |
| 3 | 2.875 | 0.81 | 0.78 | 99.45 |
| 3.25 | 3.125 | 0.34 | 0.33 | 99.78 |
| 3.5 | 3.375 | 0.19 | 0.18 | 99.96 |
| 3.75 | 3.625 | 0.02 | 0.02 | 99.98 |
| 4 | 3.875 | -0.01 | -0.01 | 99.97 |
| >4.0 | 4.25 | 0.03 | 0.03 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.610 |
| **5** | 0.000 |
| **16** | 0.590 |
| **25** | 0.925 |
| **50** | 1.460 |
| **75** | 1.860 |
| **84** | 2.055 |
| **95** | 2.370 |
| **99** | 2.730 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.482 | 0.358 |
| Standard Deviation | 0.728 | 0.604 |
| Skewness | -0.598 | |
| Kurtosis | 3.338 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.322 | 1.368 |
| Standard Deviation | 0.732 | 0.725 |
| Skewness (1) | -0.188 | -0.210 |
| Skewness (2) | -0.375 | |
| Kurtosis | 0.618 | 1.039 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1070+00** |
| **Sample** | **Beach Face** |
| **Mean** | **0.278 mm** |
| **STD** | **0.700 mm** |
| **Skewness** | **-0.322** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.56 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.00 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.1 |

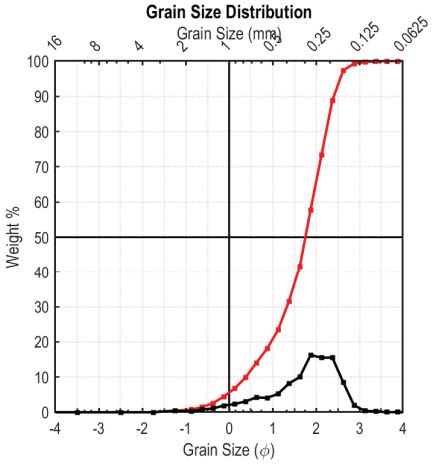
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.00 | 0.00 | 0.00 |
| -0.75 | -0.875 | 0.02 | 0.02 | 0.02 |
| -0.5 | -0.625 | 0.03 | 0.03 | 0.05 |
| -0.25 | -0.375 | 0.03 | 0.03 | 0.08 |
| 0 | -0.125 | 0.08 | 0.08 | 0.16 |
| 0.25 | 0.125 | 0.21 | 0.20 | 0.36 |
| 0.5 | 0.375 | 0.59 | 0.58 | 0.94 |
| 0.75 | 0.625 | 1.68 | 1.64 | 2.57 |
| 1 | 0.875 | 3.05 | 2.97 | 5.55 |
| 1.25 | 1.125 | 6.09 | 5.94 | 11.49 |
| 1.5 | 1.375 | 12.17 | 11.87 | 23.35 |
| 1.75 | 1.625 | 16.34 | 15.93 | 39.28 |
| 2 | 1.875 | 23.34 | 22.76 | 62.04 |
| 2.25 | 2.125 | 16.94 | 16.52 | 78.56 |
| 2.5 | 2.375 | 13.41 | 13.08 | 91.63 |
| 2.75 | 2.625 | 6.15 | 6.00 | 97.63 |
| 3 | 2.875 | 1.40 | 1.37 | 99.00 |
| 3.25 | 3.125 | 0.65 | 0.63 | 99.63 |
| 3.5 | 3.375 | 0.32 | 0.31 | 99.94 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.99 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.385 |
| **5** | 0.830 |
| **16** | 1.220 |
| **25** | 1.400 |
| **50** | 1.745 |
| **75** | 2.070 |
| **84** | 2.230 |
| **95** | 2.515 |
| **99** | 2.875 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.844 | 0.278 |
| Standard Deviation | 0.514 | 0.700 |
| Skewness | -0.322 | |
| Kurtosis | 3.748 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.725 | 1.732 |
| Standard Deviation | 0.505 | 0.508 |
| Skewness (1) | -0.040 | -0.063 |
| Skewness (2) | -0.144 | |
| Kurtosis | 0.668 | 1.031 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **1070+00** |
| **Sample** | **Swash** |
| **Mean** | **0.308 mm** |
| **STD** | **0.574 mm** |
| **Skewness** | **-1.018** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 104.50 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.46 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 2.3 |

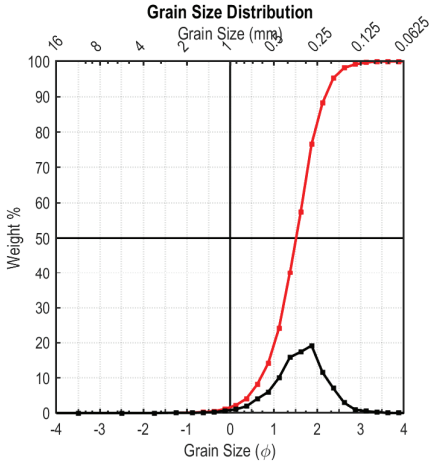
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.48 | 0.46 | 0.46 |
| -0.75 | -0.875 | 0.25 | 0.24 | 0.70 |
| -0.5 | -0.625 | 0.82 | 0.78 | 1.48 |
| -0.25 | -0.375 | 1.12 | 1.07 | 2.56 |
| 0 | -0.125 | 1.97 | 1.89 | 4.44 |
| 0.25 | 0.125 | 2.42 | 2.32 | 6.76 |
| 0.5 | 0.375 | 3.22 | 3.08 | 9.84 |
| 0.75 | 0.625 | 4.40 | 4.21 | 14.05 |
| 1 | 0.875 | 4.26 | 4.08 | 18.12 |
| 1.25 | 1.125 | 5.47 | 5.23 | 23.36 |
| 1.5 | 1.375 | 8.52 | 8.15 | 31.51 |
| 1.75 | 1.625 | 10.45 | 10.00 | 41.51 |
| 2 | 1.875 | 16.99 | 16.26 | 57.77 |
| 2.25 | 2.125 | 16.20 | 15.50 | 73.27 |
| 2.5 | 2.375 | 16.23 | 15.53 | 88.80 |
| 2.75 | 2.625 | 8.94 | 8.56 | 97.36 |
| 3 | 2.875 | 2.02 | 1.93 | 99.29 |
| 3.25 | 3.125 | 0.45 | 0.43 | 99.72 |
| 3.5 | 3.375 | 0.22 | 0.21 | 99.93 |
| 3.75 | 3.625 | 0.05 | 0.05 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.780 |
| **5** | -0.065 |
| **16** | 0.745 |
| **25** | 1.175 |
| **50** | 1.755 |
| **75** | 2.155 |
| **84** | 2.300 |
| **95** | 2.555 |
| **99** | 2.835 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.697 | 0.308 |
| Standard Deviation | 0.802 | 0.574 |
| Skewness | -1.018 | |
| Kurtosis | 3.843 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.522 | 1.600 |
| Standard Deviation | 0.777 | 0.786 |
| Skewness (1) | -0.299 | -0.344 |
| Skewness (2) | -0.656 | |
| Kurtosis | 0.685 | 1.096 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Toe of Dune** |
| **Mean** | **0.329 mm** |
| **STD** | **0.662 mm** |
| **Skewness** | **-0.426** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Symmetrical |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.81 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.07 |
| % gravel (>4 mm) | 0.00 |
| CaCO3 | 1.0 |

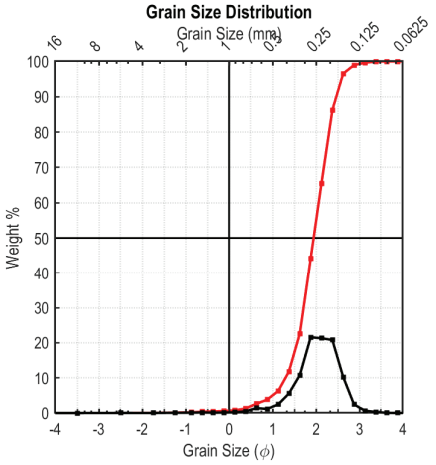
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.00 | 0.00 | 0.00 |
| -1.5 | -1.75 | 0.00 | 0.00 | 0.00 |
| -1 | -1.25 | 0.08 | 0.07 | 0.07 |
| -0.75 | -0.875 | 0.05 | 0.05 | 0.12 |
| -0.5 | -0.625 | 0.15 | 0.14 | 0.26 |
| -0.25 | -0.375 | 0.23 | 0.22 | 0.49 |
| 0 | -0.125 | 0.67 | 0.65 | 1.13 |
| 0.25 | 0.125 | 1.08 | 1.04 | 2.17 |
| 0.5 | 0.375 | 2.00 | 1.93 | 4.10 |
| 0.75 | 0.625 | 4.21 | 4.06 | 8.15 |
| 1 | 0.875 | 6.20 | 5.97 | 14.13 |
| 1.25 | 1.125 | 10.42 | 10.04 | 24.17 |
| 1.5 | 1.375 | 16.46 | 15.86 | 40.03 |
| 1.75 | 1.625 | 18.05 | 17.39 | 57.41 |
| 2 | 1.875 | 19.93 | 19.20 | 76.61 |
| 2.25 | 2.125 | 12.04 | 11.60 | 88.21 |
| 2.5 | 2.375 | 7.31 | 7.04 | 95.25 |
| 2.75 | 2.625 | 3.04 | 2.93 | 98.18 |
| 3 | 2.875 | 1.02 | 0.98 | 99.17 |
| 3.25 | 3.125 | 0.54 | 0.52 | 99.69 |
| 3.5 | 3.375 | 0.27 | 0.26 | 99.95 |
| 3.75 | 3.625 | 0.03 | 0.03 | 99.98 |
| 4 | 3.875 | 0.00 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.175 |
| **5** | 0.430 |
| **16** | 0.920 |
| **25** | 1.140 |
| **50** | 1.520 |
| **75** | 1.855 |
| **84** | 2.035 |
| **95** | 2.365 |
| **99** | 2.835 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.602 | 0.329 |
| Standard Deviation | 0.595 | 0.662 |
| Skewness | -0.426 | |
| Kurtosis | 4.016 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.478 | 1.492 |
| Standard Deviation | 0.558 | 0.572 |
| Skewness (1) | -0.076 | -0.101 |
| Skewness (2) | -0.220 | |
| Kurtosis | 0.735 | 1.109 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Beach Face** |
| **Mean** | **0.246 mm** |
| **STD** | **0.698 mm** |
| **Skewness** | **-1.360** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Fine Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Strongly Coarse Skewed |
| | Very Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.09 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.08 |
| % gravel (>4 mm) | 0.02 |
| CaCO3 | 1.7 |

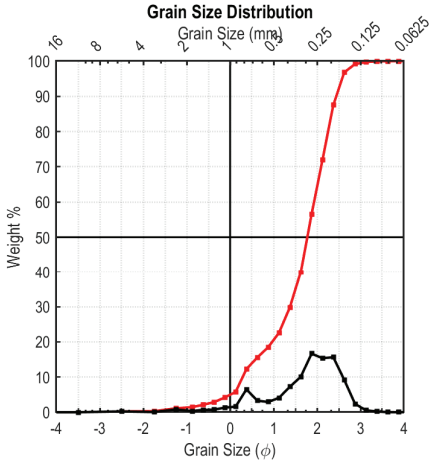
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.02 | 0.02 | 0.02 |
| -1.5 | -1.75 | 0.01 | 0.01 | 0.03 |
| -1 | -1.25 | 0.07 | 0.07 | 0.11 |
| -0.75 | -0.875 | 0.10 | 0.09 | 0.20 |
| -0.5 | -0.625 | 0.16 | 0.16 | 0.36 |
| -0.25 | -0.375 | 0.09 | 0.09 | 0.45 |
| 0 | -0.125 | 0.14 | 0.13 | 0.58 |
| 0.25 | 0.125 | 0.19 | 0.18 | 0.76 |
| 0.5 | 0.375 | 0.50 | 0.49 | 1.25 |
| 0.75 | 0.625 | 1.44 | 1.39 | 2.64 |
| 1 | 0.875 | 1.19 | 1.16 | 3.80 |
| 1.25 | 1.125 | 2.51 | 2.43 | 6.23 |
| 1.5 | 1.375 | 5.75 | 5.58 | 11.81 |
| 1.75 | 1.625 | 11.09 | 10.76 | 22.56 |
| 2 | 1.875 | 22.25 | 21.58 | 44.15 |
| 2.25 | 2.125 | 21.96 | 21.30 | 65.45 |
| 2.5 | 2.375 | 21.44 | 20.80 | 86.25 |
| 2.75 | 2.625 | 10.60 | 10.29 | 96.53 |
| 3 | 2.875 | 2.51 | 2.43 | 98.97 |
| 3.25 | 3.125 | 0.69 | 0.67 | 99.64 |
| 3.5 | 3.375 | 0.30 | 0.29 | 99.93 |
| 3.75 | 3.625 | 0.06 | 0.05 | 99.99 |
| 4 | 3.875 | 0.01 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | 0.250 |
| **5** | 1.000 |
| **16** | 1.470 |
| **25** | 1.655 |
| **50** | 1.945 |
| **75** | 2.240 |
| **84** | 2.350 |
| **95** | 2.590 |
| **99** | 2.885 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 2.020 | 0.246 |
| Standard Deviation | 0.519 | 0.698 |
| Skewness | -1.360 | |
| Kurtosis | 8.430 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.910 | 1.922 |
| Standard Deviation | 0.440 | 0.461 |
| Skewness (1) | -0.080 | -0.134 |
| Skewness (2) | -0.341 | |
| Kurtosis | 0.807 | 1.114 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **Swash** |
| **Mean** | **0.308 mm** |
| **STD** | **0.555 mm** |
| **Skewness** | **-1.264** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 102.44 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.86 |
| % gravel (>4 mm) | 0.24 |
| CaCO3 | 1.2 |

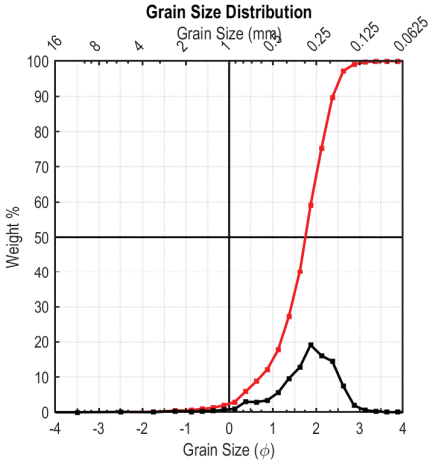
| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.25 | 0.24 | 0.24 |
| -1.5 | -1.75 | 0.05 | 0.05 | 0.29 |
| -1 | -1.25 | 0.83 | 0.81 | 1.11 |
| -0.75 | -0.875 | 0.34 | 0.34 | 1.44 |
| -0.5 | -0.625 | 0.70 | 0.68 | 2.12 |
| -0.25 | -0.375 | 0.75 | 0.73 | 2.86 |
| 0 | -0.125 | 1.36 | 1.33 | 4.18 |
| 0.25 | 0.125 | 1.61 | 1.58 | 5.76 |
| 0.5 | 0.375 | 6.67 | 6.51 | 12.27 |
| 0.75 | 0.625 | 3.37 | 3.29 | 15.56 |
| 1 | 0.875 | 2.99 | 2.92 | 18.48 |
| 1.25 | 1.125 | 4.21 | 4.11 | 22.59 |
| 1.5 | 1.375 | 7.42 | 7.24 | 29.83 |
| 1.75 | 1.625 | 10.32 | 10.08 | 39.91 |
| 2 | 1.875 | 17.05 | 16.64 | 56.55 |
| 2.25 | 2.125 | 15.74 | 15.37 | 71.92 |
| 2.5 | 2.375 | 16.01 | 15.63 | 87.55 |
| 2.75 | 2.625 | 9.46 | 9.24 | 96.79 |
| 3 | 2.875 | 2.46 | 2.40 | 99.18 |
| 3.25 | 3.125 | 0.57 | 0.56 | 99.74 |
| 3.5 | 3.375 | 0.21 | 0.21 | 99.95 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.01 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -1.315 |
| **5** | 0.005 |
| **16** | 0.665 |
| **25** | 1.210 |
| **50** | 1.775 |
| **75** | 2.175 |
| **84** | 2.320 |
| **95** | 2.575 |
| **99** | 2.855 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.701 | 0.308 |
| Standard Deviation | 0.850 | 0.555 |
| Skewness | -1.264 | |
| Kurtosis | 5.041 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.493 | 1.587 |
| Standard Deviation | 0.828 | 0.803 |
| Skewness (1) | -0.341 | -0.359 |
| Skewness (2) | -0.586 | |
| Kurtosis | 0.553 | 1.091 |

## Grain Size Distribution




| | |
|---|---|
| **Project** | **2403/2525** |
| **Location** | **Salvo, NC** |
| **Date** | **Aug 22 2023** |
| **Station** | **ALL** |
| **Sample** | **ALL** |
| **Mean** | **0.292 mm** |
| **STD** | **0.619 mm** |
| **Skewness** | **-1.189** |

| **USCS** | **Wentworth** |
|---|---|
| SP | Medium Sand |
| Fine Sand | Moderately Well Sorted |
| Poorly Graded | Coarse Skewed |
| | Leptokurtic |

| | |
|---|---|
| Total weight (gram) | 103.11 |
| % finer than 0.0625 mm (dry) | 0.01 |
| % granule (2-4 mm) | 0.34 |
| % gravel (>4 mm) | 0.09 |
| CaCO3 | 1.3 |

| Class Limits (ϕ) | Mid Point (ϕ) | Weight (gram) | Weight % | Cumm. Wt % |
|---|---|---|---|---|
| -4 | -4.5 | 0.00 | 0.00 | 0.00 |
| -3 | -3.5 | 0.00 | 0.00 | 0.00 |
| -2 | -2.5 | 0.09 | 0.09 | 0.09 |
| -1.5 | -1.75 | 0.02 | 0.02 | 0.11 |
| -1 | -1.25 | 0.33 | 0.32 | 0.43 |
| -0.75 | -0.875 | 0.16 | 0.16 | 0.58 |
| -0.5 | -0.625 | 0.34 | 0.33 | 0.91 |
| -0.25 | -0.375 | 0.36 | 0.35 | 1.26 |
| 0 | -0.125 | 0.72 | 0.70 | 1.96 |
| 0.25 | 0.125 | 0.96 | 0.93 | 2.89 |
| 0.5 | 0.375 | 3.06 | 2.97 | 5.86 |
| 0.75 | 0.625 | 3.00 | 2.91 | 8.77 |
| 1 | 0.875 | 3.46 | 3.36 | 12.13 |
| 1.25 | 1.125 | 5.72 | 5.54 | 17.67 |
| 1.5 | 1.375 | 9.88 | 9.58 | 27.25 |
| 1.75 | 1.625 | 13.15 | 12.76 | 40.00 |
| 2 | 1.875 | 19.74 | 19.14 | 59.15 |
| 2.25 | 2.125 | 16.58 | 16.08 | 75.23 |
| 2.5 | 2.375 | 14.92 | 14.47 | 89.70 |
| 2.75 | 2.625 | 7.70 | 7.47 | 97.17 |
| 3 | 2.875 | 2.00 | 1.94 | 99.11 |
| 3.25 | 3.125 | 0.60 | 0.59 | 99.69 |
| 3.5 | 3.375 | 0.26 | 0.25 | 99.94 |
| 3.75 | 3.625 | 0.04 | 0.04 | 99.98 |
| 4 | 3.875 | 0.01 | 0.00 | 99.99 |
| >4.0 | 4.25 | 0.01 | 0.01 | 100.00 |

| **Percentiles** | |
|---|---|
| **1** | -0.560 |
| **5** | 0.305 |
| **16** | 1.050 |
| **25** | 1.315 |
| **50** | 1.755 |
| **75** | 2.120 |
| **84** | 2.275 |
| **95** | 2.550 |
| **99** | 2.860 |

| **Moment Measures** | **(phi)** | **(mm)** |
|---|---|---|
| Mean | 1.774 | 0.292 |
| Standard Deviation | 0.693 | 0.619 |
| Skewness | -1.189 | |
| Kurtosis | 5.824 | |
| Dispersion | | |
| Standard Deviation | | |
| Deviation from Normal | | |

| **Graphic Phi Parameters** | **Inman 1952** | **Folk & Ward 1957** |
|---|---|---|
| Mean | 1.662 | 1.693 |
| Standard Deviation | 0.613 | 0.646 |
| Skewness (1) | -0.151 | -0.221 |
| Skewness (2) | -0.535 | |
| Kurtosis | 0.833 | 1.143 |

# APPENDIX D-1

## Benthic Summary Report

(Pre- and Post-Construction Sampling)

# Monitoring possible impacts of beach nourishment on the Avon and Buxton 2022 construction projects

## Task 1 – Pre- and post-construction sampling

D. Reide Corbett, Paul Paris, and Rebekah Littauer
Coastal Studies Institute
East Carolina University

**Executive Summary - Findings to date**

This study compares ocean beach ecosystems and heavy mineral composition before and after beach nourishment to identify, describe and quantify any potential immediate impacts. The study considers two impacted beach sites, Avon and Buxton NC, and contrasts these against a designated non-nourished Control site. Results to date suggest the following:

- Beach nourishment very likely had a significant immediate impact on the ecology of the studied invertebrate taxa both in the swash zone and along the upper beach at the Buxton study site. Abundance densities for all species/groups declined significantly between the before and after event surveys at that site, despite the seasonal tendency for populations to increase over the June to August time period considered.
- Beach nourishment very likely had an immediate impact on the ecology of the nourished Avon Beach site. Chronic anthropogenic influences associated with pedestrian, and especially, off-road vehicle use in this area, however, may provide levels of disturbance sufficient to suppress populations of some species, particularly along the upper beach, independent of the nourishment disturbance.
- Along the Control Site beach, off-road vehicle and pedestrian use was like that observed at the Avon beach site. Persistent vehicle traffic along the entire Control beach at sampling sites 1, 2, and 3 likely introduced a continuous, countervailing level of disturbance to the beach ecosystem, particularly along the upper beach face, that likely muted the natural system response.
- Little to no real change in the heavy mineral content was observed in the nourishment sands contrasted against the natural sediments at all sites measured.

## Introduction

Beach nourishment, the placement of sand on a beach to restore elevation, seaward extent, and form, and to restore and provide protection from future erosion-producing events (e.g., intense storms), is a common soft-engineering response to the eroding ocean beach (Speybroeck et al., 2006). In some instances, such as in North Carolina, where regulations prohibit hard structures (e.g., seawalls, bulkheads, sandbags), it is one of the few mitigation options that remain for communities in response to chronic beach erosion. Given the potential impacts of nourishment projects, it is critical to provide pre- and post-nourishment measurements of beach morphology, sand character, and biological composition to quantify possible impacts along these sections of the beach. The present research studies a beach nourishment disturbance event along North Carolina's Outer Banks, where, in 2022, ocean beaches at two locations along Hatteras Island were restored via nourishment. The objective of this work is to observe any ecological changes associated with sand placement on each beach site, quantify those changes, and monitor ecosystems over a 24-month period to ascertain the post-disturbance recovery trajectory. This report summarizes an initial assessment at each site, comparing before and after sand placement relative to a control site.

## Study Area

The areas included in this study are all located on Hatteras Island, an ocean-facing barrier island that is part of the North Carolina Outer Banks (Figure 1). The study consists of three sample sites, representing three experimental units, along Hatteras Island (Figure 1). Two of the three sites, Avon and Buxton, are locations that received nourishment sands in the summer of 2022. A third site identified as Control (Figure 1) received no nourishment and is assumed to be a suitable representative of contemporary baseline ecological and geomorphological conditions along the Hatteras Ocean beaches.

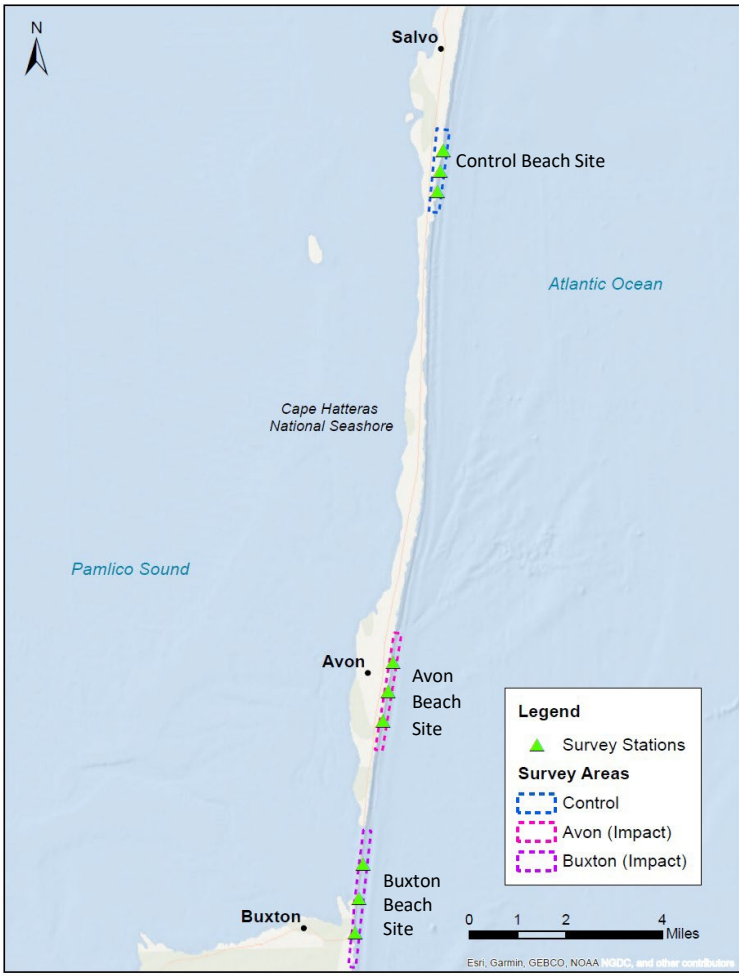



Figure 1: Sampling areas include a control area north of the two beach construction regions, Avon and Buxton. See Figure 2 for sampling design.

## Methods

All field, laboratory, and analytical work associated with the ocean beach invertebrate bio-sampling and beach substrate mineralogical assay is being conducted by scientists and technicians from the Coastal

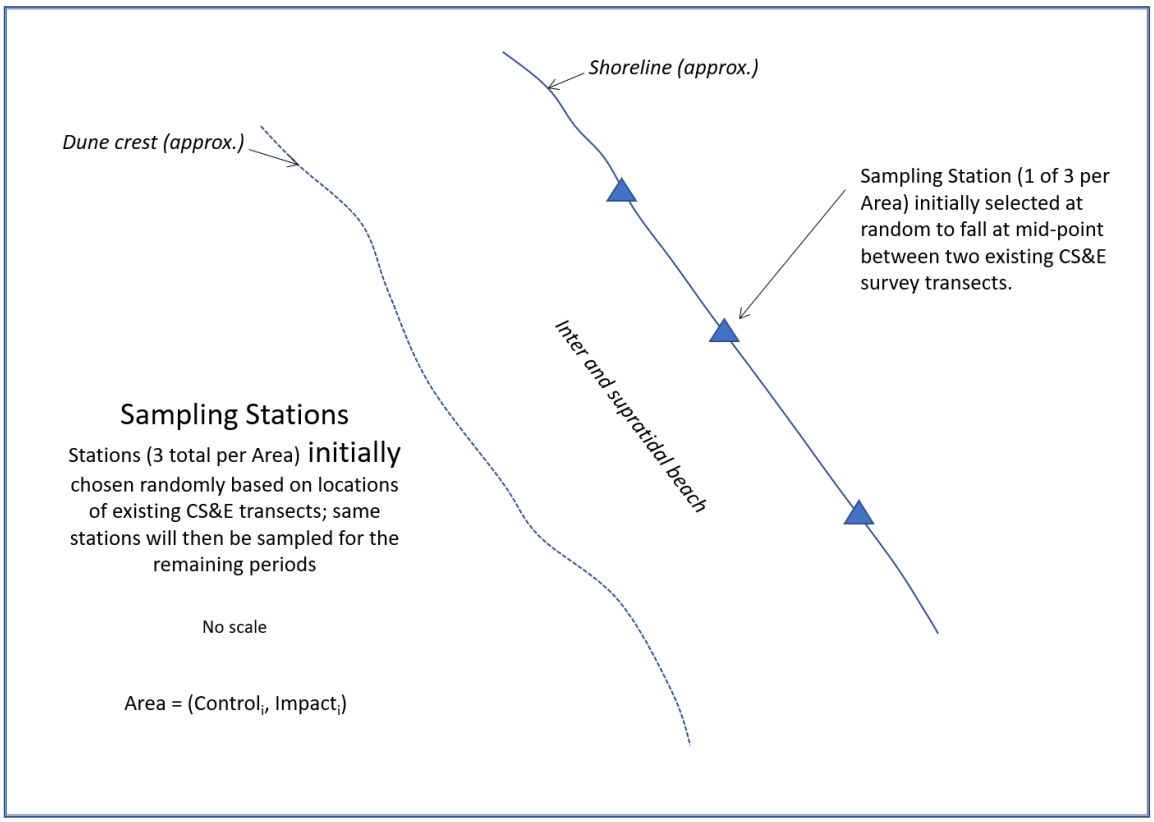
Studies Institute (CSI). Within each of the three defined study sites (Avon, Buxton, and the Control—see Figure 1) a total of 54 biological samples were collected along 18 pre-defined transects (transect and sampling details are shown in Figure 2). In total 162 biological samples are collected per survey. In addition, Coastal Science and Engineering (CS&E) staff collected sand samples at the mid-beach and base of dune (hereafter referred to as the dune toe) for heavy mineral assay by CSI.

Beach nourishment sands were applied to the Avon and Buxton beaches respectively on a staggered schedule. Construction operations at the Avon site were started in late May of 2022 and were completed in late July. The Buxton construction project was started in June and was completed in late August. Immediate pre- and post-sampling surveys were conducted around this staggered schedule. A pre-survey was completed at Avon, and the Control site, in May 2022. The post-construction survey for both beaches followed two-calendar days after construction was completed in July. For Buxton the pre-construction survey was started in June, two days prior to construction start, and followed by a post-nourishment survey two days after construction was completed here, in late August. Subsequent sampling to track longer term impacts and change are scheduled on a quarterly basis, to continue for two calendar years until Fall 2024. Based on this schedule, a total of ten surveys will be conducted. The November 2022 survey was completed on schedule prior to preparation of this report, but its results are not included here.

***Beach Macroinvertebrate Sampling***

Ghost Crabs (sp. Ocypode quadrata): Methods for measuring ghost crab burrow density vary across the literature. A common technique in ecological research involves counting burrows present along a transect in a narrow area of beach running from the dune to the intertidal zone, a sampling mode often referred to as a belt transect (Schlacher et al. 2011). The area captured by the belt transect method is site-specific, as sampling area varies proportionally with beach width. Belt transect sampling consists of visually identifying and recording each ghost crab den found along a 2 m wide "belt" overlayed on each survey transect, parallel to that transect and spanning from the upper swash to dune toe. The distance from upper swash to dune toe is measured using a transect tape and recorded, along with the total number of ghost crab burrows observed.

Swash zone invertebrates: Three random samples are collected and assessed on-site at three shore-normal locations in the swash zone (the visually identified lower, middle, and upper swash areas) using a small hand dredge (100 mm diameter, 100 mm deep). Samples were immediately transferred to a 1 mm mesh sieve, cleared of inorganic materials, and specific macro-organisms counted. The organisms monitored for the study are all macroinvertebrates and include: Atlantic Mole Crab (sp. Emerita talpoida), partitioned into three size classes (carapace length <4mm, 4 to 8 mm, and >8 mm); Coquina Clam (sp. Donax variabilis), a polychaete worm (likely sp. Solelipsis squamata); and amphipods (keyed only to the group level). Animals were counted on site and returned to the swash zone following enumeration.



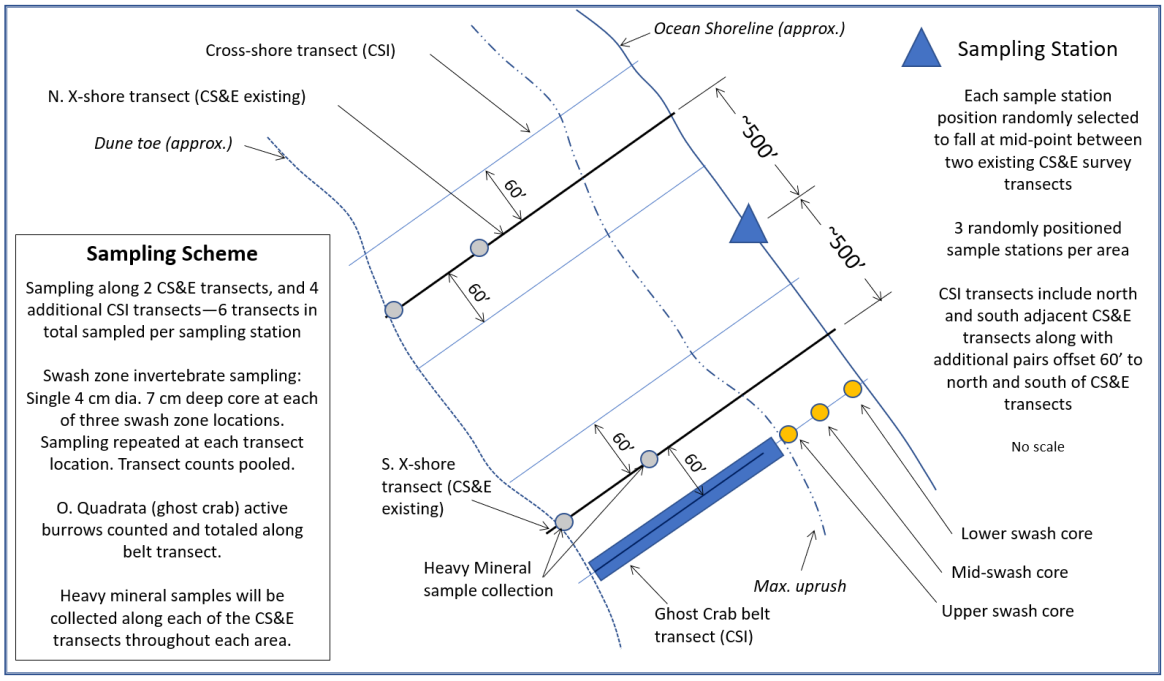




Figure 2: CSI occupied three sampling stations (top figure) across all sampling areas (i.e., Control, Avon, Buxton). At each sampling station, biological sample counts along 6 transects were collected, including two of the CS&E transects. Heavy mineral samples were collected at all CS&E transects.

### *Beach Sand Heavy Mineral Analysis*

Heavy mineral percentages are field collected as individual ~400 g samples of beach surface substrate (sands) from two positions on the supra-tidal beach: the approximate mid-beach and the dune base (dune toe) positions along each CS&E defined transect in each of the three beach sites (Figure 2). In the lab samples are homogenized, split into 200 g subsamples and dried at 80$^{o}$ C for 24 hours. Samples for imaging are prepared by first removing any gravel-sized component and then splitting into approximately 1-3 g subsamples. Subsamples are then imaged using an analog Leica M80 microscope with an attached AmScope 14MP Digital Camera using an above-stage ring lighting source. Three to five images for each sample are captured from a camera video stream as discrete RGB images.

The approach used to identify and quantify the heavy minerals present in the sample is one that parallels work done by Dolan and Spiekermann (2014), where the percentage of dark grains observed in a sample is used as a proxy for heavy mineral abundance. The images for each sample are processed for particle detection and classification (as light or dark) using a CSI-macro that runs natively in the image analysis application ImageJ (Rueden et al. 2017). Differentiation between dark and light particles is determined by a pixel-value, binary thresholding technique that assigns a detected particle in the image to the light or dark class based on its combined RGB tonal value. Resultant total heavy mineral percentages are computed by dividing the number of dark grains by the total number of grains, light and dark, detected in the image. To reduce detection error particles with imaged areas below a threshold size (< 0.01 mm$^2$) are not included in the sample count. Results from ImageJ processing are transferred into Microsoft Excel for archive.

## Results

The May 2022 surveys represent the pre-nourishment taxa population totals for the Control and nourished Avon sites, while the pre-nourishment survey for the Buxton site was conducted the following month in June 2022. Post-nourishment surveys were carried out in July for the Avon and Control sites, and in August for Buxton.

### *Beach macro-invertebrates*

Atlantic Mole Crab (sp. E. talpoida): Mean population densities for the small size-class mole crab species (< 4mm carapace length) at the Avon site observed in May 2022 pre-nourishment, was 2.6 individuals/transect per Table 1 and Figure 3a. At the Buxton site mole crab densities were much higher (17.9 individuals/transect, from Table 1 and Figure 3a). After nourishment in August 2022, however, mean densities were observed at 1.5 individuals/transect (Table 1 and Figure 3a). At the Control site prior to nourishment (May 2022) small mole crab densities were observed at 2.2 individuals/transect. The July 2022 post-nourishment results reveal a marked increase in mole crab densities at the control site with densities exceeding 13 individuals/transect (Table 1 and Figure 3a) observed.

Mid-size class mole crabs (carapace length 4 to 8mm) were similarly prolific on the pre-nourished Avon beach site to their smaller counterparts. From Table 1 and Figure 3b the mean number of individuals observed was 2.2 individuals/transect. Following nourishment in July 2022 at the Avon site the observed density of mid-size class mole crabs was observed to increase

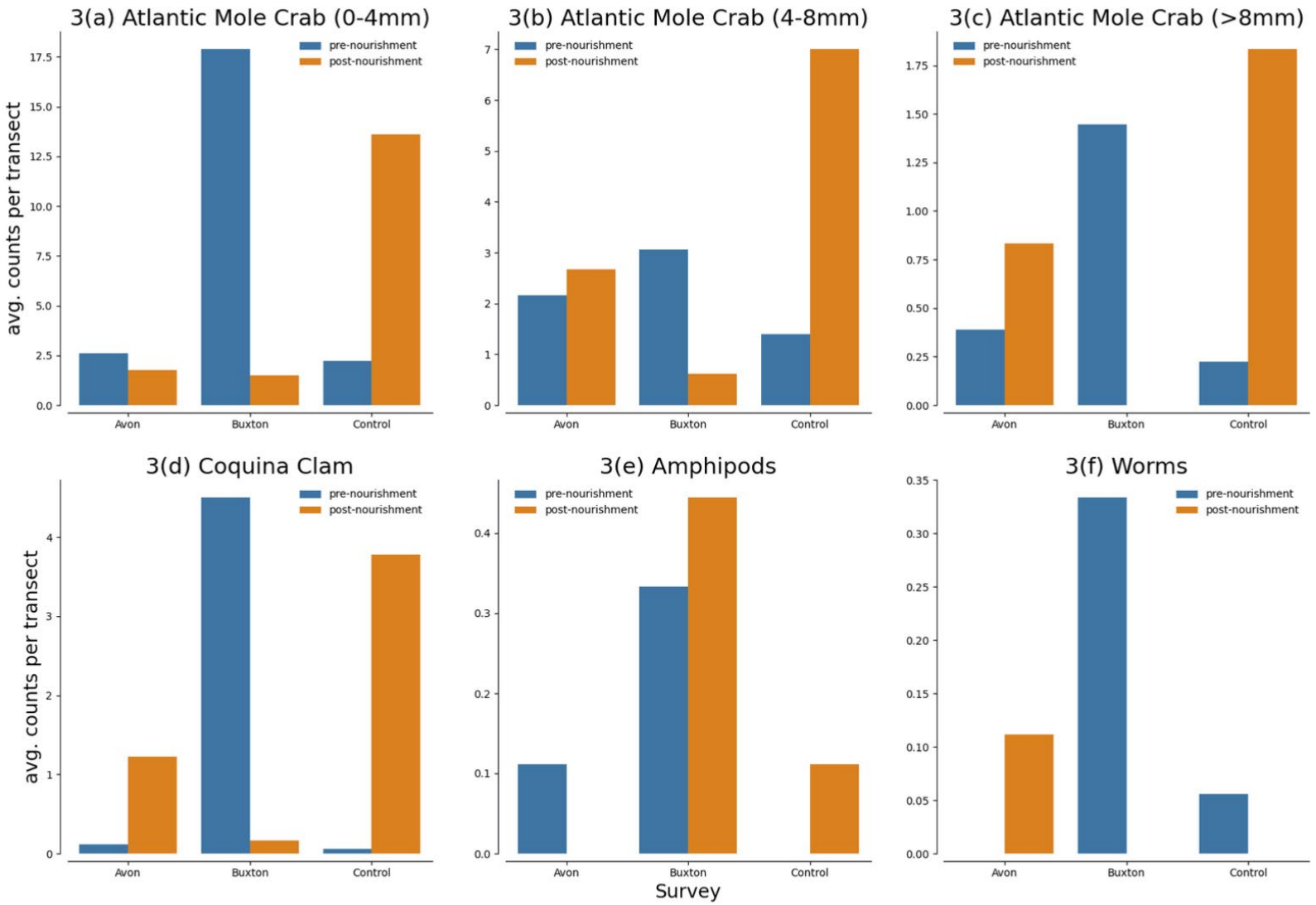



Figure 3: Summary of population density (individuals/transect) of swash zone macroinvertebrates across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment.

to 2.7 individuals/transect from Table 1 and Figure 3b. At Buxton pre-nourishment densities were measured (Table 1 and Figure 3b) at 3.1 individuals/transect while post-nourishment in August 2022, mean densities at the Buxton site declined to 0.6 individuals/transect (Table 1 and Figure 3b). At the Control site, middle-size class mole crabs were high relative to observations at Avon and Buxton after nourishment with an observed mean density of 7.0 individuals/transect. Prior to the nourishment event in June, the mean density was 1.4 individuals/transect (Table 1 and figure 3b).

Table 1: Summary of population density (individuals/transect) of swash zone macroinvertebrates across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment.

| | | | **Atlantic Mole Crab** (sp. E. talpoida) | | **Coquina Clam** (sp. D. variabilis) | **Amphipods** (sp. undiff.) | **"worms"** (polychaetes undiff.) |
|---|---|---|---|---|---|---|---|
| **Site** | **Survey** | ($< 4mm$) | ($4mm \leq l \leq 8mm$) | ($> 8mm$) | | | |
| Avon | May 2022 | 2.6 | 2.2 | 0.4 | 0.1 | 0.1 | 0.0 |
| | July 2022 | 1.8 | 2.7 | 0.8 | 1.2 | 0.0 | 0.1 |
| Buxton | June 2022 | 17.9 | 3.1 | 1.4 | 4.5 | 0.3 | 0.3 |
| | August 2022 | 1.5 | 0.6 | 0.0 | 0.2 | 0.4 | 0.0 |
| Control | May 2022 | 2.2 | 1.4 | 0.2 | 0.1 | 0.0 | 0.1 |
| | July 2022 | 13.6 | 7.0 | 1.8 | 3.8 | 0.1 | 0.0 |

Relatively fewer large size class (>8mm carapace length) mole crabs were observed along all three study site beaches, both before and after the summer 2022 nourishment event. At Avon mean density prior to nourishment was 0.4 individuals/transect, with a slight increase seen post-nourishment (0.8 individuals/transect - Table 1 and Figure 3c). At Buxton no large size class mole crabs were counted after nourishment (Table 1 and Figure 3c). However, prior to the density was observed at 1.4 individuals/transect (Table 1 and Figure 3c). At the Control site, the density went from 0.2 individuals/transect in May to 1.8 individuals/transect in July (Table 1, Fig. 3c).

Coquina Clams (sp. Donax variabilis): Coquina mean population densities are listed in Table 1 and shown on Figure 3d. At the Avon site prior to nourishment the mean density was 0.1 individuals/transect. In July after nourishment was completed the density increased to 1.2 individuals/transect. At Buxton the pre-nourishment density was greater than that observed at the Avon site, with mean density 4.5 individuals/transect per Table 1 and Figure 3d. After nourishment was complete densities for coquina were observed to have declined to 0.2 individuals/transect, a full order of magnitude decrease in density relative to the pre-nourishment survey (Table 1 and Figure 3d). At the Control site the opposite response to that seen at Buxton was noted. The observed Control site density in May was 0.1 individuals/transect increasing to 3.8 in July, a two order of magnitude increase (Table 1 and Figure 3d).

Amphipods: Amphipod abundance densities were low relative to the other taxa considered in the pre and post surveys. At the Avon site prior to nourishment the population density was measured at 0.1 individuals/transect from Table 1 and Figure 3e. During the post nourishment survey the

mean density fell away completely to 0.0 individuals/transect (Table 1 and Figure 3e). At the Buxton site pre-nourishment amphipod density was measured at 0.3 individuals/transect but grew only slightly to 0.4 individuals/transect during the follow-up survey in August 2022 (Table 1 and Figure 3e). At the Control site, no amphipods were observed in May 2022 with an increase to 0.1 individuals/transect in July.

Polychaete worms (sp. Solilepis squamata): Densities for this species were also lower than those measured in the mole crab and coquina communities but were on par with those from the amphipod group. At the Avon site densities before nourishment, observed in May 2022, were nonexistent (Table 1 and Figure 3f). In July 2022, after completion of the nourishment sand placement the animal were observed in low numbers (mean density=0.1 individuals/transect). At Buxton the pre-nourishment density was a little higher at 0.3 per Table 1 and Figure 3f; post-nourishment the animal was effectively, if only temporarily, extinct. On the Control beach site pre- and post-nourishment densities for the worm community remained comparative stable, but at very low levels--the post-nourishment survey on the Control Beach shows that no individuals were detected. Densities prior to nourishment were low, at 0.1 individuals/transect (Table 1 and Figure 3f).

The Atlantic Ghost Crab (sp. Ocypode quadrata): Atlantic Ghost Crab densities before and after are summarized in Table 2 and shown graphically in Figure 4. Ghost crab density at the Avon beach site before nourishment was 6.9 individuals/belt transect, but dropped to 1.3 individuals/belt transect, less-than one-quarter of the pre-nourished value. At Buxton the density was much higher 12.7 individuals/belt transect prior to nourishment. In August, after nourishment was complete the mean ghost crab density dropped at Buxton to only 1.1 individuals/belt transect. On the Control beach ghost crab density was 4.9

Figure 4: Summary of population density (individuals/transect) of Atlantic Ghost Crab across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment.

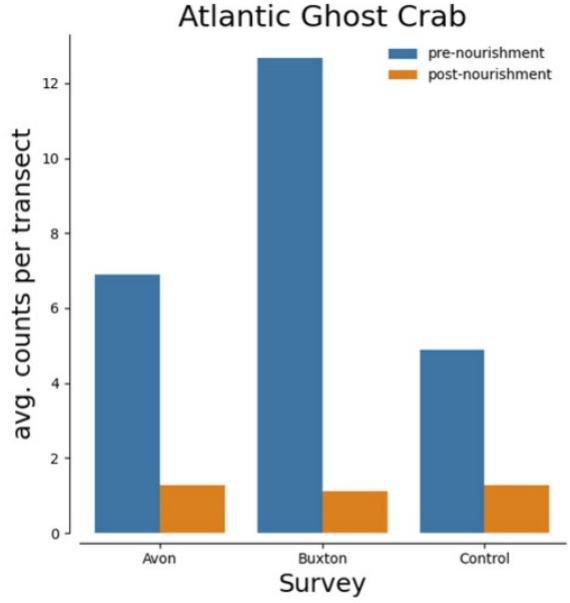



Table 2: Summary of population density (individuals/transect) of Atlantic Ghost Crab across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment.

| | | Atlantic Ghost Crab (O. quadrata) |
|---|---|---|
| **Site** | **Survey** | |
| Avon | May 2022 | 6.9 |
| | July 2022 | 1.3 |
| Buxton | June 2022 | 12.7 |
| | August 2022 | 1.1 |
| Control | May 2022 | 4.9 |
| | July 2022 | 1.3 |

individuals/belt transect; after the number was down to 1.3 individuals (Table 4).

***Beach substrate heavy mineral compositions***

Beach surface sand from a position approximately midway across the supra-tidal beach was collected and assayed to determine the percentage of heavy minerals (e.g., ilmenite, hornblende, garnet, magnetite) present. Sand samples collected on the Avon and Control Beach sites prior to nourishment (May 2022) at the Avon site show that approximately 2% of the total sample consists of heavy minerals (Table 3; Figure 5). On the Control Beach about 2.5% of the sample (Table 3; Figure 5) consisted of heavy mineral assemblages. At the Buxton site, prior to nourishment (June 2022) heavy mineral content was higher still, averaging almost 3.4% per sample (Table 3; Figure 5). Following nourishment only a slight change is noted at the Avon Beach site where the mean percent heavy mineral content was measured at 2.7% (Table 3; Figure 5). Percentages at the Buxton and Control Sites, however, remained relatively unchanged. Standard deviations for all averaged observations are consistently low, around one-half of their respective mean values.

Figure 5: Summary of % heavy minerals across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment.

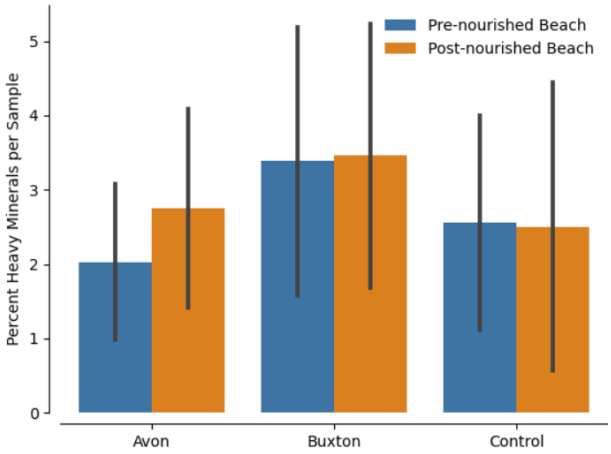



Table 3: Summary of % heavy minerals across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment.

| Site | Survey | Heavy Mineral (%) (mean +/- std dev.) |
|---|---|---|
| Avon | May 2022 | 2.03 (+/- 1.04) |
| | July 2022 | 2.75 (+/- 1.33) |
| Buxton | June 2022 | 3.38 (+/- 1.80) |
| | August 2022 | 3.35 (+/- 1.77) |
| Control | May 2022 | 2.55 (+/- 1.44) |
| | July 2022 | 2.50 (+/- 1.94) |

## Discussion

***Ecosystem Impacts and Changes***

The object of this study is to identify and quantify any impacts to the indigenous invertebrate ecology of the ocean beach resulting from beach restoration via the addition of nourishment sands. Previous research demonstrates that large scale reductions in the population for most species is commonplace (Leewis et al. 2012; Speybroeck et al. 2006). Many report near to total extinctions (albeit temporary) for many taxa (Speybroeck et al. 2016; Greene, 2002). Results here suggest that impacts varied between the two nourished beach sites (Avon and Buxton) and the non-nourished Control. In only a few instances were populations observed to disappear, however, reductions, sometimes large, in abundance and abundance density were common.

The Buxton nourishment site shows the greatest overall before and after changes for all the invertebrates considered in this study. Apart from the amphipod group whose numbers declined by approximately 50% in the Buxton area, all other species numbers dropped by an order of magnitude per transect density as observed in the post-nourishment surveys relative to that measured during pre-event (Figure 3 and Table 1). This drop occurred even though the August post-nourishment survey for the Buxton site occurred during the expected seasonal July-August peak in abundance This pattern is consistent across both the swash-zone invertebrates (Table 1) and the Atlantic Ghost Crab (Figure 4 and Table 2), who occupies the upper, supra-tidal beach face. For ghost crab abundance densities declined markedly at all three beach sites but were most dramatic along the Buxton site.

The Buxton sampling site identified as Buxton 3A/B sits within the Village of Buxton near Cape Hatteras and as such the beach here receives heavy anthropogenic use (almost entirely human foot traffic), particularly during the summer tourist season. It was also the narrowest of all the beach sample sites (avg beach width was 6 m) considered in the research. For its very small size and high-frequency use, taxa populations in the swash zone were largely non-existent. No ghost crabs were observed at the Buxton 3A and B sites. Thus, this sampling area contributed little to the relatively high abundances observed overall for Buxton prior to nourishment. Sites 1A/B and 2A/B at Buxton (Figure 2), on the other hand, represent the most pristine of all the locations sampled in the study. Here pristine refers to the lack of impact as a result of minimal human foot and vehicular traffic. The beach where these two sample sites are located was devoid of vehicles and any evidence of recent vehicular use both before and after nourishment . Given this relative isolation of Buxton 1A/B and 2A/B and assumed lack of human impact, interpretation and an explanation for the steep invertebrate population declines seen between the pre- and post-nourishment surveys on the Buxton Beach site is likely to be found in the placement of nourishment sands on the beach during July and August.

Reconstruction operations at the Avon Beach site present a response that differs from that seen at the Buxton site. This difference in some instances is quite remarkable. First, the abundance densities for the most prolific of the swash zone invertebrates the mole crab are for all size classes lower than those observed at Buxton (Figure 3). This difference is particularly notable for the smallest size-class representatives of the group (mole crab < 4 mm carapace length, Figure 3a). At Buxton, densities were measured at almost 18 individuals per transect (Table 1). In contrast, at the Avon Beach site the density for this same size group was 2.6 individuals per transect (Table 1). A lesser decline is seen for the larger (4 to 8 mm carapace length) mole crab specimens (Figure 3b), while before-after parity is noted in abundance density for the largest size class (> 8mm carapace length) of the species. A similar result is seen for the amphipod group (Figure 3e). For the coquina clams and worms' abundance density post-nourishment increased though the increases observed were relatively small (ref. Figure 3 and Table 1). For ghost crabs abundance densities at Avon were some 50% lower than those observed at the Buxton Beach site (Table 2) but the decline post-nourishment at the Avon site was less than that seen at Buxton (Table 2). A few possible explanations can be advanced to explain these differences. First, the pre-nourishment survey was conducted along the Avon beach site in May while that for Buxton was in June. The seasonal variation in populations for the observed invertebrate taxa are such that abundance numbers typically peak in the mid to late summer. If this is the case, we would naturally expect to see more individuals in June relative to May. Second, unlike Buxton, the

Avon beach site was one observed to be is both highly trafficked by pedestrians and motor vehicles. Beach driving is permitted in the village from October through May, and for the proximity to beach access ramps is heavily used by the off-road community during this period. In addition, the beaches here are a popular destination for tourists arriving on foot from nearby vacation rental communities. Based on observations by the authors during the two field surveys (pre- and post-nourishment) these two factors very likely play an influential, (perhaps a dominant influential) role in shaping the indigenous ecology; especially on the upper beach. Third, the observed differences seen between the two nourished beach sites (Avon and Buxton) could be attributed to differences in environmental conditions, and in particular wind and local surf-zone wave conditions, and the resultant beach morphology that is shaped by those conditions. The ocean beaches along Hatteras Island north of Cape Hatteras are high-energy beaches and, as such, wave energy plays an important role in the shaping of both the beach morphology and ecology. That the two sites are in relative proximity, however, suggests that both would experience similar (though not identical) conditions for the regional wind and wave climate in place at a given time, so differences between the two may not be significant. Finally, the differences seen could be tied to idiosyncratic variation--that is, to the natural species-inherent spatial and temporal variance in behaviors for each species individually and as a group. Likely, each of these explanations plays a role and contributes synergistically or antagonistically to the overall results observed. These contributions do also make it difficult to selectively isolate impacts associated with nourishment from those tied to these other intrinsic contributions. Nevertheless, it is assumed that some of the decline in abundance as observed and recorded in Figures 3 and 4 and Tables 1 and 2 can be attributed to the nourishment event along the Avon Beach site.

As this experiment was designed around a Before-After-Control-Impact experimental model (Underwood 1994; Green, 1979) a Control site was provided and included in the field surveys. Pre- and post-nourishment surveys for the Control Area coincide temporally with those conducted for the (impacted) Avon Beach Site. Results for the Control Site surveys are included in Figures 3 and 4 and on Tables 1 and 2. These results suggest a dominant seasonal signal in terms of expected abundances (increases in abundance densities from May to July as the recruitment season progresses) for the taxa considered here. It is uncertain, however, how much dampening is seen in the overall natural signal due to effects attributable to off-road vehicle traffic, which is relatively high across all three Control Beach sampling sites, versus natural system processes.

***Changes in Sediment (Sand) Heavy Mineral Composition***

Assay of field samples of beach sediment (largely sand sized particles) indicates that heavy minerals comprise less than 5% of the total constituent fraction at each of the three beach sites (Avon, Buxton, and Control--ref Figure 5 and Table 3) considered in this study. The Buxton Beach site contains the largest percentage of heavy minerals (~ 3.3%), while the Avon and Control sites have slightly lower percentages (2.0 - 2.7% and approximately 2.5%, respectively) (Table 3). Changes in composition as measured by comparing the pre- and post-nourishment surveys show little difference. The largest change was observed along the Avon Beach site, where the percentage climbed from 2.0% to 2.7% (Table 3). Differences before and after at the Buxton and Control sites could, given the error inherent in the analysis, be reasonably interpreted as zero, or possibly sit below the threshold of detection for the technique used. Variation was

observed to be slightly higher in the post surveys at Avon and on the Control Beach site, while Buxton remained largely constant (Table 3). *Interpretation of these results suggests that the nourishment sands used for reconstruction were equivalent in terms of heavy mineral content to the natural sediments found along the beaches*.

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# APPENDIX D-2

## Benthic Summary Report

(1.5-Year Post-Construction Sampling)

# Monitoring possible impacts of beach nourishment on the Avon and Buxton 2023 construction projects

***Task 2 – 1.5-year post-construction sampling and recovery assessment***

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Coastal Studies Institute
East Carolina University

**Executive Summary - Findings to date**

This study compares ocean beach ecosystems and heavy mineral composition before and after beach nourishment to identify, describe and quantify any potential longer-term impacts—up to one calendar year beyond fill sand placement. The study considers two impacted beach sites, Avon and Buxton NC, and contrasts these against a designated non-nourished Control site. Results to date show the following:

- Beach nourishment likely had a significant immediate impact on the ecology of the studied invertebrate taxa both in the swash zone and along the upper beach at the Avon and Buxton Beach sites.
- Post-nourishment survey findings at Avon and Buxton, with corroborating results from the Control, suggest recovery for all three mole crab size-classes. More data is needed to verify.
- Though coquina populations are lower for the 2023 survey season at Avon and Buxton they are also down along the Control Beach, a result which suggests recovery was reached for the species/group. As with the mole crabs, more data will help to verify.
- Ghost Crab populations at both Avon and Buxton remain suppressed one year after nourishment. Survey data fails to indict the prior Summer's nourishment event as a primary or secondary cause. Other independent or interdependent influences such as anthropogenic use and idiosyncratic variability have likely played the greater role in observed populations.
- Little to no real change in the heavy mineral content was observed in the nourishment sands contrasted against the natural sediments at all sites observed immediately following renourishment. Longer term, heavy mineral constituent percentages have declined on all three project beaches between August 2022 and August 2023.
- It should be noted that the quarterly timing built into the survey design is likely insufficient to allow for detection of changes in population densities necessary to discriminate impacts owed to the Summer 2022 nourishment from environmental variation in the natural system. The natural system can vary over the course of hours to years, time spans easily missed using a quarterly sampling interval.

## Introduction

Beach nourishment, the placement of sand on a beach to restore elevation, seaward extent, and form to restore and provide protection from future erosion-producing events (e.g., intense storms), is a common soft-engineering response to the eroding ocean beach (Speybroeck et al., 2006). In some instances, such as in North Carolina, where regulations prohibit hard structures (e.g., seawalls, bulkheads, sandbags), it is one of the few mitigation options that remain for communities in response to chronic beach erosion. Given the potential impacts of nourishment projects, it is critical to provide pre- and post-nourishment measurements of beach morphology, sand character, and biological composition to quantify possible impacts along these sections of the beach. The present research monitors a beach nourishment disturbance event along North Carolina's Outer Banks, where, in 2022, ocean beaches at two locations along Hatteras Island were restored via sand placement. The objective of this project is to observe any ecological changes associated with sand placement on each beach, quantify those changes, and monitor ecosystems over a 24-month period to ascertain the post-disturbance recovery trajectory. This report provides a summary of site conditions assessed during the period from pre-construction in May/June 2022 through August 2023.

## Study Area

The areas included in this monitoring project are all located on Hatteras Island, an ocean-facing barrier island that is part of the North Carolina Outer Banks (Figure 1). The project consists of three survey areas, representing three experimental units, along Hatteras Island (Figure 1). Two of the three areas, Avon and Buxton, are locations that received nourishment sands in the summer of 2022. A third site identified as Control (Figure 1) received no nourishment and is assumed to be a suitable representative of contemporary baseline ecological and geomorphological dynamics along the Hatteras Ocean beaches.

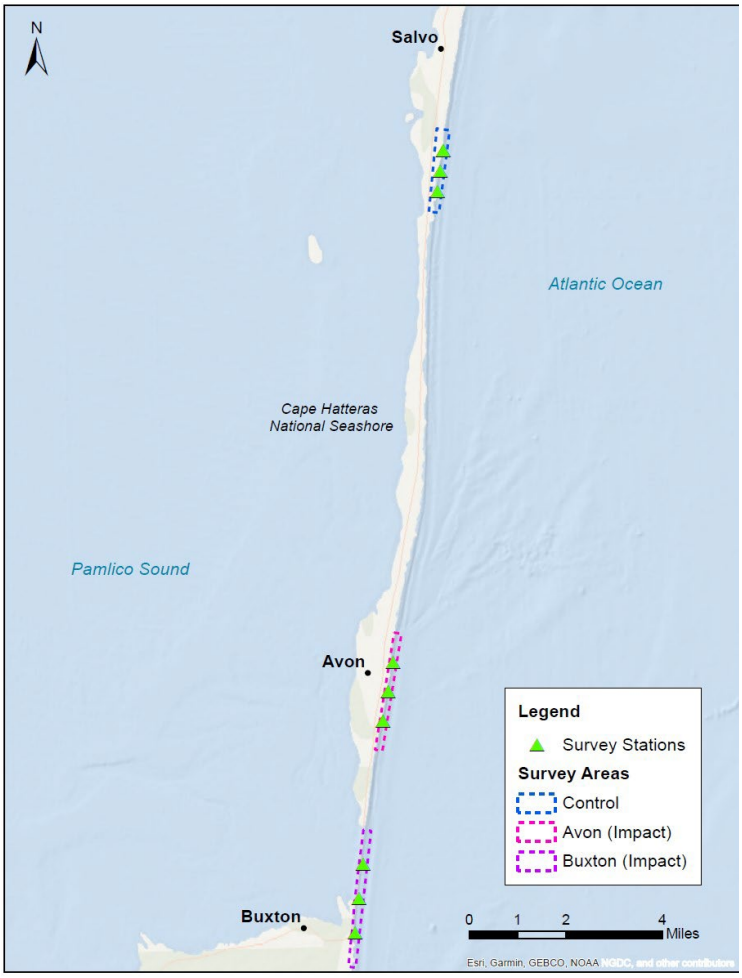



Figure 1: Sampling areas include a control area north of the two beach construction regions, Avon and Buxton. See Figure 2 for sampling design.

## Methods

All field, laboratory, and analytical work associated with the ocean beach invertebrate bio-sampling and beach substrate mineralogical assay is being conducted by scientists and technicians from the Coastal Studies Institute (CSI). Within each of the three defined project sites (Avon, Buxton, and the Control—see Figure 1), during each of the eight reported quarterly surveys at each of the three beach sites monitored 54 biological samples were collected along 18 pre-

defined transects (transect and sampling details are shown in Figure 2). In total, 162 biological samples are collected for each of the eight surveys (November 2022 and February, May, and August 2023) with the single exception of the Buxton site in May 2023. Here, beach closures by the National Park Service prevented CSI staff from visiting two of the three survey sites. In addition, Coastal Science and Engineering (CS&E) staff collected concurrent sand samples at the mid-beach and base of dune (hereafter referred to as the dune toe) for heavy mineral assay by CSI.

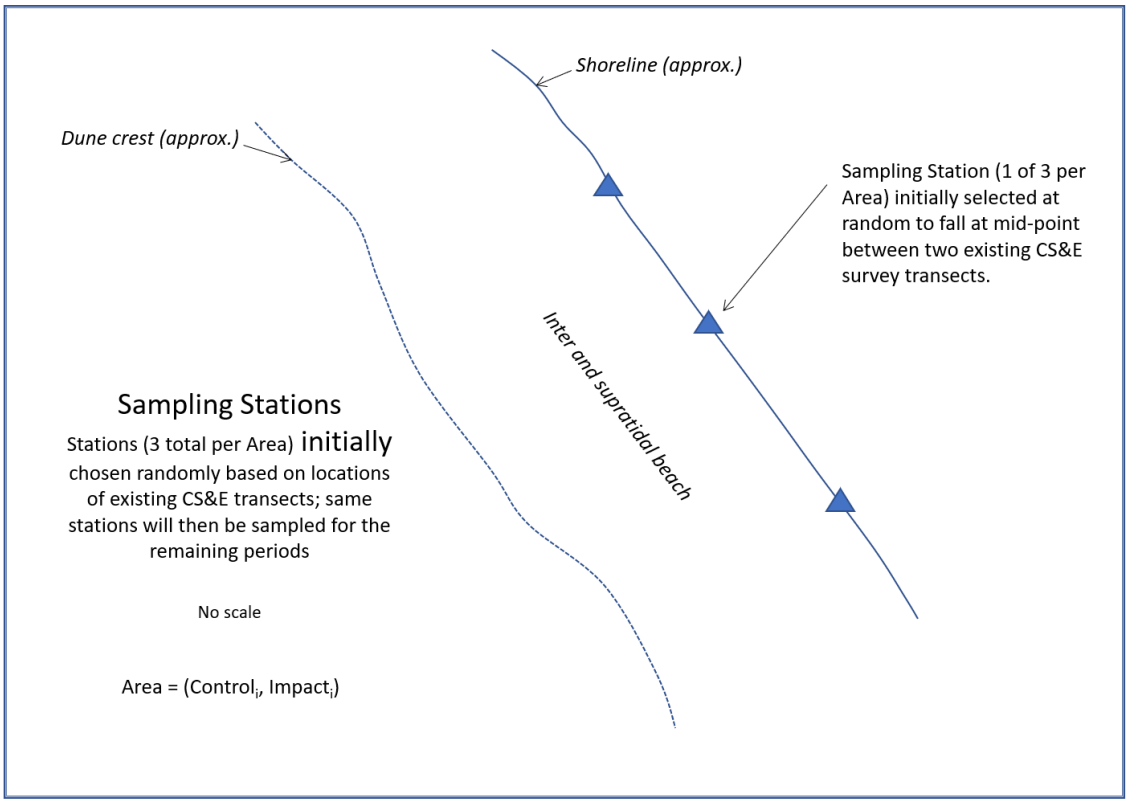
Beach nourishment sands were applied to the Avon and Buxton beaches on a staggered schedule. Construction operations at the Avon site were started in late May 2022 and were completed in late July 2022. The Buxton construction project was started in June 2022 and was completed in late August 2022. Immediate pre- and post-sampling surveys were conducted around this staggered schedule. A pre-survey was completed at Avon, and the Control site, in May 2022. The post-construction survey for those same beaches followed two-calendar days after construction was completed in July. For Buxton the pre-construction survey was started in June, two days prior to construction start, and followed by a post-nourishment survey two days after construction was completed here, in late August. Subsequent sampling to track longer term impacts and change began for all beaches in November 2022 and has been conducted quarterly, as of this writing, through August 2023.

***Beach Macroinvertebrate Sampling***

*Ghost Crabs (sp. Ocypode quadrata):* Methods for measuring ghost crab burrow density vary across the literature. A common technique in ecological research involves counting burrows present along a transect in a narrow area of beach running from the dune to the intertidal zone, a mode often referred to as belt transect sampling (Schlacher et al. 2011). The area captured by the belt transect method is site-specific, as sampling area varies proportionally with beach width. Belt transect sampling employed in this project consists of visually identifying and recording each ghost crab den found along a 2 m wide "belt" overlayed on each survey transect, parallel to that transect and spanning from the upper swash to dune toe. The distance from upper swash to dune toe is measured using a transect tape and recorded, along with the total number of ghost crab dens observed. Field-observed ghost crab den counts are used as a proxy for the presence of the animal itself. A single animal is assumed per observed den. Densities (dens/$m^2$) are computed as the quotient of dens counted within a belt transect and the area ($m^2$) of that transect.

*Swash zone invertebrates*: Three random samples are collected and assessed on-site at three shore-normal locations in the swash zone (the visually identified lower, middle, and upper swash areas) using a small hand dredge (100 mm diameter, 100 mm deep). Sediment samples were scooped using the dredge and the contents immediately transferred to a 30 cm diameter 1 mm mesh stainless steel sieve. Sediment contents are then cleared of inorganic materials, and specific macro-invertebrates counted. The organisms monitored for the study include Atlantic Mole Crab (sp. E. talpoida), partitioned into three size classes (carapace length <4mm, 4 to 8 mm, and >8 mm); Coquina Clam (dominant sp. D. variabilis), a polychaete worm (likely sp. S. squamata); and Amphipoda (keyed only to the group level). Animals were counted on site and returned to the swash zone following enumeration.

Swash zone populations as reported on Figures 3 a-f and in Tables A1 in this report are provided graphically and numerically as area-averaged densities (individual specimens/m2) grouped by beach (domain=Avon, Buxton, and Control) and survey (domain=May, June, July, August, and November 2022 and February. May, and August 2023). Per sample population densities are computed by dividing the number of individual specimens captured in each core sample by the surface area of the core. The coring dredge used for all surveys has a surface area of 0.00817$m^{2.}$ These individual densities are then used to compute descriptive statistics (mean, standard deviation, and 95% confidence intervals) grouped by beach and survey. All core sample depths are assumed to be 100 mm as measured down from the beach surface.



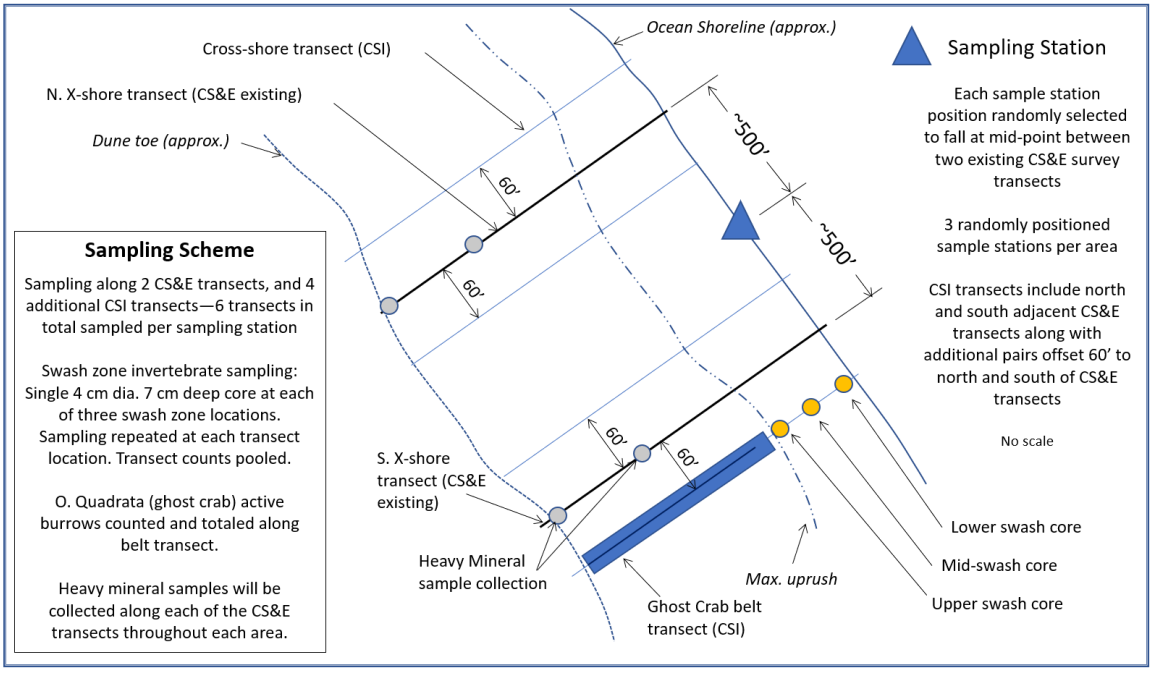




Figure 2: CSI occupied three sampling stations (top figure) across all sampling areas (i.e., Control, Avon, Buxton). At each sampling station, biological sample counts along 6 transects were collected, including two of the CS&E transects. Heavy mineral samples were collected at all CS&E transects.

***Beach Sand Heavy Mineral Analysis***

Heavy mineral percentages are field collected as individual ~400 g samples of beach surface substrate (sands) from two positions on the supra-tidal beach: the approximate mid-beach and the dune base (dune toe) positions along each CS&E defined transect in each of the three beach sites (Figure 2). CS&E staff collect these samples on behalf of CSI during their larger beach sediment surveys. These sediment surveys are concurrent with CSIs bio-monitoring surveys. In the lab samples are homogenized, split into 200 g subsamples and dried at 80$^{o}$ C for 24 hours. Samples for imaging are prepared by first removing any gravel-sized component and then splitting into approximately 1-3 g subsamples. Subsamples are then imaged using an analog Leica M80 microscope with an attached AmScope 14MP Digital Camera using an above-stage ring lighting source. Three to five images for each sample are captured from a camera video stream as discrete RGB images.

The approach used to identify and quantify the heavy minerals present in the sample is one that parallels work done by Dolan and Spiekermann (2014), where the percentage of dark grains observed in a sample is used as a proxy for heavy mineral abundance. The images for each sample are processed for particle detection and classification (light or dark) using a CSI-macro that runs natively in the image analysis application ImageJ (Rueden et al. 2017). Differentiation between dark and light particles is determined by a pixel-value, binary thresholding technique that assigns a detected particle in the image to the light or dark class based on its combined RGB tonal value. Resultant total heavy mineral percentages are computed by dividing the number of dark grains by the total number of grains, light and dark, detected in the image. To reduce detection error, a particle size-based bandpass filter is used. The filter works by rejecting imaged particle areas smaller than 0.0015 mm$^2$ and greater than 0.21 mm$^2$. Imaged particle areas outside the bandpass thresholds are not included in the sample count. Results from ImageJ processing are transferred into Microsoft Excel for archive.

**Results**

***Beach macro-invertebrates:***

*Mole Crab Specimens with Carapace Lengths L < 4 mm*: Immediately following completion of fill sand placement at both Avon and Buxton in July and August, respectively, populations of small size-class mole crabs declined (Figure 3a and Table A1). The decline was particularly large at Buxton where just prior to nourishment more than 729 individuals /m$^2$ were observed. Immediately after, in August 2022 the density was down to 61.2 individuals/m$^2$. Populations changes before and after nourishment at Avon were lower (approx. 106.5 individuals/m$^2$ in May 2022 dropping to 72.5 individuals/m$^2$ in July 2022, Table A1). On the Control beach the pattern was reversed. Prior to nourishment in May 2022 about 90.7 individuals/m$^2$ were recorded. By July 2022 the density was up to 555.3 individuals/m$^2$. Note that May 2022 and August 2022 surveys were not conducted on Control beach.

In the months following nourishment an increase in density was seen along Avon and Buxton, while on the Control Beach den counts were down from the prior summer (Figure 4 and Table A1). For the November 2022 survey Avon recorded its highest density to date (346.8 individuals/ m$^2$ Table A1 and Figure 3a). At Buxton densities were also higher in November versus that observed in August 2022 (233.5 individuals/m$^2$ and 61.2 individuals/m$^2$, respectively from Table A1). Along the Control Beach November saw a drop in individual counts from 555.3 individuals /m$^2$ in July 2022 to 222.1 individuals/m$^2$ (Table A1).

For the remainder of the study period individual densities declined through the cold season and remained low into the following warm season (Table A1 and Figure 4). At Avon and Buxton, the density of L<4mm mole crabs observed in August 2023 was less than that recorded during the prior February 2023 survey (Table A1 and Figure 3). On the Control Beach in August about 140.5 individuals/m$^2$ were observed.

*Mole Crab Specimens with Carapace Lengths 4 mm <= L <= 8 mm*: Mid-size class mole crab populations were observed consistently across all three beach sites during the monitoring period from May 2022 to August 2023. The pre-nourishment density in Avon stood at 88.4 individuals/$m^2$ with a peak count of 108.8 individuals/$m^2$ immediately after treatment. Over the monitoring period, the density experienced fluctuations especially during the transition into the colder season, with the most recent recording at the final site indicating 11.3 individuals/$m^2$ (Table A1 and Figure 3b).

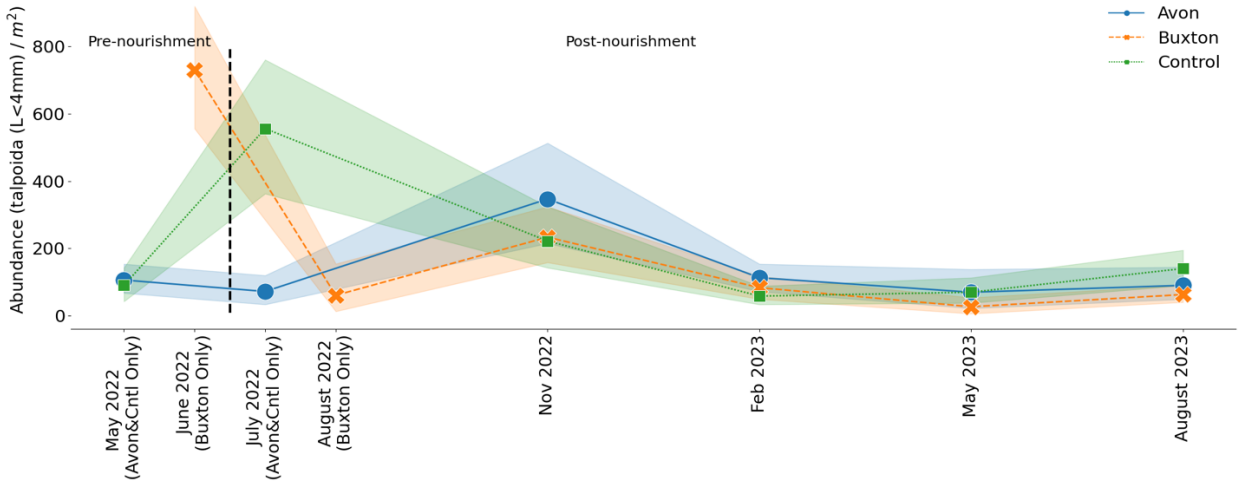
In Buxton, the pre-nourishment survey documented a density of 124.7 individuals/$m^2$. Following sand placement, the density decreased to 24.9 individuals/$m^2$. As observed in the Avon site, the density exhibited fluctuations during the fall/winter period. The latest survey in August 2023 reported a density of 15.9 individuals/$m^2$ (Table A1 and Figure 3b).

56.7 individuals/$m^2$ were observed along the Control Beach in May 2022. Subsequent surveys in July 2022 revealed a peak density of 285.6 individuals/$m^2$. From November 2022 through August 2023 there was a gradual decrease in density in the *4mm<=L<=8mm* mole crab group, with the most recent survey (August 2023) showing a density of 24.93 individuals/$m^2$ (Table A1 and Figure 3b).

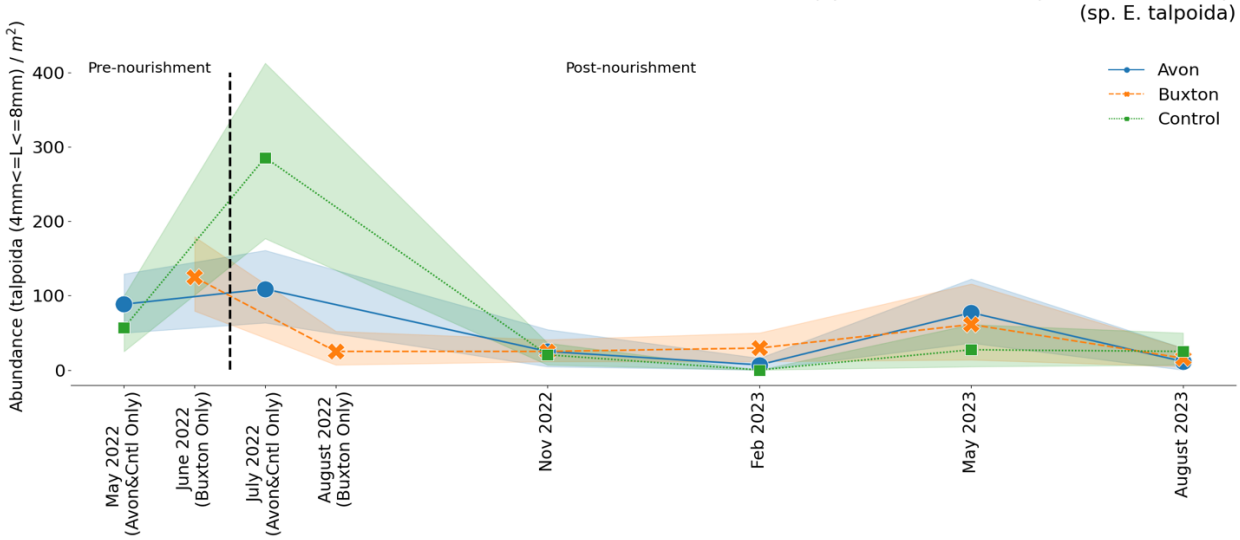
*Mole Crab Specimens with Carapace Lengths L > 8 mm*: Populations of large-size class mole crabs were relatively low on all three beaches for both the pre-nourished and post-nourished time periods. Pre-nourishment densities were low at Avon (15.9 individuals/$m^2$ in May 2022) and lower still on the Control beach (9.07 individuals/$m^2$ for that same May 2022 survey). In contrast 58.9 individuals/$m^2$ were observed on Buxton prior to nourishment (June 2022). During the post-nourishment period Avon's population climbed to 34 individuals/$m^2$ as seen during the July 2022 survey but declined to densities less than 10 individuals/$m^2$ through August 2023. For Buxton pre-nourishment, the density was 58.9 individuals/$m^2$. Post-nourishment, the density dropped to 0 individuals/$m^2$ and then consistently remained low through the August 2023 survey (Table A1). During the July survey, the Control beach saw a surge in L>8mm mole crab specimens, reaching its peak density at 74.8 individuals/$m^2$, a notable increase from the previous survey's 9.07 individuals/$m^2$. Subsequent surveys indicated a consistently low density count through August 2023 (Table A1 and Figure 3C).

*Coquina Clams (sp. Donax variabilis)*: Coquina pooled per-survey populations are shown in Figure 3d. At Avon prior to nourishment observed densities were low at 4.53 individuals/$m^2$, but by the immediate post-nourishment survey in July 2022 observed density was up to 49.9 individuals/$m^2$ (Figure 3d and Table A1). Since that July 2022 survey, and apart from the survey for February 2023 (11.3 coquinas/$m^2$ from Table A1, coquinas densities have varied from 65 to more than 108 coquina/$m^2$ (Table A1). At Buxton following fill sand placement in August 2022 the densities decreased from 183.6 coquina/$m^2$ to 6.8 coquina/$m^2$. From November 2022 onward through August 2023 Buxton coquina densities never exceeded 34.0 coquina/$m^2$ in May 2023 (Figure 3d and Table A1). Along the Control Beach coquina reached a peak in July 2022 (154.1 coquina/$m^2$ from Table A1) and a nadir in February 2023 (6.8 coquina/$m^2$ from Table A1). Otherwise, coquina densities on the Control Beach have hovered around 58.9 to 81.6 coquina/$m^2$ (Table A1 and Figure 3d).

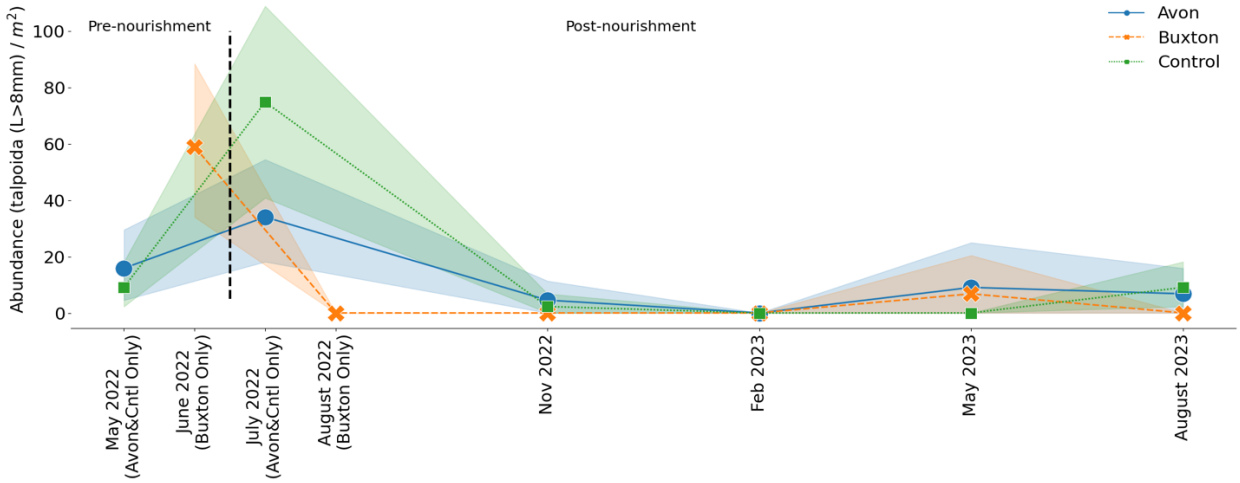
(a) Atlantic Mole Crab (L<4mm)
(sp. E. talpoida)



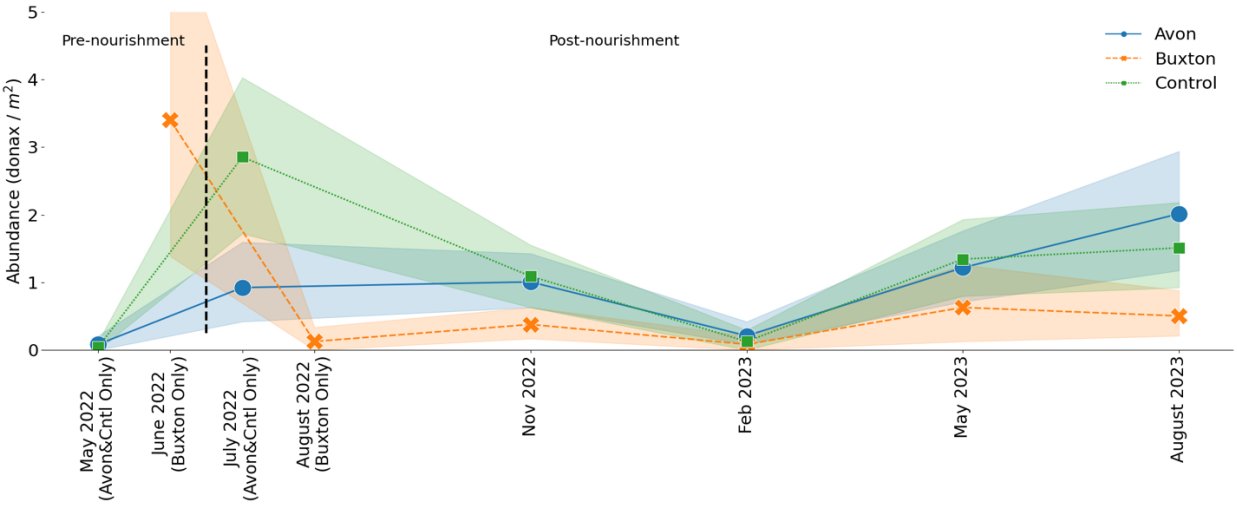

(b) Atlantic Mole Crab (4mm<=L<=8mm)
(sp. E. talpoida)



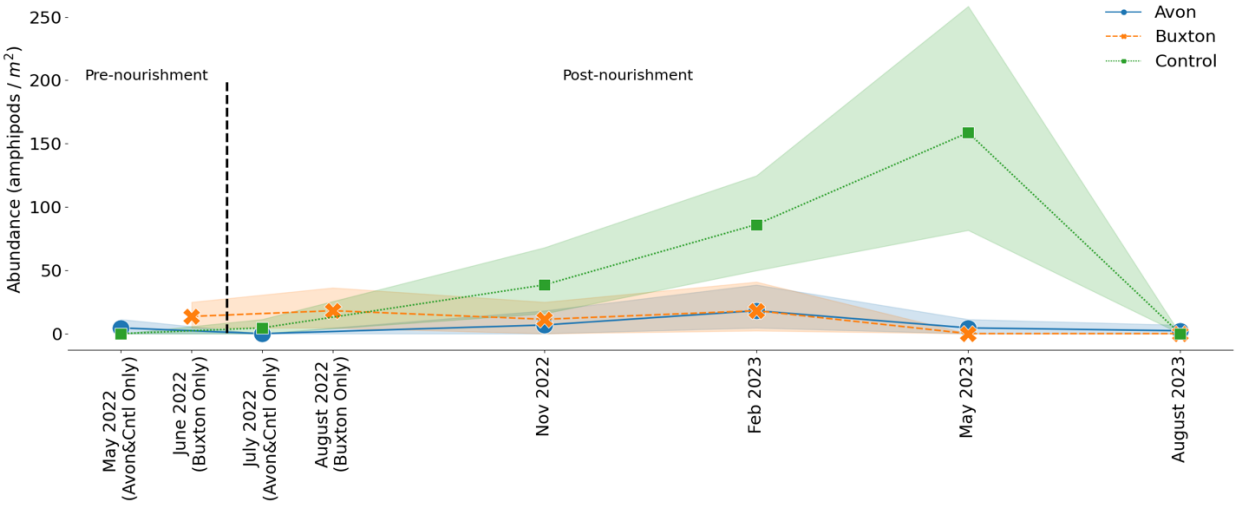

(c) Atlantic Mole Crab (L>8mm)
(sp. E. talpoida)



(d) Coquina
(sp. Donax variabilis locally dominant)




(e) group Amphipoda




(f) class Polychaeta
(sp. S.squamata locally dominant)

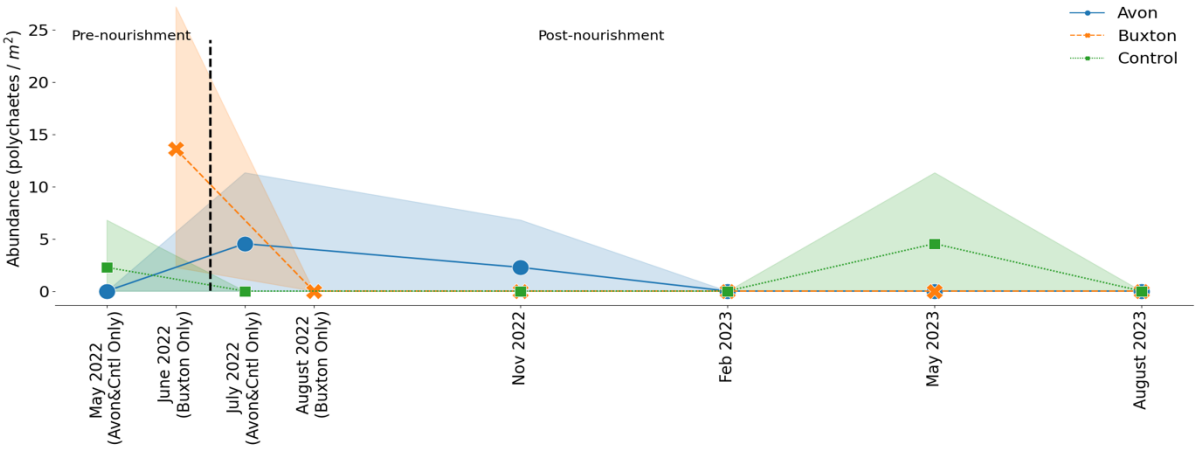


Figure 3(a): Summary of population abundance densities (individuals/$m^2$ by beach site) of the swash zone macroinvertebrates: a.) Atlantic Mole Crab (sp. E. talpoida - specimen carapace lengths L<4mm) ; b.) Atlantic Mole Crab (sp. E. talpoida - specimen carapace lengths 4 mm<= L<= 8mm) ; c.) Atlantic Mole Crab (sp. E. talpoida - specimen carapace lengths L>8mm) ; d.) Coquina Clams (D. variabilis is the dominate species locally); e.) group Amphipoda (not differentiated by species); f.) group polychaeta (S. squamata is the dominate species locally) monitored across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment through August 2023. Shaded areas represent the 95% confidence interval.

*Amphipoda Group*: Amphipod abundance was low on all monitored beaches both before and after nourishment in 2022 (Figure 3e and Table A1). At Avon nourishment before and after observations show the pre-event density to be 4.5 amphipods/$m^2$. After nourishment the density dropped to 0. Amphipod presence at Avon would peak in February 2023 at 18.1 amphipods/$m^2$ (Table A1) but were typically < 7 amphipods/$m^2$ throughout the study period. Results at Buxton suggest relatively higher stable densities for Amphipoda up through the February 2023 survey before dropping off to 0 amphipods/$m^2$ for both the May and August 2023 surveys (see Table A1 and Figure 3e). At the Control Beach observations suggest a pattern in densities seen to be the approximate reverse of that at Buxton, where early surveys (May and July 2022) were 0.0 and 4.5 amphipods/$m^2$, respectively. Afterward, densities increased toward a peak in May 2023 (158.7 amphipods/$m^2$) before dropping back to 0 amphipods/$m^2$ in August 2023 (Table A1 and Figure 3e).

*Polychaete worms (sp. Solilepis squamata dominant)*: Observations across the entire study to date (May 2022 through August 2023, inclusive) show that the class of worms included as polychaetes are rare. This rarity extends across all three beaches and all surveys. The highest density for the study to date (13.6 worms/$m^2$) was recorded at Buxton in June of 2022. In total, 13 of the 18 surveys in the study recorded no worms at all (Table A1 and Figure 3f).

*The Atlantic Ghost Crab (sp. Ocypode quadrata)*: Population densities of the supra-tidal invertebrate known commonly as the Atlantic Ghost Crab are shown in Figure 4 and listed in Table 1. Ghost crab densities were relatively low (< 0.25 dens/$m^2$ per Table 1 and Figure 4) prior to nourishment in May and June 2022. Immediately following nourishment densities observed at the two impacted beaches (Avon and Buxton) dropped to 0 dens/$m^2$. A similar drop in density (to 0 dens/$m^2$) was seen along the unaltered Control beach (Figure 4).

At Buxton, densities exceeded 0.45 dens/$m^2$, an observation that would mark the maximum observed for the species for the entire study to date. A lesser density peak is noted in Figure 4 (and Table 1) in May 2023 with maximum densities around 0.1 dens/$m^2$ for the nourished beaches (Avon and Buxton) and 0.25 dens/$m^2$ on the Control beach (Figure 4). Densities at all three beaches were seen to have dropped off for the August 2023 survey, with values for the Control, Avon, and Buxton at 0.053, 0.016, and 0.051 dens/$m^2$, respectively (per Table 1).

Table 1: Summary of observed populations of Atlantic Ghost Crab, measured as dens/m$^2$ across all three survey areas (i.e., Avon, Buxton, Control). [1]The pre-nourishment survey at Avon was conducted in May with a follow up post survey in July. [2]The pre-nourishment survey at Buxton was conducted in June and the post was carried out in August. [3]The Control Beach was surveyed in May 2022 and followed up in July 2022. The Control beach was not surveyed in June or August.

| Survey | Atlantic Ghost Crab (dens/m$^2$) | | |
|---|---|---|---|
| | **Avon** | **Buxton** | **Control** |
| May 2022[1,3] | 0.095 | - | 0.123 |
| June 2022[2] | - | 0.181 | - |
| July 2022[1,3] | 0.013 | - | 0.025 |
| Aug. 2022[2] | - | 0.012 | - |
| Nov. 2022 | 0.000 | 0.000 | 0.000 |
| Feb. 2023 | 0.001 | 0.000 | 0.044 |
| May 2023 | 0.059 | 0.034 | 0.207 |
| Aug. 2023 | 0.016 | 0.051 | 0.053 |

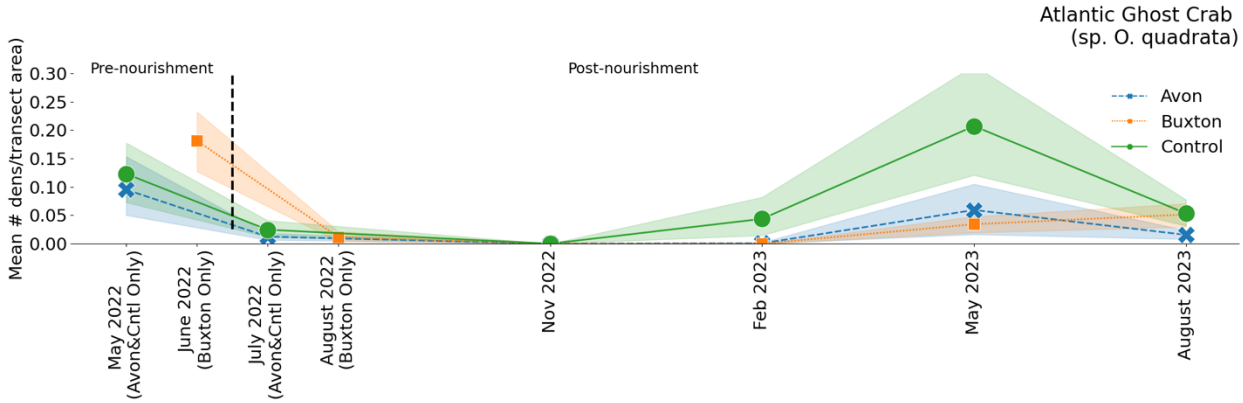



Figure 4: Summary of population abundance density (dens/m$^2$ by survey by beach site) of Atlantic Ghost Crab (sp. O. quadrata) monitored across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment through August 2023. Shaded areas represent the 95% confidence interval.

***Beach substrate heavy mineral compositions***

Beach surface sand from the dune toe and the approximate mid-position on the supra-tidal beach was collected at each bio-sampling transect and assayed to determine the percentage of heavy minerals (e.g., ilmenite, hornblende, garnet, magnetite) present. Prior to nourishment (May 2022) constituent heavy minerals were estimated to comprise about 2% of the total sediment load (Table 2). At Buxton, pre-nourishment (June 2022) heavy mineral content was observed to be higher still, averaging almost 3.4% per sample (Table 2).

Following nourishment an increase in the percentage of heavy minerals is noted at Avon (2.03% +/-1.04% to 2.75% +/-1.33%, Table 2) while at Buxton the increase was smaller (from 3.38% +/-1.8% to 3.46%+/-1.77%, Table 2). Over the same period the Control beach changed little (2.55% +/-1.44% before

to 2.50% +/-1.94% after, Table 2). From November 2022 through August 2023, however, the observed percentage of heavy minerals in collected supra-tidal beach samples collected declined (Figure 5). This downward trend is seen at Avon, Buxton, and the Control beaches. The data exhibits considerable variability, and the temporal changes from August 2022 to August 2023, as illustrated in Figure 5, do not follow a monotonic pattern. The change is the most conspicuous aspect of the variation seen in the data (Figure 5). The magnitude of the trend and the associated variability observed in individual surveys does, however, differ between beach sites. For instance, at Avon the maximum percent content of heavy minerals recorded was 3.43% +/-1.26% while the minimum was 1.7%+/-0.89%. Standard deviations ranged from 1.33% to 0.87%. At Buxton the maximum percentage of heavy minerals was observed during August 2022 at 3.46 +/-1.77%, while the minimum of 1.72% +/-1.06% was noted a year later, in August 2023. Note that most often the largest percentage of heavy minerals observed was at Buxton (Table 2). The Control beach on the other hand displayed the lowest percentages of heavy minerals across all eight surveys (Figure 5 and Table 2). The maximum percentage heavy minerals recorded here was 2.69% +/-1.32% while the minimum was 0.86% +/-0.56 (standard deviations were 1.32% and 0.56%, respectively).

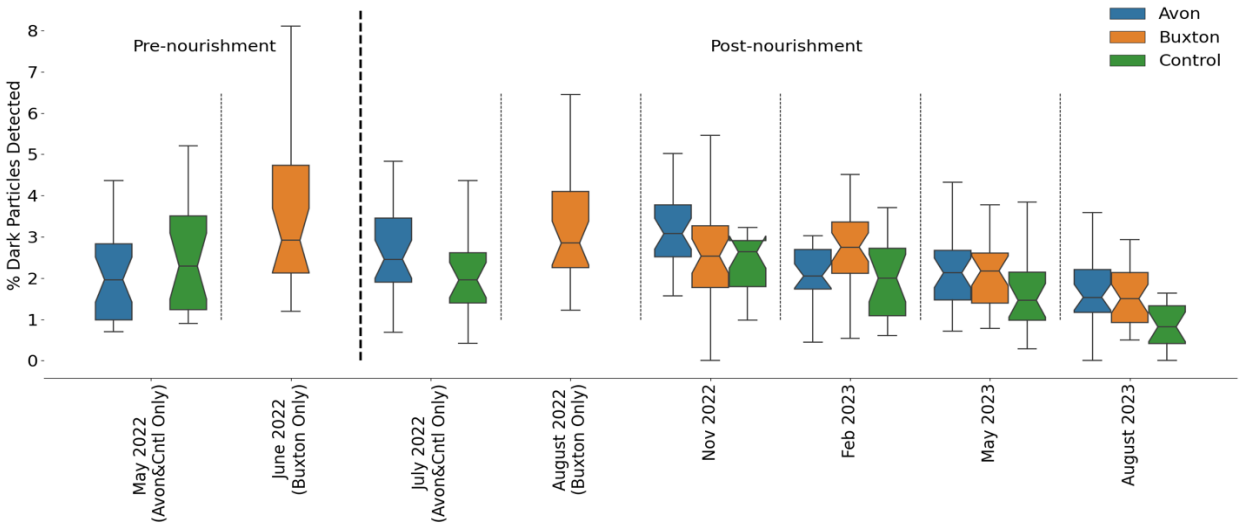



Figure 5: Summary of % heavy minerals distributions along Avon, Buxton, and the Control Beach, pre-nourishment and post-nourishment through August 2023. Box plots display the distribution of the sampled data, showing the median (line across the ”waist” of the box); the filled portion of the box is encapsulated by the 25$^{th}$ through 75$^{th}$ percentiles and comprises 50% of the data. The overall extents of the data (minimum and maximum observations) are shown using the “capped” vertical lines, or whiskers, that extend from the top and bottom of the filled boxes. The indentations represent the span of the 95% confidence interval.

**Discussion**

***Ecosystem Impacts and Changes:*** The Atlantic Mole Crab (sp. E talpoida) is tracked in three groups based on carapace length, the most abundant within the talpoida species are specimens whose carapace length L is < 4 mm (Figure 3a and Table A1). The midsized group (4mm<=L<=8mm) follow the small group in population (Figure 3b). The fewest mole crabs observed are part of the largest L>8 mm group (Table A1 and Figure 3c).

Table 2: Summary of % heavy minerals across all three survey areas (i.e., Avon, Buxton, Control). Notes: [1]Percent of heavy minerals contained in total sediment sample. [2]The pre-nourishment survey at Avon was conducted in May with a follow up post survey in July. [3]The pre-nourishment survey at Buxton was conducted in June and the post was carried out in August. [4]The Control Beach was surveyed in May 2022 and followed up in July 2022. The Control beach was not surveyed in June or August.

| | **Heavy Mineral (%[1])** (mean +/- std dev.) | | |
|---|---|---|---|
| **Survey** | **Avon** | **Buxton** | **Control** |
| May 2022[2,3] | 2.03 (+/- 1.04) | - | 2.55 (+/- 1.44) |
| June 2022[4] | - | 3.38 (+/- 1.80) | . - |
| July 2022[2,3] | 2.75 (+/- 1.33) | - | 2.50 (+/- 1.94) |
| Aug. 2022[4] | - | 3.46 (+/- 1.77) | - |
| Nov. 2022 | 3.43 (+/- 1.26) | 2.87 (+/- 1.78) | 2.69 (+/- 1.32) |
| Feb. 2023 | 2.22 (+/- 0.87) | 2.97 (+/- 1.65) | 1.99 (+/- 0.98) |
| May 2023 | 2.25 (+/- 1.13) | 2.18 (+/- 1.01) | 1.75 (+/- 1.02) |
| Aug. 2023 | 1.70 (+/- 0.89) | 1.72 (+/- 1.06) | 0.86 (+/- 0.56) |

At Buxton, immediate impacts from the nourishment disturbance can explain the L<4mm mole crab group's declines from 729.9 individuals/$m^2$ in June 2022 to 61.2 individuals/$m^2$ seen in August 2022 (Table A1). Nourishment construction was completed at Buxton in August 2022 in the middle of the local warm temperature summer season where populations of mole crabs and other invertebrate species along the beach would be expected to reach maximum annuals levels. This expected peak at Buxton was likely erased by the local nourishment impact. A much smaller decline (106.5 individuals/$m^2$ in May 2022 to 72.5 individuals/$m^2$ in July 2022 (Table A1) was seen at Avon. This slight drop likely reflects impacts from nourishment construction but is tempered by the timing of the before and after surveys. The Avon pre-nourishment survey was carried out in May, while the post-nourishment survey took place two months later in July. May marks an approximate beginning to the warm season influx of many species into the beach swash zone while July is near the peak of this warm season influx. Thus, as is postulated for Buxton, the warm-season population maximum for Avon was also reduced by the nourishment impact. We might thus expect much higher densities of L<4mm moles crabs at Avon had the nourishment not occurred. These proposed results are further supported by observations along the Control Beach where L<4mm mole crab density in May 2022 was measured at 90.7 individuals/$m^2$. That number would then rise to 555.3 individuals/$m^2$ in July (Table A1 and Figure 3a), a change that reflected the natural warm season increases for the undisturbed local ocean beach for the 2022 season.

The relatively higher L<4mm mole crab densities observed during the November 2022 survey, 346.8 individuals/$m^2$, 233.5 individuals/$m^2$ at Avon and Buxton, respectively (Table A1), could be interpreted as evidence of recovery. The lowered densities seen subsequently during the following peak warm season in August 2023 where values were never observed to climb above about 90 individuals/$m^2$ (Table A1 and Figure 3a) for the 2023 warm season on either nourished beach might suggest otherwise, until we consider that lowered population densities were also seen in L<4mm demographics along the Control

Beach in August 2023 (140.5 individuals/$m^2$ versus 555.3 individuals/$m^2$ the prior July 2022 (Table A1 and Figure 3a)). This would perhaps suggest that some other unidentified factor(s) are likely at work independent of the nourishment stressor to explain the populations observed. Further, the magnitudes of these unknown factors in influencing those populations could be at parity with or greater than the nourishment disturbance, a finding that would support an argument that L<4mm mole crab populations had recovered sometime during the Fall of 2022. We do not, however, have sufficient data to test this hypothesis.

For the 4mm<=L<=8mm and L<8mm mole crab groups immediate post-nourishment increases, albeit relatively small, were seen at Avon (Table A1 and Figure 3b and c). Larger increases in 4mm<=L<=8mm mole crab populations on the Control Beach (56.7 individuals/$m^2$ in May 2022 up to 285.6 individuals/$m^2$ in July, reflect the expected warm season population rise for the species. This increase is likely also reflected in the smaller L>8mm mole crabs population density gains. Potential larger population gains, however, were probably muted by nourishment impacts. Looking beyond the immediate impacts, the November 2022 increases observed for the L<4mm mole crabs did not materialize for these larger mole crab groups. Lacking sufficient data to demonstrate otherwise, this difference is likely due as much to natural variations in the animal's life cycle as to any differential impacts tied to the nourishment event. Relative to the Control beach population densities for these larger crabs (Table A1) there appears to be little difference in population densities between the un-nourished Control and the nourishment-impacted sites at Avon and Buxton (as seen in Table A1 and Figures 3b and c). This suggests that, like their smaller sized counterparts the medium and larger size-class mole crabs may have achieved some form of dynamic stasis marking recovery prior to or by the time of the November 2022 survey.

At Avon coquina population densities were seen to have increased by more than an order of magnitude immediately following the nourishment event (4.5 coquina/$m^2$ before versus 49.9 coquinas/$m^2$ after from Table A1)—this result may be significant as its confidence band (see Figure 3d) does not overlap that seen for the Control Beach data (Figure 3d). This failure to overlap provides preliminary evidence that coquina populations along Avon differed in some statistically significant way from the Control. The lower densities thus observed for coquina suggests an immediate nourishment impact that largely, but perhaps not entirely, erased an expected warm season population maximum for 2022.

At Buxton, where nourishment construction took place during the warm season peak the beach saw a large decline from the pre-nourishment June 2022 survey of 186.6 coquina/$m^2$ to 6.8 coquina/$m^2$ post-nourishment in August 2022 (Table A1). As with the mole crab groups, this decline can be explained by the temporal alignment of the nourishment event with nourishment coming during the warm-season peak; the nourishment impacts thus erasing any expected seasonal population gains. On the Control Beach, in contrast, coquina populations rose from 2.27 coquinas/$m^2$ in May to 154.1 coquinas/$m^2$ in July (Figure 3d and Table A1). By November coquina population densities on all beaches were higher but at Avon densities were at parity with the Control Beach while Buxton was lower. For November 2022, and February and May 2023, however, the 95% confidence bands (Figure 3d) were seen to overlap. They do not overlap during the August 2023 survey which points to differences that may be demonstrated as statistically significant if subject to more rigorous confirmatory testing. More data would be needed to test this conjecture. Additional data would also help to ascertain the potential influence posed on coquina, and other swash zone invertebrate populations by natural variation. Idiosyncratic dynamics likely pose strong influences on populations and make the identification and isolation of nourishment-related impacts problematic.

The swash-based polychaete and Amphipoda groups both exhibit consistently variable and often low relative population densities at all three beach study sites (Table A1 and Figures 3e & f). Note that polychaeta (worm) densities were consistently at or near 0 worms/$m^2$, both before and after nourishment. Values for the class never exceeded 13.6 worms/$m^2$. One of these peaks occurred during the immediate-

post-nourishment survey at Avon in July 2022. For the amphipods larger densities are seen along the Control Beach in November 2022, February 2023, and May 2023 (38.5, 86.1, and 158.7 amphipods/$m^2$, respectively, from Table A1 and Figure 3e). At the same time populations at the two nourished beaches remained relatively low. A maximum of 18.1 amphipods/$m^2$ were observed at Avon and Buxton in February 2023. Otherwise, for all three beaches populations of amphipods were low, often below 20 amphipods/$m^2$ per survey (Table A1 and Figure 3e). Similar population behavior for both group Amphipoda and the polychaetes was seen by Corbett and Walsh (2017) over the course of several years along ocean beaches on the Pea Island National Wildlife Refuge. Pea Island sits only about 30 km north of the Avon nourishment site. Such small population sizes and idiosyncratic population behavior make it difficult to assess what, if any, influence nourishment might have had on these two invertebrate groups.

For ghost crabs the population densities, as measured via the presence of dens/$m^{2,}$ evident on the beach surface, observed at any time of year likely hinge on factors such as anthropogenic use, local environmental conditions, and supra-tidal beach width. They will also be influenced to a large extent by the variability inherent to the species. Den densities measured in July and August 2022 at Avon and Buxton, respectively, reveal what appears to be clear impacts to the indigenous ghost crab populations resulting from renourishment activities. This finding is tempered somewhat in that numbers along the unmodified Control beach are also down, however, nourishment construction is likely to be the primary reason for the lowered densities observed for the two (Avon and Buxton) renourished sites. The expected warm season increases in ghost crab populations and population densities is seen, if but briefly during the Spring and Summer of 2023. Den densities were observed to have peaked on the Control Beach in May 2023 (0.207 dens/$m^2$ from Table 1). Similar peaks were, however, absent from both Avon (0.059 dens/$m^2$ from Table 1) and Buxton (0.034 dens/$m^2$ from Table 1). Densities then dropped across all three beaches for the August 2023 survey (Table 1 and Figure 4). The increase seen on the Control Beach in May 2023, we surmise, was the warm seasonal emergent response of the species and its concomitant increases in density. That these increases are not seen at Avon and Buxton might be evidence that the species was impacted by the nourishment event and effects of that impact extend through the August 2023 survey. Thus, we could tentatively conclude that ghost crabs along the nourished Avon and Buxton beaches, at this writing, have not yet recovered. Natural variation, however, with ghost crabs like all the invertebrates monitored as part of this project, may be sufficient in magnitude to equally well explain the low numbers at Avon and Buxton, as well as those observed along the Control Beach during the August 2023 survey. Some other factor(s) that could be impacting all three beaches considered in this study could include: anthropogenic use, and insufficient spatial and/or temporal sampling resolution built into the project's experimental design.

***Changes in Sediment (Sand) Heavy Mineral Composition:*** Assay of field samples of beach sediment (largely sand sized particles) indicates that heavy minerals consistently comprise less than 5% of the total constituent sediment fraction at each of the three beach sites (Avon, Buxton, and Control—refer to Figure 5 and Table 2) considered in this project. Buxton averages the largest percentage of heavy minerals (mean = 2.8%, computed from the individual means listed in Table 2), while Avon and the Control sites have slightly lower percentages (Avon mean = 2.4%; Control mean = 2.1%, computed from the individual means listed in Table 2). The difference before and after at Avon was 0.72% while Buxton's percentage increased 0.08%. At the Control Beach the percentage dropped 0.05% (Table 2). Changes in composition as measured by comparing the pre- and post-nourishment surveys were relatively small. The largest change was observed at Avon, where the percentage climbed from 2.0% (+/-1.04) to 2.75% (+/-1.33) from Table 2. Based on comparison of the before and after sample distributions seen in the boxplots on Figure 5, this increase is not different enough (confidence notches overlap by a significant degree) to support an interpretation that the fill sands were slightly finer than those native at Avon.

Differences before and after at Buxton and the Control Beach could, given the variance in the natural system and the difficult-to-quantify errors inherent in the analysis, be reasonably interpreted as zero, or

possibly sit below the threshold of detection for the experimental design used. Variation (listed as standard deviations in Table 2) was observed to be slightly higher in November at Avon and on the Control Beach site, while at Buxton the November-observed variance was little changed (+/-1.77 in August 2022 to +/-1.78% in November 2022, from Table 2. As was reported in the prior December 2022 report (Corbett et al., 2022), interpretation of these results to date (May 2022 – August 2023) suggests that the nourishment sands used for reconstruction were equivalent in terms of heavy mineral content to the natural sediments found along all beaches being monitored in this project.

Finally, as the boxplots in Figure 5 reveal, the greatest variation in the heavy mineral percentage data for all three sites to date is temporal. As is clear from Figure 5, all three beaches display a consistent and coherent trend marking a reduction in the heavy mineral content in the supra-tidal beach samples collected. With only the limited data gathered thus far we are unable to give a cogent explanation for this downward trend beyond the role that natural variation might play.

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## Appendix 1:

Table A1: Summary of population density (individuals/m$^2$) of swash zone macroinvertebrates across all three survey areas (i.e., Avon, Buxton, Control), pre- and post-nourishment through August 2023.

| Site | Survey | ($< 4mm$) | **Atlantic Mole Crab** (sp. E. talpoida) ($4mm \leq l \leq 8mm$) | ($> 8mm$) | **Coquina Clam** (sp. D. variabilis) | **Amphipods** (sp. undiff.) | **"worms"** (polychaetes undiff.) |
|---|---|---|---|---|---|---|---|
| Avon | May 2022 | 106.53 | 88.40 | 15.87 | 4.53 | 4.53 | 0.00 |
| | July 2022 | 72.53 | 108.80 | 34.00 | 49.87 | 0.00 | 4.53 |
| | Nov. 2022 | 346.80 | 24.93 | 4.53 | 54.40 | 6.80 | 2.27 |
| | Feb. 2023 | 113.33 | 6.80 | 0.00 | 11.33 | 18.13 | 0.00 |
| | May 2023 | 70.27 | 77.07 | 9.07 | 65.73 | 4.53 | 0.00 |
| | Aug. 2023 | 90.67 | 11.33 | 6.80 | 108.80 | 2.27 | 0.00 |
| Buxton | June 2022 | 729.86 | 124.67 | 58.93 | 183.60 | 13.60 | 13.60 |
| | Aug. 2022 | 61.20 | 24.93 | 0.00 | 6.80 | 18.13 | 0.00 |
| | Nov. 2022 | 233.46 | 24.93 | 0.00 | 20.40 | 11.33 | 0.00 |
| | Feb. 2023 | 83.87 | 29.47 | 0.00 | 4.53 | 18.13 | 0.00 |
| | May 2023 | 27.20 | 61.20 | 6.80 | 34.00 | 0.00 | 0.00 |
| | Aug. 2023 | 63.47 | 15.87 | 0.00 | 27.20 | 0.00 | 0.00 |
| Control | May 2022 | 90.67 | 56.67 | 9.07 | 2.27 | 0.00 | 2.27 |
| | July 2022 | 555.33 | 285.60 | 74.80 | 154.13 | 4.53 | 0.00 |
| | Nov. 2022 | 222.13 | 20.40 | 2.27 | 58.93 | 38.53 | 0.00 |
| | Feb. 2023 | 58.93 | 0.00 | 0.00 | 6.80 | 86.13 | 0.00 |
| | May 2023 | 70.27 | 27.20 | 0.00 | 72.53 | 158.67 | 4.53 |
| | Aug. 2023 | 140.53 | 24.93 | 9.07 | 81.60 | 0.00 | 0.00 |

# APPENDIX E-1

# Avon Lighting Survey Report

COASTAL SCIENCE & ENGINEERING
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October 17, 2023

Ms. Kathy Matthews, Fish and Wildlife Biologist
Raleigh Ecological Services
US Fish and Wildlife Service
PO Box 33726 TEL: 919-856-4520 × 27
Raleigh NC 27636-3726 EMAIL: kathryn_matthews@fws.gov

RE: Avon Beach Nourishment, Dare County, NC
Post-Project Lighting Surveys (CSE 2557)

Dear Ms. Matthews:

The above-referenced project commenced on 30 May 2022, and pumping was completed on 27 July 2022. Based on the requirements by the USACE permit and the USFWS Biological Opinion (BO) dated 20 December 2021, lighting surveys are required for the first summer following project completion. Item #14 on page 25 of the BO specified the following.

> *Two surveys of all lighting visible from the beach placement area must be conducted by the Applicant or the Corps, using standard techniques for such a survey (Appendix B), in the year following construction. The first survey must be conducted between May 1 and May 15, and a brief summary provided to Service. The second survey must be conducted between July 15 and August 1. A summary report of the surveys (including the following information: methodology of the survey, a map showing the position of lights visible from the beach, a description of each light source visible from the beach, recommendations for remediation, and any actions taken) must be submitted to the Raleigh Field Office within 3 months after the last survey is conducted. After the annual report is completed, a meeting must be set up with the Applicant, County, the Corps, NCWRC, and the Service to discuss the survey report, as well as any documented sea turtle disorientations in or adjacent to the project area. If the project is completed during the nesting season and prior to May 1, the contractor may conduct the lighting surveys during the year of construction.*

CSE conducted the first lighting survey on the evening of 15 May 2023 from 9 PM to 12 AM following the protocol established in Appendix B of the BO. CSE personnel walked the project area at night and documented observable direct and indirect lighting. Locations of light sources were marked on aerial photographs, and notes were recorded regarding the type of light (e.g. interior light, porch light, street lamp, etc.) and intensity of light exposure (e.g. indirect versus direct light source). Still photography was also used to document light sources in many cases with photos being taken from near the berm crest, using a standard digital camera.

The types of light sources included direct and indirect interior lighting such as table lamps set in front of windows, TVs, illuminated window shades, direct lighting from balconies and porches, direct lighting

above outdoor stairs, direct and indirect lighting from parking areas beneath and around buildings, landscape lighting, pool lighting, and indirect lighting of building walls. The most concentrated light sources that were documented occurred along the central section of Avon shorefront, where houses are located immediately landward of the foredune crest. In locations to the north and south of this area, where ~150 to 200 ft of vegetated dune separates the beach and homes, light pollution is noticeably lower.

May 2023 survey results are given in Table 1. CSE digitized the locations of light sources in GIS as shown in a series of map panels in Figure A.

CSE conducted the second lighting survey on the evening of 27 July 2023 from 9 PM to 12 AM using the same methodology as the first lighting survey. The types of light sources included direct and indirect interior lighting such as table lamps set in front of windows, TVs, illuminated window shades, direct lighting from balconies and porches, direct lighting above outdoor stairs, direct and indirect lighting from parking areas beneath and around buildings, landscape lighting, pool lighting, and indirect lighting of building walls. The same as the light sources in May, the most concentrated light sources that were documented in July occurred at the motels and hotels near the northern section of the Village of Buxton.

July 2023 survey results are given in Table 2. CSE digitized the locations of light sources in GIS as shown in a series of map panels in Figure B.

Overlaying the locations of observed light sources in May and July 2023 shows much of the Avon waterfront was lit directly during one or both surveys (Figure C). Between both surveys, approximately 100 light sources were observed along ~9,000 ft of shoreline for an average of one light source every ~90 ft.

This is an excessive amount of oceanfront lighting, particularly in the cases of several residences where entire porches were lit by interior lamps, flood lights, and ground lights while residents sat around deep hand-dug fire pits on the adjacent beach. Efforts to mitigate light exposure along the village waterfront should be promoted. Based on the extensive lighting of the beach during the turtle nesting season, despite adjacent turtle nesting habitat, it appears public outreach and education is needed to ensure more functional nesting habitat around the 2022 project template.

Please contact me if you have any questions or concerns.

Sincerely,

**Coastal Science & Engineering (CSE)**

Patrick Barrineau

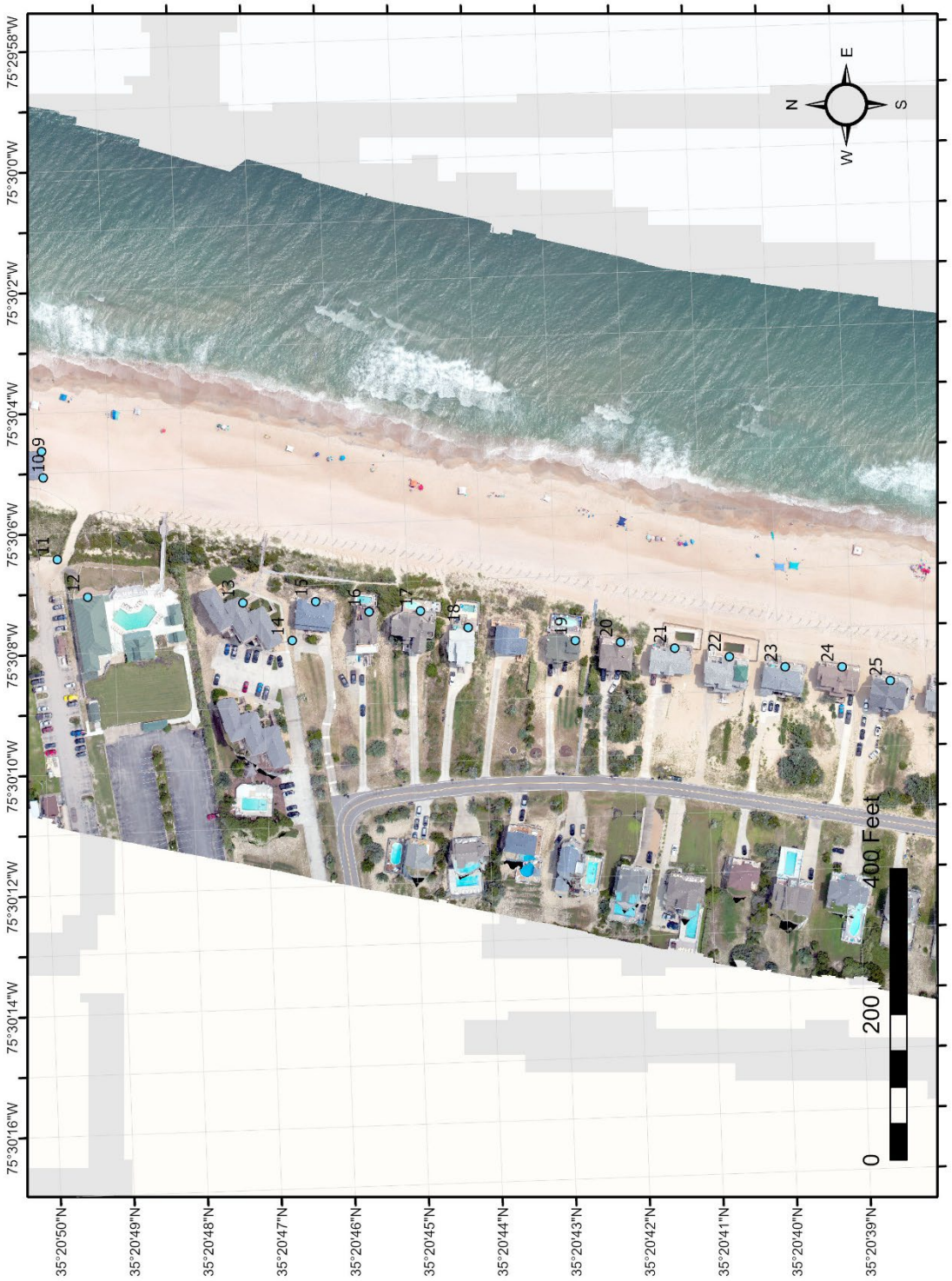
Patrick Barrineau PhD PG
Project Manager

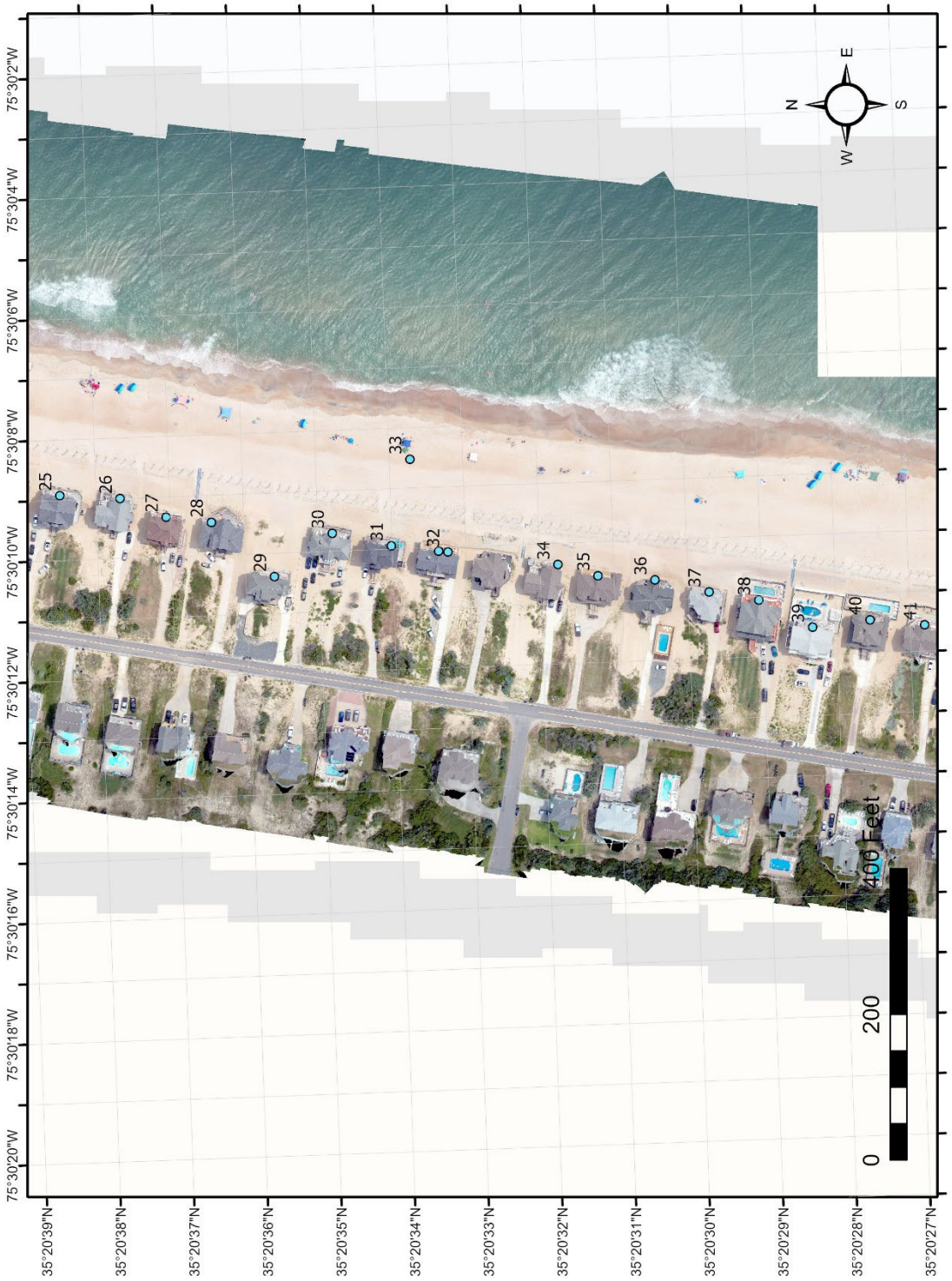
**TABLE 1.** List of light sources in May 2023 along the oceanfront of Avon (NC). Light sources are numbered and marked in Figure A.

| Number | Type | Direct/Indirect | Number | Type | Direct/Indirect |
|---|---|---|---|---|---|
| 1 | interior light | Indirect | 47 | porch light | Direct |
| 2 | porch light | Indirect | 48 | porch light, interior light | Direct |
| 3 | interior light | Indirect | 49 | interior light | Direct |
| 4 | porch light, interior light | Direct | 50 | interior light | Direct |
| 5 | interior light | Indirect | 51 | porch light, interior light | Direct |
| 6 | interior light | Indirect | 52 | porch light, interior light | Direct |
| 7 | flood lamp Avon Pier | Direct | 53 | interior light | Indirect |
| 8 | interior light Avon Pier | Direct | 54 | interior light | Direct |
| 9 | interior light Avon Pier | Direct | 55 | porch light, interior light | Direct |
| 10 | flood lamp Avon Pier | Direct | 56 | porch light, interior light | Direct |
| 11 | street lamp | Direct | 57 | porch light, interior light | Direct |
| 12 | porch light event venue | Direct | 58 | interior light | Direct |
| 13 | porch light, interior light | Direct | 59 | porch light | Direct |
| 14 | street lamp | Direct | 60 | interior light | Direct |
| 15 | interior light | Direct | 61 | interior light | Direct |
| 16 | interior light | Direct | 62 | porch light | Direct |
| 17 | interior light | Direct | 63 | interior light | Direct |
| 18 | interior light | Direct | 64 | porch light, interior light | Direct |
| 19 | interior light | Indirect | 65 | porch light, interior light | Direct |
| 20 | porch light, interior light | Direct | 66 | porch light, interior light | Direct |
| 21 | porch light, interior light | Direct | 67 | interior light | Direct |
| 22 | porch light, interior light | Direct | 68 | interior light | Direct |
| 23 | porch light, interior light | Direct | 69 | porch light, interior light | Direct |
| 24 | porch light, interior light | Direct | 70 | porch light, interior light | Direct |
| 25 | interior light | Indirect | 71 | interior light | Direct |
| 26 | interior light | Direct | 72 | interior light | Direct |
| 27 | interior light | Direct | 73 | interior light | Direct |
| 28 | interior light | Indirect | 74 | interior light | Direct |
| 29 | porch light | Direct | 75 | porch light, interior light | Direct |
| 30 | interior light | Direct | 76 | interior light | Direct |
| 31 | porch light, interior light | Direct | 77 | porch light, interior light | Direct |
| 32 | interior light | Direct | 78 | interior light | Direct |
| 33 | camp fire | Direct | 79 | interior light | Direct |
| 34 | porch light, interior light | Direct | 80 | interior light | Direct |
| 35 | interior light | Direct | 81 | interior light | Direct |
| 36 | interior light | Direct | 82 | interior light | Direct |
| 37 | interior light | Direct | 83 | interior light | Direct |
| 38 | porch light, interior light | Direct | 84 | interior light | Direct |
| 39 | porch light, interior light | Direct | 85 | porch light, interior light | Direct |
| 40 | interior light | Direct | 86 | porch light, interior light | Direct |
| 41 | interior light | Direct | 87 | interior light | Direct |
| 42 | porch light, interior light | Direct | 88 | interior light | Direct |
| 43 | interior light | Direct | 89 | interior light | Direct |
| 44 | interior light | Direct | 90 | interior light | Direct |
| 45 | porch light, interior light | Direct | 91 | porch light | Direct |
| 46 | porch light, interior light | Direct | 92 | interior light | Direct |
| 47 | porch light | Direct | 93 | interior light | Direct |

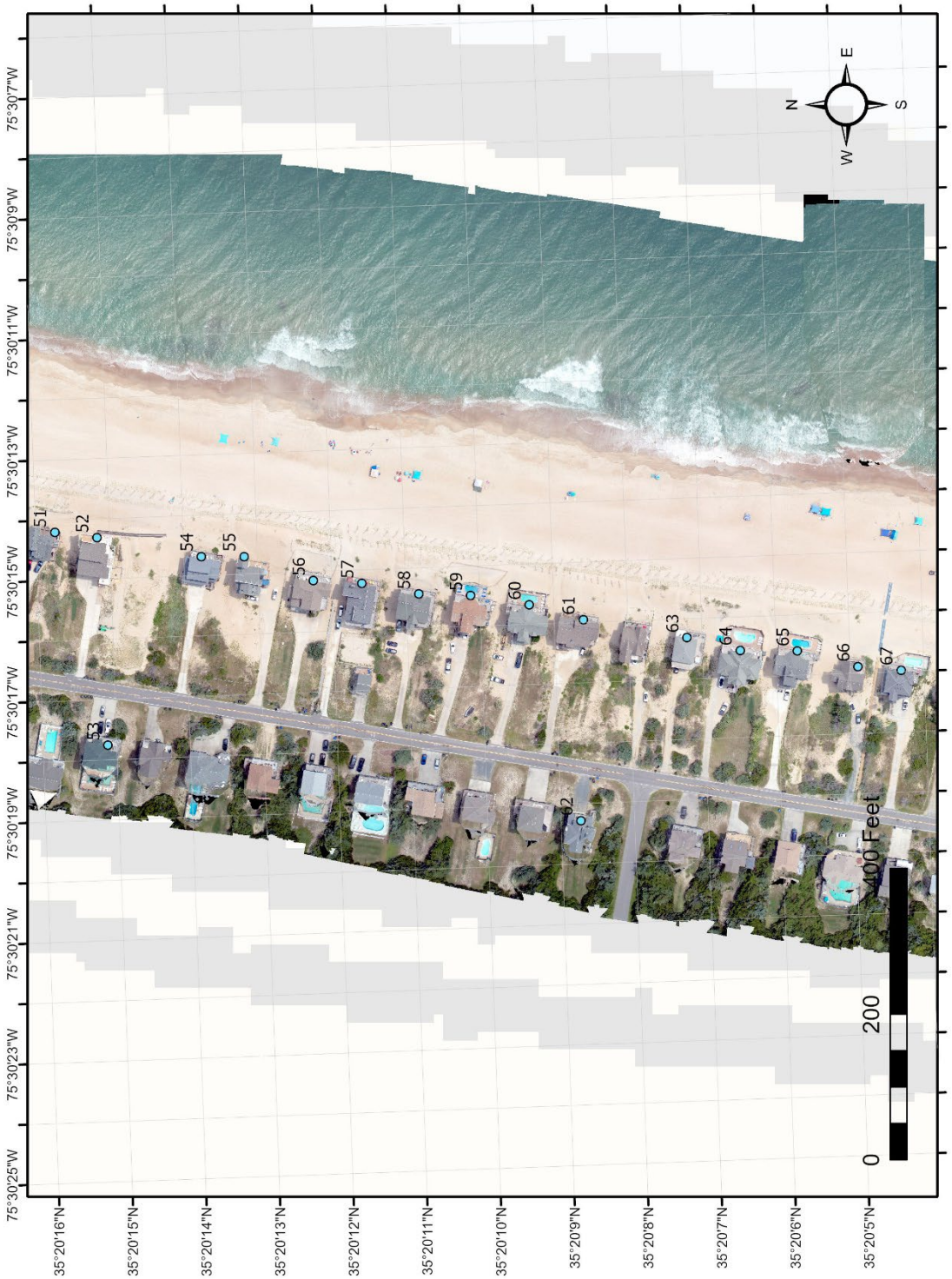
**FIGURE A.** Locations of light sources along Avon, May 2023.



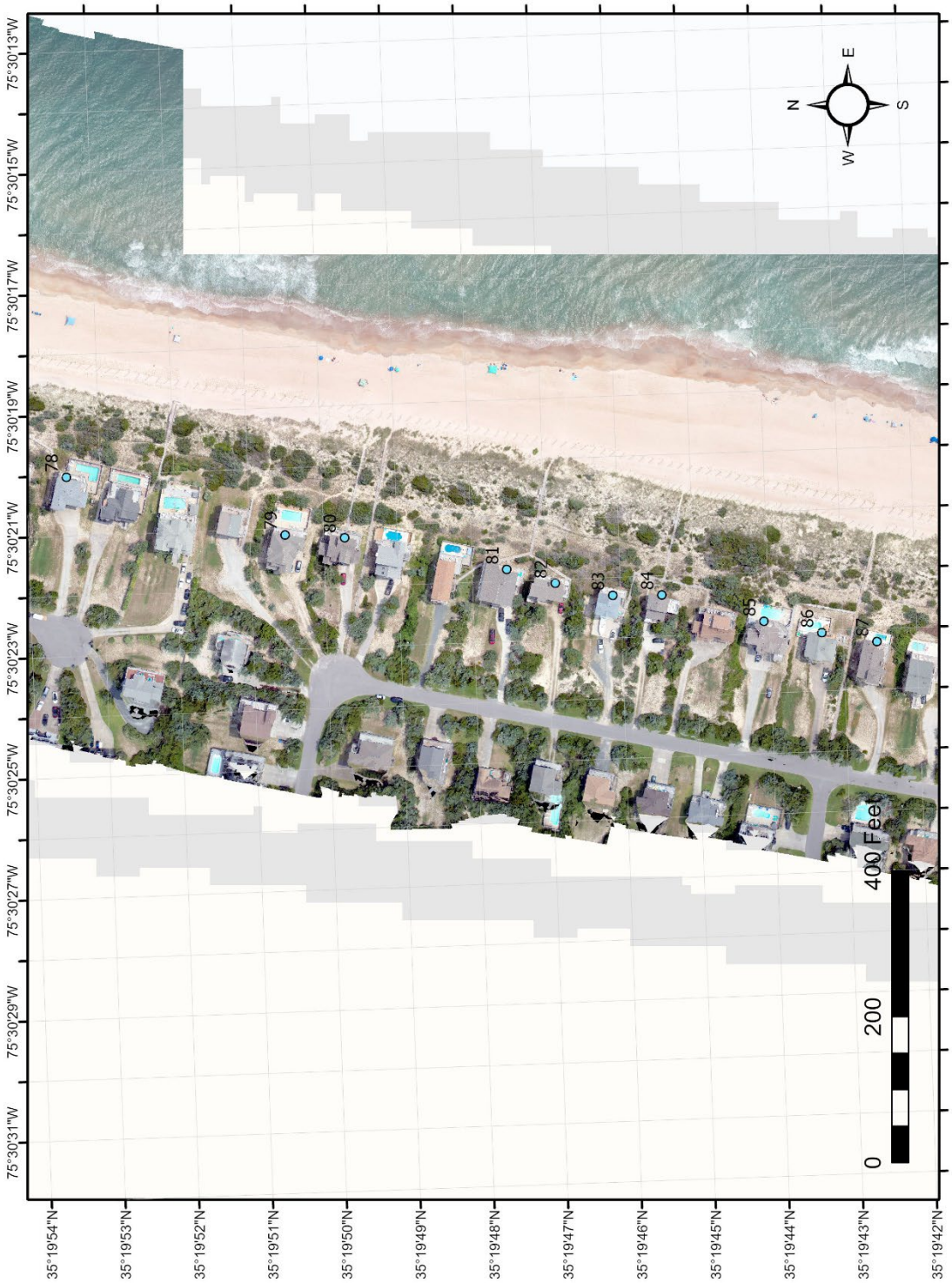

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75°30'14"W
75°30'16"W
35°20'50"N
35°20'49"N
35°20'48"N
35°20'47"N
35°20'46"N
35°20'45"N
35°20'44"N
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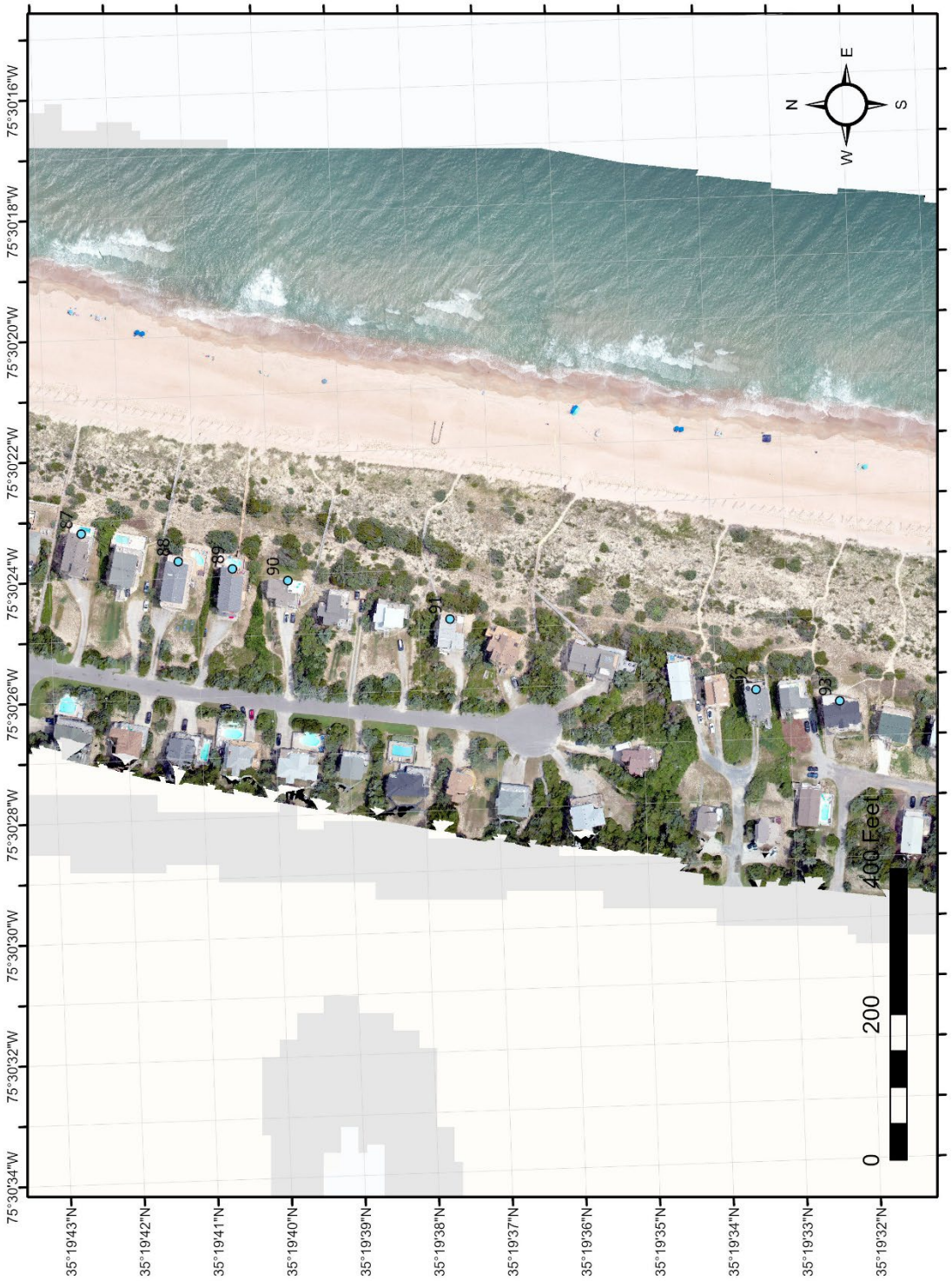
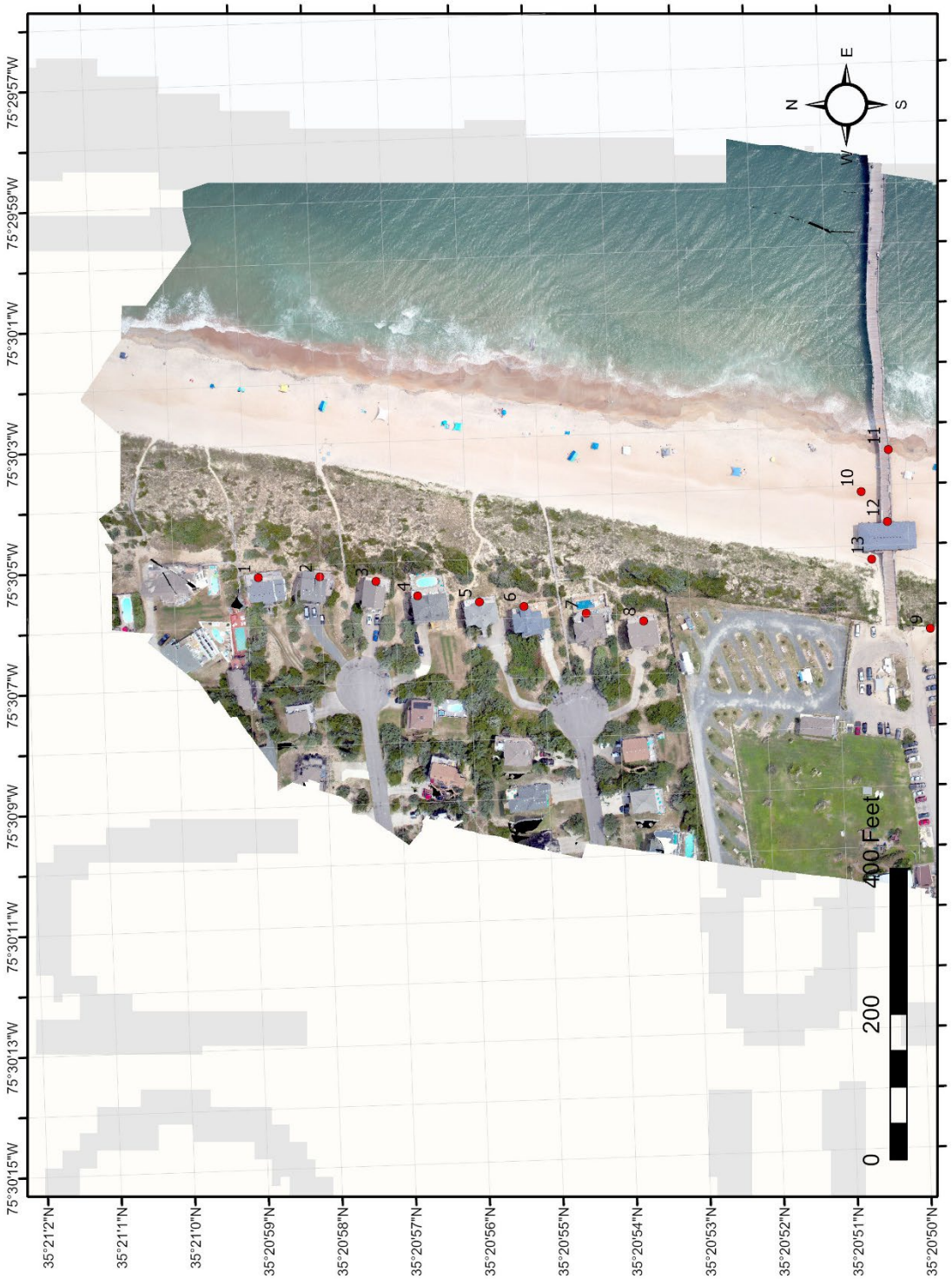

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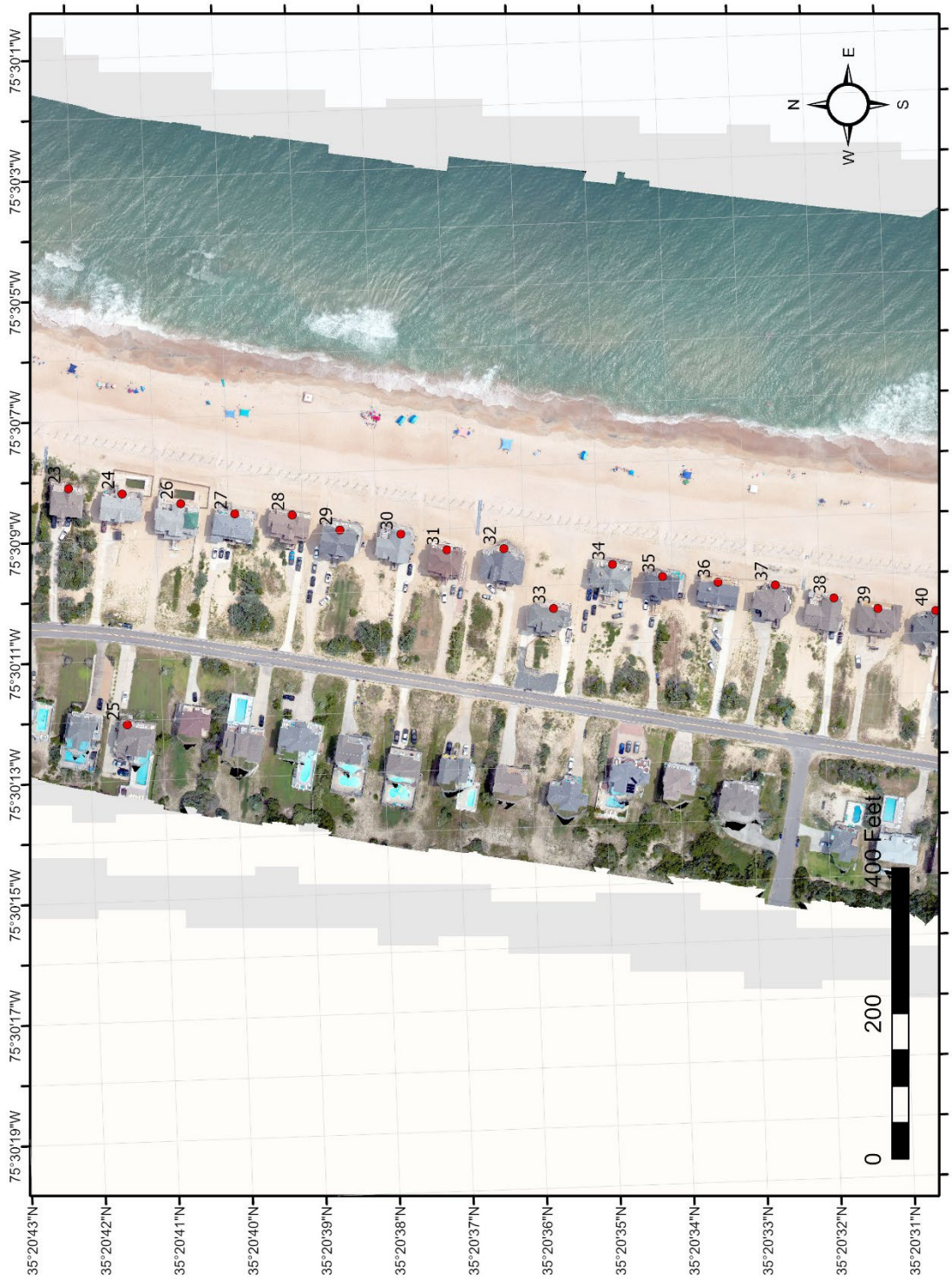
**TABLE 2.** List of light sources in July 2023 along the oceanfront of Avon (NC). Light sources are numbered numerically and marked in Figure A.

| Number | Type | Direct/Indirect | Number | Type | Direct/Indirect |
|---|---|---|---|---|---|
| 1 | interior light | Direct | 55 | porch light, interior light | Direct |
| 2 | interior light | Indirect | 56 | porch light, interior light | Indirect |
| 3 | interior light | Indirect | 57 | porch light, interior light | Direct |
| 4 | interior light | Indirect | 58 | porch light, interior light | Direct |
| 5 | interior light | Indirect | 59 | porch light, interior light | Indirect |
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| 8 | interior light | Indirect | 62 | porch light, interior light | Direct |
| 9 | street lamp | Direct | 63 | interior light | Indirect |
| 10 | camp fire | Direct | 64 | porch light, interior light | Direct |
| 11 | street lamp Avon Pier | Direct | 65 | interior light | Indirect |
| 12 | flood lamp Avon Pier | Direct | 66 | porch light, interior light | Direct |
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| 37 | porch light, interior light | Direct | 91 | interior light | Direct |
| 38 | porch light, interior light | Direct | 92 | interior light | Direct |
| 39 | interior light | Direct | 93 | interior light | Direct |
| 40 | porch light, interior light | Direct | 94 | interior light | Indirect |
| 41 | porch light, interior light | Direct | 95 | interior light | Direct |
| 42 | interior light | Direct | 96 | interior light | Direct |
| 43 | porch light, interior light | Direct | 97 | interior light | Direct |
| 44 | porch light, interior light | Direct | 98 | porch light, interior light | Direct |
| 45 | interior light | Indirect | 99 | porch light, interior light | Direct |
| 46 | interior light | Indirect | 100 | porch light, interior light | Direct |
| 47 | porch light | Direct | 101 | porch light, interior light | Direct |
| 48 | interior light | Direct | 102 | porch light, interior light | Direct |
| 49 | porch light, interior light | Direct | 103 | porch light, interior light | Direct |
| 50 | interior light | Direct | 104 | porch light, interior light | Direct |
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| 52 | porch light, interior light | Direct | 106 | porch light, interior light | Direct |
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| 54 | porch light, interior light | Direct | 108 | porch light, interior light | Direct |

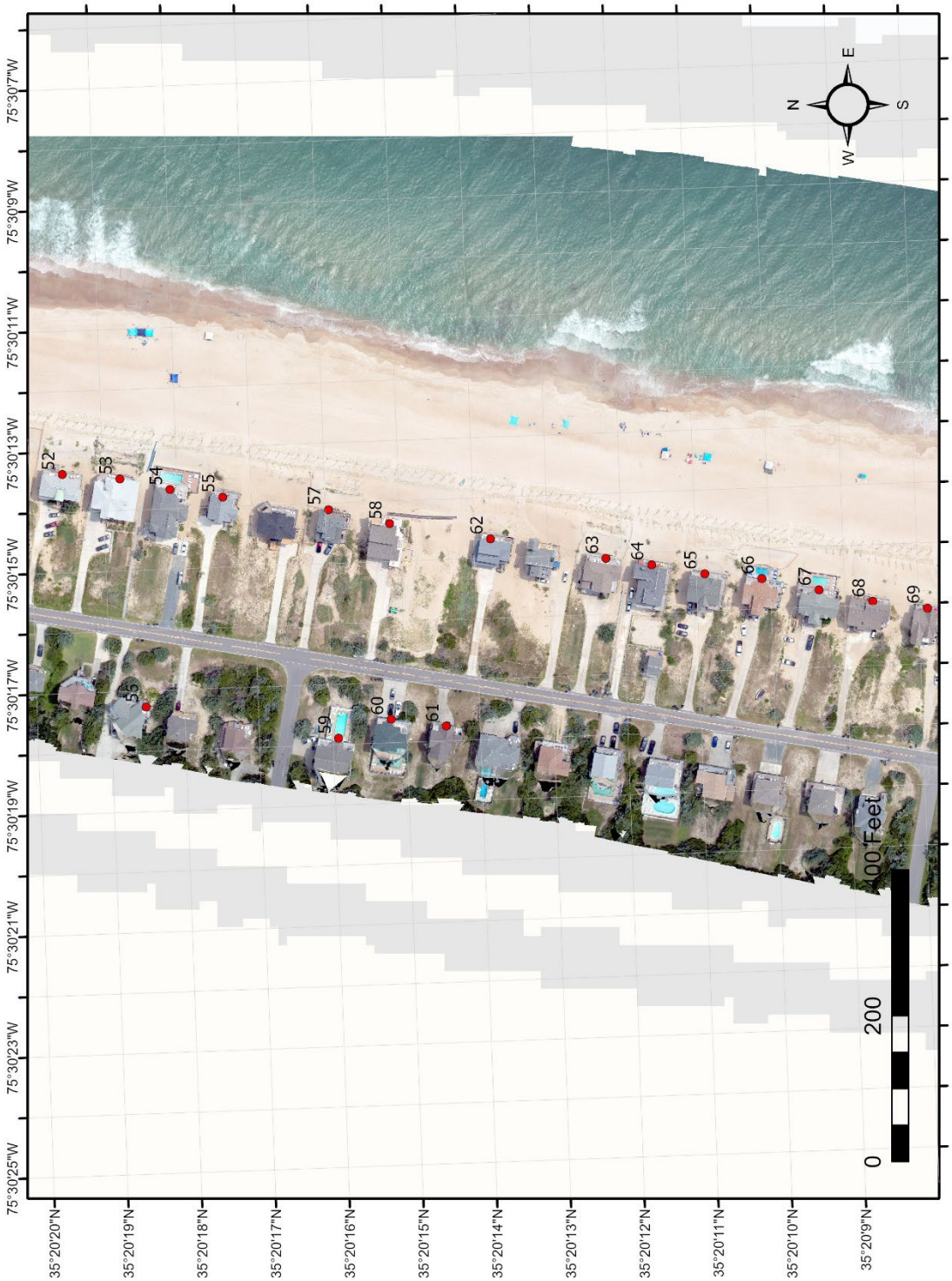
**FIGURE B.** Locations of light sources along Avon, July 2023.

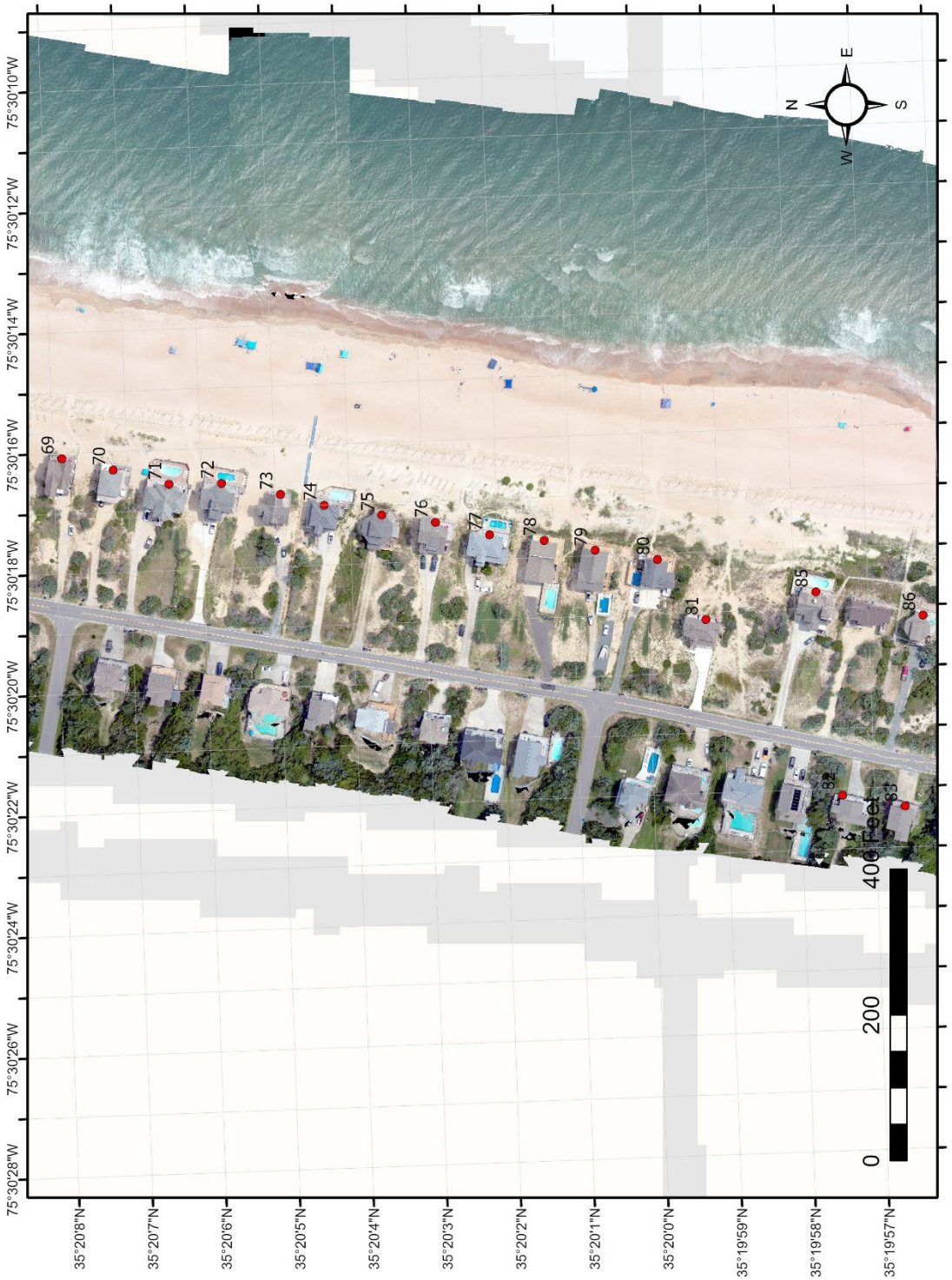



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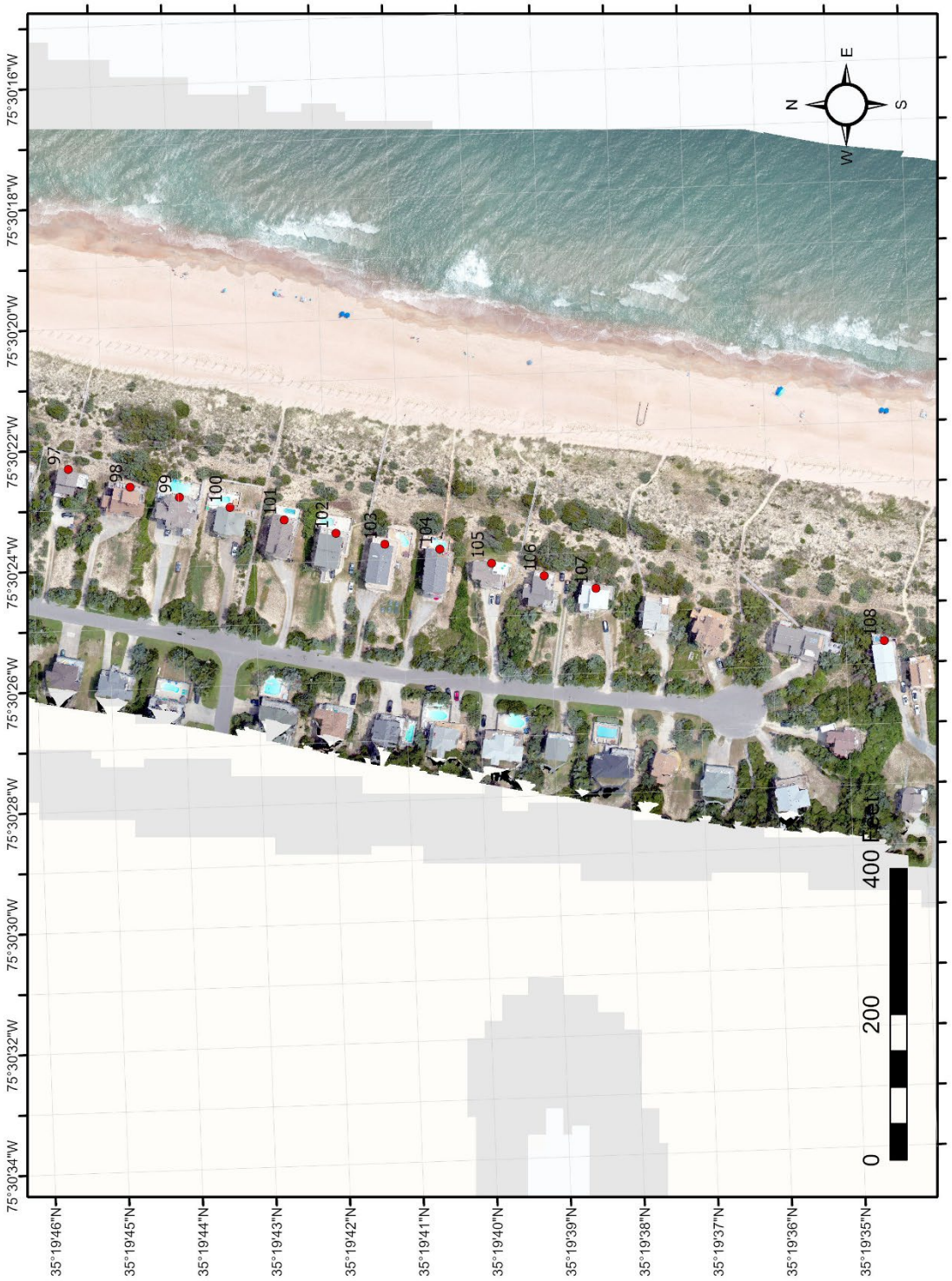
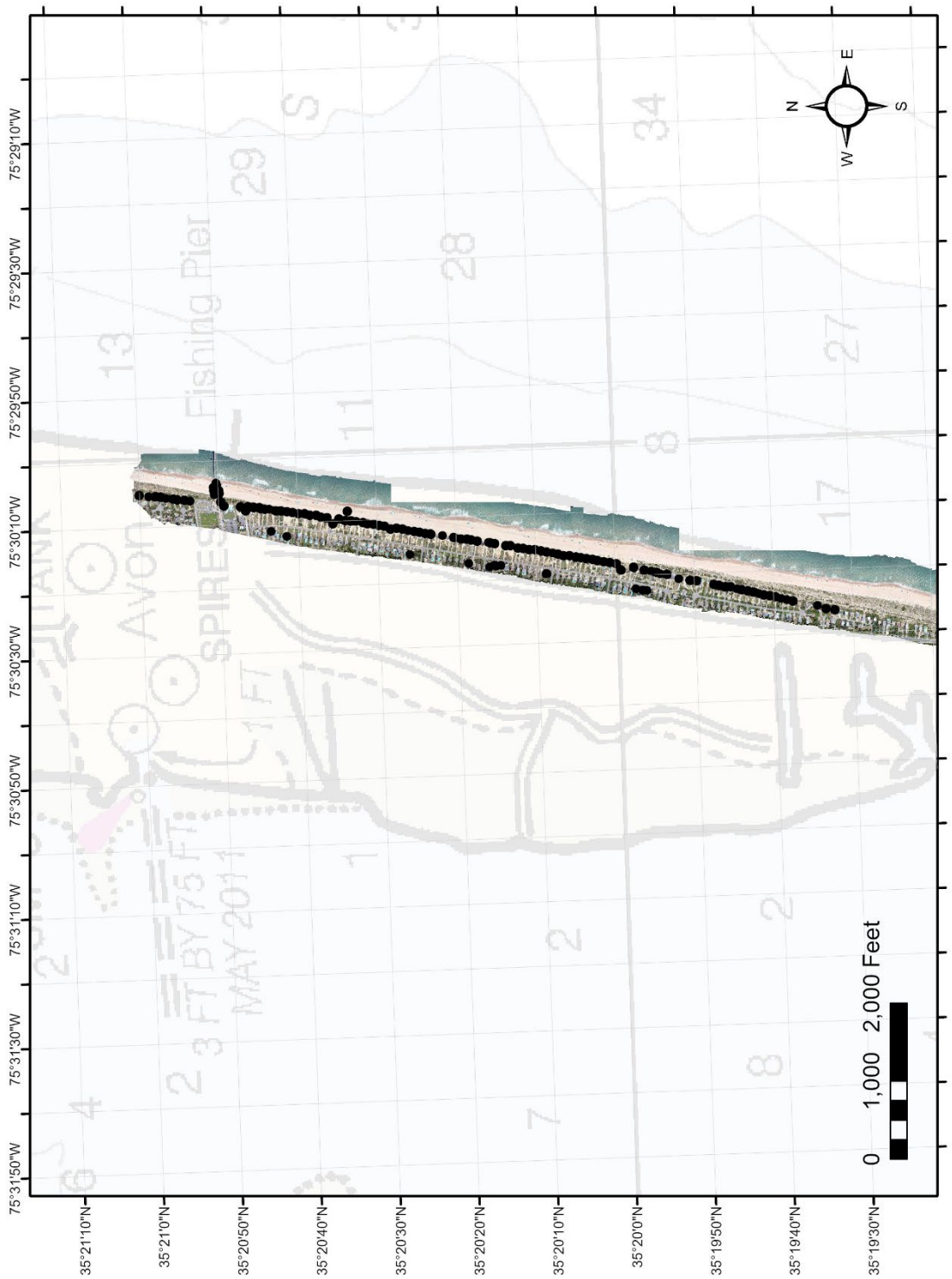

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75°30'32"W
75°30'34"W
35°19'46"N
35°19'45"N
35°19'44"N
35°19'43"N
35°19'42"N
35°19'41"N
35°19'40"N
35°19'39"N
35°19'38"N
35°19'37"N
35°19'36"N
35°19'35"N
N
E
S
W
97
98
99
100
101
102
103
104
105
106
107
108
0
200
400 Feet

**FIGURE C.** Locations of light sources along Avon, May and July 2023.



# APPENDIX E-2

# Buxton Lighting Survey Report

COASTAL SCIENCE & ENGINEERING
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October 17, 2023

Ms. Kathy Matthews, Fish and Wildlife Biologist
Raleigh Ecological Services
US Fish and Wildlife Service
PO Box 33726 TEL: 919-856-4520 × 27
Raleigh NC 27636-3726 EMAIL: kathryn_matthews@fws.gov

RE: Beach Restoration to Protect NC Highway 12 at Buxton, Dare County, NC
Post-Project Lighting Surveys (CSE 2558)

Dear Ms. Matthews:

The above-referenced project commenced on 22 June 2022, and pumping was completed on 16 August 2022. Based on the requirements by the USACE permit and the USFWS Biological Opinion (BO) dated 20 December 2021, lighting surveys are required for the first summer following project completion. Item #14 on page 25 of the BO specified the following.

> *Two surveys of all lighting visible from the beach placement area must be conducted by the Applicant or the Corps, using standard techniques for such a survey (Appendix B), in the year following construction. The first survey must be conducted between May 1 and May 15, and a brief summary provided to Service. The second survey must be conducted between July 15 and August 1. A summary report of the surveys (including the following information: methodology of the survey, a map showing the position of lights visible from the beach, a description of each light source visible from the beach, recommendations for remediation, and any actions taken) must be submitted to the Raleigh Field Office within 3 months after the last survey is conducted. After the annual report is completed, a meeting must be set up with the Applicant, County, the Corps, NCWRC, and the Service to discuss the survey report, as well as any documented sea turtle disorientations in or adjacent to the project area. If the project is completed during the nesting season and prior to May 1, the contractor may conduct the lighting surveys during the year of construction.*

CSE conducted the first lighting survey on the evening of 15 May 2023 from 9 PM to 12 AM following the protocol established in Appendix B of the BO. CSE personnel walked the project area at night and documented observable direct and indirect lighting. Locations of light sources were marked on aerial photographs, and notes were recorded regarding the type of light (e.g. interior light, porch light, street lamp, etc.) and intensity of light exposure (e.g. indirect versus direct light source). Still photography was also used to document light sources in many cases with photos being taken from near the berm crest, using a standard digital camera.

The types of light sources included direct and indirect interior lighting such as table lamps set in front of windows, TVs, illuminated window shades, direct lighting from balconies and porches, direct lighting

above outdoor stairs, direct and indirect lighting from parking areas beneath and around buildings, landscape lighting, pool lighting, and indirect lighting of building walls. The most concentrated light sources that were documented occurred at the motels and hotels near the northern section of the Village of Buxton.

May 2023 survey results are given in Table 1. CSE digitized the locations of light sources in GIS as shown in a series of map panels in Figure A.

CSE conducted the second lighting survey on the evening of 27 July 2023 from 9 PM to 12 AM using the same methodology as the first lighting survey. The types of light sources included direct and indirect interior lighting such as table lamps set in front of windows, TVs, illuminated window shades, direct lighting from balconies and porches, direct lighting above outdoor stairs, direct and indirect lighting from parking areas beneath and around buildings, landscape lighting, pool lighting, and indirect lighting of building walls. The same as the light sources in May, the most concentrated light sources that were documented in July occurred at the motels and hotels near the northern section of the Village of Buxton.

July 2023 survey results are given in Table 2. CSE digitized the locations of light sources in GIS as shown in a series of map panels in Figure B.

Overlaying the locations of observed light sources in May and July 2023 shows the entire Buxton village waterfront was lit directly during one or both surveys (Figure C). Between both surveys, approximately 40 light sources were observed along ~3,200 ft of shoreline for an average of one light source every ~80 ft.

This is an excessive amount of oceanfront lighting, particularly within a National Seashore. Efforts to mitigate light exposure along the village waterfront – as well as second- and some third-row properties – should be promoted. Based on the extensive lighting of the beach during the turtle nesting season, despite adjacent turtle nesting habitat, it appears public outreach and education is needed to ensure more functional nesting habitat around the 2022 project template.

Please contact me if you have any questions or concerns.

Sincerely,

**Coastal Science** & **Engineering (CSE)**

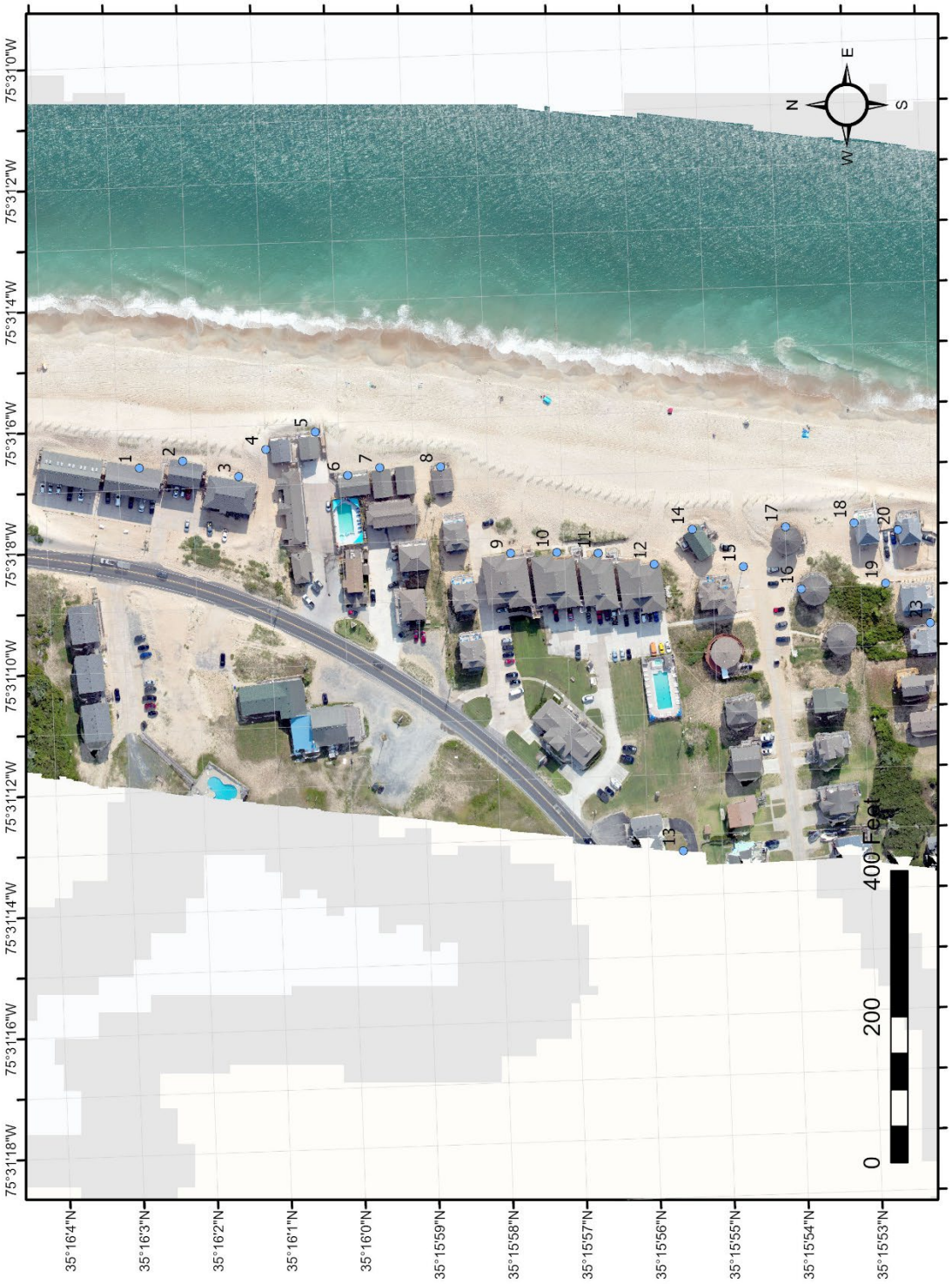
Patrick Barrineau

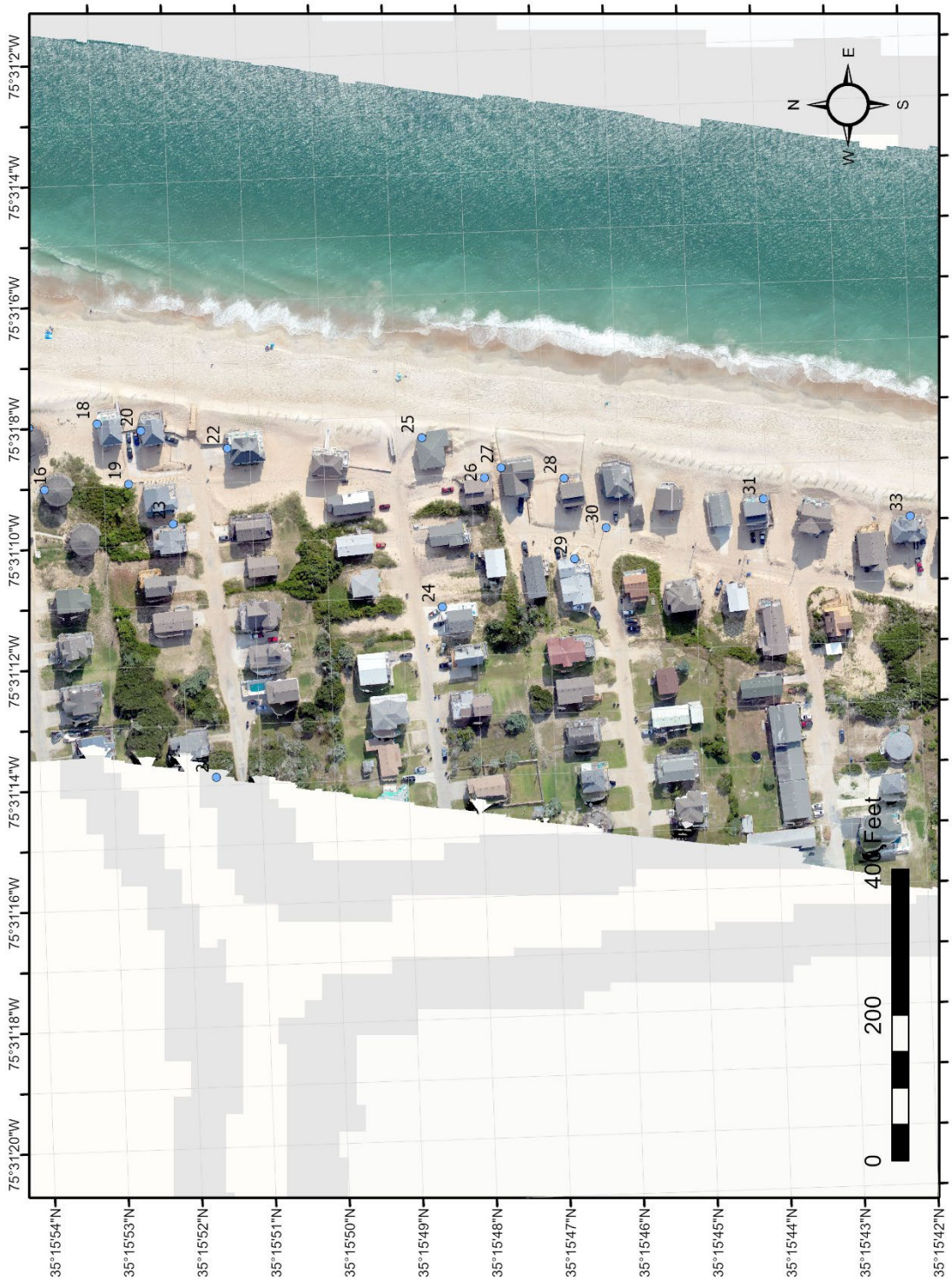
Patrick Barrineau PhD PG
Project Manager

**TABLE 1.** List of light sources in May 2023 along the oceanfront of Buxton (NC). Light sources are numbered numerically and marked in Figure A.

| Number | Type | Direct/Indirect |
|---|---|---|
| 1 | porch light, interior light | Direct |
| 2 | porch light, interior light | Direct |
| 3 | porch light, interior light | Direct |
| 4 | reflection | Indirect |
| 5 | interior light | Direct |
| 6 | porch light | Direct |
| 7 | porch light | Direct |
| 8 | porch light | Direct |
| 9 | porch light, interior light | Direct |
| 10 | porch light, interior light | Direct |
| 11 | porch light, interior light | Direct |
| 12 | interior light | Direct |
| 13 | business porch light | Direct |
| 14 | interior light | Direct |
| 15 | streep lamp | Direct |
| 16 | porch light, interior light | Direct |
| 17 | porch light, interior light | Direct |
| 18 | reflection | Indirect |
| 19 | street lamp | Direct |
| 20 | reflection | Indirect |
| 21 | radio tower | Direct |
| 22 | reflection | Indirect |
| 23 | interior light | Direct |
| 24 | porch light | Direct |
| 25 | interior light | Direct |
| 26 | porch light, interior light | Direct |
| 27 | reflection | Indirect |
| 28 | porch light, interior light | Direct |
| 29 | reflection | Indirect |
| 30 | street lamp | Direct |
| 31 | interior light | Direct |
| 32 | porch light, interior light | Direct |
| 33 | porch light | Direct |
| 34 | interior light | Direct |
| 35 | porch light, interior light | Direct |
| 36 | porch light, interior light | Direct |
| 37 | porch light, interior light | Direct |
| 38 | porch light, interior light | Direct |
| 39 | porch light, interior light | Direct |
| 40 | interior light | Direct |
| 41 | interior light | Direct |
| 42 | street lamp | Direct |

**FIGURE A.** Locations of light sources along Buxton, May 2023.




75°31'12"W
75°31'14"W
75°31'16"W
75°31'18"W
75°31'10"W
75°31'12"W
75°31'14"W
75°31'16"W
75°31'18"W
75°31'20"W
35°15'54"N
35°15'53"N
35°15'52"N
35°15'51"N
35°15'50"N
35°15'49"N
35°15'48"N
35°15'47"N
35°15'46"N
35°15'45"N
35°15'44"N
35°15'43"N
35°15'42"N
N
E
S
W
0
200
400 Feet

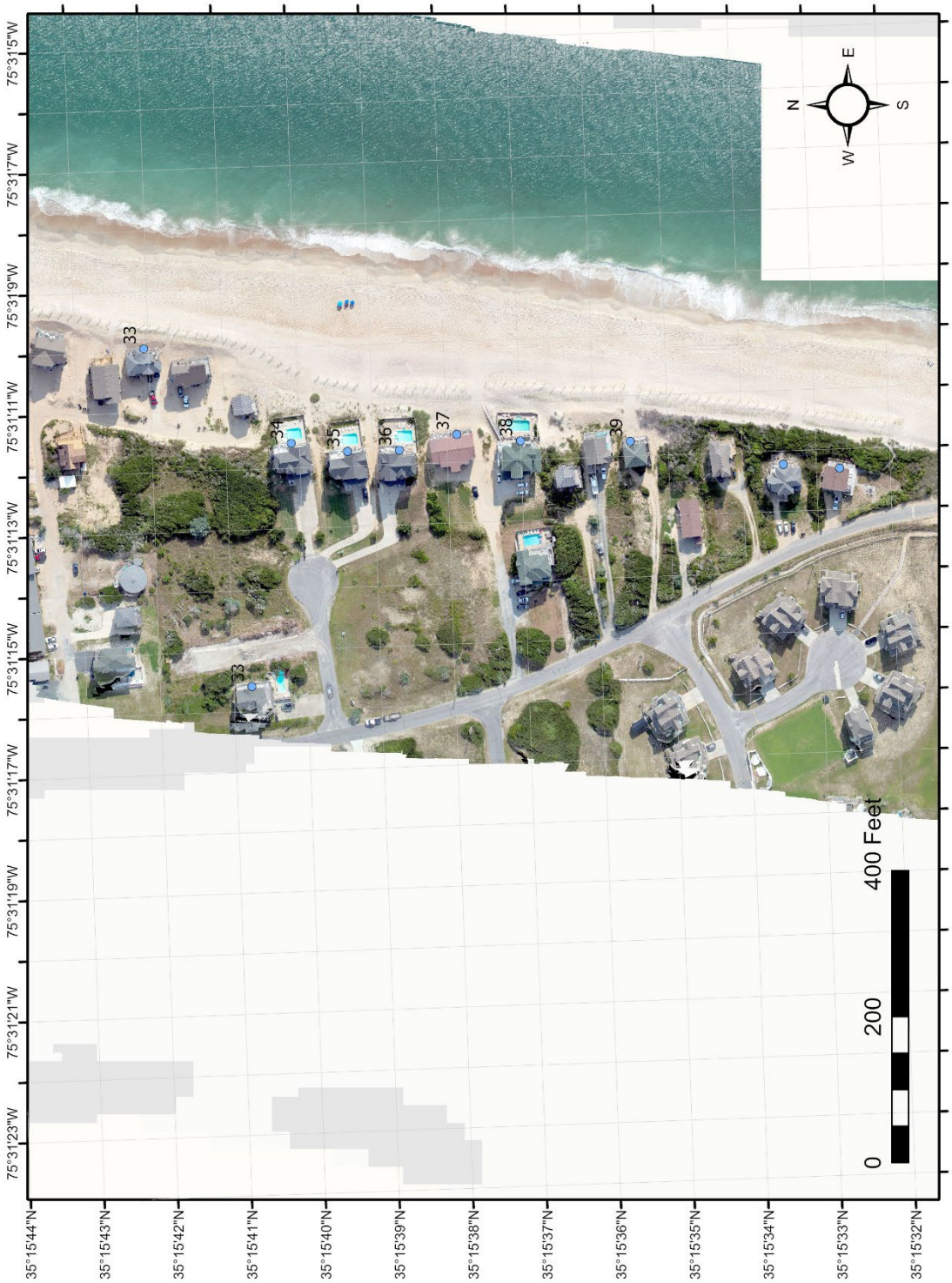
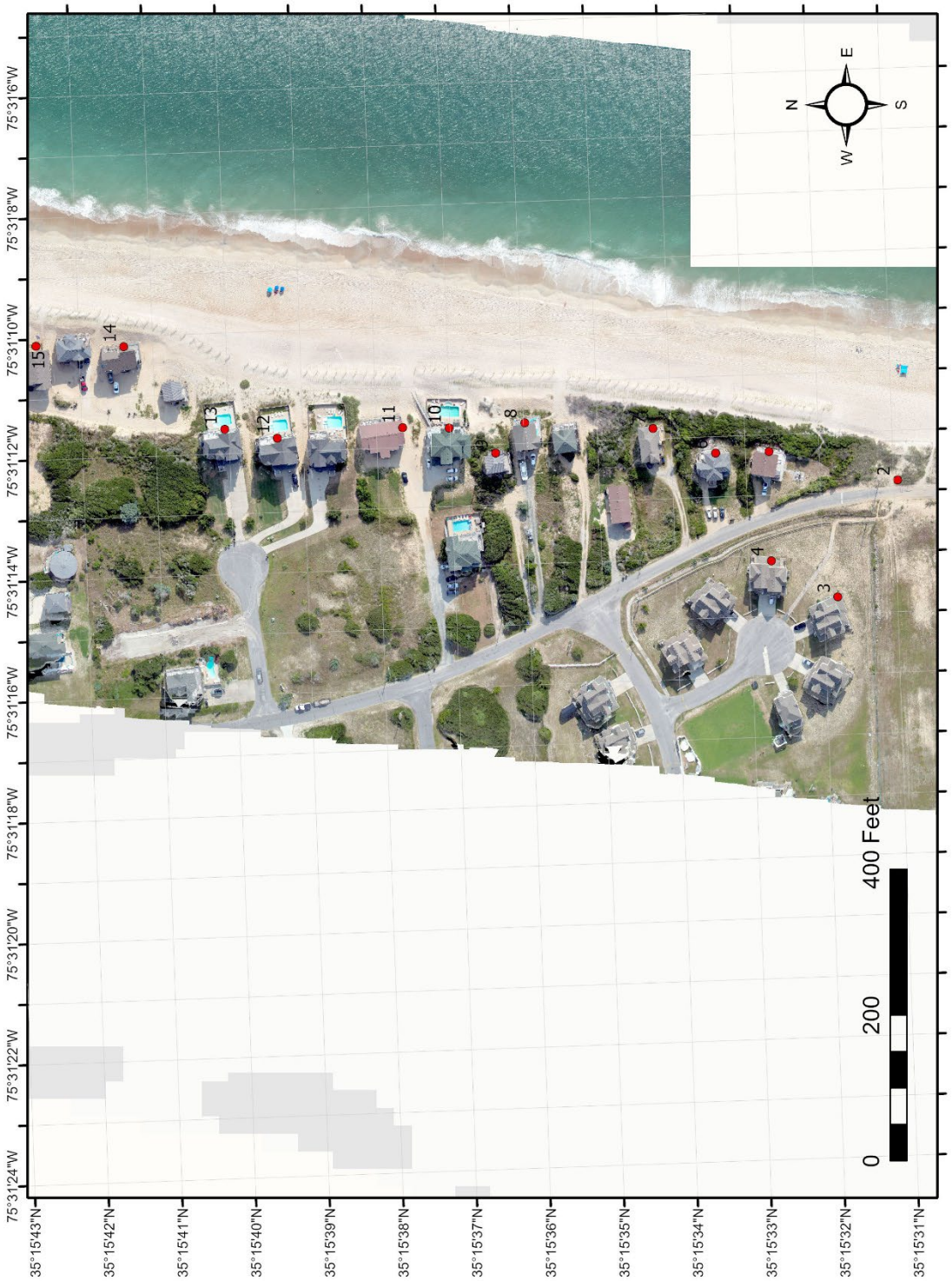

75°31'5"W
75°31'7"W
75°31'9"W
75°31'11"W
75°31'13"W
75°31'15"W
75°31'17"W
75°31'19"W
75°31'21"W
75°31'23"W
35°15'44"N
35°15'43"N
35°15'42"N
35°15'41"N
35°15'40"N
35°15'39"N
35°15'38"N
35°15'37"N
35°15'36"N
35°15'35"N
35°15'34"N
35°15'33"N
35°15'32"N
N
E
S
W
33
34
35
36
37
38
39
33
0
200
400 Feet

**TABLE 2.** List of light sources in July 2023 along the oceanfront of Buxton (NC). Light sources are numbered numerically and marked in Figure A.

| Number | Type | Direct/Indirect |
|---|---|---|
| 1 | Cape Hatteras Lighthouse | Indirect |
| 2 | street lamp | Direct |
| 3 | porch light, interior light | Indirect |
| 4 | interior light | Indirect |
| 5 | porch light, interior light | Direct |
| 6 | interior light | Direct |
| 7 | interior light | Direct |
| 8 | interior light | Direct |
| 9 | interior light | Direct |
| 10 | porch light, interior light | Direct |
| 11 | interior light | Indirect |
| 12 | porch light, interior light | Direct |
| 13 | porch light, interior light | Direct |
| 14 | interior light | Indirect |
| 15 | porch light, interior light | Direct |
| 16 | porch light, interior light | Direct |
| 17 | interior light | Indirect |
| 18 | interior light | Indirect |
| 19 | interior light | Indirect |
| 20 | flood lamp | Direct |
| 21 | interior light | Indirect |
| 22 | interior light | Indirect |
| 23 | interior light | Indirect |
| 24 | porch light, interior light | Direct |
| 25 | porch light, interior light | Direct |
| 26 | interior light | Indirect |
| 27 | interior light | Indirect |
| 28 | interior light | Indirect |
| 29 | interior light | Indirect |
| 30 | porch light, interior light | Direct |
| 31 | porch light, interior light | Direct |
| 32 | porch light, interior light, flood lamps | Direct |
| 33 | spotlit beach | Direct |
| 34 | porch light, interior light | Direct |

**FIGURE B.** Locations of light sources along Buxton, July 2023.




N
E
S
W
0
200
400 Feet
29
27
26
28
25
24
23
22
21
20
19
18
17
16
15
14
75°31'11"W
75°31'13"W
75°31'15"W
75°31'17"W
75°31'19"W
75°31'11"W
75°31'13"W
75°31'15"W
75°31'17"W
75°31'19"W
35°15'53"N
35°15'52"N
35°15'51"N
35°15'50"N
35°15'49"N
35°15'48"N
35°15'47"N
35°15'46"N
35°15'45"N
35°15'44"N
35°15'43"N
35°15'42"N


75°30'59"W
75°31'1"W
75°31'3"W
75°31'5"W
75°31'7"W
75°31'9"W
75°31'11"W
75°31'13"W
75°31'15"W
75°31'17"W
35°16'4"N
35°16'3"N
35°16'2"N
35°16'1"N
35°16'0"N
35°15'59"N
35°15'58"N
35°15'57"N
35°15'56"N
35°15'55"N
35°15'54"N
35°15'53"N
35°15'52"N
N
E
S
W
33
34
32
31
30
29
27
26
28
0
200
400 Feet

**FIGURE C.** Locations of light sources along Buxton, May and July 2023.

