
Fort Sumter & Fort Moultrie National Historical Park Charles Pinckney National Historic Site



Wetland Resource Delineation Report



Clockwise from top left: Fort Moultrie, Sullivan's Island Lighthouse at USCG Historic District, and the Farm House at Charles Pinckney National Historic Site. NPS photos.

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Abstract

A jurisdictional wetland delineation was conducted at Fort Sumter & Fort Moultrie National Historical Park (FOSU) and at Charles Pinckney National Historic Site (Charles Pinckney NHS or CHPI), in Mount Pleasant, South Carolina. This work was performed to support and inform project planning and environmental compliance obligations for anticipated storm recovery projects funded by Disaster Supplemental 2023. Wetland survey covered approximately 57.2 acres across three separate survey sites. A total of seven distinct wetland resources were identified including five palustrine wetlands, one tidal marine wetland, and one artificial and historic riverine ditch. Assessment of wetland function and values identified causes of ecological degradation most associated with management of cultural landscapes, and limited opportunities for restoration of habitat function. Five of the seven resources were identified as Waters of the US subject to regulation under the Clean Water Act.

Keywords: Wetland, Stream, Wetland Delineation, Resource Assessment.

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Wetland Resource Delineation Summary

On May 5 and 6, 2026, regional wetland ecologist Byron Tsang (NPS Interior Region 2 Science and Natural Resources Management Division) conducted a wetland survey and wetland functional assessment at Fort Sumter & Fort Moultrie National Historical Park (FOSU) and at Charles Pinckney National Historic Site (Charles Pinckney NHS or CHPI), in Mount Pleasant, South Carolina. He was assisted in the field by park resource management staff: acting integrated resources program manager Krista Pollett, and archaeologist Evan Parker. This work was conducted in support of project planning and environmental compliance obligations for anticipated storm recovery projects at FOSU and CHPI and was funded by Disaster Supplemental 2023 (DS23). In anticipation of regulatory compliance documentation for proposed projects, a jurisdictional wetland delineation is required. Wetland resource compliance for all NPS undertakings is governed by Executive Order (EO) 11990 and Director's Order (DO) #77-1: Wetland Protection for NPS wetlands (including streams and rivers) and is regulated under Section 404 of the Clean Water Act (33 U.S.C. 1344) for Waters of the United States. Methods for delineation of NPS wetlands are defined in NPS Procedural Manual #77-1: Wetland Protection. Methods for delineation of Waters of the U.S. are defined in U.S. Army Corps of Engineers (USACE) "Corps of Engineers Wetlands Delineation Manual" (1987), and USACE "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain (Version 2.0)" (2010). Site observations, resource descriptions and functional assessments, and technical delineation data are presented herein with recommendations for federal regulatory compliance for proposed projects.

Site Descriptions

Three discrete wetland survey areas were included in this delineation effort (see Table 1 and Figure 1, below). The "Fort Moultrie" wetland survey site covered 26.8 acres including Fort Moultrie and Battery Jasper historic structures and the surrounding cultural landscape of Fort Moultrie Military Reservation on Sullivan's Island at FOSU. Approximately one mile east of Fort Moultrie, the "USCG Historic District" survey area was defined to include 2.2 acres around the buildings and facilities of the US Coast Guard Historic District. This area was limited to the NPS-managed grounds and did not include the natural coastal landscape area south of the lighthouse structure, which is managed by the Town of Sullivan's Island, SC. The third "Charles Pinckney NHS" survey area was 28.2 acres and included the entirety of Charles Pinckney National Historic Site in Mount Pleasant, SC. All three wetland survey sites featured predominantly developed land cover comprised of built structures and maintained landscaping and vegetation and were typical of urban areas in the coastal South Carolina Lowcountry and the greater South Atlantic coastal plain.

TABLE 1. Wetland survey areas at Fort Sumter & Fort Moultrie National Historical Park and Charles Pinckney National Historic Site

SURVEY SITE	NPS UNIT	LAT/LONG COORDINATE	AREA (acres)
Fort Moultrie	FOSU	32.758366, -79.856706	26.8
USCG Historic District	FOSU	32.758254, -79.843451	2.2
Charles Pinckney NHS	CHPI	32.845748, -79.824953	28.2



FIGURE 1. Map of wetland survey area locations at Fort Sumter & Fort Moultrie National Historical Park and Charles Pinckney National Historic Site

Wetland Resource Delineation Results

Seven distinct wetland resources were identified within the three survey areas, including: three palustrine wetlands and one marine open water at Fort Moultrie, one palustrine wetland at USCG Historic District, and one palustrine wetland and one riverine channel at Charles Pinckney NHS (*see* Table 2. Delineated Wetland Resources Summary, Attachment 1. Wetland Delineation Maps, and Attachment 2. Wetland Determination Data Forms, below). At the time of survey, extreme drought conditions were reported (*see* Attachment 3. Antecedent Precipitation Tool report). However, indicators for hydric soil and hydrophytic vegetation were clear enough to readily define wetland boundaries despite atypical climate.

TABLE 2. Delineated Wetland Resources Summary

RESOURCE	LOCATION	WETLAND TYPE	COWARDIN CLASS	AREA (acre)	AREA (sq ft)
WL 1	Fort Moultrie	Palustrine	PEM1	10.31	448,905
OW 2	Fort Moultrie	Marine	M2US2	2.98	129,748
WL 3	Fort Moultrie	Palustrine	PFO1	0.47	20,687
WL 4	Fort Moultrie	Palustrine	PEM1hr	0.65	28,099
WL 5	USCG Historic District	Palustrine	PEM1	0.59	25,898
DTCH 6	Charles Pinckney NHS	Riverine	R6	0.17	7,439
WL 7	Charles Pinckney NHS	Palustrine	PFO1d	7.52	327,547

Wetland 1

Wetland 1 (WL 1) is a palustrine wetland with persistent emergent vegetation (Cowardin class PEM1) in the Fort Moultrie survey area. This coastal wetland is characterized by relatively flat terrain that accumulates and retains surface water, resulting in a shallow water table, frequent flooding, and prolonged saturated conditions despite the presence of sandy, easily drained soil. While the coastal hydrology and presence of strong hydric soil indicators observed in WL 1 are typical of coastal wetlands in the region, the vegetation has been significantly altered through long-term management of centipede grass (*Eremochloa ophiuroides*) lawn associated with the fort's cultural landscape setting. Salt-tolerant coastal wetland plants were frequently observed among maintained turf areas, with pennywort (*Hydrocotyle umbellata*) occurring as the most abundant sub-dominant species. At the southeast edge of WL 1, an unmaintained area adjacent to the beach supports an early successional marsh grass community dominated by saltmeadow cordgrass (*Sporobolus pumilus*). Absent active landscape management, it is likely that maintained lawn portions of WL 1 would eventually develop a similar saltmarsh or maritime grassland character, and through the process of primary succession may ultimately develop into shrub wetland or maritime forest. Wetland function is significantly impaired for WL 1 as compared to reference maritime grasslands. With limited vegetation structure and low species diversity, this wetland does not provide significant habitat for wildlife, nor does it provide significant shoreline protection or stormwater buffering and storage capacity. Wetland 1 immediately drains into the Atlantic Ocean (OW 2) along its western edge. Therefore, WL 1 is a paragraph (a)(4) jurisdictional Water of the US as an adjacent wetland with a direct surface connection to traditionally navigable waters at various points in a typical year (33 CFR 328.3).

Open Water 2

Open Water 2 (OW 2), the Atlantic Ocean, is a marine intertidal wetland with a sandy unconsolidated shore substrate (Cowardin class M2US2) in the Fort Moultrie survey area. Within the survey limit, the intertidal shoreline of the Atlantic Ocean is characterized by a relatively low-gradient open sandy beach backed by either coastal wetlands (WL 1 and WL 3) or by an artificial riprap berm where a foredune would normally occur. At the time of survey, tidal hydrology and marine coastal substrate appeared normal and fully functional. As a navigable territorial sea, OW 1 is a paragraph (a)(1)(ii) jurisdictional Water of the US (33 CFR 328.3).

Wetland 3

Wetland 3 (WL 3) is a palustrine wetland with broad-leaf deciduous forest vegetation (Cowardin class PFO1) in the Fort Moultrie survey area. This small fragment of maritime forest wetland is characterized by relatively flat terrain and mid-late successional canopy species including southern hackberry (*Celtis laevigata*), pond cypress (*Taxodium ascendens*), and eastern red cedar (*Juniperus virginiana*). Sharing its boundary and shallow groundwater hydrology with both WL 1 and OW 2, this wetland appears to be an isolated section of the much larger maritime forest dune-and-swale complex that occupies most of the southern tip of Sullivan's Islands, immediately southwest of Fort Moultrie. The forested conditions of WL 3 are a reasonable predictor of what the rest of WL 1 may eventually develop into, should landscape management efforts cease. WL 3 appears fully functional but is slightly impaired due to habitat fragmentation and decreased WL function of neighboring WL 1. Based on vegetation structure and diversity, this wetland likely provides suitable but limited habitat for wildlife. It also provides moderate shoreline protection beyond that provided from the adjacent riprap barrier, as well as increased

stormwater buffering and storage capacity compared to adjacent lawn areas of WL 1. WL 3 immediately drains into the Atlantic Ocean (OW 2) along its southern edge and is therefore a paragraph (a)(4) jurisdictional Water of the US as an adjacent wetland with a direct surface water connection to traditionally navigable waters at various points in a typical year (33 CFR 328.3). Note that a paired upland sample point was not recorded for WL 3, as this resource was contiguous with adjacent wetland areas, and differentiated primarily by changes in vegetation structure.

Wetland 4

Wetland 4 (WL 4) is an impounded and artificial palustrine wetland with persistent emergent vegetation (Cowardin class PEM1hr) in the Fort Moultrie survey area. This wetland is characterized by relatively flat, bowl-shaped terrain that is surrounded by raised hardscape areas and is underlaid by poorly drained, hard-packed gravel fill which is likely associated with the construction of the fort or the adjacent roadway. These features result in accumulation and retention of surface water in the shallow surface soil, resulting in frequent flooding and prolonged saturated conditions. Hydric soils observed in WL 4 are not typical of coastal wetlands, with accumulation of organic material resulting in a layer of mucky, organic-rich soil immediately above the packed fill layer. The vegetation has been significantly altered through long-term management of centipede grass lawn which has become densely colonized by wetland-obligate pennywort as well as by common lawn weeds white clover (*Trifolium repens*) and turkey tangle (*Phyla nodiflora*). WL 4 is hydrologically isolated with no surface connections to navigable waters and is therefore not a Water of the US and is not subject to regulation under the Clean Water Act. Note that a paired upland sample point was not recorded for WL 4, because this wetland is surrounded entirely by constructed hardscape features and there were no suitable adjacent upland soils or vegetation to record.

Wetland 5

Wetland 5 (WL 5) is a palustrine wetland with persistent emergent vegetation (Cowardin class PEM1) in the USCG Historic District survey area. This wetland is characterized by relatively flat terrain that accumulates and retains surface water, resulting in a shallow water table, flooding, and saturated soils. The hydrology of WL 5 appears to be driven exclusively by rainwater inputs, though strong hydric soil indicators suggest prolonged soil saturation for much of the year. This area is mostly likely a former interdune swale with naturally low elevation, which has since been developed along with much of Sullivan's Island. Vegetation has been significantly altered through long-term management of the grass lawn associated with the historic district, although this grass has been displaced by water-tolerant pennywort in several large patches. As a result of the altered vegetation and soil, wetland function is significantly impaired for WL 2 as compared to reference maritime wetlands occurring nearby. With limited vegetation structure and low species diversity, the habitat does not provide significant habitat for wildlife, nor does it provide significant shoreline protection, stormwater buffering, or storage capacity. WL 5 is hydrologically isolated with no surface connections to navigable waters and is therefore not a Water of the US and not subject to regulation under the Clean Water Act.

Ditch 6

Ditch 6 is an artificial, riverine wetland with an ephemeral flow regime (Cowardin class R6r) in the Charles Pinckney NHS survey area. Despite being artificially constructed, this historic ditch has developed sufficiently strong stream morphology characteristics to meet the definition of a riverine wetland including: consistent bed and bank along a well-defined channel, development of hydric soils within the channel, and subsequent establishment of hydrophytic vegetation. In terms of riverine wetland

function, Ditch 6 is poorly functional and provides only minimal wetland value, providing no significant habitat value and providing only limited flood retention capacity with no floodplain development. Because Ditch 6 is excavated wholly in and drains only dry land and does not carry a relatively permanent flow of water, this wetland is statutorily excluded from the definition of Waters of the US and is therefore not subject to regulation under the Clean Water Act (33 CFR 328.3[b][3]).

Wetland 7

Wetland 7 (WL 7) is a partially drained or ditched palustrine wetland with broad-leaf deciduous forest vegetation (Cowardin class PFO1d) in the Charles Pinckney NHS survey area. This mature maritime forest wetland is characterized by subtly sloping terrain with late successional canopy species and a structurally complex shrub understory. Downslope to the west, the vegetation transitions to graminoid-dominant emergent wetland and eventually to open marsh and a tidal creek system along the western boundary of the park unit which drains north toward Boone Hall Creek. WL 7 is the forested wetland fringe of a larger complex of tidal creeks and saltmarshes associated with the Wando River and Charleston Harbor. Portions of WL 7 adjacent to the historic barn (current Maintenance facility) and in the southwest corner of the park near the slave community archeological site have altered vegetation and are maintained as bahiagrass (*Paspalum notatum*) lawn as part of the park's cultural landscape. Outside of these maintained lawn areas, this wetland appears fully functional and provides excellent habitat and water storage capacity typical of coastal wetlands in the region. WL 7 drains indirectly into Charleston Harbor and the intracoastal waterway via tidal creeks and rivers and is therefore a paragraph (a)(4) jurisdictional Water of the US as an adjacent wetland with a direct surface water connection to traditionally navigable waters at various points in a typical year (33 CFR 328.3).

Site Management and Project Compliance Considerations

Fort Moultrie

Stormwater drainage and handling in and around Fort Moultrie is an ongoing challenge for park operations which has been exacerbated by recent storm damage to the fort's drainage facilities. An upcoming drainage study will evaluate options to improve stormwater management at this site. NPS wetland protection policies apply to naturally occurring wetland systems including WL 1, OW 2, and WL 3. Adverse impacts to these resources resulting from construction of new stormwater facilities may require a Wetland Statement of Findings (WSOF) and compensatory mitigation. However, impacts to incidental artificial wetlands (i.e. WL 4) may not require a SOF under the exemption described in PM 77-1 §4.2.3 *Activities with Adverse Impacts on "Artificial" Wetlands*, so long as, after evaluation of impacts on wetland functions and values, the anticipated wetland loss or degradation is determined to be minor and would have no adverse impacts on state or federally listed or candidate species or their critical habitats. Similarly, discharge of fill into Waters of the US (WOTUS) would require under Section 404 of the Clean Water Act, but this does not apply to WL 4 which is not WOTUS. It is therefore recommended that, if feasible, ground disturbance associated with construction or reconfiguration of stormwater facilities should be located north of the fort along the roadway to avoid or minimize impacts to wetlands, thereby reducing regulatory compliance obligations for the proposed project.

USCG Historic District

Much of the low-elevation lawn area surrounding Sullivan's Island Lighthouse at USCG Historic District is a degraded wetland. This hydrologically isolated depression is not WOTUS and therefore not subject to Section 404 Clean Water Act permitting. However, as an NPS wetland it is still subject to NPS wetland protection policies. As a degraded wetland this site could be ecologically restored to wet meadow or interdune swale habitat, though this is likely incompatible with park intent as a historic site. Additionally, wetland restoration is likely not feasible without significant investment to repair or restore hydrologic connections to nearby natural systems. If such restoration were pursued, it could potentially be used as compensatory mitigation to offset wetland impacts at another site.

Charles Pinckney NHS

Wetland 7 at Charles Pinckney NHS appears healthy and fully functional. Wetland areas with maintained lawn may be subject to frequent flooding and this could impair turf grass cover over time, though this did not appear to be an issue at the time of survey. These areas could also be restored and converted back into emergent wetland or maritime forest, though this is likely incompatible with park operations and cultural landscape management goals. The historic barn and nearby corn crib in the northwest corner of the site are located partially within wetland and fully within the 100-year floodplain, and both are expected to see increased flood risk associated with sea level rise. Similarly, historic Ditch 6 is likely to hold more water for longer durations in coming years and will most likely exhibit stronger riverine wetland characteristics over time. While no specific projects have been proposed for this site, any work resulting in ground disturbance or other adverse impacts to WL 7 may require compliance under DO/PM 77-1 and permitting under Section 404 CWA. Ditch 6 is not WOTUS and therefore not subject to Section 404, but may still be subject to DO/PM 77-1 protections, particularly if it carries perennial or intermittent flow in the future. The ditch has most likely lowered the surrounding groundwater table, reducing the extent of wetlands from their historic range prior to the ditch construction. There may be an opportunity to increase wetland coverage by filling this ditch and increasing surface water retention, though this is likely incompatible with park management and interpretive needs, and would likely increase flooding risk to adjacent facilities including the road immediately north of the ditch outside of the park boundary.

Qualification Statement

Byron Tsang is a Professional Wetland Scientist (PWS # 3832), botanist, and wetland ecologist with 16 years' experience in wetland management, including jurisdictional wetland delineation and federal regulatory compliance and permitting. As the NPS Regional Wetland Ecologist for the Southeast Region, he is a technical authority and subject matter expert for issues pertaining to NPS wetland and floodplain management in National Park units. His specific areas of expertise include wetland hydrology and natural resource values, river and floodplain natural processes, coastal wetland environments, plant community ecology, native and invasive species management, and ecological restoration of natural landscapes. He serves as the southeast region technical advisor for park projects and operations with regulatory obligations under the Clean Water Act, Coastal Barrier Resources Act, Coastal Zone Management Act, National Wild and Scenic Rivers, and NPS Wetland and Floodplain policies, DO 77-1 & 77-2.

I affirm that all information presented in this report is accurate and true to the best of my knowledge at the time of the wetland survey.

BYRON TSANG

Byron Tsang, NPS Regional Wetland Ecologist



Digitally signed by BYRON TSANG

Date: 2026.06.03 12:53:43 -05'00'

Date

References

Executive Order No. 11990. 42 F.R. 26961 (1977) “Protection of Wetlands.”

Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

National Park Service Director's Order 77–1: Wetland Protection.

National Park Service Procedural Manual 77–1: Wetland Protection.

National Park Service. 2016. Fort Sumter National Monument Foundation Document.

U.S. Fish and Wildlife Service. National Wetlands Inventory. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

U.S. Geological Survey. USGS 3D Elevation Program Digital Elevation Model.

Attachments

Included with this resource delineation, please see the following attachments:

Attachment 1. Wetland Delineation Maps

- a. Fort Moultrie survey area
- b. USCG Historic District survey area
- c. Charles Pinckney NHS survey area

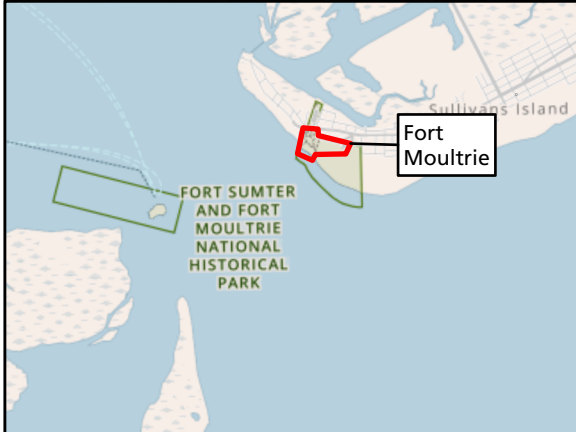
Attachment 2. Wetland Determination Data Forms

Attachment 3. Antecedent Precipitation Tool report

Wetland Delineation Map

Fort Moultrie

Fort Sumter & Fort Moultrie
National Historical Park
National Park Service
U.S. Department of the Interior



Legend

Limit of Survey

Delineated Wetland Resources

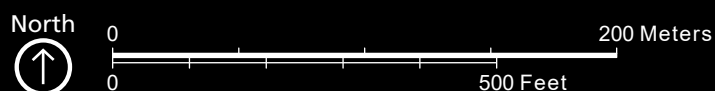
Marine

Palustrine

WL Determination Sample Points

Upland Sample Point

Wetland Sample Point



May 2026

Data Sources: ESRI Imagery, NPS Park Data
Produced by Byron Tsang, NPS SERO SNRMD

Wetland Delineation Map

US Coast Guard Historic District

Fort Sumter & Fort Moultrie
National Historical Park
National Park Service
U.S. Department of the Interior



Legend

Limit of Survey

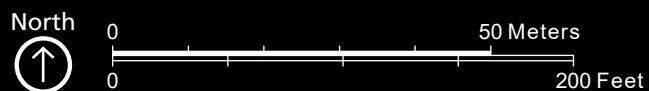
Delineated Wetland Resources

Palustrine

WL Determination Sample Points

Upland Sample Point

Wetland Sample Point



May 2026

Data Sources: ESRI Imagery, NPS Park Data
Produced by Byron Tsang, NPS SERO SNRMD

Wetland Delineation Map

Charles Pinckney NHS

Charles Pinckney National Historic Site
National Park Service
U.S. Department of the Interior



Legend

Limit of Survey

Delineated Wetland Resources

Palustrine

Riverine

WL Determination Sample Points

Upland Sample Point

Wetland Sample Point

Riverine Sample Point



North



0
0

200 Meters

500 Feet

June 2026

Data Sources: ESRI Imagery, NPS Park Data
Produced by Byron Tsang, NPS SERO SNRMD

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Fort Sumter & Fort Moultrie National Historical Park City/County: Sullivan's Island (Charleston Cty) Sampling Date: 05/05/2026

Applicant/Owner: National Park Service State: SC Sampling Point: WL 1

Investigator(s): B Tsang; K Pollett; E Parker Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Coastal flat Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T; MLRA 153B Lat: 32.75881° Long: -79.85780° Datum: WGS 1984

Soil Map Unit Name: Co - Coastal beaches and dune land NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☒, Soil ☒, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soil Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			

Remarks: **COWARDIN CLASS: PEM1**

Atypical climate/hydrology note: Extreme drought, county-wide. Driest year on record: total annual precipitation 7.9 in below normal. 2nd driest month on record, total monthly precipitation 2.6 in below normal.

Disturbance note: Mowed lawn cultural landscape. Turf grass above historic fill.

Field ID: WL1

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☒ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☒ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☒ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: WL 1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	0 =Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling Stratum (Plot size: 15 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	0 =Total Cover		
50% of total cover: 0	20% of total cover: 0		

Shrub Stratum (Plot size: 15 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	0 =Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 5 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Eremochloa ophiuroides</i>	75	yes	NI
2. <i>Phyla nodiflora</i>	25	no*	FAC
3. <i>Hydrocotyle umbellata</i>	25	no*	OBL
4. <i>Sisyrinchium rosulatum</i>	10	no*	FAC
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	135 =Total Cover		
50% of total cover: 67.5	20% of total cover: 27		

Woody Vine Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	0 =Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (2) (A)

Total Number of Dominant Species Across All Strata: 1 (2) (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (100%) (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species 25	x 1 = 25
FACW Species 0	x 2 = 0
FAC Species 35	x 3 = 105
FACU Species 0	x 4 = 0
UPL Species 0	x 5 = 0
Columns Totals: 60 (A)	130 (B)

Prevalence Index = B/A = 2.17

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒* 2 - Dominance Test is > 50%

☒ 3 - Prevalence Index is ≤ 3.0¹

☒ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)
 Problematic vegetation: Maintained turf lawn subject to heavy foot traffic. Centipede grass, *Eremochloa ophiuroides* seeded and maintained throughout grounds. *Recalculating vegetation without this species yields positive dominance test (see results in parentheses)

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0–2	10YR 4/2	100					Sand	Almost S12/S9 but high Chroma
2–24	10YR 6/2	85					Sand	Gray reduced matrix
"			10YR 3/2	10	MS	M	Sand	Dark organic component polyvalue
"			10YR 5/4	5	RM	PL	Sand	Bright mottle in pore linings

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| ☐ Histosol (A1) | ☒ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☒ Barrier Islands 1 cm Muck (S12) (MLRA 153B, 153D) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) | ☐ Depleted Dark Surface (F7) |
| ☐ Muck Presence (A8) (LRR U) | ☐ Redox Depressions (F8) |
| ☐ 1 cm Muck (A9) (LRR P, T) | ☐ Marl (F10) (LRR U) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Ochric (F11) (MLRA 151) |
| ☐ Thick Dark Surface (A12) | ☐ Iron-Manganese Masses (F12) (LRR O, P, T) |
| ☐ Coast Prairie Redox (A16) (MLRA 150A) | ☐ Umbric Surface (F13) (LRR P, T, U) |
| ☐ Sandy Mucky Mineral (S1) (LRR O, S) | ☐ Delta Ochric (F17) (MLRA 151) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Reduced Vertic (F18) (MLRA 150A, 150B) |
| ☒ Sandy Redox (S5) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☐ Stripped Matrix (S6) | ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154) |
| ☒ Polyvalue Below Surface (S8) (LRR S, T, U) | |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR O**)
- ☐ 2 cm Muck (A10) (**MLRA 147**)
- ☐ Coast Prairie Redox (A16) (**outside MLRA 150A**)
- ☐ Reduced Vertic (F18) (**outside MLRA 150A, 150B**)
- ☐ Piedmont Floodplain Soils (F19) (**LRR P, T**)
- ☐ Anomalous Bright Loamy Soils (F20) (**MLRA 153B**)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22) (**outside MLRA 138, 152A in FL, 154**)
- ☐ Barrier Islands Low Chroma Matrix (TS7) (**MLRA 153B, 153D**)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Unusual fill-derived soils in historic landscape. Samples meet S5 and F3. Borderline for S8, S9, S12 but with elevated chroma possibly due to extreme drought conditions. Clear bright orange mottles were evident throughout the area, from multiple soil samples.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Fort Sumter & Fort Moultrie National Historical Park City/County: Sullivan's Island (Charleston Cty) Sampling Date: 05/05/2026

Applicant/Owner: National Park Service State: SC Sampling Point: UPL 1

Investigator(s): B Tsang; K Pollett; E Parker Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Coastal flat Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T; MLRA 153B Lat: 32.75876° Long: -79.85772° Datum: WGS 1984

Soil Map Unit Name: Co - Coastal beaches and dune land NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☒, Soil ☒, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	Is the Sampled Area within a Wetland?	Yes ☐	No ☒
Hydric Soil Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **COWARDIN CLASS: U**
Atypical climate/hydrology note: Extreme drought, county-wide. Driest year on record: total annual precipitation 7.9 in below normal. 2nd driest month on record, total monthly precipitation 2.6 in below normal.
Disturbance note: Maintained landscape, turf lawn on historic fill (packed gravel)
Field ID: WL1

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☐ No ☒
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL 1

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Quercus virginiana</i>	40	yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

40 =Total Cover
50% of total cover: 20 20% of total cover: 8

Sapling Stratum (Plot size: 15 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

0 =Total Cover
50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: 15 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

0 =Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 5 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Eremochloa ophiuroides</i>	75	yes	NI
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

75 =Total Cover
50% of total cover: 37.5 20% of total cover: 15

Woody Vine Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

0 =Total Cover
50% of total cover: 0 20% of total cover: 0

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
Total Number of Dominant Species Across All Strata:	2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0 (A/B)

Prevalence Index Worksheet:	
Total % Cover of:	Multiply by:
OBL Species 0	x 1 = 0
FACW Species 0	x 2 = 0
FAC Species 0	x 3 = 0
FACU Species 40	x 4 = 160
UPL Species 0	x 5 = 0
Columns Totals: 40 (A)	160 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:	
☐ 1 - Rapid Test for Hydrophytic Vegetation	
☐ 2 - Dominance Test is > 50%	
☐ 3 - Prevalence Index is ≤ 3.0 ¹	
☐ Problematic Hydrophytic Vegetation ¹ (Explain)	

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:	
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).	
Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.	
Woody vine – All woody vines, regardless of height.	

Hydrophytic Vegetation Present?	Yes ☐	No ☒
---------------------------------	------------------------------	--

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-5	10YR 5/3	100					Sand	Refusal @ 5in

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Barrier Islands 1 cm Muck (S12) |
| ☐ Black Histic (A3) | (MLRA 153B, 153D) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Stratified Layers (A5) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Depleted Matrix (F3) |
| ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ Muck Presence (A8) (LRR U) | ☐ Depleted Dark Surface (F7) |
| ☐ 1 cm Muck (A9) (LRR P, T) | ☐ Redox Depressions (F8) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Marl (F10) (LRR U) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Ochric (F11) (MLRA 151) |
| ☐ Coast Prairie Redox (A16) (MLRA 150A) | ☐ Iron-Manganese Masses (F12) (LRR O, P, T) |
| ☐ Sandy Mucky Mineral (S1) (LRR O, S) | ☐ Umbric Surface (F13) (LRR P, T, U) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Delta Ochric (F17) (MLRA 151) |
| ☐ Sandy Redox (S5) | ☐ Reduced Vertic (F18) (MLRA 150A, 150B) |
| ☐ Stripped Matrix (S6) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Anomalous Bright Loamy Soils (F20) |
| ☐ Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | ☐ Very Shallow Dark Surface (F22) |
| | (MLRA 138, 152A in FL, 154) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 1 cm Muck (A9) (LRR O) |
| ☐ 2 cm Muck (A10) (MLRA 147) |
| ☐ Coast Prairie Redox (A16) |
| (outside MLRA 150A) |
| ☐ Reduced Vertic (F18) |
| (outside MLRA 150A, 150B) |
| ☐ Piedmont Floodplain Soils (F19) (LRR P, T) |
| ☐ Anomalous Bright Loamy Soils (F20) |
| (MLRA 153B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (F22) |
| (outside MLRA 138, 152A in FL, 154) |
| ☐ Barrier Islands Low Chroma Matrix (TS7) |
| (MLRA 153B, 153D) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Probe refusal, packed gravel

Depth (inches): 5

Hydric Soil Present? Yes ☐ No ☒

Remarks:

U.S. Army Corps of Engineers (USACE)
**RAPID ORDINARY HIGH WATER MARK
(OHWM) FIELD IDENTIFICATION DATA SHEET**
The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: FOSU-CHPI OW 2

Site Name: Fort Moultrie NHS

Date and Time: 05/05/2026

Location (lat/long): 32.75881°, -79.85780°

Investigator(s): B Tsang; K Pollett; E Parker

Step 1 Site overview from remote and online resources.

Check boxes for online resources used to evaluate site:

- | | | |
|---|---|---|
| ☐ gage data | ☐ LiDAR | ☐ geologic maps |
| ☐ climatic data | ☒ satellite imagery | ☒ land use maps |
| ☒ aerial photos | ☒ topographic maps | ☐ Other: _____ |

Describe land use and flow conditions from online resources.

Were there any recent extreme events (floods or drought)?

Coastal marine open water (public beach outside Fort Moultrie)

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

wrack line of marine vegetative debris, coincident with natural line in sand between wetted beach and dry foredune toe-of-slope.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.

OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM.

Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.

Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- | | |
|---|---|
| ☒ Break in slope | ☐ Channel bar |
| ☒ on the bank | ☐ shelving (berms) on bar |
| ☐ undercut bank | ☐ unvegetated |
| ☐ valley bottom | ☐ vegetation transition (go to veg. indicators) |
| ☐ Other: _____ | ☐ sediment transition (go to sed. indicators) |
| ☐ Shelving | ☐ upper limit of deposition on bar |
| ☐ shelf at top of bank | ☐ Instream bedforms and other bedload transport evidence |
| ☐ natural levee | ☐ deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.) |
| ☐ human-made berms or levees | ☐ bedforms (e.g., pools, riffles, steps, etc.) |
| ☐ other berms: _____ | ☐ Weathered clasts or bedrock |
| ☐ Secondary channels | ☐ erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.) |

Sediment indicators

- | |
|---|
| ☐ Soil development |
| ☐ Changes in character of soil |
| ☐ Mudcracks |
| ☐ Changes in particle-sized distribution |
| ☐ transition from _____ to _____ |
| ☐ upper limit of sand-sized particles |
| ☐ silt deposits |

Vegetation indicators (Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain)

- | |
|--|
| ☐ Change in vegetation type from _____ to _____ |
| ☒ Change in density of vegetation |
| ☐ Exposed roots below intact soil layer |
| ☐ Other vegetation observations |
| ☐ Vegetation matted down and/or bent |

Other physical indicators

- | |
|---|
| ☐ Sediment deposited on vegetation or structures |
| ☒ Wracking/presence of organic litter |
| ☐ Presence of large wood |
| ☐ Leaf litter disturbed or washed away |
| ☐ Water staining |

Other observed indicators? Describe:

Project ID #: FOSU-CHPI OW 2

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No
If yes, describe and attach information to data sheet:

--

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No
Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

OWM at observed high tide wrack line which coincides with a distinct change in slope and veg density (bare sand vs sparse dune grass at toe of slope)

Additional observations or notes
OHWM east of observation point obscured by riprap berm but inferred by elevation and visible water staining on riprap.

OHWL east of observation point obscured by riprap berm but inferred by elevation and visible water staining on riprap.

Imagery log attached? ☐ Yes ☒ No If no, explain why not: see associated photos submitted with report.

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

[illegible]

ENG FORM 6250, SEP 2024 Page 2 of 4

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Fort Sumter & Fort Moultrie National Historical Park City/County: Sullivan's Island (Charleston Cty) Sampling Date: 05/05/2026

Applicant/Owner: National Park Service State: SC Sampling Point: WL 3

Investigator(s): B Tsang; K Pollett; E Parker Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Coastal flat Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T; MLRA 153B Lat: 32.75791° Long: -79.85843° Datum: WGS 1984

Soil Map Unit Name: Co - Coastal beaches and dune land NWI classification: None (E2US2N adjacent)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soil Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			

Remarks: **COWARDIN CLASS: PFO1**
Atypical climate/hydrology note: Extreme drought, county-wide. Driest year on record: total annual precipitation 7.9 in below normal. 2nd driest month on record, total monthly precipitation 2.6 in below normal.
NOTE: No paired Upland sample point, feature is contiguous with WL 1.
Second WL data sheet recorded to document significant change in vegetative cover.
Field ID: WL3

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☒ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☒ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☒ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
--	--

Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: WL 3

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Celtis laevigata</u>	50	yes	FACW
2. <u>Taxodium ascendens</u>	40	yes	OBL
3. <u>Juniperus virginiana</u>	20	no	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

110 =Total Cover

50% of total cover: 55 20% of total cover: 22

Sapling Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

0 =Total Cover

50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Baccharis halimifolia</u>	25	yes	FAC
2. <u>Ilex vomitoria</u>	25	yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

50 =Total Cover

50% of total cover: 25 20% of total cover: 10

Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

0 =Total Cover

50% of total cover: 0 20% of total cover: 0

Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Smilax auriculata</u>	10	yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

10 =Total Cover

50% of total cover: 5 20% of total cover: 2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species <u>40</u>	x 1 = <u>40</u>
FACW Species <u>50</u>	x 2 = <u>100</u>
FAC Species <u>50</u>	x 3 = <u>150</u>
FACU Species <u>30</u>	x 4 = <u>120</u>
UPL Species <u>0</u>	x 5 = <u>0</u>
Columns Totals: <u>170</u> (A)	<u>410</u> (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is > 50%
- ☒ 3 - Prevalence Index is ≤ 3.0¹
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)
Root buttress

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0–3	10YR 5/2	100					Sand	
3–24	10YR 6/2	75	10YR 3/1	20	MS	M	Sand	Polyvalue
3–24			10YR 4/4	5	RM	PL	Sand	Mottle in pore lining

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Barrier Islands 1 cm Muck (S12) |
| ☐ Black Histic (A3) | (MLRA 153B, 153D) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Stratified Layers (A5) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☒ Depleted Matrix (F3) |
| ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ Muck Presence (A8) (LRR U) | ☐ Depleted Dark Surface (F7) |
| ☐ 1 cm Muck (A9) (LRR P, T) | ☐ Redox Depressions (F8) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Marl (F10) (LRR U) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Ochric (F11) (MLRA 151) |
| ☐ Coast Prairie Redox (A16) (MLRA 150A) | ☐ Iron-Manganese Masses (F12) (LRR O, P, T) |
| ☐ Sandy Mucky Mineral (S1) (LRR O, S) | ☐ Umbric Surface (F13) (LRR P, T, U) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Delta Ochric (F17) (MLRA 151) |
| ☒ Sandy Redox (S5) | ☐ Reduced Vertic (F18) (MLRA 150A, 150B) |
| ☐ Stripped Matrix (S6) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Anomalous Bright Loamy Soils (F20) |
| ☒ Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | ☐ Very Shallow Dark Surface (F22) |
| | (MLRA 138, 152A in FL, 154) |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (**LRR O**)
- ☐ 2 cm Muck (A10) (**MLRA 147**)
- ☐ Coast Prairie Redox (A16)
- (outside MLRA 150A)**
- ☐ Reduced Vertic (F18)
- (outside MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) (**LRR P, T**)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- (outside MLRA 138, 152A in FL, 154)**
- ☐ Barrier Islands Low Chroma Matrix (TS7)
- (MLRA 153B, 153D)**
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Fort Sumter & Fort Moultrie National Historical Park City/County: Sullivan's Island (Charleston Cty) Sampling Date: 05/05/2026

Applicant/Owner: National Park Service State: SC Sampling Point: WL 4

Investigator(s): B Tsang; K Pollett; E Parker Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Roadside swale Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T; MLRA 153B Lat: 32.75975° Long: -79.85729° Datum: WGS 1984

Soil Map Unit Name: Ma - Made Land NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☒, Soil ☒, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soil Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			

Remarks: **COWARDIN CLASS: PEM1hr**
Atypical climate/hydrology note: Extreme drought, county-wide. Driest year on record: total annual precipitation 7.9 in below normal. 2nd driest month on record, total monthly precipitation 2.6 in below normal.
Disturbance note: Maintained landscape (turf lawn over packed gravel fill)
NOTE: There is no paired upland sample point for WL 4, because the entire WL is an impounded depression feature surrounded by hard structures.
Field ID: WL4

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☒ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☒ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☒ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This wetland is likely an artificial depression formed by perched surface water above a relatively impervious packed gravel fill layer. Vegetation is maintained as turf lawn, but densely colonized by pennywort and other common lawn weeds (clover, turkey tangle, etc)

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: WL 4

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Hydrocotyle umbellata</u>	<u>50</u>	<u>yes</u>	<u>OBL</u>
2. <u>Eremochloa ophiuroides</u>	<u>50</u>	<u>yes</u>	<u>NI</u>
3. <u>Trifolium repens</u>	<u>25</u>	<u>no</u>	<u>FACU</u>
4. <u>Phyla nodiflora</u>	<u>25</u>	<u>no</u>	<u>FAC</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 75 20% of total cover: 30

Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 0 20% of total cover: 0

Remarks: (Include photo numbers here or on a separate sheet.)
Maintained lawn – Centipede grass

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species <u>50</u>	x 1 = <u>50</u>
FACW Species <u>0</u>	x 2 = <u>0</u>
FAC Species <u>25</u>	x 3 = <u>75</u>
FACU Species <u>25</u>	x 4 = <u>100</u>
UPL Species <u>0</u>	x 5 = <u>0</u>
Columns Totals: <u>100</u> (A)	<u>225</u> (B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is > 50%

☒ 3 - Prevalence Index is ≤ 3.0¹

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-7	10YR 2/1	90	10YR 4/4	10	RM	PL	Loamy Sand	Masked Grains w 10% Mottles
								Refusal @ 7 inches

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Barrier Islands 1 cm Muck (S12) |
| ☐ Black Histic (A3) | (MLRA 153B, 153D) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Stratified Layers (A5) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Depleted Matrix (F3) |
| ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) | ☒ Redox Dark Surface (F6) |
| ☐ Muck Presence (A8) (LRR U) | ☐ Depleted Dark Surface (F7) |
| ☐ 1 cm Muck (A9) (LRR P, T) | ☒ Redox Depressions (F8) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Marl (F10) (LRR U) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Ochric (F11) (MLRA 151) |
| ☐ Coast Prairie Redox (A16) (MLRA 150A) | ☐ Iron-Manganese Masses (F12) (LRR O, P, T) |
| ☐ Sandy Mucky Mineral (S1) (LRR O, S) | ☐ Umbric Surface (F13) (LRR P, T, U) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Delta Ochric (F17) (MLRA 151) |
| ☒ Sandy Redox (S5) | ☐ Reduced Vertic (F18) (MLRA 150A, 150B) |
| ☐ Stripped Matrix (S6) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☒ Dark Surface (S7) (LRR P, S, T, U) | ☐ Anomalous Bright Loamy Soils (F20) |
| ☐ Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | ☐ Very Shallow Dark Surface (F22) |
| | (MLRA 138, 152A in FL, 154) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 1 cm Muck (A9) (LRR O) |
| ☐ 2 cm Muck (A10) (MLRA 147) |
| ☐ Coast Prairie Redox (A16) |
| (outside MLRA 150A) |
| ☐ Reduced Vertic (F18) |
| (outside MLRA 150A, 150B) |
| ☐ Piedmont Floodplain Soils (F19) (LRR P, T) |
| ☐ Anomalous Bright Loamy Soils (F20) |
| (MLRA 153B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (F22) |
| (outside MLRA 138, 152A in FL, 154) |
| ☐ Barrier Islands Low Chroma Matrix (TS7) |
| (MLRA 153B, 153D) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: Packed gravel fill

Depth (inches): 7

Hydric Soil Present? Yes ☒ No ☐

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Fort Sumter & Fort Moultrie National Historical Park City/County: Sullivan's Island (Charleston Cty) Sampling Date: 05/05/2026

Applicant/Owner: National Park Service State: SC Sampling Point: WL 5

Investigator(s): B Tsang; K Pollett; E Parker Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Shallow depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T; MLRA 153B Lat: 32.75862° Long: -79.84340° Datum: WGS 1984

Soil Map Unit Name: Ma - Made Land NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☒, Soil ☒, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soil Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			

Remarks: **COWARDIN CLASS: PEM1**

Atypical climate/hydrology note: Extreme drought, county-wide. Driest year on record: total annual precipitation 7.9 in below normal. 2nd driest month on record, total monthly precipitation 2.6 in below normal.

Disturbance note: Maintained lawn

Field ID: WL5

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☒ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☒ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☒ No ☐ Depth (inches): <u>6</u> (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: WL 5

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 0 20% of total cover: 0

Sapling Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Hydrocotyle umbellata</u>	<u>80</u>	<u>yes</u>	<u>OBL</u>
2. <u>Trifolium repens</u>	<u>10</u>	<u>no</u>	<u>FACU</u>
3. <u>Eremochloa ophiuroides</u>	<u>10</u>	<u>no</u>	<u>NI</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 0 20% of total cover: 0

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)

Prevalence Index Worksheet:	
Total % Cover of:	Multiply by:
OBL Species <u>80</u>	x 1 = <u>80</u>
FACW Species <u>0</u>	x 2 = <u>0</u>
FAC Species <u>0</u>	x 3 = <u>0</u>
FACU Species <u>10</u>	x 4 = <u>40</u>
UPL Species <u>0</u>	x 5 = <u>0</u>
Columns Totals: <u>90</u> (A)	<u>120</u> (B)

Prevalence Index = B/A = 1.33

Hydrophytic Vegetation Indicators:	
☒ 1 - Rapid Test for Hydrophytic Vegetation	
☒ 2 - Dominance Test is > 50%	
☒ 3 - Prevalence Index is ≤ 3.0 ¹	
☐ Problematic Hydrophytic Vegetation ¹ (Explain)	

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:	
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).	
Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.	
Woody vine – All woody vines, regardless of height.	

Hydrophytic Vegetation Present?	Yes ☒	No ☐
---------------------------------	---	-----------------------------

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	95	10YR 4/6	5	RM	PL	Loamy Sand	Mucky, Bright mottles in root channels.
								Saturated @ 5 inch
								Probe refusal @ 8 inch

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Barrier Islands 1 cm Muck (S12) |
| ☐ Black Histic (A3) | (MLRA 153B, 153D) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Stratified Layers (A5) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Depleted Matrix (F3) |
| ☒ 5 cm Mucky Mineral (A7) (LRR P, T, U) | ☒ Redox Dark Surface (F6) |
| ☐ Muck Presence (A8) (LRR U) | ☐ Depleted Dark Surface (F7) |
| ☐ 1 cm Muck (A9) (LRR P, T) | ☐ Redox Depressions (F8) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Marl (F10) (LRR U) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Ochric (F11) (MLRA 151) |
| ☐ Coast Prairie Redox (A16) (MLRA 150A) | ☐ Iron-Manganese Masses (F12) (LRR O, P, T) |
| ☒ Sandy Mucky Mineral (S1) (LRR O, S) | ☐ Umbric Surface (F13) (LRR P, T, U) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Delta Ochric (F17) (MLRA 151) |
| ☒ Sandy Redox (S5) | ☐ Reduced Vertic (F18) (MLRA 150A, 150B) |
| ☐ Stripped Matrix (S6) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☒ Dark Surface (S7) (LRR P, S, T, U) | ☐ Anomalous Bright Loamy Soils (F20) |
| ☐ Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | ☐ Very Shallow Dark Surface (F22) |
| | (MLRA 138, 152A in FL, 154) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 1 cm Muck (A9) (LRR O) |
| ☐ 2 cm Muck (A10) (MLRA 147) |
| ☐ Coast Prairie Redox (A16) |
| (outside MLRA 150A) |
| ☐ Reduced Vertic (F18) |
| (outside MLRA 150A, 150B) |
| ☐ Piedmont Floodplain Soils (F19) (LRR P, T) |
| ☐ Anomalous Bright Loamy Soils (F20) |
| (MLRA 153B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (F22) |
| (outside MLRA 138, 152A in FL, 154) |
| ☐ Barrier Islands Low Chroma Matrix (TS7) |
| (MLRA 153B, 153D) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Probe refusal

Depth (inches): 8

Hydric Soil Present? Yes ☒ No ☐

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Fort Sumter & Fort Moultrie National Historical Park City/County: Sullivan's Island (Charleston Cty) Sampling Date: 05/05/2026

Applicant/Owner: National Park Service State: SC Sampling Point: UPL 5

Investigator(s): B Tsang; K Pollett; E Parker Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Graded terrace Local relief (concave, convex, none): Convex Slope (%): 10-25%

Subregion (LRR or MLRA): LRR T; MLRA 153B Lat: 32.75867° Long: -79.84343° Datum: WGS 1984

Soil Map Unit Name: Ma - Made Land NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	Is the Sampled Area within a Wetland?	Yes ☐	No ☒
Hydric Soil Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **COWARDIN CLASS: U**
Atypical climate/hydrology note: Extreme drought, county-wide. Driest year on record: total annual precipitation 7.9 in below normal. 2nd driest month on record, total monthly precipitation 2.6 in below normal.
Disturbance note: Constructed earthen mound under historic residence, landscaped
Field ID: UPL5

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☐ No ☒
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL 5

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus virginiana</u>	<u>75</u>	<u>yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ =Total Cover
50% of total cover: 37.5 20% of total cover: 15

Sapling Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ =Total Cover
50% of total cover: 0 20% of total cover: 0

Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ =Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Hydrocotyle umbellata</u>	<u>10</u>	<u>yes</u>	<u>OBL</u>
2. <u>Sisyrinchium rosulatum</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>
3. <u>Dichondra carolinensis</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

_____ =Total Cover
50% of total cover: 15 20% of total cover: 6

Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

_____ =Total Cover
50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species <u>10</u>	x 1 = <u>10</u>
FACW Species <u>0</u>	x 2 = <u>0</u>
FAC Species <u>20</u>	x 3 = <u>60</u>
FACU Species <u>75</u>	x 4 = <u>300</u>
UPL Species <u>0</u>	x 5 = <u>0</u>
Columns Totals: <u>105</u> (A)	<u>370</u> (B)

Prevalence Index = B/A = 3.52

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ * 2 - Dominance Test is > 50%

☐ 3 - Prevalence Index is ≤ 3.0¹

☒ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: (Include photo numbers here or on a separate sheet.)
*Pennywort population spreading via rhizomes into upland from adjacent WL areas. In upland, it is notably sparse as compared to adjacent lawn area with hydric soils. In this case, presence of OBL species does NOT indicate presence of hydrophytic vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0–4	10YR 3/2	100					Loamy Sand	
4–18	10Y 3/2	50	10YR 5/3	50			Loamy Sand	Mixed sand fill

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Barrier Islands 1 cm Muck (S12) |
| ☐ Black Histic (A3) | (MLRA 153B, 153D) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Stratified Layers (A5) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Depleted Matrix (F3) |
| ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ Muck Presence (A8) (LRR U) | ☐ Depleted Dark Surface (F7) |
| ☐ 1 cm Muck (A9) (LRR P, T) | ☐ Redox Depressions (F8) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Marl (F10) (LRR U) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Ochric (F11) (MLRA 151) |
| ☐ Coast Prairie Redox (A16) (MLRA 150A) | ☐ Iron-Manganese Masses (F12) (LRR O, P, T) |
| ☐ Sandy Mucky Mineral (S1) (LRR O, S) | ☐ Umbric Surface (F13) (LRR P, T, U) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Delta Ochric (F17) (MLRA 151) |
| ☐ Sandy Redox (S5) | ☐ Reduced Vertic (F18) (MLRA 150A, 150B) |
| ☐ Stripped Matrix (S6) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Anomalous Bright Loamy Soils (F20) |
| ☐ Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | ☐ Very Shallow Dark Surface (F22) |
| | (MLRA 138, 152A in FL, 154) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 1 cm Muck (A9) (LRR O) |
| ☐ 2 cm Muck (A10) (MLRA 147) |
| ☐ Coast Prairie Redox (A16) |
| (outside MLRA 150A) |
| ☐ Reduced Vertic (F18) |
| (outside MLRA 150A, 150B) |
| ☐ Piedmont Floodplain Soils (F19) (LRR P, T) |
| ☐ Anomalous Bright Loamy Soils (F20) |
| (MLRA 153B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (F22) |
| (outside MLRA 138, 152A in FL, 154) |
| ☐ Barrier Islands Low Chroma Matrix (TS7) |
| (MLRA 153B, 153D) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Loamy organic-rich sandy fill, dark color but loose and dry from landscape mulch and duff layer. No apparent redox.

Survey Site Information:

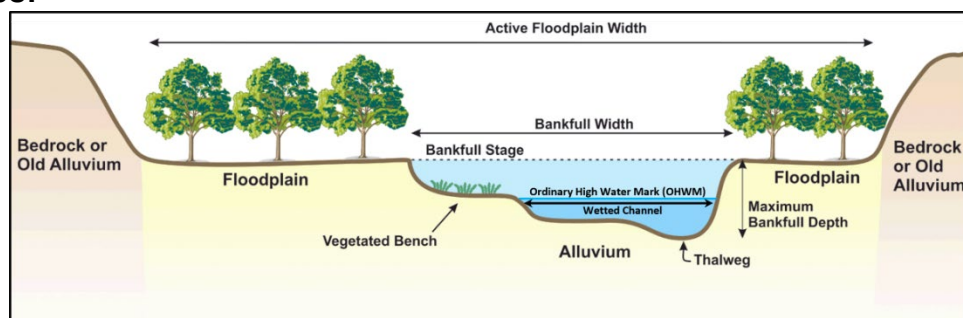
DATE	05/06/2026
LATITUDE	32.847115°
LONGITUDE	-79.825261°
ECOREGION	Atlantic and Gulf Coastal Plain

PROJECT / SITE	Charles Pinckney National Historic Site
CITY / COUNTY / STATE	Mount Pleasant (Charleston County, SC)
EVALUATORS	B Tsang
FIELD ID	DITCH6

Riverine Wetland Physical Properties:

	Width (ft)	Depth (ft)
Top of Bank	8	4
OHWM	N/A	N/A
Wetted Width	N/A	N/A

Bank Slope Angle	40–60° (steep)
Flow Conditions	None (dry channel)
Flow Direction	West



Riverine Wetland Characteristics:

OHWM Indicators	
☐ Alluvial Deposition	
☐ Bed and bank	
☐ Leaf litter removal	
☐ Litter and debris	
☐ Matted/bent vegetation	
☐ Natural line on bank	
☐ Plant community change	
☐ Scouring	
☐ Sediment sorting	
☐ Shelving	
☐ Soil change	
☐ Water staining	
☐ Wracking	
☐ Wrested Vegetation	

Hydric Soil Indicators	
☐ Hydrogen Sulfide (A4)	
☐ Depleted Below Dark Surface (A11)	
☐ Sandy Mucky Mineral (S1)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☒ Dark Surface (S7)	
☒ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☒ Redox Dark Surface (F6)	

Hydrophytic Vegetation	
Species:	Indicator:
1. <i>Woodwardia areolata</i>	
2.	
3.	
4.	
5.	
6.	

Note: List up to 6 dominant hydrophytic species observed within the assessment reach or immediately adjacent floodplain.

Stream Substrate (Estimate percentage)	
Bedrock %	0
Cobble %	0
Rip-Rap %	0
Gravel %	0
Sand %	0
SiltClay %	75
Organic %	25
Other %	0

Riverine Wetland Functional Assessment:

Channel Status	Artificial
Channel Condition	Unnatural straightening
Stream Function	Poor

Turbidity	
Water Quality Defects	

Additional Notes:

Cowardin Classification: R6

Artificial historic ditch, drains uplands West to WL7 tidal creek complex. Deeply incised ditch with hydric soils and hydrophytic veg in channel and along banks. Frequent ephemeral flow appears to be developing more stream character, in contrast to other ditches at CHPI which are filling in and losing stream character.

Date: 05/06/2026	Project/Site: Charles Pinckney National Historic Site	Latitude: 32.847115°
Evaluator: B Tsang	County: Mount Pleasant (Charleston Cty SC)	Longitude: -79.825261°
Total Points: <i>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (select one) ☒ Ephemeral ☐ Intermittent ☐ Perennial	Other: Field ID: DITCH6

A. Geomorphology (Subtotal = 3.5)

	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	☐ 0	☐ 1	☒ 2	☐ 3
2. Sinuosity of channel along thalweg	☒ 0	☐ 1	☐ 2	☐ 3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	☒ 0	☐ 1	☐ 2	☐ 3
4. Particle size of stream substrate	☒ 0	☐ 1	☐ 2	☐ 3
5. Active/relict floodplain	☐ 0	☒ 1	☐ 2	☐ 3
6. Depositional bars or benches	☒ 0	☐ 1	☐ 2	☐ 3
7. Recent alluvial deposits	☒ 0	☐ 1	☐ 2	☐ 3
8. Headcuts	☒ 0	☐ 1	☐ 2	☐ 3
9. Grade control	☒ 0	☐ 0.5	☐ 1	☐ 1.5
10. Natural valley	☐ 0	☒ 0.5	☐ 1	☐ 1.5
11. Second or greater order channel	☒ No = 0		☐ Yes = 3	

^aartificial ditches are not rated; see discussions in manual**B. Hydrology (Subtotal = 3.5)**

12. Presence of Baseflow	☒ 0	☐ 1	☐ 2	☐ 3
13. Iron oxidizing bacteria	☒ 0	☐ 1	☐ 2	☐ 3
14. Leaf litter	☐ 1.5	☐ 1	☐ 0.5	☒ 0
15. Sediment on plants or debris	☐ 0	☒ 0.5	☐ 1	☐ 1.5
16. Organic debris lines or piles	☒ 0	☐ 0.5	☐ 1	☐ 1.5
17. Soil-based evidence of high water table?	☐ No = 0		☒ Yes = 3	

C. Biology (Subtotal = 4.5)

18. Fibrous roots in streambed	☐ 3	☐ 2	☐ 1	☒ 0
19. Rooted upland plants in streambed	☒ 3	☐ 2	☐ 1	☐ 0
20. Macroinvertebrates (note diversity and abundance)	☒ 0	☐ 1	☐ 2	☐ 3
21. Aquatic Mollusks	☒ 0	☐ 1	☐ 2	☐ 3
22. Fish	☒ 0	☐ 0.5	☐ 1	☐ 1.5
23. Crayfish	☒ 0	☐ 0.5	☐ 1	☐ 1.5
24. Amphibians	☒ 0	☐ 0.5	☐ 1	☐ 1.5
25. Algae	☒ 0	☐ 0.5	☐ 1	☐ 1.5
26. Wetland plants in streambed	☐ FACW = 0.75 ☒ OBL = 1.5 ☐ Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of NC DWQ manual.

Notes:

Artificial historic ditch

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site:	Charles Pinckney National Historic Site	City/County:	Mount Pleasant (Charleston Cty)	Sampling Date:	05/06/2026
Applicant/Owner:	National Park Service	State:	SC	Sampling Point:	WL 7
Investigator(s):	B Tsang	Section, Township, Range:	N/A		
Landform (hillslope, terrace, etc.):	Tidal flat fringe	Local relief (concave, convex, none):	None	Slope (%):	0-2%
Subregion (LRR or MLRA):	LRR T; MLRA 153B	Lat:	32.84636°	Long:	-79.82616°
		Datum:	WGS 1984		
Soil Map Unit Name:	Cm - Chipley loamy fine sand	NWI classification:	None (E2EM1P adjacent)		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)					
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐					
Are Vegetation ☐ , soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)					

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soil Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			
Remarks: COWARDIN CLASS: PFO1d					
Atypical climate/hydrology note: Extreme drought, county-wide. Driest year on record: total annual precipitation 7.9 in below normal. 2nd driest month on record, total monthly precipitation 2.6 in below normal.					
Field ID: WL7					

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
☐ Surface Water (A1)	☐ Aquatic Fauna (B13)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Marl Deposits (B15) (LRR U)	☐ Sparsely Vegetated Concave Surface (B8)	
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☒ Drainage Patterns (B10)	
☐ Water Marks (B1)	☒ Oxidized Rhizospheres along Living Roots (C3)	☐ Moss Trim Lines (B16)	
☐ Sediment Deposits (B2)	☒ Presence of Reduced Iron (C4)	☐ Dry-Season Water Table (C2)	
☐ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Crayfish Burrows (C8)	
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Iron Deposits (B5)	☐ Other (Explain in Remarks)	☒ Geomorphic Position (D2)	
☒ Inundation Visible on Aerial Imagery (B7)		☐ Shallow Aquitard (D3)	
☐ Water-Stained Leaves (B9)		☐ FAC-Neutral Test (D5)	
		☐ Sphagnum moss (D8) (LRR T, U)	
Field Observations:			
Surface Water Present?	Yes ☐ No ☒ Depth (inches):	Wetland Hydrology Present? Yes ☒ No ☐	
Water Table Present?	Yes ☐ No ☒ Depth (inches):		
Saturation Present?	Yes ☐ No ☒ Depth (inches):		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: WL 7

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus nigra</u>	50	yes	FAC
2. <u>Quercus laurifolia</u>	25	yes	FACW
3. <u>Morella cerifera</u>	25	yes	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

100 =Total Cover

50% of total cover: 50 20% of total cover: 20

Sapling Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Morella cerifera</u>	25	yes	FAC
2. <u>Prunus serotina</u>	25	yes	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

50 =Total Cover

50% of total cover: 25 20% of total cover: 10

Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ilex vomitoria</u>	50	yes	FAC
2. <u>Morella cerifera</u>	25	yes	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

75 =Total Cover

50% of total cover: 37.5 20% of total cover: 15

Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Scleria triglomerata</u>	10	yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

10 =Total Cover

50% of total cover: 5 20% of total cover: 2

Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Parthenocissus quinquefolia</u>	10	yes	FACU
2. <u>Smilax bona-nox</u>	10	yes	FAC
3. _____	10	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

30 =Total Cover

50% of total cover: 15 20% of total cover: 6

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 73 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species <u>0</u>	x 1 = <u>0</u>
FACW Species <u>35</u>	x 2 = <u>70</u>
FAC Species <u>185</u>	x 3 = <u>555</u>
FACU Species <u>35</u>	x 4 = <u>140</u>
UPL Species <u>0</u>	x 5 = <u>0</u>
Columns Totals: <u>255</u> (A)	<u>765</u> (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is > 50%
- ☒ 3 - Prevalence Index is ≤ 3.0¹
- ☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)
Buttressing and cypress knees visible nearby

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0–2	10YR 5/2	100					Loamy Sand	
2–18	10YR 5/1	90	10YR 4/6	10	RM	PL	Silty Sand	Bright mottles, depleted matrix

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Barrier Islands 1 cm Muck (S12) |
| ☐ Black Histic (A3) | (MLRA 153B, 153D) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Stratified Layers (A5) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☒ Depleted Matrix (F3) |
| ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ Muck Presence (A8) (LRR U) | ☐ Depleted Dark Surface (F7) |
| ☐ 1 cm Muck (A9) (LRR P, T) | ☐ Redox Depressions (F8) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Marl (F10) (LRR U) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Ochric (F11) (MLRA 151) |
| ☐ Coast Prairie Redox (A16) (MLRA 150A) | ☐ Iron-Manganese Masses (F12) (LRR O, P, T) |
| ☐ Sandy Mucky Mineral (S1) (LRR O, S) | ☐ Umbric Surface (F13) (LRR P, T, U) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Delta Ochric (F17) (MLRA 151) |
| ☒ Sandy Redox (S5) | ☐ Reduced Vertic (F18) (MLRA 150A, 150B) |
| ☐ Stripped Matrix (S6) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Anomalous Bright Loamy Soils (F20) |
| ☐ Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | ☐ Very Shallow Dark Surface (F22) |
| | (MLRA 138, 152A in FL, 154) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 1 cm Muck (A9) (LRR O) |
| ☐ 2 cm Muck (A10) (MLRA 147) |
| ☐ Coast Prairie Redox (A16) |
| (outside MLRA 150A) |
| ☐ Reduced Vertic (F18) |
| (outside MLRA 150A, 150B) |
| ☐ Piedmont Floodplain Soils (F19) (LRR P, T) |
| ☐ Anomalous Bright Loamy Soils (F20) |
| (MLRA 153B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (F22) |
| (outside MLRA 138, 152A in FL, 154) |
| ☐ Barrier Islands Low Chroma Matrix (TS7) |
| (MLRA 153B, 153D) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-COR	OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Charles Pinckney National Historic Site City/County: Mount Pleasant (Charleston Cty) Sampling Date: 05/06/2026

Applicant/Owner: National Park Service State: SC Sampling Point: UPL 7

Investigator(s): B Tsang Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Music forest Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T; MLRA 153B Lat: 32.84641° Long: -79.82598° Datum: WGS 1984

Soil Map Unit Name: Cm - Chipley loamy fine sand NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	Is the Sampled Area within a Wetland?	Yes ☐	No ☒
Hydric Soil Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **COWARDIN CLASS: U**
Atypical climate/hydrology note: Extreme drought, county-wide. Driest year on record: total annual precipitation 7.9 in below normal. 2nd driest month on record, total monthly precipitation 2.6 in below normal.

Field ID: UPL7

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
---	--

Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☐ No ☒
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UPL 7

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Quercus virginiana</i>	50	yes	FACU
2. <i>Platanus occidentalis</i>	30	yes	FACW
3. <i>Acer saccharinum</i>	30	yes	FAC
4. <i>Liquidambar styraciflua</i>	30	yes	FAC
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	140	=Total Cover	
50% of total cover: <u>70</u>	20% of total cover: <u>28</u>		

Sapling Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Prunus caroliniana</i>	15	yes	FACU
2. <i>Juniperus virginiana</i>	15	yes	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	30	=Total Cover	
50% of total cover: <u>15</u>	20% of total cover: <u>6</u>		

Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
	0	=Total Cover	
50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		

Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Toxicodendron radicans</i>	20	yes	FAC
2. <i>Sanicula canadensis</i>	20	yes	FACU
3. <i>Solidago altissima</i>	20	yes	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
	60	=Total Cover	
50% of total cover: <u>30</u>	20% of total cover: <u>12</u>		

Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Parthenocissus quinquefolia</i>	20	yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	20	=Total Cover	
50% of total cover: <u>10</u>	20% of total cover: <u>4</u>		

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species <u>0</u>	x 1 = <u>0</u>
FACW Species <u>30</u>	x 2 = <u>60</u>
FAC Species <u>80</u>	x 3 = <u>240</u>
FACU Species <u>140</u>	x 4 = <u>560</u>
UPL Species <u>0</u>	x 5 = <u>0</u>
Columns Totals: <u>250</u> (A)	<u>860</u> (B)

Prevalence Index = B/A = 3.44

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is > 50%

☐ 3 - Prevalence Index is ≤ 3.0¹

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0–6	10YR 4/2	100					Sandy Loam	
6–18	10YR 4/2	95	10YR 4/3	5		PL	Loamy Sand	Very faint mottles, NOT distinct/prominent

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Thin Dark Surface (S9) (LRR S, T, U) |
| ☐ Histic Epipedon (A2) | ☐ Barrier Islands 1 cm Muck (S12) |
| ☐ Black Histic (A3) | (MLRA 153B, 153D) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) (LRR O) |
| ☐ Stratified Layers (A5) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Organic Bodies (A6) (LRR P, T, U) | ☐ Depleted Matrix (F3) |
| ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) | ☐ Redox Dark Surface (F6) |
| ☐ Muck Presence (A8) (LRR U) | ☐ Depleted Dark Surface (F7) |
| ☐ 1 cm Muck (A9) (LRR P, T) | ☐ Redox Depressions (F8) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Marl (F10) (LRR U) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Ochric (F11) (MLRA 151) |
| ☐ Coast Prairie Redox (A16) (MLRA 150A) | ☐ Iron-Manganese Masses (F12) (LRR O, P, T) |
| ☐ Sandy Mucky Mineral (S1) (LRR O, S) | ☐ Umbric Surface (F13) (LRR P, T, U) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Delta Ochric (F17) (MLRA 151) |
| ☐ Sandy Redox (S5) | ☐ Reduced Vertic (F18) (MLRA 150A, 150B) |
| ☐ Stripped Matrix (S6) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☐ Dark Surface (S7) (LRR P, S, T, U) | ☐ Anomalous Bright Loamy Soils (F20) |
| ☐ Polyvalue Below Surface (S8) | (MLRA 149A, 153C, 153D) |
| (LRR S, T, U) | ☐ Very Shallow Dark Surface (F22) |
| | (MLRA 138, 152A in FL, 154) |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 1 cm Muck (A9) (LRR O) |
| ☐ 2 cm Muck (A10) (MLRA 147) |
| ☐ Coast Prairie Redox (A16) |
| (outside MLRA 150A) |
| ☐ Reduced Vertic (F18) |
| (outside MLRA 150A, 150B) |
| ☐ Piedmont Floodplain Soils (F19) (LRR P, T) |
| ☐ Anomalous Bright Loamy Soils (F20) |
| (MLRA 153B) |
| ☐ Red Parent Material (F21) |
| ☐ Very Shallow Dark Surface (F22) |
| (outside MLRA 138, 152A in FL, 154) |
| ☐ Barrier Islands Low Chroma Matrix (TS7) |
| (MLRA 153B, 153D) |
| ☐ Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Transitional hydric/upland soil below 6 in, mottles not distinct or prominent, matrix high chroma, suggests remnant WL soils possibly drained by historic ditches, but may be influenced by lower water table resulting from severe drought conditions.

Antecedent Precipitation Tool v3.0 - Watershed Sampling Summary

Generated on 2026-05-19

User Inputs

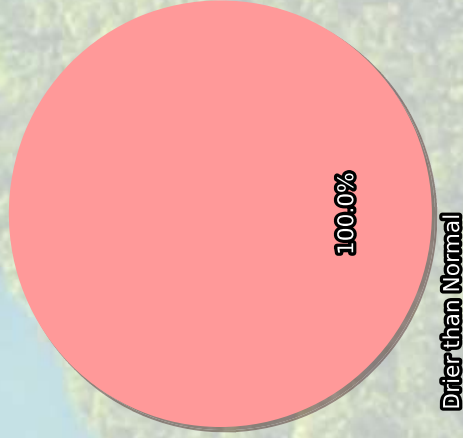
Coordinates	32.75745, -79.85498
Date	2026-05-05
Geographic Scope	HUC12
Used Gridded Precipitation	False

Intermediate Data

Hydrologic Unit Code	030502010707
Watershed Size	70.16 mi ²
# Random Sampling Points	8

Preliminary Result

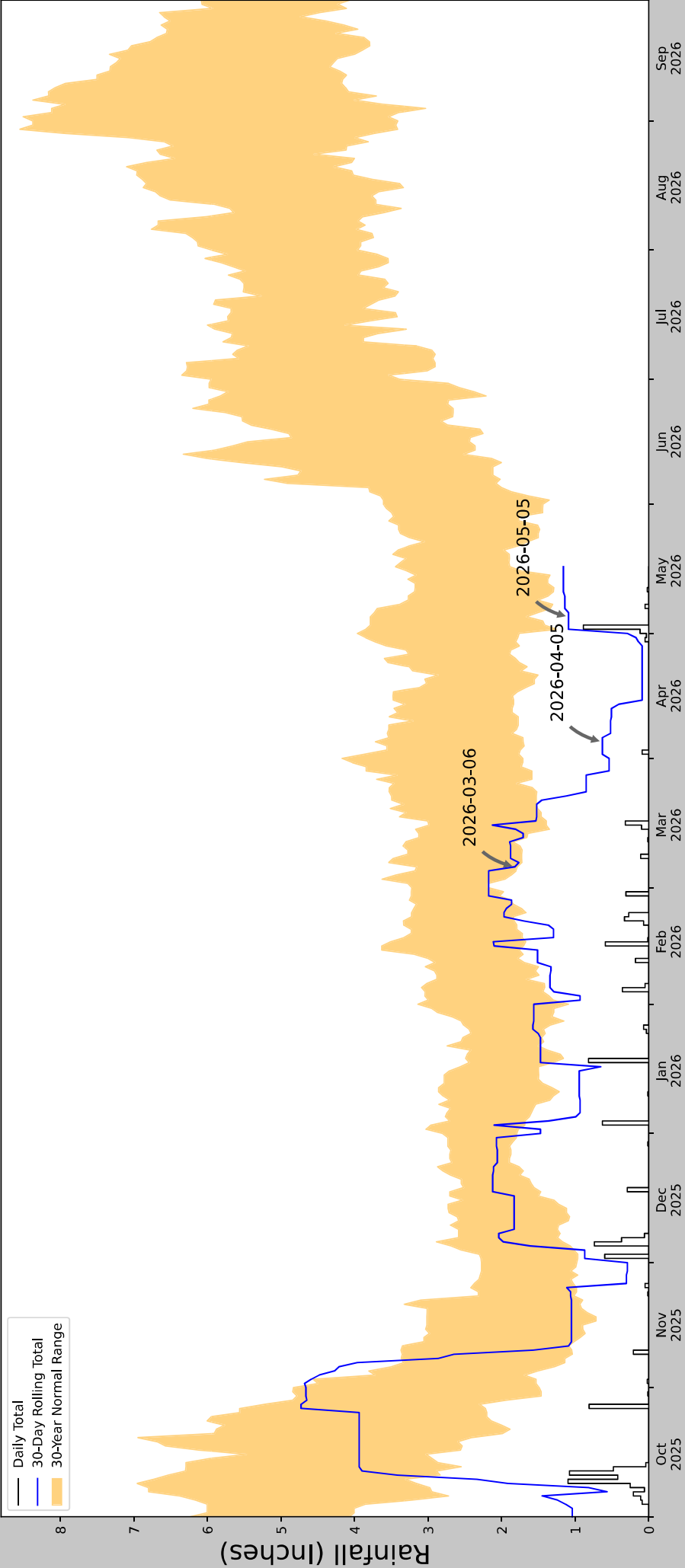
Average Antecedent Precipitation Score	6.75
Preliminary Determination	Drier than Normal



Sampling Point Breakdown

Antecedent Precipitation Score	Antecedent Precipitation Condition	WebWIMP H ₂ O Balance	Drought Index (PDSI)	# of Points
7	Drier than Normal	ERROR	Severe drought (2026-04)	5
7	Drier than Normal	ERROR	Not available	1
6	Drier than Normal	Dry Season	Severe drought (2026-04)	2

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.75745, -79.85498
Observation Date	2026-05-05
Elevation (ft)	9.661
Drought Index (PDSI)	Severe drought (2026-04)
WebWIMP H ₂ O Balance	Not available

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-05	1.661811	3.784646	1.090551	Dry	1	3	3
2026-04-05	1.709055	3.714961	0.629921	Dry	1	2	2
2026-03-06	1.785827	3.155906	1.818898	Normal	2	1	2
Result							Drier than Normal - 7

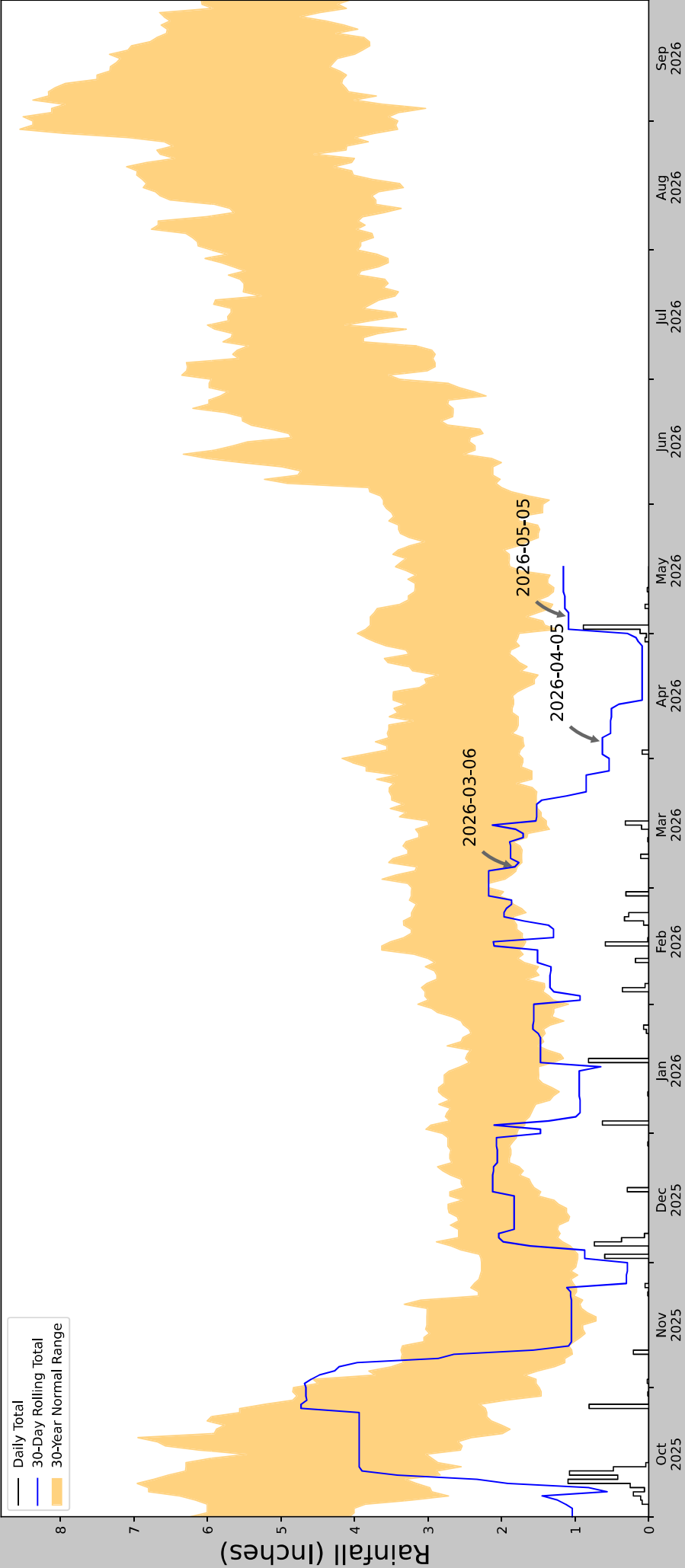
Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DWYN CHARLESTON	32.775, -79.9239	9.843	4.184	0.182	1.883	11321	89
CHARLESTON 5.2 ESE	32.7449, -79.9186	26.903	2.102	17.06	0.982	16	0
MOUNT PLEASANT 2.6 SW	32.7929, -79.8913	4.921	2.262	4.922	1.029	0	1
CHARLESTON 1.7 SE	32.7649, -79.9762	12.139	3.118	2.296	1.41	3	0
SULLIVANS IS	32.7617, -79.8572	4.921	3.983	4.922	1.812	9	0
CHARLESTON INTL AP	32.8994, -80.0408	39.042	10.951	29.199	5.248	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.754017, -79.85
Observation Date	2026-05-05
Elevation (ft)	9.661
Drought Index (PDSI)	Severe drought (2026-04)
WebWIMP H ₂ O Balance	Not available

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-05	1.661811	3.784646	1.090551	Dry	1	3	3
2026-04-05	1.709055	3.714961	0.629921	Dry	1	2	2
2026-03-06	1.785827	3.155906	1.818898	Normal	2	1	2
Result							Drier than Normal - 7

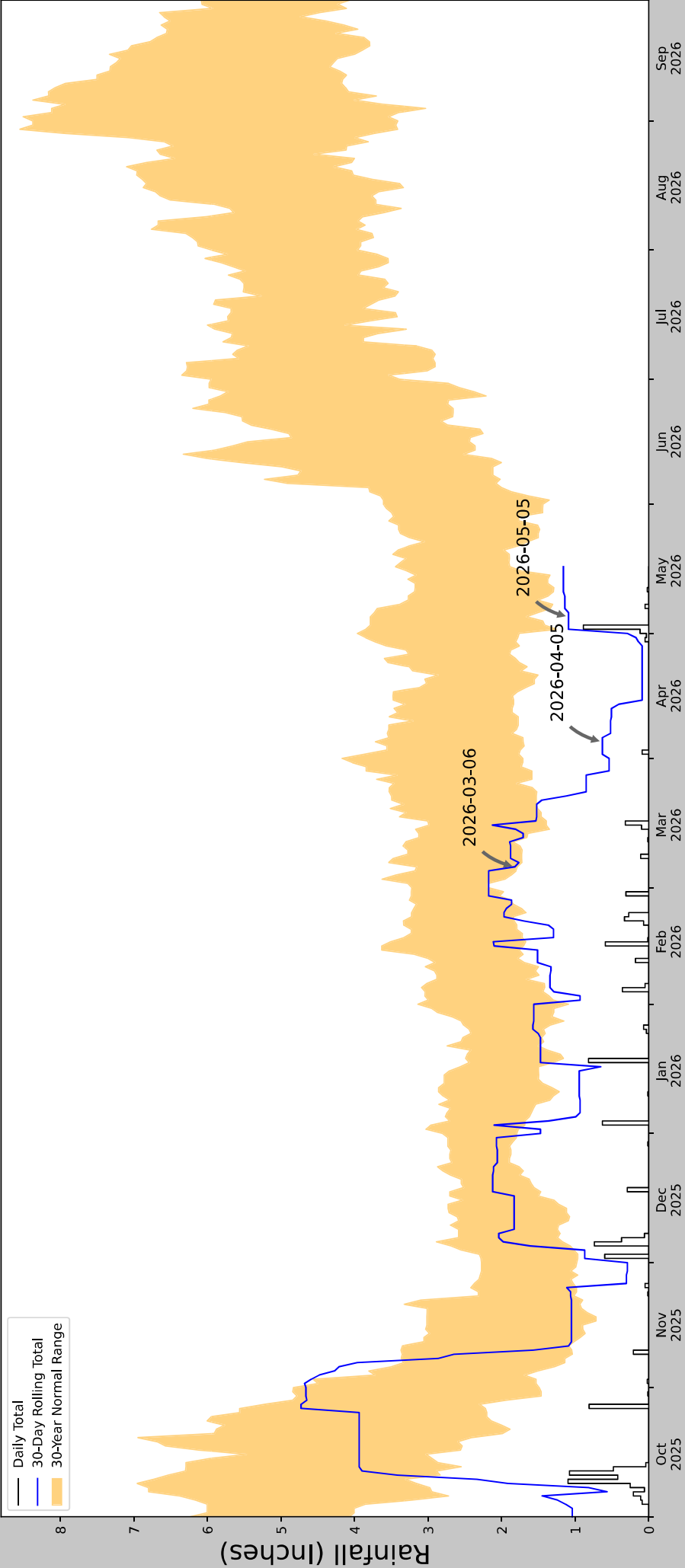
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DWYN CHARLESTON	32.775, -79.9239	9.843	4.532	0.182	2.04	11321	89
CHARLESTON 5.2 ESE	32.7449, -79.9186	26.903	2.102	17.06	0.982	16	0
MOUNT PLEASANT 2.6 SW	32.7929, -79.8913	4.921	2.262	4.922	1.029	0	1
CHARLESTON 1.7 SE	32.7649, -79.9762	12.139	3.118	2.296	1.41	3	0
SULLIVANS IS	32.7617, -79.8572	4.921	3.983	4.922	1.812	9	0
CHARLESTON INTL AP	32.8994, -80.0408	39.042	10.951	29.199	5.248	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.836266, -79.949146
Observation Date	2026-05-05
Elevation (ft)	15.509
Drought Index (PDSI)	Severe drought (2026-04)
WebWIMP H ₂ O Balance	Not available

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-05	1.661811	3.784646	1.090551	Dry	1	3	3
2026-04-05	1.709055	3.714961	0.629921	Dry	1	2	2
2026-03-06	1.785827	3.155906	1.818898	Normal	2	1	2
Result							Drier than Normal - 7

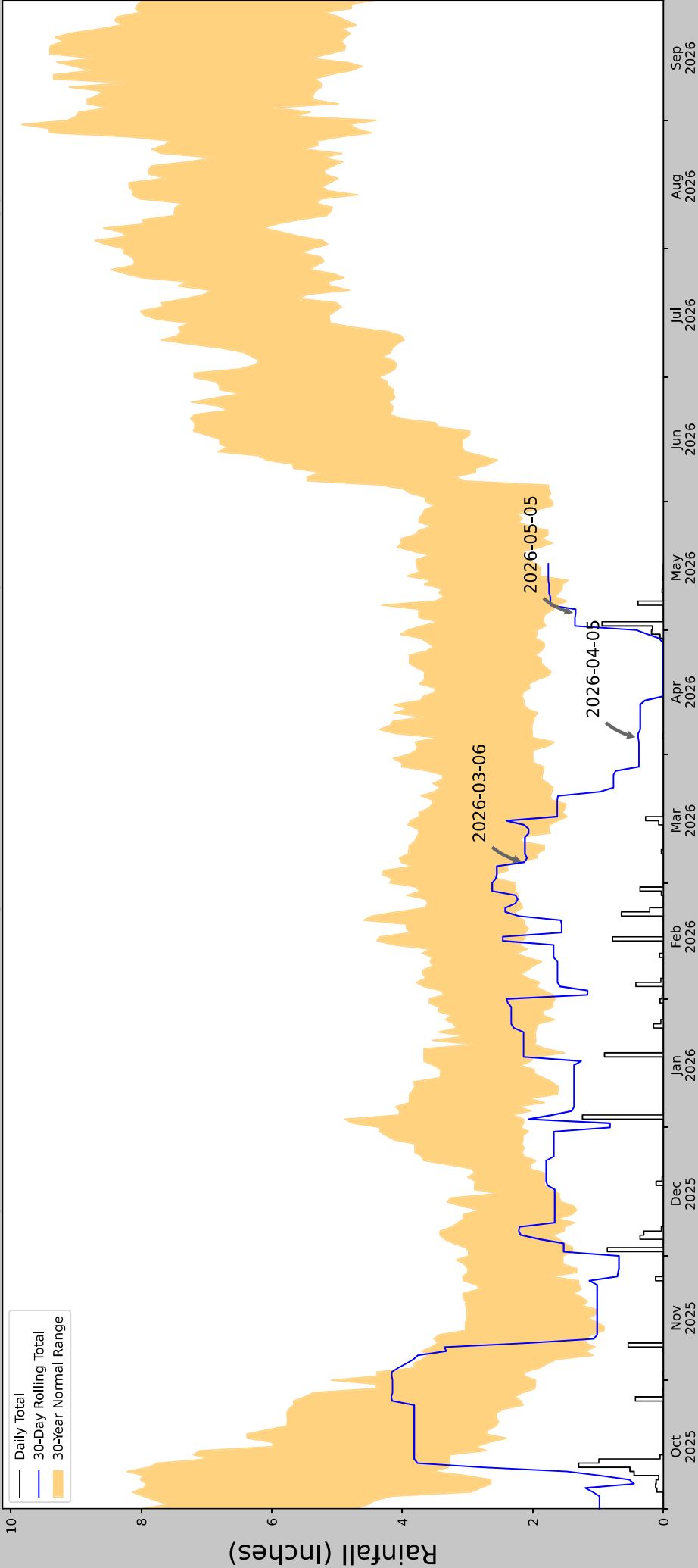
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DWYN CHARLESTON	32.775, -79.9239	9.843	4.48	5.666	2.041	11321	89
CHARLESTON 5.2 ESE	32.7449, -79.9186	26.903	2.102	17.06	0.982	16	0
MOUNT PLEASANT 2.6 SW	32.7929, -79.8913	4.921	2.262	4.922	1.029	0	1
CHARLESTON 1.7 SE	32.7649, -79.9762	12.139	3.118	2.296	1.41	3	0
SULLIVANS IS	32.7617, -79.8572	4.921	3.983	4.922	1.812	9	0
CHARLESTON INTL AP	32.8994, -80.0408	39.042	10.951	29.199	5.248	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.892486, -80.003811
Observation Date	2026-05-05
Elevation (ft)	8,409
Drought Index (PDSI)	Severe drought (2026-04)
WebWMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-05	1.8	3.746457	1.34252	Dry	1	3	3
2026-04-05	2.001969	3.456299	0.385827	Dry	1	2	2
2026-03-06	2.252756	4.018898	2.129921	Dry	1	1	1
Result							Drier than Normal - 6

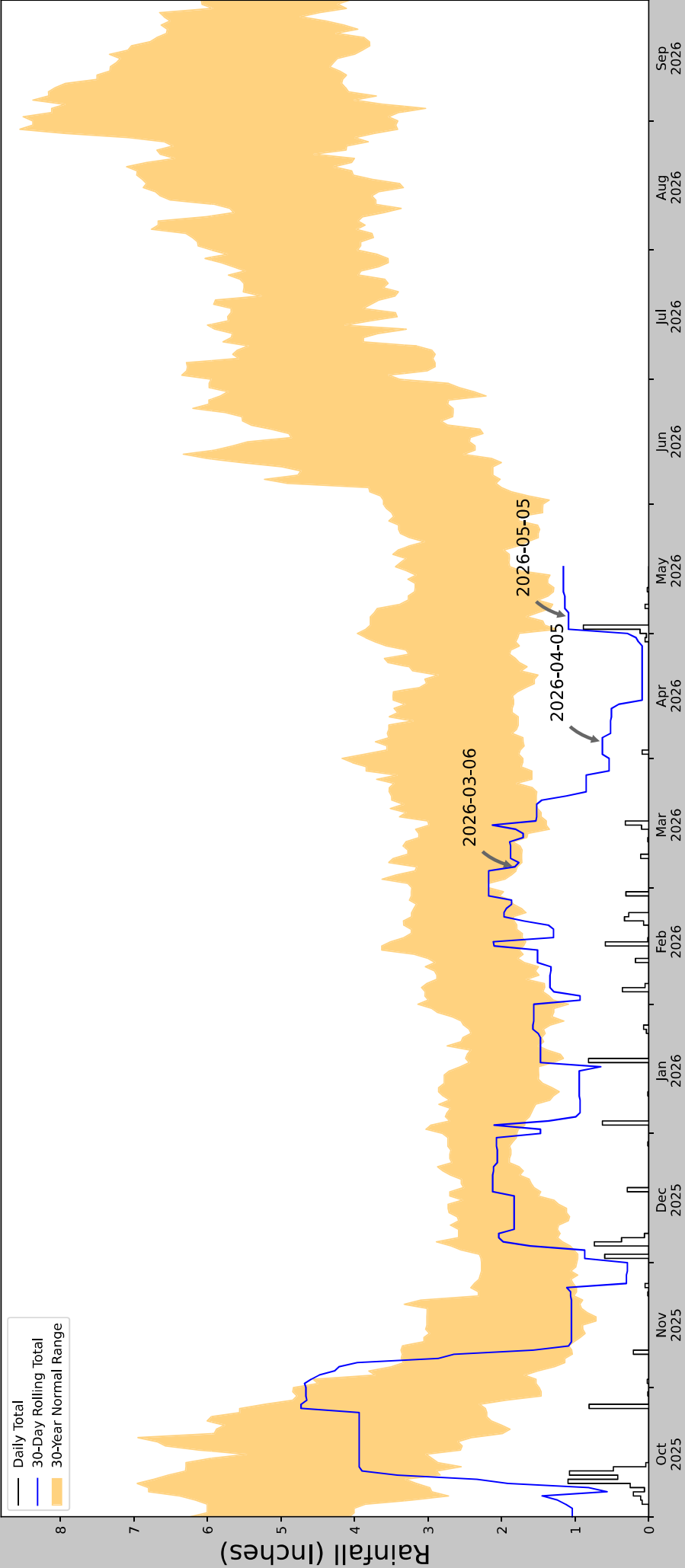
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHARLESTON INTL AP	32.8994, -80.0408	39,042	2.198	30,633	1.057	11353	90

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.715869, -79.918188
Observation Date	2026-05-05
Elevation (ft)	-4.5
Drought Index (PDSI)	Severe drought (2026-04)
WebWIMP H ₂ O Balance	Not available

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-05	1.661811	3.784646	1.090551	Dry	1	3	3
2026-04-05	1.709055	3.714961	0.629921	Dry	1	2	2
2026-03-06	1.785827	3.155906	1.818898	Normal	2	1	2
Result							Drier than Normal - 7

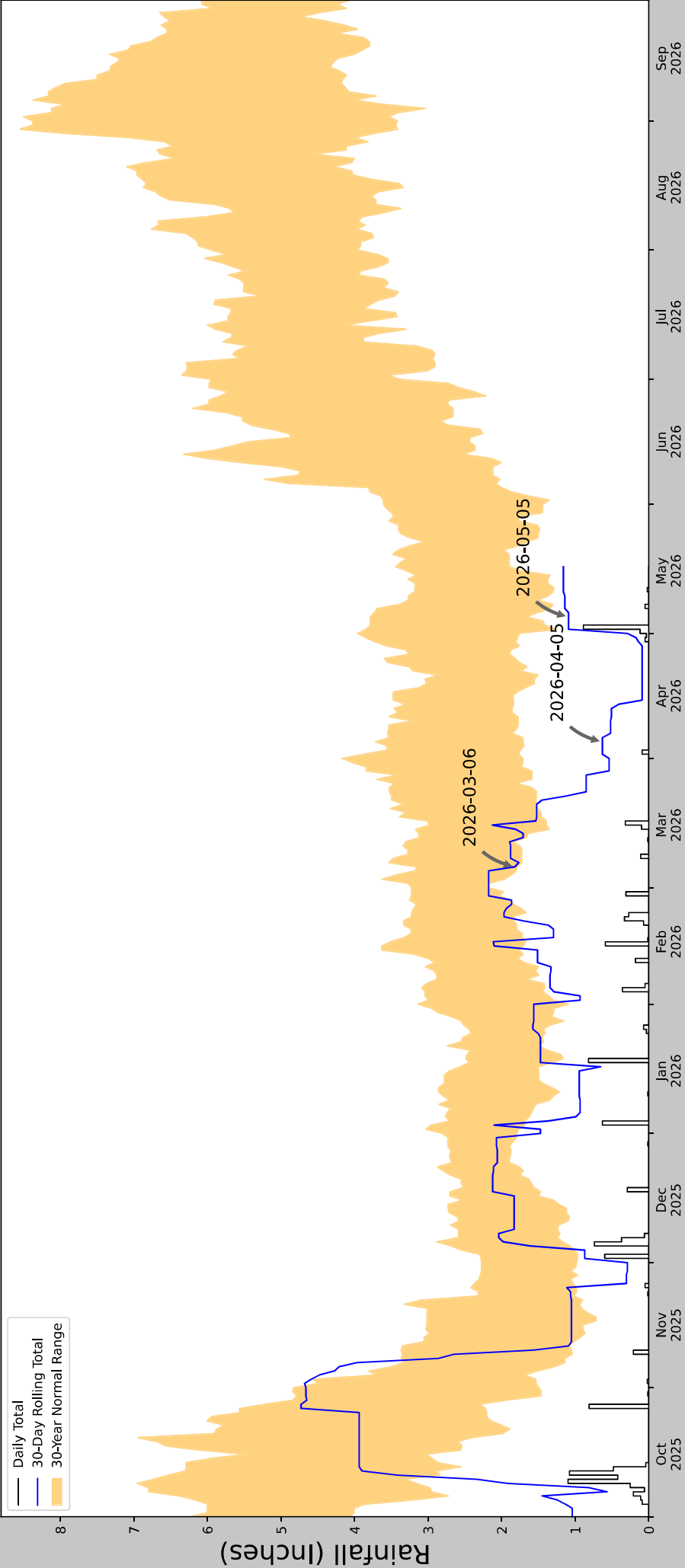
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DWYN CHARLESTON	32.775, -79.9239	9.843	4.099	14.343	1.903	11321	89
CHARLESTON 5.2 ESE	32.7449, -79.9186	26.903	2.102	17.06	0.982	16	0
MOUNT PLEASANT 2.6 SW	32.7929, -79.8913	4.921	2.262	4.922	1.029	0	1
CHARLESTON 1.7 SE	32.7649, -79.9762	12.139	3.118	2.296	1.41	3	0
SULLIVANS IS	32.7617, -79.8572	4.921	3.983	4.922	1.812	9	0
CHARLESTON INTL AP	32.8994, -80.0408	39.042	10.951	29.199	5.248	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.781739, -79.915138
Observation Date	2026-05-05
Elevation (ft)	-5.0
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Not available

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-05	1.661811	3.784646	1.090551	Dry	1	3	3
2026-04-05	1.709055	3.714961	0.629921	Dry	1	2	2
2026-03-06	1.785827	3.155906	1.818898	Normal	2	1	2
Result							Drier than Normal - 7

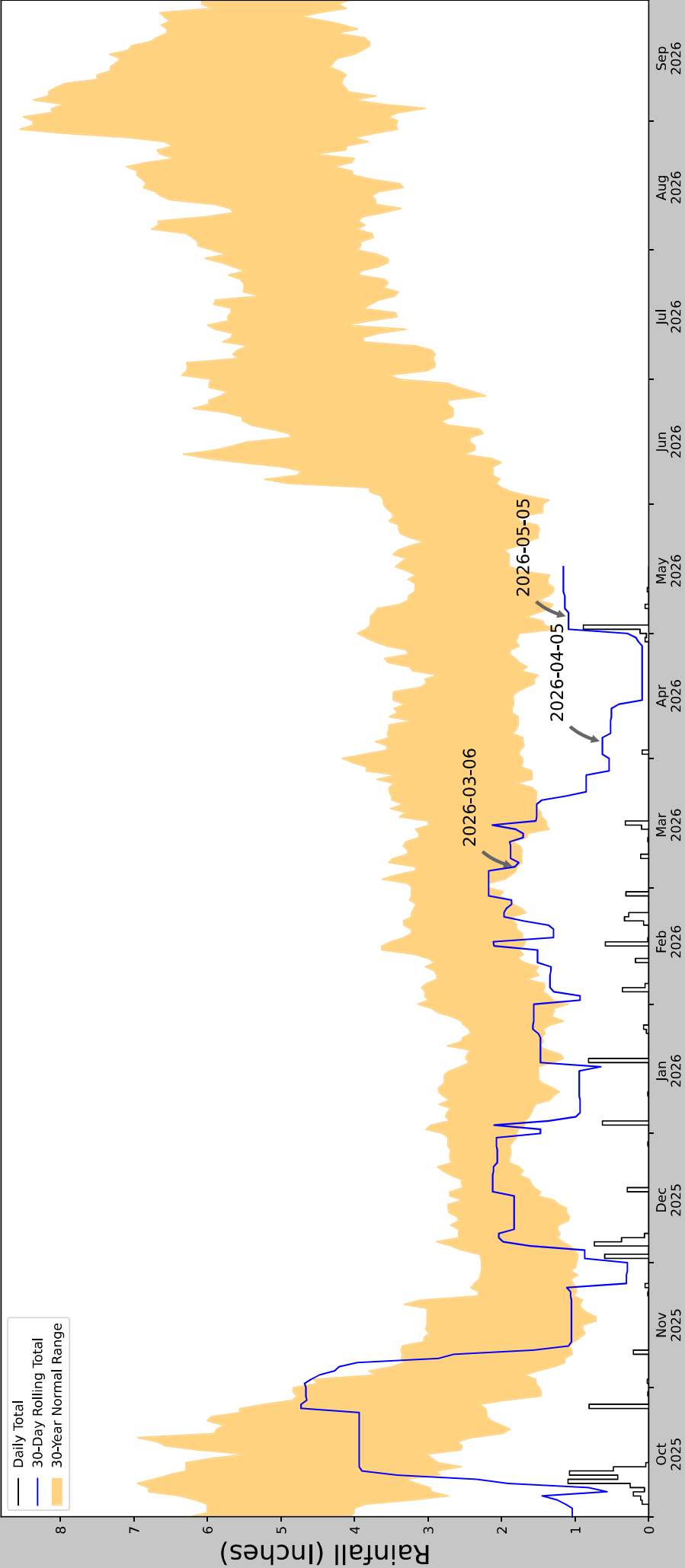
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DWYN CHARLESTON	32.775, -79.9239	9.843	0.69	14.843	0.321	11321	89
CHARLESTON 5.2 ESE	32.7449, -79.9186	26.903	2.102	17.06	0.982	16	0
MOUNT PLEASANT 2.6 SW	32.7929, -79.8913	4.921	2.262	4.922	1.029	0	1
CHARLESTON 1.7 SE	32.7649, -79.9762	12.139	3.118	2.296	1.41	3	0
SULLIVANS IS	32.7617, -79.8572	4.921	3.983	4.922	1.812	9	0
CHARLESTON INTL AP	32.8994, -80.0408	39.042	10.951	29.199	5.248	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.807305, -79.839437
Observation Date	2026-05-05
Elevation (ft)	10.681
Drought Index (PDSI)	Severe drought (2026-04)
WebWIMP H ₂ O Balance	Not available

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-05	1.661811	3.784646	1.090551	Dry	1	3	3
2026-04-05	1.709055	3.714961	0.629921	Dry	1	2	2
2026-03-06	1.785827	3.155906	1.818898	Normal	2	1	2
Result							Drier than Normal - 7

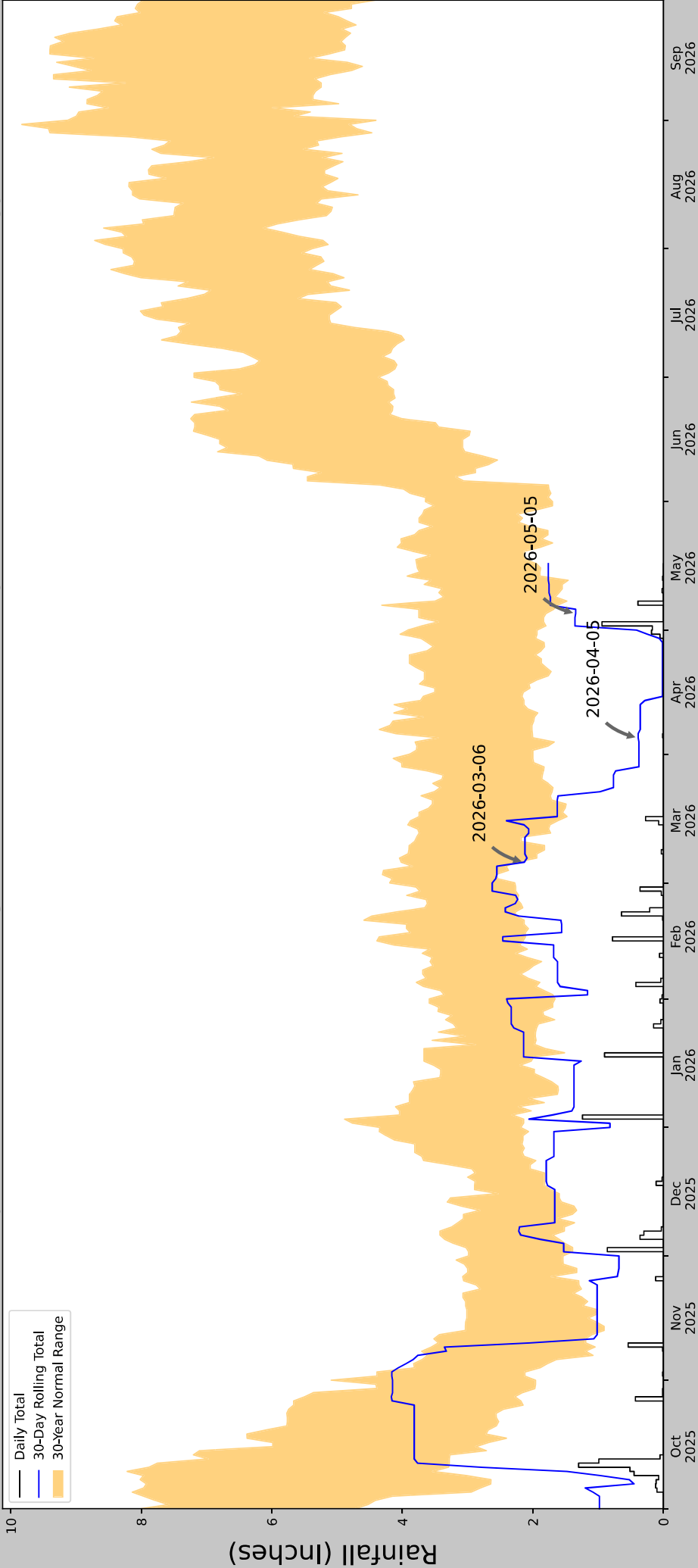
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DWYN CHARLESTON	32.775, -79.9239	9.843	5.39	0.838	2.43	11321	89
CHARLESTON 5.2 ESE	32.7449, -79.9186	26.903	2.102	17.06	0.982	16	0
MOUNT PLEASANT 2.6 SW	32.7929, -79.8913	4.921	2.262	4.922	1.029	0	1
CHARLESTON 1.7 SE	32.7649, -79.9762	12.139	3.118	2.296	1.41	3	0
SULLIVANS IS	32.7617, -79.8572	4.921	3.983	4.922	1.812	9	0
CHARLESTON INTL AP	32.8994, -80.0408	39.042	10.951	29.199	5.248	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.892282, -79.930804
Observation Date	2026-05-05
Elevation (ft)	27.866
Drought Index (PDSI)	Severe drought (2026-04)
WebWMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-05-05	1.8	3.746457	1.34252	Dry	1	3	3
2026-04-05	2.001969	3.456299	0.385827	Dry	1	2	2
2026-03-06	2.252756	4.018898	2.129921	Dry	1	1	1
Result							Drier than Normal - 6

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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHARLESTON INTL AP	32.8994, -80.0408	39.042	6.4	11.176	2.952	11353	90