
National Park Service
Cultural Landscapes Inventory
2011



Novillo Line Camp
Padre Island National Seashore

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Inventory Summary

The Cultural Landscapes Inventory Overview:

CLI General Information:

Purpose and Goals of the CLI

The Cultural Landscapes Inventory (CLI), a comprehensive inventory of all cultural landscapes in the national park system, is one of the most ambitious initiatives of the National Park Service (NPS) Park Cultural Landscapes Program. The CLI is an evaluated inventory of all landscapes having historical significance that are listed on or eligible for listing on the National Register of Historic Places, or are otherwise managed as cultural resources through a public planning process and in which the NPS has or plans to acquire any legal interest. The CLI identifies and documents each landscape's location, size, physical development, condition, landscape characteristics, character-defining features, as well as other valuable information useful to park management. Cultural landscapes become approved CLIs when concurrence with the findings is obtained from the park superintendent and all required data fields are entered into a national database. In addition, for landscapes that are not currently listed on the National Register and/or do not have adequate documentation, concurrence is required from the State Historic Preservation Officer or the Keeper of the National Register.

The CLI, like the List of Classified Structures, assists the NPS in its efforts to fulfill the identification and management requirements associated with Section 110(a) of the National Historic Preservation Act, National Park Service Management Policies (2006), and Director's Order #28: Cultural Resource Management. Since launching the CLI nationwide, the NPS, in response to the Government Performance and Results Act (GPRA), is required to report information that respond to NPS strategic plan accomplishments. Two GPRA goals are associated with the CLI: bringing certified cultural landscapes into good condition (Goal 1a7) and increasing the number of CLI records that have complete, accurate, and reliable information (Goal 1b2B).

Scope of the CLI

The information contained within the CLI is gathered from existing secondary sources found in park libraries and archives and at NPS regional offices and centers, as well as through on-site reconnaissance of the existing landscape. The baseline information collected provides a comprehensive look at the historical development and significance of the landscape, placing it in context of the site's overall significance. Documentation and analysis of the existing landscape identifies character-defining characteristics and features, and allows for an evaluation of the landscape's overall integrity and an assessment of the landscape's overall condition. The CLI also provides an illustrative site plan that indicates major features within the inventory unit. Unlike cultural landscape reports, the CLI does not provide management recommendations or

treatment guidelines for the cultural landscape.

Inventory Unit Description:

The Novillo Line Camp is the northernmost of four line camps that Patrick Dunn built on Padre Island in order to effectively work his cattle ranch. Patrick Dunn came to Padre Island in 1879, looking to establish a cattle ranch. The island proved to be an ideal location for such a ranch, as it had previously been grazed since the 1760s and offered abundant native grasses. The surrounding water provided natural fences that contained the cattle to the island, while the lack of dense chaparral and overstory trees provided an environment conducive to herding cattle.

In the establishment of the ranch, Dunn constructed a series of line camps spaced approximately 15 miles apart—the distance cattle could be driven in one day. Line camps were small outposts on grazing land that primarily consisted of fences and corrals in which to separate and work on the cattle. Ranch hands were temporarily stationed at these camps to “ride the line” as they drove cattle to market.

Novillo became the northernmost of the camps in the late 19th century where cattle were held and then herded across the Packery Channel to the Texas mainland to be sold. Later, Novillo was the main gathering spot for loading cattle to market beginning in the late 1940s. At the camp, Dunn constructed two bunkhouses, a cookhouse, a series of corrals and fences, as well as a large fenced-in area, called a trap, which enclosed the entire camp area. The island, isolated from the mainland, provided a number of building materials through driftwood and lumber that washed up on the beaches. Dunn used these materials to his advantage, creating functional, vernacular structures.

Patrick Dunn continued to obtain land and operate the ranch until his death in 1937. At that time, his son, Burton Dunn, managed the cattle ranch making improvements to the line camp. Beginning in the late 1940s through the late 1960s, Burton added a windmill, two concrete water tanks, a road constructed of shell, and cattle loading chutes to accommodate vehicular truck access to the camp to transport cattle. The Dunn family continued cattle operations until 1971 when the last cattle were removed from the park.

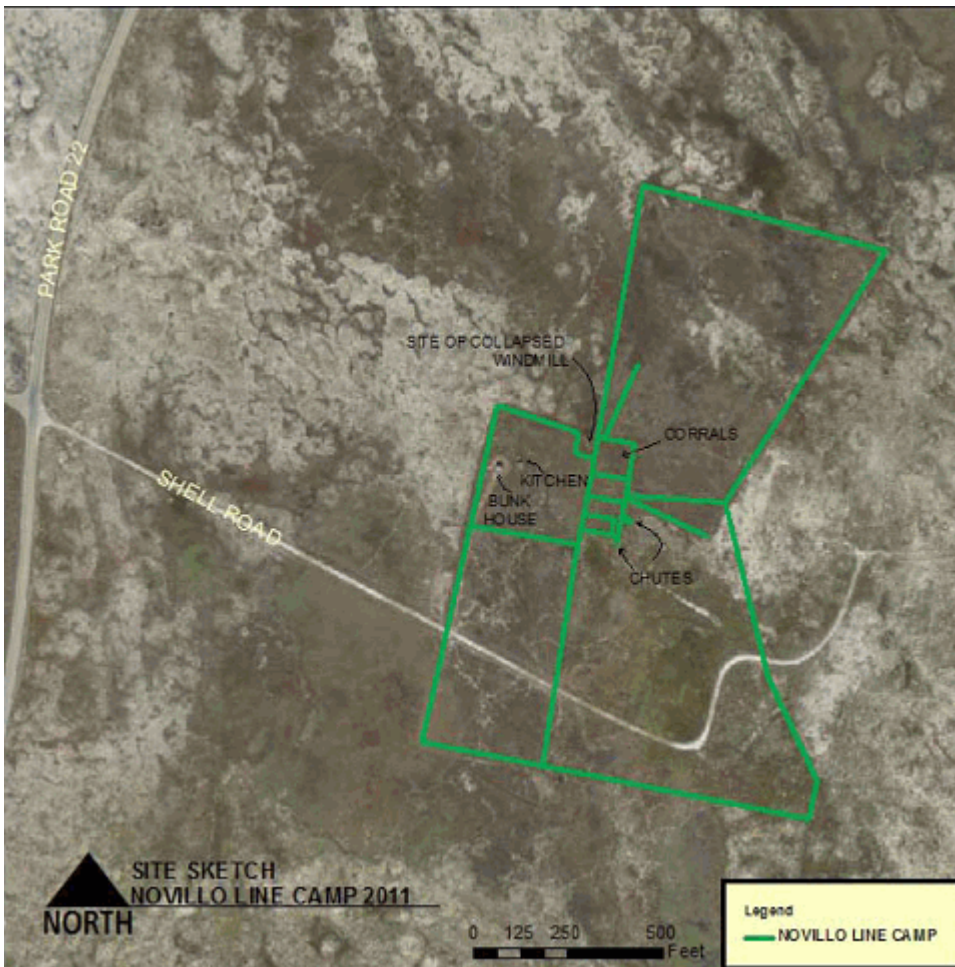
Since 1971, minimal alterations have been made to the landscape. Repairs were made to the bunkhouses and cookhouse in the mid-1970s in preparation for a ranching demonstration in 1976. A Historic Structures Report was completed in 1979, which outlined “benign neglect” as the preferred treatment option. Shortly thereafter, one of the bunkhouses was destroyed in a fire. Throughout the 1980s and 1990s, the remaining buildings and structures of the line camp were allowed to actively deteriorate. A shift in park management in the late 1990s marked the beginning of interest in the line camp and efforts were made to stabilize the remaining structures. Stabilization of the bunkhouse and cookhouse were made in 2002. Visitor parking and an interpretive boardwalk were proposed shortly thereafter; funding for construction is anticipated Summer 2011. Though the main features of the camp have been stabilized and repaired, a number of the corrals and fences remain in a deteriorated state. As a result, the condition of the landscape is fair.

Today, Novillo Line Camp is near the east shore of Padre Island National Seashore approximately 2.2 miles south of the north boundary, north of the Ranger Station and across from Bird Island Basin. The camp is eligible for listing on the National Register under Criteria A, C, and D in the areas of

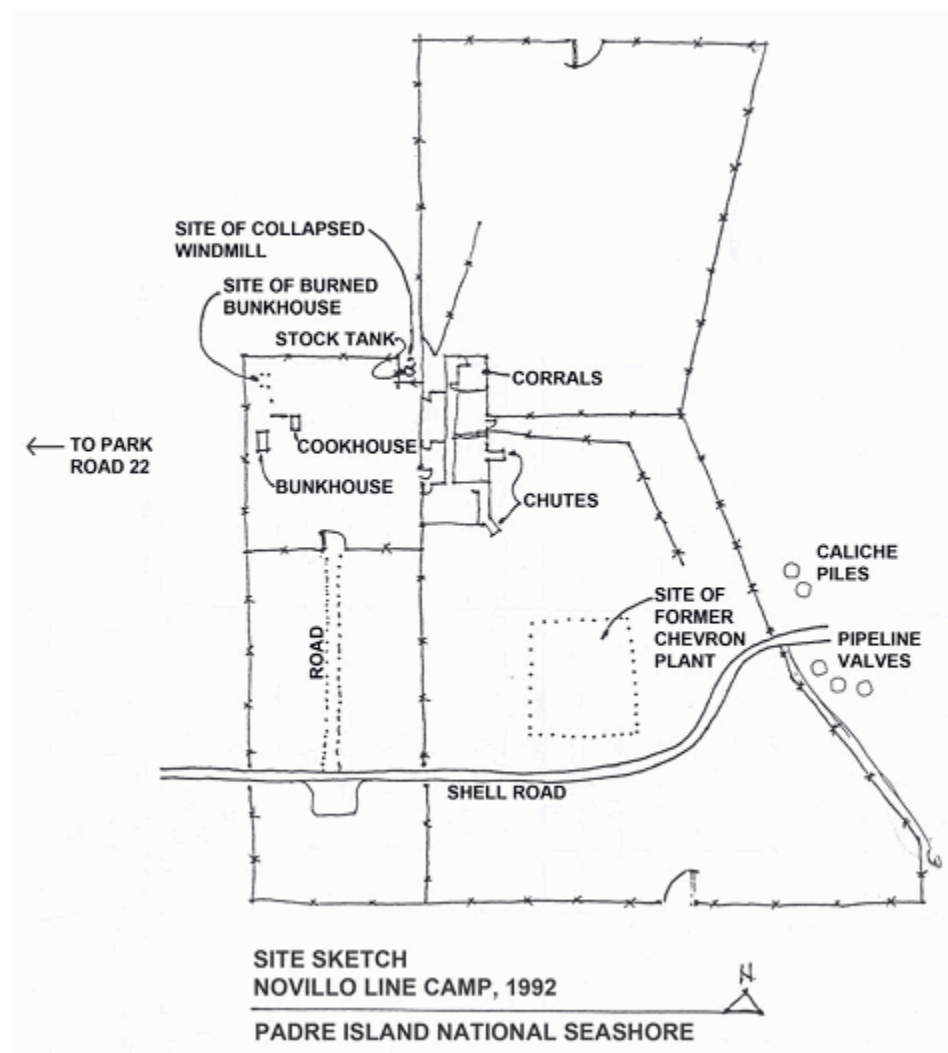
Novillo Line Camp
Padre Island National Seashore

Architecture, Agriculture, and Archeology. Additionally, the landscape retains integrity from the 1879 to 1971 period of significance.

Site Plan



Site plan showing Novillo Line Camp, 2011. Source: PAIS GIS files.



Site plan showing Novillo Line Camp, 1992. Source: IMR CRM files.



*Site plan showing boundary addressed in this CLI with Novillo Line Camp in the center, 2011.
Source: Google Earth.*

Property Level and CLI Numbers

Inventory Unit Name:	Novillo Line Camp
Property Level:	Component Landscape
CLI Identification Number:	850085
Parent Landscape:	850084

Park Information

Park Name and Alpha Code:	Padre Island National Seashore -PAIS
Park Organization Code:	7490
Park Administrative Unit:	Padre Island National Seashore

CLI Hierarchy Description

Novillo Line Camp

Padre Island National Seashore

The Novillo Line Camp is one of three line camps within Padre Island National Seashore that were historically part of the Dunn Ranch. The other two line camps, Black Hill and Green Hill, are documented in separate CLIs. At least one other line camp and the Dunn Ranch Headquarters are located outside of the park's authorized boundary. If these properties are acquired by the NPS, it is recommended that additional CLIs be conducted for those sites.

Concurrence Status

Inventory Status: Complete

Completion Status Explanatory Narrative:

An initial reconnaissance or Level 0 CLI was done by Jill Cowley in 1998. The information gathered at that time included a general overview of the area (site name, significance, National Register information, threats, etc) in preparation for an Oil and Gas Management Plan and Environmental Impact Statement (1999).

A more complete CLI was drafted by Carrie Mardorf, Intermountain Region CLI Coordinator, with assistance from Jim Lindsay, Chief of Sciences and Natural Resources; Wade O. Stablein, Biological Technician; and Travis R. Clapp, Cartographic Technician. The final CLI was completed in 2011.

Concurrence Status:

Park Superintendent Concurrence: Yes
Park Superintendent Date of Concurrence: 06/13/2011
National Register Concurrence: Eligible -- SHPO Consensus Determination
Date of Concurrence Determination: 07/07/2011
National Register Concurrence Narrative:

The Texas Historical Commission (THC) concurred with the findings of the CLI on 7/7/2011.

Concurrence Graphic Information:

Novillo Line Camp
Padre Island National Seashore

MEMORANDUM

To: NPS-IMR CLI Coordinator
Box 728
Santa Fe, New Mexico 87504-0728

From: Superintendent
Padre Island National Seashore
PO Box 181300
Corpus Christi, TX 78480-1300

Subject: Novillo Line Camp, Black Hill Line Camp, Green Hill Line Camp Cultural Landscape Inventories (CLIs)

I hereby concur with the content and the assessment of the Novillo Line Camp, Black Hill Line Camp, and Green Hill Line Camp Cultural Landscape Inventories (CLIs)

1. The CLIs have identified the Novillo, Black Hill, and Green Hill Line Camps as Historic Vernacular Landscapes.
2. The condition of the Novillo Line Camp and Black Hill Line Camp are listed as "Fair," while the condition of the Green Hill Line camp is "Poor." The Management Category for all three line camps is listed as "Should be Preserved and Maintained".
3. The period of significance for the three line camps is 1879 to 1971 AD. The Statement of Significance for Novillo Line Camp states the landscape is significant under Criterion A, C, and D. However, Black Hill and Green Hill Line Camps are significant under Criterion A and D.
4. The contributing features for each line camp are listed in the "Analysis and Evaluation" section and represent landscape features that are integral to the character and integrity of each site.

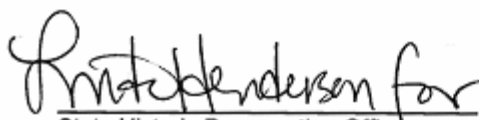

Superintendent, Padre Island National Seashore

6/13/11
Date

Park Superintendent concurrence on the findings of the CLI, 6/13/2011.

NOVILLO LINE CAMP, BLACK HILL LINE CAMP, AND GREEN HILL LINE CAMP

I hereby concur with the content and findings of the assessment of the cultural landscapes for the Novillo, Black Hill, and Green Hill Line Camps, as noted in the respective Cultural Landscape Inventories (CLIs).


State Historic Preservation Officer

7 July 2011
Date

Texas Historical Commission (THC) concurrence on the findings of the CLI, 7/7/2011.

Geographic Information & Location Map

Inventory Unit Boundary Description:

While the actual ranching landscape at Padre Island encompassed the entire island, the boundary addressed in this CLI includes approximately 330 acres. The western boundary aligns to park road 22, while the eastern boundary follows the west edge of the beach. The north and south boundaries extend roughly .25 miles from the trap fence lines.

State and County:

State: TX

County: Kleberg County

Size (Acres): 330.00

Boundary UTMS:

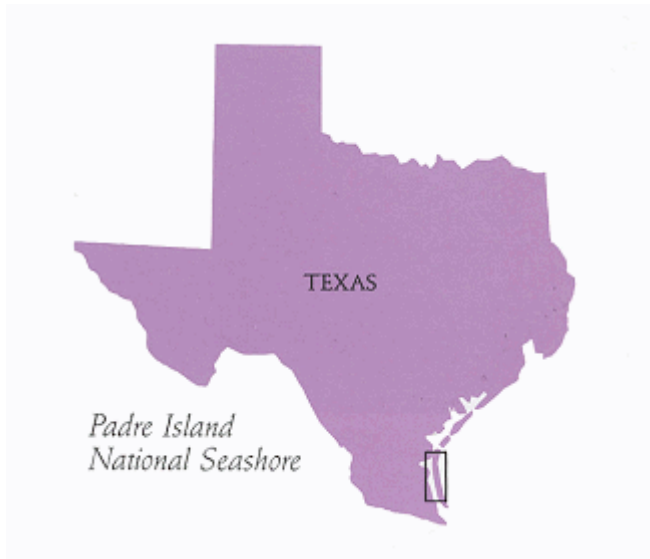
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Datum: Other Datum
UTM Zone: 14
UTM Easting: 669,236
UTM Northing: 3,039,675
Boundary Datum Other: Google Earth – WGS 84

Source: GPS-Differentially Corrected
Boundary Source Narrative: NE Corner
Type of Point: Area
Datum: Other Datum
UTM Zone: 14
UTM Easting: 670,025
UTM Northing: 3,039,298
Boundary Datum Other: Google Earth – WGS 84

Source: GPS-Differentially Corrected
Boundary Source Narrative: SE Corner
Type of Point: Area
Datum: Other Datum
UTM Zone: 14
UTM Easting: 669,505
UTM Northing: 3,037,960
Boundary Datum Other: Google Earth – WGS 84

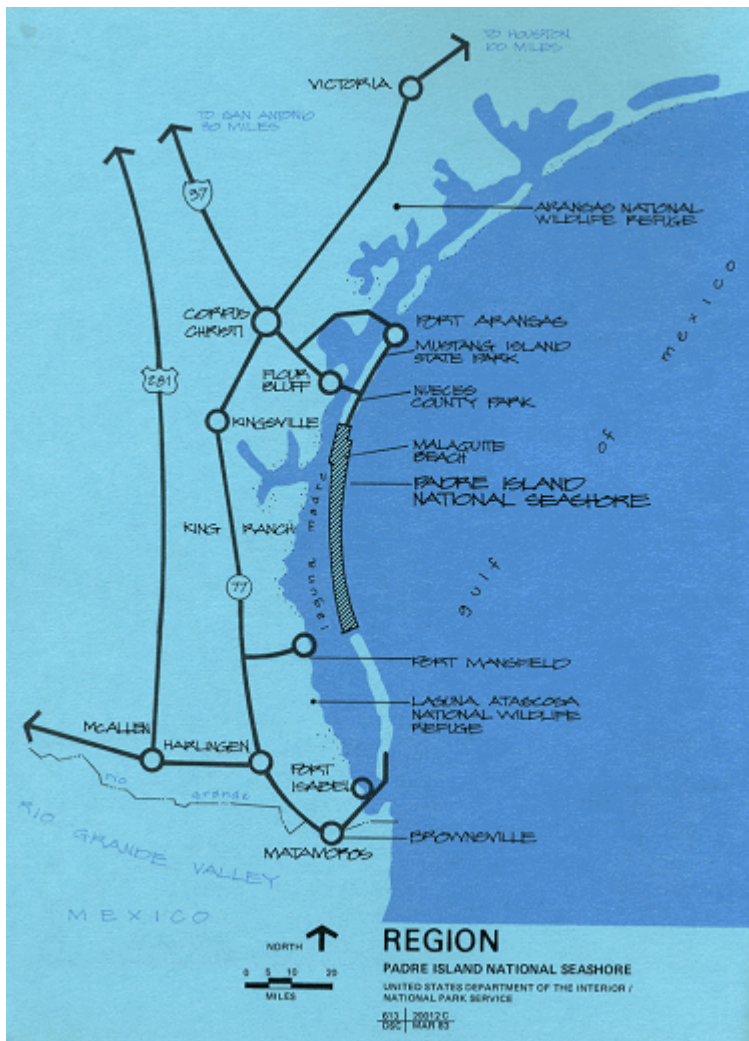
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UTM Northing:	3,038,281
Boundary Datum Other:	Google Earth – WGS 84

Location Map:



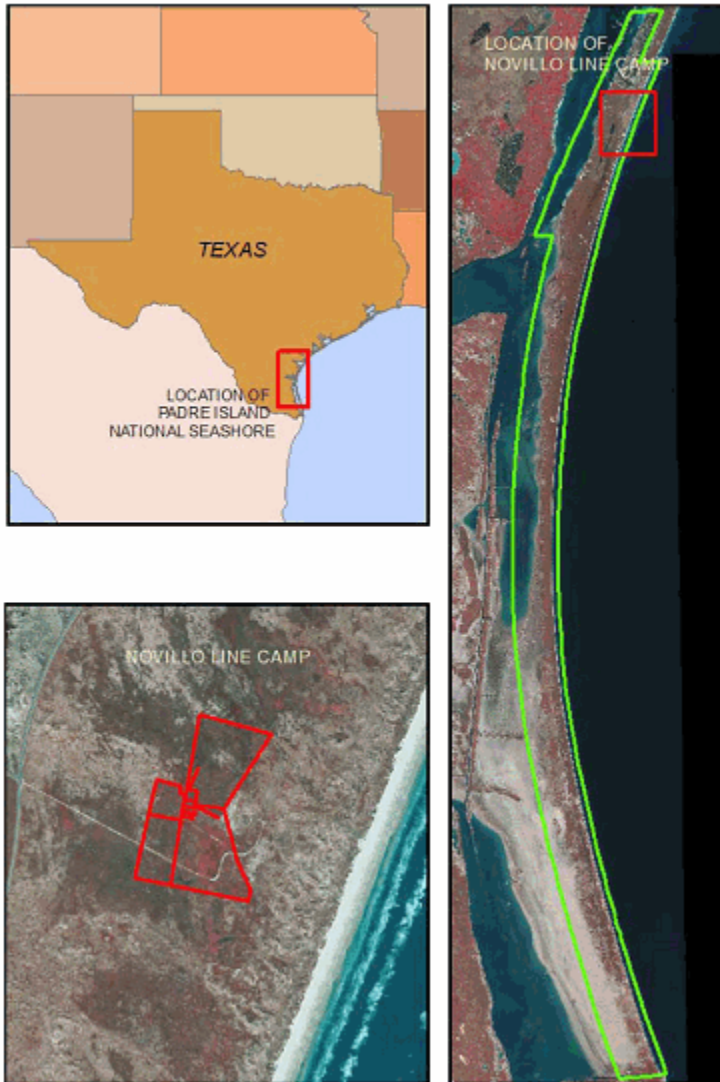
*Location map showing location of Padre Island National Seashore within the State of Texas
(Source: Brown 1991, 4).*

Novillo Line Camp
Padre Island National Seashore



Location map showing Padre Island National Seashore and surrounding vicinity (Source: GMP 1983, 2).

Novillo Line Camp
Padre Island National Seashore



Location map showing Novillo Line Camp within Padre Island National Seashore. (Source: PAIS GIS files).

Regional Context:

Type of Context: Cultural

Description:

Cultural resources on the island include prehistoric sites, an Underwater Archeological District, and the ranching line camps. Over time, an influx of human activity from Native Americans, Spaniards, ranchers, oil and gas explorers and recreationists have affected the island (DCP 1995, 8-9).

Surveys between 1964 and 1993 recorded 32 cultural sites on the island, 20 of which are in the boundaries of the park. Most of which are at the northern end of the island.

Artifacts from neo-American sites are attributed to the late prehistoric and historic Karankawa and/or Coahuiltecan tribes. Contact with Euro-Americans so totally uprooted and physically reduced these two tribes that by 1840 very few members remained. There are no known living descendants (DCP 1995, 71). Because the shifting sands of Padre Island constantly cover and reveal archeological sites, and because survey coverage is not yet complete, the presence of additional sites is likely (DCP 1995, 72).

Three underwater historic archeological sites consisting of Spanish Colonial shipwrecks from 1554 comprise the Mansfield Cut Underwater Archeological District, which is listed on the National Register of Historic Places, and included portions of the park (DCP 1995, 71). The shipwreck of the Nicaragua from June 1913 is also a notable underwater archeological site. Although currently submerged, the boilers of the Nicaragua are visible at low tide.

Other historic sites and landscapes include the Zachary Taylor campsite from the Mexican-American War, and three line camps from the Dunn Ranch, known as Black Hill, Green Hill, and Novillo Line Camps that were built for cattle operations. The Novillo Line Camp, the only remaining collection of historic structures related to open-range ranching on the island was listed on the National Register in 1974 (DCP 1995, 72).

Type of Context: Physiographic

Description:

Padre Island National Seashore encompasses 69 miles of the 113-mile long barrier island located in the Coastal Bend region of South Texas, within Kleberg, Kenedy, and Willacy Counties (DCP 1995, 1).

As the southernmost link in the chain of Texas barrier islands in the Gulf of Mexico, Padre Island was historically the longest undeveloped barrier island in the U.S. Today, Padre Island is now considered a separate island delineated by the Packery Channel (formerly Corpus Christi Pass) to the north and Mansfield Channel to the south. South of the Mansfield Channel, South Padre Island extends to Brazos Santiago Pass, just north of the U.S.-Mexico border. Both islands are separated from the mainland by Laguna Madre, a shallow body of water that is

navigable through the Gulf Intracoastal Waterway maintained by the U.S. Army Corps of Engineers. The lagoon, which is 10 miles wide at its widest point, is connected to the gulf by the Mansfield Channel, which cuts through the southern portion of the island (GMP 1983, 4).

From the gulf to the laguna, the Padre Island varies from 1000 feet to 2.5 miles wide. Its landscape changes from broad sandy beaches, or in places beaches comprised almost entirely of shells, to ridges of fore-island dunes; then to grassy flats broken here and there by smaller dunes and ponds; and finally to vaguely defined back-island dunes and mudflats that merge with the waters of the laguna. These land and water environments provide a rich habitat for marine and terrestrial plants and animals (DCP 1995, 65-66).

As a barrier island, Padre Island National Seashore is a dynamic system, which was formed and is continually being reshaped by the action of wind, current, wave, and tide. Waves and currents move sand and shell along the gulf shore in shifting patterns that shape the character of different beaches. Winds pick up the sand from the beaches and carry it landward, moving the island westward toward the mainland. The largest forces driving the island west are washovers during hurricanes. Massive amounts of material are transported across the island and into the Laguna during these events. Where vegetation is successful, it produces a stabilizing effect, binding the blowing sand and building the elevations of the dunes. However, this stabilizing force is constantly interrupted by the large storms that sweep across the island, destroying vegetation, leveling dunes, and eroding deposits of sand and shell (DCP 1995, 65-66).

The climate of the island is subtropical with an average rainfall of 28.5 inches annually; however, in the 1990s, rainfall increased substantially to over 40 inches annually. Increasing rainfall has also raised the water table and promoted dunefield growth at the expense of sediment export (DCP 1995, 66). From 2005 to 2010 drought lowered the water table to the point that only one fresh water feature still had water. Heavy precipitation from 2010 to 2011 has ended the drought and raised the water table so that much of the island is covered with standing fresh water.

Persistent southeasterly winds occur from March to September, and north-northeasterly winds occur from October to February. Weather on the island is changeable and often dramatic, with high tides and winds, and sudden temperature changes. The hurricane season extends from June 1 through October. In any given year, the probability of tropical storms or hurricanes is 34 percent, with an average of 5 years between hurricanes along this stretch of coastline (DCP 1995, 66).

Type of Context: Political

Description:

The park was established in 1962 to “save and preserve, for the purposes of public recreation, benefit, and inspiration, a portion of the diminishing seashore of the United States that remains undeveloped.” (DCP 1995, 1). As a result, it has become a major regional recreation destination. Visitor facilities are located within 5 miles of the north entrance, with more than 60

Novillo Line Camp
Padre Island National Seashore

miles of undeveloped beach stretching to the south. Major visitor activities include driving and walking on the beach, camping, boating, sail boarding, fishing, nature viewing, swimming, shelling, and bird watching (DCP 1995, 1).

Management Unit: Padre Island National Seashore

Management Information

General Management Information

Management Category: Should be Preserved and Maintained

Management Category Date: 10/01/1974

Management Category Explanatory Narrative:

The Novillo Line Camp was listed on the National Register of Historic Places on 10/1/1974, and thus, should be maintained and preserved. Additionally, it is one of the most well preserved ranching line camps within the park.

Agreements, Legal Interest, and Access

Management Agreement:

Type of Agreement: Other Agreement

Other Agreement: Maintenance Plan

Management Agreement Explanatory Narrative:

The Texas Historical Commission (Texas SHPO) has concurred with the NPS maintenance plan for the Novillo Line Camp. The plan calls for repairing and replacing materials in-kind with materials that wash up on the beach, as was done historically.

NPS Legal Interest:

Type of Interest: Fee Simple

Explanatory Narrative:

The NPS owns the Novillo Line Camp outright with no encumbrances.

Public Access:

Type of Access: No Access Currently

Explanatory Narrative:

The camp is currently not open to visitors or the public. The Chevron oil road used to access the site is gated and locked. Plans to construct a visitor parking lot and interpretive boardwalk are expected to be implemented summer 2011.

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Description:

Novillo Line Camp
Padre Island National Seashore

The Novillo Line Camp is only one of several line camps that were part of the Dunn Ranch. At least one other line camp and the Dunn Ranch Headquarters existed outside of the park's authorized boundary, which also contribute to the significance of the Novillo Line Camp.

National Register Information

Existing National Register Status

National Register Landscape Documentation:

Entered Inadequately Documented

National Register Explanatory Narrative:

The Keeper of the National Register of Historic Places determined that the Novillo Line Camp was eligible for listing on the National Register on 9/25/1974, and the property was subsequently listed on the National Register of Historic Places on 10/1/1974. The nomination states the property is significant for its associations with agriculture and conservation of the 19th and 20th centuries. However, the nomination only focuses on the buildings and structures of the site, leaving out important landscape characteristics that are a part of the line camp. Additionally, several changes have been made to the buildings and structures of the site since 1974.

This CLI documents those key landscape features and also addresses changes within the landscape over time.

Existing NRIS Information:

Name in National Register:	Dunn Ranch, Novillo Line Camp
NRIS Number:	74000277
Other Names:	Dunn Ranch
Primary Certification Date:	10/01/1974

National Register Eligibility

National Register Concurrence:	Eligible -- SHPO Consensus Determination
Contributing/Individual:	Individual
National Register Classification:	Site
Significance Level:	State
Significance Criteria:	A - Associated with events significant to broad patterns of our history
Significance Criteria:	C - Embodies distinctive construction, work of master, or high artistic values
Significance Criteria:	D - Has yielded, or is likely to yield, information important to prehistory or history

Period of Significance:

Time Period:	AD 1879 - 1971
Historic Context Theme:	Peopling Places
Subtheme:	Westward Expansion of the Colonies and the United States, 1763-1898
Facet:	The Cattle Frontier
Time Period:	AD 1879 - 1971
Historic Context Theme:	Creating Social Institutions and Movements
Subtheme:	Ways of Life
Facet:	Ranching Communities
Time Period:	AD 1879 - 1971
Historic Context Theme:	Expressing Cultural Values
Subtheme:	Architecture
Facet:	Vernacular Architecture
Time Period:	AD 1879 - 1971
Historic Context Theme:	Developing the American Economy
Subtheme:	The Cattle Frontier
Facet:	Ranches
Time Period:	AD 1879 - 1971
Historic Context Theme:	Developing the American Economy
Subtheme:	Agriculture
Facet:	Animal Husbandry (Cattle, Horses, Sheep, Hogs, Poultry)

Area of Significance:

Area of Significance Category: Agriculture

Area of Significance Category: Architecture

Area of Significance Category: Archeology

Statement of Significance:

Novillo Line Camp

Padre Island National Seashore

The Novillo Line Camp is eligible for listing in the National Register of Historic Places under Criterion A for its association with agriculture and open range cattle ranching in southern Texas in the 19th and 20th centuries and under Criterion C for its vernacular architecture. The line camp is also eligible under Criterion D for its potential to add to existing knowledge of the Dunn Ranch operations on Padre Island. The period of significance for the Novillo Line Camp extends from 1879, when Patrick Dunn first started his cattle ranching operations on the island, until 1971, when ranching operations ceased.

Criterion A – Agriculture

Novillo Line Camp is the best remaining example of ranching operations, the primary historical land utilization of Padre Island from 1879 to 1971. As noted in the 1974 National Register nomination for the site, it also graphically illustrates a level of human historical interaction with the island's environment as an example of human adaption of agriculture to Padre Island. As the chief remnant of this activity within the park, Novillo represents a unique ranching effort significant at the state level.

Ranching on Padre Island began with the Spanish in the 1700s and was continued as part of Mexico in the early 1800s. After the establishment of the Republic of Texas, ranching thrived under Anglo-Americans throughout the 1870s. In 1879, Patrick Dunn moved from the Texas mainland and began his ranching operations on Padre Island, eventually acquiring most of the land on the island.

The island provided a unique ranch environment that aided in Dunn's success. No fencing was required as the entire range was surrounded by water which provided a natural barrier for the cattle. This removed considerable expense, which almost all cattlemen faced at the end of the open range system in the late 19th century. Additionally, the vegetation of the island was low, allowing for increased visibility of cattle and a reduction in obstacles for ranchers. The unusual length of the island also meant that cattle could wander south more than a hundred miles from the ranch headquarters, which was located at the north end of the island. To operate in these particular circumstances Dunn built his line camps at 15-mile intervals along the upper (north) portions of the island. Novillo was his northernmost line camp and it is the only one which remains generally intact.

By 1900, land parceling and fencing had become common on the Texas mainland, leading to the decline of open ranching throughout Texas and the Plains, except for on Padre Island. Since Dunn owned most of the island, he was able to continue his open range ranch operations for much longer than those operations on the mainland. The Dunn family continued cattle operations until 1971, making the Dunn Ranch unique in practicing open range ranching for 92 years.

During that time, the Novillo Line Camp underwent changes that were influenced by changing technologies. Prior to World War II, cattle were transported to market by driving them to the north end of the island and swimming them across the water to the mainland. However, after the war, trucks became more common in transporting cattle. As a result, loading chutes were constructed at the line camp, to accommodate truck use in cattle operations. Similarly, windmills and water tanks were added to supply additional water to cattle at the line camp. These features, though not part of the original line camp, reflect the prominent role that technology had in agriculture during the mid-20th century.

Criterion C – Architecture

The form of the line camp was highly influenced by the environment of the island. These influences include:

- Use of materials at hand, such as driftwood from the beach for structures. The structures themselves document adaptation, i.e. the thick bunkhouse doors necessitated by the high wind potential, the bunkhouses raised above the sand, and the absence of hardware.
- Shape and length of the island determined the number of ranch hands which in return determined the number of bunkhouses at the line camp.
- Island topography influenced the drive or roundup. Because the cowboys could in a single day drive the cattle 15 miles up the island and get them penned before dark, line camps were located 15 miles apart. Dunn adapted this technique of the cattle roundup to the island's conditions (Interpretive Prospectus 1975, 7).

The effect of these environmental factors helped shape the number and locations of the line camps, as well as the types of buildings and structures constructed. Neither well-crafted in design nor construction; fabrication of buildings was simple at best, and more often primitive in execution (HSR 1979, 7). However, the line camp is a clear expression of the limited materials available and the harsh climate to which it is adapted. The buildings and structures are built entirely of wood, with supplementary materials such as metal nails and hinges, ropes, and fencing wire used where needed or expedient (HSR 1979, 23). The result is a vernacular complex of two bunkhouses, a cookhouse, fences, corrals, windmill, and cattle tanks attuned to the functional requirements of ranching activities.

At Novillo Line Camp, one bunkhouse and a cookhouse are the only remaining buildings constructed in the localized vernacular style. As noted in the 1974 National Register nomination for the camp, the bunkhouses “are of board and batten construction, with pitched roofs...They are constructed on piers, with the floors being about two feet above grade, presumably to keep the floors dry and sound due to the extremely high water table, and also to provide some protection against snakes.” The cookhouse is described as “an open structure, consisting of a pitched roof of wood planks supported by posts” that primarily served as shelter from the weather. The roof of the bunkhouse consists of cedar shingle. The kitchen portion of the cookhouse is roofed with tongue and groove yellow pine, while the balance of the kitchen/storage area is roofed with corrugated tin.

The corrals and fences are also constructed in a vernacular style, generally with wood plank rails on posts, while the traps were fenced with barbed or woven wire,

Criterion D – Archeology

Under Criterion D the line camp is significant for its potential to add to existing knowledge of open

range ranching operations on Padre Island and in southeast Texas. A number of archeological surveys have been conducted to map the visible, remaining features. However, it is likely that a number of archaeological features also remain below-ground. Artifacts such as fence posts, corrals, as well as the cattle tanks, provide evidence regarding the ranching methods used at the site. In addition, objects such as glass bottles and other refuse can provide further information and context regarding the lives of ranchers and cowboys at the Dunn Ranch.

National Historic Landmark Information

National Historic Landmark Status: No

World Heritage Site Information

World Heritage Site Status: No

Chronology & Physical History

Cultural Landscape Type and Use

Cultural Landscape Type: Vernacular

Current and Historic Use/Function:

Primary Historic Function: Livestock

Primary Current Use: Outdoor Recreation

Other Use/Function

Other Type of Use or Function

Camp

Historic

Dormitory (Bunkhouse)

Historic

Manufacturing Facility (Mill) - Other

Historic

Functional Landscape-Other

Historic

Leisure-Passive (Park)

Current

Interpretation Facility

Current

Interpretive Landscape

Current

Beach

Both Current And Historic

Dune

Both Current And Historic

Wetland

Both Current And Historic

Body Of Water (Lake, Pond)

Both Current And Historic

Parking Area

Current

Interpretive Trail

Current

Current and Historic Names:

Name

Type of Name

Dunn Ranch

Both Current And Historic

Novillo Line Camp

Both Current And Historic

Novilla Line Camp (incorrectly spelled)

Historic

Novia Line Camp (incorrectly spelled)

Historic

41KL64 (Archeological site)

Current

Ethnographic Study Conducted: No Survey Conducted

Associated Group:

Name of Group:	Coahuiltecan
Type of Association:	Historic
Name of Group:	Karankawas
Type of Association:	Historic

Chronology:

Year	Event	Annotation
AD 1519	Explored	Spanish Jamaican Governor orders Alonso de Pineda to explore the north and west coasts of the Gulf of Mexico. In the process Pineda discovers Isla Blanca, now known as Padre Island (Weise and White 1991, 67; Brown 1991, 53-54).
AD 1760	Ranched/Grazed	By 1760, Spanish cattle grazed on Padre Island (Weise and White 1991, 68).
AD 1791	Destroyed	A hurricane inundates the island and 50,000 head of cattle belonging to a Spanish cattle baron are killed (Weise and White 1991, 68).
AD 1800	Land Transfer	A Portuguese priest, Padre Nicolas Balli gains a land grant to 11.5 leagues on the island from King Charles IV of Spain. He quickly establishes cattle operations on the island and is joined by his nephew Jaun Jose Balli. The ranch headquarters, named Santa Cruz de Buena Vista, is located 26 miles from the south end of the island (on what is now South Padre Island). (Weise and White 1991, 68, 72; Brown 1991, 54).
AD 1810 - 1821	Abandoned	Mexico declares independence from Spain. Balli leaves the area (Weise and White 1991, 68).
AD 1821 - 1828	Land Transfer	Balli fights to have the Mexican government reconfirm his title to land on Padre Island. The grant is finally verified in 1828 (Weise and White 1991, 68).
AD 1828 - 1840	Ranched/Grazed	The Balli family continues to operate the ranch on the island (Weise and White 1991, 68; Brown 1991, 54-55).
AD 1830	Land Transfer	The Balli family begins to sell portions of their land (Weise and White 1991, 68; Brown 1991 54-55).

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AD 1836	Established	Texas declares its independence from Mexico (Weise and White 1991, 68).
AD 1844	Abandoned	The Balli family leaves Padre Island (Weise and White 1991, 70).
AD 1845	Established	Texas is annexed as part of the United States; however disputes arise over the boundary between Texas and Mexico (Weise and White 1991, 68).
AD 1845 - 1848	Military Operation	The U.S.-Mexican War breaks out. At the end of the war, the boundary between the two nations is established along the Rio Grande and Padre Island officially becomes part of the U.S. (Weise and White 1991, 70; Brown 1991, 55).
AD 1846	Land Transfer	The northern half of the island (present-day park) is owned by Jose Maria Tovar (Weise and White 1991, 70).
AD 1854	Land Transfer	Richard King purchases 12,000 acres on Padre Island from the Balli family and establishes the King Ranch (Weise and White 1991, 70).
AD 1870 - 1875	Land Transfer	Early 1870s. King and Mifflin Kenedy lease additional acreage on the island, expanded their ranches (Weise and White 1991, 70).
AD 1870 - 1879	Built	Meat packing facilities appear along the coast and along the island. Cattle from the area ranches are slaughtered for hides and tallow (Weise and White 1991, 70).
AD 1879	Land Transfer	Patrick Dunn leases land at the north end of the island from two Corpus Christi landowners, John McCampbell and Stanley Welch (HSR 1979, 4). He is attracted to the land by its “natural fences” (Gulf of Mexico and Laguna Madre) that bounded the island to the east and west (Weise and White 1991, 71). Fresh water (by digging shallow wells in the sand) and grass are also readily available at the north end of the island (HSR 1979, 4).

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	Ranched/Grazed	Circa 1979. Dunn and his brother establish a cattle ranch on the island, stocking the island with 400 cows purchased from a man named Rachel who lived at White Point. Dunn and his brother drive the cattle from White Point to Flour Bluff and then ford the Laguna Madre over to the island (Sheire 1971, 44-45).
AD 1880	Damaged	A storm hits Padre Island and King's ranching operations are severely curtailed (Weise and White 1991, 70; Brown 1991, 56).
	Altered	End of the 1870s. The meat packing boom on the island ends; cattle are driven into the Midwest for processing (Weise and White 1991, 70-71).
AD 1882	Altered	On the Texas mainland, open range ranching ends as Mifflin Kenedy fences his land (Weise and White 1991, 71).
AD 1884	Ranched/Grazed	The Dunn Ranch is firmly established (Sheire 1971, 45). The three line camps are likely built by this time (HSR 1979, 6).
AD 1880 - 1971	Ranched/Grazed	The line camps are used on a semi-annual basis (May and October/November) to sort and prepare cattle for market (HSR 1979, 19).
AD 1900	Altered	Open range on the Texas mainland is discontinued with the exception of open range land on Padre Island (HSR 1979, 3).
AD 1907	Built	Dunn constructs a two-story house made of drift wood on Corpus Christi Pass (now Packery Channel) (Sheire 1971, 45).
AD 1916	Damaged	A major hurricane hits Padre Island and destroys Dunn's two-story house (Sheire 1971, 45). It also likely damages Dunn's line camps (HSR 1979, 6).
	Built	Dunn constructs a second house at the north end of the island (Sheire 1971, 45).

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AD 1919 - 1920	Damaged	A hurricane hits the island, likely resulting in the reconstruction of the Novillo Line Camp the following year, 1920 (Colby 1998, 1; Simpson 2002, 79; HSR 1979, 10). Nearly all of the Green Hill Line Camp is rebuilt (HSR 1979, 10).
AD 1920	Built	Circa 1920. An outhouse is attached to the west façade of Bunkhouse A at the Novillo Line Camp (HSR 1979, 10).
AD 1920 - 1937	Ranched/Grazed	Circa 1920 to 1937. Dunn and his “vaqueros” (cowboys) travel up and down the island between the three line camps on horseback. They pull along a small freight wagon that carries food and provisions. Dunn stays in one bunkhouse, while the cowboys stay in the second bunkhouse at each site (HSR 1979, 8, 10).
AD 1926	Land Transfer	Dunn, known as the “Duke of Padre,” owns almost all of the island’s 130,000 acres (Weise and White 1991, 71; Brown 1991, 56; HSR 1979, 4). For small inholdings that he does not own, Dunn owns grazing rights, effectively controlling the entire island (HSR 1979, 4).
	Purchased/Sold	Dunn sells the surface rights to his land for \$125,000 to Colonel Sam Robertson, a real estate developer (Weise and White 1991, 71). Dunn retains his grazing rights and continues his cattle operation (HSR 1979, 5).
AD 1927	Built	Patricio Causeway, the first causeway linking Corpus Christi with the island is completed and named after Patrick Dunn (Weise and White 1991, 71).
AD 1933	Damaged	A major hurricane hits Padre Island and likely causes major damage to the three line camps (HSR 1979, 6).
AD 1937	Ranched/Grazed	Dunn continues ranching and retains the mineral rights to the land until his death in 1937 (Weise and White 1991, 71).
AD 1937 - 1971	Ranched/Grazed	Dunn’s son, Burton Dunn, continues the ranching operations at Padre Island (Brown 1991, 59).
AD 1941 - 1945	Military Operation	World War II. Padre Island is used as a U.S. Navy bombing range; ranching continues (Brown 1991, 59).

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AD 1948 - 1949	Altered	Burton Dunn adds two loading chutes, concrete water tanks, and windmill to Novillo Line Camp. Trucks begin hauling the cattle to market (Colby 1998, 1; Simpson 2002, 79).
AD 1951	Built	Padre Island Causeway opens allowing commercial cattle trucks to drive as far south as Novillo Line Camp. Novillo gains importance as the principal gathering place for livestock, while Black Hill and Green Hill diminish in importance (HSR 1979, 14).
AD 1955	Built	A Chevron cracking plant is constructed immediately southeast of the Novillo Line Camp (HSR 1979, 2).
AD 1962	Established	September. Congress establishes Padre Island National Seashore.
AD 1964	Land Transfer	The NPS acquires Land Tract 7 from the Lovenskiold family (part of Novillo Line Camp) (HSR 1979, 5).
AD 1965	Land Transfer	The NPS acquires Land Tract 8 from the Albert Jones family (part of the Novillo Line Camp) (HSR 1979, 5).
AD 1969	Built	A hand water pump is installed at Novillo Line Camp (HSR 1979, 18).
	Built	An ice refrigerator is installed at Novillo Line Camp and the cook is supplied with a Coleman gas stove (Sheire 1971, 52-53).
AD 1970 - 1971	Built	Improvements are made for the last cattle round-up at Novillo Line Camp. Corrugated metal is installed over roofs on buildings at Novillo Line Camp. Corrugated metal is also installed at the windbreak. A hand water pump is installed at the cookhouse (Colby 1998, 2; Simpson 2002, 80).
AD 1971	Removed	Ranching and grazing activities at Padre Island are terminated (Weise and White 1991, 71; HSR 1979, 5).
AD 1971 - 1976	Established	Novillo Line Camp is largely hidden from public view by the Chevron Cracking Plant. Interest in the camp is minimal (Jones 1999, Chapter 9).

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AD 1972	Established	Interest in the Novillo Line Camp grows within the NPS as Chief Naturalist Robert Whistler inspects the site and envisions an interpretive program involving living history (Jones 1999, Chapter 9).
AD 1974	Established	The Novillo Line Camp is listed on the National Register of Historic Places. It is significant for its associations with 19th and 20th century agriculture (Jacobson 2010, 22).
AD 1975	Established	An Interpretive Prospectus is completed for the park. Three interpretive themes are identified for the Novillo Line Camp: (1) the role of the line camp and cattle ranching on Padre Island; (2) comparison between ranching and gas and oil exploration and their impacts on the environment; and (3) role of recreation and NPS at Padre Island. A small parking area, short trail from the Chevron Oil Company access road, and wayside exhibits are proposed for the area (Interpretive Prospectus 1975, 7).
AD 1976	Stabilized	April. The cookhouse is stabilized (Colby 1998, 2; Simpson 2002, 80).
	Altered	September. New cedar fence posts and 5 strands of barbed wire are erected along the location of the existing fences at Novillo Line Camp (Colby 1998, 2; Simpson 2002, 80). In addition, at the bunkhouse, hinges were added and the doors are reinforced. Plywood sheets are installed for securing mineral surface roll roofing. Some roof joists sistered (Jacobson 2010, 22).
	Built	November. A replica of the windmill is built; however, untrue to the original design it is later dismantled (HSR 1979, 16).
	Established	A living history exhibit is conducted as part of the Bicentennial Celebration of 1976. Dunn Ranch foreman, Jim Lynch, and vaqueros demonstrate horse shodding and grooming, hand working leather articles, and how cattle were handled. Designated camp cooks prepare food for visitors while the staff and volunteers conduct tours (Jones 1999, Chapter 9).

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AD 1978	Stabilized	Maintenance crews repair and replace some of the deteriorated boards and apply a wood preservative to the structures at Novillo Line Camp (Jones 1999, Chapter 9).
AD 1979	Established	A Historic Structures Report is completed for the Novillo Line Camp. Seven features of the site are also listed on the List of Classified Structures—fences (HS-1), bunkhouse A (HS-2), bunkhouse B (HS-3), cookhouse (HS-4), corrals (HS-5), windmill and tank (HS-6), and historic grounds (HS-7). Treatment recommendations include benignly neglecting the buildings and structures with interpretation of the ruinous complex (HSR 1979, 1).
	Destroyed	A vagrant occupies one of the bunkhouses (Bunkhouse B) at Novillo Line Camp and burns the structure and damages the adjoining buildings (Jones 1999, Chapter 9).
AD 1980	Damaged	August. Hurricane Allen hits Padre Island National Seashore.
AD 1983	Established	April. A General Management Plan/Development Concept Plan (GMP/DCP) is completed for the park. Novillo Line Camp is identified as a Historic Zone where maintenance is required to slow deterioration (GMP 1983, 10). The camp is also to be protected from fire and further deterioration; the site will be managed as an archeological site (GMP 1983, 17).
AD 1984 - 1986	Removed	1984 or 1986 (dates vary). The Chevron processing plant is removed (EIS 1999, 3-18; Jones 1999, Chapter 9).
AD 1992	Removed	The second bunkhouse (Bunkhouse B) is removed from the List of Classified Structures, having burned down between 1979 and 1992 (Colby 1998, 1; Simpson 2002, 79).
AD 1993	Damaged	The former adjacent Chevron processing facility is found to be contaminating the surface water at Novillo Line Camp with hydrocarbons with visible sheening on the water surface and a strong odor (EIS 1999, 1-12).

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AD 1995	Established	A Parkwide Development Concept Plan and Environmental Assessment are drafted for the park, updating the plans set forth in the 1983 GMP/DCP. An auto-pullout and interpretive trail are proposed for the Novillo Line Camp. Other allowable uses in historic areas include interpretation, and necessary support development such as trails, boardwalks, signs and waysides (DCP 1995, vi).
AD 1997	Established	Novillo, Black Hill and Green Hill Line Camps are documented in preparation for an Environmental Impact Statement (Jacobson 2010, 22).
AD 1998	Established	Level 0 (initial reconnaissance) cultural landscape inventories are drafted for the three line camps.
	Established	Management policy regarding historic structures in the park changes, and a preliminary report on stabilization for the Novillo Line Camp is drafted (Colby 1998, 1; Simpson 2002, 79). At the time, features included post and wire fencing, wood corrals, one bunkhouse, cookhouse (kitchen), water pump, and hitching post (Colby 1998, 1; Simpson 2002, 79).
AD 1999	Established	An Environmental Impact Statement is prepared and the Novillo, Black Hill, and Green Hill Line Camps are re-evaluated (Colby 1998, 1; Simpson 2002, 79; EIS 1999, 3-29).
AD 2002	Established	A condition assessment and preservation plan are drafted for Novillo, Green Hill, and Black Hill Line Camps (Neidinger 2002, 1).
	Stabilized	Stabilization efforts are carried out at the bunkhouse, cookhouse, and two cattle chutes (Simpson 2002, 2). The work is documented in "Record of Treatment – Novillo Line Camp Stabilization" (Simpson 2002, 2).
AD 2008	Planned	A boardwalk and parking area are planned at Novillo Line Camp to facilitate visitor interpretation of the site.

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AD 2010	Excavated	May. Archeological investigations/inspections are carried out at the Novillo Line Camp cookhouse in preparation for rehabilitation efforts. The objectives of the investigation were to (1) expose and assess the below-grade integrity and deterioration of select cookhouse structural posts to determine replacement needs; (2) identify any archeological features in close proximity to the structural posts that would be impacted by post replacement; and (3) uncover and document the architectural configuration of the cookhouse's cypress plank dining table to facilitate rehabilitation.
	Stabilized	July. A "Stabilization of Kitchen and Line Camp Maintenance Guide" is prepared by Vicky Jacobson, Architect, IMR-SF. The plan puts forth appropriate stabilization and treatment measures in order for Novillo to be interpreted to the public (Jacobson 2010, 3). The document also notes that as many as 9 windmill systems and up to 75 below-grade water tanks were present throughout the island at one time (Jacobson 2010, 3).
AD 2010 - 2011	Stabilized	All remaining features at Novillo Line Camp are rehabilitated. Specifically, the cookhouse is rehabilitated by (1) re-erecting the collapsed plant roof covering the cookhouse's open-sided southern half; (2) re-planking the pine board walls of the cookhouse's enclosed L-shaped northern half; and (3) re-exposing and rebuilding the low-lying, in ground cypress dining table within the cookhouse's interior.
	Established	A Cultural Landscape Inventory (CLIs) is completed for the Novillo Line Camp.

Physical History:

Overview of Landscape Changes over Time on Padre Island

This section was taken from the Oil and Gas Management Plan and Environmental Impact Statement (1999) and augmented somewhat to provide a general overview of landscape changes associated with different historic events and periods. While use of Padre Island has varied, and while land ownership has been complex, there has been very little settlement on the seashore compared with surrounding areas outside the NPS boundary.

Seasonal Occupation and Use by Coahuiltecans and Karankawas, Pre-1519

Prior to 1519, seasonal, short-term hunting camps were present on the island. No references to large-scale landscape/vegetation modification (e.g., burning) have been found in the literature to date. The island environment was likely very similar to today's conditions, with dune, inland grasslands, wetlands, and tidal-flat areas (EIS 1999, 3-30). Oak mottes (oaks groves) were also present south of Bird Island Basin, measuring .5 miles wide and 7 to 9 miles long.

Spanish Exploration, 1519 -1805

Numerous shipwrecks in the Gulf of Mexico result in ship remnants and cargo that wash up on shore, in addition to debris from Spanish settlements. Various exploring and shipwreck parties come through the area, but no settlements were developed. The island environment was likely similar to the pre-1519 period (EIS 1999, 3-30).

Padre Nicolas Balli Cattle Operation, 1805 – 1846

Introduction of cattle onto the island resulted in some impact on and changes to the native vegetation. Padre Nicolas Balli established a ranch (Santa Cruz de Buena Vista Ranch outside the present-day seashore boundary. Other activities during this period included the continuation of material and debris washed up on shore (EIS 1999, 3-30).

Mexican-American War; American Cattle Operations, 1846 - 1879

With the onset of the Mexican-American War, the island is used as a campsite by U.S. forces. After the war, the land became part of the U.S. and an influx of Americans settled in south Texas. The cattle operations, now under American control, had similar types of impacts as the Balli operation (EIS 1999, 3-30).

Dunn Family Cattle Operation, 1879 - 1920s

Patrick Dunn established a cattle ranch operation on the island. With larger numbers of cattle, and horses, on the island, changes to island vegetation were likely larger in scale than during the earlier period. To run Dunn's cattle operation, line camps (Novillo, Green Hill, and Black Hill) were developed, and various other modifications, such as cross-island fences and fresh water seep tanks, were developed between the line camps. With the continuation of cattle grazing,

the overall amount of vegetation on the island was reduced, resulting in more exposed sand, more active dunes, and more sand movement, and thus a greater degree of "migration" of the island's shores. Some non-native plant species (e.g., tamarisk) were introduced during this period (EIS 1999, 3-30).

When large trucks were used to transport the cattle, roads to/from line camps were developed, which required breaks to be established in the foredune area. The Dunn family residence/headquarters was located north of the present-day NPS boundary (EIS 1999, 3-31).

Dunn Cattle Operations Continue; Mineral Exploration/Extraction; Tourism, 1920s – 1962

Grazing-related changes to the island environment continued as the Dunn family operated the ranch into the mid-20th century. Mineral activity on the island resulted in the introduction of developments (e.g., structures, roads), the introduction of foreign materials such as oyster shells for construction, and the introduction of potential pollutant sources. Discussions also begin on the establishment of a national seashore on the island for public recreation and enjoyment (EIS 1999, 3-31).

Padre Island National Seashore, 1962 – present

Establishment of the national seashore in 1962 formalized the preservation, recreation, and education emphasis for the area. The Dunn Ranch continued to raise cattle until 1971. Since then, vegetation has generally increased and dunes have stabilized to large extent, resulting in less overall dune migration and sand movement. Recreational use has resulted in some social trails, dune blowouts, and the subsequent need for dune restoration projects. NPS developments have been introduced at Bird Island Basin, Malaquite, North and South Beaches, and the area of the Gulf campground. NPS educational programs have resulted in more exposure to and experience of the seashore area by the public than in previous times (EIS 1999, 3-31).

Early Establishment of the Dunn Ranch

Note: The following sections of text were taken directly from Chapter 3 of the Padre Island National Seashore Historic Resource Study, written by James Sheire, 1971, addressing the history of Patrick Dunn and his cattle ranch. Minor edits have been made throughout the text for clarity and to incorporate additional sources.

Patrick (Pat) Dunn was the son of Irish immigrants who came to Corpus Christi in the 1840s or early 1850s. Born in 1858 and left fatherless in 1865, Dunn turned to cattle as his vocation and occupation. With his brother, Dunn as a teenager worked cattle on the open range. However, the fencing of the range beginning in the 1870s signaled the end of the landless cattle entrepreneur. Either one moved farther west to the Big Bend country or Arizona or one turned to another trade. As Dunn himself many years later described his decision to go to Padre Island, "The occasion of going to Padre Island was this: in the early days the range was all free, there were no pastures, and then people commenced building fences and buying the land, and my brother and I had some cattle and we had to go some place and so we went to Padre Island." (Sheire 1971, 44).

When he moved onto Padre Island, Dunn leased land from two Corpus Christi gentlemen, John McCampbell and Stanley Welch. After a man named Healy moved his cattle off Padre Island, Dunn stocked the land with 400 cows he had purchased from a man named Rachel who lived at White Point. Dunn and his brother drove the cattle from White Point to Flour Bluff and then forded the Laguna Madre to the island (Sheire 1971, 44).

During the first year, Dunn experienced several hardships. A severe winter badly damaged the herd, and Dunn was unable to meet the payment on the note due Rachel. Fortunately, a firm called the Coleman-Fulton Pasture Company was looking for someone to drive 1,000 head to a ranch in Webb County. Dunn took the job and received a dollar a head as commission. The money enabled him to meet his payment (Sheire 1971, 44-45).

When Dunn moved the first four hundred cows to Padre in 1879, he was confronted with the problem of adapting a type of agricultural land utilization to the island's environment. The two most important elements of successful cattle raising—food and water supply—were already present. The island's grasses had for years supported cattle and horses. Fresh water could be found by digging shallow wells in the sand, a technique that Padre Balli had learned from the Native Americans and was later adopted by Dunn (Sheire 1971, 45-46).

Padre Island also had additional environmental characteristics, which were advantageous to cattle raising. Since it was surrounded by the Gulf of Mexico on the east, the Laguna Madre on the west, Corpus Christi Pass on the north, and Brazos Santiago Pass on the south, the island required no fencing. The natural barriers prevented cattle from wandering off the range, nor were fences necessary to distinguish Dunn's land from his neighbors. Good grass and water plus natural fences made Padre an ideal place to run cattle (Sheire 1971, 45-46).

The island possessed still another attribute which very few cattle ranches in that part of the country could claim. There was no brush on Padre Island, such as the mesquite and chaparral, which made cattle raising on the mainland difficult. Brush obscured cattle and required vaqueros to wear toe fenders, thick boots, heavy leather leggings, ducking jackets, gauntleted gloves, and stout hats to protect their bodies from the woody vegetation. For some reason, brush so typical of the mainland was not found on Padre Island. Thus, vaqueros working the Dunn Ranch did not have to weigh themselves down with extra clothing. Cattle did not get lost in the brush, requiring the vaquero to spend hours searching for them. The stock was always in the open between the laguna and the gulf, easy to find and easy to string out. According to Jim Lynch, a south Texas cattle man who worked Padre Island cattle since his boyhood, the island's good grass and water, the natural fences, and the absence of brush made Padre one of the easiest ranches in the area (Sheire 1971, 45-46).

The island's narrow width and linear dimensions also contributed to the success of the ranch. Although the majority of the cattle grazed on the northernmost sixty miles, some wandered down the island to the southern end. In order to work cattle spread out over such a great distance, Dunn built a string of four line camps down the island at approximately 15-mile intervals—the distance it was possible to drive cattle in one day. Together, the Novillo, Black

Hill, and Green Hill Line Camps covered about sixty miles of the island's prime range. Each camp contained similar facilities and spatial arrangement. First, a large trap which enclosed the entire camp area. Within the trap, Dunn built two bunkhouses, an outdoor cookhouse, smaller traps, and corrals or working pens. One bunkhouse was used for Dunn's personal use and the other functioned as a bunkhouse for the vaqueros (Sheire 1971, 46).

When Dunn built his line camps, he was unable to get lumber delivered to the island as no causeway connected the island to the mainland. Additionally, lumber was expensive, and transportation to the island was difficult. Like those who had built structures on Padre Island before him, Dunn turned to the island for building materials, finding the Gulf of Mexico delivered a constant supply of hard and softwood boards of all lengths and widths to the beaches of the island. When put together, the materials became bunkhouses, kitchens, fences, and corrals at the line camps. Shingles were hand made from rough lumber (Sheire 1971, 47).

Materials were also scavenged for furniture. Barrels with the tops removed and filled with sand became small stoves. Stools and chairs came in and found their way to the camps. Tar barrels floated in and were melted to close holes. Other barrels collected rain water. Ropes of all sizes were used for a variety of purposes. Using the available resources at hand, Dunn was able to adapt his line camp structures to the environment. Overall, the effect was a vernacular type of architecture that was simple, plain, and rough in form (Sheire 1971, 47).

Salvaged lumber was used to build a number of fresh water wells, which were the most unusual feature of Dunn's Padre Island cattle operation. Adapted from Padre Balli and earlier inhabitants of the island, Dunn first built a rectangular frame about eight feet by two feet. A hole was then dug in the sand, usually near a sand dune, and the frame inserted in the hole. Water, which did not run off but which was rather trapped in the sand, slowly seeped into the shallow tanks. According to Dunn, at one time or another there were as many as 75 of these tanks spread out on the island. Keeping the tanks clean was a constant task, but it was easily accomplished by bailing them out and then cleaning the sides and bottoms. Unlike the water supply on the mainland, fresh water was never a problem on Padre Island (Sheire 1971, 47).

By 1884, Dunn had firmly established his cattle operation. That same year he decided to move his family to the island, building a residence about 20 miles from the north end of the island. The family lived at the settlement for five or six years, until one of Dunn's daughters became partially paralyzed after contracting scarlet fever. In 1889 or 1890, Dunn moved his family from the island into Corpus Christi. Although the family continued to maintain its permanent residence in Corpus Christi, they spent several months during the summer on Padre occupying a two-story house on Corpus Christi Pass (now Packery Channel). Constructed entirely from drift lumber in 1907, the house was an imposing, but short-lived structure. In 1916 an exceptionally severe hurricane destroyed the house; Dunn replaced it with a smaller structure also located at the north end of the island. This building, which since 1916 has been remodeled a number of times, served as the ranch headquarters (currently outside of the park) and continues to be inhabited by the Dunn family today (Sheire 1971, 45).

In the late 1910s, additional hurricanes struck the island, damaging a number of line camp

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buildings. Using previous construction techniques, Dunn continued to use salvaged and drift lumber that washed up along the beach in the repair and construction of the line camp structures.

By 1926, Dunn, known as the “Duke of Padre,” owned almost all of the island’s 130,000 acres and obtained grazing rights to inholdings that he didn’t own.



Patrick Dunn owned a cattle ranch that covered about two-thirds of Padre Island from the late 1800s until his death in 1937. (Courtesy of the Dunn family: Source Padre Island NS website)



Dunn Ranch Headquarters, 1913 (Source PAIS website).

Ranching Operations and Cattle Drives

For ten months out of the year the cattle on Padre Island peacefully grazed. Dunn and his men moved up and down the island checking on new calves, taking care of distressed animals, and cleaning water tanks. Twice a year, usually in May and October or November, it came time to round up the herd and select stock for market. With a foreman, about twelve vaqueros, a cook, and the necessary baggage and camp gear, Dunn first proceeded down the island to Green Hill, the southernmost camp. After making any necessary repairs to the traps and corrals, the men began the drive.

First, the crew proceeded another thirty miles down the island to a fence constructed in the area of the present-day Port Mansfield Channel. They set up camp on the beach, awaking at 4:00 AM to eat breakfast. Afterward, they spread out across the island in the form of a "V". The men on the wings funneled cattle to the center of the "V" while the foreman managed the whole operation, moving back and forth across the island making sure that one of the wings did not get ahead of the other and that the herd was properly strung out. Cripples and outlaws, who could upset the herd, were either left behind to be picked up later or "tailed" to quiet them down. Tailing was a dangerous vaquero sport, which consisted of reaching down from the horse, grabbing the tail of an angry cow, and wrapping the tail around the horn and hump. If the vaquero was successful, and he usually was, the outlaw was violently thrown to the ground. Upon release the dazed animal docilely joined the string. If the vaquero missed, the cowboy could be dragged from his horse or the horse could be badly gored (Sheire 1971, 47-48).

Slowly moving north the men on the wings continued to throw the cattle to the center of the "V" and the herd gradually grew in size. When it approached Green Hill, three men were stationed on each side of the trap—the enclosure around the entire line camp—to make sure no cattle got past the trap into the next section of the island. After the herd had been placed in the trap, the task of working the animals was next. Calves were separated into one of the working pens,

where they were branded, castrated, and, in later years, vaccinated. Other cows were run through dipping vats or, again in later years, sprayed. The major concern, however, was to separate out the yearlings and other stock which would be taken to market. Once the work was complete and the prime beeves selected, the rest of the herd was turned out. They slowly drifted back down the island and resumed grazing (Sheire 1971, 48).

The technique of the "V" type drive between the two bodies of water on each side of the island was repeated between Green Hill and Black Hill. Again, the vaqueros spread out across Padre Island with the wings throwing new cattle to the center, where they joined the animals from Green Hill. Reaching Black Hill, the cattle collected between Green and Black Hills were branded and vaccinated. When the cattle ready for market had been added to those from Green Hill, the herd resumed the slow drive northward up the island. The same roundup technique was employed between Black Hill and Novillo and between Novillo and headquarters at the top of the island (Sheire 1971, 48-49).

It usually took about three weeks to a month to work the entire island and collect a herd at the north end. However, from the ranch headquarters, Dunn and his foreman still faced the problem of getting the cattle off the island to the mainland. Throughout most of the ranch's history, the men drove the herd to the Laguna Madre where they forded the body of water to the Peta Island holding pens on Flour Bluff. At the Peta Island pens, the herd was either sold on the spot or arrangements were made to drive it to another mainland ranch. In later years Dunn acquired still another place on Flour Bluff about two miles from the Peta Island pens. Here he kept his equipment and horses (Sheire 1971, 49).



Patrick Dunn's open ranch land on Padre Island (Source: Brown 1991, 57).

Change Comes to Dunn Ranch

Between the 1880s and the 1940s, the Dunns Ranch underwent no significant changes. On the mainland, vehicles—especially the truck—took over many of the functions previously performed by horses and wagons. Gathering and working cattle became much easier and quicker, and the cattle roundup and drive disappeared. On Padre Island, however, the traditional techniques remained until the 1940s. Twice a year crews went down the island to Green Hill, gathered the cattle, and strung them out north. (Sheire 1971, 49).

However, the start of World War II changed the dynamic of the island as the nearby Corpus Christi Naval Air Station used the island to train pilots in aerial bombardment (Brown 1991, 59). According to foreman Jim Lynch, “the bombing never bothered our cattle...We worked out a system with the navy; they’d signal us whenever bombing was to begin. We drove the cattle the other way.” (Brown 1991, 59).

After World War II, technological advances in cattle ranching proved more efficient than

traditional methods. Though Dunn's son, Burton Dunn, continued traditional ranch operations after his father's death in 1937, he later made alterations to accommodate transporting the cattle to market by truck. At the end of the war, Burton Dunn purchased a two-ton army surplus truck which he converted to a "bob-tail." Thanks to its four-wheel drive, the truck could easily move down the sandy Padre Island beach without getting stuck.

Ultimately, the bob-tail changed the style of the traditional cattle roundup. Instead of riding the horses south to Green Hill and driving a herd north, Dunn and his men worked each camp. At the headquarters place at the north end, the horses were loaded on the truck and taken to Green Hill. Using Green Hill as a center and collection point the men first went south to the Mansfield Cut and drove the cattle into Green Hill. Instead of then proceeding north with a herd, they went to a point about halfway between Green Hill and Black Hill and drove the cattle south to Green Hill. The animals selected for market were loaded on the bob-tail and trucked to the headquarters pens at the north end of the island. Finishing at Green Hill, the crew proceeded north to Black Hill and Novillo, where they again collected the animals north and south of the camp. The use of the bob-tail not only reduced the time necessary to gather a herd for market, but it also cut down on the weight loss the cattle had experienced during the month-long drive up the island (Sheire 1971, 49). Use of the truck also necessitated the construction of loading chutes at each of the line camps to facilitate easier cattle loading (Colby 1998, 1; Simpson 2002, 79).

Another development which affected the ranch during the 1940s was the digging of the Intercoastal Canal down the Laguna Madre. This waterway, which enabled vessels to pass easily from Corpus to Point Isabel and Brownsville, brought an end to the practice of fording the cattle across the Laguna Madre. Burton Dunn had to look for another way to get his cattle to market. He solved the problem by transporting the cattle collected at the headquarters pens up to Mustang Island. At the north end they were loaded on trucks and ferried across to the mainland (Sheire 1971, 50).

The 1940s saw still other modern changes. These involved the application of methods aimed at improving the quality of cattle and the efficiency of the industry. Perhaps following the lead of the King Ranch, Burton Dunn adopted modern innovations on the island by installing windmills and concrete water tanks. However, the wind-powered structures marked no significant improvement over the traditional well dug into the sand. When hurricanes later destroyed most of the windmills, they were not replaced. Dunn also sought to enrich his cattle's diet by introducing salt and minerals through dietary supplements. In addition, spraying replaced the dipping vat and vaccination became a routine part of working the animals. Ultimately, the herd benefited from these innovations (Sheire 1971, 50).

Though Burton Dunn embraced ranching innovations of the mid-20th century, the Dunn family never experimented with changing their cattle breed into a single stock, such as the King Ranch's famous Santa Gertrudis. Although new stock was often introduced to improve the herd, it is possible that Padre Island cattle retained traces of the cattle Padre Balli brought to the island at the beginning of the 19th century. Indeed, Padre Island cattle were famous for their ability to thrive on the food supply nature provided, obtaining salt and other minerals from

Novillo Line Camp

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the natural environment. Overall, they required little help from man (Sheire 1971, 50).

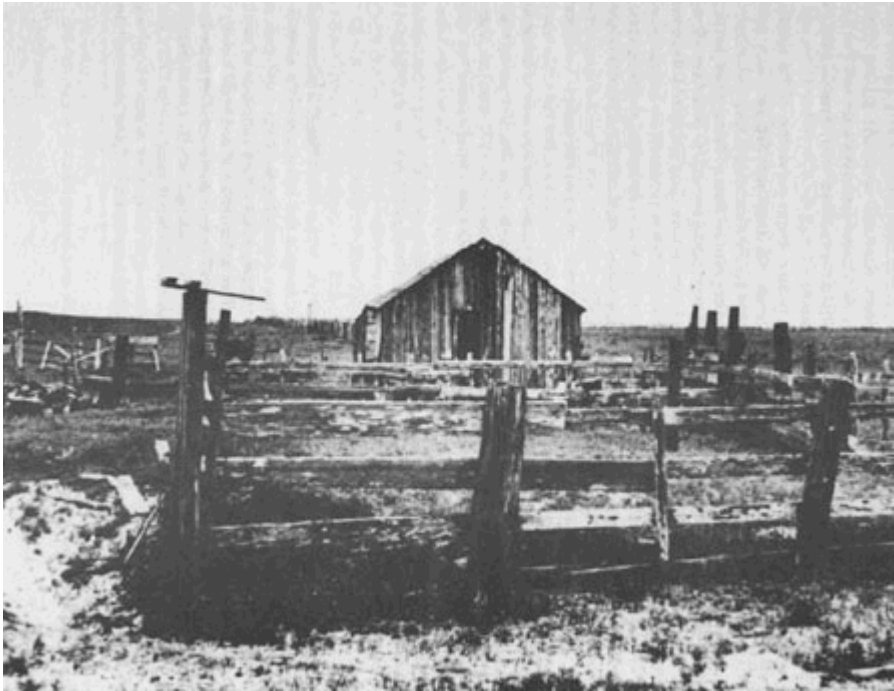
Change to the ranch continued throughout the 1950s. The construction of the Padre Island causeway in 1951 made it possible to bring large trailer truck type vehicles to the island, and thus enabled Burton Dunn to transport more cattle. The traps and corrals at the north end of the island (at the ranch headquarters) were abandoned and the Novillo Line Camp became the major cattle collecting point. Cattle gathered at Green Hill, Black Hill, and north of Novillo were held in the Novillo traps and corrals where the large semis drove down to loading chutes at Novillo and picked up the cattle (Sheire 1971, 50).

The 1950s also brought about oil and gas exploration to the island. As the resources were found below the surface, processing facilities were constructed to extract and refine the raw resources. One of these facilities, a cracking plant was constructed immediately southeast of the Novillo Line Camp (HSR 1979, 2).

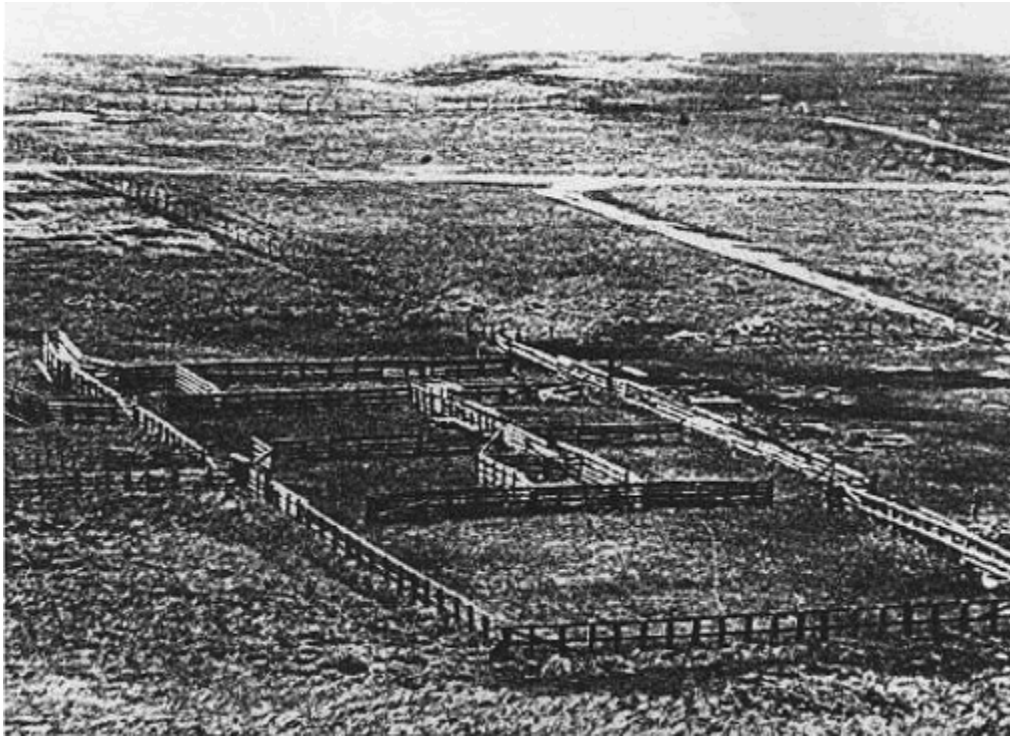
Cattle operations at the Dunn Ranch continued into the 1960s and early 1970s with minimal alterations. Padre Island National Seashore was established by Congress in 1962, protecting the seashore for future generations. Shortly thereafter, the majority of the ranch land was acquired by the National Park Service, though the Dunn family retained grazing rights and continued to graze cattle until 1971. In that year, the last cattle drive was held, removing livestock from the island for the first time in over 200 years.



*The Dunn Ranch Headquarters in 1951. Photo taken by Doc McGregor.
(<http://www.nps.gov/archive/pais/website/photos.htm>)*



Historic view of one of the bunkhouses at Novillo Line Camp, no date. Source: IMR CRM files.



Oblique aerial photograph of Novillo Line Camp, looking southwest, no date. Source: IMR CRM files.

Dunn Ranch Today

Shortly after the last cattle were removed from the newly established park, the National Park Service conducted a number of studies and plans on the line camps and made repairs to the structures. The Novillo Line Camp became the focus of the majority of the plans, as it was more readily accessible to the public and retained a great number of structures compared to Black Hill and Green Hill, which had been abandoned in prior years.

In 1974, Novillo Line Camp was listed on the National Register of Historic Places, and an interpretive prospectus outlining an interpretive strategy for the camp was completed the following year. In 1976, living history exhibit was created at Novillo to demonstrate traditional ranching methods, including horse shodding and grooming, hand working leather articles, and cattle handling. In preparation for the event, the cookhouse was stabilized, new cedar fence posts and barbed wire are erected, and a replica of the windmill was built (Colby 1998, 2; Simpson 2002, 80).

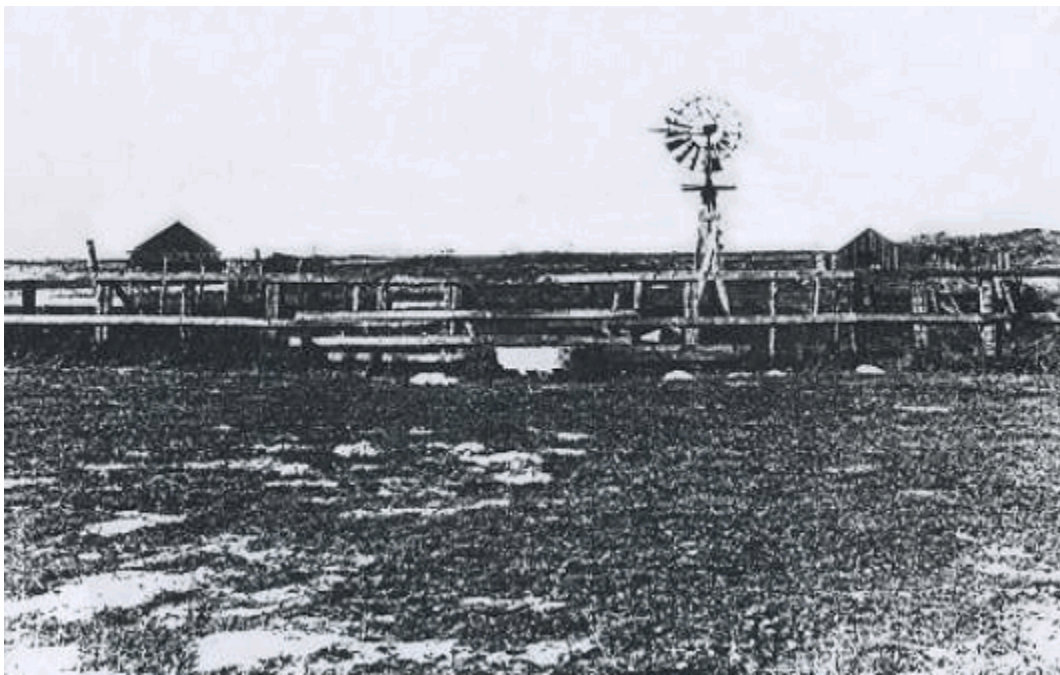
Repair and maintenance to Novillo Line Camp continued in 1978 when deteriorated boards were replaced throughout the complex. In 1979, a Historic Structures Report was completed for the line camp, listing seven features on the List of Classified Structures (LCS)—fences (HS-1), bunkhouse A (HS-2), bunkhouse B (HS-3), cookhouse (HS-4), corrals (HS-5), windmill and tank (HS-6), and historic grounds (HS-7). Treatment recommendations for the site

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included benignly neglecting the buildings and structures with interpretation of the ruinous complex (HSR 1979, 1).

Between 1979 and 1998, park management strategy of the line camps reflected the original recommendations to manage the sites as ruinous complexes and archeological sites. Shortly after the recommendations were made, one of the bunkhouses at Novillo was destroyed in a fire and removed from the site (Jones 1999, Chapter 9). However, in the late 1990s, the historic significance of the line camps was realized and plans were made to stabilize and interpret the remaining structures at Novillo. In 2008 plans were drafted for an interpretive boardwalk and waysides at the line camp. As of 2011, the interpretive boardwalk remains in the planning stages, awaiting on funding. Meanwhile, repairs and maintenance are ongoing at Novillo using in-kind replacement with materials from the beach and traditional construction techniques used by the ranch hands. This maintenance plan was approved by the Texas Historical Commission in 2011.



Historic view of bunkhouses, corrals, and windmill at Novillo Line Camp, 1973. Source: IMR CRM files.



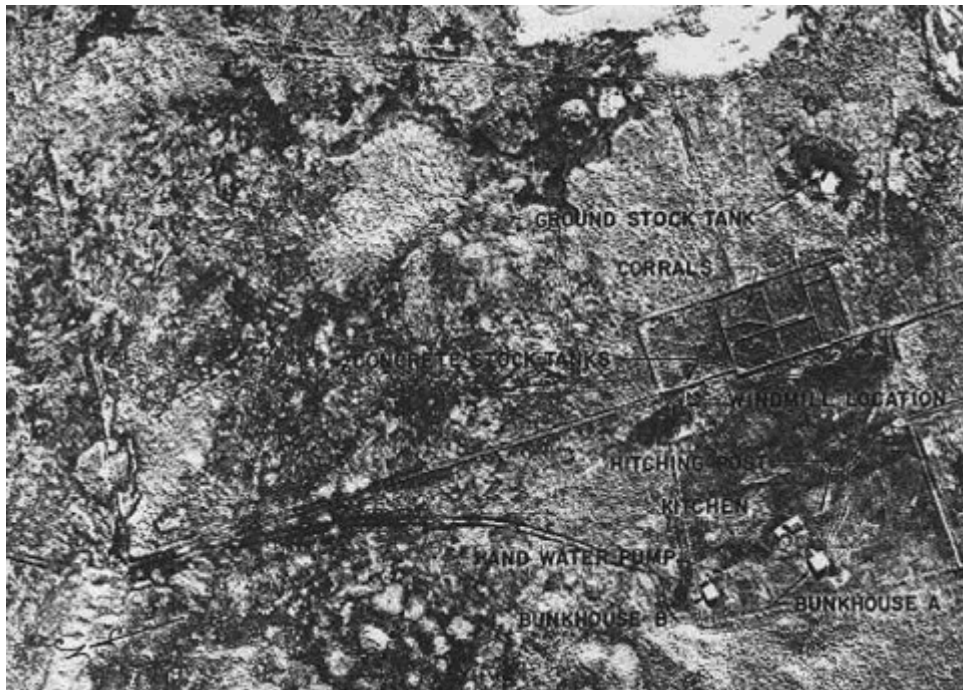
View of bunkhouse and fencing at Novillo Line Camp, likely 1976 (Source: Brown 1991, 57).



*Vaqueros shoeing a horse at a demonstration/ranching reenactment on April 24, 1976.
(Source: <http://www.nps.gov/archive/pais/website/photos.htm>)*



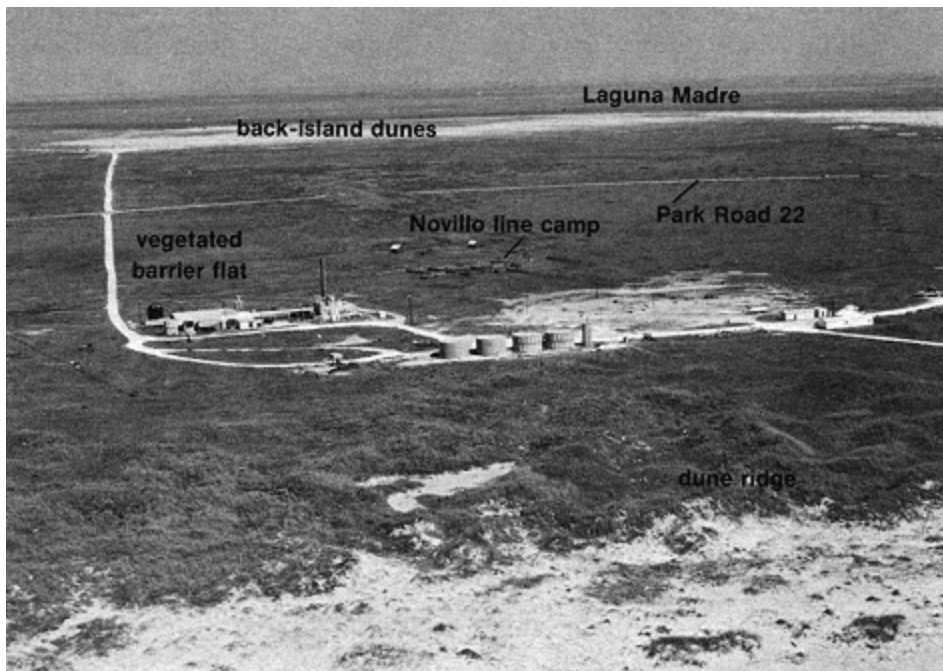
*Cooking at the Novillo line camp during the 1976 demonstration/ranching reenactment.
(Source: <http://www.nps.gov/archive/pais/website/photos.htm>)*



Aerial photograph of Novillo Line Camp, October 1979. Source IMR CRM files.



Novillo Line Camp, looking northeast, no date (Source: Weise and White 1991, 53).



Novillo Line Camp with Chevron petroleum facilities, looking northwest (Source: Weise and White 1991, 65).

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

The Novillo Line Camp contains many character-defining features, such as spatial patterns, natural systems, buildings and structures, views, and small-scale elements that were significant characteristics during the period of significance from 1879 to 1971. As a result, the character of the landscape is important as it evolved through time as a cattle ranch line camp. Landscape features important to retaining the integrity of the site, have remained with relatively few changes.

The historic integrity of Novillo Line Camp may be analyzed under seven categories: integrity of location, design, setting, materials, workmanship, feeling, and association.

Location

Location is the physical place where the historic property was constructed or the place where the historic event occurred. The location of a property is an important factor in determining why the property was created. If a property is separated from its location, the recapture of a sense of historic meaning and character is fragmented.

The Novillo Line Camp has remained in its location near the east shore of Padre Island National Seashore and across from Bird Island Basin. Over the centuries, the active and dynamic forces of the barrier island have continually reshaped the land around the line camp by wind, current, wave, and tide. As a result, the movement of sand within the line camp has changed surrounding landforms over time. Nevertheless, the overall location of the line camp remains intact and retains integrity of location.

All line camp buildings within the landscape, with the exception of Bunkhouse B, also retain integrity of location. While the buildings have been continuously rebuilt and repaired due to the harsh environment of the island, the locations of the buildings has remained constant. Changes to the structures reflect the character and quality of the vernacular line camp.

Design

Design is the combination of elements that create the form, plan, space, structure, and style of a property. It results from conscious decisions made during the original conception and planning of a property or its significant alteration. The design of a historic property reflects the functions, technologies, and aesthetics of its period of significance, and can include elements such as massing, spatial arrangement, site layout, texture and color of materials, style of ornamental detailing, and type of vegetation.

The landscape at Novillo was not designed by a master designer, but rather evolved from a combination of functionality, natural features, and land use. The major components of this “vernacular” design include the spatial layout of the line camp buildings, fences, corrals, and other small-scale features. The design and materials of which were influenced by readily available materials

found along the seashore.

Patrick Dunn established a series of four line camps along the island, each arranged in a similar fashion. At Novillo, the buildings of the line camp were clustered together at the northwest edge of the line camp with the corrals located directly to the east. Trap areas were located farther east and to the south and north. Circulation routes were established around these areas out of necessity. Small-scale features were typically clustered around the buildings and corral areas.

As ranching and agricultural technologies changed during the mid 20th century to accommodate vehicles, the functional design of the landscape also changed. Beginning in the 1940s and extending into the 1960s, additions to the landscape included a windmill, two concrete water tanks, a shell road, and cattle loading chutes. These changes, being part of the period of significance, illustrate the role technology played during the era. Today, the vernacular design and overall spatial organization of the site remain, and the integrity of design is retained.

Setting

Setting is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role. Setting includes the physical elements of a site, including character-defining features, such as spatial organization, land use, vegetation, topography, circulation, and small-scale features that are discussed in more detail in the following sections.

Overall, the setting of the Novillo Line Camp retains many of the landscape features present during the period of significance. Some changes since the end of the period of significance have added, altered, and removed individual features, such as buildings and small-scale features. Buildings were stabilized and repaired in the 1970s and early 2000s, while corrals, cattle chutes, and fence lines have deteriorated from fire and minimal maintenance.

Today, the general naturalistic setting of the line camp remains with views of the distant sand dunes. In the mid-1950s, the setting was degraded with the construction of the adjacent Chevron Cracking Plant, but was mostly regained in the mid-1980s when the facility was removed. However, today, remnants of the plant remain, diminishing the setting somewhat. Nevertheless, the clusters of outbuildings, fences, and corrals in the landscape today resemble the appearance of the landscape during the period of significance. Additionally, the spatial organization of the property remains. Overall, the integrity of the setting of the Novillo Line Camp is retained.

The surrounding context of the line camp has also remained relatively unchanged. Adjacent lands were historically undeveloped as they were used for open range land. Such lands were incorporated into Padre Island National Seashore in 1962, thus further limiting development.

Materials

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technologies.

Overall, historic and natural materials of the Novillo Line Camp landscape remain. The topography and soils are relatively intact with the exception of minor alterations created by natural forces. Natural features present at the time of the line camp and ranch operations persist. Vegetation has regenerated and grown over time, although existing vegetation communities are predominantly native species. The two remaining buildings, Bunkhouse A and the cookhouse, exhibit vernacular construction techniques through the use of salvaged building materials that washed up on the beach. The original corral and fence patterns also exist, creating broad patterns across the landscape. Integrity is retained through the substantial retention of historic materials.

Workmanship

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components.

Expressions of workmanship during the period of significance for the Novillo Line Camp landscape are limited to remaining buildings, corrals, cattle chutes, fences, and other built elements. Nearly all the buildings from the period of significance remain (with the exception of Bunkhouse B), having been continuously repaired and rebuilt over time by the Dunn family with available materials. Those features that remain have withstood decades of harsh environmental conditions and limited maintenance by the NPS from the late 1970s to the 1990s. This indicates a level of craftsmanship persists at the camp. Integrity of workmanship is retained.

Feeling

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character. In conjunction with location and setting, feeling describes what the property feels like or the senses it evokes to a person on the property.

At the Novillo Line Camp, the physical features that comprise the site, including buildings, corrals, fences, vegetation patterns, and views create a feeling of a late 19th and early 20th century ranch landscape. The rustic and secluded nature of the buildings and corral and fence patterns create a similar feeling as was experienced historically. The arrangement of the site create a historic sense of time where one might expect to see the cattle drive, Patrick Dunn, and the vaqueros at any moment. Therefore, the level of integrity of feeling is retained.

Association

Association is the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. A property with high integrity of association portrays its historic character through physical elements and their relationships to each other. Like feeling, association is based on individual perceptions.

At Novillo Line Camp, associations with the Patrick Dunn family and cattle ranching are evident through the remaining buildings and structures in the landscape. The simple, functional forms of the vernacular buildings can be associated with ranchers, like Dunn, who was more concerned about the functionality of the ranch than aesthetics. Additionally, the site retains its rural, remote feelings of a late 19th and early 20th century ranch on Padre Island. Integrity of association is retained.

Landscape Characteristic:

Archeological Sites

Archeological sites dating to the period of significance likely include a number of sites related to the Novillo Line Camp. In particular, the former building site of the burned bunkhouse (Bunkhouse B) has the potential to reveal additional information about line camp operations. Trash pits or middens may also be present in the area.

CONTRIBUTING FEATURES:

Former site of the burned bunkhouse
Potential trash pits or middens
Potential archeological sites dating to the period of significance

NON-CONTRIBUTING FEATURES:

Potential archeological sites dating after the period of significance

Buildings and Structures

Historically, the Novillo Line Camp contained two bunkhouses, a cookhouse, corrals, cattle chutes, fences, a windmill and water tanks. Additional information about each of these is provided below.

Bunkhouse A and B

During the period of significance, two bunkhouses were present at Novillo. One bunkhouse was used by Patrick Dunn, while the other was used by the crew of 12-13 Mexican vaqueros (Interpretive Prospectus 1975, 7). Dunn likely built both buildings, replacing earlier bunkhouses that were destroyed by a hurricane.

Bunkhouse A was the southernmost and slightly larger of the two original bunkhouses. As the

only completely enclosed structure at the line camp, it is constructed on 12-14" log piers, which elevate the structure approximately two feet above grade. Presumably this was done to keep the floor dry due to the high water table and to provide some protection against snakes. The rectangular plan measures 14'-6" wide by 15'-6" long. The walls are made of board and batten construction with a pitched roof of 24 courses of split cedar shingles to each side. Boards are 9.5" wide and 2.5" thick; battens are 3.5" wide and ¾" thick. Three board and batten doors are located on the east, south, and west walls, attached with metal strap hinges. The west door historically opened to platform to enter into an attached outhouse that was constructed circa 1920 (HSR 1979, 9-10).

Minimal alterations have been made to the building since the end of the period of significance. Sometime prior to the early 1970s, the attached outhouse was removed, leaving only a ghosting outline on the west elevation. In 1970-1971 the roof was covered with corrugated tin. More recently, the bunkhouse was stabilized in 2002, and the roof was re-shingled with cedar shingles (Colby 1998, 1; Simpson 2002, 79).

Since that time, the marine atmosphere and weather have contributed to further deterioration. In 2010 a stabilization and maintenance guide noted at least a dozen shingles that had blown off and another several dozen had either curled or been partially dislodged by wind and weather (Jacobson 2010, 12). The report also noted that existing board and battens continue to be infested with carpenter ants and are deteriorating from the bottom up. Two galvanized barrel bolts installed in 2002 to secure a louvered door on the east side have completely corroded and failed although their stainless steel mounting screws are still intact; the door will no longer close and cannot be secured (Jacobson 2010, 12-13).

Bunkhouse B, located north of Bunkhouse A, was constructed in similar fashion with few notable differences. Its plan measured 12'-0" wide by 14'-6" long. One door was located on the south elevation, while window openings were located on the east and west facades. The split cedar shingle roof consisted of 20 courses of shingles to each slope. Bunkhouse B was originally used by the vaqueros and later by the cattle foreman and cook while the vaqueros slept in Bunkhouse A (HSR 1979, 11).

In the early 1970s, the roof was covered with corrugated tin. Additionally, metal strap hinges on the east window and south door were replaced in 1976. Shortly thereafter, the bunkhouse was destroyed in a fire in 1979 (Jones 1999, Chapter 9). Nothing remains of this building today.

Cookhouse (Kitchen)

The cookhouse is an open structure with a pitched roof of wood tongue-in-groove planking supported by round posts approximately 9" in diameter. The structure covers an area measuring 10'-6" by 15'-6" and shelters a long table, measuring 11'-2" and 34" wide with built-in benches on both sides. An L-shaped windbreak measuring 17' by 12' extends north then west of the covered table area. The windbreak, added in later years (unknown date prior

to 1971) to keep sand from blowing into the food while it was prepared, consists of vertical boards ranging from 9" to 18" wide (HSR 1979, 13). Corrugated tin was added to the windbreak in 1970-1971. More recent stabilization efforts took place in 2002 and 2009. The kitchen portion of the cookhouse is currently roofed with tongue and groove yellow pine, while the balance of the kitchen/storage area is roofed with corrugated tin. Although the cookhouse structure has been stabilized the wood table underneath continues to deteriorate. As of 2002, the surface of the wood table is approximately 2 feet above grade (Colby 1998, 1; Simpson 2002, 79). Since then, the table has completely rotted and has been destroyed by termites and carpenter ants.

As noted in the 2010 stabilization and maintenance guide, "While the basic form described above is still extant, the corrugated metal described above is almost completely gone, mostly visible as rusted, fallen debris. Much of the wooden-plank siding on the windbreak structure is gone, as is most of the plank shed roof on the northern end, depicted in 1979 photographs. Structural elements on the south end, including the north/south, 8" by 10" carrying beams connecting the piles and the lower ends of the plank roofing, replaced in-kind in 2002, are mostly deteriorated and near failure due to carpenter ants and perhaps other biological agents. The cross member on the south end has failed completely causing the new (2002) ridge support post and existing "ridge-beam" to drop at that end and further compromise the stability of the deteriorating beams to which the roof planks are attached. The 6" square posts supporting the beams and roof of the L-shaped windbreak were found, during the archeological testing, to be almost completely deteriorated at the grade line and failing." (Jacobson 2010, 8-9).

Corrals, Fences, and Cattle Chutes

Corrals, fences, and cattle chutes represent the most diverse use of materials at Novillo. The corrals are constructed of boards of all types and sizes, nailed to upright timbers that also vary in size. A hierarchy of pen sizes throughout the corral area aided in separating and dividing cattle into progressively smaller pens for branding, castrating, vaccinating. A long narrow chute down the length and middle of the corral complex, forced cattle to move single file into the desired pen area. A unique triangular stop-gate located in this working chute allowed cattle to be diverted into a pen without letting the animal behind follow or walk ahead. Early line camp corrals employed mortise and tenon fastenings, most of which have now replaced with metal strap hinges (HSR 1979, 13-14).

Fences, like the corrals, were built of a variety of materials; however, post and wire fencing was a prominent feature throughout the Novillo Line Camp. Post and wire fences were used to delineated the trap areas, as opposed to corral areas which were all wood construction used for working pens. Wire may have been either barbed wire or woven wire—the latter of which was noted on the north side of the corrals in the late 1970s. In 1976, five strands of new barbed wire were attached to wood posts to replace fences that were on site historically. The posts were composed of unpeeled cedar approximately 5 feet above grade (HSR 1979, 8). Today, most of the original wood posts remain, though some have fallen and remain in the grass

below. The majority of the fencing wire has corroded and disappeared.

Two cattle chutes were added to the corral area in 1948 with the advent of first truck use on the island. Located at the east and southeast corners of the corral area, the east chute was built first. The southeast chute was built later along with a shell road that ran to the beach (HSR 1979, 14-15). In 2002 the two chutes were stabilized. Replacement rails, walk boards, ramp-floor treads, and several support posts were replaced in-kind (Jacobson 2010, 14). As of 2010, several of the massive older wooden posts supporting the corral at the base of the south chute had rotted at the soil line. The lack of support has tipped the structure, pulling down the rails on both sides (Jacobson 2010, 14).

Windmill and Water Tanks

The windmill at the Novillo Line Camp was one of nine windmill systems Burton Dunn built on the island. Erected in 1949, the windmill pumped water to two reinforced concrete stock tanks approximately 20 feet away. The windmill frame measured 10' tall, 40" square at the base, and 7" square at the top, while the water tanks measured 5' diameter with a depth of 22". A metal pipe ran from the windmill to the tanks.

In 1979, the windmill was "lying near the kitchen, away from its original standing position near the northwest corner of the corrals" (HSR 1979, 16). Remnants of this system can still be seen today. Only three round posts approximately 3 feet above grade remain where the windmill stood; the frame has been removed. The concrete stock tanks remain; however, both exhibit deterioration as the reinforcing rods have rusted and the concrete has cracked and broken up into brittle pieces.

Earthen Water Tanks

Prior to the construction of the windmill at Novillo, water was gathered in a ground level tank located east of the corrals, roughly 35 feet away. This type of water tank was constructed of a wood frame 6' wide, 8' long, and 2' deep out of 2x12 lumber. A hole was dug approximately 3' in the ground to allow fresh water to seep through the frame from below, keeping the tank filled with freshwater. As salt water is more dense than freshwater, the salt water would sink to the bottom of the frame and freshwater would rise to the top. At one time, there were about 75 such tanks located near the sand dunes on the east side of the island (HSR 1979, 15-16). Today, most of the earth water tanks have filled in after maintenance ceased in the early 1970s. There are depressions and seeps left in some areas, but the wood frames have rotted away.

Chevron Cracking Plant

In 1955, a Chevron Cracking Plant was constructed adjacent to the line camp to facilitate oil and gas processing on Padre Island. The plant affected the character of the site until the

Novillo Line Camp
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mid-1980s when most of the plant was removed. The remaining tanks were removed in 2010; however, today, smaller-scale remnants of the facility remain and are visible from the line camp.

CONTRIBUTING FEATURES:

Novillo Line Camp Bunkhouse A (LCS 066225, HS-03)
Novillo Line Camp Kitchen (LCS 066226, HS-04)
Novillo Line Camp Corrals and Chutes (LCS 066227, HS-05)
Novillo Line Camp Fences and Gates (LCS 066228, HS-01)
Windmill remnants and Concrete Water Tanks (2)
Depressions and Seeps from Earth Water Tanks

NON-CONTRIBUTING FEATURES:

Remnants of the Chevron Cracking Plant

MISSING FEATURES:

Novillo Line Camp Bunkhouse B (HS-02)
Wood Frames of Earth Water Tanks

Landscape Characteristic Graphics:



View of cookhouse (foreground) and bunkhouse (background), 1979. Source: Historic Structures Report.



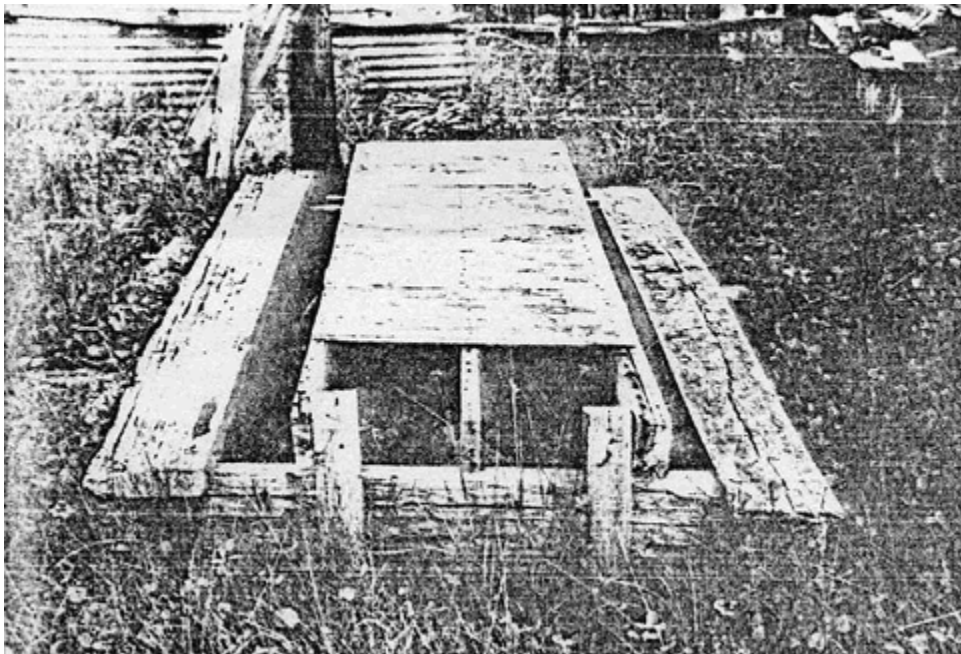
View of Bunkhouse A, cookhouse with attached windbreak, corrals and fences, looking southeast. Photo taken by Jim Bradford, April 2009.



Detailed view of Bunkhouse A, looking south. Photo taken by Jim Bradford, April 2009.



View of cookhouse with table (underneath) and windbreak in the background after stabilization, looking northeast. Photo taken March 2002.



View of table within cookhouse, 1979. Source Historic Structure Report.



View of corrals at Novillo Line Camp, looking west. Photo taken February 2002.



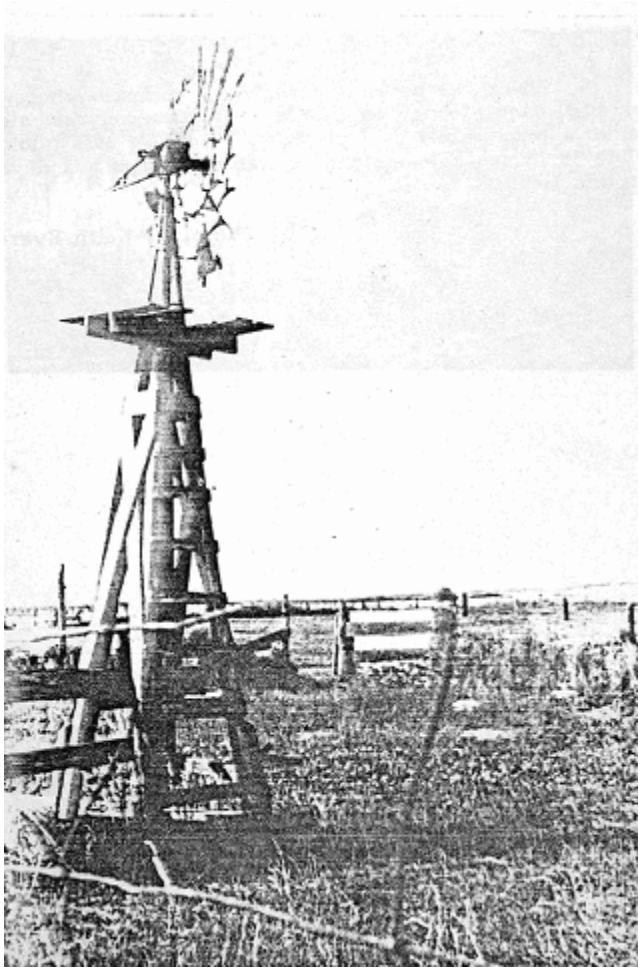
View of one of the cattle chutes at Novillo; bunkhouse in background to left, looking northwest. Photo taken February 2002.



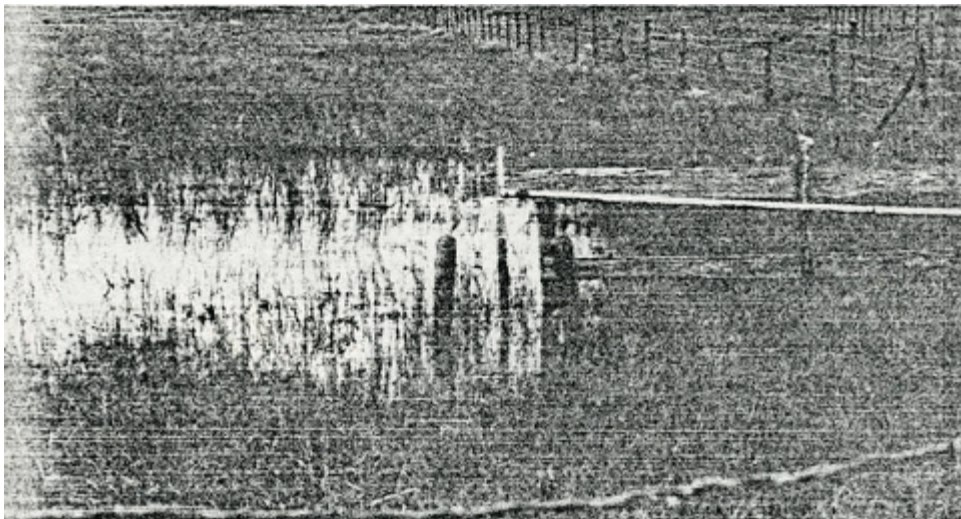
Remnants of corrals at Novillo Line Camp, looking north. Photo taken February 2002.



Fences marking the trap areas, looking north, 1997. Source: IMR CRM files.



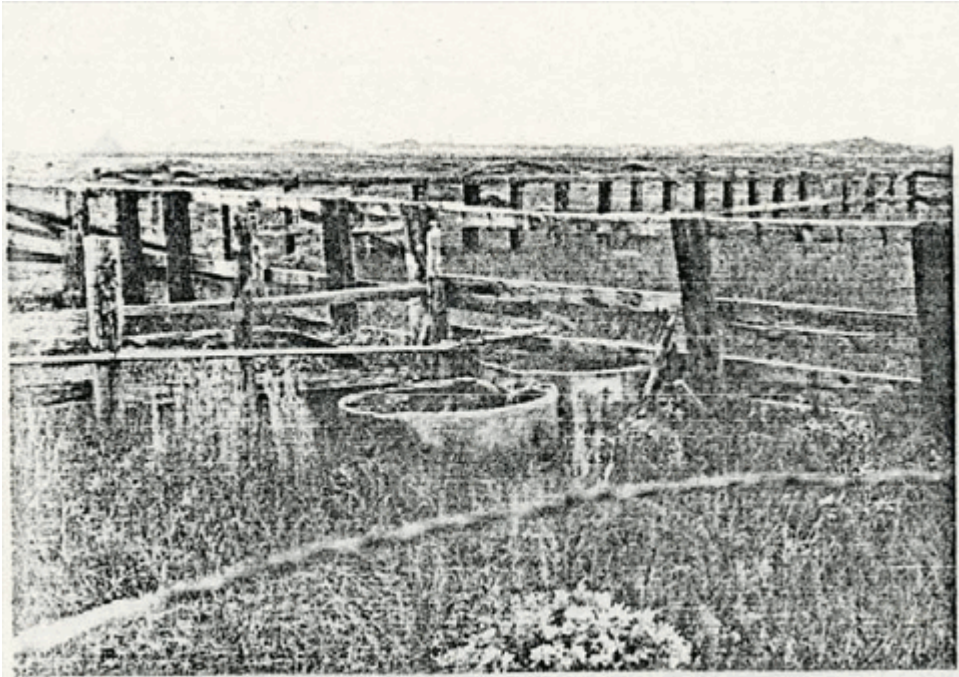
View of windmill (now removed), 1979. Source: Historic Structures Report.



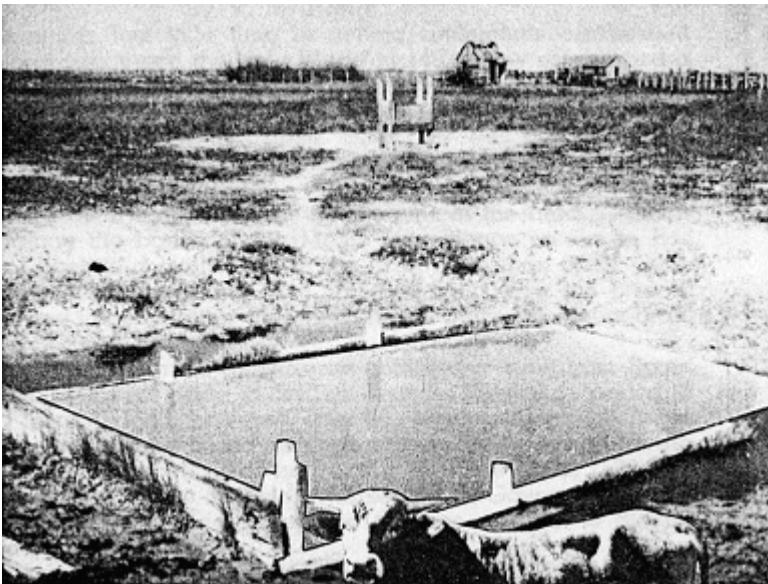
View of windmill location, 1979. Source: Historic Structures Report.



View of two concrete water tanks that held water pumped from the windmill. Photo taken February 2002.



View of concrete water tanks and adjacent fences and corrals, 1979. Source: Historic Structures Report.



View of earthen water tank at Dunn Ranch headquarters, similar to other water tanks constructed throughout the island and at Novillo Line Camp. Source: ↯ Harris 1965, cover.

Circulation

Circulation features of the early Dunn Ranch were minimal as cattle were driven over land to each of the four line camps. Circulation patterns weren't defined, but rather varied as cattle

and vaqueros moved from camp to camp.

It wasn't until 1948 when trucks were first used to transport cattle that the first defined circulation routes evolved. With the advent of truck transportation a shell road was built on the southern half of the line camp in an east-west direction. The road provided access to the corrals and later to the Chevron Cracking Plant in the mid-1950s. Circulation patterns were further altered as part of cracking facility operations from the 1950s to the mid-1980s when a series of new roads were created, connecting various areas of the plant to the shell road. The dismantling of the plant in the mid-1980s also led to the abandonment of the roads at the same time. Today, the roads remain, but plans are in place to reclaim the roads in the future.

Other remaining circulation features include a north-south road that leads from the shell road to the bunkhouse and cookhouse.

Future circulation changes include a proposed parking area and raised boardwalk along the park access road for visitor access and interpretation of the line camp. From the parking lot, located on the east side of Park Road 22 at the intersection of that road and the Bird Island Basin Road, the approximately 1,470-foot-long boardwalk will allow the park to provide visitor interpretation of both the wetlands and the Novillo Line Camp. Funds for the construction of these features are anticipated in summer 2011.

Other alterations to the circulation patterns include a proposal to remove the shell road to Novillo as part of a wetlands restoration effort. Although some sources state that the road was built by Chevron in 1955 to access their facility on the east edge of Novillo line camp, it may have been constructed by the Dunn family circa 1951 to provide truck access to the camp. Regardless of when it was built, the road was used for nearly 20 years, from the 1950s to 1971, as part of ranching operations in the mid-20th century.

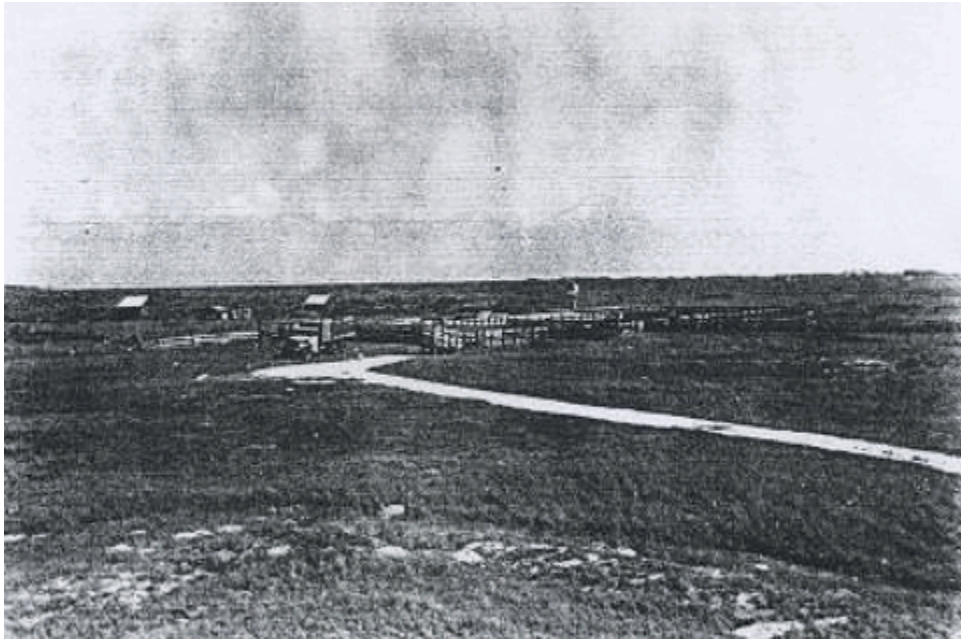
CONTRIBUTING FEATURES:

Informal north-south cattle routes from line camp to line camp
Shell road to Novillo Line Camp
North-south road from the shell road to the bunkhouse and cookhouse

NON-CONTRIBUTING FEATURES:

Contemporary parking area (construction anticipated summer 2011)
Boardwalk for pedestrian access
Abandoned internal access roads at Chevron plant

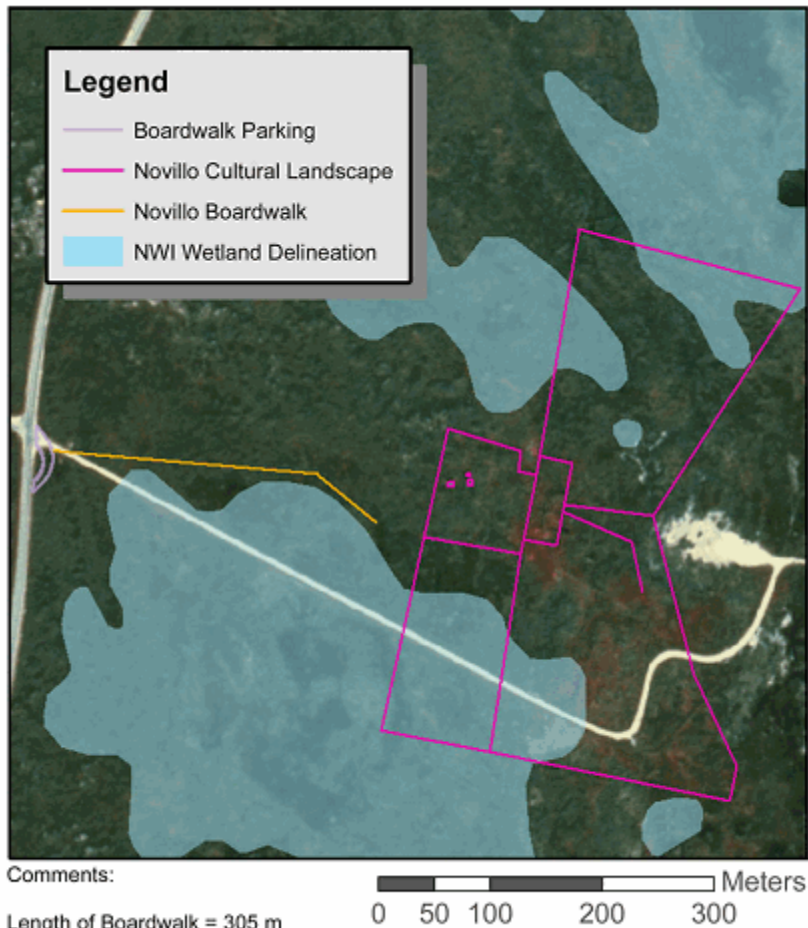
Landscape Characteristic Graphics:



Historic view of the shell road and Novillo Line Camp, 1971. Source: IMR CRM files.



View of the shell road leading to Novillo Line Camp, looking east. Photo taken by Victoria Jacobson, June 2010.



*Site plan showing proposed parking and boardwalk extending to Novillo Line Camp
(Source: IMR CRM files).*

Cluster Arrangement

Not used: See Spatial Organization.

Constructed Water Features

Not used: See Buildings and Structures.

Cultural Traditions

Not used.

Land Use

Beginning in the 1700s, Padre Island was used for cattle ranching, first by the Spanish, then by the Mexicans, and lastly by Anglo-Americans. The island was an ideal place for ranching: no need for fences, good grassland, an ample source of fresh water, and a narrow geographic

profile that simplified the job of herding cattle (Brown 1991, 48). The land was used for cattle ranching until 1971, when the last of the herd was removed from the island.

During the 20th century, other land uses were also introduced. During World War II, the island was used as a Navy bombing practice site—sharing the same open range with cattle and cowboys. After the war, oil and gas production facilities were added to the grounds of the island, and one facility was located adjacent to the Novillo Line Camp. However, in the early 1980s the facility was removed. Recreational use of the area has also increased and continues today.

CONTRIBUTING FEATURES: None.

NON-CONTRIBUTING FEATURES:

Recreation use

MISSING FEATURES:

Agricultural use

Military use

Oil and gas production use

Natural Systems and Features

Not used; See Topography and Vegetation.

Small Scale Features

Historically, the Novillo Line Camp contained numerous small-scale features. In addition to the corrals, cattle chutes, and fences (addressed in the Buildings and Structures section), a hitching post, hand pump, bench, water barrel, and beef jerky wire were also present during the period of significance. The hitching post, constructed of a horizontal iron pipe with three wood posts was located south of the cookhouse (HSR 1979, 18). The hand pump, located between Bunkhouse B and the cookhouse pumped fresh water from a 10-foot deep well for cooking, drinking, and washing. Prior to this water was carried via bucket from windmill tanks (HSR 1979, 18). Adjacent to the pump was a wood crafted bench. A water barrel for water storage was located between the cookhouse and Bunkhouse A (HSR 1979 18). Additionally, at one time a wire was strung between the cookhouse and Bunkhouse A to hang strips of beef for beef jerky (HSR 1979, 13).

Although these features remained in 1979, very few of these features remain today, having severely deteriorated over time. The pipe for the hand pump has been located. The bench is currently stored inside the bunkhouse, and posts are still standing from the hitching rail.

Other small-scale features include a USGS benchmark approximately 25 meters southeast of the bunkhouse.

CONTRIBUTING FEATURES:

Pipe for the hand pump
Wood bench (stored inside the bunkhouse, previously adjacent to hand pump)
Posts from the hitching rail

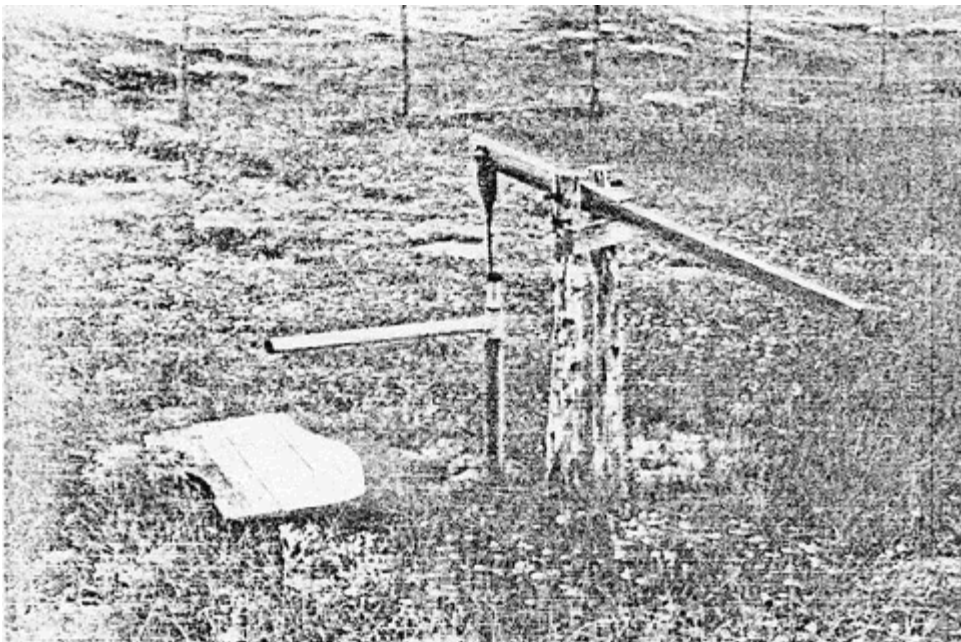
NON-CONTRIBUTING FEATURES:

USGS benchmark

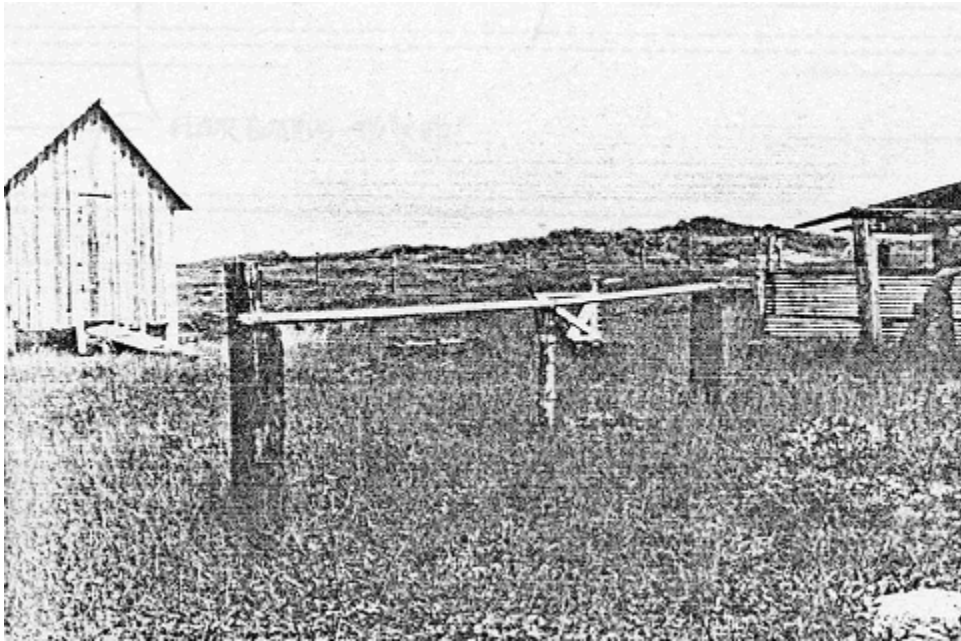
MISSING FEATURES:

Hitching post south of the cookhouse
Hand pump between Bunkhouse B and the cookhouse
10-foot water well
Water barrel between the cookhouse and Bunkhouse A
Beef jerky wire between the cookhouse and Bunkhouse A

Landscape Characteristic Graphics:



View of the hand pump between Bunkhouse B and the cookhouse, 1979. Source: Historic Structures Report, 1979.



View of hitching post between the cookhouse and Bunkhouse A, 1979. Source: Historic Structures Report, 1979.

Spatial Organization

In terms of spatial organization, “the general configuration and its structural components follow very closely the initial line camp building scheme devised by Patrick Dunn in the 1880s.” With the exception of structural features added in recent times (windmill and loading ramps for cattle trucks), Novillo has evolved very little in either form or function since its completion (HSR 1979, 6).

The buildings of the line camp were clustered together to the west of the camp with the corrals located directly to the east. Trap areas were located farther east and to the south and north. Circulation routes were established around these areas out of necessity. Small-scale features were typically clustered around the buildings and corral areas.

Today, this spatial arrangement remains as the bunkhouse, cookhouse, and site of the collapsed windmill are clustered at the west edge of the line camp and are surrounded by fences. To the east are four corrals; the two southernmost corrals have cattle chutes. To the northeast and southeast of the corrals are two large traps delineated by fence posts. The site of the former Chevron facility is located within the large trap to the southeast. A third, smaller trap is also located immediately south of the line camp buildings. The shell road cuts through the two traps to the south.

CONTRIBUTING FEATURES:

Clustering of buildings to the west

Clustering of corrals between buildings and traps
Clustering of traps to the north, east, and south

NON-CONTRIBUTING FEATURES:

Site of the former Chevron Cracking Plant

Topography

The topography of the Novillo Line Camp is relatively level. Water collects in low-lying areas, and since the water table is so high, surplus rainwater may stand in low-lying areas for months before evaporating. Shifting sands tend to collect at the base of the line camp buildings and structures, creating subtle changes in the topography. No substantial changes have been made to the topography of Novillo since the end of the period of significance.

CONTRIBUTING FEATURES:

Relatively level ground plane edged by sand dunes

NON-CONTRIBUTING FEATURES: None.

Vegetation

Historically, the absence of thick chaparral and overstory trees found in other parts of Texas made Padre Island an ideal place for a cattle ranch (Brown 1991, 34). Instead of trees, the island contained an abundance of native grasses that made prime rangeland. Other early accounts of the island by Diego Ortiz Parrillato noted elders, laurels, and red grass (Brown 1991, 54). Because of the wealth of herbaceous vegetation and lack of trees, the island's interior grassland was heavily grazed and trampled, which eliminated native grasses and replaced it with marshhay cordgrass—a tough exotic that became the dominant species (Brown 1991, 34).

In the early 1970s, cattle grazing was terminated on the island and rain levels began to increase. Subsequently, the vegetation began to recover. Native grasses, such as seacoast bluestem have made a comeback and species diversity has increased. The sand dunes have also gradually re-vegetated, providing a more ecologically stable ecosystem for wildlife (DCP 1995, 65).

Today, a total of 140 species, including 27 grasses, 15 grass-like species, 92 forbs, 3 cacti, and 3 woody species are known to grow within the park. In general, these species can be categorized into five plant communities—coastal dunes, low coastal sands, shore-grass flats, salt marsh, and salty sands (DCP 1995, 66). Very few plants can survive on the beach, where wind, waves, tides, salt, and storms are tolerated by only highly adaptive species. “On the edge of the beach, nearer the foredunes, sesuvium, beach morning glory, and railroad vine manage to grow” (Brown 1991, 22). Along the foredune areas, common plants include marshhay cordgrass, morning glory, and sea purslane, sea oats, bitter panicum, gulf croton, and seacoast bluestem (Brown 1991, 30). Rushes and sedges, such as white top sedge, whitestone wild

indigo, ground cherry, grow near ponds.

At the Novillo Line Camp, vegetation is mostly low growing, providing for expansive panoramic views. Grasses are most prominent and consist of andropogon, camphorplant (*Heterotheca*), gaillardia (*Gaillardia*), phlox (*Phlox*), and *Machaeranthera*. Marshy areas near the line camp include saltwort (*Batis maritima*), glasswort (*Salicornia perennis*), and salt or marsh grass (*Spartina* and *Lapochloa*) (HSR 1979, 22). These grasses, now unchecked by cattle, can grow to a height of 3 feet or more. Park staff periodically mow grasses for fire prevention purposes.

CONTRIBUTING FEATURES:

Native grasses including:

Andropogon (*Andropogon* species)

Camphorplant (*Heterotheca*)

Gaillardia (*Gaillardia* species)

Phlox (*Phlox* species)

Machaeranthera (*Machaeranthera* species)

Saltwort (*Batis maritima*)

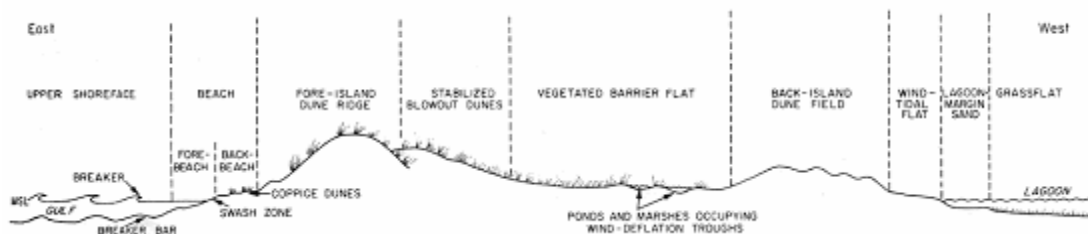
Glasswort (*Salicornia perennis*)

Salt or marsh grass (*Spartina* and *Lapochloa*)

NON-CONTRIBUTING FEATURES:

Non-native exotic grasses

Landscape Characteristic Graphics:



Cross section of Padre Island showing vegetation typologies and topography (Source: Weise and White 1980, 3).



Native grasses are the predominant vegetation at Novillo Line Camp. Photo taken by Victoria Jacobson, June 2010.

Views and Vistas

Because of the relatively flat topography and lack of overstory vegetation, views throughout the Novillo Line Camp were historically expansive in all directions. These views remain today. To the north, south, and west, views primarily consist of native grasses and smaller, undulating sand dunes. To the east, high sand dunes prevent views to the Gulf of Mexico.

Since the end of the period of significance, minimal changes have been made to the views within the Novillo Line Camp. The construction of the Chevron Cracking Plant in the 1950s blocked views to and from the area; however, views were mostly regained after the plant was removed in the 1980s. Remnants of the former plant continue to mark the landscape today, altering views from the line camp. Other changes, such as the proposed boardwalk and parking area, may also minimally affect the views of the area, when constructed.

CONTRIBUTING FEATURES:

Expansive views in all directions
North, south, and west views of native grasses and sand dunes
East views to sand dunes

NON-CONTRIBUTING FEATURES:

Views of former Chevron Cracking Plant
Views of nearby contemporary features (parking areas, roads, signs, etc).

Landscape Characteristic Graphics:



View of native grasses and sand dunes in the distance, looking east from the pull-out at park road 22. Photo taken by Jim Bradford, April 2009.



View of remnants of Chevron Cracking Plant adjacent to the line camp, looking east. The tanks were removed in 2010. Photo taken by Jim Bradford, April 2009.

Condition

Condition Assessment and Impacts

Condition Assessment: Fair

Assessment Date: 03/29/2011

Condition Assessment Explanatory Narrative:

The condition of the bunkhouse is fair, the roof was repaired in March 2011. The cookhouse is in poor shape, having collapsed during a storm in March of 2010. The fences are in fair shape with about 40% of the materials currently needing replacement. The park Superintendent concurred on 6/13/2011.

Impacts

Type of Impact: Erosion

External or Internal: Both Internal and External

Impact Description: The ever-constant blowing and shifting of sands at Padre Island National Seashore erodes wood features of the line camp.

Type of Impact: Exposure To Elements

External or Internal: Both Internal and External

Impact Description: Padre Island National Seashore has a harsh climate with constant wind, sun, and occasional hurricanes. These constant forces have deteriorated the wood elements of the line camp.

Type of Impact: Fire

External or Internal: Both Internal and External

Impact Description: Grass fires have burned and charred several of the wood features at the line camp. Threat of fire continues today with an increase of native grasses on the island.

Type of Impact: Flooding

External or Internal: Internal

Impact Description: Because the water table is so high on the island, ponding often occurs after rain events creating wet spots in low-lying areas. Standing water portrays the top of the water table, and water can take days or months to evaporate.

Type of Impact:	Neglect
External or Internal:	Internal
Impact Description:	Upon acquisition of the property, the NPS determined that benign neglect was the most appropriate treatment for the line camp. Since that time, park management policies have changed; however, a period of 20 years of neglect has impacted the resources of the site.
Type of Impact:	Structural Deterioration
External or Internal:	Internal
Impact Description:	Between UV exposure from the sun, erosion from blowing winds, and fungal rot from a high water table, the wood features at the line camp exhibit signs of structural deterioration. The cookhouse table has completely rotted or been destroyed by termites and carpenter ants.
Type of Impact:	Vegetation/Invasive Plants
External or Internal:	Internal
Impact Description:	With the end of grazing on park lands in 1971, vegetation has recovered, often growing to heights of 2 to 3 feet. An increase in vegetation has obscured historic features such as fence posts and created excess fuel for island grass fires.
Type of Impact:	Pests/Diseases
External or Internal:	Internal
Impact Description:	Termites and carpenter ants are a large factor in loss of wood features at Novillo Line Camp.

Treatment

Treatment

Approved Treatment: Preservation

Approved Treatment Document: Other Document

Document Date: 07/01/2010

Approved Treatment Document Explanatory Narrative:

In 1979, a Historic Structures Report (HSR) for Novillo Line Camp outlined preservation as an appropriate treatment. More recently in 2010, a maintenance plan was drafted and approved by the Texas Historical Commission (Texas SHPO) for the replacement in-kind maintenance of the line camp features.

Approved Treatment Completed: No

Approved Treatment Costs

Cost Date: 07/01/2010

Bibliography and Supplemental Information

Bibliography

Citation Author:	Jill Cowley
Citation Title:	Level 0 Cultural Landscape Inventory
Year of Publication:	1998
Citation Publisher:	NPS
Citation Type:	Both Graphic and Narrative
Citation Location:	CLI database, IMR CLI files
Citation Author:	NPS
Citation Title:	Padre Island National Seashore Parkwide Development Concept Plan and Environmental Assessment, Public Draft, January 1995
Year of Publication:	1995
Citation Publisher:	NPS
Citation Type:	Narrative
Citation Location:	IMR CRM files
Citation Author:	NPS
Citation Title:	Memorandum to PAIS Superintendent from IMR Archeology Program Manager, Trip Report for Novillo Line Camp Kitchen Rehabilitation Project, June 2, 2010
Year of Publication:	2010
Citation Publisher:	NPS
Citation Type:	Narrative
Citation Location:	IMR Archeology files

Citation Author:	NPS
Citation Title:	Interpretive Prospectus, Padre Island National Seashore
Year of Publication:	1975
Citation Publisher:	NPS
Citation Type:	Narrative
Citation Location:	IMR CRM files
Citation Author:	NPS
Citation Title:	General Management Plan / Development Concept Plan, Padre Island National Seashore, April 1983
Year of Publication:	1983
Citation Publisher:	NPS
Citation Type:	Narrative
Citation Location:	IMR CRM files
Citation Author:	NPS
Citation Title:	Novillo Line Camp Historic Structures Report, Padre Island National Seashore, October 1979
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Citation Publisher: NPS
Citation Type: Narrative
Citation Location: NPS History website

Citation Author: W. Dwayne Jones
Citation Title: Padre Island National Seashore Administrative History
Year of Publication: 1999
Citation Publisher: NPS
Citation Type: Narrative
Citation Location: NPS History website

Citation Author: James W. Sheire
Citation Title: Padre Island National Seashore Historic Resource Study, August 1971
Year of Publication: 1971
Citation Publisher: NPS
Citation Type: Narrative
Citation Location: NPS History website

Citation Author: Joseph E. Brown
Citation Title: Padre Island: The National Seashore
Year of Publication: 1991
Citation Publisher: Southwest Parks and Monuments Association
Citation Type: Narrative
Citation Location: IMR Archeology files

Citation Author: David Battle and Richard Sellers
Citation Title: Novillo Line Camp National Register of Historic Places nomination form
Year of Publication: 1974
Citation Publisher: NPS
Citation Type: Narrative
Citation Location: IMR CRM files

Citation Author: Glenn Simpson
Citation Title: Padre Island National Seashore, Historic Preservation Report, Record of Treatment – Novillo Line Camp Stabilization
Year of Publication: 2002
Citation Publisher: NPS
Citation Type: Narrative
Citation Location: IMR CRM files

Citation Author: Catherine Colby
Citation Title: Novillo Line Camp: Preliminary Report on Stabilization
Year of Publication: 1998
Citation Publisher: NPS
Citation Type: Narrative
Citation Location: IMR CRM files

Citation Author: Paul J. Neidinger
Citation Title: Condition Assessment and Preservation Plan for the Novillo Line Camp and Associated Line Camps at Black Hill and Green Hill, Padre Island National Seashore
Year of Publication: 2002
Citation Publisher: NPS
Citation Type: Narrative
Citation Location: IMR CRM files

Citation Author: V.M. Harris
Citation Title: “History of Cattle Raising on Padre Island” an article in South Texas Agriculture: A Progress Report from the Perry Foundation, vol. 1, no. 2
Year of Publication: 1965
Citation Publisher: Perry Foundation
Citation Type: Both Graphic and Narrative
Citation Location: IMR CRM files

Citation Author: Vicky Jacobson
Citation Title: Novillo Line Camp: Stabilization of Kitchen & Line Camp Maintenance Guide, July 2010
Year of Publication: 2010
Citation Publisher: NPS
Citation Type: Narrative
Citation Location: IMR CRM files