
National Park Service
Cultural Landscapes Inventory
2007



Fort Jefferson Landscape
Dry Tortugas National Park

Table of Contents

Inventory Unit Summary & Site Plan

Concurrence Status

Geographic Information and Location Map

Management Information

National Register Information

Chronology & Physical History

Analysis & Evaluation of Integrity

Condition

Treatment

Bibliography & Supplemental Information

Inventory Unit Summary & Site Plan

Inventory Summary

The Cultural Landscapes Inventory Overview:

CLI General Information:

Purpose and Goals of the CLI

The Cultural Landscapes Inventory (CLI) is an evaluated inventory of all significant landscapes in units of the national park system in which the National Park Service has, or plans to acquire any enforceable legal interest. Landscapes documented through the CLI are those that individually meet criteria set forth in the National Register of Historic Places such as historic sites, historic designed landscapes, and historic vernacular landscapes or those that are contributing elements of properties that meet the criteria. In addition, landscapes that are managed as cultural resources because of law, policy, or decisions reached through the park planning process even though they do not meet the National Register criteria, are also included in the CLI.

The CLI serves three major purposes. First, it provides the means to describe cultural landscapes on an individual or collective basis at the park, regional, or service-wide level. Secondly, it provides a platform to share information about cultural landscapes across programmatic areas and concerns and to integrate related data about these resources into park management. Thirdly, it provides an analytical tool to judge accomplishment and accountability.

The legislative, regulatory, and policy direction for conducting the CLI include:

National Historic Preservation Act of 1966 (16 USC 470h-2(a)(1)). Each Federal agency shall establish...a preservation program for the identification, evaluation, and nomination to the National Register of Historic Places...of historic properties...

Executive Order 13287: Preserve America, 2003. Sec. 3(a)...Each agency with real property management responsibilities shall prepare an assessment of the current status of its inventory of historic properties required by section 110(a)(2) of the NHPA...No later than September 30, 2004, each covered agency shall complete a report of the assessment and make it available to the Chairman of the Advisory Council on Historic Preservation and the Secretary of the Interior... (c) Each agency with real property management responsibilities shall, by September 30, 2005, and every third year thereafter, prepare a report on its progress in identifying... historic properties in its ownership and make the report available to the Council and the Secretary...

The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act, 1998. Standard 2: An agency provides for the timely identification and evaluation of historic properties under agency jurisdiction or control and/or subject to effect by agency actions (Sec. 110 (a)(2)(A))

Fort Jefferson Landscape
Dry Tortugas National Park

Management Policies 2006. 5.1.3.1 Inventories: The Park Service will (1) maintain and expand the following inventories...about cultural resources in units of the national park system...Cultural Landscape Inventory of historic designed landscapes, historic vernacular landscapes,... and historic sites...
ural Resource Management Guideline, 1997, Release No. 5, page 22 issued pursuant to Director's Order #28. As cultural resources are identified and evaluated, they should also be listed in the appropriate Service-wide inventories of cultural resources.

Responding to the Call to Action:

The year 2016 marks the 100th anniversary of the National Park Service. A five-year action plan entitled, “*A Call to Action: Preparing for a Second Century of Stewardship and Engagement*” charts a path toward that second century vision by asking Service employees and partners to commit to concrete actions that advance the agency’s mission. The heart of the plan includes four broad themes supported by specific goals and measurable actions. These themes are: Connecting People to Parks, Advancing the NPS Education Mission, Preserving America’s Special Places, and Enhancing Professional and Organizational Excellence. The Cultural Landscape Inventory relates to three of these themes:

Connect People to Parks. Help communities protect what is special to them, highlight their history, and retain or rebuild their economic and environmental sustainability.

Advance the Education Mission. Strengthen the National Park Service’s role as an educational force based on core American values, historical and scientific scholarship, and unbiased translation of the complexities of the American experience.

Preserve America’s Special Places. Be a leader in extending the benefits of conservation across physical, social, political, and international boundaries in partnership with others.

The national CLI effort directly relates to #3, Preserve America’s Special Places, and specifically to Action #28, “Park Pulse.” Each CLI documents the existing condition of park resources and identifies impacts, threats, and measures to improve condition. This information can be used to improve park priority setting and communicate complex park condition information to the public.

Responding to the Cultural Resources Challenge:

The Cultural Resources Challenge (CRC) is a NPS strategic plan that identifies our most critical priorities. The primary objective is to “*Achieve a standard of excellence for the stewardship of the resources that form the historical and cultural foundations of the nation, commit at all levels to a common set of goals, and articulate a common vision for the next century.*” The CLI contributes to the fulfillment of all five goals of the CRC:

- 1) *Provide leadership support, and advocacy for the stewardship, protection, interpretation, and management of the nation’s heritage through scholarly research, science and effective management;*
- 2) *Recommit to the spirit and letter of the landmark legislation underpinning the NPS*

Fort Jefferson Landscape

Dry Tortugas National Park

- 3) *Connect all Americans to their heritage resources in a manner that resonates with their lives, legacies, and dreams, and tells the stories that make up America's diverse national identity;*
- 4) *Integrate the values of heritage stewardship into major initiatives and issues such as renewable energy, climate change, community assistance and revitalization, and sustainability, while cultivating excellence in science and technical preservation as a foundation for resource protection, management, and rehabilitation; and*
- 5) *Attract, support, and retain a highly skilled and diverse workforce, and support the development of leadership and expertise within the National Park Service.*

Scope of the CLI

CLI data is gathered from existing secondary sources found in park libraries, archives and at NPS regional offices and centers, as well as through on-site reconnaissance. The baseline information describes the historical development and significance of the landscape, placing it in the context of the landscape'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 and generates spatial data for Geographic Information Systems (GIS). The CLI also identifies stabilization needs to prevent further deterioration of the landscape and provides data for the Facility Management Software System

Inventory Unit Description:

Fort Jefferson is located on Garden Key in Dry Tortugas National Park. The Tortugas are a series of small keys off the southernmost point of Florida, 70 miles west of Key West. The keys are individual sandy islands in the Gulf of Mexico surrounded with extensive coral reefs and shoals. Fort Jefferson is located on the second largest of these isolated islands and construction began in 1846, continued for thirty years, though was never completed. The fort is the largest example of a Third System seacoast fortification built for the defense of the Atlantic coast and was used as a military outpost, federal prison, quarantine site, and coal fueling station. The fort was designated a national monument in 1935.

Fort Jefferson almost completely covers Garden Key. The fort is six-sided with three tiers and has arched casements along each rampart with a staircase at each bastion. The terreplein above each rampart is covered with grass and forbs and several cannon (10) are still in place. The brick fort encloses a large parade ground planted with coconut palms, and buttonwood trees. Several seaside mahoes, an invasive exotic tree introduced to South Florida in the 1920s, are planned for removal. The parade ground also contains the ruins of the officers' quarters, engineer's quarters and enlisted men's barracks as well as the original light house foundation, a monument to Major Smith, and an unmarked grave. A restored brick hot shot furnace and staff house (engineer's quarters) also occupy the periphery of the parade ground. The center of the fort remains open with a turf of mown grass and sandy pathways used by visitors and staff. Other plantings of beach lilies, geiger trees, and seagrapes are located around the perimeter in addition to a brick walkway encircling the interior fronts of the fort. The cistern, placed on the foundation for a chapel that was never built, is still in use. Leaching fields were added (diagonally) near the staff house in recent years. A screen of seagrapes, geiger trees, and coconut palms extends along Front 2 and 3, concealing maintenance and staff areas from view. The parade ground landscape has several makeshift benches (of architectural material from the fort) and picnic

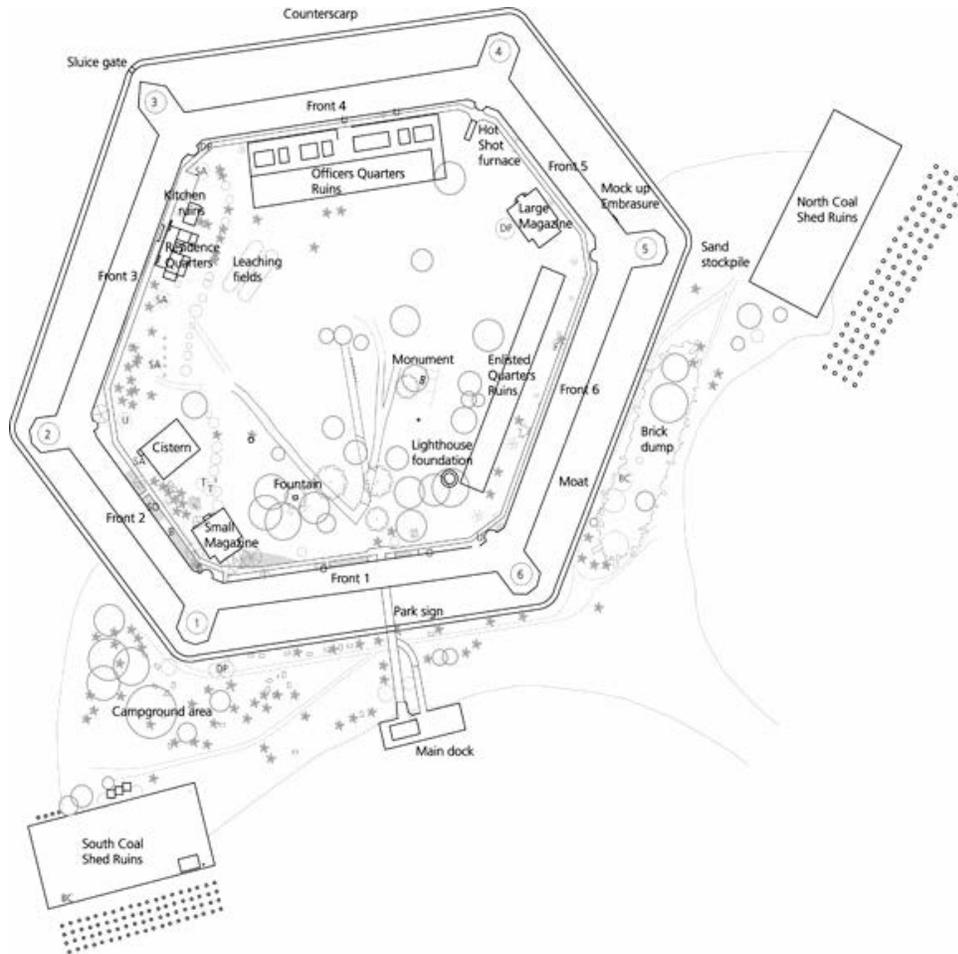
Fort Jefferson Landscape

Dry Tortugas National Park

tables in the employee housing area. A square brick fountain for birds is located on the parade near the sally port but post-dates the period of significance at Fort Jefferson. A cluster of benches for park interpretative programs is located to the right of the entrance under the shade of several trees.

The brick fort is surrounded by a moat and counterscarp, while the remainder of the island has a small campground, beach, boat dock, and remains of the Navy coaling infrastructure. The campground has a picnic table and standing outdoor grill at each campsite with scattered buttonwoods and coconut palms planted in the area. Restroom buildings are located between the campground and south coaling piers. A section of buttonwood trees and coconut palms is roped off to promote restoration and separates the campground from the beach on the southwest shore of Garden Key. On the exterior of Front 1, beyond the counterscarp is a large NPS sign for Dry Tortugas National Park, a large anchor, and a singular row of coconut palms. The main dock is located directly in front of the NPS sign and sally port entrance. This feature is a modern addition. The shoreline next to the main dock is used for seaplane loading and unloading. To the north end of Garden Key is the north coaling dock, an area for dumping architectural materials and storing boats used by Cuban refugees. The brick dump site along Front 6 contains remains from the enlisted men's barracks and the officers' quarters dumped by the NPS in 1960s. Volunteers of bay cedar, buttonwoods, and coconut palms have grown up on this portion of the key.

Site Plan



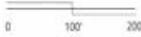
Legend

- Brick walkway
- Visible sand path
- Visible brick edging
- Buried paths (GPR survey)*
- Brick rubble
- Beach
- Planted beds**
- o Picnic tables/Benches
- o Interpretive signs
- o Campground grills

- o Buttonwood
 - * Coconut Palm
 - * Geiger
 - * Gumbo Limbo
 - * Night-blooming Cereus
 - o Seaside Mahoe
 - o Seagrape
- *GPR survey located buried paths. Dashed lines represent conjecture
 **Planting beds contain Beach Lily, Aloe Vera, and Mother-in-laws tongue

Code Common name

- B Banana
- BC Bay Cedar
- DP Date Palm
- F Flame tree
- O Ochrosia
- SA Spanish Almond
- SO Sour Orange
- T Tamarind
- U Unidentified



Fort Jefferson
 Existing Conditions

Dry Tortugas National Park
 Cultural Landscape Inventory
 September 2005
 (revised May 2007)

CLI site plan Fort Jefferson, revised 2007.

Property Level and CLI Numbers

| | |
|-----------------------------------|--------------------------|
| Inventory Unit Name: | Fort Jefferson Landscape |
| Property Level: | Landscape |
| CLI Identification Number: | 550018 |
| Parent Landscape: | 550018 |

Park Information

| | |
|----------------------------------|----------------------------------|
| Park Name and Alpha Code: | Dry Tortugas National Park -DRTO |
| Park Organization Code: | 5299 |
| Park Administrative Unit: | Everglades National Park |

CLI Hierarchy Description

Fort Jefferson (1846-1874) is a significant cultural landscape located in Dry Tortugas National Park. The park covers an extensive area of sand islands and coral reefs in the Florida Straits (64,701 acres). Fort Jefferson, a nineteenth century military fortification is located on Garden Key, the second largest island of Dry Tortugas. The cultural landscape includes the six-sided fort as well as the interior parade ground, terreplein above the fort, and the portion of Garden Key outside of the fort walls. The cultural landscape of Fort Jefferson is partially enclosed by the counterscarp and moat and includes the Navy coaling piers, boat dock, and adjacent campground. Loggerhead Key, also in Dry Tortugas National Park, has an additional cultural landscape but no survey has evaluated or recorded this resource. There are no other cultural landscapes remaining on the other sand keys within the park.



Cultural Landscape Inventory Unit Hierarchy

Concurrence Status

Inventory Status: Incomplete

Completion Status Explanatory Narrative:

Sean Styles contacted the park in 1997 to begin the CLI . Two cultural landscapes were identified at the park: Fort Jefferson, Loggerhead Key Lighthouse. Beth Wheeler did a cursory overview of the information available at SERO in the summer of 2004. In February 2005, David Hasty and Beth Wheeler conducted a site visit, photographed the key features of the site, and conducted archival research. The park contact is Melissa Memory.

Concurrence Status:

| | |
|---|--|
| Park Superintendent Concurrence: | Yes |
| Park Superintendent Date of Concurrence: | 06/21/2007 |
| National Register Concurrence: | Eligible -- SHPO Consensus Determination |
| Date of Concurrence Determination: | 09/17/2007 |

Concurrence Graphic Information:



United States Department of the Interior

NATIONAL PARK SERVICE
Southeast Regional Office
Atlanta Federal Center
1924 Building
100 Alabama St., SW.
Atlanta, Georgia 30303



IN REPLY REFER TO:
H22 (SERO-CRD)

31 July 2007

David Ferro
Division of Historical Resources
Bureau of Historic Preservation
R,A, Gray Building
500 South Brounough St.
Tallahassee, FL 32399-0250

Dear Mr. Ferro:

Enclosed please find a copy of the Cultural Landscape Inventory (CLI) for Fort Jefferson, located in Monroe County at Dry Tortugas National Park.

The CLI is an evaluated list of landscape properties in the National Park System considered eligible for the National Register of Historic Places or that contribute to an existing historic property. In order for CLI data to become certified, National Park Service regulations require concurrence from the SHPO on the eligibility of these properties. We are requesting your review of the Fort Jefferson CLI and ask that you return the enclosed concurrence form.

Fort Jefferson was first listed on the National Register in November 1970, but that documentation focuses primarily on military history and historic structures with no reference to the cultural landscape. We suggest that the existing nomination be amended to include additional cultural landscape features such as circulation, spatial organization, small scale features, and vegetation. We believe that these features contribute to the significance of the property in terms of feeling, setting, location and association. The enclosed inventories include statements of significance, a written history, analysis and evaluation of cultural landscape features, and graphic attachments.

With concurrence from your office, the findings become certified in the CLI database. Your concurrence also gives us justification to submit proper additional documentation to you at a future date.



Letter to the SHPO

If you have any questions about this document, please contact David Hasty, CLI Coordinator, Southeast Region (SER), at (404) 562-3117 extension 630 or by e-mail at david_hasty@nps.gov. The concurrence form can be returned by fax at (404) 562-3202, or mailed to the address above.

We greatly appreciate your office's assistance with the project.

Sincerely,



Dan Scheidt
Chief, Cultural Resource Division
Southeast Region

Enclosure

We have reviewed the submitted documentation that identifies cultural landscape features at the Fort Jefferson in Dry Tortugas National Park. We concur with the findings of the Cultural Landscape Inventory, and understand that these features have the potential to contribute to the existing National Register of Historic Places nomination for Fort Jefferson.

Barbara E. Matlock, DSHPO
Florida State Historic Preservation Officer

9/17/2007
Date

2nd page of letter to SHPO; SHPO Signature of Concurrence



United States Department of the Interior

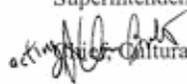
NATIONAL PARK SERVICE
Southeast Regional Office
Atlanta Federal Center
1924 Building
100 Alabama St., S.W.
Atlanta, Georgia 30303



H22(SERO-CRD)

4 June 2007

Memorandum

To: Superintendent, Everglades National Park
From:  Chief, Cultural Resource Division, Southeast Region
Subject: Fort Jefferson Cultural Landscape Inventory

We are pleased to transmit the Fort Jefferson Cultural Landscape Inventory (CLI) for the park's approval. The CLI is an evaluated list of landscape properties in the National Park System eligible for listing on the National Register of Historic Places (NR) or that contribute to an existing historic property. This CLI is the work of Beth Wheeler, primary author, and David Hasty, Southeast Region CLI Coordinator. Information for this document comes primarily from archival research at the Southeast Regional Office and the Beard Center at Everglades NP, and a site visit to the fort in February 2005. Nancy Russell, Curator of the South Florida Collections, served as our main point of contact for this project, and provided assistance both at the Beard Center and at Fort Jefferson. Additional help was provided by Melissa Memory, Everglades Chief of Cultural Resources, Mike Ryan, former DRTO Site Manager, Niki Ryan, and Willie Lopez. Craig S. Smith, Botanist, and Jonathan E. Taylor, Exotics Control Manager, provided additional expertise with the vegetation data.

In order for the CLI to be certified and counted in PMDS under DRTO's goal 1a7 and the systemwide goal 1b2B, the Florida State Historic Preservation Office (FL-SHPO) needs to concur on the eligibility of the identified cultural landscape features to the existing nomination. Fort Jefferson is listed on the National Register, but the cultural landscape features are inadequately documented in the existing nomination. David Hasty will send a request to FL-SHPO for concurrence on the CLI findings.

The park superintendent also needs to concur on the condition assessment and management category provided within the inventory. A signature page is enclosed and needs to be signed and returned to the Regional Office for final certification and listing in PMDS goals 1a7 and 1b2B. If the condition assessment and management category are agreed upon, please sign the attached approval form and return to our office to the attention of David Hasty.

Enclosures



Letter to the Superintendent

CULTURAL LANDSCAPE INVENTORY
CONDITION ASSESSMENT CONCURRENCE SHEET

Park Information

Park: Dry Tortugas National Park
Name: Fort Jefferson Landscape
Location: Florida
County: Monroe
CLI#: 550018

Cultural Landscape Condition Information

Landscape Condition:

Good
Fair
Poor

Management Category:

Must be preserved
Should be preserved
May be preserved
May be released, altered or destroyed

Park Concurrence

Concur Do Not Concur

Dan Bramble Supt. DR70 6/21/2007
Signature Title Date

Superintendent Signature of Concurrence

**CULTURAL LANDSCAPE INVENTORY
CONDITION ASSESSMENT CONCURRENCE SHEET – 23 July 2013**

| | |
|--------------------------------|----------------------------|
| <u>Park Information</u> | |
| Park: | Dry Tortugas National Park |
| Name: | Fort Jefferson Landscape |
| Location: | Florida |
| County: | Monroe |
| CLI#: | 550018 |

| | |
|--|----------------------------------|
| <u>Cultural Landscape Condition Information</u> | |
| 2007 Landscape Condition: | 2013 Landscape Condition: |
| Good _____ | Good _____ |
| Fair <u> X </u> | Fair <u> X </u> |
| Poor _____ | Poor _____ |

| | | |
|--------------------------------|--|-------------------|
| <u>Park Concurrence</u> | | |
| Concur <u> x </u> | Do Not Concur _____ | |
| Kelly Clark Signature | Exhibits Specialist/Sect. 106 Coordinator Title | 9/25/2013 Date |

Condition reassessment

Geographic Information & Location Map

Inventory Unit Boundary Description:

Fort Jefferson is located on Garden Key in Dry Tortugas National Park.

State and County:

State: FL

County: Monroe County

Size (Acres): 16.90

Boundary Coordinates:

Source: USGS Map 1:24,000

Type of Point: Area

Latitude: -82.8733281633

Longitude: 24.6297796500

Source: USGS Map 1:24,000

Type of Point: Area

Latitude: -82.8716510886

Longitude: 24.6292497830

Source: USGS Map 1:24,000

Type of Point: Area

Latitude: -82.8718326402

Longitude: 24.6275139980

Source: USGS Map 1:24,000

Type of Point: Area

Latitude: -82.8732901729

Longitude: 24.6259067800

Source: USGS Map 1:24,000

Type of Point: Area

Latitude: -82.8746519823

Longitude: 24.6271538350

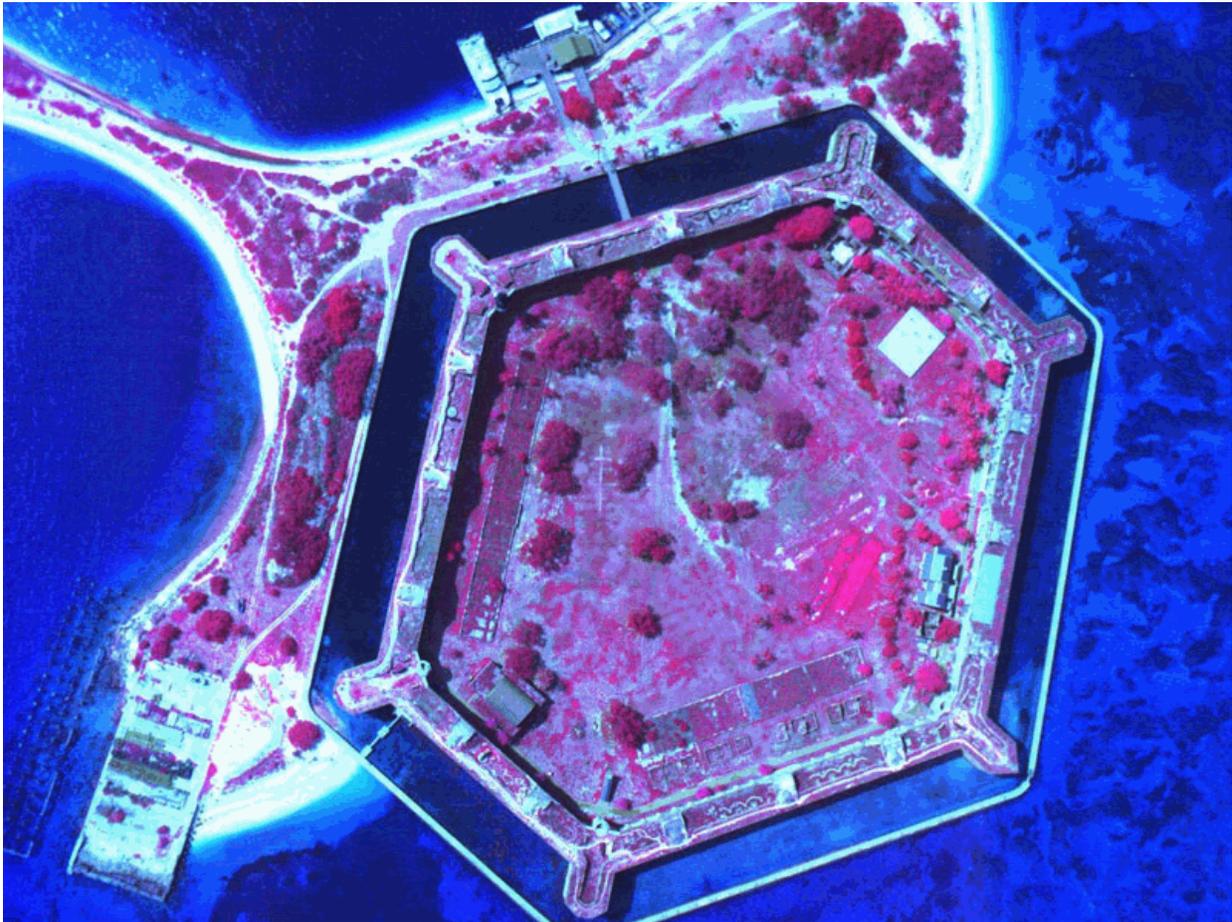
Source: USGS Map 1:24,000

Type of Point: Area

Latitude: -82.8748054083

Longitude: 24.6288312730

Location Map:



Aerial of Fort Jefferson, 2004.

Regional Context:

Type of Context: Cultural

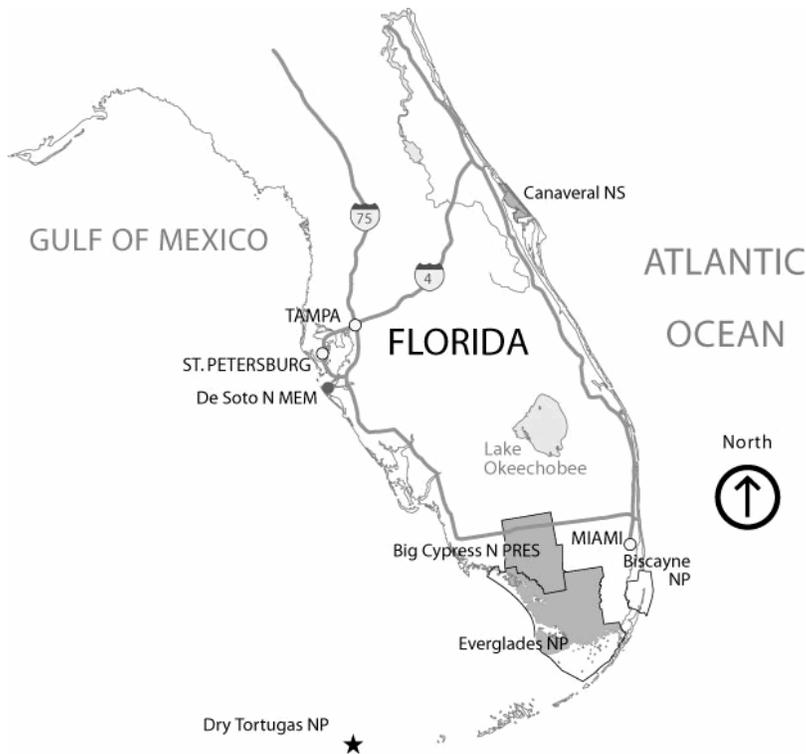
Description:

Ponce de Leon discovered the Dry Tortugas in 1513. Fishermen, wreckers, and pirates regularly landed on the islands during the next two centuries but finding no fresh water, moved on. Only a lighthouse keeper inhabited Garden Key before the construction of Fort Jefferson in 1846. The fort was used by the Army as a prison and later became a quarantine station and coal depot. Fort Jefferson has been preserved as a national monument since 1935.

Type of Context: Physiographic

Description:

Garden Key, the second largest island in Dry Tortugas National Park, is the location of Fort Jefferson. The clustered islands of the Dry Tortugas are composed of sand and coral reefs in the Gulf of Mexico and change with erosion from hurricanes and storms. The Dry Tortugas are an extension of the Florida keys, however there is no fresh water source on any of the islands.



Regional location of Dry Tortugas National Park

Type of Context: Political

Description:

Fort Jefferson is located in Dry Tortugas National Park in Monroe County, Florida. The park lies in the Eighteenth US Congressional District.

Management Unit: EVER

Tract Numbers: 01-101

Management Information

General Management Information

Management Category: Should be Preserved and Maintained

Management Category Date: 02/15/2007

NPS Legal Interest:

Type of Interest: Fee Simple

Public Access:

Type of Access: With Permission

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Description:

The Dry Tortugas are isolated islands with no threat of encroaching or incompatible development. The Gulf of Mexico surrounds the Dry Tortugas with the closest town, Key West, 70 miles to the east. The keys surrounding (and including) Garden Key change with the erosion of storms and hurricanes and naturally alter over time. During a hurricane in December 2004, a land bridge was formed between Garden Key and Bush Key, but subsequently washed away during Hurricane Wilma in October 2005.



USGS topographic map of Dry Tortugas surrounding Garden key.

National Register Information

Existing National Register Status

National Register Landscape Documentation:

Entered Inadequately Documented

National Register Explanatory Narrative:

Fort Jefferson is an existing National Register historic district nationally significant for military architecture and the role of defending an expanding United States in the nineteenth century. Further documentation should be added to include the associated cultural landscape of the fort. Several landscape elements of Fort Jefferson contribute to the period of significance but are not documented in the National Register nomination.

Existing NRIS Information:

| | |
|------------------------------------|--------------------------------|
| Other Names: | Fort Jefferson National Monume |
| Primary Certification Date: | 11/10/1970 |
| Name in National Register: | Dry Tortugas National Park |
| NRIS Number: | 01000228 |
| Primary Certification Date: | 10/26/1992 |

National Register Eligibility

| | |
|--|--|
| National Register Concurrence: | Eligible -- SHPO Consensus Determination |
| Contributing/Individual: | Individual |
| National Register Classification: | District |
| Significance Level: | National |
| 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 |

Period of Significance:

| | |
|--------------------------------|--|
| Time Period: | CE 1846 - 1876 |
| Historic Context Theme: | Shaping the Political Landscape |
| Subtheme: | Political and Military Affairs 1783-1860 |
| Facet: | Manifest Destiny, 1844-1859 |
| Other Facet: | America Becomes a World Power 1865-1914 |

Area of Significance:

| | |
|--|-------------|
| Area of Significance Category: | Military |
| Area of Significance Subcategory: | None |
| Area of Significance Category: | Engineering |
| Area of Significance Subcategory: | None |

Statement of Significance:

Fort Jefferson is a nationally significant seacoast fortification. The fort was constructed over a period of thirty years though never completed (1846-1874) and is a lasting example of nineteenth century seacoast military architecture and engineering (Criterion C). Constructed to protect the Straits of Florida, Fort Jefferson is the largest and most extensive Third System fort. The trade routes between the Mississippi River and the Atlantic Ocean made the Dry Tortugas a strategic location for defense near the coast of Florida. Besides a coastal defense, the fort was used to hold Civil War prisoners and later became a quarantine station and Navy coal depot. Fort Jefferson also represents the protection of lands and waterways newly acquired during the territorial expansion of the United States in the mid-nineteenth century (Criterion A).

The Third System fortifications along the Atlantic coast were integrated military installations, part of a uniform campaign to defend the United States coast from Maine to Florida in the nineteenth century. Earlier forts were designed by individual and local engineers, while Third System forts were initially designed by General J.G. Totten, then refined by the U.S. Army Corps of Engineers for location and topography. For the first time, fort architecture was standardized and large polygonal masonry structures were built on shores and islands to protect harbors and trade routes. Engineering combined structural elements like brick, stone and concrete to allow for casement emplacements that concentrated armament in an unprecedented way. The arched casement design characteristic of the Third System lined all seaward fronts, at Fort Jefferson this included each side, with guns placed in each arched opening. The fortification at Dry Tortugas is constructed of brick and has six differing rampart lengths with bastions at each angle and the most (125) gun emplacements on any Third System fort front (designed to have 420 guns, but second tier never installed). Other Third System forts include Pulaski, Delaware, Moultrie and Sumter. The size, shape, and architectural details of Fort Jefferson are unique yet the fort system is part of distinct design and period of defense building in the mid-nineteenth-century (Criterion C).

Fort Jefferson Landscape

Dry Tortugas National Park

Fort Jefferson is also significant for its contribution to the broad pattern of historic westward expansion and the increased national influence of the United States in the nineteenth century (Criterion A). The defense of territorial resources became imperative in the 1800s as part of Manifest Destiny, the belief that America should stretch from the Atlantic to Pacific coasts. The need to protect new lands and trade routes was met with a series of masonry fortifications that dotted eastern coasts and harbors. The development of Third System forts occurred at a time of peace (between the Mexican and Civil Wars) but served to guard against potential wartime threats. The Dry Tortugas provided a strategic location in the Straits of Florida between the Atlantic Ocean and Gulf of Mexico, as increasing trade from Mississippi River markets made the site ideal for protecting shipping routes and impeding blockades. Known as the 'Key to the Mexican Gulf,' all New Orleans ships passed through the narrow area near the Dry Tortugas. As part of the Third System fortification plan, Fort Jefferson protected the growing United States as part of a larger string of coastal defenses.

The period of significance for Fort Jefferson is 1846-1876. This includes the major building and use of the fort as well as the construction of the light tower. Slaves from Key West began initial construction and later labor was provided by the United States Army during the Civil War. The fort was enclosed by a counterscarp and moat, and contained buildings for barracks (officers, engineers, and enlisted men), several detached kitchens, two magazines, a hot shot furnace, cisterns, a blacksmith shop, a hospital, a chapel, other temporary buildings, and a large parade ground. The fort served as a military prison during and after the Civil War. At its peak nearly a thousand men were garrisoned at Fort Jefferson. The parade ground was used as a camp for soldiers while the barracks were constructed. Fort Jefferson was one of only three forts in the South to remain in Federal hands during the Civil War. By 1874, the fort was unnecessary for national defense interests and obsolete due to new technology. Fort construction was halted and Garden Key became a quarantine station. A light tower was constructed to replace the previous lighthouse in 1876. In 1904, the Navy began using Fort Jefferson as a coal refueling station and constructed new infrastructure and piers on the north and south shores of the key. President Franklin Roosevelt designated Fort Jefferson a National Monument in 1935 and today the fort is part of Dry Tortugas National Park.

Fort Jefferson is an important example of a Third System fortification and significant to the defense of military interests and trade routes in the nineteenth century. The fort remains in fair condition, despite numerous hurricanes, and has good integrity (location, design, setting, feeling, materials, workmanship, and association). The architectural ruins of the barracks, lighthouse, and officer's quarters are still present on the parade ground and retain integrity of location, setting, and association as part of the cultural landscape. The parade ground also includes extant large and small magazines as well as a restored hot shot furnace. The permanent and temporary buildings on Garden Key housed the daily functions of the military, but only these few buildings, foundations, and sites remain to convey the history beyond the fort itself. The parade ground also encloses a monument to Major Smith with associated pathways, but does not date to the period of significance. Non-contributing landscape features are also present on the parade ground, including a fountain, an unmarked grave, and leaching fields. There are a few small staff gardens along Front 3 that are modern additions. The landscape on Garden Key contributes to the historic significance with integrity of location, setting and association despite later changes to the parade ground and buildings as well as the addition of modern features.

The vegetation on Garden Key is significant to the history of the fort and was described in soldier's letters and historic journals. Photographs from the historic period reveal the presence of both buttonwood trees and coconut palms, part of the existing vegetation that conveys integrity of feeling, association, setting, and potentially, location. The open parade ground once contained a small vegetable garden and main pathway lined with ordinance during the period of significance but these landscape features were more ephemeral. An interrupted line of brick edging currently begins at the sally port and heads north, but more research should identify and date this feature, as it is believed to be a WPA addition. Seaside mahoes were introduced to the parade ground in the twentieth-century and are a non-contributing characteristic. They are scheduled for removal (PEPC 13332).

State Register Information

Identification Number: 8MO229
Name: Fort Jefferson National Monument

Explanatory Narrative:

Florida SHPO documented a Physical Change in Site on 05/16/1989 when a particular structure was rehabilitated. No other information was provided.

During the park review of the CLI, Mike Jester (NPS employee) mentioned the project was likely the Visitor Center expansion submitted in February 1989 (#19890510).

Chronology & Physical History

Cultural Landscape Type and Use

Cultural Landscape Type: Historic Site
Current and Historic Use/Function:
Primary Historic Function: Fortification-Other
Primary Current Use: Government-Other

Current and Historic Names:

| Name | Type of Name |
|----------------|---------------------------|
| Fort Jefferson | Both Current And Historic |

Ethnographic Study Conducted: No Survey Conducted

Chronology:

| Year | Event | Annotation |
|----------------|--------------|--|
| CE 1513 | Explored | Dry Tortugas or "Las Tortugas" (The Turtles) |
| | | Ponce de Leon |
| CE 1826 | Built | Lighthouse and Keeper's quarters on Garden Key |
| CE 1829 | Planned | Dry Tortugas surveyed by Lt. Josiah Tattnall |
| CE 1844 | Planned | Preliminary reconnaissance of fort sites |
| CE 1846 | Planned | Topographical survey of Dry Tortugas Fort plan completed, construction begins on temporary buildings |
| CE 1846 - 1874 | Built | Fort Jefferson (not completed) Engineers: US Army Corps of Engineers |
| | Altered | Cisterns and Sewer drainage modified many times |
| CE 1847 - 1854 | Built | Parade filled with excavated sand |
| CE 1847 - 1869 | Built | Carpenter shop, blacksmithy, quarters, limehouse, barracks, and mess hall constructed as work seasons and contracts allowed. Interruptions included, yellow fever epidemics, hurricanes, and inconsistent supervising engineers and lack of appropriated funding. Engineer: US Army Corps of Engineer |
| CE 1847 - 1848 | Built | Officer's quarters |
| | Built | Two kitchens |
| CE 1847 - 1872 | Built | Counterscarp |

Fort Jefferson Landscape
 Dry Tortugas National Park

| | | |
|----------------|--------------------|---|
| CE 1848 - 1857 | Built | Foundation, First tier casement piers |
| CE 1851 - 1855 | Built | Bastions |
| CE 1852 | Damaged | Hurricane delays construction of fort |
| CE 1855 - 1860 | Built | Hospital and cistern |
| CE 1855 - 1863 | Built | Second tier casements |
| CE 1856 | Destroyed | Hurricane ruins Activa (supply boat) |
| CE 1856 - 1858 | Built | Dry Tortugas lighthouse on Loggerhead Key |
| CE 1857 | Destroyed | Fire destroys Storehouse |
| CE 1858 | Built | First tier iron embrasures |
| CE 1861 | Built | Sand battery on Bird Key |
| CE 1861 - 1873 | Military Operation | Garrison occupation by Union soldiers, fort armed, prisoners held at Fort Jefferson. Dr. Samuel Mudd |
| CE 1865 | Damaged | Hurricane ruins Officer's quarters, shed blows away, other buildings lose roofs and have minor damage |
| CE 1870 | Damaged | Hurricane overturns Parade fencing |
| | Built | Major Smith Monument |

Fort Jefferson Landscape
Dry Tortugas National Park

| | | |
|----------------|---------------|---|
| CE 1873 | Damaged | Hurricane ruins roof and chimneys of buildings |
| CE 1876 | Maintained | Fort mostly complete except for 2nd tier embrasures |
| | Destroyed | All frame buildings and lighthouse on parade removed |
| | Built | Garden Key light tower |
| CE 1882 | Preserved | Fort Jefferson preserved and repaired |
| CE 1886 | Damaged | Hurricane ruins parade ground, walkways and vegetation; Wharf almost destroyed |
| CE 1889 - 1900 | Altered | Marine-Hospital Service used fort as quarantine station |
| CE 1892 | Built | Wharf, connected to fort by bridge |
| CE 1900 | Land Transfer | Fort Jefferson transferred from Treasury Department to US Navy. Condensing plant built, coal dumping area, and wireless communication towers. |
| CE 1902 - 1907 | Altered | Fort Jefferson serves as coal depot |
| CE 1908 | Land Transfer | Fort Jefferson transferred to Department of Agriculture as bird preserve |
| CE 1910 | Damaged | Hurricane damages coal depot equipment |
| CE 1912 | Damaged | Fire at Fort Jefferson |
| CE 1927 | Damaged | Fire in Officers' Quarters |

Fort Jefferson Landscape
Dry Tortugas National Park

| | | |
|----------------|--------------------|---|
| CE 1935 | Land Transfer | Franklin D. Roosevelt designates the Fort a National Monument, National Park Service |
| CE 1960 - 1969 | Military Operation | Cuban Missile Crisis; Ft. Jefferson is site of Voice of America (VOA) transmitter and a frequent landing point for Cuban refugees fleeing the revolution. Other listening stations are constructed on Dry Tortugas sand keys. |
| CE 1986 | Restored | Counterscarp |
| CE 1993 | Rehabilitated | quarters and Terreplein |
| CE 2000 | Eroded | Hurricane forms land bridge connecting Bush and Garden Keys |
| CE 2005 | Damaged | Hurricane damage. Land bridge between Bush and Garden keys washes away. |

Physical History:

Exploring the Dry Tortugas (1500-1846)

The Dry Tortugas were first discovered by Ponce de Leon in 1513, and named after the sea turtles abundant in the area. Ponce de Leon initially described the terrain of Garden Key as low, sandy and barren with a sparse cover of grass, low brush, and a few mangroves. The islands had no fresh water and for the next three centuries were only used intermittently by fishermen and pirates as a way station. The Dry Tortugas were later recognized in the nineteenth century for native bird populations. James Audubon visited the islands in 1832 and Louis Agassiz also studied birds on Dry Tortugas.

As water transportation developed with new technology, an early naval station was established in Key West in 1822. Subsequently in 1826, a lighthouse and keeper's quarters were constructed on Garden Key. The foundation for the first permanent structure on the Tortugas is still visible in the parade ground of the fort, though no documentation remains. With the construction of the Garden Key lighthouse, the importance of Dry Tortugas was recognized as the "Key to the Mexican Gulf." (Manucy, 304)

The location of the Dry Tortugas became important during the nineteenth century for national and military interests. The increasing importance of trade along the Mississippi River and to the Atlantic Ocean focused attention on the Straits of Florida. The country was rapidly growing and several European countries (England, Spain, France, and Denmark) possessed neighboring islands in the Caribbean, many well-fortified. The United States military wanted to secure coastal defenses as well as protect the vital maritime commerce in the Gulf of Mexico. Fort Jefferson was planned as part of a comprehensive string of seacoast fortifications stretching from Maine to Florida that served the purpose of defense. Despite no fresh water source, the Tortugas offered a safe harbor and strategic position for defending the expanding United States. The closest harbor remained at Key West, seventy miles to the east.

In 1844, Captain J.G. Barnard explored the Dry Tortugas for potential fort sites as part of the planned Third System coastal defenses. According to Barnard's reconnaissance, Garden Key was three feet above sea level with buttonwoods, mangroves and a stagnant pond in the middle of the island (the buttonwood trees presently in the center of the parade ground may be the original or related specimens, but have not been dated). Florida became a state the following year and the Dry Tortugas were given to the Federal government as a fort site. An executive order on September 17, 1845 by President James Polk set aside the islands for a military installation.

Fort Jefferson (1846-1875)

The construction of Fort Jefferson on Garden Key began under the charge of Horatio Wright after a topographical survey was completed. The fort was designed by Lt. Montgomery C. Meigs under the supervision of Chief Engineer Joseph G. Totten. Totten designed the Third System forts along the coast, distinguished as large polygonal masonry structures with arched casements. Fort Jefferson was planned as a brick six-sided fort with guns along each front.

The fort drastically altered the terrain of Garden Key. It was constructed partially in the water and enclosed a majority of the sand island. The existing 1826 lighthouse and keeper's quarters remained and the fort was built directly around the structures.

Temporary buildings were constructed first, as contracts and hurricanes repeatedly delayed work on the fort. The Mexican War, and later Civil War, also made materials difficult to obtain. Ships preferred to haul cotton for profit rather than bricks to Garden Key (which meant an empty return trip). When available materials arrived, slaves composed the primary workforce at the fort. Local slaves, owned by men in Key West, excavated a preliminary ditch and the initial construction of the fort began in 1846. The officer's quarters construction started in 1847 and eventually included detached kitchens, refined interiors, and fenced yards (Manucy, 65). Construction began in 1848 on the foundation of the fort but problems with the expansion rates of northern bricks caused additional delays. In 1853 the fort received bricks from Pensacola, Florida, which were used for the remainder of the fort construction. The post on Garden Key was officially named for Thomas Jefferson on November 4, 1850 (General orders #38).

Totten made several revisions to the plans for Fort Jefferson over the next decade as construction continued. Temporary wooden buildings outside of the fort walls included the workmen's barracks, kitchens, mess rooms, storehouses and stables (later converted into sleeping quarters). By 1855, the curtain wall was raised to 9 feet in places and a second wharf was added near Front 2 to accommodate new construction materials. Wright was also replaced by Captain D. P. Woodbury in 1855. The fort construction continued as Woodbury left to supervise other projects, and in 1858 all work halted temporarily when funds were not appropriated to Fort Jefferson.

(Civil War at Fort Jefferson 1861-1865)

Fort Jefferson was first garrisoned in the winter of 1860-1861. When Florida seceded from the Union, Fort Jefferson remained in Union control. The post was occupied for months at a time by the regular infantry, volunteers, Zouaves, and colored troops during and after the Civil War. Artillery, bandsmen, doctors, and engineers were posted at Fort Jefferson as well as regiments from New Hampshire, New York, and Pennsylvania. At its peak, 1000 men inhabited Fort Jefferson with the population during the war averaging closer to 500 men. Guns arrived at the outbreak of the war and in 1861 the first gun was mounted at the half-completed fort. Major L. C. Arnold initially received six Columbiads, two six-pounder and two twelve-pounder howitzers, though many more guns arrived at Fort Jefferson over the course of the war. A small battery was also constructed on Bird Key to bolster defenses. The technology of armament had advanced by 1865 and Fort Jefferson was no longer impregnable. The development of the rifled cannon made the Third System fortification obsolete, even before construction on Garden Key was finished.

The construction of Fort Jefferson accelerated during the war as finances allowed. The fort walls were mostly completed, reaching 50 feet by 1862. By 1863 the hot shot furnace was finished and in 1864 the traverses, pintles and shot cells were complete. The large magazine in the parade ground was constructed from 1864 to 1866, though never fully completed, and followed by work on the small parade ground magazine. The soldiers' barracks were occupied in 1863 (although not completed) and an extension to the officer's quarters was nearly concluded by the end of the war.

Fort Jefferson Landscape

Dry Tortugas National Park

Despite constant construction, the condition of the fort deteriorated gradually during the war. The settling of the bastions caused cracking in the brick scarp walls as the sand sunk under the weight of the fort. Cracked cisterns in the foundation were abandoned and plans drawn up to place new ones below the officers' and soldiers' quarters. The reduction in slave labor forced operations to continue at a minimum, with an engineering force of only 15 men. After 1876, appropriations were designated for basic maintenance only and construction ended at Fort Jefferson. Work on Fort Zachary Taylor in Key West also stopped.

During and after the Civil War, Fort Jefferson served as a military prison. Prisoners were held in empty casements and work was hastened on barracks for soldiers and engineers. The most famous prisoner held at Fort Jefferson was Dr. Samuel Mudd, the physician that set the broken leg of John Wilkes Booth after the assassination of Abraham Lincoln. Dr. Mudd wrote letters to his family describing the conditions of Fort Jefferson and was released after a presidential pardon in 1869. During his stay Dr. Mudd assisted with the 1867 yellow fever outbreak at Fort Jefferson. Yellow fever victims were buried on nearby Hospital Key.

Several historic accounts of the landscape at Fort Jefferson survive from the Civil War. An article published in Harper's New Monthly magazine in 1868 described the landscape of Garden Key. "On entering the fort the stranger is surprised to see a pleasant parade-ground of fine Bermuda grass—the choicest of all lawn grasses—and large groups of evergreen mangroves and buttonwoods. Towering above all are the elegant plumes of the cocoa palm. A neat walk leads to the officers' quarters through an arching group of mangroves, flanked by long rows of ordinance material. And as we approach head-quarters a beautiful group of mangroves is seen, furnished with shady seats and lounging places, where the ever acceptable hammock swings invitingly." The author, J. B. Holden, also refers to the presence of night-blooming cereus, banyan (or wild fig tree), four o'clocks, gum trees, cypress vines, Ipomoea, jasmine, date-palms, castor-oil plants, Thunbergias, morning glories, a banana tree, and an unidentified orchid. Several corresponding historic photographs were taken in 1868.

The surgeon, Dr. Holder, posted at Fort Jefferson from 1859 to 1869 was an amateur naturalist and his wife, Emily, kept a journal during the Civil War. Her writings were later published in 1892 as a series of articles in Californian Illustrated. The journal entries describe the typical life on Garden Key and specifically note native vegetation, such as "the shiny leaves of the mangroves and coconut branches." She wrote of her arrival to Garden Key "over the top of the fort we caught site of trees and the roof of a building with a tall, white lighthouse towering over all." She also described the bare exterior of the fort and hard white walkways in contrast to "deep green vegetation" on Garden Key. The "other keys with a few trees and shrubs took away something of the isolated feeling." Emily Holder also confirmed the presence of a vegetable garden on the parade ground, further mentioned in soldier accounts, noting onions, ochre and potatoes growing in 1864. Though there was "a small garden in the center, which is kept up more as a curiosity than any practical benefit," soldiers complained of little or no adequate vegetables in their diet (Stebbins, etc). Upon the arrival of the 7th New Hampshire regiment (including Wilson's Zouaves), Holder explains the parade ground turned into a camp, with "white tents among the mangrove trees." The journal entry also mentions a fence located around the officer's house and trees located in front of the quarters. Other accounts by soldiers posted at Fort Jefferson referred to coconut palms, while one soldier mentioned tamarind specifically.

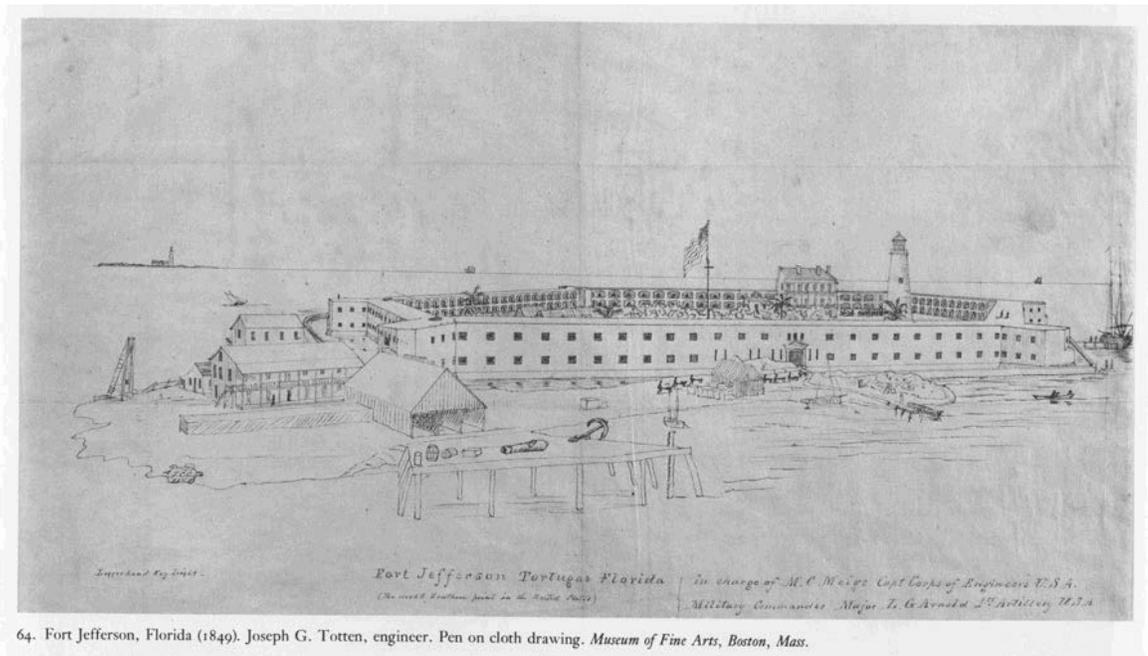
Historic accounts may misidentify buttonwood trees as mangrove. Buttonwood (*Conocarpus erectus*) is one of the four separate mangrove tree species found in the mangrove ecological community, the others being red mangrove (*Rhizophora mangle*), white mangrove (*Laguncularia racemosa*), and black mangrove (*Avicennia racemosa*). Buttonwood thrives along the edge of brackish waters, while the other three species prefer a more consistently wet environment. Mangrove forests could have originally grown on Garden Key, and as sand was used to fill the parade ground it is likely that buttonwoods replaced red, white, and black mangroves or became the dominant species.

The historic landscape of Fort Jefferson during the period of significance (1846-1876) was primarily a large open parade ground used for military dress parade with scattered trees and buildings lining the perimeter. Some fencing and pathways surrounded the buildings, but no exact documentation exists. A direct path shown in photos from the sally port to the officer's quarters was lined with brick edging and ordinance. From period photographs, the garden appears to be located near the center of the parade ground to the south of the main pathway. A monument to Major Smith was erected in 1870, but no related information survives. Although the remnants of perpendicular pathways surround the monument, no historic accounts mention this portion of the parade ground. A grave site is located near the Major Smith monument, but is currently unmarked. The grave is believed to date to the 1930s. The historic terreplein was vegetated with grasses and forbs during the Civil War and the exterior of the fort left barren.

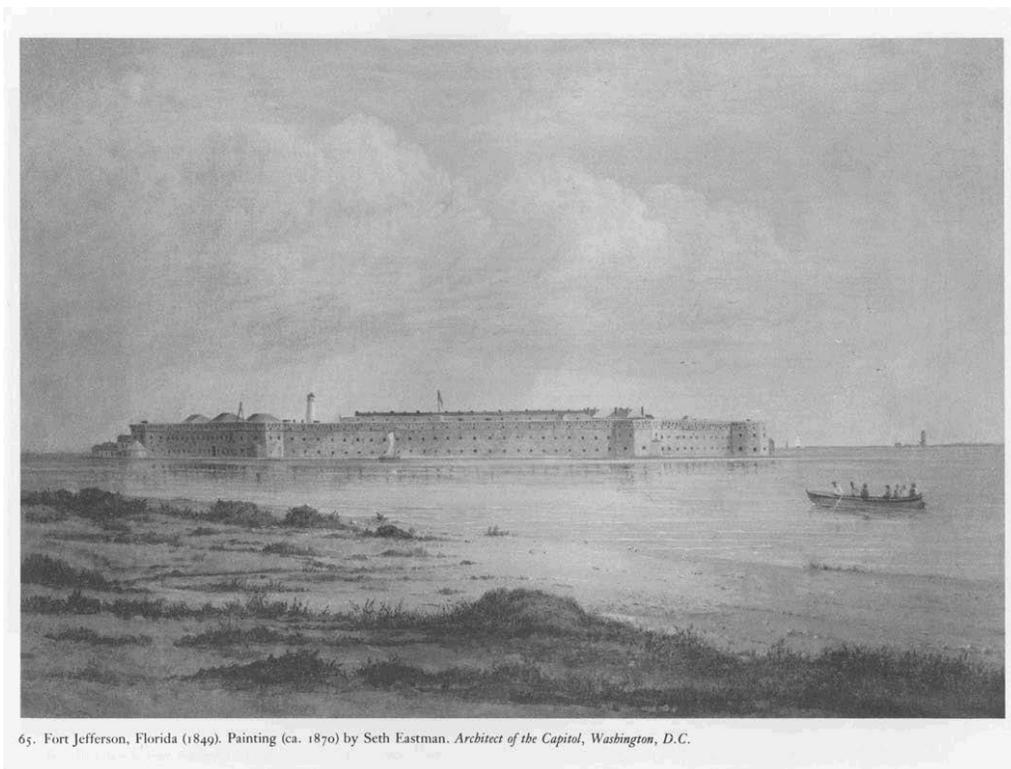


Parade ground with garden and fencing in foreground, barracks in rear (1867), EVER 7393.

Fort Jefferson Landscape
Dry Tortugas National Park



1849 drawing



1849 Fort Jefferson painting



Front 3, Parade ground buildings (1867), EVER 7392.

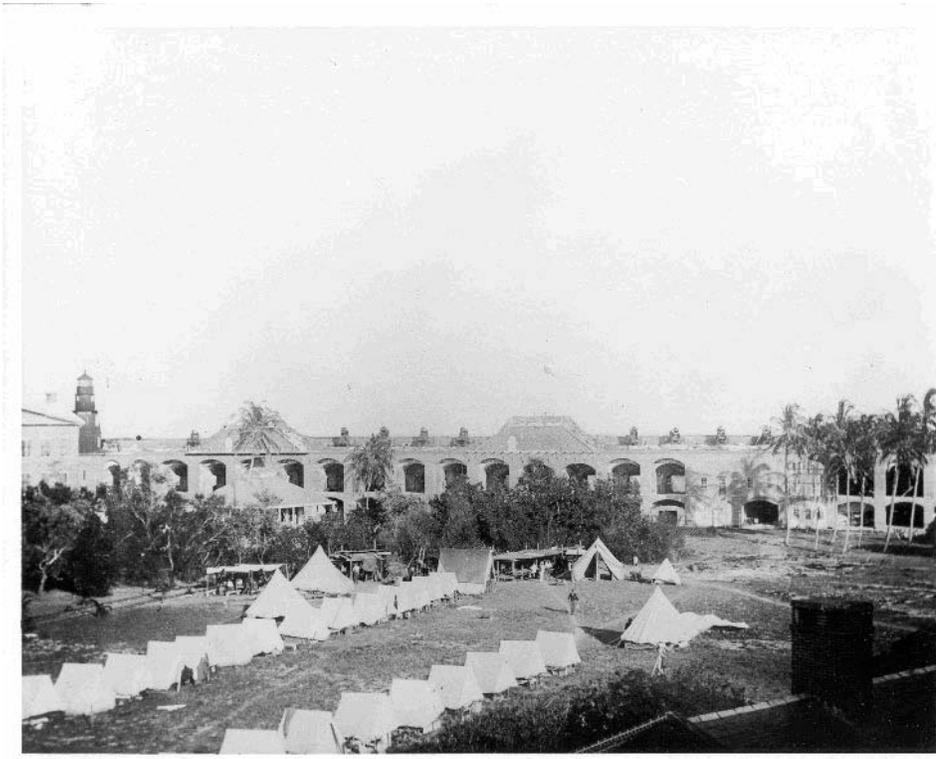
Later Uses: (1875- 1935)

The Civil War brought new technology, such as the rifled cannon, that rendered Fort Jefferson obsolete, lessening the significance of the island fort. Magazine work continued but was never completed, though the counterscarp and moat were finished in 1873. All major construction of the fort ended in 1874, though some repairs were made to the quarters after a hurricane in 1875. A new light tower was constructed in 1876 to replace the original lighthouse within the fort. Joseph Cole worked as a fort keeper during the 1870s and 1880s, but buildings began falling into disrepair and the rooms were boarded up with wooden storm shutters. The fort was transferred to the Treasury Department for use as a quarantine station—with cases of small pox, yellow fever, and cholera handled on Garden Key. Ships disembarked at Fort Jefferson to disinfect, steam, and fumigate supplies.

The War Department reclaimed the fort in 1898 and harbored the White Squadron fleet in the Dry Tortugas to quell fears of a Spanish squadron at nearby Santiago-de-Cuba. Later that year, the channels were dredged and work began on a coaling station. The excavated sand from dredging was distributed on the south end of Garden Key, increasing the size of the island. In 1900, Fort Jefferson was transferred to the U.S. Navy. The naval depot was constructed and a condensing plant was built along with piers and rigs. At this time Key West was connected to Fort Jefferson with a submarine line for wireless communication.

Fort Jefferson Landscape
Dry Tortugas National Park

The tank and condensing plant used by the Navy were removed in 1906 and the wireless operations continued until 1909 (Manucy, 172). In 1908, Fort Jefferson was transferred to the Department of Agriculture as a designated breeding ground and sanctuary for native birds. Oral history notes that the barracks burned in 1912 and the officer's quarters were set ablaze in 1927 by Capt. Rice (Manucy, 173). The naval coaling facilities were removed after the transfer and hurricane damage, but the piers still remain on the north and south shore of Garden Key.



Parade ground with garden and fencing in foreground, barracks in rear, EVER 7320.



Coaling Station Construction, 1899, Meigs collection, Number 20.

National Monument (1935-present)

Franklin D. Roosevelt designated Fort Jefferson a National Monument in 1935. The National Park Service stationed a superintendent as a caretaker on Garden Key, but the fort was closed to the public during World War II. From 1942 to 1944, Robert Budlong lived at Fort Jefferson and reported monthly with detailed accounts of weather, wildlife, and the landscape. He wrote specifically about parade ground maintenance-- removing weeds and mowing the grass, as well as the constant struggle with back logged projects. In January 1943, Budlong noted that a vegetable garden was planted, including beans, carrots, tomatoes and lettuce, but no location was recorded. The following month Budlong wrote, "we removed many weeds, vines, and old Agaves in order to bare the traces of old walks in front of the offices' barracks." During his tenure he mentioned guava trees, seagrape, bay cedar, and coconut trees at the fort. Records show Australian pine introduced to Loggerhead Key in 1935 as a windbreak for the lighthouse complex, was likely brought from Garden Key. Budlong mentions the removal of a slanting Australian pine in January 1943, evidence that the tree was present at one time on Garden Key. After the war, Budlong corresponded with Ranger C.T. Reid and mentioned that the fort was the site of testing for the Chemical Warfare Service. Chemical tests took place throughout Budlong's tenure and the fort was visited by numerous military personnel, however due to the nature of the tests little information exists about this portion of Fort Jefferson history. The typical isolation of Fort Jefferson was further pronounced by WWII, though members of the 106 Observation Squadron dropped newspapers for Budlong and his family. After the war Fort Jefferson reopened to the public.

Fort Jefferson Landscape

Dry Tortugas National Park

The Dry Tortugas became important to Cold War events in the twentieth century due to the proximity of many of the islands to Cuba. Garden Key was a frequent landing site and way station for fleeing Cuban refugees, and the site of a Voice of America (VOA) transmitter. The surrounding keys supported U.S. Coast and Geodetic Survey (USCGS) listening stations used for radio, radar, and mapping. During the Cuban missile crisis in October 1962, Fort Jefferson became the sight of a radio station facility. Other unidentified Cold War resources are potentially located in Dry Tortugas National Park. A Navy Blue Angel aircraft crashed near Loggerhead key on January 6, 1960 and the wreckage may be a submerged resource.

Fort Jefferson continued to be preserved as a national monument throughout the late twentieth century.

A fountain was installed on the parade ground in the 1970s by the Tropical Audubon Society and is still used by visitors interested in bird-watching. In 1976, UNESCO designated the area, including the entire Dry Tortugas and the Everglades National Park, an International Biosphere Reserve for natural resources. The Fort Jefferson National Monument was renamed Dry Tortugas National Park in 1992. A portion of the historic brick pathway circumscribing the interior of the fort was reconstructed from bricks once used in the Enlisted Mens barracks (EVER-827). The bricks and steel used in the reconstruction of the pathways as well as the sally port bridge were salvaged from the old Officers' quarters ruins. Day labor completed the project and the path was expanded in places to allow construction vehicles to maneuver. Other landscape features, such as picnic tables in the employee area, benches and leaching fields, have been added over the years. Today the park is open to the public with campground facilities and interpretation on Garden Key. Recent hurricanes have damaged the fort, but restoration work is currently taking place (2005).



Parade ground with lighthouse keeper's house, and light tower, stacked cannonball, palms and other vegetation new Front 1, 1907, (DRTO 300834), Meigs collection, Number 56.



Ordiance lined pathways in parade ground, with fence to right (towards lighthouse keeper's house), and buttonwoods throughout, c. 1907, Meigs collection, Number 44.



Enlisted Men's Quarters in ruins: note date palms, buttonwoods, and pathway grid near Major Smith marker to far left (1937).



Boat dock, 2005.



Campground area from terreplein (looking eastward), 2005.

Fort Jefferson Landscape
Dry Tortugas National Park



Moat and bridge, existing conditions, 2005.



Officers ruins from terreplein, 2005.



Parade ground looking north from terreplein, 2005.



North coaling piers, 2005.

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

The cultural landscape contributes to the historic significance of Fort Jefferson and retains many historic features. Elements of the 1846-1876 fort landscape have been altered and features removed and added, but the present character of the landscape has fair integrity. The landscape on Garden Key has buildings associated with the fort in the same location and isolated island setting of the nineteenth century. The removal of buildings after the period of significance changed the landscape but features such as the vegetation and circulation were retained, as well as building foundations and ruins. Coconut palms and buttonwood trees continue to grow in the parade ground as they did during the period of significance, while recent plantings that provide shade (seaside mahoe) and grow in gardens (Aloe vera and mother-in-laws tongue) do not contribute to the historic character of the fort landscape. While many of the building locations are still decipherable and the setting is similar to the nineteenth century, the addition of small scale features, such as the Maj. Smith marker and fountain detract from the integrity. The absence of ephemeral landscape features such as fences and historic vegetable gardens also lessens the integrity of the parade ground inside Fort Jefferson. The formal design and the spatial organization of the parade ground during the period of significance is not readily apparent today, but much of the cultural landscape still conveys the history of the fort.

| | |
|------------------------------|-------------|
| Aspects of Integrity: | Location |
| | Setting |
| | Association |

Landscape Characteristic:

Buildings and Structures

Most buildings and structures at Fort Jefferson contribute to the period of significance (1846-1876) and retain integrity of location, setting, and association. The existing fort also has integrity of materials and workmanship, but due to the ruinous state of the other historic structures, the integrity of buildings and structures is limited to only a few criteria. The original design of Fort Jefferson has been impacted by the removal of buildings and the addition of modern features.

Garden Key Lighthouse- The light tower was constructed in 1876 over Bastion 6 (southeast) on the terreplein. The hexagonal tower is 37' tall and constructed of iron with an observation deck and windows on each side. The lens room is octagonal and offers 360 degree views. The light tower contributes to the design and engineering of the historic fort, despite being built after the fort construction ended in 1874. Thus, while the light tower does not contribute to the Third System period of development of the fort (Criterion C), it does contribute in terms of the 19th century territorial expansion of the United States (Criterion A). The light tower has integrity of association.

Fort Jefferson- The fort is a six-sided, three tiered Third System seacoast fortification constructed of brick and concrete from 1846-1874. The elongated hexagon is surrounded by a moat and counterscarp with a perimeter of 0.6 miles. The foundation includes barrel vaulted cisterns with two lower tiers of arched casements. Each bastion contains a staircase to the upper tiers and access to the terreplein. Currently the terreplein is covered in grass and forbs with ten cannon still existing, though not properly mounted. The casements along Front 2 and 3 have been adapted to accommodate maintenance equipment and staff housing. Front 1 includes the park offices and visitor contact station on either side of the sally port. The exterior sally port is detailed in granite with a modern bridge providing access to the campground, boat dock, and remainder of Garden Key. The fort itself is significant for Criteria A and C and has integrity of location, setting, association, feeling, materials, design, and workmanship.

Large Magazine- A large magazine remains on the north end of the parade ground and contributes to the design and engineering typical of Third System forts. The magazine is a rectangular building, never completed, with an open ended barrel vault roof. The brick walls (57' x79') enclose the barrel vault and have vertical ventilation slits. The magazine has integrity of location, association, materials, and setting.

Small Magazine- The small magazine located in front of Bastion 1 is a brick rectangular building (67' x57') with two pair of brick vaults and a T-plan entryway. There are detailed lintels and the flooring is no long present. The magazine is partially in ruins, yet contributes as a component of the historic fort in location and association.

Hot Shot Furnace- The restored hot shot furnace is a rectangular (9'x31') one-story building with a sloping shed roof. The furnace is located directly in front of Bastion 4 aligned due north and has granite sills and star-shaped iron tie rods. There is a firebox at the chimney end (south). The hot shot furnace was recently restored and has integrity of location, setting, association, and design.

Officers' Quarters (ruins)- Along Front 4, the Officers' quarters (282'x43') remain as ruins. The barracks location and association remain intact, but only 1'-2' of the brick foundation are still present with ruins of the detached kitchens immediately behind the foundation (17'x35' and 31'x33'). The ruins have integrity of location, setting, and association.

Enlisted Men's Quarters (ruins)- The Enlisted Men's quarters (335'x40') is located along Front 6. The once massive three-story barracks is currently only an outline of the building foundation but contributes to the location and association of the historic fort. The vegetation growing within the ruins is controlled.

Lighthouse foundation- The original 1826 lighthouse foundation is still extant at the southwest corner of the Enlisted men's quarters. The brick and coral concrete foundation has a 15' diameter and integrity of location, association, and setting.

Cistern- The cistern contributes to the historic fort and has good integrity. The 66' x 54' concrete cistern along Front 2 is a large, low-laying rectangular structure covered in metal and asphalt. There are three valves on the side and modern features were added.

Engineer Officer's Quarters (and former kitchen building) Park Quarters Six- The Engineer officer's quarters along Front 3 are extant and retain integrity of location, design, materials, workmanship, feeling, setting and association. The two-story brick building (30' x 41') has a gable slate roof, double hung sash windows, granite sills and lintels, and a two-story wood frame porch. The building today houses park quarters and contributes to the historic significance of Fort Jefferson. A chimney is located on the north end of the building and a new roof has been added. The brick ruins located adjacent to the Quarters #6 has integrity of location and association. The 32' x 21' ruin was once a two-story building but currently has partial walls reaching one full story and remnants of interior stucco. A double hearth is still intact and the sills and lintels are granite.

Counterscarp and Moat- The counterscarp and moat surround the exterior of Fort Jefferson with a total perimeter of 3068'. The hexagonal wall is constructed of brick with concrete infill (ranging from 3' to 8' in thickness) and encloses a moat, approximately 70' wide. The brick walk atop the counterscarp is intact on the south front. The counterscarp and moat have been restored and repaired several times and the feature has integrity of location, setting, association, and feeling.

Restrooms- Modern restrooms are located between the south coaling area and campground. These facilities have a handicap accessible ramp and are a non-contributing structure.

Main Dock- The main dock is a modern structure and does not contribute to the history of Fort Jefferson.

Coal Dock- Two coal docks to the north and south of Fort Jefferson remain as extant features, but do not contribute to the period of significance. The metal foundations do not have integrity.

Character-defining Features:

Feature: Garden Key Lighthouse
Feature Identification Number: 113550
Type of Feature Contribution: Contributing
IDLCS Number: 319
LCS Structure Name: Garden Key Lighthouse
LCS Structure Number: HS-01

Feature: Fort Jefferson
Feature Identification Number: 113552

Fort Jefferson Landscape
Dry Tortugas National Park

Type of Feature Contribution: Contributing
IDLCS Number: 320
LCS Structure Name: Fort Jefferson
LCS Structure Number: HS-12/15

Feature: Large Magazine
Feature Identification Number: 113554
Type of Feature Contribution: Contributing
IDLCS Number: 11916
LCS Structure Name: Fort Jefferson Large Powder Magazine
LCS Structure Number: HS-02

Feature: Small Magazine
Feature Identification Number: 113556
Type of Feature Contribution: Contributing
IDLCS Number: 11917
LCS Structure Name: Fort Jefferson Small Powder Magazine
LCS Structure Number: HS-03

Feature: Hot Shot Furnace
Feature Identification Number: 113558
Type of Feature Contribution: Contributing
IDLCS Number: 11918
LCS Structure Name: Fort Jefferson Hot Shot Furnace
LCS Structure Number: HS-04

Feature: Officers' quarters (ruins)
Feature Identification Number: 113560
Type of Feature Contribution: Contributing
IDLCS Number: 11919
LCS Structure Name: Fort Jefferson Officers' Quarters (ruins)
LCS Structure Number: HS-06

Feature: Enlisted Men's quarters

Fort Jefferson Landscape
Dry Tortugas National Park

Feature Identification Number: 113562
Type of Feature Contribution: Contributing
IDLCS Number: 11920
LCS Structure Name: Fort Jefferson Enlisted Men's Quarters (ruins)
LCS Structure Number: HS-07

Feature: Engineer Officers' quarters

Feature Identification Number: 113564
Type of Feature Contribution: Contributing
IDLCS Number: 11921
LCS Structure Name: Fort Jefferson Engineer Officers' Quarters
LCS Structure Number: HS-08

Feature: Lighthouse foundation

Feature Identification Number: 113566
Type of Feature Contribution: Contributing
IDLCS Number: 91379
LCS Structure Name: First Garden Key Lighthouse Foundation
LCS Structure Number: HS-16

Feature: Cistern

Feature Identification Number: 113568
Type of Feature Contribution: Contributing
IDLCS Number: 11923
LCS Structure Name: Fort Jefferson Cistern
LCS Structure Number: HS-10

Feature: Counterscarp and moat

Feature Identification Number: 113570
Type of Feature Contribution: Contributing
IDLCS Number: 91384
LCS Structure Name: Fort Jefferson Counterscarp and Moat
LCS Structure Number: HS-11

Fort Jefferson Landscape
Dry Tortugas National Park

Feature: Restrooms

Feature Identification Number: 113572

Type of Feature Contribution: Non contributing – compatible

Feature: Main Dock

Feature Identification Number: 113574

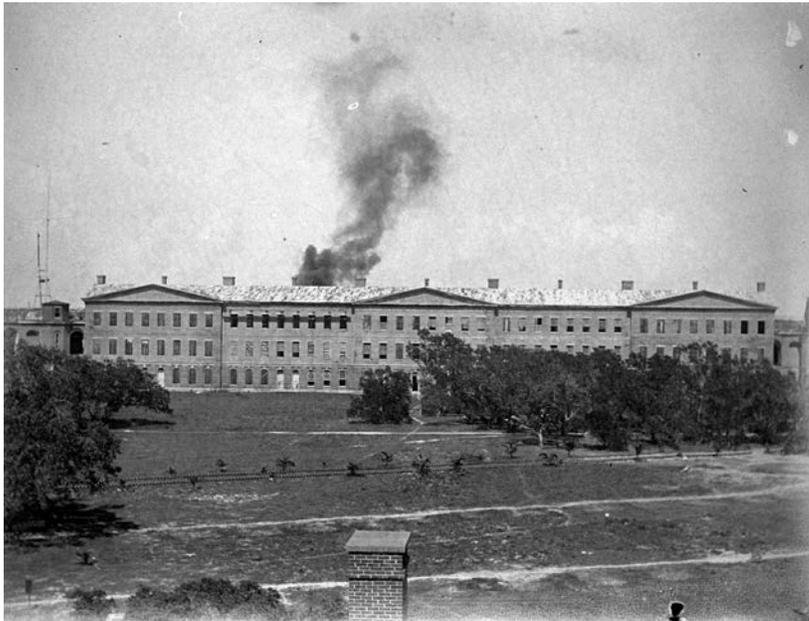
Type of Feature Contribution: Non contributing – compatible

Feature: Coaling dock

Feature Identification Number: 113576

Type of Feature Contribution: Non contributing – compatible

Landscape Characteristic Graphics:



Parade Ground and Enlisted Men's Quarter's (c. 1900).



Officer's Quarters (c. 1900), Meigs collection, Number 66.



Enlisted Men's Barracks (February 2005).



Staff House (Engineer's officers' quarters) and Kitchen ruins from terreplein (February 2005).



Large Magazine (February 2005).

Small Scale Features

A stone monument to Major Smith is located on the parade ground in front of the Enlisted Men's quarters ruins. The 9' x 3' x 8' classical marker is constructed of brick and stuccoed white with pilasters on each end and a pedimented central section. The marker has an inscribed marble tablet on the east side and is surrounded by buttonwood trees and the remnants of perpendicular pathways. The marker does not date to the period of significance and is non-contributing.

Benches and picnic tables are located near the fountain and campground, but do not contribute to the historic period.

Character-defining Features:

| | |
|--------------------------------|-------------------------------|
| Feature: | Major Smith monument |
| Feature Identification Number: | 113580 |
| Type of Feature Contribution: | Non contributing – compatible |
| IDLCS Number: | 91380 |
| LCS Structure Name: | Major Smith Marker |
| LCS Structure Number: | HS-17 |

Landscape Characteristic Graphics:



Major Smith marker, c. 1898, (DRTO 301154).



Major Smith Marker and pathways (February 2005).



Benches for interpretation (February 2005).

Circulation

A brick walk circumscribes the interior of the fort as the primary circulation pattern and contributes to the cultural landscape. The brick is laid in a herringbone pattern and extends to the inner fort walls at specific locations for staff and visitor access. The walkway was restored in 1970s and has integrity of location and association. Besides the brick walk, there are several informal sand pathways that traverse the parade ground, used mainly by the current staff. A series of perpendicular paths also surrounds the Major Smith monument, but no information about them was found during the CLI research. Intermittent portions of the historic brick-edged path are visible across the parade ground. This straight path originates at the sally port entrance and continues due north to the center of the fort, near the officers' quarters ruins. Evidence of additional pathways were found during a Ground Penetrating Radar (GPR) survey in 2006, though it is not known which period, or periods, these paths date to. During construction of the leaching fields, a straight brick path was found leading from the kitchen ruins near the staff house to the center of the officers' quarters ruins.

Character-defining Features:

Feature: Fort Jefferson Brick Walk

Fort Jefferson Landscape
Dry Tortugas National Park

Feature Identification Number: 116888

Type of Feature Contribution: Contributing

Feature: Fort Jefferson Parade Ground Walkways

Feature Identification Number: 116890

Landscape Characteristic Graphics:



Walkway (c. 1909), Meigs collection, Number 54.



Ordinance pathway leading to Sally port with Coconut palms and Buttonwoods, Meigs collection, Number 50.



Brick walkway Front 1 (February 2005).

Vegetation

The one consistent thing about the vegetation at Fort Jefferson is its changing nature. Hurricanes, construction projects, intermittent gardening, and a variety of maintenance practices have altered the landscape in one way or another. Prior to fort construction, a mangrove forest, grass and low brush covered Garden Key. Filling in the parade ground created a drier habitat that was more suitable for buttonwood trees, a type of mangrove tree that prefers drier areas along the edge of brackish waters. Historic accounts and photographs show that many more plant species were introduced to the key during fort construction. These included coconut and date palms, banyan (or wild fig tree), gum trees, possibly sea grapes, bananas, castor-oil plants, cypress vines, night-blooming cereus, jasmine, four o'clocks, Thunbergias, morning glories, and orchids, as well as a fenced vegetable garden and Bermuda grass.

The shrubs, flowering vines, vegetable gardens and other smaller plants have mostly disappeared, due to hurricanes and maintenance practices. In fact, some 20th century photographs show a parade ground much clearer of vegetation than photographs in the 1860s. The buttonwood trees and coconut palms, however, have persevered. Seaside mahoes and Australian pines were planted in the 20th century, but both are considered invasive exotic species and potentially damaging to the surrounding native ecosystems. Additionally, they do not contribute to the historic setting since they were not part of the plant palette during the period of significance. The pines were removed some years ago, and the seaside mahoes are scheduled for removal (2005). Additional plants currently found at the fort include Geiger trees, night-blooming cereus, flame trees, sea lavender, beach lilies, bay cedar, tamarind, date palm, Spanish almond, ochrosia, and gumbo-limbo. Small gardens in or near the staff area are planted with aloe plants and mother-in-laws tongue. Some of these are the same species documented at the site during fort construction. However, the small staff gardens differ in location and composition from the 1860s vegetable garden, and are a departure from the historic scene.

The vegetation at Fort Jefferson has changed since the period of significance, but it still retains historic integrity, particularly at the large, tree-level scale. Buttonwood trees and coconut palms are mentioned repeatedly in historic accounts (as well as date palms and other trees less frequently) and appear frequently in early photographs. While the number, and specific arrangement of these trees may not be the same as during the period of significance, they are still character-defining features of the property and their presence contributes to the historic integrity. The vegetable garden, shown in 1860s photographs, and vines, shrubs, and other small-scale vegetation have disappeared over the years. And the recently introduced staff gardens differ in location, materials, and composition from the historic vegetable garden, and are a departure from the historic scene. Still, with a continuing overstory of buttonwood and coconut palm, and the removal of 20th century seaside mahoes and Australian pines, the vegetation at Fort Jefferson largely retains its integrity.

Landscape Characteristic Graphics:



Coconut palm and buttonwood in parade Ground (c. 1900), Number 85.



Coconut palms and buttonwoods near Enlisted Men's Quarters (c. 1900), DRTO 3000898.



Coconut palms in Parade Ground (c. 1900), Number 67.



Parade Ground, looking towards Front 1 with light tower and lightkeeper's house. Note the informal pathways, stacked ordinance, coconut palms to the right, and buttonwoods clustered near sally port area (c. 1907), EVER 7403. Meigs collection, Number 72.

Constructed Water Features

A brick fountain is located in the southern portion of the parade ground near the sally port entrance. The three-tiered fountain, situated under mature buttonwood trees, is six feet square and has benches located nearby. Visitors frequent the area to watch native birds. The fountain was added to the Fort Jefferson landscape by Flora O'Brien of the Tropical Audubon Society in the 1970s and does not contribute to the historic significance of the fort.

Character-defining Features:

Feature: Brick fountain

Feature Identification Number: 113578

Type of Feature Contribution: Non contributing – compatible

Landscape Characteristic Graphics:



Tropical Audubon fountain with seaside mahoes (February 2005).

Spatial Organization

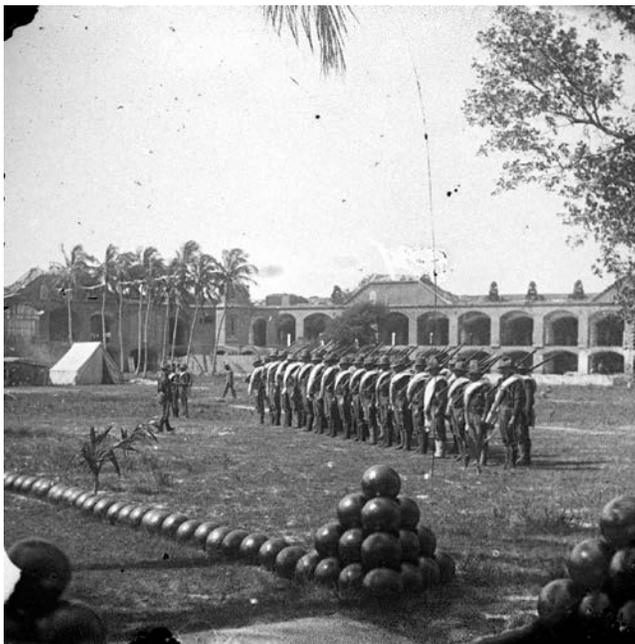
With remnants of the circulation system, buildings and building ruins, general vegetative patterns, and the fort itself still in their location, the spatial organization of the property retains its historic integrity. This was disrupted in recent years by the introduction of leeching fields on the parade

ground. While water and wastewater treatment is a serious issue at Fort Jefferson, the current solution detracts from views from the parade ground and the terreplein, and the spatial organization of the property.

Landscape Characteristic Graphics:



Light Keeper's House, Enlisted Men's Quarter's, Light Tower, and Mounted Cannon (c. 1900), Number 73.



Parade Ground (c. 1900), Number 12.



Parade ground looking west from terreplein (February 2005).



Leaching fields (February 2005).

Condition

Condition Assessment and Impacts

Condition Assessment: Fair
Assessment Date: 02/15/2007
Condition Assessment: Fair
Assessment Date: 09/25/2013

Impacts

Type of Impact: Erosion
Other Impact: Exposure to the Elements
External or Internal: Both Internal and External
Impact Description: The climatic conditions in the Dry Tortugas cause erosion to the landscape by wind and blowing sand. The exterior of Fort Jefferson is deteriorating due to the breakdown of mortar and brick, while several of the buildings on the parade ground are in ruins. The landscape features on Garden Key, including the monument, pathways, fountain, and staff buildings remain in good condition but are exposed to the typical erosion and climate of the Dry Tortugas.

Type of Impact: Planting Practices
External or Internal: Both Internal and External
Impact Description: The abundance of coconuts at Fort Jefferson has required constant vigilance in recent years and inspired creative removal practices. While coconut palms are a member of the historic plant palette at Fort Jefferson, the burial of their fruit has resulted in an excessive number of trees and additional maintenance.

Type of Impact: Vegetation/Invasive Plants
External or Internal: Both Internal and External
Impact Description: The staff area is designated along Front 2 and 3, with a screen of geiger trees and seagrapes. Within this area, small staff gardens contain several invasive exotics that impact the vegetation, including mother-in-laws tongue and Aloe vera. The parade ground is planted with buttonwood trees and Coconut palms. A

proposal to remove seaside mahoes and other isolated exotic specimen trees was approved in 2005. The Australian pine once introduced to Garden Key has been removed. Both species were not present during the period of significance and their removal is an improvement in the condition of the cultural landscape.

| | |
|------------------------------|--|
| Type of Impact: | Operations On Site |
| External or Internal: | Internal |
| Impact Description: | The treatment of wastewater at this remote site is an issue of serious concern, but the leeching fields recently added to the parade ground negatively impact the property in terms of materials, feeling and setting. These leeching fields are visible from most areas of the fort and their linear imprint on the parade ground is a clear departure from the historic scene. |
| Type of Impact: | Other |
| External or Internal: | Internal |
| Impact Description: | Cannons are located along the terreplein, but they are not properly mounted – often directed towards a terreplein wall, rather than the surrounding waters. This gives the visitor an ineffective picture of how they were used for defense. |

Treatment

Treatment

Approved Treatment: Undetermined

Approved Treatment Costs

Landscape Approved Treatment Cost Explanatory Description:

Structure: Structure Number / IDLCS / Cost

Fort Jefferson: HS-12/15 / 000320 / 15,000,000

Fort Jefferson Hot Shot Furnace: HS-04 / 011918 / 62,000

Ft Jefferson Engineer Officers' Quarter: HS-08 / 011921 / 86,000

Ft Jefferson Counterscarp and Moat: HS-11 / 091384 / 2,000,000

Bibliography and Supplemental Information

Bibliography

- Citation Author:** Emanuel Raymond Lewis
Citation Title: Seacoast Fortification of the United States
Year of Publication: 1970
Citation Publisher: Smithsonian Institute Press
Source Name: Other
- Citation Author:** Albert C. Manucy
Citation Title: A Handbook for Fort Jefferson History
Year of Publication: 1942
Citation Publisher: Unpublished
Source Name: CRBIB
Citation Type: Narrative
Citation Location: SERO
- Citation Author:** Willard B. Robinson
Citation Title: American Forts
Year of Publication: 1977
Citation Publisher: University of Illinois Press
- Citation Author:** John Muller
Citation Title: A Treatise Containing the Elementary Part of Fortification, Regular and Irregular.
Year of Publication: 1746
Citation Publisher: Lamb
Citation Type: Narrative
Citation Location: SERO

Citation Author: Edwin C. Bearss
Citation Title: A Constructional History for Fort Jefferson
Year of Publication: 1983
Citation Publisher: Unpublished, NSP
Source Name: CRBIB
Citation Number: 011627
Citation Type: Both Graphic and Narrative
Citation Location: SERO

Citation Author: Edwin C. Bearss
Citation Title: Fort Jefferson Historic Structure Report Historical Data Section
Year of Publication: 1983
Citation Publisher: Unpublished, NPS
Source Name: CRBIB
Citation Number: 011627
Citation Type: Both Graphic and Narrative
Citation Location: SERO

Citation Author: Steve Hach
Citation Title: Cold War in South Florida Historic Resource Study
Year of Publication: 2004
Citation Publisher: NPS
Source Name: CRBIB
Citation Type: Both Graphic and Narrative
Citation Location: SERO

Citation Title: Fort Jefferson Historic Structure Report Architectural Data Section

Year of Publication: 1997

Citation Publisher: Unpublished, NPS

Source Name: CRBIB

Citation Type: Both Graphic and Narrative

Citation Location: SERO

Citation Title: Narrative Report: Rebuild Historic Walks and Boat Bridge

Citation Publisher: Unpublished, NPS

Citation Type: Both Graphic and Narrative

Citation Location: SERO

Citation Author: John H. Davis

Citation Title: The Ecology of the Vegetation and Topography of the Sand Keys of Florida

Year of Publication: 1942

Citation Publisher: Southwestern College, Memphis, TN

Source Name: Other

Citation Type: Both Graphic and Narrative

Citation Location: EVER

Citation Author: Charles Frederick Millspaugh

Citation Title: Flora of the Sand Keys

Year of Publication: 1907

Citation Publisher: Field Columbian Museum

Citation Type: Both Graphic and Narrative

Citation Location: EVER

Citation Author: H.H. M. Bowman
Citation Title: Botanical Ecology of the Dry Tortugas
Year of Publication: 1917
Citation Publisher: University of Pennsylvania
Citation Type: Both Graphic and Narrative
Citation Location: EVER

Citation Title: Historic Resource Management Plan Fort Jefferson National Monument Draft
Year of Publication: 1977
Citation Publisher: Unpublished, NPS

Citation Author: D.R. Stoddart and F.R. Fosberg
Citation Title: Topographic and Floristic Change, Dry Tortugas, Florida, 1904-1977
Year of Publication: 1981
Citation Publisher: The Smithsonian Institute
Source Name: Other
Citation Type: Both Graphic and Narrative
Citation Location: EVER

Citation Author: Submerged Resource Center
Citation Title: Dry Tortugas NP Submerged Cultural Resources Assessment (Professional Report No 13)
Year of Publication: 1993
Citation Publisher: National Park Service
Source Name: Other

Supplemental Information

Title: City on the Sea: A Collection of Dry Tortugas Personal Histories

Description: CD-ROM with historic and aerial photographs. Personal accounts from soldiers, prisoners, and others stationed at Ford Jefferson are included in pdf format.

Title: Ground-Penetrating Radar Survey, Southeastern Archeological Center, 2007.

Description: Auto-CAD file showing buried paths in parade ground. (SERO)