

# National Park Service Cultural Landscapes Inventory 2022



**Fort Jefferson Landscape  
Dry Tortugas National Park  
[2022 Condition Reassessment]**

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## Chapter 1: General

### Region

Southeast

### Park Alpha Code

DRTO

### Park Org Code

5299

### Resource Type

Cultural Landscape

### Resource Classification

Cultural Landscape

### Inventory Status

Complete

### Resource ID

550018

### Resource Name

Fort Jefferson Landscape

### Parent Landscape

N/A

### Parent Resource ID

N/A

### State

FL

## Park Name

Dry Tortugas National Park

## Cultural Landscapes in the Cultural Resources Inventory System:

CRIS is the National Park Service's database of cultural resources on its lands, consisting of archaeological sites, historic structures, ethnographic resources and cultural landscapes. The set of CRIS records for cultural landscapes is referred to as CRIS-CL. CRIS-CL records conform to a standardized data structure known as the Cultural Landscapes Inventory (CLI).

The legislative, regulatory and policy directions for conducting and maintaining the CRIS are: Section 110 of the National Historic Preservation Act, NPS Management Policies (2006), Director's Order 28 (Cultural Resources) and Director's Order 28a (Archeology).

The Cultural Landscapes Inventory (CLI)

The CLI is the data structure within CRIS used to document and evaluate all potentially significant landscapes in which NPS has, or plans to acquire any enforceable legal interest.

Each CRIS-CL record is certified complete when the landscape is determined to meet one of the following:

Landscape individually meets the National Register of Historic Places criteria for evaluation; or,  
Landscape is a contributing element of a property that is eligible for the National Register; or,  
Landscape does not meet the National Register criteria, but is managed as cultural resources because law, policy or decisions reached through the park planning process.

Cultural landscapes vary from historic sites, historic designed landscapes, historic vernacular landscapes to historic ethnographic landscapes, but may also fit within more than one type.

Those eligible for the National Register have significance in the nation's history on a national, state or local level, as well as integrity or authenticity.



The legislative, regulatory and policy directions for conducting and maintaining the CLI within CRIS are: *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 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...*

*Executive Order 13287: Preserve America, 2003. Sec. 3(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) 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...*

*Cultural 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.*

## Landscape 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, have been removed from the parade ground. 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 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.

## **Landscape 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.

## **Recent Condition**

Fair

**Subsite/Child components**

N/A

**Landscape Type**

Historic Site

**Cover Page Graphic**

See Cover Page.

Site Plan(s)

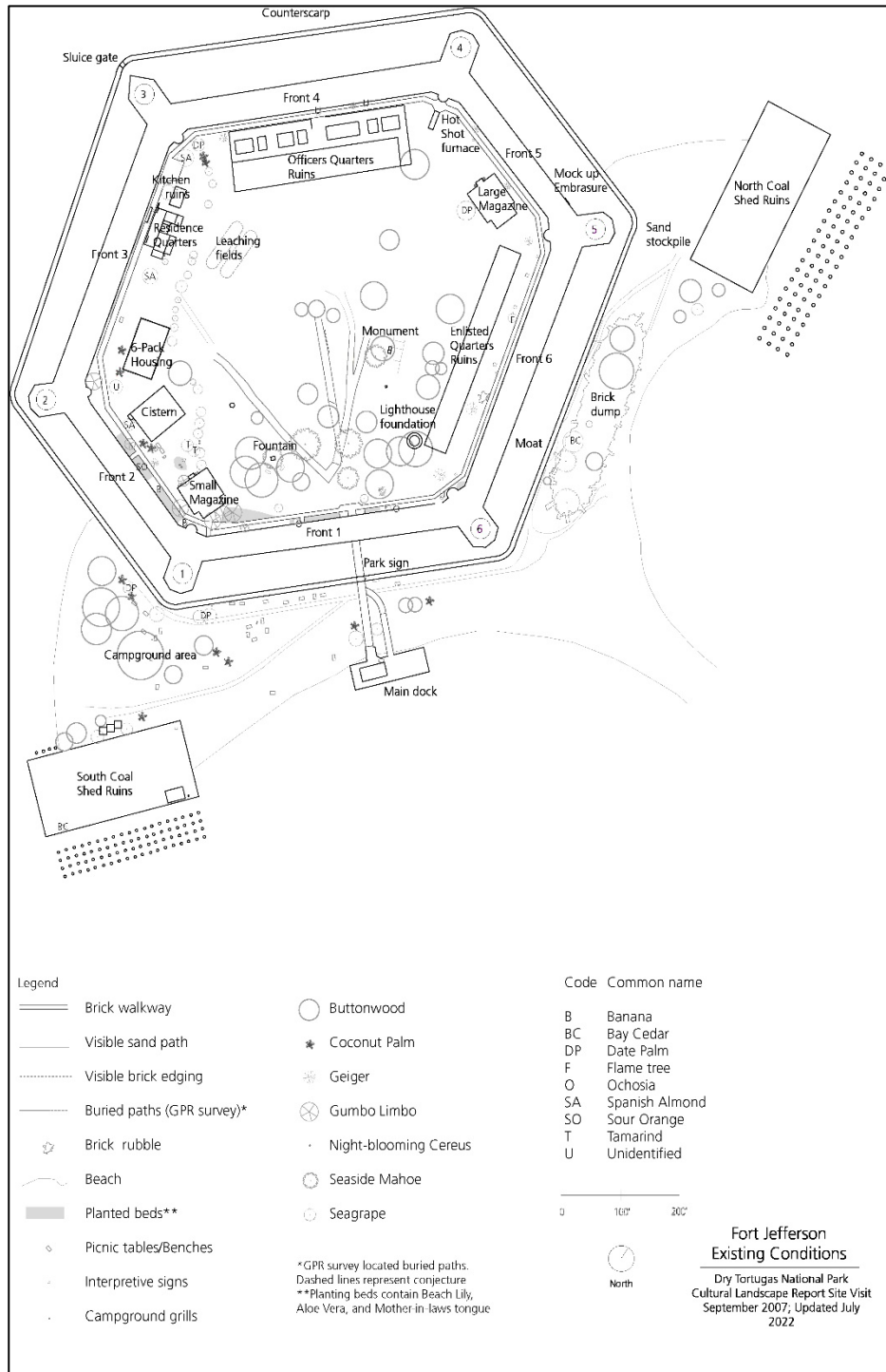
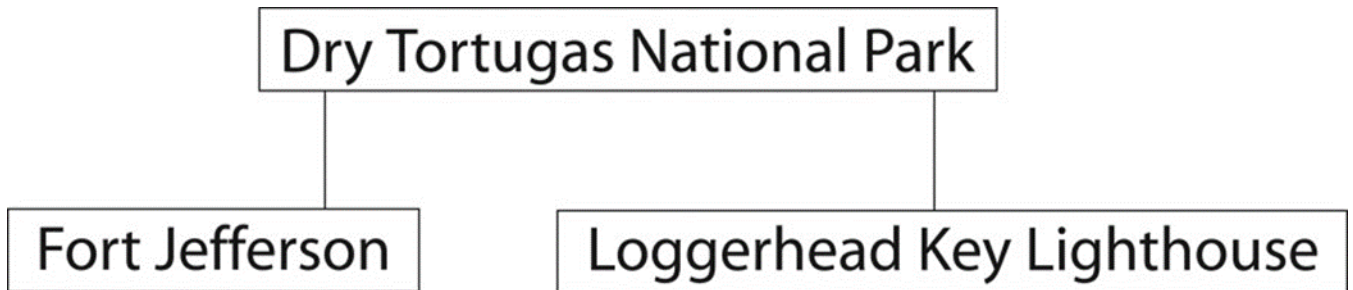


Fig 1. CLI site plan Fort Jefferson, revised 2022.

### Hierarchy Description Graphic



Cultural Landscape Inventory Unit Hierarchy

### Other Names

Seq. No.	Name	Type
1	Fort Jefferson	Both Current and Historic

## **Chapter 2: Concurrence Status**

### **Park Superintendent Concurrence Date**

06/21/2007

### **Park Superintendent Concurrence**

Yes

### **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 Jaci Wells.

## Concurrence Graphics



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





United States Department of the Interior

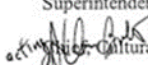
NATIONAL PARK SERVICE  
Southeast Regional Office  
Atlanta Federal Center  
1924 Building  
100 Alabama St., S.W.  
Atlanta, Georgia 30303



H22(SERO-CRD)

4 June 2007

Memorandum

To: Superintendent, Everglades National Park  
From:  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 X  
Poor \_\_\_\_

Management Category:  
Must be preserved \_\_\_\_  
Should be preserved X  
May be preserved \_\_\_\_  
May be released, altered or destroyed \_\_\_\_

Park Concurrence

Concur \_\_\_\_ Do Not Concur \_\_\_\_

Dan Brumby Supt. DRTO 6/21/2007  
Signature Title Date

Superintendent Signature of Concurrence

Fort Jefferson Landscape  
Dry Tortugas National Park

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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](mailto: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 C. Mattick, DSHPO  
Florida State Historic Preservation Officer

9/17/2007  
Date

2<sup>nd</sup> page of letter to SHPO; SHPO Signature of Concurrence

CULTURAL LANDSCAPE INVENTORY  
CONDITION ASSESSMENT CONCURRENCE SHEET – 23 July 2013

**Park Information**

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

**Cultural Landscape Condition Information**

**2007 Landscape Condition:**

**Good** \_\_\_\_  
**Fair**   X    
**Poor** \_\_\_\_

**2013 Landscape Condition:**

**Good** \_\_\_\_  
**Fair**   X    
**Poor** \_\_\_\_

**Park Concurrence**

**Concur**   X  

**Do Not Concur** \_\_\_\_

**Kelly Clark**  
**Signature**

**Exhibits Specialist/Sect. 106 Coordinator**  
**Title**

**9/25/2013**  
**Date**

Condition reassessment

**CULTURAL LANDSCAPE INVENTORY  
 CONDITION RE-ASSESSMENT CONCURRENCE SHEET – August 2022**

<b><u>Park Information</u></b>			
<b>Park:</b>	Everglades National Park and Dry Tortugas National Park		
<b>State:</b>	Florida	<b>County:</b>	Dade and Monroe

<b><u>Cultural Landscape Information</u></b>			
<b><u>Inventory Name</u></b>	<b><u>CRIS CLI ID #</u></b>	<b><u>2011 Condition</u></b>	<b><u>New Condition</u></b>
HM-69 Nike Missile Site	550172	Fair	Fair
Flamingo Mission 66 Developed Area	975659	Fair	Fair
<b>Management Category:</b>	Should Be Preserved and Maintained		
Fort Jefferson Landscape	550018	Fair	Fair
<b>Management Category:</b>	Must Be Preserved and Maintained		

<b><u>Park Superintendent Concurrence</u></b>	
Everglades and Dry Tortugas National Parks concur with the CLI updates for HM-69 Nike Missile Site, Flamingo Mission 66 Developed Area, and Fort Jefferson Landscape.	
<b>Concur</b>	<u>  X  </u> <b>Not Concur</b> <u>      </u>
SABRINA DIAZ <small>Digitally signed by SABRINA DIAZ Date: 2022.09.14 15:27:55 -0400'</small>	_____
<b>Superintendent</b>	<b>Date</b>

**Good:** Indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit’s cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is re-quired to maintain its current condition.

**Fair:** Indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the landscape characteristics will cause the inventory unit to degrade to a poor condition.

**Poor:** Indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

CLI Superintendent Reassessment Signature 2022

**Revision**

N/A

## Chapter 3: Geographic Information

### Area (Acres)

16.9

### Land Tract Number(s)

01-101

### Boundary Description

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

### Latitude/Longitude

[enter text here (eg 'See spreadsheet in Appendix.')]

Seq. No.	Geo-metry	Lati-tude	Longi-tude	Geo-Datum	Eleva-tion (Meters)	Position Source	Positi on Arrura cy	Date	Narra-tive
01	Area	24.6297 796499 849	- 82.8733 281633 422			USGS Map 1:24,000			
02	Area	24.6292 497827 266	- 82.8716 510886 202			USGS Map 1:24,000			
03	Area	24.6275 139975 161	- 82.8718 326401 775			USGS Map 1:24,000			
04	Area	24.6259 067804 858	- 82.8732 901729 115			USGS Map 1:24,000			
05	Area	24.6271 538351 935	- 82.8746 519823 199			USGS Map 1:24,000			

06	Area	24.6288 312726 056	- 82.8748 054083 196			USGS Map 1:24,000			
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## Regional Landscape Context

### *Physiographic*

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.

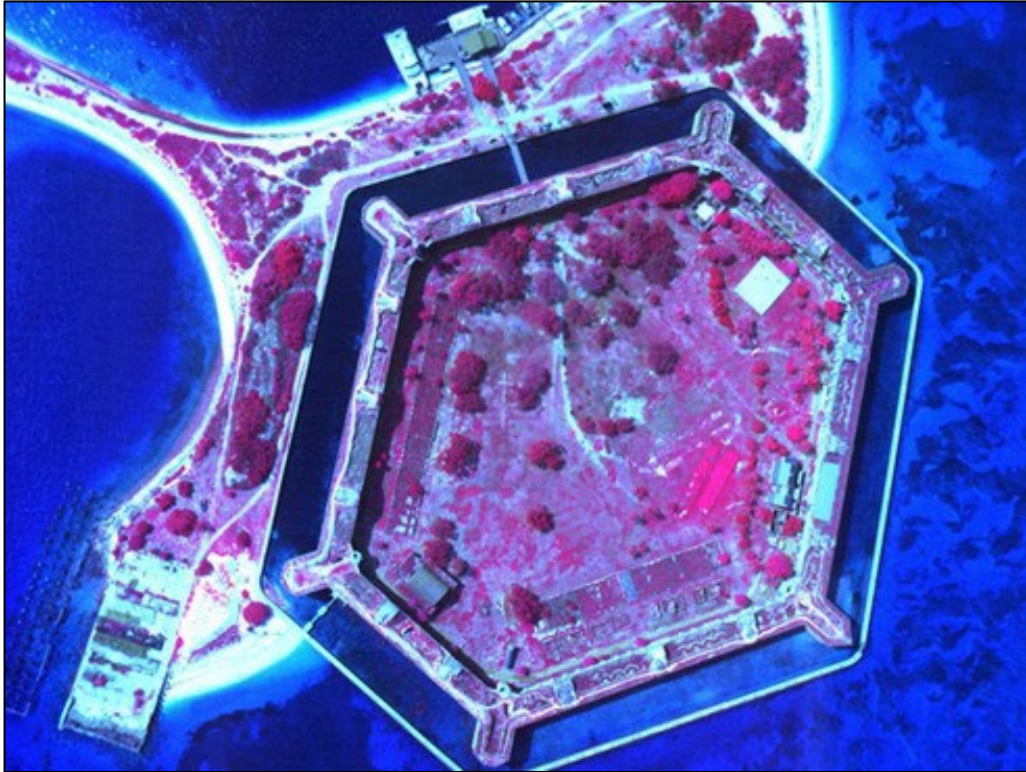
### *Cultural*

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.

### *Political*

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

## Location Map Graphic Information



*Fig 2. Location map – Aerial of Fort Jefferson, 2004*

## Counties and States

Monroe County, Florida



## Chapter 4 : Management Information

### Management Category

Must be Preserved and Maintained

### Management Category Date

02/15/2007

### Management Category Explanatory Narrative

Fort Jefferson meets the criteria for Management Category A, “Must be Preserved and Maintained.” The Fort Jefferson National Monument was listed in the National Register as a nationally significant historic district in 1970. Additionally, the enabling legislation for Dry Tortugas National Park explicitly states that protection and preservation of Fort Jefferson is a management purpose of the establishment of the park: “The park shall be managed for the following purposes, among others: [...] To protect, stabilize, restore, and interpret Fort Jefferson, an outstanding example of nineteenth century masonry fortification.” As such, the inventory unit is nationally significant and related to the park’s legislated significance, which are criteria for Management Category A, “Must be Preserved and Maintained.”

### Management Agreements

Management Agreement	Other Management Agreement	Management Agreement Expiration Date	Management Agreement Explanatory Narrative
N/A	N/A	N/A	N/A

### Legal Interests

Legal Interest Type	Fee Simple Reservation Expiration Date	Other Organization/Agency	Legal Interest Narrative
Fee Simple			

## Located in a managed wilderness?

Unknown

## Adjacent Lands Information

### *Do Adjacent Lands Contribute?*

Yes

### *Narrative*

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.

### *Adjacent Lands Graphic*



Fig 3. USGS topographic map of Dry Tortugas surrounding Garden key.

## Chapter 5: National Register Information

### National Register of Historic Places

#### **Documentation Status**

Entered – Inadequately Documented

#### **Documentation Narrative Description**

Fort Jefferson National Monument was listed in the National Register on November 10, 1970. The historic district was documented as nationally significant in the areas of engineering and military for military architecture and its role as the largest of the Third System Forts charged with defending an expanding United States in the nineteenth century. Dry Tortugas National Park was administratively added to the National Register in 1992, but that administrative listing did not contain any additional documentation of Fort Jefferson. The 1970 Fort Jefferson National Monument National Register nomination focuses largely on the buildings and structures associated with the fort. Further documentation should be added to include the associated cultural landscape and landscape features of the fort. Several landscape elements of Fort Jefferson contribute to the period of significance but are not documented in the National Register nomination.

#### **Eligibility**

Eligible – SHPO Consensus Determination

#### **Concurrence Eligibility Date**

09/17/2007

#### **Concurrence Eligibility Narrative**

[enter text here]

#### **Significance Level**

National

#### **Contributing/Individual**

Individual

#### **National Register Classification**

District

## 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 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. Enslaved people 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.

### **National Register Significance Criteria**

- A – Associated with events significant to broad patterns of our history
- C – Embodies distinctive construction, work of master, or high artistic values

### **National Register Criteria Considerations**

N/A

### National Register Periods of Significance (with Historic Context Themes)

Seq. No.	Start Year/Era and End Year/Era	Historic Context Theme	Subtheme	Facet
01	1846 CE – 1876 CE	Shaping the Political Landscape	Political and Military Affairs 1783-1860	Manifest Destiny, 1844-1859; America Becomes a World Power 1865-1914

### National Register Areas of Significance

Seq. No.	Category	Subcategory (only for Archeology and Ethnic Heritage)	Narrative
1	Military		
2	Engineering		

### NRIS Information

Seq. No. (R)	NRIS Name (R)	NRIS ID (R)	NRIS URL (R)	Other Name	Primary Certification Date (R)
	Fort Jefferson National Monument	7000069	<a href="https://catalog.archives.gov/id/77843330">https://catalog.archives.gov/id/77843330</a>		11/10/1970
	Dry Tortugas National Park	01000228	<a href="https://catalog.archives.gov/id/77843292">https://catalog.archives.gov/id/77843292</a>		10/26/1992



### State Register Documentation

Seq. No. (R)	Identification Number	Name	Listed Date	Narrative
	8MO229	Fort Jefferson National Monument		<p>Florida SHPO documented a Physical Change in Site on 05/16/1989 when a particular structure was rehabilitated. No other information was provided.</p> <p>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).</p>

### National Historic Landmarks

Status	Theme	Contributing	NHL ID	NHL URL	Date
No					

**Statement of Significance for National Historic Landmark**

N/A

### World Heritage Site

Status	Category	WHS ID	WHS ID URL	Date
No				

**Is Resource within a designated National Natural Landscape?**

No

## Chapter 6: Chronology & Physical History

### Chronology

Seq. No.	Major Event	Major Event Narrative	Start Year of Event	Start Era	End Year of Event	End Era
01	Explored	Dry Tortugas or "Las Tortugas" (The Turtles)	1513	CE	1513	CE
02	Built	Lighthouse and Keeper's quarters on Garden Key	1826	CE	1826	CE
03	Planned	Dry Tortugas surveyed by Lt. Josiah Tattnall	1829	CE	1829	CE
04	Planned	Preliminary reconnaissance of fort sites	1844	CE	1844	CE
05	Planned	Topographical survey of Dry Tortugas Fort plan completed, construction begins on temporary buildings	1846	CE	1846	CE
06	Built	Fort Jefferson (not completed) Engineers: US Army Corps of Engineers	1846	CE	1874	CE
07	Altered	Cisterns and Sewer drainage modified many times	1846	CE	1874	CE
08	Built	Parade filled with excavated sand	1847	CE	1854	CE
09	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	1847	CE	1869	CE
10	Built	Officer's quarters	1847	CE	1848	CE
11	Built	Two kitchens	1847	CE	1848	CE
12	Built	Counterscarp	1847	CE	1872	CE
13	Built	Foundation, First tier casement piers	1848	CE	1857	CE
14	Built	Bastions	1851	CE	1855	CE
15	Damaged	Hurricane delays construction of fort	1852	CE	1852	CE
16	Built	Hospital and cistern	1855	CE	1860	CE
17	Built	Second tier casements	1855	CE	1863	CE
18	Destroyed	Hurricane ruins Activa (supply boat)	1856	CE	1856	CE

19	Built	Dry Tortugas lighthouse on Loggerhead Key	1856	CE	1858	CE
20	Destroyed	Fire destroys Storehouse	1857	CE	1857	CE
21	Built	First tier iron embrasures	1858	CE	1858	CE
22	Built	Sand battery on Bird Key	1861	CE	1861	CE
23	Military Operation	Garrison occupation by Union soldiers, fort armed, prisoners held at Fort Jefferson.	1861	CE	1873	CE
24	Damaged	Hurricane ruins Officer's quarters, shed blows away, other buildings lose roofs and have minor damage	1865	CE	1865	CE
25	Damaged	Hurricane overturns Parade fencing	1870	CE	1870	CE
26	Built	Major Smith Monument	1870	CE	1870	CE
27	Damaged	Hurricane ruins roof and chimneys of buildings	1873	CE	1873	CE
28	Maintained	Fort mostly complete except for 2nd tier embrasures	1876	CE	1876	CE
29	Destroyed	All frame buildings and lighthouse on parade removed	1876	CE	1876	CE
30	Built	Garden Key light tower	1876	CE	1876	CE
31	Preserved	Fort Jefferson preserved and repaired	1882	CE	1882	CE
32	Damaged	Hurricane ruins parade ground, walkways and vegetation; Wharf almost destroyed	1886	CE	1886	CE
33	Altered	Marine-Hospital Service used fort as quarantine station	1889	CE	1900	CE
34	Built	Wharf, connected to fort by bridge	1892	CE	1892	CE
35	Land Transfer	Fort Jefferson transferred from Treasury Department to US Navy. Condensing plant built, coal dumping area, and wireless communication towers.	1900	CE	1900	CE
36	Altered	Fort Jefferson serves as coal depot	1902	CE	1907	CE
37	Land Transfer	Fort Jefferson transferred to Department of Agriculture as bird preserve	1908	CE	1908	CE
38	Damaged	Hurricane damages coal depot equipment	1910	CE	1910	CE
39	Damaged	Fire at Fort Jefferson	1912	CE	1912	CE
40	Damaged	Fire in Officers' Quarters	1927	CE	1927	CE
41	Land Transfer	Franklin D. Roosevelt designates the Fort a National Monument, National Park Service	1935	CE	1935	CE

42	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.	1960	CE	1969	CE
43	Restored	Counterscarp	1986	CE	1986	CE
44	Rehabilitated	Quarters and Terreplein	1993	CE	1993	CE
45	Eroded	Hurricane forms land bridge connecting Bush and Garden Keys	2000	CE	2000	CE
46	Damaged	Hurricane damage. Land bridge between Bush and Garden keys washes away.	2005	CE	2005	CE
47	Eroded	Land bridge between Bush and Garden Keys reforms.	2013	CE	2013	CE
48	Damaged	Hurricane Irma damaged the counterscarp (Mote) wall in multiple locations and caused a breach off front three (below Historic Bastion F, West-NW facing walls)	2017	CE	2017	CE

## Physical History

### *Sequence Number and Physical History Time Period*

01 – Exploring the Dry Tortugas, 1500-1846

### *Physical History Narrative*

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.

***Sequence Number and Physical History Time Period***

02 – Fort Jefferson, 1846-1875

***Physical History Narrative***

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, enslaved workers composed the primary workforce at the fort. Local enslaved people 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.

***Sequence Number and Physical History Time Period***

03 – Civil War at Fort Jefferson, 1861-1865

***Physical History Narrative***

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. 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



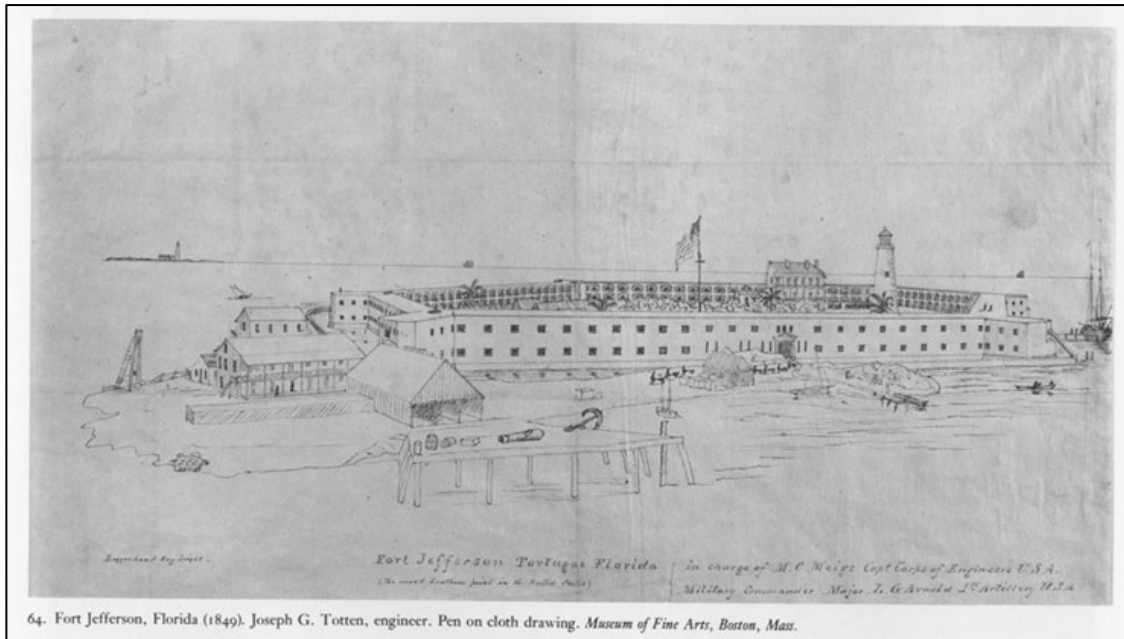
among the mangrove trees.” The journal entry also mentions a fence located around the officer’s house and trees located in front of the quarters. Other accounts by soldiers posted at Fort Jefferson referred to coconut palms, while one soldier mentioned tamarind specifically.

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.



Fig 4. Parade ground with garden and fencing in foreground, barracks in rear (1867), EVER 7393.



64. Fort Jefferson, Florida (1849). Joseph G. Totten, engineer. Pen on cloth drawing. Museum of Fine Arts, Boston, Mass.

Fig 5. 1849 drawing

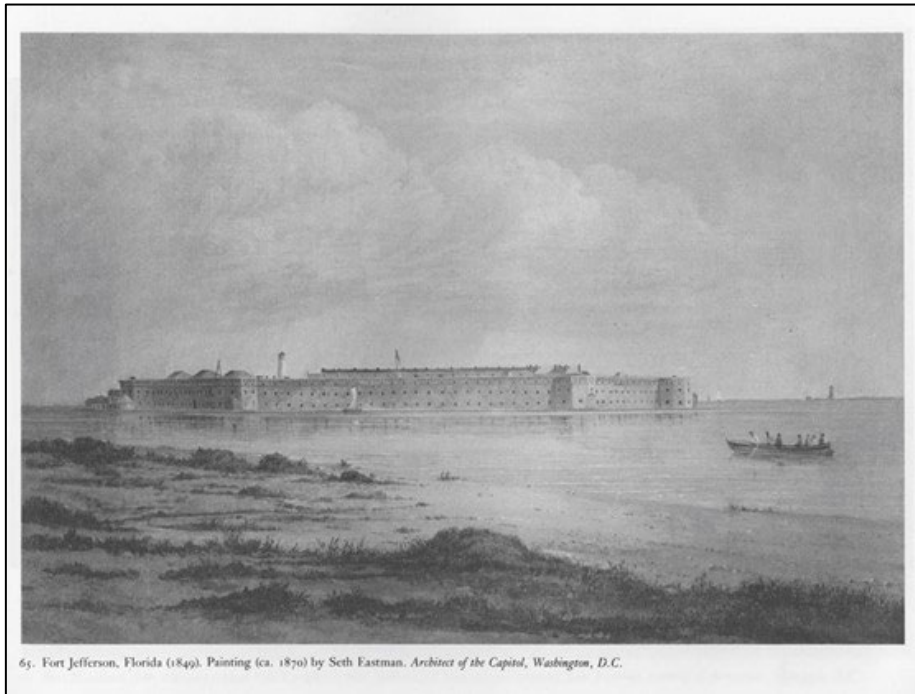


Fig 6. 1849 Fort Jefferson painting



Fig 7. Front 3, Parade ground buildings (1867), EVER 7392.

***Sequence Number and Physical History Time Period***

04 – Later Uses, 1876-1935

***Physical History Narrative***

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 smallpox, 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.

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.



Fig 8. Parade ground with garden and fencing in foreground, barracks in rear, EVER 7320.



Fig 9. Coaling Station Construction, 1899, Meigs collection, Number 20.

***Sequence Number and Physical History Time Period***

05 – National Monument, 1935-Present

***Physical History Narrative***

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.

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 site 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 Men's 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.

The rehabilitation of the timber boathouse docks, ramps, and moat bridge was completed in 2005. Phase 1 stabilization of the scarp wall reached ninety percent completion. The park suffered hurricane damage in 2004, but 2005 was a record year. Hurricanes Dennis, Katrina, and Wilma all struck the Dry Tortugas. At Fort Jefferson, damage occurred to the counterscarp wall, docks, employee quarters, the communications tower, and park utilities. After Hurricane Wilma, the park was closed for several weeks to allow staff to repair damages and remove downed vegetation. Finger piers remained partially unusable during 2005 (Federal Highway Administration, "Final Construction Report, Dry Tortugas National Park, Monroe County, Florida," May 2005, DRTO 4378, South Florida Collections Management Center, Everglades National Park; LAS, 163; Superintendent's Annual Narrative Report, 2000- 2006, SERO archives).

The park and the Florida State Historic Preservation Office entered into a Memorandum of Agreement in 2003 to guide the fort's stabilization. Phase I stabilization of the fort walls included carefully removing the existing brick surrounding the embrasures on the lower level in order to gain access to the original iron elements and was 90% complete in 2006. In 2007, the park began Phase II of this project to repair the exterior scarp wall in the following areas: the north and east faces of Bastion 3, Front 4, the west and northwest faces of Bastion 4; Bastion 5, Front 6, and the northeast and east faces of Bastion 6, with a projected completion date of June 2011.

The Dry Tortugas Research Natural Area (RNA), a no-take no-anchor marine sanctuary covering 46% of the park, went into effect in January 2007. No consumptive recreational, management, or scientific activities will be permitted in this zone.

The replacement of three employee and two superintendent's quarters within the casemates



with pre-fabricated housing units was completed in 2008. Also included was the addition of a modern roof over the units on Front 3.

A multiyear cannon conservation project began in 2007, with the goal of conserving all cannon by 2012. In 2014-2015, a new 6-pack housing unit was constructed on the parade ground in front of Front 3. In 2017 Hurricane Irma damaged the counterscarp (Mote) wall in multiple locations and caused a breach off front three (below Historic Bastion F, West-NW facing walls).



Fig 10. 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.



Fig 11. Ordnance lined pathways in parade ground, with fence to right (towards lighthouse keeper's house), and buttonwoods throughout, c. 1907, Meigs collection, Number 44.



Fig 12. Enlisted Men's Quarter's in ruins: note date palms, buttonwoods, and pathway grid near Major Smith marker to far left (1937).



Fig 13. Boat dock, 2005.



Fig 14. Campground area from terreplein (looking eastward), 2005.



Fig 15. Moat and bridge, existing conditions, 2005.



Fig 16. Officers ruins from terreplein, 2005.



Fig 17. Parade ground looking north from terreplein, 2005.



Fig 18. North coaling piers, 2005.

## Chapter 7: Uses

### Functions and Uses

Seq. No. (R)	Major Category (R)	Category (R)	Use/ Function (R, if exists)	Historic (Yes/No)	Current (Yes/No)	Primary (Yes/No)
01	Defense	Fortification	Fortification-Other	Yes	No	Yes
02	Government	Government-Other	Government-Other	No	Yes	Yes

### Public Access

#### *Public Access*

Unrestricted

#### *Public Access Narrative*

Fort Jefferson, located on Garden Key, is open year-round from sunrise to sunset.

### Associated Ethnographic Groups

Seq. No. (R)	Ethnographic Group [Select from drop down pick list.]	Current (Yes/No)	Historic (Yes/No)
N/A	N/A	N/A	N/A

#### *Ethnographic Study Status:*

No Survey Conducted

#### *Ethnographic Narrative:*

N/A

## Chapter 8: Analysis & Evaluation

### Analysis and Evaluation 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 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.

### Landscape Characteristics and Features

#### ***Buildings and Structures***

Buildings are elements constructed primarily for sheltering any form of human activity in a landscape, while structures are elements constructed for functional purposes other than sheltering human activity.

#### **Summary:**

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 been restored and retains 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. 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 longer 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'x21' 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. Hurricane Irma (2017) damaged the Fort Jefferson Counterscarp and filled the moat with sand at the northeast and southwest beaches.

**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.

**6-Pack Housing Unit.** In 2014-2015, a new 6-pack housing unit was constructed on the parade ground in front of Front 3. This relatively new construction does not contribute to the significance of the cultural landscape.

*Landscape Features:*

**Feature Name:** Garden Key Lighthouse

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** 00319

**FMSS Record Type:** Location

**FMSS Record Number:** 77656

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Fort Jefferson

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** Fort Jefferson

**CRIS-HS Resource ID:** 000320

**FMSS Record Type:** Location

**FMSS Record Number:** 79444

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Large Magazine

**Feature Contribution:** Contributing

**Latitude:** 24.630745010801586

**Longitude:** -82.87266105349687

**CRIS-HS Resource name:** Large Powder Magazine (Fort Jefferson)

**CRIS-HS Resource ID:** 011916

**FMSS Record Type:** Location

**FMSS Record Number:** 77857

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Small Magazine

**Feature Contribution:** Contributing

**Latitude:** 24.629065894469147

**Longitude:** -82.87336690428381

**CRIS-HS Resource name:** Small Powder Magazine (Fort Jefferson)

**CRIS-HS Resource ID:** 011917

**FMSS Record Type:** Location

**FMSS Record Number:** 77857

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Hot Shot Furnace

**Feature Contribution:** Contributing

**Latitude:** 24.630902823653596

**Longitude:** -82.87303872805326

**CRIS-HS Resource name:** Fort Jefferson Hot Shot Furnace

**CRIS-HS Resource ID:** 011918

**FMSS Record Type:** Location

**FMSS Record Number:** 77859

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Officers' quarters (ruins)

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** Officers Quarters Ruins (Fort Jefferson)

**CRIS-HS Resource ID:** 011919

**FMSS Record Type:** Location

**FMSS Record Number:** 79433

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Enlisted Men's quarters

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** Enlisted Men's Quarters Ruins (Fort Jefferson)

**CRIS-HS Resource ID:** 011920

**FMSS Record Type:** Location

**FMSS Record Number:** 77861

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Engineer Officers' quarters

**Feature Contribution:** Contributing

**Latitude:** 24.62997000024548

**Longitude:** -82.87399274870327

**CRIS-HS Resource name:** Engineer Officers' Quarters (Fort Jefferson)

**CRIS-HS Resource ID:** 011921

**FMSS Record Type:** Location

**FMSS Record Number:** 67296

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Lighthouse foundation

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** First Garden Key Lighthouse Foundation

**CRIS-HS Resource ID:** 091379

**FMSS Record Type:** Location

**FMSS Record Number:** 79445

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Cistern

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** Cistern on Parade Ground at Fort Jefferson

**CRIS-HS Resource ID:** 011923

**FMSS Record Type:** Location

**FMSS Record Number:** 79434

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Counterscarp and moat

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** Fort Jefferson Counterscarp and Moat

**CRIS-HS Resource ID:** 091384

**FMSS Record Type:** Location

**FMSS Record Number:** 79435

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Restrooms

**Feature Contribution:** Noncontributing - Compatible

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** Location

**FMSS Record Number:** 112727

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Main Dock

**Feature Contribution:** Noncontributing - Compatible

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** Asset

**FMSS Record Number:** 548588

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Coaling Dock

**Feature Contribution:** Noncontributing - Compatible

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** Location



**FMSS Record Number:** 112725

**Is FMSS Record Exact Match?:** No

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** 6-Pack Housing Unit

**Feature Contribution:** Noncontributing - Incompatible

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** [enter text here]

**FMSS Record Number:** [enter text here]

**Is FMSS Record Exact Match?:** [enter text here]

**Associated CRIS-AR Resource ID:** [enter text here]



*Fig 19. Fort Jefferson (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 20. Fort Jefferson Interior (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 21. Fort Jefferson Parade Ground (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 22. Fort Jefferson Parade Ground (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 23. Harbor Light (April 20, 2022, photograph by Elizabeth Koreman).*



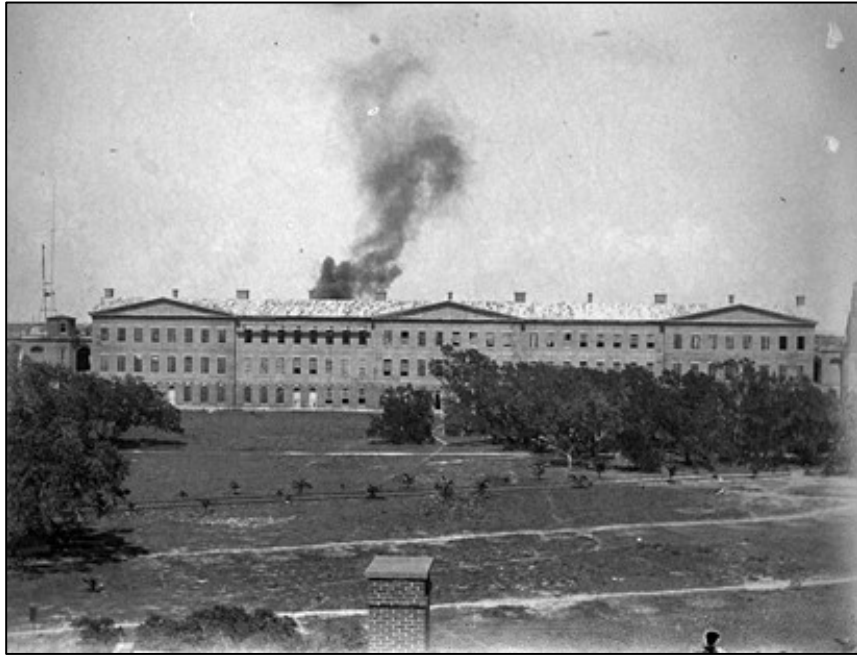
*Fig 24. Harbor Light Restoration (Photograph provided by Glenn Simpson, DRTO Park Manager).*



*Fig 25. Large Magazine (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 26. View of Small Magazine (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 27. Parade Ground and Enlisted Men's Quarter's (c. 1900).*



*Fig 28. Parade Ground and Enlisted Men's Quarter's Ruins (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 29. Officer's Quarters (c. 1900), Meigs collection, Number 66.*



*Fig 30. Officers' Quarters Ruins (April 20, 2022, photograph by Elizabeth Koreman).*





*Fig 31. Staff House (Engineer's officers' quarters) and Kitchen ruins from terreplein (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 32. Staff House (Engineer's officers' quarters) (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 33. Staff House (Engineer's officers' quarters) (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 34. Counterscarp and moat (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 35. Hurricane damage to counterscarp (Photograph provided by Glenn Simpson, DRTO Park Manager).*



*Fig 35. Moat filled with sand, post-Hurricane Irma (Photograph provided by Glenn Simpson, DRTO Park Manager).*



*Fig 36. Main Dock (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 37. North Coaling Dock (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 38. South Coaling Dock (April 20, 2022, photograph by Elizabeth Koreman).*

### **Small-Scale Features**

Small-scale features are elements that provide detail and diversity for both functional needs and aesthetic concerns in the landscape.

#### **Summary:**

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 dates to the period of significance and is contributing.

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

#### *Landscape Features:*

**Feature Name:** Major Smith monument

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** Major Smith Marker

**CRIS-HS Resource ID:** 091380

**FMSS Record Type:** Asset

**FMSS Record Number:** 1028761

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]



*Fig 39. Major Smith marker, c. 1898, (DRTO 301154).*



*Fig 40. Major Smith Marker and pathways (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 41. Benches for interpretation (April 20, 2022, photograph by Elizabeth Koreman).*

### **Circulation**

Circulation refers to the spaces, features, and applied material finishes that constitute systems of movement in a landscape.

#### **Summary:**

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.

*Landscape Features:*

**Feature Name:** Fort Jefferson Brick Walk

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** Location

**FMSS Record Number:** 79450

**Is FMSS Record Exact Match?:** Yes

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Fort Jefferson Parade Ground Walkways

**Feature Contribution:** Undetermined

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** [enter text here]

**FMSS Record Number:** [enter text here]

**Is FMSS Record Exact Match?:** [enter selection here]

**Associated CRIS-AR Resource ID:** [enter text here]



*Fig 42. Walkway (c. 1909), Meigs collection, Number 54.*



*Fig 43. Ordinance pathway leading to Sally port with Coconut palms and Buttonwoods, Meigs collection, Number 50.*



*Fig 44. Brick walkway (April 20, 2022, photograph by Elizabeth Koreman).*

### **Vegetation**

Vegetation includes deciduous and evergreen trees, shrubs, vines, groundcovers, and herbaceous plants and plant communities, whether indigenous or introduced in the landscape.

#### **Summary:**

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 largely 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. Both the pines and the seaside mahoes have been removed. Hurricanes severely damaged several coconut palms on the parade ground, leading to their removal. An effort to replace these trees is planned for 2023.

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. There is now a major vegetation line screening the administrative area from the parade ground composed of native vegetation. This is screen did not historically exist, but it screens the non-historic features from visitors.

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.

**Feature Name:** Buttonwood Trees

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** [enter text here]

**FMSS Record Number:** [enter text here]

**Is FMSS Record Exact Match?:** [enter selection here]

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Coconut Palms

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** [enter text here]

**FMSS Record Number:** [enter text here]

**Is FMSS Record Exact Match?:** [enter selection here]

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Staff gardens

**Feature Contribution:** Non-contributing - Compatible

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** [enter text here]

**FMSS Record Number:** [enter text here]

**Is FMSS Record Exact Match?:** [enter selection here]

**Associated CRIS-AR Resource ID:** [enter text here]

**Feature Name:** Vegetation Screen

**Feature Contribution:** Non-contributing - Compatible

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** [enter text here]

**FMSS Record Number:** [enter text here]

**Is FMSS Record Exact Match?:** [enter selection here]

**Associated CRIS-AR Resource ID:** [enter text here]



*Fig 45. Coconut palm and buttonwood in parade Ground (c. 1900), Number 85.*



*Fig 46. Coconut palms and buttonwoods near Enlisted Men's Quarter's (c. 1900), DRTO 3000898.*

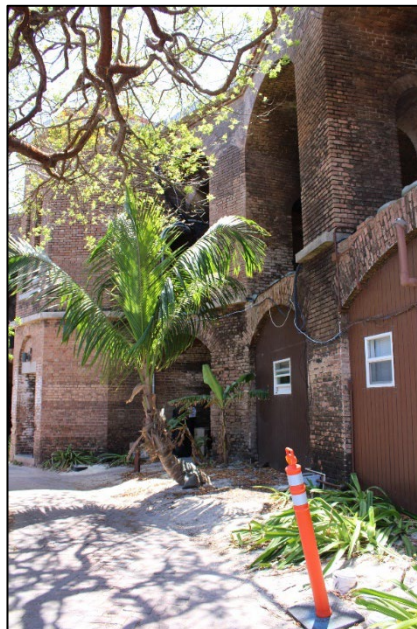




*Fig 47. Coconut palms in Parade Ground (c. 1900), Number 67.*



*Fig 48. Parade Ground, looking towards Front1 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.*



*Fig 49. One of the remaining coconut palms in the fort (April 20, 2022, photograph by Elizabeth Koreman).*



Fig 50. Buttonwoods on the parade ground with palm in front of the Large Magazine (April 20, 2022, photograph by Elizabeth Koreman).



Fig 51. Aerial showing vegetation screen (Photograph by Glenn Simpson, DRTO Park Manager).



*Fig 52. Vegetation screen (April 20, 2022, photograph by Elizabeth Koreman).*

### **Constructed Water Features**

Constructed water features are built features and elements that utilize water for aesthetic or utilitarian functions in the landscape.

#### **Summary:**

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.

#### *Landscape Features:*

**Feature Name:** Brick Fountain

**Feature Contribution:** Noncontributing - compatible

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** [enter text here]

**FMSS Record Number:** [enter text here]

**Is FMSS Record Exact Match?:** [enter selection here]

**Associated CRIS-AR Resource ID:** [enter text here]



*Fig 53. Tropical Audubon fountain (April 20, 2022, photograph by Elizabeth Koreman).*

### ***Spatial Organization***

Spatial organization is the three-dimensional organization of physical forms and visual associations in a landscape, including the articulation of ground, vertical, and overhead planes that define and create spaces.

#### **Summary:**

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.

The centerpiece of the historic spatial organization at Fort Jefferson was a large, open parade ground with clusters of trees and buildings along the perimeter. Although their size and layout varied, parade grounds almost always had a consistent relationship with the surrounding buildings, which were oriented with the front elevation facing inwards towards this important central space. From CLR –

Although lacking all but the foundations, the ruins of the officers' quarters and the enlisted men's quarters on the parade ground demarcate the spatial order of military buildings around a central, open space. The loss of buttonwoods on either side of the main path and coconut palms that were planted near the officers' quarters and small powder magazine is the most significant change in historic vegetation. It is unclear if any of the oldest buttonwoods that survive on the parade ground date from the period of significance or were planted to replace trees that were damaged in hurricanes or that simply died. A small, enclosed garden area located near the center of the parade has also been lost along with the pathways across the parade. Although historic integrity of the parade ground has been lost due to the changes in vegetation and buildings, the spatial organization of the parade ground is a contributing feature to the cultural landscape's significance.

*Landscape Features:*

**Feature Name:** Parade Ground

**Feature Contribution:** Contributing

**Latitude:** [enter text here]

**Longitude:** [enter text here]

**CRIS-HS Resource name:** [enter text here]

**CRIS-HS Resource ID:** [enter text here]

**FMSS Record Type:** [enter text here]

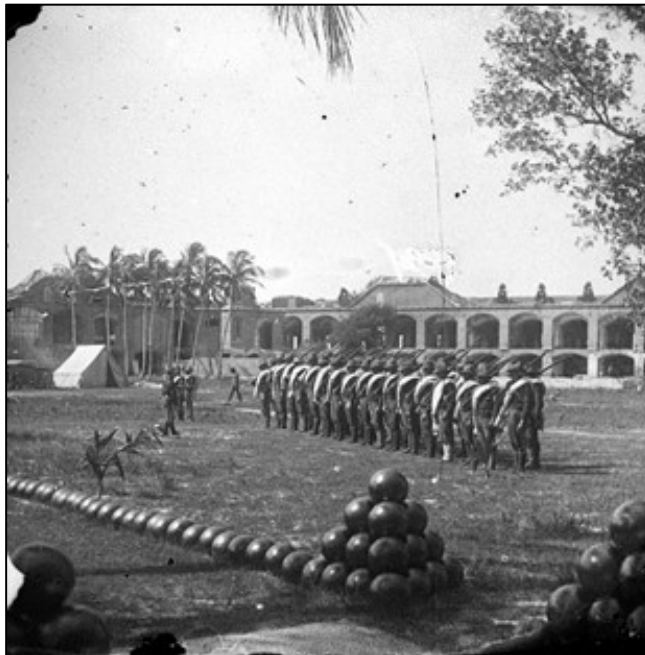
**FMSS Record Number:** [enter text here]

**Is FMSS Record Exact Match?:** [enter selection here]

**Associated CRIS-AR Resource ID:** [enter text here]



*Fig 54. Light Keeper's House, Enlisted Men's Quarter's, Light Tower, and Mounted Cannon (c. 1900), Number 73.*



*Fig 55. Parade Ground (c. 1900), Number 12.*





*Fig 57. Parade ground looking west from terreplein (February 2005).*



*Fig 57. Parade ground (April 20, 2022, photograph by Elizabeth Koreman).*



*Fig 58. Leaching fields (February 2005).*



*Fig 59. Leaching fields (April 20, 2022, photograph by Elizabeth Koreman).*

## Chapter 9: Condition Assessment

### Assessment Interval:

6

### Condition

**Condition:**

Fair

**Condition Date:**

02/15/2007

**Primary Inspector Name:**

[opt. enter name here]

**Profession/Credentials:**

[opt. enter selection here]

**Narrative:**

[enter text here]

**Condition:**

Fair

**Condition Date:**

09/25/2013

**Primary Inspector Name:**

[opt. enter name here]

**Profession/Credentials:**

[opt. enter selection here]

**Narrative:**

Will work with park & HIM team in FY 21 to update condition.

**Condition:**

Fair

**Condition Date:**

09/14/2022

**Primary Inspector Name:**

[opt. enter name here]

**Profession/Credentials:**

[opt. enter selection here]

**Narrative:**

The Fort Jefferson cultural landscape is currently in 'fair' condition, as the fort and its environs are susceptible to negative impacts, particularly exposure to the elements threatening the site's cultural resources. Erosion, the climatic conditions in the Dry Tortugas, and susceptibility to severe weather events including tropical storms and hurricanes pose the most significant threat to the Fort Jefferson cultural landscape, often leading to the damage and sometimes subsequent removal of the fort's buildings and structures and vegetation. Erosion and climatic conditions continue to impact the landscape and will most likely be exacerbated in the future by climate change. Operations on site to treat wastewater with leaching fields and the new construction of a six-pack housing unit on the parade ground negatively impact the historic character of the landscape. Structural deterioration of the fort due to corrosive iron drainpipes and mortar and brick deterioration diminishes integrity of materials and workmanship.

## Impacts

Seq. No.	Type	Impact Type – Other	Internal Source?	External Source?	Narrative	Date Identified
xx			Yes/No	Yes/No	1000 Char.	mm/dd/yyyy
	Erosion		Yes	Yes	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.	08/08/2006

	<p>Exposure to the Elements</p>			<p>In 2017 Hurricane Irma damaged the counterscarp wall in multiple locations and caused a breach off front three (below Historic Bastion F, West-NW facing walls). Hurricane Irma additionally filled the moat with sand at the northeast and southwest beaches.</p> <p>Hurricanes and tropical storms have also caused destruction to historic vegetation. By 2008, 90% of the coconut palms had been removed from the parade ground due to hurricane damage. Tropical Storm Eta (2020) damaged a mature buttonwood adjacent to the old lighthouse foundations, causing its removal.</p>	<p>08/22/2022</p>
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	Operations on Site		Yes	No	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.	08/08/2006
	Structural Deterioration				The iron drainpipes from the Terreplein to the cistern are corroding/expanding and causing damage to the fort.	8/22/2022
	Impending Development				In 2014-2015, a new 6-pack housing unit was constructed on the parade ground in front of Front 3. This has negatively impacted the historic integrity of the cultural landscape.	8/22/2022

	Structural Deterioration				The brick masonry on almost all of Front 1, and portions of Front 2, and the interior of the fort needs to be stabilized. "Loose Brick Stay Back" signs have been placed at the bases of all of the parade ground-facing walls to warn of the potential hazard of falling bricks due to mortar and brick deterioration.	8/22/2022
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## Chapter 10: Treatment

### Stabilization Measures

Stabilization Measure Narrative (R)	Stabilization Cost (R)	Stabilization Cost Date (R)	Estimate Level (R)	Cost Estimator (R)	Cost Narrative
N/A					

### Approved Treatments

Type	Completed	Approved Treatment Doc.	Doc Date	Narrative	Approved Treatment Cost	Cost Date	Estimate Level	Estimator	Cost Narrative
Preservation	No	Cultural Landscape Report	2011	The overarching treatment associated with the historic landscape is preservation. Restoration has been applied to selected features, primarily the restoration of historic vegetation, the central garden space, pathways on the parade ground, and cannon and gun mounts on the terreplein.					

## Chapter 11: Bibliography and Supplemental Information

### Bibliography

Seq. No.	Citation Author	Citation Title	Year	Publisher	Citation Location	Citation Type	Citation Number	IRMA Number	Citation URL
	Emanuel Raymond Lewis	Seacoast Fortification of the United States	1970	Smithsonian Institute Press		Narrative			
	Albert C. Manucy	A Handbook for Fort Jefferson History	1942	Unpublished	SERO	Narrative			
	Willard B. Robinson	American Forts	1977	University of Illinois Press		Both Graphic and Narrative			
	John Muller	A Treatise Containing the Elementary Part of Fortification, Regular and Irregular.	1746	Lamb	SERO	Narrative			
	Edwin C. Bearss	A Constructional History for Fort Jefferson	1983	Unpublished, NSP	SERO	Both Graphic and Narrative	011627		
	Steve Hach	Cold War in South Florida Historic Resource Study	2004	NPS	SERO	Both Graphic and Narrative			

**Fort Jefferson Landscape  
Dry Tortugas National Park**

		Fort Jefferson Historic Structure Report Architectural Data Section	1997	Unpublished, NPS	SERO	Both Graphic and Narrative			
		Narrative Report: Rebuild Historic Walks and Boat Bridge		Unpublished, NPS	SERO	Both Graphic and Narrative			
	John H. Davis	The Ecology of the Vegetation and Topography of the Sand Keys of Florida	1942	Southwestern College, Memphis, TN	EVER	Both Graphic and Narrative			
	Charles Frederick Millsbaugh	Flora of the Sand Keys	1907	Field Columbian Museum	EVER	Both Graphic and Narrative			
	H.H. M. Bowman	Botanical Ecology of the Dry Tortugas	1917	University of Pennsylvania	EVER	Both Graphic and Narrative			
	D.R. Stoddart and F.R. Fosberg	Topographic and Floristic Change, Dry Tortugas, Florida, 1904-1977	1977	The Smithsonian Institute	EVER	Both Graphic and Narrative			
	Edwin C. Bearss	Fort Jefferson Historic Structure Report Historical Data Section	1983	Unpublished, NPS	SERO	Both Graphic and Narrative	011627		

		Historic Resource Management Plan Fort Jefferson National Monument Draft	1977	Unpublished, NPS		Both Graphic and Narrative			
	Submerged Resource Center	Dry Tortugas NP Submerged Cultural Resources Assessment (Professional Report No 13)	1993	National Park Service					

### Supplemental Information

Seq. No.	Supplemental Information Title	Supplemental Information Narrative
	City on the Sea: A Collection of Dry Tortugas Personal Histories	CD-ROM with historic and aerial photographs. Personal accounts from soldiers, prisoners, and others stationed at Ford Jefferson are included in pdf format.
	Ground-Penetrating Radar Survey, Southeastern Archeological Center, 2007.	Auto-CAD file showing buried paths in parade ground. (SERO)



**Fort Jefferson Landscape  
Dry Tortugas National Park**

	Garden Key Lighthouse	Contributing					000319	Location	77656	Yes	
	Fort Jefferson	Contributing				Fort Jefferson	000320	Location	79444	Yes	
	Large Magazine	Contributing		24.6307450 10801586	- 82.87266105 349687	Large Powder Magazine (Fort Jefferson)	011916	Location	77857	Yes	
	Small Magazine	Contributing		24.6290658 94469147	- 82.87336690 428381	Small Powder Magazine (Fort Jefferson)	011917	Location	77858	Yes	
	Hot Shot Furnace	Contributing		24.6309028 23653596	- 82.87303872 805326	Fort Jefferson Hot Shot Furnace	011918	Location	77859	Yes	
	Officers' quarters (ruins)	Contributing				Officers Quarters Ruins (Fort Jefferson)	011919	Location	79433	Yes	
	Enlisted Men's quarters	Contributing				Enlisted Men's Quarters Ruins (Fort Jefferson)	011920	Location	77861	Yes	
	Engineer Officers' quarters	Contributing		24.6299700 0024548	- 82.87399274 870327	Engineer Officers' Quarters (Fort Jefferson)	011921	Location	67296	Yes	

**Fort Jefferson Landscape  
Dry Tortugas National Park**

	Lighthouse foundation	Contributing				First Garden Key Lighthouse Foundation	091379	Location	79445	Yes	
	Cistern	Contributing				Cistern on Parade Ground at Fort Jefferson	011923	Location	79434	Yes	
	Counterscarp and moat	Contributing				Fort Jefferson Counterscarp and Moat	091384	Location	79435	Yes	
	Restrooms	NC - Compatible						Location	112727	Yes	
	Main Dock	NC - Compatible						Asset	548588	Yes	
	Coaling Dock	NC - Compatible						Location	112725	Yes	
	6-Pack Housing Unit	NC - Incompatible									
	Constructed Water Features										

	Brick Fountain	NC - Compatibl e									
	Small-Scale Features										
	Major Smith monument	Contributi ng				Major Smith Marker	091380	Asset	1028761	Yes	
	Spatial Organization										
	Parade Ground	Contributi ng									