

Federal Emergency Management Agency (FEMA)

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

for

**Construction of City of Fort Pierce's
Marina and Storm Protection System
Santa Rosa County, Florida
FEMA-1545-DR-FL; PW 438**

Background

The City of Fort Pierce has applied to FEMA for assistance with the repair of the City Marina's outer harbor and the construction of hazard mitigation consisting of a Storm Protection System. The outer harbor would be reconstructed to its approximate pre-disaster conditions. The outer harbor entrance would be moved from the south side to the northern portion of the harbor to improve public access and navigation.

The City of Fort Pierce is proposing to construct a Storm Protection System that would provide protection from a 100-year storm event; it would protect the Fort Pierce City Marina's outer and inner harbors, as well as publicly owned waterfront properties.

The Storm Protection System would consist of one large Storm Protection Island located southeast of the outer harbor; a series of 11 smaller Free Form Breakwater Habitat Islands located east of the outer harbor; and Tombolo Point, a peninsula constructed off of the bulkhead south of the outer harbor. The Storm Protection System would be constructed using sand filled Geotubes. The large Storm Protection Island would also be anchored by T-shaped riprap revetments (t-groins) and rock-filled marine mattress units. A veneer of sand would be provided to complete the Storm Protection Island and Tombolo Point. Native vegetative plantings would be added to enhance shoreline stabilization and to provide a diversity of habitat.

The 11 Free Form Breakwater Habitat Islands would be constructed east and northeast of the outer harbor. These Free Form Breakwater Habitat Islands would be constructed with Geotube cores. In contrast to the Storm Protection Island, the Free Form Islands would not include any sand fill and the Geotube cores would be covered with natural limestone rock to provide a breakwater armor layer of protection. Mangroves would be planted on the Free Form Islands to enhance shoreline stabilization and provide habitat.

The Storm Protection System would provide hazard mitigation against future storm events, as well as enhance the Indian River Lagoon by creating habitats. Native vegetative plantings would provide a diversity of habitats, including oyster beds, lime-rock artificial reefs, mangrove fringes, and coastal dune plantings. Oyster shells and lime rock would be used at lower elevations to promote the establishment of oyster beds, hardbottom communities, and other essential fish habitats. The Storm Protection System would also lower current velocities within the outer harbor, which would provide an estimated 8.12 acres of seagrass recruitment areas.

FEMA has developed an Environmental Assessment (EA) to determine the potential for significant impacts from the proposed project.

Findings

The purpose of the EA is to analyze the potential environmental impacts of the proposed project, and to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

In accordance with 44 CFR Part 10.8 (d)(3)(x), FEMA has determined that the proposed alternative would not have significant individual or cumulative impacts; nor would it promote significant secondary adverse effects. No significant adverse impacts to groundwater or surface water; floodplains; wetlands or jurisdictional waters of the U.S.; terrestrial resources or wildlife; state or federally protected species; socioeconomics (including minority and low income populations); or cultural resources would occur.

Construction of a Storm Protection System would have a beneficial effect on the environment by providing hazard mitigation for privately and publicly owned river front property against future storm events as well as enhancing the Indian River Lagoon by creating habitat. Habitats that will be created include oyster beds, lime-rock artificial reefs, mangrove fringes, and coastal dune. Mangroves and coastal dune vegetation would be planted to stabilize the islands and provide habitat. Oyster shells and lime rock would be used at lower elevations to promote the establishment of oyster beds, hardbottom communities, and other essential fish habitats. The Storm Protection System would also lower current velocities within the outer harbor. The lowering of current velocities within the outer harbor area is anticipated to result in an estimated 8.12 acres of seagrass recruitment areas.

The Draft EA was made available to interested parties through publication on FEMA's website (<http://www.fema.gov/plan/ehp/envdocuments/ea-region4.shtm>) and by distribution at the St. Lucie County, Fort Pierce Branch and the City of Fort Pierce. Notification of availability of the Draft EA was published in the Fort Pierce Tribune newspaper on October 21, 2010.

The following summarizes what is outlined in the EA as conditions that must be met as part of the implementation of this proposed action.

The City of Fort Pierce is required to obtain Clean Water Act permits for the project. The permits for both Sections 401 and 404 with the Florida Department of Environmental Protection (FL DEP) and U.S. Army Corps of Engineers (USACE) will place project conditions to minimize impacts. The permits will require the use sediment control to reduce turbidity during construction, and thereby minimize water quality impacts. Two different methods are proposed for work near shore, turbidity barriers and 150 meter mixing zones; one method would be used within the Intracoastal Waterway, 150 meter mixing zones. The City of Fort Pierce will obtain all required permits and adhere to all permit conditions.

Any pilings within the Indian River Lagoon that are treated with chromated copper arsenate will be wrapped to prevent the possible leaching into the water column.

Mitigation is required for the impacts to 0.43 acres of seagrass, as determined by the USACE and FL DEP permits. Mitigation that is being required includes:

1. All work will be conducted from a shallow-draft barge. The barge is required to operate within waters of sufficient depth (one-foot clearance from the deepest draft of the vessel to the top of submerged resources) to preclude bottom scouring, propeller dredging, and damage to submerged surfaces. Piles will be driven from barge-mounted cranes.
2. Restoration of estuarine bottom to enhance seagrass recruitment within a seagrass area adjacent to the North Causeway in Fort Pierce will be provided. Nearby spoil islands will be scraped down and 1.94-acres of a dredge hole will be filled and then covered with the scrapings from the spoil islands. Bird stakes will be added to the area to encourage roosting of waterfowl, which will add natural fertilizer for revegetating the seagrass beds.
3. The City of Fort Pierce will provide channel markings at the North Causeway Island Park and Boat Ramp. The City will install signage to protect existing seagrass beds from boaters using these ramps. Existing seagrass damage will undergo restoration where prop scars are not naturally healing.
4. The City of Fort Pierce will deed 26 acres of submerged land to the State of Florida. This 26-acre parcel contains pristine seagrass beds, tidal flats, and submerged mangrove areas; it is located immediately adjacent to the State of Florida's Fort Pierce Inlet State Park. An additional 30 acres will be given to the State as proprietary public interest.

National Marine Fisheries Service (NMFS) special conditions for the protection of sea turtles and smalltooth sawfish, as described in *Sea Turtle and Smalltooth Sawfish Construction Conditions*, will be implemented.

NMFS conditions identified in the *NMFS-COE Key Construction Conditions for Docks or Other Minor Structures Constructed in or over Johnson's Seagrass* will be implemented. Additionally, USACE/NMFS's *Dock Construction Guidelines* will be implemented.

The Florida Fish and Wildlife Conservation Commission's (FWCC) *Standard Manatee Conditions for Work-In-Water* conditions will be implemented. The project must also be reviewed for confirmation that it is consistent with the Lucie County Manatee Protection Plan and USACE/USFWS Manatee Key 2005 Plan.

The following measures will be incorporated into the project in order to further minimize impacts to threatened or endangered species from the installation of the Storm Protection System.

- Fill material for the exposed sections of the Storm Protection System will exhibit the same sediment characteristics of the surrounding sediments. Additionally, fill material would consist of limestone rocks or oyster shells and will not be made of concrete or other fill.
- All permit conditions that are placed on the project by U.S. Fish and Wildlife Service (USFWS), NMFS, FL DEP or FWCC will be adhered to.

A lease is required from the State of Florida for sovereign submerged lands for the southern marina facility in the outer harbor. In addition, a lease will be required for the habitat islands. The City of Fort Pierce will obtain these leases.

FEMA funding is conditional upon the City of Fort Pierce obtaining all applicable permits, including but not limited to Sections 401 and 404 Clean Water Act permits from the FL DEP and USACE, and adherence to all permit conditions. In doing so, FEMA can reasonably ascertain that no significant impacts will occur to environmental resources. Compliance with permit conditions established by the State Historic Preservation Office, NMFS, USFWS, USACE, and FL DEP as part of this permitting process will ensure that applicable environmental regulations are adhered to.

If prehistoric or historic artifacts, vessel remnants, or any other physical remains that could be associated with Native American cultures, colonial or early American settlement, or maritime history are encountered at any time within the project area, the permitted project shall cease all activities involving disturbance in the immediate vicinity of such discoveries. The City of Fort Pierce, or other designee, shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at 850-245-6333, as well as Ms. Heather Batson of FEMA and the appropriate permitting agencies. The project activities shall not resume without verbal and/or written authorization.

The Storm Protection System will be monitored in accordance with the *City of Fort Pierce Island Performance Plan*. In conformance with this plan, repairs to the rock revetment and t-groin structures will be required when a damage value of $S = 3$ (or greater) occurs.

The City of Fort Pierce will obtain and maintain insurance coverage and/or establish and maintain an island maintenance and performance fund sufficient to cover the repair of the Storm Protection System in accordance with FEMA hazard mitigation program requirements.

The Storm Protection System will be monitored and maintained in accordance with the *City of Fort Pierce Waterfront Storm Protection System Habitat Monitoring Plan* to provide assurances that the proposed habitat areas, planted and naturally recruited, will be monitored and maintained for success.

The Storm Protection System will be monitored and maintained in accordance with the *City of Fort Pierce Waterfront Storm Protection Island Maintenance Plan* that outlines a program for routine island maintenance activities that will support the planned ecological communities.

Failure to comply with permit and project conditions could jeopardize FEMA funding.

Conclusion

Based on the findings of the attached EA, coordination with the appropriate agencies, and adherence to the project conditions set forth in the EA, and in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing NEPA (44 CFR Parts 1500 through 1508) and FEMA regulations for environmental consideration pertaining to NEPA compliance (44 CFR Part 10), FEMA has

