ENVIRONMENTAL APPENDIX

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY

MONROE COUNTY, FLORIDA

APPENDIX D

U.S. Army Corps
of Engineers
Norfolk District

ENVIRONMENTAL APPENDIX, APPENDIX D OUTLINE

A. Sub-Appendix A. Biological Assessment

B. Sub-Appendix B. 404B1 Guidelines

C. Sub-Appendix C. CZMA
   Draft Federal Consistency Determination

D. Sub-Appendix D. Draft Environmental Mitigation Plan

E. Sub-Appendix E. Environmental Correspondence and Coordination
   a. Draft EIS Release Letters
   b. Cooperating Agency Invitations and Responses
   c. Interagency Coordination and Responses
   d. Interagency Meetings
   e. Public Notices and Responses to Public Comments

US Army Corps of Engineers

Florida Keys Coastal Storm Risk Feasibility Study

DRAFT Biological Assessment

Monroe County, Florida

Submitted To:
Department of the Interior
U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510
April 29, 2020

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

April 29, 2020

Mr. Jeff Howe
U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, FL 32960

Re: Request for Formal Consultation Pursuant to Section 7 of the Endangered Species Act, for the Florida Keys Coastal Storm Risk Management Project, Monroe County, Florida

Dear Mr. Howe:

The U.S. Army Corps of Engineers, Norfolk District (USACE) is requesting to reinitiate formal Section 7 Consultation with the U.S. Fish and Wildlife Service, pursuant to the Endangered Species Act (ESA), for the Florida Keys Coastal Storm Risk Management Project, in Monroe County, Florida. The Study Area consists of the entire extent of the Florida Keys.

Attached for your review is the *Florida Keys Coastal Storm Risk Management Biological Assessment (BA) and Bald Eagle Determination*. We are requesting that the USFWS provide a Draft Biological Opinion to the USACE for those listed species within its jurisdictional range of so that we can review and discuss the findings with you, prior to the issuance of the Final Biological Opinion.

The Preferred Alternative, which is described in further detail in the attached BA, consists of constructing and maintaining the following features:

- Nonstructural measures, including elevation or acquisition of existing residential structures;

- Nonstructural measures including flood proofing for existing critical infrastructure; and

- Proposed rock revetment structures at six locations along U.S. Route 1 to reduce damage to the roadway by stabilizing the shoreline and ideally preventing or at least minimizing washout. These proposed revetments are located at: West Summerland Key, Bahia Honda Key, Long Key, Fiesta Key, and Indian Fill Key.

Within the attached Biological Assessment and Bald Eagle Determination, we made the preliminary determination that implementation of the Preferred Alternative *may affect, but is not likely to adversely affect* the following species within your jurisdiction: American alligator, American crocodile, green sea turtle, and the West Indian manatee. In addition, we made the preliminary determination that the project *may affect and is likely to adversely affect* the following species within your jurisdiction: loggerhead sea turtle, piping plover, red knot, roseate tern, and Cape Sable thoroughwort.

Critical Habitat within the action area has been designated for the following species: piping plover (74 Fed. Reg. 23476), elkhorn and staghorn coral (73 Fed. Reg. 72210), West Indian manatee (42 Fed. Reg. 47840), American crocodile (42 Fed. Reg. 47840), loggerhead sea turtle (79 Fed. Reg. 39855), and Cape Sable thoroughwort (79 Fed. Reg. 1551).

Because the project does not include any proposed impacts below mean high water (MHW), we have determined that it will have no effect on any threatened or endangered species under the jurisdiction of the National Marine Fisheries Service (NMFS). Likewise, no adverse effects on NMFS Critical Habitat are anticipated. Therefore, we do not intend to initiate further consultation with NMFS with respect to this project.

Pursuant to the National Environmental Policy Act (NEPA), a Draft Integrated Feasibility Study/Environmental Impact Statement (IFS/EIS) or the Florida Keys Coastal Storm Risk Management Project, has been prepared and will be available online at: https://www.saj.usace.army.mil/FloridaKeysCSRMFeasibilityStudy/). It will be released for public and agency review, in late May or early June, for a commenting period of 45 days. Upon release, we will send you a letter under separate cover requesting any comments you have on the IFS/EIS as a whole, pursuant to NEPA, ESA, and the Fish and Wildlife Coordination Act.

We appreciate the coordination, guidance, and information USFWS has provided previously for the Section 7 consultation for this project. Please do not hesitate to contact me at Kathy.S.Perdue@usace.army.mil or (757) 201-7218, if you have any questions or need any additional information. We look forward to our continued coordination on the project.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch
803 Front Street
Norfolk, Virginia 23510

Table of Contents

1.0 INTRODUCTION 2

1.1 AUTHORITY 3

1.2 PURPOSE AND PROPOSED ACTION 3

1.3 EXISTING PROJECTS 5

2.0 ACTION AREA 6

2.1 HABITAT IN ACTION AREA 6

2.2 FEDERALLY LISTED SPECIES WITH THE POTENTIAL TO OCCUR IN THE ACTION AREA 8

2.2.1 DESIGNATED CRITICAL HABITAT 10

2.2.2 BIRDS 11

2.2.3 FISH 13

2.2.4 INVERTEBRATES 15

2.2.5 MAMMALS 18

2.2.6 REPTILES 19

2.2.7 PLANTS 27

2.3 EFFECTS ANALYSIS 28

2.3.1 Birds 28

2.3.2 Fish 30

2.3.3 Invertebrates 30

2.3.4 Mammals 31

2.3.5 Reptiles 31

2.3.6 Plants 39

3.0 SPECIES SUMMARY CONCLUSION TABLE 40

4.0 REFERENCES 42

1.0 INTRODUCTION

The Florida Keys are an important asset to the economic development of the United States because the islands are a major tourism destination that also hold unique environmental resources including the third largest coral reef in the world and 17 national and state parks. There is Federal interest in addressing the Keys' high levels of risk and vulnerability to coastal storms which is expected to be compounded by the combined effects of sea level change and climate change. The vulnerability of the Florida Keys to coastal storms was most recently exemplified by the significant damage sustained by Hurricane Irma in 2017.

States and territories with more than one flood-related major disaster declared pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.) in calendar years 2014, 2015, 2016, or 2017 qualified for supplemental investigation funds for the initiation and completion of authorized flood and storm damage reduction studies appropriated by Public Law 115-123. High-priority studies of projects were provided supplemental funding in thirty-three states and three territories which met the criteria due to impacts from Hurricanes Harvey, Irma, and Maria. Florida is one of the thirty-three states and the Florida Keys Coastal Storm Risk Management Study is one of 14 CSRM studies being conducted with supplemental funds in the State of Florida.

1.1 AUTHORITY

The study authority is Public Law 84-71, June 15, 1955 which authorizes an examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides. Per the Assistant Secretary of the Army for Civil Works (ASA-CW) memorandum dated 9 August 2018, Subject: Policy Guidance on Implementation of Supplemental Appropriations in the Bipartisan Budget Act of 2018, for feasibility studies (including General Reevaluation Studies), a new feasibility cost sharing agreement (FCSA) or an amendment to the existing FCSA is required to address use of Supplemental Investigations funds at 100 percent Federal expense. Additionally this guidance states, studies funded by Public Law 115-123 will be undertaken in accordance with existing Civil Works policies and guidance and incorporate SMART Planning principles.

1.2 PURPOSE AND PROPOSED ACTION

The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. The study area extends from the Key Largo, Florida vicinity to Key West, Florida. Route 1 is the only roadway that connects all of the Florida Keys to each other and then to the Florida mainland. The preferred alternative evaluated in this Biological Assessment would reduce coastal storm risk to U.S. 1, critical infrastructure, and residential and commercial structures that are damaged during coastal storms. The preferred alternative measures evaluated would maintain the road structure as much as possible so that once a storm has passed, the roadway would likely remain intact, and nonstructural measures would reduce damage to any at risk structure. The preferred alternative is not expected to have in water impacts, therefore this Biological Assessment is directed for submission to U.S. Fish and Wildlife Services. Potential measures being evaluated include:

1. Nonstructural measures including elevation, flood proofing, and acquisition of structures experiencing damage over the 50 year period of analysis;

2. Nonstructural measures including flood proofing for critical infrastructure. Mangrove restoration may be incorporated in conjunction with flood proofing if the measure would provide measurable CSRM benefit to critical infrastructure in the immediate vicinity; and

3. Rock revetment structures designed in six areas (see below) along Route 1 to reduce damage to the roadway by stabilizing the shoreline and ideally preventing or at least minimizing washout. Living shoreline and/or mangrove restoration may also be incorporated in conjunction with the shoreline stabilization if they provide measurable CSRM benefit:

a. West Summerland Key: an approximately 550 feet long by 12 feet wide revetment that consists of a sloping wall (2 feet to the horizontal to 1 foot vertical, 2H: 1V) constructed of rocks with a geotextile placed underneath. In locations where mangroves are present, there will be a one foot buffer between the mangroves and the toe of the measure. The revetment will be placed behind an existing seawall. A laydown area may be temporarily constructed within the vicinity of the revetment during construction and has been considered in the impact analyses.
b. Bahia Honda Key: an approximately 1,300 feet long by 14 feet wide revetment that consists of a sloping wall (2 feet to the horizontal to 1 foot vertical, 2H: 1V) constructed of rocks with a geotextile placed underneath. In locations where mangroves are present, there will be a one foot buffer between the mangroves and the toe of the measure. The revetment at this location will be placed north of the state park's fence and campground road. The revetment will not be placed directly on the beach. A laydown area may be temporarily constructed within the vicinity of the revetment during construction and has been considered in the impact analyses.
c. Long Key: an approximately 1,000 feet long by 15 feet wide revetment that consists of a sloping wall (2 feet to the horizontal to 1 foot vertical, 2H: 1V) constructed of rocks with a geotextile placed underneath. In locations where mangroves are present, there will be a one foot buffer between the mangroves and the toe of the measure. A laydown area may be temporarily constructed within the vicinity of the revetment during construction and has been considered in the impact analyses.
d. Fiesta Key West: an approximately 1,350 feet long by 13 feet wide revetment that consists of a sloping wall (2 feet to the horizontal to 1 foot vertical, 2H: 1V) constructed of rocks with a geotextile placed underneath. In locations where mangroves are present, there will be a one foot buffer between the mangroves and the toe of the measure. The revetment would be placed close to the road north of dense vegetation separating the revetment from the coast. A laydown area may be temporarily constructed within the vicinity of the revetment during construction and has been considered in the impact analyses.
e. Fiesta Key East: an approximately 900 feet long by 13 feet wide revetment that consists of a sloping wall (2 feet to the horizontal to 1 foot vertical, 2H: 1V) constructed of rocks with a geotextile placed underneath. In locations where mangroves are present, there will be a one foot buffer between the mangroves and the toe of the measure. This key has an existing rip rap revetment along the coast. A laydown area may be temporarily constructed within the vicinity of the revetment during construction and has been considered in the impact analyses.
f. Indian Key Fill: an approximately 400 feet long by 21 feet wide revetment that consists of a sloping wall (2 feet to the horizontal to 1 foot vertical, 2H: 1V) constructed of rocks with a geotextile placed underneath. In locations where mangroves are present, there will be a one foot buffer between the mangroves and the toe of the measure. A laydown area may be temporarily constructed within the vicinity of the revetment during construction and has been considered in the impact analyses.

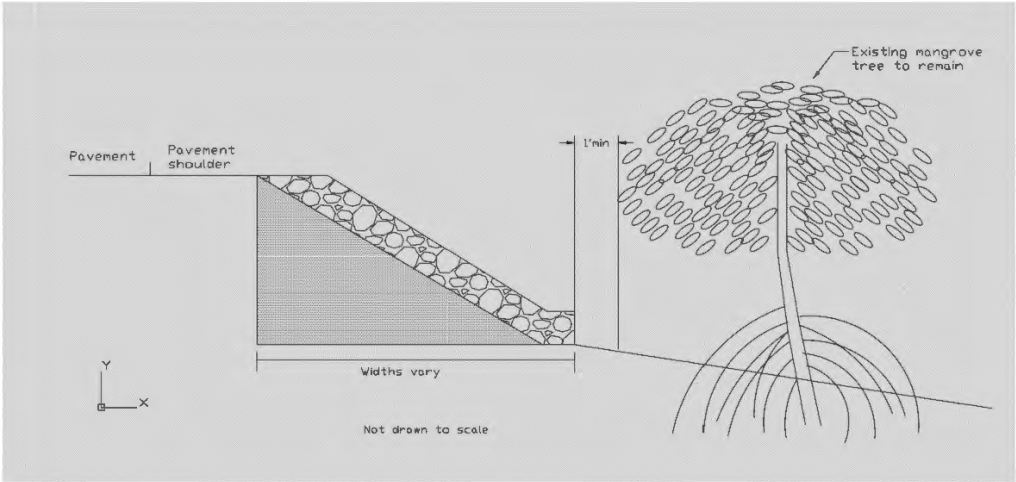


Figure 1. Rock revetment structure design along Route 1

1.3 EXISTING PROJECTS

Key West Harbor is a Federal navigation project that provides approximately 23 miles of channel from the main ship channel and anchorage to Garrison Bight and Key West Bight. Garrison Bight forms part of the project for improving Key West Harbor and consists of approximately 3.75 miles of channel, a breakwater along the north side of the bight, and a 12 foot deep turning basin in the bight.

The Intracoastal Waterway, Miami to Key West, Florida provides a channel 7 feet deep and 35 feet wide from Miami to Cross Bank and a channel 7 feet deep by 90 feet wide from Miami to Key West. Finally, there are multiple Federal, state, local, and non-governmental environmental entities that have completed various ecosystem restoration projects within the study area and vicinity, such as coral reef and mangrove restoration.

Monroe County has a very active resiliency program. These efforts include, but are not limited to: conducting site-specific vulnerability studies, conducting studies for roadway elevations, completing a watershed management plan of the storm water infrastructure, updating LIDAR elevation data and Sea Level Rise (SLR) projections, identifying repetitive loss and adaption action areas, and adding policies to the comprehensive plan that dis-incentivize development in high-risk areas. Development centers may continue to grow; however, they would be subject to wetland regulations, any applicable mitigation requirements, and County requirements. In addition, the Florida Keys' building moratorium is expected to be implemented, beginning in 2026, which should result in a reduction of cumulative wetland impacts across the Florida Keys.

As a result of Hurricane Irma, there have been numerous washouts of the Route 1 Overseas Trail and/or the Route 1 roadway embankment along various sections of the Florida Keys. The Florida Department of Transportation (FDOT) will be placing revetments or articulating block bank repairs at approximately 99 locations, including five that were deleted from our initial array of alternatives. FDOT also will be conducting Overseas Trail and fill slope repairs where needed. Specifically, there will be trail repairs at West Summerland Key and Fiesta Key West and East. However, these are landward of the proposed revetments. Other routine bank stabilization projects on public and private property would be expected to continue.

Other reasonably foreseeable work within the ROI is planned within Bahia Honda and Long Key State Parks. Both parks experienced washouts of their campground sites and access roadways in the vicinity of the proposed revetments; and both plan to repair the roads and campsites and reopen them for public use. Both parks also plan to implement shoreline replanting's in washout areas.

Climatic changes such as sea level rise and increasing global temperatures are predicted to continue over the next 50 years. Due to the synergistic effects from a combination of factors, and relative SLR, and an increase in the frequency and strength of storms, the risk from coastal inundation will rise in the coming years for the Florida Keys.

2.0 ACTION AREA

Per 50 CFR 402.2, the action area is defined as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action." The action area consists of all areas directly and indirectly affected by the proposed structural and nonstructural measures, from Palo Alto Key (north Key Largo) extending southwest to Key West, Florida, including shoreline and adjacent wetlands. These include temporary and permanent footprints, and all areas in the population centers being considered for building elevations, acquisition and relocation, wet- or dry-proofing, and flood warning systems.

The specific locations where potential measures are being considered include: West Summerland Key, Bahia Honda Key, Long Key, Fiesta Key East, Fiesta Key West, and Indian Key Fill.

2.1 HABITAT IN ACTION AREA

The Upper Keys extend from Virginia Key to Lower Matecumbe Key. The islands in the Upper Keys are long, narrow, and low-lying, with an average elevation of three to six feet (1-2 m). A few narrow channels connect Florida Bay to the Atlantic Ocean. The Middle Keys extend from Lower Matecumbe Key in Islamorada to the Seven Mile Bridge, which connects the City of Marathon to Little Duck Key. The Middle Keys are similar in size, elevation, and orientation to the Upper Keys; however, many wide channels separate each island. The Lower Keys extend from Little Duck Key to Key West. The Lower Keys are broad, and flat. They are separated by long narrow channels, and are perpendicularly oriented as compared with the Middle and Upper Keys. Elevations in the study area range from eighteen feet above sea level at the highest point in Windley Key in the Upper Keys, to an average of three to five feet throughout the remainder of the Upper, Middle, and Lower Keys (National Marine Sanctuaries 2019).

The Keys are a coral archipelago formed from a series of low limestone islands, within the South Atlantic Coastal Plain (NOAA 2019). Two main geologic formations of the Pleistocene age are present in the study area – Miami Limestone and Key Largo Limestone. Miami Limestone is found on the mainland Florida peninsula and on the lower keys from Big Pine Key to Key West. It is highly porous and permeable containing fossils and composed of Ooids. The Ooids or grain stones are formed in a high energy environment and contains skeletal materials of corals, echnoids, mollusks and algae (Hailey et al, 2018). Throughout the Lower Keys, the exposed Miami limestone formation lies atop the Key Largo limestone formation. In the Lower Keys, the Miami limestone formation began forming in the late Pleistocene epoch when sea level conditions favored the accumulation of carbonate sand banks behind the outer reef (Lapointe and Clark 1990).

The near shore areas of the Florida Keys are influenced by two main regional currents: the Gulf of Mexico Loop Current and the Florida Current. The variability of these currents in conjunction with local meteorology, tides, wind-driven currents, and surface runoff affects the circulation and nature of the Marine Sanctuary waters. Near shore waters generally experience high variability in temperature, salinity, and other factors relative to the reef tract and deeper waters further offshore (National Marine Sanctuaries 2019).

Lapointe and Clark (1990) notes that the primary causative factors for beach and dune erosion in Monroe County include periodic major storm events, onshore and long shore sediment budget deficits, historical development trends, and long term sea level rise. Because of the nature of the carbonate sediment of the beaches in Monroe County, the sediment supply is affected by the chemical and biological processes of adjacent waters. Not well understood, Lapointe and Clark states, are the environmental influences of changing salinity, hydrostatic pressure, temperature, turbidity, organic and inorganic pollutants, and other marine environmental factors on the chemical and biological production of sediments for the natural nourishment of the beaches (Lapointe and Clark 1990).

Lapointe and Clark (1990) notes that at the same time, naturally-occurring beach and dune formation is not common in the Keys. Compared to the Florida peninsula, there is very little natural quartz sand on the Keys; instead sand is of carbonate origin derived from the erosion of limestone, from aragonite particles precipitated from seawater, and from the fragmented remains of corals, cast-off shells, and calcareous algae (Lapointe and Clark 1990). However, several of the beaches on the Keys have been artificially nourished historically, and therefore do contain quartz sand.

West Summerland Key. This location has a concrete seawall along the shoreline, and water approximately 40 inches deep immediately channel ward of it. The seawall is damaged but mostly intact. Water seeps behind the seawall and is sufficient to support what is now a mostly emergent wetland. Hurricane Irma washed over and through the seawall, damaged mangroves, and washing out the U.S. Route 1 Overseas trail.

Bahia Honda Key. This island has 11,900 feet of beach, south of U.S. Highway 1, fronting the Straits of Florida. Sediment transport has been observed to occur primarily during storm events, with most of the material either being transported onshore or offshore (FDEP 2018). Several attempts have been made to armor and fill the eroding areas since the early 1970's. The area was designated critically eroded, and was estimated to have receded about five feet between 1971 and 1986. Erosion control efforts have included the riprap along the 400 to 500 feet of threatened roadway in the early 1970’s, the 1988/89 construction of a 1,200-foot-long limestone rock revetment, and substantial sea oats planting during the 1980s and 1990s. In 2017, Hurricane Irma caused major beach and dune erosion and severely damaged the park facilities, parking areas and roadway (FDEP 2018). The section of limestone rock revetment that washed out is within the ROI. These areas, including the Park’s campground roadway and campground, remain closed to the public.

Long Key. Lapointe and Clark (1990) had noted that the western three quarters of Long Key has a west direction of long shore sediment transport; that critical erosion of 2,950 feet of shoreline exists along the camping and swimming areas within the State Recreation Area, and that at that time, park officials estimated that approximately 0.6 mile of the beach had been eroding as much as three feet per year since the park was opened in 1970. A rock revetment was constructed along a limited segment of shoreline in 1976; however, Lapointe and Clark noted that erosion end effects are most apparent adjacent to the structure. Lapointe and Clark

postulated that small tidal creeks, tidal lagoons, and a mangrove dominant shoreline fronting on the Florida Straits/Atlantic Ocean near the center of the island create a sediment budget deficit to the west, also affecting the shoreline campgrounds. This erosion was considered critical, due to the threat to the campground facilities (Lapointe and Clark 1990). The FDEP's Strategic Beach Plan (2018) noted that the park was severely impacted by Hurricanes Georges and Irene in 1998 and 1999. Beach and dune restoration was considered necessary after these storms, and a feasibility study was initiated by the FDEP. However, in 2005, Hurricanes Rita and Wilma combined severely impacted the park again, and damaged all the waterfront campsites and infrastructure.

Fiesta Key. At the eastern end of Fiesta Key, adjacent to the bridge near Mile Marker 71, there is a steep fill slope that is heavily riprapped with coral rock on the south side of U.S. Route 1. This slope, adjacent to the bridge approach is approximately 15 feet above mean sea level. Two other sections bordering the Florida Straits/Atlantic Ocean along the west end of Fiesta Key between Mile Markers 69 and 70, have been damaged by erosion, with sections of the U.S. Route 1 Overseas Trail washed out by Hurricane Irma. However, these sections also have a mature wooded mangrove and buttonwood buffer channel ward of them. At these locations, the U.S. Route 1 Overseas Trail is washed out in places, and there is scour along the banks immediately adjacent to the trail.

Indian Key Fill. The shorelines between Upper and Lower Matecumbe Key in the City of Islamorada are known as Indian Key Fill; they were created by artificial fill material. Within this area, Lapointe and Clark (1990) had noted that between Upper and Lower Matecumbe Keys, the small Tea Table Key is bulkheaded and the Indian Key shoreline is mixed sand and gravel fill along U.S. Route 1; and that the Lower Matecumbe Key shoreline fronting the Florida Straits/Atlantic Ocean also has a mix of riprap, bulkheads, and natural rock shoreline. Today, an old cemented riprap wall is still in place along nearly the entire shoreline lengths of these three Indian Key Fill sections. Most of the shoreline lengths appear to be relatively stable, due to the riprap wall, and in some cases, red mangroves along the shorelines. Shallow channels parallel their shorelines, which then intersect perpendicularly to the Tea Table, Indian Key, and Lignumvitae channels that pass underneath U.S. Route 1. Tidal flushing and circulation along these channels and riprap walls likely occurs regularly and effectively.

2.2 FEDERALLY LISTED SPECIES WITH THE POTENTIAL TO OCCUR IN THE ACTION AREA

Animals and plants listed as endangered or threatened are protected under the Endangered Species Act of 1973, as amended (ESA). According to the ESA, an "endangered species" is defined as any plant or animal species in danger of extinction throughout all or a substantial portion of its range. A "threatened species" is any species likely to become an endangered species in the foreseeable future throughout all or a substantial part of its range. "Proposed species" are animal or plant species proposed in the Federal Register to be listed under Section 4 of the ESA. "Candidate species" are species for which the USFWS and NOAA Fisheries have sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act. Critical habitat is designated per 50 CFR parts 17 or 226 and defines those habitats that are essential for the conservation of a federally threatened or endangered species and that may require special management and protection.

This section provides a summary of the federally listed species that are known or have the potential to occur in the action area. The following references were consulted for compilation of the threatened and endangered species list:

- Florida Fish and Wildlife Conservation Commission;
- Information Planning and Consultation System database search conducted within the action area (USFWS 2020);
- Florida Fish and Wildlife Service;
- NOAA Fisheries Southeast Region;
- Florida Fish and Wildlife Conservation Commission's Statewide Atlas of Sea Turtle Nesting Occurrence and Density

Federally listed species known or with the potential to occur in the action area are displayed in the following table.

Table 1. Federally listed species known or with the potential to occur in the action area

Taxonomic Category	Common Name	Scientific Name	Federal Status	Critical Habitat
BIRDS	Piping plover	*Charadrius melodus*	THREATENED	Y
	Red knot	*Calidris canatus rufa*	THREATENED	N
	Roseate tern	*Sterna dougallii dougallii*	THREATENED	N
FISH	Nassau grouper	*Epinephelus striatus*	THREATENED	N
	Smalltooth sawfish (U.S. DPS)	*Pristis pectinata*	ENDANGERED	Y*
	Oceanic whitetip shark	*Carcharhinus longimanus*	THREATENED	N
	Giant manta ray	*Manta birostris*	THREATENED	N
INVERTEBRATES	Pillar coral	*Dendrogyra cylindrus*	THREATENED	N
	Rough cactus coral	*Mycetophyllia ferox*	THREATENED	N
	Lobed star coral	*Orbicella annularis*	THREATENED	N
	Boulder star coral	*Orbicella franksi*	THREATENED	N
	Mountainous star coral	*Orbicella faveolata*	THREATENED	N
	Elkhorn coral	*Acropora palmata*	THREATENED	Y
	Staghorn coral	*Acropora cervicornis*	THREATENED	Y

MAMMALS	West Indian manatee	*Trichechus manatus*	THREATENED	Y
REPTILES	American alligator	*Alligator mississippiensis*	SAT	N
	American crocodile	*Crocodylus acutus*	THREATENED	Y
	Hawksbill sea turtle	*Eretmochelys imbricata*	ENDANGERED	Y*
	Leatherback sea turtle	*Dermochelys coriacea*	ENDANGERED	Y*
	Loggerhead sea turtle (Northwest Atlantic Ocean DPS)	*Caretta caretta*	THREATENED	Y
	Green sea turtle (North and South Atlantic DPS)	*Chelonia mydas*	THREATENED	Y*
	Kemp's Ridley sea turtle	*Lepidochelys kempii*	ENDANGERED	N
PLANTS	Cape Sable Thoroughwort	*Chromolaena frustrate*	ENDANGERED	Y

DPS = Distinct Population Segment; SAT = threatened due to similarity of appearance; Y = Yes; N = No; P = Proposed; *Critical Habitat not located in action area
(U.S. Fish and Wildlife Service 2019; National Oceanic and Atmospheric Administration 2019)

2.2.1 DESIGNATED CRITICAL HABITAT

Critical habitat is designated per 50 CFR parts 17 or 226 and defines those habitats that are essential for the conservation of a federally threatened or endangered species and that may require special management and protection. Critical habitat is defined as:

(1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the ESA, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protections; and

(2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of Section 4 of the ESA, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Critical habitat within the action area has been designated for the following species: piping plover (74 Fed. Reg. 23476), elkhorn and staghorn coral (73 Fed. Reg. 72210), West Indian manatee (42 Fed. Reg. 47840), American crocodile (42 Fed. Reg. 47840), loggerhead sea turtle (79 Fed. Reg. 39855), and Cape Sable thoroughwort (79 Fed. Reg. 1551). Critical habitat for each federally listed species with the potential to occur in the action area is documented in the individual species descriptions below. Please see Appendix A for the critical habitat maps by revetment location.

2.2.2 BIRDS

Piping Plover (*Charadrius melodus*)

The piping plover is a small, sand-colored shorebird, measuring just over 7 inches in length and primarily found along the sandy beaches of the Atlantic coastline (Alsop 2002). This species nests in the three separate geographic populations in the U.S.: the Great Plains states, the shores of the Great Lakes, and the shores of the Atlantic coast. Birds from all populations winter in Florida on the southern Atlantic and Gulf coasts in the U.S. (USFWS 1999). The piping plover is federally- and state-listed as threatened, and recovery efforts are geared toward minimizing disturbance to their breeding and wintering areas.

Piping plovers do not breed in Florida, but spend a large portion of the year overwintering there (USFWS 2019). They use beaches, as well as tidal sand and mudflats for foraging in the Florida Keys during winter months. Their diet includes polychaete marine worms, crustaceans, insects, and bivalve mollusks (Nicholls 1989), found on top of or just beneath the surface of moist or wet sand, mud, or shell. They are susceptible to human disturbance due to the nature of their habitat use. Increased use of beaches and tidal flats for recreation is of primary concern. Wintering piping plovers use a variety of habitat patches during fall through spring, moving among them according to changes in tide and weather. Protecting these habitat patches from disturbance is important to ensure that plovers are healthy when they begin their spring migration toward breeding grounds from March to May.

Critical habitat for this species is dispersed throughout the state of Florida. Within the action area, piping plover critical habitat is located on Bahia Honda Key. Temporary impacts to critical habitat during the construction phase of the revetments are estimated to impact up to 1.0 acre. Permanent impacts to critical habitat following construction for the footprint of the revetment are estimated to impact less than 0.5 acre. See the following figure for the breakdown of critical habitat affected by proposed location.

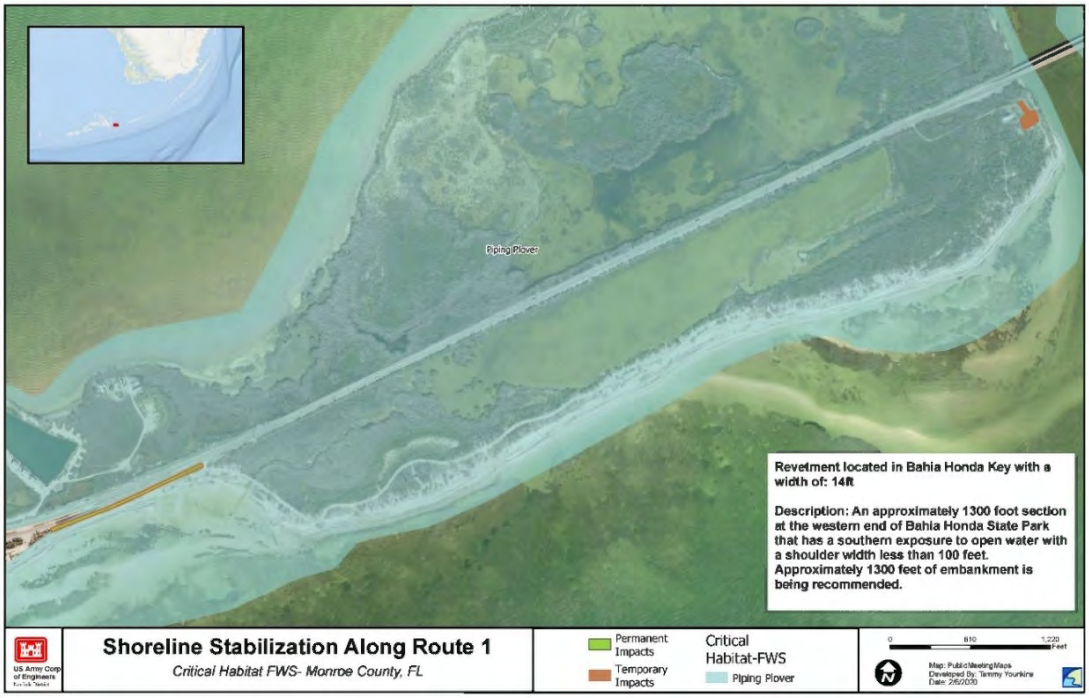


Figure 2. Critical habitat designation for the piping plover

Red knot (*Calidris canutus rufa*)

The red knot is a medium-sized shorebird about 9 to 11 inches in length and is designated as a federally threatened species under the Endangered Species Act. Red knots migrate over 9,300 miles every spring and fall (USFWS 2019). They overwinter in Florida between November and April, and prefer to forage in coastal habitats that include sand flats adjacent to inlets or passes, sandy mud flats along prograding spits (areas where the land rises with respect to the water level), ephemeral pools, and over wash areas. These substrate types have a richer infauna than the foreshore of high energy beaches and often attract large numbers of shorebirds.

The USFWS has not yet designated critical habitat for the red knot. There is no nesting habitat within the action area, however, foraging may occur in the action area. Red knots are thought to be vulnerable to the increasing threats of climate change that may impact the arctic tundra ecosystem in their breeding areas, coastal foraging habitats and other foraging habitats, and storm and weather changes (USFWS 2019). Within the past few years, the population is thought to have stabilized but still remains at low population levels (USFWS 2019).

Roseate Tern (*Sterna dougallii dougalli)*

The roseate tern is a medium sized, colonial nesting marine waterbird and is designated a federally threatened species in Florida and a federally endangered species in the Northeast under the Endangered Species Act. This species has a deeply forked tail and has a black bill, black legs, and white forehead outside of breeding season. During breeding season, the roseate tern appears paler than other tern species with plumage that turns to silver and a rose colored chest. The North American subspecies is divided into

two breeding colonies, one in Northeastern United States to Nova Scotia and the other in Florida and the Caribbean (USFWS 2019).

Roseate terns nest on small barrier islands, in hollows under dense vegetation, rocks, or debris, and/or on gravel roofs. This species typically nests in colonies associated with common terns. Over the past 50 years, sporadic nesting for this species has occurred mainly on scattered islands and rooftops within the Keys. Since 1989, the 95 percent of nesting has occurred on Pelican Shoal off Boca Chica Key (Florida Natural Areas Inventory, 2001). Roseate terns first breed around three years of age and lay between one and three eggs (USFWS 2019). Both males and females feed the young. This species forages by plunge feeding on fish, however they will often forage in shallow water or steal fish from other terns (USFWS 2019). They are primarily documented foraging and roosting in the Lower Keys (Florida Natural Areas Inventory, 2001)

Roseate terns are very sensitive to disturbances and will desert a whole colony if they perceive a threat. Other threats to this species include: habitat loss and degradation by erosion, development and human activities, predation, rising sea levels, and competition for resources with similar species.

2.2.3 FISH

Nassau grouper (*Epinephelus striatus*)

The Nassau grouper is listed as federally threatened and is associated with hard structures such as natural and artificial reefs, rocks, and ledges. The Nassau grouper has supported fisheries throughout the wider Caribbean, South Florida, Bermuda, and the Bahamas (Carter et al. 1994). Due to overfishing, the Nassau grouper is considered commercially extinct through most of its geographical range (NOAA 2019).

These fish are late maturing, long-lived, high level ambush predators that feed on other fishes and invertebrates using suction created by a protruding mouth. Biologists believe they utilize low light levels at dawn and dusk to maximize their foraging efforts (NOAA 2019). Adults can reach up to 36 inches in length and 55 pounds. Juveniles are typically found near shore in shallow macro algal and sea grass habitats, while adults occur predominantly in deeper water reef habitats (NOAA 2019). They have robust bodies and large eyes, and can be distinguished from other groupers by the vertical bars and dark saddle coloring along the dorsal part of the area forward of the tail.

Juvenile and adults have been recorded in Florida. Larval grouper have not been observed in Florida waters, however sampling efforts of shoreline habitats in the Florida Keys is limited. This species tends to occupy natural and artificial reefs, as well as rocks in clear water. There is no critical habitat for this species within the action area.

Smalltooth Sawfish (*Pristis pectinata*)

The smalltooth sawfish is a large, shark-like elasmobranchs that is listed as federally endangered. Sawfish get their name from their long, flattened rostrum that is edged with teeth resembling a saw and a flattened head and trunk. They utilize their rostra to stir up muddy or sandy bottoms and slash through schools of fish to find and injure prey (NOAA 2019). Smalltooth sawfish primarily occur in estuarine and coastal habitats such as bays,

lagoons, and rivers. Juveniles tend to inhabit shallow water habitats, then move to deeper water habitats as they reach adulthood (NOAA 2019).

The smalltooth sawfish population has declined over the last century in the U.S. They were thought to be near extinct until researchers discovered moderate numbers of juveniles in Florida in the 1990's (FWC 2019). Their current distribution is primarily off the southwest coast of Florida, from approximately Charlotte Harbor through the Everglades region. They have been historically caught as bycatch in commercial and recreational fisheries throughout their range. Most sawfish species take a long time to mature. This low reproductive potential, historical bycatch, and trophy fishing has led to the endangered status of smalltooth sawfish.

Critical habitat for this species is not located within the action area but nearby in southern and south western Florida main as seen in the following figure.

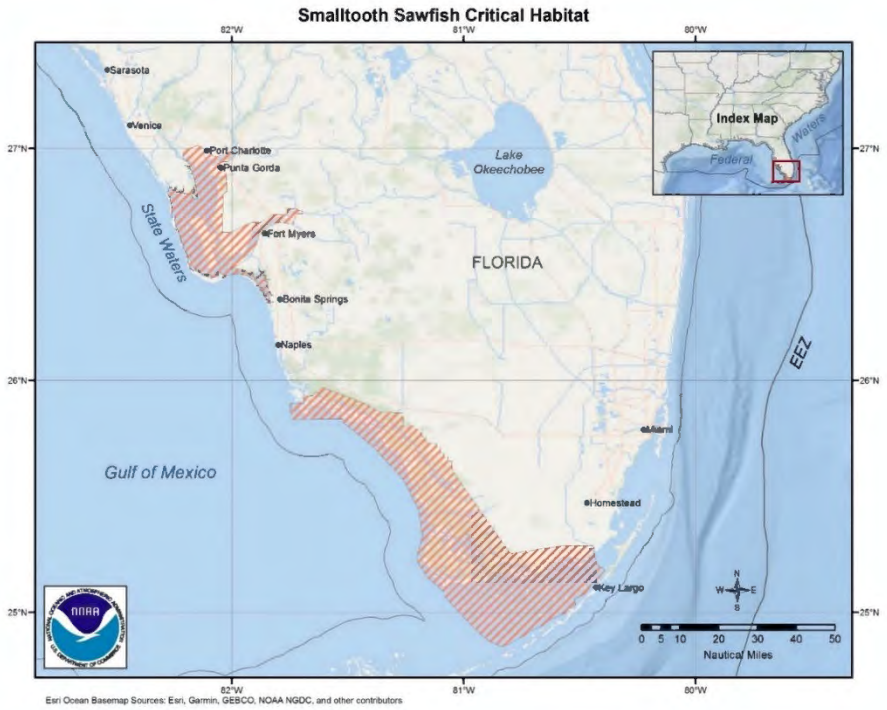


Figure 3. Critical habitat designation for the smalltooth sawfish in Florida (NOAA 2019)

Oceanic Whitetip Shark (*Carcharhinus longimanus*)

The oceanic whitetip shark is a large shark with a stocky build that is listed as federally threatened. This species has distinct mottled white markings on the tips of its dorsal fins. Whitetip sharks are opportunistic predators that feed primarily on bony fishes and cephalopods (NOAA 2019). Oceanic whitetip sharks are found throughout the world in tropical and subtropical waters and generally remain offshore in the open ocean. They are considered surface-dwelling sharks as they prefer the surface mixed layer in waters warmer than 20 degrees Celsius (NOAA 2019). Oceanic whitetip sharks are inherently vulnerable to depletions, with low likelihood of recovery, due to slow maturity and low reproductive output. Males and females typically reach reproductive maturity in 4-5 years. After a 10-12 month gestation period, 1 to 15 pups are born, with the quantity of pups correlated with the

size of the mother (Compagno et al. 2005). Incidental bycatch in commercial fisheries is considered their primary threat. There is no critical habitat for this species within the action area.

Giant Manta Ray (*Manta birostris)*

The giant manta ray is the world's largest ray, with a wingspan of up to 29 feet and is listed as federally threatened. They are filter feeders and eat large quantities of zooplankton. Giant manta rays are slow-growing, migratory animals with small, highly fragmented populations that are sparsely distributed across the world in tropical, subtropical, and temperate bodies of water (NOAA 2019). They are migratory with seasonal visits to productive coastlines that correlates with zooplankton movement, tidal patterns, seasonal upwelling, seawater temperature and mating behavior (NOAA 2019). Giant manta rays appear to exhibit a high degree of plasticity in terms of their use of depths within their habitat. During feeding, giant manta rays may be found aggregating in shallow waters at depths less than 10 meters. However, tagging studies have also shown that the species conducts dives of up to 200 to 450 meters and is capable of diving to depths exceeding 1,000 meters. This diving behavior may be influenced by season and shifts in prey location associated with the thermocline (NOAA 2019). The main threat to the giant manta ray is commercial fishing, with the species both targeted and caught as bycatch in a number of global fisheries throughout its range. Manta rays are particularly valued for their gill rakers, which are traded internationally. There is no critical habitat for this species within the action area.

2.2.4 INVERTEBRATES

Pillar coral (*Dendrogyra cylindrus)*

Pillar coral is listed as federally threatened and has historically been found in warm marine water throughout the Caribbean, subtropical, and tropical West Atlantic Ocean (USFWS 2019). Pillar coral is tan and can grow to reach 8 feet with a maximum diameter of approximately 5 inches. Pillar coral is a broadcast spawning species with a low egg production compared to its large size, but it can propagate by fragmentation following storms and physical disturbances (NMFS 2015).

Pillar coral is considered limited to just southern Florida, with a historical presence off the southeast coast of Florida. It occurs as scattered, isolated colonies, although a few small aggregations historically occurred in the Florida Keys. It most commonly occurs between the depths of 4 and 65 feet in Florida waters. In the Florida Keys, populations are rarely found nearshore (Henry et al. 2018). The low abundance and infrequent encounter rate make it difficult to determine population trends (NMFS 2015).

This species is increasingly vulnerable to extinction due to life history characteristics including small population size, limited geographical range, slow growth and decreased reproductive success. Pillar coral is also threatened by habitat degradation, bleaching, climate change, storms, anthropogenic impacts, white plague disease, and bio erosion from sponges (NOAA 2019). There is no critical habitat for this species within the action area.

Rough cactus coral (*Mycetophyllia ferox*)

Rough cactus coral is listed as federally threatened and occurs in the Caribbean and southern Florida, Bahamas, and Gulf of Mexico. They are typically grey or brown, but can be shades of red or green. Colonies will grow 1-2 feet in diameter and create encrusting formations and/or overhangs on edged substrate. Rough cactus coral is one of the least common coral species observed in monitoring studies (NMFS 2015). The species reproductive rates in comparison to their slow maturity limits its capacity for recovery.

Low encounter rate and percent cover coupled with the tendency to survey *Mycetophyllia spp*. at the genus level make it difficult to discern population trends. The available data indicate *M. ferox* has significant declines in Florida (NMFS 2015). This species is commonly found at depths between 30-70 feet in Florida, but can occupy depths as deep as 120 feet or as shallow as 2 feet (Henry et al. 2018). There is no critical habitat for this species within the action area.

Lobed star coral (*Orbicella annularis*)

Lobed star coral inhabits the western Atlantic Ocean and is listed a federally threatened. They grow in multiple encrusting colonies up to 10 feet in diameter. It is considered to be the most abundant species of reef-building coral in the Caribbean and also has the largest average colony size of any coral species (NOAA 2019). Morphological variations are dependent on water depth, currents, lighting, and mineral concentrations. They are sessile predators that utilize individual polyps to move their tentacles to catch prey, primarily zooplankton (Weil and Knowlton 1994). Major threats include yellow band and black band disease, bleaching, predation by parrotfish, hurricanes, algal overgrowth, sedimentation, and anthropogenic impacts (Aronson et al. 2008).

Lobed star coral has populations in southern Florida, and the Florida Keys National Marine Sanctuary. This species can be found growing between 1.5 feet to 270 feet beneath the surface, but is most commonly found in lagoons and upper reef slopes in shallow Florida waters from 3 to 33 feet deep (Henry et al. 2018). There is no critical habitat for this species within the action area.

Boulder star coral (*Orbicella franksi*)

Boulder star coral is listed as federally threatened and native to shallow waters in the Caribbean Sea, the Gulf of Mexico, the Bahamas, Bermuda, and Florida. This species is typically orange-brown or shades of grey-brown, however the extremities are often pale or white. They form colonies of massive, uneven clumps and occasionally plates (NOAA 2019). This species have slow growth rates, late reproductive maturity, and low recruitment rates. Colonies can grow and live for centuries. As with other *Orbicella spp.,* bleaching and coral diseases have caused major declines over the last twenty years, and in many locations they are now rare. Fortunately, in some Florida Keys locations, especially in mid-channel and near shore patch reefs, populations of these species have been stable or have suffered minimal losses. There is no critical habitat for this species within the action area.

Mountainous star coral (*Orbicella faveolata*)

Mountainous star coral is native to the Caribbean Sea, the Florida coast, the Gulf of Mexico, and the western Atlantic Ocean. Mountainous star coral is listed as federally threatened throughout its range. Its color varies from pale brown to deep brown with

fluorescent green highlights (NOAA 2019). Colonies in shallow water form mounding structures, while colonies at depths below 80 feet grow in flattened plates (Henry et al. 2018). Like other *Orbicella spp.,* Mountainous star coral are sessile predators with a slow growth rate. They take 3-8 years to become sexually mature. These corals maintain a very high ecological importance in allowing a vast species diversity and ecological home to hundreds of species which aids in biodiversity.

Mountainous star coral has a wide range in Florida compared to other similar species. It is most commonly found in south Florida at depths of 33 to 66 feet. However, their full range is between 1.5 feet and 131 feet beneath the surface (Weil and Knowlton 1994). This species is key to coral reef building especially in fringing reefs which also protects coastal areas from direct coastal degradation (UWI 2019). There is no critical habitat for this species within the action area.

Elkhorn coral (*Acropora palmata*)

Elkhorn coral is one of the most important species of coral in the Caribbean and is listed as federally threatened throughout its range. This species is golden tan to pale brown with white tips and frond-like branches that appear flattened or rounded. These coral tend to live in high energy zones with wave action. Wave action and storms can cause the coral to break resulting in fragmentation which is an alternate method of reproduction. Elkhorn coral feed via tentacles that catch plankton, as well as absorbing energy from photosynthetic algae that reside in the coral's cells (NOAA 2019).

They are typically found in clear, shallow water (1 to 16 feet) throughout Florida, but can be found as deep as 30 feet. The northern most extent of its range in Florida is Broward County (NOAA 2019). This species is commonly found near Fowey Rocks in the Florida Keys (Henry et al. 2018). Their populations were once common on shallow reefs of south Florida, but have seen as much as a 95% decline throughout their historical range (Henry et al. 2018).

Critical habitat has been designated in four critical areas determined to provide critical recruitment habitat for staghorn corals off the coast of Florida and off the islands of Puerto Rico and the U.S. Virgin Island. Within the action area, elkhorn coral critical habitat is located on Bahia Honda Key. However, impacts to designated critical habitat for elkhorn coral is not expected as project activities will be occurring upland with no in water impacts. Please see Appendix A for the breakdown of critical habitat near the proposed location.

Staghorn coral (*Acropora cervicornis*)

Staghorn coral is one of the most important species of coral in the Caribbean and is listed as federally threatened throughout its range. This species tends to be golden tan or pale brown with white tips and antler-like branches. Staghorn coral is found in clear, shallow water (15 to 60 feet) throughout the Bahamas, Florida, and the Caribbean with the northernmost extent of the range in the Atlantic Ocean in Palm Beach County, Florida (NOAA 2019). Like other coral species, staghorn coral get food from photosynthetic algae that live inside its cells, and also by capturing plankton with their polyp's tentacles. Staghorn coral lives in many coral reef habitats including spur and groove, bank reef, patch reef, and transitional reef habitats, as well as on limestone ridges, terraces, and hard bottom habitats (NOAA 2019). Critical habitat has been designated in four critical

areas determined to provide critical recruitment habitat for staghorn corals off the coast of Florida and off the islands of Puerto Rico and the U.S. Virgin Island.

Both elkhorn and staghorn corals underwent precipitous declines in abundance throughout their ranges in the 1970s and 1980s, with losses of up to 95 percent. White band disease is the main factor for their near demise, with additional losses from disease, bleaching, hurricanes, and predation in the 1990s and 2000s. The significant reduction in the density of these species affects their role as a habitat forming coral and also may reduce the likelihood of natural recovery, as their ability to successfully reproduce is greatly diminished. Although disease was the primary cause of the initial decline, elevated seawater temperatures and ocean acidification associated with climate change are credible and potentially significant impediments to recovery of these species (NOAA 2019).

Critical habitat for this species is dispersed throughout the Florida Keys and Puerto Rico. Within the action area, staghorn coral critical habitat is located on Bahia Honda Key. Within the action area, staghorn coral critical habitat is located on Bahia Honda Key. However, impacts to designated critical habitat for staghorn coral is not expected as project activities will be occurring upland with no in water impacts. Please see Appendix A for the breakdown of critical habitat near the proposed location.

2.2.5 MAMMALS

West Indian manatee (*Trichechus manatus*)

The West Indian manatee (including the subspecies the Florida manatee (*Trichechus manatus latirostris*) is a federally listed species throughout its range. It can be found along the coast of Florida and in the Caribbean. Adult manatees are about 10 feet long and weigh from 800 to 1,200 pounds. These herbivores feed opportunistically on a wide variety of marine, estuarine, and freshwater plants, including submerged, floating, and emergent vegetation. These docile mammals move slowly through the water, often resting just below the water's surface with only its snout above water.

Manatees prefer large slow-moving rivers, river mouths, and shallow coastal areas. The animals may travel great distances as they migrate between winter and summer grounds. During the winter, manatees congregate around warm springs in peninsular Florida and around power plants that discharge warm water. During summer months, they can travel as far west as Texas and as far north as Massachusetts (USFWS 2019). Manatees have a low reproductive rate with one calf born every three to five years (USFWS 2019). The most significant threat to manatees in Florida is boat strikes (USFWS 2019). Recovery efforts are focused on reducing threats and maintaining the integrity of manatee ecosystems. Critical habitat for this species is not located within the action area but has been designated on the eastern, western, and southern portions of Florida including parts of Monroe County as seen in the following figure.

Figure 4. Critical habitat designation for the Florida manatee in Florida (USFWS 2019)

2.2.6 REPTILES

American Alligator (*Alligator mississippiensis*)

The American alligator is federally protected under the Endangered Species Act as a threatened species due to similarity in appearance to the American crocodile. Both species are native to Florida. The American alligator can be distinguished from the American crocodile by a broad snout with no lower teeth visible when their jaw is closed. Alligators prefer fresh water lakes, and slow-moving rivers and associated wetlands, but are occasionally found in brackish water habitats (USFWS 2019). The species ranges from east Texas and Oklahoma in the west through to North Carolina to Florida in the east. Alligators are opportunistic feeders. Juveniles consume small fish, amphibians, invertebrates, and insects; while adults consume fish, snakes, turtles, small mammals, and birds. Alligators mate in May and June, and nest from June through September. Since alligators are ectothermic, they hide in burrows and become dormant in temperatures below 55 degrees Fahrenheit. There is no critical habitat for this species within the action area.

American crocodile (*Crocodylus acutus)*

The American crocodile is listed as federally endangered and inhabits coastal waters of south Florida, as well as waters further south outside the territorial bounds of the USA. This reclusive species has a gray to green appearance and a narrow, tapered snout. Unlike the alligator, crocodiles have a fourth tooth on the lower jaw exposed when the mouth is closed. Crocodiles have a higher salinity tolerance than alligators, and tend to inhabit more estuarine waters though they can be found in fresh water (USFWS 2019). They are ectothermic and bask in the sun with their mouths open to help regulate body temperature. They are easily frightened by human activity and will often flee rapidly from

an approaching human (USWFS 2019). Threats and impacts to this species are primarily hunting, nest disturbance and loss of habitat. They are frequently killed on U.S. Highway 1 that runs through Monroe County to Key West (USFWS 2019).

In Florida, they primarily inhabit mangrove swamps, though can be found in other areas such as shorelines, mudflats, near shore salt waters and other types of swamps. They nest between April and early May in Florida, with incubation lasting approximately 85 days. Crocodile populations is South Florida have been difficult to substantiate because many records are anecdotal and confused with alligators (USFWS 2019).

There is a large extent of critical habitat in southern Florida for the crocodile, encompassing water from Turkey Point off Homestead in eastern Florida, including all embayment and inshore waters along the Florida Keys, then extending northwestward to Cap Sable. Within the action area, American crocodile critical habitat is located on Long Key, Fiesta Key, and Indian Key. Temporary impacts to critical habitat during the construction phase of the revetments are estimated to impact up to 4.0 acres. Permanent impacts to critical habitat following construction for the footprint of the revetment are estimated to impact less than 1.5 acres. See the figures below for the breakdown of critical habitat affected by proposed location.

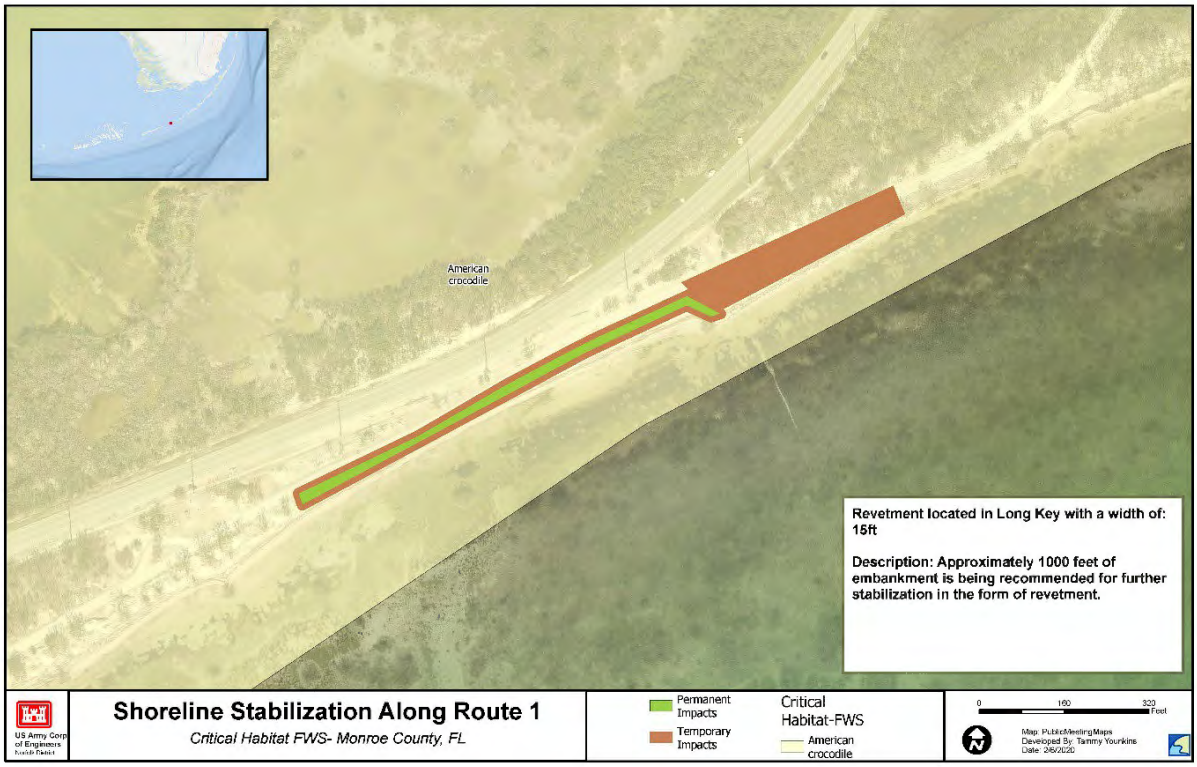


Figure 5a. Critical habitat designation for the American crocodile on Long Key

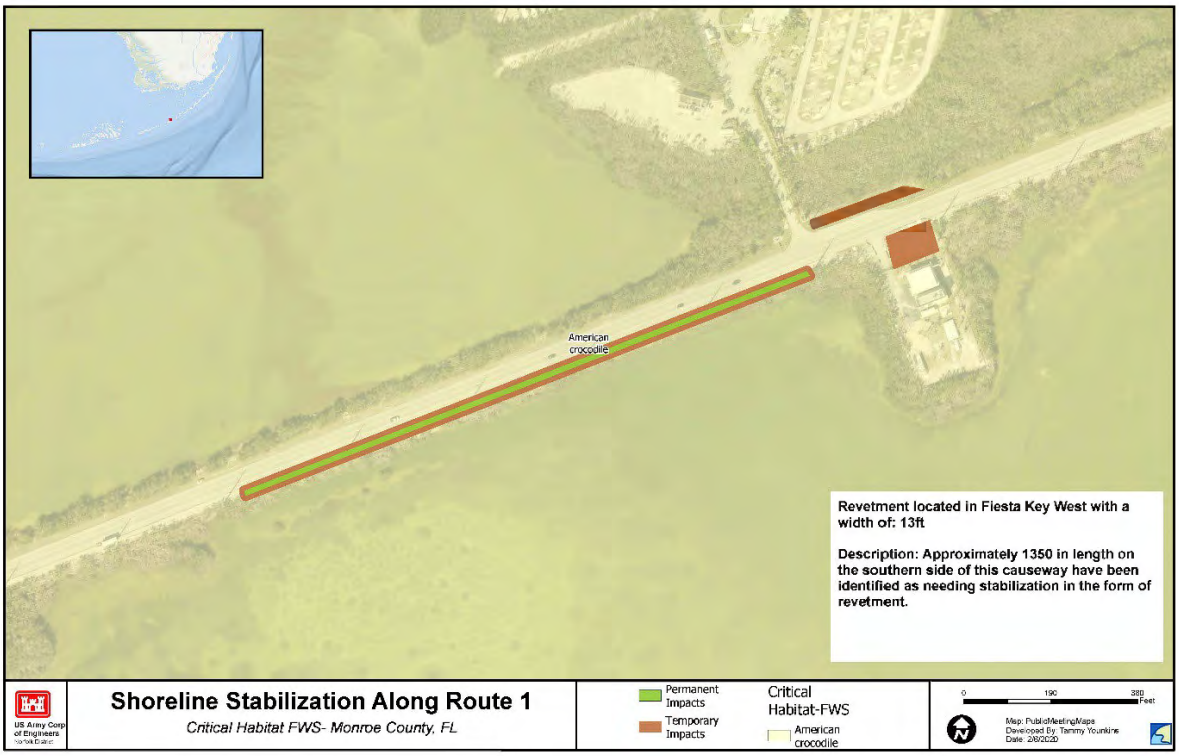


Figure 5b. Critical habitat designation for the American crocodile on Fiesta Key West

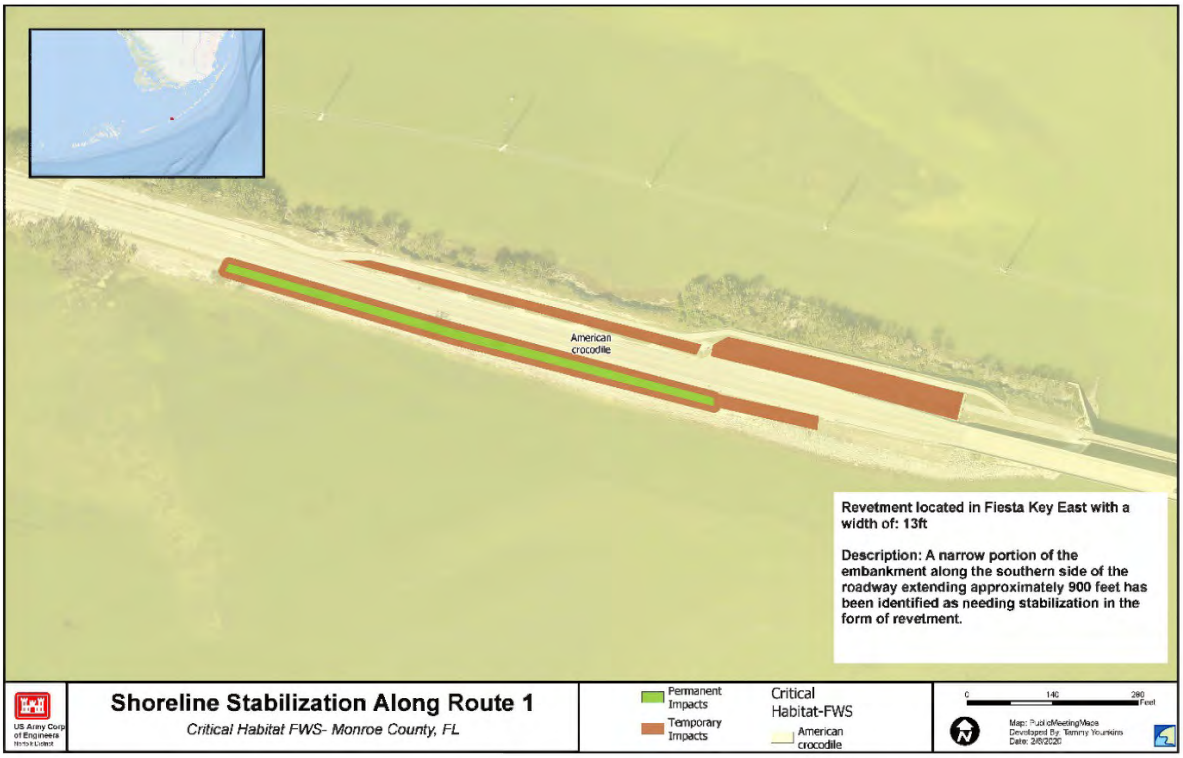


Figure 5c. Critical habitat designation for the American crocodile on Fiesta Key East

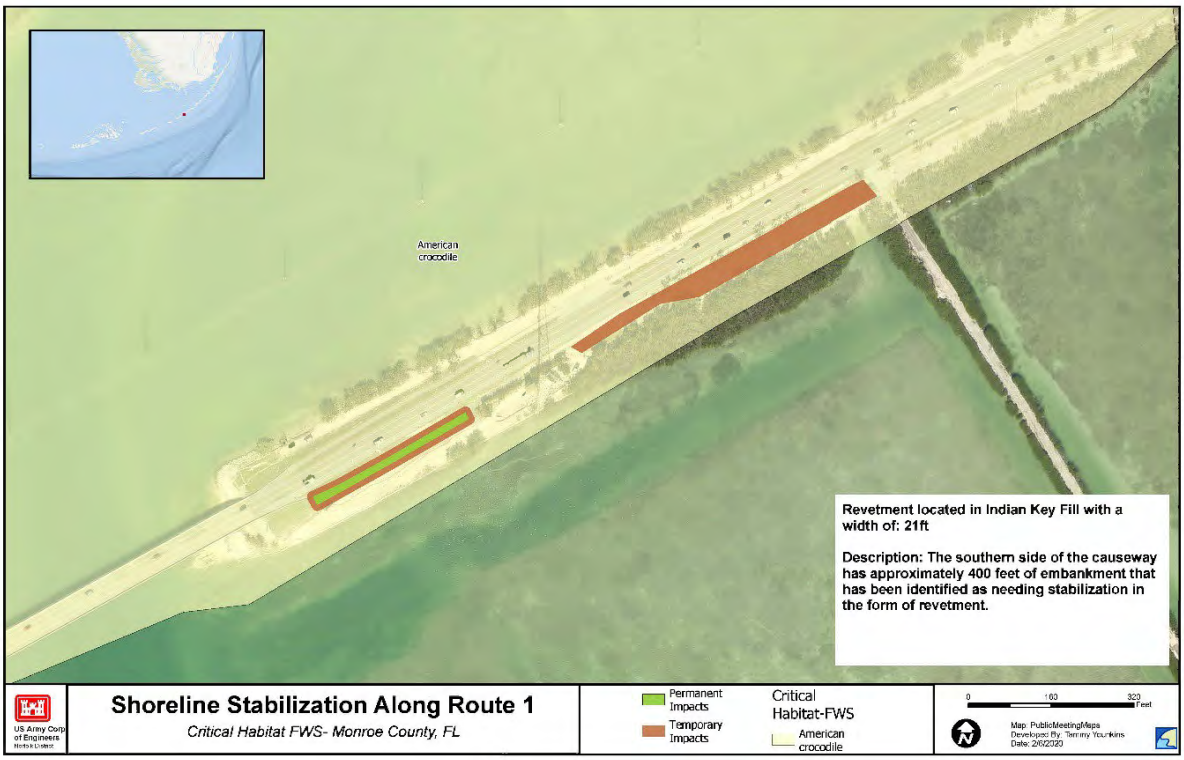


Figure 5d. Critical habitat designation for the American crocodile on Indian Key Fill

Hawksbill sea turtle (*Eretmochelys imbricata*)

The hawksbill sea turtle is listed as endangered throughout its range. Hawksbills have a hawk-like beak, posteriorly overlapping carapace scutes, and two pairs of claws on their flippers. They can weigh 100-200 pounds and reach straight carapace lengths up to 35 inches (NOAA 2019). Hawksbills are found worldwide in tropical and subtropical seas where they inhabit shallow coastal areas, lagoons, coral reefs, rocky areas, oceanic islands, and narrow creeks. They are omnivores and feed primarily on sponges, benthic crustaceans, tunicates, bryozoans, algae, and mollusks (Bjorndal 1997).

Hawksbills are regularly observed in waters near the Florida Keys and on reefs off Palm Beach County (Lund 1985). The nesting season is from June to August in Florida, and the average clutch size is around 130 eggs (USFWS 2019). Hawksbill nesting within the continental U.S. is rare, with areas restricted to south Florida beaches and the Florida Keys (Crouse 1999). Hawksbill populations have been severely reduced during the 20th century in the U.S. and Caribbean (Eckert 1992); however, at present, they are not thought to be declining but are also not recovering. The critical habitat designation for hawksbill sea turtles does not include Florida, but does include nearby beaches and waters in Mona, Monito, Culebrita, and Culebra Island, Puerto Rico as seen in the following figure. There is no critical habitat for this species in the action area.

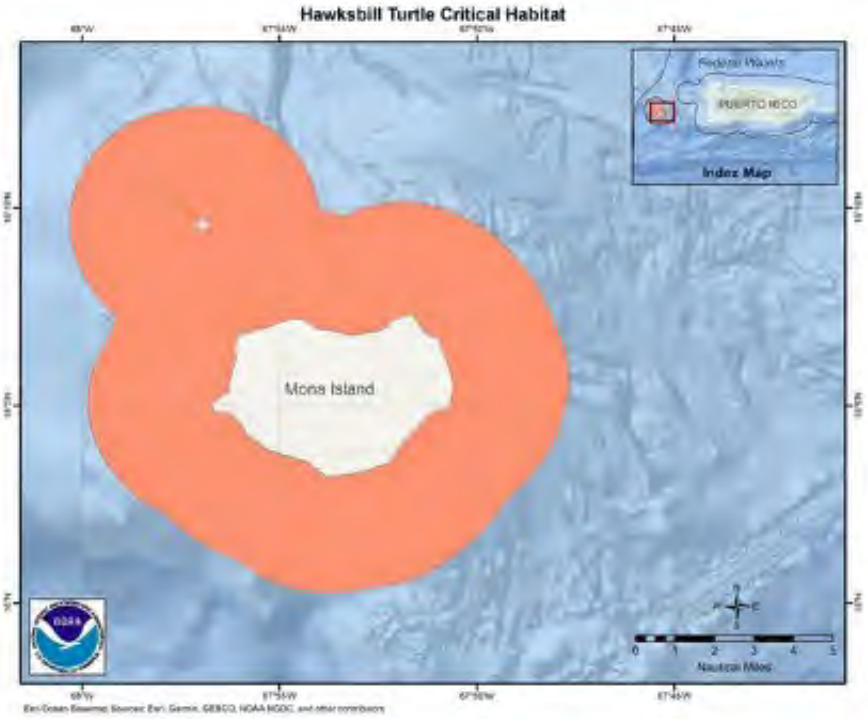


Figure 6. Critical habitat designation for the hawksbill sea turtle (NOAA 2019)

Leatherback sea turtle (*Dermochelys coriacea*)

The leatherback sea turtle is listed as endangered throughout its range, and is the largest sea turtle weighing up to 2,200 pounds (NOAA 2019). Leatherback sea turtles lack scales and a hard carapace. Instead, they have tough rubbery skin and a carapace with longitudinal ridges. Their skin and carapace are black with white splotches dorsally, with a pink colored ventrum. This species inhabits marine coastal and oceanic waters. They undertake long migrations between breeding a feeding areas, averaging approximately 3,700 miles each way (NOAA 2019). They feed primarily on jellyfish and salps.

In the United States and the Caribbean, leatherback sea turtles nest on sandy beaches in Florida, Puerto Rico, and the U.S. Virginia Islands between March and July (NOAA 2019). In Florida, they nest almost exclusively on the east coast, with 50% of nests occurring in Palm Beach County (FWC 2019). Nesting activity was documented at Bahia Honda State Park in 2016.

The critical habitat designation for leatherback sea turtles does not include Florida, but does include the waters adjacent to Sandy Point, St. Croix, U.S. Virgin Islands as seen in the following figure. There is no critical habitat for this species in the action area.

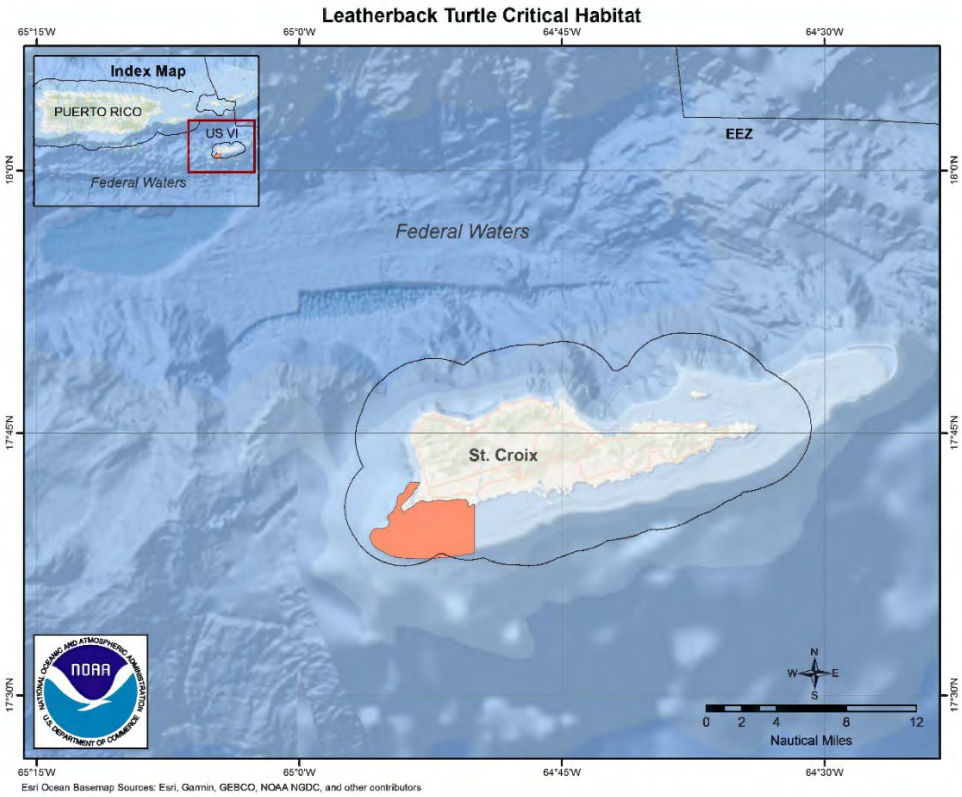


Figure 7. Critical habitat designation for the leatherback sea turtle (NOAA 2019)

Loggerhead Sea Turtle (*Caretta caretta*)

The loggerhead sea turtle is divided into nine Distinct Population Segments (DPS). Four of these DPS are listed as endangered, and five are listed as threatened under the Endangered Species Act. This species is characterized by its large blunt head, and can reach 3 feet in length and weigh up to 250 pounds (NOAA 2019). Loggerhead sea turtles are opportunistic feeders and primarily consume crabs, whelks, mollusks, and sea urchins. Threats to loggerhead sea turtles include: accidental capture in fisheries, development of nesting habitat, artificial lighting, predation, beach armoring, exploitation, and habitat degradation.

Loggerhead sea turtles inhabit temperate and tropical marine coastal and oceanic waters and are present in Florida year-round (Witherington 2006). Loggerhead sea turtles typically nest at night on sandy beaches between April and August in the U.S. In the southeastern U.S., approximately 80 percent of nesting occurs in six Florida counties: Brevard, Indian River, St. Lucie, Martin, Palm Beach, and Broward (NOAA 2019). The majority of the Florida coast is within designated critical habitat for loggerhead sea turtles. Female loggerheads have strong nest site fidelity, often returning to the same nesting beach year after year (USFWS 2019).

Within the action area, loggerhead sea turtle terrestrial critical habitat designated by USFWS and near shore reproductive critical habitat is located on Long Key and Bahia Honda. Loggerhead sea turtle migratory and breeding critical habitat is located on Long Key, Fiesta Key, Bahia Honda Key, and West Summerland Key. Temporary impacts to

critical habitat during the construction phase of the revetments are estimated to impact up to 0.25 acres. Permanent impacts to critical habitat following construction for the footprint of the revetment are estimated to impact less than 0.25 acres. See the following figures for the breakdown of critical habitat affected by proposed location.

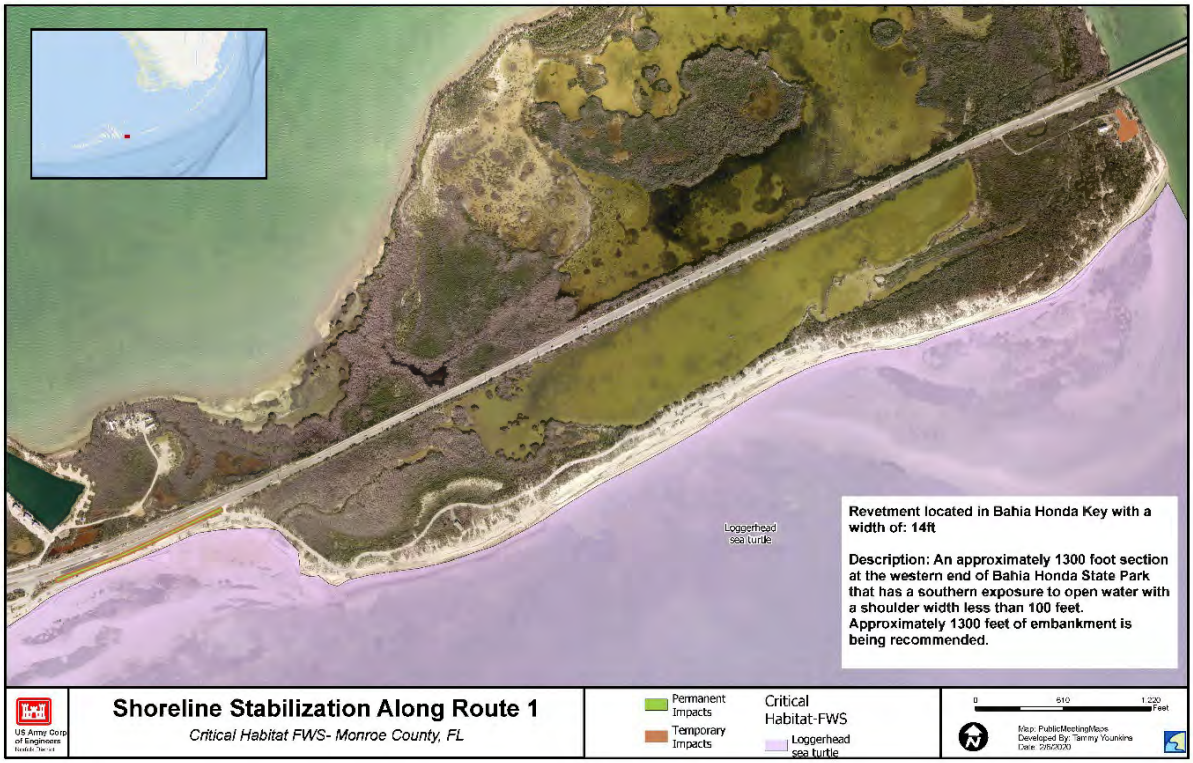


Figure 8a. Critical habitat designation for the loggerhead sea turtle on Bahia Honda Key

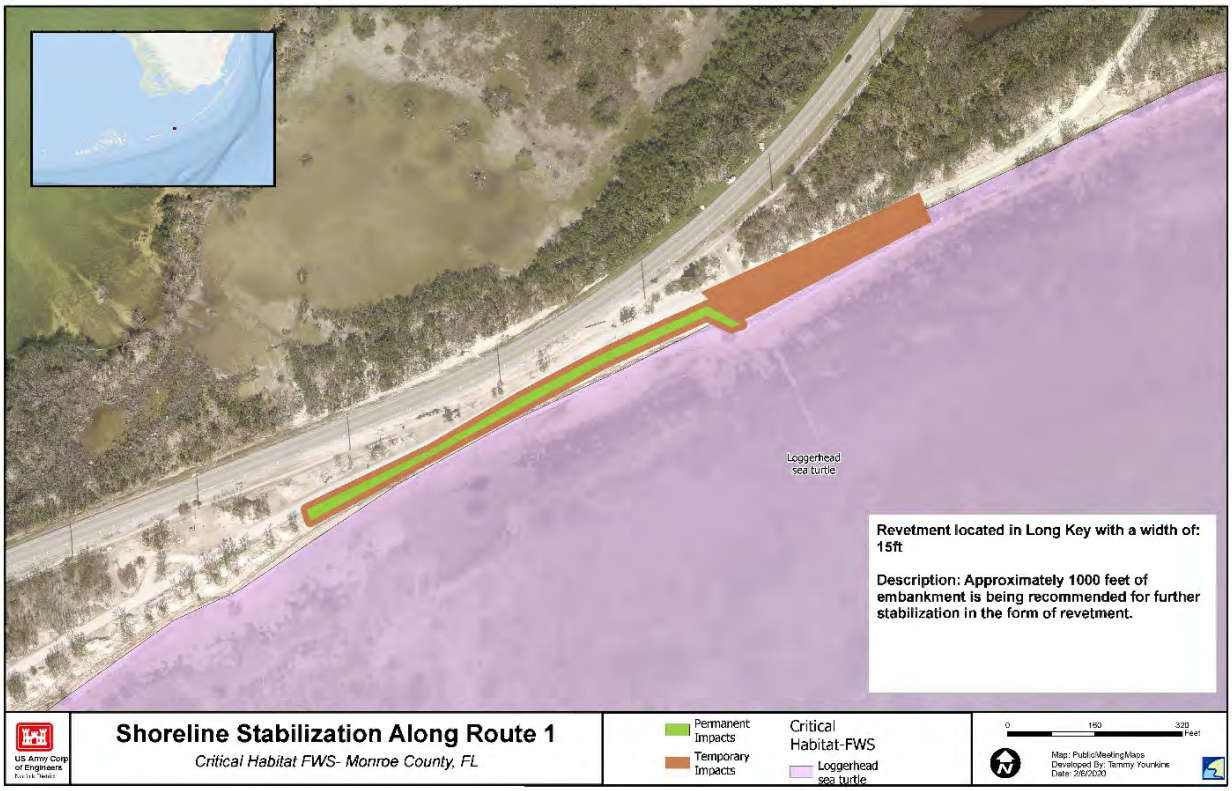


Figure 8b. Critical habitat designation for the loggerhead sea turtle on Long Key

Green sea turtle (*Chelonia mydas*)

The green sea turtle is divided into eleven Distinct Population Segments (DPS). Eight of these DPS are listed as threatened and 3 are listed as endangered under the Endangered Species Act. The Florida breeding population is federally threatened. The green sea turtle is one of the largest hard-shelled turtles reaching up to 350 pounds and 4 feet in length (NOAA 2019). Juvenile green sea turtles are omnivores and feed plant and animals. However, adult green sea turtles are primarily herbivores that forage on sea grass and algae and consume the occasional invertebrate or sponge (NOAA 2019).

This large sea turtle inhabits marine coastal and oceanic waters and occurs in Florida year-round. Green sea turtles nest between June and September, with 100-1000 green sea turtle nests per year (FWC 2019). The majority of Florida's coast is considered nesting habitat (FWC 2019). Critical habitat is designated for this species nearby in Puerto Rico as seen in the following figure. There is no critical habitat for this species in the action area.

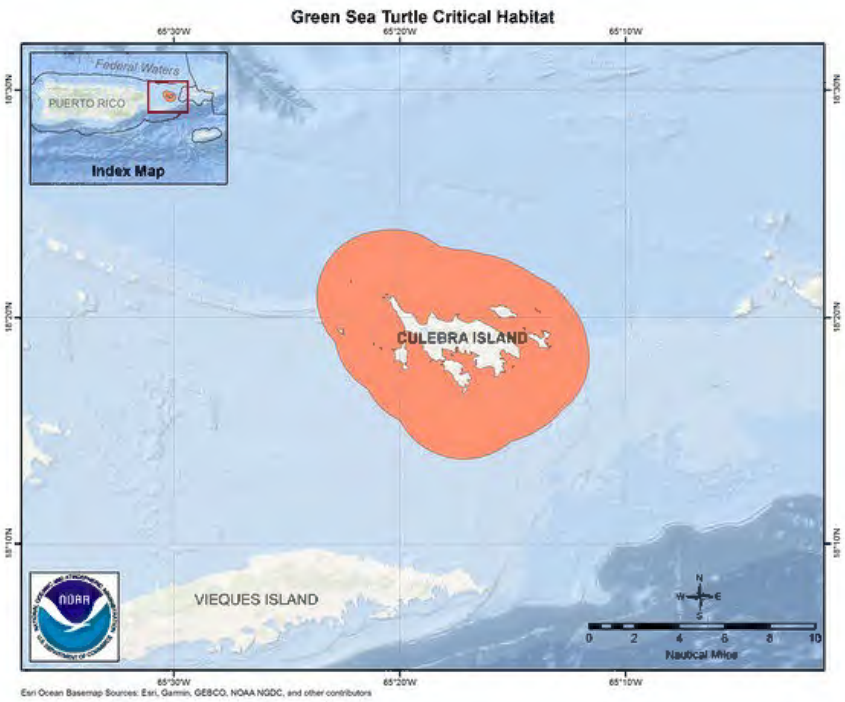


Figure 9. Critical habitat designation for the green sea turtle (NOAA 2019)

Kemp's ridley sea turtle (*Lepidochelys kempii*)

The Kemp's ridley sea turtle is listed as endangered throughout its range. It is a small-to-medium-sized turtle with a nearly circular shell, weighing up to 100 pounds and reaching up to 2.3 feet in length (USFWS 2019). Primarily a Gulf of Mexico species, it inhabits marine coastal waters with sand or mud bottoms. Juveniles frequent bays. Kemp's ridley sea turtles are omnivores, but feed primarily on crabs, small animals, plants, and even discarded bycatch. The biggest threat to this species is accidental capture in commercial fisheries (shrimp trawls, long lines, finfish trawls, beach seines, gill nets, etc) (Schmid and Barichivich 2006).

Ninety-five percent of worldwide Kemp's ridley nesting occurs in Tamaulipas, Mexico (NOAA 2019). Nesting occurs on Gulf beaches in south Texas and northern Mexico between April and July, although a few nests have been confirmed in Florida, the Carolinas, and Virginia. No critical habitat has been designated for this species.

2.2.7 PLANTS

Cape Sable Thoroughwort (*Chromolaena frustrate*)

The Cape Sable thoroughwort is listed as an endangered species under the Endangered Species Act. It is a rare flowering perennial herb in the Asteraceae family that is listed as endangered. This plant tends to be shorter than 3 feet with blue or purple flowers. It grows in in rockland hammocks, coastal hardwood hammocks, buttonwood forests, coastal berms, and coastal rock barrens (USFWS 2019). This species has been extirpated (no longer in existence) from half of the islands where it occurred in the Florida

Keys. The biggest threat is habitat loss due to development, storms, sea level rise, competition from non-native plants, predation by non-native herbivores, and wildfires (USFWS 2019).

Historically, the Cape Sable thoroughwort was found from Monroe County, both on the Florida mainland and the Florida Keys, and in Miami-Dade County along Florida Bay. The current range of this species includes areas in Everglades National Park and five islands in the Florida Keys (Upper Matecumbe Key, Lignumvitae Key, Big Munson Island, Boca Grande, and Long Key) (USFWS 2019). This species has never been documented on the islands north of Key Largo in Biscayne National Park or west of Boca Grande in the Marquesas or Dry Tortugas, despite extensive surveys (Bradley and Gann 2004).

Approximately 11,000 acres of land in Monroe and Miami Dade Counties are designated critical habitat. Within the action area, Cape Sable thoroughwort critical habitat is located on Long Key. Temporary impacts to critical habitat during the construction phase of the revetments are estimated to impact up to 0.75 acre. Permanent impacts to critical habitat following construction for the footprint of the revetment are estimated to impact less than 0.5 acre. See the following figure for the breakdown of critical habitat affected by proposed location.

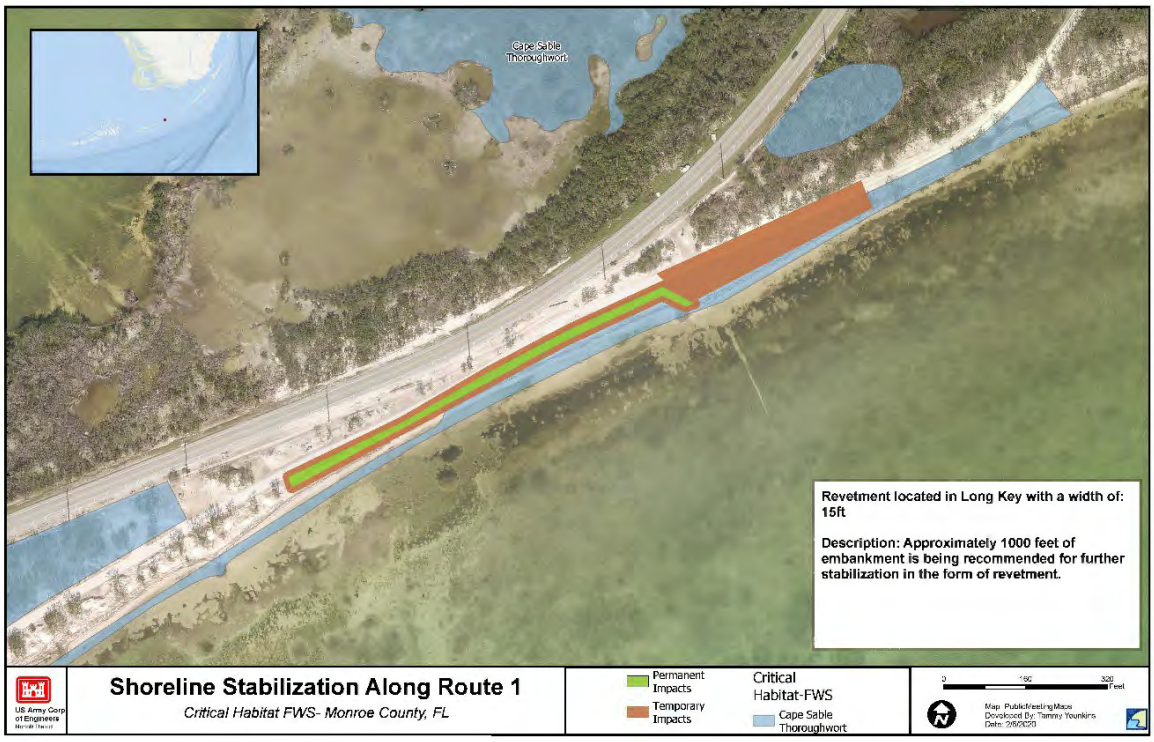


Figure 9. Critical habitat designation for the Cape Sable thoroughwort on Long Key

2.3 EFFECTS ANALYSIS

2.3.1 Birds

Piping plovers and red knots have the potential to forage, rest, overwinter, and/or migrate through the action area but do not currently breed within the action area. Roseate terns breed, nest, and forage in the Lower Keys (with 95% of nests occurring on Boca Chica

Key) then migrate south to overwinter in South America. There is limited information regarding immature, post breeding piping plovers, and even less information regarding nonbreeding red knots (USFWS 2019). Piping plovers are expected to reach sexual maturity as early as one year of age and spend up to ten months of their life cycle on migration and overwintering (USFWS 2019). Piping plovers overwinter in Florida from July to May and have very high wintering site fidelity. Female red knots migrate from the breeding grounds soon after the eggs hatch. The males care for the chicks until they fledge, and then the males migrate from the breeding grounds with the juveniles soon to follow (Niles et al. 2008). Roseate terns reach sexual maturity around age three. Based on this limited information, we expect juvenile and adult life stages to be present in the action area for all piping plovers and red knots species. All life stages of roseate terns are expected to occur in Florida. Behavioral observations have determined these species spend the majority of their time foraging throughout the day and night (Nicholls and Baldassarre 1990).

Potential direct effects to red knots, piping plovers, and roseate terns as a result of the preferred alternative would include: visual disturbances, auditory disturbances, increased human activity during construction, and habitat loss. Noise from activities within the action area could temporarily displace and/or disturb birds within audible range of the construction. Visual disturbances and increased human activity are also expected to temporarily displace or disturb birds within range of the construction. Nesting roseate terns are highly sensitive to disturbances and will often abandon a nesting site if threatened, sometimes relocating to a less desirable or inadequate area (USFWS 2019). However, the 95 percent of the Florida roseate tern population nests on Boca Chica Key outside the action area. The preferred alternative would not result in a take of a migratory species given noise, visual disturbances, and increased human activity would be limited in duration, and disturbed species could move to adequate suitable habitat nearby. However, temporary abandonment of the construction area as well as decreased foraging capability, and breeding and nesting capability for the roseate tern, within the project footprint is likely to occur. Heavy machinery and equipment (e.g., trucks and bulldozers) operating on action area beaches may adversely affect migrating and wintering piping plovers and red knots, and nesting roseate terns, in the action area by disturbing and disrupting normal activities such as roosting and feeding, and possibly forcing birds to expend valuable energy reserves to seek available habitat in adjacent areas along the shoreline. Short-term and temporary construction effects to these species will occur if the birds are roosting and feeding in the area during a migration stopover. The displacement of material during construction may temporarily deplete, block access to, or disturb the intertidal food base along the shoreline and temporarily disturb roosting birds during project construction (Hayes and Michael 2008). Some habitat loss will occur as a result of the construction.

Indirect effects to red knots, piping plovers, and roseate terns as a result of the preferred alternative include habitat loss. The expected habitat loss would be due to the permanent footprint of the revetments proposed. In addition, the revetments will alter the beach and could degrade the suitability of foraging habitat close to the water (Hayes and Michael 2008). Studies of revetments at four California study sites documented that sites with revetments had narrower intertidal zones, lower species richness, and lower shorebird abundance post construction (Dugan and Hubbard 2006). Long-term effects could include a decrease in use of habitat due to alteration of the habitat, as well as decreased use of potential nesting habitat for roseate terns (rarely).

Critical Habitat
The action area for the Florida Keys Coastal Storm Risk Feasibility Study falls within the designated Critical Habitat area for the piping plover. As described in Section 2.2.2, designated critical habitat within the action area occurs on Bahia Honda Key with temporary impacts estimated to impact up to 1.0 acre and permanent impacts estimated to impact up to 0.5 acre. The continuing loss and degradation of habitat due to sand placement projects, inlet stabilization, sand mining, groins, seawalls and revetments, dredging of canal subdivisions, invasive vegetation, and wrack removal are major threats to piping plover (USFWS 2019).

Cumulative Impacts
Potential cumulative threats to piping plovers, red knots, and roseate terns include: habitat loss, degradation, and destruction from development, invasive vegetation, pollution, predation, oil spills, disease, climate change, prey availability, hunting, human disturbance, wind energy development, aquaculture, and algal blooms. Additionally, seawalls and revetments have the potential to be installed elsewhere within their habitat. Seawalls and revetments often accelerate erosion by causing scouring in front of and down-drift from the structure (Hayes and Michel 2008), which has the potential to eliminate intertidal foraging habitat and adjacent roosting habitat. Physical characteristics that determine microhabitats and biological communities can be altered following installation of a revetment, thereby depleting or changing the benthic community composition that serves as the prey base for these species (USFWS 2019). In addition, cumulative impacts that could impair prey species include discharges from soil, nutrients, and other pollutants washing into coastal waters and wetlands from urban and agricultural runoff.

Analysis of species/critical habitat likely to be affected
The preferred alternative has the potential to adversely affect piping plovers, red knots, and roseate terns. Project activities are expected to permanently alter and adversely modify up to 0.5 acres within the critical habitat designation for piping plover.

2.3.2 Fish

Because the project activities are all upland and expected to have no in water impacts, it is unlikely there would be any interactions or impacts to the Nassau grouper, smalltooth sawfish, oceanic whitetip shark, or giant manta ray. There is no critical habitat designated within the project area.

Therefore, the implementation of the preferred alternative is anticipated to have no effect on the Nassau grouper, smalltooth sawfish, oceanic whitetip shark, or giant manta ray.

2.3.3 Invertebrates

Because the project activities of the preferred alternative are all upland and expected to have no in water impacts, it is unlikely there would be any interactions or impacts to the pillar coral, rough cactus coral, lobed star coral, boulder star coral, mountainous star coral, elkhorn coral, or staghorn coral. There is critical habitat designated for elkhorn and staghorn coral within the action area, however it will remain unaffected.

Therefore, the implementation of the preferred alternative is anticipated to have no effect on the pillar coral, rough cactus coral, lobed star coral, boulder star coral, mountainous star coral, elkhorn coral, or staghorn coral.

2.3.4 Mammals

Because the project activities of the preferred alternative are all upland and expected to have no in water impacts, it is unlikely there would be any interactions or impacts to the West Indian manatee. There is no critical habitat designated within the project area.

Therefore, the implementation of the preferred alternative is anticipated to have no effect on the West Indian Manatee.

2.3.5 Reptiles

American Alligator and American Crocodile

American alligators and crocodiles have the potential to hunt, breed, nest, and/or rest in the action area throughout the year. All life stages occur within the action area. Crocodiles typically mate between February and March, and alligators mate throughout the spring. Crocodile nests hatch in July and August, while alligators nest through spring and into summer.

The USFWS determined that two percent of American crocodile critical habitat occurs between south of Key Largo to Long Key, much of it within canal subdivisions that lack constituent habitat elements (USFWS 2014). The USFWS determined in a letter dated October 28, 2014, to the United States Army Corps of Engineers, Jacksonville District, that development impacts on crocodiles in the Keys were discountable and insignificant. Crocodile nesting south of Key Largo is very uncommon (USFWS 2014). The USFWS set parameters in the 2014 letter to determine if development south of U.S. Highway 1 and State Road 905 in Key Largo are unlikely to adversely affect nests of the American crocodile. The parameters are as follows:

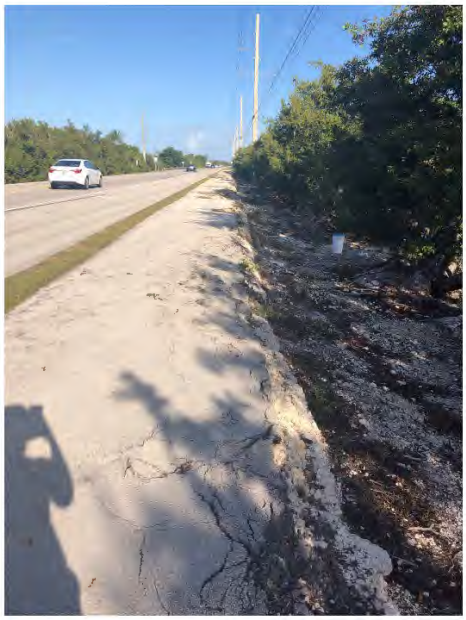
1. The project site is not immediately adjacent or contiguous to waters accessible to the crocodile.
2. The project site is adjacent or contiguous to waters accessible to the crocodile but the project site does not contain suitable habitat for nesting accessible to the crocodile. Suitable nesting habitat is defined as patches of soils at least 100 square feet (9.29 square meters) that are either (I) completely bare of vegetation, (2) mostly bare soils with sparse woody vegetation such as scattered mangroves or less than 50 percent herbaceous vegetation cover, less than 50 centimeters high, or (3) open clearing with less than 50 centimeters high herbaceous vegetation cover (can be up to 100 percent vegetative cover). Soils of suitable crocodile nesting habitat consist of marl, sand, peat, or rocky spoil (with particles not greater than 3 to 5 centimeters in diameter).
3. The project site contains suitable nesting habitat for the crocodile, as described above, but the proposed project will not impact the area of suitable nesting habitat.
4. The project site contains suitable nesting habitat, as described above, but the site contains sea walls or other types of structures that preclude crocodiles from accessing the suitable nesting habitat.

Based on the above parameters, USACE has made the following determinations regarding crocodiles in the action area:

- Fiesta Key East has an existing rip rap revetment along the shoreline. Refer to the image below. The revetment proposed in the preferred alternative to stabilize the road is behind the existing rip rap revetment. Per parameter four, “the site contains a sea wall or other type of structure that precludes crocodiles from accessing the suitable nesting habitat.”

Figure 10. Existing rip rap revetment along Fiesta Key East.

- Fiesta Key West has a dense area of vegetation between the road and the water access. The revetment proposed in the preferred alternative for this location is adjacent to the road. Refer to the images below. Per parameter one, the site is not immediately adjacent or contiguous to waters accessible to crocodiles.”



Figures 11 a and b. Area for the revetment adjacent to the road on Fiesta Key West

- Indian Key Fill has an existing sea wall along the shoreline. Refer to the image below. The revetment proposed in the preferred alternative to stabilize the road is behind the existing sea wall. Per parameter four, “the site contains a sea wall or other type of structure that precludes crocodiles from accessing the suitable nesting habitat.”

Figure 12. Existing sea wall along Indian Key Fill

- Long Key is the only proposed site which may provide suitable and accessible nesting habitat within the two percent of the critical habitat south of Key Largo.

Potential direct effects to American crocodiles and alligators as a result of the proposed action would include: visual disturbances, auditory disturbances, increased human activity during construction, and habitat loss. Noise from activities within the action area could temporarily displace and/or disturb crocodilians within audible range of the construction. Visual disturbances and increased human activity are also expected to temporarily displace or disturb crocodilians within range of the construction. Some habitat loss will occur as a result of the construction. Increased human activity would be limited in duration, and disturbed species could move to adequate suitable habitat nearby. However, temporary abandonment of the construction area as well as decreased foraging capability within the project footprint is likely to occur. Heavy machinery and equipment (e.g., trucks and bulldozers) operating on action area beaches may adversely affect crocodilians in the action area by disturbing and disrupting normal activities such as mating, nesting, and feeding, and possibly forcing crocodilians to expend valuable energy reserves to seek available habitat elsewhere. Some habitat loss will occur as a result of the construction. However, suitable and accessible habitat is only available on Long Key, because Indian Key Fill, Fiesta Key West, and Fiesta Key East have existing sea walls, rip rap revetments, or dense vegetation between the proposed location of the preferred alternative and the water access.

Indirect effects to American crocodiles and alligators as a result of the preferred alternative include habitat loss. The expected habitat loss would be due to the permanent footprint of the revetment proposed on Long Key and would permanently alter up to 0.5 acres. In addition, the revetment will alter the beach and limit the suitability of nesting habitat close to the water. Long-term effects could include a decrease in American crocodile and alligator use of habitat due to alteration of the habitat.

Critical Habitat

The action area for the Florida Keys Coastal Storm Risk Feasibility Study falls within the designated critical habitat area for the American crocodile. As described in Section 2.2.6, designated critical habitat within the action area occurs on Long Key, Fiesta Key, and Indian Key with temporary impacts estimated to impact up to 4.0 acres and permanent impacts estimated to impact less than 1.5 acres. However, based on the parameters set in the USFWS 2014 letter to USACE, the revetments on Indian Key Fill, Fiesta Key West, and Fiesta Key East are unlikely to adversely impact crocodilians. Long Key is the only location that may have lasting permanent impacts, but USFWS estimates American crocodiles to be uncommon south of Key Largo.

Cumulative Impacts

Potential cumulative threats to American alligator and crocodiles include: habitat loss, degradation, and destruction from development, invasive vegetation, beach re-nourishment, coastal armoring, pollution, human interactions, human related mortality such as motor vehicles, oil spills, climate change, prey availability, hunting, dune migration, hurricanes, aquaculture, and access to fresh water, and hydrologic projects.

Analysis of species/critical habitat likely to be affected

The preferred alternative has the potential to affect, but is unlikely to adversely affect the American crocodile and alligator. Project activities are expected to permanently alter and adversely modify up to 1.5 acres within the critical habitat designation for the American crocodile.

Kemp's Ridley Sea Turtles
Kemp's ridley sea turtles have the potential to breed, forage, and migrate within the action area. Juveniles and adults are expected to occur within the action area. Historically, Kemp's ridley sea turtles have not nested within the action area as shown in the following table. There are no in water construction components for this project and strict erosion and sediment controls will be used. Additionally, there are no in water impacts anticipated for the preferred alternative.

Therefore, the implementation of the preferred alternative is anticipated to have no effect on the Kemp's ridley sea turtle.

Green, Leatherback, and Hawksbill Sea Turtles
Green, leatherback, and hawksbill sea turtles have the potential to breed, forage, migrate and nest within the action area. All life stages are expected to occur within the action area. Green, leatherback, and hawksbill sea turtles have rarely and inconsistently nested in one location within the action area on Bahia Honda Key as shown in the following table. However, the revetment proposed on Bahia Honda Key will be located north of an existing fence and campground road maintained by the park service. The nesting habitat is south of the fence and campground road. The road would separate any construction from the nesting habitat. Additionally, there are no in water impacts anticipated for the preferred alternative.

Potential direct effects to green, hawksbill, and leatherback sea turtles as a result of the proposed action would include: visual disturbances, auditory disturbances, and increased human activity during construction. Visual and auditory disturbances and increased human activity are also expected to temporarily displace or disturb potential nesting sea turtles within range of the construction if construction occurs during nesting season. Increased human activity and heavy machinery use would be limited in duration, however, the activities could force nesting sea turtles to expend valuable energy reserves to seek available nesting habitat elsewhere if construction is done during nesting season.

Indirect effects to green, leatherback and hawksbill sea turtles as a result of the preferred alternative are no expected. There is no permanent alternation to existing habitat, and all impacts would be minor and temporary and would end with construction.

The preferred alternative has the potential to affect, but is unlikely to adversely affect the green, leatherback, and hawksbill sea turtles.

Table 2. Sea turtle nesting by species within the action area

Location	Total # Loggerhead Nests	Total # Green Nests	Total # Leatherback Nests	Total # Hawksbill Nests	Total # Kemp's Ridley Nests

Bahia Honda					
2014	33	0	0	0	0
2015	68	1	0	0	0
2016	26	0	1	0	0
2017	14	0	0	0	0
2018	25	0	1	2	0
2019	14	1	0	0	0
Long Key					
2014	8	0	0	0	0
2015	5	0	0	0	0
2016	1	0	0	0	0
2017	5	0	0	0	0
2018	2	0	0	0	0
2019	13	0	0	0	0
West Summerland Key					
1991	2	0	0	0	0
1995	2	0	0	0	0

(FWC/FWRI Statewide Nesting Beach Survey Program Database, Florida Department of Environmental Protection)

Loggerhead Sea Turtle

Loggerhead sea turtles breed, nest, and forage within the action area. All life stages are expected to occur within the action area. Loggerhead sea turtles regularly nest on Bahia Honda and Long Key. Historically, loggerhead sea turtle nests and false crawls have been documented on West Summerland Key. However, nest occurrence on West Summerland Key was a rare occurrence and has not been documented since 1995 as seen in the table above. In addition, the revetment on West Summerland Key is proposed directly behind an existing seawall that already blocks access to potential nesting sea turtles at the site. The following figures detail the seawall and revetment location at West Summerland Key.

Figure 13 a and b. West Summerland Key site conditions.

Bahia Honda Key has the largest concentration of loggerhead nests within the action area. However, the revetment proposed on Bahia Honda Key will be located north of an existing fence and campground road maintained by the park service. The nesting habitat is south of the fence and campground road. Therefore, there are no anticipated effects to loggerhead sea turtle nesting habitat on Bahia Honda Key. The figures below show photos of the campground road at Bahia Honda.

Figure 14 a and b. Bahia Honda Key site conditions. The revetment is proposed north of the campground road, separating the nesting habitat from the revetment.

Long Key has the second largest concentration of loggerhead sea turtle nests within the action area as seen in the table above. The revetment proposed in the preferred alternative has the potential to permanently impact and block access to nesting habitat on Long Key. The figures below show photos of the nesting habitat on Long Key. Nesting data from 2015-2019 provided by Long Key State Park indicated that approximately 3 turtles (two in 2019 and one in 2017) have nested within the approximate project footprint. The remaining nests have occurred anywhere from 0.12 to 1.0 mile southwest of the project footprint.

Figure 15 a and b. Long Key site conditions.

Potential direct effects to loggerhead sea turtles as a result of the proposed action would include: visual disturbances, auditory disturbances, increased human activity during construction, and habitat loss. Visual and auditory disturbances and increased human activity are also expected to temporarily displace or disturb potential nesting loggerhead sea turtles within range of the construction if construction occurs during nesting season. Some temporary and permanent habitat loss will occur as a result of the construction. Increased human activity and heavy machinery use would be limited in duration, however, the activities could force loggerhead sea turtles to expend valuable energy reserves to seek available nesting habitat elsewhere if construction is done during nesting season.

Indirect effects to loggerhead sea turtles as a result of the preferred alternative include habitat loss. The expected habitat loss would be due to the permanent footprint of the revetment proposed on Long Key and would permanently alter up to 0.25 acres. In

addition, the revetment will alter the beach and limit the suitability of nesting habitat close to the water. Long-term effects could include a decrease in loggerhead sea turtle use of nesting habitat due to alteration of the habitat.

Critical Habitat
The action area for the Florida Keys Coastal Storm Risk Feasibility Study falls within the designated loggerhead sea turtle terrestrial critical habitat designated by USFWS and near shore reproductive critical habitat. As described in Section 2.2.6, Loggerhead sea turtle migratory and breeding critical habitat is located on Long Key, Fiesta Key, Bahia Honda Key, and West Summerland Key. Temporary impacts to critical habitat during the construction phase of the revetments are estimated to impact up to 0.25 acres. Permanent impacts to critical habitat following construction for the footprint of the revetment are estimated to impact less than 0.25 acres.

Cumulative Impacts
Potential cumulative threats to loggerhead sea turtles include: nesting habitat loss, degradation, and destruction from development, fishery interactions, invasive vegetation, beach re-nourishment, coastal armoring, pollution, human interactions, human related mortality such as motor vehicles and vessel strikes, oil spills, climate change, prey availability, artificial lighting, poaching, dune migration, and hurricanes.

Analysis of species/critical habitat likely to be affected
The preferred alternative has the potential to adversely affect breeding, nesting and foraging loggerhead sea turtles. Project activities are expected to permanently alter and adversely modify up to 0.25 acres within the critical habitat designation for loggerhead sea turtles.

2.3.6 Plants

The Cape Sable thoroughwort is a state listed species that is found within the action area on Long Key. Temporary and permanent impacts to critical habitat have the potential to occur.

Potential direct effects to the Cape Sable thoroughwort as a result of the proposed action would include: increased human activity during construction, habitat loss, and habitat degradation. Construction and traffic through the action area could cause damage to plants present within range due to trampling, construction, and heavy equipment operations.

Indirect effects to the Cape Sable thoroughwort as a result of the proposed action include habitat loss. The expected habitat loss would be due to the permanent footprint of the revetment proposed on Bahia Honda Key and would permanently alter up to 0.25 acre.

Critical Habitat
The action area for the Florida Keys Coastal Storm Risk Feasibility Study falls within the designated Critical Habitat area for the Cape Sable thoroughwort. As described in Section 2.2.7, designated critical habitat within the action area occurs on Long Key with temporary impacts estimated to impact up to 0.75 acre and permanent impacts estimated to impact up to 0.5 acre.

Cumulative Impacts
Potential cumulative threats to Cape Sable thoroughwort include: habitat loss, degradation, and destruction from development, invasive vegetation, sea level rise, pollution, predation, oil spills, climate change, and human disturbance. In addition, cumulative impacts that could include discharges from soil, nutrients, and other pollutants washing into coastal waters and wetlands from urban and agricultural runoff.

Analysis of species/critical habitat likely to be affected
The preferred alternative has the potential to adversely affect the Cape Sable thoroughwort. Project activities are expected to permanently alter and adversely modify up to 0.25 acres within the critical habitat designation for the Cape Sable thoroughwort.

3.0 SPECIES SUMMARY CONCLUSION TABLE

The table below summarizes the findings for each species and critical habitat occurring or with the potential to occur in the action area.

Table 2. Species Summary Conclusion Table

SPECIES / RESOURCE NAME	ESA SECTION 7 / EAGLE ACT DETERMINATION	NOTES / DOCUMENTATION
Piping Plover, Red Knot, Roseate Tern	May Affect, Likely to Adversely Affect	Construction may impact prey species, will alter habitat and may cause species to leave the action area from the visual disturbances, auditory disturbances, and increased human activity.
Piping Plover Designated Critical Habitat	Adverse Modification	Construction of a revetment would permanently alter up to 0.5 acres of designated critical habitat and could impact prey species and foraging habitat. The revetments would adversely modify designated critical habitat.
Nassau Grouper, Smalltooth Sawfish, Oceanic Whitetip Shark, Giant Manta Ray	No Effect	There are no in water impacts associated with this project.
Pillar Coral, Rough Cactus Coral, Lobed Star Coral, Boulder Star Coral, Mountainous Star Coral. Elkhorn Coral, Staghorn Coral	No Effect	There are no in water impacts associated with this project.

SPECIES / RESOURCE NAME	ESA SECTION 7 / EAGLE ACT DETERMINATION	NOTES / DOCUMENTATION
Elkhorn Coral, Staghorn Coral Designated Critical Habitat	No Effect	There are no in water impacts associated with this project.
West Indian Manatee	No Effect	There are no in water impacts associated with this project.
American Alligator and American Crocodile	May Affect, Not Likely to Adversely Affect	Construction may disturb species due to temporary increases in human disturbance including auditory and visual disturbances during construction. The revetments would temporarily and permanently alter designated critical habitat. However, existing sea walls, revetments, and vegetation block access to Fiesta Key East and West and Indian Key Fill, creating limited access to these areas. In addition, the 2014 USFWS letter referenced in Section 2.3.5 notes that crocodiles are uncommon south of Key Largo. Using the guidance from this letter, it is anticipated the impacts will be insignificant.
American Crocodile Designated Critical Habitat	Adverse Modification	Construction of a revetment would permanently alter up to 1.5 acres of designated critical habitat, however, 1.0 of those acres are not accessible to crocodiles due to existing sea walls and rip rap revetments. The remaining 0.5 acre is at the southernmost extent of the range in the Florida Keys and occurrence is uncommon.
Kemp's ridley sea turtle	No Effect	Kemp's ridley sea turtles do not nest within the action area. Kemp's ridley sea turtles do not have critical habitat within the action area. There are no in water impacts associated with this project.
Green Sea Turtle, Hawksbill Sea Turtle, Leatherback Sea Turtle	May Affect, Not Likely to Adversely Affect	Green, Hawksbill, and Leatherback sea turtles rarely nest on Bahia Honda Key within the action area. The revetment on Bahia Honda Key will be north of an existing fence and campground road. The nesting area is south of the existing fence and campground road on Bahia Honda Key. Impacts to green, hawksbill, and leatherback sea turtles will be temporary and insignificant. There are no in water impacts associated with this project.
Loggerhead Sea Turtle	May Affect, Likely to Adversely Affect	Within the action area, Loggerhead sea turtles nest on Bahia Honda and Long Key. Historically, nests were also documented on West Summerland Key in the 90's. The revetment on Long Key will block access to nesting habitat. The revetment on Bahia Honda Key will be north of an existing fence and campground road. The nesting area is south of the existing fence and campground road, so impacts to nesting turtles are not anticipated on Bahia Honda Key.

SPECIES / RESOURCE NAME	ESA SECTION 7 / EAGLE ACT DETERMINATION	NOTES / DOCUMENTATION
Loggerhead Sea Turtle Designated Critical Habitat	Adverse Modification	Construction of a revetment would permanently alter up to 0.25 acres of designated critical habitat and could impact nesting habitat on Long Key. The revetments would adversely modify designated critical habitat.
Cape Sable Thoroughwort	May Affect, Likely to Adversely Affect	Construction and human activities could disturb or trample plant. Construction of a revetment would permanently alter up to 0.5 acre of designated critical habitat.
Cape Sable Thoroughwort Designated Critical Habitat	Adverse Modification	Construction of a revetment would permanently alter up to 0.5 acre of designated critical habitat. The revetments would adversely modify designated critical habitat.

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FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Section 404(b)(1) Evaluation

Norfolk District
803 Front Street
Norfolk, Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

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Final Evaluation of 404(b)(1) Guidelines

Florida Keys Coastal Storm Risk Management Feasibility Study and Environmental Impact Statement

March 2020

1. Technical Evaluation Factors

a. Physical and Chemical Characteristics of the Aquatic Ecosystem (40 CFR §§ 230.20-230.25)(Subpart C)

	N/A	Not Significant	Significant
(1) Substrate impacts	☒	☐	☐
(2) Suspended particulates/turbidity impacts	☐	☒	☐
(3) Water Quality Control	☒	☐	☐
(4) Alteration of current patterns and water circulation	☒	☐	☐
(5) Alteration of normal water fluctuations/hydroperiod	☒	☐	☐
(6) Alteration of salinity gradients	☒	☐	☐

The tentatively selected plan (TSP) recommended herein includes the following measures to reduce coastal storm risk and damage throughout the Florida Keys:

- Shoreline stabilization in six locations along U.S. 1 (Overseas Highway) that were identified as having risk of damage due to erosion and/or wave energy during a storm event. Rock revetment structures were designed in six areas along Route 1 to reduce damage to the roadway by stabilizing the shoreline and reducing the risk of washout. Living shoreline and/or mangrove restoration may also be incorporated in conjunction with the shoreline stabilization in the six revetment areas if conditions are favorable for the survival of the natural features and additional analysis shows they would provide measurable CSRM benefit. The six locations are: West Summerland Key (Mile Marker 34.5), Bahia Honda Key (Mile Marker 37), Long Key (Mile Marker 67), Fiesta Key East (Mile Marker 70), Fiesta Key West (Mile Marker 70.5), and Indian Key Fill (79.5). None of these revetments are in the water. These revetments will also have temporary staging areas that are on dry land. Strict erosion and sediment control measures will be followed so that any suspended particulates and turbidity is kept to a negligible to minor effect level.

The TSP also includes the following measures on dry land that will not affect any special aquatic sites:

- Dry floodproofing approximately 31 critical infrastructure buildings that were identified at risk to damage from coastal storms. Dry floodproofing will reduce the damage caused by storm surge during storm events so that emergency and human services can resume more quickly after a storm event.
- Nonstructural measures to reduce coastal storm damage to residential and nonresidential structures identified at risk throughout the Keys. Nonstructural measures are applied to a structure to reduce damage from flooding, which in the Keys would be from storm surge. Nonstructural measures reduce the consequences of coastal storms on a structure instead of reducing the risk and/or probability of the flooding caused by storm surge. The nonstructural measures recommended in the TSP include approximately 9,100 residence elevations, approximately 250 acquisitions of residential property and floodproofing of approximately 1,000 nonresidential properties.

b. Biological Characteristics of the Aquatic Ecosystem (40 CFR §§ 230.30-230.32) (Subpart D)

	N/A	Not Significant	Significant
(1) Effect on threatened/endangered species and their habitat	☐	☒	☐
(2) Effect on the aquatic food web	☐	☒	☐
(3) Effect on other wildlife (mammals, birds, reptiles, and amphibians)	☐	☒	☐

Pursuant to Section 7 of the ESA, the Corps is coordinating with the U.S. Fish and Wildlife Service (USFWS) for the placement of the revetments. The nonstructural measures are not expected to affect listed species; however, the revetment at Long Key State Park in particular is approximately 1500 linear feet along a beach shore, and would adversely affect known loggerhead turtle nesting habitat and shorebird foraging and loafing areas. Detailed analysis of the Corps' effect determinations are in Chapter 8 of the 2020 Draft EIS. The Corps' Biological Assessment is located in the Draft EIS Environmental Appendix, Appendix D. A summary of the Corps' effect determinations as well as coordination and consultation with USFWS are included below:

<u>Effect determinations for species under NMFS jurisdiction:</u>

No Effect:

Nassau Grouper, Smalltooth Sawfish, Oceanic Whitetip Shark, Giant Manta Ray, Pillar Coral, Rough Cactus Coral, Lobed Star Coral, Boulder Star Coral, Mountainous Star Coral. Elkhorn Coral, Staghorn Coral, Kemps ridley sea turtle.

The revetment is adjacent to the Critical Habitat for the Elkhorn and Staghorn Coral, but there are no in-water impacts and therefore no impacts to Critical Habitat.

<u>Effect determinations for species under USFWS jurisdiction:</u>

May Affect, Likely to Adversely Affect:
Loggerhead sea turtle (nesting habitat), piping plover, rufa red knot, roseate tern, Cape Sable Thoroughwort.

May Affect, Not Likely to Adversely Affect:
Green sea turtle, hawksbill sea turtle, leatherback sea turtle, American alligator, American crocodile

No Effect:
Florida manatee

For potential effects to federally-listed T&E species under the USFWS jurisdiction, the Corps will initiate formal consultation with the USFWS. There will be moderate to potentially significant permanent adverse modifications of up to 0.5 acre of American crocodile critical habitat, 0.5 acre of Cape Sable thoroughwort critical habitat, and 0.25 acre of loggerhead sea turtle critical habitat, in known turtle nesting areas. Temporary adverse modifications of up to 4.0 acres of American crocodile critical habitat, 1.0 acres of piping plover critical habitat, 0.75 acres of Cape Sable thoroughwort critical habitat, and 0.25 acres of loggerhead sea turtle critical habitat.

c. Special Aquatic Site (40 CFR §§ 230.40-230.45) (Subpart E)

	N/A	Not Significant	Significant
(1) Sanctuaries and refuges	☐	☒	☐
(2) Wetlands	☐	☒	☐
(3) Mud flats	☒	☐	☐
(4) Vegetated shallows	☒	☐	☐
(5) Coral reefs	☒	☐	☐
(6) Riffle and pool complexes	☒	☐	☐

The proposed action would occur in land areas surrounded by the Florida Keys National Marine Sanctuary. It will have no in-water impacts, and strict erosion and sediment control measures would be utilized so that the Marine Sanctuary waters are not affected.

The revetment located at West Summerland Key will impact approximately 10,250 square feet of herbaceous wetlands dominated by sea purslane and sea oxeye. This wetland area is located behind an existing old sea wall and does not appear to be subject to the ebb and flow of tides. It would be permanently converted to riprap revetment. These wetland impacts will be mitigated through permittee-responsible mitigation at an appropriate location, and if not available the impacts would be mitigated through mitigation bank or in-lieu-fee bank credits. Mitigation would be in accordance with the Uniform Mitigation Assessment Methodology (UMAM). A Clean Water Act Section 401 water quality certification is required from the State of Florida for the beach placement of dredged material.

d. Human Use Characteristics (40 CFR §§ 230.50-230.54) (Subpart F)

	N/A	Not Significant	Significant
(1) Effects on municipal and private water supplies	☒	☐	☐
(2) Recreational and Commercial fisheries impacts	☒	☐	☐
(3) Effects on water-related recreation	☒	☐	☐
(4) Aesthetic impacts	☐	☒	☐
(5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves	☐	☒	☐

There would be direct and indirect temporary and permanent impacts on recreation that are minor to moderate. Permanent adverse effect on approximately 1500 linear feet of a narrow section of a beach located within Long Key State Park, parallel to its campground access road. This would convert an area that may currently be used for wading, walking, bird watching, etc into a permanent revetment. The revetment on Bahia Honda Key, however, will be placed adjacent to U.S. Route 1, outside of the park limits, and will have no effect on the park itself.

Temporary, direct and indirect, adverse effects on use of sections of the Overseas Trail, the public pier at Fiesta Key, Long Key State Park campground roadway, and Indian Key Fill beach access area, during an approximately 4-5 month construction window. However, permanent, beneficial effect due to erosion protection.

Direct temporary and permanent minor adverse effects on aesthetics would occur at the six revetment locations and the nonstructural locations. During construction, equipment used to install the riprap and the building modifications will be visible during construction, which may be considered unsightly by members of the public, resulting in a temporary reduction in the aesthetic value in

the construction area. There would be permanent revetment visible within the park upon completion.

2. Evaluation of Dredged or Fill Material (40 CFR § 230.60) (Subpart G)

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (**Check only those appropriate**)

☒ (1) Physical characteristics
☐ (2) Hydrography in relation to known or anticipated sources of contaminants
☐ (3) Results from previous testing of the material in the vicinity of the project
☐ (4) Known, significant, sources of persistent pesticides from land runoff or percolation
☐ (5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances
☒ (6) Other public records of significant introduction of contaminants from industries, municipalities or other sources
☐ (7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge/fill
☒ (8) Other sources (specify)

The fill to be placed would consist of clean sand and clean commercially purchased rock or limestone rock. Grading would be required to obtain the appropriate slopes.

There are currently no known records of sources of HTRW or producers adjacent to the project site that discharge effluents near the Monroe County shoreline. None were observed during the site visit in December 2019.

For all of the buildings to be demolished or modified, a Phase 1 Environmental Site Assessment would be needed for structures older than 1978, to check for asbestos-containing materials (ACM), lead-based pain (LBP), and polychlorinated biphenyls (PCBs), prior to work. If found, they will be handled and disposed of in accordance with all applicable laws. However, these areas are not located within waterways or special aquatic sites, so they are not expected to have any effect on those resources.

b. An evaluation of the appropriate information in 2a above indicated that there is reason to believe the proposed dredged or fill material is not a carrier of contaminants, of that levels of contaminants are substantively similar at

extraction and disposal sites and not likely to exceed constraints. The material meets the testing exclusion criteria.

YES ☒ NO ☐

3. Disposal Site Delineation (40 CFR § 230.11(f))

a. The following factors, as appropriate, have been considered in evaluating the disposal site.

☐ (1) Depth of water at disposal site (N/A)
☐ (2) Current velocity, direction, and variability at disposal site (N/A)
☒ (3) Degree of turbulence
☐ (4) Water volume stratification (N/A)
☐ (5) Discharge vessel or fill speed and direction (N/A)
☒ (6) Rate of discharge/fill
☒ (7) Dredged material characteristics (constituents, amount, and type of material, settling velocities)
☐ (8) Number of discharges/fill per unit of time (N/A)
☐ (9) Other factors affecting rates and patterns of mixing (specify)

Implementation of the Preferred Alternative may result in short-term increases in turbidity and/or sedimentation during placement operations in the surf zone. However, a strict erosion and sediment control plan is expected to prevent that. The areas affected by nonstructural measures (residence acquisition, demolition, and relocation, building elevations, and floodproofing) will also utilize an erosion and sediment control.

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable.

YES ☒ NO ☐

4. Actions to Minimize Adverse Effects (40 CFR §§ 230.70-230.77)(Subpart H)

All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge/fill.

YES ☒ NO ☐

5. Factual Determination (40 CFR § 230.11)

A review of appropriate information as identified in items 2-5 above indicates that there is minimal potential for short or long-term environmental effects of the proposed discharge/fill as related to:

☒ a. Physical substrate at the disposal site (review sections 2a, 3, 4, & 5)
☒ b. Water circulation, fluctuation & salinity (review sections 2a 3, 4, & 5)
☒ c. Suspended particulates/turbidity (review sections 2a, 3, 4, & 5)
☒ d. Contaminant availability (review sections 2a, 3, & 4)
☒ e. Aquatic ecosystem structure and function (review sections 2b, c; 3, & 5)
☒ f. Disposal site (review sections 2, 4, & 5)
☒ g. Cumulative impact on the aquatic ecosystem
☒ h. Secondary impacts on the aquatic ecosystem

6. Review of Compliance (40 CFR § 230.10(a)-(d) (Subpart B)

A review of the permit application indicates that:

a. The discharge/fill represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge/fill must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for EA alternative);
YES ☒ NO ☐

b. The activity does not appear to 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally designated marine sanctuary(if no, see section 2b and check responses from resource and water quality certifying agencies; YES ☒ NO ☐

c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values (if no, see section 2); YES ☒ NO ☐

d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge/fill on the aquatic ecosystem (if no, see section 5);
YES ☒ NO ☐

7. Findings

☒ a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404 (b)(1) guidelines;

☐ b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following conditions:

c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

☐ (1) There is a less damaging practicable alternative
☐ (2) The proposed discharge/fill will result in significant degradation of the aquatic ecosystem
☐ (3) The proposed discharge/fill does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Coastal Zone Management Act Draft Federal Consistency Determination

Norfolk District
803 Front Street
Norfolk, Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement, and Request for Review of Coastal Zone Management Act Draft Federal Consistency Determination

Dear Mr. Shahl:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you for your involvement in interagency coordination in this Study.

The Florida Keys are an important asset to the economic development of the United States because the islands are a major tourism destination that also hold unique environmental resources including the third largest coral reef in the world and 17 national and state parks. There is federal interest in addressing the Keys' high levels of risk and vulnerability to coastal storms which is expected to be compounded by the combined effects of sea level change and climate change. The vulnerability of the Florida Keys to coastal storms was most recently exemplified by the significant damage sustained by Hurricane Irma in 2017.

The purpose of the Florida Keys CSRM Study is to evaluate coastal storm risk and recommend a project that would reduce that risk throughout the study area. This project is not an all-encompassing solution that would address all of the coastal storm risk in the Keys, but it is one important component of the larger effort by the non-federal sponsor, Monroe County, as well as municipalities, local organizations, and state and federal government agencies that are all working to reduce risk and improve resiliency in the Florida Keys. This study seeks to not only reduce coastal storm risk, but also to build on resilience by implementing strategic approaches that are compatible with the work of others.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and as implemented by the Council of Environmental Quality regulations (40 CFR 1500-1508), the

USACE has determined that the project has the potential to have significant environmental impacts. The Draft IFR/EIS considers a full range of nonstructural and structural coastal storm risk management alternatives that meet the Proposed Action's purpose and need, evaluates the environmental impacts of the measures, and incorporate measures to avoid and minimize impacts to the maximum extent practicable.

Alternatives that were considered included: structural measures to protect U.S. Route 1 only, nonstructural measures to protect critical infrastructure only, nonstructural measures to protect development centers only, multiple combinations of these alternatives, and the No Action Alternative.

The Proposed Action is Alternative 7, which is a combination of structural measures to protect U.S. Route 1, and nonstructural measures to protect both critical infrastructure and development centers. Nonstructural measures reduce the consequences of coastal storms on a structure instead of reducing the risk and/or probability of the flooding caused by storm surge. More specifically, Alternative 7 includes: six proposed riprap revetments along sections of U.S. Route 1; floodproofing for critical infrastructure; and elevation and acquisition/relocation for residential properties.

An electronic copy of the Draft IFR/EIS is available for public review at the USACE website https://www.saj.usace.army.mil/FloridaKeysCSRMFeasibilityStudy/. Hard copies can be made available if necessary.

In addition, you are invited to participate in a virtual public meeting for the release of the document. Two identical virtual meetings will be held July 8, 2020, from 1-3 p.m. and July 13, 2020, from 5-7 p.m. To participate, log in at: https://usace.webex.com/meet/alicia.m.logalbo. For the audio portion, please call 877-336-1829, access code: 9556794, security code: 1234. If the line is full, please call 888-363-4749, access code: 5073286, security code: 1234. There will be a powerpoint presentation followed by a Questions and Answers session. Virtual office hours will also be available using the same webex and audio, on July 9, 2020, 1-2 p.m. and July 14, 2020, 5-6 p.m.

Please note that pursuant to the Coastal Zone Management Act, the Draft Federal Consistency Determination is included Environmental Appendix, Appendix D, Sub-Appendix C, and is being officially submitted for your review.

A 45-day public comment period is being held to receive comments on the Draft IFR/EIS, Federal, state, and local agencies and tribal governments and the public are invited to comment on the Draft IFR/EIS. Please include any comments you have pursuant to the NEPA, CZMA, and to the Fish and Wildlife Coordination Act. Please submit all comments on the Draft IFR/EIS by the 60-day deadline for CZMA review, **August 27, 2020**, via mail or email to me, at

Floridakeys@usace.army.mil or Kathy Perdue, U.S. Army Corps of Engineers, 803 Front Street, Norfolk, Virginia 23510. You may also contact me with any questions at (757) 201-7218.

Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

Florida Coastal Zone Management Program Evaluation Procedures
Federal Consistency Determination (FCD)

Florida Keys Coastal Storm Risk Management Project in
Monroe County, Florida

June 2020

Enforceable Policy. Florida Statutes considers "enforceable policy" under the Coastal Zone Management Act (www.dep.state.fl.us/cmp/federal/24_statutes.htm).

Applicability of the Coastal Zone Management Act. The following table summarizes the process and procedures under the Coastal Zone Management Act for federal actions and for non-federal applicants*.

Enforceable Policies	Reviewed and approved by NOAA (in FL www.dep.state.fl.us/cmp/federal/24_statutes.htm)	Same
Effects Test	Direct, Indirect (cumulative, secondary), adverse or beneficial	Same
Review Time	6 months from state receipt of Consistency Certification (30-days for completeness notice) Can be altered by written agreement between state and applicant	60 Days, extendable (or contractible) by mutual agreement
Consistency	Must be Fully Consistent	To Maximum Extent Practicable**
Procedure Initiation	Applicant provides Consistency Certification to state	Federal Agency provides "Consistency Statement" to state
Appealable	Yes, applicant can appeal to Secretary (NOAA)	No (NOAA can "mediate")
Activities	Listed activities with their geographic location (State can request additional listing within 30 days)	Listed or Unlisted Activities in State Program
Activities in Another State	Must have approval for interstate reviews from NOAA	Interstate review approval NOT required
Activities in Federal Waters	Yes, if activity affects state waters	Same

* There are separate requirements for activities on the Outer Continental Shelf (subpart E) and for "assistance to an applicant agency" (subpart F).
** Must be fully consistent except for items prohibited by applicable law (generally does not count lack of funding as prohibited by law, 15 CFR 930.32).

Coastal Zone Consistency Statement by Statute/Enforceable Policy

1. CHAPTER 161, F.S., BEACH AND SHORE PRESERVATION.

Coastal areas are among the state's most valuable natural, aesthetic, and economic resources. The state is required to protect coastal areas from imprudent activities that could jeopardize the stability of the beach-dune system, accelerate erosion, provide inadequate protection to upland structures, endanger adjacent properties, or interfere with public beach access. Coastal areas used, or likely to be used, by sea turtles are designated for nesting, and the removal of vegetative cover that binds sand is prohibited. This statute provides policy for the regulation of construction, reconstruction, and other physical activities related to the beaches and shores of the state. Additionally, this statute requires the restoration and maintenance of critically eroding beaches.

RESPONSE: The purpose of this study is to develop and evaluate coastal storm risk management (CSRM) measures for the Florida Keys, Monroe County, Florida residents, industries, and businesses, some of which are critical to the regional and national economy. Monroe County, Florida is the non-Federal sponsor (NFS) for this study.

The TSP/Preferred alternative consists of structural and nonstructural measures to include:

Structural

Shoreline stabilization is proposed in six locations along U.S. 1 (Overseas Highway) that were identified as having risk of damage due to erosion and/or wave energy during a storm event. Rock revetment structures were designed in six areas along Route 1 to reduce damage to the roadway by stabilizing the shoreline and reducing the risk of washout. Living shoreline and/or mangrove restoration may also be incorporated in conjunction with the shoreline stabilization in the six revetment areas if conditions are favorable for the survival of the natural features and additional analysis shows they would provide measurable CSRM benefit. The six locations are: West Summerland Key (Mile Marker 34.5), Bahia Honda Key (Mile Marker 37), Long Key (Mile Marker 67), Fiesta Key East (Mile Marker 70), Fiesta Key West (Mile Marker 70.5), and Indian Key Fill (79.5). None of these revetments are in the water. These revetments will also have temporary staging areas that are on dry land.

The proposed revetment at Long Key State Park is along a beach. An estimated 15,000 square feet of land will be permanently modified for the installation of the revetment, and much of this area is vegetated with herbaceous and short, scrubby shoreline species. The wrackline debris would also be permanently displaced; it would fall along the revetment rather than along a beach, making it less useable for foraging or loafing habitat for shorebirds. There will be approximately 1.25 acre of temporary impacts adjacent to the revetment location for staging and construction access that would be restored following construction.

FDEP's Department of Parks and Recreation (DPR) expressed concerns about these beach impacts in their comments to USACE. Specifically, DPR indicated that it prefers no hard structures in the Long Key State Park, and that a planting plan is being developed for this area.

However, if agreeable to the Park, its planting plan could be supplemented with a USACE upland dune vegetation mitigation plan to replace the impacted dune vegetation. USACE will coordinate again with the DPR during the PED phase to determine what work has already been undertaken by DPR at this location, and to minimize adverse effects to it. This also is discussed more in the Mitigation Plan section of the Environmental Appendix, Appendix D.

The Preferred Alternative would result in both indirect and direct, temporary and permanent, adverse impacts on the beach and its vegetation. Similarly, localized maintenance, as repairs will be needed over time. The effects can be considered minor to moderate, but not significant, because the noise and construction activity would be temporary. Also, suitable beach foraging areas will remain outside of the revetment footprint and area to be affected by construction noise and disturbance. A permit will be required per this statute and all permit conditions, including best management practices would be followed.

Nonstructural

Nonstructural measures include elevating approximately 9,100 residences, and acquiring approximately 250 residences, and floodproofing approximately 1,000 nonresidential structures. These would be in locations most vulnerable to coastal storm risk flooding throughout the Florida Keys. The locations for the non-structural features of the Tentatively Selected Plan (TSP)/Preferred Alternative are still being refined.

Natural and Nature-Based Features

The potential natural and nature-based features (NNBF) originally included a wide array of options that were under evaluation. Eight locations were considered, however, they were screened out either due to unsuitable site conditions (too deep, hardbottom present, or mangroves already present). The Florida Keys National Marine Sanctuary (FKNMS) had recommended restoring or improving tidal flushing in areas that have die-back of mangrove communities, particularly in Bahia Honda State Park and Long Key State Park. However, further research, engineering, and economic analysis would need to be done in order to determine whether this would be feasible and economically justified.

As of this writing, we have not identified any economically justified locations or measures; however USACE may consider further recommendations for mangrove restoration as well as restoration of other native vegetative species, during the optimization process of this study.

Critical Infrastructure

Coastal storm risk reduction to vulnerable critical infrastructure was analyzed throughout the Florida Keys. Critical Infrastructure asset categories included were fire stations, medical facilities, police stations, evacuation centers, wastewater and potable water facilities, Emergency Operation Center facilities, vulnerable airport facilities, and railway electrical substations. Floodproofing was the recommended method of flood risk reduction provided to critical infrastructure.

The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

2. CHAPTER 163, PART II, F.S., INTERGOVERNMENTAL PROGRAMS: GROWTH POLICY; COUNTY AND MUNICIPAL PLANNING: LAND DEVELOPMENT REGULATION

The purpose of this statute is to provide for the implementation of comprehensive planning programs to guide and control future development in the state. The comprehensive planning process encourages units of local government to preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare; prevent the overcrowding of land and avoid undue concentration of population; facilitate the adequate and efficient provision of public facilities and services; and conserve, develop, utilize, and protect natural resources within their jurisdictions.

RESPONSE: The Preferred Alternative will be subject to the requirements of the Coastal Barrier Resources Act (CBRA) requirements, where applicable. No federal expenditure of money for coastal storm risk management would be allowed in areas subject to CBRA, without an exemption. Coordination with USFWS is ongoing. In addition, Monroe County has implemented a building moratorium for the Florida Keys, beginning in 2026. This would mean less future land use for residential and commercial development, and preservation of remaining open space.

Pursuant to the National Environmental Protection Act (NEPA), the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan throughout its goals to provide greater protection of critical infrastructure in the study area, increase public safety through the greater protection of Florida Keys residents and businesses through flood protection measures, among other improvements that are in support of this statute which are described in detail in the draft environmental impact statement (DEIS). The proposed project is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

3. CHAPTER 186, F.S., STATE AND REGIONAL PLANNING

The state comprehensive plan provides basic policy direction to all levels of government regarding the orderly social, economic, and physical growth of the state. The goals, objectives, and policies of the state comprehensive plan are statewide in scope and are consistent and compatible with each other. The statute provides direction for the delivery of governmental services, a means for defining and achieving the specific goals of the state, and a method for evaluating the accomplishment of those goals.

RESPONSE: Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan, as described in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

4. CHAPTER 252, F.S., EMERGENCY MANAGEMENT

The state of Florida is vulnerable to a wide range of emergencies, including natural, technological, and manmade disasters. This vulnerability is exacerbated by the tremendous

growth in the state's population. This statute directs the state to reduce the vulnerability of its people and property to natural and manmade disasters; prepare for, respond to and reduce the impacts of disasters; and decrease the time and resources needed to recover from disasters.

Disaster mitigation is necessary to ensure the common defense of Floridians' lives and to protect the public peace, health, and safety. The policies provide the means to assist in the prevention or mitigation of emergencies that may be caused or aggravated by the inadequate planning or regulation. State agencies are directed to keep land uses and facility construction under continuing study and identify areas that are particularly susceptible to natural or manmade catastrophic occurrences.

RESPONSE: The proposed plans and information will be submitted to the state in compliance with this chapter. The purpose of this study is to develop and evaluate CSRM measures for the Florida Keys residents, industries, and businesses, some of which are critical to the regional and national economy.

The Preferred Action would have permanent direct and indirect beneficial effects for transportation, that are minor to moderate, through the protection of vulnerable sections of US Route 1 from erosional damage due to coastal storms and SLR. This is crucial, as US Route 1 is both the only transportation network connecting all of the inhabited Florida Keys and the only land evacuation route from the Keys.

Pursuant to the National Environmental Protection Act (NEPA), the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Inter-agency coordination is ongoing throughout this study and includes representatives from the Federal Emergency Management Agency (FEMA), the Florida Department of Environmental Management (FDEM), Monroe County emergency management departments as well as that of municipalities within Monroe County, among others. The proposed project meets the goals of the State Comprehensive Plan, as described in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

5. CHAPTER 253, F.S., STATE LANDS

The Board of Trustees of the Internal Improvement Trust Fund (Trustees) is vested and charged with the acquisition, administration, management, control, supervision, conservation, protection, and disposition of all lands owned by the state. Lands acquired for preservation, conservation and recreation serve the public interest by contributing to the public health, welfare and economy. In carrying out the requirements of this statute, the Trustees are directed to take necessary action to fully: conserve and protect state lands; maintain natural conditions; protect and enhance natural areas and ecosystems; prevent damage and depredation; and preserve archaeological and historical resources.

All submerged lands are considered single-use lands to be maintained in natural condition for the propagation of fish and wildlife and public recreation. Where multiple-uses are permitted, ecosystem integrity, recreational benefits and wildlife values are conserved and protected.

RESPONSE: The purpose of this study is to develop and evaluate coastal storm risk management (CSRM) measures for Miami-Dade County, Florida residents, industries, and businesses, some of which are critical to the regional and national economy. The TSP/Preferred alternative consists of structural and nonstructural measures as detailed in #1 above as well as in detail in the DEIS.

The proposed revetment at Long Key State Park is along a beach. An estimated 15,000 square feet of land will be permanently modified for the installation of the revetment, and much of this area is vegetated with herbaceous and short, scrubby shoreline species. The proposed revetment would make it less useable for foraging or loafing habitat for shorebirds, as well as for public recreation. There will be approximately 1.25 acre of temporary impacts adjacent to the revetment location for staging and construction access that would be restored following construction.

FDEP's Department of Parks and Recreation (DPR) expressed concerns about these beach impacts in their comments to USACE. Specifically, DPR indicated that it prefers no hard structures in the Long Key State Park, and that a planting plan is being developed for this area. However, if agreeable to the Park, its planting plan could be supplemented with a USACE upland dune vegetation mitigation plan to replace the impacted dune vegetation. The Corps would be required to obtain a permit and a letter of recommendation from the FDEP's DPR. This also is discussed more in the Mitigation Plan section of the Environmental Appendix, Appendix D.

The revetment originally proposed within Bahia Honda State Park has now been shifted upslope and outside of the confines of the park; therefore this revetment should not affect the park.

The revetment proposed at Indian Key Fill is owned by both FDEP's DPR and FDOT, and is used by the public for recreation. As one of the few locations on the Keys where visitors can park and obtain free access to the water, the Indian Key Fill islands serve as gathering places for visitors wanting to spend leisure time near the water, wade, swim, fish, or put canoes or kayaks in the water. At least a portion of this upland area would have to be closed to the public temporarily during construction for safety. There are two other sections of Indian Key Fill to the southwest of this location that are similarly used for public recreation, and the public could still use those during construction. This alternative would have a direct and indirect, minor temporary impact on recreation.

The Overseas Trail, which parallels U.S. Route 1, have been damaged and unusable since Hurricane Irma in September 2017, is also a State Land of the FDEP's DPR. The proposed revetments cannot permanently displace any sections of the trail, and therefore would have no direct, permanent adverse impact on the Overseas Trail itself. However, sections of the trail will likely have to be closed during the construction window at these three locations, which is expected

to take approximately 4-5 months at each location. However, trail users still could divert around the construction and use open sections of the trail. Once construction is complete, the revetments would provide added permanent erosion protection for the trails and the roadway itself. For the locations where the revetments are within the FDEP's DPR trail property, a permit would be required from the DPR for the permanent riprap encroachment.

Environmental protection measures, as described in detail in the DEIS, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, threatened and endangered (T&E) species, water quality, air quality, or other environmental resources. Consultation on the TSP/Preferred Alternative is ongoing with the Florida State Historic Preservation Office (SHPO) and appropriate federally-recognized tribes for compliance with Section 106 of the National Historic Preservation Act for the Federal portions of the project.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The Corps will coordinate the project with the State of Florida through the issuance of a water quality certification (WQC), Federal Consistency Determination (FCD) review, and/or the review process of the DEIS. Coordination would also continue with the Florida Department of Environmental Protection's Division of Parks and Recreation. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized. The proposed project complies with the goals of this chapter.

6. CHAPTER 258, F.S., STATE PARKS AND PRESERVES

The statute addresses the state's administration of state parks, aquatic preserves, and recreation areas, which are acquired to emblemize the state's natural values and to ensure that these values are conserved for all time. Parks and preserves are managed for the non-depleting use, enjoyment, and benefit of Floridians and visitors and to contribute to the state's tourist appeal.

Aquatic Preserves are recognized as having exceptional biological, aesthetic, and scientific value and are set aside for the benefit of future generations. Disruptive physical activities and polluting discharges are highly restricted in aquatic preserves. State managed wild and scenic rivers possess exceptionally remarkable and unique ecological, fish and wildlife, and recreational values. These rivers are also designated for permanent preservation and enhancement for both the present and future.

RESPONSE: Please see the response to #5, above.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in the DEIS, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, T&E species, water quality, air quality, or other environmental resources. The project will also occur within the Biscayne Bay Aquatic Preserve, the extent and/or potential footprint and exact siting is still being

evaluated and will be determined during the PED Phase. The Corps will coordinate the project with the State of Florida through the issuance of a WQC, FCD review, and/or the review process of DEIS. Coordination will also continue with the FDEP's DCR. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized. The proposed project complies with the goals of this chapter.

7. CHAPTER 259, F.S., LAND ACQUISITION FOR CONSERVATION OR RECREATION

The statute addresses public ownership of natural areas for purposes of maintaining the state's unique natural resources; protecting air, land, and water quality; promoting water resource development to meet the needs of natural systems and citizens of this state; promoting restoration activities on public lands; and providing lands for natural resource based recreation. Lands are managed to protect or restore their natural resource values, and provide the greatest benefit, including public access, to the citizens of this state.

RESPONSE: Please see the response to the response to #5 and 6 above.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in the DEIS, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, T&E species, water quality, air quality, or other environmental resources. The Corps will coordinate the project with the State of Florida through the issuance of a WQC, FCD review, and/or the review process of DEIS. Coordination will also continue with the FDEP's DCR. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized. The proposed project complies with the goals of this chapter.

8. CHAPTER 260, F.S., FLORIDA GREENWAYS AND TRAILS ACT

A statewide system of greenways and trails is established in order to conserve, develop, and use the natural resources of Florida for healthful and recreational purposes. These greenways and trails provide open space benefiting environmentally sensitive lands and wildlife and provide people with access to healthful outdoor activities. The greenways and trails serve to implement the concepts of ecosystem management while providing recreational opportunities such as horseback riding, hiking, bicycling, canoeing, jogging, and historical and archaeological interpretation. As of August 29th, 2016, Chapter 260, F.S., does not contain any enforceable policies for federal consistency purposes.

RESPONSE: The U.S. Route 1 Overseas Trail is within the Study Area. The trail opened in 2011, and is a 90-mile-long string of pathways, bridges, and greenspaces that parallel U.S. Rt 1. The trail provides pedestrian and bicycle access to the scenic highway. Along most locations, it is separated from U.S. Route 1 by a narrow grass median; and over most of the bridges, it is within the bridge shoulder. It has the highest visitation of any state park in the Florida Keys. However, sections of the trail remain damaged and unusable as a result of Hurricane Irma in September

2017. Florida Department of Transportation (FDOT) has plans to repair numerous trail sections, including locations at West Summerland Key, Fiesta Key East and Fiesta Key West.

The Preferred Alternative revetments would not permanently displace any sections of the trail; it would have no direct, permanent adverse impact on the Overseas Trail itself. Sections of the trail will likely have to be closed during the construction window at these three locations, which is expected to take approximately 4-5 months at each location. However, once construction is complete, the revetments would provide added permanent erosion protection for the trails and the roadway itself.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan, as described in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

9. CHAPTER 267, F.S., HISTORICAL RESOURCES

The management and preservation of the state's archaeological and historical resources are addressed by this statute. This statute recognizes the state's rich and unique heritage of historic resources and directs the state to locate, acquire, protect, preserve, operate and interpret historic and archeological resources for the benefit of current and future generations of Floridians.

Objects or artifacts with intrinsic historic or archeological value located on, or abandoned on, state-owned lands or state-owned submerged lands belong to the citizens of the state. The state historic preservation program operates in conjunction with the National Historic Preservation Act of 1966 to require state and federal agencies to consider the effect of their direct or indirect actions on historic and archeological resources. These resources cannot be destroyed or altered unless no prudent alternative exists. Unavoidable impacts must be mitigated.

RESPONSE: No infrastructure facilities in the Keys have been identified as NRHP eligible, so their modifications would not cause adverse effects to historic properties. However, where measures may cause ground disturbance, archaeological survey would be needed.

In residential areas, nonstructural measures would cause significant impacts to any NRHP eligible buildings, these impacts would be primarily in the NRHP listed Key West Historic District. The most severe adverse effects would be from buyout/demolition; these should be avoided. Elevating any NRHP-eligible structure would be an adverse effect, but some designs are less so than others. Elevations may cause adverse visual effects to a historic district. Floodproofing may be adverse, or non-adverse. Dry floodproofing designs which require windows and doors to be sealed would cause adverse effects; however, wet floodproofing might use coatings which are compatible with the historic character of a building and avoid causing adverse effects.

Consultation on the Preferred Alternative is ongoing with the SHPO and appropriate federally-recognized tribes for compliance with Section 106 of the National Historic Preservation Act for the Federal portions of the project as described in detail in the DEIS. A Draft Programmatic Agreement (PA) with the Florida Division of Historic Resources (FDHR) and consulting parties, pursuant to Section 106 of the National Historic Preservation Act has been prepared. The proposed project is consistent with the goals of this chapter. The proposed plans, a copy of the PA once executed, and supplemental information will be submitted to the state in compliance with this chapter once finalized.

10. CHAPTER 288, F.S., COMMERCIAL DEVELOPMENT AND CAPITAL IMPROVEMENTS

The framework to promote and develop general business, trade, and tourism components of the state economy are established in this statute. The statute includes requirements to protect and promote the natural, coastal, historical, and cultural tourism assets of the state; foster the development of nature-based tourism and recreation; and upgrade the image of Florida as a quality destination. Natural resource-based tourism and recreational activities are critical sectors of Florida's economy. The needs of the environment must be balanced with the need for growth and economic development.

RESPONSE: The purpose of this study is to develop and evaluate coastal storm risk management (CSRM) measures for the Florida Keys residents, industries, and businesses, some of which are critical to the regional economy.

Temporary, direct and indirect, adverse effects on use of sections of the Overseas Trail, the public pier at Fiesta Key, Long Key State Park campground roadway, and Indian Key Fill beach access area, during an approximately 4-5 month construction window. However, permanent, beneficial effect due to erosion protection. Permanent adverse effect on approximately 1500 linear feet of Long Key beach. Implementation of the project components will ensure the continuation of benefits to socioeconomic resources (e.g. recreation, tourism, import/exports, etc.).

Moderate to significant permanent adverse modifications of up to 0.5 acre of American crocodile critical habitat, 0.5 acre of Cape Sable thoroughwort critical habitat, and 0.25 acre of loggerhead sea turtle critical habitat, in known turtle nesting areas. Temporary adverse modifications of up to American crocodile, piping plover Cape Sable thoroughwort and loggerhead sea turtle critical habitat. Otherwise, expected adverse effects due to climate change. Coordination with USFWS is ongoing. Environmental protection measures, as described in detail in the DEIS, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, T&E species, water quality, air quality, or other environmental resources.

Pursuant to NEPA, the proposed project is being coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

11. CHAPTER 334, F.S., TRANSPORTATION ADMINISTRATION

The statute addresses the state's policy concerning transportation administration. It establishes the responsibilities of the state, the counties, and the municipalities in the planning and development of the transportation systems; and the development of an integrated, balanced statewide transportation system. This is necessary for the protection of public safety and general welfare and for the preservation of all transportation facilities in the state. As of October 9th, 2017, Chapter 334, F.S., does not contain any enforceable policies for federal consistency purposes.

RESPONSE: The proposed plans and information will be submitted to the state in compliance with this chapter. Pursuant to the National Environmental Protection Act (NEPA), the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The purpose of this study is to develop and evaluate CSRM measures for the Florida Keys residents, industries, and businesses, some of which are critical to the regional and national economy. These improvements will include both beneficial and temporary, adverse impacts to the transportation system as described in detail in the DEIS.

Inter-agency coordination has been conducted throughout this study and includes representatives from the Florida Department of Transportation (FDOT), which is a cooperating agency for this study.

As a result of Hurricane Irma, there have been numerous washouts of the Route 1 Overseas Trail and/or the U.S. Route 1 roadway embankment along various sections of the Florida Keys. FDOT will be placing revetments or articulating block bank repairs at approximately 99 locations, including five that were deleted from our initial array of alternatives. This work includes fill and slope repairs to the Overseas Trail where needed. Specifically, West Summerland Key and Fiesta Key West and East are among the locations that FDOT intends to repair, and are near the proposed revetments. FDOT's work, although mostly small-scale operations, will also repair damaged roadway embankments and help prevent future damage. FDOT's bank work and the Preferred Alternative would be designed to enhance preservation of utility infrastructure and service, and have beneficial effects on safety and transportation.

Close collaboration and input will continue with FDOT to ensure that the proposed project is consistent with the State Comprehensive Plan and meets the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

12. CHAPTER 339, F.S., TRANSPORTATION FINANCE AND PLANNING

The statute addresses the finance and planning needs of the state's transportation system.

RESPONSE: The proposed plans and information will be submitted to the state in compliance with this chapter. Pursuant to the National Environmental Protection Act (NEPA), the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The purpose of this study is to develop and evaluate

CSRM measures for Florida Keys residents, industries, and businesses, some of which are critical to the regional and national economy. These improvements will include both beneficial and temporary, adverse impacts to the transportation system as described in detail in the DEIS.

Inter-agency coordination has been conducted throughout this study and includes representatives from the Florida Department of Transportation (FDOT), which is a cooperating agency for this study. Close collaboration and input will continue with FDOT to ensure that the proposed project is consistent with the State Comprehensive Plan and meets the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

13. CHAPTER 373, F.S., WATER RESOURCES

The waters in the state of Florida are managed and protected to conserve and preserve water resources, water quality, and environmental quality. This statute addresses sustainable water management; the conservation of surface and ground waters for full beneficial use; the preservation of natural resources, fish, and wildlife; protecting public land; and promoting the health and general welfare of Floridians. The state manages and conserves water and related natural resources by determining whether activities will unreasonably consume water; degrade water quality; or adversely affect environmental values such as protected species habitat, recreational pursuits, and marine productivity.

Specifically, under Part IV of Chapter 373, the Department of Environmental Protection, water management districts, and delegated local governments review and take agency action on wetland resource, environmental resource, and stormwater permit applications. These permits address the construction, alteration, operation, maintenance, abandonment, and removal of any stormwater management system, dam, impoundment, reservoir, or appurtenant work or works (including dredging, filling and construction activities in, on, and over wetlands and other surface waters).

RESPONSE: The waters surrounding the Florida Keys are part of the Florida Keys National Marine Sanctuary (FKNMS). The Marine Sanctuary waters are designated as an Outstanding Florida Water (OFW). However, currently, the Atlantic Ocean from Bahia Honda Key to Key West, also is on the 303(d) impaired waters list for total nitrogen levels. This waterbody is impaired for this parameter because the annual geometric means exceeded the criterion more than once in a three year period during the verified period. This parameter is being added to the Verified List and the department is requesting EPA add to the 303(d) List.

At West Summerland Key, an estimated 10,250 square feet of sea purslane and sea oxeye-dominated herbaceous wetland community behind an existing concrete seawall will be displaced for the installation of the revetment. There are also several dead mangrove and/or buttonwood individuals and an estimated 100-200 square feet of live ones in this wetland area. However, these likely can be avoided by designing the revetments to avoid them.

It should be noted, however, that at this early stage, a jurisdictional determination (JD) to identify waters of the U.S., including wetlands, has not been conducted. Instead, wetlands were spot-checked in the field. Aerial maps and National Wetland Inventory (NWI) maps were also checked to determine an estimate. As project plans and impact areas are finalized, a JD will be undertaken pursuant to the 1987 Wetland Delineation Manual and the Atlantic and Gulf Coast Regional Supplement, to ascertain the actual footprint of jurisdictional wetlands impacted by the project. This will be done in the PED phase.

There will be no in-water structure or fill impacts below mean high water (MHW).

The Uniform Mitigation Assessment Methodology (UMAM), will be utilized to determine to wetland mitigation would be required. Mitigation within the watershed, and preferably near the impact, would be done. The Environmental Mitigation Plan is found in the Environmental Appendix.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in the DEIS, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, T&E species, water quality, air quality, or other environmental resources.

USACE is coordinating the project with the State of Florida through this Draft FCD review, and/or the review process of DEIS, for the State's preliminary concurrence with respect to this FCD and the WQC. Full FCD concurrence and a final WQC would be obtained during the PED phase. A permit from FKNMS would only be required, should there be any in-water impacts below the MHW mark.

The proposed plans and information will be submitted to the state in compliance with this chapter once finalized. The proposed project complies with the goals of this chapter.

14. CHAPTER 375, F.S., OUTDOOR RECREATION AND CONSERVATION LANDS

The statute addresses the development of a comprehensive outdoor recreation plan. The purpose of the plan is to document recreational supply and demand, describe current recreational opportunities, estimate the need for additional recreational opportunities, and propose the means to meet the identified needs.

RESPONSE: The U.S. Route 1 Overseas Trail is within the Study Area. The trail opened in 2011, and is a 90-mile-long string of pathways, bridges, and greenspaces that parallel U.S. Rt 1. The trail provides pedestrian and bicycle access to the scenic highway. Along most locations, it is separated from U.S. Route 1 by a narrow grass median; and over most of the bridges, it is within the bridge shoulder. It has the highest visitation of any state park in the Florida Keys. However, sections of the trail remain damaged and unusable as a result of Hurricane Irma in September 2017. FDOT has plans to repair numerous trail sections, including locations at West Summerland Key, Fiesta Key East and Fiesta Key West.

The Preferred Alternative revetments would not permanently displace any sections of the trail; it would have no direct, permanent adverse impact on the Overseas Trail itself. Sections of the trail

will likely have to be closed during the construction window at these three locations, which is expected to take approximately 4-5 months at each location. However, once construction is complete, the revetments would provide added permanent erosion protection for the trails and the roadway itself.

The proposed revetment at Long Key State Park is along a beach. An estimated 15,000 square feet of land will be permanently modified for the installation of the revetment, and much of this area is vegetated with herbaceous and short, scrubby shoreline species. The wrackline debris would also be permanently displaced; it would fall along the revetment rather than along a beach, making it less useable for foraging or loafing habitat for shorebirds. There will be approximately 1.25 acre of temporary impacts adjacent to the revetment location for staging and construction access that would be restored following construction.

FDEP's Department of Parks and Recreation (DPR) expressed concerns about these beach impacts in their comments to USACE. Specifically, DPR indicated that it prefers no hard structures in the Long Key State Park, and that a planting plan is being developed for this area. However, if agreeable to the Park, its planting plan could be supplemented with a USACE upland dune vegetation mitigation plan to replace the impacted dune vegetation. USACE will coordinate with the DPR during the PED phase, to determine what work has been undertaken by the DPR, and to avoid and minimize impacts on it. This also is discussed more in the Mitigation Plan section of the Environmental Appendix, Appendix D.

The Preferred Alternative would result in both indirect and direct, temporary and permanent, adverse impacts on the beach and its vegetation. Similarly, localized maintenance, as repairs will be needed over time. The effects can be considered minor to moderate, but not significant, because the noise and construction activity would be temporary. Also, suitable beach foraging areas will remain outside of the revetment footprint and area to be affected by construction noise and disturbance. A permit will be required per this statute and all permit conditions, including best management practices would be followed.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan, as described in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

15. CHAPTER 376, F.S., POLLUTANT DISCHARGE PREVENTION AND REMOVAL

Regulating the transfer, storage, and transportation of pollutants, and the cleanup of pollutant discharges is essential for maintaining coastal resources (specifically the coastal waters, estuaries, tidal flats, beaches, and public lands adjoining the seacoast) in as close to a pristine condition as possible. The preservation of the seacoast as a source of public and private recreation, along with the preservation of water and certain lands are matters of the highest urgency and priority.

This statute provides a framework for the protection of the state's coastline from spills, discharges, and releases of pollutants. The discharge of pollutants into or upon any coastal

waters, estuaries, tidal flats, beaches, and lands adjoining the seacoast of the state is prohibited. The statute provides for hazards and threats of danger and damages resulting from any pollutant discharge to be evaluated; requires the prompt containment and removal of pollution; provides penalties for violations; and ensures the prompt payment of reasonable damages from a discharge.

Portions of Chapter 376, F.S., serve as a complement to the national contingency plan portions of the federal Water Pollution Control Act.

RESPONSE: The proposed project does not involve the transportation or discharge of pollutants. The contract specifications will be written to prohibit the contractor from dumping oil, fuel, or hazardous wastes in the work area and will include conditions on how to handle inadvertent spills of pollutants, such as vehicle fuels. A spill prevention plan will be required of the contractor.

With respect to the six revetment locations for the Preferred Alternative, there are no known industrial activities produce hazardous, toxic, and/or radioactive wastes adjacent to the project sites; no known industrial activities discharge effluents near the shoreline; and no known records of such past activities exist. There also was no evidence noted of any of these contaminants during a site visit in December 2019. Therefore, no temporary or permanent adverse effects caused by HRTW would be expected to occur as a result of implementing this alternative.

The Preferred Alternative involves disturbance to existing structures of varying ages; therefore, the potential exists for some structures to contain lead-based pain (LBP), asbestos containing materials (ACM), or polychlorinated biphenols (PCBs). As a result, a Phase 1 Environmental Site Assessment should be conducted for any affected structure constructed prior to 1978. If any such contaminants are found, the construction contract must include procedures for the lawful demolition, removal, and disposal of such wastes. With this stipulation, there would be negligible adverse permanent and minor adverse temporary impacts on HRTW. Also, there would be no pollutants discharged into waterways.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan, as described in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

16. CHAPTER 377, F.S., ENERGY RESOURCES

The statute addresses the regulation, planning, and development of the energy resources of the state. The statute provides policy to conserve and control the oil and gas resources in the state, including products made therefrom and to safeguard the health, property and welfare of Floridians. The Department of Environmental Protection (DEP) is authorized to regulate all phases of exploration, drilling, and production of oil, gas, and other petroleum products in the state.

The statute describes the permitting requirements and criteria necessary to drill and develop for oil and gas. DEP rules ensure that all precautions are taken to prevent the spillage of oil or any other pollutant in all phases of extraction and transportation. The state explicitly prohibits pollution resulting from drilling and production activities. No person drilling for or producing oil, gas, or other petroleum products may pollute land or water; damage aquatic or marine life, wildlife, birds, or public or private property; or allow any extraneous matter to enter or damage any mineral or freshwater-bearing formation.

Penalties for violations of any provisions of this chapter are detailed.

RESPONSE: The proposed project does not involve the development of energy resources.

17. CHAPTER 379, F.S., FISH AND WILDLIFE CONSERVATION

The framework for the management and protection of the state of Florida's wide diversity of fish and wildlife resources are established in this statute. It is the policy of the state to conserve and wisely manage these resources. Particular attention is given to those species defined as being endangered or threatened. This includes the acquisition or management of lands important to the conservation of fish and wildlife.

This statute contains specific provisions for the conservation and management of marine fisheries resources. These conservation and management measures permit reasonable means and quantities of annual harvest (consistent with maximum practicable sustainable stock abundance) as well as ensure the proper quality control of marine resources that enter commerce.

Additionally, this statute supports and promotes hunting, fishing and the taking of game opportunities in the State. Hunting, fishing, and the taking of game are considered an important part in the state's economy and in the conservation, preservation, and management of the state's natural areas and resources.

RESPONSE: Pursuant to Section 7 of the Endangered Species Act, the Corps is coordinating with the U.S. Fish and Wildlife Service (USFWS) for the placement of the revetments. Detailed analysis of the Corps' effect determinations are in Chapter 8, Section 8.14 of the DEIS, and the Draft Biological Assessment in, Environmental Appendix, Appendix D.

The nonstructural measures are not expected to affect listed species; however, the revetment at Long Key State Park in particular is approximately 1500 linear feet along a beach shore, and would adversely affect known loggerhead turtle nesting habitat and shorebird foraging and loafing areas. Detailed analysis of the Corps' effect determinations are in Chapter 8 of the 2020 Draft EIS. The Corps' Biological Assessment is located in the Draft EIS Environmental Appendix, Appendix D.

A summary of the Corps' effect determinations as well as coordination and consultation with USFWS are included below:

The Preferred Alternatives would have potential impacts to federally listed species under the jurisdiction of USFWS include: Loggerhead sea turtle (nesting habitat), piping plover, rufa red knot, roseate tern, Cape Sable Thoroughwort, with an effect determination of may affect, likely to adversely affect. There will be moderate to potentially significant permanent adverse modifications of up to 0.5 acre of American crocodile critical habitat, approximately 0.5 acre of Cape Sable thoroughwort critical habitat, and approximately 0.25 acre of loggerhead sea turtle critical habitat, in known turtle nesting areas. Formal consultation with USFWS is ongoing.

The Preferred Alternative would have potential impacts to the Green sea turtle, hawksbill sea turtle, leatherback sea turtle, American alligator, American crocodile, under the jurisdiction of the USFWS could occur with an effect determination of may affect, not likely to adversely affect. Coordination with USFWS for concurrence with this effect determination is ongoing.

The Preferred Alternative does not include in-water structures or fills. It will have no effect on Nassau Grouper, Smalltooth Sawfish, Oceanic Whitetip Shark, Giant Manta Ray, Pillar Coral, Rough Cactus Coral, Lobed Star Coral, Boulder Star Coral, Mountainous Star Coral. Elkhorn Coral, Staghorn Coral, Kemps ridley sea turtle, fisheries, and benthics.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in the DEIS, will be implemented to minimize adverse effects to the maximum extent practicable to T&E species as well as fish and other wildlife resources. The project is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

18. CHAPTER 380, F.S., LAND AND WATER MANAGEMENT

Land and water management policies are established to protect natural resources and the environment; and to guide and coordinate local decisions relating to growth and development. The statute provides that state land and water management policies be implemented by local governments through existing processes for the guidance of growth and development. The statute also provides that all the existing rights of private property be preserved in accord with constitutions of this state and of the United States.

The chapter establishes the Areas of Critical State Concern designation, the Florida Communities Trust as well as the Florida Coastal Management Act. The Florida Coastal Management Act provides the basis for the Florida Coastal Management Program which seeks to protect the natural, commercial, recreational, ecological, industrial, and aesthetic resources of Florida's coast.

RESPONSE: The Preferred Alternative will be subject to the requirements of the Coastal Barrier Resources Act (CBRA) requirements, where applicable. No federal expenditure of money for coastal storm risk management would be allowed in areas subject to CBRA, without an exemption. Coordination with USFWS is ongoing. In addition, Monroe County has implemented

a building moratorium for the Florida Keys, beginning in 2026. This would mean less future land use for residential and commercial development, and preservation of remaining open space.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan, as described in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

19. CHAPTER 381, F.S., PUBLIC HEALTH: GENERAL PROVISIONS

The statute establishes public policy concerning the state's public health system, which is designated to promote, protect, and improve the health of all people in the state.

RESPONSE: The state's public health system will be improved by the proposed project through the protection of critical infrastructure within the study area. The proposed project meets the goals of the State Comprehensive Plan throughout its goals to provide greater protection of critical infrastructure in the study area, increase public safety through the greater protection of Monroe County residents and businesses through flood protection measures, among other improvements that are in support of this statute which are described in detail in the DEIS. Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

20. CHAPTER 388, F.S., MOSQUITO CONTROL

Mosquito control efforts of the state are to achieve and maintain such levels of arthropod control as will protect human health and safety; promote the economic development of the state; and facilitate the enjoyment of its natural attractions by reducing the number of pestiferous and disease-carrying arthropods.

It is the policy of the state to conduct arthropod control in a manner consistent with protection of the environmental and ecological integrity of all lands and waters throughout the state.

RESPONSE: The proposed project will not further the propagation of mosquitoes or other pest arthropods. The proposed project is consistent with the goals of this chapter.

21. CHAPTER 403, F.S., ENVIRONMENTAL CONTROL

Environmental control policies conserve state waters; protect and improve water quality; and maintain air quality. This statute provides wide-ranging authority to address various environmental control concerns, including air and water pollution; electrical power plant and transmission line siting; the Interstate Environmental Control Compact; resource recovery and management; solid and hazardous waste management; drinking water protection; pollution prevention; ecosystem management; and natural gas transmission pipeline siting.

RESPONSE: Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in the 2019 EA, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, T&E species, water quality, air quality, or other environmental resources. The proposed project meets the goals of the State Comprehensive Plan, as described herein and in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

22. CHAPTER 553, F.S., BUILDING AND CONSTRUCTION STANDARDS

The statute addresses building construction standards and provides for a unified Florida Building Code.

RESPONSE: The proposed project will ensure that all building construction standards are developed in accordance with this statute and the Florida Building Code. The proposed project meets the goals of the State Comprehensive Plan, as described in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

23. CHAPTER 582, F.S., SOIL AND WATER CONSERVATION

It is the state's policy to preserve natural resources; control and prevent soil erosion, prevent floodwater and sediment damages; and to further the conservation, development and use of soil and water resources.

Farm, forest, and grazing lands are among the basic assets of the state; and the preservation of these lands is necessary to protect and promote the health, safety, and general welfare of its people.

These measures help to preserve state and private lands, control floods, maintain water quality, prevent impairment of dams and reservoirs, assist in maintaining the navigability of rivers and harbors, preserve wildlife and protect wildlife habitat, protect the tax base, protect public lands, and protect and promote the health, safety, and general welfare of the people of this state.

RESPONSE: The project is not located on or near agricultural lands. It also will have include any in-water structures or fills. The proposed project will include appropriate erosion and sediment control plans and measures where applicable. Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project meets the goals of the State Comprehensive Plan, as described in detail in the DEIS, and is consistent with the goals of this chapter. The proposed plans and information will be submitted to the state in compliance with this chapter once finalized.

24. CHAPTER 597, F.S., AQUACULTURE

The statute establishes public policy concerning the cultivation of aquatic organisms in the state. The intent is to enhance the growth of aquaculture, while protecting Florida's environment. This includes a requirement for a state aquaculture plan which provides for: the coordination and prioritization of state aquaculture efforts; the conservation and enhancement of aquatic resources; and mechanisms for increasing aquaculture production.

RESPONSE: The proposed project does not include aquaculture.

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Environmental Mitigation Plan

Norfolk District
803 Front Street
Norfolk, Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

PRELIMINARY DRAFT
ENVIRONMENTAL MITIGATION PLAN

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT

MONROE COUNTY, FLORIDA

April 2020

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TABLE OF CONTENTS

1.0 PURPOSE OF THIS DOCUMENT AND MITIGATION OBJECTIVES 4

2.0 PURPOSE AND NEED FOR THE PROPOSED ACTION..... 4

3.0 ENVIRONMENTAL MITIGATION REQULATORY BACKGROUND 4

4.0 DESCRIPTION OF THE PREFERRED ALTERNATIVE, ALTERNATIVE 7 6

5.0 SCREENING OF ALTERNATIVES, ALTERNATIVE CONSIDERED BUT ELIMINATED, AND SELECTION OF THE PREFERRED ALTERNATIVE 8

6.0 DESCRIPTION OF PROJECT, PROJECT SITE, AND IMPACT ANALYSIS 8

7.0 COMPENSATORY WETLAND MITIGATION FUNCTIONAL ANALYSIS AND MITIGATION REQUIREMENTS 2

8.0 POTENTIAL MITIGATION STRATEGIES/ALTERNATIVES 2

9.0 SITING OF ONSITE COMPENSATORY MITIGATION SITES 3

10.0 RECOMMENDED MITIGATION PLAN ALTERNATIVE AND JUSTIFICATION OF THE SELECTED MITIGATION PLAN ALTERNATIVE 10

11.0 COSTS OF MITIGATION STRATEGY/COST SHARE OF RECOMMENDED MITIGATION PLAN ALTERNATIVE.....10

12.0 PROJECTED LERRD NEED OF COMPENSATORY MITIGATION.....10

1.0 PURPOSE OF THIS DOCUMENT AND MITIGATION OBJECTIVES

The purpose of this document is to describe the strategy for determining the type and quantity of compensatory mitigation required for implementation of the Preferred Alternative, Alternative 7, for the Florida Keys Coastal Storm Risk Management (CSRM) Integrated Feasibility Report and Environmental Impact Statement (IFR/EIS). This document also serves to describe the mitigation strategies and alternatives that were considered, and the functional model used to assess functional resource loss requiring mitigation.

The compensatory mitigation objectives for the Florida Keys CSRM Project are the following:

- Describe the methodology that will be used to estimate the functional loss of unavoidable impacts to herbaceous wetlands with implementation of the Preferred Alternative, Alternative 7;
- Describe the methodology that will be used to estimate the functional loss of unavoidable impacts to herbaceous upland beach dune species;
- Identify potential environmental mitigation plan alternatives that compensate for the functional loss of herbaceous wetlands and vegetated beach dunes;
- Identify the most cost-effective compensatory mitigation alternative that strategizes to identify and implement the most cost-effective mitigation plan while also meeting all environmental mitigation requirements; and
- Describe required real estate needs, in terms of labor and lands, easements, rights of way, and relocations (LERRDs) to implement the preferred environmental mitigation alternative.

This document is meant to describe the environmental mitigation strategy and would be updated during the Preconstruction, Engineering, and Design (PED) Phase of the project when the final siting of structures and engineering designs are provided and the quantity and type of required environmental mitigation as well as real estate acquisitions are finalized.

It is important to note that at this time that the wetland impacts are estimated. A wetland jurisdictional determination and a final project footprint would be required to ascertain the full limits of wetland impacts requiring mitigation. Therefore, the amount of mitigation needed may change from what is estimated in this document also.

2.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

The U.S. Army Corps of Engineers (USACE) is the lead federal agency for this project and the Monroe County is the non-federal sponsor for the project. The study serves to identify and evaluate potential coastal storm risk management measures for the Florida Keys, Monroe County. These measures will be formulated to reduce risk to residents, industries, and businesses which are critical to the nation's economy. For a detailed description of the purpose and need for the proposed action, please refer to the draft Florida Keys CSRM IFR/EIS.

3.0 ENVIRONMENTAL MITIGATION REQULATORY BACKGROUND

Federal Mitigation Requirements

This document has been drafted in accordance with Section 2036a of Water Resources Development Act (WRDA) of 2007, which requires the development of a wetland compensatory mitigation plan that includes objectives, a description of the plan to be undertaken to mitigate fish, wildlife or wetland losses, the type of habitat to be restored, costs, a monitoring plan, ecological success criteria, and a contingency or adaptive management plan.

In addition, the USACE and U.S. Environmental Protection Agency (USEPA) published regulations entitled, "Compensatory Mitigation for Losses of Aquatic Resources" (Mitigation Rule) on April 10, 2008. One of the primary goals of these regulations (33 Code of Federal Regulation (CFR) Parts 325 and 332) was to improve the quality and success of compensatory mitigation plans that are designed to offset impacts to aquatic resources. The Mitigation Rule emphasizes the strategic selection of mitigation sites on a watershed basis and established equivalent standards for all types of compensatory mitigation (mitigation banks, in-lieu fee programs, and permittee-responsible mitigation plans). Per these regulations, compensatory mitigation means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of wetlands and special aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. The three mechanisms for providing compensatory mitigation listed in order of preference as stated in the Mitigation Rule are the following: mitigation banks, in-lieu fee programs, and permittee-responsible mitigation. Compensatory mitigation is necessary to offset these unavoidable impacts to aquatic resource functions and services and to meet the programmatic goal of "no overall net loss" of aquatic resource functions and services.

State Mitgation Requirements

The State of Florida Administrative Code and Register, Rule 62-312.450, states, "Notwithstanding any of the prohibitions contained in this rule, the Florida Department of Environment Protection (FDEP) shall consider mitigation pursuant to Section 373.414(1)(b), Florida Statute (FS), and applicable Department (FDEP) rules to determine whether a project may otherwise be permittable. In any application for mitigation, the applicant shall demonstrate before issuance of any permit for the construction of the intended project that the proposed mitigation will be effective.

Florida Statutes (F.S.), Chapter 161, Part I Section 161.053 establishes the "Coastal Construction Control Line (CCCL)" as that portion of the beach and dune system subject to severe fluctuations based on a 100-year storm event and establishes the landward limit of jurisdiction of the Department of Environmental Protection (DEP) along sandy beaches of the State along the Gulf of Mexico, the Atlantic Ocean, and the Straits of Florida. Unless otherwise exempt, a permit is required from FDEP for construction and excavation activities channelward of the CCCL. The CCCL is not a channelward limit for construction of upland structures (as in a setback line), but is an area wherein special siting and design considerations are required to protect the beach-dune system, proposed or existing structures, adjacent properties, public beach access, native salt-tolerant coastal vegetation, and marine turtles. On sandy beach areas where no CCCL has been established pursuant to Section 161.053, Florida Statutes (F.S.), coastal construction is prohibited

within 50 feet of the line of mean high water (MHW) unless authorized by waiver or variance of the setback requirements pursuant to Section 161.052, F.S. Unless expressly authorized by the permit, native coastal vegetation destroyed during construction should be replaced. (FDEP, 2020a).

4.0 DESCRIPTION OF THE PREFERRED ALTERNATIVE, ALTERNATIVE 7

For the Florida Keys Coastal Storm Risk Management Feasibility Study, Alternative 7 is the Preferred Alternative. It is a combination of all economically justified measures included in Alternatives 1, 2, and 3. It should be noted that Alternative 2 (nonstructural measures to protect critical infrastructure) and Alternative 3 (nonstructural measures to protect development centers) combined make up Alternative 6 (Nonstructural measures only); therefore, another way to express this is that the Preferred Alternative is a combination of Alternatives 1 (Structural Measures Only) and Alternative 6 (Nonstructural Measures Only).

The Preferred Alternative, Alternative 7, would reduce coastal storm risk to U.S. Route 1, critical infrastructure, and residential and commercial structures that are damaged by coastal storms. The following descriptions of Alternatives 1, 2, and 3, that make up Alternative 7.

Alternative 1 (Structural Only Alternative): This alternative was designed to address reducing coastal storm risk along U.S. Route 1. U.S. Route 1 is the only roadway that connects all of the Florida Keys to each other and then to the Florida mainland. Considering the extent of expected storm surge during a hurricane or other significant storm event and that structural measures such as road elevation and sea walls were screened out, there is no practical way to prevent the entire length of U.S. Route 1 from being inundated by surge from a coastal storm event. Therefore, plan formulation for U.S. Route 1 focused on measures that would maintain the road structure as much as possible even if inundated by surge so that once a storm has passed, the roadway would likely remain intact. The only structural measure carried forward was shoreline stabilization. Rock revetment structures were proposed in six at-risk areas along U.S. Route 1 to reduce damage to the roadway by stabilizing the shoreline and reducing the risk of washout due to wave action. Locations of the six revetment sites included in this alternative are shown in Figure 1-1.

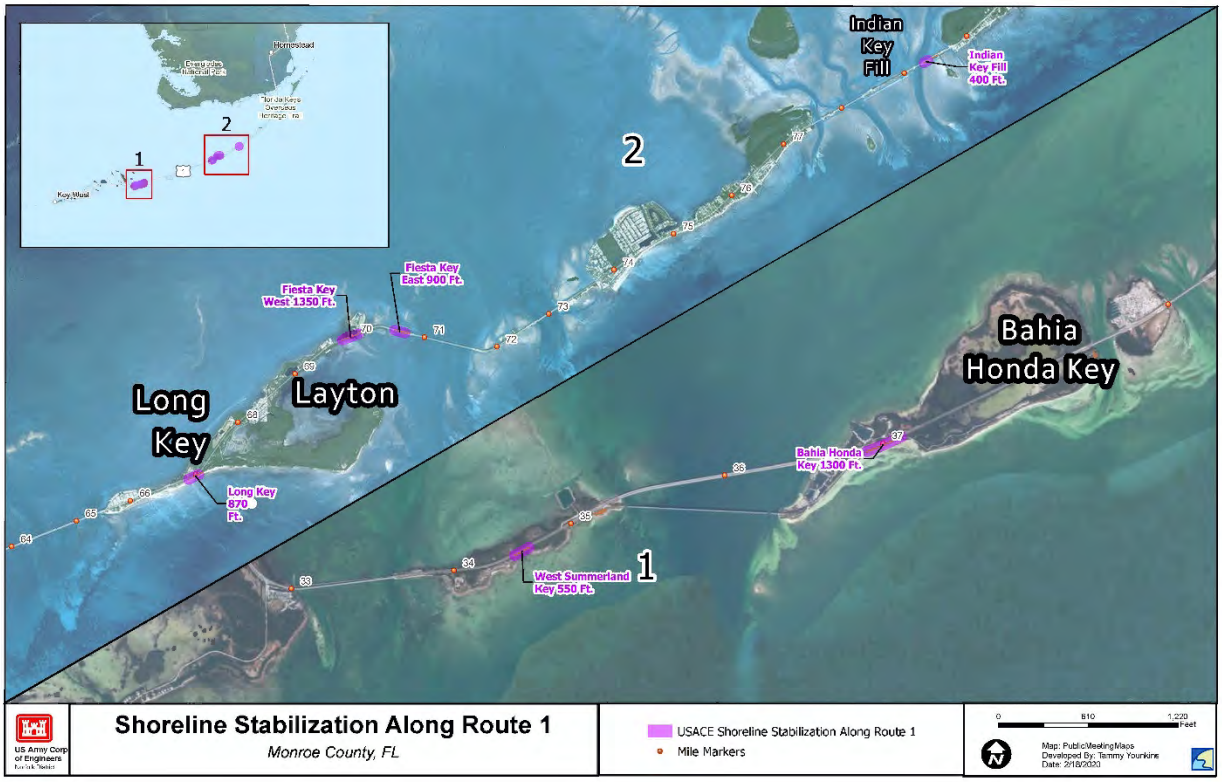

Figure 1-1. Alternative 1, Structural Measures.

Alternatives 2 and 3, combined into Alternative 6, Nonstructural Measures Only). These alternatives combined were proposed to address reducing impacts on critical infrastructure and development centers.

The only measures carried forward that would reduce damage to any at risk structure, critical or not, are nonstructural. Considering the size of critical infrastructure buildings does not allow them to be elevated and they would not be acquired because they are necessary and must remain in place, the only nonstructural measure appropriate for critical infrastructure would be floodproofing. A list of critical infrastructure was provided by the non-Federal sponsor and the following critical infrastructure types were evaluated using the economic model:

- Potable Water Pumping Stations
- Wastewater Facility
- Emergency Operations Center (EOC) Facilities
- Health care
- Schools
- Fire Stations
- Police Stations
- Airports

There were approximately 31 critical infrastructure structures identified for floodproofing. These structures will be dry floodproofed up to three feet to reduce damage due to coastal storm surge.

Nonstructural measures to protect development centers were evaluated for every structure in the Keys, excluding those owned by the Federal government. Economic model results indicated that approximately 1,000 nonresidential structures had a positive benefit-to-cost ratio (BCR) for floodproofing, approximately 9,100 residential structures had a positive BCR for elevation, and approximately 250 residential structures had a positive BCR for acquisition.

5.0 SCREENING OF ALTERNATIVES, ALTERNATIVE CONSIDERED BUT ELIMINATED, AND SELECTION OF THE PREFERRED ALTERNATIVE

A requirement of the National Environmental Policy Act of 1969, as amended (NEPA) during the planning of a federal project is to develop and evaluate reasonable project alternatives, including the No Action Alternative. Evaluating reasonable alternatives is a crucial part of the NEPA process and provides necessary information and analyses that assist the decision-maker in selecting a Preferred Alternative. In evaluating alternatives, alternatives should meet the purpose and need of the project. Alternatives must also avoid and minimize negative impacts to natural and cultural resources, to the extent practicable, with unavoidable impacts mitigated to the fullest extent practicable. While other alternatives were considered and screened out during the planning process, four alternatives were evaluated in detail: The Structural Only Project Alternative (Alternative 1); the Nonstructural Only Alternative (Alternative 6); the Structural and Nonstructural Only Alternatives Combined (Alternative 7); and the No Action/Future Without Project Alternative (Alternative 8). Alternative 7 was selected as the Preferred Alternative during the feasibility phase. Avoidance and minimization of project features to natural resources was considered during the planning process during the development of project alternatives and avoidance and minimization measures have been incorporated in the Preferred Alternative to the maximum, practical extent.

6.0 DESCRIPTION OF PROJECT, PROJECT SITE, AND IMPACT ANALYSIS

The tentatively selected plan (TSP) recommended herein includes the following measures to reduce coastal storm risk and damage throughout the Florida Keys:

- Nonstructural measures such as acquisition and demolition, elevation of residences, and wet- and dry-proofing of critical infrastructure and non-residential facilities. However, these do not involve wetland impacts or mitigation, so they will not be discussed any further.
- Shoreline stabilization in six locations along U.S. 1 (Overseas Highway) that were identified as having risk of damage due to erosion and/or wave energy during a storm event. Rock revetment structures were designed in six areas along Route 1 to reduce damage to the roadway by stabilizing the shoreline and reducing the risk of washout. The six locations are: West Summerland Key (Mile Marker 34.5), Bahia Honda Key (Mile Marker 37), Long Key (Mile Marker 67), Fiesta Key East (Mile Marker 70), Fiesta Key West

(Mile Marker 70.5), and Indian Key Fill (Mile Marker 79.5). None of these revetments are anticipated to be below mean high water (MHW); however, they do involve wetland impacts. These revetments will also have temporary staging areas that are on dry land.

USACE conducted an interagency site visit in December 2019, to assess the potential environmental impacts of each of the proposed revetment locations and to assess potential mitigation requirements. Based on the site visit, the proposed riprap revetments will be sited in or affect herbaceous wetlands, a small amount of scrub/shrub wetlands, and upland vegetated dune species at two locations, respectively: West Summerland Key and Long Key.

West Summerland Key. This area experienced damage from Hurricane Irma; and the Overseas Trail section immediately to the north of it was washed out and has been closed since then. The revetment proposed at this location is approximately 550 feet long by approximately 12 feet wide. No wetlands had been mapped on the National Wetland Inventory (NWI) map; however the site visit confirmed the presence of a sea purslane (*Sesuvium portulacastrum*) and sea oxeye (*Borrichia frutescens*)-dominated herbaceous wetland community that would be impacted directly and/or indirectly by the proposed revetment. This community is located behind an existing concrete seawall, and does not appear to be subject to daily ebb and flow of tides. These are not high-quality wetlands; except for a few live black mangroves (*Avicennia germinans*) that are also mixed. However, most of the mangroves present are standing dead.

A jurisdictional wetland determination has not been conducted, nor is the revetment fully designed; therefore impacts are estimated at this point. Approximately 10,250 square feet (0.24 acre) of herbaceous wetland community would be impacted. There are also approximately 100-200 square feet (0.002-0.004) of mangroves in the footprint; however, they should be able to be avoided through incorporating them into the revetment design. Therefore, this mitigation plan does not address mangroves. Figure 1-2 depicts the proposed structure, and Figure 1-3 depicts the existing wetlands at this location.

Figure 1-2. West Summerland Key revetment and temporary staging area.

Figure 1-3. Wetlands to be impacted at West Summerland Key.

Long Key. The Long Key revetment location is along a narrow beach in Long Key State Park that is in close proximity to U.S. Route 1. This area had experienced severe erosion during Hurricane Irma, and there are still piles of sand onsite salvaged from the aftermath of the storm. An estimated 15,000 square feet (0.344 acres) of land, would be permanently directly or indirectly modified for the installation of the revetment. During the site visit, it was noted that much of this area is vegetated with herbaceous mixed with few scrubby shoreline species. There will be approximately 1.25 acre of temporary impacts for staging and construction access, however much of that acreage is a roadway and the remaining areas would be restored following construction. Figure 3 depicts the proposed revetment and temporary staging area, and Figure 1-4 depicts the existing habitat at this location.

Figure 1-42. Long Key State Park revetment and temporary staging area.

Figure 3. Vegetated upland dune area to be impacted at Long Key.

For purposes of this preliminary plan, based on the visual site investigation and examination of existing geospatial data, USACE has estimated the types and amounts of resources that could potentially be impacted and may require mitigation, depending on the final siting of structures and designs that would be determined during the PED Phase of the project (Table 1-1).

Table 1-1. Estimated Impacts and Resources to be Mitigated.

Description	Protected Resource
Revetment at West Summerland Key	Approximately 10, 250 square feet of herbaceous saltmarsh/salt flat wetland impact*
Revetment at Long Key State Park	Approximately 15,000 square feet of herbaceous vegetated upland beach*

*presence, abundance, diversity, and extent of protected resources would be determined during the PED Phase of the project when detailed, site-specific surveys would be conducted. Additional protected resources may need to be added to Table 1-1 depending on the results.

7.0 COMPENSATORY WETLAND MITIGATION FUNCTIONAL ANALYSIS AND MITIGATION REQUIREMENTS

Herbaceous Wetland Mitigation Functional Analysis and Mitigation Requirements

The Uniform Mitigation Assessment Model (UMAM) would be used to evaluate the estimated functional loss of wetlands and vegetated upland beach associated with implementation of the Preferred Alternative, Alternative 7. This model is used to determine the functional loss of habitat and required mitigation ratios and associated required mitigation acreages.

The UMAM is currently approved for use throughout the State of Florida by the U.S. Army Corps of Engineers ECO-PCX and is required for wetland impact and mitigation sites by the State of Florida per 62-345 Florida Administrative Code. Therefore, the UMAM is applied in a wide variety of wetland habitat types throughout the State of Florida. The UMAM is well suited for evaluating a suite of impact and potential mitigation sites, including the preservation, enhancement, restoration, and creation of wetlands, as well as the evaluation and use of mitigation sites, and it provides a framework for standardized wetland assessment methodology. The impact or mitigation site is assessed via a qualitative description of the site and a quantification of the wetland function at the site. For the wetland function quantification, sites are evaluated in three categories and scored numerically from 0 to 10 (where 10 indicates a minimally impaired system). The first category, Location and Landscape Support, assess the surrounding landscape within which the system operates. The second examines the Water Environment, including an assessment of hydrology and water quality. The third category assess vegetation and structural habitat, for areas with plant cover, and benthic and sessile communities, for areas with a submerged benthic community.

The *UMAM Uniform Mitigation Assessment Method Training Manual* (Bardi et al. n.d.) provides a detailed guide of the UMAM concept and methodology and explains how to compile all of the data/information needed to perform the UMAM, how to document the standardized forms for the UMAM, and how to perform the necessary calculations to complete the UMAM functional analysis to quantify the habitat value of impact and mitigation sites.

8.0 POTENTIAL MITIGATION STRATEGIES/ALTERNATIVES

This section describes the mitigation alternatives that were evaluated that serve to meet the mitigation objectives.

USACE consulted the online Regulatory In Lieu Fee and Bank Information Tracking System (RIBITS), as well as discussions with state and federal regulatory agencies. There is only one bank or in-lieu fee (ILF) fund within the service area of the Florida Keys; it is called the Keys Restoration Fund. It consists of two sites, both of which are on Bahia Honda Key. Three other mitigation banks are located in South Florida: the Hole in the Donut, FP& L Everglades Phase I, and FP & L Everglades Phase II.

Mitigation Alternative #1: Purchase ILF credits from Keys Restoration Fund ILF. According to its Mitigation Banking Instrument, the ILF provides mitigation credits for mangrove, tidal marsh,

and freshwater marsh wetlands, and credit fees are $217,000 per credit. However, FDEP staff have indicated that FDEP cannot accept ILF credits as mitigation for statutory reasons. An FDEP permit and mitigation is required for construction; therefore, this alternative was eliminated from consideration.

Mitigation Alternative #2: Purchase mitigation ILF credits from the Everglades National Park's "Hole in the Donut" ILF: "Hole in the Donut" is located in Dade County, and includes mitigation credits for freshwater forested and emergent wetlands.However, again, FDEP cannot accept ILF credits as mitigation, and this ILF is outside of the service area of the impact site, and would only offer out-of-kind mitigation.

Mitigation Alternative #3: Purchase mitigation bank credits from the Florida Power & Light (FP & L) Everglades Phase I or II Mitigation Bank. According to RIBITS, this bank has approximately 0.69 UMAM-based estuarine emergent wetland credits. However, again, this bank is out of the service area and watershed and well over 100 miles from the impact site, and would not be appropriate unless no other option is available, and unless specifically approved for use by the FDEP and by Mitigation Bank's Interagency Review Team (IRT) for the ILF. This Bank does not offer upland credits for beach vegetation impacts. There is also no way to guarantee that credits would be available when needed, particularly noting the current low availability.

Mitigation Alternative #4: Create or restore estuarine wetlands through permittee-responsible onsite or offsite mitigation within watershed. Per the Mitigation Rule, it is generally more appropriate to conduct permittee-responsible onsite or offsite mitigation if no mitigation bank or ILF is available in the service area or watershed. There appear to be feasible locations for both wetland and upland vegetation replacement that are onsite or in close proximity offsite and could reasonably be obtained.

Based on this research and discussions with state and federal regulatory agencies, there do not appear to be any mitigation banks or in-lieu fee funds in the Florida Keys that are acceptable for use to offset herbaceous wetland or upland beach vegetation impacts. Therefore, we propose Mitigation Alternative #4. All wetland and vegetated upland mitigation would be permittee-responsible onsite/offsite compensatory mitigation.

9.0 SITING OF ONSITE COMPENSATORY MITIGATION SITES

Based on information provided by state and federal agencies, limited site visits, and a geospatial analysis conducted in ArcMap, potential wetland and upland compensatory mitigation sites are the proposed locations of the respective temporary staging areas shown in Figures 1-2 and 1-4, following construction of the revetments.

The refinement and final designs of the onsite compensatory mitigation sites would be conducted during the PED Phase of the project, when site-specific wetland jurisdictional determination and an assessment of shoreline conditions to determine the most appropriate locations. The location, types, and acreages of potential compensatory mitigation sites may vary depending on the completion of the final engineering designs and the ability to obtain real estate protections for the mitigation sites.

A topographic survey and would be conducted prior to and after grading for wetlands. It is anticipated that the mitigation sites would occur within the State Park property, County property, or other suitable property.

Appropriate real estate protections of the mitigation site would be necessary to determine the protection and perpetuity of the site over time. This is discussed further in Section 12.0 of this document.

Best Management Practices (BMPs) for both mitigation/plant replacement sites:

1) Strict erosion and sediment control measures would be employed during construction, in accordance with the State of Florida's Erosion and Sediment Control Designer and Reviewer Manual, July 2013 (or most current version), as well as the conditions of any permits issued for the project.

2) Proactive stormwater management at these sites via increased engineering (silt fences, etc.) and administrative controls (site stormwater inspections, permitting, BMPs) would provide additional assurance that potential impacts (runoff, contaminant transport, sedimentation, etc.) to the marine environment from land-disturbing activities are minimized.

3) The following standard BMPs for invasive species will be followed:
    a. Prior to the commencement of work, an invasive species prevention plan will be developed. It shall identify specific transfer prevention procedures and equipment cleaning sites.

    b. Sightings of any invasive species shall be included in a preconstruction report. Any subsequent sighting of invasive species shall be reported within 24 hours of siting. The reporting shall include date, time, location (latitude and longitude), photographs, environmental conditions, circumstances surrounding sighting disposition/behavior of the species, and any other notable observations. Reports shall be provided to the Jacksonville District Planning Division, Environmental Branch.

    c. All equipment would be thoroughly cleaned prior to and following work on the project site to ensure that materials including soil, vegetative matter, eggs, seeds, and other debris are not transported to other sites.

    d. Prevention protocols will also apply to clothing and personal protective equipment.

    e. Only native plantings and vegetative seed mixes may be applied on disturbed land after construction is complete.

HERBACEOUS WETLAND PLAN

Following a jurisdictional determination and the use of the UMAM to determine actual requirements initial reef placement, a topographic survey will be conducted of the site to determine grading needs and also to collect native reference vegetation elevation points from surrounding wetlands.

Topographic Survey and Grading Requirements

USACE will conduct a topographic survey of the compensatory mitigation site and existing reference *Sesuvium portulacastrum*) and sea oxeye (*Borrichia frutescens)* -marsh sites in the local area to determine target wetland elevations and to determine if any grading or filling of the site is necessary. Following the proper grading of the living shoreline, any fill used at the site to bring the area to target elevations shall be composed of a minimum of 90% Sand and shall be free of trash or organic debris.

Post-Grading Topographic Survey

Following the grading of the site and prior to conducting the wetland planting, a topographic survey shall be conducted verify the post-grading target elevations have been met. If the grading work does not meet the specifications, regrading of the site will be done. No wetland plantings shall commence until the grading of the site is acceptable. Sites within the project area that are already at the target elevations shall not be regraded and any disturbance to these areas shall be limited to the maximum, practical extent.

Planting Plan

A Biologist will be onsite to monitor the grading and planting activities. Generally, the plantings shall include sea purslane and sea oxeye seedlings planted on 2” centers, in order to mitigate in-kind for the wetland losses; however, the planting plan may also include other suitable native wetland species as deemed by the Biologist as appropriate. Plant species selection and sizing may vary depending on nursery availability of plants and final grading requirements of the site that will be determined during the PED Phase of the project. The planting will occur approximately between 1 April and 15 June.

Plant Protection & Maintenance

Shrub and tree plant material shall be adequately protected from drying out and kept adequately moist with fresh water prior to planting. Until the time of planting, all plant material shall be stored in an approved location and maintained. All plants not planted immediately shall be watered as necessary to prevent wilting until planting.

The planting will occur no later than three weeks after the completion of the soil grading. Following planting, the area will be watered with freshwater for a minimum of three days/week for four months following all planting activities. Water shall be fresh water that is free from salt, toxic substances and chemicals that may be injurious to plant growth. Trucks, hoses, and other watering equipment required to transport water from a source to the planting area shall be included as part of the work with all costs incidental to this item. Any areas impacted by

construction equipment that are not part of the planting plan shall be restored (graded and planted) to prior conditions.

Planting Inspection and Adaptive Management for Wetland Mitigation

Best professional judgment, visual observations and monitoring reports will be used to evaluate attainment of success criteria and in determining whether part or of the entire sites is successful or whether corrective actions are warranted. Vegetation success will be determined by the average percent cover of randomly selected quadrats across the entire site or sites. The sampling intensity must be sufficient to calculate means and the coefficient of variation. The following criteria will be used to assess project success:

1. The USACE or their designee will prepare as-built drawings and monitoring reports in accordance with this plan.

2. Wetland Hydrology:
   a) An as-built survey which documents that the elevations provided in the construction plans have been achieved.
   b) Hydrology shall be sufficient to support the wetland community

3. Wetland Vegetation:
   a) Plant survival:
      i. Plant survival after the first full growing season shall be at least 80%. Supplemental plantings will be required in areas where plant survival is less than 90%.

   b) Vegetation Cover:
      i. Year One 10 – 20%
      ii. Year Two 30 – 50%
      iii. Year Three 50 – 70%
      iv. Year Four 60 – 70%
      v. Year Five 70 – 80%
      vi. Year Seven 70 – 80%
      vii. Year Ten 70 – 80%

4. Invasive Species:
   a) Invasive plant species cover shall not exceed 5% per plot, or a total of 5% aerial coverage of the entire mitigation site, at any time.
   b) Invasive species identified will be removed by hand and the area treated with a registered aquatic-safe herbicide to minimize the extent of cover.

5. Soil organic matter increase to be documented by:
   a) Surface algal mats.
   b) Root growth from increasing vegetation growth.

6. Corrective measures: Should any of these criteria not be met, an adaptive management plan to address the issues must be developed and implemented.

Plant Monitoring Requirements

The monitoring program for herbaceous wetlands will follow the guidelines established below:

1. Monitoring activities must occur during late summer or early fall (August- September), and at least once during the 1st, 2nd, 3rd, 5th, 7th and 10th growing seasons following completion of grading.
    a. For any year in which planting was conducted, monitoring of vegetation must take place at least 6 months following planting.
    b. If all performance criteria have not been met in the 5th year, then a monitoring report will be required for each consecutive year until two sequential annual reports indicate that all criteria have been successfully satisfied.
    c. Submittal of a final monitoring report will be required.

2. Visual descriptions will be provided with each monitoring report in narrative form along with documentation by one of the following means: (i) Permanent photo stations established around the perimeter of the site that depict a reasonable representation of conditions of the entire site.

3. The sites will be monitored to ensure the successful establishment of wetlands and their associated ecological functions and values. The monitoring components will consist of both structural and functional parameters

4. The structural component will include the as-built survey which will indicate whether the appropriate grades have been established to ensure adequate tidal hydrology has been provided to the site. This will involve the comparison of the established grades to the tidal datum to ensure that the grades are, in fact, within the intertidal zone.

5. The functional component will entail monitoring the vegetation within the sites. Transects will be used across the mitigation site that will allow for random sampling. Random one meter square quadrats will be sampled along these transects for percent vegetation cover, including plant species colonizing the marsh, stem height and number of flowering shoots. Stem height and flowering shoot data may also be collected as a measure of plant vigor. Sampling is planned for late summer and/or early fall when vegetative cover peaks. In addition, during Year 1 sampling, data on the percent survivorship of the planted plugs will be collected. This will determine if there has been any undue mortality among the plantings which would represent problem areas resulting from inappropriate elevations or improper drainage. This information will be used to address problem areas where remedial plantings or drainage improvements are necessary. The final transect locations

and monitoring methodology and parameters to be sampled will be fully determined during the PED Phase of the project in coordination with the FDEP.

6. During each annual sampling the mitigation site will be surveyed and mapped for the presence of invasive species. This information will be used to design a treatment program to eliminate any invasive species.

7. Permanent photographic stations will be strategically established around the perimeter of the marsh to qualitatively assess and document the development of the marsh vegetation and any tidal channels.

8. The monitoring data for each year will be compiled into a report that will be presented to the regulatory agencies for review.

Vegetation Monitoring Report Requirements

Monitoring reports will include at a minimum the following information:

1. A Title page indicating the monitoring year, any requested action, and Preparer identification (name, address, phone number and email address);

2. A detailed narrative summarizing the condition of the compensatory mitigation site and all regular maintenance and monitoring activities;

3. A drawing based upon the grading plans of the Property that depicts topography, and the location of, sampling quadrats, and permanent photo stations;

4. Results of vegetation monitoring including per plot reporting of all herbaceous species present (with corresponding estimate of percent cover, indicator status, native status, planted/volunteer category for each species), percent cover of bare ground and/or open water, species richness, % cover of non-native/invasive vegetation, and survival rate of planted vegetation in Year One;

5. A corrective action plan, if necessary, which shall include any proposed actions or maintenance activities to control undesirable species, the replacement of damaged planted vegetation, or needed drainage improvements;

6. Each monitoring report will include detailed resource documentation, tables summarizing attainment of success criteria, and a revised summary table of actual wetland acreages based on field measurements;

7. Any additional information required to adequately characterize site conditions (as needed);

8. An as-built report shall be prepared. The report shall include:
    a. Plan view of the constructed/restored wetlands with location of all permanent photo stations;
    b. Photographs of the completed sites taken from permanent photo stations. Photos from each station must be grouped with corresponding photos from previous monitoring reports;
    c. Planting zones and densities;
    d. As-built elevations.

PLANTING PLAN FOR VEGETATED BEACH DUNE AT LONG KEY

Sea oats will be the primary species planted. However, the project will attempt to incorporate other native coastal species in the project planting plan to create a diverse habitat based on their commercial availability. Other potential species to be included in the planting plan include gulfhairawn muhly (*Muhlenbergia filipes*), bluestem (*Schizachyrium scoparium, S. maritimum*, or *S. littorale*), seashore dropseed (*Sporobolus virginicus*), beach sunflower (*Helianthus debilis*), beach morningglory (*Ipomoea imperati*), and bayhops (*Ipomoea pes-caprae*). The final planting plan would need to be coordinated with the FDEP Division of Parks and Recreation (DPR) to select plantings they deem appropriate and desirable.

After dune vegetation is established, additional vegetation will naturally recruit following future periodic nourishments and will be planted as needed. Deference will also be given to the Florida Department of Environmental Protection, Division of Parks and Recreation.

Planting Inspection and Adaptive Management for Upland Mitigation

1. Plant survival after the first full growing season shall be at least 80%. Supplemental plantings will be required in areas where plant survival is less than 90%.

Vegetation Cover:

Year One	10 – 20%
Year Two	30 – 50%
Year Three	50 – 70%
Year Four	60 – 70%
Year Five	70 – 80%
Year Seven	70 – 80%
Year Ten	70 – 80%

2. Invasive plant species cover shall not exceed 5% per plot, or a total of 5% aerial coverage of the entire mitigation site, at any time. Invasive species identified will be removed by hand and the area treated with a registered aquatic-safe herbicide to minimize the extent of cover..

3. Corrective measures: Should any of these criteria not be met, an adaptive management plan to address the issues must be developed and implemented.

Plant Monitoring Requirements and Reporting Requirements for Upland Mitigation

Plant monitoring and reporting requirements shall be the same as those for Wetland Mitigation, except for the requirement for wetland hydrology and wetland plant community establishment.

10.0 RECOMMENDED MITIGATION PLAN ALTERNATIVE AND JUSTIFICATION OF THE SELECTED MITIGATION PLAN ALTERNATIVE

During the PED phase of the project, detailed site investigation surveys and UMAM site investigations would be conducted to determine the type and quantify of the required mitigation for the project. In addition, potential mitigation banks available would be reinvestigated as well as a cost assessment to ensure that the most appropriate mitigation alternative is selected.

11.0 COSTS OF MITIGATION STRATEGY/COST SHARE OF RECOMMENDED MITIGATION PLAN ALTERNATIVE

The total estimated costs of the implementation of the proposed mitigation for the Long Key beach replanting and the wetland mitigation at West Summerland Key is $581,498. This estimated cost, which was included in the total project cost for the IFS/EIS, includes: a UMAM multiplier estimation, construction costs, a planting plan, and five years of operations and maintenance, monitoring, and reporting. The assumptions used in this estimated costs are as follows:

- Resources impacted and acres of impact are required to be field-verified through UMAM;
- Impacts have not been field-verified and are based on a rough field estimation;
- Mitigation costs have not been escalated to planned implementation dates;
- Operations and maintenance (O & M) and reporting will occur annually for a five-year period post-construction
- Construction would occur in the Year 2029, with O & M occurring in Years 2030-2034;
- O & M is assumed as a function of construction cost – 25% of construction cost for 2030, 20% of construction costs for Year 2031; 15% of construction costs for Year 2032; and 10% of construction costs for Years 2034 and 2035.

The breakdown of these costs is provided as an attachment at the end of this document.

In accordance with the cost share provisions in Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended (33 U.S.C. 2213), project design and implementation are cost shared 65% federal and 35% non-federal.

12.0 PROJECTED LERRD NEED OF COMPENSATORY MITIGATION

Labor costs of the real estate USACE staff would be required to verify and document real estate requirements of the mitigation portions of the project; and acquisitions would be conducted during the PED phase.

It is anticipated that the upland vegetation replanting mitigation would be conducted on state-owned (FDEP DPR) land; and the wetland mitigation would be conducted on County-owned land, within the vicinity of the impacts. Appropriate real estate protections of the mitigation site will be required to determine the protection and perpetuity of the site over time.

FDEP DPR-owned land. A permit would be needed from the FDEP DPRto construct a revetment or mitigation on its land. There is an application process in which the applicant must submit a completed questionnaire that includes an accurate aerial map of the proposed easement area(s) and a sketch and legal description of the easement area(s), to the park managers' and district offices for review and DPR comment. Upon receipt of all comments, DRP's managing agency review letter would be provided. The proposal must have a letter of support in order to proceed. Upon receipt of a letter of support, applicants would submit a completed easement application, including the DPR letter, to the Division of State Lands/DSL, which has the responsibility of reviewing and issuing easements. The DPR has indicated that it prefers not to encumber lands so it would be important to include a start date in the Questionnaire, conduct this in the PED phase.

County-owned land. The proposed wetland mitigation location is listed as County-owned land, with a recreational land use. A separate process would be necessary to conduct mitigation and to preserve it in perpetuity on County land. The County, as the non-federal sponsor, would be responsible for completing these steps and obtaining the appropriate approvals.

Approved by:

_____ _____

Susan Layton

U.S. Army Corps of Engineers, Norfolk District

Chief, Planning and Policy Branch

Site	Description	Resource	Estimated Construction Cost (per sq ft) or cost (per mile)*	Estimated Raw Impact Acreage (sq ft) or linear ft*	Estimated UMAM Mitigation Ratio	Estimated Mitigation Acreage Required with UMAM Multiplier (sq ft)	Year Construction Cost Estimated	Construction Cost (Year 2029) - with UMAM Multiplier	Operations & Maintenance (O &M) (2030)	Monitoring (2030)	Reporting (2030)	Operations & Maintenance (O &M) (2031)	Monitoring (2031)	Reporting (2031)	Operations & Maintenance (O &M) (2032)	Monitoring (2032)	Reporting (2032)	Operations & Maintenance (O &M) (2033)	Monitoring (2033)	Reporting (2033)	Operations & Maintenance (O &M) (2034)	Monitoring (2034)	Reporting (2034)	Total Estimated Mitigation Cost	Notes after site visit
2	West Summerland Key (formerly Spanish Harbor Key), MM 33-34, 715 LF of Riprap Revetment (See notes in far right column)	herbaceous wetlands	$6.89	10,725	1.03	11046.75	2013	$76,112.11	$19,028.03	**$10,000.00**	**$7,000.00**	**$15,222.42**	**$10,000.00**	**$7,000.00**	**$11,416.82**	$10,000.00	$7,000.00	**$7,611.21**	$10,000.00	$7,000.00	**$7,611.21**	$10,000.00	$7,000.00	**$222,001.79**	
6	Long Key State Park MM 67 Riprap Revetment	Vegetated beach/dune*	$10.23	15,000.00	1.03	15,450.00	2012	$158,053.50	$39,513.38	$9,000.00	$6,000.00	$31,610.70	$9,000.00	$6,000.00	$23,708.03	$9,000.00	$6,000.00	$15,805.35	$9,000.00	$6,000.00	$15,805.35	$9,000.00	$6,000.00	$359,496.30	
																								$581,498.09	**GRAND TOTAL**

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Environmental Correspondence and Coordination

Norfolk District
803 Front Street
Norfolk, Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Release of Draft Environmental Impact Statement to Agencies

Norfolk District
803 Front Street
Norfolk, Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Ms. Jamie Higgins
U.S. Environmental Protection Agency, Region IV
Resource Conservation Restoration Division
61 Forsyth Street, SW
Atlanta, GA 30303

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Ms. Higgins:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Study/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you for your involvement as a Cooperating Agency in this Study.

The Florida Keys are an important asset to the economic development of the United States because the islands are a major tourism destination that also hold unique environmental resources including the third largest coral reef in the world and 17 national and state parks. There is Federal interest in addressing the Keys' high levels of risk and vulnerability to coastal storms which is expected to be compounded by the combined effects of sea level change and climate change. The vulnerability of the Florida Keys to coastal storms was most recently exemplified by the significant damage sustained by Hurricane Irma in 2017.

The purpose of the Florida Keys CSRM Study is to evaluate coastal storm risk and recommend a project that would reduce that risk throughout the study area. This project is not an all-encompassing solution that would address all of the coastal storm risk in the Keys, but it is one important component of the larger effort by the non-federal sponsor, Monroe County, as well as municipalities, local organizations, and state and federal government agencies that are all working to reduce risk and improve resiliency in the Florida Keys. This study seeks to not only reduce coastal storm risk, but also to build on resilience by implementing strategic approaches that are compatible with the work of others.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and as implemented by the Council of Environmental Quality regulations (40 CFR 1500-1508), the USACE has determined that the project has the potential to have significant environmental impacts. The Draft IFR/EIS considers a full range of nonstructural and structural coastal storm

risk management alternatives that meet the Proposed Action's purpose and need, evaluates the environmental impacts of the measures, and incorporate measures to avoid and minimize impacts to the maximum extent practicable.

Alternatives that were considered included: structural measures to protect U.S. Route 1 only, nonstructural measures to protect critical infrastructure only, nonstructural measures to protect development centers only, multiple combinations of these alternatives, and the No Action Alternative.

The Proposed Action is Alternative 7, which is a combination of structural measures to protect U.S. Route 1, and nonstructural measures to protect both critical infrastructure and development centers. Nonstructural measures reduce the consequences of coastal storms on a structure instead of reducing the risk and/or probability of the flooding caused by storm surge. More specifically, Alternative 7 includes: six proposed riprap revetments along sections of U.S. Route 1; floodproofing for critical infrastructure; and elevation and acquisition/relocation for residential properties.

An electronic copy of the Draft IFR/EIS is available for public review at the USACE website https://www.saj.usace.army.mil/FloridaKeysCSRMFeasibilityStudy/. Hard copies can be made available if necessary.

In addition, you are invited to participate in a virtual public meeting for the release of the document. Two identical virtual meetings will be held July 8, 2020, from 1-3 p.m. and July 13, 2020, from 5-7 p.m. To participate, log in at: https://usace.webex.com/meet/alicia.m.logalbo. For the audio portion, please call 877-336-1829, access code: 9556794, security code: 1234. If the line is full, please call 888-363-4749, access code: 5073286, security code: 1234. There will be a powerpoint presentation followed by a Questions and Answers session. Virtual office hours will also be available using the same webex and audio, on July 9, 2020, 1-2 p.m. and July 14, 2020, 5-6 p.m.

A 45-day public comment period is being held to receive comments on the Draft IFR/EIS, Federal, state, and local agencies and tribal governments and the public are invited to comment on the Draft IFR/EIS.

Please submit any comments you have on the Draft IFR/EIS by **August 10, 2020**, via mail or email to me, at Floridakeys@usace.army.mil or Kathy Perdue, U.S. Army Corps of Engineers, 803 Front Street, Norfolk, Virginia 23510. You may also contact me with any questions at (757) 201-7218.

Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Jeff Howe
U.S Fish and Wildlife Service
1339 20th Street
Vero Beach, FL 32960

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Howe:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you for your involvement in the interagency coordination for this Study.

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The purpose of the Florida Keys CSRM Study is to evaluate coastal storm risk and recommend a project that would reduce that risk throughout the study area. This project is not an all-encompassing solution that would address all of the coastal storm risk in the Keys, but it is one important component of the larger effort by the non-federal sponsor, Monroe County, as well as municipalities, local organizations, and state and federal government agencies that are all working to reduce risk and improve resiliency in the Florida Keys. This study seeks to not only reduce coastal storm risk, but also to build on resilience by implementing strategic approaches that are compatible with the work of others.

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In addition, as you know, we are currently in the formal Section 7 process pursuant to the Endangered Species Act; therefore, we would anticipate your Biological Opinion in accordance with the 135-day timeline pursuant to that process.

Please submit comments on the Draft IFR/EIS by **August 10, 2020,** via mail or email to me, at Floridakeys@usace.army.mil or Kathy Perdue, U.S. Army Corps of Engineers, 803 Front Street, Norfolk, Virginia 23510. You may also contact me with any questions at (757) 201-7218.

Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Ms. Sarah Fangman
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Florida Keys National Marine Sanctuary
Key Largo, FL 33037

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Ms. Fangman:

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Thank you in advance for your review and comments.

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Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Dr. Pace Wilbur
National Oceanic and Atmospheric Administration
HCD Atlantic Branch Supervisor
219 Ft Johnson Road
Charleston, SC 29412

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Dr. Wilbur:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you and your staff for your involvement as a Cooperating Agency in this Study.

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Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Andy Strelcheck
National Oceanic and Atmospheric Administration
Deputy Regional Administrator
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Strelcheck:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you and your staff for your involvement as a Cooperating Agency in this Study.

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Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Steven James
Florida Department of Transportation
District Six
1000 N.W. 111 Avenue
Miami, FL 33172

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. James:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you for your involvement as a Cooperating Agency in this Study.

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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Mark Lamb
Chief, Coral Conservation Branch
Protected Resources Division
NOAA, NMFS, Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Lamb:

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DEPARTMENT OF THE ARMY
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FORT NORFOLK
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June 26, 2020

Mr. Robert Johnson
National Park Service
Director, South Florida Ecosystem Office
950 N. Krome Avenue
Homestead, FL 33030-4443

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Johnson:

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Environmental Analysis Section
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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Captain Bobby J. Baker
Commanding Officer
U.S. Naval Air Station
P.O. Box 9001
Key West, FL 33040

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Captain Baker:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study.

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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Rear Admiral Brown
U.S. Coast Guard, Seventh District
909 SE 1st Avenue
Brickell Plaza Federal Building
Miami, FL 33131-3050

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

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DEPARTMENT OF THE ARMY
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FORT NORFOLK
803 FRONT STREET
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June 26, 2020

Ms. Gracia Szczech
U.S. Federal Emergency Management Agency
Regional Admininstrator, Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Ms. Szczech:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you for your involvement as a Participating Agency in this Study.

The Florida Keys are an important asset to the economic development of the United States because the islands are a major tourism destination that also hold unique environmental resources including the third largest coral reef in the world and 17 national and state parks. There is Federal interest in addressing the Keys' high levels of risk and vulnerability to coastal storms which is expected to be compounded by the combined effects of sea level change and climate change. The vulnerability of the Florida Keys to coastal storms was most recently exemplified by the significant damage sustained by Hurricane Irma in 2017.

The purpose of the Florida Keys CSRM Study is to evaluate coastal storm risk and recommend a project that would reduce that risk throughout the study area. This project is not an all-encompassing solution that would address all of the coastal storm risk in the Keys, but it is one important component of the larger effort by the non-federal sponsor, Monroe County, as well as municipalities, local organizations, and state and federal government agencies that are all working to reduce risk and improve resiliency in the Florida Keys. This study seeks to not only reduce coastal storm risk, but also to build on resilience by implementing strategic approaches that are compatible with the work of others.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and as implemented by the Council of Environmental Quality regulations (40 CFR 1500-1508), the USACE has determined that the project has the potential to have significant environmental impacts. The Draft IFR/EIS considers a full range of nonstructural and structural coastal storm

risk management alternatives that meet the Proposed Action's purpose and need, evaluates the environmental impacts of the measures, and incorporate measures to avoid and minimize impacts to the maximum extent practicable.

Alternatives that were considered included: structural measures to protect U.S. Route 1 only, nonstructural measures to protect critical infrastructure only, nonstructural measures to protect development centers only, multiple combinations of these alternatives, and the No Action Alternative.

The Proposed Action is Alternative 7, which is a combination of structural measures to protect U.S. Route 1, and nonstructural measures to protect both critical infrastructure and development centers. Nonstructural measures reduce the consequences of coastal storms on a structure instead of reducing the risk and/or probability of the flooding caused by storm surge. More specifically, Alternative 7 includes: six proposed riprap revetments along sections of U.S. Route 1; floodproofing for critical infrastructure; and elevation and acquisition/relocation for residential properties.

In addition, you are invited to participate in a virtual public meeting for the release of the document. Two identical virtual meetings will be held July 8, 2020, from 1-3 p.m. and July 13, 2020, from 5-7 p.m. To participate, log in at: https://usace.webex.com/meet/alicia.m.logalbo. For the audio portion, please call 877-336-1829, access code: 9556794, security code: 1234. If the line is full, please call 888-363-4749, access code: 5073286, security code: 1234. There will be a powerpoint presentation followed by a Questions and Answers session. Virtual office hours will also be available using the same webex and audio, on July 9, 2020, 1-2 p.m. and July 14, 2020, 5-6 p.m.

An electronic copy of the Draft IFR/EIS is available for public review at the USACE website https://www.saj.usace.army.mil/FloridaKeysCSRMFeasibilityStudy/. Hard copies can be made available if necessary.

A 45-day public comment period is being held to receive comments on the Draft IFR/EIS. Federal, state, and local agencies and tribal governments and the public are invited to comment on the Draft IFR/EIS.

Please submit any comments you have on the Draft IFR/EIS by **August 10, 2020**, via mail or email to me, at Floridakeys@usace.army.mil or Kathy Perdue, U.S. Army Corps of Engineers, 803 Front Street, Norfolk, Virginia 23510. You may also contact me with any questions at (757) 201-7218.

Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement, and Request for Review of Coastal Zone Management Act Draft Federal Consistency Determination

Dear Mr. Shahl:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you for your involvement in interagency coordination in this Study.

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Please note that pursuant to the Coastal Zone Management Act, the Draft Federal Consistency Determination is included Environmental Appendix, Appendix D, Sub-Appendix C, and is being officially submitted for your review.

A 45-day public comment period is being held to receive comments on the Draft IFR/EIS, Federal, state, and local agencies and tribal governments and the public are invited to comment on the Draft IFR/EIS. Please include any comments you have pursuant to the NEPA, CZMA, and to the Fish and Wildlife Coordination Act. Please submit all comments on the Draft IFR/EIS by the 60-day deadline for CZMA review, **August 27, 2020**, via mail or email to me, at

Floridakeys@usace.army.mil or Kathy Perdue, U.S. Army Corps of Engineers, 803 Front Street, Norfolk, Virginia 23510. You may also contact me with any questions at (757) 201-7218.

Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Christopher Daniel
Advisory Council on Historic Preservation
Office of Federal Agency Programs
401 F. Street NW, Suite 308
Washington, DC 20001-2637

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Daniel:

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Please submit all comments on the Draft IFR/EIS by **August 10, 2020**, via mail or email to me, at Floridakeys@usace.army.mil or Kathy Perdue, U.S. Army Corps of Engineers, 803 Front Street, Norfolk, Virginia 23510. You may also contact me with any questions at (757) 201-7218.

Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Jason Aldridge
Compliance Review Supervisor
Deputy State Historic Preservation Officer
Florida Department of State, Division of Historic Resources
500 South Bronough Street
Tallahassee, FL 32399

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Aldridge:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you for your involvement in the interagency coordination for this Study.

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Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Fred Dayhoff
Section 106/NAGPRA Representative
Miccosukee Tribe of Indians
HC 61 SR 68 Old Loop Road
Ochopee, FL 34141

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Dayhoff:

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Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. David Frank
Tribal Historic Preservation Officer
Seminole Nation of Oklahoma
P.O. Box 1498
Wewoka, OK 74884

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Frank:

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Environmental Analysis Section
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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
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FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Bradley M. Mueller
Compliance Supervisor
Seminole Tribe of Florida
6300 Stirling Road
Hollywood, FL, 33024

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Mueller:

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Please include any comments you have pursuant to the NEPA, and the National Historic Preservation Act. Please note that the draft Programmatic Agreement is found in the Appendix E of the Draft IFR/EIS.

Please submit all comments on the Draft IFR/EIS by **August 10, 2020**, via mail or email to me, at Floridakeys@usace.army.mil or Kathy Perdue, U.S. Army Corps of Engineers, 803 Front Street, Norfolk, Virginia 23510. You may also contact me with any questions at (757) 201-7218.

Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Ms. Jane Maylen
Tribal Historic Preservation Officer (Acting)
Thlopthlocco Tribal Town
P.O. Box 188
Okemah, OK 74859

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Ms.Maylen:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study.

The Florida Keys are an important asset to the economic development of the United States because the islands are a major tourism destination that also hold unique environmental resources including the third largest coral reef in the world and 17 national and state parks. There is Federal interest in addressing the Keys' high levels of risk and vulnerability to coastal storms which is expected to be compounded by the combined effects of sea level change and climate change. The vulnerability of the Florida Keys to coastal storms was most recently exemplified by the significant damage sustained by Hurricane Irma in 2017.

The purpose of the Florida Keys CSRM Study is to evaluate coastal storm risk and recommend a project that would reduce that risk throughout the study area. This project is not an all-encompassing solution that would address all of the coastal storm risk in the Keys, but it is one important component of the larger effort by the non-federal sponsor, Monroe County, as well as municipalities, local organizations, and state and federal government agencies that are all working to reduce risk and improve resiliency in the Florida Keys. This study seeks to not only reduce coastal storm risk, but also to build on resilience by implementing strategic approaches that are compatible with the work of others.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and as implemented by the Council of Environmental Quality regulations (40 CFR 1500-1508), the USACE has determined that the project has the potential to have significant environmental impacts. The Draft IFR/EIS considers a full range of nonstructural and structural coastal storm risk management alternatives that meet the Proposed Action's purpose and need, evaluates the

environmental impacts of the measures, and incorporate measures to avoid and minimize impacts to the maximum extent practicable.

Alternatives that were considered included: structural measures to protect U.S. Route 1 only, nonstructural measures to protect critical infrastructure only, nonstructural measures to protect development centers only, multiple combinations of these alternatives, and the No Action Alternative.

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Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Ms. Valerie Jones
Coastal Construction Control Line Program
Division of Water Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road - M.S. 3522
Tallahassee, Florida 32399-2400

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Ms. Jones:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you and your staff for your involvement in interagency coordination in this Study.

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Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Steve Cutshaw
Chief, Office of Park Planning
Florida Department of Environmental Protection
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Cutshaw:

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DEPARTMENT OF THE ARMY
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NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. James Keltner
Florida Fish and Wildlife Conservation Commission
Land Use Planning Program Administrator
Office of Conservation Planning Services
620 South Meridian Street
Tallahassee, FL 32399-1600

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Keltner:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Study/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you and your staff for your involvement in the interagency coordination for this Study.

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Thank you in advance for your review and comments.

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Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Ms. Roxanne Dow
Florida Department of Environmental Protection
Division of Water Resource Management
2600 Blair Stone Road, MS 3544
Tallahassee, FL 32399-2400

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Ms. Dow:

The U.S. Army Corps of Engineers, Norfolk District, and our non-federal sponsor, the County of Monroe, Florida, announce and release for your review and public comment, the Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. We also wish to thank you and your staff for your involvement in interagency coordination in this Study.

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Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

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Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2020

Mr. Gregory Garis
Florida Department of Environmental Protection
Division of Water Resource Management
2600 Blair Stone Road, MS 3544
Tallahassee, FL 32399-2400

RE: Public Release of the Draft Florida Keys Coastal Storm Risk Management Integrated Feasibility Report/Environmental Impact Statement

Dear Mr. Garis:

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Thank you in advance for your review and comments.

Sincerely,

Kathy Perdue

Kathy Perdue, Biologist
Environmental Analysis Section
Planning and Policy Branch

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Cooperating Agency Invitations and Responses

Norfolk District
803 Front Street
Norfolk,Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

U.S. Environmental Protection Agency
Ms. Jamie Higgins
Resource Conservation Restoration Division
Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

RE: Cooperating Agency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Ms. Higgins,

This letter is being provided to you as a cooperating agency, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

USACE plans to prepare an Environmental Impact Statement (EIS) to evaluate environmental impacts from reasonable project alternatives, in order to determine the potential for significant impacts. Therefore, the USACE is publishing a Notice of Intent (NOI) to prepare an EIS in the Federal Register, and the NEPA public scoping comment period is being reinitiated for 30 days. Scoping will aid in determining the scope of the analysis and any potentially significant issues. This process is also to help identify alternatives and information needed to evaluate alternatives.

USACE will hold an interagency and cooperating agency meeting by webinar on November 20, 2019, at 2 pm. At this meeting, we will provide an update on the project and would welcome your comments. We will forward an Outlook invitation with the weblink and the telephone number.

The study authority is Public Law 84-71, June 15, 1955 which authorizes an examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides. The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. The study area extends from the Key Largo, Florida vicinity to Key West, Florida. A map of the approximate study area is attached.

Potential measures being considered include, but are not limited to the following: structural alternatives (approximately 13 riprap revetments), non-structural alternatives (such as flood proofing, elevation of structures, acquisition of property and relocation, floodplain management, and flood warning systems); small scale structural measures on a per structure basis (such as ringwalls) around critical infrastructure, and Natural and Nature-Based Features (such as living shorelines, mangrove, coral and wetland plantings).

All comments previously submitted will be fully considered and addressed in the EIS. You may view the project and submit written comments on our interactive web-based tool at: https://arcg.is/1TyuTW, no later than December 10, 2019. You may also submit written comments no later by December 10, 2019, to: Ms. Kathy Perdue, U.S. Army Corps of Engineers, Norfolk District, 803 Front St., Norfolk, VA 23510, or Kathy.S.Perdue@usace.army.mil. If you have any questions, please contact Ms. Perdue at (757) 201-7218. Thank you in advance for your participation.

Sincerely,

Kathy Perdue

Kathy Perdue
U.S. Army Corps of Engineers
Norfolk District
Biologist, Environmental Analysis Section
Planning and Policy Branch

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

NOV 2 8 2018

Alicia M. Logalbo
Chief, Environmental Analysis Section
Department of the Army
Norfolk District, Corps of Engineers
Fort Norfolk
803 Front Street
Norfolk, Virginia 23510-1011

Re: U.S. Army Corps of Engineers (USACE) Cooperating Agency Requests for the Miami Back Bay, Florida Keys and Collier County Coastal Storm Risk Management (CSRM) Feasibility Studies and National Environmental Policy Act Documents

Dear Ms. Logalbo:

The U.S. Environmental Protection Agency has received your three letters dated November 20 and 21, 2018, offering the EPA an opportunity to become a "cooperating agency" to the USACE in the development of the CSRM Feasibility Studies and associated National Environmental Policy Act (NEPA) documents for Miami-Dade County Back Bay, Florida Keys and Collier County (respectively) projects in accordance with NEPA (Title 40 of the Code of Federal Regulations, Part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014. The EPA understands that the USACE has not decided whether to prepare an Environmental Assessment or Environmental Impact Statement and will determine the level of NEPA later in the process. As stated in your letters, the purposes of the projects are to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in three separate projects that are in Miami-Dade County Back Bay, the Florida Keys and Collier County, Florida.

The EPA accepts your invitation to become a cooperating agency on all three projects. As resources allow, we plan to fully participate in interagency teleconferences and meetings at important milestones. It should be noted that our status as a cooperating agency has no effect on our authorities under Section 102(2)(C) of NEPA, Section 309 of the Clean Air Act and the Clean Water Act. Similarly, our role as a cooperating agency does not imply that EPA will necessarily concur with all aspects of the project or NEPA document.

We appreciate the opportunity of working with the USACE as a cooperating agency on these projects. Please contact Ms. Jamie Higgins of the NEPA Program Office as our primary agency representative for this project at (404) 562-9681, or by e-mail at Higgins.jamie@epa.gov.

Sincerely,

Christopher A. Militscher
Chief, NEPA Program Office
Resource Conservation and Restoration Division

cc: J. Derby, EPA, Water Protection Division

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 20, 2018

Jamie Higgins
Resource Conservation Restoration Division
National Environmental Policy Act (NEPA)
Program Office – Region 4
Environmental Protection Agency
61 Forsyth St SW
Atlanta, GA 30303

RE: Cooperating Agency Invitation for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Jamie Higgins,

In accordance with regulations pertaining to the National Environmental Policy Act (NEPA; Title 40 of the Code of Federal Regulations, part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014, the U.S. Army Corps of Engineers (Corps), is formally inviting the Environmental Protection Agency to become a cooperating agency for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). The U.S. Army Corps of Engineers is the lead federal agency for the study and Monroe County is the nonfederal sponsor for the study. Council on Environmental Quality regulations implementing NEPA provide that the lead agency (i.e. Corps) may designate other federal, state, local and tribal agencies that have legal jurisdiction or special expertise with respect to any environmental impact involved in a proposal to be cooperating agencies. If you choose not to become a cooperating agency, the Corps will continue to coordinate as we have done in the past.

The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. Attachment 1 contains a map of the approximate study area which extends from the Key Largo vicinity to Key West, Florida. The project is currently in the feasibility study phase and draft project alternatives are anticipated to be available in approximately January 2019, selection of a Tentatively Selected Plan is planned for January 2020 and the release of the draft integrated report/NEPA document is planned for release to the public for commenting in February/March 2020.

The formulation of the project alternatives will be in accordance with Engineer Regulation ER 1105-2-100 and will fully consider a range of environmental, economic and social factors. Your participation as a cooperating agency will help the Corps fully consider the views, needs and benefits of competing interests. Roles and

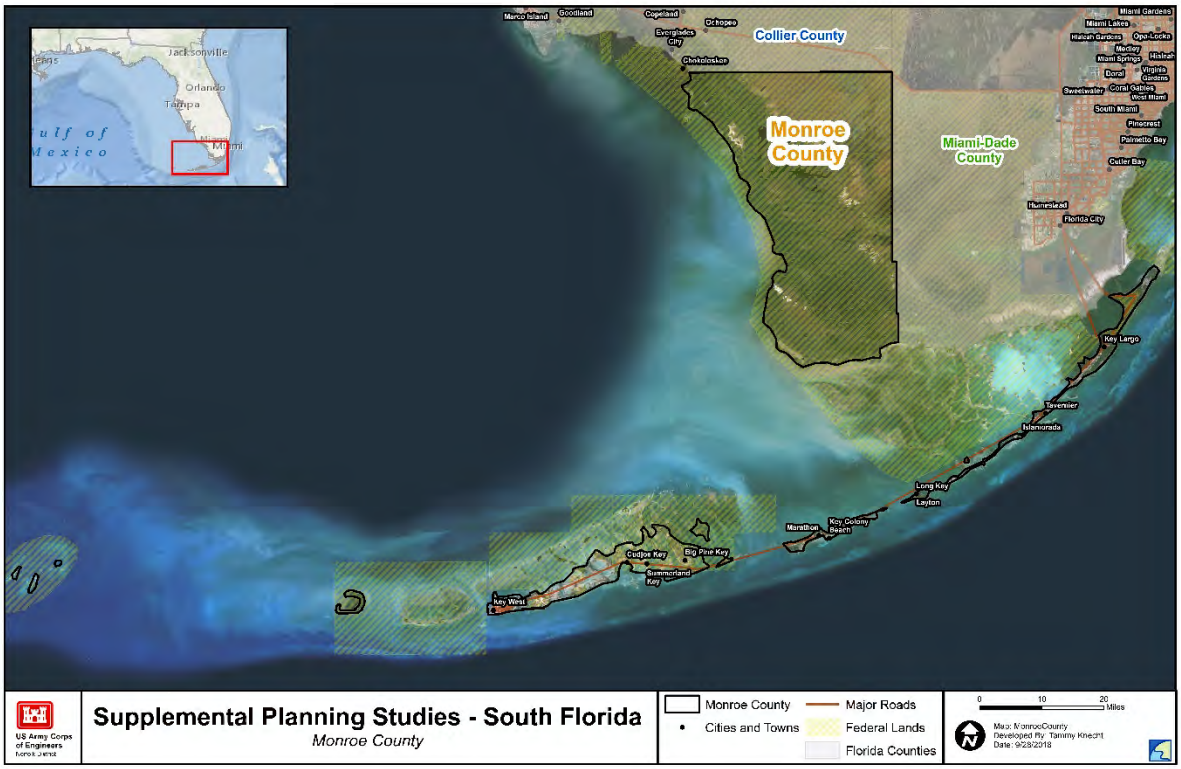
responsibilities of a cooperating agency are defined in Attachment 2. For additional information on becoming a cooperating agency, please see the “Rights and Responsibilities of Lead and Cooperating Agencies” (Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, Council on Environmental Quality, 1981, 14a; https://www.energy.gov/sites/prod/files/2018/06/f53/G-CEQ-40Questions.pdf).

In accordance with WRRDA 2014, Section 1005, any federal agency that is invited by the federal lead agency to participate in the environmental review process for a project study shall be designated as a cooperating agency by the federal lead agency unless the invited agency informs the federal lead agency, in writing, by the deadline specified in the invitation that the invited agency— ‘‘(A)(i)(I) has no jurisdiction or authority with respect to the project; ‘‘(II) has no expertise or information relevant to the project; or ‘‘(III) does not have adequate funds to participate in the project; and ‘‘(ii) does not intend to submit comments on the project; or ‘‘(B) does not intend to submit comments on the project. The Corps appreciates a response to this invitation within 30 days of the date of this letter. If you have any questions, please contact Ms. Kimberly Koelsch at 757-201-7837 or via email at Kimberly.C.Koelsch@usace.army.mil.

Sincerely,

Alicia M. Logalbo
U.S. Army Corps of Engineers
Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

Attachment 1: Map of Approximate Study Area



Attachment 2: Role of Cooperating Agency

As outlined in E.O. 13807, Section 5 (b)(i): “All Federal cooperating and participating agencies shall identify points of contact for each project, cooperate with the lead Federal agency point of contact, and respond to all reasonable requests for information from the lead Federal agency in a timely manner.”

The roles and responsibilities of cooperating agencies include, but are not limited to:

40 CFR §1501.6

1) Participate in the National Environmental Policy Act (NEPA) process at the earliest possible time.
2) Participate in the scoping process (described below and adapted from 40 CFR §1501.7)
a) Determine significant issues to be analyzed in depth in the NEPA assessment.
b) In cooperation with the lead agency (U.S. Army Corps of Engineers, Jacksonville District; Corps) identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review, narrowing the discussion of these issues in the NEPA assessment to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.
c) Assist in preparation of the sections of the NEPA assessment for which the cooperating agency has jurisdiction by law or special expertise.
d) Share knowledge of any public environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the NEPA assessment under consultation.
e) Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies concurrently with, an integrated with, the NEPA assessment as provided in 40 CFR §1502.25.
3) Assume on the request of the Corps responsibility for developing information and preparing environmental analyses including portions of the NEPA assessment concerning which the cooperating agency had special expertise.
4) Make available staff support at the Corps’ request to enhance the Corps’ interdisciplinary capabilities.
5) Participate in scheduled project delivery team meetings, sub-team meetings, NEPA meetings and other scheduled public engagements as requested by the Corps.
6) Meet all scheduled time frames provided by the Corps to ensure timely delivery of materials in order to comply with time frames set forth under WRRDA 2014 and E.O. 13807.
7) Review and provide written comments to the Corps on the Draft and Final NEPA assessment during the scheduled public review periods.

8) Understand that the Corps is the lead Federal agency and as such as the final decision on the contents of the NEPA assessment.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

Ms. Lisa Symons
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Florida Keys National Marine Sanctuary
95230 Overseas Highway
Key Largo, FL 33037

RE: Cooperating Agency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Ms. Symons,

This letter is being provided to you as a cooperating agency, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

USACE plans to prepare an Environmental Impact Statement (EIS) to evaluate environmental impacts from reasonable project alternatives, in order to determine the potential for significant impacts. Therefore, the USACE is publishing a Notice of Intent (NOI) to prepare an EIS in the Federal Register, and the NEPA public scoping comment period is being reinitiated for 30 days. Scoping will aid in determining the scope of the analysis and any potentially significant issues. This process is also to help identify alternatives and information needed to evaluate alternatives.

USACE will hold an interagency and cooperating agency meeting by webinar on November 20, 2019, at 2 pm. At this meeting, we will provide an update on the project and would welcome your comments. We will forward an Outlook invitation with the weblink and the telephone number.

The study authority is Public Law 84-71, June 15, 1955 which authorizes an examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides. The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. The study area extends from the Key Largo, Florida vicinity to Key West, Florida. A map of the approximate study area is included as Attachment 1.

Potential measures being considered include, but are not limited to the following: structural alternatives (such as riprap revetments), non-structural alternatives (such as flood proofing, elevation of structures, acquisition of property and relocation, floodplain management, and flood warning systems); small scale structural measures on a per structure basis (such as ringwalls) around critical infrastructure, and Natural and Nature-Based Features (such as living shorelines, mangrove, coral and wetland plantings).

All comments previously submitted will be fully considered and addressed in the EIS. You may view the project and submit written comments on our interactive web-based tool at: https://arcg.is/1TyuTW, no later than December 10, 2019. You may also submit written comments no later by December 10, 2019, to: Ms. Kathy Perdue, U.S. Army Corps of Engineers, Norfolk District, 803 Front St., Norfolk, VA 23510, or Kathy.S.Perdue@usace.army.mil. If you have any questions, please contact Ms. Perdue at (757) 201-7218. Thank you in advance for your participation.

Sincerely,

Kathy Perdue
U.S. Army Corps of Engineers
Norfolk District
Biologist, Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 20, 2018

Sarah Fangman
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Office of National Marine Sanctuaries
95230 Overseas Highway
Key Largo, FL 33037

RE: Cooperating Agency Invitation for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Ms. Fangman,

In accordance with regulations pertaining to the National Environmental Policy Act (NEPA; Title 40 of the Code of Federal Regulations, part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014, the U.S. Army Corps of Engineers (Corps), is formally inviting the Florida Keys National Marine Sanctuary to become a cooperating agency for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). The U.S. Army Corps of Engineers is the lead federal agency for the study and Monroe County is the nonfederal sponsor for the study. Council on Environmental Quality regulations implementing NEPA provide that the lead agency (i.e. Corps) may designate other federal, state, local and tribal agencies that have legal jurisdiction or special expertise with respect to any environmental impact involved in a proposal to be cooperating agencies. If you choose not to become a cooperating agency, the Corps will continue to coordinate as we have done in the past.

The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. Attachment 1 contains a map of the approximate study area which extends from the Key Largo vicinity to Key West, Florida. The project is currently in the feasibility study phase and draft project alternatives are anticipated to be available in approximately January 2019, selection of a Tentatively Selected Plan is planned for January 2020 and the release of the draft integrated report/NEPA document is planned for release to the public for commenting in February/March 2020.

The formulation of the project alternatives will be in accordance with Engineer Regulation ER 1105-2-100 and will fully consider a range of environmental, economic and social factors. Your participation as a cooperating agency will help the Corps fully consider the views, needs and benefits of competing interests. Roles and

responsibilities of a cooperating agency are defined in Attachment 2. For additional information on becoming a cooperating agency, please see the “Rights and Responsibilities of Lead and Cooperating Agencies” (Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, Council on Environmental Quality, 1981, 14a; https://www.energy.gov/sites/prod/files/2018/06/f53/G-CEQ-40Questions.pdf).

In accordance with WRRDA 2014, Section 1005, any federal agency that is invited by the federal lead agency to participate in the environmental review process for a project study shall be designated as a cooperating agency by the federal lead agency unless the invited agency informs the federal lead agency, in writing, by the deadline specified in the invitation that the invited agency— ‘‘(A)(i)(I) has no jurisdiction or authority with respect to the project; ‘‘(II) has no expertise or information relevant to the project; or ‘‘(III) does not have adequate funds to participate in the project; and ‘‘(ii) does not intend to submit comments on the project; or ‘‘(B) does not intend to submit comments on the project. The Corps appreciates a response to this invitation within 30 days of the date of this letter. If you have any questions, please contact Ms. Kimberly Koelsch at 757-201-7837 or via email at Kimberly.C.Koelsch@usace.army.mil.

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U.S. Army Corps of Engineers Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

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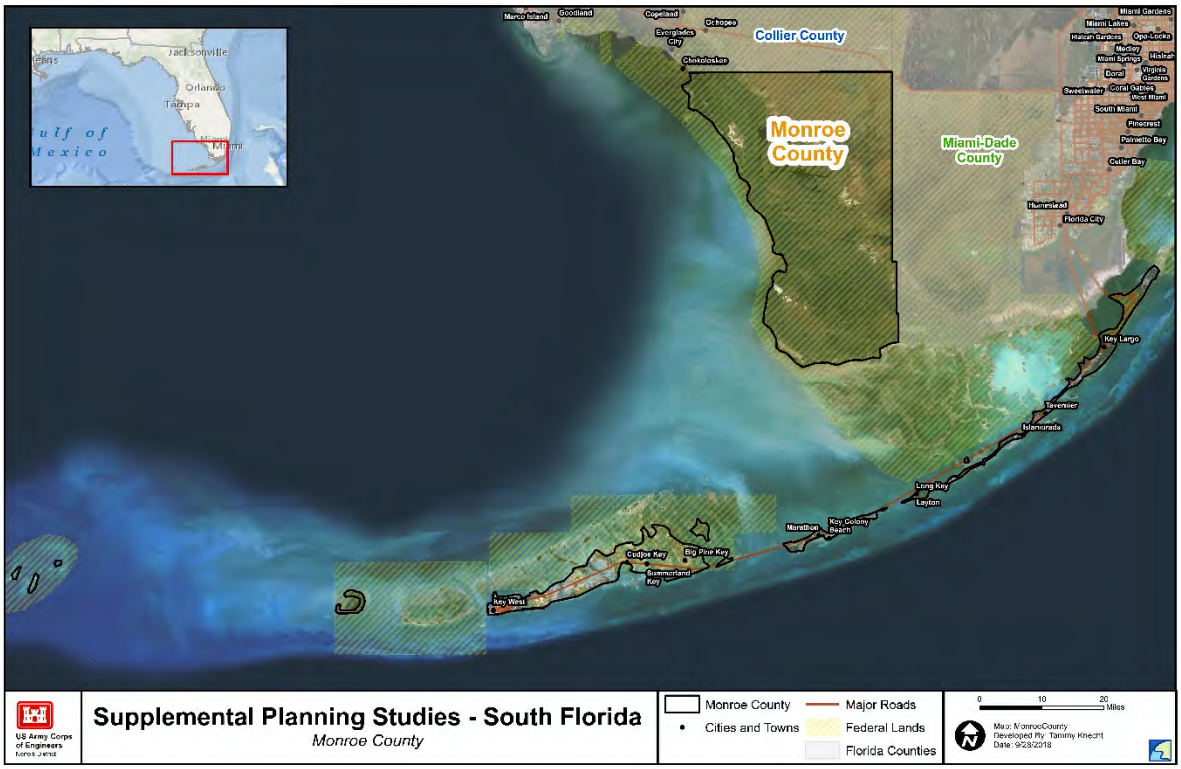

Attachment 2: Role of Cooperating Agency

As outlined in E.O. 13807, Section 5 (b)(i): “All Federal cooperating and participating agencies shall identify points of contact for each project, cooperate with the lead Federal agency point of contact, and respond to all reasonable requests for information from the lead Federal agency in a timely manner.”

The roles and responsibilities of cooperating agencies include, but are not limited to:

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c) Assist in preparation of the sections of the NEPA assessment for which the cooperating agency has jurisdiction by law or special expertise.
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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

Mr. Jim Wolfe
Florida Department of Transportation
District Six
1000 N.W. 111 Avenue
Miami, FL 33172

RE: Cooperating Agency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Mr. Wolfe,

This letter is being provided to you as a cooperating agency, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

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flood proofing, elevation of structures, acquisition of property and relocation, floodplain management, and flood warning systems); small scale structural measures on a per structure basis (such as ringwalls) around critical infrastructure, and Natural and Nature-Based Features (such as living shorelines, mangrove, coral and wetland plantings).

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Sincerely,

Kathy Perdue
U.S. Army Corps of Engineers
Norfolk District
Biologist, Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 20, 2018

Jim Wolfe
Florida Department of Transportation
District Six
1000 N.W. 111 Avenue
Miami, Florida 33172

RE: Cooperating Agency Invitation for the Florida Keys Coastal Storm Risk Management Feasibility Study

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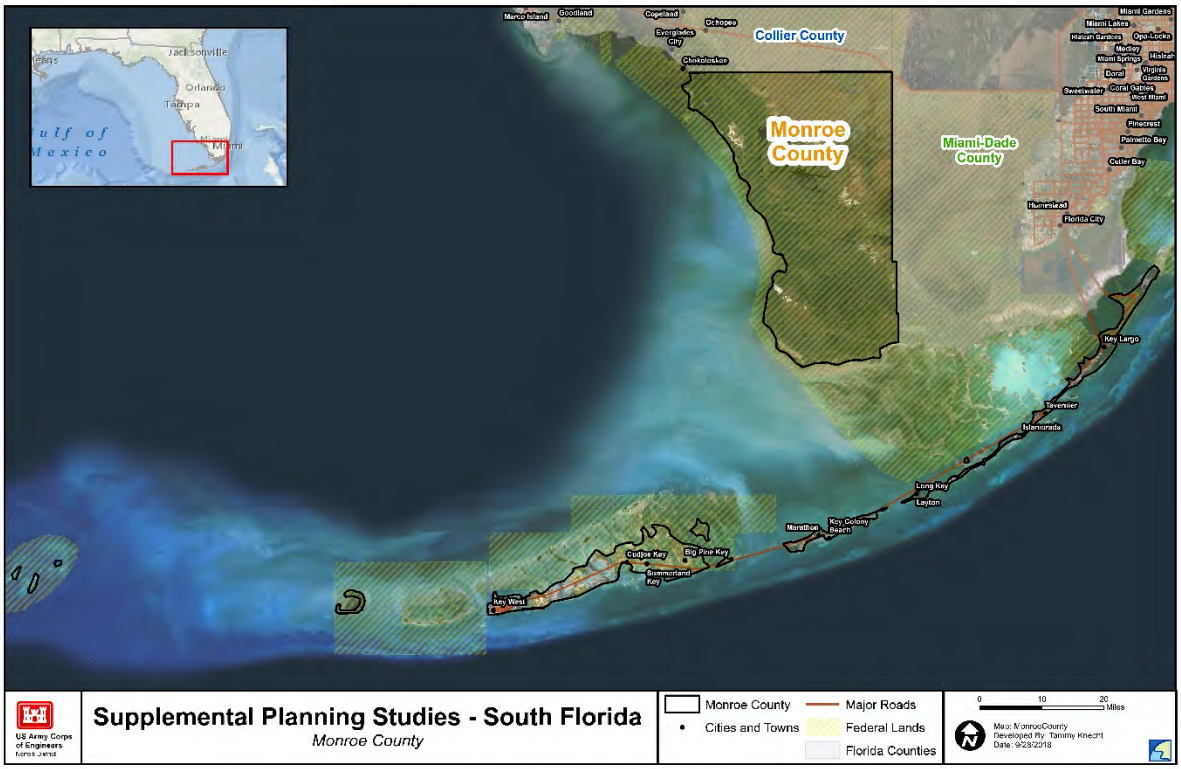
Alicia M. Logalbo
U.S. Army Corps of Engineers Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

Attachment 1: Map of Approximate Study Area



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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

Mr. Andy Strelcheck
Deputy Regional Administrator
NOAA Fisheries
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

RE: Cooperating Agency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Ms. Strelcheck,

This letter is being provided to you as a cooperating agency, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

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The study authority is Public Law 84-71, June 15, 1955 which authorizes an examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides. The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. The study area extends from the Key Largo, Florida vicinity to Key West, Florida. A map of the approximate study area is included as Attachment 1.

Potential measures being considered include, but are not limited to the following: structural alternatives (such as riprap revetments), non-structural alternatives (such as flood proofing, elevation of structures, acquisition of property and relocation, floodplain management, and flood warning systems); small scale structural measures on a per structure basis (such as ringwalls) around critical infrastructure, and Natural and Nature-Based Features (such as living shorelines, mangrove, coral and wetland plantings).

All comments previously submitted will be fully considered and addressed in the EIS. You may view the project and submit written comments on our interactive web-based tool at: https://arcg.is/1TyuTW, no later than December 10, 2019. You may also submit written comments no later by December 10, 2019, to: Ms. Kathy Perdue, U.S. Army Corps of Engineers, Norfolk District, 803 Front St., Norfolk, VA 23510, or Kathy.S.Perdue@usace.army.mil. If you have any questions, please contact Ms. Perdue at (757) 201-7218. Thank you in advance for your participation.

Sincerely,

Kathy Perdue
U.S. Army Corps of Engineers
Norfolk District
Biologist, Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 20, 2018

Andy Strelcheck
Deputy Regional Administrator
NOAA Fisheries
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

RE: Cooperating Agency Invitation for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Mr.Strelcheck ,

In accordance with regulations pertaining to the National Environmental Policy Act (NEPA; Title 40 of the Code of Federal Regulations, part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014, the U.S. Army Corps of Engineers (Corps), is formally inviting the National Oceanic and Atmospheric Administration Fisheries Service to become a cooperating agency for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). The U.S. Army Corps of Engineers is the lead federal agency for the study and Monroe County is the nonfederal sponsor for the study. Council on Environmental Quality regulations implementing NEPA provide that the lead agency (i.e. Corps) may designate other federal, state, local and tribal agencies that have legal jurisdiction or special expertise with respect to any environmental impact involved in a proposal to be cooperating agencies. If you choose not to become a cooperating agency, the Corps will continue to coordinate as we have done in the past.

The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. Attachment 1 contains a map of the approximate study area which extends from the Key Largo vicinity to Key West, Florida. The project is currently in the feasibility study phase and draft project alternatives are anticipated to be available in approximately January 2019, selection of a Tentatively Selected Plan is planned for January 2020 and the release of the draft integrated report/NEPA document is planned for release to the public for commenting in February/March 2020.

The formulation of the project alternatives will be in accordance with Engineer Regulation ER 1105-2-100 and will fully consider a range of environmental, economic and social factors. Your participation as a cooperating agency will help the Corps fully consider the views, needs and benefits of competing interests. Roles and

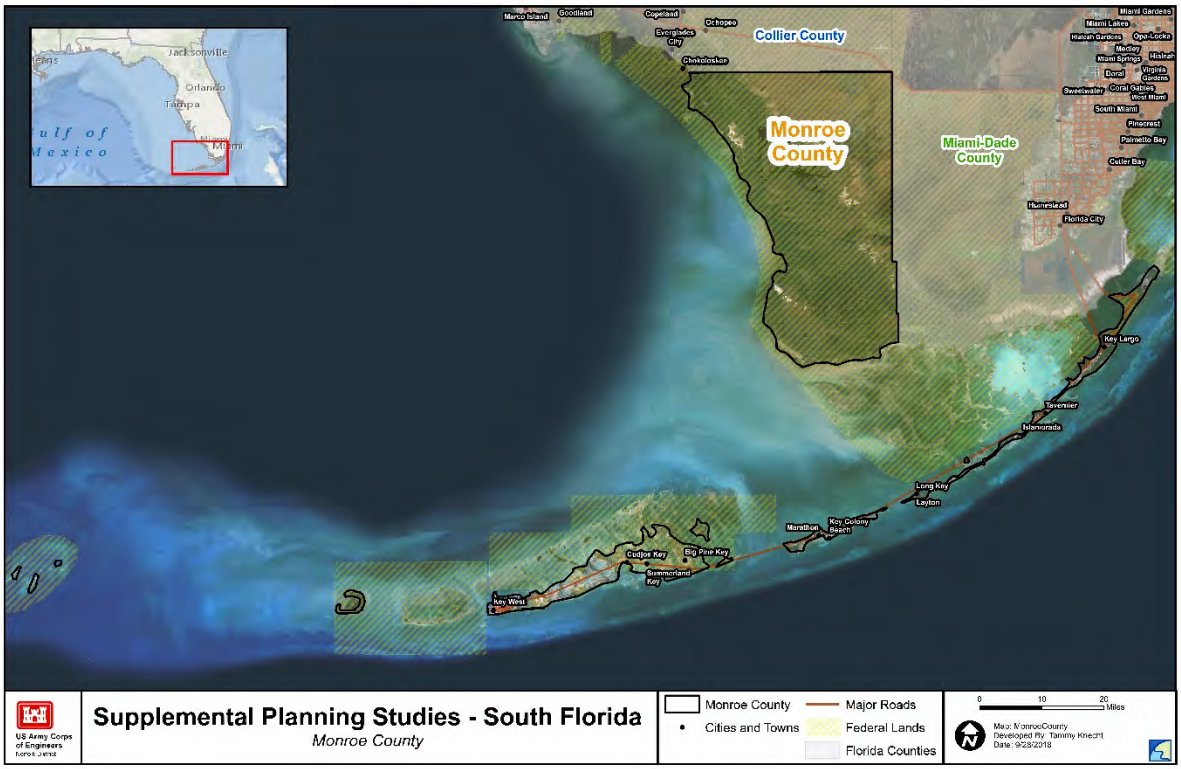
responsibilities of a cooperating agency are defined in Attachment 2. For additional information on becoming a cooperating agency, please see the “Rights and Responsibilities of Lead and Cooperating Agencies” (Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, Council on Environmental Quality, 1981, 14a; https://www.energy.gov/sites/prod/files/2018/06/f53/G-CEQ-40Questions.pdf).

In accordance with WRRDA 2014, Section 1005, any federal agency that is invited by the federal lead agency to participate in the environmental review process for a project study shall be designated as a cooperating agency by the federal lead agency unless the invited agency informs the federal lead agency, in writing, by the deadline specified in the invitation that the invited agency— ‘‘(A)(i)(I) has no jurisdiction or authority with respect to the project; ‘‘(II) has no expertise or information relevant to the project; or ‘‘(III) does not have adequate funds to participate in the project; and ‘‘(ii) does not intend to submit comments on the project; or ‘‘(B) does not intend to submit comments on the project. The Corps appreciates a response to this invitation within 30 days of the date of this letter. If you have any questions, please contact Ms. Kimberly Koelsch at 757-201-7837 or via email at Kimberly.C.Koelsch@usace.army.mil.

Sincerely,

Alicia M. Logalbo
U.S. Army Corps of Engineers
Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

Attachment 1: Map of Approximate Study Area



Attachment 2: Role of Cooperating Agency

As outlined in E.O. 13807, Section 5 (b)(i): “All Federal cooperating and participating agencies shall identify points of contact for each project, cooperate with the lead Federal agency point of contact, and respond to all reasonable requests for information from the lead Federal agency in a timely manner.”

The roles and responsibilities of cooperating agencies include, but are not limited to:

40 CFR §1501.6

1) Participate in the National Environmental Policy Act (NEPA) process at the earliest possible time.
2) Participate in the scoping process (described below and adapted from 40 CFR §1501.7)
a) Determine significant issues to be analyzed in depth in the NEPA assessment.
b) In cooperation with the lead agency (U.S. Army Corps of Engineers, Jacksonville District; Corps) identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review, narrowing the discussion of these issues in the NEPA assessment to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.
c) Assist in preparation of the sections of the NEPA assessment for which the cooperating agency has jurisdiction by law or special expertise.
d) Share knowledge of any public environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the NEPA assessment under consultation.
e) Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies concurrently with, an integrated with, the NEPA assessment as provided in 40 CFR §1502.25.
3) Assume on the request of the Corps responsibility for developing information and preparing environmental analyses including portions of the NEPA assessment concerning which the cooperating agency had special expertise.
4) Make available staff support at the Corps’ request to enhance the Corps’ interdisciplinary capabilities.
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6) Meet all scheduled time frames provided by the Corps to ensure timely delivery of materials in order to comply with time frames set forth under WRRDA 2014 and E.O. 13807.
7) Review and provide written comments to the Corps on the Draft and Final NEPA assessment during the scheduled public review periods.

8) Understand that the Corps is the lead Federal agency and as such as the final decision on the contents of the NEPA assessment.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

Florida Department of Environmental Protection
Division of Water Resource Management
Mr. Gregory W. Garis
2600 Blair Stone Road, MS 3544
Tallahassee, FL 32399-2400

RE: Interagency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Mr. Garis,

This letter is being provided to you as an interagency partner, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

USACE plans to prepare an Environmental Impact Statement (EIS) to evaluate environmental impacts from reasonable project alternatives, in order to determine the potential for significant impacts. Therefore, the USACE is publishing a Notice of Intent (NOI) to prepare an EIS in the Federal Register, and the NEPA public scoping comment period is being reinitiated for 30 days. Scoping will aid in determining the scope of the analysis and any potentially significant issues. This process is also to help identify alternatives and information needed to evaluate alternatives.

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To aid in the development of our EIS, we request that you provide any available sea turtle nesting data, an official species list, any other available data regarding threatened or endangered species to be affected, and any other comments you have.

All comments previously submitted will be fully considered and addressed in the EIS. You may view the project and submit written comments on our interactive web-based tool at: https://arcg.is/1TyuTW, no later than December 10, 2019. You may also submit written comments no later by December 10, 2019, to: Ms. Kathy Perdue, U.S. Army Corps of Engineers, Norfolk District, 803 Front St., Norfolk, VA 23510, or Kathy.S.Perdue@usace.army.mil. If you have any questions, please contact Ms. Perdue at (757) 201-7218. Thank you in advance for your participation.

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Kathy Perdue

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U.S. Army Corps of Engineers
Norfolk District
Biologist, Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
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November 20, 2018

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Program Administrator
Florida Department of Environmental Protection
Division of Water Resource Management
2600 Blair Stone Road, MS 3544
Tallahassee, FL 32399-2400

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Norfolk District
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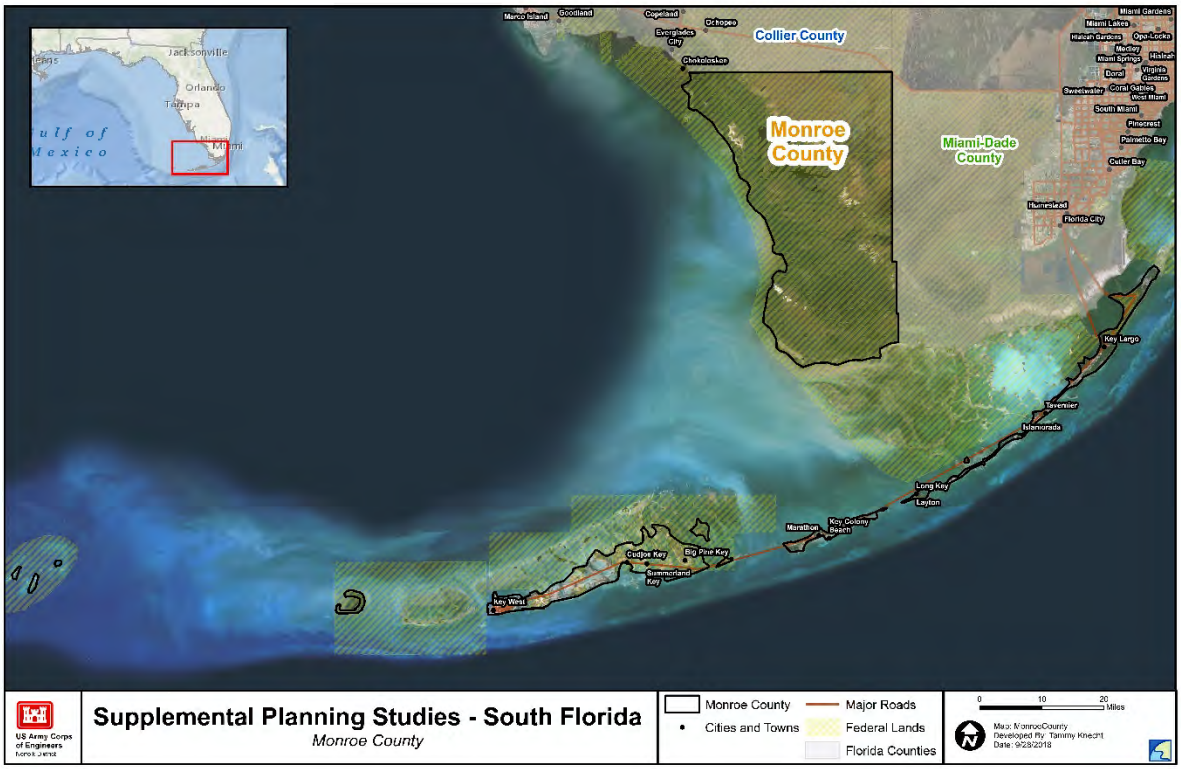

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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

Mr. Jeff Howe
U.S. Fish and Wildlife Service
South Florida Ecological Services Office
1339 20th Street
Vero Beach, FL 32960

RE: Interagency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Mr. Howe,

This letter is being provided to you as an interagency partner, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

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Kathy Perdue
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Norfolk District
Biologist, Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
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November 20, 2018

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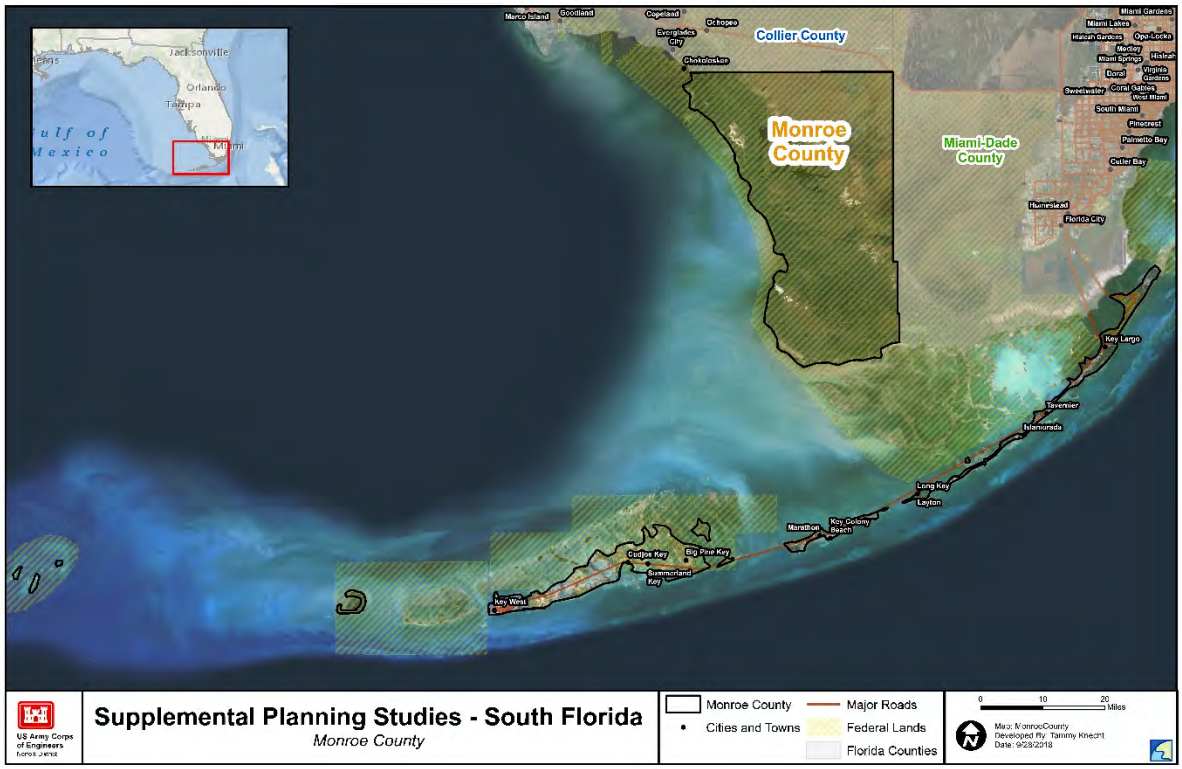

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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

U.S. Federal Emergency Management Agency
Ms. Gracia Szczech
Regional Administrator, Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

RE: Participating Agency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Ms. Szczech,

This letter is being provided to you as a participating agency, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

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US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
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November 20, 2018

Planning and Policy Division
Environmental Branch

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RE: Participating Agency Invitation for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Ms. Szczech,

In accordance with regulations pertaining to the National Environmental Policy Act (NEPA; Title 40 of the Code of Federal Regulations, part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014, the U.S. Army Corps of Engineers (Corps), is formally inviting the Federal Emergency Management Agency, Region IV to become a participating agency for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). The U.S. Army Corps of Engineers is the lead federal agency for the study and Monroe County is the nonfederal sponsor for the study. Federal, State, tribal, regional, and local government agencies that may have an interest in the project are invited to serve as participating agencies. Roles and responsibilities of participating agencies are defined in Attachment 1. If you choose not to become a participating agency, the Corps will continue to coordinate as we have done in the past.

The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. Attachment 2 contains a map of the approximate study area which extends from the Key Largo, Florida vicinity to Key West, Florida. The project is currently in the feasibility study phase and draft project alternatives are anticipated to be available in approximately January 2019, selection of a Tentatively Selected Plan is planned for January 2020 and the release of the draft integrated report/NEPA document is planned for release to the public for commenting in February/March 2020.

The formulation of the project alternatives will be in accordance with Engineer Regulation ER 1105-2-100 and will fully consider a range of environmental, economic

and social factors. Your contribution as a participating agency will help us fully consider the views, needs and benefits of competing interests. Based on information received from the Federal lead agency, cooperating and participating agencies shall identify, as early as practicable, any issues of concern regarding the potential environmental or socioeconomic impacts of the project, including any issues that could substantially delay or prevent an agency from granting a permit (WRRDA 2014 Section 1005).

The Corps appreciates a response to this invitation within 30 days of the date of this letter. The Corps requests that in your letter response that you state formally whether you wish to contribute to the project as participating agency. If you have any questions, please contact Ms. Kimberly C. Koelsch at 757-201-7837 or via email at Kimberly.C.Koelsch@usace.army.mil.

Sincerely,

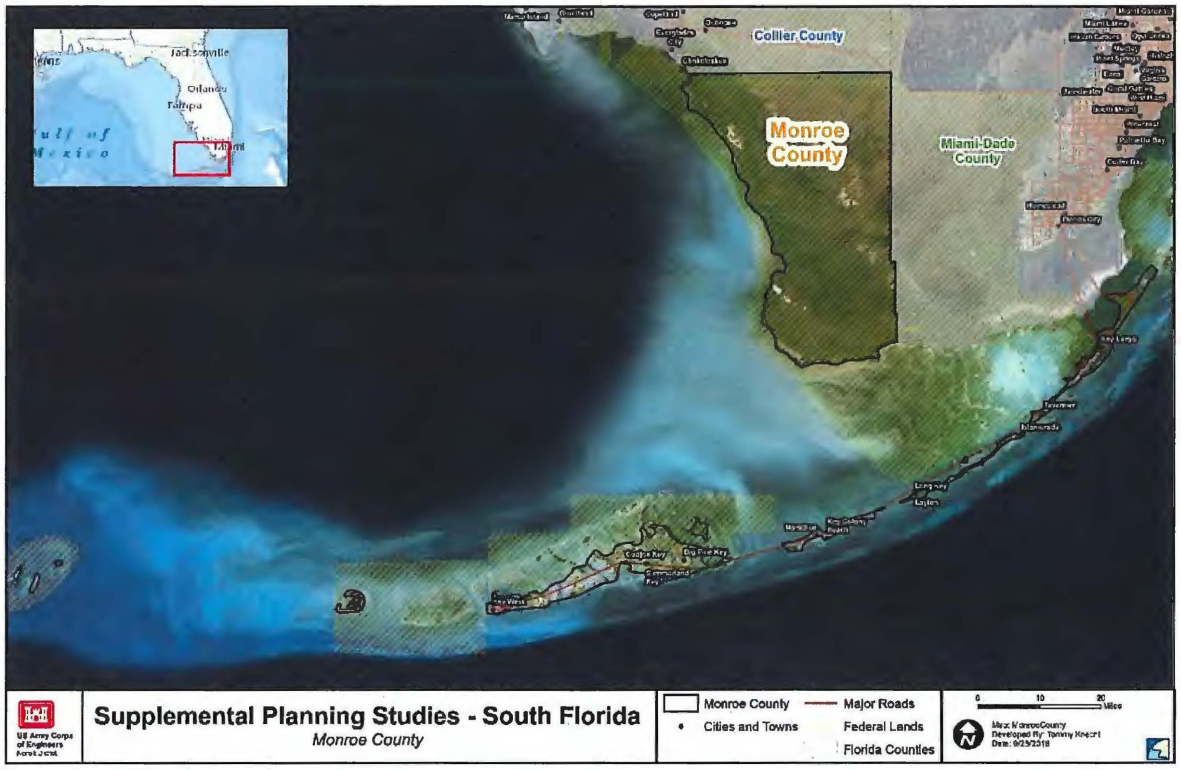
Alicia M. Logalbo
U.S. Army Corps of Engineers
Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

Attachment 1: Role of Participating Agency

As outlined in E.O. 13807, Section 5 (b)(i): "All Federal cooperating and participating agencies shall identify points of contact for each project, cooperate with the lead Federal agency point of contact, and respond to all reasonable requests for information from the lead Federal agency in a timely manner."

1) Participate in the National Environmental Policy Act (NEPA) process starting at the earliest possible time, especially with regard to the development of the purpose and need statement, range of alternatives, methodologies, and the level of detail for the analysis of alternatives.
2) Participate in the scoping process and scheduled project delivery team meetings.
3) Identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts.
4) Provide meaningful and timely input on unresolved issues.
5) Review and provide written comments to the U.S. Army Corps of Engineers, Jacksonville District, on the draft and final NEPA assessments during the scheduled public review periods.

Attachment 2: Map of Approximate Study Area



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

U.S. Coast Guard
Rear Admiral Brown
Seventh District
909 SE 1st Avenue
Brickell Plaza Federal Building
Miami, FL 33131-3050

RE: Interagency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Admiral Brown,

This letter is being provided to you as an interagency partner, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

USACE plans to prepare an Environmental Impact Statement (EIS) to evaluate environmental impacts from reasonable project alternatives, in order to determine the potential for significant impacts. Therefore, the USACE is publishing a Notice of Intent (NOI) to prepare an EIS in the Federal Register, and the NEPA public scoping comment period is being reinitiated for 30 days. Scoping will aid in determining the scope of the analysis and any potentially significant issues. This process is also to help identify alternatives and information needed to evaluate alternatives.

USACE will hold an interagency and cooperating agency meeting by webinar on November 20, 2019, at 2 pm. At this meeting, we will provide an update on the project and would welcome your comments. We will forward an Outlook invitation with the weblink and the telephone number.

The study authority is Public Law 84-71, June 15, 1955 which authorizes an examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides. The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. The study area extends from the Key Largo, Florida vicinity to Key West, Florida. A map of the approximate study area is included as an attachment.

Potential measures being considered include, but are not limited to the following: structural alternatives (such as riprap revetments), non-structural alternatives (such as flood proofing, elevation of structures, acquisition of property and relocation, floodplain management, and flood warning systems); small scale structural measures on a per structure basis (such as ringwalls) around critical infrastructure, and Natural and Nature-Based Features (such as living shorelines, mangrove, coral and wetland plantings).

All comments previously submitted will be fully considered and addressed in the EIS. You may view the project and submit written comments on our interactive web-based tool at: https://arcg.is/1TyuTW, no later than December 10, 2019. You may also submit written comments no later by December 10, 2019, to: Ms. Kathy Perdue, U.S. Army Corps of Engineers, Norfolk District, 803 Front St., Norfolk, VA 23510, or Kathy.S.Perdue@usace.army.mil. If you have any questions, please contact Ms. Perdue at (757) 201-7218. Thank you in advance for your participation.

Sincerely,

Kathy Perdue
U.S. Army Corps of Engineers
Norfolk District
Biologist, Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 20, 2018

United States Coast Guard
Rear Admiral Peter J. Brown
Seventh District
909 SE 1st Avenue
Brickell Plaza Federal Building
Miami, FL 33131-3050

RE: Cooperating Agency Invitation for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Admiral Brown,

In accordance with regulations pertaining to the National Environmental Policy Act (NEPA; Title 40 of the Code of Federal Regulations, part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014, the U.S. Army Corps of Engineers (Corps), is formally inviting U.S. Coast Guard to become a cooperating agency for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). The U.S. Army Corps of Engineers is the lead federal agency for the study and Monroe County is the nonfederal sponsor for the study. Council on Environmental Quality regulations implementing NEPA provide that the lead agency (i.e. Corps) may designate other federal, state, local and tribal agencies that have legal jurisdiction or special expertise with respect to any environmental impact involved in a proposal to be cooperating agencies. If you choose not to become a cooperating agency, the Corps will continue to coordinate as we have done in the past.

The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. Attachment 1 contains a map of the approximate study area which extends from the Key Largo vicinity to Key West, Florida. The project is currently in the feasibility study phase and draft project alternatives are anticipated to be available in approximately January 2019, selection of a Tentatively Selected Plan is planned for January 2020 and the release of the draft integrated report/NEPA document is planned for release to the public for commenting in February/March 2020.

The formulation of the project alternatives will be in accordance with Engineer Regulation ER 1105-2-100 and will fully consider a range of environmental, economic and social factors. Your participation as a cooperating agency will help the Corps fully consider the views, needs and benefits of competing interests. Roles and

responsibilities of a cooperating agency are defined in Attachment 2. For additional information on becoming a cooperating agency, please see the “Rights and Responsibilities of Lead and Cooperating Agencies” (Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, Council on Environmental Quality, 1981, 14a; https://www.energy.gov/sites/prod/files/2018/06/f53/G-CEQ-40Questions.pdf).

In accordance with WRRDA 2014, Section 1005, any federal agency that is invited by the federal lead agency to participate in the environmental review process for a project study shall be designated as a cooperating agency by the federal lead agency unless the invited agency informs the federal lead agency, in writing, by the deadline specified in the invitation that the invited agency— ‘‘(A)(i)(I) has no jurisdiction or authority with respect to the project; ‘‘(II) has no expertise or information relevant to the project; or ‘‘(III) does not have adequate funds to participate in the project; and ‘‘(ii) does not intend to submit comments on the project; or ‘‘(B) does not intend to submit comments on the project. The Corps appreciates a response to this invitation within 30 days of the date of this letter. If you have any questions, please contact Ms. Kimberly Koelsch at 757-201-7837 or via email at Kimberly.C.Koelsch@usace.army.mil.

Sincerely,

Alicia M. Logalbo
U.S. Army Corps of Engineers Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

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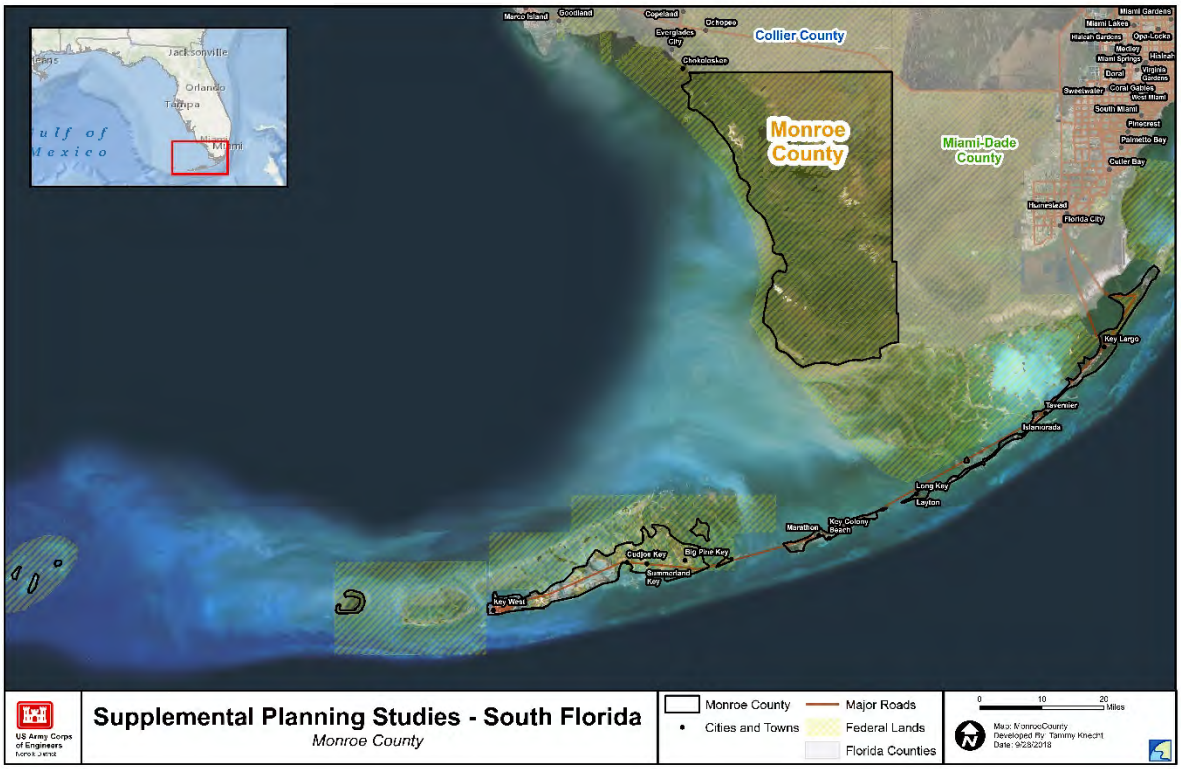


Attachment 2: Role of Cooperating Agency

As outlined in E.O. 13807, Section 5 (b)(i): “All Federal cooperating and participating agencies shall identify points of contact for each project, cooperate with the lead Federal agency point of contact, and respond to all reasonable requests for information from the lead Federal agency in a timely manner.”

The roles and responsibilities of cooperating agencies include, but are not limited to:

40 CFR §1501.6

1) Participate in the National Environmental Policy Act (NEPA) process at the earliest possible time.
2) Participate in the scoping process (described below and adapted from 40 CFR §1501.7)
a) Determine significant issues to be analyzed in depth in the NEPA assessment.
b) In cooperation with the lead agency (U.S. Army Corps of Engineers, Jacksonville District; Corps) identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review, narrowing the discussion of these issues in the NEPA assessment to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.
c) Assist in preparation of the sections of the NEPA assessment for which the cooperating agency has jurisdiction by law or special expertise.
d) Share knowledge of any public environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the NEPA assessment under consultation.
e) Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies concurrently with, an integrated with, the NEPA assessment as provided in 40 CFR §1502.25.
3) Assume on the request of the Corps responsibility for developing information and preparing environmental analyses including portions of the NEPA assessment concerning which the cooperating agency had special expertise.
4) Make available staff support at the Corps’ request to enhance the Corps’ interdisciplinary capabilities.
5) Participate in scheduled project delivery team meetings, sub-team meetings, NEPA meetings and other scheduled public engagements as requested by the Corps.
6) Meet all scheduled time frames provided by the Corps to ensure timely delivery of materials in order to comply with time frames set forth under WRRDA 2014 and E.O. 13807.
7) Review and provide written comments to the Corps on the Draft and Final NEPA assessment during the scheduled public review periods.

8) Understand that the Corps is the lead Federal agency and as such as the final decision on the contents of the NEPA assessment.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 8, 2019

Mr. Robert Johnson
National Park Service
Director, South Florida Ecosystem Office
950 N. Krome Avenue
Homestead, FL 33030-4443

RE: Interagency Coordination for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Mr. Johnson,

This letter is being provided to you as an interagency partner, and is also in reference to the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). USACE is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

USACE plans to prepare an Environmental Impact Statement (EIS) to evaluate environmental impacts from reasonable project alternatives, in order to determine the potential for significant impacts. Therefore, the USACE is publishing a Notice of Intent (NOI) to prepare an EIS in the Federal Register, and the NEPA public scoping comment period is being reinitiated for 30 days. Scoping will aid in determining the scope of the analysis and any potentially significant issues. This process is also to help identify alternatives and information needed to evaluate alternatives.

USACE will hold an interagency and cooperating agency meeting by webinar on November 20, 2019, at 2 pm. At this meeting, we will provide an update on the project and would welcome your comments. We will forward an Outlook invitation with the weblink and the telephone number.

The study authority is Public Law 84-71, June 15, 1955 which authorizes an examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides. The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. The study area extends from the Key Largo, Florida vicinity to Key West, Florida. A map of the approximate study area is included as an attachment.

Potential measures being considered include, but are not limited to the following: structural alternatives (such as riprap revetments), non-structural alternatives (such as

flood proofing, elevation of structures, acquisition of property and relocation, floodplain management, and flood warning systems); small scale structural measures on a per structure basis (such as ringwalls) around critical infrastructure, and Natural and Nature-Based Features (such as living shorelines, mangrove, coral and wetland plantings).

All comments previously submitted will be fully considered and addressed in the EIS. You may view the project and submit written comments on our interactive web-based tool at: https://arcg.is/1TyuTW, no later than December 10, 2019. You may also submit written comments no later by December 10, 2019, to: Ms. Kathy Perdue, U.S. Army Corps of Engineers, Norfolk District, 803 Front St., Norfolk, VA 23510, or Kathy.S.Perdue@usace.army.mil. If you have any questions, please contact Ms. Perdue at (757) 201-7218. Thank you in advance for your participation.

Sincerely,

Kathy Perdue
U.S. Army Corps of Engineers
Norfolk District
Biologist, Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

December 11, 2018

Robert Johnson
National Park Service
Director, South Florida Ecosystem Office
950 N. Krome Avenue
Homestead, FL 33030-4443

RE: Cooperating Agency Invitation for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Mr. Johnson,

In accordance with regulations pertaining to the National Environmental Policy Act (NEPA; Title 40 of the Code of Federal Regulations, part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014, the U.S. Army Corps of Engineers (Corps), is formally inviting the National Park Service to become a cooperating agency for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). The U.S. Army Corps of Engineers is the lead federal agency for the study and Monroe County is the nonfederal sponsor for the study. Council on Environmental Quality regulations implementing NEPA provide that the lead agency (i.e. Corps) may designate other federal, state, local and tribal agencies that have legal jurisdiction or special expertise with respect to any environmental impact involved in a proposal to be cooperating agencies. If you choose not to become a cooperating agency, the Corps will continue to coordinate as we have done in the past.

The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. Attachment 1 contains a map of the approximate study area which extends from the Key Largo vicinity to Key West, Florida. The project is currently in the feasibility study phase and draft project alternatives are anticipated to be available in approximately January 2019, selection of a Tentatively Selected Plan is planned for January 2020 and the release of the draft integrated report/NEPA document is planned for release to the public for commenting in February/March 2020.

The formulation of the project alternatives will be in accordance with Engineer Regulation ER 1105-2-100 and will fully consider a range of environmental, economic and social factors. Your participation as a cooperating agency will help the Corps fully consider the views, needs and benefits of competing interests. Roles and responsibilities of a cooperating agency are defined in Attachment 2. For additional information on becoming a cooperating agency, please see the "Rights and

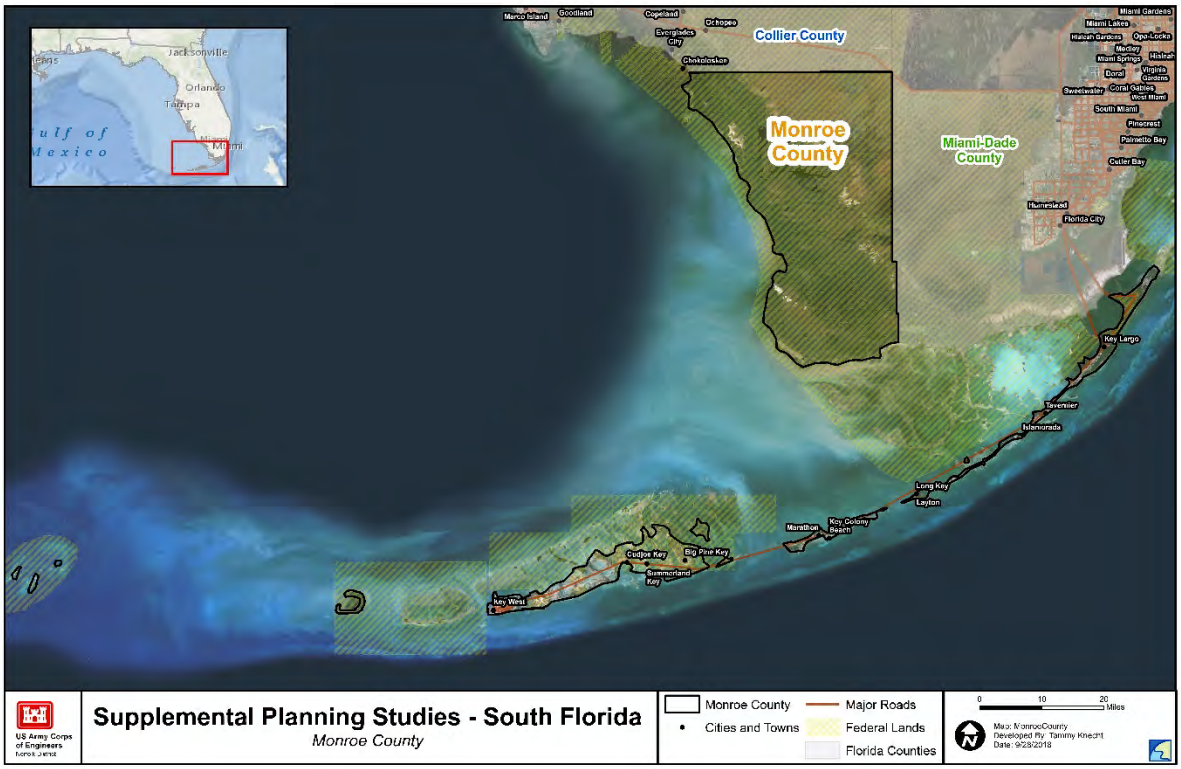
Responsibilities of Lead and Cooperating Agencies" (Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Council on Environmental Quality, 1981, 14a; https://www.energy.gov/sites/prod/files/2018/06/f53/G-CEQ-40Questions.pdf).

In accordance with WRRDA 2014, Section 1005, any federal agency that is invited by the federal lead agency to participate in the environmental review process for a project study shall be designated as a cooperating agency by the federal lead agency unless the invited agency informs the federal lead agency, in writing, by the deadline specified in the invitation that the invited agency— ''(A)(i)(I) has no jurisdiction or authority with respect to the project; ''(II) has no expertise or information relevant to the project; or ''(III) does not have adequate funds to participate in the project; and ''(ii) does not intend to submit comments on the project; or ''(B) does not intend to submit comments on the project. The Corps appreciates a response to this invitation within 30 days of the date of this letter. If you have any questions, please contact Ms. Kimberly Koelsch at 757-201-7837 or via email at Kimberly.C.Koelsch@usace.army.mil.

Sincerely,

Alicia M. Logalbo
U.S. Army Corps of Engineers Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

Attachment 1: Map of Approximate Study Area



Attachment 2: Role of Cooperating Agency

As outlined in E.O. 13807, Section 5 (b)(i): “All Federal cooperating and participating agencies shall identify points of contact for each project, cooperate with the lead Federal agency point of contact, and respond to all reasonable requests for information from the lead Federal agency in a timely manner.”

The roles and responsibilities of cooperating agencies include, but are not limited to:

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a) Determine significant issues to be analyzed in depth in the NEPA assessment.
b) In cooperation with the lead agency (U.S. Army Corps of Engineers, Jacksonville District; Corps) identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review, narrowing the discussion of these issues in the NEPA assessment to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.
c) Assist in preparation of the sections of the NEPA assessment for which the cooperating agency has jurisdiction by law or special expertise.
d) Share knowledge of any public environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the NEPA assessment under consultation.
e) Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies concurrently with, an integrated with, the NEPA assessment as provided in 40 CFR §1502.25.
3) Assume on the request of the Corps responsibility for developing information and preparing environmental analyses including portions of the NEPA assessment concerning which the cooperating agency had special expertise.
4) Make available staff support at the Corps’ request to enhance the Corps’ interdisciplinary capabilities.
5) Participate in scheduled project delivery team meetings, sub-team meetings, NEPA meetings and other scheduled public engagements as requested by the Corps.
6) Meet all scheduled time frames provided by the Corps to ensure timely delivery of materials in order to comply with time frames set forth under WRRDA 2014 and E.O. 13807.
7) Review and provide written comments to the Corps on the Draft and Final NEPA assessment during the scheduled public review periods.

8) Understand that the Corps is the lead Federal agency and as such as the final decision on the contents of the NEPA assessment.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 20, 2018

Brandye L Hendrickson
Federal Highway Administration
Deputy Administrator
Southeast Federal Center Building
1200 New Jersey Ave. S.E.
Washington, DC 20590-9898

RE: Cooperating Agency Invitation for the Florida Keys Coastal Storm Risk Management Feasibility Study

Dear Ms. Hendrickson

In accordance with regulations pertaining to the National Environmental Policy Act (NEPA; Title 40 of the Code of Federal Regulations, part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014, the U.S. Army Corps of Engineers (Corps), is formally inviting the Federal Highway Administration to become a cooperating agency for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). The U.S. Army Corps of Engineers is the lead federal agency for the study and Monroe County is the nonfederal sponsor for the study. Council on Environmental Quality regulations implementing NEPA provide that the lead agency (i.e. Corps) may designate other federal, state, local and tribal agencies that have legal jurisdiction or special expertise with respect to any environmental impact involved in a proposal to be cooperating agencies. If you choose not to become a cooperating agency, the Corps will continue to coordinate as we have done in the past.

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In accordance with WRRDA 2014, Section 1005, any federal agency that is invited by the federal lead agency to participate in the environmental review process for a project study shall be designated as a cooperating agency by the federal lead agency unless the invited agency informs the federal lead agency, in writing, by the deadline specified in the invitation that the invited agency— ‘‘(A)(i)(I) has no jurisdiction or authority with respect to the project; ‘‘(II) has no expertise or information relevant to the project; or ‘‘(III) does not have adequate funds to participate in the project; and ‘‘(ii) does not intend to submit comments on the project; or ‘‘(B) does not intend to submit comments on the project. The Corps appreciates a response to this invitation within 30 days of the date of this letter. If you have any questions, please contact Ms. Kimberly Koelsch at 757-201-7837 or via email at Kimberly.C.Koelsch@usace.army.mil.

Sincerely,

Alicia M. Logalbo
U.S. Army Corps of Engineers Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

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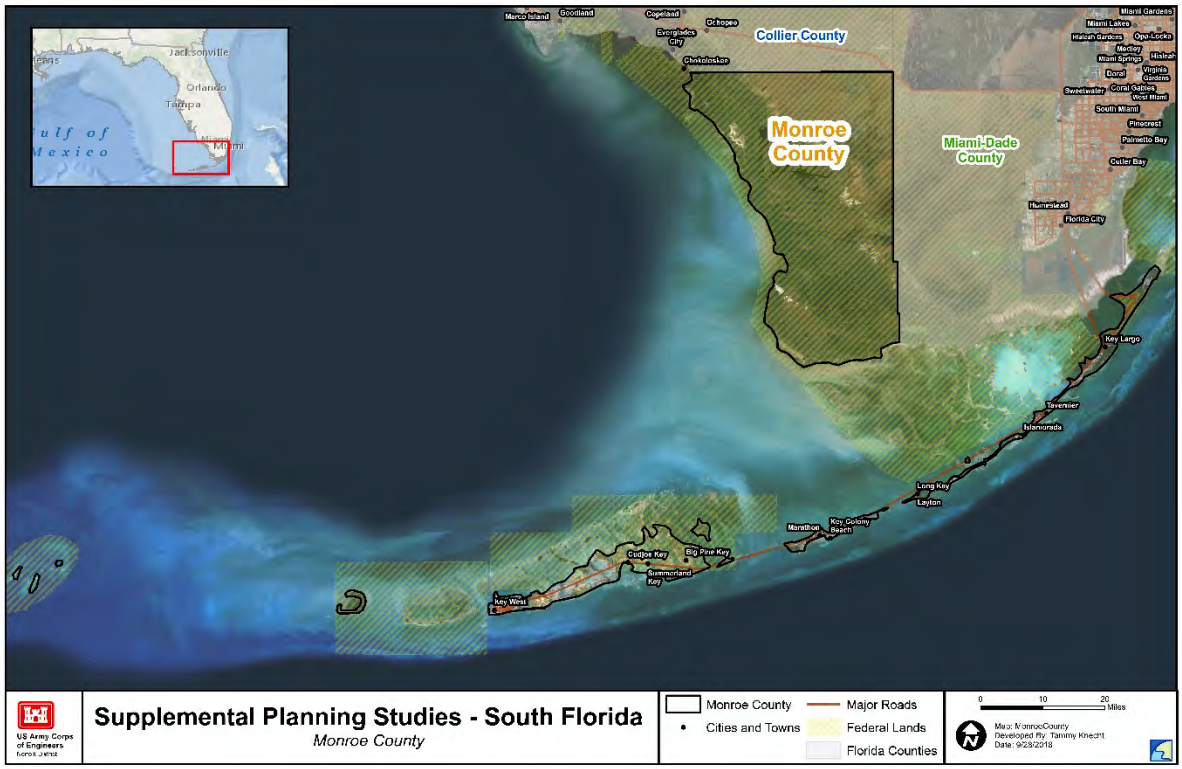

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b) In cooperation with the lead agency (U.S. Army Corps of Engineers, Jacksonville District; Corps) identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review, narrowing the discussion of these issues in the NEPA assessment to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.
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5) Participate in scheduled project delivery team meetings, sub-team meetings, NEPA meetings and other scheduled public engagements as requested by the Corps.
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7) Review and provide written comments to the Corps on the Draft and Final NEPA assessment during the scheduled public review periods.

8) Understand that the Corps is the lead Federal agency and as such as the final decision on the contents of the NEPA assessment.

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Interagency Coordination and Responses

Norfolk District
803 Front Street
Norfolk, Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

CENAO-WR-PE (ER 200-2-2)

MEMORANDUM FOR THE RECORD

SUBJECT: Coordination Act Report for the Florida Keys Coastal Storm Risk Management Feasibility Study, Monroe County, Florida

PURPOSE: To document an informal understanding between the U.S. Army Corps of Engineers, Norfolk District (Corps), and the US Fish and Wildlife Service (USFWS), South Florida Ecological Services Office.

Project Description. The US Army Corps of Engineers (Corps), Norfolk District, in sponsorship with Monroe County, Florida has initiated the Florida Keys Coastal Storm Risk Management Feasibility Study under the study authority, Section 4033 of the Water Resources Development Act of 2007 (Public Law 110 -114). The Corps proposes to investigate solutions that will reduce damages and risks from impacts of sea level rise and coastal storms. The study area includes the Florida Keys, north of Key Largo (Palo Alto Key) and extends to Key West, Florida.

Proposed Work. Based on the plan formulation to date, the potential measures being evaluated include nonstructural, structural, and natural and nature-based features. The potential nonstructural measures include buyouts and acquisitions, elevation of structures and roads, dry/wet floodproofing, warning systems, emergency planning, and land use planning. The potential structural measures include breakwaters, and shoreline stabilization. The potential natural and nature-based features include the restoration of mangroves, Submerged Aquatic Vegetation, and coral reefs. In addition, living shorelines and water storage features/drainage improvements are being considered.

A Draft Feasibility Report/Environmental Impact Statement is being prepared with a Tentatively Selected Plan that results from the evaluation of alternatives that includes recommendations which will be distributed for comment to the public.

Coordination. The Fish and Wildlife Coordination (FWCA; 16 U.S.C. 661 et seq., March 10, 1934, as amended 1946, 1958, 1978, and 1995) requires Federal agencies to consult with USFWS regarding the impacts to fish and wildlife resources and the proposed measures to mitigate these impacts. Additional coordination authorities exist through the review process of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321-4347, January 1, 1970, as amended 1975 and 1982) and the consultations required under the Endangered Species Act of 1973 (ESA; 7 U.S.C. 136, 16 U.S.C. 1531 et seq. December 28, 1973).

CENAO-WR-PE (ER 200-2-2)
SUBJECT: Coordination Act Report for the Florida Keys Coastal Storm Risk Management Feasibility Study, Monroe County, Florida

The Corps through NEPA and the ESA will address impacts to fish and wildlife resources. The USFWS, if applicable, will include comments relevant to FWCA in the USFWS response to the Corps ESA coordination letter.

Agreement. The undersigned, the Corps and USFWS, agree to utilize the project's NEPA review and ESA consultation processes to complete coordination responsibilities under the FWCA. If no response is received from the USFWS during the NEPA review, the Corps will assume that there are either no relevant comments that pertain to the FWCA or that all comments will be provided during the ESA consultation process. This agreement will avoid duplicate analysis and documentation as authorized under 40 CFR section 1500.4 (k), 1502.25, 1506.4, and is consistent with Presidential Executive Order for Improving Regulation and Regulatory Review, released January 18, 2011.

2/26/2020

Roxanna Hinzman
Field Supervisor
US Fish and Wildlife Service
South Florida Ecological Services Office

Alicia Logalbo

Digitally signed by Alicia Logalbo
Date: 2020.02.24 15:43:37 -05'00'

Alicia Logalbo
Chief, Environmental Analysis Section
US Army Corps of Engineers,
Norfolk District

From: Howe, Jeffrey
To: Perdue, Katherine S CIV CENAO CENAD (USA)
Subject: [Non-DoD Source] Re: [EXTERNAL] CBRA this time
Date: Wednesday, April 22, 2020 10:24:47 AM

Hello Kathy:
If the structural and nonstructural measures are only located in OPMs, you don't need to coordinate.

From: Perdue, Katherine S CIV CENAO CENAD (USA) <Kathy.S.Perdue@usace.army.mil>
Sent: Wednesday, April 22, 2020 10:10 AM
To: Howe, Jeffrey <jeffrey_howe@fws.gov>
Subject: [EXTERNAL] CBRA this time

Jeff,

I am so sorry for all of the emails, but while I have you: with respect to CBRA, we have no structural or nonstructural measures in any CBRA System Unit maps. We will have two structural and some nonstructural measures in the "Other Protected Areas" only. Do we still need to coordinate?

Thank you,
Kathy

-----Original Message-----
From: Howe, Jeffrey [mailto:jeffrey_howe@fws.gov]
Sent: Wednesday, April 22, 2020 9:46 AM
To: Perdue, Katherine S CIV CENAO CENAD (USA) <Kathy.S.Perdue@usace.army.mil>; Logalbo, Alicia M CIV USARMY CENAO (USA) <Alicia.M.Logalbo@usace.army.mil>; Hitt, Heather L <heather_hitt@fws.gov>
Cc: Woodward, Justine R CIV USARMY CENAO (USA) <Justine.R.Woodward@usace.army.mil>; Schulte, David M CIV CENAO CENAD (US) <David.M.Schulte@usace.army.mil>
Subject: [Non-DoD Source] Re: [EXTERNAL] FW: Draft FWCAR Coordination MOAs - FL SAD Studies (UNCLASSIFIED)

Hello Kathy:
I have attached the signed Coordination MOAs for the Florida Keys and Collier County. Heather Hitt will forward the Miami MOA to you.

Take care,

From: Perdue, Katherine S CIV CENAO CENAD (USA) <Kathy.S.Perdue@usace.army.mil>
Sent: Wednesday, April 22, 2020 9:24 AM
To: Howe, Jeffrey <jeffrey_howe@fws.gov>; Logalbo, Alicia M CIV USARMY CENAO (USA) <Alicia.M.Logalbo@usace.army.mil>; Hitt, Heather L <heather_hitt@fws.gov>
Cc: Woodward, Justine R CIV USARMY CENAO (USA) <Justine.R.Woodward@usace.army.mil>; Schulte, David M CIV CENAO CENAD (US) <David.M.Schulte@usace.army.mil>
Subject: RE: [EXTERNAL] FW: Draft FWCAR Coordination MOAs - FL SAD Studies (UNCLASSIFIED)

Good morning, Jeff,

I am not sure what happened, but we don't seem to have a signed MOA from USFWS. If the USFWS has signed it, could you please re-send it? I apologize for any confusion.

Thank you,
Kathy

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

May 18, 2020

Ms. Sarah Fangman
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Florida Keys National Marine Sanctuary
Key Largo, FL 33037

RE: Response to Comments regarding the Florida Keys Coastal Storm Risk Management Integrated Feasibility Study/Environmental Impact Statement

Dear Ms. Fangman:

This letter is in response to your comment letter dated December 10, 2019, concerning the Integrated Feasibility Study/Environmental Impact Statement (IFS/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. The U.S. Army Corps of Engineers, Norfolk District, (USACE) is the lead federal agency, and the County of Monroe, Florida, is our non-federal sponsor.

As you are aware, pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and as implemented by the Council of Environmental Quality regulations (40 CFR 1500-1508), the USACE has determined that the project has the potential to have significant environmental impacts. USACE is preparing and will release shortly, the Draft IFS/EIS for public and agency comment. The Draft IFS/EIS considers a full range of nonstructural and structural coastal storm risk management alternatives that meet the Proposed Action's purpose and need, evaluates the environmental impacts of the measures, and incorporates measures to avoid and minimize impacts to the maximum extent practicable.

Alternatives that were considered included: structural measures to protect U.S. Route 1 only, nonstructural measures to protect critical infrastructure only, nonstructural measures to protect development centers only, multiple combinations of these alternatives, and the No Action Alternative.

The Proposed Action is Alternative 7, which is a combination of structural measures to protect U.S. Route 1, and nonstructural measures to protect both critical infrastructure and development centers. Nonstructural measures reduce the consequences of coastal storms on a structure instead of reducing the risk and/or probability of the flooding caused by storm surge. More specifically, Alternative 7 includes: six proposed riprap revetments along sections of U.S.

Route 1; and floodproofing for existing critical infrastructure; and elevation and acquisition/relocation for existing residential properties.

You have provided the following comments:

1) **Comment:** As you are aware, NOAA is a Cooperating Agency for this project and depending on the types of activities the USACE ultimately plans to undertake within the Florida Keys National Marine Sanctuary (FKNMS), permits or authorizations from ONMS may be required. In addition, USACE will likely need to conduct consultations under the Endangered Species Act (ESA), Magnuson- Stevens Fisheries Conservation and Management Act (MSA) Essential Fish Habitat (EFH) provisions, and Section 304(d) of the National Marine Sanctuaries Act (NMSA). Structural measures (e.g., seawalls and rip-rap revetments) that are not Natural and Nature-Based Features (NNBF) may impact sea turtles, loggerhead sea turtle critical habitat, ESA-listed corals, and staghorn and elkhorn coral critical habitat. NOAA Protected Resources Division (PRD) recommends USACE conduct benthic assessments of the proposed action areas for ESA-listed coral and staghorn and elkhorn coral critical habitat.

   USACE response: That is correct. We are aware that impacts seaward of mean high water (MHW) would require FKNMS authorization and coordination with NOAA PRD, pursuant to the ESA. In order to avoid and minimize adverse effects on aquatic resources such as mangroves, EFH, and threatened and endangered species, we have reduced the number of proposed revetments from 13 to six, and have revised the footprints of four of those landward. At this time, we do not anticipate impacts seaward of MHW. We have added the following Best Management Practice in the Draft EIS: "Proactive stormwater management via increased engineering (silt fences, etc.) and administrative controls (site stormwater inspections, permitting, BMPs) would provide additional assurance that potential impacts (runoff, contaminant transport, sedimentation, etc.) to the marine environment from land-disturbing activities would be minimized." If we determine as the designs are further refined during the Preconstruction, Engineering, and Design (PED) phase that impacts seaward of MHW are necessary, USACE will conduct additional coordination and apply for any required authorizations at that time.

   We concur that there are the potential adverse effects on federally listed threatened and endangered species and Critical Habitat within the jurisdiction of the U.S. Fish and Wildlife Service (USFWS); therefore, we have prepared a Biological Assessment (BA), and are initiating formal consultation with the (USFWS) pursuant to the ESA. Based on the revised footprints of the revetments, and on adherence to strict erosion and sediment control measures at each revetment location, we do not anticipate impacts on EFH or within NOAA Protected Resources ESA jurisdiction.

2) **Comment:** NNBFs are rarely used, yet may provide the best opportunity for lasting success without the continued need for maintenance, and in many instances will be more cost effective than artificial defenses. The services that NNBFs provide to overall coastal protection have typically not been assessed and as such not considered in decision-making processes.

   USACE response: USACE initially considered at least 10 locations for NNBFs; however, at this time, no locations were identified where habitat is suitable and where NNBFs would be compatible with the surroundings. As you know, NNBFs and living shorelines must not displace other important aquatic resources, such as existing seagrass beds, hardbottom, or wetlands, which would themselves have to be mitigated if impacted. The initially considered sites were found to be either hardbottom, seagrass, owned by the Navy, too deep for mangrove generation, or already dominated with low-growing mangroves. Also, per USACE policy, it is important to note that NNBFs must be economically justified in order to be included in the project. Additional analysis and possible modeling would be required to more specifically quantify wave attenuation and storm surge reduction provided by any mangrove and living shoreline locations identified. However, if additional potential sites are identified, this could be considered prior to the finalization of the EIS.

Once the Draft IFS/EIS is ready for release, you will receive a letter indicating that it is available for public and agency review, and a link to the document.

In closing, we would like to express our appreciation of your and your staff's participation as a Cooperating Agency, as well as the input and availability of your staff in this Study. We look forward to further coordination in the Study, and in the PED phase, as appropriate. Please feel free to contact Ms. Kathy Perdue with any questions at (757) 201-7218 or Kathy.S.Perdue@usace.army.mil.

Thank you for your comments.

Sincerely,

Susan Layton

Susan Layton
Chief, Planning and Policy Branch

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Florida Keys National Marine Sanctuary
33 East Quay Road
Key West, Florida 33040

December 10, 2019

Ms. Kathy Purdue
U.S. Army Corps of Engineers, Norfolk District
Planning and Policy Branch
803 Front Street
Norfolk, VA 23510

Dear Ms. Purdue,

The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) and National Marine Fisheries Service (NMFS) have reviewed your scoping letter for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study dated November 8, 2019, stating the U.S. Army Corps of Engineers (USACE) plans to prepare an Environmental Impact Statement for this project and requests scoping comments. As you are aware, NOAA is a Cooperating Agency for this project and depending on the types of activities the USACE ultimately plans to undertake within the Florida Keys National Marine Sanctuary (FKNMS), permits or authorizations from ONMS may be required. In addition, USACE will likely need to conduct consultations under the Endangered Species Act (ESA), Magnuson-Stevens Fisheries Conservation and Management Act (MSA) Essential Fish Habitat (EFH) provisions, and Section 304(d) of the National Marine Sanctuaries Act (NMSA).

NOAA is providing the following scoping comments to the USACE per their request. NOAA staff from ONMS and NMFS also plan to participate in the scheduled (December 11 and 12) site visits later this week. NOAA staff will likely be able to provide more project specific comments to the USACE following the site visits.

<u>ONMS/FKNMS comments</u>
ONMS supports the development of alternatives in the Florida Keys CSRM Feasibility Study that examine the full suite of measures to address coastal protection. Traditionally, agency-supported and other public and private projects in the Florida Keys have relied heavily on structural measures such as hardened shorelines (e.g., seawalls and revetments). However, decades of experience and data have shown that such measures are prone to failure and require repeated repairs, with such repairs often extending the overall project footprint into sensitive natural habitats. Nonstructural and natural/nature-based features (NNBF) are rarely used, yet may provide the best opportunity for lasting success without the continued need for maintenance, and in many instances will be more cost effective than artificial defenses. The services that NNBFs provide to overall coastal protection have typically not been assessed and as such not considered in decision-making processes. However, recent examination of the role coral reefs play in coastal hazard risk reduction shows that reefs of the Florida Keys protect over $32M in buildings and infrastructure and nearly $43M in economic activity, as well as 716 lives (Storlazzi et al. 2019). ONMS supports USACE undertaking a thorough exploration of nonstructural and NNBF measures, using current tools and models, to address long-term shoreline protection in the Florida Keys. Furthermore, the use of NNBF would directly address

management directives of the Florida Keys National Marine Sanctuary for improving resilience of key species and restoring degraded habitats.

NMFS Essential Fish Habitat-specific comments

By email dated February 8, 2019, the NMFS Habitat Conservation Division (HCD) provided the USACE Norfolk District with general comments on conservation of essential fish habitat (EFH) and guidance on developing EFH assessments under the MSA, including the most recent version of *Users Guide to Essential Fish Habitat Designations by the South Atlantic Fishery Management Council* (August 2017). The South Atlantic Fishery Management Council's most relevant fishery management plans for this project area are for shrimp (especially pink shrimp); the snapper-grouper complex; spiny lobster; and coral, coral reefs, and live/hardbottom habitat. The plan for the snapper-grouper complex includes several species occurring within inshore waters. To simplify the consultation process, NOAA typically advises federal agencies to focus on white grunt (*Haemulon plumier*i), gray snapper *(Lutjanus griseus*), lane snapper (*Lutjanus synagris*), mutton snapper (*Lutjanus analis*), goliath grouper (*Epinephelus itajara*), black grouper (*Mycteroperca bonaci*), and hogfish (*Lachnolaimus maximus*). Please note that over the last few years, the Council has reduced the number of species included in the snapper-grouper complex, so if USACE examines older EFH assessments as a guide for the Florida Keys CSRM Feasibility Study, USACE should note the date the assessment was prepared. For coral, coral reefs and live/hardbottom habitats, NOAA focuses on Groups A and C (see the Users Guide). Cutting across the above fishery management plans, the EFH assessment should focus on mangroves (including buttonwoods), seagrass, coral reefs, coral colonies, and live/hardbottom. Please note that coral colonies occur on armor stones and other materials placed by humans. While the materials placed by humans are not EFH under the Council's EFH designations, the coral colonies attached to the material are EFH and a Habitat Area of Particular Concern under the snapper/grouper fishery management plan. Seagrass surveys should be done between June 1 and September 30. If coral relocations are necessary, the Florida Fish and Wildlife Conservation Commission's Coral and Octocoral Mitigation Relocation recommendations (dated Sept. 20, 2018 or later) should be followed. HCD staff will participate in the field visits planned for this week and may send additional comments based on the visits.

NMFS Endangered Species Act-specific comments

The Protected Resources Division (PRD) echoes ONMS/FKNMS comments above, and highly recommends using coral reefs as natural infrastructure for coastal protection. Recent studies have shown the success and cost-effectiveness of using natural infrastructure for coastal protection (Calil et al. 2015, Reguero et al. 2018, Narayan et al. 2018). Coral reefs have the highest overall potential to reduce wave energy (Narayan et al. 2018). Healthy coral reefs have been shown to reduce up to 97% of wave energy (Ferrario et al. 2014). Natural infrastructure has an average cost benefit ratio of 3.5 (Reguero et al. 2018) and are more cost effective than constructed structures (e.g., breakwaters). Constructed breakwaters average $19,791 per linear meter (Ferrario et al. 2014), whereas coral restoration is estimated to average less than $1,000 per linear meter.

Structural measures (e.g., seawalls and rip-rap revetments) that are not NNBF may impact sea turtles, loggerhead sea turtle critical habitat, ESA-listed corals, and staghorn and elkhorn coral critical habitat. Loggerhead sea turtle critical habitat is present at a majority of the proposed (as of December 2019) rip-rap revetment sites. Also, per an interagency call on November 20, 2019, two or three of the proposed rip-rap revetment sites are the top nesting locations for sea turtles in

the Florida Keys. The occurrence of ESA-listed corals at the proposed rip-rap revetment sites is unknown at this time. Similarly, staghorn and elkhorn coral critical habitat is present at a majority of the proposed sites; however, the presence of the essential feature – substrate of suitable quality and availability (i.e., consolidated hard bottom or dead coral skeletons free from fleshy macroalgae or turf algae and sediment cover; such substrate supports successful larval settlement, recruitment, and reattachment and recruitment of asexual fragments) – at the proposed construction sites is unknown. PRD recommends USACE conduct benthic assessments of the proposed action areas for ESA-listed coral and staghorn and elkhorn coral critical habitat consistent with the ESA-listed Coral Colony and Acropora Critical Habitat Survey Protocol (available at https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance) to better inform USACE's species and critical habitat effects determinations in the ESA Section 7 consultation process.

If you have any questions or would like clarification on NOAA's comments, please contact Joanne Delaney (Joanne.Delaney@noaa.gov), FKNMS Resource Protection and Permit Coordinator. Thank you for the opportunity to provide input to the Florida Keys CSRM Feasibility Study.

Sincerely,

Sarah Fangman
Superintendent

References Cited

Calil, J., Beck, M.W., Gleason, M., Merrifield, M., Klausmeyer, K., Newkirk, S., 2015. Aligning Natural Resource Conservation and Flood Hazard Mitigation in California. PLoS ONE 10(7): e0132651.doi:10.1371/journal.pone.0132651.

Ferrario, F., Beck, M.W., Storlazzi, C.D., Micheli, F., Shepard, C.C., Airoldi, L., 2014. The effectiveness of coral reefs for coastal hazard risk reduction and adaptation. Nature Communications 5:3794.

Narayan, S., Beck, M.W., Reguero, B.G., Losada, I.J., van Wesenbeeck, B., Pontee, N., Sanchirico, J.N., Ingram, J.C., Lange, G.M., Burks-Copes, K.A., 2016. The Effectiveness, Costs and Coastal Protection Benefits of Natural and Nature-Based Defences. PLoS ONE 1(5): e0154735.doi:10.1371/ journal.pone.0154735.

Reguero, B.G., Beck, M.W., Bresch, D.N., Calil, J., Meliane, I., 2018. Comparing the cost effectiveness of nature-based and coastal adaptation: A case study from the Gulf Coast of the United States. PLoS ONE 13(4): e0192132.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

May 18, 2020

Mr. Steve Cutshaw
Chief, Office of Park Planning
Division of Recreation and Parks
Florida Department of Environmental Protection
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

RE: Response to Comments regarding the Florida Keys Coastal Storm Risk Management Integrated Feasibility Study/Environmental Impact Statement

Dear Mr. Cutshaw:

This letter is in response to your email dated January 22, 2020, concerning the Integrated Feasibility Study/Environmental Impact Statement (IFS/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. The U.S. Army Corps of Engineers, Norfolk District, (USACE) is the lead federal agency, and the County of Monroe, Florida, is our non-federal sponsor.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and as implemented by the Council of Environmental Quality regulations (40 CFR 1500-1508), the USACE has determined that the project has the potential to have significant environmental impacts. USACE is preparing and will release shortly, the Draft IFS/EIS for public and agency comment. The Draft IFS/EIS considers a full range of nonstructural and structural coastal storm risk management alternatives that meet the Proposed Action's purpose and need, evaluates the environmental impacts of the measures, and incorporates measures to avoid and minimize impacts to the maximum extent practicable.

Alternatives that were considered included: structural measures to protect U.S. Route 1 only, nonstructural measures to protect critical infrastructure only, nonstructural measures to protect development centers only, multiple combinations of these alternatives, and the No Action Alternative.

The Proposed Action is Alternative 7, which is a combination of structural measures to protect U.S. Route 1, and nonstructural measures to protect both critical infrastructure and development centers. Nonstructural measures reduce the consequences of coastal storms on a structure instead of reducing the risk and/or probability of the flooding caused by storm surge. More specifically, Alternative 7 includes: six proposed riprap revetments along sections of U.S.

Route 1; floodproofing for existing critical infrastructure; and elevation and acquisition/relocation for existing residential properties.

You provided the following comments:

1) **Comment:** Bahia Honda State Park. DRP construction is taking place, starting last month, to restore the Sandspur campground and day-use areas at the Park, slated to end around July or August 2020. DRP's preference is for no hardening to occur; discussions may need to occur in proposed areas. DRP suggests that raising the stretch of park road in the area would add additional buffer for US1.

   USACE response: USACE minimized the potential impacts of the proposed revetments by shifting the proposed revetment at Bahia Honda Key landward and upslope of the existing park fence, adjacent to US Route 1. Therefore, it would not be in conflict with the ongoing work, and would be upslope of the beach.

2) **Comment:** DRP does have concerns with the preliminary plans at this Park. DRP has contractors in the permitting phase of installation of a visitor restroom in the area between US1 and the park drive, which is directly adjacent to the area proposed for shoreline stabilization. Construction/installation is slated to begin in spring 2020, and the project should take approximately six months. Additionally, the Park's campground rebuilding design is nearing completion and this area is not compatible with shoreline armoring. DRP has plans to stabilize the area with a natural shoreline.

   USACE Response: We appreciate your comments, and have had ongoing coordination with your staff, regarding these concerns. This location was one of the locations identified by USACE and the County as being vulnerable to erosion, and is also within 100 feet of U.S. Route 1; therefore this proposed revetment was included as a measure to help protect U.S. Route 1 from washout. We understand, based on recent coordination with your staff, that the DRP's construction work that you describe has been initiated. We have requested the specific plans, including planting plans, for construction in the vicinity of the shoreline. In particular, shapefiles would be very helpful, if available. We will give all park plans full consideration, and are also aware that further coordination and authorization from FDEP DRP would be required in order to implement a revetment at this location.

3) **Comment:** Lignumvitae Key Botanical State Park (Indian Key fill area). FDOT has proposed to replace riprap at the boat launch area at Indian Key fill, and DRP recommends USACE coordinate with FDOT on work in this location. Also, the Villages of Islamorada have requested a sublease with DRP for management of the Indian Key fill area and it is anticipated to be finalized shortly. In addition to coordinating with FDOT

and DRP, we suggest coordination with the Villages of Islamorada as well. All work should take into consideration maintaining visitor beach access.

USACE Response: Thank you for the suggestion. USACE and the County have coordinated with all three, as suggested. FDOT is a Cooperating Agency in the development of the Draft IFS/EIS; and we have also consulted the Villages of Islamorada. All three participated in the interagency site visit in December 2019. As a result of further coordination with FDOT at this and all locations along U.S. Route 1 to ensure that there is no conflict or overlap in our plans, we have eliminated two of the three proposed revetments at Indian Key fill (Sites 11 and 12). In addition, we have revised the footprint of the remaining revetment (Site 13) upslope of the original proposed location, and closer to US Route 1. It is anticipated that the temporary construction would impact recreational use at that location; however, we do not anticipate any permanent adverse effects on recreation at this location. We will conduct further coordination with the three jurisdictions in the Preconstruction, Engineering, and Design (PED) phase, and would obtain any necessary authorizations.

4) **Comment:** Florida Keys Overseas Heritage State Trail. DRP stresses it would be preferable to keep additional buffering for US1 while helping to stabilize the Trail. Also, retention of existing vegetation is recommended.

   USACE Response. FDOT will be conducting repairs to the trails in numerous locations throughout the Overseas Trail; however, FDOT does not plan revetments as further stabilization at any of the locations. Revetments are proposed at locations determined to be most vulnerable to erosion. Existing vegetation will be avoided and impacts minimized to the extent practicable.

5) **Comment**: Summary. Consideration must be given to marine turtle and shorebird nesting impacts for both Bahia Honda and Long Key. There were two nests located in the project footprint and nine in close proximity for Bahia Honda Key; and 13 nests recorded on Long Key in 2019. Per your request, we are sending you our files containing sea turtle nesting locations. In addition, this portion of the beach is an important loafing and foraging area for shorebirds. Overall, visitor safety should be a top priority for consideration. We have concerns regarding secondary impacts of hardening of the shoreline. DRP suggests that DOT be responsible for maintaining any secondary impacts such as additional shoreline erosion at the ends of the hardened structures.

   USACE Response: Thank you for sending the sea turtle data; it was very helpful in our consideration of avoidance and minimization of adverse effects. The revised location of the Bahia Honda Key revetment off of the beach should greatly reduce or eliminate any adverse effects on sea turtles and shorebirds. However, there was not enough space to shift the Long Key revetment upslope. We have prepared a Biological Assessment (BA)

to address adverse effects on threatened and endangered species, and will initiate formal consultation with the U.S. Fish and Wildlife Service (USFWS), and will also consider their comments with respect to avoidance and minimization measures for migratory and shorebirds. We have addressed direct and indirect effects in the Draft IFS/EIS. However, the County, rather than FDOT would have the responsibility of long-term maintenance of the project.

In closing, we would like to express our appreciation of your and your staff's input in this Study. We look forward to further coordination in the Study, and in the PED phase. Once the Draft IFS/EIS is ready for release, you will receive a letter indicating that it is available for public and agency review, and a link to the document.

Please feel free to contact Ms. Kathy Perdue with any questions at (757) 201-7218 or Kathy.S.Perdue@usace.army.mil.

Thank you for your comments.

Sincerely,

Susan Layton

Susan Layton
Chief, Planning and Policy Branch

FLORIDA DEPARTMENT OF
Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

Ron DeSanUs
Governor

Jeanette Nunez
Lt. Governor

Noah Valenstein
Secretary

January 22, 2020

TO: Kathy Perdue, Biologist
U.S. Army Corps of Engineers

FROM: Steve Cutshaw, Chief
Office of Park Planning
Division of Recreation and Parks

SUBJECT: Division review of USACE Florida Keys Coastal Storm Risk Management Feasibility Study - shoreline stabilization

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This memorandum is to provide the U.S. Army Corps of Engineers (USACE) with initial comments from the Division of Recreation and Parks (DRP) regarding the USACE's shoreline stabilization project between Mile Marker 23 and Mile Marker 80 in the Florida Keys. We have reviewed the "Structural_10_17_19" drawings you submitted, and our staff were present at the December site visits. DRP offers the following comments on the impacted areas currently managed by DRP:

Bahia Honda State Park

DRP has the following comments on your preliminary project plans at this Park: DRP construction is taking place, starting last month, to restore the Sandspur campground and day-use areas at the Park, slated to end around July or August 2020.

During the site visit, there was discussion regarding shoreline hardening, and DRP's preference is for no hardening to occur; discussions may need to occur in proposed areas. DRP suggests that raising the stretch of park road in the area would add additional buffer for US1.

Long Key State Park

DRP does have concerns with the preliminary plans at this Park. DRP has contractors in the permitting phase of installation of a visitor restroom in the area between US1 and the park drive, which is directly adjacent to the area proposed for shoreline stabilization. Construction/installation is slated to begin in spring 2020, and the project should take approximately six months after permit approval. Additionally, the Park's campground rebuilding design is nearing completion and this area is not compatible with shoreline armoring. DRP has plans to stabilize the area with a natural shoreline.

Lignumvitae Key Botanical State Park (Indian Key fill area)

FOOT has proposed to replace riprap at the boat launch area at Indian Key fill, and DRP recommends USACE coordinate with FOOT on work in this location. Also, the Villages

of Islamorada have requested a sublease with DRP for management of the Indian Key fill area, and it is anticipated to be finalized shortly. In addition to coordinating with FOOT and DRP, we suggest coordination with the Villages of Islamorada as well. Monthly communication is suggested. All work should take into consideration maintaining visitor beach access.

Florida Keys Overseas Heritage State Trail
DRP stresses it would be preferable to keep additional buffering for US1 while helping to stabilize the Trail. Also, retention of existing vegetation is recommended.

Summary

Consideration must be given to marine turtle and shorebird nesting impacts for both Bahia Honda and Long Key with regards to the proposed rock revetment. Shoreline armoring can deter sea turtles from nesting, resulting in increased non-nesting emergences or false crawls and causing them to nest in suboptimal conditions elsewhere. According to nest monitoring records for Bahia Honda, in 2019 there were two endangered sea turtle nests located within the proposed project footprint, with the remaining nine nests found in close proximity. There were 13 nests recorded on Long Key in 2019. In addition, this portion of beach is an important loafing and foraging area for shorebirds. Per your request, we are sending you our files (maps, excel spreadsheets and shapefiles) containing sea turtle nesting locations at Bahia Honda and Long Key.

Overall, visitor safety should be a top priority for consideration. Also, we have concerns regarding secondary impacts which typically result from hardening of the shoreline. DRP suggests DOT be responsible for maintaining any secondary impacts such as additional shoreline erosion at the ends of the hardened areas.

Also, DRP recommends that USAGE coordinate with the Florida Department of Transportation (FOOT) on all locations along the Overseas Highway (US1) as FOOT is in the process of starting projects in December and January in several of the areas indicated on the drawings, and it is possible the project boundaries could overlap in areas.

Thank you for the opportunity to comment. DRP requests monthly progress updates and onsite reviews of project movement. We feel additional coordination and routine communication is vital to the success of such an important project as this. If you have any questions, feel free to contact me or Diane Martin of our staff at 850-245-3051.

SC/dm
cc: Eric Draper
Parks Small
Wes Howell
Michael Foster
Kevin Jones
Brian Addison
Don Bergeron
Mark Duncan
Ernie Cowan
Janice Duquesne!

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

May 15, 2020

Ms. Jamie Higgins
U.S. Department of Commerce
Environmental Protection Agency
Florida Keys National Marine Sanctuary
Key Largo, FL 33037

RE: Response to Comments regarding the Florida Keys Coastal Storm Risk Management Integrated Feasibility Study/Environmental Impact Statement

Dear Ms. Higgins:

This letter is in response to your scoping comments dated December 6, 2018, concerning the Integrated Feasibility Study/Environmental Impact Statement (IFS/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. The U.S. Army Corps of Engineers, Norfolk District, (USACE) is the lead federal agency, and the County of Monroe, Florida, is our non-federal sponsor.

As you are aware, pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and as implemented by the Council of Environmental Quality regulations (40 CFR 1500-1508), the USACE has determined that the project has the potential to have significant environmental impacts. USACE is preparing and will release shortly, the Draft IFS/EIS for public and agency comment. The Draft IFS/EIS considers a full range of nonstructural and structural coastal storm risk management alternatives that meet the Proposed Action's purpose and need, evaluates the environmental impacts of the measures, and incorporates measures to avoid and minimize impacts to the maximum extent practicable.

Alternatives that were considered included: structural measures to protect U.S. Route 1 only, nonstructural measures to protect critical infrastructure only, nonstructural measures to protect development centers only, multiple combinations of these alternatives, and the No Action Alternative.

The Proposed Action is Alternative 7, which is a combination of structural measures to protect U.S. Route 1, and nonstructural measures to protect both critical infrastructure and development centers. Nonstructural measures reduce the consequences of coastal storms on a structure instead of reducing the risk and/or probability of the flooding caused by storm surge. More specifically, Alternative 7 includes: six proposed riprap revetments along sections of U.S. Route 1; and floodproofing for existing critical infrastructure; and elevation and acquisition/relocation for existing residential properties.

You have provided the following comments:

1) **Comment: Wetlands.** The EPA recommends the USACE avoid and minimize impacts to wetlands and mitigate wetland impacts according to Clean Water Act Section 404(b)(1) Guidelines and related regulations. Additionally, the EPA recommends the USACE avoid, minimize and mitigate any impacts to Submerged Aquatic Vegetation (SAVs).

   USACE response: In order to avoid and minimize adverse effects on aquatic resources such as mangroves, SAV, and hardbottom, EFH, and threatened and endangered species, we have reduced the number of proposed revetments from 13 to six, and have revised the footprints of four of those landward. There will be impacts to one herbaceous wetland community dominated by sea purslane and sea oxeye that is behind a sea wall; those impacts would be mitigated in accordance with the Environmental Mitigation Plan in the Environmental Appendix of the Draft IFS/EIS. At this time, we do not anticipate impacts seaward of MHW; therefore there will be no direct impacts to SAV. If we determine as the designs are further refined during the Preconstruction, Engineering, and Design (PED) phase that impacts seaward of MHW are necessary, USACE will conduct additional coordination and apply for any required authorizations at that time. We have added the following Best Management Practice in the Draft EIS: "Proactive stormwater management via increased engineering (silt fences, etc.) and administrative controls (site stormwater inspections, permitting, BMPs) would provide additional assurance that potential impacts (runoff, contaminant transport, sedimentation, etc.) to the marine environment from land-disturbing activities would be minimized. We would also adhere to state regulations for erosion and sediment control."

2) **Comment: Water Quality.** The EPA recommends the USACE evaluate potential impacts related to water quality such as potential increases in salinity, sedimentation, dissolved oxygen and re-suspension of nutrients, etc. and explore opportunities to minimize these potential impacts during the risk management study process.

   USACE Response: At this time, we do not anticipate impacts seaward of MHW; therefore, the impacts on water quality would be minimal. We have added the Best Management Practices described in Response #1 above.

3) **Comment: Groundwater and Drinking Water**. The EPA recommends the USACE fully and rigorously evaluate the proposed projects impacts on the Biscayne Aquifer especially regarding impacts related to saltwater intrusion.

   USACE Response: The Proposed Action for this project would involve minimal grading only, and is not anticipated to affect this aquifer.

4) **Comment: Coral Reefs:** The EPA notes that scoping materials indicate that USACE is considering various structures that might impact coral reefs. The EPA notes that a National Marine Fisheries Service (NMFS) supported study found that previous USACE dredging in 2013-2015 in the Miami Harbor led to extensive mortality and partial mortality of hard coral complexes, as well as the loss of other coral community species. The EPA notes that the project study area includes highly valued state and national protected lands such as John Pennekamp Coral Reef State Park. The EPA recommends that the USACE avoid, minimize and mitigate any project impacts to these protected lands and disclose any impacts in the NEPA document. The EPA also recommends the USACE include the state and federal trustees of these lands (National Park Service and Florida Department of Environmental Protection) as cooperating agencies and/or members of the Project Delivery Team.

   USACE Response: Because the revetments have been modified to be landward of MHW, and we would implement strict erosion and sediment control measures as per Response #1, minimal effects on coral reefs would be anticipated. FDEP and NPS were invited to be Cooperating Agencies; a response was not received. However, we have coordinated as appropriate through the interagency coordination process.

5) **Comment: Transportation Infrastructure, Noise, and Air:** The EPA notes that the USACE indicates that surface transportation infrastructure might be improved to better accommodate evacuation from impeding hurricanes and storms. For NEPA disclosure, the EPA recommends the USACE discuss any potential transportation improvements especially improvements that might involve expanding transportation infrastructure capacity or construction of any transportation infrastructure. If possible, the EPA also recommends the USACE discuss the number of vehicles these surface transportation projects might increase especially on a daily basis. Also related to transportation improvements, the EPA recommends the USACE disclose any noise or air quality impacts to businesses and neighborhoods. If possible, the EPA recommends that any new transportation projects avoid neighborhoods especially vulnerable communities such as environmental justice communities, elderly facilities and facilities associated with children (i.e., daycares, schools, etc.). The EPA also recommends the USACE include the Florida Department of Transportation (FDOT) in any discussions regarding transportation improvements.

   USACE Response: We concur, and to the extent applicable, these are discussed in the Draft IFS/EIS. With respect to transportation, and recognizing that U.S. Route 1 is the only evacuation route from the Florida Keys, the objective is to protect U.S. Route 1 at locations determined to be vulnerable to potential erosion. Otherwise, no improvements to transportation infrastructure are proposed. With respect to environmental justice communities, elderly facilities and facilities associated with children, the Draft IFS/EIS describes the potential adverse effects relating to the proposed nonstructural measures,

in particular the acquisition and relocation measure. Noise and air impacts would be temporary, and would occur during construction only. FDOT is a Cooperating Agency in this Study, and USACE has coordinated regularly with respect to its facilities.

6) **Comment: Environmental Justice (EJ).** Also related to the previous comments, the EPA recommends the USACE disclose any impacts to EJ communities especially related to increases in traffic through low income, minority communities. An increase in traffic through EJ communities could increase health impacts associated with air quality (i.e., MSATs) and noise. When possible, the EPA recommends the USACE avoid and minimize impacts to EJ communities.

   USACE Response: No new traffic is anticipated through EJ communities, other than construction vehicles temporarily during construction. There are also temporary effects on residences for residence elevation, and permanent effects, both adverse and beneficial, for acquisition and relocation. All of this is discussed in the Draft IFS/EIS.

7) **Comment: Socioeconomics:** The EPA acknowledges the USACE's economic analysis and the benefits to cost ratio that is produced for USACE feasibility studies. For NEPA disclosure, the EPA encourages the USACE to also consider any economic losses due to temporary impacts to the tourism and recreation industry.

   USACE Response: There are potential temporary adverse effects due to construction; however there are also potential temporary benefits associated with providing temporary employment for construction workers. This is considered and discussed in the Draft IFS/EIS.

8) **Comment: Recreation:** The EPA recommends the USACE document any impacts to tourism and recreation (even temporary) such as beach closures, commercial and recreational fishing impacts, park and boat ramp closures, impacts to diving and snorkeling, etc. Additionally, the EPA recommends the USACE document and disclose any impacts to the local community and economy due to potential impacts to the recreation and tourism industry.

   USACE Response: Please see Comment #7. In addition, the Proposed Action's revetments would affect two park properties: Bahia Honda State Park and Long Key State Park, and the Overseas Trail. The proposed revetment is outside the park fence of Bahia Honda State Park; therefore, it is not anticipated to affect recreation there. There would be adverse effects at Long Key State Park. The Overseas Trail would experience only temporary impacts in the form of limited useage, during construction; however it would have a permanent benefit in the form of better erosion protection at the proposed revetment locations. We have been, and remain in coordination with the

FDEP Division of Recreation and Parks. These effects are discussed in detail in the Draft IFS/EIS.

9) **Comment: Green Infrastructure.** When possible, the EPA encourages the USACE to use green and sustainable infrastructure as project measures or features. The EPA also encourages the USACE to consider the concepts of living shorelines and other natural features to reduce damages from storms.

USACE response: USACE initially considered at least 10 locations for Natural and Nature-Based Features (NNBFs); however, at this time, no locations have been identified where habitat is suitable and where NNBFs would be compatible with the surroundings. NNBFs and living shorelines must not displace other important aquatic resources, such as existing seagrass beds, hardbottom, or wetlands, which would themselves have to be mitigated if impacted. The initially considered sites were found to be either hardbottom, seagrass, owned by the Navy, too deep for mangrove generation, or already dominated with low-growing mangroves. Also, per USACE policy, it is important to note that NNBFs must be economically justified in order to be included in the project. Additional analysis and possible modeling would be required to more specifically quantify wave attenuation and storm surge reduction provided by any mangrove and living shoreline locations identified. However, if additional potential sites are identified, this could be considered prior to the finalization of the EIS.

Once the Draft IFS/EIS is ready for release, you will receive a letter indicating that it is available for public and agency review, and a link to the document.

In closing, we would like to express our appreciation of the input in this Study, and your participation as a Cooperating Agency. We look forward to further coordination in the Study, and in the PED phase, as appropriate. Please feel free to contact Ms. Kathy Perdue with any questions at (757) 201-7218 or Kathy.S.Perdue@usace.army.mil.

Thank you for your comments.

Sincerely,

Susan Layton

Susan Layton
Chief, Planning and Policy Branch

US Environmental Protection Agency (EPA) Scoping Comments
for
Norfolk District, U.S. Army Corps of Engineers (USACE)
Florida Keys Coastal Storm Risk Management Study (CSRM) National Environmental Policy Act (NEPA) Document
December 6, 2018

Background: On November 20, 2018, the U.S. Environmental Protection Agency (EPA) received a letter from the Norfolk District, USACE as the lead Federal agency announcing that the scoping process had been initiated for the Florida Keys Coastal Storm Risk Management Feasibility Study and National Environmental Policy Act (NEPA) document. The EPA understands that the USACE has not decided whether to prepare an Environmental Assessment or Environmental Impact Statement and will determine the level of NEPA later in the process. As stated in your letter, the purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys from approximately Key Largo to Key West, Florida. The EPA recently accepted USACE's invitation to become a cooperating agency on November 28, 2018. The below scoping comments are based on the very limited information that has been provided by USACE.

Technical Comments and Recommendations:

Wetlands: The EPA recommends the USACE avoid and minimize impacts to wetlands and mitigate wetland impacts according to Clean Water Act Section 404(b)(1) Guidelines and related regulations. Dredging activities could cause salinity levels to increase, which could convert freshwater/brackish wetlands into saltwater marshes. The EPA also recommends the USACE evaluate potential impacts to increases in salinity levels due to any dredging activities. The EPA recommends the USACE evaluate the potential increases in salinity and document any potential conversion of freshwater wetlands into saltwater marshes and avoid, minimize and mitigate these impacts as appropriate. Additionally, the EPA recommends the USACE avoid, minimize and mitigate any impacts to Submerged Aquatic Vegetation (SAVs).

Water Quality: The EPA recommends the USACE evaluate potential impacts related to water quality such as potential increases in salinity, sedimentation, dissolved oxygen and re-suspension of nutrients, etc. and explore opportunities to minimize these potential impacts during the risk management study process.

Groundwater and Drinking Water: The EPA notes that saltwater intrusion is presently an issue with the Biscayne Aquifer, which is a drinking water source for the Florida Keys. The EPA also notes that presently there is a large saltwater plume beneath under the Florida Power and Light's Turkey Point Nuclear Plant located near Homestead, Florida. The EPA recommends the USACE fully and rigorously evaluate the proposed projects impacts on the Biscayne Aquifer especially regarding impacts related to saltwater intrusion.

Coral Reefs: The EPA notes that scoping materials indicate that USACE is considering various structures that might impact coral reefs. The EPA notes that a National Marine Fisheries Service (NMFS) supported study1 found that previous USACE dredging in 2013-2015 in the Miami Harbor led to extensive mortality and partial mortality of hard coral complexes, as well as the loss of other coral community species. This study notes:

> *"Results indicate increased sediment accumulation, severe in certain times and places, and an associated biological response (e.g., higher prevalence of partial mortality of corals) extended up to 700 mfrom the channel, whereas project-associated monitoring was limited to 50 m from the channel.* "

The study concludes that: *"Dredging projects near valuable and sensitive habitats subject to local and global stressors require monitoring methods capable of discerning non-dredging related impacts and adaptive management to ensure predicted and unpredicted project-related impacts are quantified.* "

The EPA also notes that the USACE has created an Interagency Working Group (IWG) for project and NEPA development for the Port Everglades navigation study. The EPA is an active member of the Pmt Everglades IWG and is currently working with other state and Federal agencies and academia to·develop a sedimentation monitoring and adaptive management plan for Pmt Everglades. If potential coral reef impacts are identified, the EPA recommends the Norfolk District reach out to this IWG and member agencies to draw upon their expertise in avoiding, minimizing and mitigating impacts to coral reefs. The EPA also encourages the USACE to apply lessons learned from the previous Miami Harbor dredging project so that future coral reef damages are avoided.

Everglades National Park, Biscayne National Park and John Pennekamp Coral Reef State Park: The EPA notes that the project study area includes highly valued state and national protected lands such as Everglades National Park, Biscayne National Park and John Pennekamp Coral Reef State Park. The EPA recommends that the USACE avoid, minimize and mitigate any project impacts to these protected lands and disclose any impacts in the NEPA document. The EPA also recommends the USACE include the state and federal trustees of these lands (National Park Service and Florida Department of Environmental Protection) as cooperating agencies and/or members of the Project Delivery Team.

Transportation Infrastructure: The EPA notes that the USACE indicates that surface transportation infrastructure might be improved to better accommodate evacuation from impeding hurricanes and storms. For NEPA disclosure, the EPA recommends the USACE discuss any potential transportation improvements especially improvements that might involve expanding transportation infrastructure capacity or construction of any potential new

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'Miller et al. (2016), Detecting sedimentation impacts to coral reefs resulting from dredging the Port of Miami, Florida USA. PeerJ 4:e2711; DOI 10.7717/peerj.271 I

transportation infrastructure. If possible, the EPA also recommends the USACE discuss the number of vehicles these surface transportation projects might increase especially on a daily basis. Also related to transportation improvements, the EPA recommends the USACE disclose any noise or air quality impacts to businesses and neighborhoods. If possible, the EPA recommends that any new transportation projects avoid neighborhoods especially vulnerable communities such as environmental justice communities, elderly facilities and facilities associated with children (i.e., daycares, schools, etc.). The EPA also recommends the USACE include the Florida Department of Transportation (FDOT) in any discussions regarding transportation improvements.

Noise: As previously discussed, the EPA recommends the USACE discuss noise related impacts associated with any transportation improvements especially features that would expand capacity within the draft NEPA document. The EPA also recommends that the new transportation routes and expanded transportation infrastructure avoid residential neighborhoods and sensitive communities such as environmental justice, children and elderly communities. When appropriate, the EPA recommends the implementation of noise minimization measures (such as noise walls, barriers, vegetative buffers, etc.) as described in FOOT and Federal Highway Administration (FHWA) regulations.

Air Quality: As previously discussed, the EPA recommends the USACE discuss air quality (i.e., mobile source air toxics-MSATs) related impacts associated with any transportation improvements especially features that would expand capacity within the draft NEPA document. The EPA also recommend that the new transportation routes and expanded transpo1tation infrastructure avoid residential neighborhoods and sensitive communities such as environmental justice, children and elderly communities.

Environmental Justice (EJ): Also related to the previous comments, the EPA recommends the USACE disclose any impacts to EJ communities especially related to increases in traffic through low income, minority communities. An increase in traffic through EJ communities could increase health impacts associated with air quality (i.e., MSATs) and noise. When possible, the EPA recommends the USACE avoid and minimize impacts to EJ communities.

Recreation: The EPA recommends the USACE document any impacts to tourism and recreation (even temporary) such as beach closures, commercial and recreational fishing impacts, park and boat ramp closures, impacts to diving and snorkeling, etc. Additionally, the EPA recommends the USACE document and disclose any impacts to the local community and economy due to potential impacts to the recreation and tourism industry.

Socioeconomic: The EPA acknowledges the USACE's economic analysis and the benefits to cost ratio that is produced for USACE feasibility studies. For NEPA disclosure, the EPA encourages the USACE to also consider any economic losses due to temporary impacts to the tourism and recreation industry.

Green Infrastructure: When possible, the EPA encourages the USACE to use green and sustainable infrastructure as project measures or features. The EPA also encourages the USACE to consider the concepts of living shorelines and other natural features to reduce damages from storms.

Please feel free to contact Jamie Higgins at higgins.jamie@epa.gov or 404-562-9681.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

February 5, 2019

Ms. Sarah Furtak
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Forman Building, Suite 227
8000 North Ocean Drove
Dania Beach, Florida 33004-3033

Re: Request for the Official Protected Species List under the jurisdiction of the National Marine Fisheries Service: Florida Keys Coastal Storm Risk Management Feasibility Study.

Dear Ms. Furtak,

The U.S. Army Corps of Engineers (USACE), Norfolk District, in sponsorship with Monroe County, Florida has initiated the Florida Keys Coastal Storm Risk Management Feasibility Study under the study authority, Section 4033 of the Water Resources Development Act of 2007 (Public Law 110 -114). The study area includes the Florida Keys, north of Key Largo (Palo Alto Key) and extends to Key West, Florida. Attachment 1 provides a map of the approximate study area.

The primary purpose of the project is to investigate solutions that will reduce damages and risks from impacts of sea level rise and coastal storms. Based on the plan formulation to date, the potential measures being considered include nonstructural, structural, and natural and nature-based features. The potential nonstructural measures being considered are buyouts and acquisitions, elevation of structures and roads, dry/wet floodproofing, warning systems, emergency planning, and land use planning. The potential structural measures being considered are breakwaters, shoreline stabilization, canal improvements, and beach replenishment. The potential natural and nature-based features include the restoration and creation of habitat, i.e. mangrove, Submerged Aquatic Vegetation, and reef. In addition, living shorelines and water storage features/drainage improvements are being evaluated.

The purpose of this letter is to request the “Official Protected Species List” under the jurisdiction of the National Oceanic and Atmospheric Administration, Protected Resources Division, pursuant to Section 7 of the Endangered Species Act. Attachment 2 is the draft list of Protected Species we have compiled to date. We will conduct further coordination with you upon receipt of your official list, and after potential project alternatives are further refined. In addition, we plan to continue Interagency Coordination Meetings as needed to address any consultation issues.

If you have any questions or need additional information, please contact me at (757) 201-7837 or by email at Kimberly.C.Koelsch@usace.army.mil. Thank you for your assistance.

Sincerely,

Kimberly Koelsch

Kimberly C. Koelsch
Biologist
Planning and Policy Branch
USACE Norfolk District

Attachment 1: Map of the Approximate Study Area

Attachment 2: Federally Listed Species under the U.S. Fish and Wildlife Service's jurisdiction pursuant to the Endangered Species Act.

Taxonomic Category/Common Name	Scientific Name	Status	Critical Habitat
Fish			
Atlantic sturgeon	*Acipenser oxyrinchus desotoi*	T	Y
Nassau grouper	*Epinephelus striatus*	T	N
Shortnose sturgeon	*Acipenser brevirostrum*	E	N
Smalltooth sawfish	*Pristis pectinata*	E	N
Oceanic whitetip shark	*Carcharhinus longimanus*	T	N
Giant manta ray	*Manta birostris*	T	N
Invertebrates			
Pillar coral	*Dendrogyra cylindrus*	T	N
Rough cactus coral	*Mycetophyllia ferox*	T	N
Lobed star coral	*Orbicella annularis*	T	N
Boulder star coral	*Orbicella franksi*	T	N
Mountainous star coral	*Orbicella faveolata*	T	N
Elkhorn coral	*Acropora palmata*	T	Y
Staghorn coral	*Acropora cervicornis*	T	Y
Mammals			
Blue whale	*Balaenoptera musculus*	E	N
Fin whale	*Balaenoptera physalus*	E	N
North Atlantic right whale	*Eubalaena glacialis*	E	N
Sei whale	*Balaenoptera borealis*	E	N
Sperm whale	*Physeter macrocephalus*	E	N

Plants			
Johnson's seagrass	*Halophila johnsonii*	E	N
Reptiles			
Hawksbill Sea Turtle	*Eretmochelys imbricata*	E	N
Leatherback Sea Turtle	*Dermochelys coriacea*	E	N
Loggerhead Sea Turtle	*Caretta caretta*	T	Y
Green Sea Turtle	*Chelonia mydas*	T	N
Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	E	N

From:	Sarah Furtak - NOAA Federal
To:	Logalbo, Alicia M CIV USARMY CENAO (USA)
Cc:	Perdue, Katherine S CIV CENAO CENAD (USA); Schulte, David M CIV CENAO CENAD (US); Reinheimer, Shannon J CIV USARMY CENAO (USA); Fuerst, Lee A CIV USARMY CENAO (USA)
Subject:	[Non-DoD Source] Re: Preference on BA Format and Question on 2017 JAXBO (UNCLASSIFIED)
Date:	Friday, December 6, 2019 7:18:32 PM
Attachments:	Staghorn and elkhorn coral critical habitat essential feature for USACE.docx

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Hi Alicia,

Thank you for your email.

In response to your questions, I do not have a preference as to whether the BA combines listed species under USFWS jurisdiction with listed species under NMFS jurisdiction or not.

It is possible that the JAXBO could cover the project provided the general program design criteria (PDCs) (start on JAXBO p. 47) are met, and the shoreline stabilization PDCs (start on p. 98) are met. Note PDC AP.14 (JAXBO p. 52) regarding coral.

Also, in follow-up to our call on Tuesday, November 26, I took away several questions, which I had an opportunity to discuss with my colleagues this week. Please see highlights from the November 26 call with updates/notes below (italics):

* USACE has unique timeline for this project; USACE suggested formal consultation occurring years before detailed benthic surveys taking place. I understand such consultation can happen; however, NMFS would need to protect our listed species with conservative assumptions as to presence and quantity of the species. It would likely be in USACE's best interest to conduct benthic surveys prior to Section 7 consultation.

* USACE asked if NMFS can help do the benthic surveys. I understand NMFS does not do complete benthic surveys; this work is something USACE would likely enlist the help of a contractor on.

* 2 or 3 of the proposed riprap sites are the top nesting sites for sea turtles in the FL Keys.
* A majority of the proposed rip-rap revetment sites are in loggerhead sea turtle critical habitat (breeding, constricted migratory). Is this a showstopper? This is not necessarily a showstopper for implementation of the project, but it could mean LAA vs. NLAA.
* Is the proposed riprap work feasible with mitigation? If so, what kind of mitigation? Examples of mitigation we have seen include relocating nests (e.g., Hawaii) and improving nesting sites in other areas. Mitigation would not change the project from LAA to NLAA.
* What kind of avoidance / awareness of sea turtle nesting season is needed? Avoiding nesting season.
* What are NMFS's BMPs for beach nourishment? South Atlantic Regional Biological Opinion (SARBO) will likely provide further info regarding such BMPs; SARBO will be forthcoming in the next quarter.

* Will there be population-level impact? For determining population-level impact, we would be interested in how many turtles are using these areas for nesting.

Attached, FYI, please find a working document describing the essential feature of staghorn and elkhorn coral critical habitat, which I mentioned on our Nov. 20 and 26 calls. If the essential feature is not present in the action area, that means critical habitat would not be impacted.

Also, the final loggerhead sea turtle critical habitat rule is available at Blockedhttps://www.govinfo.gov/content/pkg/FR-2014-07-10/pdf/2014-15748.pdf. Northwest Atlantic distinct population segment physical and biological features and primary constituent elements (nearshore reproductive,

breeding, constricted migratory critical habitat) are on pp. 39881-39882. USACE would determine whether this project is LAA loggerhead critical habitat based upon this information.

Shannon asked about format of the BA. I checked with others in the program, and there is no template for a BA. The website at Blockedhttps://www.fisheries.noaa.gov/content/how-submit-consultation-request-southeast provides the S7 checklist and the S7 handbook link.

I look forward to the site visits next week, and meeting some/all of you then!

Sarah

Sarah Furtak
National Oceanic and Atmospheric Administration (NOAA) Fisheries
Southeast Regional Office - Protected Resources Division - Coral Conservation Branch

Mobile Phone (954) 734-4713

On Thu, Dec 5, 2019 at 12:42 PM Logalbo, Alicia M CIV USARMY CENAO (USA) <Alicia.M.Logalbo@usace.army.mil <Blockedhttp://army.mil> > wrote:

CLASSIFICATION: UNCLASSIFIED

Sarah,

For our FL SAD Coastal Storm Risk Management projects do you have a recommendation or preference on whether NMFS would prefer a combined Biological Assessment (BA) with the USFWS jurisdictional species or separate BAs (one for NMFS jurisdictional species and one for USFWS jurisdictional species). Also, do you think the Florida Keys Coastal Storm Risk Management Project could potentially be covered under the existing Jacksonville Biological Opinion from 2017? Thank you in advance for your assistance.

Alicia

Alicia Logalbo
Norfolk District, U.S. Army Corps of Engineers
Planning and Policy Branch
Chief, Environmental Analysis Section
803 Front Street
Norfolk, VA 23510

(757) 201-7210 office
(757) 335-8075 cell

Alicia.Logalbo@usace.army.mil <mailto:Alicia.Logalbo@usace.army.mil>

CLASSIFICATION: UNCLASSIFIED

Species list request from Kathy Perdue, 11/26/2019

Species list below is from the Threatened and Endangered Species and Critical Habitats at https://www.fisheries.noaa.gov/southeast/consultations/threatened-and-endangered-species-and-critical-habitats; I have stricken several species from the online list based upon my experience in the Florida Keys.

Species list:

Species	Listing Status	Recovery Plan	Critical Habitat
Green sea turtle	Threatened - North and South Atlantic Distinct Population Segment (81 FR 20057; April 6, 2016)	October 1991	63 FR 46693; September 2, 1998
Kemp's ridley sea turtle	Endangered (35 FR 18319; December 2, 1970)	September 2011	None
Leatherback sea turtle	Endangered (35 FR 8491; June 2, 1970)	April 1992	44 FR 17710; March 23, 1979
Loggerhead sea turtle	Threatened - Northwest Atlantic Ocean Distinct Population Segment (76 FR 58868; September 22, 2011)	December 2008	79 FR 39856; July 10, 2014
Hawksbill sea turtle	Endangered (35 FR 8491; June 2, 1970)	December 1993	63 FR 46693; September 2, 1998
Smalltooth sawfish	U.S. Distinct Population Segment Endangered (68 FR 15674; April 1, 2003)	January 2009	72 FR 45353; October 2, 2009
Nassau grouper	Threatened (81 FR 42268; June 29, 2016)	2018 Recovery Outline	None
Oceanic whitetip shark	Threatened (83 FR 4153; January 30, 2018)	2018 Recovery Outline	None

Species	Listing Status	Recovery Plan	Critical Habitat
Giant manta ray	Threatened (83 FR 2916; January 22, 2018)	None	None
Elkhorn coral	Threatened (71 FR 26852; May 9, 2006)	March 2015	73 FR 72210; November 26, 2008
Staghorn coral	Threatened (71 FR 26852; May 9, 2006)	March 2015	73 FR 72210; November 26, 2008
Boulder star coral	Threatened (79 FR 53851; September 10, 2014)	None	None
Mountainous star coral	Threatened (79 FR 53851; September 10, 2014)	None	None
Lobed star coral	Threatened (79 FR 53851; September 10, 2014)	None	None
Rough cactus coral	Threatened (79 FR 53851; September 10, 2014)	None	None
Pillar coral	Threatened (79 FR 53851; September 10, 2014)	None	None

Site*	Latitude	Longitude	Critical Habitat
1	24.662	-81.4682	Loggerhead (breeding & constricted migratory)
2	24.6514	-81.3067	Loggerhead (breeding & constricted migratory) Staghorn and elkhorn coral
3	24.6610	-81.2709	Loggerhead (nearshore reproductive, breeding, & constricted migratory) Staghorn and elkhorn coral
4	24.7765	-80.9243	Loggerhead (breeding & constricted migratory)
5	24.7835	-80.9049	Loggerhead (breeding & constricted migratory)
6	24.8105	-80.8291	Loggerhead (nearshore reproductive, breeding, & constricted migratory) Staghorn and elkhorn coral
7	24.8379	-80.7969	Loggerhead (breeding & constricted migratory) Staghorn and elkhorn coral
8	24.8393	-80.7932	Loggerhead (breeding & constricted migratory) Staghorn and elkhorn coral
9	24.839	-80.7808	Loggerhead (breeding & constricted migratory) Staghorn and elkhorn coral
10	24.8583	-80.7249	Loggerhead (breeding & constricted migratory) Staghorn and elkhorn coral
11	24.8845	-80.6859	Loggerhead (breeding & constricted migratory) Staghorn and elkhorn coral
12	24.8894	?	Appears to be Loggerhead (breeding & constricted migratory) Staghorn and elkhorn coral
13	24.8953	-80.6644	Loggerhead (breeding & constricted migratory) Staghorn and elkhorn coral

* Numbered according to “Florida Keys Coastal Storm Risk Management Feasibility Study” PowerPoint provided via email November 26, 2

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

May 18, 2020

Mr. Fritz Wettstein
Land Use Planning Program Administrator
Office of Conservation Planning Services
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, FL 32399

RE: Response to Comments regarding the Florida Keys Coastal Storm Risk Management Integrated Feasibility Study/Environmental Impact Statement

Dear Mr. Wettstein:

This letter is in response to your email dated January 8, 2019, concerning the Integrated Feasibility Study/Environmental Impact Statement (IFS/EIS) for the Florida Keys Coastal Storm Risk Management (CSRM) Study. The U.S. Army Corps of Engineers, Norfolk District, (USACE) is the lead federal agency, and the County of Monroe, Florida, is our non-federal sponsor.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, and as implemented by the Council of Environmental Quality regulations (40 CFR 1500-1508), the USACE has determined that the project has the potential to have significant environmental impacts. USACE is preparing and will release shortly, the Draft IFS/EIS for public and agency comment. The Draft IFS/EIS considers a full range of nonstructural and structural coastal storm risk management alternatives that meet the Proposed Action's purpose and need, evaluates the environmental impacts of the measures, and incorporates measures to avoid and minimize impacts to the maximum extent practicable.

Alternatives that were considered included: structural measures to protect U.S. Route 1 only, nonstructural measures to protect critical infrastructure only, nonstructural measures to protect development centers only, multiple combinations of these alternatives, and the No Action Alternative.

The Proposed Action is Alternative 7, which is a combination of structural measures to protect U.S. Route 1, and nonstructural measures to protect both critical infrastructure and development centers. Nonstructural measures reduce the consequences of coastal storms on a structure instead of reducing the risk and/or probability of the flooding caused by storm surge. More specifically, Alternative 7 includes: six proposed riprap revetments along sections of U.S. Route 1; floodproofing for existing critical infrastructure; and elevation and acquisition/relocation for existing residential properties.

You provided the following comments:

1) **Comment:** Potentially affected resources from the proposed projects include mangroves, living shorelines, coral reefs, submerged aquatic vegetation, wetlands, managed or protected areas within the project area, and all fish and wildlife, including species federally or state-listed as endangered or threatened, that depend on these habitats found in and near the project. Consideration of these resources during alternative development and examination is critical.

   USACE response: Careful consideration was given to these resources. USACE minimized the potential impacts of the proposed revetments by eliminating some of the originally proposed revetments, and by shifting four of the remaining six of them landward. As a result, there will be no in-water impacts, and thus no direct impacts on coral reefs, fish, submerged aquatic vegetation, or mangrove wetlands. We will adhere to strict erosion and sediment control measures to avoid and minimize any indirect effects on these resources. There will be permanent impacts to herbaceous wetlands for the proposed revetment at West Summerland Key; those impacts would be mitigated. We have determined that there would be adverse effects on federally listed threatened and endangered species and Critical Habitat and other wildlife species, associated with the proposed revetment at Long Key State Park. These species are the loggerhead sea turtle, piping plover, red knot, roseate tern, and the Cape Sable thoroughwort. We have prepared a Biological Assessment and will initiate formal consultation with the U.S. Fish and Wildlife Service (USFWS) soon. We have also considered adverse effects on the park itself, in the Draft IFS/EIS, and have been coordinating with the Florida Department of Environmental Protection, Division of Parks and Recreation (FDPE DPR) concerning those effects.

2) **Comment:** FWC staff is available to help identify potentially affected fish and wildlife resources related to alternative management measures and is interested in reviewing project plans as they become available. FWC staff has consulted extensively with the USACE about impacts to fish and wildlife resources during past projects and we would like to review the proposed projects as plans are refined so that we may be involved in conservation measures for listed species or technical assistance regarding habitat for fish and wildlife species.

   USACE Response: We very much appreciate the survey data and guidance provided by your staff, and the involvement of your staff in the interagency coordination meetings. It was helpful in the avoidance and minimization of adverse effects, and in the preparation of the Draft IFS/EIS, including the BA.

Once the Draft IFS/EIS is ready for release, you will receive a letter indicating that it is available for public and agency review, and a link to the document.

Please feel free to contact Ms. Kathy Perdue with any questions at (757) 201-7218 or Kathy.S.Perdue@usace.army.mil.

Thank you for your comments.

Sincerely,

Susan Layton

Susan Layton
Chief, Planning and Policy Branch

Florida Fish and Wildlife Conservation Commission

Commissioners
Robert A. Spottswood
Chairman
Key West

Michael W. Sole
Vice Chairman
Tequesta

Carlos Beruff
Bradenton

Joshua Kellam
Palm Beach Gardens

Gary Lester
Oxford

Gary Nicklaus
Jupiter

Sonya Rood
St. Augustine

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Executive Director
Eric Sutton
Executive Director

Thomas H. Eason, Ph.D.
Assistant Executive Director

Jennifer Fitzwater
Chief of Staff

850-487-3796
850-921-5786 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street
Tallahassee, Florida
32399-1600
Voice: 850-488-4676

Hearing/speech-impaired:
800-955-8771 (T)
800 955-8770 (V)

MyFWC.com

January 8, 2019

Kimberly Koelsch
U.S. Army Corps of Engineers
Norfolk District
Planning and Policy Branch
803 Front Street
Norfolk, VA 23510
Kimberly.C.Koelsch@usace.army.mil

RE: Florida Keys Coastal Storm Risk Management Feasibility Study, U.S. Army Corps of Engineers Scoping Request, Monroe County

Dear Ms. Koelsch:

Florida Fish and Wildlife Conservation Commission (FWC) staff has reviewed the above-referenced scoping notice. We provide the following comments and recommendations for your consideration in accordance with Chapter 379, Florida Statutes, and the Fish and Wildlife Coordination Act.

Project Description

The Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study will examine the impacts of and potential responses to storm surge damage in the Florida Keys, Monroe County. The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency from Key Largo to Key West. The study will examine current and future strategies and measures to address these coastal risks. The study will evaluate current studies, scientific consensus, guidelines, and design standards to recommend a project that increases resilience for infrastructure systems and the built environment. Analyses will include assessments of engineering feasibility, costs, economic benefits, and impacts to the environment and local communities. Potential measures being considered include but are not limited to the following: structural alternatives (such as tidal gates and backflow preventers), non-structural alternatives (such as flood proofing, relocation, and elevation of structures), and natural features (such as living shorelines, mangrove, artificial reefs, coral and wetland plantings).

Potentially Affected Resources

Potentially affected resources from the proposed projects include mangroves, living shorelines, coral reefs, submerged aquatic vegetation, wetlands, managed or protected areas within the project area, and all fish and wildlife, including species federally or state-listed as endangered or threatened, that depend on these habitats found in and near the project. Consideration of these resources during alternative development and examination is critical.

FWC staff is available to help identify potentially affected fish and wildlife resources related to alternative management measures and is interested in reviewing project plans as they become available. FWC staff has consulted extensively with the USACE about impacts to fish and wildlife resources during past projects and we would like to review the proposed projects as plans are refined so that we may be involved in conservation measures for listed species or technical assistance regarding habitat for fish and wildlife species.

We appreciate the opportunity to review the feasibility study and the invitation to be a part of the NEPA process and look forward to future opportunities to contribute. Please feel free to contact our office by email at FWCConservationPlanningServices@MyFWC.com with questions about this letter. If you have specific technical questions regarding the content of this letter, please contact Jim Keltner by phone at (239) 332-6972 x9209 or by email at James.Keltner@MyFWC.com.

Sincerely,

Fritz Wettstein

Fritz Wettstein
Land Use Planning Program Administrator
Office of Conservation Planning Services

fw/jdk

Florida Keys Coastal Storm Risk Management Feasibility Study_37713_010819

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 20, 2018

Planning and Policy Branch
Environmental Analysis Section

RE: Initiation of NEPA Scoping and NEPA Scoping Comment Period for the Florida Keys Coastal Storm Risk Management Feasibility Study

To Whom It May Concern:

This scoping letter is being promulgated by the U.S. Army Corps of Engineers (Corps) in compliance with public coordination requirements of the National Environmental Policy Act of 1969 (NEPA). The purpose of this correspondence is to formally initiate the scoping process as defined by 40 CFR 1501.7 for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study (previously identified as the Monroe County CSRM Feasibility Study). The Corps is the lead federal agency for this study and Monroe County is the nonfederal sponsor.

The study authority is Public Law 84-71, June 15, 1955 which authorizes an examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides. The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. The study area extends from the Key Largo, Florida vicinity to Key West, Florida. A map of the approximate study area is included as Attachment 1.

Potential measures being considered include, but are not limited to the following: structural alternatives (such as tidal gates and backflow preventers), non-structural alternatives (such as flood proofing, relocation, and elevation of structures), and Natural and Nature-Based Features (such as living shorelines, mangrove, coral and wetland plantings).

The purpose of the scoping period is to commence the public process for the generation of a NEPA document to assess the effects of the alternatives associated with the Florida Keys CSRM Feasibility Study. The NEPA document that will be prepared will be either an Environmental Assessment or an Environmental Impact Statement for this study. Scoping will aid in determining the scope of the analysis and any potentially significant issues. This process is also to help identify alternatives and information needed to evaluate alternatives.

A series of public meetings is scheduled for this study in order to solicit public scoping comments. The following table identifies the dates and locations of each meeting:

Florida Keys Coastal Storm Risk Management Feasibility Study Public Meeting Schedule			
Date	Location	Time	Reserved Venue
Monday, 12/03/2018	Key West, FL	6-8pm	Key West Commission Room Harvey Government Center, 1200 Truman Avenue, Key West Florida 33040
Tuesday, 12/04/2018	Marathon, FL	11-1pm	Marathon Commission Room Marathon Government Center, 2798 Overseas Highway, Marathon, FL 33050
Tuesday, 12/04/2018	Key Largo, FL	6-8pm	Holiday Inn Key Largo 99701 Overseas Hwy, Key Largo, FL 33037

We welcome your views, questions, comments, concerns and suggestions. The Corps believes that this study will benefit significantly from your involvement. Written scoping comments for the Florida Keys CSRM Feasibility Study are to be provided no later than January 8, 2019. If it is determined that preparation of an Environmental Impact Statement is required, the Corps will publish a Notice of Intent to prepare an Environmental Impact Statement in the Federal Register and the NEPA public scoping comment period will be extended. Written comments or inquiries regarding the Florida CSRM Feasibility Study should be addressed to Ms. Kimberly Koelsch; email: Kimberly.C.Koelsch@usace.army.mil; Telephone: 757-201-7837. Thank you in advance for your participation.

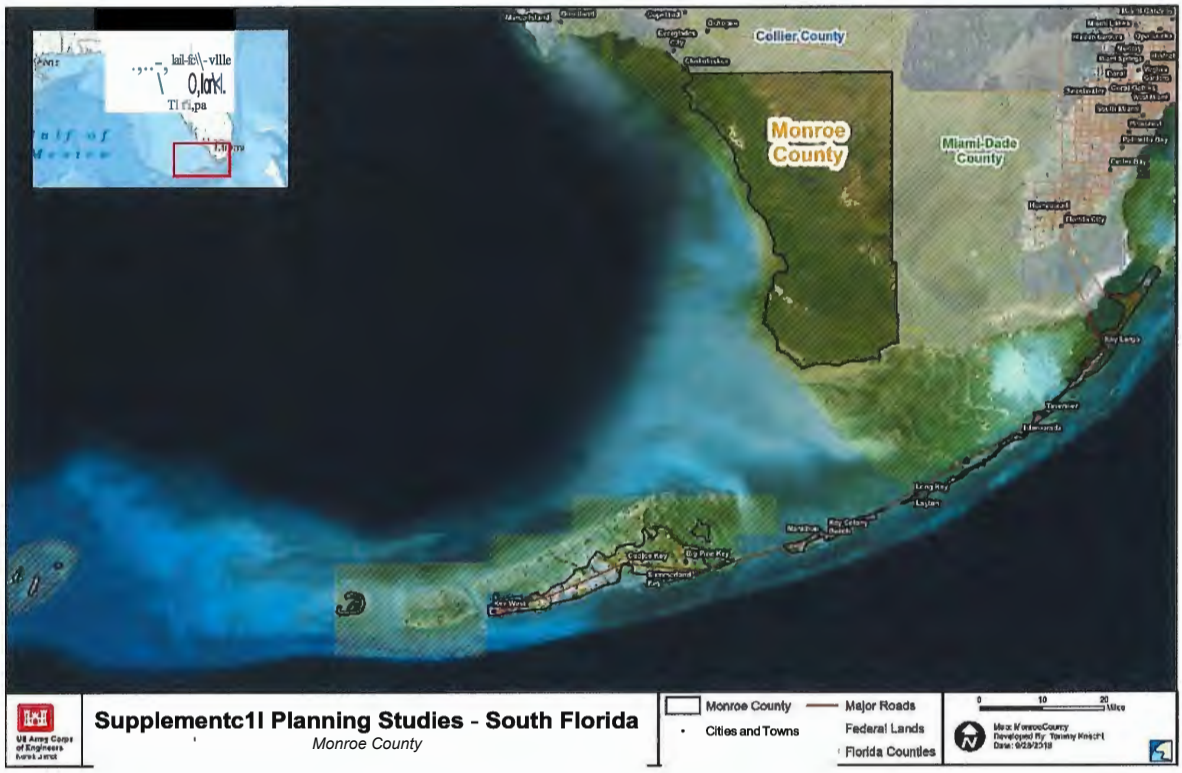
Sincerely,

Alicia M. Logalbo
U.S. Army Corps of Engineers
Norfolk District
Chief, Environmental Analysis Section
Planning and Policy Branch

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

November 20, 2018

Attachment 1: Map of Approximate Study Area



NEPA PUBLIC SCOPING Email List: Florida Keys CSRM Feasibility Study

jcheon@fkaa.com;greg.corning@woodplc.com;erin@deadylaw.com;jrdean@fkaa.com;dyoung@southfloridaaudubon.org;director@tropicalaudubon.org;dmandch@aol.com;dhackworth@fkaa.com ;sue.heim@klwtd.com;ktripp@savethemanatee.org;aleal@keysmosquito.org ;dmeiers@sfwmd.gov;knelson@fkaa.com;knelson@fkaa.com;joreynolds@FKAA.com;steve.russ1@COMCAST.NET;scuderi@my100bank.com;rachel@miamiwaterkeeper.org;stc@conserveturtles.org;reefkeeper@reefkeeper.org;jbyrne@tnc.org;Haag-Rhonda@MonroeCounty-FL.Gov;skipharing@juno.com;ahiggins@cityofkeywest-fl.gov ;Christine@MonroeCounty-FL.Gov ;seth.lawless@islamorada.fl.us;London-Debra@MonroeCounty-FL.Gov;London-Debra@MonroeCounty-FL.Gov;Manning-Jeff@MonroeCounty-FL.Gov ;Manning-Jeff@MonroeCounty-FL.Gov ;matthews-kimberly@MonroeCounty-FL.Gov;cmoonis@keycolonybeach.net;Roberts-Michael@MonroeCounty-FL.Gov;Roberts-Michael@MonroeCounty-FL.Gov;Schemper-Emily@MonroeCounty-FL.Gov;Schemper-Emily@MonroeCounty-FL.Gov;Senterfitt-Martin@MonroeCounty-FL.Gov;Stein;Bradley@MonroeCounty-FL.Gov ;Helene@MonroeCounty-Fl.gov ;Helene@MonroeCounty-Fl.gov ;Wilson-Kevin@MonroeCounty-FL.Gov ;Wilson-Kevin@MonroeCounty-FL.Gov ;boccdis1@MonroeCounty-FL.gov;boccdis2@MonroeCounty-FL.gov;boccdis3@MonroeCounty-FL.gov;boccdis4@MonroeCounty-FL.gov;boccdis5@MonroeCounty-FL.gov;jscholl@cityofkeywest-fl.gov;tjohnston@cityofkeywest-fl.gov;jweekley@cityofkeywest-fl.gov;skaufman@cityofkeywest-fl.gov;bwardlow@cityofkeywest-fl.gov;mlhoover@cityofkeywest-fl.gov;gdavila@cityofkeywest-fl.gov;clopez@cityofkeywest-fl.gov;Betancourt-Alicia@monroecounty-fl.gov;boone-mark@MonroeCounty-FL.Gov;Clarke-Judith@monroecounty-fl.gov;mayor@keycolonybeach.net;Douma-Tim@MonroeCounty-FL.Gov ;sfraser@cityofkeywest-fl.gov;peter.frezza@islamorada.fl.us;garrettg@ci.marathon.fl.us;Chris.Stahl@dep.state.fl.us;Lainie.Edwards@dep.state.fl.us;Eric.Buck@fl.dep.state.us;Kelly.Egan@dep.state.fl.us;Francisco.Pagan@fl.dep.state.us;Fritz.Wettstein@myfwc.com;Jason.Golden@FloridaDEP.gov;Gregory.Garis@dep.fl.state.us;John.Hunt@MyFWC.com;Jon.Iglehart@FloridaDEP.gov;steven.james@dot.state.fl.us;Jennifer.Goff@myfwc.com;shellykrueger@ufl.edu;shellykrueger@ufl.edu;mary.duncan@myfwc.com;gil.McRae@MyFWC.com;gil.mcrae@fwc.com;barbara.powell@deo.myflorida.com;James.Rachal@flhealth.gov;James.Rachal@flhealth.gov;gus.rios@dep.state.fl.us;rob.ruzicka@MyFWC.com;ROBBIN.TRINDELL@myfwc.com;Senterfitt-Martin@MonroeCounty-FL.Gov;Stein-Bradley@MonroeCounty-FL.Gov ;Joanna.Walczak@dep.state.fl.us;william_brookman@doh.state.fl.us ;mailto:James.Wolfe@dot.state.fl.us;mary.duncan@myfwc.com;Chris.Anderson@MyFWC.com;Karen.Bohnsack@dep.state.fl.us;TRINDELL@myfwc.com;david.bernhart@noaa.gov;blackburn.steven@epa.gov; Andrew.L.Bobick@uscg.mil;billy.causey@noaa.gov;james.christian@dot.gov;daniel_clark@fws.gov;Derby.Jennifer@epa.gov;nancy.diersing@noaa.gov;beth.dieveney@noaa.gov;Mario.Dominguez@dot.state.fl.us;Sarah.Fangman@noaa.gov;virginia.fay@noaa.gov;sarah.furtak@noaa.gov;Howard.Goldstein@noaa.gov;Harper.Cecelia@epa.gov;Higgins.Jamie@epa.gov;Jeffery_Howe@fws.gov;Jocelyn.Karazsia@noaa.gov;Christopher_kavanagh@nps.gov;Mark.Lamb@noaa.gov;kel.logan@noaa.gov;gil.mcrae@fwc.com;carol_mitchell@nps.gov;carol_mitchell@nps.gov;Parsons.Mel@epa.gov;Lisa.Symons@noaa.gov;Weiss.Lena@epa.gov;Pace.Wilber@noaa.gov;Lehmann.Wade@epa.gov; state.clearinghouse@state.fl.us; Ross.Martin@WaterMatters.org; mark.walters@sierraclub.org; linda.demler@sierraclub.org; info@friendsoffloridastateparks.org; jackielarson@fsbpa.com

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Inter-agency Meeting Summary and Minutes

Norfolk District
803 Front Street
Norfolk, Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

CENAO-WR-PE

MEMORANDUM FOR RECORD

MEMORANDUM FOR:

SUBJECT: Florida Keys Coastal Storm Risk Management Feasibility Study Interagency Meeting

1. An Interagency Meeting was held on January 7, 2019 via teleconference from 1000 to 1100 with the following persons attending:

   Alicia Logalbo, USACE Norfolk District
   Dan Hughes, USACE Norfolk District
   Kristin Mazur, USACE Norfolk District
   Kimberly Koelsch, USACE Norfolk District
   Jim Keltner, Fish and Wildlife Conservation Commission
   Rhonda Haag, Monroe County
   Joanne Delaney, NOAA, Florida Keys National Marine Sanctuary (FKNMS)
   Roxane Dow, Florida Department of Environmental Protection (FLDEP)
   Jennifer Steele, FLDEP
   Jason Golden, FLDEP
   Steven Craig James, Florida Department of Transportation (FDOT)
   Andrew Youngman, FDOT

2. After introductions, Ms. Koelsch began the briefing stating the purpose of the meeting to coordinate throughout the project timeline with environmental agencies, cooperating agencies and participating agencies. Ms. Koelsch walked through 37 slides describing the study background, problems and opportunities, plan formulation, environmental compliance, potential measures, including potential Natural and Nature-based features.

3. Discussion followed the presentation. Sediment management and potential sediment sources was discussed for any beach restoration considered. FLDEP encouraged their involvement in this future issue. Ms. Joanne Delaney of the FKNMS inquired about the role of the Cooperating Agency and the proper time to submit comments on plan formulation. She sent an email following the meeting requesting more information on the timing and steps to reach the USACE Tentatively Selected Plan. She also requested to receive the scoping comments and would like NOAA/ Florida Keys National Marine Sanctuary to be actively involved as a Cooperating Agency.

4. Steven Craig James of FDOT stated they are encouraged by USACE efforts on this EIS in the Florida Keys. They are hoping they will have the opportunity to “tier” or leverage off USACE EIS efforts in the future saving FDOT funds on road improvement project documentation.

5. The FCSA was executed with Monroe County, Florida on October 9, 2018 with the nonfederal sponsor Monroe County. A successful Alternative Milestone Meeting was conducted on 15 January 2019.

6. A series of monthly meetings will be established in the future to continue coordination with partners and regulatory agencies.

Florida Keys Coastal Storm Risk Management Feasibility Study

February 12, 2019

Interagency Meeting Agenda

1:00 p.m.	Welcome and Introductions
1:15 p.m.	Meeting Purpose
1:20 p.m.	January Meeting Minutes
1:30 p.m.	Study Overview & Planning Efforts to Date o Problems o Opportunities o Objectives o Constraints and Considerations
1:45 p.m.	Management Measures o Structural o Non-Structural o Natural and Nature-Based Features
2:00 p.m.	General Discussion
2:15 p.m.	Adjourn

Florida Keys Coastal Storm Risk Management Feasibility Study

March 21, 2019

Interagency Meeting Agenda

1:00 p.m.	Welcome and Introductions
1:10 p.m.	Meeting Purpose
1:15 p.m.	February Meeting Minutes
1:20 p.m.	Planning Efforts to Date
1:30 p.m.	GIS Data Sources
1:45 p.m.	GIS Data Requests
2:00 p.m.	Discussion of Mangrove Models
2:15 p.m.	Agency Input on Potential NNBFs
2:30 p.m.	Adjourn

FL Keys Coastal Storm Risk Management Feasibility Study

Interagency Meeting 11.20.2019

Attendees:

Monroe County: Greg Corning (representative for County)
EPA: Jamie Higgins
Fish and Wildlife Service: Jim Keltner
NOAA Marine Sanctuary: Sophie Saffir McKey, Michelle Brown (?)
NOAA Protected Resources: Jennifer Gap
NOAA NMFS: Kevin Mack
USACE Jacksonville District Regulatory: Maria Bethania
FL State Parks: Diane Martin, Don Burgeron (Bahia Honda) Ernie Callan from District 5, Wes Howell
FL DOT: Liz Fulcher, District 6 Nic Impludo (?), Steven James
Florida DEP: Roxanne Dowell (Beaches and Coastal Division), Guy Weeks, Doz Ridos, Travis Burgis,
Florida Fish and Wildlife Conservation Commission: Sue Chaff, Jim Calvin
USACE Norfolk District: Tammy Younkins, Rachel Haug, Kathy Perdue, Justine Woodward, John Haynes, Miranda Ryan, Alicia Logalbo, Trent Elder, Matt Schultz, Ashton Burgin
SF Water Management District: Tricia Stone
Megan Mills (?)

The meeting commenced at 2pm with the welcome and introductions conducted by Kathy Perdue. Kathy also provided an overview of the study scope and purpose.

Plan Formulator Rachel Haug led the discussion on the three plan formulation strategies.
1) Route 1 corridor (priority for the non-federal sponsor, Monroe County)
2) Reducing coastal storm risk to critical infrastructure
3) Reducing coastal storm risk to population and development centers. – Reduction of damage to structures

Kathy provided a broad overview of some of the potential impacts. In terms of CR, John indicated that he didn't think there would be a lot of archaeological impacts – sparse nature of the structural program. He did state that the Historic district in Key West is a concern.

Applicable Regulatory requirements/permits

Trish Stone inquired as to who would be the applicant for any state environment permits.

Alicia indicated that the USACE higher level vertical team prefer sponsor (in this case, Monroe Co.) to be applicant, but in some cases the sponsor is the applicant and USACE is the agent.

The comment was made that some of the individual sites are likely to be within the existing FDOT right-of-way. For permitting purposes, FDOT may need to be co-applicant or have an agreement in place to issue permit to sponsor. Bottom line is that coordinate with FDOT would need to occur to discuss permitting details and work out the need for agreements.

Site 1: Cudjoe Key

Comments:

Florida Fish and Wildlife Commission (FFWC) would provide comments through permitting process.

The need/timing for baseline resource surveys (such as corals, etc.) was discussed. In the immediate future, site visits/field investigations would occur to groundtruth the proposed locations; however any survey work (including buffer areas) would be anticipated to occur during the PED phase (next phase of project).

It was mentioned that the State parks maintain sea turtle nesting records with GPS coordinates for sea turtle nests.

Site 2 – Spanish Harbor Key

No substantive comments.

Site 3: Bahia Honda State Park – multitude of things going on here

Known sea turtle nesting, nearshore reproductive critical habitat, piping plover critical habitat
Four species of sea turtles noted at this location

Looking at sea turtle nesting numbers – this is one of the highest density nesting areas in State parks in the Keys (for loggerheads). Anywhere from low (15 in 2019) to as high as 69 in the past five years.

An easement will be needed from the Board of Trustees for work in areas within the State Park.

Roxanne (FL DEP) indicated that this is a critically eroded beach armoring has been attempted before. Her office would like to see this remain a sand beach.

Don Burger (FL State Park) indicated that recreational use of this stretch is light now compared to rest of park beaches mainly due to erosion from Irma. In terms of an operational consideration: everything to the northeast in park will impact the camping area (access to and from campground). Don not aware of records for piping plover for this stretch.

There was a brief discussion about beach nourishment. One of the impacts associated with nourishment is the nearshore habitat impacts. It would be worth considering the placement of sand above MHW to minimize impacts to nearshore environments.

Guy Weeks: appears to be rock revetments in state park, would this be located channelward of state park roadway? Kathy indicated the proposed rip rap would likely overlay existing riprap.

Guy Weeks inquired about location of the rip rap and he reiterated what Roxanne said about strategic beach management plan. His office would have a greater interest to place sand here. Additionally, he mentioned that staff would consider impacts to nearshore resources when reviewing the project.

Site 4 – Duck Key

Possibly encroaching on Rt. 1 Overseas Heritage Trail

No substantive comments.

Site 5 – also Duck Key

Mapped almost entirely as mangrove; substantive mangrove impact so we are considering more NNBFs, looking at this site in more detail.

Maria (USACE Jacksonville Regulatory) indicated that with a scenario such as this they may request applicant put rip rap on landward side – NNBF on water side to serve as dual protection.

Steven James (FDOT) be aware Heritage Trail would be located between work zone and highway – coordinate with DEP would be required. He stated that typically the Heritage Trail connects with the historic bridge which is on the ocean side. Also, indicated SHPO coordination is required.

Coordination with DRP is required for potential impacts to the Heritage Trail.

Site 6 – Long Key

One of biggest sea turtle nesting areas on the FL Keys.

2nd most dense beach for loggerhead nesting (in terms of state parks). The last 3 years 5-6 nests, this year 13 nests at this location. This is a critically eroded beach.

Park staff is considering ways to minimize beach erosion here as well.

Used to be extensive armoring but even that has eroded. A lot of it was put in years ago, difficult to say if it was designed and installed properly. A large storm surge will toss rocks around like pebbles. Eroding shorelines adjacent to roads is a chronic problem in general across the Keys.

Ernie Callan indicated that looking at google earth before the area was washed out by last several hurricanes (prior to 2017), there were campgrounds along a lot of this area and there is interest in restoring campgrounds. In summary, a potential issue/conflict would be recreational use/interest in this area where the riprap is proposed. His agency is considering restoring recreational use (camping) of the area. The Park had 42,000+ visitors last year.

Coordination should occur with Building, Design, and Construction (BDC) with Park Planning – can also check with Park Chief. They can provide further input once they have more information.

Rachel indicated that we would like to have as good of an idea of future conditions as possible so we can plan around it. We also have ways to quantify recreational use – we can use this as part of justification for moving forward.

Sites 7 and 8 (500 feet apart) Fiesta Key

Mangrove impacts would occur with current proposal. Alicia indicated that we can't impact other resources (like seagrass) to plant mangroves.

Site 9 Fiesta Key

Seagrass channelward of mhw here, steep sloped bank, possibly a recreational fishing hotspot

Steven James (FDOT) – thinks this might be a USCG Bridge (high level 6 span bridges are usually placed next to navigable waters). Fishing piers might be to the north on other side of roadway – so may not be fishing activity at proposed project site.

Site 10 Sea Oats Beach

We already know this is heavily used by loggerheads – Sue said yesterday they have even come up into the road so FDOT has put up silt fences to prevent turtles form getting on the road.

Sue – highest nesting loggerhead beach that is not in a state park in the Keys. We can get specific nesting data, may not have 2019 data just yet. A couple of sea turtle deaths along highway. False crawls have stayed fairly high (into teens).

Steven (FDOT) – this beach has been eroded for more than a few years so historically had much higher nesting numbers. Some discussion in recent years for beach renourishment here but it was not FDOT taking lead. FDOT had a rip rap structure with geofabric in place – this is the location that failed. Some of roadway engineers have probably done an assessment as to why it failed. FDOT may be able to provide history about why improvements failed at Sea Oats beach.

This property is owned mostly by the village.

Surface of asphalt was damaged during Irma and has happened during previous storms as well. Beach sand has washed up over highway. Not much of a beach left at all. Beach nourishment would potentially impact critical habitat for coral – would depend on what the coral survey shows.

It is likely the impact here channelward of MHW would be SAV (not hard-bottom). The goal here would be to minimize impacts and mitigate. This is a popular spot for fish for wading and flyfishing as well as pedestrians.

There is an image in post-storm hurricane damage report for the beaches written by DEP – whole section on Monroe County and Sea Oats beach – shows what it looked like after Irma. (Mangrove impacts not a focus of this report).

Maria – In Keys, FWS has a programmatic letter that addresses suitable habitat for crocodiles. Will forward to us. Jacksonville Biological Opinion (we do have a copy of it). It is preferable to consult under the Jacksonville BO when possible.

Site 11, 12, and 13 – Indian Key

We are aware that this area experiences heavy recreational use by the public.

Land is partially owned by State park and the Village. State Park will be subleasing part of the proposed action area (from the Village) to patrol area and manage recreational use. Sublease hopefully to be finalized in the near future.

Travis Ferguson – also parts of sites 11 and 13 are part of the Lignumvitae Key Aquatic Preserve as well so might be some complications.

Likely portions of the sites are in FDOT right-of-ways. Right of way varies in width – not a straight line next to highway – jogs in and out. Requires coordination with FDOT. Village of Islamorada has a maintenance agreement with FDOT for some of this area.

Site 12 – this area would require a sublease with Board of Trustees (State Park). Village has to provide to division of state lands in terms of a map/sketch of area that is included in sublease to allow the village to patrol the area and manage recreational use. She can send it to USACE for consideration by real estate dept.

Would rip rap be compatible with current use?

Steven (FDOT) – likely a lot of existing rip rap now – it probably would be consistent with prior rip rap placement. There is an existing sandy beach area next to the radio tower. But not like your typically sandy shore beach. The potential for conflicts will depend on the location of the proposed riprap with respect to the existing rip rap. Steven indicated there are no historic bridges which is where fishing usually occurs.

Lignumvitae Key Aquatic Preserve would have to review the compatibility with existing use. The aquatic preserve limits are likely MHW but need to confirm with the Preserve.

Meeting adjourned.

Florida Keys Coastal Storm Risk Management Feasibility Study and Environmental Impact Statement

Interagency Meeting 24 March 2020

Meeting Notes Date 2 April 2020

(Italics in meeting notes refers to follow-up actions after the meeting)

Attendees:

Monroe County: Greg Corning (representative)

US Environmental Protection Agency (EPA): Jamie Higgins

National Oceanic and Atmospheric Association (NOAA) Florida Keys National Marine Sanctuary (FKNMS): Lisa Symons, Joanne Delaney, Sophie Godfrey-Mckee

NOAA Protected Resources Division (PRD): Mark Lamb, Melissa Alverez

NOAA National Marine Fisheries Service (NMFS): Jennifer Schull, Brian Rosseger

USACE Jacksonville District: Maria Bezanilla

Florida Department of Environmental Protection (FDEP), Division of Parks and Recreation (DPR): Don Bergeron (Bahia Honda)

Florida Department of Transportation (FDOT): Steven James, Jacqueline DeAngelo, Liz Fulcher (representative)

Florida Department of Environmental Protection (FDEP): Roxanne Dow, Greg Garis, Nick Parr

Florida Wildlife Conservation Commission (FWCC); Jim Keltner

USACE Norfolk District: Ashton Burgin, Rachel Haug, John Haynes, Susan Layton, Alicia Logalbo, Stacey Nolan, Kathy Perdue, Justine Woodward, Tammy Younkins

Notes:

The meeting opened at 2:30 pm, and was held by webinar. The webinar consisted of the powerpoint entitled, "Florida Keys Coastal Storm Risk Management Feasibility Study, March 2020," and discussion by the participants.

Kathy Perdue opened and stated that the purpose of the meeting was to update the agencies on the revised plans and the cultural and environmental effects, and to obtain any comments based on the revisions.

Rachel Haug presented the plan formulation slides on the study scope and purpose, a description of the structural and nonstructural measures, and the tentatively selected plan (Alternative 7).

John Haynes stated that the revetments are in areas that are highly modified and aren't expected to have adverse effects on cultural resources. However, there would be a potentially significant effect on cultural resources, especially in the Key West Historic District. He explained that the most severe impact on an historic structure would be acquisition and demolition. The second most severe would be elevation of structures. The least severe would be floodproofing. He said that a Programmatic Agreement has been prepared to address the effects and mitigation.

Kathy Perdue went through an overview of all of the environmental effects, as described on Slides 9-11. She indicated that there would be adverse effects on socioeconomics, environmental justice populations, recreation, threatened/endangered species, and migratory and shorebirds. She mentioned that the threatened/endangered species and Critical Habitats are addressed in the draft Biological Assessment (BA). She also mentioned two State Park properties: Bahia Honda and Long Key would be affected, as well as the Overseas Trail. Kathy emphasized that USACE has received the FDEP DPR's comment memo concerning the Proposed Action and the fact that the DRP does not want structural measures placed in their parks, as well as other concerns, such as nesting turtles and shorebirds. Kathy and Rachel emphasized that we were open to hearing more from the FDEP DPR, and that this isn't set in stone at this point. Kathy emphasized that she and the rest of USACE and the County intend to hold a sidebar meeting with DPR to discuss their concerns. (*NOTE: That conference call was held on 1 April)*.

Kathy noted that there would be no in-water impacts for any structural or nonstructural measures. Joanne Delaney requested clarification as to whether or not there would be impacts below mean high water (MHW). She said that a permit from the Marine Sanctuary would be required in that case. Also an FDEP 401 Water Quality Certification and a Rivers and Harbors Act permit would be required too.

The question came up as to how certain at this point that we are that there would be no impacts below MHW. Steven James of FDOT added that a lot of times, they initially plan to keep structures out of the water, but later end up realizing that there would have be in-water impacts after all.

Kathy explained that as of right now, we have no plans for any impacts below MHW. She explained to the team that right now, we are just in conceptual design, perhaps 10% design, so we can't know for absolute sure until the PED phase, after further engineering and onsite survey work occurs. There is not a good way to guess or estimate whether the footprint would change by that time, or how it would change. Kathy added that during the PED phase is also the time when permits would be applied for.

Kathy went through the list of revetments that were eliminated from consideration and why. (Eliminated revetments are: Site #1 Cudjoe Key; Sites #4 & #5 Duck Key; Site #10 Sea Oats Beach, and Sites 11 & 12: Indian Key Fill. All of these were eliminated either because they were already stable with dense mangroves/buttonwood wetlands that should not be impacted, or because FDOT was already doing a revetment there).

Then she went through the revetments that remain.

<u>West Summerland Key.</u> Kathy indicated that there would be herbaceous wetland impacts behind a sea wall and above MHW at this location that would need to be mitigated. She said that the live mangroves there would be avoided, utilizing a concept whereby there is a buffer off mangroves, or they are incorporated into the design.

Roxanne Dow (FDEP) indicated that she was not aware of such a design, and Kathy indicated that FDOT had provided a conceptual cross section, so Roxanne said she would like to review it. (*Kathy will send*). Kathy noted that the Overseas Trail, landward of the revetment location, is damaged there and will be repaired by FDOT.

Bahia Honda Key. Kathy explained that to avoid beach and turtle nesting impacts, the proposed revetment was moved upslope and outside of the State Park fence. Steven James noted that that revetment would be located on FDOT transportation Right of Way (ROW) that is managed by FDEP. He added that if Federal Highway Administration (FHWA) funding is used in the future for construction, then a USDOT Section 4f analysis would be needed for impacts on the parks, as well as on any cultural resources. Kathy agreed but noted USACE is not required to do 4f. *(NOTE: this current study is 100% federally funded, but the construction is shared 65% USACE and 35% locality. It was verified by USACE management on 26 March that no other federal funding is allowed to be used by the County as part of its share; therefore, Section 4f isn't required)*.

Don Bergeron with the FDEP DPR noted that the identified staging area for Bahia Honda is actually at the location of a residence and therefore could not be used. He suggested utilizing a gravel area across US Rt 1 instead. (*NOTE: On 26 March, Don sent the map to Kathy showing the location, but on 30 March, Candice Miranda, USACE Engineering, said that the area most likely was not large enough. She said further identification efforts may need to be done in PED, if no part of the residential lot could* be *used. Also, Kathy later coordinated with Jacqueline on possible staging areas that FDOT has used in the vicinity of Bahia Honda. On 27 March, Jacqueline sent her a map and documentation of a staging location for the Bahia Honda Bridge; however, the staging area is located on West Summerland Key rather than Bahia Honda Key, and it probably not practical for use at the Bahia Honda revetment).*

Long Key. This revetment is located along a beach in Long Key State Park. Kathy stated that there are many sensitive resources in the area, including nesting turtles, upland beach vegetation that will have to be mitigated, recreational impacts, etc. She indicated that formal consultation with USFWS would be required, and that we have prepared a BA to address these and other impacts of the Proposed Action. Also, this particular revetment is very close to MHW. (*NOTE: Kathy did check with Candice after the call, and on 26 March, Candice stated, "I just checked revetment's toe elevations. The revetment is not in MHW. No changes at this time are needed. In PED, I would recommend a survey to verify the elevation.")*. It was again emphasized that a separate discussion with the Park would take place to discuss their concerns.

Fiesta Key West. Kathy explained that this revetment was formerly Sites 7 & 8, but now they are fused together, and shifted upslope to avoid mangroves. She noted also that the Overseas Trail is damaged there and that FDOT would be repairing it.
Jacqueline brought up that one FDOT project originally on the table in that vicinity has been eliminated. She said it was between MM 70.4 and 70.8. She said this section did not qualify for FDOT Hurricane Irma repair work, because it had been damaged for a long time. Kathy said Fiesta Key West is within the vicinity of MM 70. Jacqueline asked for the USACE shapefiles for this area. (*NOTE: Tammy Younkins provided the shapefiles to Kathy, and she sent them to Jacqueline and Steven on 27 March. It appears that this 70.4 through 70.8 section may overlap Fiesta Key East rather than Fiesta Key East, but those would still only be trail repairs, not revetment*).

Fiesta Key East. Kathy mentioned that this revetment had been shifted south, and closer to US Rt 1, based on need. She mentioned that the environmental impacts at this location would be low; however

there would be temporary recreation impacts, as the staging area is in a parking lot adjacent to a public pier. Staging there likely would cut off use of the pier.
Steven James noted that parking lot is in FDOT ROW, but the pier is owned by a Florida Trust ("TIFIA"), and managed by FDEP. He mentioned that the pier may also be an historic resource. Kathy noted that the pier itself would not be impacted, but its use would likely be temporarily restricted. Steven said that the pier as well as the Overseas Trail is managed by the "TIFIA" arm of DEP, and that the best person to talk to would be Lou Dodson, and he provided contact information on 26 March.

Indian Key Fill. This is the last revetment. Kathy explained that it had been shifted upslope and closer to US Route 1. This location is also in FDOT ROW.

Kathy briefly went over the draft effect determinations for all of the threatened/endangered species and again noted that a draft BA had been prepared for coordination with USFWS.
Mark Lamb, of NOAA Protected Resources, asked if ESA coordination was needed for species in NOAA PRD jurisdiction, and Kathy indicated that, no because there are no in-water impacts, there is a "no effect" determination for NOAA resources. Mark mentioned his concern about aquatic species and resources, and stressed the need for strict erosion and sediment control to avoid impacting aquatic organisms and habitat areas such as hardbottom and seagrass. Kathy agreed, and asked if there are any Best Management Practices (BMPs) that he would like to send me, and he said he would do that.

Natural and Nature-Based Features (NNBFs). The topic then turned to NNBFs. Kathy explained that USACE had looked very closely at NNBF locations, but that none of them had found to be appropriate locations. The slides explain the reasons, but basically, the originally proposed locations were ruled out for various reasons, including: they were already an existing aquatic resource, such as mangroves; they were too deep to plant mangroves; they were being used as seagrass plantings; and/or a navigation to and from hotels; one was owned by the Navy and used by them for their own restoration efforts; or they were otherwise not an appropriate location to plant mangroves.
During the December site visit, the FKMNS had suggested restoring the mangrove-damaged locations at Long Key as NNBFs, by restoring tidal flushing and replanting them. These were large areas of dead mangroves that are believed to have been killed by hypersalinity following Hurricane Irma. However, USACE is not necessarily sure of the reasons for mangrove mortality there, and USACE believes it is unclear whether restored tidal flushing would solve the problem. The County would also be required to conduct required maintenance and monitoring once they are established. Therefore, those sites were determined to be too risky.
Also, Kathy, Rachel Haug, and Alicia Logalbo all explained that NNBFs must also be found to be economically justifiable in terms of measureable benefits.
Roxanne Dow agreed that the Navy is not likely to allow its property to be used by anyone else. She also expressed disappointment about the high bar that a proposed NNBF would have to meet to be justified (in terms of economics).
Joanne also confirmed that proposed NNBF #1 has been the site of seagrass restoration.

Kathy and Alicia closed by indicating that if there are other NNBF recommendations, we would consider them, but at this time, we have none proposed that have been found to be suitable locations from a habitat, ownership, and economic perspective. If in-water NNBFs are proposed, this would also require modification of the report, and this would also trigger the requirement for permits and further environmental coordination with agencies to ensure we were not adversely impacting aquatic resources that are already there.

Kathy indicated that sections of the report that pertain to the cooperating agencies may be provided to them for their review prior to the release of the report, which is planned for late May. Roxanne (FDEP liaison for federal projects) indicated that she would like to review: the draft BA, the beach impacts, the generalized, conceptual revetment FDOT schematics of revetments that avoid or incorporate mangroves, and the information concerning the acquisition/buyouts. (*these have not yet been sent, but they will be*).

Meeting adjourned at approximately 4:30 pm.

Notes by Kathy Perdue

FLORIDA KEYS COASTAL STORM RISK MANAGEMENT PROJECT

Federal Register, Public Notices, Public Comments, and Responses

Norfolk District
803 Front Street
Norfolk, Virginia 23510

U.S. Army Corps
of Engineers
Norfolk District

Dated: November 4, 2019.

Tracey L. Thompson,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2019–24365 Filed 11–7–19; 8:45 am]

BILLING CODE 3510–22–P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Proposed Deletions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Proposed deletions from the Procurement List.

SUMMARY: The Committee is proposing to delete services from the Procurement List that were furnished by nonprofit agencies employing persons who are blind or have other severe disabilities.

DATES: Comments must be received on or before: December 8, 2019.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, 1401 S. Clark Street, Suite 715, Arlington, Virginia 22202–4149.

FOR FURTHER INFORMATION CONTACT: For further information or to submit comments contact: Michael R. Jurkowski, Telephone: (703) 603–2117, Fax: (703) 603–0655, or email *CMTEFedReg@AbilityOne.gov.*

SUPPLEMENTARY INFORMATION: This notice is published pursuant to 41 U.S.C. 8503 (a)(2) and 41 CFR 51–2.3. Its purpose is to provide interested persons an opportunity to submit comments on the proposed actions.

Deletions

The following services are proposed for deletion from the Procurement List:

Services

Service Type: Administrative Services
Mandatory for: GSA, Sacramento PBS: Sacramento Field Office, Sacramento, CA
Mandatory Source of Supply: Crossroads Building Services, Inc.—Deleted, Sacramento, CA
Contracting Activity: GENERAL SERVICES ADMINISTRATION, FPDS AGENCY COORDINATOR

Service Type: Administrative Services
Mandatory for: GSA, Federal Technology Service: 10304 Eaton Place, Fairfax, VA
Mandatory Source of Supply: ServiceSource, Inc., Oakton, VA
Contracting Activity: GENERAL SERVICES ADMINISTRATION, FPDS AGENCY COORDINATOR

Service Type: Custodial Services
Mandatory for: Harley O. Staggers Federal Building, Morgantown, WV
Mandatory Source of Supply: PACE Enterprises of West Virginia, Inc., Morgantown, WV
Contracting Activity: GENERAL SERVICES ADMINISTRATION, FPDS AGENCY COORDINATOR

Patricia Briscoe,

Deputy Director, Business Operations (Pricing and Information Management).

[FR Doc. 2019–24389 Filed 11–7–19; 8:45 am]

BILLING CODE 6353–01–P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Deletions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Deletions from the Procurement List.

SUMMARY: This action deletes services from the Procurement List that were furnished by nonprofit agencies employing persons who are blind or have other severe disabilities.

DATES: *Date deleted from the Procurement List:* December 08, 2019.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, 1401 S Clark Street, Suite 715, Arlington, Virginia 22202–4149.

FOR FURTHER INFORMATION CONTACT: Michael R. Jurkowski, Telephone: (703) 603–2117, Fax: (703) 603–0655, or email *CMTEFedReg@AbilityOne.gov.*

SUPPLEMENTARY INFORMATION:

Deletions

On 10/4/2019, the Committee for Purchase From People Who Are Blind or Severely Disabled published notice of proposed deletions from the Procurement List.

After consideration of the relevant matter presented, the Committee has determined that the product and service listed below are no longer suitable for procurement by the Federal Government under 41 U.S.C. 8501–8506 and 41 CFR 51–2.4.

Regulatory Flexibility Act Certification

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in additional reporting, recordkeeping or other compliance requirements for small entities.

2. The action may result in authorizing small entities to furnish the product and service to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 8501–8506) in connection with the product and service deleted from the Procurement List.

End of Certification

Accordingly, the following product and service are deleted from the Procurement List:

Product

NSN—Product Name:
8140–01–063–7681—Grommet
Mandatory Source of Supply: LC Industries, Inc., Durham, NC
Contracting Activity: W40M RHCO–ATLANTIC USAHCA, FORT BELVOIR, VA

Service

Service Type: Janitorial/Custodial
Mandatory for: USDA, Forest Service: 4886 Cottage Grove Avenue, Humboldt Nursery, McKinleyville, CA
Contracting Activity: AGRICULTURE, DEPARTMENT OF, PROCUREMENT OPERATIONS DIVISION

Patricia Briscoe,

Deputy Director, Business Operations (Pricing and Information Management).

[FR Doc. 2019–24388 Filed 11–7–19; 8:45 am]

BILLING CODE 6353–01–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Florida Keys Coastal Storm Risk Management Study

AGENCY: U.S. Army Corps of Engineers, DoD.

ACTION: Notice of intent.

SUMMARY: In accordance with all applicable laws and regulations, the U.S. Army Corps of Engineers (USACE) plans to prepare a Feasibility Study with an integrated Environmental Impact Statement (EIS) to evaluate environmental impacts from reasonable project alternatives to protect nearshore areas of Monroe County, Florida, from hurricanes and other storms with their associated wind, storm surge, and coastal flooding.

DATES: Scoping comments are due by December 9, 2019.

ADDRESSES: The public is invited to submit NEPA scoping comments to Ms. Kathy Perdue, Department of the Army, U.S. Army Corps of Engineers, Norfolk District, Fort Norfolk, 803 Front St., Norfolk, VA 23510 or via email: *Kathy.S.Perdue@usace.army.mil.* The project title and the commenter's

contact information should be included with submitted comments.

FOR FURTHER INFORMATION CONTACT: Ms. Kathy Perdue, (757) 201–7218.

SUPPLEMENTARY INFORMATION: Applicable laws and regulations are section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended, 42 U.S.C. 4321–4370, as implemented by the Council on Environmental Quality Regulations (40 CFR parts 1500–1508) and Section 106 of the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470f as implemented by Advisory Council on Historic Preservation regulations (36 CFR part 800). The study authority is Public Law 84–71 of 1955 which authorizes examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides.

The primary problem is the vulnerability of critical infrastructure: the U.S. Route 1 corridor, and local development and population centers, to storm damage from major storms. Coastal flooding is exacerbated by Relative Sea Level Change, which also amplifies storm surge due to higher waters. These trends are expected to continue and worsen without intervention. Measures being considered include structural, nonstructural and natural and nature-based features such as road stabilization, buyouts/elevations of buildings, dry and wet flood-proofing of buildings, early warning systems, mangrove restoration, and living shorelines.

USACE is the lead federal agency and Monroe County is the non-federal sponsor for the study effort. The Feasibility Study/EIS will address the primary problem of the increasing storm damage and flooding occurring and expected to increase in the area by studying all reasonable alternatives and determine the Federal interest in cost-sharing for those alternatives.

As required by Council on Environmental Quality's Principles, Requirements and Guidelines for Water and Land Related Resources Implementation Studies, all reasonable alternatives to the proposed Federal action that meet the purpose and need will be considered in the EIS. The Study Area consists of all of the Florida Keys, a 123-mile-long chain of islands extending into the Gulf of Mexico to the southern tip of Florida. Several alternatives are currently being considered, including a no action alternative and various combinations of structural measures, nonstructural measures, and natural and nature based features for reducing risks and damages caused by coastal storms in the Study Area in Monroe County, Florida.

Scoping/Public Involvement. Two public NEPA scoping meetings were held in Monroe County. On September 11, 2019, from 5 p.m.—7 p.m. at the Key Largo Board of County Commissioners Room, Murray Nelson Government Center, 102050 Overseas Hwy, Key Largo, FL 33037. A second public meeting was held on September 12, 2019, at the Key West Commission Room, Harvey Government Center, 1200 Truman Avenue, Key West, Florida 33040. Federal, state, and local agencies, Indian tribes, and the public are invited to provide scoping comments to identify issues and potentially significant effects to be considered in the analysis.

Diana M. Holland,

Major General, U.S. Army, Commander, South Atlantic Division.

[FR Doc. 2019–24417 Filed 11–7–19; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

[Docket ID USN–2019–HQ–0019]

Submission for OMB Review; Comment Request

AGENCY: The Office of the Under Secretary of the Navy, DoD.

ACTION: 30-Day information collection notice.

SUMMARY: The Department of Defense has submitted to OMB for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act.

DATES: Consideration will be given to all comments received by December 9, 2019.

ADDRESSES: Comments and recommendations on the proposed information collection should be emailed to Ms. Jasmeet Seehra, DoD Desk Officer, at *oira_submission@omb.eop.gov.* Please identify the proposed information collection by DoD Desk Officer, Docket ID number, and title of the information collection.

FOR FURTHER INFORMATION CONTACT: Angela James, 571–372–7574, or *whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil.*

SUPPLEMENTARY INFORMATION:

Title; Associated Form; and OMB Number: Personalized Recruiting for Immediate and Delayed Enlistment Modernization (PRIDE Mod); OMB Control Number 0703–0062.

Type of Request: Extension.

Number of Respondents: 60,000.

Responses per Respondent: 1.

Annual Responses: 60,000.

Average Burden per Response: 1 hour.

Annual Burden Hours: 60,000.

Needs and Uses: The information collection requirement is necessary to support the U.S. Navy's process to recruit and access persons for naval service.

Affected Public: Individuals or households.

Frequency: On occasion.

Respondent's Obligation: Voluntary.

OMB Desk Officer: Ms. Jasmeet Seehra.

You may also submit comments and recommendations, identified by Docket ID number and title, by the following method:

• *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

Instructions: All submissions received must include the agency name, Docket ID number, and title for this *Federal Register* document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the internet at *http://www.regulations.gov* as they are received without change, including any personal identifiers or contact information.

DOD Clearance Officer: Ms. Angela James.

Requests for copies of the information collection proposal should be sent to Ms. James at *whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil.*

Dated: November 5, 2019.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2019–24435 Filed 11–7–19; 8:45 am]

BILLING CODE 5001–06–P

ELECTION ASSISTANCE COMMISSION

Board of Advisors; Notice of Meeting

AGENCY: U.S. Election Assistance Commission.

ACTION: Notice of Public Quarterly Conference Call for EAC Board of Advisors.

DATES: Monday, November 18, 2019, 3:00–4:00 p.m. (EDT).

ADDRESSES: EAC Board of Advisers Quarterly Conference Call.

To listen and monitor the event as an attendee:

1. Go to *https://zoom.us/j/9770268359?pwd=WW4wdnJMdkpJc25WZlFRZXF1UXJGUT09.*

BILLING CODE: 3720-58

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Florida Keys Coastal Storm Risk Management Study

AGENCY: U.S. Army Corps of Engineers, DoD.

ACTION: Notice of Intent.

SUMMARY: In accordance with all applicable laws and regulations, the U.S. Army Corps of Engineers (USACE) plans to prepare a Feasibility Study with an integrated Environmental Impact Statement (EIS) to evaluate environmental impacts from reasonable project alternatives to protect nearshore areas of Monroe County, Florida, from hurricanes and other storms with their associated wind, storm surge, and coastal flooding.

DATES: Scoping comments are due by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: The public is invited to submit NEPA scoping comments to Ms. Kathy Perdue, Department of the Army, U.S. Army Corps of Engineers, Norfolk District, Fort Norfolk, 803 Front St., Norfolk, VA 23510 or via email: *Kathy.S.Perdue@usace.army.mil.* The project title and the commenter's contact information should be included with submitted comments.

FOR FURTHER INFORMATION CONTACT: Ms. Kathy Perdue, (757) 201–7218.

SUPPLEMENTARY INFORMATION: Applicable laws and regulations are section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended, 42

U.S.C. 4321–4370, as implemented by the Council on Environmental Quality Regulations (40 CFR parts 1500–1508) and Section 106 of the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470f as implemented by Advisory Council on Historic Preservation regulations (36 CFR PART 800). The study authority is Public Law 84-71 of 1955 which authorizes examination and survey of the coastal and tidal areas of the eastern and southern United States, with particular reference to areas where severe damages have occurred from hurricane winds and tides.

The primary problem is the vulnerability of critical infrastructure: the U.S. Route 1 corridor, and local development and population centers, to storm damage from major storms. Coastal flooding is exacerbated by Relative Sea Level Change, which also amplifies storm surge due to higher waters. These trends are expected to continue and worsen without intervention. Measures being considered include structural, nonstructural and natural and nature-based features such as road stabilization, buyouts/elevations of buildings, dry and wet flood-proofing of buildings, early warning systems, mangrove restoration, and living shorelines.

USACE is the lead federal agency and Monroe County is the non-federal sponsor for the study effort. The Feasibility Study/EIS will address the primary problem of the increasing storm damage and flooding occurring and expected to increase in the area by studying all reasonable alternatives and determine the Federal interest in cost-sharing for those alternatives.

As required by Council on Environmental Quality's Principles, Requirements and Guidelines for Water and Land Related Resources Implementation Studies, all reasonable alternatives to the proposed Federal action that meet the purpose and need

will be considered in the EIS. The Study Area consists of all of the Florida Keys, a 123-mile-long chain of islands extending into the Gulf of Mexico to the southern tip of Florida. Several alternatives are currently being considered, including a no action alternative and various combinations of structural measures, nonstructural measures, and natural and nature based features for reducing risks and damages caused by coastal storms in the Study Area in Monroe County, Florida.

Scoping/Public Involvement. Two public NEPA scoping meetings were held in Monroe County. On September 11, 2019, from 5 p.m. - 7 p.m. at the Key Largo Board of County Commissioners Room, Murray Nelson Government Center, 102050 Overseas Hwy, Key Largo, FL 33037. A second public meeting was held on September 12, 2019, at the Key West Commission Room, Harvey Government Center, 1200 Truman Avenue, Key West, Florida 33040. Federal, state, and local agencies, Indian tribes, and the public are invited to provide scoping comments to identify issues and potentially significant effects to be considered in the analysis.

Diana M. Holland
Major General, U.S. Army
Commander, South Atlantic Division

THE CITIZEN KEY WEST

The Florida Keys Only Daily Newspaper, Est. 1876
PO Box 1800, Key West FL 33041
P: (305) 292-7777 ext. 219 F: (305) 295-8025
legals@keysnews.com

U.S. Army Corps of Engineers
803 Front Street
NORFOLK VA 23510

Account: 147044 Ticket: 320888

PUBLISHER'S AFFIDAVIT

STATE OF FLORIDA
COUNTY OF MONROE

Before the undersigned authority personally appeared Misty Graves, who on oath says that he or she is an employee of the Key West Citizen, a daily newspaper published in Key West, in Monroe County, Florida; that the attached copy of advertisment, being a legal notice in the matter of USACE was published in said newspaper in the issues of:

Thursday, November 14, 2019

Affiant further says that the Key West Citizen is a newspaper published in Key West, in said Monroe County, Florida and that the said newspapers has heretofore been continuously published in said Monroe County, Florida every day, and has been entered as periodicals matter at the post office in Key West, in said Monroe County, Florida, for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant further says that he or she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

(Signature of Affiant)

Affirmed and subscribed before me this 14th day of November 2019

(Notary Public Signature)

Suelynn Stamper
(Notary Public Printed Name) (Notary Seal)

My commission expires 6/27/22

Personally Known X Produced Identification ___

Type of Identification Produced _____

The U.S. Army Corps of Engineers (USACE) and non-Federal Sponsor, Monroe County are reinitiating the public comment period for the Florida Keys Coastal Storm Risk Management Feasibility Study, in accordance with the National Environmental Policy Act (NEPA). The USACE plans to prepare an Environmental Impact Statement (EIS) to evaluate environmental impacts from reasonable project alternatives, and to determine the potential for significant impacts.

The USACE also is publishing a Notice of Intent (NOI) to prepare an EIS in the Federal Register. Scoping will aid in determining the scope of the analysis and any potentially significant issues. This process is also to help identify alternatives and information needed to evaluate alternatives.

The purpose of the project is to reduce potential damages caused by coastal storms and improve human safety and coastal resiliency in the Florida Keys. The study area extends from the Key Largo, Florida vicinity to Key West, Florida. Potential measures being considered include, but are not limited to the following: structural alternatives (such as riprap revetments); non-structural alternatives (such as flood proofing, elevation of structures, acquisition of property and relocation, floodplain management, and flood warning systems); small scale structural measures on a per structure basis (such as ringwalls) around critical infrastructure; and Natural and Nature-Based Features (such as living shorelines, mangrove, coral and wetland plantings).

All comments previously submitted will be fully considered and addressed in the EIS. You may submit written comments on our interactive web-based tool at: https://arcg.is/1TyuTW, no later than December 10, 2019. Written comments also may be provided no later December 10, 2019, and should be addressed to: Ms. Kathy Perdue, U.S. Army Corps of Engineers, Norfolk District, 803 Front St., Norfolk, VA 23510, or Kathy.S.Perdue@usace.army.mil. If you have any questions, please contact Ms. Perdue at (757) 201-7218.
11/14/19 Key West Citizen

NOTARY PUBLIC STATE OF FLORIDA
Suelynn Stamper
COMMISSION # GG232802
EXPIRES: June 27, 2022
Bonded Thru Aaron Notary

APG
Media of East Carolina
Key West Citizen - Florida Free Press - Paradise
The Daily Reflector - The Daily Advance - The Rocky Mount Telegram
Bertie Ledger - Chowan Herald - Duplin Times - Farmville Enterprise - Perquimans Weekly
Standard Laconic - Tarboro Weekly - Times Leader - Williamston Enterprise
PO Box 1967 Greenville NC 27835 - (252) 329-9500

Date: August 28, 2019

- LEGAL AD PROOF -

Thank you for advertising with us! This is the proof of your ad scheduled to run on the dates indicated below. If changes are needed, please contact Dawn Kawzinsky by phone at (305) 292-7777 or email at legals@keysnews.com.

CUSTOMER INFORMATION

Account #:	147044
Company Name:	U.S. Army Corps of Engineers
Address:	803 Front Street NORFOLK VA 23510
Telephone:	(757) 201-7837
Email:	Kimberly.C.Koelsch@usace.army.mil

AD INFORMATION

Ad ID:	309127		
Run Dates:	08/30/19 to 09/02/19		
# of Inserts:	7	Account Rep:	Sue Stamper
# of Lines:	55	Phone #:	(305) 292-7777
Ad Class:	57	Email:	legals@keysnews.com
Total Cost:	$401.00		
Ordered By:			
Description:	Florida Keys Coastal		

Publications	Start Date	End Date	# of Insertions
Key West Citizen	08/30/19	09/02/19	3
KeysNews.com	08/30/19	09/02/19	4

Ad Proof

Florida Keys Coastal Storm Risk Management Feasibility Study Public Informational Meeting

The U.S. Army Corps of Engineers (USACE) and non-Federal Sponsor, Monroe County invite the public to attend two informational meetings on the Florida Keys Coastal Storm Risk Management Feasibility Study. The upcoming meetings are scheduled as follows:

Date: September 11, 2019
5pm – 7pm
Location: Key Largo BOCC Room
Murray Nelson Government Center
102050 Overseas Hwy
Key Largo, FL 33037

Date: September 12, 2019
5pm-7pm
Location: Key West Commission Room
Harvey Government Center
1200 Truman Avenue
Key West, FL 33040

The purpose of the meeting is to provide the public an opportunity to learn more about the project alternatives and provide comments on the alternatives and the feasibility study. The format of the meeting will be an informal open-house hosted by Monroe County, where the public can attend any time during the meeting hours and staff from the USACE and Monroe County will be available to answer questions. The USACE plans to prepare an Environmental Assessment to evaluate environmental impacts from reasonable project alternatives and to determine the potential for significant impacts.

The public is invited to submit comments at the meeting and/or submit comments by October 12, 2019 to Kimberly Koelsch, USACE, via email/mail/telephone at Kimberly.C.Koelsch@usace.army.mil ATTN: Kimberly Koelsch, Department of the Army, U.S. Army Corps of Engineers, Norfolk District, Fort Norfolk, 803 Front St., Norfolk, VA 23510. (757)201-7837.
08/30/19, 08/31/19, 09/02/19
Key West Citizen

Keys Weekly Newspapers
9709 Overseas Hwy.
Marathon FL, 33050
305.743.0844

Ad ID: 24577

Invoice

9709 Overseas Highway • Marathon, FL 33050 • 305-743-0844

Bill to:

Kimberly Koelsch
~~Deborah Santiago~~
U.S. Army Corps of Engineers
803 Front Street
Norfolk, VA 23510

Sold to: Account ID: 4862

Kimberly Koelsch
U.S. Army Corps of Engineers
803 Front Street
Norfolk, VA 23510

Please pay from this Invoice. Return stub with payment.	Rep ID: **AP**	Terms: **Net 7**

Description

Classification of Ad: 100 – Legal Notices
Text: Legal Notice - Public Meeting - NOTICE OF PUBLIC MEETIN...
Zone:

***Charges** from 8/29/2019 to 9/5/2019*

Date	Pub	Type	Description	Price	Discount	Applied	Due
8/29/19	MW	Ad	Legals: Legal Notice - Public	$100.00		-$100.00	$0.00
9/5/19	MW	Ad	Legals: Legal Notice - Public	$100.00		-$100.00	$0.00
				$200.00		-$200.00	$0.00

Please return this portion with your payment.

Advertising Invoice

Remit Payment to:
The Weekly Newspapers, Inc.
9709 Overseas Highway
Marathon, FL 33050
Phone: 305-743-0844
Fax:

Amount Due **$0.00**

Amount Enclosed _____

Issue Date: 8/29/2019

Advertising Invoice Date: 9/6/2019

Ad # 24577

Account # 4862

Deborah Santiago
U.S. Army Corps of Engineers
803 Front Street
Norfolk, VA 23510

Published Weekly
Marathon, Monroe County, Florida

PROOF OF PUBLICATION

STATE OF FLORIDA
COUNTY OF MONROE

Before the undersigned authority personally appeared **JASON KOLER** who on oath, says that he is **PUBLISHER of the WEEKLY NEWSPAPERS**, a weekly newspaper published in Marathon, in Monroe County, Florida: that the attached copy of advertisement was published in said newspaper in the issues of: (date(s) of publication)

August 29, 2019

Affiant further says that the said **WEEKLY NEWSPAPERS** is a newspaper published at Marathon, in said Monroe County, Florida, and that the said newspaper has heretofore been continuously published In said Monroe County, Florida, once each week (on Thursday) and has been qualified as a second class mail matter at the post office in Marathon, In Monroe County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement. The affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper(s) and that The Weekly Newspapers is in full compliance with Chapter 50 of the Florida State Statutes on Legal and Official Advertisements.

Sworn to and subscribed before me this 30 day of Aug, 2019.
(SEAL)

Charlotte Hruska
Notary

NOTICE OF PUBLIC MEETING
Florida Keys Coastal Storm Risk Management Feasibility Study Public Informational MeetingThe U.S. Army Corps of Engineers (USACE) and non-Federal Sponsor, Monroe County invite the public to attend two informational meetings on the Florida Keys Coastal Storm Risk Management Feasibility Study. The upcoming meetings are scheduled as follows:
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Publish:
August 29 and September 5, 2019
The Weekly Newspapers

NOTARY PUBLIC STATE OF FLORIDA
CHARLOTTE HRUSKA
MY COMMISSION # GG 221835
EXPIRES: September 1, 2022
Bonded Thru Notary Public Underwriters

Published Weekly
Marathon, Monroe County, Florida

PROOF OF PUBLICATION

STATE OF FLORIDA
COUNTY OF MONROE

Before the undersigned authority personally appeared **JASON KOLER** who on oath, says that he is **PUBLISHER of the WEEKLY NEWSPAPERS**, a weekly newspaper published in Marathon, in Monroe County, Florida: that the attached copy of advertisement was published in said newspaper in the issues of: (date(s) of publication)

September 5, 2019

Affiant further says that the said **WEEKLY NEWSPAPERS** is a newspaper published at Marathon, in said Monroe County, Florida, and that the said newspaper has heretofore been continuously published In said Monroe County, Florida, once each week (on Thursday) and has been qualified as a second class mail matter at the post office in Marathon, In Monroe County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement. The affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper(s) and that The Weekly Newspapers is in full compliance with Chapter 50 of the Florida State Statutes on Legal and Official Advertisements.

Sworn to and subscribed before me this 6th day of Sept, 2019.
(SEAL)

Charlotte Hruska
Notary

NOTICE OF PUBLIC MEETING
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Publish:
August 29 and September 5, 2019
The Weekly Newspapers

CHARLOTTE HRUSKA
MY COMMISSION # GG 221835
EXPIRES: September 1, 2022
Bonded Thru Notary Public Underwriters

KEY WEST
THE CITIZEN
The Florida Keys Only Daily Newspaper, Est. 1876
PO Box 1800, Key West FL 33041
P: (305) 292-7777 ext. 219 F: (305) 295-8025
legals@keysnews.com

U.S. Army Corps of Engineers
803 Front Street
NORFOLK VA 23510

Account: 147044 Ticket: 309127

PUBLISHER'S AFFIDAVIT

STATE OF FLORIDA
COUNTY OF MONROE

Before the undersigned authority personally appeared Misty Graves, who on oath says that he or she is an employee of the Key West Citizen, a daily newspaper published in Key West in Monroe County, Florida; that the attached copy of advertisment, being a legal notice in the matter of Florida Keys Coastal was published in said newspaper in the issues of:

Friday, August 30, 2019
Sunday, September 1, 2019
Monday, September 2, 2019

Affiant further says that the Key West Citizen is a newspaper published in Key West, in said Monroe County, Florida and that the said newspapers has heretofore been continuously published in said Monroe County, Florida every day, and has been entered as periodicals matter at the post office in Key West, in said Monroe County, Florida, for a period of 1 year next preceding the first publication of the attached copy of advertisement; and affiant further says that he or she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

(Signature of Affiant)

Affirmed and subscribed before me this 3rd day of September 2019

(Notary Public Signature)

Suelynn Stamper
(Notary Public Printed Name)

(Notary Seal)

My commission expires 6/27/22

Personally Known X Produced Identification ___

Type of Identification Produced _____

Florida Keys Coastal Storm Risk Management Feasibility Study Public Informational Meeting

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08/30/19, 08/31/19, 09/02/19
Key West Citizen

NOTARY PUBLIC STATE OF FLORIDA
Suelynn Stamper
COMMISSION # GG232802
EXPIRES: June 27, 2022
Bonded Thru Aaron Notary

Florida Keys Public Scoping Comment Record

Date	Name	Organization	Comments	Responses
12/4/2018	DA Aldridge	self	1. Make this an EIS not an EA 2. So many of the future impacts are socioeconomic in natiure and need to be thoroughly analyzed 3. No matter if it is a structure or a natural barrier, the results will directly affect those on the land.	We concur; this is being reviewed as an EIS, with potentially signficant effects on socioeconomics and land use. This is discussed in Chapter 8 of the Draft EIS.
12/4/2018	Dottie Moses	self	1. US1 is a federal/state scenic highway spo please keep that in mond and don't build large ugly structures. 2. ACOE permits coastal development in areas that they shouldn't. 3. Even when a shoreline conservation easement is required no one enforces it when it is removed. 4. Please protect and rehabilitate sea turtle nesting beaches. 5. Our waters are Outstanding Florida Waters and we have water quality concerns that need to be considered. 6. The Sanctuary waters and resources need to be protected.	We concur. Aesthetics were taken into account; please Section 8.18. Formal consultation with USFWS is ongoing for sea turtles. Please see Section 8.14 of the report, and the Biological Assessment in the Environmental Appendix, Appendix D.
12/3/2018	Shellie Kruegar	self	1. No bulkheads, No shoreline hardening 2. Would like to encourage you focus on native flood control and storm surge modalities such as mangroves, coral reef, and seagrass	We considered many alternatives; riprap revetment was the only economically justifiable means of bank stabilization. Please see Chapters 6-7.
12/3/2018	Ray Henderson	self	1. South Roosevelt Boulevard Key West is State Road. Floods with rain water. No drains and State plans to pump water into the ground. When done, will that be a factor to consider? 2. Key West water comes from the Mainland. Will the water be safe? 3. Most of the Key West electric comes from the mainland. Will the power be secure in hurricanes and sea rise?	The authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address rainfall and sea level rise that occur regularly or outside of significant storm events such as tropical storms and hurricanes. The study did not address power infrastructure but does include pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan.

12/12/2018	Dottie Moses	self	I attended the Army Corp scoping meeting in Key Largo and wanted to share the below newspaper article. The county just finished a road improvement project in this subdivision of Sexton Cove which included improved drainage and yet salt water intrusion is still an issue for the sewer system. Does your study include impacts to utilities?	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan.
12/10/2018	Pat Biagi	self	I live in the Coco Plum area of Marathon, Florida. My home is located on an avenue that is not fully developed, actually my house my house is the only one on my street. In the last two years it has become of increased concern that the property across the driveway from my home is flooding and subsequently allowing flood waters to intrude onto my property. The area surrounding my property is low lying and I believe has been designated as wet lands. I fully believe that the flooding is the result of erosion of the canal wall on the opposite side of the property which floods. I read in our local page that you have requested anyone with concerns to bring them to your attention. Because the property that is flooding is in designated wet lands I don't expect that any homes will be built on the property and the canal erosion issue will not be resolved with either stone or concrete seawalls by the owners or, in this case, perhaps the State of Florida, to address this issue. I am retired and a widow. I cannot afford the thousands of dollars to lift my foundation to a higher level. I can put fill on my yard but that will not solve the problem as the water will just continue to intrude over the slab under my home. The house is elevated to 13 feet above ground level but I do have storage under the house as well as parking for my automobile. Please give consideration of perhaps reinforcing the canals that are suffering erosion as I know that will continue until/unless something is done. Any assistance that your office can provide would be greatly appreciated.	Canal improvements were considered as a measure, but were screened out because 1) Coastal engineers have established that there would not be a measurable reduction in storm surge or wave action during a significant coastal storm event gained by improving these small canals. 2) If there is not a measurable reduction in the effects of coastal storms that would meet the study objective of reducing damage in the study area, there would be no way to quantify an economic benefit to justify the cost of improvements to the canals. Please see Chapter 6.

12/6/2018	Jamie Higgins	EPA	See letter. Summary of EPA comments: Ljmit potential affects on wetlands, water quality, groundwater and drinking water, coral reefs, Federal and State parks, transportation infrastructure, noise, air quality, environmental justice, recreation, socioeconomic considerations, and green infrastructure.	Wetland and other aquatic and biological resource impacts were reduced during the study process, and avioded to the extent practicable. There are potentially significant effects on socioeconimics and environmental justice. Please see Chapters 8 and 9.
1/8/2019	Fritz Wettstein	Florida Fish and Wildlife Conservation Commission/Office of Conservation Planning Services	Potentially affected resources from the proposed projects include mangroves, living shorelines, coral reefs, submerged aquatic vegetation, wetlands, managed or protected areas within the project area, and all fish and wildlife, including species federally or state-listed as endangered or threatened, that depend on these habitats found in and near the project. Consideration of these resources during alternative development and examination is critical.FWC staff is available to help identify potentially affected fish and wildlife resources related to alternative management measures and is interested in reviewing project plans as they become available. FWC staff has consulted extensively with the USACE about impacts to fish and wildlife resources during past projects and we would like to review the proposed projects as plans are refined so that we may be involved in conservation measures for listed species or technical assistance regarding habitat for fish and wildlife species.	All aquatic and biological resoruce impacts were avoided and minimzed to the extent practicable. Federal and state spceies and wildlife were considered. We appreciate your agency's comments and aid in identifying effects. Please see Chapter 8 of the report.
9/11/2019	Emilie Stewart	Stillwright Point Subdivision	Stillwright Point, mm105.5 Bayside. We experience tidal flooding as well as storm surge flooding as deep as 3 ft cutting off 215 houses from US 1 Access. As well as the obvious problems, we have a vacuum sewer system. When flooded, salt water enters the sewer system. This causes a shut down of the main plant until the source of the salt water can be located. This is a ripple effect because the plant is shut down for all the Upper Keys. Thus is an infrastructure problem.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.

9/11/2019	Andy Sikora	Stillwright Point	Stillwright Point , mm105.5 Bayside, has flooding over the road and through the mangroves. This makes accessibility near impossible and overflows into the sewer system. Limited Barrier Walls along mangroves would greatly reduce flooding. Raising road to raise sewer top of holding tanks would solve sewer in Key Largo shutting down due to saltwater intrusion.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/11/2019	Kim Sikora	Stillwright Point	Stillwright Point , mm105.5 Bayside, "there is considerable concern over flooding in Still Wright Point neighborhood. With past flood waters and king tides - the neighborhood is often under 2+ feet of stormwater. This is affecting the infrastructure of the sewer systems - which failed as recently as last week (1st week of September 2019). This is also affecting property values and I would request an analysis of the economic impact to residential neighborhoods that are off US 1. I believe the Army Corps may need to propose projects in these areas too. This issue, especially with the sewer failure is escalating and needs to be addressed.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/11/2019	Rick Darden	Stillwright Point	King Tide and Storm Surge Flooding in Stillwright Point (mm 105.5, Bayside) makes roads unusable and causes problems with the Vacuum Sewer systems, causes damage to personal property and has caused a decline in our property values. Road needs to be raised 12-18 inches.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.

9/12/2019	John Schwarz	Duck Key Property Owners Association	I represent the Duck Key Property Owners' Association as a Board director. Duck Key is an island in the Florida Keys chain, at MM 61 of the Overseas Highway. It is roughly a square mile of low lying land. It was developed in the 1950-60's, including the cutting of concentric canals to allow water access from the interior of the island. Currently, there are just under 500 homes built on the Island. The majority have water frontage on the Ocean or along one of the interior canals. 70 of these home are directly facing the Atlantic Ocean. The Island has a breakwater running along the east and south shore exposed to the Atlantic Ocean. The breakwater was originally created by the cutting of a canal along the southern and eastern edge of the Island, with the spoils from the dredging being placed on the waterfront bank of the canal. The breakwater was strengthened in 2000-2002 following the devastation caused by hurricane Georges. Additional large coral boulders were placed on the waterfront bank, and the anchoring of the boulders using stainless rods that were sunk into the underlying caprock. The breakwater has been a very effective barrier to waves and debris being flung by ocean surges. Unfortunately, Irma caused significant damage to the breakwater. Several areas of it were breached as the waves broke the stainless rods holding the breakwater boulders down and sucked the boulders into the ocean. This can be clearly seen on the Google aerial photos of the island that were taken shortly after Irma. We estimate that Irma caused $15 million of damage just to the 70 water front properties alone. But this damage was greatly mitigated by the breakwater. It would have been much worse if the waves were able to attack the frontage homes with no barrier, as was evident on the nearby Grassy Key and in Marathon. We would like to ask the ACE to consider including the repair, and perhaps further strengthening, of the breakwater in the coastal storm management programs. Please let us know how we might engage with the ACE or the County to promote and enable the repair action.	Jetties and breakwaters were not included in the tentatively selected plan for this study because the analysis concluded that they would not reduce inundation to structures, which is how the benefit in our economic benefit to cost ratio (BCR) is established per USACE guidance. In addition, the high cost of the environmental mitgation that would be required for the construction/rehab of most breakwaters in the Keys further drives down that BCR. The nonstructural measures that were recommended in the tentatively selected plan are much more effective methods of reducing damage to homes and other structures that are at risk to damage by coastal storms in the Keys.

9/12/2019	Janice Kay Lee	self	My home is 55 North Blackwater Lane, Stillwright Point, Key Largo, FL 33037 Stillwright Point FLOODS! No residents here are spared the results of flooding several times through the year. Some streets are worse than others & impassable at times of high tide, high winds & during storm serge. This flooding totally Undermines Stillwright Points infrastructure & that of the Upper Keys. Urgent attention must be given to this eco-sensitive area!? thank you for the work you are doing in this regard.	The authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot include general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan as they were not economically justified and in the case of walls, were not feasible to prevent the high level of surge experienced in the Keys as there is not sufficient high ground to tie sea walls into for inundation to be prevented.
9/16/2019	Mary K. Magrath	self	The Salt water flooding in our neighborhood of Stillwright Point has gotten worse and much more frequent. We have lived here for 25 years and very rarely did the flooding happen. Now it is multiple times a year and it lasts for weeks at a time. It is not only damaging and inconvenient but is harming the infrastructure of Monroe County. Our Sewer Pump Systems Stations are frequently inundated by so much salt water that it quits working. Employees are submerged in man holes under salt water to find the leaks. Monroe County vehicles of every kind have to drive in high water to pickup everything from our garage to having our mail delivered. County vehicles have broken down from flooding to bring us our needed services. The water is not coming from over our sea walls, it's coming from our streets sinking and overflow from the Mangroves. Raising our streets is imperative. Mary added a photo of severe flooding	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/11/2019	CJ Ferguson	self	Severe flooding. Causes sewer to close, which, in turn, affects the rest of the upper keys.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.

9/11/2019	Dottie Moses	self	An existing breakwater that could use re- fortification Ms. Moses indicated a location at mm 95.	Breakwaters were considered but screened out, due to high cost and the fact that a revetment where needed could accomplish the same purpose. Please see Section 6.3.
9/11/2019	Dottie Moses	self	at MM 110 oceanside on the 18 mile stretch there is an opportunity to establish mangrove and nature based features along an exposed section of US 1	The six most vulnerable sections of U.S. Route 1 were chosen, where the road is less than 100 feet from the bank. Please see Chapters 6 & 7 for formulation of alternatives.
9/15/2019	Bill Marlow	self	During Hurricane Dorian our street flooded causing the sewer system to shut down! Additionally, the resulting flooding blocked engress and ingress of emergency vehicles. (at mm105)	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/15/2019	PAMELA A SHOCKEY	self	Whenever there are heavy rains, tropical storms or high tides, the streets in Stilwright Point/ Paradise Point flood. Not only does this make it difficult to drive in and out of our neighborhood, it damages the streets and even worse floods the sewer system. The flooding in the streets and sewer lasts for days and days. The sewer system sucks water in potentailly causing widespread damage to the system. During the last super King Tides and raised water from Hurricane Dorian, there was close to 2 feet of standing salt water in our area when the workers went down in to the manholes. Recently, sewer workers were again in our area looking for a leak in the system and the main plant had to be shut down to avoid further damage from the salt water. Although there will be an expense associated from raising the streets in our neighborhood, it would seem that it would be less than having to replace miles of damaged sewer pipes and plant processing equipment. Ignoring the continued salt water flooding of our area would definitely be a "penny wise and dollar foolish" approach. Thank you for considering my concerns.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.

9/12/2019	Janice Darden	self	King Tide flood Dorian in Stillwright Pt shutdown sewers Upper Keys (indicated mm 105)	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan.
9/15/2019	Wendy Cahill	self	Our Key Largo, FL, Monroe County has not properly maintained the roads to address not only the rising of seawater but also the settling of our streets. This issue is most severe undeveloped properties as no fill has been added overtime. Results: sea water leeks onto our streets causing damage to our infrastructure, personal property, and property values.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/12/2019	Carl Hansen	self	Our street floods in front of my house just with a rain storm, the eternal puddle. When King tides are here then we have a big section of salt water at my house and a few others that we have to drive the cars through just getting salt water in the worst spots, then corrosion to the body, wheels, brakes... I don't understand when they put the sewers in they just didn't raise it then for free instead of hauling all the fill out and giving me the eternal puddle. Terrible planning and waste of taxpayer money	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.

9/18/2019	Anonymous	self	The streets are sinking, as is all the land around my house which I have re-filled with gravel every 6 years. Not sure if the sewer construction lowered the road or not, but bottom line is the road needs to be raised. During king tides, combined with winds from the west, up to a foot of water accumulates on N Blackwater Lane, Key Largo. This has impacted the function of the sewer system, requiring repairs. This flooding strands residents of our community for days at a time, unless they wan to ruin their vehicles by driving through salt water. Please place our neighborhood on the list to have this issue remediated.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/16/2019	Peter Frezza	self	Please consider Shoreline stabilization along Route 1 on lower Matecumbe key a priority. This is likely the most vulnerable section of Route 1 through the keys and experienced asphalt washout and damaged during Irma. Potential future damage could limit access during times of emergency.	We considerd shoreline stabilization at that location; Sea Oats Beach in particular. However, we eliminated our proposal there because FDOT is already going to construct bank stabilization at that same location. Please see Chapters 6 & 7.
9/19/2019	Anonymous	self	Severe flooding. Causes sewer to close, which, in turn, affects the rest of the upper keys.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan.
9/19/2019	Anonymous	self	We have significant flooding in Stillwright Point during King Tides as well as heavy rain. The saltwater comes up through the roads and over some sea walls. It inundates the sewer system and causes problems for emergency services.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.

9/19/2019	Anonymous	self	During Hurricane Dorian our street flooded casuing the sewer system to shut down! Additionally, the resulting flooding blocked engress and ingress of emergency vehicles.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/19/2019	Anonymous	self	North Blackwater Lane, Stillwright Point, floods as much as 2.5 feet during King Tide as well as storm surge. Aside from usual problems brought on with salt water flooding, the Upper Keys have a vacuum sewer system. The system has MANY problems due to being under salt water for days and days. Last week, the system was sucking salt water I to the lines and the main plant had to be briefly shut down while the leak was hunted in Stillwright Point. The entire Upper Keys is impacted when this happens repeatedly in Stillwright. This is a huge infrastructure problem when our sewers don't function due to salt water flooding.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/19/2019	Anonymous	self	Placing a Ring wall around critical facilities has a secondary impact of forcing water from surges to migrate to surrounding areas. In Key West, homes that have a block wall around the perimeter forced water that would have gone onto that property to move onto the neighbors' yards causing them to have flooding on their property .	Ringwalls were considered; however they were screened out in favor of wet- and dry-floodproofing. Please see Chapters 6 & 7.
9/19/2019	Anonymous		Placing a ringwall around critical infrastructure facilities has a secondary impact of forcing water from surges to migrate to surrounding areas. In Key West, homes that have a block wall around the perimeter forced water that would have gone onto that property to move onto the neighbors' yards, causing them to have flooding on their property.	Ringwalls were considered; however they were screened out in favor of wet- and dry-floodproofing. Please see Chapters 6 & 7.

9/21/2019	Anonymous		The salt water intrusion and flooding in Stillwright Point has gotten worse and much more frequent. My parents lived here since the 70s and I have lived here since the 90s and very rarely did the flooding happen. Now it is many times a year and it lasts for weeks at a time. It is not only damaging and inconvenient but is harming the infrastructure of Monroe County. Our sewer pump systems stations are frequently inundated by so much salt water that it quits working. Employees are submerged in man holes under salt water to find the leaks. Monroe County vehicles of every kind have to drive in high water to pickup everything from our garage to having our mail delivered. County vehicles have broken down from flooding to bring us our needed services. The water is not coming from over our sea walls, it's coming from our streets sinking and overflow from the mangroves. Raising our streets is imperative.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
9/23/2019	Anonymous	self	Although we have only lived in Stillwright Point for almost 7 years just in that time we have seen a significant increase in salt water flooding on our streets. Not just at king tides but more frequently now on regular tidal cycles and with a bit of wind in the wrong direction our streets are flooded. We frequently have to drive through several inches of salt water causing damage to cars and bicycles. Not to speak of the many county vehicles which much suffer the same problems. Our roads are just too low and should have been raised back when sewer system was installed. Now is the time to act!!	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
10/1/2019	Anonymous		At a future date, Harry Harris Park in Tavernier should be reviewed to determine if should be "abandoned" and rededicated and "harden" to providing [sic] a natural barrier for the homes east of the Park.	The Study does not propose to take public parks for bank stabilization, other than a small section of Long Key State Park, that was deemed necessary to protect U.S. Route 1.
10/11/2019	Anonymous		Please be aware that the proposed activities either cross, are adjacent to, or are on the FDOT ROW. Please note that any work proposed on FDOT ROW may require a permit and may be required prior to work beginning. Coordination with FDOT may be necessary.	We are aware of FDOT's easements. FDOT is a cooperating agnecy in this study. We have coordinated closely with FDOT to identify the locations of their easements as well as areas where they are planning structures.

10/12/2019	Anonymous	self	I agree with Gary We have an opportunity for improvement that would be relatively inexpensive and serve to protect approximately 100 homes at MM 95. The existing jetty has been decimated by storms and could be repaired, restored and improved for less than $200K (The homeowners already have an estimate from a local contractor for $85K (not including the air curtain, permits and engineering). With the restoration of the jetty that would eliminate the need for 2 air curtains and the homeowners are willing to maintain the 1 necessary air curtain with no further cost to the county. We are shovel ready! Our project can be a feather in the programs cap quickly and cheaply.holly	Jetties and breakwaters were not included in the tentatively selected plan for this study because the analysis concluded that they would not reduce inundation to structures, which is how the benefit in our economic benefit to cost ratio (BCR) is established per USACE guidance. In addition, the high cost of the environmental mitgation that would be required for the construction/rehab of most jetties and breakwaters in the Keys further drives down that BCR. The nonstructural measures that were recommended in the tentatively selected plan are much more cost effective methods of reducing damage to homes and other structures that are at risk to damage by coastal storms in the Keys. It is also important to note that the authority that this study is being completed under does not include navigation or environmental restoration purposes.
10/14/2019	Anonymous		The Tavernier Ocean Shores community located on mm 92.4 Ocean side has an existing jetty (riprap) barrier that has been damaged by recent hurricanes. This jetty wall protected our TOS community for many years from direct wave action structural damage as well as by keeping the Sargasso seaweed racks from the Atlatnic Ocean passing through it and invading our canals and waterways. Boulders have fallen, opening holes on our rock barrier, making it porous, endangering navigation as well as marine life due to seaweed accumulating on the surface and decomposing in our waterways as is sinking to the bottom of our canals. Seaweed as it rots produces hydrogen sulfide gas that depletes the water from oxygen, producing fish kills. Restoring this barrier is a "green" effective solution to the water quality problem in our waterways. The jetty barrier efficiency has been proven for many years. If the jetty is restored by filling holes opened by the storms we can bring back our water qualityand avoid fish kills without burning fossil fuels. It is a maintenance and electricity free solution that should be considered. The property owners have recently obtained a proposal for the jetty restoration on July 2019, however the cost is too high for the property owners to bear on our own. The idea to restore the jetty, if government funds are made available that could help with the expenses, it is a proven passive restoration solution that will bring back all the marine life, including including sea turtles, lobsters, and nurse sharks that used to swim around our waterways. Jetty restoration would make our canals safe again in a short period of time, for people to swim and snorkel and enjoy the Florida Keys paradise once again. Please consider jetty restoration for Tavernier Ocean Shores.	Jetties and breakwaters were not included in the tentatively selected plan for this study because the analysis concluded that they would not reduce inundation to structures, which is how the benefit in our economic benefit to cost ratio (BCR) is established per USACE guidance. In addition, the high cost of the environmental mitgation that would be required for the construction/rehab of most jetties and breakwaters in the Keys further drives down that BCR. The nonstructural measures that were recommended in the tentatively selected plan are much more cost effective methods of reducing damage to homes and other structures that are at risk to damage by coastal storms in the Keys. It is also important to note that the authority that this study is being completed under does not include navigation or environmental restoration purposes.

10/21/2019	Anonymous		The salt water flooding of the Stillwright Point neighborhood has put the long term viability of our sewer system in jeopardy. No longer just a threat to transportation the salt water intrusion has mandated temporarily securing the system for repairs. This will only get worse until a permanent solution is found.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.
10/25/2019	Anonymous		The Salt water flooding in our neighborhood of Stillwright Point has gotten worse and much more frequent. The Salt water flooding in our neighborhood of Stillwright Point has gotten worse and much more frequent. Due to streets being submerged for days at a time, our vacuum sewers suck salt water into them. Last we had the flooding, the sewer workers were in Stillwright trying to locate the source of the leak and the main plant was shut down! The workers were in 2 feet of salt water in the manhole just down from my house. Stillwright's flooding, damages the infrastructure of the Upper Keys.	The study includes pump stations for potable and wastewater as critical infrastructure and those determined to be at risk to coastal storm surge will be floodproofed as part of the tentatively selected plan. However, it is important to note that the authority that this study is being completed under limits the solutions to those that address storm event flooding/surge. We incorporate sea level rise and rainfall into the analysis of surge, however we cannot address general sea level rise solutions in our recommended plan. The only solution that was economically justifed per USACE regulations for a study of this kind was revetment to prevent washout of U.S. 1 in areas vulnerable to wave damage and/or erosion. Road elevation and sea walls were not included in the tentatively selected plan.

12/10/2019	NOAA/National Marine Sanctuary		The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) and National Marine Fisheries Service (NMFS) have reviewed your scoping letter for the Florida Keys Coastal Storm Risk Management (CSRM) Feasibility Study dated November 8, 2019, stating the U.S. Army Corps of Engineers (USACE) plans to prepare an Environmental Impact Statement for this project and requests scoping comments. As you are aware, NOAA is a Cooperating Agency for this project and depending on the types of activities the USACE ultimately plans to undertake within the Florida Keys National Marine Sanctuary (FKNMS), permits or authorizations from ONMS may be required. In addition, USACE will likely need to conduct consultations under the Endangered Species Act (ESA), Magnuson-Stevens Fisheries Conservation and Management Act (MSA) Essential Fish Habitat (EFH) provisions, and Section 304(d) of the National Marine Sanctuaries Act (NMSA). NOAA is providing detailed scoping comments to the USACE via letter, per their request, and will likely be able to provide more project specific comments to the USACE following the site visits.	Thank you for your comments. We apprecaite your participation in the interagency site visits. We determined that all in-water structures could be moved upslope and out of the water; therefore, an EFH assessment was not needed. Likewise, we don't anticipate that permits will be required from FKNMS; however, this will be verified in the construction phase. Coordination with USFWS under ESA is ongoing.