

Supplemental Environmental Assessment

**Honeymoon Beach Restoration Project
FEMA-DR-4280-FL and FEMA-DR-4337
Florida Department of Environmental Protection
March 2020**



FEMA

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ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
CEQ	Council on Environmental Quality
CFR	<i>Code of Federal Regulations</i>
EA	Environmental Assessment
EO	Executive Order
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMSF	Florida Master Site File
FONSI	Finding of No Significant Impact
IPaC	Information for Planning and Consultation
JCP	Joint Coastal Permit
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
PA	Public Assistance
PBO	Programmatic Biological Opinion
PL	Public Law
SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Office
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

1.0 INTRODUCTION

Hurricane Hermine impacted Florida between August 31, 2016 and September 11, 2016, and Hurricane Irma impacted the state between September 4, 2017 and October 12, 2017. Both storms brought strong wave action and storm surge. President Obama signed a disaster declaration (FEMA-4280-DR-FL) on September 28, 2016, and President Trump signed a disaster declaration (FEMA-4337-DR-FL) on September 10, 2017, authorizing the Department of Homeland Security's Federal Emergency Management Agency (FEMA) to provide federal assistance to designated areas of Florida. This assistance was provided pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), and Public Law (PL) 93-288, as amended. Section 406 of the Stafford Act authorizes FEMA's Public Assistance (PA) Program to repair, restore, and replace state and local government and certain private nonprofit facilities damaged as a result of the event.

Pinellas County, Florida was designated in Hurricanes Hermine and Irma to receive federal assistance. The Florida Department of Environmental Protection (FDEP), has applied through the PA Program to receive funding to restore the eroded shoreline along Honeymoon Beach at Honeymoon Island State Park. The shoreline is an engineered and maintained beach previously authorized for nourishment and maintenance by the U.S. Army Corps of Engineers (USACE).

USACE prepared an Environmental Assessment for the Honeymoon Island Beach renourishment in May 2019 and issued a Finding of No Significant Impact (FONSI) on their proposed action. Any federal agency may adopt another federal or state agency's EA (40 CFR §1500.4(n), §1500.5(h), and §1506.3) providing the original document satisfies the agency's National Environmental Policy Act (NEPA) requirements. FEMA has adopted USACE's EA and has also provided supplemental information. The USACE EA is included as Appendix B of this document.

This draft Supplemental Environmental Assessment (SEA) has been conducted in accordance with NEPA, the President's Council on Environmental Quality regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508) and regulations adopted pursuant to Department of Homeland Security Directive 023-01, Rev 01, and FEMA Directive 108-1.

2.0 PURPOSE AND NEED

Starting in 2008, Honeymoon Beach has undergone two phases of beach restoration projects to combat heavy erosion along approximately 0.75 miles of shoreline. Phase I, completed in 2008, included the installation of one T-groin and placement of 150,000 cubic yards of hydraulically dredged sand along 2,500 linear feet of shoreline. Phase II, authorized by USACE in 2013, included the construction of three additional T-groins and the placement of 149,000 cubic yards of hydraulically dredged sand along 3,200 linear feet of shoreline. As a result of Hurricanes Hermine and Irma, the engineered shoreline experienced additional erosion. The Florida Department of Environmental Protection has identified the need to re-initiate Phase II to replace the sand lost by both hurricanes and restore the capacity of the shoreline to resist erosion and withstand future storm events. The proposed action will reduce the risk of storm-related impacts to life and property, restore viable habitat for sea turtles and shorebirds, and increase the area's recreational value.

3.0 ALTERNATIVES

Two alternatives have been considered in addressing the purpose and need of the beach renourishment project. Alternative 1 is the No Action Alternative, and Alternative 2 is the renourishment of the shoreline along Honeymoon Beach.

3.1 Alternative 1 – No Action Alternative

Under the No Action Alternative, the shore stabilization project would not be completed. Consequently, the area would not be protected from future storm events. Ongoing erosion would continue along the shoreline. Benefits to listed species and recreational values would not occur.

3.2 Alternative 2 – Construct the Beach Restoration Project–Preferred Alternative

Under Alternative 2, the beach renourishment project would proceed along 0.75 miles of Honeymoon Island using dredged material from Hurricane Pass. The applicant proposes to reinitiate the hydraulic dredging of 149,000 cubic yards of sand from a 34-acre area in Hurricane Pass and place the sand into a 17.3-acre beach nourishment area between FDEP Reference Monuments R 7.5 and R 9.5 (28.069104, -82.833735 to 28.060342, -82.827322). Of the 149,000 cubic yards of sand, 28,900 cubic yards will be replaced due to erosion from Hurricane Hermine, and 12,976 cubic yards will be replaced due to erosion from Hurricane Irma.

Additionally, the applicant proposes to dredge 73,000 cubic yards of sand from a recently formed 5.5-acre sand spit located in Hurricane Pass, and place the sand below the mean high water line of Honeymoon Beach in a 7.33-acre area to create a beach berm with a crest elevation of 4.5 North American Vertical Datum (NAVD).

The Alternative 2 dredge template would be designed to prevent impacts to seagrass beds located to the east of the sand spit borrow area. Under the Alternative 2 dredge template, the applicant proposes to remove sediment that is currently washing over the seagrass and leave a portion of the eastern sand spit to buffer the seagrass from secondary dredging impacts.

4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Honeymoon Island is a barrier island located off the west coast of Florida in the Gulf of Mexico. The island originally formed in 1921 when a major hurricane created a channel that separated one large barrier island into two – Honeymoon Island and Caladesi Island. In 1981, Honeymoon Island was designated as a Florida State Park. To the east, the island is separated from the mainland by Saint Joseph Sound. To the south, the island is bordered by Hurricane Pass, the channel that separates it from Caladesi Island. Fronting the Gulf of Mexico, the west side of the island is lined with over 4 miles of sandy beach. The beaches provide suitable habitat for threatened and endangered species including sea turtles and piping plover. The park's beaches and trails also make it a popular destination for swimming, fishing, hiking, and biking for the one million-plus visitors that frequent the island each year.

4.1 Potential Environmental Consequences

The potential environmental consequences and required measures and permits required as a result of Alternative 1 and 2 are summarized in Table 4.1.

Resource	Environmental Consequences	Environmental Protection Measures and Required Permits
<p>Floodplains See Section 4.2 for details</p>	<p>Updated – see USACE EA</p> <p>Alternative 1 – No impact. Risk to human life and improved property continues at current level</p> <p>Alternative 2 – Minor beneficial impact as the beach would reduce flood risk to adjacent property and preserve the floodplain for open space and recreational use.</p>	<p>Not applicable.</p>
<p>Coastal Resources</p>	<p>No Change – see USACE EA</p> <p>Alternative 1 – No impact</p> <p>Alternative 2 – Minor beneficial impact due to restoration of the sandy beach along the shoreline</p>	<p>Alternative 2 would require an FDEP Joint Coastal Permit (JCP), which would constitute consistency review under the state’s coastal zone management program. On April 6, 2018, the Florida Department of Environmental Protection authorized the proposed project under Permit Modification No. 0249602-010-JN/ Permit No. 0249602-006-JC, Variance No. 0249602-008-BV. This authorization included the CZMA consistency determination.</p> <p>A portion of the project is located within an Otherwise Protected Area (OPA): FL 86-P; Per 44 CFR § 206.347(a)(2) no further action is necessary.</p>
<p>Wetlands (Executive Order 11990) See Section 4.3 for details</p>	<p>Updated – see USACE EA</p> <p>Alternative 1 – No impact</p> <p>Alternative 2 – Short term minor impacts from construction. No long-term impacts.</p>	<p>Alternative 2 would proceed under FDEP Modification No. 0249602-010-JN for Joint Coastal Permit No. 0249602-006-JC, Variance No. 0249602-008-BV and under USACE Permit SAJ-2011-02369 (SP-JED). All conditions must be followed in each respective permit.</p>

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Environmental Justice (Executive Order 12898)	No Change– see USACE EA Alternative 1 and 2 – No impact	Not applicable.
Threatened and Endangered Species See Section 4.4 for details	Updated – see USACE EA Alternative 1 – No impact, loss of suitable habitat for listed species Alternative 2 - Beneficial effects due to increased habitat for sea turtles and shorebirds. Potential for incidental take during construction minimized by application of measures set forth in U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) Programmatic Biological Opinions (PBOs) with the USACE.	Under Alternative 2, the following measures would be implemented from the applicable PBOs: <ul style="list-style-type: none"> a) The applicant will comply with the following conditions from the USFWS Statewide Programmatic Biological Opinion for Sand Placement # 41910-2011-F-0170 issued to the U.S. Army Corps of Engineers on March 13, 2015: b) Beach-compatible fill shall be placed on the beach or in any associated dune system. Beach compatible fill must be sand that is similar to a native beach in the vicinity of the site that has not been affected by prior sand placement activity. The fill material must be similar in both coloration and grain size distribution to that native beach. Beach compatible fill is material that maintains the general character and functionality of the material occurring on the beach and in the adjacent dune and coastal system. Fill material shall comply with FDEP requirements pursuant to the Florida Administrative Code (FAC) subsection 62B-41.005(15). If a variance is requested from FDEP, the Service must be contacted to discuss whether the project falls outside of the SPBO. A Quality Control Plan shall be implemented pursuant to FAC Rule 62B-41.008(1)(k)4.b. c) Sand placement shall not occur during the period of peak sea turtle egg laying and egg hatching to reduce the possibility of sea turtle nest burial, crushing of eggs, or nest excavation. Sand placement projects in Pinellas County may occur during the sea turtle nesting season except on publicly owned conservation lands such as state parks and areas where such work is

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		<p>prohibited by the managing agency or under applicable local land use codes.</p> <p>d) All derelict concrete, metal, and coastal armoring geotextile material and other debris shall be removed from the beach to the maximum extent possible prior to any sand placement in accordance with the dates in b. If debris removal activities take place during shorebird breeding or peak sea turtle nesting season, the work shall be conducted during daylight hours only and shall not commence until completion of daily seabird, shorebird or marine turtle surveys each day.</p> <p>e) The beach profile template for the sand placement project shall be designed to mimic, the native beach berm elevation and beach slopes landward and seaward of the equilibrated berm crest.</p> <p>Beach profile may vary depending on location, shoreline dynamics, nature of the fill material, and other factors. If a native beach berm elevation is not possible, due to the beach width, impacts to nearshore hardbottom, or other considerations, the alternative template shall include features to minimize impacts to sea turtle nesting success and the potential for ponding and escarpment formation for that beach. For all high density green turtle nesting beaches, the formation of a dune, either through direct creation or natural accretion, will be included in the project design. Dunes and other construction features must be within the scope of the Congressionally-authorized project, if it is a civil works project, and constructible without impacting other resources.</p> <p>f) Predator-proof trash receptacles shall be installed and maintained during construction at all beach access points used for the project construction to minimize the potential for attracting</p>

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		<p>predators of sea turtles and beach mice (SPBO Appendix F).</p> <p>g) Daily early morning surveys for sea turtle nests shall be required and continue throughout the season as outlined in SPBO Tables 16 and 17 (Nesting Season Monitoring) if construction occurs during the nesting and hatching season. Any known nests recorded just prior to the beginning of Nesting Season Monitoring must be relocated if it will be impacted by the construction activity or marked and avoided if feasible.</p> <p>h) If nests are constructed in the area of anticipated sand placement, the eggs shall be relocated to minimize sea turtle nest burial, crushing of eggs, or nest excavation as outlined in below. If nests are laid on the dune outside of the immediate sand placement area, the applicant must coordinate with the Corps and the Service to discuss whether relocation or mark and avoidance is required. Any known nests recorded just prior to the beginning of Nesting Season Monitoring must be relocated if it will be impacted by the construction activity or marked and avoided if feasible.</p> <p>i. For sand placement projects in Pinellas County that occur during the period of sea turtle nest laying (see SPBO Tables 16 & 17), daily early morning (before 9 a.m.) surveys and egg relocation shall be conducted. If nests are laid in areas where they may be affected by construction activities, eggs shall be relocated per the requirements listed below.</p> <p>ii. Additionally for Pinellas County, nesting surveys shall be initiated 65 days prior to nourishment or dredged channel material placement activities or by the beginning of the nesting season</p>

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		<p>monitoring indicated in SPBO Tables 16 & 17 whichever is later. Nesting surveys shall continue through the end of nesting season monitoring, with egg relocation continuing only through the end of fill placement. If nests are laid in areas where they may be affected by construction activities, eggs shall be relocated per the requirements listed below:</p> <ul style="list-style-type: none"> • Nesting surveys and egg relocations will only be conducted by persons with prior experience and training in these activities and who are duly authorized to conduct such activities through a valid permit issued by FWC, pursuant to FAC 68E-1. Please contact FWC's Imperiled Species Management Section in Tequesta at mtp@myfwc.com for information on the permit holder in the project area. Relocation cannot begin until the Corps has a copy of the FWC permit authorizing relocation for construction purposes at that particular sand placement project. Nesting surveys shall be conducted daily between sunrise and 9 a.m. (this is for all time zones). • Only those nests that may be affected by sand placement activities will be relocated. Nest relocation shall not occur upon completion of the project. Nests requiring relocation shall be moved no later than 9 a.m. the morning following deposition to a nearby self-release beach site in a secure setting where artificial lighting will not interfere with hatchling orientation. Relocated nests shall not be placed in

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		<p>organized groupings. Relocated nests shall be randomly staggered along the length and width of the beach in settings that are not expected to experience daily inundation by high tides or known to routinely experience severe erosion and egg loss, predation, or be subject to artificial lighting. Nest relocations in association with construction activities shall cease when construction activities no longer threaten nests.</p> <ul style="list-style-type: none"> • Nests deposited within areas where construction activities have ceased or will not occur for 65 days or nests laid in the nourished berm prior to tilling shall be marked and left in situ unless other factors threaten the success of the nest. The turtle permit holder shall install an on-beach marker at the nest site and a secondary marker at a point as far landward as possible to assure that future location of the nest will be possible should the on-beach marker be lost. No activity will occur within this area nor will any activities occur that could result in impacts to the nest. Nest sites shall be inspected daily to assure nest markers remain in place and the nest has not been disturbed by the project activity. <p>i) Two surveys shall be conducted of all lighting visible from the beach placement area by the Applicant or Corps, using standard techniques for such a survey (SPBO Appendix C), in the year following construction. The first survey shall be conducted between May 1 and May 15 and a fill out FWS Sea Turtle Lighting Survey Form (SPBO Appendix D) and send electronically to seaturtle@fws.gov.</p>

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		<p>The second survey shall be conducted between July 15 and August 1. A summary report of the surveys, including any actions taken, shall be submitted to the Service by December 31 of the year in which surveys are conducted.</p> <p>After the annual report is completed, a meeting shall be set up with the Applicant, county or municipality, FWC, Corps, and the Service to discuss the survey report, as well as any documented sea turtle disorientations in or adjacent to the project area. If the project is completed during the nesting season and prior to May 1, the Corps may conduct the lighting surveys during the year of construction.</p> <p>j) Daily nesting surveys shall be conducted for two nesting seasons following construction in accordance with SPBO Table 18 and reported in accordance with SPBO Table 20 by the Corps or the Applicant if placed material still remains on the beach. Post construction year-one surveys shall record the number of nests, nesting success, reproductive success, disorientations, and lost nests due to erosion or inundation. Post construction year- two surveys shall only need to record nest numbers, nesting success, and disorientations (SPBO Table 20). This information will be used to periodically assess the cumulative effects of these projects on sea turtle nesting and hatchling production and monitor suitability of post construction beaches for nesting.</p> <p>k) Sand compaction shall be monitored in the area of sand placement immediately after completion of the project and prior to the dates in SPBO Table 19 for 3 subsequent years.</p> <p>If tilling is needed, the area shall be tilled to a depth of 36 inches. Each pass of the tilling equipment shall be overlapped to allow more</p>

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		<p>thorough and even tilling. All tilling activity shall be completed at least once prior to the nesting season. An electronic copy of the results of the compaction monitoring shall be submitted electronically to seaturtle@fws.gov prior to any tilling actions being taken or if a request not to till is made based on compaction results. The requirement for compaction monitoring can be eliminated if the decision is made to till regardless of post construction compaction levels. Additionally, out-year compaction monitoring and remediation are not required if placed material no longer remains on the dry beach.</p> <p>(NOTE: If tilling occurs during shorebird nesting season (February 15-August 31), shorebirds surveys prior to tilling are required per the Migratory Bird Treaty Act. See Appendix E for shorebird conditions recommended by FWC.</p> <ol style="list-style-type: none"> <li data-bbox="850 989 1373 1346">i. Compaction sampling stations shall be located at 500-foot intervals along the sand placement template. One station shall be at the seaward edge of the dune/bulkhead line (when material is placed in this area), and one station shall be midway between the dune line and the high water line (normal wrack line). <li data-bbox="850 1356 1373 1923">ii. At each station, the cone penetrometer shall be pushed to a depth of 6, 12, and 18 inches three times (three replicates at each depth). Material may be removed from the hole if necessary to ensure accurate readings of successive levels of sediment. The penetrometer may need to be reset between pushes, especially if sediment layering exists. Layers of highly compact material may lie over less compact layers. Replicates shall be located as close to each other as possible, without interacting with the previous hole

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		<p>or disturbed sediments. The three replicate compaction values for each depth shall be averaged to produce final values for each depth at each station. Reports will include all 18 values for each transect line, and the final six averaged compaction values.</p> <ul style="list-style-type: none"> iii. If the average value for any depth exceeds 500 pounds per square inch (psi) for any two or more adjacent stations, then that area shall be tilled immediately prior to the appropriate date listed in SPBO Table 19. iv. If values exceeding 500 psi are distributed throughout the project area but in no case do those values exist at two adjacent stations at the same depth, then consultation with the Service will be required to determine if tilling is required. If a few values exceeding 500 psi are present randomly within the project area, tilling will not be required. v. Tilling shall occur landward of the wrack line and avoid all vegetated areas 3 square feet or greater with a 3 square foot buffer around the vegetated areas. <p>1) Visual weekly surveys for escarpments along the project area shall be made immediately after completion of the sand placement and within 30 days prior to the start dates for Nesting Season Monitoring in SPBO Table 19 for 3 subsequent years if sand in the project area still remains on the dry beach. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet shall be leveled and the beach profile shall be reconfigured to minimize scarp formation by the dates listed in SPBO Table 19. Any escarpment removal shall be reported by location in the annual report. If the project is completed during</p>

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		<p>the early part of the sea turtle nesting and hatching season (March 1 through April 30), escarpments may be required to be leveled immediately, while protecting nests that have been relocated or left in place. If during weekly escarpment surveys, it is found that subsequent reformation of escarpments interferes with sea turtle nesting or that they exceed 18 inches in height for a distance of 100 feet during the nesting and hatching season, the Service shall be contacted immediately to determine the appropriate action to be taken. If it is determined by the Service or FWC that that escarpment leveling is required during the nesting or hatching season the Service, in coordination with the FWC, will provide a brief written authorization within 5 days that describes methods to be used to reduce the likelihood of impacting existing nests. An annual summary of escarpment surveys and actions taken shall be sent electronically to seaturtle@fws.gov. A summary is required even when no action has been taken (SPBO Table 3).</p> <p>m) Staging areas for construction equipment shall be located off the beach during early (before April 30) and late (after November 1) nesting season for Brevard through Broward counties (see table 14) and peak nesting season (May 1 through October 31) for the remaining counties. Nighttime storage of construction equipment not in use shall be off the beach to minimize disturbance to sea turtle nesting and hatching activities. In addition, all construction pipes placed on the beach shall be located as far landward as possible without compromising the integrity of the dune system. Pipes placed parallel to the dune shall be 5 to 10 feet away from the toe of the dune if the width of the beach allows. Temporary storage of pipes shall be off the beach to the maximum extent possible. If the pipes are</p>

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		<p>stored on the beach, they shall be placed in a manner that will minimize the impact to nesting habitat and shall not compromise the integrity of the dune systems. If the pipes placed parallel to the dune cannot be placed between 5 to 10 feet away from the toe of the dune during nesting and hatching season, the applicant must notify the Corps, as this represents adverse effects not addressed in this SPBO. If it will be necessary to extend construction pipes past a known shorebird nesting site or over-wintering area for piping plovers, then whenever possible those pipes shall be placed landward of the site before birds are active in that area. No pipe or sand shall be placed seaward of a shorebird nesting site during the shorebird nesting season.</p> <p>n) Direct lighting of the beach and nearshore waters shall be limited to the immediate construction area during early (before April 30) and late (after November 1) nesting season for Brevard through Broward counties (see Table 14) and peak nesting season (May 1 through October 31) for the remaining counties, and shall comply with safety requirements. A light management plan for the dredge and the work site shall be submitted for approval by the Service and FWC prior to the pre-construction meeting. In accordance with this plan, lighting on all equipment shall be minimized through reduction, shielding, lowering, and appropriate placement to avoid excessive illumination of the water's surface and nesting beach while meeting all Coast Guard, Corps EM 385-1- 1, and OSHA requirements. Light intensity of lighting equipment shall be reduced to the minimum standard required by OSHA for General Construction areas, in order not to misdirect sea turtles. Shields shall be affixed to the light housing on dredge and land- based lights and be large enough to block light from all</p>

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		<p>lamps from being transmitted outside the construction area or to the adjacent sea turtle nesting beach in line-of-sight of the dredge (SPBO Figure 15).</p> <p>o) During peak nesting season (May 1 through October 31) the Applicant shall not extend the beach fill more than 500 feet (or other agreed upon length) along the shoreline between dusk and dawn of the following day until the daily nesting survey has been completed and the beach cleared for fill advancement. An exception to this may occur if there is a permitted sea turtle surveyor present on-site to ensure no nesting and hatching sea turtles are present within the extended work area. If the 500 feet is not feasible for the project, an agreed upon distance will be decided on during the preconstruction meeting. Once the beach has been cleared and the necessary nest relocations have been completed, the Applicant will be allowed to proceed with the placement of fill during daylight hours until dusk at which time the 500-foot length (or other agreed upon length) limitation shall apply. If any nesting turtles are sighted on the beach within the immediate construction area, activities shall cease immediately until the turtle has returned to the water and the sea turtle permit holder responsible for nest monitoring has relocated the nest.</p> <p>p) All vegetation planting shall be designed and conducted to minimize impacts to sea turtles and beach mice. Dune vegetation planting may occur during the sea turtle nesting season under the following conditions.</p> <p>i. Daily early morning sea turtle nesting surveys (before 9 a.m.) shall be conducted during the Nest Laying period for all counties in Florida where sea turtle nesting occurs (see Tables</p>

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		<p>16 and 17). Nesting surveys shall only be conducted by personnel with prior experience and training in nesting surveys. Surveyors shall have a valid FWC permit. Nesting surveys shall be conducted daily between sunrise and 9 a.m. (all times). No dune planting activity shall occur until after the daily turtle survey and nest conservation and protection efforts have been completed. Hatching and emerging success monitoring will involve checking nests beyond the completion date of the daily early morning nesting surveys;</p> <p>ii. Any nests deposited in the dune planting area not requiring relocation for conservation purposes shall be left in place. The turtle permit holder shall install an on-beach marker at the nest site and a secondary marker at a point as far landward as possible to assure that future location of the nest will be possible should the on- beach marker be lost. A series of stakes and highly visible survey ribbon or string shall be installed to establish a 3-foot radius around the nest. No planting or other activity shall occur within this area nor will any activities be allowed that could result in impacts to the nest. Nest sites shall be inspected daily to assure nest markers remain in place and the nest has not been disturbed by the planting activity;</p> <p>iii. If a nest is disturbed or uncovered during planting activity, the Corps, or the Applicant shall cease all work and immediately contact the project turtle permit</p>

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		<p>holder. If a nest(s) cannot be safely avoided during planting, all activity within 10 feet of a nest shall be delayed until hatching and emerging success monitoring of the nest is completed;</p> <ul style="list-style-type: none"> iv. All dune planting activities shall be conducted by hand and only during daylight hours; v. All dune vegetation shall consist of coastal dune species native to the local area; (i.e., native to coastal dunes in the respective county and grown from plant stock from that region of Florida). Vegetation shall be planted with an appropriate amount of fertilizer and antidesiccant material for the plant size; vi. No use of heavy equipment shall occur on the dunes or seaward for planting purposes. A lightweight (all-terrain type) vehicle, with tire pressures of 10 psi or less may be used for this purpose; and vii. Irrigation equipment, if needed, shall be authorized under a FDEP permit. <p>q) A report with the information specified in SPBO Tables 20 and 21 shall be submitted to the Service electronically (seaturtle@fws.gov) by December 31 after completion of construction.</p> <p>r) In the event a sea turtle nest is excavated during construction activities, the project turtle permit holder responsible for egg relocation for the project shall be notified immediately so the eggs can be moved to a suitable relocation site. Upon locating a dead or injured sea turtle adult, hatchling, egg, or beach mouse that may have been harmed or destroyed as a direct or indirect result of the project, the applicant shall be responsible for notifying FWC Wildlife Alert at 1-888-404-FWCC</p>

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		<p>(3922) and the appropriate Service Field Office immediately (Table 3). Care shall be taken in handling injured sea turtles, eggs or beach mice to ensure effective treatment or disposition, and in handling dead specimens to preserve biological materials in the best possible state for later analysis.</p> <p>s) Manatees</p> <ul style="list-style-type: none"> i. Shall follow the 2011 Standard Manatee In-water Construction Conditions ii. Barges shall install mooring bumpers that provide a minimum 4-foot standoff distance under maximum compression between other moored barges and large vessels, when in the vicinity of inlets, river mouths, and large estuaries where manatees are known to congregate. iii. Pipelines shall be positioned such that they do not restrict manatee movement to the maximum extent possible. Plastic pipelines shall be weighted or floated. Pipelines transporting dredged material within the vicinity of inlets, river mouths, and large estuaries where manatees are known to congregate shall be weighted or secured to the bottom substrate as necessary to prevent movement of the pipeline and to prevent manatee entrapment or crushing. iv. In the event that such positioning has the potential to impact submerged aquatic vegetation (SAV) or nearshore hardbottom, the pipeline may be elevated or secured to the bottom substrate to minimize impacts to SAV. <p>t) Migratory Birds: Applicant shall follow the latest Florida Fish and Wildlife Conservation Commission (FWC) standard guidelines to protect against</p>

Resource	Environmental Consequences	Environmental Protection Measures and Required Permits
		<p>impacts to nesting shorebirds during implementation of this project during periods from February 15 to August 31.</p> <p>2. The applicant will comply with the following additional conditions from the USFWS Programmatic Piping Plover Biological Opinion #04EF1000-2013-F-0124 dated May 22, 2013:</p> <p>a) The Corps or the applicant must provide the following information to the Service Field Supervisor of the appropriate Field Office at least 10 business days prior to the commencement of work:</p> <ul style="list-style-type: none"> i. Project location (include FDEP Range Monuments and latitude and longitude coordinates); ii. Project description (include linear feet of beach, actual fill template, access points, and borrow areas); iii. Date of commencement and anticipated duration of construction; and iv. Names and qualifications of personnel involved in piping plover surveys. <p>b) Prior to construction, the applicant shall delineate preferred piping plover habitat (intertidal portions of ocean beaches, ephemeral pools, washover areas, wrack lines) adjacent to or outside of the project footprint that might be impacted by construction activities. Obvious identifiers shall be used (for example, pink flagging on metal poles) to clearly mark the beginning and end points to prevent accidental impacts to use areas.</p> <p>c) Piping plover habitat delineated adjacent to or outside of the project footprint shall be avoided to the maximum extent practicable when staging equipment, establishing travel corridors, and aligning pipeline.</p> <p>d) Driving on the beach for construction shall be limited to the minimum necessary within</p>

Resource	Environmental Consequences	Environmental Protection Measures and Required Permits
		<p>the designated travel corridor, which will be established just above or just below the primary “wrack” line.</p> <p>e) Educational signs shall be installed at public access points within the project area with emphasis on the importance of the beach habitat and wrack for piping plovers. When the project area has a pet or dog regulation, the provisions of the regulation shall be included on the educational signs.</p> <p>f) For one full piping plover migration and winter season (beginning July 15 to May 15) prior to construction, and 2 years following each dredging and sand placement event, bimonthly (twice-monthly) surveys for piping plovers shall be conducted in the beach fill and in any other intertidal or shoreline areas within or affected by the project. If a full season is not available, at least 5 consecutive months with three surveys per month spaced at least 9 days apart are required. During emergency projects, the surveys will begin as soon as possible prior to, and up to implementing the project. Piping plover identification, especially when in non-breeding plumage, can be difficult. If preconstruction monitoring is not practicable, it will be so indicated in the notification to the Service (see P3BO Term and Condition #2) and the Service will decide whether to require a separate individual consultation. See introductory paragraph to Reasonable and Prudent Measures.</p> <p>g) The person(s) conducting the survey must demonstrate the qualifications and ability to identify shorebird species and be able to provide the information listed below. The following will be collected, mapped, and reported:</p> <ol style="list-style-type: none"> i. Date, location, time of day, weather, and tide cycle when survey was conducted;

Resource	Environmental Consequences	Environmental Protection Measures and Required Permits
		<ul style="list-style-type: none"> ii. Latitude and longitude of observed piping plover locations (decimal degrees preferred); iii. Any color bands observed on piping plovers; iv. Behavior of piping plovers (e.g., foraging, roosting, preening, bathing, flying, aggression, walking); v. Landscape features(s) where piping plovers are located (e.g., inlet spit, tidal creeks, shoals, lagoon shoreline); vi. Habitat features(s) used by piping plovers when observed (e.g., intertidal, fresh wrack, old wrack, dune, mid-beach, vegetation); vii. Substrata used by piping plovers (e.g., sand, mud/sand, mud, algal mat); viii. The amount and type of recreational use (e.g., people, dogs on or off leash, vehicles, kite-boarders); and ix. All other shorebirds/waterbirds seen within the survey area. x. All information shall be provided in an Excel spreadsheet. Monitoring results shall be submitted (datasheets, maps, database) on standard electronic media (e.g., CD, DVD) to the appropriate Field Office by July 31 of each year in which monitoring is completed. If an appropriate web based reporting system becomes available, it would be used in lieu of hard copy/media. <p>[NOTE: As a condition to a permit from the FDEP, the bird monitor may also be required to report shorebird data to the Florida Fish and Wildlife Conservation Commission (FWC)]</p>

Resource	Environmental Consequences	Environmental Protection Measures and Required Permits
		<p style="text-align: center;">https://public.myfwc.com/crossdoi/shorbirds]</p> <p>3. The applicant intends to dredge using a hydraulic dredge; therefore, the project will comply with the NMFS Gulf Regional Biological Opinion (GRBO).</p>
<p>Cultural Resources</p> <p>See Section 4.4 for details</p>	<p>Updated– see USACE EA</p> <p>Alternative 1 and 2 – No impact.</p> <p>Concurrence with SHPO received on July 2, 2018 regarding USACE’s determination of No Effect on Historic Properties listed, or eligible for listing, on the <i>National Register of Historic Places</i>.</p> <p>Concurrence from the Seminole Tribe of Florida was received on January 6, 2020 regarding FEMA’s determination of No Historic Properties Affected.</p>	<p>Alternative 2 would require the following measures:</p> <ul style="list-style-type: none"> • If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes. • Any changes to the approved scope of work will require submission to, and evaluation and approval by, the State and FEMA, prior to initiation of any work, for compliance with Section 106.
<p>Geology and Geomorphology</p>	<p>No Change – See USACE EA</p> <p>Alternative 1 – No impact</p> <p>Alternative 2 – No long-term impacts. Beach compatible sand will be used during construction.</p>	<p>Alternative 2 would require a JCP from FDEP that requires beach compatible sand be utilized.</p>

Resource	Environmental Consequences	Environmental Protection Measures and Required Permits
Vegetation	<p>No Change – See USACE EA</p> <p>Alternative 1 – No impact from construction. Continuing erosion could lead to ongoing dune vegetation loss due to escarpment formation.</p> <p>Alternative 2 – No impact to dune vegetation during construction, moderate beneficial impact from restored shoreline due to buffer from storm surge.</p>	Not applicable
Fish and Wildlife Resources	<p>No Change – See USACE EA</p> <p>Alternative 1 – No impact</p> <p>Alternative 2 –Short term minor changes in nearshore and offshore softbottom bathymetry in the borrow area. Temporary minor impacts to migratory birds and surf-zone fishes. After construction, fish and wildlife resources are expected to recover.</p>	Implement FDEP JCP and USACE permit conditions regarding nearshore hardbottom and Migratory Bird Treaty Act, including provisions in applicable PBOs regarding sea turtles and shorebirds.

Resource	Environmental Consequences	Environmental Protection Measures and Required Permits
Socioeconomic	<p>No Change – See USACE EA</p> <p>Alternative 1 – Minor impacts could result from future storm damages along the shoreline</p> <p>Alternative 2- Minor effects to water related recreation and aesthetics. This area is a popular tourist destination, however impacts will be minor and short term, and beneficial in the long term by restoring the beach</p>	Not applicable
Hazardous, Toxic, and Radioactive Waste	<p>No Change– see USACE EA</p> <p>Alternative 1 - No impact</p> <p>Alternative 2- Minor short term impact due to potential for spills during construction</p>	<p>Potential for spills from construction equipment will be minimized and handled in accordance with applicable regulations. The contractor shall perform all maintenance of equipment, including but not limited to refueling, filter changes, and replacement of hydraulic lines in a manner so as not to contaminate soils, ground or surface waters, or any other natural resources.</p>
Air Quality	<p>No Change – see USACE EA</p> <p>Alternative 1 – No impact</p> <p>Alternative 2 – Minor short term impacts to air quality due to exhaust from construction equipment</p>	Not applicable

Resource	Environmental Consequences	Environmental Protection Measures and Required Permits
Noise	No Change – see USACE EA Alternative 1 – No impact Alternative 2 – Minor short term impacts from construction equipment	Not applicable
Cumulative Impacts See Section 5.0 for details	No Change – see USACE EA Alternative 1 and 2 are not expected to have significant adverse cumulative impacts on any resource	Not applicable

4.2 Floodplain Management (Executive Order 11988)

Executive Order (EO) 11988 requires federal agencies to take action to minimize occupancy and modification of the floodplain. Specifically, EO 11988 prohibits federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives. FEMA’s regulations for complying with EO 11988 are promulgated in 44 CFR Part 9. Based on the current FEMA Flood Insurance Rate Map (FIRM), the project area is located within the coastal high hazard area (VE Zone) per Pinellas County Flood Insurance Rate Map Panels # 12103C0054G and 12103C0062G, dated 09/03/2003 (Appendix A).

Alternative 1 – No Action Alternative

Under the no action alternative, no construction would occur and there would be no effect to the floodplain. Improved property adjacent to the project area would remain at risk from future flooding events.

Alternative 2 – Construct the Shore Stabilization Project

Under the preferred alternative, construction to restore the beach would occur within the floodplain. The reconstructed engineered beach would have a beneficial effect, serving to reduce the flood risk to adjacent improved property and facilitating open space use of the floodplain for recreational value. The facility is functionally dependent upon its location within the floodplain. An 8-step checklist, as required by 44 CFR Part 9, has been completed for this alternative (Appendix B).

4.3 Wetlands (Executive Order 11990)

EO 11990, Protection of Wetlands, requires federal agencies to take action to minimize the loss of wetlands. The NEPA compliance process requires federal agencies to consider direct and indirect impacts to wetlands, which may result from federally funded actions.

Alternative 1 – No Action Alternative

Under the no action alternative, no impacts to wetlands are anticipated.

Alternative 2 – Construct the Shore Restoration Project

Under the preferred alternative, short-term impacts are anticipated. The action will involve dredging of marine wetlands and placing sand in the near and foreshore environment. Temporary increases to turbidity could be expected due to dredging and sand placement. Short-term minor negative impacts would also be expected to commercial and recreational fisheries near the shoreline and the dredge area, but impacts are expected to be limited to the construction timeframe. Higher turbidity in the habitat area may cause species to relocate and reduce the number of catch available for a short period of time. Long-term impacts to the marine wetlands would be beneficial for preserving habitat and recreational value as well as reducing rates of sand loss and erosion from future storms. The applicant has obtained an FDEP JCP and USACE Individual Permit and will be required to follow the permit conditions to minimize impacts from construction.

4.4 Threatened and Endangered Species

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, the project was evaluated for the potential occurrences of federally listed threatened and endangered species. The ESA requires any federal agency that funds, authorizes, or carries out an action to ensure that their action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitats.

4.4.1 Existing Conditions

Potential threatened and endangered species that may be present in the project area were identified in the USACE EA. The species were verified by accessing the USFWS Information for Planning and Consultation (IPaC) database in July 2019 to identify species that may occur in the project area. The species likely to occur in the project area are the green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricate*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), Kemp's ridley sea turtle (*Lepidochelys kempii*), piping plover (*Charadrius melodus*), manatee (*Trichechus manatus latirostris*), and gulf sturgeon (*Acipenser oxyrinchus*). The shoreline of the project area is suitable sea turtle nesting habitat for listed sea turtles as well as foraging habitat for the piping plover. Critical habitat for the piping plover exists in or near the project dredging area.

Alternative 1 – No Action Alternative

Alternative 1 does not include any FEMA undertaking and no construction, therefore there would be no potential for effects and no further responsibility under the ESA. Suitable sea turtle nesting habitat may continue to be reduced in the project area due to coastal erosion.

Alternative 2 – Construct the Shore Restoration Project

Alternative 2 is expected to have impacts to species along the shoreline and in the nearshore environment due to sand placement and dredging. If sand placement and renourishment of the engineered beach occurs during sea turtle nesting season, the action may adversely affect nesting sea turtles and hatchlings. Dredging activities may affect, but are not likely to adversely the piping plover due to disruption in foraging habitat. Dredging activities may also affect, but are not likely to adversely affect sea turtles near the dredging area or nearshore environment. The project may affect,

but is not likely to adversely affect the West Indian manatee. The applicant agrees to follow the Standard Manatee Conditions for In-Water Work (FWC 2011a) to minimize any impacts. Whale species are unlikely to be in the nearshore area of the project and therefore, are not likely to be adversely affected.

The project will be required to meet the terms and conditions of the following USACE programmatic biological opinions to minimize impacts to listed species: 1) the USFWS Statewide Sand Placement Biological Opinion (Service Log 41910-2011-F-0170, dated March 13, 2015); 2) the USFWS Programmatic Piping Plover Biological Opinion (Service Log 04EF1000-2013-F-0124, dated May 22, 2013); and 3) the NMFS Gulf Regional Biological Opinion (dated November 19, 2003). The project will also adhere to the Florida Standard Manatee Conditions as required by the PBOs. The terms and conditions of these documents can be found in Table 4.1.

4.5 Cultural Resources

Consideration of impacts to cultural resources is mandated by Section 106 of the National Historic Preservation Act (NHPA) as implemented by CFR Part 800. Requirements include identifying historic properties that may be impacted by the proposed action or alternatives within the area of potential affect (APE). Historic properties may be archeological sites, structures, historic districts, or other historic resources listed in or determined eligible for listing in the National Register of Historic Places (NRHP). If adverse effects on historic, archeological, or cultural properties are identified, federal agencies must attempt to avoid, minimize, or mitigate the impacts to these resources.

FEMA, the Florida State Historic Preservation Office (SHPO), the Florida Division of Emergency Management, the Choctaw Nation of Oklahoma, and the Advisory Council on Historic Preservation have executed a Statewide Programmatic Agreement dated September 10, 2014 to streamline the Section 106 review process.

4.5.1 Existing Conditions

The USACE evaluated potential resources in the project area and consulted with the State Historic Preservation Office (SHPO). USACE received concurrence on July 2, 2018 that the proposed project will have *no effect on historic properties listed, or eligible for listing, on the National Register of Historic Places*.

Alternative 1 – No Action Alternative

Alternative 1 does not include any FEMA undertaking and no construction, therefore there would be no potential for effects and no further responsibility under Section 106.

Alternative 2 – Construct the Shore Restoration Project

Alternative 2 would include renourishing the beach utilizing off-shore sand sources. It is not anticipated for the work along the shoreline to have an impact as renourishment activities have occurred in this area previously. Activities will not disturb sand and shoreline below the depth where sand has been placed previously.

USACE determined that the project would not affect historic properties listed, or eligible for listing, on the National Register of Historic Places. FEMA is adopting the determination by USACE of No Effect on Historic Properties and the concurrence from SHPO received on July 2, 2018. FEMA also determined that no tribal historic properties would be affected by the project. On December 12, 2019, FEMA consulted with five tribes regarding this determination. On January 6, 2020, FEMA received a response from the Seminole Tribe of Florida concurring with the determination of No Historic

Properties Affected. As of January 21, 2020, FEMA has not received a response from the other tribes that were consulted. The following conditions will be applied to the project:

Alternative 2 would require the following measures:

- If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.
- Any changes to the approved scope of work will require submission to, and evaluation and approval by, the State and FEMA, prior to initiation of any work, for compliance with Section 106.

5.0 CUMULATIVE IMPACTS

Per the Council on Environmental Quality (CEQ) regulations, cumulative impact is the impact on the environment that “results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). In accordance with NEPA, this SEA considered the combined effect of the preferred alternative and other actions occurring or proposed in the vicinity of the proposed project site.

The proposed project would impact Honeymoon Island, a barrier island located on the west coast of Florida in the Gulf of Mexico. Beach renourishment would occur along Honeymoon Beach, and dredging would occur in Hurricane Pass, a cut that separates Honeymoon Island from Caladesi Island. Honeymoon Beach and Hurricane Pass are part of a dynamic coastal system subject to continual erosion and accretion cycles driven by prevailing winds, current, and longshore transport of sediment. The shoreline is also vulnerable to additional erosion from future tropical storms and hurricanes. Beach renourishment efforts date back to 1960 when the area was slated for residential development. Subsequently, FDEP purchased Honeymoon Island and has since performed beach renourishment projects in 1989, 2008, and 2015.

Sand for the proposed project would be dredged from Honeymoon Pass within an existing bare sand bottom channel, and from a recently formed sand spit. The sand spit does not accommodate dune systems or vegetative communities, however, a patch of seagrass is located directly north-east of the spit. The dredge template for the proposed project is designed to prevent dredging impacts to the seagrass, leaving a margin of sand to shield the seagrass from potential erosion, turbidity, and sedimentation. The sand would be placed along Honeymoon Beach behind a pre-existing groin complex, designed to receive back-passed sand and prevent future erosion.

The proposed project will have short-term impacts to commercial and recreational usage of the shoreline and associated borrow area due to construction efforts. However, it is anticipated there will be no long-term impact to commercial fisheries and beneficial long-term impacts to recreational usage of the shoreline due to the continued existence of the engineered beach. Historically, Honeymoon

Island has been a top tourist destination in the region, contributing significantly to the local economy. Continued maintenance of Honeymoon Beach will help sustain the island’s economical and recreational value. In consideration of the overall impact of the proposed project in relation to impacts from past, present, and reasonably foreseeable future activities, the proposed action is not expected to have significant adverse cumulative impacts on any resource.

6.0 PUBLIC INVOLVEMENT

USACE is the lead federal agency that conducted the original NEPA analysis and issued a statement of finding in May 2019. FEMA issued a disaster-wide initial public notice for Hurricane Hermine on November 21, 2016, and for Hurricane Irma on October 6, 2017, to notify the public of projects under the Public Assistance program that may occur within floodplains. For environmentally sensitive projects such as beach renourishments, Pinellas County typically hosts town hall meetings for members of the public to voice concerns or support of the projects.

7.0 AGENCY COORDINATION

Several of the findings of the USACE were adopted per Unified Federal Review. The following agencies and organizations were contacted by USACE:

- U.S. Fish and Wildlife Service (North Florida Ecological Services Field Office)
- National Marine Fisheries Service (NMFS)
- U.S. Army Corps of Engineers, Jacksonville District
- Florida Division of Historical Resources (SHPO)

8.0 LIST OF PREPARERS

Name	Organization	Title
Stephanie Madson	FEMA	Regional Environmental Officer
Larissa Hyatt	FEMA	Supervisory Environmental Protection Specialist
Holly DeJong	FEMA	Environmental Protection Specialist

9.0 REFERENCES

USACE, 2019. Department of the Army Environmental Assessment and Statement of Finding for Permit Application SAJ-2011-02369.

Appendices are available for review upon request to FEMA-R4EHP@fema.dhs.gov.