Hurricanes Debby, Helene and Milton Recovery Plan for Florida's Beach and Dune System

Florida Department of Environmental Protection

Office of Resilience and Coastal Protection

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I. Introduction

Overview

This "Hurricanes Debby, Helene and Milton Recovery Plan for Florida's Beach and Dune System" (Recovery Plan or Plan) is considered by the Florida Department of Environmental Protection (DEP) to be a preliminary planning document for recovery funding needs. Estimates contained in the Plan are based on information provided by local governments, their coastal engineering consultants, the Federal Emergency Management Administration (FEMA), Florida Department of Emergency Management (DEM) and DEP staff, which in some cases may be limited. As surveys or new information is obtained, this Plan may be updated to include such information. Additionally, it is important that this Plan be flexible to allow for adjustments in project funding based on new information and conditions that exist at the time the work will be contracted. Detailed planning and engineering tasks will be conducted for each project to formulate the most cost-effective design.

During the 2024 hurricane season, the State of Florida was impacted by three hurricanes: Hurricane Debby, major Hurricane Helene and major Hurricane Milton.

Hurricane Debby spawned from a tropical wave that crossed Cuba on Friday, Aug. 2. At 7 a.m. EDT Monday, Aug. 5, Hurricane Debby made landfall near Steinhatchee, Florida, as a category 1 hurricane with maximum sustained winds of 80 mph and a minimum central pressure of 979 millibars (28.91 inches).

At 11 a.m. Tuesday, Sept. 24, the National Hurricane Center (NHC) designated Tropical Storm Helene with maximum sustained winds of 45 mph. Thursday, Sept. 26, Hurricane Helene made landfall at about 11:10 p.m. just east of the mouth of the Aucilla River in Taylor County with maximum sustained winds of 140 mph and a central pressure of 938 millibars (27.70 inches) as a category 4 major hurricane.

Hurricane Milton was the second major hurricane to make landfall on Florida's coastline in the 2024 hurricane season within a couple of weeks after Hurricane Helene. The system spawned from a tropical depression that formed over the southwestern Gulf of America on Saturday morning, Oct. 5. On Wednesday Oct. 9, at 8:30 p.m., with sustained winds of 120 mph, Milton made landfall near Siesta Key in Sarasota County as a category 3 hurricane. The storm's path was tracked east across the state and then it entered the Atlantic Ocean where it became extratropical and eventually dissipated on Oct. 12.

The recovery of the beach and dune system is vital for providing protection to upland development (including infrastructure) to restore economic opportunities for local governments and for restoring habitat of threatened and endangered species.

Summary of Assessments

Hurricane Debby

DEP staff assisted in sand loss assessments of non-federal beach restoration and nourishment projects within impacted areas and included Manatee, Sarasota and Charlotte counties. These assessments included staff representing FEMA, DEM, local governments and their coastal consultants.

Additional data, information and assistance was provided to DEP staff by various local governments and their consultants.

Hurricane Helene

Immediately following the impacts of Hurricane Helene, damage assessment teams were dispatched to the affected coastal areas. The damage assessment teams conducted detailed damage assessments for Pinellas, Manatee, Sarasota, Lee and Collier counties. Additional data, information and assistance was provided to DEP staff by various state parks staff, county officials and various private coastal engineering firms.

DEP staff assisted in sand loss assessments of non-federal beach restoration and nourishment projects within impacted areas and included Manatee, Sarasota, Lee and Collier counties. Additional data and information on beach conditions was provided to DEP staff by various local governments and their consultants.

Hurricane Milton

Following Hurricane Milton, field staff from DEP's Tallahassee Office were not immediately deployed as much of the impacted region was difficult to navigate and because staff had recently returned from assessments of much of the same region impacted again by Hurricane Milton. DEP staff evaluated the costs and efficiencies of deploying several teams of staff vs. utilizing its contract with Camera Copters. Staff determined that flying high resolution aerial oblique videography and capturing still images from the aircraft would be more efficient while still providing the information necessary to conduct damage assessments.

DEP staff did conduct joint sand loss assessments of non-federal beaches with FEMA, DEM, local government representatives and their coastal consultants in the weeks following Hurricane Milton, in Nassau, St. Johns, Palm Beach, Collier, Lee, Charlotte, Sarasota and Manatee counties. Additional data and information on beach conditions was provided to DEP staff by various local governments and their consultants.

Additional information can be found on DEP's Beaches Post Storm Reports page.

Utilization of DebrisTech Imagery and Topographic LiDAR Data

DEM entered in a contract with DebrisTech for various surveys and data collection involving impactful storm events. Prior to Hurricane Debby, DebrisTech collected 360' beach imagery of the anticipated impacted area. Following Debby's landfall DebrisTech once again collected this imagery and collected topographic LiDAR data of the beach and dune areas. This data was then collected following Hurricane Helene and again after Hurricane Milton. The data and imagery proved to be informative and useful in many of DEP's post storm assessments and evaluations. Continued contracts are anticipated for upcoming storm seasons and may be enhanced to include bathymetric LiDAR data collection. Utilization of such data may improve efficiencies and accuracy in post storm assessments, thereby expediting the restoration process in the future.

Summary of Recovery Activities and Methods

This Plan focuses only on the beach and dune systems in Gulf, Wakulla, Pinellas, Manatee, Sarasota, Charlotte, Lee, Collier, Palm Beach, Martin, St. Lucie, Indian River, Brevard, Volusia, Flagler and St. Johns counties that had moderate to major beach erosion. The report is organized by separating the Gulf of America and Atlantic coastlines, then by county, then by project or project area. This Plan does not include replacement cost estimates associated with any upland structures, roads, piers or bridges.

The Plan works to coordinate recovery efforts with long-term maintenance strategies, using both regular program appropriations and emergency funding assistance provided by federal, state and local sources to achieve the most efficient recovery of impacted beaches and dunes. For the purposes of this Plan, non-federal dollars are identified funds that would be requested for implementing this Recovery Plan via a special appropriation. Non-federal dollars are comprised of the cost share on a given project born by the State of Florida [either by Florida Department of Emergency Management (DEM) or DEP] and the local sponsor of the project. Below are overviews of regular and post storm funding opportunities.

DEP

Funding opportunities for management of Florida's critically eroded beaches is administered by the Beach Management Funding Assistance (BMFA) Program. The program provides and manages grants to local governments (up to 75% of project costs) for planning and implementing beach and inlet management projects on the Gulf of America, Atlantic Ocean or Straits of Florida. The Recovery Plan takes into account the strategies of the DEP Strategic Beach Management Plan (SBMP), which is designed to identify long-term management strategies of the state's critically eroded beaches. Management activities conducted by local governments that are consistent with strategies identified in the SBMP are eligible for funding opportunities through the Local Government Funding Request (LGFR) process. The BMFA Program accepts funding requests on an annual basis from local governments and municipalities for beach and inlet management projects. **This Plan identifies funds needed in addition to those already allocated in agreements with local governments through the LGFR process.**

FEMA

FEMA administers a public assistance program to state and local governments to assist with storm recovery activities. A final cost determination is not available at this writing. For the purposes of this Plan, the assumed cost-share for projects receiving FEMA assistance is 75% FEMA, 25% state (DEM) and local. FEMA offers funding assistance for beach and dune restoration activities mainly under two program areas. A detailed guide to these programs can be found in the Public Assistance Program and Policy Guide.

Category B: Emergency Protective Measures can provide a small volume of sand to prevent flooding to developed upland properties. To qualify, a property (public or private development) must be threatened by a five-year return interval storm event. Properties are evaluated on a case-by-case basis, with qualifying properties eligible to receive funding to construct a small berm or dune feature.

Category G: Permanent Work is intended to assist with the repair of public facilities. Qualifying non-federally authorized beach projects are eligible for replacement of the sand that was lost as a result of the storm.

U.S. Army Corps of Engineers (USACE)

The Shore Protection Program works directly with local governments to construct beach restoration projects for the primary purpose of protecting upland developed properties. After detailed feasibility studies, projects are individually authorized by Congress for construction and long-term maintenance. Authorized projects usually have an authorization period of 50 years, during which periodic beach nourishment is conducted to maintain the designed storm protection values. Under the program, the federal government can fund the majority of the total project costs. The remaining non-federal cost is the responsibility of the local sponsor and the state of Florida as cost-sharing partners. As a result of storm impacts, an authorized constructed project is eligible for Flood Control and Coastal Emergency (FCCE) funds to rebuild the project.

II. Beach and Dune Recovery Strategies

The beach and dune recovery recommendations in this Plan include volumetric loss determinations and replacement cost estimates that are based on the best available information and strategies. DEP staff corresponded with other state and local agencies involved with storm recovery activities. Cost estimates were developed with the assistance of local sponsors and through supporting documentation provided by engineering consultants. These recommendations were developed as a guide to develop a recovery plan, and if implemented, accelerate the natural recovery of impacted beach and dune systems.

Each proposed activity is presented by county with a listing of DEP Reference (R) monuments or specific project names and locations to identify project boundaries along the impacted shoreline. The storm recovery funds indicated are required in addition to any funding currently appropriated via the BMFA Program or requested in the LGFR process. Federally authorized projects that are expected to be maintained by USACE are not included in the plan as restoration is anticipated to be federally funded.

Projects not mentioned below were not requested for assistance. Agreements and funds applied to local sponsors below may be used for the work described in this Plan, or work that is consistent with the DEP SBMP, or applicable permits.

Gulf Coast Beaches

Gulf County

Cape San Blas, Stump Hole Nourishment, R-70.5 to R-73.6 and R-74.8 to R-106

This is a critically eroded section of shoreline managed by Gulf County. Although funding is partially in place for nourishment and construction of submerged breakwaters intended to supplement the performance of the beach nourishment project, impacts from Hurricane Helene resulted in additional losses of sand from the dune and beach. The county estimates that approximately $10,340,000.00 in additional funds are needed to fully fund the nourishment project that is critically needed. Recommend funding at 100% non-federal costs of **$10,340,000.00.**

Wakulla County

Mashes Sands County Park, Virtual Monument V-301 to approximately V-317

This is a shoreline managed by Wakulla County leased from the State of Florida. The county has conducted feasibility studies in the past to restore this critically eroding shoreline. Discussion reinitiated in 2024 to conduct an updated feasibility study and restore the shoreline. Impacts from Hurricane Helene have further exacerbated conditions at the park. Estimated costs for an updated feasibility study and implementing a selected plan are $3,375,000.00. Recommend 100% non-federal funding to Wakulla County for the restoration of Mashes Sands at **$3,375,000.00.**

Pinellas County

Sand Key, Treasure Island, and Long Key, R-56 to R-66, R-71 to R-109, R-126 to R-128, R-136 to R-143 and R-144 to R-147

These are stretches of historically federally authorized beaches. However, longstanding certification issues with the project jeopardize future maintenance by the USACE. Given uncertainties in future federal involvement and considering these beaches were impacted by three hurricanes in 2024, DEP recommends 100% non-federal cost-share. Based on survey data collected prior to Hurricane Debby and following Hurricane Milton, these reaches of shoreline lost approximately 649,000 cubic yards of sand from the dune and beach system. The estimated cost per cubic yard of authorized sand sources is $65.41.

Recommend locally sponsored beach nourishment with 100% non-federal funding at an estimated cost of **$42,451,090.00.**

Manatee County

Coquina Beach Nourishment Project, R-33 to R-41+305

The Coquina Beach Nourishment Project is managed by Manatee County. Based on pre- and post-beach width measurements, visual estimates of beach erosion, and survey data, it is estimated that approximately 210,500 cubic yards of sand was lost within the project template due to combined effects of Hurricanes Debby, Helene and Milton. The estimated cost per cubic yard of authorized sand sources is $75.23.

Recommend nourishment to restore volumes lost due to storms. Estimated construction cost is $15,835,915.00. Project may be FEMA Category G eligible.

FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$3,958,978.75.**

North End Longboat Key, R-42 to R-67

The north end of Longboat Key is comprehensively managed by the Town of Longboat Key in coordination with Manatee County. Recommendations are included below under the Longboat Key Nourishment Project.

Sarasota County

Longboat Key Nourishment, R-1 to R-29

The Longboat Key Nourishment Project is comprehensively managed by the Town of Longboat Key in coordination with Manatee and Sarasota counties. Estimated island wide losses within managed beach segments as a result of the combined effects of the 2024 hurricanes is 620,900 cubic yards of sand. The anticipated cost per cubic yard of authorized sand is $44.00. Recommend nourishment to restore lost volumes of sand at an estimated construction cost of $27,319,600.00, and funding of all non-FEMA eligible sand losses.

Non-federal cost share state/local share is **$11,474,232.00.**

South Siesta Key Beach Nourishment Project, R-64 to R-77

The South Siesta Key Beach Nourishment Project is managed by Sarasota County. Based on pre- and post-beach width measurements and visual estimates of beach erosion, it is estimated there was approximately 110,000 cubic yards of sand lost due to the combination of the 2024 hurricanes.

Recommend nourishment to restore volumes lost due to storms. The estimated construction cost to replace lost volume is $9,900,000.00. Project is FEMA Category G eligible.

FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$2,475,000.00.**

Manasota Key Beach Restoration and Nourishment, R-173.4 Sarasota County to R-1 Charlotte County

The Manasota Key Beach Restoration and Nourishment Project is managed jointly by Sarasota and Charlotte counties. Based on pre- and post-beach width measurements, visual estimates of beach erosion, and surveys, it is estimated that approximately 312,871 cubic yards of sand were lost to the combined effects of the 2024 Hurricanes in the Sarasota County portion of the project. However, only approximately 26% of these losses are FEMA eligible.

Recommend nourishment to restore volumes lost due to storms within the authorized construction templates. The non-FEMA eligible portion is estimated at 231,782 cubic yards. The FEMA eligible losses are estimated at 81,089 cubic yards. Estimated cost per cubic yard of authorized sand sources is $81.29.

The FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$1,647,931.20**

The non-FEMA eligible estimated construction cost is **$18,841,558.78.**

Charlotte County

Manasota Key Beach Restoration and Nourishment, R-173.4 Sarasota County to R-15.3 Charlotte County, Stump Pass State Park and Knight Island, R-9 to R-40.5

The Manasota Key Beach Restoration and Nourishment Project is managed jointly by Sarasota and Charlotte counties. Based on pre- and post-beach width measurements and visual estimates of beach erosion, and surveys it is estimated that approximately 1,019,000 cubic yards of sand were lost due to the combination of Hurricanes Helene and Milton in the Charlotte County portion of the project and includes a substantial breach within Stump Pass Beach State Park. Charlotte County has proposed to sponsor the closing of this breach.

Recommend nourishment to restore volumes lost due to storms. Estimated construction cost to replace non-FEMA eligible losses is **$45,936,520.00**.

Lee County

Gasparilla Island State Park Nourishment Project, R-24 to R-26.5

The Gasparilla Island State Park Nourishment Project is managed by the Florida Park Service. The project is historically constructed in conjunction with the Gasparilla Island Shore Protection Project to save on dredge mobilization costs. The project has current funding available for nourishment, and construction is commencing soon. However, the Florida Park Service owns a seawall fronting private property that sustained catastrophic damage as a result of Hurricanes Helene and Milton. The Florida Park Service in consultation with its coastal consultant is proposing to temporarily repair the wall while planning and permitting is completed for a redesign of coastal protection measures. The repair, design and permitting and construction is currently estimated at $15,000,000.00. The redesigned coastal protection structures would improve the coastal conditions of the area while providing the necessary upland protection for the private properties.

Recommend funding to DEP's Division of Recreation and Parks of the anticipated **$15,000,000.00** for temporary and permanent fixes to the seawall.

Captiva Island, Lee County Shore Protection Project, R-83 to R-109

The Captiva Island, Lee County Shore Protection Project is a federally authorized project managed by the Captiva Erosion Prevention District (CEPD). The project is anticipated for nourishment in 2025, under the CEPD. Currently, there are uncertainties whether the project will remain federally designated and therefore would not qualify for FCCE funds. Further, because the project is still federally authorized, it is not eligible for FEMA recovery funds. Therefore, DEP is proposing 100% non-federal funds for nourishment of Captiva Island following the impacts of Hurricanes Helene and Milton. The funding for the upcoming nourishment is primarily through the legislatures funding of the 2022 Hurricanes Ian and Nicole Beach and Dune Recovery Plan. DEP is proposing to make up the gap in funds to restore the beach and dune from the impacts of Ian and Nicole to also account for impacts from Hurricanes Helene and Milton.

Based on initial surveys, it is estimated that project losses due to Hurricanes Helene and Milton are about 381,409 cubic yards of sand.

Recommend nourishment to include restoration of these volumes lost due to the 2024 storms. The estimated construction cost per cubic yard of sand from authorized sources is $33.04. Project is not FEMA Category G eligible.

100% state/local share is **$12,716,176.06.**

Sanibel North End Nourishment, R-110 to R-122

The North end of Sanibel Island is authorized for sand placement under the Captiva Island, Lee County Shore Protection Project's permit and under the Blind Pass Maintenance Dredging permit. Based on initial surveys it is estimated that this area of shoreline lost approximately 211,700 cubic yards of sand due to Hurricanes Helene and Milton.

Expected construction costs for nourishment is $5,610,050.00. Because of federal cost share uncertainties, DEP recommends non-federal funds be provided for 100% of anticipated construction, minus the remaining funds from the grant agreement from Hurricanes Ian and Nicole of $3,128,563.00 which equates to **$2,481,487.00**

These values are based on preliminary data and are subject to updates.

Sanibel Island, R-122 to R-173.5

There are no engineered beaches on this segment of Sanibel Island eligible for FEMA Category G recovery. It is unclear if any reaches of shoreline will be eligible for FEMA Category B emergency sand placement. To assist Sanibel Island in restoring the beach and dune system following the impacts of Hurricane Ian, the City of Sanibel was granted non-federal funding for sand placement densities using a calculation of 6 cubic yards per foot of shoreline from R-122 to R-173.5. This equated to approximately 51,500 linear feet of shoreline and total of 309,000 cubic yards of sand. Based on project and regional comparisons, it was estimated that the cost per cubic yard of sand could be $77. Given this, the City of Sanibel was provided with a total of $23,793,000.00 in non-federal dollars to restore the beach and dune systems of the island following Hurricane Ian. Only $5,471,727.00 remain available under this agreement.

Losses to the beach and dune resulting from Hurricanes Helene and Milton are estimated at 368,650 cubic yards. Recommend funding the replacement of these losses at 100% non-federal funding, which is estimated at $28,386,050.00. Subtracting the remaining funds from the Ian and Nicole Agreement results in **$22,914323.00.**

These values are based on preliminary data and are subject to updates.

Estero Island Beach Restoration and Nourishment Project, R-174 to R-198 and R-203 toR-207

The Estero Island Beach Restoration and Nourishment Project is managed by the City of Ft. Myers Beach. Based on pre- and post-beach surveys, it is estimated there was approximately 113,140 cubic yards of sand lost due to the combination of Hurricanes Helene and Milton in the project area that are not FEMA eligible.

Post Hurricane Ian nourishment has recently completed, but losses from Hurricanes Helene and Milton remain due to the timing of contracting the construction effort.

Recommend funding losses not eligible for FEMA assistance in next nourishment at 100% state share.

Based on anticipated construction costs, 113,140 cubic yards of sand will equate to approximately **$11,637,304.00.**

Lovers Key and Bonita Beach, Beach Nourishment Projects, R-214.5 to R-220.5 and R-226.5 to R-230

Lee County is the local sponsor for both beach fill segments. The county has a Management Agreement with DEP to maintain the beach on the Lovers Key State Park, and an Interlocal Agreement with the City of Bonita Springs to maintain Bonita Beach. Based on pre and post storm surveys, the losses resulting from Hurricanes Helen and Milton that are not FEMA eligible are estimated at 100,600 cubic yards of sand.

Recommend nourishment as scheduled and fund additional losses not funded under FEMA as 100% state share.

Based on anticipated construction costs, 100,600 cubic yards of sand will equate to approximately **$3,972,694.00.**

South Bonita Beach, R-230 to R-239.25

This is a stretch of previously unmanaged beach prior to Hurricane Ian. The City of Bonita Beach with assistance from the Hurricanes Ian and Nicole Beach and Dune Recovery Plan Agreement is constructing a dune project. Losses resulting from Hurricanes Helene and Milton are estimated at 70,000 cubic yards. Based on construction bid advertisement proposals, the cost per cubic yard of sand is $75.77.

Recommend dune restoration from R-230 to R-239.25, Due to uncertainties in federal funding, recommend 100% state share of **$5,303,900.00.**

Collier County

Barefoot Beach, R-1 to R-9

This is a stretch of previously unmanaged beach prior to Hurricane Ian. Collier County is seeking assistance in restoring dune losses on this section of beach following the impacts of Hurricanes Helene and Milton.

Recommend dune nourishment from R-1 to R-9, to replace losses from Helene and Milton at an estimated 36,948 cubic yards of sand. Based on project cost comparisons this would equate to $1,787,544.00. The project is likely eligible for FEMA assistance at 75% federal share. Recommend funding **$446,886.06.**

Barefoot/Wiggins Pass, R-10 to R-22

This is a stretch of shoreline managed by Collier County. Estimated losses resulting from Hurricanes Helene and Milton are 152,000 cubic yards of sand. Estimated cost per cubic yard of sand from authorized sources is $48.38. Recommend funding the non-federal portion of replacing these loses equating to **$1,838,440.00**.

Vanderbilt Beach, R-23 to R-30.5

Vanderbilt Beach is managed by Collier County and is incorporated in the greater Collier County Nourishment Project. Based on pre- and post-storm surveys it is estimated this segment of beach lost 76,321 cubic yards of sand.

Recommend nourishment to restore volumes lost due to storms. Estimated construction cost is $ $3,692,409.98. Project is FEMA assistance eligible. FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$923,102.50.**

Pelican Bay, R-30.5 to R-36

The Pelican Bay segment of Collier County is managed by Collier County and is incorporated in part in the greater Collier County Nourishment Project. Based on pre- and post-storm surveys it is estimated this segment of beach lost 45,438 cubic yards of sand and has areas in need of protective dunes.

Recommend nourishment to restore volumes lost due to storms. Estimated construction cost is $2,198,290.44. Project is FEMA assistance eligible. FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$549,572.61.**

Park Shore, R-43.5 to R-54.5

Park Shore Beach is managed by Collier County and is incorporated in the greater Collier County Nourishment Project. Based on pre- and post-storm surveys it is estimated this segment of beach lost 103,048 cubic yards of sand.

Recommend nourishment to restore volumes lost due to storms. Estimated construction cost is $4,985,462.24. Project is FEMA assistance eligible. FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$1,246,365.56.**

Naples, R-58 to R-79

This segment of shoreline is managed by Collier County and is incorporated in the greater Collier County Nourishment Project. Based on pre and post storm surveys it is estimated this segment of beach lost 101,293 cubic yards of sand.

Recommend nourishment to restore volumes lost due to storms. Estimated construction cost is $4,900,555.34. Project is FEMA assistance eligible. FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$1,225,138.84.**

South Naples, R-79 to R-89

This is a stretch of previously unmanaged beach, prior to Hurricane Ian, and contains no engineered beaches eligible for FEMA Category G funding. Collier County is seeking assistance in restoring dune losses on this section of beach through FEMA.

Recommend dune restoration from R-79 to R-89, replacing losses resulting from Hurricanes Helene and Milton of 88,983 cubic yards of sand. Based on project cost comparisons this would equate to $4,304,997.54. Assuming FEMA assistance, DEP recommends state share of **$1,076,249.39.**

South Marco Island Beach Nourishment Project, R-144 to G-4

The South Marco Island Beach Nourishment Project is managed by Collier County and is eligible for FEMA Category G funding. Based on pre- and post-storm surveys it is estimated this segment of beach lost 80,000 cubic yards of sand.

Recommend nourishment to restore volumes lost due to storms. Estimated construction cost is $4,548,000.00. FEMA non-federal cost share based on FEMA 75% and 25% state/local share is **$1,137,000.00.**

Atlantic Coast Beaches

St. Johns County

Ponte Vedra Beach Restoration Project, R-1 to R-46.4

This is a new beach restoration project constructed in 2024. Estimated losses from Hurricane Milton are 300,000 cubic yards of sand. Based on an average cost per cubic yard of sand at $30, the restoration of losses due to Hurricane Milton will be approximately $9,000,000.00.

Recommend nourishment to restore volumes lost due to storms. Project is FEMA Category G eligible. FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$2,250,000.**

South Ponte Vedra Beach Restoration Project, R-76 to R-103.5

The South Ponte Vedra Beach Restoration project was initially constructed by St. Johns County in 2021/22. Based on pre-and-post beach surveys, it is estimated there was approximately 200,000 cubic yards of sand lost to Hurricane Milton.

Recommend nourishment to restore lost volumes. The estimated construction cost is $6,000,000. Project is FEMA Category G eligible.

FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$1,500,000.00.**

Flagler County

Flagler County- Category B Dune Projects

Portions of North Flagler County outside of the previously constructed dune projects are in need of emergency dune placement as a result of Hurricane Milton. Estimated construction costs are 70,000 cubic yards of sand at an estimated $75.00 per cubic yard. FEMA eligible non-federal cost share based on FEMA Cat B is 75% and 25% state/local share is **$1,312,500.00.**

North Flagler County Dunes, R-2.3 to R-11.8, R-15.9 to 24.3 and R-47.9 to R-65

The North Flagler County Dune Project is managed by Flagler County. Based on pre- and post-storm surveys, it is estimated there was approximately 130,000 cubic yards of sand lost to Hurricane Milton.

Recommend dune nourishment to restore volumes lost due to storms. Estimated construction cost is $9,750,000.00. Project is FEMA Category G eligible.

FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$2,437,500.00.**

Volusia County

There are currently no engineered beaches in Volusia County eligible for FEMA Category G recovery or FEMA Category B emergency sand placement following Hurricane Milton.

In order to assist Volusia County in restoring the beach and dune system following Hurricane Ian and Nicole, Volusia County received $46,620,000.00 in grant agreements for initial repairs and for long-term management projects. Although the county's shoreline above and below mean high water lost approximately 2 million cubic yards of sand, it is expected that upcoming restoration projects will replace these losses. Given this, Volusia County responsibly declined requesting additional funds in response to Hurricane Milton at this time.

Brevard County

Brevard County Dunes — South Beaches, R-141 to R-213

The Brevard County Dunes — South Beaches Project is managed by Brevard County. Based on pre- and post-storm beach surveys, it is estimated there was approximately 62,000 cubic yards of sand lost to Hurricane Milton.

Recommend dune nourishment to restore volumes lost due to Hurricane Milton. Estimated construction cost is $5,890,000. Project is FEMA Category G eligible.

FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$1,472,500.00**

Indian River County

Sector 3 Beach, R-20 to R-55

Indian River County manages Sector 3 beaches. Based on pre- and post-storm beach surveys, it is estimated there was approximately 322,400 cubic yards of sand lost due to Hurricane Milton.

Recommend nourishment to restore volumes lost due to storms. Estimated construction cost is $16,952,839.01. Project is FEMA Category G eligible.

FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$4,057,758.00.**

St. Lucie County

Intermediate Dune Repairs in Ft. Pierce Shore Protection Project, R-34 to R-41 or St. Lucie South Beach Nourishment, R-98 to R-116

These are federally authorized beach projects managed by the USACE and St. Lucie County. The projects are federally authorized and are eligible for FCCE recovery funds and are not eligible for FEMA assistance. However, due to construction schedule uncertainties, St. Lucie County is requesting **$4,238,209.75** in state, non-federal funds to construct a dune project to protect upland structures and restore habitat prior to the 2025 and/or 2026 hurricane seasons.

Martin County

MacArthur Dune Project, R-27 to R-34

This is a stretch of previously constructed but unmanaged beach and does not qualify as an engineered beach eligible for FEMA Category G funding. Martin County is seeking assistance in restoring dune losses on this section of beach under FEMA Category B funds.

Recommend dune restoration from R-27 to R-34. Based on a dune nourishment volume of approximately 4,500 cubic yards and the difference in eligible funds from FEMA, construction costs are estimated at $180,855.00.

Recommend funding the non-federal share of **$180,855.00.**

Palm Beach County

Coral Cove Dune Nourishment, R-1 to R-7.5

The Coral Cove Dune Nourishment Project is managed by Palm Beach County. Based on pre- and post-storm beach surveys, it is estimated that approximately 15,468 cubic yards of sand was lost due to Hurricane Milton which is not eligible for FEMA assistance.

Recommend dune nourishment to restore volumes lost due to the storm.

FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$925,759.80.**

Singer Island Dune Project, R-60.5 to R-65.7

Similar to the Coral Cove Project, the Singer Island Dune Nourishment Project is managed by Palm Beach County. Based on pre- and post-storm beach surveys, it is estimated there was approximately 17,765 cubic yards of sand lost due to Hurricane Milton that is not FEMA eligible.

FEMA eligible non-federal cost share based on FEMA 75% and 25% state/local share is **$1,133,939.95.**

III. Summary

There are 35 projects or coastal reaches identified in the Plan. In total, the non-federal funds requested through this Recovery Plan is **$242,477,972.24**.

It is important to note that the comparatively high funding amount is likely due to several factors. First, the Gulf Coast Region has seen an extremely active hurricane season for the previous three years, with some areas being impacted by four storms in two seasons. Secondly, federal funding is slow to become available and waiting for this funding to commence construction of beach and dune restoration efforts can leave communities more vulnerable for sometimes multiple hurricane seasons. Lastly, high construction mobilization costs are being noted throughout Florida. This is likely due to the high number of construction activities requiring dredge equipment throughout the east coast of the U.S., and the relatively high amount of work being advertised in Florida, which are driving the increased demand of dredge equipment.

All but one of the 35 project areas have prior history of sand placement or management activities to some extent. Comparatively, the Hurricanes Ian and Nicole Recovery Plan identified 48 project areas, but approximately 68% of the total funds being requested was being applied to previously unmanaged stretches of shoreline.

The funds in this Recovery Plan are being requested outside of the annual beach and inlet management funding.