TREASURE COAST REGIONAL PLANNING COUNCIL

M E M O R A N D U M

To: Council Members AGENDA ITEM 9

From: Staff

Date: September 18, 2015 Council Meeting

Subject: Miami-Dade County Beach Renourishment Project – Draft Environmental Assessment

Introduction

The U.S. Army Corps of Engineers (Corps) has submitted a Draft Environmental Assessment (EA) for the Dade County Beach Erosion Control and Hurricane Protection (BEC&HP) project to the Florida State Clearinghouse for review through the Intergovernmental Coordination and Review (ICR) process. The Florida Department of Environmental Protection (FDEP) administers the state clearinghouse program, which provides a coordinated review by all appropriate state and regional agencies. The review process is intended to inform the applicant of potential concerns or inconsistencies regarding the proposed activity. FDEP has requested that Council review the Draft EA and submit comments by September 21, 2015. One of Council's statutory responsibilities is to coordinate the state's required ICR process at the local level. As part of this process, Council solicited comments on the proposed project from potentially affected local governments in the region. These comments are attached to this report, which also includes a summary of the proposed project and Council comments.

Summary of the Project

The National Environmental Policy Act (NEPA) requires that, at a minimum, an EA be completed for projects involving federal participation. The purpose of the Draft EA is: 1) to review the environmental effects of utilizing sand source alternatives associated with the BEC&HP project for Miami-Dade County; and 2) determine whether the expected impacts from the project are significant enough to warrant preparation of a full Environmental Impact Statement (EIS). The Draft EA was submitted along with several related documents, including: Draft Finding of No Significant Impact for the Dade County BEC&HP; Draft Limited Reevaluation Report for the Dade County BEC&HP (July 2015); and Southeast Florida Sediment Assessment and Needs Determination Study (September 2014). These related documents provide additional information about the project.

The Dade County BEC&HP project was authorized by the Flood Control Act of 1968 and consists of renourishing a 9.3-mile main segment of the beach that was originally begun in 1975, and a 2.5-mile Sunny Isles segment that was added to the project in 1985 (Exhibit 1). All the beaches in Miami-Dade County are classified as "critically eroded" by the State of Florida.

Approximately 3,600,000 cubic yards (cy) of sand will be needed for beach renourishment during the remaining period of federal participation, which is 10 years for the main segment, and 23 years for the Sunny Isles segment. However, Miami-Dade County's traditional offshore sand sources for beach renourishment have been depleted. Therefore, the project proposes to obtain sand from several alternative sources.

Alternative Sources of Sand

The Corps along with state and local partners undertook an extensive effort to identify all potential domestic and non-domestic sources of sand. This process identified one hundred eleven potential sand sources. Based on an analysis of compatibility with sand from Miami-Dade County beaches, sites were dropped from further consideration and 50 potential sites were carried forward into the second level of analysis. This analysis focused on potential sand sources with adequate volume to meet the remaining needs in Miami-Dade County. The last step in the process was to select sand sources closest to Miami-Dade County that had made it through previous evaluation levels.

The most common reasons alternatives were screened out for potential use included: sand grain size and/or color were not compatible with the Dade BEC&HP project; the source was identified for use on another project in Southeast Florida; and the Corps lacks authority, under Section 935 of the Water Resources Development Act (WRDA) of 1986, to acquire non-domestic sources if domestic sources are economically/environmentally available. Regarding the use of non-domestic sources, the Conferee Report on the fiscal year 1999 Energy and Water Appropriations Bill (H8842) directs that none of the funds provided for the Dade County BEC&HP project be used for acquisition of foreign source materials for the project unless the Secretary of the Army provides written certification to the Committees on Appropriations that domestic sources of material are not available. Finally, sand sources outside of Miami-Dade County within three miles of the adjacent shoreline were eliminated from further consideration due to potential risk and uncertainty of shoreline impacts associated with sand removal.

The screening process resulted in the identification the following seven sources that met the project requirements:

1. Site M4-R105 located about 4 to 5 miles offshore of Martin County
2. Site SL10-T41 located about 10 to 11 miles offshore of St. Lucie County
3. Baker's Haulover Inlet ebb shoal in Miami-Dade County
4. Lummus Park in Miami Beach
5. Atlantic Civil Inc. (ACI) commercial sand mine in Miami-Dade County
6. Witherspoon Sand Plant commercial sand mine in Glades County
7. Ortona Sand Plant commercial sand mine in Glades County

Two of the sites are located in the Atlantic Ocean offshore of the Treasure Coast Region within federal waters of the Outer Continental Shelf (OCS). Potential sand source site M4-R105 is located about 4 to 5 miles offshore of Martin County and approximately 80 miles north of the Dade BEC&HP project. This site has approximately 600,000 cy of sand compatible with the requirements for placement in Miami-Dade County. It is located in about 60 to 70 feet of water.

Potential sand source site SL10-T41 is located about 10 to 11 miles offshore of St. Lucie County and approximately 120 miles north of the Dade BEC&HP project. This site has approximately 4,600,000 cy of sand compatible with the requirements for placement in Miami-Dade County. This site is also located in about 60 to 70 feet of water. Authorization from the Bureau of Ocean Energy Management (BOEM) is required to use the two sand mining areas in OCS waters (Exhibit 2).

Sand may be obtained from the offshore sites using either a hydraulic dredge to pump the sand to a barge, or through the use of a hopper dredge, which is a self-propelled ocean-going vessel that hydraulically lifts dredged material from the bottom surface and deposits it into an open hopper within the ship. When the hopper is full, the dredge transits to a disposal location and releases the dredged material into an underwater disposal site by opening doors on the hopper bottom or in some cases the vessel is designed to split open longitudinally. The sand is then typically pumped to the renourishment site through a pipeline.

Draft EA Preferred Alternative

The Draft EA indicates the preferred alternative is to use a combination of the seven sand sources identified above to renourish the beaches. None of the sand sources have sufficient sand by themselves to allow for the renourishment of the project area over the remaining period of federal participation. Due to variation in the costs and limitations associated with each site, the Draft EA proposes using the following protocol: Bakers Haulover Inlet ebb shoal and Lummus Park would be used whenever available; Martin County offshore would be used for the first renourishment requiring a volume less than or equal to its available volume of 600,000 cy; upland sand sources would be used for any renourishment of 200,000 cy or less; and St. Lucie offshore would be used for renourishments in excess of 200,000 cy up to a total volume of the available 4.6 million cy.

The Draft EA indicates that the preferred alternative will result in potential or temporary impacts to the coastal environment; sea turtles; listed corals; hardbottom communities; non-listed species; benthic habitat; essential fish habitat; air quality; noise; aesthetics; and recreation and safety. The Draft EA proposes mitigation measures to avoid and minimize the potential for impacts, and compensatory mitigation for unavoidable impacts. The compensatory mitigation is primarily related to the unavoidable impacts associated with the pipeline corridors and renourishment operations in the nearshore area in Miami-Dade County. Based on these findings, the Corps has issued a Draft Finding of No Significant Impact, which concludes that the proposed action will not significantly affect the human environment and does not require an EIS.

<u>Evaluation</u>

A major concern with the proposed project is that it will result in a significant financial impact to the ongoing beach renourishment activities of the local governments in the Treasure Coast Region. Martin and St. Lucie counties currently rely on offshore sand sources for beach renourishment projects. Miami-Dade County's use of sand sources in relatively close proximity to Martin and St. Lucie counties will make these sources unavailable for Martin and St. Lucie county renourishment projects in future years. This will cause local governments in the Treasure

Coast Region to seek more distant sources of sand for future renourishment activities, which will increase the cost of these projects.

The Southeast Florida Sediment Assessment and Needs Determination Study concluded that currently known sediment resources for St. Lucie, Martin, Palm Beach, Broward, and Miami-Dade counties exceed sediment needs by 100,000,000 cy for beach renourishment projects through the next 50 years (Exhibit 3). However, this study does not document how the use of various sources of sand by one county will impact the cost of sand for other counties. Furthermore, the 50-year time frame is inadequate to predict future financial impacts, which could be even greater when domestic sources of sand are exhausted.

The Draft EA identified several non-domestic sand sources considered for the project, including Ocean Cay (Bahamas); Turks & Caicos; Jamaica; Dominican Republic; and Belize. Of these, the Bahamas site is only 65 miles from the Dade County BEC&HP project site. This site is closer to the project than the proposed sites located offshore of Martin and St. Lucie counties. Use of a Bahamas site would eliminate economic impacts to local governments in the Treasure Coast Region. The Draft EA indicates the Bahamas site and other non-domestic sand sources were eliminated from consideration, because the Corps lacks authority, under Section 935 of WRDA 1986, to acquire if domestic sources are economically/environmentally available. However, the Draft EA does not present an economic analysis of using a sand source in the Bahamas.

Finally, the Draft EA does not include a discussion of how the implementation of other technologies could be employed to provide a more sustainable solution to beach erosion in Miami-Dade County. The installation of permeable groins or other new technologies designed to reduce erosion and promote accretion of sand on the beaches should be considered as a long-term alternative to the proposed beach renourishment activities and use of alternative sand sources.

Conclusion

In determining "significant' impact and whether a full EIS is needed, NEPA lists several evaluation criteria required to be considered. This project meets three of the significance requirements, which suggest further impact analyses should be performed through an EIS. These include: 1) the possible effects from the project are highly uncertain or involve unique or unknown risks; 2) the project may establish precedent for future actions with significant effects and represents a decision about the future considerations (in this case, the offshore sand source areas); and 3) it is reasonable to anticipate cumulatively significant impacts, which in this case are avoidable.

Because of the deficiencies and criteria noted above, the Corps should conduct an EIS that, at a minimum, includes the following:

- Analysis of when the preferred alternative will begin to have a negative economic impact on local governments in the Treasure Coast Region by causing them to utilize more distant sources of sand for future renourishment activities.

- Analysis of when domestic sources of sand will be exhausted for beach renourishment projects in southeastern Florida and the only reasonable alternative will be non-domestic sand sources.

- Analysis of the total economic impact to local governments in the Treasure Coast Region incurred between the time the preferred alternative will force them to seek more distant sources of sand for future renourishment activities and the time when domestic sources of sand will be exhausted.

- Analysis comparing the economic cost and benefits of using domestic and non-domestic sand sources in the Bahamas.

- A plan to mitigate any economic impacts to local governments in the Treasure Coast Region.

- A statement from the Corps providing justification to the U.S. Congress that non-domestic sand sources should be used for the project to avoid economic impacts to local governments in the Treasure Coast Region.

- Consideration of more sustainable solutions to beach erosion in Miami-Dade County, such as the installation of permeable groins or other new technologies designed to reduce erosion and promote accretion of sand on the beaches.

The attached correspondence from St. Lucie County also recommends that a full EIS is needed for the project (Exhibit 4).

Recommendation

Council should adopt this report and authorize its transmittal to the Florida State Clearinghouse, U.S. Army Corps of Engineers, and other interested organizations and parties.

Attachments

List of Exhibits

Exhibit

1	Project Area Placement Map
2	Potential Sand Sources After Screening
3	Dade County Beach Erosion Control Project Fact Sheet
4	Correspondence dated September 2, 2015 from St. Lucie County

Exhibit 1
Project Area Placement Map

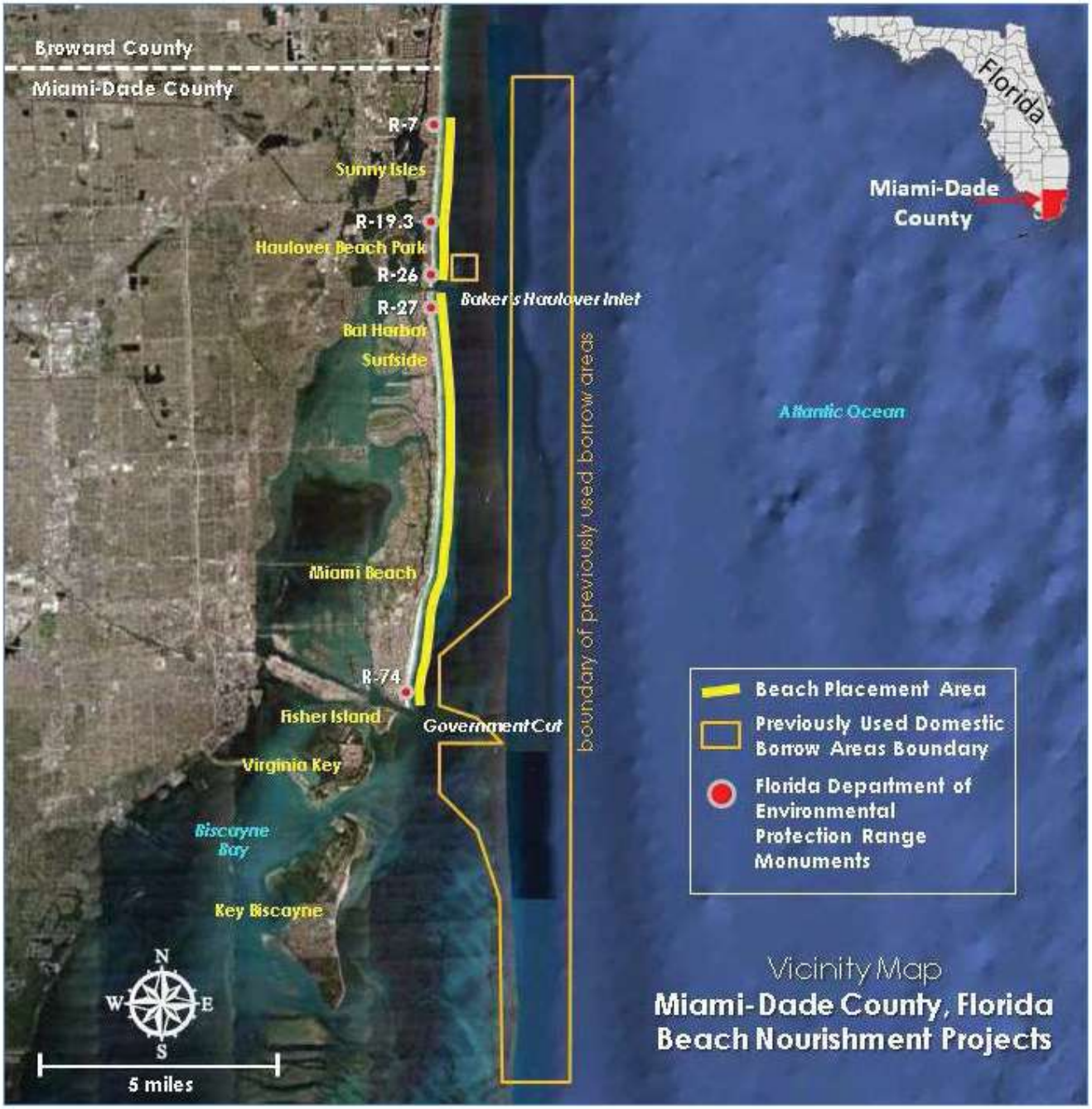

Exhibit 2
Potential Sand Sources After Screening

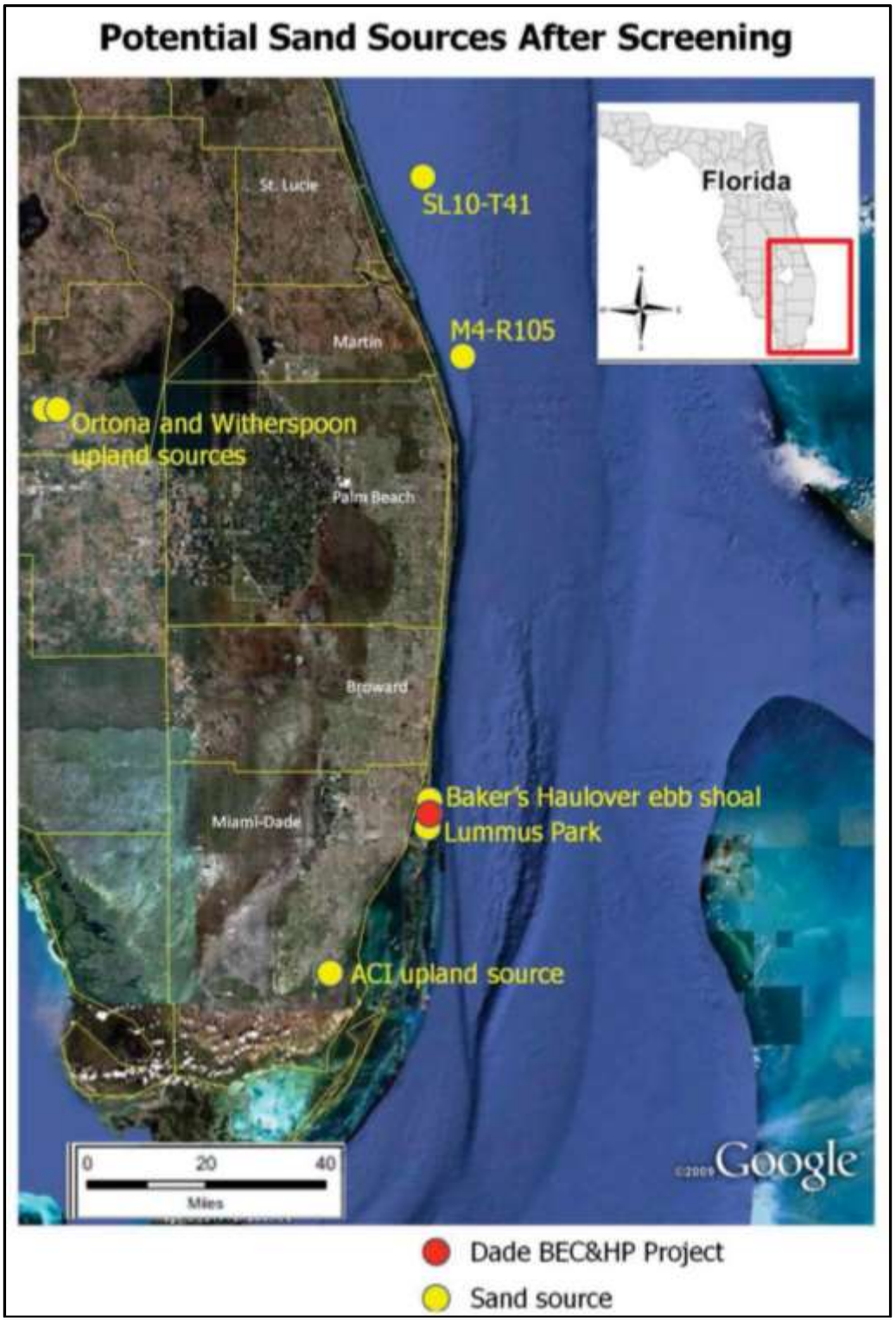

Exhibit 3
Dade County Beach Erosion Control Project Fact Sheet

DADE COUNTY BEACH EROSION CONTROL AND HURRICANE PROTECTION PROJECT | Alternative Sand Source Investigation

FACTS & INFORMATION

JUNE 2015

THE BACKGROUND

Beach renourishment has been an ongoing practice in southeast Florida since the late 1970s providing essential economic, environmental and recreational benefit to coastal communities. Renourished beaches and dunes serve as a vital buffer between coastal infrastructure and the destructive forces of ocean waves and surge during storm events.

Figure 1: Southeast Florida region (Corps 2009)

The southeast Florida region encompasses five counties (St. Lucie, Martin, Palm Beach, Broward, and Miami-Dade) and approximately 200 miles of Florida shoreline **(Figure 1)**. Throughout the region, twenty-four federal and nonfederal beach nourishment projects provide storm damage reduction to infrastructure as well as incidental recreational opportunities for local, national, and international visitors.

These constructed beaches mimic the protective and recreational functions of natural beaches, and the resulting benefits of beach nourishment projects are well documented. The 2008 Shore Protection Assessment (SPA) completed an in-depth evaluation of benefits provided by the Martin County Shore Protection Project during the 2004 hurricane season. The study calculated over $11-million damages were prevented by the Martin County Shore Protection Project which equals approximately 20% of the 50-year total project cost realized in one storm season. As an example of recreational benefits, Miami Beach had little beach tourism before construction of the Dade County Beach Erosion Control and Hurricane Protection Project in 1975. Since construction of the project, it is estimated that tourists contribute $11-billion annually to the Miami Beach economy, almost half of which is from international tourists (Houston 2008).

Sand dredged from offshore borrow sources in state and Federal waters is typically used to renourish the projects. The current practice is for projects to access borrow sources located in close proximity to the project since they are often the most economical sand sources. Counties are often cost-sharing partners in the projects along with the State of Florida and the Federal government (in the case of Federal projects). Many of these projects were initially constructed in the 1970's and 1980's and are periodically renourished with sand over a typical project life of 50 years.

Renourishment needs of ongoing projects, initiation of new projects, existing environmental resources, and increasing environmental constraints have continued to reduce the available sand supply located offshore, particularly in the most southern counties, Broward and Miami-Dade, where narrowing of the continental shelf limits investigation and access to sand sources. Currently, sand sources offshore of these two counties fall short of the counties' renourishment needs throughout their projects' remaining periods of Federal participation.

Miami-Dade County in particular is running out of dependable, economical, and environmentally practicable offshore sand sources. In 1986, a congressional directive authorized the acquisition of non-domestic sand IF such material is not available from domestic sources for environmental or economic reasons. Since that time, the Corps has been investigating the use of non-domestic sand for use on Federal projects in southeast Florida, particularly in Miami-Dade County.

Investigations for Miami-Dade County indicated that some sources, particularly Bahamian aragonite, which has been used on non-federal projects in southeast Florida, looked promising. However, in 1999 the FY99 Energy and Water Appropriations Bill directed that no funds provided for the Dade County, Florida shore protection project be used for acquisition of foreign source materials unless the Secretary of the Army provides written certification that domestic sources are not available.

PROJECT SCHEDULE:

The Corps must complete a Limited Re-evaluation Report (LRR) and subsequent NEPA documentation to utilize sands as discussed above. It's anticipated that this report will be approved ~ November 2015. From that point the Corps would start permit applications and detailed designed with construction contracts awarded in 2016 (subject to appropriations).

DADE COUNTY BEACH EROSION CONTROL AND HURRICANE PROTECTION PROJECT | Alternative Sand Source Investigation

REGIONAL SAND STUDIES:

Studies have been underway to identify alternative sand sources. In addition to non-domestic, the studies included domestic sources such as upland sources, sources in deeper offshore waters, sources offshore of other counties in southeast Florida in federal and state waters, even domestic sources as far away as the Apalachicola River. In 2007, the Assistant Secretary of the Army for Civil Works directed that all remaining sand offshore of Miami-Dade be used for beach renourishment in the county, to investigate the viability of non-domestic sand sources, and to investigate a regional management plan for use of domestic sources.

Subsequently in 2009 a Regional Sediment Management(RSM) Plan for southeast Florida indicated there was just enough domestic offshore sand in the region to support federal and non-federal projects for 50 years. Further economic analysis and discussion with dredging industry indicated that domestic sources were more dependable and economically viable than non-domestic.

In 2012, a collaborative effort between the Florida Department of Environmental Protection (FDEP), the five southeast Florida Counties, and the U.S. Army Corps of Engineers (Corps) sought to update the 2009 RSM Plan with improved data. The FDEP lead the study effort with technical input from the Corps, and data provided by southeast Florida counties. Each county determined its sand need for federal and non-federal nourishment projects over the next 50 years. With a 55% contingency added to these needs, it was found that 174,101,870 cubic-yards of sediment are needed to support placement of planned, full-sized beach nourishment projects through 2062. The FDEP and the Corps carried out geotechnical investigations to locate additional beach quality sand sources. With contingencies applied, it was found that 280,037,956 cubic-yards of sand exist offshore of southeast Florida that meet the criteria for this study, established for sand placement on Florida beaches. Therefore, currently known sediment resources in St. Lucie, Martin, Palm Beach, Broward and Dade Counties exceed 50-year sediment needs by 100,000,000 cubic yards.

	Sand Needs (cy)		Sand Availability (cy)		
County	50-Year Volume Need	50-Year Need +55% Contingency	2012 Total Volume per County	Volume + Contingency/ Confidence	Volume after Needs Met
St. Lucie	18,017,487	27,927,105	175,847,874	106,149,618	78,222,514
Martin	22,111,000	34,272,050	107,593,227	56,160,331	21,888,281
Palm Beach[2]	45,577,000	70,644,350	191,951,814	117,728,007	47,083,657
Broward[2]	11,650,000	18,057,500	-	-	-18,057,500
Miami-Dade[2]	14,968,300	23,200,865	-	-	-23,200,865
	112,323,787	174,101,870	475,392,915	280,037,956	105,936,086
					100,000,000

NEPA PROCESS:

The National Environmental Policy Act requires projects that are federally funded; federally authorized or federally permitted to be analyzed to determine the effects on the human environment and for this analysis to be provided to the public for review and comment. The human environment is defined as the natural, social, economic and cultural resources in the project area. The NEPA process begins with Scoping, an effort to work with the public to identify specific resources that may or may not be impacted by the proposed project and determine which resources will be the focus of the impact analysis. After Scoping, a NEPA document is prepared and a draft of the document is released to the interested public and stakeholders for review and comment. After review and comment, the comments are addressed and the NEPA document is finalized. After finalization, federal action (authorization, funding, permitting) may move forward.

POTENTIAL SAND SOURCES:

A Limited Re-evaluation Report (LRR) and subsequent NEPA documentation will investigate the use of alternative sand sources for the Dade County Beach Erosion Control and Hurricane Protection Project. Alternative sand sources may include, but are not limited to:

- material remaining in previous Miami-Dade County borrow areas
- upland sand sources
- deepwater sites offshore of Miami-Dade County
- borrow areas offshore of Palm Beach County
- borrow areas offshore of Martin County
- borrow areas offshore of St. Lucie County
- borrow areas offshore of Broward County
- flood and ebb shoal at Bakers Haulover Inlet
- sand relocation from the accreting South Beach area to eroding areas
- carbonate materials (aragonite) from foreign sources.

Of these potential sources, seven are recommended by the LRR and EA for approval in order to meet renourishment needs of the project over the remaining period of Federal participation. The recommended sand sources include:

- Lummus Park
- Bakers Haulover Ebb Shoal
- M4-R105, located offshore of Martin County
- SL10-T41, located offshore of St. Lucie County
- Witherspoon Sand Plant upland sand source
- Ortona Sand Plant upland sand source
- ACI Homestead upland sand source

The use of a particular source would depend on the volume necessary for a specific renourishment.

(Figure 4 in the draft LRR/EA shows the location of these sources relative to the project.)

FOR MORE INFORMATION

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US ARMY CORPS OF ENGINEERS

Exhibit 4
Letter from St. Lucie County

BOARD OF COUNTY COMMISSIONERS

ST. LUCIE COUNTY FLORIDA

FRANNIE HUTCHINSON
COMMISSIONER

September 2, 2015

VIA ELECTRONIC MAIL: DadeCountyBECComments@usace.army.mil

U.S. Army Corps of Engineers
Jacksonville District
Planning and Policy Division, Environmental Branch
Attn: Terri Jordan-Sellers
P.O. Box 4970
Jacksonville, FL 32232-0019

RE: Draft Environmental Assessment and Finding of No Significant Impact for Dade County Beach Erosion Control and Hurricane Protection Project

Dear Ms. Jordan-Sellers:

On behalf of the St. Lucie County Erosion District Board (the "Board"), I am writing to express the Board's strong opposition with the U.S. Army Corps of Engineers' (USACE or Corps) intention to use an Environmental Assessment/Finding of No Significant Impact (EA/FONSI) for the Dade County Beach Erosion Control and Hurricane Protection Project (Project). Based on the size, duration, and environmental factors involved, as well as precedent set by prior, similar projects, the Board firmly believes that in order for this Project to be sufficiently evaluated pursuant to the National Environmental Policy Act (NEPA), the Corps must analyze this Project through an Environmental Impact Statement (EIS) or a Programmatic EIS (PEIS).

The Board appreciates economic and environmental reasons for the Proposed Project and generally does not oppose renourishment of Dade County beaches. However, an EA does not provide the necessary in-depth analysis of cumulative impacts of the reasonably foreseeable Project impacts to marine fauna, and other comparable impacts of future projects that is required in this instance. An EA is not adequate to address these considerations. Therefore, the Board is urging the Corps to evaluate the Project under an EIS rather than an EA/FONSI.

More specifically, the Draft EA for the Project (DEA) indicates that a FONSI is not appropriate and an EIS is necessary to adequately address the following concerns:

The Size, Scope and Duration of the Project, along with Precedent, Mandates an EIS

The Project contemplated in the DEA is at minimum a 23-year project, but at least a 50-year planning horizon should be addressed. This is simultaneously too long to be properly analyzed by the DEA

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and too short of a planning horizon to evaluate the perpetual long term needs of the entire coastline, rather than a single county, to be renourished in the future. The size of the proposed Project and the multiple sources from which sand will be borrowed also indicates that this is a major federal action that must be analyzed in an EIS or PEIS rather than an EA/FONSI.

Moreover, the Project proposes to use at least five (5) separate sand sources to meet the Project needs, most of which are not rechargeable, and some of those sites will be completely exhausted of all sand and infauna resources. The scope of this Project and its irreversible use of finite resources should be more thoroughly analyzed through an EIS.

Precedent also suggests that a project of this scale must be analyzed under an EIS. For example, another, much smaller project, the St. Lucie County South Beach and Dune Restoration Project, was recently required to complete a Final EIS (St. Lucie FEIS) in order to comply with NEPA.

Irretrievable Commitment of Resources

Most of the proposed borrow sites are not rechargeable. The DEA anticipates that the SL10-T41 site will not recharge for decades, if not centuries. (DEA p. 100). Thus, any use of that sand is for practical purposes an irretrievable commitment of resources. To commit the massive amount of sand needed for the Project for the benefit of a single county irreversibly deprives St. Lucie and other nearby counties of the opportunity to use that sand for its own future renourishment needs. The Project should be considered in light of the renourishment needs of the entire Atlantic Floridian coast and requires more analysis than the mere acknowledgment of other projects and Figure 9 in the DEA.

Further, the ability of sand source sites to recharge after the dredge event should be considered as a critical factor to evaluate the proposed borrow areas. Much of the state coastline will need continuous renourishment into the foreseeable future and the decision to harvest from unsustainable sources for such a large, long-term project must be analyzed more carefully. An EIS or PEIS would provide the USACE with the hard look required by NEPA.

Cumulative Impacts and Reasonably Foreseeable Future Activities

The St. Lucie FEIS already contemplates, as a reasonably foreseeable future activity, using sand from off its coasts to meet its future renourishment needs. Specifically, the St. Lucie FEIS discusses using sand more than three miles off its coast to meet its 50-year beach management needs. (See St. Lucie FEIS p. 179, St. Lucie FEIS Appendix R). Because this activity is specifically contemplated in an issued Final EIS, the USACE must evaluate the cumulative impacts of dredging the SL10-T41 in close proximity to the other dredge sites already anticipated off the coast of St. Lucie County. Again, the DEA's brief acknowledgement of the St. Lucie project is not an adequate analysis of the cumulative impacts of these and other projects.

In addition to NEPA's requirements to consider cumulative impacts and reasonably foreseeable future activities, the Corps has a separate directive to consider long term, *regional* renourishment needs. As explained on page 8 of the DEA, in a letter dated December 10, 2007, the Assistant Secretary of the Army for Civil Works directed the Corps to take a three-tiered approach to resolve Miami-Dade County's need for sand. This directive specifically required that the remaining Florida domestic sand sources should be evaluated through a comprehensive regional management plan to address the long term regional renourishment needs along the Atlantic coast of Florida. This EA does not provide such an analysis and

as discussed above, forecloses certain sources of sand such as the SL10-T41 from future use. An EIS that properly addresses cumulative impacts would provide the analysis necessary to comply with this directive and make an informed decision as required by NEPA.

Finally, an adequate cumulative impacts analysis is necessary in order to fully evaluate whether any appropriate measures, mitigation, or monitoring is necessary.

Alternatives Analysis

Page 6 of the DEA states that "Amounts of material remaining in offshore sand source areas designed for construction of the project are summarized in the 'Status of Available Borrow Sources' section of the Limited Reevaluation Report;" however, no such section exists in the Limited Reevaluation Report. Although the document later states that as a result of previous renourishments, "Miami-Dade County has effectively depleted known sand supplies in traditional offshore sand sources," the document does not quantify the remaining amount of available sand in these original borrow areas, nor does it discuss whether the original borrow areas will recharge or become viable for use prior to the end of this 23-year project with a 50-year planning horizon.

The DEA explains that Lummus Park is an accretional beach that has been used and "should be considered by the sponsor or Corps for future events whenever possible," but is not analyzed as a "plausible renourishment scenario" in the DEA. The DEA states that this has been previously evaluated in a separate EA (not an EIS), but given the massive scale and duration of the Project, Lummus Park should be considered a source for a least a portion of the Project's source needs. Use of a PEIS would allow this option to be considered for later portions of the Project pursuant to a potential future EA for use of this option.

Additionally, Section 2.3 – Preferred Alternative(s) (DEA p. 48) does not include a discussion of the Atlantic Civil ("ACI") mines and the relative cost of using sand from that source. ACI is also not listed as a potential source in any of the phases shown in the Preferred Renourishment Scenario. (DEA Table 10). Since the EA lists the ACI mines as a viable source option, it should also consider the use of that sand in the discussion of the amounts of sand that may be taken from each source. In fact, multiple alternative scenarios would better inform the Corps and the public of viable options to meet the project's needs.

The DEA used the availability of data for a particular site as a key criteria in evaluating alternative sources. Screening alternatives based on whether there is existing data may not be the most effective criteria. For example, pumping sand from SL10-T41 is said to be the most expensive alternative, yet it is the proposed source for 5 of the 10 project phases outlined in the Preferred Renourishment Scenario. (DEA Table 10). Analysis of other potential sites that simply lack data due to an absence of analysis may lead to a less expensive, more sustainable sand source for the Project and should be considered.

Overall, an EIS or PEIS would provide a better platform for an alternatives analysis that should be undertaken for a project of this magnitude.

Effects on Marine Life and Essential Fish Habitat

The DEA identifies three units of critical habitat for the loggerhead sea turtles that will be affected by the sand sources in federal waters, including SL10-T41. It also identifies potential impacts to other

marine fauna, including other sea turtles, invertebrates, demersal fishes, bottlenose dolphins, North Atlantic Right Whales, humpback whales, a variety of fishes, and others. Further, the DEA anticipates impacts to essential fish habitat as a result of using the sand sources in federal waters. Full inter-agency consultation should be undertaken to analyze these impacts as part of the analysis for an EIS or PEIS.

Many beaches, such as the ones found in St. Lucie, are nesting areas for sea turtles. The DEA acknowledges that coastal erosion can lead to "shoreline impacts" and associated loss of sea turtle nesting habitat (DEA P. 12). Since sand used for the Project precludes that same sand from being used for other projects in St. Lucie County, an analysis of the needs of vital nesting beaches should be undertaken in to order to ensure adequate resources exist in the future to support this vital function of Florida's beaches.

Sea Level Rise

The DEA does not adequately discuss the impacts of sea level rise on the Project or its impacts on the future restoration and renourishment needs of the Project's beaches and other Florida beaches. This potential impact should be analyzed in an EIS or PEIS.

Impacts to Human Environment

As more thoroughly discussed above, many Florida beaches will require renourishment in the future. Like the citizens of Miami-Dade County, other counties depend on their beaches to attract tourists and businesses and thus have a concrete, vested interest in the future health of their beaches. The long-term ability of these communities to be able to renourish their beaches depends on the availability of appropriate sand, some of which is now proposed to be irretrievably committed to the Project. Impacts to these resources should be analyze further pursuant to an EIS or PEIS.

Also, SL10-T41 site is a popular recreational fishing site, and the short term impacts of disrupting the fishing, in addition to the long term impacts of potentially destroying that area's use as a fishing site due to impacts to marine fauna, should be considered in an EIS or PEIS.

This Project Requires an EIS or PEIS

In short, the information presented in the DEA indicates that the Corps should not issue a FONSI. For the reasons explained above as well as others provided by other commenters to the DEA and the scoping proceedings, this Project must be analyzed pursuant to an EIS or PEIS in order to comply with the requirements of NEPA.

Sincerely,

Frannie

Frannie Hutchinson, Chair