

## APPENDIX D: CLEAN WATER ACT SECTION 404(B)(1) EVALUATION

### SECTION 404(b)(1) EVALUATION

The following short form 404(b)(1) evaluation follows the format designed by the Office of the Chief of Engineers. As a measure to avoid unnecessary paperwork and to streamline regulation procedures while fulfilling the spirit and intent of environmental statutes, the New Orleans District is using this format for all proposed project elements requiring 404 evaluation, but involving no significant adverse impacts.

**PROJECT TITLE:** Grand Isle and Vicinity, Louisiana Beach Erosion and Hurricane Protection Project in Jefferson Parish, Louisiana.

**PROJECT DESCRIPTION:** The proposed action (proposed project) involves conducting beach and dune renourishment and dune restoration encompassing up to a total of approximately 76 acres on the gulf side of Grand Isle along its western end. The overall beach renourishment and dune restoration limits are divided into two “areas” (see Figure B1 of SEA #573A)). Area 1 would begin at the existing western jetty and extend approximately 4,970 feet eastward (roughly 0.9 mile), ending roughly 565 feet east of Alma Lane. The width of Area 1 (as measured perpendicular to its northern boundary) would range from roughly 400 feet to 520 feet. This area’s beach renourishment and dune restoration footprint (area within the overall limits of construction) would occupy a total of approximately 51.7 acres, with about 5.9 acres consisting of dune restoration and the remaining 45.8 acres consisting of beach renourishment. Area 2 would begin at the eastern boundary of Area 1 and would, at the most, extend approximately 2,550 feet eastward (roughly 0.5 mile) ending roughly 163 feet east of Shelton Lane. It is currently anticipated that all of Area 1 would be constructed, but the limit of construction for Area 2 is still unknown. If all of Area 2 is implemented, its beach renourishment and dune restoration limits would occupy a total of approximately 24.3 acres, with about 3.5 acres consisting of dune restoration and 20.8 acres consisting of beach renourishment.

**Table D1. Approximate lengths and acreages for the proposed beach renourishment and dune restoration .**

Area	Length (feet)	Renourishment and Restoration Acreages		
		Beach	Dune	Total
Area 1	4,970	45.8	5.9	<b>51.7</b>
Area 2	2,550	20.8	3.5	<b>24.3</b>
<b>Totals</b>	<b>7,520</b>	<b>66.6</b>	<b>9.4</b>	<b>76.0</b>

Note: The length and acreages indicated for Area 2 represent maximums. The minimum length and acreages would be the data for Area 1.

Beach renourishment and dune restoration would primarily involve placement of sand on top of eroded beach areas and on eroded portions of the existing dune that runs parallel to the shoreline near the northern limits of the beach renourishment and dune restoration areas. Figure B5 of SEA #573A provides a typical cross-section view of the proposed renourishment and restoration. For dune areas where the crest (top) of the dune has eroded significantly, placement of fill (sand) would extend over the dune’s crest and would continue downward to a point along the landward sideslope (slope on north side of dune), but would not extend to the toe-of-slope. It is noted that a portion of the remnant shoreline in the southern end of Area 1 is presently lined with exposed stone rip-rap with no beach remaining. The proposed beach renourishment and dune restoration in the area with rip-rap would differ somewhat from the typical cross-section shown in Figure B5 of SEA #573A. In this area, additional sand fill would be placed on the rip-rap slope such that

there would be a 3-feet thick layer of sand over the existing rock.

Dredging would occur in one or two borrow areas; the Caminada Pass Shoal (CPS) borrow site (230 acres) and the Barataria Bay Waterway (BBWW) borrow site (643 acres). Both of the proposed borrow sites are in open water areas (marine subtidal unconsolidated bottom) that classify as other waters of the United States. The BBWW borrow site would encompass a maximum of approximately 644 acres. The CPS borrow site would encompass a maximum of approximately 230 acres. The existing seabed elevation at the CPS borrow site ranges from approximately -6 feet to -12 feet NAVD88, while that of the BBWW borrow site ranges from approximately -8 feet to -13 feet NAVD88. The depth of dredging to obtain the sand would extend no lower (deeper) than elevation -20.0 feet NAVD88 when dredging either of the two sites. A maximum of approximately 1,100,000 cubic yards (cy) would be dredged for the project using a cutterhead dredge. The sand sediment dredged from the borrow areas would be transported to the beach/dune re-nourishment areas via a pipeline.

Once the pipeline(s) has carried sediment to the beach/dune re-nourishment areas, track hoes and marsh buggies would be used to distribute and spread the sand material as necessary to achieve the desired finish grades in portions of the re-nourishment footprint not inundated for long periods. Temporary silt fence, or in some cases temporary orange enviro-fence, would be installed along the northern boundary of the beach/dune re-nourishment areas prior to adding and spreading sand on the dune to help minimize turbid stormwater runoff and to help ensure construction equipment does not disturb areas situated outside the project's limits of construction. The staging area for beach nourishment work would be located directly north of Area 1 in an existing gravel/sand lot that has access from Highway 1. This staging area would occupy approximately 2.1 acres and is shown in Figure B7 of SEA #573A.

Upon completion of all sand placement and grading work in the beach renourishment and dune restoration areas, all dune areas disturbed or renourished would be planted with Fouchon bitter panicum (*Panicum amarum* var. *Amarum*) and Caminada sea oats (*Uniola paniculata*). The plantings would extend from the disturbed limits on the dune's landward slope, then over the dune crest and down its seaward slope to a distance of roughly 10 feet beyond the dune's toe-of-slope. The bitter panicum would be planted at a density of approximately 6,000 plants per acre using 4-inch container stock and/or bitter panicum plants harvested from dune areas that would be disturbed by the proposed project. This species would be planted in all of the planting area except the dune crown. The dune crown would be planted with sea oats at a density of approximately 400 plants per acre using 1-gallon stock. Using a water truck, the plants would be watered twice a week for 28 consecutive days following plant installation, unless rainfall allows reduction of the watering rate. USACE staff would monitor the planted areas at the end of this period. The construction contractor would be required to re-plant any bare areas greater than approximately 100 square feet and to repair and possibly re-plant any areas of significant erosion. Monitoring of the replanted dune would be conducted for a minimum of 3 years.

Wooden sand fencing would also be installed to help windblown, drifting sand accumulate along the fencing, control erosion, and help stabilize the dune. Sand fencing segments would be installed along the dune's seaward toe-of-slope in a line parallel to the dune's centerline. Another row of sand fencing segments would be installed approximately 10 feet seaward from the aforementioned row, and would also run parallel to the dune's centerline. These fencing segments would be 100 feet long. The segments would be situated to span the gaps between the landward rows of sand fencing segments, with the segment ends extending 10 feet beyond the ends of the gaps. No sand fencing would be installed within approximately 5 feet of any existing pedestrian or vehicular dune crossovers.

## 1. Review of Compliance (§230.10 (a)-(d)).

A review of this project indicates that:

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

Preliminary<sup>1</sup>

Final<sup>2</sup>

YES
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NO\*

YES

NO

b. The activity does not appear to: (1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the Clean Water Act; (2) jeopardize the existence of federally listed endangered or threatened species or their habitat; and (3) violate requirements of any federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies);

YES
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NO\*

YES

NO

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

YES
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NO\*

YES

NO

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

YES
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NO\*

YES

NO

## 2. Technical Evaluation Factors (Subparts C-F).

N/A

Not Significant

Significant\*

a. Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C).

- (1) Substrate impacts.
- (2) Suspended particulates/turbidity impacts.
- (3) Water column impacts.
- (4) Alteration of current patterns and water circulation.
- (5) Alteration of normal water fluctuations/hydroperiod.
- (6) Alteration of salinity gradients.

	X	
	X	
	X	
	X	
	X	
	X	

b. Biological Characteristics of the Aquatic Ecosystem (Subpart D).

- (1) Effect on threatened/endangered species and their habitat.
- (2) Effect on the aquatic food web.

	X	
	X	

- (3) Effect on other wildlife (mammals, birds, reptiles, and amphibians).

	X	
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c. Special Aquatic Sites (Subpart E).

- (1) Sanctuaries and refuges.  
 (2) Wetlands.  
 (3) Mud flats.  
 (4) Vegetated shallows.  
 (5) Coral reefs.  
 (6) Riffle and pool complexes.

X		
	X	
	X	
	X	
X		
X		

d. Human Use Characteristics (Subpart F).

- (1) Effects on municipal and private water supplies.  
 (2) Recreational and commercial fisheries impacts.  
 (3) Effects on water-related recreation.  
 (4) Esthetic impacts.  
 (5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves.

X		
	X	
	X	
	X	
	X	

**Remarks:** Where a check is placed under the significant category, the preparer has attached explanation.

**3. Evaluation of Dredged or Fill Material (Subpart G)<sup>3</sup>**

- a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material.

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

Appropriate references:

- b. An evaluation of the appropriate information in 3a above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants, or the material meets the testing exclusion criteria.

YES

NO\*

**4. Disposal Site Delineation (§230.11(f))**

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

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

Appropriate references:

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

YES

NO\*

#### 5. Actions to Minimize Adverse Effects (Subpart H)

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

YES

NO\*

#### 6. Factual Determination (§230.11)

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

- |                                                                                     |                              |                              |
|-------------------------------------------------------------------------------------|------------------------------|------------------------------|
| a. Physical substrate at the disposal site (review sections 2a, 3, 4, and 5 above). | <input type="checkbox"/> YES | <input type="checkbox"/> NO* |
| b. Water circulation, fluctuation and salinity (review sections 2a, 3, 4, and 5).   | <input type="checkbox"/> YES | <input type="checkbox"/> NO* |
| c. Suspended particulates/turbidity (review sections 2a, 3, 4, and 5)               | <input type="checkbox"/> YES | <input type="checkbox"/> NO* |
| d. Contaminant availability (review sections 2a, 3, and 4).                         | <input type="checkbox"/> YES | <input type="checkbox"/> NO* |
| e. Aquatic ecosystem structure and function (review sections 2b and c, 3, and 5).   | <input type="checkbox"/> YES | <input type="checkbox"/> NO* |
| f. Disposal site (review sections 2, 4, and 5).                                     | <input type="checkbox"/> YES | <input type="checkbox"/> NO* |
| g. Cumulative impact on the aquatic ecosystem.                                      | <input type="checkbox"/> YES | <input type="checkbox"/> NO* |
| h. Secondary impacts on the aquatic ecosystem.                                      | <input type="checkbox"/> YES | <input type="checkbox"/> NO* |

\*A negative, significant, or unknown response indicates that the proposed project may not be in compliance with the Section 404(b)(1) Guidelines.

<sup>1</sup>Negative responses to three or more of the compliance criteria at this stage indicates that the proposed project may not be evaluated using this "short form procedure". Care should be used in assessing pertinent portions of the technical information of items 2a-d, before completing the final review of compliance.

<sup>2</sup>Negative responses to one of the compliance criteria at this stage indicates that the proposed project does not comply with the guidelines. If the economics of navigation and anchorage of Section 404(b)(2) are to be evaluated in the decision-making process, the "short form" evaluation process is inappropriate.

<sup>3</sup>If the dredged or fill material cannot be excluded from individual testing, the "short form" evaluation process is inappropriate.

7. Evaluation Responsibility.

Evaluation prepared by: Eric M. Williams

Position: Chief, PDS-N

Date: 08/12/2020

Evaluation reviewed by: Tammy Gilmore

Position: NEPA Specialist

Date: 08/17/2020

8. Findings.

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

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

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

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

\_\_\_\_\_  
Date

\_\_\_\_\_  
Marshall K. Harper  
Chief, Environmental Planning Branch