

**APPENDIX E: 404 PUBLIC NOTICE, 404(B)(1) EVALUATION & 401**

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US Army Corps  
of Engineers  
New Orleans District

# Public Notice

**Notice of Availability of the Draft Supplemental Environmental Assessment (SEA) 543a entitled “Brackish Marsh and Swamp Mitigation for the New Orleans to Venice (NOV) Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees (NFL) from Oakville to St. Jude and NOV Federal Hurricane Protection Levee, Plaquemines and St. Tammany Parishes, Louisiana”**

**Introduction.** The U.S. Army Corps of Engineers, New Orleans District (CEMVN), has prepared Draft SEA 543a and it is available for your review. This public notice is being posted per the National Environmental Policy Act (NEPA) and the Council of Environmental Quality’s Regulations for Implementing NEPA, Section 1506.6, Public Involvement and the Clean Water Act (CWA) Section 404 in accordance with provisions of Title 33 CFR Parts 336.1(b)(1) and 337.1, which establish policy, practices, and procedures to be followed on Federal actions involving the disposal of dredged or fill material into waters of the United States (application of Section 404(b)(1) of the CWA guidelines). Notice is hereby given that for the SEA 543a, an existing 401 Water Quality Certification (WQC 110520-01) remains valid to place fill material for the NOV mitigation. CEMVN has coordinated this proposed action with the Louisiana Department of Environmental Quality, Office of Environmental Services for a Water Quality Certification in accordance with statutory authority contained in the LAC 33:IX.1507.A-E and provisions of Section 401 of the Clean Water Act and no further action is required.

The purpose of the proposed action discussed in SEA 543a is to evaluate mitigation plan alternatives to mitigate for wetland impacts and compensate for habitat losses incurred during construction of the NOV project. The mitigation plan was formulated to provide compensatory mitigation for unavoidable impacts to intermediate, brackish and saline marsh, open water and swamp habitats assessed in the Final Supplemental Environmental Impact Statement (SEIS), NOV Hurricane Protection Levee, Plaquemines Parish, Louisiana; Final Environmental Impact Statement (EIS), NOV, Louisiana, Hurricane Risk Reduction Project: Incorporation of NFL from Oakville to St. Jude, Plaquemines Parish, Louisiana; SEA 537, NOV Hurricane Risk Reduction Project: Changes to the NFL Project, Oakville to St. Jude, Plaquemines Parish, Louisiana, and EA 543, New Right of Way and Mitigation for the NOV Hurricane Risk Reduction Project: Incorporation of NFL From Oakville to St. Jude and NOV Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana. The Record of Decision (ROD) for both the SEIS and EIS was signed on 31 October 2011, the Finding of No Significant Impact (FONSI) for SEA 537 was signed on 25 March 2016, the FONSI for EA 543 was signed on 12 December 2017. The mitigation plan described in SEA 543a will provide compensatory mitigation for all intermediate, brackish and saline marsh, open water and swamp impacts. Evaluation of the proposed action includes application of the Section 404(b)(1) guidelines promulgated by the Administrator of the U.S. Environmental Protection Agency, through 40 CFR 230.

**Location of Work.** The proposed action is located in St. Tammany Parish, LA

**Description of Work.** The proposed action or tentatively selected plan (TSP) assessed in SEA 543a includes the creation of brackish marsh from open water within the Big Branch National Wildlife Refuge (NWR) Fritchie Marsh to mitigate for marsh and open water impacts and the purchase of swamp mitigation bank credits to compensate for habitat losses incurred during construction of the NOV project. The TSP, Fritchie brackish marsh project, would create up to approximately 350 acres of brackish marsh in an eroded open water area within the Big Branch NWR west of Chef Menteur Highway (Hwy), east of Highway 433, and south of Slidell. Approximately 258 acres of Lake Pontchartrain south west of the Fritchie marsh would be dredged to provide borrow material for Fritchie brackish marsh project. This TSP mitigates for the 33.9 Average Annual Habitat Units (AAHUs) of swamp and 106.9 AAHUs of brackish marsh wetland impacts.

**Public Involvement.** The purpose of this notice is to solicit comments from the public; Federal, State and local agencies and officials; Indian Tribes; and other interested parties. Copies of SEA 543a and supporting documents are available at <http://www.mvn.usace.army.mil/About/Projects/NOV/> or upon request.

The 45-day public review and comment period for SEA 543a and CWA Section 404(b)(1) will begin on October 23, 2019 and end on December 6, 2019. Interested parties may express their views on the proposed action. All comments postmarked on or before the expiration of the comment period for this notice will be considered. Comments may be submitted to Laura Lee Wilkinson by email [Laura.L.Wilkinson@usace.army.mil](mailto:Laura.L.Wilkinson@usace.army.mil) or by mail U.S. Army Corps of Engineers; Regional Planning and Environmental Division South; PDS-C; 7400 Leake Avenue, New Orleans, Louisiana 70118-3651.

\*The following short form 404(b)(1) evaluation follows the format designed by the Office of the Chief of Engineers, (OCE). 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. Mitigation for the New Orleans to Venice (NOV) Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees (NFL) from Oakville to St. Jude and the NOV Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana

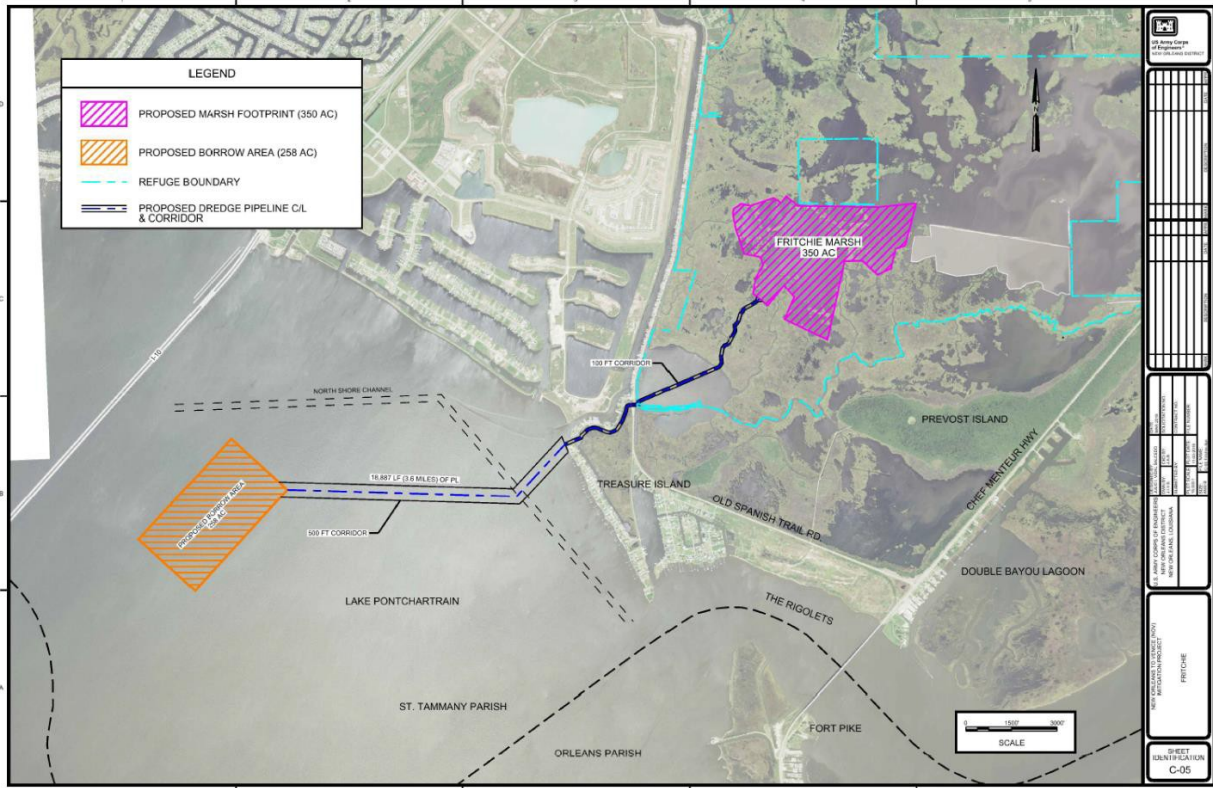
PROJECT DESCRIPTION. This project includes the enhancement of an open water site to mitigate for wetland impacts and compensate for habitat losses incurred during construction of the NFL-NOV project. The tentatively-selected alternative (TSA) is to purchase Swamp mitigation bank credits and to construct the Fritchie Brackish Marsh project. This tentatively-selected plan (TSP) mitigates for the 33.9 AAHUs of swamp and 106.9 AAHUs of brackish marsh (including intermediate marsh, saline marsh, and open water) impacts. The tentatively-selected mitigation plan (TSMP) would purchase swamp mitigation bank credits to mitigate for swamp impacts and construct the Fritchie Flood Side (FS) Brackish Marsh project to mitigate for the intermediate marsh, brackish marsh, saline marsh and open water impacts. No additional evaluation for this 404(b)(1) is necessary for the purchase of swamp credits from a mitigation bank because no new or additional impacts to wetlands or waters of the United States would occur from that TSA of the TSMP. This 404(b) (1) will instead evaluate impacts for the Fritchie brackish marsh creation project.

**Fritchie FS Brackish Marsh.** The proposed Fritchie FS brackish marsh project would involve the restoration of brackish marsh habitat from shallow open water within what has been identified as public land, more specifically, the Big Branch National Wildlife Refuge to mitigate for open water; intermediate, brackish, and saline marsh FS impacts incurred as result of the NFL NOV project improvements. The proposed project is located in St. Tammany Parish on the northshore of Lake Pontchartrain east and north of Old Spanish Trail Road and west of Chef Menteur Highway. Figures 1 and 2 provide an illustration of the proposed FS brackish marsh restoration mitigation feature. The proposed feature would be up to approximately 350 acres.

The water bottom in the Fritchie marsh creation site is approximate elevation -1.5 feet (ft) North American Vertical Datum 88 (NAVD88). Marsh restoration would require approximately 2,630,000 cubic yards (CY) of material hydraulically dredged from within a 258 acre borrow site in Lake Pontchartrain to construct a brackish marsh platform. Access to the proposed marsh creation area and transport of hydraulically dredged borrow material would be via Salt Bayou and unnamed waterways. Approximately 20,938 LF retention dikes would be constructed to elevation 4 ft NAVD88 with a 5 ft wide crown and 1:3 side slopes using approximately 150,000 CY of borrow obtained from within/exterior to the marsh creation area. Once the construction of the retention dikes is complete, dredging of material from the Lake Pontchartrain borrow area would commence. The 258 acre borrow site would be dredged to a max elevation depth of -

20 ft NAVD88 with assumed water bottom of 8 ft NAVD88, the material pumped via pipeline, and placed within the marsh creation area to a maximum elevation of 2.5 ft NAVD88 in an effort to achieve an initial fill elevation of 1.5 ft NAVD88. After one year, it is estimated that the initial 2.5 ft NAVD88 fill elevation would settle to an approximate elevation of 1.5 ft NAVD88. The target marsh elevation for brackish marsh habitat would range from 1.0 ft to 1.5 ft NAVD88. The construction duration would be approximately 160 days for dredging and 2 years for settlement and degrading of retention dikes.

During the OMRR&R phase of the project, prior to transfer of monitoring responsibilities to the non-Federal Sponsor (NFS), the site would be monitored and surveyed to ensure the marsh creation area has met the initial success criteria. At a minimum, these actions would include periodic eradication of invasive/nuisance plants in the mitigation feature and mitigation monitoring and reporting. Approximately one year after the construction of the marsh platform is complete, once dewatering and settlement of the marsh platform has occurred, the retention dikes would be degraded to the target marsh elevation. Degraded dike material would be placed within the marsh creation area and adjacent to the retention dikes by marsh buggies to a maximum elevation of 1.0 ft NAVD88. In conjunction with the degradation the retention dikes, trenasses may be constructed by marsh buggy within feature if additional hydraulic conveyance is necessary. Trenasse width would be the width of marsh buggy. If the resulting depression is not adequate for minimal water flow, the marsh equipment could excavate material along the proposed trenasse alignment, not to exceed a 5-foot bottom width by 1-foot deep channel. The marsh feature is not expected to require planting, since it was assumed that native brackish marsh plants would colonize the marsh naturally. If brackish marsh species do not colonize the site on their own, brackish marsh plant species would be planted. The construction duration for degrading the dikes would be approximately 2 months. Additional duration would be necessary if trenasse construction and brackish marsh plantings are required.



**Figure 1: Proposed Marsh Footprint and Borrow Area**

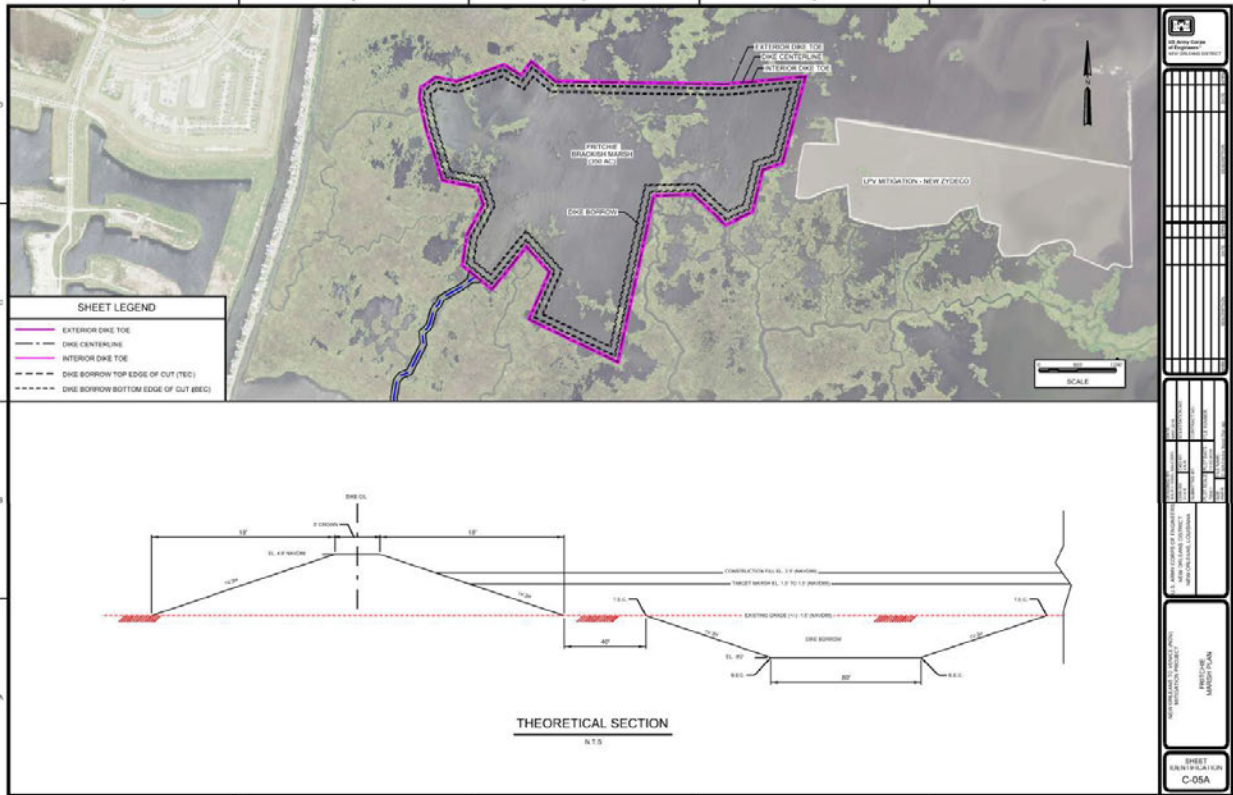


Figure 2: Marsh Plan and Dike Cross-section

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

Preliminary<sup>1</sup>

Final<sup>2</sup>

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);

YES

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);

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);

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).

FOR (1)  
ONLY

YES	NO*	<input checked="" type="checkbox"/> YES	NO
YES	NO*	<input checked="" type="checkbox"/> YES	NO
YES	NO*	<input checked="" type="checkbox"/> 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.
- (3) Effect on other wildlife (mammals, birds, reptiles, and amphibians).

	X	
	X	
	X	

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 .....  | <u>  X  </u>  |
| (2) Hydrography in relation to known or anticipated sources of contaminants .....   | <u>  X  </u>  |
| (3) Results from previous testing of the material or similar material in the vicinity of the project .....  | <u>  X  </u>  |
| (4) Known, significant sources of persistent pesticides from land runoff or percolation .....   | <u>  X  </u>  |
| (5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances .....  | <u>  X  </u>  |
| (6) Other public records of significant introduction of contaminants from industries, municipalities, or other sources .....  | <u>  X  </u>  |
| (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 ..... | <u>  X  </u>  |
| (8) Other sources (specify) .....   | <u>      </u> |

Appropriate references: See memorandum (Encl 2)

- 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 .....  | <u>  X  </u>  |
| (2) Current velocity, direction, and variability at disposal site .....                                      | <u>  X  </u>  |
| (3) Degree of turbulence .....   | <u>  X  </u>  |
| (4) Water column stratification .....  | <u>  X  </u>  |
| (5) Discharge vessel speed and direction .....   | <u>      </u> |
| (6) Rate of discharge .....  | <u>      </u> |
| (7) Dredged material characteristics (constituents, amount, and type of material, settling velocities) ..... | <u>  X  </u>  |

- (8) Number of discharges per unit of time ..... \_\_\_\_\_
- (9) Other factors affecting rates and patterns of mixing (specify) ..... \_\_\_\_\_

Appropriate references: See memorandum (Encl 2)

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 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).  YES  NO\*
- b. Water circulation, fluctuation and salinity (review sections 2a, 3, 4, and 5).  YES  NO\*
- c. Suspended particulates/turbidity (review sections 2a, 3, 4, and 5)  YES  NO\*
- d. Contaminant availability (review sections 2a, 3, and 4).  YES  NO\*
- e. Aquatic ecosystem structure and function (review sections 2b and c, 3, and 5).  YES  NO\*
- f. Disposal site (review sections 2, 4, and 5).  YES  NO\*

g. Cumulative impact on the aquatic ecosystem.

YES  NO\*

h. Secondary impacts on the aquatic ecosystem.

YES  NO\*

\*A negative, significant, or unknown response indicates that the 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 projects 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.

a. This evaluation was prepared by:

Name: Whitney Hickerson  
Position: Hydraulic Engineer  
Organization: U.S. Army Corps of Engineers, New Orleans District  
Date: 04/10/2019

Name: Daniel Meden  
Position: Biologist  
Organization: U.S. Army Corps of Engineers, New Orleans District  
Date: 04/10/2019

b. This evaluation was reviewed by:

Name: Eric Glisch  
Position: Environmental Engineer  
Organization: U.S. Army Corps of Engineers, New Orleans District  
Date: 04/12/2019

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: 1/7/20

  
Chief, Environmental Planning Branch



**US Army Corps of Engineers,  
New Orleans District**

To: File

From: Whitney Hickerson, CEMVN-ED-H

CC:

Date: 03 May 2017

Re: New Orleans to Venice (NOV), Louisiana, Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees (NFL) From Oakville to St. Jude and New Orleans to Venice Federal Hurricane Protection Levee, Plaquemines Parish, Louisiana Project

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A short form 404 (b)(1) evaluation of the Federal actions for the subject project was performed by ED-H for water quality impacts. Existing data were used to make factual determinations for the subject actions. The following summarizes the review process and comments noted:

**I. Subpart B – Review of Compliance**

- a. 230.10 (b) (1):* After consideration of disposal site dilution and dispersion, there are no expected violations of State water quality standards from the proposed Federal actions.

**II. Subpart C – Physical and Chemical Characteristics of the Aquatic Ecosystem**

- a. 230.20 - Substrate Impacts:* The Point Celeste Borrow Area of the Mississippi River material consists of silty and fine sands underlain by clay material. Due to the close vicinity of the disposal site, it is expected that the substrate of the Coleman Marsh and nearby shallow waters also consist of silty and fine sands. Disposal of the top layer of the Point Celeste borrow area of the Mississippi River material into the Coleman Marsh is therefore not expected to change the physical characteristics of the project site substrate.

Disposal of the Point Celeste Borrow Area of the Mississippi River material into the Coleman Marsh is expected to smother sessile benthic organisms at the project site. Following consolidation of material at the site and establishment of any vegetation, these organisms would be replaced by organisms adapted to aquatic habitat that recolonize the project site.

Please see content addressing 230.61 (a) for the Point Celeste Borrow Area of the

Mississippi River sediment evaluation results. Based on findings of the sediment evaluations, channel material is not expected to adversely affect any benthic aquatic organisms that recolonize the project site.

Substrate impacts of the proposed project are expected to be a byproduct of what is considered to be beneficial habitat modification. Due to high local subsidence rates, global sea-level rise, wind-induced wave energy, tropical activity that occasions the area, and other factors, the proposed project is expected to eventually disappear, as it would be subject to these forces of nature and eventually erode and submerge.

- b. *230.21 – Suspended Particulates/Turbidity Impacts:* The proposed project includes unconfined disposal of hydraulically dredged channel material comprised of silty and fine sands. The project is therefore expected to generate minor, localized increases in turbidity in the vicinity of the project site during construction activities.
- c. *230.22 – Water Column Impacts:* The proposed project is expected to generate localized water column impacts in the vicinity of the project site during construction activities.

Please see content addressing 230.61 (a) for the Point Celeste Borrow Area of the Mississippi River sediment evaluation results. Based on findings of the sediment evaluations, water column impacts of the proposed project not expected to be significant.

- d. *230.23 – Alteration of Current Patterns and Water Circulation:* The proposed project would locally alter current patterns and water circulation, by creating a hydraulic barrier in an area that is currently open water. However, there are no expected adverse impacts to the alteration of current patterns and water circulation in the project area.
- e. *230.24 – Alteration of Normal Water Fluctuations/Hydroperiod:* The proposed project would have a negligible impact on the hydrology of surrounding surface waters.
- f. *230.25 – Alteration of Salinity Gradients:* Project area salinity gradients are largely determined by the interaction of waters from the Mississippi, the Gulf of Mexico, and rainfall-runoff within the Barataria Basin. Due to the small footprint of the proposed project, as well as its location (e.g., it is not obstructing any large channels connected to the Gulf of Mexico), the project is not anticipated to alter salinity gradients.

### **III. Subpart F – Human Use Characteristics**

- a. *230.50 – Effects on Municipal and Private Water Supplies:* The nearest municipal or private water supply is located in the Mississippi River at West Pointe a la Hache, which is hydraulically separated from the project site by earthen levees.

### **IV. Subpart G – Evaluation of Dredged or Fill Material**

- a. *230.61 (a) – Considerations in Evaluating the Biological Availability of Possible Contaminants in Dredged or Fill Material:* The most recent sediment evaluation that includes sediment samples collected in the vicinity (15 to 30 miles downstream) of the Point Celeste borrow area was completed in May 2007 (Providence Engineering and Environmental Group LLC, 2014). For the evaluation, composite samples were collected at each potential borrow source area and restoration area for laboratory analyses. The number of collection points (subsample collection locations) for each composite depended on the size of the area; however, at least three subsamples were collected at each potential borrow source and restoration area to make up composite samples. Water quality samples were collected within the water column. Sediment samples were collected from the surficial bed material (upper 15 centimeters or six inches) settled on the bottom of the water body (*i.e.* Mississippi River or Gulf of Mexico) using a Petit Ponar™ bottom sampler. Additional sediment composite samples were collected for sediment elutriate analysis. The elutriate samples were prepared for analysis in the laboratory in accordance with the USACE standard procedures.

The ambient water sample (MS RIV01) from the Mississippi River borrow source area exhibited a dissolved arsenic concentration of 1.1 µg/L, which is less than the freshwater numerical criteria (acute toxicity criterion of 339.8 µg/L and chronic toxicity criterion of 150 µg/L) established for arsenic in the LA WQS. The LA WQS numerical criterion for protection of human health against potential toxicity associated with consumption of drinking water and aquatic organisms is 50 µg/L for waters designated for public water supply.

Dissolved copper was reported in samples from all of the ambient water sampling locations at concentrations ranging from 0.50 µg/L to 2.2 µg/L, all of which are less than the LA WQS marine numerical criteria for protection of aquatic life established for copper (acute toxicity criterion and chronic toxicity criterion are both 3.63 µg/L).

Dissolved mercury<sup>4</sup> (as inorganic mercury not methylmercury) was detected at only one ambient water sampling location, the Mississippi River borrow source area (sample number MS Riv 01), at a concentration of 0.000093 mg/L or 0.093 µg/L. The detected concentration of mercury is less than both the LA WQS freshwater and marine numerical criteria for mercury established for the protection of aquatic life against acute toxicity (freshwater acute criterion of 2.04 µg/L and marine acute criterion of 2.0 µg/L). However, the detected concentration for mercury exceeds both the LA WQS freshwater and marine numerical criteria for mercury established for the protection of aquatic life against chronic toxicity (freshwater chronic criterion of 0.012 µg/L and marine chronic criterion of 0.025 µg/L).

In June 2005, a TMDL for mercury in fish tissue for coastal bays and gulf waters of Louisiana<sup>6</sup> was prepared for the LDEQ and USEPA. The report included the project area comprised of the Barataria Basin Coastal Bays (Coastal Segment

021102). The TMDL report identifies atmospheric deposition as the primary source of mercury and notes that likely avenues of input to coastal areas, besides direct deposition, include rivers, storm water runoff, and release from sediments. There are no known point-source wastewater discharges of mercury in the vicinity of the Mississippi River borrow source area.

Dissolved thallium was detected at low concentrations in the ambient water samples collected the Mississippi River borrow source area (MS Riv 01). The concentrations detected (0.31 µg/L in MS Riv 01) are only marginally higher than the MDL of 0.25 µg/L for thallium. The reported thallium concentrations are well less than the USEPA WQC marine water numerical criterion (6.3 µg/L) for protection of human health (consumption of aquatic organisms). The reported concentrations for thallium are unremarkable and do not indicate contamination.

Dissolved zinc was detected in samples from all of the ambient water sampling locations at concentrations of 4.7 µg/L (MS Riv 01). The concentration range for the marine locations (13 µg/L to 16 µg/L) is less than the LA WQS marine numerical criteria for protection of aquatic life established for zinc (acute toxicity criterion of 90 µg/L and chronic toxicity criterion of 81 µg/L). The concentration of 4.7 µg/L reported for the ambient water sample from the Mississippi River borrow source area (MS Riv 01) is less than the LA WQS freshwater (hardness dependent) numerical criteria for protection of aquatic life calculated for zinc applicable to the Mississippi River: 164.7 µg/L (acute criterion) and 150.4 µg/L (chronic criterion). The zinc concentration at the Mississippi River borrow source area is less than the LA WQS numerical criterion of 5.0 µg/L for protection of human health (consumption of drinking water and organisms).

A total beryllium concentration was reported for only one elutriate sample (MS Riv 01 from the Mississippi River potential borrow source) at 1.0 µg/L. This value is only marginally above the MDL of 0.6 µg/L for beryllium. No numerical criteria for beryllium are established by either the LA WQS or USEPA WQC. The concentrations reported for cadmium are less than the LA WQS marine numerical criteria for protection of aquatic life established for cadmium (acute toxicity criterion of 45.35 µg/L and chronic toxicity criterion of 10.0 µg/L) and less than the LA WQS freshwater (hardness dependent) numerical criteria (acute toxicity criterion of 50.7 µg/L and chronic toxicity criterion of 1.42 µg/L) calculated for cadmium as applicable to the Mississippi River. The concentrations reported for cadmium are less than the LA WQS drinking water supply numerical criteria for protection of human health (10 µg/L) as applicable to the Mississippi River. Neither the LA WQS nor the USEPA WQC establish cadmium numerical criteria for protection of human health applicable to marine waters. The reported concentrations for beryllium and cadmium in elutriate samples are unremarkable and do not indicate contamination.

Total chromium concentrations were reported for the elutriate samples from the Mississippi River potential borrow source (MS Riv 01). The concentrations



detected are 23 µg/L (MS Riv 01). All of the elutriate sample concentrations for chromium are less than the LA WQS marine numerical criteria for protection of aquatic life established for chromium (acute toxicity criterion of 515 µg/L and chronic toxicity criterion of 103 µg/L) and less than the LA WQS freshwater (hardness dependent) numerical criteria for protection of aquatic life (acute toxicity criterion of 780.3 µg/L and chronic toxicity criterion of 253.1 µg/L) calculated for chromium as applicable to the Mississippi River. The concentrations reported for chromium are less than the LA WQS drinking water supply numerical criteria for protection of human health (50 µg/L) as applicable to the Mississippi River.

Total copper concentrations were reported for the elutriate samples from all sampling locations at levels ranging from 0.94 µg/L to 19 µg/L. The copper concentrations in the elutriate samples from all of the marine locations are less than the LA WQS marine numerical criteria numerical criteria for protection of aquatic life established for copper (acute toxicity criterion and chronic toxicity criterion are both 3.63 µg/L). The elutriate concentration of 19 µg/L reported for the sample from the Mississippi River potential borrow source area is less than the LA WQS freshwater (hardness dependent) acute toxicity numerical criteria for protection of aquatic life of 27.6 µg/L calculated for the Mississippi River, but exceeds the LA WQS freshwater (hardness dependent) chronic toxicity numerical criterion for protection of aquatic life of 17.7 µg/L calculated for the Mississippi River. It is noted that the comparison of the elutriate results reported as total copper concentrations with the LA WQS numerical criteria for copper, which are expressed as dissolved concentrations, is conservative. Neither the LA WQS nor the USEPA WQC establish copper numerical criteria for protection of human health applicable to marine waters. The LA WQS numerical criterion for protection of human health in freshwaters designated for public water supply is 1.0 milligram per liter (mg/L) or 1,000 µg/L.

Total lead concentrations were reported for the elutriate samples ranged from 0.51 µg/L to 19 µg/L. The elutriate concentration of 19 µg/L reported for the sample from the Mississippi River potential borrow source area is less than the LA WQS freshwater (hardness dependent) acute toxicity numerical criteria for protection of aquatic life of 102.8 µg/L calculated for the Mississippi River, but exceeds the LA WQS freshwater (hardness dependent) chronic toxicity numerical criterion for protection of aquatic life of 4.00 µg/L calculated for the Mississippi River. Again, it is noted that the comparison of the elutriate results reported as total lead concentrations with the LA WQS numerical criteria for lead, which are expressed as dissolved concentrations, is conservative. The LA WQS do not establish a numerical criterion for lead for the protection of human health (consumption of aquatic organisms only) applicable to marine waters; however, the LA WQS numerical criterion for protection of human health (consumption of drinking water and aquatic organisms) for freshwaters designated for public water supply is 50.0 µg/L.

Total nickel concentrations were reported for the elutriate samples and a concentration of 22 µg/L was reported for the Mississippi River potential borrow source area. The nickel concentration of 22 µg/L for the Mississippi River potential borrow source elutriate sample is less than the LA WQS freshwater (hardness dependent) numerical criteria for protection of aquatic life (acute toxicity criterion of 2,036 µg/L and chronic toxicity criterion of 226.1 µg/L) calculated for nickel as applicable to the Mississippi River. No nickel numerical criteria for protection of human health are established by the LA WQS. The USEPA WQC marine (saltwater) numerical criterion for protection of human health established for nickel is 4,600 µg/L, and the freshwater numerical criterion for protection of human health (consumption of drinking water and aquatic organisms) is 610 µg/L for water bodies designated as a public water supply (e.g., the Mississippi River).

Total zinc concentrations were reported in elutriate samples with the concentration of 72 µg/L reported for the elutriate sample from the Mississippi River borrow source area is less than the LA WQS freshwater (hardness dependent) numerical criteria for protection of aquatic life calculated for zinc applicable to the Mississippi River: 164.7 µg/L (acute criterion) and 150.4 µg/L (chronic criterion).

The overall assessment of the sediment sample results for samples collected from the proposed restoration project area, the potential borrow source area, and the outside of right of way areas is that no significant anthropogenic contamination is indicated that would have potential for long-term, adverse impacts to water quality or the aquatic environment in the vicinity of the project and potential borrow areas. As discussed in the comparison of elutriate results versus ambient water results, there is a potential for mobilization of metals from the sediments to the water column during the construction phase of these projects, but the temporary increases in metals concentrations that are likely do not represent adverse impacts to water quality and the aquatic environment when evaluated in the context of the potential for significant exceedances of the applicable numerical criteria of the LA WQS and/or USEPA WQC.

Elutriate and sediment toxicity test results did not indicate that short-term water-column effects or long-term changes in substrate from dredged material placement would adversely affect water column or benthic organisms.

Appropriate references: See references

- b. An evaluation of the appropriate information in VI(a) 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

## II. Disposal Site Delineation

- a. *230.11 (f) – Considerations in Evaluating the Disposal Site:* The proposed project is located in Plaquemines parish near the city of West Pointe a La Hache, west of HWY 23 between river miles 46 and 49.
- b. An evaluation of the appropriate factors in V(a) above indicates that the disposal site and/or size of mixing zone are acceptable: Yes.

### III. Subpart H - Actions to Minimize Adverse Effects

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: NA

### IV. Factual Determinations

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

- a. Physical substrate at the disposal site (review sections II, IV, V, and VI above): Yes
- b. Water circulation, fluctuation and salinity (review sections II, IV, V, and VI): Yes
- c. Suspended particulates (review sections II, IV, V, and VI): Yes
- d. Contaminant availability (review sections II, IV, and V): Yes

### VIII. References

- a. Louisiana Department of Environmental Quality (LDEQ). 2016. *LAC Title 33, Part IX*. <http://www.deq.louisiana.gov/portal/DIVISIONS/LegalAffairs/RulesandRegulations/Title33.aspx>. Last accessed April 7, 2017.
- b. National Oceanic and Atmospheric Administration (NOAA). *SQuiRT Cards*. <http://response.restoration.noaa.gov/environmental-restoration/environmental-assessment-tools/squirt-cards.html>. Last accessed April 7, 2017.
- c. Providence Engineering and Environmental Group LLC, Parker, Phillip. 2007. *Caminada Headlands and Shell Island Restoration Projects: Water Quality Assessment Report*. Baton Rouge, LA: U.S.
- d. U.S. Coast Guard (USCG). 2016. National Response Center. <http://nrc.uscg.mil/>. Last accessed March 30, 2017.
- e. U.S. Environmental Protection Agency (USEPA). 2016. *National Recommended Water Quality Criteria – Aquatic Life Criteria*

*Table.* <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table>. Last accessed April 7, 2017.

**From:** [Elizabeth Hill](#)  
**To:** [Meden, Daniel C CIV USARMY CEMVN \(USA\)](#)  
**Subject:** [Non-DoD Source] RE: Water Quality Certificate for NOV NFL (UNCLASSIFIED)  
**Date:** Monday, May 13, 2019 4:47:53 PM

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Daniel:

As a supplemental environmental assessment for EA 543, this application is valid under water quality certification, WQC 110520-01. The administrative record is amended to reflect the Mitigation for the New Orleans to Venice (NOV) Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oaksville to St. Jude and the NOV Federal Hurricane Protection Levee, Plaquemine Parish, Louisiana, Construction of the Fritchie Flood Side Brackish Marsh Creation Mitigation Project in St. Tammany Parish, Louisiana. No further action is required.

-----Original Message-----

From: Meden, Daniel C CIV USARMY CEMVN (USA) <Daniel.C.Meden@usace.army.mil>  
Sent: Monday, May 13, 2019 2:56 PM  
To: Elizabeth Hill <Elizabeth.Hill@la.gov>  
Cc: Behrens, Elizabeth H CIV USARMY CEMVN (USA) <Elizabeth.H.Behrens@usace.army.mil>; Wilkinson Wolfson, Laura L CIV USARMY CEMVN (USA) <Laura.L.Wilkinson@usace.army.mil>  
Subject: Water Quality Certificate for NOV NFL (UNCLASSIFIED)  
Importance: High

CLASSIFICATION: UNCLASSIFIED

Good afternoon, Elizabeth.

I thought I had previously sent out this Application for Water Quality Certification for the title project: Mitigation for the New Orleans to Venice (NOV) Hurricane Risk Reduction Project: Incorporation of Non-Federal Levees from Oaksville to St. Jude and the NOV Federal Hurricane Protection Levee, Plaquemine Parish, Louisiana, Construction of Fritchie Flood Side Brackish Marsh Creation Mitigation Project in St. Tammany Parish, Louisiana. Please see the signed application for consideration as this is for a supplemental environmental assessment for EA 543.

Thank you!

Daniel Meden  
Biologist, Coastal Environmental Planning RPEDS, New Orleans District  
Office: 504-862-1014

CLASSIFICATION: UNCLASSIFIED