

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, New Orleans District is using this format for all proposed project elements requiring 404 evaluation, but involving no adverse significant impacts.

**PROJECT TITLE.** Lake Pontchartrain and Vicinity (LPV), Jefferson East Bank, Jefferson Parish, Louisiana (Individual Environmental Report [IER] #3).

**PROJECT DESCRIPTION.** The proposed action consists of a project to rebuild earthen levees, upgrade foreshore protection, replace floodgates, and construct or modify breakwaters and construct fronting protection at four pumping stations. For the purposes of the IER assessments of LPV projects, the area has been divided into numerous reaches. Each reach is identified by a project identification number (e.g., LPV 01). This project would involve modification of existing facilities and construction of new facilities of the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (GNOHSDRRS) designated LPV 00, 01, 02, 09, 10, 11, 12, 16, 17, 18, 19, and 20. The proposed action is described by LPV reach below.

***LPV 00 Levee Reach 1, LPV 01 Levee Reach 2, LPV 02 Levee Reach 3, LPV 19 Levee Reach 4, and LPV 20 Levee Reach 5***

The proposed action for these reaches would consist of raising the levee from its current height of 16.5 ft to 17.5 ft, modifying the levee to widen the crown from 7 ft to 10 ft in a straddle configuration to the extent possible, and adding rock foreshore protection to a height of 6 ft at 150 ft from the levee centerline on the flood-side. The rock foreshore protection would be placed along the shoreline in addition to riprap that currently is present in these areas, and it would be added only to those segments west of the Lake Pontchartrain Causeway. As an additional feature, armoring may be incorporated to protect against erosion and scour on the protected side of critical portions of levees and floodwalls. The proposed method of armoring could be one of the following: articulated concrete blocks (ACB) covered with soil and grass; turf reinforcement mattress (TRM); ACB/TRM; TRM/grass; or good grass cover. The armoring would be incorporated into the existing levee or floodwall footprint.

***LPV 09 Pumping Station #1 (Bonnabel) Modification, Fronting Protection, Positive Cutoff, and Floodwall Tie-ins; LPV 10 Pumping Station #2 (Suburban) Modification, Fronting Protection, Positive Cutoff, and Floodwall Tie-ins; LPV 11 Pumping Station #3 (Elmwood) Modification, Fronting Protection, Positive Cutoff, and Floodwall Tie-ins; and LPV 12 Pumping Station #4 (Duncan) Modification, Fronting Protection, Positive Cutoff, and Floodwall Tie-ins***

The proposed action for the four lakefront pumping stations would include the addition of fronting protection to each of the stations. The fronting protection would be similar to a concrete T-wall, with a sluice or vertical-lift gate to allow discharge from the pumping station. The fronting protection would be constructed to an approximate height of 17 ft, and new T-wall tie-ins would be constructed to connect the new fronting protection to the adjacent levee reaches at a height of 17.5 ft.

In addition, existing breakwaters would be modified or new breakwaters constructed at each of the pumping stations. The breakwaters would be constructed out of concrete and steel with a 2-ft rock layer at the lake bottom and located where the drainage canals meet Lake Pontchartrain. At pumping station #1 (Bonnabel), a new breakwater would be added at a height of 14 ft and extending approximately 500 ft from onshore into the lake, with a footprint on the lake bottom of approximately 1.5 acre. At pumping station #2 (Suburban), the existing breakwater would be modified to increase its strength through the addition of concrete piles, concrete, and rock, increasing its footprint to about 0.5 acre. At pumping station #3 (Elmwood), the existing breakwater would be modified to increase its height from 6.5 ft to approximately 10 ft., and its footprint would be approximately 0.6 acre. At pumping station #4 (Duncan), a new breakwater would be added at a height of 14 ft. It would begin approximately 150 ft offshore, would be 250 ft long and connected to shore by a bridge, and it would have a footprint of 0.6 acre. Including the rock riprap that would be placed along the toe of the breakwaters to provide erosion protection, the total width of the footprint of the new breakwaters at pumping stations #1 and #4 would be approximately 130 ft and 110 ft, respectively, and the total area they would cover would be 2.1 acres.

**LPV 16 Floodwall and Gate at Bonnabel Boat Launch and LPV 18 Floodwall and Gate at Williams Blvd Boat Launch**

The proposed action for these gates consists of demolition of the existing floodwalls and gates and construction of new T-walls, I-wall transitions, and gates. The new gate structure would include a rolling gate closure at a height of 16.5 ft.

**LPV 17 Bridge Abutment and Floodwall Tie-ins at Causeway Bridge**

The proposed action for this reach consists of extending the existing levee system across Causeway Boulevard. The new levee would have a crown/crest height of 16.5 ft. Causeway Boulevard would be modified, beginning at 6<sup>th</sup> Street, and would slope up to the crest elevation of the levee. The roadway would then slope back down to the elevation of the bridge abutment. The new road would be supported by vertical and mechanically stabilized earth walls to minimize the impact at the base and allow construction of sidewalks and accesses to existing buildings and streets.

*The proposed action itself consists of measures to minimize the adverse effects of storm water erosion and thus requires no separate measures or controls for compliance with CWA Section 402(p) and LAC 33:IX.2341.B.14.j.*

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
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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	NO*	YES	NO
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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	NO*	YES	NO
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d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the

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discharge on the aquatic ecosystem (if no, see section 5).

YES	NO*	YES	NO
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2. Technical Evaluation Factors (Subparts C-F).

N/A      Not Significant      Significant  
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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 ..... 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 .....	
(8) Other sources (specify) ..See references below.....	X

Appropriate references:

1. Environmental Regulatory Code, Part IX. Water Quality Regulation, Louisiana Department of Environmental Quality, 1994, 3<sup>rd</sup> Edition.
2. State of Louisiana Water Quality Management Plan, Volume 5, Part B – Water Quality Inventory, Louisiana Department of Environmental Quality, Office of Water Resources, 1994.
3. US Army Corps of Engineers. February 25, 2008. Draft Individual Environmental Report #8, Lake Pontchartrain and Vicinity, Bayou Bienvenue and Bayou Dupre Control Structures, St. Bernard Parish, Louisiana.

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
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NO*
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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 .....	
(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:

Same as 3(a)

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\*

Actions taken: Use of a bucket dredge instead of a cutterhead dredge (minimizes turbidity, reduces loss of material, and maximizes material available for backfilling of access channel).

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. Evaluation prepared by: Qui Nhon Dac Ho

Position: Hydraulic Engineer

Date: 05/12/08

b. This evaluation was reviewed by: Elizabeth Behrens

Position: Biologist

Date: 05/13/08

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: \_\_\_\_\_

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Alvin B. Lee  
Colonel, EN  
Commanding