

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. West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Structural Alignment Surveys and Borings Investigations

#### PROJECT DESCRIPTION

A map indicating where the Proposed Action activities would occur is provided (Figure 1).

There are five distinct activities in the Proposed Action in addition to the option to purchase Mitigation Bank credits for BLH impacts. They are: access, clearing and grubbing, stockpiling and staging, soil borings and CPTs, and other surveys. Each activity is discussed below. The duration for the Proposed Action activities would be approximately nine months. The entire survey ROW would be approximately 600 feet wide, with the clearing and grubbing necessary for the soil borings and CPT's occurring within a 100 foot corridor within the 600 foot ROW. All vegetation would be removed within the clearing and grubbing corridor and within the access roads. All tree felling would be performed to avoid damage to trees left standing, to existing structures and installations, to those under work operations, and with due regard for the safety of employees and others. No other areas or activities would involve the felling of trees. Other surveys, which include topographical surveys, cross-sectional surveys, environmental and cultural resources investigations, and HTRW assessments would be within the approximately 600 foot ROW surrounding the 100 foot clearing and grubbing corridor. A typical survey ROW plan view is shown in Figure 2.

#### Access

Access for clearing and grubbing of the 100 foot corridor, cross-sectional surveys, soil borings/CPTs, environmental and cultural resources investigations, and HTRW assessments would be from U.S. Highway 61 (Airline Hwy), LA Hwy 44, LA Hwy 54, 1-10 Service Road, Old US HWY 51, Frenier Road, Prescott Road, other existing roads, trails, pipeline corridors, and along Reserve Canal leading to the alignment (Figure 1). These access routes would be utilized for the delivery of survey, tree clearing, and boring/CPT equipment. Some of the proposed access routes would require the clearing of vegetation for the movement of this equipment. Clearing and grubbing for access routes would be limited to a 40-foot width, which is the minimum width necessary for the passage of surveys and borings/CPTs equipment. A 60-foot road width would be allowed for access roads within pipeline ROWs to allow for pipeline protection. The extra width would accommodate for special construction considerations to minimize impacts to infrastructure. Coordination with pipeline companies is ongoing to determine the best method to accommodate pipeline infrastructure and minimize environmental impacts. For instance, timber matting or similar measures may be required across some pipeline corridors. Clearing would consist of the complete removal of all trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris within access route corridors. Debris resulting from access road clearing and grubbing operations could be stockpiled in temporary windrows within access corridors, or within the stockpile and staging areas described below. Felled timber may be chipped on-site prior to hauling and disposal, and other cleared debris any timber hauled offsite and disposed of according to applicable laws and regulations. Approximately 91 acres have been identified as access routes with a maximum impact to coastal swamp habitat of approximately 78 acres. All equipment to be utilized for the surveys are described in the subsequent sections.

#### Clearing and Grubbing

Clearing and grubbing would occur within a 100 foot corridor and would provide the necessary work area for the completion of soil boring/CPT activities. The corridor is broken into six distinct segments shown in red in Figure 2 totaling approximately 138 acres and 11.4 linear miles. Approximately 135 of these 138 acres are forested wetlands, with approximately 115 acres being swamp and approximately 20 acres are BLH. A width of 100 feet is needed for operation of equipment and for stockpiling of cut trees and undergrowth. All trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned

structures, fencing, and similar debris would be cleared within the clearing and grubbing corridor. Trees on dry land would be cut flush with the natural ground, while trees in water would be cut flush with the natural ground or mud line underwater. In limited circumstances, the removal of tree stumps and rootballs below the ground surface may be necessary to provide unobstructed and safe access for equipment. Rootball removal is not expected to exceed 20% of the corridor.

Trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations could be stockpiled in temporary windrows within the clearing and grubbing corridor, spaced approximately every 300 feet. Windrows would alternate between land side and flood side of the project centerline. Debris may be placed in neat windrows or piles with the tree limbs trimmed sufficiently to make the windrow as small as practicable. No windrowed debris or cleared material shall extend beyond the 100-foot clearing and grubbing limit. Debris could also be stockpiled in the stockpile and staging areas described below. Debris removal would occur during the levee construction phase.

#### Stockpiling and Staging

Two options for temporary stockpiling of trees, stumps, down timber snags, brush, vegetation, loose stone, abandoned structures, fencing, and similar debris resulting from clearing and grubbing operations would be available to the contractor. Material could be stockpiled within any of the five stockpile areas shown in Figure 2, or material could be temporarily stockpiled within the 100-foot clearing and grubbing corridor or access roads ROWs. Descriptions of how material could be stockpiled within the clearing and grubbing corridor and access roads are discussed in their respective sections.

The five temporary stockpile/staging areas total approximately 1,020 acres (583 acres, 40 acres, 98 acres, 143 acres, and 156 acres from east to west) and are shown in Figure 2. Originally nine stockpile/staging areas were considered, but four were eliminated from further consideration due to potential impacts to wetlands, cultural resources, Environmental Justice communities, or local development plans.

These temporary stockpile/staging areas may be used for various activities during the investigative and construction phases of the WSLP Project. Use of these areas is expected to end in 2023. The sites may be used for the storage of felled trees, staging of investigative and construction equipment such as drilling rigs, small boats, bulldozers, excavators, pile driving equipment, and/or storage of construction materials such as steel sheet piling, steel piles, and other materials and items for construction of pump stations and drainage structures. The construction contractor or USACE may also set up trailers to serve as office space during construction within one or more of the stockpile/staging areas.

Some of the stockpile/staging areas could also be used for the temporary stockpiling of clay and sand for levee or floodwall construction. Up to 3,000,000 cubic yards of clay material and approximately 1,000,000 cubic yards of sand would be used to construct the WSLP Project levee. These materials could be transported to the stockpile areas from the Bonnet Carré Spillway (BCS) borrow pits, as approved in the 2016 WSLP EIS, using dump trucks. Sand could be obtained from commercially available sources or within the BCS. Approximately 225,000 truck trips would be required to haul 4,000,000 cubic yards of material. All stockpile/staging areas are located along major highways. Material would be hauled from BCS to five stockpile/staging areas exclusively via Highway 61 for the four stockpile areas located adjacent to Highway 61, and via Highways 61 and 51 for the northern most stockpile area that is adjacent to Highway 51.

#### Soil Borings and Cone Penetration Testing (CPTs)

Soil borings and CPTs would be conducted within the clearing and grubbing corridor at intervals of 500 feet. The borings would consist of undisturbed type borings. Borings and CPTs would be taken with truck and track mounted equipment. The boring holes would be backfilled in accordance with standard criteria.

Two and four wheel drive vehicles, standard boring and land surveying equipment, machetes, chainsaws, a small boat and trailer (as required), and marsh buggies would be used.

### Other Surveys

Other surveys include topographical surveys to locate features and utilities, define the project baseline alignment, and define ROW extent; as well as those necessary to complete cross-sections, HTRW assessments, cultural resource investigations, and environmental surveys. Small vehicles (such as all-terrain vehicles or other similar small 4x4s), small boats, air boats, and marsh buggies would be allowed to operate within the approximately 600 foot ROW surrounding the clearing and grubbing corridor (see other surveys area in Figure 2). Foot traffic would also be permitted. Cross-sectional surveys would occur at intervals between 50 and 300 feet.

Environmental surveys would include vegetative surveys such as plant identification and measurements. HTRW assessments would include traversing the area to identify potential HTRW concerns. If any suspected HTRW concerns are noticed, soil and/or water samples may be taken. Environmental surveys and HTRW assessments would be performed by two to four person crews that would traverse the area.

Similarly, cultural resources (CR) investigations would be completed with two to four person crews. Some CR subsurface investigations may be required to determine if buried cultural remains exist within the site limits. The subsurface investigation would be accomplished by hand auger or shovel. If items of seeming cultural significance are discovered during the initial traverse of the site, the CR investigation would be expanded to include, at the most, a series of 2-meter by 2-meter holes or 1-meter wide trenches evacuated to depths of 1 to 2 meters. Excavation would be accomplished by hand augers and/or shovels. All excavations would be held to the absolute minimum required to determine the apparent existence or non-existence of significant cultural remains. All excavations would be backfilled upon completion of the excavations. Artifacts discovered during the survey would be marked for identification and removed from the site for analysis and examination to determine historical significance. Permission to remove the items from the site would be obtained through personal contact with the landowner. All objects removed from the site would be returned to the landowner, if required, upon completion of the analysis and report. If the landowner does not require the return of the objects discovered, they would be donated to the State Historic Preservation Officer (SHPO) for permanent curation. If the investigations reveal the existence of cultural remains significant enough to render the site eligible for the National Register, additional ROE for more extensive excavations and mitigation would be required.

No roads, fences, buildings, or other improvements within the area would be disturbed. No trees would be felled outside of the 100 foot clearing and grubbing corridor in Figure 2. Branch cutting would be allowed for small vehicle passage, if necessary within the 600 foot ROW.

### Purchase of Mitigation Bank Credits

In addition to the mitigation plan approved in the 2016 WSLP EIS, USACE approved mitigation banks with a service area that encompasses the impacts, with perpetual conservation servitudes currently in compliance with their mitigation bank instrument, and with released BLH credits would be an option for mitigating BLH impacts incurred from the WSLP project. If the BLH impacts are wetland in nature and/or incurred within the coastal zone, the purchase of mitigation bank credits would also have to meet these requirements in kind. Mitigation banks would be required to run the same version of the WVA model as was used to assess the impacts from constructing the WSLP project to ensure that the assessment of the functions and services provided by the mitigation bank match the assessment of the lost functions and services at the impacted site.

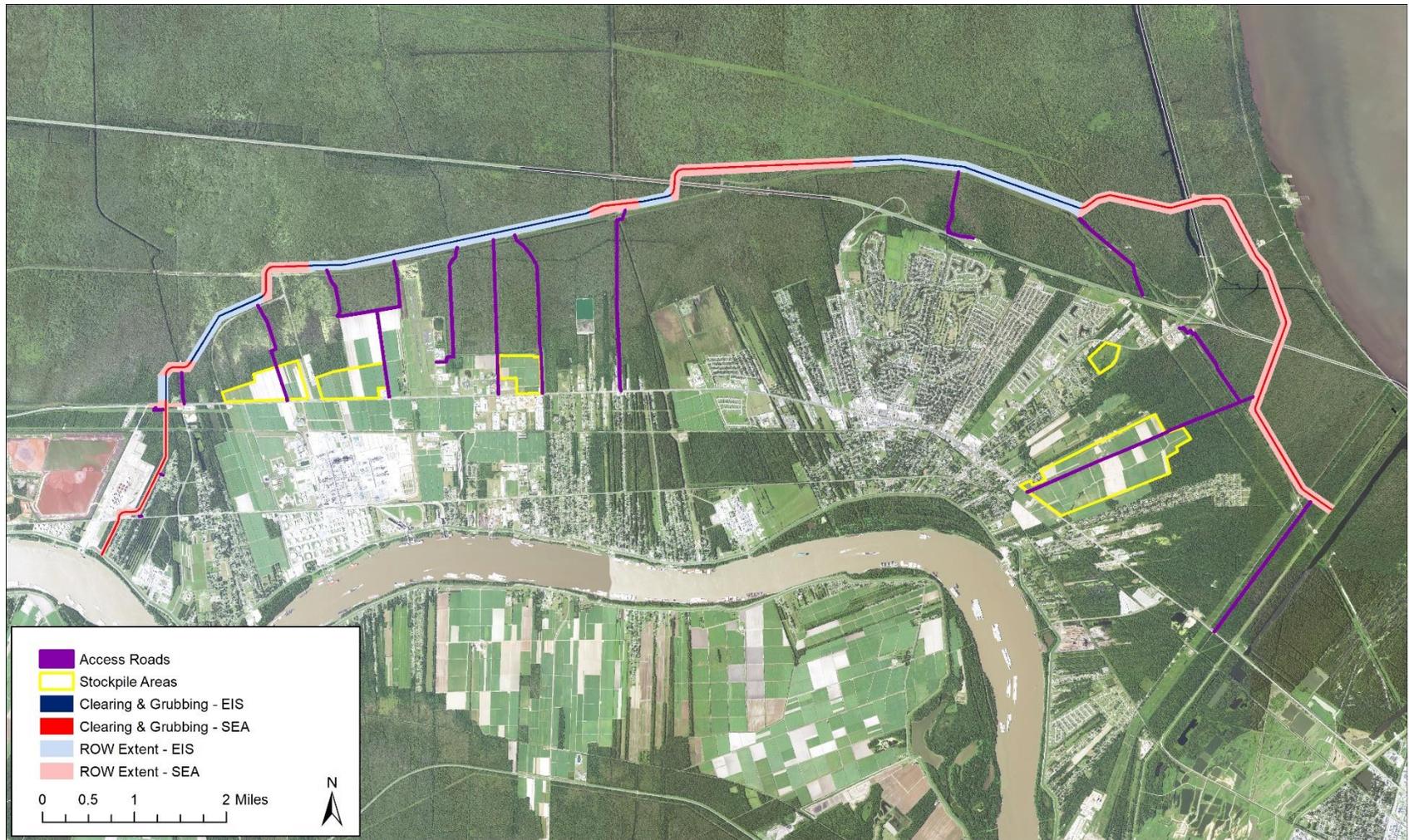


Figure 1: Map showing the Proposed Action. There are 15 access routes, with one access route bifurcating into two roads near the surveys and boring/CPT area. “Clearing & Grubbing” indicates the extent to which tree felling, borings/CPTs, and stockpiling would occur. “ROW Extent” refers to the extent to which other surveys would occur. Areas with “EIS” are within the ROW from the 2016 WSLP EIS and are shown for reference as they are not part of the Proposed Action. Areas with “SEA” refer to the Proposed Action.

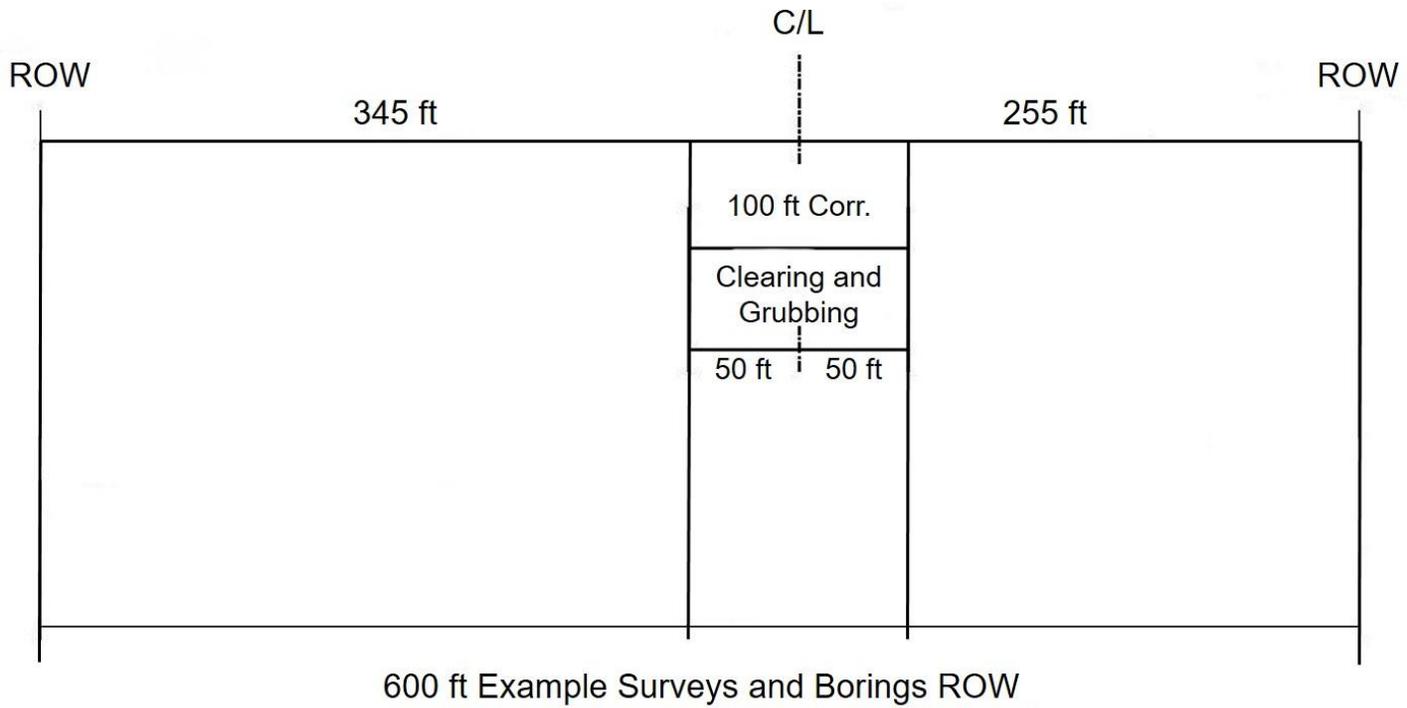


Figure 2: Plan view drawing of a typical ROW for the Proposed Action.

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);

FOR (1) ONLY			
YES	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	NO*	YES	NO
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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	NO*	YES	NO
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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>          </u> |
| (3) Results from previous testing of the material or similar material in the vicinity of the project .....  | <u>          </u> |
| (4) Known, significant sources of persistent pesticides from land runoff or percolation .....   | <u>          </u> |
| (5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances .....  | <u>          </u> |
| (6) Other public records of significant introduction of contaminants from industries, municipalities, or other sources .....  | <u>          </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>          </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>          </u> |
| (8) Number of discharges per unit of time .....  | <u>          </u> |
| (9) Other factors affecting rates and patterns of mixing (specify) .....                                     | <u>          </u> |

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 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 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: Patrick Smith, PhD  
Position: Biologist  
Organization: U.S. Army Corps of Engineers, New Orleans District  
Date: March 8, 2019

b. Water Quality evaluation was prepared by:

c. Water Quality evaluation was reviewed by:

Name: Whitney Hickerson  
Position: Hydraulic Engineer  
Organization: U.S. Army Corps of Engineers, New Orleans District  
Date: March 13, 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: \_\_\_\_\_

\_\_\_\_\_  
Chief, Environmental Planning and Compliance  
Branch