

Attachment D-1
Clean Water Act Section 404(b)(1) Evaluation

EVALUATION OF SECTION 404(b)(1) GUIDELINES (SHORT FORM)

PROPOSED PROJECT: Gulf Intracoastal Waterway, Brazos River Floodgates and Colorado River Locks Feasibility Study, Brazoria and Matagorda Counties, Texas

	Yes	No*
1. Review of Compliance (230.10(a)-(d))		
A review of the proposed project indicates that:		
a. The placement represents the least environmentally damaging practicable alternative and, if in a special aquatic site, the activity associated with the placement 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 EA alternative).	X	
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;	X	
2) Jeopardize the existence of Federally-listed endangered or threatened species or their habitat; and	X	
3) Violate requirements of any Federally-designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies).	X	
c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, an economic values (if no, see values, Section 2)	X	
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)	X	

Note: See Reference #1, Final Report, Chapter 5, Sections 5.3.2 (Water Resources), 5.3.3 (Water Quality), 5.4.3 (Threatened and Endangered Species), 5.5 (Aquatic Resources), and 5.7 (Essential Fish Habitat) for description of impacts to respective resources.

	Not Applicable	Not Significant	Significant*
2. Technical Evaluation Factors (Subparts C-F) (where a 'Significant' category is checked, add explanation below.)			
a. Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C)			
1) Substrate impacts		X	
2) Suspended particulates/turbidity impacts		X	
3) Water column impacts		X	
4) Alteration of current patterns and water circulation		X	
5) Alteration of normal water fluctuation/hydroperiod		X	
6) Alteration of salinity gradients		X	
b. Biological Characteristics of the Aquatic Ecosystem (Subpart D)			
1) Effect on threatened/endangered species and their habitat		X	
2) Effect on the aquatic food web		X	
3) Effect on other wildlife (mammals, birds, reptiles and amphibians)		X	

	Not Applicable	Not Significant	Significant*
2. Technical Evaluation Factors (Subparts C-F) - Continued (where a 'Significant' category is checked, add explanation below.)			
c. Special Aquatic Sites (Subpart E)			
1) Sanctuaries and refuges		X	
2) Wetlands Wetland impacts would occur at each facility, including 11.4 acres of intertidal marsh and 2.4 acres of high marsh at Brazos River Floodgates (BRFG) and 0.7 acre of intertidal marsh at Colorado River Locks (CRL). The USACE will provide mitigation for the impacted wetland habitats. Mitigation needs were calculated using Habitat Evaluation Procedures (HEP) methodology. The Recommended Plan is the Least Environmentally Damaging Practicable Alternative (LEDPA) that meets the goals and objectives of the study and satisfies navigation needs based on public input. At the BRFG, the LEDPA would result in the loss of 9.12 Average Annual Habitat Units (AAHUs) for intertidal marsh and 2.40 AAHUs for high marsh. The LEDPA would result in the loss of 0.58 AAHUs for intertidal marsh at the CRL. Using the HEP methodology, it was determined that the USACE would create 14.14 acres of wetland habitat at the BRFG site (11.69 acres of intertidal marsh and 2.45 acres of high marsh) and 0.74 acre of wetland habitat (intertidal marsh) at the CRL site to mitigate for the wetland losses described above. This mitigation would produce 12.10 AAHUs to offset the 12.10 AAHUs that would be lost as a result of the LEDPA.		X	
3) Mud flats	X		
4) Vegetated shallows	X		
5) Coral reefs	X		
6) Riffle and pool complexes	X		
d. Human Use Characteristics (Subpart F)			
1) Effects on municipal and private water supplies	X		
2) Recreational and Commercial fisheries impacts		X	
3) Effects on water-related recreation		X	
4) Aesthetic impacts		X	
5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves	X		

Note: See Reference #1, Final Report, Chapter 5, Section 5.3.2 (Water Resources), 5.3.3 (Water Quality), 5.4.2 (Land Resources [Protected/Managed] and Recreation Areas), 5.4.3 (Threatened and Endangered Species), 5.5 (Aquatic Resources), 5.6 (Commercial and Recreational Fisheries), and 5.7 (Essential Fish Habitat) for description of impacts to respective resources.

	Yes
3. Evaluation of Dredged or Fill Material (Subpart G)	
a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material (check only those appropriate)	
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	
5) Spill records for petroleum products or designated (Section 311 of Clean Water Act) 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	

Note: See Reference #1, Final Report, Chapter 5, Section 5.14 (Hazardous, Toxic, and Radioactive Wastes). Also see Reference #3.

List appropriate references:

- 1) U.S. Army Corps of Engineers (USACE). 2019. Gulf Intracoastal Waterway, Brazos River Floodgates and Colorado River Locks, Texas: Final Integrated Feasibility Report and Environmental Impact Statement.
- 2) USACE. 2019. Engineering Appendix A of Final Report, Gulf Intracoastal Waterway, Brazos River Floodgates and Colorado River Locks, Texas: Final Integrated Feasibility Report and Environmental Impact Statement.
- 3) USACE. 2019. Environmental Appendix D, Attachment D-1: GIWW BRFG-CRL HTRW Appendix (February 2019). Gulf Intracoastal Waterway, Brazos River Floodgates and Colorado River Locks, Texas: Final Integrated Feasibility Report and Environmental Impact Statement.

	Yes	No
b. An evaluation of the appropriate information in 3a above indicates that there is reason to believe the proposed dredged or fill material is not a carrier of contaminants, or that levels of contaminants are substantively similar at extraction and placement sites and not likely to degrade the placement sites, or the material meets the testing exclusion criteria.	X	

Note: Sediment sampling at the BRFG and CRL facilities will be conducted during the PED phase, prior to construction, to characterize any contaminants present. If contaminated, the material will be disposed of in accordance with applicable local, state, and federal permits, statutes, and regulations.

	Yes
4. Placement Site Delineation (230.11(f))	
a. The following factors as appropriate, have been considered in evaluating the placement site:	N/A
1) Depth of water at placement site	
2) Current velocity, direction, and variability at placement site	
3) Degree of turbulence	

	Yes
4. Placement Site Delineation (230.11(f)) - Continued	
4) Water column stratification	
5) Discharge vessel speed and direction	
6) Rate of discharge	
7) Fill material characteristics (constituents, amount, and type of material, settling velocities)	
8) Number of discharges per unit of time	
9) Other factors affecting rates and patterns of mixing (specify)	

Note: See Reference #1, Final Report, Chapter 3, Section 3.13 and Chapter 5, Section 5.3.2. Dredged material resulting from construction of the Recommended Plan and subsequent maintenance would be placed within existing dredged material placement areas (DMPAs) until available capacity is exhausted, after which dredged material would be transported offshore to an existing ocean dredged material disposal site (ODMDS) that has been approved for Freeport Channel dredging. The USACE Galveston District is currently working on updating the dredged material management plan (DMMP) for the GIWW from High Island to the Brazos River, which includes the Freeport Channel, to allow disposal of future additional maintenance material at ODMDS.

List appropriate references:

- 1) U.S. Army Corps of Engineers (USACE). 2019. Gulf Intracoastal Waterway, Brazos River Floodgates and Colorado River Locks, Texas: Final Integrated Feasibility Report and Environmental Impact Statement.

	Yes	No
b. An evaluation of the appropriate factors in 4a above indicates that the placement site and/or size of mixing zone are acceptable.	N/A	

	Yes	No
5. Actions to Minimize Adverse Effects (Subpart H)		
All appropriate and practicable steps have been taken, through application of recommendations of 230.70-230.77 to ensure minimal adverse effects of the proposed discharge.	X	

List actions taken:

- 1) Best management practices (BMPs) would be used to reduce suspended solids from land runoff, including installation of silt fences. Similarly, turbidity screens or silt collection curtains around construction equipment would reduce the amount of sediment entrained in the water.

	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 placement site (review Sections 2a. 3, 4, and 5 above)	X	
b. Water circulation, fluctuation and salinity (review Sections 2a. 3, 4, and 5)	X	
c. Suspended particulates/turbidity (review Sections 2a. 3, 4, and 5)	X	

	Yes	No*
6. Factual Determination (230.11) - Continued		
d. Contaminant availability (review Sections 2a, 3, and 4)	X	
e. Aquatic ecosystem structure and function (review Sections 2b and c, 3, and 5)	X	
f. Placement site (review Sections 2, 4, and 5)	X	
g. Cumulative impacts on the aquatic ecosystem	X	
h. Secondary impacts on the aquatic ecosystem	X	


Note: During the PED phase and prior to construction, the USACE will collect sediment samples to characterize potential contaminants present at the BRFG and CRL. If contaminated sediments are encountered, they will be disposed of in accordance with applicable local, state, and federal permits, statutes, and regulations.

7. Evaluation Responsibility
a. This evaluation was prepared by: Daniel Allen Position: Wildlife Biologist, USACE Regional Planning and Environmental Center

8. Findings	Yes
a. The proposed placement site for discharge of dredged or fill material complies with the Section 404(b)(1) Guidelines.	X
b. The proposed placement site for discharge of dredged or fill material complies with the Section 404(b)(1) Guidelines with the inclusion of the following conditions:	

List of conditions:

c. The proposed placement 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	

<u>3/18/19</u> Date	 Douglas C. Sims, PMP, RPA Chief, Environmental Branch Regional Planning and Environmental Center
------------------------	--

NOTES:

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

Negative responses to three or more of the compliance criteria at the preliminary stage indicate 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-c before completing the final review of compliance.

Negative response to one of the compliance criteria at the final 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.