Grand Isle and Vicinity Louisiana Beach Erosion and Hurricane Project PL 84-99, Jefferson Parish, Louisiana

Appendix A – Clean Water Act

April 2026

EA608-202-00-B2P-1770651673

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SECTION 1
404(b)(1) Evaluation

**404(b)(1) Evaluation (Short Form) for the
Grand Isle and Vicinity, Hurricane Protection and Beach Erosion, Repair and Rehabilitation of Damaged Federal Hurricane / Shoreline Risk Reduction Project for Post-Hurricane Ida Repairs, Stone Segmented Breakwaters**

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

PROJECT DESCRIPTION. The Grand Isle and Vicinity, Louisiana Project is a hurricane flood risk reduction project, authorized by the Flood Control Act of 1965, to provide improvements to help prevent loss of human lives and damages to property that may result from flooding and wave action caused by hurricanes. Its primary feature is a seven-mile-long dune, with a center core made of stone and earthen filled geotextile and a stone toe dike located fifty feet from its alignment. Additional project features include twenty-eight segmented breakwaters, placement of navigational lights, and dune and concrete crossovers. Landfall of Hurricane Ida near the project area, in August of 2025, caused substantial damage to completed features as well as areas located within the portion of the segmented breakwaters that remain incomplete. This included substantial erosion of the dune as well as numerous washouts of both the sand-filled geotextile tube and clay-filled geotextile core. The proposed actions consist of the construction of stone segmented breakwaters along the gulf shoreline of Grand Isle, where the breakwater system remains incomplete, as well as placement of navigation lights. The proposed efforts evaluated in this form would take place in Jefferson Parish. Figure 1 shows the location of the proposed breakwaters footprint evaluated, where the project remains incomplete.

Figure 1. Aerial view showing the location of the proposed breakwaters footprint (pink) in relation to the existing breakwaters previously completed for this project.

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Stone Breakwaters: A series of segmented stone breakwaters sections is proposed along the Gulf shoreline of Grand Isle, spanning approximately 3.1 miles, to reduce impacts to the unprotected portions of the shore from wave action. The stone breakwaters will be built with 250-foot gaps between consecutive segments. Each segment will be approximately 250 feet long, with a 10-foot crown, 1V:2H side slopes, and a maximum width of 50 feet. Each segment will consist of geo-textile fabric at its base and stone of various gradations will be used for the core, bedding, and for armoring. The stone gradation for the core and bedding stone will be 4 inches stone, capped by armor stone that would use 2 to 4 TON top-size stone. This design is the same one used for the original armor stone previously built on the completed sections west and east of the proposed footprint. A 12-foot berm is also included on the Gulf side of the breakwater to protect the toe of the dike from wave action and minimize scour thus improving resilience. Breakwaters will be constructed to an elevation of +6.5 feet NAVD88. Figure 2 depicts the proposed section for the stone breakwaters. All activities associated with the construction of the breakwaters will be water based and via barge. Barge mounted draglines and excavators will be used to place the geotextile fabric and stone.

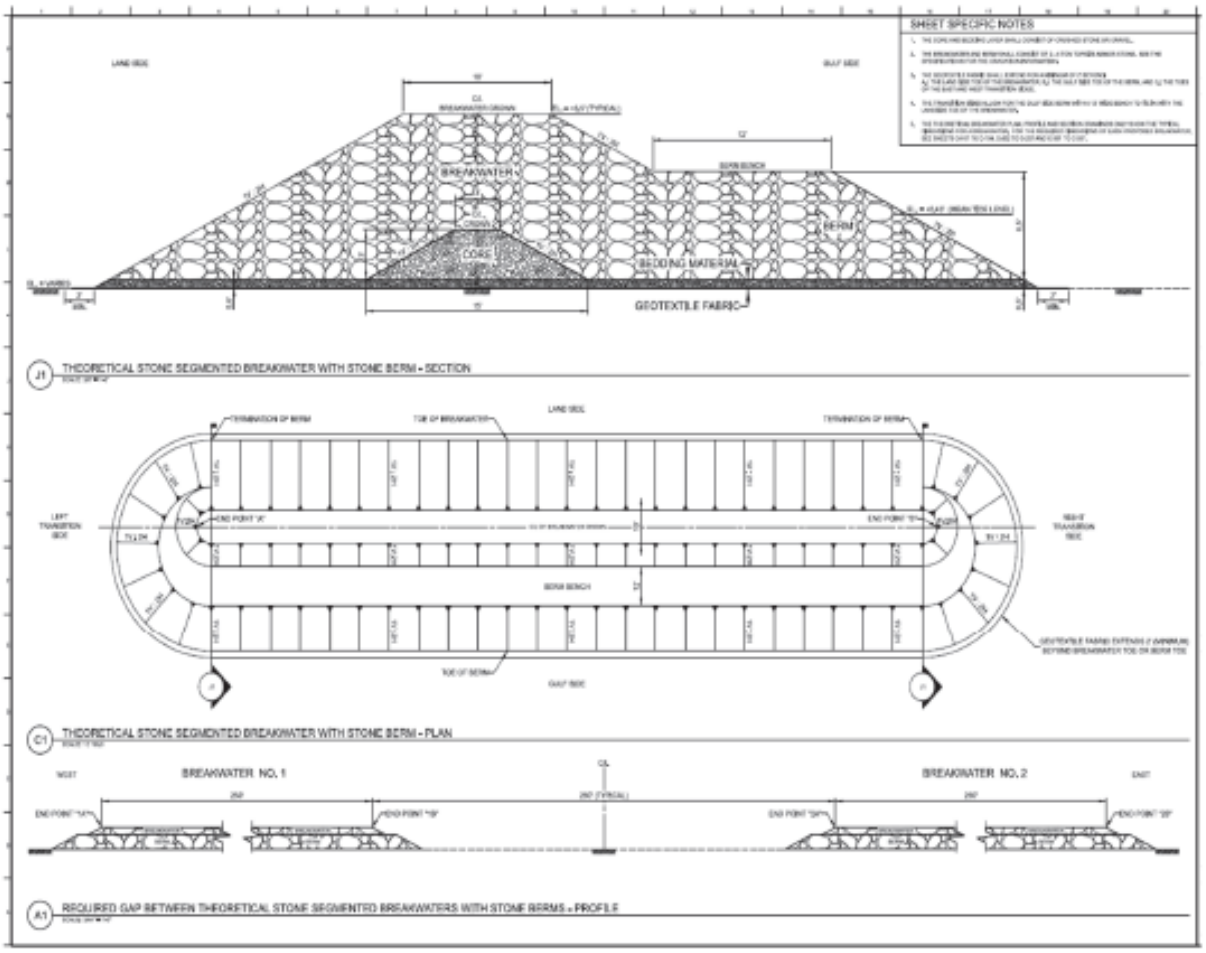

Figure 2. Proposed cross section for the stone breakwaters.

Approximately 51,000 SY of geotextile fabric will be placed at the base. Approximately 29,500 TON of stone will be required for the core and bedding material of the proposed breakwaters, and approximately 183,000 TON of stone will be required for the armoring protecting the core.
While access to the site will be via the open waters in the Gulf, flotation channels excavation will be allowed within the project boundaries in areas where existing elevations might warrant it for barge access. The locations for these flotation channels will be controlled by the proposed breakwaters alignment with the bottom edge of cut located adjacent to the breakwaters at a minimum offset distance of 80 feet. The allowable bottom width for flotation will not exceed 60 feet and water bottom elevations will not exceed an elevation of -6.0 feet NAVD88. Excavated material will be stockpiled next to the flotation channel and placed back in place prior to project completion. These temporary stockpiled areas will also be brought back to the surrounding matching grade of the water bottom.

Navigation Lights: Up to twenty navigation lights will be installed at various locations near the stone breakwaters alignments. Each navigation light will be installed on a 2.0 x 4.0 feet wood deck (platform) directly on top of a timber pile cluster. Each cluster will be made of three timber piles with a minimum 7-inch tip diameter for each pile. Figures 3 and 4 show the elevation view of the timber pile navigation light, with all its components, and the relative location for the placement of the structure with respect to the proposed breakwaters. All lumber and timber will be treated with Chromated Copper Arsenate (CCA) and creosoto in accordance with the American Wood Protection Association's (AWPA) Standards U1 for marine piles. A barge mounted pile driver will be used to drive the pilings for the platforms.

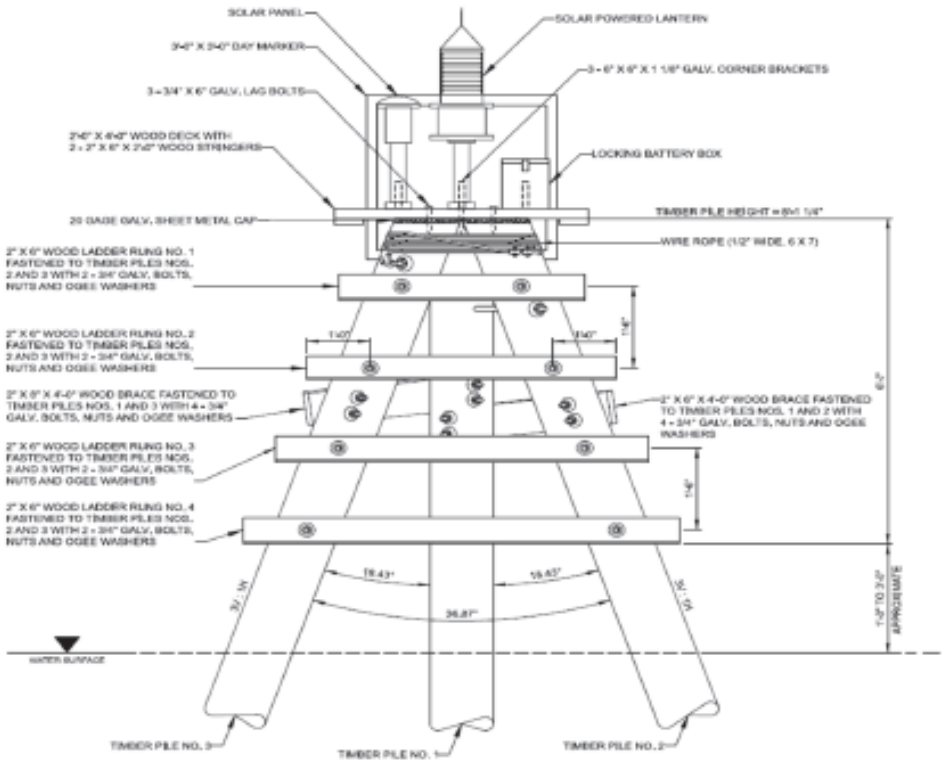

Figure 3. Elevation view of the timber pile navigation light including all its components.

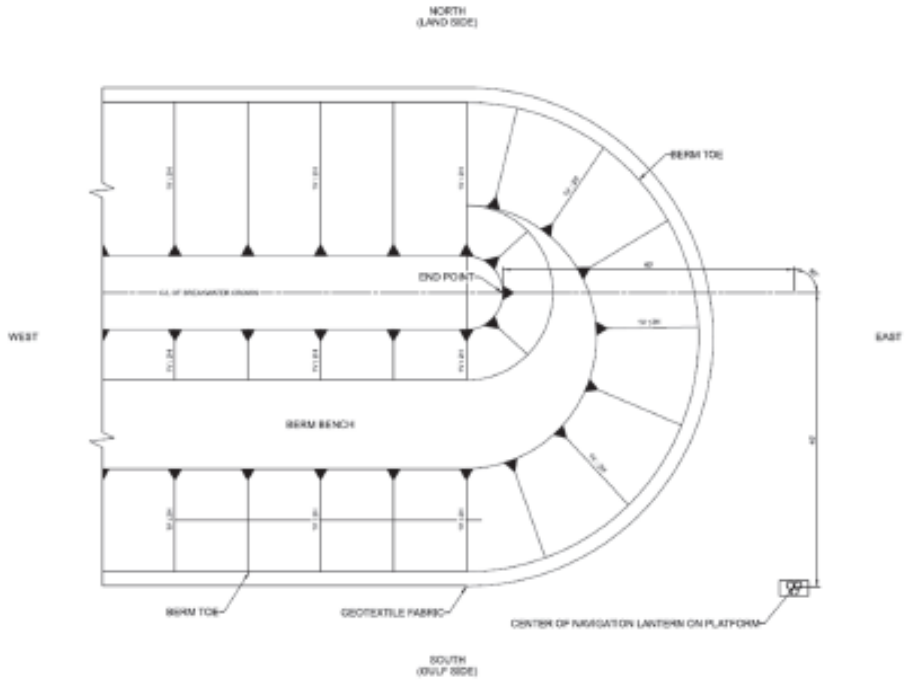

Figure 4. Relative location for placement of the navigation light platforms with respect to the proposed breakwaters.

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

A review of this project indicates that:

	Preliminary[1]		Final[2]	
	Yes	No	Yes	No
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)	×		X	
b. The activity does not appear to: **i.** violate applicable state water quality standards or effluent standards prohibited under Section 307 of the Clean Water Act; **ii.** jeopardize the existence of Federally listed endangered or threatened species or their habitat; and **iii.** violate requirements of any Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies)	x[2]		X[2]	
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)	×		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	

2. Technical Evaluation Factors (Subparts C-F)

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

	N/A	Not Significant	Significant [3,5]
i. Substrate impacts		x	
ii. Suspended particulates/turbidity impacts.		x	
iii. Water column impacts		x	
iv. Alteration of current patterns and water circulation		x	
v. Alteration of normal water fluctuations/ hydroperiod		x	
vi. Alteration of salinity gradients	x		

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

i. Effect on threatened/endangered species and their habitat		x	
ii. Effect on the aquatic food web		x	
iii. Effect on other wildlife (mammals, birds, reptiles, and amphibians)		x	

c. Special Aquatic Sites (Subpart E)

i. Sanctuaries and refuges	x		
ii. Wetlands	x		
iii. Mud flats		x	
iv. Vegetated shallows		x	
v. Coral reefs	x		
vi. Riffle and pool complexes	x		

d. Human Use Characteristics (Subpart F)

i. Effects on municipal and private water supplies	x		
ii. Recreational and commercial fisheries impacts		x	
iii. Effects on water-related recreation.		x	
iv. Esthetic impacts	x		
v. Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves	x		

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.

i. Physical characteristics	x
ii. Hydrography in relation to known or anticipated sources of contaminants	x
iii. Known, significant sources of persistent pesticides from land runoff or percolation	x
iv. Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances	x
v. Other public records of significant introduction of contaminants from industries, municipalities, or other sources	X
vi. Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities	X
vii. Other sources (boring data, geotechnical investigation report)	x

Appropriate references: See Encl 2

b. An evaluation of the appropriate information in 3.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.[6]

Yes	No[3]
x	

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

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

i. Depth of water at disposal site	x
ii. Current velocity, direction, and variability at disposal site	x
iii. Degree of turbulence	x
iv. Water column stratification	x
v. Discharge vessel speed and direction	x
vi. Rate of discharge	x
vii. Dredged or fill material characteristics (constituents, amount, and type of material, settling velocities)	x
viii. Number of discharges per unit of time	
ix. Other factors affecting rates and patterns of mixing (specify)	

Appropriate references: See 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[3]
x	

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[3]
×	

Actions taken:

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.

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:

	Yes	No[3]
a. Physical substrate at the disposal 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	
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. Disposal site (review sections 2, 4, and 5)	x	
g. Cumulative impact on the aquatic ecosystem	x	
h. Secondary impacts on the aquatic ecosystem	x	

[1] 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.

[2] 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.

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

[4] For 1.b., review is for i. only (i.e., The activity does not appear to violate applicable state water quality standards or effluent standards prohibited under Section 307 of the Clean Water Act)

[5] Where a check is placed under the significant category, the preparer has attached explanation.

[6] If the dredged or fill material cannot be excluded from individual testing, the "short form" evaluation process is inappropriate.

7. Evaluation Responsibility

a. Prepared by:
Michael A. Morris
Environmental Protections Specialist U.S. Army Corps of Engineers, New Orleans District January 22, 2026

Julio I. Vidal Salcedo
Civil Engineer
U.S. Army Corps of Engineers, New Orleans District December 29, 2025

b. Reviewed by:

Whitney Hickerson
Hydraulic Engineer
U.S. Army Corps of Engineers, New Orleans District December 30, 2025

Patrick W. Smith
Supervisory Biologist
U.S. Army Corps of Engineers, New Orleans District January 30, 2026

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):	
	i. There is a less damaging practicable alternative	
	ii. The proposed discharge will result in significant degradation of the aquatic ecosystem	
	iii. The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem	

Date: 19 March 2026

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Date: 2026.03.19 16:34:29 -05'00'

Chief, Environmental Planning Branch

Appendix - Public Notice Comments and Responses

US Army Corps of Engineers, New Orleans District

To: File

From: Julio I. Vidal Salcedo, CEMVN

EDH CC:

Date: 29 December 2025

Re: Grand Isle and Vicinity, Hurricane Protection and Beach Erosion, Repair and Rehabilitation of Damaged Federal Hurricane / Shoreline Risk Reduction Project for Post Hurricane Ida Repairs, Stone Segmented Breakwaters

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A short form 404 (b)(1) evaluation of the Federal actions for the subject project was completed by CEMVN-EDH for water quality impacts. Existing data was used to make factual determinations for the subject actions. The proposed construction activities include construction of a field of stone breakwaters along the Grand Isle southern shoreline with stones of various gradations to be used for the core, bedding and exterior armoring, placement of geotextile at the base, placement of navigation lights, and flotation access. The design used for the breakwaters is similar to the one used on previously completed segments west and east of the proposed federal actions evaluated in this review. Stone to be used would be furnished from a government approved source. All construction activities would be water based and via barge. The following summarizes the review process and comments noted:

I. Subpart B – Review of Compliance

a. 230.10 (a): The proposed federal actions on the south shoreline of Grand Isle do not involve a discharge of dredged or fill materials into any of the identified areas which include the stone breakwaters footprint, location of the navigation lights, and flotation access. Therefore, no restrictions on discharge would apply.

The proposed breakwater field connecting the offshore breakwaters on the west of Grand Isle to the offshore breakwaters on the east end is the result of a comprehensive numerical modeling analysis aiming to improve stability of the west and center portions of Grand Isle while protecting the existing levee dune and landward infrastructure. It considered sediment bypassing patterns and rates due to natural and artificial changes on concerning tidal inlets (Caminada Pass) to establish changes over time, incorporated those sediment bypassing rates to model changes to the shoreline over a 10-year period to inform, design and establish various configurations, and modeled storm impacts to determine

resulting erosion of those configurations to the shoreline and features. Therefore, we can conclude that the proposed breakwaters configuration and the individual locations consider optimal practicable position that could reasonably be obtained to fulfill basic design requirements of the proposed construction features for the area. This include minimizing the number of breakwaters required to accomplish the goal without impacting existing features.

b. 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.

The proposed stone breakwaters and navigation lights for Grand Isle will be located within the southern end of the Barataria Basin. The Barataria Basin is located immediately south and west of New Orleans and is bounded on the north and east by the Mississippi River, from Donalsonville to Venice, on the south by the Gulf of America, and on the West by Bayou Lafourche. The northern portion of the basin is segregated by the GIWW and several large lakes that occupy the sump position approximately half-way between the ridges. The southern half of the basin consists of tidally influenced marshes connected to a large bay system known as the Barataria Bay, behind the Grande Terre Islands and Grand Isle, with the last one located on the western boundary. Barataria Bay is classified as an estuarine system with an intricate complex network of connected bayous, marshes, channels, and smaller bays. Barataria Bay has four major tidal inlets: Caminada Pass, Barataria Pass, Pass Able, and Quatre Bayou Pass. The main sources of freshwater to the basin are through the Davis Pond Diversion, local rainfall / runoff, and flow from upstream water bodies. Grand Isle is the only inhabited barrier island in Louisiana.

The proposed federal actions will take place within a geographically vital location for the Barataria Basin as Grand Isle isn't just near the basin, it's a defining feature for the basin's estuaries productivity, existing wetlands protection, and marine life in the region. For water quality assessment purposes, the Louisiana Department of Environmental Quality (LDEQ) makes a distinction between the northern and southern shorelines created by Grand Isle and any other inland and estuarine water bodies north of Grand Isle. The Barataria Bay is the main water body immediately adjacent to Grand Isle and along with the Gulf waters on the southern side falls into its own large LDEQ coastal subsegment, bordering Grand Isle on all sides, and has designation number LA021102. During the 2024 reporting period, subsegment LA021102 have fully supported designated uses for Secondary Contact Recreation (SCR, boating) and Oyster Propagation. The region also generally meets the standards for Primary Contract Recreation (PCR, swimming) and Fish and Wildlife Propagation, however, during this reporting period there is a significant advisory for the open Gulf waters that includes the southern shoreline of Grand Isle. At the time of this review the suspected causes of water quality impairment in these subsegment include mercury (there is an active fish consumption advisory) and enterococcus (there is an active swimming

advisory). While the water itself is safe for recreation, there are specific recommendations to limit consumption of certain types of fish caught in these waters to avoid potential effects from mercury. The suspected sources of water quality impairment in these subsegment include atmospheric deposition – toxics, and other unknown sources. The suspected atmospheric depositions are essentially pollutants, mainly from industrial emissions, that are released into the atmosphere then travel long distances and are deposited onto the land and into water with rain, snow, or as dry particles. Placement of a geotextile fabric, stone, and the placement of navigation lights platforms at the proposed locations would not result in the release of contaminants that would violate water quality standards or criteria or exacerbate existing water quality impairments in the identified areas, which are the result of non-local nonpoint sources of pollution. In this particular case the southern shoreline of Grand Isle is more susceptible to more direct and visible pollution from offshore oil and gas activities and marine debris on the Gulf.

c. 230.10 (c): The proposed construction of the stone breakwaters, (individually or collectively), the placement of geotextile, placement of navigation lights platforms, and flotation access excavation, do not represent a potential degradation of waters of the USA.

d. 230.10 (d): The proposed construction of the stone breakwaters, (individually or collectively), the placement of geotextile, placement of navigation lights platforms, and flotation access excavation, are not expected to have adverse impacts on aquatic ecosystems.

(See references b, d, e, and f.)

II. Subpart C – Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem

a. *230.20 - Substrate*: The proposed stone breakwaters, placement of geotextile, excavation for flotation access, and placement of navigation lights platforms do not involve a direct discharge of dredged or fill materials into the identified footprint of the Barataria Bay, nor any the surrounding areas in the Gulf. Placement of both stone and geotextile would introduce additional hard substrate atypical to this area and may affect permeability around the breakwaters, which is intended, to provide natural protection against wave actions from the Gulf to prevent future erosion to the Grand Isle south shoreline. Placement of stone and geotextile is not expected to alter the physical, chemical, and biological characteristics of water bottoms near the shoreline or past the breakwaters footprint nor affect the permeability of water bottom sediments. Access routes would be via open waters in the Gulf. Flotation channels excavation for equipment and material barge access would be allowed, but not required, and limited to areas where existing water bottom elevations may impede flotation access to the proposed breakwater alignments during construction operations.

Flotation channels excavation won't be allowed to be lower than -6.0 feet NAVD88. Recent surveys show elevations ranging from -4.0 to -5.0 feet NAVD88. All excavated material from the flotation channels would be place in a temporary stockpile adjacent to the flotation channel. Therefore, the proposed activities are not anticipated to alter water bottoms in a way that would appreciably adversely alter the chemical, physical, or biological characteristics of water bottoms.

b. *230.21 – Suspended Particulates/Turbidity*: The proposed stone breakwaters, placement of geotextile, excavation for flotation access, and placement of navigation lights platforms do not involve a direct discharge of dredged or fill materials into the identified footprint of the Barataria Bay, nor any the surrounding areas in the Gulf. There may be temporary impacts to suspended particulate and turbidity levels near the proposed stone breakwaters alignments, the total footprint, and in the vicinities along the Grand Isle south shoreline during construction. Turbidity levels may increase during the construction period due to the nature of the activity. Placement of geotextile, armoring, and excavation for flotation, near and within the segmented alignments may cause localized turbidity plumes and the release of suspended particles in the water. Turbidity plumes may be generated during placement of stone and excavation of flotation channels due to an increase of suspended particles generated by fines that normally take longer to reach the water bottom. Depending on hydrologic conditions, weather events, and tides events that occur during construction, impacts may range from negligible to appreciable but transient. Placement of geotextile fabric may also generate temporary impacts on suspended particles and turbidity, but these would be minimal and are also expected to diminish. As material settles, any loose sediments will eventually be carried away by tides or wave action and the direct effects on suspended particulates and turbidity are expected to diminish. This determination applies to all cases, the individual breakwater alignments, its collective effect on the system, and after backfilling of the temporary flotation channels. Placement of navigation lights is not expected to impact suspended particulate nor turbidity levels.

c. *230.22 – Water Column*: The proposed stone breakwaters, placement of geotextile, excavation for flotation access, and placement of navigation lights platforms do not involve a direct discharge of dredged or fill materials into the identified footprint of the Barataria Bay, nor any the surrounding areas in the Gulf. Placement of geotextile and stone is expected to generate minor releases of trace minerals from clay and limestone rock dust and may result on localized turbidity plums, which would affect water clarity and water color. Following completion of construction activities, the occurrence of these localized turbidity plumes would no longer occur. Depending on hydrologic conditions and whether any major rainfall events occur during construction, these impacts may range from nonexistent to minor and transient. These traces of minerals are expected to be carried and dissipated by wave action to the gulf and any direct water column effects of project features are expected to diminish. Placement of geotextile and

stone are not expected to cause potential changes in chemistry, physical characteristics, changes in odor, or taste of water. Excavation of flotation channels would result in the exposure of previously undisturbed, organic and reduced sediments, which may result in an odor but these are expected to be transient and persisting only during the duration of construction activities.

d. *230.23 –Current Patterns and Water Circulation*: The proposed stone breakwaters, placement of geotextile, excavation for flotation access, and placement of navigation lights platforms do not involve a direct discharge of dredged or fill materials into the identified footprint of the Barataria Bay, nor any the surrounding areas in the Gulf. The proposed federal actions are not expected to alter current patterns and water circulation within the estuary, or the Gulf of America, during construction operations nor after completion of all construction activities.

e. *230.24 –Normal Water Fluctuations/Hydroperiod*: The proposed federal actions are not expected to have a direct effect on normal water fluctuations and hydroperiod in the estuary or the Gulf of America.

f. *230.25 –Salinity Gradients:* N/A

III. Subpart F – Potential Effects on Human Use Characteristics

a. *230.51 –Recreational and commercial fisheries*: The proposed footprint falls within a subsegment of the Grand Isle south shoreline with an Oyster Propagation designated use. There is also an active fish consumption advisory in the Gulf. The proposed placement of stone, geotextile, and the various expected activities during construction are not expected to interfere with reproductive success of aquatic species, nor introduce pollutants that may directly reduce population of important aquatic organisms. The use of CCA and creosote as a wood preservative on lumber and timber piles is also not expected to introduce any foreign metals into the aquatic environment. While CCA may be highly toxic to human health and the environment, the absence of adverse environmental effects associated with the use of CCA treated wood (that meets AWPA standards) in open aquatic environments is well documented in the literature. If there are any risks, it would come from potential metal loss rates due to leaching conditions on elements that do not meet AWPA standards for use in marine or freshwaters. There may be an elevated risk if used in large quantities and for areas with poorly circulated water bodies, but neither of those cases apply to the proposed federal actions evaluated here given that these platforms are small scale and will be located within the Gulf of America.

b. *230.52 –Water-related recreation*: The proposed footprint falls within a subsegment of the Grand Isle south shoreline with a Secondary Contact Recreation (SCR) designated use. There is also an active swimming advisory in the Gulf. The proposed activities are not expected to permanently change turbidity, suspended particulates, temperature, dissolved oxygen, dissolved

materials, pathogenic organisms, aesthetics qualities of sight, taste, odor, or color, of water used for recreation.

(See references a, d, and e)

IV. Subpart G – Evaluation of Dredged or Fill Material

a. *230.60 (a) – General evaluation of dredged or fill material:* Boring data collected in the vicinity in previous years has also been considered to better understand subsoil conditions near the designated footprint where the stone and geotextile would be placed. The geologic profile for this project spans 3.3 miles of Grand Isle's coastline and includes data from four borings taken between 1978 and 1985. Geologic profile depicts two major facies: barrier beach and interdistributary. The two facies shift back and forth, representing the gradual cutoff of the Mississippi River in the area. At the top we find the first barrier beach layer, which extends from an elevation of 6.2 to approximately -18.0 feet NAVD88 and has a thickness of approximately 16.0 to 25.0 feet. This layer consists mostly of grey sand with some silty sand layers, shell fragments, and rootlets, and shows signs of oxidation. Underneath the first barrier beach layer is the first interdistributary layer, which extends from an elevation of approximately -8.0 to -25.0 feet NAVD88 and has a thickness of approximately 5.0 to 33.0 feet. This interdistributary layer consists of very soft to stiff grey fat clay with silt, silty sand, and lean clay layers and strata, and shell fragments, and shows signs of oxidation. Beneath this layer is another barrier beach layer, which spans from an elevation of -20.0 to roughly -50.0 feet NAVD88 and has a thickness of around 5.0 to 25.0 feet. The second layer is composed of predominantly silty sand and contains some sand and silt layers, as well as small clay lenses. The bottom layer, with an elevation spanning from approximately -30.0 feet to the bottom of the deepest boring at -90.0 feet NAVD88, is the second interdistributary layer. This second layer looks like the first interdistributary layer, with the addition of some slickensides.

   The proposed breakwaters will use 4 inches size stone for the core and bedding. Material will be comprised of crushed stone or gravel. Typical material composition from available stone sources, will primarily include limestone, dolomite, marble, sand, gravel, and shale. Limestone, dolomite, and quartzite are the most common for construction. For the armoring 2-4 top-size stone will be used. This is generally composed of granite, limestone, basalt, or quartzite. Given that stone to be used for construction will be sourced from a government approved quarry, it is expected to be comprised of elements that commonly occur in the earth's crust and are not expected to be carriers of contaminants or negatively affect water quality and the existing geologic profile. In addition, no potential impacts to pH levels are expected for south Louisiana waters or the Gulf of America.

b. 230.61 (a) – Considerations in Evaluating the Biological Availability of Possible

Contaminants in Dredged or Fill Material: See II.a. The U.S. Coast Guard National Response Center website containing spill reports (USCG 2025) has been reviewed for the portions of the Barataria Bay estuary near the proposed footprint along the Grand Isle south shoreline, as well as the portions on the Gulf of America. A spill incident has been identified in the vicinities in April 2025 where approximately 20-50 barrels of crude oil where release 25 miles southeast of Grand Isle. However, the proposed federal actions evaluated here are not expected to exacerbate any previously reported incidents and its aiming to improve resilience against erosion and wave action of the Grand Isle southern shoreline.

(See references c, g, h, and i)

c. An evaluation of the appropriate information in IV(a) above indicates that there is reason to believe the proposed fill material is not a carrier of contaminants, or the material meets the testing exclusion criteria: Yes

V. Disposal Site Delineation

a. *230.11 (f) – Considerations in Evaluating the Disposal Site:* The proposed locations for the breakwater alignments are adjacent to the Barataria Bay and the Gulf of America in Jefferson Parish, Louisiana. The proposed stone to be used (for the core, base, and armoring of the breakwaters), the geotextile (for the base), and the use of CCA and creosote as a wood preservative on the lumber and timber piles of the navigation lights platform, is not expected to include contaminants that would adversely affect aquatic life.

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

VI. 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: N/A

VII. 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. Brooks, K.M. 2003. Environmental Risk Assessment for CCA-C and ACZA Treated Wood. Aquatic Environmental Sciences.

b. Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). 2025. Coastal Louisiana Basins. https://lacoast.gov/new/about/basin_data/ba/default.aspx

c. Lamar, J.E. and H.B. Willman. 1938. A Summary of the Uses of Limestone and Dolomite. Report of Investigations—No. 49. Urbana, IL: Illinois State Geological Survey. https://core.ac.uk/download/pdf/17354971.pdf

d. Louisiana Department of Environmental Quality (LDEQ). 2024. Fishing Consumption and Swimming Advisories. https://deq.louisiana.gov/page/fishing-consumption-and-swimming-advisories

e. Louisiana Department of Environmental Quality (LDEQ). 2024. Louisiana Water Quality Inventory: Integrated Report (Clean Water Act Sections 305(b)/303(d)). https://deq.louisiana.gov/page/2024-Water-Quality-Integrated-Report

f. Louisiana Watershed Initiative (LWI). 2023. Watershed Regions. https://watershed.la.gov/watershed-regions

g. United States Coast Guard (USCG). 2025. National Response Center. https://nrc.uscg.mil/

h. United Sates Army Corps of Engineers (USACE). 2025. Grand Isle Stone Segmented Breakwaters Geotechnical Report.

i. Weems, J.B. 1903. Chemistry of Clays. Iowa Geological Survey Annual Report No. 14. Pp. 319-346. https://ir.uiowa.edu/cgi/viewcontent.cgi?article=1076&context=igsar

SECTION 2
Water Quality Certification

2.1 APPLICATION

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U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

For use of this form, see 33 CFR 325. The proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0003 Expires: 2027-10-31

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Jason Middle - A. Last - Emery	First - David Middle - J. Last - Day
Company - US Army Corps of Engineers, New Orleans District	Company - Same as applicant
E-mail Address - Jason.A.Emery@usace.army.mil	E-mail Address - David.J.Day@usace.army.mil
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address- 7400 Leake Avenue	Address- Same as applicant
City - New Orleans State - LA Zip - 70118 Country - USA	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE	10. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business 504-862-2364 c. Fax	a. Residence b. Business 504-862-1014 c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, David J. Day to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

EMERY.JASON.A.1536523100 Digitally signed by EMERY.JASON.A.1536523100 Date: 2025.12.18 08:00:54 -06'00' — 2025-12-18

SIGNATURE OF APPLICANT — DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
Grand Isle and Vicinity Louisiana Beach Erosion and Hurricane Project PL 84-99

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Gulf of America	Address Not Applicable
15. LOCATION OF PROJECT	
Latitude: N 29°12'58.11" Longitude: W 90°00'44.83"	City - State- Zip-

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16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see Instructions)

State Tax Parcel ID NA Municipality

Section - Township - Range -

17. DIRECTIONS TO THE SITE

The proposed project consists of construction of up to 35 segmented stone breakwaters (Jefferson Parish), 108 miles south of New Orleans, LA. Accessible by I-10 W/I-310 S/US-90 W/LA-308 S/LA-1 S

18. Nature of Activity (Description of project, include all features)

The Proposed Action consists of construction of up to 35 segmented stone breakwaters on the Gulf of America side of Grand Isle, LA in the 16,000-foot gap located between the existing western and eastern breakwater fields. The length and gap of each breakwater, as well as the distance offshore would vary across the proposed breakwater alignment. The breakwaters would consist of geotextile, core and bedding stone, and armor stone. Approximately 230,000 tons of armor stone, 42,000 tons of core and bedding stone, and 74,000 square yards of geotextile would be used. Up to 20 navigation lights and platforms would be placed adjacent to breakwaters. All activities associated with the construction of the breakwaters would be water based and via barge. Barge mounted draglines and excavators would be used to place the geotextile fabric and stone. A barge mounted pile driver would be used to drive piling for navigation light platforms. There would be no dredging associated with the Proposed Action.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of the Proposed Action is to improve the performance and longevity of beach nourishment projects, ultimately reducing the scope of future repairs and maintenance activities. The Proposed Action is expected to also better maintain the beach and shoreline through higher retention of sand.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Stone would be placed in open waters of the Gulf of America near Grand Isle, LA to act as a breakwater. The purpose of the proposed breakwater are described in Block 19.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
See Block 18 for types of materials and amounts.		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 18 acres in Water of the U.S.

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see Instructions)

Best management practices would be used to avoid and minimize any adverse impacts to the coastal area.

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It is anticipated that there would be no significant adverse impacts resulting from the proposed action.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

No work associated with the Proposed Action has begun. Previous breakwaters for the Grand Isle Project have been completed by the applicant in the past.

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- Grand Isle, Jefferson Parish, Louisiana

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

EMERY.JASON.A.1536523100 Digitally signed by EMERY.JASON.A.1536523100 Date: 2025.12.18 10:01:00 -06'00' — 2025-12-18

SIGNATURE OF APPLICANT | DATE | SIGNATURE OF AGENT | DATE

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The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

2.2 CERTIFICATE

JEFF LANDRY
GOVERNOR

COURTNEY J. BURDETTE
SECRETARY

STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL SERVICES

MAR 18 2026

David Day
U.S. Army Corps of Engineers, New Orleans District
7400 Leake Avenue
New Orleans, Louisiana 70118

AI No.: 249690
Activity No.: CER20250001

RE: U.S. Army Corps of Engineers, New Orleans District
Grand Isle and Vicinity Louisiana Beach Erosion and Hurricane Project PL 84-99
Water Quality Certification WQC 251219-01
Jefferson Parish

Dear Mr. Day:

The Louisiana Department of Environmental Quality, Water Permits Division (LDEQ), has reviewed the application requesting authorization to construct up to 35 segmented stone breakwaters on the Gulf of America side of Grand Isle in the 16,000-ft. gap between the existing western and eastern breakwater fields. All work will occur near Grand Isle in Jefferson Parish.

The application and the additional information received February 5 and 25, 2026, have been reviewed to assess compliance with State Water Quality Standards, the approved Water Quality Management Plan and applicable state water laws, rules and regulations. LDEQ has complied with its public notice procedures established pursuant to Clean Water Act Section 401(a)(1). LDEQ determined that the requirements for a Water Quality Certification have been met. LDEQ concludes that the activity will not violate water quality standards as provided for in LAC 33:IX.Chapter 11. Therefore, LDEQ hereby issues U.S. Army Corps of Engineers, New Orleans District Grand Isle and Vicinity Louisiana Beach Erosion and Hurricane Project PL 84-99 Water Quality Certification, WQC 251219-01.

Should you have any questions concerning any part of this certification, please contact Jace Hood at (225) 219-2743 or by email at jace.hood@la.gov. Please reference Agency Interest (AI) number 249690 and Water Quality Certification 251219-01 on all future correspondence to this Department to ensure all correspondence regarding this project is properly filed into the Department's Electronic Document Management System.

Sincerely,

Jenniffer Sheppard, Administrator
Water Permits Division

c: IO-W

ec: david.j.day@usace.army.mil

Post Office Box 4313 • Baton Rouge, Louisiana 70821-4313 • Phone 225-219-3181 • Fax 225-219-3309
www.deq.louisiana.gov

SECTION 3
List of Acronyms and Abbreviations

ACZA	Ammoniacal Copper Zinc Arsenate
AWPA	American Wood Protection Association
CCA	Chromated Copper Arsenate
CEMVN	New Orleans District
CWA	Clean Water Act
CWPPRA	Coastal Wetlands Planning, Protection and Restoration Act
ED	Engineering Division
ENCL	Enclosed
GIWW	Gulf Intracoastal Waterway
LDEQ	Louisiana Department of Environmental Quality
NAVD 88	National American Vertical Datum of 1988
N/A	Not Applicable
PCR	Primary Contract Recreation
PL	Public Law
SCR	Secondary Contact Recreation
SY	Square Yards
USCG	U.S. Coast Guard