Deepwater Horizon Oil Spill

Louisiana Trustee Implementation Group Draft Supplemental Restoration Plan and Environmental Assessment: Cypremort Point State Park Improvements Project Modification

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1 INTRODUCTION/BACKGROUND

This document, Louisiana Trustee Implementation Group Draft Supplemental Restoration Plan and Environmental Assessment for the Cypremort Point State Park Improvements Project Modification (Draft Supplemental RP/EA), was prepared by the Louisiana Trustee Implementation Group (LA TIG) to assess the environmental impacts from modifications (Cypremort Improvements Project modification) to the originally proposed Cypremort Point State Park Improvements project scope and design (original Cypremort Improvements Project) that was evaluated and selected in the Final Restoration Plan and Environmental Assessment #4: Nutrient Reduction (Nonpoint Source) and Recreational Use (RP/EA #4), which was finalized in July 2018 (LA TIG 2018b).

The LA TIG is responsible for restoring the natural resources and services within the Louisiana Restoration Area that were injured by the April 20, 2010, Deepwater Horizon (DWH) oil spill and associated spill response efforts. The LA TIG, which represents the Deepwater Horizon Oil Spill Trustees (DWH Trustees) for Louisiana, includes five Louisiana state trustee agencies and four federal trustee agencies: Louisiana Coastal Protection and Restoration Authority (CPRA); Louisiana Department of Natural Resources; Louisiana Department of Environmental Quality (LDEQ); Louisiana Oil Spill Coordinator's Office (LOSCO); Louisiana Department of Wildlife and Fisheries (LDWF); U.S. Department of Commerce, represented by the National Oceanic and Atmospheric Administration (NOAA); U.S. Department of the Interior (DOI), represented by the U.S. Fish and Wildlife Service (USFWS) and National Park Service; U.S. Department of Agriculture (USDA); and U.S. Environmental Protection Agency (EPA).

The RP/EA #4 (LA TIG 2018b) was prepared pursuant to the Oil Pollution Act of 1990 (OPA) and the National Environmental Policy Act of 1969 (NEPA) and is consistent with the DWH Trustees' findings in the *Deepwater Horizon Oil Spill Final Programmatic Damage Assessment and Restoration Plan/Programmatic Environmental Impact Statement* (PDARP/PEIS) and Record of Decision (ROD) and the 2016 Consent Decree resolving civil claims by the DWH Trustees against BP Exploration and Production (BP) arising from the DWH oil spill (DWH Trustees 2016a). Details on the background and settlement can be found in the PDARP/PEIS (DWH Trustees 2016a). The release of the *Draft Restoration Plan and Environmental Assessment #4: Nutrient Reduction (Nonpoint Source) and Recreational Use* (Draft RP/EA #4 [LA TIG 2018a]), which included a Preliminary Finding of No Significant Impact (FONSI), and opening of the public comment period for the Draft RP/EA #4 was publicized on April 20, 2018, in the *Federal Register* (Federal Register 83:17550); the Louisiana Register Volume 44, Number 04; and announced on the LA TIG website.[1] A public meeting was held on April 24, 2018 in New Orleans, Louisiana. The public comment period closed May 21, 2018, and the RP/EA #4 and FONSI were released on the LA TIG website[2] on July 18, 2018, and in the *Federal Register* (Federal Register 83:34572) and Louisiana Register Volume 44, Number 07 on July 20, 2018.

[1] LA TIG website announcement for the Draft RP/EA #4: https://www.gulfspillrestoration.noaa.gov/2018/04/louisiana-trustees-release-fourth-draft-restoration-plan-focusing-recreational-use-and.

[2] LA TIG website announcement for the Final RP/EA #4: https://www.gulfspillrestoration.noaa.gov/2018/07/louisiana-trustees-release-final-restoration-plan-4-recreational-use-and-nutrient-reduction.

1.1 Rationale for the Draft Supplemental RP/EA

The scope and design of the original Cypremort Improvements Project were evaluated in the Draft and RP/EA #4 (LA TIG 2018a, 2018b). Following release of the RP/EA #4 (LA TIG 2018b) and approval of Natural Resource Damage Assessment (NRDA) funding[3] for the original Cypremort Improvements Project, the Louisiana Office of State Parks constructed the breakwater system component of the approved original Cypremort Improvements Project with separate, non-NRDA funds. This component included the replacement of an existing breakwater system with a new system of rock groins to increase shoreline erosion protection. The other components of the original Cypremort Improvements Project that were approved for funding, but have not yet been implemented, include improvements to an existing rock jetty, beach reclamation, construction of a marsh boardwalk and trail, and road and parking lot repairs.

Given that the breakwater system component has been implemented, the LA TIG is now considering the reallocation of the NRDA funding ($1,450,000) that was originally approved in RP/EA #4 for the breakwater system component. Accordingly, the LA TIG prepared this Draft Supplemental RP/EA to consider and evaluate alternatives that would provide the public with additional and enhanced recreational use services, consistent with the purpose and need of the approved original Cypremort Improvements Project. The LA TIG coordinated with the Louisiana Office of State Parks to identify an array of potential amenities at Cypremort Point State Park that would enhance the public's enjoyment of recreational use services offered at the park, including recreational vehicle (RV) campground facilities, bathhouses, and boat docks. This Draft Supplemental RP/EA evaluates the potential environmental impacts of three action alternatives (Alternatives A, B, and C) and a Natural Recovery/No Action Alternative. Action Alternatives include:

- Alternative A: Restoration and Recreation Improvements would implement all of the components of the original approved Cypremort Improvements Project except the breakwater system.

- Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred) would implement the original project components contained in Alternative A plus an RV campground, two mobile bathhouses, and a boat dock/fishing pier.

- Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses would entail all of the components considered in Alternative B but would not include bathhouses.

The LA TIG also evaluated the applicability of the original Cypremort Improvements Project analysis under OPA, as described in Section 3.3.13 of the RP/EA #4 (LA TIG 2018b), to this Draft Supplemental RP/EA. The LA TIG determined the OPA analysis remains applicable for the restoration and recreation improvements (hereafter referred to as components) analyzed in the RP/EA #4 (LA TIG 2018b) and carried forward as components of the three new alternatives analyzed in this Draft Supplemental RP/EA. These components include rock jetty improvements, beach reclamation, marsh boardwalk and trail construction, and road and parking lot repairs. The OPA analyses for these components as described in Section 3.3.13 of the RP/EA #4 (LA TIG 2018b) are incorporated herein by reference for Alternatives A,

[3] Natural Resource Damage Assessment (NRDA) funds are awarded under the *Deepwater Horizon* (DWH) Consent Decree, which was issued on April 4, 2016, by the U.S. District Court for the Eastern District of Louisiana to resolve civil claims by the DWH Trustees against BP arising from the DWH oil spill (LA TIG 2018b). Additional details on the background of the DWH oil spill, the impact of the spill on the Gulf of Mexico ecosystem, and additional context for the settlement and allocation of funds can be found in Chapter 1 of the RP/EA #4 (LA TIG 2018b) and Chapter 2 of the PDARP/PEIS (DWH Trustees 2016a).

B, and C (see Section 3 of this Draft Supplemental RP/EA). The OPA analyses in this Draft Supplemental RP/EA also evaluate the expanded restoration and recreation components under Alternatives B and C.

The LA TIG has prepared this Draft Supplemental RP/EA in compliance with OPA and NEPA to evaluate and consider alternatives consistent with the purpose and need of the original Cypremort Improvements Project described in the RP/EA #4 (LA TIG 2018b), and evaluate potential environmental effects from the implementation of these alternatives. Based on the evaluation of beneficial and adverse environmental impacts described in the remainder of this document, Alternative B, Expanded Restoration and Recreation Improvements with Mobile Bathhouses, is the LA TIG's proposed preferred alternative.

1.2 Lead and Cooperating Agencies

In accordance with 40 Code of Federal Regulations (CFR) 1508.12, the LA TIG designated the EPA as the lead federal agency responsible for NEPA compliance for the RP/EA #4 (LA TIG 2018b) and this Draft Supplemental RP/EA. The federal and state agencies participating on the LA TIG are acting as cooperating agencies for the purposes of compliance with NEPA in the development of this Draft Supplemental RP/EA. In accordance with 40 CFR 1506.3(a), each cooperating agency participating on the LA TIG (as described in Section 1 of this Draft Supplemental RP/EA) will review the document for adequacy in meeting the standards set forth in its own NEPA implementing procedures and make a decision on adoption of the NEPA analysis.

1.3 Public Involvement

The LA TIG released the Draft RP/EA #4 (LA TIG 2018a) for public comment on April 20, 2018, as publicized in the *Federal Register* (Federal Register 83:17550), the Louisiana Register Volume 44, Number 04, and on the NOAA Gulf Spill web portal.[4] This release also included the announcement of a public meeting in New Orleans, Louisiana, which was held on April 24, 2018. The RP/EA #4 was revised and completed in response to comments received on the Draft RP/EA #4. Section 7 of the RP/EA #4 (LA TIG 2018b) provides a description of the comment analysis process, a summary of public comments received, and the LA TIG's responses to those comments.

The LA TIG has prepared this Draft Supplemental RP/EA to inform the public about the proposed Cypremort Improvements Project modification. The LA TIG seeks public comment on this Draft Supplemental RP/EA. Additional information regarding the public comment period and associated public webinar for this Draft Supplemental RP/EA can be found in Section 6 of this document.

1.4 Purpose and Need

The purpose and need for the Cypremort Improvements Project modification are consistent with the purpose and need described in Section 1.4 of the RP/EA #4 (LA TIG 2018b), as well as the PDARP/PEIS (DWH Trustees 2016a). As described in Section 5.3 of the PDARP/PEIS, the five DWH Trustee programmatic restoration goals for restoration work independently and together to benefit injured resources and services (DWH Trustees 2016a). This Draft Supplemental RP/EA focuses on the restoration of injuries to Louisiana's natural resources and services, in particular to Restoration Type: "Provide and

[4] NOAA Gulf Spill web portal: https://www.gulfspillrestoration.noaa.gov/restoration-areas/louisiana

Enhance Recreational Opportunities," using funds made available in Early Restoration and through the DWH Consent Decree (see PDARP/PEIS [DWH Trustees 2016a:Chapter 4]).

For the purpose of restoring natural resources and services injured as a result of the DWH oil spill, the LA TIG needs to address the associated recreational loss that occurred in the Louisiana Restoration Area. The LA TIG proposes to implement compensatory restoration projects that would provide the public with additional and enhanced recreational use services in Louisiana in a manner consistent with the PDARP/PEIS (DWH Trustees 2016a). Impacts to Louisiana from the DWH oil spill, including oiled shorelines, the closure of fishing and recreational areas, and the cancellation of recreational trips, resulted in losses to the public's use of natural resources for outdoor recreation and other recreational activities.

The LA TIG has identified lost recreational opportunities, such as fishing, camping, hunting, boating, and hiking, as the most significantly impacted recreational use in the state. The lost recreational opportunities occurred statewide because people in non-coastal areas cancelled trips to the coast during closures related to the DWH oil spill. Given these widespread impacts of the spill, Louisiana's approach to restoring lost recreational use in the Draft Supplemental RP/EA uses a combination of many of the recreational use restoration approaches described in the PDARP/PEIS (DWH Trustees 2016a), including restoring diminishing fishing and recreational opportunities, providing new opportunities for recreational use, restoring beach habitat for both recreation and wildlife, providing recreational infrastructure, enhancing recreational use and experiences, and improving public access to natural resources. The proposed alternatives described in this Draft Supplemental RP/EA are consistent with restoration techniques for the recreational use injuries caused by the DWH oil spill, while also providing new educational opportunities to promote responsible use of natural resources.

1.5 Preliminary Finding of No Significant Impact (FONSI)

In this Draft Supplemental RP/EA, the LA TIG addresses NEPA requirements by tiering from environmental analyses conducted in the PDARP/PEIS (DWH Trustees 2016a) and the RP/EA #4 (LA TIG 2018b), as well as by preparing additional environmental consequences analyses for the alternatives as appropriate. Based on these analyses, the LA TIG's preliminary findings indicate the alternatives evaluated in this Draft Supplemental RP/EA would not result in any significant impacts on the human environment in accordance with the guidelines for determining the significance of proposed federal actions (40 CFR 1508.27). Following the close of the 30-day public comment period, the LA TIG will consider any comments received. After public comments are addressed and if the preliminary findings are confirmed,[5] the LA TIG will issue a FONSI appended to the Final Supplemental RP/EA.

[5] EPA's NEPA implementing procedures at 40 CFR 6.203(b)(1).

2 MODIFICATION OF CYPREMORT POINT STATE PARK IMPROVEMENTS AND ALTERNATIVES CONSIDERED

Section 2 of the RP/EA #4 provides a detailed description of the restoration planning process, including the screening of alternatives for the restoration of recreational use. The alternative screening process included in the RP/EA #4 (LA TIG 2018b) is incorporated herein by reference.

The goal of the LA TIG's screening process was to identify a set of proposed alternatives that provided a reasonable range of options that would compensate the public for Louisiana's lost recreational use caused by the DWH oil spill. The screening process identified 23 reasonable alternatives that were carried forward for analysis in the RP/EA #4 (LA TIG 2018b), one of which was the original Cypremort Improvements Project. That analysis is valid and applicable to the components carried forward for the proposed Cypremort Improvements Project modification alternatives analyzed in this Draft Supplemental RP/EA.

Four alternatives for the proposed Cypremort Improvements Project modification are identified for analysis in this Draft Supplemental RP/EA, all of which would be located on state-owned or state-leased property managed by the Louisiana Office of State Parks, in Cypremort Point State Park, in the Town of Cypremort Point, St. Mary and Iberia Parishes, Louisiana. The location of and existing facilities in Cypremort Point State Park are shown in Figure 2-1.

Alternatives A, B, and C are action alternatives associated with the Cypremort Improvements Project modification. Alternative A includes the components of the original Cypremort Improvements Project, as defined in the RP/EA #4 (LA TIG 2018b), that were approved for funding but are not currently completed: improvements to an existing rock jetty, beach reclamation, construction of a marsh boardwalk and trail, and road and parking lot repairs. Alternative B includes the same components as Alternative A in addition to a new set of improvements at Cypremort Point State Park: an RV campground with approximately 30 new paved pull-through campsites with sewer, water, and electrical tie-ins; two mobile bathhouses with sewer, water, and electrical tie-ins; and a boat dock/fishing pier. Alternative C includes the same components as Alternative B but eliminates the mobile bathhouses.

The Natural Recovery/No Action Alternative is incorporated by reference from the RP/EA #4 (LA TIG 2018b).

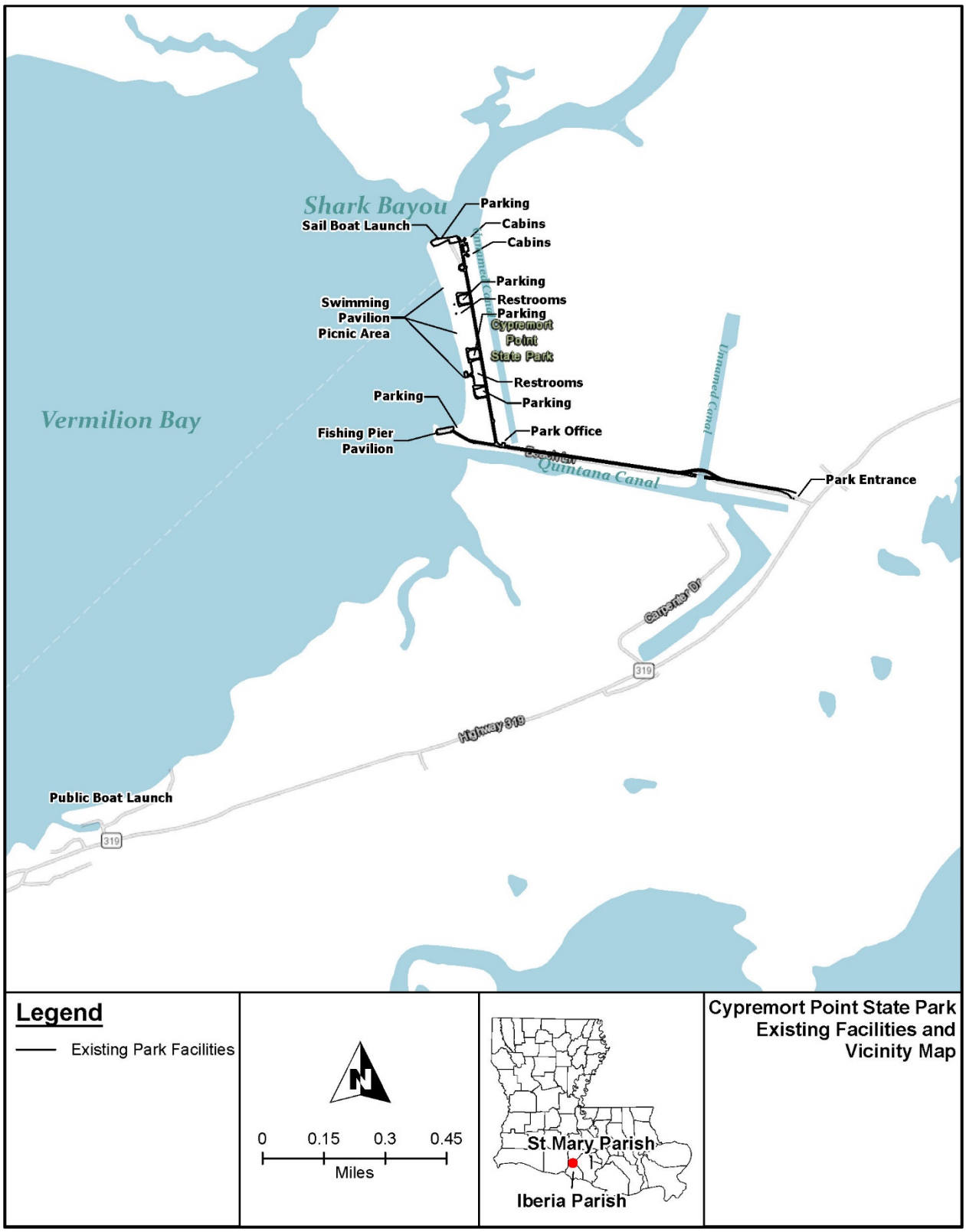

Figure 2-1. Cypremort Point State Park Facilities and Vicinity Map

2.1 Alternative A: Restoration and Recreation Improvements

The purpose of the Cypremort Improvements Project modification under Alternative A is to restore diminishing fishing and recreational opportunities, provide new opportunities for recreational and educational use, restore beach habitat for both recreation and wildlife, and provide recreational infrastructure. The project components included under Alternative A include the components of the original Cypremort Improvements Project, with the exception of the breakwater system, which was completed with non-NRDA funds. These components are described in Section 3.3.13, Cypremort Point State Park Improvements, of the RP/EA #4 (LA TIG 2018b), which is incorporated by reference into this Draft Supplemental RP/EA. A brief summary is provided below.

Under Alternative A, the Cypremort Improvements Project modification would be located just west of the intersection of Louisiana Highway 319 and Beach Lane and extend along Quintana Canal and the west-east and north-south segments of Beach Lane, as shown in Figure 2-2. Alternative A would also include the park's beach area, starting from the northern-most beach parking area and ending near the southern day-use parking area, plus a portion of the marsh area on the east side of the park (see Figure 2-2). The Cypremort Improvements Project modification under Alternative A would encompass an area of approximately 14.2 acres and would include:

- reinforcing and extending the existing rock jetty along the north bank of the Quintana Canal and south side of Beach Lane at the entrance to Cypremort Point State Park to prevent further erosion on the Quintana Canal side and protect the park road and park property;
- restoring the degraded beach area to its pre-eroded condition to support existing recreational access for swimming, sunbathing, paddle boarding, and other water-based activities, as well as shorebird habitat;
- installing a new wooden boardwalk and trail (approximately 6 feet wide, with a total length of approximately 3,000 feet) within the park's marsh area, with seating, required toe and hand rails, and interpretive signage throughout to replace the park's fishing pier that has been damaged by storms and provide improved fishing and other shoreline-based recreational opportunities, including Americans with Disabilities Act (ADA)-compliant access where possible; and
- repairing and upgrading existing roads, parking lots (including base repairs requiring approximately 37,600 square feet of fill, a minimum 2-inch overlay, and restriping), and sidewalks damaged by repeat flooding and to provide access to the park including the beach access, cabins, pavilions, boat docks and restrooms, and preserve public access and recreational opportunities to the park's natural resources.

Final engineering and design (E&D) and construction of Alternative A of the Cypremort Improvements Project modification would utilize $2,808,808 in NRDA funding, and maintenance of improvements under Alternative A would be funded by the park's existing camping and use fees. More information about project costs is provided in Section 3 of this document. The permit application for the Cypremort Improvements Project modification was submitted in September 2019. Once the permit is issued and the LA TIG approves the Cypremort Improvements Project modification through their decision on the Final Supplemental RP/EA, final design would take approximately 6 months, and project construction would take approximately 8 months.

The Cypremort Improvements Project modification under Alternative A would be operated and maintained by the Louisiana Office of State Parks, with current Cypremort Point State Park employees responsible for ongoing maintenance of the project.

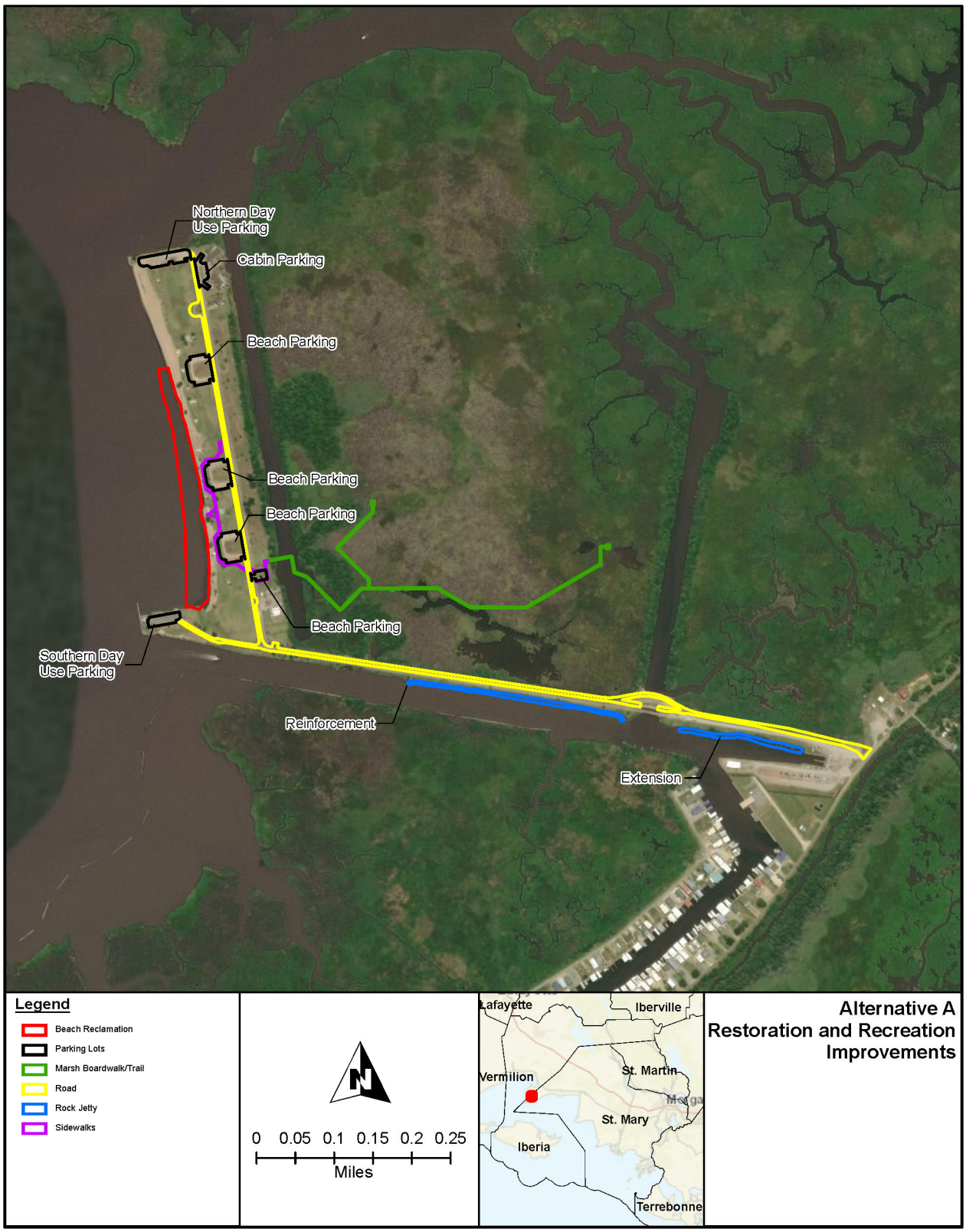

Figure 2-2. Alternative A: Restoration and Recreation Improvements

2.2 Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

Under Alternative B, the Cypremort Improvements Project modification would include the same project elements as described under Alternative A, with the addition of enhancing recreational use and experiences and improving public access to natural resources. The project under Alternative B would be situated in the same location as described under Alternative A, as shown in Figure 2-3. Alternative B would also include an area of the park between the north-south segment of Beach Lane and along the marsh shore on the east side of the park, for a total area of 18.5 acres (see Figure 2-3). The purpose of the Cypremort Improvements Project modification under Alternative B would be consistent with and expand upon the purpose and need of the original approved Cypremort Improvements Project: to restore diminishing fishing and recreational opportunities, provide new opportunities for recreational and educational use, restore beach habitat for both recreation and wildlife, provide recreational infrastructure, enhance recreational use and experiences, and improve public access to natural resources. In addition to the elements described under Alternative A, the Cypremort Improvements Project modification would include:

- constructing an RV campground consisting of 30 new paved pull-through campsites with sewer, water, and electrical services;
- constructing two mobile bathhouses with toilets, showers, and laundry equipment and ADA-compliant access (bathhouses would be mobile to permit movement during storm events);
- installing water, sewer, and electrical tie-ins from the RV campground and mobile bathhouses to the park's existing onsite water well, sewer, and electric systems (i.e., utilities) to provide proper capacity for other proposed elements; and
- constructing an 8-foot-wide, 300-foot-long (approximately 0.1 acre) boat dock/fishing pier with required toe and hand rails that connects to the RV campground area through a 15-foot gangway, which would provide ADA-compliant access from the park to the boat dock/fishing pier.

The RV campground would encompass approximately 4.2 acres and would be located along the north-south segment of Beach Lane—south of existing cabins, parking and sailboat launch, and park superintendent residence, and north of the existing park maintenance area, entrance, and check-in area—all of which would remain in place. A typical RV campsite would include:

- a paved (impervious asphaltic concrete) pull-through RV site approximately 16 feet wide to accommodate a standard motor home, which is typically approximately 8.5 feet wide and 40 feet long;
- a grass recreational area approximately 20 feet wide that includes a firepit, grill, and a concrete patio area (approximately 9×16 feet) with a picnic table; and
- a limestone-surfaced utility area adjacent to the pull-through site with water, sewer, and electrical service hookups.

The paved areas for RV campsites could vary from site to site, depending on the existing base and distance to structures or marsh area, but would not exceed 20 feet wide. The campsite area would be elevated to approximately 1.5 feet, or approximately 18 inches above existing grade. This elevation would match that of adjacent roads constructed or improved under Alternative B. Compacted select fill material would be used to construct the RV campsites to provide proper drainage. Heavy equipment and machinery used to construct the campsite would include a bulldozer or grader, trucks, a backhoe, excavators, roller, generators, small trucks, and hand tools. The total fill area of Alternative B, including

road and parking lot repairs and RV campsite construction, would be approximately 188,000 square feet with a total fill volume of approximately 10,400 cubic yards. Approximately 80% (150,400 square feet) of this fill is for campground construction, and the remaining 20% (37,600 square feet) would be used for road, parking lot, and sidewalk repairs.

Each campsite would have access to existing, on-site electrical services through tie-ins. Electric hookups would be mounted at each campsite in a covered and grounded electrical box that is mounted to a post or in a manufactured assembly that includes a ground fault interrupter. The post would be located on the driver's side of each campsite spur (i.e., pull-through site) at a point 0 to 15 feet from the rear of the spur. Electrical facilities at each campsite would be sized to comply with National Electrical Code (NEC): Article 551-Recreational Vehicles and Recreational Vehicle Parks: Part VI, 551.71 "Type Receptacles Provided". Electrical tie-ins would be planned and implemented through coordination with utility providers. Each campsite would also have sewer and water tie-ins to the park's existing onsite sewer system and water well. All utility tie-in infrastructure would be buried through trenching, using a trencher and heavy equipment and machinery similar to that previously described for construction of the campground. The depths of disturbance to accommodate electrical and water tie-ins would vary but would be buried at least 3 feet below the new grade. Gravity sewer lines would be buried a minimum of 3 feet below the new grade and as deep as practical based upon downstream elevations. Any upgrades necessary to the park's existing onsite water well, sewer, or electric systems would be completed in conjunction with construction of utility tie-ins.

Mobile bathhouses would be premanufactured and delivered and installed at the midway point of the RV campground area using a flatbed truck and forklift. Mobile bathhouses would encompass approximately 0.02 acre and would be at or near ground level to provide ADA-compliant access. Sewer, water, and electrical tie-ins would be installed at the mobile bathhouses using the same methods as described for the RV campground. In the event of a storm, sewer, water, and electrical tie-ins at the mobile bathhouses would be disconnected and capped off, as necessary, and mobile bathhouses would be moved to higher ground to avoid flooding and contamination of stormwater. An 8-foot-wide, 300-foot-long boat dock/fishing pier, encompassing approximately 0.1 acre, would be located east of the mobile bathhouses along the RV campground and within the marsh area. Trucks or marsh buggies with cranes and pile drivers and hand tools would be used to construct the boat dock/fishing pier.

Final E&D and construction of Alternative B of the Cypremort Improvements Project modification would utilize $4,477,338 of NRDA funding, and operation and maintenance of improvements under Alternative B would be funded by the park's existing and new camping and use fees. More information about project costs is provided in Section 3 of this document. The permit application for the Cypremort Improvements Project modification was submitted in September 2019. If the permit is issued and the LA TIG approves the Cypremort Improvements Project modification through their decision on the Final Supplemental RP/EA, final design would take approximately 6 months, and project construction would take approximately 14 months.

The Cypremort Improvements Project modification under Alternative B would be operated and maintained by the Louisiana Office of State Parks, with current Cypremort Point State Park employees managing and completing ongoing operations and maintenance of the project. The Louisiana Office of State Parks would hire one additional employee to manage operations of the RV campground using funds from existing and new camping and use fees. The Cypremort Point State Park would implement the Louisiana Office of State Parks' Campground Host program, which would allow a camper the opportunity to assist with maintenance duties (e.g., trash pickup, cleaning, repairs) in exchange for free camping over an allotted amount of time.

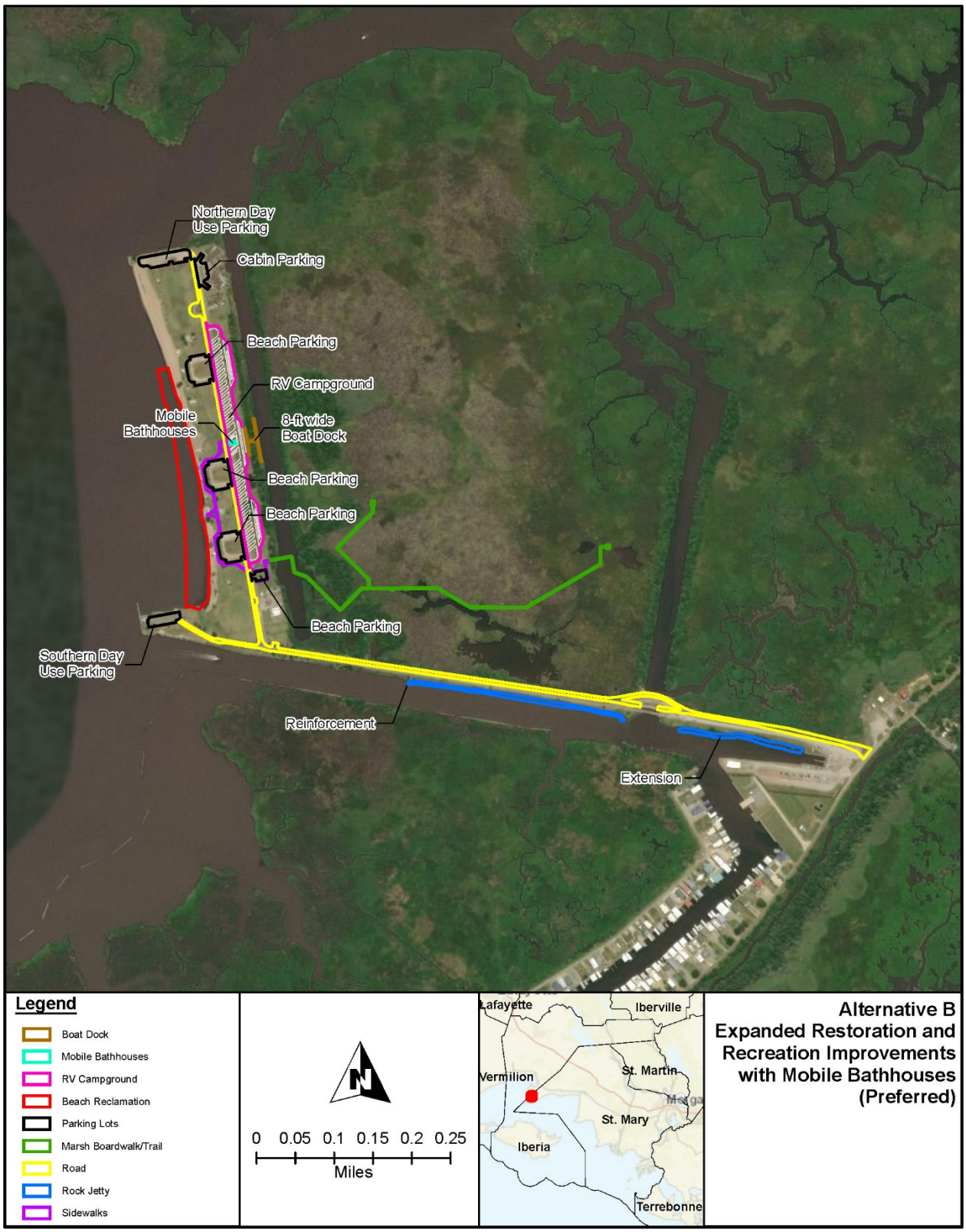

Figure 2-3. Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

2.3 Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Alternative C would include the same elements as described under Alternative B, except the mobile bathhouses would not be constructed under Alternative C, to offer a lower cost alternative. The purpose of Alternative C would be the same as described under Alternative B. Alternative C would encompass the same overall area in terms of location and extent (18.5 acres) as described for Alternative B, as shown in Figure 2-4.

Construction of Alternative C of the Cypremort Improvements Project modification would utilize $4,249,338 in NRDA funding, and operation and maintenance of improvements under Alternative C would be funded by the park's existing and new camping and use fees. More information about project costs is provided in Section 3 of this document. The permit application for the Cypremort Improvements Project modification was submitted in September 2019. If the permit is issued and the LA TIG approves the Cypremort Improvements Project modification through their decision on the Final Supplemental RP/EA, final design would take approximately 6 months, and project construction would take approximately 14 months.

The Cypremort Improvements Project modification under Alternative C would be operated and maintained by the Louisiana Office of State Parks, with current Cypremort Point State Park employees managing and completing ongoing operations and maintenance of the project. The Louisiana Office of State Parks would hire one additional employee to manage operations of the RV campground using funds from existing and new camping and use fees. The Cypremort Point State Park would implement the Louisiana Office of State Parks' Campground Host program, which would allow a camper the opportunity to assist with maintenance duties (e.g., trash pickup, cleaning, repairs) in exchange for free camping over an allotted amount of time.

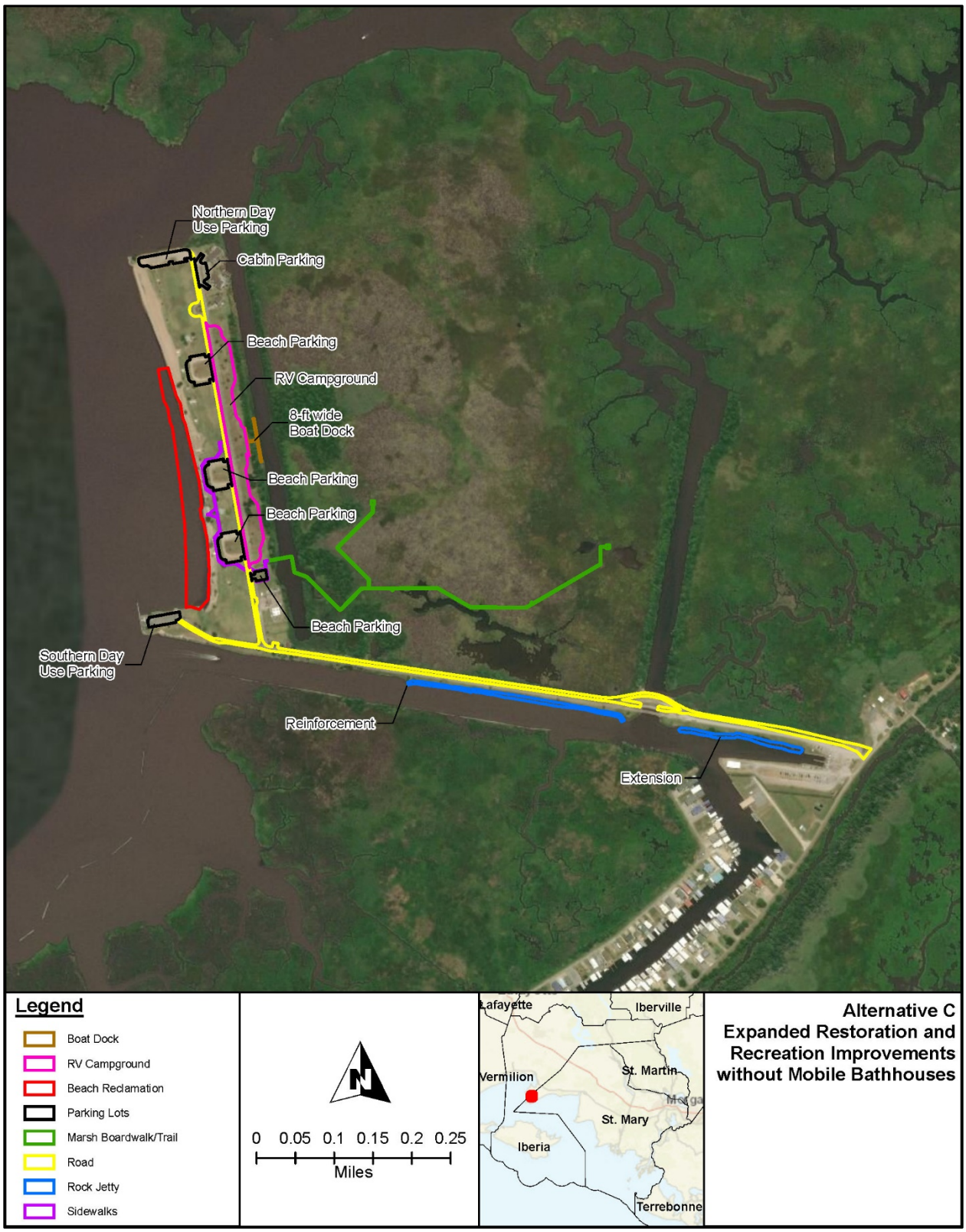

Figure 2-4. Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

2.4 Natural Recovery/No Action Alternative

In accordance with OPA regulations, the PDARP/PEIS (DWH Trustees 2016a) considered a "natural recovery alternative in which no human intervention would be taken to directly restore injured natural resources and services to baseline" (15 CFR 990.53[b][2]). Under a natural recovery alternative, the DWH Trustees would not implement additional restoration to accelerate the recovery of injured natural resources or to compensate for lost services. The DWH Trustees would allow natural recovery processes to occur, which could result in one of four outcomes for injured resources: 1) gradual recovery, 2) partial recovery, 3) no recovery, or 4) further deterioration. Although injured resources could presumably recover to baseline or near baseline conditions under this scenario, recovery would take much longer compared to a scenario in which restoration actions were undertaken. The PDARP/PEIS (DWH Trustees 2016a: 5-92) notes that interim losses of natural resources and the services natural resources provide would not be compensated under a natural recovery alternative. Given that technically feasible restoration approaches are available to compensate for interim natural resource and service losses, the DWH Trustees rejected this alternative from further OPA evaluation within the PDARP/PEIS (DWH Trustees 2016a).

Based on this determination, tiering this Draft Supplemental RP/EA from the PDARP/PEIS (DWH Trustees 2016a) and incorporating that analysis by reference, the LA TIG did not further evaluate natural recovery as a viable alternative under OPA. The LA TIG rejects the Natural Recovery Alternative as a viable means of compensating the public for the lost recreational uses caused by the DWH oil spill. Natural recovery is not considered further under OPA in this Draft Supplemental RP/EA.

A No Action alternative is evaluated as a basis for comparison of potential environmental consequences of the action alternatives(s). The No Action analysis presents the conditions that would result if the LA TIG did not elect to undertake any additional restoration for injured natural resources or to compensate for lost services at this time. The No Action Alternative is not evaluated further under NEPA in this Draft Supplemental RP/EA because impacts are not substantially different from the Natural Recovery/No Action Alternative described in Section 4.4 of the RP/EA #4 (LA TIG 2018b), which is incorporated herein by reference.

3 SUPPLEMENTAL OPA EVALUATION

The LA TIG continues to propose the selection of the Cypremort Improvements Project modification under OPA as described and modified from the RP/EA #4 (LA TIG 2018b). Consistent with 15 CFR 990.54, the LA TIG evaluates each alternative on, at minimum:

1) the cost to carry out the alternative;
2) the extent to which each alternative is expected to meet LA TIG's goals and objectives in returning the injured natural resources and services to baseline and/or compensating for interim losses;
3) the likelihood of success of each alternative;
4) the extent to which each alternative would prevent future injury as a result of the incident and avoid collateral injury as a result of implementing the alternative;
5) the extent to which each alternative benefits more than one natural resource and/or service; and
6) the effect of each alternative on public health and safety.

The project components, as described under Alternatives A, B, and C, meet the evaluation criteria established for OPA and are described in the following sections.

3.1 Alternative A: Restoration and Recreation Improvements

Alternative A includes the same components as analyzed in the RP/EA #4 for the original Cypremort Improvements Project, with the exception of the breakwater system, which was completed with non-NRDA funds. The OPA evaluation for components carried forward from the original Cypremort Improvements Project and proposed under Alternative A is described in Section 3.3.13 of the RP/EA #4 (LA TIG 2018b), and is incorporated by reference into this Draft Supplemental RP/EA. A brief summary of the OPA evaluation for components under Alternative A is provided below.

Under Alternative A, $2,808,808 of NRDA funds would be allocated to the Louisiana Office of State Parks to finalize E&D and construct improvements to Cypremort Point State Park and provide public recreational opportunities (Table 3-1). This amount includes a 10% contingency. Maintenance, monitoring, and implementation of mitigation of improvements under Alternative A would be funded by the Louisiana Office of State Parks using the park's existing camping and use fees. The purpose of the Cypremort Improvements Project modification would be to restore diminishing fishing and recreational opportunities, provide new opportunities for recreational and educational use, restore beach habitat for both recreation and wildlife, and provide recreational infrastructure. The marsh boardwalk and trail system components of the Cypremort Improvements Project modification would help restore diminishing fishing and recreational opportunities and provide educational opportunities.

No land acquisition costs are associated with Alternative A, because the state owns (40 acres) or leases (330 acres) the property. The leased portion of the park is owned by the St. Mary Parish School Board. The lease became effective July 1, 2008, and expires June 31, 2058, but grants the Louisiana Office of State Parks the right to renew the lease for an additional 49 years, which would extend beyond the anticipated project life.

Table 3-1. Estimated Cost for Restoration and Recreation Improvements (Alternative A)

Description	Cost	Total
Rock Jetty Subtotal		**$436,113**
Construction and Materials	$353,153	
Engineering and Design	$82,960	
Beach Reclamation Subtotal		**$351,998**
Construction and Materials	$300,000	
Engineering and Design	$51,998	
Marsh Boardwalk Subtotal		**$1,184,219**
Construction and Materials	$1,108,624	
Engineering and Design	$75,595	
Road and Parking Repairs Subtotal		**$649,786**
Construction and Materials	$571,871	
Engineering and Design	$77,915	
Construction Supervision and Inspection		**$186,692**
Total Project Cost (NRDA funds)		**$2,808,808**

The OPA evaluation in the RP/EA #4 (LA TIG 2018b) indicates the infrastructure costs of Alternative A are well documented, reasonable, and appropriate. The alternative has a strong nexus to the recreational injury caused by the DWH oil spill and can reasonably be expected to provide benefits to the public over an extended timeframe. Access to the Restoration and Recreation Improvements under Alternative A would be included with existing park entrance fees ($3 per person). The alternative would provide new and improved public access to trust resources that were injured by the DWH oil spill and has a high probability of success. Finally, public safety issues are not expected to be a concern and would in fact be improved with the implementation of the alternative, because minor adverse impacts would be reduced through the application of best practices and mitigation measures (see Section 4.1.2.8 of this document).

3.2 Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

Under Alternative B, $4,477,338 of NRDA funds would be contributed to construct the proposed expanded Cypremort Improvements Project modification with an RV campground; mobile bathhouses; sewer, water, and electrical tie-ins; and boat dock/fishing pier. The purpose of the Cypremort Improvements Project modification would be the same as described under Alternative A, with the added benefit of further enhancing recreational use and experiences, as well as allowing the public better access to natural resources.

As described under Alternative A, no land acquisition costs are associated with Alternative B, because the state owns or leases the property.

The following sections review the OPA criteria as outlined at the beginning of the chapter.

1) The cost to implement the alternative.

The costs to implement Alternative B are reasonable, appropriate, and comparable to other equivalent restoration alternatives. The proposed cost of the expanded Cypremort Improvements Project modification with mobile bathhouses is $4,477,338 million (Table 3-2). The cost estimates represent the best estimates of the design team's extensive knowledge of park facilities design cost and historical knowledge of construction cost in the area.

The estimated cost for the alternative, approximately $4.5 million, includes E&D (including pre-construction testing and surveys), construction, and materials for each of the alternative components (see Table 3-2), and a 10% contingency. This cost estimate does not include funds for operation, maintenance, or implementation of mitigation, which would be funded by the Louisiana Office of State Parks using the park's existing and new camping and use fees. Mobile bathhouses provide a lower construction cost option than permanent bathhouses and can be relocated during storm surge or flood events, thereby minimizing costs associated with water damage.

Table 3-2. Estimated Cost for Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred) (Alternative B)

Description	Cost	Total
Rock Jetty Subtotal		**$436,113**
Construction and Materials	$353,153	
Engineering and Design	$82,960	
Beach Reclamation Subtotal		**$351,998**
Construction and Materials	$300,000	
Engineering and Design	$51,998	
Marsh Boardwalk Subtotal		**$1,184,219**
Construction and Materials	$1,108,624	
Engineering and Design	$75,595	
Road and Parking Repairs Subtotal		**$649,786**
Construction and Materials	$571,871	
Engineering and Design	$77,915	
RV Campground; Mobile Bathhouses; Sewer, Water, and Electrical Tie-Ins; and Boat Dock/Fishing Pier Subtotal		**$1,552,530**
Construction and Materials	$1,450,000	
Engineering and Design	$102,530	
Construction Supervision and Inspection		**$302,692**
Total Project Cost (NRDA funds)		**$4,477,338**

All alternative work would be awarded in compliance with Louisiana's public bid laws and regulations, ensuring the alternative is constructed at current market rates. The Louisiana Office of State Parks would be responsible for overseeing funds necessary for final E&D and construction. Operations and maintenance including implementation of the Monitoring and Adaptive Management (MAM) Plan (Appendix A) would be funded through existing and new camping and use fees.

The extent to which the alternative is expected to meet the LA TIG's goals and objectives in returning the injured natural resources and services to baseline and/or compensating for interim losses.

Nexus to Injury: The Gulf of Mexico recreational assessment, discussed in the PDARP/PEIS (DWH Trustees 2016a), focuses on the loss of shoreline use and boating. Shoreline use refers to recreational activities conducted by individuals at locations near beaches, along the shoreline, or from shoreline structures, such as piers. These activities include swimming, sunbathing, surfing, walking, kayaking, and fishing. Boating refers to a variety of recreational boating activities that begin at sites providing access to saltwater near the Gulf Coast (boat-based fishing is included in this category). Within Louisiana, the LA TIG has identified lost recreational fishing opportunities as the most significant impact to recreational use in the state. The LA TIG also identified merits of increasing and enhancing the public's ability to access a variety of recreational resources such as fishing, beach going, camping, and boating in the screening process of the RP/EA #4 (LA TIG 2018b).

Alternative B is designed to restore shoreline uses and boating opportunities, restore and enhance fishing and recreational opportunities, and increase and enhance the public's ability to access a variety of recreational resources. Alternative B would repair and protect existing park infrastructure that provide shoreline use, boating, fishing and recreational opportunities. New infrastructure constructed under Alternative B, including additional RV campgrounds, mobile bathhouses, and a boat dock/fishing pier, would support the use of the state park's existing sailboat launch, beach, cabins with boat slips, and day-use facilities (see Figure 2-1) and would provide additional terrestrial recreational opportunities. These components would restore and improve the public's access to recreational waterbodies, fishing, and other recreational opportunities; increase recreational use opportunities; and enhance the quality of future recreational visits to the area.

The Cypremort Improvements Project modification under Alternative B has a strong nexus to the DWH oil spill recreational injuries identified in the PDARP/PEIS (DWH Trustees 2016a) and RP/EA #4 (LA TIG 2018b), as summarized above. The restoration of recreational opportunities that would be created by the alternative are similar to shoreline uses that were lost as a result of the DWH oil spill (e.g., lost user-days of fishing, lost days on the water, and loss of wildlife viewing and shoreline access) and are in keeping with criteria used in the RP/EA #4 (LA TIG 2018b) for recreational use alternative selection (i.e., merits of increasing and enhancing the public's ability to access a variety of recreational resources such as fishing, beach going, camping, and boating). Visitors to the park's facilities would likely be the same regional user population that the DWH oil spill affected and that would benefit from the alternative. Therefore, Alternative B represents "in-place, in-kind" restoration and is fully consistent with OPA objectives for compensatory restoration.

Benefit to Injured Resources

- **Component Benefits:** Alternative B's location and amenities are within the geographical footprint of the DWH oil spill injury and would provide the same component benefits as Alternative A. In addition, the RV campground, mobile bathhouses, and boat dock/fishing pier facilities under Alternative B are designed to improve the overall use of the park by increasing park amenities to support boat- and shoreline-based recreational anglers and other recreational users.
- **Scope of Benefits:** The Cypremort Improvements Project modification under Alternative B would meet the same purpose and need as Alternative A but would provide additional benefits from increased shoreline access and expanded opportunities at underserviced areas of the park as a result of RV campground, mobile bathhouses, and boat dock/fishing pier facilities. These facilities would

encourage and increase capacity use at the existing sailboat launch, beach, cabins with boat slips, and day-use facilities and would be measured as part of the alternative's MAM Plan (Appendix A).

- **Public Access:** The recreational benefits of Alternative B would be broadly available to the public through existing park entrance fees ($3 per person) plus an estimated campsite fee ranging from $33 Friday through Saturday (year-round), $30 Sunday through Thursday (April through September), and $25 Sunday through Thursday (October through March) per campsite per night, plus applicable local and state taxes. The charges associated with the RV campsites under Alternative B would allow for enhanced recreational use and experiences in terms of expanded year-round recreational opportunities, as well as improved public access to natural resources.
- **Location:** The proposed location for the Cypremort Improvements Project modification under Alternative B is within Cypremort Point State Park. The alternative is approximately 1.5 hours from the nearby Atchafalaya Welcome Center on Interstate 10, which is a highly-traveled interstate corridor; is accessible from multiple nearby communities, including the cities of Lafayette (an approximately 1-hour drive) and Baton Rouge (an approximately 2-hour drive), Louisiana, in addition to surrounding towns; and would be available to a large potential visitor and recreational fishing population.

2) The likelihood of success of each alternative.

The alternative's goal (i.e., restoring shoreline uses and boating opportunities, restoring and enhancing fishing and recreational opportunities, and increasing and enhancing the public's access to a variety of resources) has a high likelihood of success. No land acquisition is required, and the Louisiana Office of State Parks has successfully implemented similar restoration projects and recreation facilities in support of existing and expanding park uses. The existing Cypremort Point State Park has been operational since 2005 and provides access to natural resources to a regional population. Maintenance and management activities for expanded park facilities under Alternative B would be similar to existing maintenance and management activities and would not exceed the capabilities or capacities of existing park employees, who would be supported by one new employee hired to manage operation and maintenance of the RV campground. The new park employee position would be funded through existing and new camping and use fees. The estimated Cypremort Improvements Project modification life under Alternative B is 50 years.

3) The extent to which each alternative would prevent future injury as a result of the incident and avoid collateral injury as a result of implementing the alternative.

The Cypremort Improvements Project modification under Alternative B is not expected to play a role in preventing future injury from the spill. The PDARP/PEIS indicates that recreational uses have recovered to pre-spill levels (DWH Trustees 2016a). The purpose of Alternative B is to provide compensatory restoration for losses that occurred between April 2010 and November 2011, after which the PDARP/PEIS studies conclude that recreational use returned to baseline levels. Implementation of Alternative B is not expected to cause any net collateral damage to the environment. Improvements and expanded facilities under Alternative B would be constructed within the Cypremort Point State Park. All work would be conducted in compliance with federal, state, and local laws and regulations. Additional discussion related to regulatory and permitting requirements for the alternative is provided in the impact analysis in Section 5 of this document.

4) The extent to which each alternative benefits more than one natural resource and/or service.

The primary NRDA benefits of this alternative would be to restore shoreline uses, boating, and fishing opportunities; enhance recreational fishing opportunities and terrestrial recreational opportunities; and improve the public's ability to access a variety of recreational resources. The mobile bathhouses and boat dock/fishing pier under Alternative B would provide the added benefit of park enjoyment through expanded use facilities.

5) The effect of each alternative on public health and safety.

Public safety issues are not expected to be a concern and would in fact be improved with the implementation of the alternative because minor adverse impacts would be reduced through the application of best practices and mitigation measures (see Section 4.1.2.8 of this document). Elements of Alternative B would be designed for consideration and consistency with ADA standards. In addition, sewer, water, and electrical tie-ins at the mobile bathhouses would be disconnected and capped off, as appropriate, and the mobile bathhouses would be moved in the event of storm surge or flooding, which would avoid any potential public health and safety impacts.

3.3 Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

The OPA evaluation for Alternative C would be similar to the evaluation provided in Section 3.2 of this document for Alternative B. Like Alternative B, Alternative C would include an RV campground, sewer and water tie-ins, and boat dock/fishing pier; however, unlike Alternative B, Alternative C would eliminate the mobile bathhouses. A brief summary of the OPA evaluation under Alternative C is provided below.

Under Alternative C, $4,249,338 of NRDA funds would be contributed to construct the proposed Cypremort Improvements Project modification and provide public recreational opportunities. The OPA analysis for Alternative B, excluding elements related to the mobile bathhouses, is applicable to Alternative C, herein incorporated by reference and summarized below.

The purpose of the Cypremort Improvements Project modification would be to enhance recreational use and experiences, as well as allow the public better access to natural resources. No land acquisition costs are associated with Alternative C, because the state owns or leases the property. The costs of approximately $4.3 million to implement Alternative C (Table 3-3) are reasonable, appropriate, and comparable to other equivalent restoration alternatives.

Table 3-3. Estimated Cost for Expanded Restoration and Recreation Improvements without Mobile Bathhouses (Alternative C)

Description	Cost	Total
Rock Jetty Subtotal		**$436,113**
Construction and Materials	$353,153	
Engineering and Design	$82,960	
Beach Reclamation Subtotal		**$351,998**
Construction and Materials	$300,000	

Description	Cost	Total
Engineering and Design	$51,998	
Marsh Boardwalk Subtotal		**$1,184,219**
Construction and Materials	$1,108,624	
Engineering and Design	$75,595	
Road and Parking Repairs Subtotal		**$649,786**
Construction and Materials	$571,871	
Engineering and Design	$77,915	
RV Campground; Sewer, Water, and Electrical Tie-Ins; and Boat Dock/Fishing Pier Subtotal		**$1,340,530**
Construction and Materials	$1,250,000	
Engineering and Design	$90,530	
Construction Supervision and Inspection		**$286,692**
Total Project Cost (NRDA funds)		**$4,249,338**

The Cypremort Improvements Project modification under Alternative C has a strong nexus to the DWH oil spill recreational injury, because it is designed to restore shoreline uses and boating opportunities, restore and enhance fishing and recreational opportunities, and increase and enhance the public's ability to access a variety of recreational resources. Alternative C represents "in-place, in-kind" restoration and is fully consistent with OPA objectives for compensatory restoration. Alternative C would improve overall park use and provide additional benefits from increased shoreline access and expanded opportunities at underserviced areas of the park. These benefits would be similar to Alternative B but would not provide the added benefits of mobile bathhouses in support of recreational opportunities. The estimated entrance fee associated with Alternative C would be $3 per person plus an additional campsite fee ranging from $33 Friday through Saturday (year-round), $30 Sunday through Thursday (April through September), and $25 Sunday through Thursday (October through March) per campsite per night, plus applicable local and state taxes.

Alternative C has a high likelihood of success and would have an estimated project life of 50 years. The purpose of Alternative C – to provide compensatory restoration for losses that occurred between April 2010 and November 2011 from the DWH oil spill – would not play a role in preventing future injury from the spill. Implementation of Alternative C would, however, avoid collateral damage to the environment. The primary NRDA benefits of Alternative C would be the same as Alternative B without the added benefit of park enjoyment through expanded use facilities (i.e., mobile bathhouses). Public safety issues are not expected to be a concern and would in fact be improved with the implementation of the alternative because minor adverse impacts would be reduced through the application of best practices and mitigation measures (see Section 4.1.2.8 of this document). Elements of Alternative C would be designed for consideration and consistency with ADA standards.

3.4 Oil Pollution Act Evaluation Conclusions

The LA TIG has completed its OPA evaluation of three recreational use action alternatives for the Cypremort Improvements Project modification. The OPA evaluation indicates that the infrastructure costs of the alternatives are well documented, reasonable, and appropriate. The costs of Alternative C are lower

than those under Alternatives A and B; however, these cost savings would be offset by reduced park amenities to support recreational users.

The alternatives, all of which would occur in the Louisiana Restoration Area, have a strong nexus to the recreational injuries caused by the DWH oil spill and can reasonably be expected to provide benefits to the public over an extended timeframe. The alternatives would be similar to existing restoration and recreation projects and are based on the use of proven techniques with established methods and documented results, thereby having high probabilities of success. Recreational benefits accrue from restored shoreline uses and boating opportunities, restored and enhanced fishing and recreational opportunities, and increased and enhanced public access to a variety of recreational resources. These benefits, which would be the greatest under Alternative B, would be broadly available to the public over an extended timeframe.

An environmental review indicates that adverse impacts resulting from the alternatives would be localized, minor to moderate and short-term, and localized, minor and long term. In addition, best practices and measures to avoid or minimize adverse impacts described in Section 4 of this Draft Supplemental RP/EA would be implemented. As a result, collateral injury would be avoided and minimized during project implementation. Finally, public safety issues are not expected to be a concern and would in fact be improved with the implementation of the alternatives.

4 SUPPLEMENTAL ENVIRONMENTAL IMPACT ANALYSIS

4.1 Introduction

The Affected Environment for the original Cypremort Improvements Project, as analyzed in the RP/EA #4 (LA TIG 2018b), generally remains the same for the analyses included in this Draft Supplemental RP/EA, and is therefore incorporated by reference as part of Alternative A: Restoration and Recreation Improvements, Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred), and Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses. The analysis areas and evaluation of potential impacts from the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components of the original Cypremort Improvements Project, as analyzed in the RP/EA #4 (LA TIG 2018b), are also incorporated by reference, where applicable, as part of the three action alternatives. Any substantive changes to existing conditions since release of the RP/EA #4 are described within this chapter, where applicable. Updated or additional information has been included where applicable to describe existing conditions under each alternative and identify potential impacts from expanded restoration and recreation improvements, which include construction of an RV campground; mobile bathhouses; sewer, water, and electrical tie-ins; and boat dock/fishing pier. The Natural Recovery/No Action Alternative is not evaluated herein because impacts are not substantially different from the Natural Recovery/No Action Alternative described in the RP/EA #4 (LA TIG 2018b).

This Draft Supplemental RP/EA does not reevaluate three resource topics (Table 4-1) because the resource is not present in the analysis area or no impact to the resource would occur based on existing conditions.

Table 4-1. Resource Topics Dismissed from Detailed Analysis and Rationale

Resource Topic	Rationale for Dismissal from Detailed Analysis
Marine Management	The alternatives would not result in changes or impacts to marine management because the location of the alternatives is outside navigable waterways and would not impact marine management.
Fisheries and Aquaculture	The alternatives would not result in impacts to commercial fisheries or aquaculture because of the location and nature of the alternatives considered in this RP/EA. Impacts to essential fish habitat are discussed in detail in each alternative's Marine and Estuarine Fauna section. Impacts to recreational fishing are discussed in detail in each alternative's Tourism and Recreational Use section.
Marine Transportation	The alternatives would not result in changes or impacts to marine transportation because the location of the alternatives is outside navigable waterways.

4.1.1 Impact Threshold Definitions

NEPA requires federal agencies to consider the environmental effects of their actions that include impacts (also referred to as effects) on social, cultural, economic, and natural resources. To determine whether an action has the potential to result in significant impacts, the context and intensity of the action must be considered. Context refers to area of impacts (local, state-wide, etc.) and their duration (e.g., whether they are short- or long-term impacts). Intensity refers to the severity of impact and could include the timing of the action (more intense impacts would occur during critical periods like high visitation or wildlife

breeding/rearing, etc.). Intensity is also described in terms of whether the impact would be beneficial or adverse.

For purposes of this document, adverse impacts are characterized as minor, moderate, or major, and short or long term. The analysis of beneficial impacts focuses on the duration (short- or long-term), without attempting to specify the intensity of the benefit. Short-term impacts would occur during the construction period and are also referred to as temporary. Long-term impacts could be permanent or intermittent in nature but would be anticipated to occur throughout the life of the project. The definition of these characterizations is consistent with that used in the PDARP/PEIS (DWH Trustees 2016a: Section 6, Table 6.3-2). The environmental consequences sections of this report (Sections 4.2 through 4.4) analyze the beneficial and adverse impacts that would result from implementing any of the alternatives considered in this Draft Supplemental RP/EA.

4.1.2 Best Practices

The PDARP/PEIS (DWH Trustees 2016a: Section 6, Appendix A) contains best practices to avoid or minimize adverse impacts to natural resources, including protected and listed species and their habitats. The RP/EA #4 identifies additional best practices, as summarized below, which generally include design criteria, best practices, lessons learned, expert advice, and tips from the field (LA TIG 2018b). The environmental consequences described in Sections 4.2 through 4.4 of this report acknowledge that the best practices in the PDARP/PEIS (DWH Trustees 2016a) and those from the RP/EA #4 as listed below could be established during project planning and implementation to avoid or minimize the potential adverse impacts from an alternative.

GEOLOGY AND SUBSTRATES

Specific measures would be implemented during construction to minimize erosion and overall soil impacts. To the extent possible, the alternatives would use the existing development footprints and disturbed areas (e.g., parking areas). These would include following established best practices for construction activities, such as implementing an erosion control and stormwater management plan, installing sediment traps prior to commencement of construction activities, and ongoing construction monitoring to ensure compliance. Any in-water work, such as construction of pilings or culverts, would be performed behind silt curtains to isolate construction impacts.

HYDROLOGY AND WATER QUALITY

Pollution prevention plans would be prepared as necessary, in conjunction with the National Pollutant Discharge Elimination System permitting process prior to construction. These plans would include all specifications and best practices necessary for control of erosion and sedimentation due to construction-related activities. The construction best practices, in addition to other avoidance and mitigation measures as required by state and federal regulatory agencies, would minimize water quality and hydrology impacts.

AIR QUALITY

Emission-reduction measures to mitigate for short-term, adverse air quality impacts could include the use of ultra-low sulfur diesel fuel in off-road construction equipment, limiting unnecessary idling time of

diesel-powered engines, controlling dust related to construction site activities, and covering trucks hauling loose materials.

NOISE

Mitigation measures that serve to limit noise impacts to humans from construction activities include the following:

- Limiting activity at alternatives to daytime hours
- Limiting truck traffic ingress/egress to the site to daytime hours
- Promoting awareness that producing prominent discrete tones and periodic noises (e.g., excessive dump truck gate banging) should be avoided as much as possible
- Requiring that work crews seek pre-approval for any weekend activities or activities outside of daytime hours
- Timing of in-water noise-producing activities to minimize disturbances to marine life
- Implementing standard practices, such as muffle units for generators, during construction operations to mitigate noise impacts

ESSENTIAL FISH HABITAT

Measures that serve to mitigate impacts to essential fish habitat (EFH) include the following:

- When impacts cannot be avoided, best practices would minimize the magnitude and duration of impacts to aquatic fauna, EFH, and managed species.
- Evaluation of impacts to EFH would continue during E&D to determine the extent of permanent impacts and any necessary offsets for these impacts.
- Signage, fencing, or landscaping can be used to focus foot and boat traffic to certain areas, thereby limiting shoreline and nearshore disturbances.
- Time-of-year restrictions for any in-water work (e.g., boardwalk construction) to avoid and minimize impacts to protected and managed species when they are expected to be present or when most vulnerable.
- Standard erosion and sediment control measures (e.g., silt fence) to protect water quality and aquatic habitats from impacts resulting from construction stormwater and sediment runoff. Project design standards could include no net increase in stormwater runoff and associated pollutants.
- Unavoidable impacts to jurisdictional wetlands and waters would be mitigated, if necessary.
- EFH consultation guidance documents on the National Marine Fisheries Service (NMFS) webpage may provide additional best practices to avoid or limit alternative impacts to EFH (NOAA Fisheries 2018).

CULTURAL RESOURCES

Measures that serve to mitigate impacts to cultural resources include the following:

- Cultural and historic resources would be considered when preparing site-specific restoration measures and management actions.

- Where there is a likelihood of disturbance of cultural resources, cultural resource managers would conduct appropriate surveys to assess the methods and location of restoration and management actions.
- Restoration measures and management actions would be designed to avoid cultural resources to the extent practicable.

INFRASTRUCTURE

Measures that serve to mitigate impacts to infrastructure include the following:

- Prior to construction, a traffic control plan would be developed and implemented to ensure minimal interruptions to the transportation network. Care would be taken during construction activities to prevent impeding traffic flow and obstructing access to the alternative area.
- The use of impervious materials would be avoided as much as feasible.
- Erosion and sedimentation control measures, including minimizing the amount of clearing and exposed soil, would be implemented and maintained.
- Sedimentation controls would be installed prior to the start of construction and maintained throughout the construction period.
- Disturbed areas would be revegetated with native species as soon as possible after work has been completed.

PUBLIC HEALTH AND SAFETY

Measures that serve to mitigate impacts to public health and safety include the following:

- Caution would be taken to prevent spills of oils and grease if handling fuels on site.
- Spill mitigation measures would be employed immediately following a spill of any hazardous material.
- The load compartments of trucks hauling dust-generating materials would be covered.
- Heavy water spray or chemical dust suppressant would be used in exposed areas to control airborne dust.
- Any produced waters or human waste would not be discharged unless the Department of Health and Hospitals requirements are met or exceeded.
- Flood access and evacuation plans would be filed on site.
- The resiliency of the proposed structures to sustain sea-level rise, hurricanes, and storm surges would be determined during final design.

4.2 Physical Environment

4.2.1 Geology and Substrates

AFFECTED ENVIRONMENT

The geology and substrates affected environment described for the original Cypremort Improvements Project in Section 4.2.1.1 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At

the time of this analysis, there have been no changes to the types of geology or substrate resources that are present in the analysis area analyzed in the RP/EA #4 (LA TIG 2018b).

The geology in the analysis area under Alternatives A, B, and C is characterized by Holocene deltaic deposits of the Teche delta lobe that include peat, silt, clay, and sand (Louisiana Geological Survey 2012). Soils in the analysis area include Aquents, dredged, 1 to 5 percent slopes, occasionally flooded, which make up the majority (approximately 98%) of the analysis area, with the remaining area (approximately 2%) made up of Bancker muck, tidal; Clovelly muck, very frequently flooded; and Dupuy silt loam, 0 to 1 percent slopes, occasionally flooded (Natural Resources Conservation Service 2020). None of these soils are highly erodible. Analysis area elevations are approximately 5 feet above sea level, referenced to the North American Vertical Datum of 1988 (U.S. Geological Survey [USGS] 2018).

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The geology and substrates environmental consequences analysis completed in Section 4.6.13.1 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. Alternative A would result in an overall disturbance area of approximately 14.2 acres. Temporary disturbances to terrestrial soils and substrates would occur from the use of heavy equipment and machinery during construction. The placement of materials and piling installation would also displace, compact, and convert marine soils and substrates. These activities would result in localized, minor, short- and long-term adverse impacts on geology and substrates. Best practices, as described in Section 4.1.2.1, would be implemented under the alternative, including the use of existing parking areas for staging of equipment and the use of existing roadways and footpaths to direct foot and vehicle traffic into designated areas, thereby minimizing disturbances to terrestrial soils and substrates during construction. Once constructed, the proposed Cypremort Improvements Project modification would reduce erosion, promote sediment retention, and increase shoreline protection, thereby resulting in long-term, beneficial effects to soils and substrates.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The geology and substrates environmental consequences analysis for Alternative B would be the same as described under Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. These components would result in localized, minor, short- and long-term adverse impacts on geology and substrates. Once implemented, these components would reduce erosion, promote sediment retention, and increase shoreline protection, thereby resulting in long-term, beneficial effects to soils and substrates.

Alternative B would require additional ground-disturbing activities for construction of the RV campground and sewer, water, and electrical tie-ins, resulting in an overall disturbance area of approximately 18.5 acres. Construction of the RV campground and sewer, water, and electrical tie-ins would require the use of heavy equipment and machinery to pave the RV campground area and dig trenches for the utility tie-ins and would result in temporary disturbances of terrestrial soils and substrates. The depth of disturbance to accommodate sewer, water, and electric tie-ins would be a minimum of 3 feet below the new grade. Gravity sewer lines would be buried as deep as practical based upon downstream

elevations. These depths are not anticipated to extend beyond existing below-ground infrastructure. Best practices, as described in Section 4.1.2.1, would be implemented under the alternative, including the use of existing parking areas for staging of equipment and the use of existing roadways and footpaths to direct foot and vehicle traffic into designated areas, thereby minimizing disturbances to terrestrial soils and substrates during construction. Mobile bathhouses would be delivered to the RV campground by truck and installed with a forklift. Because mobile bathhouses would be placed within the proposed RV campground footprint, there would be no additional disturbance of soils or substrates from this activity. The construction of the boat dock/fishing pier would contribute to temporary disturbances of terrestrial and marine soils and substrates from the use of equipment for both on-land and in-water work. The placement of piles for the boat dock/fishing pier would permanently displace and compact marine soils and substrates. These construction activities would therefore result in localized, minor, short- and long-term adverse impacts on geology and substrates.

Operations of the proposed Cypremort Improvements Project modification under Alternative B would not result in disruptions to soils or substrates, because all activities would occur within existing infrastructure footprints and facilities; no new ground disturbance would occur. If repairs are needed to the facilities implemented under Alternative B, equipment would be staged on existing paved surfaces, thereby limited disturbance to soils and substrates. In the event of a storm surge or flood, a truck and, as appropriate, forklift would utilize existing paved surfaces within the park to relocate the mobile bathhouses to higher ground.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Alternative C would require the same types of construction, operation, and maintenance activities as described under Alternative B, but would not include construction of the mobile bathhouses. The overall disturbance area under Alternative C (approximately 18.5 acres) would be the same as Alternative B, because the removal of the mobile bathhouses, which would be constructed within the RV campground footprint under Alternative B, does not alter the area of disturbance. Therefore, Alternative C would result in localized, minor, short- and long-term adverse impacts on geology and substrates from disturbances of terrestrial soils and substrates during construction and displacement, compaction, and conversion of marine soils and substrates from in-water infrastructure. Once constructed, the proposed Cypremort Improvements Project modification would reduce erosion, promote sediment retention, and increase shoreline protection, thereby resulting in long-term beneficial effects to soils and substrates.

4.2.2 Hydrology and Water Quality

AFFECTED ENVIRONMENT

The hydrology and water quality affected environment described for the original Cypremort Improvements Project in Section 4.2.1.2 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to the types of surface water resources, wetlands, or floodplains present in the analysis area analyzed in the RP/EA #4 (LA TIG 2018b). Updated water quality inventories and other referenced sources are included, where applicable, in the affected environment summary below. This section also includes a description of groundwater resources that would be utilized under Alternatives B and C and expands upon the description of floodplains summarized in Section 4.2.1.2 of the RP/EA #4 (LA TIG 2018b) that would be applicable to all alternatives.

Basins and Impaired Waterbodies

The surface water analysis area for Alternatives A, B, and C consists of surface waterbodies within or crossing the analysis area boundary. The analysis area is located in the Vermilion subbasin (HUC-08080103), which is part of the Vermillion-Teche basin. The analysis area is characterized as swamp/marsh to the coastline boundary (EPA 2020) and includes Vermilion Bay to the west and Shark Bayou to the north of Cypremort Point State Park. Vermilion Bay is classified as an estuary and covers an area of approximately 216.5 square miles. Shark Bayou is located on the north end of the park, and Quintana Canal runs along a portion of the west-east segment of Beach Lane at the southern end of the park. Two unnamed canals are within the analysis area, including a canal running perpendicular to Beach Lane just west of the park's entrance and a canal adjacent and parallel to the north-south segment of Beach Lane.

Since publication of the RP/EA #4 (LA TIG 2018b), Vermilion Bay (subsegment LA061104_00) continues to be listed as fully supporting Primary Contact Recreation (PCR), Secondary Contact Recreation (SCR), Fish and Wildlife Propagation, and impaired for Oyster Propagation (OYS) due to fecal coliform (LDEQ 2019). The suspected source of Vermilion Bay's OYS impairment has been updated from on-site treatment systems (septic systems and similar decentralized systems) (LDEQ 2017b) to unknown (LDEQ 2019). Cypremort Point Beach (LA061104_001), which is evaluated for swimming advisory tracking purposes only, continues to be listed as impaired for PCR due to *enterococcus* from on-site treatment systems (septic systems and similar decentralized systems) and package plant or other permitting small flow discharges. Corrective strategies or total maximum daily loads have not been identified for Vermilion Bay or Cypremort Point Beach.

The groundwater analysis area for Alternatives A, B, and C includes aquifers underlying the analysis area. Groundwater in the analysis area is supplied by the Chicot Aquifer, which is a sole source aquifer, serving as the only/primary drinking water sources for the region. The recharge area for the Chicot Aquifer is northwest of the analysis area, outside of St. Mary and Iberia Parishes.

Wetlands and Floodplains

The wetland analysis area for all alternatives includes wetlands within or crossing the analysis area. The LDEQ regulates all surface waters, including wetlands, as "waters of the state" under Part IX, Water Quality, of the Louisiana Environmental Regulatory Code (LDEQ 2017a), which is more inclusive than "waters of the U.S.", as defined by the Clean Water Act and implementing regulations. As such, all waterbodies within the analysis area for hydrology and water quality are regulated as waters of the state under the LDEQ. The waters surrounding the onshore portions of the analysis area, as described above, are characterized as an estuarine, subtidal deepwater habitat with unconsolidated bottoms (USFWS 2019). The area surrounding the north-south segment of Quintana Canal and running along the entire length of Beach Lane is classified as estuarine and marine deepwater intertidal wetland habitat (USFWS 2019).

The floodplains analysis area for all alternatives includes floodplains within or crossing the analysis area. Alternatives A, B, and C are within Zone VE (coastal flood zone with velocity hazard from wave action) of the 100-year floodplain with base flood elevations of 13 to 14 feet (Federal Emergency Management Agency 2019a, 2019b).

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The hydrology and water quality environmental consequences analysis completed in Section 4.6.13.2 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. Alternative A would require in-water work for construction of some components, which would disrupt soils and substrates in nearby surface waters and wetlands, thereby leading to temporary alterations in hydrology, increases in turbidity, and degradations of water quality. Prior to construction, federal and state permits for in-water work and construction would be obtained as necessary, and the Cypremort Improvements Project modification would include best practices, as described in Section 4.1.2.2, to avoid or minimize potential effects to receiving waterbodies through the development and implementation of a pollution prevention plan prior to construction. Therefore, construction activities under Alternative A would result in localized, short-term, minor adverse impacts on surface water hydrology and quality. Construction and implementation of the alternative would not result in detectable changes to the natural floodplain or groundwater resources.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The surface water and hydrology environmental consequences analysis for Alternative B would be the same as described under Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. These components would result in localized, short-term, minor adverse impacts on surface water hydrology and quality.

Alternative B would require additional ground-disturbing activities for construction of the RV campground and sewer, water, and electrical tie-ins, resulting in an overall disturbance area of approximately 18.5 acres. Construction of these components would require the use of heavy equipment and machinery to prepare the RV campground area and dig trenches for the utility tie-ins, which would disturb soils and sediments and lead to temporary increased erosion and sedimentation in nearby surface waters and wetlands. Construction of the boat dock/fishing pier would require in-water work during pile installation in the unnamed canal running parallel to the north-south segment of Beach Lane, which is classified as wetland habitat. The placement of piles would temporarily disturb sediments in the localized wetland area; however, these sediment disruptions would quickly settle within minutes and would not result in a detectable change to water quality. Impervious surfaces constructed as part of the RV campground paved surfaces would lead to long-term increases in stormwater runoff and potential contamination of nearby surface waterbodies, including wetlands.

Construction and maintenance of the proposed Cypremort Improvements Project modification under Alternative B would also require the use of hazardous materials, including fuels, oils and other lubricants to operate heavy equipment and machinery. Recreational users at the park would utilize vehicles and boats that would also require the use of fuels, oils and other lubricants. Due to the limited quantities of hazardous materials, if a spill should occur during construction, operations, or maintenance of the proposed RV campground; mobile bathhouses; sewer, water and electrical tie-ins; or boat dock/fishing pier under Alternative B, the degradation of water quality in nearby surface waters and wetlands could be detectable but any contaminants would quickly dissipate and would therefore be temporary. Sewer systems would be shut down during installation of sewer tie-ins. In the event of storm surge or flooding,

sewer tie-ins supplying the RV campgrounds and mobile bathhouses would be disconnected and capped off. As a result, there would be no increased risk of contamination of waterbodies from hazardous wastes.

As described under Alternative A, federal and state permits would be obtained prior to project construction. Best practices and other avoidance and mitigation measures as required by state and federal agencies, would be implemented prior to construction to minimize adverse water quality and hydrology impacts (Section 4.1.2.2). As a result, changes to surface hydrology and water quality as a result of construction, operation and maintenance activities would be avoided or reduced, and no further degradations to already impaired waterbodies within the analysis area would occur. Construction, operations, and maintenance activities under Alternative B would therefore result in localized, short- and long-term, minor adverse impacts on surface water hydrology and quality. Changes to surface waterbodies or wetlands during construction and implementation of the alternative would not result in detectable changes to the natural floodplain.

The proposed Cypremort Improvements Project modification under Alternatives B would require the use of the park's existing water well, which relies upon the Chicot Aquifer, to supply water to the proposed RV campground and mobile bathhouses during operations. The recharge area for the Chicot Aquifer is outside of the analysis area and would not be affected in terms of quantity or quality by implementation of the Cypremort Improvements Project modification. Groundwater withdrawals from the proposed Cypremort Improvements Project modification would remain within the park's existing permitting uses and would therefore not affect groundwater quantity. The depth of disturbance to accommodate the proposed sewer, water, and electrical tie-ins would be a minimum of 3 feet below the new grade. Gravity sewer lines would be buried a minimum of 3 feet below the new grade and as deep as practical based upon downstream elevations. These depths would not extend beyond existing below-ground utility infrastructure, and groundwater would therefore not be encountered. As a result, Alternative B would not affect groundwater resources.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Alternative C would require the same types of construction, operation, and maintenance activities as described under Alternative B but would not include construction of the mobile bathhouses. The overall disturbance area (approximately 18.5 acres) and magnitude of potential impacts on hydrology and water quality under Alternative C would be the same as Alternative B, because there would be no measurable difference from effects on water resources from the exclusion of the mobile bathhouses. Therefore, Alternative C would result in localized, short- and long-term minor adverse impacts on surface water hydrology and quality from temporary increases in erosion, sedimentation, and stormwater runoff. Changes to surface waterbodies or wetlands during construction and implementation of the alternative would not result in detectable changes to the natural floodplain. Alternative C would not require groundwater withdrawals or depths of disturbance beyond existing below-ground utility infrastructure and would therefore not affect groundwater resources.

4.2.3 Air Quality

AFFECTED ENVIRONMENT

The air quality affected environment described for the original Cypremort Improvements Project in Section 4.2.1.3 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of

this analysis, there have been no changes to air quality resources within the analysis area analyzed in the RP/EA #4 (LA TIG 2018b), although there have been updates to some referenced sources. The air quality analysis area includes Iberia and St. Mary Parishes, which remain in attainment for all U.S. National Ambient Air Quality Standards (EPA 2019) and are therefore in compliance with all air quality standards. Air quality around Cypremort Point State Park remains, on average, good, which is the highest achievable level on the Air Quality Index (LDEQ 2020).

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The air quality environmental consequences analysis completed in Section 4.6.13.1.3 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. Construction of Alternative A would require the use of heavy equipment and machinery including bulldozers, trucks, backhoes, tractor trailers, trucks or marsh buggies with cranes and pile drivers, small excavators, fork lifts, roller, generators, small trucks, pile drivers, and hand tools. The exhaust from gasoline- and diesel-powered construction vehicles and heavy equipment and machinery would contribute to a temporary increase in criteria pollutants, greenhouse gasses (GHGs), and other air pollutants, which, due to the limited temporal and spatial scope of the Cypremort Improvements Project modification, would occur at a small scale over a short duration of the construction period. Increased recreational use at or near the park would contribute to nominal increases in emissions over the life of the project. As a result, Alternative A would result in localized, minor, short-term adverse impacts on air quality.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The air quality environmental consequences analysis for Alternative B would be the same as described under Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. These components would result in localized, minor, short-term adverse impacts on air quality.

Alternative B could require the use of additional gasoline- and diesel-powered vehicles and heavy equipment and machinery, including bulldozer or grader, trucks, a backhoe, excavators, roller, generators, trucks or marsh buggies with cranes and pile drivers, small trucks, and hand tools, during construction of the RV campgrounds; sewer, water, and electrical tie-ins; and boat dock/fishing pier. The exhaust from gasoline- and diesel-powered construction vehicles and heavy equipment and machinery would contribute to a temporary increase in criteria pollutants, GHGs, and other air pollutants. In addition, ground-disturbing activities in non-paved areas of the park to accommodate construction of the RV campgrounds; sewer, water, and electrical tie-ins; and boat dock/fishing pier and the movement of materials could create dust that could temporarily degrade localized air quality. Best practices would be implemented under the alternative to include the use of ultra-low sulfur diesel fuel in off-road construction equipment, limiting unnecessary idling time of diesel-powered engines, controlling dust related to construction site activities, and covering trucks hauling loose materials. Due to the limited temporal and spatial scope of the Cypremort Improvements Project modification, these increases would occur at a small scale over a short duration of the construction period and would not cause emissions to meet or exceed Clean Air Act *de minimis* criteria for general conformity (40 CFR 93.153). Therefore, construction of Alternative B would lead to localized, short-term, minor adverse impacts on air quality.

During operations of the RV campground, there would be long-term, intermittent contributions to emissions from increased vehicle and boat traffic. Idling restrictions would be implemented and enforced in and around the park. Heavy equipment and machinery could be necessary during maintenance of components under Alternative B, including the use of a truck and forklift to relocate the mobile bathhouses in the event of storm surge or flooding. However, due to the intermittent nature of recreational-user and maintenance-generated emissions and the limited scope of new recreational facilities under Alternative B (i.e., 30 RV campsites), these increases would not cause emissions to meet or exceed Clean Air Act *de minimis* criteria for general conformity (40 CFR 93.153). As a result, increased recreational use at or near the park and maintenance of park components would contribute to localized, long-term, minor adverse impacts on air quality from intermittent contributions to emissions over the life of the project.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Alternative C would require the same types of construction, operation, and maintenance activities as described under Alternative B but would not include construction of the mobile bathhouses. The overall sources and types of potential contributions to emissions would be the same as Alternative B, because there would be no measurable difference from effects on air quality from the exclusion of the mobile bathhouses. Therefore, Alternative C would result in localized, short-term, minor adverse impacts on air quality from contributions to emissions and dust through the use of heavy equipment and machinery during construction. Increased recreational use at or near the park and maintenance of park components would contribute to localized, long-term, minor adverse impacts on air quality from intermittent contributions to emissions over the life of the project.

4.2.4 Noise

AFFECTED ENVIRONMENT

The noise affected environment described for the original Cypremort Improvements Project in Section 4.2.5.1 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to noise resources or receptors[6] within the analysis area analyzed in the RP/EA #4 (LA TIG 2018b). Noise is generally defined as unwanted sound. Sound becomes noise when it interferes with normal activities such as speech, concentration, or sleep. Ambient noise (the existing background noise environment) in the vicinity of the original Cypremort Improvements Project is generated by waves, wind, wildlife, watercraft traffic, automobiles, trucks, and recreational activities. The level of noise varies, depending on the season, time of day, number and types of noise sources, and distance from the noise source. There are no sensitive noise receptors in the noise analysis area.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The noise environmental consequences analysis completed in Section 4.6.13.5.1 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot

[6] Noise receptors represent members of the population that may perceive noise as a nuisance. Sensitive noise receptors represent noise-sensitive locations, including, but not limited to, schools, daycares, and hospitals.

components under the original Cypremort Improvements Project is applicable to Alternative A. There would be temporary generation of noise during construction of the proposed Cypremort Improvements Project modification from the use of noise-producing heavy equipment and machinery and increases in vehicle traffic, which could be a nuisance to nearby residences or recreational users. Standard practices, as described in Section 4.1.2.4, would be implemented during construction to minimize noise, including limits to the timing of construction activities and the use of muffle units for generators. Increased park visitors would contribute additional noise associated with vehicle use, fishing, and other recreational activities; however, these noises would be localized and similar to existing background noise at the park. As a result, increases in noise disturbance during construction and operations would result in localized, short- and long-term, minor adverse impacts.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The noise environmental consequences analysis for Alternative B would be the same as described under Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. These components would result in localized, minor, short- and long-term adverse noise impacts.

Alternative B would require additional temporary noise-generating activities for construction and maintenance of the RV campground; mobile bathhouses; sewer, water, and electrical tie-ins; and boat dock/fishing pier through the use of noise-producing heavy equipment and machinery and increases in vehicle traffic. These noises could be a nuisance to nearby residences (approximately 0.6 mile from the analysis area) or park recreational users. Standard practices, as described in Section 4.1.2.4, would be implemented during construction to minimize noise, including limits to the timing of construction activities and the use of muffle units for generators. With implementation of noise-reducing best practices, construction noise would dissipate at distances and blend into existing background noises, thereby reducing impacts to nearby residences. Construction and maintenance noises could also be noticeable to recreational users at or near the park but would be intermittent and short-term, thereby not resulting in degradation of overall user experience. Any increased park visitors during operations could contribute additional noise associated with vehicle use, fishing and other recreational activities; however, these noises would be localized, temporary, and similar to existing background noise at the park. In addition, because of the limited scope of components implemented under Alternative B (i.e., 30 RV campsites), the potential for a noticeable increase in noise during operations would be nominal. As a result, increases in noise disturbance during construction, operations, and maintenance would lead to localized, short- and long-term, minor adverse noise impacts.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Alternative C would require the same types of construction, operation, and maintenance activities as described under Alternative B, but would not include construction of the mobile bathhouses. The overall noise from construction, operations, and maintenance activities under Alternative C would be the same as those described under Alternative B, because there would be no measurable difference between the overall noise generated with or without the presence of mobile bathhouses. Therefore, Alternative C would result in localized, minor, short- and long-term adverse noise impacts from the use of noise-generating equipment during construction and maintenance and increases in noise from recreational users during operations.

4.3 Biological Environment

4.3.1 Terrestrial, Coastal Nearshore, and Marine Habitats

AFFECTED ENVIRONMENT

The affected environment for terrestrial, coastal nearshore, or marine habitats for the original Cypremort Improvements Project in Section 4.2.2.1 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to terrestrial, coastal nearshore, or marine habitats within the analysis area evaluated in RP/EA #4 (LA TIG 2018b).

The Cypremort Improvements Project modification is located within the Deltaic Coastal Marshes and Barrier Islands level IV ecoregion. Brackish and saline marshes dominate the ecoregion. The region supports vegetation tolerant of brackish or saline water including saltmarsh cordgrass (*Spartina alterniflora*), marshhay cordgrass (*Spartina patens*), black needlerush (*Juncus roemerianus*), and coastal saltgrass (*Distichlis spicata*). Extensive organic deposits lie mainly below sea level in permanently flooded settings. The wetlands and marshes act as a buffer to help moderate flooding and tidal inundation during storm events.

The 185-acre site is currently managed as a state park that includes numerous recreational structures and associated infrastructure, as well as natural areas, and includes natural areas of upland, wetland, and aquatic habitats. Portions of the park adjacent to existing infrastructure generally consist of mowed grass.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The terrestrial, coastal nearshore, and marine habitats environmental consequences analysis completed in Section 4.6.13.2.1 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A.

Construction of rock jetties, pile-driving activities, and beach reclamation below the high tide line would disturb terrestrial, nearshore, and marine habitats. Pile driving during construction of the marsh boardwalk would permanently alter the estuarine marsh area where the proposed system is placed and would potentially impact wetlands and some open-water inlet areas due to increased human activities (e.g., shore-based fishing). Similarly, the reinforcement and extension of the existing rock jetty would permanently alter the nearby shoreline and open-water areas, due to the reduction in marine habitat where rocks are placed. The road, parking area, and sidewalk repairs would be limited to areas of existing infrastructure and would not result in disturbances to surrounding natural areas. As a result, construction activities associated with the rock jetty, marsh boardwalk, and beach reclamation would result in localized, short-term, minor adverse impacts on terrestrial, nearshore, and marine habitats.

Permanent project components would affect habitats in localized areas; however, the footprints of the marsh boardwalk and rock placement are small (0.8 acre and 1.3 acres, respectively) compared to the surrounding available habitat. The LA TIG would carefully manage project implementation and rely upon the MAM Plan (Appendix A) to minimize adverse impacts. Wildlife would likely use plentiful suitable habitats nearby during construction activities and would likely return to the area once construction

activities cease. Therefore, the alternative would not result in long-term adverse impacts on terrestrial, estuarine, coastal nearshore, or marine habitats. The beach reclamation is intended to restore the previous functions of the beach area and would provide a net benefit to shoreline habitat for several bird and wildlife species.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The terrestrial, coastal nearshore, and marine habitats environmental consequences analysis for Alternative B would be the same as described under Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components, which would result in localized, short-term, minor adverse impacts on terrestrial, nearshore, and marine habitats from disturbances to wetlands, open-water areas, and shorelines. The beach reclamation would restore the previous functions of the beach area and provide a net benefit to shoreline habitat for several bird and wildlife species.

Construction of the RV campsites; mobile bathhouses; sewer, water, and electrical tie-ins; and boat dock/fishing pier would result in an additional, temporary disturbance of 4.3 acres in upland areas, which could lead to erosion and sedimentation and degrade habitat. Noise associated with heavy equipment, machinery, and human presence during construction would lead to temporary disturbances to species in adjacent upland habitat. Pile-driving activities associated with the boat dock/fishing pier would result in similar disturbances and noise near open-water habitat areas. As described in Sections 4.2.2.2, displacements of soils and substrates in waterbodies would be temporary and would quickly settle out, and best practices, including erosion control measures, would avoid or reduce changes to surface water hydrology and quality, thereby minimizing changes to terrestrial, nearshore, and marine habitats. Noise would also be minimized through best practices, as described in Section 4.1.2.4. Therefore, disturbances to habitat environments would lead to localized, minor, short-term adverse impacts on terrestrial, nearshore, and marine habitats.

The permanent infrastructure associated with the RV campground and boat dock/fishing pier would permanently convert 4.3 acres of habitat, including 4.2 acres of upland habitat and 0.1 acre of marsh habitat, to developed land and infrastructure; however, this conversion would occur within and adjacent to areas of existing development and within a small footprint compared to the available habitat in surrounding areas. As described in Section 4.1.2.4, noise during operations and maintenance of the Cypremort Improvements Project modification would be localized, intermittent, and similar to existing background noise at the park. In addition, because of the limited scope of components implemented under Alternative B (i.e., 30 RV campsites), the potential for a noticeable increase in noise during operations would be nominal. The LA TIG would carefully manage project implementation and rely upon the MAM Plan (Appendix A) to ensure adverse impacts on habitats are minimized. Best practices, including placing proposed elements outside of sensitive habitats whenever possible, would be implemented to the extent practicable during design and construction, as determined necessary by the LA TIG, and would avoid or minimize potential adverse impacts to terrestrial, coastal nearshore, and marine habitats. As a result, the overall adverse impacts on habitat from infrastructure and operation-related noises would be localized, minor, and long term. The mobile bathhouses would be placed within the RV campground area and would not result in additional disturbance to habitat.

One of the primary goals of the Cypremort Improvements Project modification is to allow the public better access to natural resources. Better public access from the development of the RV campsites and boat dock/fishing pier could result in an increase in fishing pressure, which could result in an increase in

the use and potential loss of hook and line gear and small, personal crab pots. However, parking and RV campground capacity would limit the total number of additional visitors, thereby placing an upper limit on the magnitude of fishing pressure resulting from the alternative. The use of trawl gear or gillnets within the alternative is not expected. Although recreational fishing could increase from current levels, it is not expected to have long-term, substantive adverse impacts on habitats.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

The overall disturbance area (approximately 18.5 acres) and magnitude of potential impacts on terrestrial, coastal nearshore, and marine habitats under Alternative C would be the same as Alternative B. Mobile bathhouse construction would occur on lands already disturbed by RV campground construction, so there would be no measurable difference in effects on these resources from the exclusion of the mobile bathhouses. Therefore, Alternative C would result in short- and long-term, minor adverse impacts on habitats, and a long-term net benefit to shoreline habitat.

4.3.2 Protected Species

4.3.2.1 AFFECTED ENVIRONMENT

The affected environment for protected species described in Section 4.2.2.2 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to listed species present in the analysis area analyzed under RP/EA #4 (LA TIG 2018b).

Protected species include wildlife and plant species that are protected from harm or harassment by law. The Endangered Species Act of 1973 (ESA) protects all federally listed wildlife and plant species, and designated critical habitat of these species, in the United States. The ESA requires that federal agencies ensure that any action authorized, funded, or carried out by an agency is not likely to jeopardize the continued existence of any listed species, or result in the destruction or adverse modification of designated critical habitat. Other protected species include marine mammals, such as the common bottlenose dolphin (*Tursiops truncatus*), protected by the Marine Mammal Protection Act of 1972, and migratory birds, protected by the Migratory Bird Treaty Act of 1908. The primary regulatory agencies responsible for ESA compliance are USFWS and NMFS.

Protected Aquatic Species

Green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), Kemp's Ridley (*Lepidochelys kempii*), leatherback (*Dermochelys coriacea*), and loggerhead sea turtles (*Caretta caretta*) could occur in nearshore or inshore estuarine waters that contain seagrass or other submerged or emergent vegetation used as forage or could harbor prey species (NOAA Fisheries 2017). No large beds of submerged aquatic vegetation (SAV) have been mapped within the analysis area (Love et al. 2013; NOAA Fisheries 2020); however, small patches of sea grass could be present. The West Indian manatee (*Trichechus manatus*) occurs in warm, shallow estuarine waters adjacent to a freshwater source and with seagrass or other submerged or emergent vegetation for forage. Sightings of manatees in Louisiana riverine habitats are rare (LDWF 2018). The common bottlenose dolphin could also occur in the area due to the proximity of the alternative to marine habitats.

Protected Terrestrial Species

Suitable habitat foraging and roosting habitat for the piping plover (*Charadrius melodus*) and red knot (*Calidris canutus*) are present within the analysis area.

Critical Habitat

There is no designated critical habitat for any protected species within 20 miles of the proposed Cypremort Improvements Project modification.

4.3.2.2 ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The protected species environmental consequences analysis completed in Section 4.6.13.2.2 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. These components would have short-term, minor to moderate adverse impacts on protected species, if present during construction, from temporary disturbances due to human activities and noise, temporary increases in turbidity, and potential strikes with construction equipment. These impacts could occur on the following species: marine life stages of green, hawksbill, Kemp's Ridley, leatherback, and loggerhead sea turtles; the common bottlenose dolphin; the West Indian manatee; piping plover; and red knot.

Noise from construction equipment (e.g., generators, pile installation equipment) is known to disturb fish and marine mammals. Conservation measures to protect marine mammals from noise are discussed in the PDARP/PEIS best practices (DWH Trustees 2016a: Section 6, Appendix A). The timing of in-water, noise-producing activities would be planned to minimize disturbances to marine life, including time-of-year restrictions as described in Section 4.1.2.5, to avoid or minimize impacts to protected species when they are expected to be present or when most vulnerable. This and other best practices, in addition to other avoidance and mitigation measures required by state and federal regulatory agencies, would minimize water quality impacts that could affect aquatic habitat. As a result, adverse impacts on protected species would be short-term and minor. Because protected aquatic species are not likely to occur in the area, and because conservation measures would be implemented, no long-term adverse impacts to protected aquatic species are anticipated.

If the piping plover or red knot are present during construction, these shorebirds would likely move to undisturbed habitat located adjacent to the alternative to avoid increased human activity and construction noise. Once construction is complete, the shorebirds would return to suitable habitat in the project area. Additionally, all individuals working on the alternative construction would be provided with information in support of general awareness of piping plover and red knot presence and the means to avoid birds and their habitats. Construction work would be avoided during peak activities for these species to the maximum extent practicable. If work must be conducted when these species are present, construction workers would avoid working near concentrations of individuals or would delineate avoidance areas to minimize disturbance. As a result, construction would result in localized, short-term, minor to moderate adverse impacts on piping plover and red knot.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The protected species environmental consequences analysis for Alternative B would be the same as described under Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. As a result, these components under Alternative B would result in localized, short-term, minor to moderate adverse impacts on protected species from habitat disturbance and noise during construction.

Protected Aquatic Species

Impacts on protected aquatic species as a result of implementing Alternative B would be similar to those described for Alternative A. However, construction of the boat dock/fishing pier would result in additional temporary disturbance and noise, such as from pile-driving activities, and increased risk of strikes with construction equipment that would affect protected aquatic species. In the unlikely event that protected aquatic species (i.e., green, hawksbill, Kemp's Ridley, leatherback, or loggerhead sea turtles; the common bottlenose dolphin; or the West Indian manatee), may be present during construction, construction impacts would be temporary and localized, and species would likely avoid the area. As discussed for Alternative A, conservation measures to protect marine mammals from noise are discussed in the PDARP/PEIS best practices (DWH Trustees 2016a: Section 6, Appendix A). The timing of in-water, noise-producing activities would be planned to minimize disturbances to marine life. Best practices, in addition to other avoidance and mitigation measures required by state and federal regulatory agencies, would minimize water quality impacts that could affect aquatic habitat. As a result, adverse impacts on protected species would be localized, short-term and minor to moderate. Because protected aquatic species are not likely to occur in the area, and because conservation measures would be implemented, no adverse, long-term impacts to protected aquatic species are anticipated.

Protected Terrestrial Species

Impacts on protected terrestrial species as a result of implementing Alternative B would be similar to those described for Alternative A; however, construction of the RV campsites; mobile bathhouses; sewer, water, and electrical tie-ins; and boat dock/fishing pier would result in additional disturbance to terrestrial habitats and construction-related noise, thereby resulting in localized, short-term, minor to moderate adverse impacts on protected terrestrial species. Impacts to the piping plover and red knot could occur from increased human activity and construction noise near shorelines. Noise from construction equipment (e.g., generators, pile installation equipment) is known to disturb shorebirds, resulting in short-term, minor to moderate adverse impacts. If the piping plover or red knot are present during construction, the shorebirds would likely move to undisturbed habitat located adjacent to the alternative. Once construction is completed, the shorebirds would once again use suitable habitat in the alternative site, and there would be no long-term adverse impacts. The footprint of the project components in suitable habitat would be small and located adjacent to existing development, and plentiful suitable habitats are located nearby. If necessary, best practices as described in the PDARP/PEIS (DWH Trustees 2016a: Section 6, Appendix A) would be implemented to avoid and minimize potential adverse impacts (DWH Trustees 2016a). Therefore, the alternative could affect but is not likely to adversely affect the piping plover and red knot.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

The overall disturbance area (approximately 18.5 acres) and magnitude of potential adverse impacts on protected species under Alternative C would be the same as Alternative B. Mobile bathhouse construction would occur on lands already disturbed by RV campground construction, so there would be no measurable difference in effects on these resources from the exclusion of the mobile bathhouses. Therefore, Alternative C would result in short-term, minor to moderate adverse impacts on protected species.

4.3.3 Terrestrial Wildlife, Including Migratory Birds

AFFECTED ENVIRONMENT

The affected environment for terrestrial wildlife and migratory birds described in Section 4.2.2.3 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to wildlife or migratory bird species present within the analysis area identified in RP/EA #4 (LA TIG 2018b).

The Cypremort Improvements Project modification would occur in an existing state park that is developed and managed for human and natural environment land uses (or in adjacent waters). Several terrestrial wildlife species have the potential to occur, including muskrat (*Ondatra zibethicus*), alligator (*Alligator mississippiensis*), white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), eastern cottontail (*Sylvilagus floridanus*), opossum (*Didelphis virginiana*), and red fox (*Vulpes vulpes*), as well as multiple species of migratory birds.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The terrestrial wildlife and migratory bird environmental consequences analysis completed in Section 4.6.13.2.3 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. Alternative A would have short-term, minor adverse impacts to terrestrial wildlife and migratory bird species as a result of disturbance associated with construction activities and noise that could lead to avoidance and potential strikes from construction equipment. Best practices described in the PDARP/PEIS (DWH Trustees 2016a:Section 6, Appendix A) would be implemented and coordination with LDWF would be completed as part of E&D to avoid or minimize effects to species.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

Impacts on terrestrial wildlife and migratory bird species as a result of implementing Alternative B would be similar to those described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. Construction of the RV campsites; mobile bathhouses; and sewer, water, and electrical tie-ins would encompass an additional 4.3 acres of land. Some vegetation clearing could be required for construction of the RV campground spaces; however, much of the proposed work would occur adjacent to existing infrastructure and would involve limited vegetation clearing. In addition, wildlife could be sensitive to changes in noise sources or levels due to construction. Some

mobile species could be able to move out of the disturbed area, and wildlife would likely use plentiful suitable habitats nearby during construction activities. Best practices as described in the PDARP/PEIS (DWH Trustees 2016a: Section 6, Appendix A) would be implemented to avoid and minimize potential adverse impacts to terrestrial wildlife and migratory birds. Therefore, localized, short-term, minor to moderate adverse impacts would occur due to temporary degradation of adjacent habitat as a result of human noise and disturbance, as well as habitat disturbance associated with construction activities. Long-term, minor adverse impacts would occur due permanent conversion of existing habitat due to permanent infrastructure and other developed areas and increased human presence during operations and maintenance.

Noise from construction equipment (e.g., generators, earth-moving equipment) is known to disturb migratory and shorebirds resulting in short-term, minor to moderate adverse impacts (DWH Trustees 2016a). These noises could be slightly more disturbing to any resting or roosting birds that could use the site compared to baseline conditions. The alternative would include best practices described in the PDARP/PEIS (DWH Trustees 2016a: Section 6, Appendix A) necessary to reduce potential effects from construction-related activities, and coordination with LDWF as part of E&D to avoid or minimize effects to species would be conducted prior to construction. Therefore, adverse impacts on migratory shorebirds would be minimized to the extent possible. As a result, construction of the Cypremort Improvements Project modification would result in localized, short-term, minor adverse impacts to migratory birds.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

The overall disturbance area (approximately 18.5 acres) and magnitude of potential adverse impacts on wildlife and migratory birds under Alternative C would be the same as Alternative B. Mobile bathhouse construction would occur on lands already disturbed by RV campground construction, so there would be no measurable difference in effects on these resources from the exclusion of the mobile bathhouses. Therefore, Alternative C would result in localized, short-term, minor to moderate adverse impacts and localized, long-term, minor adverse impacts on wildlife.

4.3.4 Marine and Estuarine Fauna, Essential Fish Habitat and Managed Fish Species

AFFECTED ENVIRONMENT

The affected environment for marine and estuarine fauna, EFH, and managed fish species described in Section 4.2.2.4 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to marine or estuarine fauna, EFH or managed fish species present in the analysis area evaluated under RP/EA #4 (LA TIG 2018b).

The analysis area is located within a tidally influenced area and support a wide variety of living aquatic resources including resident and migratory fishes, mammals, crustaceans, mollusks, reptiles and benthic invertebrates. These estuarine-dependent species often serve as prey for other coastal and aquatic species. Habitats in these regions typically include estuarine emergent wetlands (e.g., marsh edge, inner marsh, marsh ponds, and tidal creeks); SAV; seagrasses; mud, sand, shell, and rock substrates (e.g., oyster reefs and barrier island flats); mangrove wetlands; and estuarine water column.

Fishery resources are publicly significant because of the high priority placed on their aesthetic, recreational, and commercial value. Habitat is the foundation for the commercial and recreational fishing industries. Aquatic fauna requires healthy surroundings to survive and reproduce. EFH includes all types of aquatic habitat—wetlands, coral reefs, seagrasses, and mangroves—where fish spawn, breed, feed, or grow to maturity. The designation and conservation of EFH seeks to minimize adverse effects on habitat caused by fishing and non-fishing activities. EFH habitats for the Gulf of Mexico have been identified as estuarine emergent wetlands; seagrass beds; algal flats; mud, sand, shell, and rock substrates; and the estuarine water column. The EFH components within the analysis area include emergent wetlands and mud substrate.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The marine and estuarine fauna, EFH, and managed fish species environmental consequences analysis completed in Section 4.6.13.2.4 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. Permanent changes would occur to the shoreline area and inland estuarine marsh where the boardwalk/trail system is proposed due to the addition of permanent infrastructure. This area would also experience increases in noise and potential degradation of habitat from human activities (e.g., shore-based fishing, litter). Although these adverse impacts could affect aquatic fauna, fisheries, and EFH (present in the areas proposed for in-water work) in localized areas, the footprints of the marsh boardwalk and rock placements are small, and temporary disturbances are expected to be limited in scope and duration. Temporarily disturbed aquatic fauna would likely find refuge in plentiful suitable habitats nearby. The timing of in-water, noise-producing activities would be planned to minimize disturbances to marine life, and other best practices would be implemented to avoid impacts on estuarine and aquatic fauna, managed fisheries, and EFH to the extent practicable. Therefore, the reinforced rock jetty, beach reclamation, and marsh boardwalk would result in localized, short-term, minor adverse impacts on aquatic fauna, local fisheries and adverse. Long-term impacts on EFH would not occur.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

Impacts on marine and estuarine fauna, EFH, and managed fish species as a result of implementing Alternative B would be similar to those described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. In-water work associated with the boat dock/fishing pier would consist of driving wooden piles into the estuarine marsh sediments and constructing over-water decking over portions of the proposed 8-foot-wide, 300-foot-long boat dock/fishing pier, which would result in temporary disturbance and an increase in turbidity in the surrounding marsh environment, thereby affecting aquatic species and habitat. The boat dock/fishing pier would permanently replace existing habitat in the shoreline area and inland estuarine marsh where in-water infrastructure is proposed. Increased human activities (e.g., shore-based fishing, litter) during construction and operations could disturb and degrade nearby shoreline and open-water areas. Although the construction of the boat dock/fishing pier would affect habitat in a localized area, the footprint is small (approximately 0.1 acres), and temporary disturbances are expected to be limited in scope and duration. Temporarily disturbed aquatic fauna would likely find refuge in plentiful suitable habitats nearby.

Potential adverse impacts to estuarine and aquatic fauna, managed fisheries, and EFH would be avoided or minimized to the extent practicable during design and construction. Noise-producing activities would be planned to minimize disturbances to marine life. When adverse impacts cannot be avoided, best practices and conservation measures would minimize the magnitude and duration of impacts to aquatic fauna, EFH, and managed species, as determined necessary by the LA TIG. Impacts to jurisdictional wetlands and waters would be mitigated through compensatory mitigation, which would be determined in coordination with the appropriate permitting agencies, per the Coastal Use Permit, after one full growing season following the completion of permitted activities. The reinforced rock jetty, beach reclamation, and marsh boardwalk would result in localized, short-term, minor adverse impacts on aquatic fauna, local fisheries. Long-term impacts on EFH would not occur.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

The overall disturbance area (approximately 18.5 acres) and magnitude of potential adverse impacts on marine and estuarine fauna, EFH, and managed fish species under Alternative C would be the same as Alternative B. Mobile bathhouse construction would occur on lands already disturbed by RV campground construction, so there would be no measurable difference in effects on these resources from the exclusion of the mobile bathhouses. Therefore, Alternative C would result in localized, short-term, minor adverse impacts on aquatic fauna, local fisheries. Adverse, long-term impacts on EFH would not occur.

4.3.5 Invasive Species

AFFECTED ENVIRONMENT

The affected environment for invasive species described in Section 4.2.2.5 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to invasive species present in the analysis area evaluated in the RP/EA #4 (LA TIG 2018b).

In Louisiana, as in most parts of the United States, invasive species are present and ground-disturbing activities such as construction can provide a pathway for invasive species to move into an area. In both aquatic and terrestrial environments, invasive species pose environmental threats, often displacing native species. Invasive aquatic species include lionfish (*Pterois*), orange cup coral (*Tubastraea coccinea*), Asian tiger shrimp (*Penaeus monodon*), and green mussel (*Perna canaliculus*). Invasive terrestrial species includes plants, such as Chinese tallow tree (*Triadica sebifera*) and cogon grass (*Imperata cylindrica*), as well as animals, such as nutria (*Myocastor coypus*) and wild boar (*Sus scrofa*) (DWH Trustees 2016a: Section 3.7.4). A comprehensive list of invasive species in the State of Louisiana can be found in the Louisiana Wildlife Action Plan (Holcomb et al. 2015).

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The invasive species environmental consequences analysis completed in Section 4.6.13.2.5 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. The RP/EA #4 (LA TIG 2018b) concluded Alternative A could have a minor, long-term adverse impacts to the surrounding environment from ground disturbance during construction activities,

which could lead to the increased risk of the spread of invasive species over a prolonged period of time, extending beyond construction activities.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

Impacts on the surrounding environment from invasive species as a result of implementing Alternative B would be similar to those described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. Construction of the RV campsites and mobile bathhouses would result in an additional 4.3 acres of ground disturbance. Ground-disturbing activities, particularly clearing of existing established vegetation, could increase the risk for the spread of invasive plant species in nearby upland and wetland areas over the long term. The LA TIG would be responsible for controlling the spread of invasive species by following the LA TIG's existing management policies or guidelines, as appropriate. If the LA TIG does not have an existing policy for the management of invasive species, they could elect to implement best practices in the PDARP/PEIS (DWH Trustees 2016a: Section 6, Appendix A). As a result, construction activities would result in localized, minor, long-term adverse impacts to the surrounding environment.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

The overall disturbance area (approximately 18.5 acres) and magnitude of potential adverse impacts from invasive species under Alternative C would be the same as Alternative B. Mobile bathhouse construction would occur on lands already disturbed by RV campground construction, so there would be no measurable difference in effects on these resources from the exclusion of the mobile bathhouses. As a result, construction activities would result in localized, minor, long-term adverse impacts to the surrounding environment due to the increased risks of the spread of invasive species over the long term.

4.4 Socioeconomic Environment

4.4.1 Socioeconomics and Environmental Justice

AFFECTED ENVIRONMENT

The analysis of socioeconomics and environmental justice focuses on existing community characteristics that are relevant for evaluating the alternatives and is based on the same set of community characteristics described in Section 4.2.3.1 of the RP/EA #4 (LA TIG 2018b). These community characteristics consist of demographics (including minority and low-income populations, or populations protected by environmental justice), employment, income/poverty status, and industrial trends within the analysis area. These community characteristics data are compared to state-level data for context and to determine if minority and low-income populations in the analysis area would be disproportionately affected by the Cypremort Improvements Project modification.

The socioeconomics and environmental justice analysis area for Alternatives A, B, and C remains the same as the analysis area described for the original Cypremort Improvements Project in Section 4.2.3.1 of the RP/EA #4 (i.e., Iberia and St. Mary Parishes). Since publication of the RP/EA #4, updated socioeconomic data, as presented in Table 4-2, have become available and are summarized below.

The proportion of minority residents in the analysis area (35.7%) and the percentage of the population with less than a high school degree (13.7%) is less than the state of Louisiana and more than the country. The population under the age of 5 (7.1%) is greater than the state and the country. The population over the age of 65 (14.2%) and median age (37.0) is similar to the state and less than the country as a whole. Median household income in the analysis area is 8.8% less than the state of Louisiana and 34.3% less than the country. The population living below the poverty level (19.6%) is similar to the state and greater than the country.

Table 4-2. Demographic, Economic, and Social Data for the Cypremort Improvements Project Modification

Description	Iberia Parish	St. Mary Parish	Analysis area	Louisiana	United States
Total Population	73,346	52,578	125,924	4,663,461	321,004,407
Total Minority Population*	35.8%	35.6%	35.7%	38.1%	27.8%
Population Under the Age of 5	7.3%	6.9%	7.1%	6.7%	6.2%
Population 65 and Older	13.7%	14.9%	14.2%	14.1%	14.9%
Median Age	36.0	38.0	37.0	36.4	37.8
Median household income†	$44,504	$41,345	$42,925	$46,710	$57,652
Population below Poverty Level	20.4%	19.5%	20.0%	19.6%	14.6%
Less than High School Graduate (Population 25 Years and Over)	13.8%	13.5%	13.7%	15.7%	12.7%

* Minority populations comprise non-white populations, including Black or African American, American Indiana and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, some other race, and populations of multiple non-white races, as described by U.S. Census Bureau (2017a).

† 2017 inflation-adjusted dollars.

Sources: U.S. Census Bureau (2017a, 2017b, 2017c).

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The socioeconomic and environmental justice environmental consequences analysis completed in Section 4.6.13.3.1 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. However, updated socioeconomic data are available, resulting in changes to the proportions of minority and low-income populations. The following analyses of socioeconomic and environmental justice impacts under Alternatives A, B, and C are based on the most recent community characteristic information available (U.S. Census Bureau 2017a, 2017b, 2017c).

Due to the small scale of the Cypremort Improvements Project modification, only a limited number of construction workers would be required to construct the project, and existing park employees would be responsible for ongoing operations and maintenance. As a result, population size, local income, and other socioeconomic variables would not change. Therefore, Alternative A would not impact socioeconomics.

Per Executive Order (EO) 12898, for environmental justice to be a concern, the alternative would have a "disproportionately high and adverse" effect on a minority or low-income population. Minority populations represent (35.7%) of the analysis area population, which is comparable to the state of Louisiana (38.1%). Similarly, low-income populations (percent of the population below the poverty level)

within the analysis area (20.0%) are comparable to the overall percentage of low-income populations of the state (19.6%). As a result, the analysis area would not be disproportionately more minority or low-income than compared to the state. Therefore, Alternative A would not have a disproportionally adverse effect to these communities and, in fact, could provide a net benefit to nearby communities by providing temporary jobs during construction and constructing permanent improvements to recreational facilities and opportunities.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The socioeconomic and environmental justice environmental consequences analysis for Alternative B would be the same as described for Alternative A, because the socioeconomic conditions and the analysis area under Alternative B, which includes additional components (RV campground and mobile bathhouses), would be the same. An additional employee would be hired using funds from existing and new camping and use fees to support ongoing operations and maintenance of the RV campground; however, this would not result in a measurable change to the local population, income, or other socioeconomic variables. Therefore, there would not be an impact on socioeconomics. Alternative B would not have a disproportionally adverse effect to these communities and, in fact, could provide a net benefit to nearby communities by providing temporary jobs during construction and constructing permanent improvements to recreational facilities and opportunities.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

The socioeconomic and environmental justice environmental consequences analysis for Alternative C would be the same as described for Alternative B, because the socioeconomic conditions and the analysis area under Alternative C, which includes additional components (RV campground), would be the same. Therefore, there would not be an impact on socioeconomics. Alternative C would not have a disproportionally adverse effect to these communities and, in fact, could provide a net benefit to nearby communities by providing temporary jobs during construction and constructing permanent improvements to recreational facilities and opportunities.

4.4.2 Cultural Resources

AFFECTED ENVIRONMENT

The cultural resources affected environment is described in Section 4.2.3.4 of the RP/EA #4 (LA TIG 2018b). There have been no changes to the cultural resources considered within the analysis area analyzed in the RP/EA #4 (LA TIG 2018b).

NEPA recognizes that a unique characteristic of an environment is its relation to historic or cultural resources and requires agency officials to consider the degree that an action might "adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places" (NRHP) (40 CFR 1508.27 [b][3] and 40 CFR 1508.27 [b][8]). However, under NEPA, no definition is provided for "cultural resources." The NRHP, which was established under the National Historic Preservation Act of 1966, as amended (NHPA) (54 USC 3001 et seq.), identifies historic properties based on their relationship to significant historic events or individuals, important stylistic or engineering trends, or in their potential to provide information about the local, regional, or national past

(36 CFR 60[a-d]). Historic properties may include archaeological sites, historic structures, historic districts, landscapes, battlefields, or shipwrecks. Also included are Traditional Cultural Properties, which may be defined as locations that are eligible for inclusion in the NRHP due to their association with practices or beliefs of a modern community that are tied to a community's sense of history, place, or identity (Parker and King 1998).

Under Section 106 of the NHPA, agencies are required to make an attempt to identify, in coordination with other interested parties including State Historic Preservation Offices (SHPOs) and Native American tribal groups, whether historic properties are present within the area of effect of an undertaking and whether they would be significantly impacted by that undertaking. Projects that are directed, overseen, funded, partially funded or permitted by a federal agency are considered undertakings. The NEPA process may take the place of a NHPA Section 106 review, as long as the processes are substantially similar and involve the same parties (36 CFR 800.8). Significant impacts are those that affect any of the characteristics of the historic property (e.g., its physical integrity, setting, materials, or location) such that the historic property is no longer able to convey its historic significance. For construction projects, significant impacts most often include the physical destruction of the historic property, but other impacts, such as the introduction of incongruous visual or auditory impacts, should also be considered.

When humans first arrived in North America, the coastline lay far offshore of its current location, due to the extraordinary amount of water locked in the glaciers that capped the continent. At the end of the last glaciation, sea levels rose, but were met by the growing power of the Mississippi River, which carried tons of silt down to the Gulf of Mexico, weighing down earlier deltas, creating new lands in former swamps, raising levees and eroding new channels. Humans have occupied that shifting space on the edge of sea, swamp, delta, and stream for the last 11,500 years.

An archaeologist meeting the Secretary of the Interior's Professional Qualification Standards used the Louisiana Division of Archaeology's Louisiana Cultural Resources Map, a limited-access, online database, to conduct an archaeological records review of the immediate proposed footprint of the improvements and of Alternative B. No cultural resources surveys have been conducted in any portion of the park, and no cultural resources have been identified within the park. Six known obstruction points have been identified in the waters within a 1-mile radius of the proposed improvements, suggesting a potential for submerged cultural resources. Despite the fact that the park was not designated until 2005, according to USGS topographic maps, the area was built up as "Cypremort Point Beach" prior to 1968. At that time, it appears that fill was imported to raise the area above the natural marsh, and a canal was constructed along the marsh side of the park. Due to the age of the improvements, some of the existing structures at the park could be old enough to qualify as historic resources.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The cultural resources environmental consequences analysis completed in Section 4.6.13.3.4 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A.

Section 4.6.13.3.4 of the RP/EA #4 (LA TIG 2018b) concluded there would be no known short- or long-term impacts on cultural resources because Alternative A would be implemented in accordance with all

applicable laws and regulations concerning the protection of cultural and historic resources. Cultural and historic resources would be considered when preparing site-specific restoration measures and management actions. Where there is a likelihood of disturbance of cultural resources, cultural resources managers would conduct appropriate surveys to assess the methods and location of restoration and management actions. Restoration measures and management actions would be designed to avoid cultural resources to the extent practicable.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The cultural resources consequences analysis for Alternative B would be the same as described under Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components. However, Alternative B would require additional ground-disturbing activities for construction of the RV campground and sewer, water, and electrical tie-ins, resulting in an overall disturbance area of approximately 18.5 acres.

The construction of the RV campground, boat dock/fishing pier along the marsh-side canal, parking lot improvements, and the installation of mobile bathhouses would likely be within disturbed land and commensurate with existing impacts and would not likely require cultural resources survey. Alternative B would be implemented in accordance with all applicable laws and regulations concerning the protection of cultural and historic resources. Cultural and historic resources would be considered when preparing site-specific restoration measures and management actions. As such, there would be no known short- or long-term impacts on cultural resources.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Impacts to cultural resources from construction, operations, and maintenance activities under Alternative C would be the same as those described under Alternative B, because there would be no measurable difference between impacts generated with or without the presence of mobile bathhouses.

Alternative C would be implemented in accordance with all applicable laws and regulations concerning the protection of cultural and historic resources. Cultural and historic resources would be considered when preparing site-specific restoration measures and management actions. As such, there would be no known short- or long-term impacts on cultural resources.

4.4.3 Infrastructure

AFFECTED ENVIRONMENT

The infrastructure affected environment described in Section 4.6.3.3 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. Since the RP/EA #4 (LA TIG 2018b), the breakwater system was recently replaced with a new system of rock groins to provide shoreline erosion protection. Otherwise there have been no changes to infrastructure resources within the analysis area analyzed in the RP/EA #4 (LA TIG 2018b).

Cypremort Point State Park is located on 306 Beach Lane, a rural road in St. Mary's Parish, less than 1 mile from a public boat launch. Beach Lane connects near the end of LA-319 a rural minor collector road (Louisiana Department of Transportation and Development 2020). Quintana Canal runs parallel to

Beach Lane before it intersects LA 319. Cypremort Point State Park contains a manmade beach east of Vermilion Bay and south of Shark Bayou. Vermillion Bay is a commercially navigable waterway. The Cypremort Point State Park is one of the few places on the Louisiana Gulf Coast that can be accessed by road. Cypremort Point State Park contains a 0.5-mile-long man-made beach, six cabins with boat slips, two pavilions and a picnic area, a sailboat launch, restrooms, and a park office (see Figure 2-1). Cypremort Point State Park operates on its own sewer system and water well.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The infrastructure environmental consequences analysis completed in Section 4.6.13.3.3 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A.

During construction of Alternative A, there could be temporary increases in local road traffic due to the movement of construction vehicles and reduced access to the park and from the additional construction traffic. However, this construction activity would be temporary and not anticipated to increase traffic volume substantially over existing conditions. Alternative A would not affect any highways, other major transportation networks, or utility infrastructure. Section 4.1.2.7 describes best practices that would be established during project planning and implementation by the LA TIG to minimize adverse impacts to infrastructure through development and implementation of a traffic control plan; use of impervious materials as feasible; implementation of erosion and sedimentation measures and controls; and revegetation of disturbed areas. As a result, impacts on infrastructure would be minor, adverse and short term.

Upon operation, Alternative A would provide a long-term, beneficial impact to infrastructure associated with recreational use by repairing existing roads and parking areas within the Cypremort Point State Park, building a new marsh boardwalk and trail, and replacing the park's destroyed fishing pier.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The infrastructure environmental consequences analysis for Alternative B would be the same as described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking components. Alternative B could require additional construction activity to support the RV campground, mobile bathhouses, and boat dock/fishing pier construction, but this construction activity would be temporary and not anticipated to increase traffic volume substantially over existing conditions. Best practices from the RP EA #4 would also be employed to minimize any adverse impacts to infrastructure. As a result, impacts on infrastructure from construction would be minor, adverse and short term.

Upon operation, Alternative B would improve existing infrastructure associated with recreational use by constructing an RV campground; mobile bathhouses; boat dock/fishing pier; and water, sewer, and electrical tie-ins from the RV campground and mobile bathhouses to the existing onsite water well, sewer, and electric systems. The RV campground would utilize the park's current waste treatment, water, and electric systems, but would require installing tie-ins to sewer, water, and electrical services from the RV campground to the park's existing onsite water well and sewer system. A limestone-surfaced utility area would be constructed adjacent to the pull-in sites for RVs with water, sewer, and electrical service hook

ups. Any upgrades necessary to the park's existing onsite water well, sewer, or electric system would be completed in conjunction with construction of utility tie-ins and would not result in additional infrastructure or conflicts with additional or new infrastructure. Because the mobile bathhouses would be premanufactured and delivered to the RV campground, there would not be additional adverse impacts to infrastructure from their construction. The mobile bathhouses would not require construction of additional infrastructure, because there are no plans for new water or wastewater treatments to accommodate the RV campground or mobile bathhouses. The existing wastewater treatment plant is a 15,000-gallons-per-day aerated active sludge treatment package plant that would have the capacity to accommodate the new RV campground. Additionally, the boat dock/fishing pier would provide water access for campers. These elements of Alternative B would result in long-term beneficial impacts to the park's infrastructure. Alternative B could increase recreational use of the park from the new 30 RV campsites; however, traffic on nearby roads from increased visitation would be negligible.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Impacts on infrastructure as a result of implementing Alternative C would be similar to those described for Alternative B, because there would be no measurable difference between impacts generated with or without the presence of the mobile bathhouses.

4.4.4 Land Use and Agriculture

AFFECTED ENVIRONMENT

The land use and agriculture affected environment as described in Section 4.2.3.5 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to land use or agricultural resources present within the resource study are analyzed in the RP/EA #4 (LA TIG 2018b).

Cypremort Point State Park is located in St. Mary and Iberia Parishes. The State of Louisiana acquired 40 acres of land in 1970 and in 2004 entered a new lease for an additional 330 acres, effective from June 1, 2008 to June 31, 2058 (a 50-year term). The current lease on Cypremort Point State Park grants the Louisiana Office of State Parks the right to renew the lease for an additional 49 years. Cypremort Point State Park was designated in 2005 and facilities are managed by the Louisiana Office of State Parks. There is no park plan available for Cypremort Point State Park and the State of Louisiana does not have an active state parks master plan, with the most recent being the Louisiana State Parks Master Plan 1997–2012. There is a residential community along LA-319 in Cypremort Point, beyond the analysis area. The analysis area is located within St. Mary and Iberia parishes, both of which do not have approved active local coastal programs. There are no agricultural land uses in the analysis area.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The land use and agriculture environmental consequences analysis completed in Section 4.6.13.3.5 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. During construction of Alternative A there could be temporary, partial closures during road, parking

lot, and sidewalk repairs. However, these closures would be staged to the extent possible and would not reduce or prevent access to the park. Alternative A would maintain current land use of Cypremort Point State Park as a state park. Therefore, Alternative A is consistent with existing land use in the area and would not adversely impact current land use. No agricultural lands are present within the project area; therefore, there would be no impacts to agricultural lands.

The current lease on Cypremort Point State Park grants the Louisiana Office of State Parks the right to renew the lease for an additional 49 years, which would extend beyond the anticipated life of Alternative A; therefore, no change in ownership could occur during operation.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The land use and agriculture environmental consequences analysis for Alternative B would be the same as described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking components.

Under Alternative B, proposed new facilities (i.e., the RV campground; mobile bathhouses; sewer, water, and electrical tie-ins; and boat dock/fishing pier), would result in surface disturbance of 18.5 acres. These facilities would be constructed in an unused area of the park and would not require closures that would reduce or restrict recreation. In addition, the RV campground; mobile bathhouses; sewer, water, and electrical tie-ins; and boat dock/fishing pier would be consistent with the existing recreational land use in the analysis area. As a result, there would be no adverse impact to land use. These components of Alternative B would result in long-term beneficial impacts to land use as they would improve the use and functionality of Cypremort Point State Park. No agricultural lands are present within the project area; therefore, there would be no impacts to agricultural lands.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Impacts on land use and agriculture as a result of implementing Alternative C would be similar to those described for Alternative B. Alternative C would be consistent with the existing land use in the analysis area and would result in long-term beneficial impact to land use by improving the use and functionality of Cypremort Point State Park, although benefits would be reduced due to the lack of mobile bathhouses. No agricultural lands are present within the project area; therefore, there would be no known impacts to agricultural lands from implementation of Alternative C.

4.4.5 Tourism and Recreational Use, including Recreational Fishing and Hunting

AFFECTED ENVIRONMENT

The tourism and recreational use affected environment described in Section 4.2.3.2 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to tourism or recreational use resources present within the analysis area analyzed in the RP/EA #4 (LA TIG 2018b).

Cypremort Point State Park provides multiple recreational opportunities for both day-use and overnight visitors—including picnicking, fishing, crabbing, water skiing, windsurfing, sailing, camping, and bird and wildlife viewing—through its 0.5-mile-long man-made beach, six cabins with boat slips, two pavilions and a picnic area, sailboat launch, and convenient access to the Cypremort Point boat ramp located less than 1 mile from the entrance to Cypremort Point State Park. The beach at Cypremort Point State Park is a popular swimming spot. The beach provides recreational access for swimming, sunbathing, paddle boards, and other water-based activities, as well as habitat for some shorebirds. The Office of State Parks offers a "Campground Host" program where visitors may camp free of charge for an allotted amount of time and in return pick up trash, clean, and help with repair and maintenance in State Parks. Visitation for Cypremort Point State Park has ranged from 32,170 visitors in Fiscal Year (FY) 2017 to 50,597 visitors in FY 2015. Visitation in FY 2019 was 35,761. As stated in Section 3.3.13 of the RP/EA #4 (LA TIG 2018b), recreational opportunities have been diminished due to deteriorating conditions at the park. Erosion has degraded the beach habitat and poses a threat the existing nearby recreational structures (i.e., pavilions and a restroom facility). The park has an existing 100-foot-long fishing pier that has been damaged from storms to the point that it is unsafe to use, and as a result, the park's fishing opportunities have diminished (LA TIG 2018b).

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The tourism and recreational use, including recreational fishing and hunting, environmental consequences analysis completed in Section 4.6.13.3.2 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. Construction of Alternative A could result in temporary, localized adverse impacts to recreational experiences, such as fishing, from interruptions to recreational activities, noise from construction equipment, visual interference or obstruction from the presence of construction equipment onsite. Furthermore, there could be temporary, partial closures to the park during road, parking lot, and sidewalk repairs that would result in reduced access and minor short-term adverse impacts to tourism and recreational uses.

Upon operation, Alternative A would result in long-term beneficial impacts to tourism and recreational uses through improved public access by car, boat, and foot to the recreational resources. The proposed reinforced rock jetty, and beach reclamation, as well as the repairs to roads and parking areas, would allow anglers, wildlife viewers, and others to better reach the Gulf of Mexico and other inland waters connecting to the Gulf of Mexico. Furthermore, the rock jetty improvements would provide long-term protection to existing park infrastructure. Alternative A would also provide long-term beneficial impacts to tourism and recreational use by improving and expanding the existing erosion protection down most of the length of Beach Lane along Quintana Canal, which is needed to prevent compromising the entry to Cypremort Point State Park. Overall, Alternative A would serve to enhance the visitor experience over the long-term, providing benefits to recreational users and other users.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The tourism and recreational use, including recreational fishing and hunting environmental consequences analysis for Alternative B would be the same as described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking components. Construction of the RV

campground and mobile bathhouses associated with Alternative B could result in additional short-term, minor adverse impacts to recreational experiences during construction due to interruptions to recreational activities, noise from construction equipment, visual interference or obstruction from the presence of construction equipment onsite. No park closures would be associated with the construction of the RV campground; mobile bathhouses; sewer, water, and electrical tie-ins; or boat dock/fishing pier, because these components would be constructed in an unused area of the park.

Upon operation, Alternative B would improve access to recreational resources at Cypremort Point State for anglers, wildlife viewers, and others. Construction of RV campground, mobile bathhouses, boat dock/fishing pier would provide new recreational opportunities for users and enhance recreational use and experience by increasing capacity and usage for recreational users. The 30 new RV campsites could accommodate an average of 120 additional overnight recreational users (assuming four people per campsite) at full capacity, which would represent a negligible increase (0.3%) in park visitors at any one time compared to FY 2019 Cypremort Point State Park visitor data. The mobile bathhouse would provide toilets, showers, and laundry for visitors; these additional amenities could result in an enhanced visitor experience and create long-term beneficial impacts to recreational users. Overall, the alternative would serve to enhance the visitor experience over the long-term, providing benefits to recreational users and other users.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Impacts on tourism and recreation use, including recreational fishing and hunting as a result of implementation of Alternative C would be similar to those described for Alternative B. Alternative C could result in the same short-term, minor adverse impacts to recreational experiences during construction. Alternative C would likely result in similar increases in recreational capacity and users as Alternative B during operation. However, the lack of mobile bathhouses could contribute to a diminished recreational experience and enjoyment for some users due to the lack of amenities associated with the mobile bathhouses (toilets, showers, laundry), as compared to Alternative B.

4.4.6 Aesthetics and Visual Resources

AFFECTED ENVIRONMENT

The aesthetics and visual resources affected environment as described in Section 4.2.4 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to aesthetics or visual resources present within the analysis area analyzed in the RP/EA #4 (LA TIG 2018b), with the exception of the replacement of existing breakwater system with a new system of 2,100-foot-long rock groins to provide shoreline erosion protection and improve the quality and appeal of the beach area.

Visual resources are the visible, physical features of a landscape that have an aesthetic value to viewers from viewpoints, such as residences, recreational areas, rivers, and highways. Physical features that comprise the visible landscape include land, water, vegetation, and human-made features (i.e., roadways, buildings, and structures), all of which contribute to the overall landscape and visual character of an area. In general terms, the landscape and visual character are like mental snapshots of a place and embody the defining and most memorable site features.

The visual characteristics of Cypremort Point State Park includes the Gulf and coastal beach, rock jetties, canals, boat launches, interior access roads, parking lots, campgrounds, cabins with boat slips, trails, sailboat launch, boardwalks, pavilions, picnic area, restroom facilities, and other park support buildings. The visual characteristics immediately outside of Cypremort Point State Park includes inland marsh and estuaries, canals, passes, and limited human-made structures. Overall the viewshed can be characterized as uninhabited natural with limited development.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The aesthetics and visual resources environmental consequences analysis completed in Section 4.6.13.4 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. During construction, impacts on visual resources from Alternative A would be minor, short-term, and adverse, due to the presence of construction personnel, equipment (e.g., fences, stockpiles), vehicles, and unfinished structures visible to the public and recreational users. Construction activities could detract from the overall visual environment at the site, but these activities would be temporary and cease when construction ends. Even though existing viewsheds would be temporarily affected, these adverse impacts would not dominate the views of the shoreline or within the park or detract from current user activities or experiences, as the components of Alternative A's footprint would only consist of approximately 14.2 acres within the 185-acre park.

Upon operation, Alternative A would change the current visual character of the coastal area by restoring the degraded beach area and installing a new marsh boardwalk; however, these elements would enhance the park aesthetics and improve access to existing visual resources. The other components of Alternative A, which primarily consists of access roads and parking lots, would not result in a change in viewshed or create an adverse visual impact because these features would not be out of character with previous site conditions.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The aesthetic and visual resources environmental consequences analysis for Alternative B would be the same as described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking components. During construction, impacts on visual resources from Alternative B would be adverse, minor, and short-term due to the presence of construction personnel, equipment (e.g., fences, stockpiles), vehicles, and unfinished structures visible to the public from the construction of the RV campground and placement of the mobile bathhouses. Even though existing viewsheds would be temporarily affected, these adverse impacts would not dominate the view or detract from current user activities or experiences, as the construction footprint of Alternative B would only consist of approximately 18.5 acres within the entire 185-acre park. Adverse impacts would occur only throughout construction, and all project components would be consistent with previous site conditions and use.

Upon operation, Alternative B could have a minor adverse or beneficial long-term impact to the aesthetics of the Cypremort Point State Park, depending on the preference of the viewer. Recreationists seeking more developed experiences could find the additional recreational infrastructure (the RV campground, mobile bathhouses, and boat dock/fishing pier) to be visually appealing, whereas other viewers and users

at the park could prefer a natural landscape with less development and manmade structures. The presence of these new features, however, would not be out of character with the existing landscape and visual character of Cypremort Point State Park.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Impacts on aesthetics and visual resources as a result of implementation of Alternative C would be similar to those described for Alternative B. During construction, impacts on visual resources from Alternative C would be adverse, minor, and short-term due to the presence of construction personnel, equipment (e.g., fences, stockpiles), vehicles, and unfinished structures visible to the public. The lack of mobile bathhouses associated with Alternative C would not result in a significant change in adverse visual impacts from those associated with Alternative B due it its consistency with the existing visual landscape.

4.4.7 Public Health and Safety, Including Flood and Shoreline Protection

AFFECTED ENVIRONMENT

The public health and safety, including flood and shoreline protection, affected environment described in Section 4.2.5 of the RP/EA #4 (LA TIG 2018b) is applicable to Alternatives A, B, and C. At the time of this analysis, there have been no changes to public health or safety resources, including flood and shoreline protection, present within the analysis area analyzed in the RP/EA #4 (LA TIG 2018b), with one exception. In 2019, the existing breakwater system was replaced with a new system of 2,100-foot-long rock groins to provide shoreline erosion protection.

Cypremort Point State Park is located in an area that is constantly exposed to erosional forces and storms, which have resulted in degraded conditions in several key areas of the park. Since the creation of the 0.5-mile-long man-made beach, storms and continuous erosional forces have significantly reduced the size and appeal of the exposed beach area, thereby reducing recreational opportunities and use. In addition, the clay sub-soil underneath the beach has been exposed and has also begun to erode. This erosion has reached a historic level and has undercut two beach shade pavilions, which are closed as a result of the erosion. Similarly, the south side of Beach Lane has experienced constant erosion along Quintana Canal from storms and increased boat traffic from the Cypremort Point boat ramp at the head of the canal. This was exacerbated by inadequate erosion protection along the north bank and could cause future safety issues for the park's only access route. In addition, the park's existing 100-foot-long fishing pier, which is located in the southwest portion of the park where Quintana Canal opens into Vermilion Bay (see Figure 2-1), has been damaged from storms to the point that it is unsafe to use, significantly diminishing pier-based fishing opportunities at the park.

ENVIRONMENTAL CONSEQUENCES

Alternative A: Restoration and Recreation Improvements

The public health and safety, including flood and shoreline protection, environmental consequences analysis completed in Section 4.6.13.5 of the RP/EA #4 (LA TIG 2018b) for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project is applicable to Alternative A. Short-term minor adverse impacts to

public health and safety could occur during construction of Alternative A from the use of heavy equipment, but no long-term adverse impacts to public health and safety would occur. Construction contractors would adhere to Occupational Safety and Health Administration (OSHA) safety standards and best practices to minimize risk of injury during construction.

Construction of a marsh boardwalk, reinforcement of the existing rock jetty, beach reclamation, and repairs to existing roads and parking areas as a part of Alternative A would result in long-term beneficial impacts to flood and shoreline protection by increasing coastal resiliency and reducing beach erosion. The proposed marsh boardwalk was developed to replace the existing fishing pier to address resiliency concerns. Reinforcement of the existing inadequate rock jetty would help stabilize the sides of Quintana Canal and Beach Lane to reduce erosion. The existing roads and parking areas would be lifted by 2 inches to address current flooding issues and damages from previous floods. The resiliency of the proposed structures to sustain sea-level rise, hurricanes, and storm surges would be further determined during final design. The following measures from the RP EA #4 would be employed to further minimize adverse, long-term impacts to this environmental resource:

- The use of impervious materials would be avoided as much as feasible.
- Erosion and sedimentation control measures, including minimizing the amount of clearing and exposed soil, would be implemented and maintained.
- Sedimentation controls would be installed prior to the start of construction and maintained throughout the construction period.
- Disturbed areas would be revegetated with native species as soon as possible after work has been completed.

Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

The public health and safety, including flood and shoreline protection, environmental consequences analysis for Alternative B would be the same as described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking components. Electricity to be provided to the RV campsites and mobile bathhouses would be in a covered and grounded box that is mounted to a post or in a manufactured assembly that includes a ground fault interrupter. Electrical facilities at each campsite would be sized to comply with National Electrical Code (NEC): Article 551-Recreational Vehicles and Recreational Vehicle Parks: Part VI, 551.71 “Type Receptacles Provided.” Short-term, minor, adverse impacts to public health and safety could occur during construction of additional infrastructure (i.e., RV campground; mobile bathhouses; sewer, water, and electrical tie-ins; and boat dock/fishing pier) under Alternative B, due to heavy equipment usage, such as a bulldozer, grader, and/or backhoe. However, construction contractors would adhere to OSHA safety standards and best practices to minimize risk of injury during construction.

No short-term adverse impacts would occur to flood and shoreline protection during construction of the RV campground and mobile bathhouses. The campsite area would be elevated approximately 1.5 feet, or approximately 18 inches above the existing grade, to match the elevation of adjacent roads. In the event of a storm, mobile bathhouses would be disconnected from water, sewer, and electrical tie ins and moved to higher ground to avoid flooding and contamination of stormwater. Similar to Alternative A, resiliency of the proposed structures to sustain sea-level rise, hurricanes, and storm surges would be determined

during final design. Overall these improvements would provide a long-term beneficial impact to flood and shoreline protection by increasing coastal resiliency and reducing beach erosion.

Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Impacts on public health and safety as a result of implementation of Alternative C would be similar to those described for Alternative B. Short-term, minor adverse impacts to public health and safety could occur during construction from the use of heavy equipment but would not occur in the long term. The elimination of mobile bathhouses under this alternative would not result in different impacts to public health and safety than discussed under Alternative B.

No short-term adverse impacts to flood and shoreline protection during construction of Alternative C would occur, and Alternative C would result in the same long-term beneficial impacts to flood and shoreline protection as described under Alternative B.

4.5 Cumulative Impacts

Section 5.2.6 of the RP/EA #4 (LA TIG 2018b) analyzed potential cumulative impacts of the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking lot components under the original Cypremort Improvements Project. The RP/EA #4 (LA TIG 2018b) identified the following resource areas as those potentially impacted from implementation of these components and therefore warranting analysis for cumulative impacts:

- Geology and substrates
- Hydrology and water quality
- Air quality
- Noise
- Terrestrial, coastal-nearshore and marine habitats
- Protected species
- Terrestrial wildlife, including migratory birds
- Marine and estuarine fauna, EFH, and managed fish species
- Invasive species
- Infrastructure
- Land use and agricultural resources
- Tourism and recreational use, including recreational fishing and hunting
- Aesthetics and visual resources
- Public health and safety, including flood and shoreline protection

The overall project and disturbance areas for the original Cypremort Improvements Project, excluding the offshore area to accommodate the breakwater system that has already been constructed using non-NRDA funds, remains the same as Alternatives A, B, and C. The types of other projects and related potential impacts on resources that were analyzed as part of the cumulative impact analysis would also remain the

same for Alternatives A, B, and C. Since publication of the RP/EA #4 (LA TIG 2018b), the breakwater system constructed by the park is the only new project that has been implemented within the cumulative analysis area for Alternatives A, B, and C (within 1 mile of the analysis area) and would not contribute to widespread moderate or major impacts on the resources analyzed under Alternatives A, B, and C. As a result, the cumulative impact analysis for the original Cypremort Improvements Project would be applicable to the cumulative impact analyses for Alternatives A, B, and C, as summarized below.

4.5.1 Alternative A: Restoration and Recreation Improvements

Alternative A would result in short- or long-term minor adverse impacts and long-term beneficial impacts on resources, as described in Section 4 of this Draft Supplemental RP/EA. These adverse impacts would be reduced, minimized or avoided through best practices implemented during construction or as part of project design. Construction or operations activities under Alternative A, in combination with past, present, or reasonably foreseeable projects, could lead to short- or long-term minor adverse cumulative impacts on geology and substrates, hydrology and water quality, air quality, noise, terrestrial, coastal nearshore and marine habitats, protected species, terrestrial wildlife including migratory birds, marine and estuarine fauna, EFH and managed fish species, invasive species, infrastructure, land use, tourism and recreation including recreational fishing and hunting, aesthetics and visual resources, and public health and safety including flood and shoreline protection. Due to the size and localized nature of the Cypremort Improvements Project modification and past, present, and reasonably foreseeable projects, Alternative A is not expected to contribute substantially to short- or long-term adverse cumulative impacts. Alternative A, in conjunction with the breakwater system, could result in long-term beneficial cumulative impacts to geology, substrates, and public health and safety, including flood and shoreline protection, from a reduction in erosion and increased shoreline protection.

4.5.2 Alternative B: Expanded Restoration and Recreation Improvements with Mobile Bathhouses (Preferred)

Cumulative impacts as a result of implementing Alternative B would be similar to those described for Alternative A for the rock jetty, beach reclamation, marsh boardwalk and trail, and road and parking components, because these components would be included under Alternative B in addition to an RV campground site, mobile bathhouses, and boat dock/fishing pier. Alternative B would result in short- or long-term minor adverse impacts and long-term beneficial impacts on resources, as described in Section 4.4 of this Draft Supplemental RP/EA. These adverse impacts would be reduced through best practices implemented during construction or as part of project design. Construction, operations, or maintenance activities under Alternative B, in combination with past, present or reasonably foreseeable projects, could lead to short- or long-term minor adverse cumulative impacts on geology and substrates, hydrology and water quality, air quality, noise, terrestrial, coastal nearshore and marine habitats, protected species, terrestrial wildlife including migratory birds, marine and estuarine fauna, EFH and managed fish species, invasive species, infrastructure, land use, tourism and recreation including recreational fishing and hunting, aesthetics and visual resources, and public health and safety including flood and shoreline protection. These adverse impacts would be reduced, minimized or avoided through best practices implemented during construction or as part of project design. Due to the size and localized nature of the Cypremort Improvements Project modification and past, present, and reasonably foreseeable projects, Alternative B is not expected to contribute substantially to short- or long-term adverse cumulative impacts. Alternative B, in conjunction with the breakwater system, could result in long-term beneficial

cumulative impacts to geology, substrates, and public health and safety, including flood and shoreline protection, from a reduction in erosion and increased shoreline protection.

4.5.3 Alternative C: Expanded Restoration and Recreation Improvements without Mobile Bathhouses

Cumulative impacts as a result of implementing Alternative C would be the same as described for Alternative B, because the exclusion of the mobile bathhouses would not result in measurable differences in potential impacts. Due to the size and localized nature of the Cypremort Improvements Project modification and past, present, and reasonably foreseeable projects, Alternative C is not expected to contribute substantially to short- or long-term adverse cumulative impacts. Alternative C, in conjunction with the breakwater system, could result in long-term beneficial cumulative impacts to geology, substrates, and public health and safety, including flood and shoreline protection, from a reduction in erosion and increased shoreline protection.

4.6 Comparison of Alternatives

Based on the evaluation of environmental impacts (Table 4-3) and collateral benefits among Alternative A (Restoration and Recreation Improvements), Alternative B (Expanded Restoration and Recreation Improvements with Mobile Bathhouses), Alternative C (Expanded Restoration and Recreation Improvements without Mobile Bathhouses), and Natural Recovery/No Action Alternative, Alternative B is the preferred alternative.

Table 4-3. Alternatives Comparison for the Cypremort Point State Park Improvements Project Modifications

Resource	Natural Recovery/ No Action	Alternative A	Alternative B	Alternative C
Geology and Substrates				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	Minor adverse and beneficial	Minor adverse and beneficial	Minor adverse and beneficial
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts
Hydrology and Water Quality				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	No impact	Minor adverse	Minor adverse
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts
Air Quality				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	No impact	Minor adverse	Minor adverse

Resource	Natural Recovery/ No Action	Alternative A	Alternative B	Alternative C
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts
Noise				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	Minor adverse	Minor adverse	Minor adverse
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term cumulative impacts	No substantial contribution to short- or long-term cumulative impacts
Terrestrial, Coastal and Nearshore Habitats				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	Beneficial	Minor adverse and beneficial	Minor adverse and beneficial
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term cumulative impacts	No substantial contribution to short- or long-term cumulative impacts
Protected Species				
Short-term	No impact	Minor to moderate adverse	Minor to moderate adverse	Minor to moderate adverse
Long-term	No impact	No impact	No impact	No impact
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term cumulative impacts	No substantial contribution to short- or long-term cumulative impacts
Terrestrial Wildlife, Including Migratory Birds				
Short-term	Minor adverse	Minor adverse	Minor to moderate adverse	Minor to moderate adverse
Long-term	Beneficial	No impact	Minor adverse	Minor adverse
Cumulative	No impact	No substantial contribution to short- or long-term cumulative impacts	No substantial contribution to short- or long-term cumulative impacts	No substantial contribution to short- or long-term cumulative impacts
Marine and Estuarine Fauna, Essential Fish Habitat, and Managed Fish Species				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	No impact	No impact	No impact
Cumulative	No impact	No substantial contribution to short- or long-term cumulative impacts	No substantial contribution to short- or long-term cumulative impacts	No substantial contribution to short- or long-term cumulative impacts
Invasive Species				
Short-term	No impact	No impact	No impact	No impact
Long-term	No impact	Minor adverse	Minor adverse	Minor adverse
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts

Resource	Natural Recovery/ No Action	Alternative A	Alternative B	Alternative C
Socioeconomics and Environmental Justice				
Short-term	No impact	Beneficial; no disproportionate effects on environmental justice populations	Beneficial; no disproportionate effects on environmental justice populations	Beneficial; no disproportionate effects on environmental justice populations
Long-term	No impact	Beneficial; no disproportionate effects on environmental justice populations	Beneficial; no disproportionate effects on environmental justice populations	Beneficial; no disproportionate effects on environmental justice populations
Cumulative	No impact	No impact	No impact	No impact
Cultural Resources				
Short-term	No impact	No impact	No impact; consultation with the Louisiana SHPO to determine if any additional requirements could be necessary.	No impact; consultation with the Louisiana SHPO to determine if any additional requirements could be necessary.
Long-term	No impact	No impact	No impact; consultation with the Louisiana SHPO to determine if any additional requirements could be necessary.	No impact; consultation with the Louisiana SHPO to determine if any additional requirements could be necessary.
Cumulative	None identified	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts
Infrastructure				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	Beneficial	Beneficial	Beneficial
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts
Land Use and Agriculture				
Short-term	No impact	No impact	No impact	No impact
Long-term	No impact	No impact	Beneficial	Beneficial
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts
Tourism and Recreational Use, including Recreational Fishing and Hunting				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	Beneficial	Beneficial	Beneficial
Cumulative	No impact	Minor, long-term beneficial cumulative impacts	Minor, long-term beneficial cumulative impacts	Minor, long-term beneficial cumulative impacts
Aesthetics and Visual Resources				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse

Resource	Natural Recovery/ No Action	Alternative A	Alternative B	Alternative C
Long-term	No impact	Beneficial	Beneficial	Minor adverse or beneficial
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts
Public Health and Safety				
Short-term	No impact	Minor adverse	Minor adverse	Minor adverse
Long-term	No impact	No impact	No impact	No impact
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts
Flood and Shoreline Protection				
Short-term	No impact	No impact	No impact	No impact
Long-term	No impact	Beneficial	Beneficial	Beneficial
Cumulative	No impact	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts	No substantial contribution to short- or long-term adverse cumulative impacts; Long-term beneficial cumulative impacts

Note: Cumulative impacts are not specified for the Natural Recovery/No Action Alternative, because the analysis of the alternatives in combination with past, present and reasonably foreseeable projects represents the cumulative impact scenario for the Natural Recovery/No Action Alternative, as described in Section 5.1.5 of the RP/EA #4 (LA TIG 2018b).

All three alternatives would meet the purpose and need of the RP/EA #4 (LA TIG 2018b), which allows the LA TIG to implement restoration projects that would provide the public with additional and enhanced recreational use services in Louisiana in a manner consistent with the PDARP/PEIS (DWH Trustees 2016a). However, Alternative B provides the best opportunity to provide the public with additional and enhanced recreational use services due to the RV campground, mobile bathhouses, and boat dock/fishing pier and is summarized in detail below.

Environmental impacts of Alternative B would be short- and long-term, minor to moderate adverse impacts. Impacts to the physical environment include localized short- and long-term disturbances to geology and substrates from ground disturbance, use of heavy equipment, digging trenches, and placement of piles; localized short- and long-term changes to hydrology and water quality from ground disturbance, surficial digging, sitework, in-water work, and incidental spills; localized short- and long-term increases in emissions from construction activities and equipment; and localized short- and long-term increases in noise from construction activities and transportation and use of construction equipment and materials.

Impacts to the biological environment include localized short- and long-term impacts to aquatic habitats from erosion and sedimentation during construction ground-disturbing activities and long-term impacts on aquatic and terrestrial habitats from placement of pavement and other infrastructure associated with RV campground; localized short-term impacts to protected species and marine and estuarine species, EFH, or managed fish species construction noise and disturbance; and minor long-term impacts from construction activities leading to the potential spreading of invasive species.

Impacts to the social environment include a net benefit to communities and would not result in a disproportionate impact on minority or low-income populations. Alternative B would result in localized short-term increases in traffic from construction activities, short-term minor impacts to tourism and recreation and aesthetics and visual resources during construction. Alternative B would result in long-term beneficial impacts to socioeconomics and environmental justice, infrastructure, land use, tourism and recreation, aesthetics and visual resources, and public health and safety, including flood and shoreline protection. The addition of the RV campground, mobile bathhouses, and boat dock/fishing pier under Alternative B would increase these benefits; and the combination of Alternative B with the breakwater system would create beneficial cumulative impacts to geology and substrates, land use, aesthetics and visual resources, and public health and safety.

Based on the above analysis, the LA TIG finds that the expanded restoration and recreation improvements are consistent with OPA and support selection of the Cypremort Improvements Project modification, Alternative B, Expanded Restoration and Recreation Improvements with Mobile Bathhouses. This analysis remains subject to the results of additional consultations (e.g., NHPA Section 106 consultation) and reviews as required for compliance with all other laws (e.g., ESA, EFH, etc.), including consideration of any significant new circumstances or information presented as part of those processes.

5 COMPLIANCE WITH OTHER LAWS AND REGULATIONS

In addition to the requirements of OPA and NEPA, other laws could apply to the alternatives in this Draft Supplemental RP/EA. Currently, the LA TIG is seeking technical assistance with the appropriate regulatory agencies. Although these reviews and consultations were initially completed for the Cypremort Improvements Project analyzed and selected in the RP/EA #4 (LA TIG 2018b), project changes may necessitate additional reviews or consultations. The LA TIG would ensure all necessary compliance is complete on the project changes proposed in this Draft Supplemental RP/EA prior to implementation of the project. An updated status of compliance by statute will be provided in the Final Supplemental RP/EA.

Applicable federal and state laws or federal EOs include, but are not necessarily limited to, those listed in this section. Additional federal laws could apply to the alternatives considered in this Draft Supplemental RP/EA. Legal authorities applicable to restoration alternative development are fully described in the context of the DWH restoration planning in the PDARP/PEIS, Section 6.9, Compliance with Other Applicable Authorities, and PDARP/PEIS Appendix 6.D, Other Laws and Executive Orders, which are incorporated by reference in this section (DWH Trustees 2016a).

Federal environmental compliance responsibilities and procedures follow the DWH Trustee Council standard operating procedures (SOP) for restoration planning, which are described in Section 9.4.6 of the *Trustee Council Standard Operating Procedures for Implementation of the Natural Resource Restoration for the Deepwater Horizon (DWH) Oil Spill* (DWH Trustees 2016b). Following this SOP, the Implementing Trustees for each alternative will ensure that the status of environmental compliance (e.g., *completed* versus *in progress*) is tracked through the DWH project portal. The Implementing Trustees will keep a record of compliance documents (e.g., ESA letters, permits) and ensure that they are submitted for inclusion in the Administrative Record. The current status of environmental compliance by project can be viewed at any time on the DWH Trustee Council's website.[7]

5.1 Additional Federal Laws

Additional federal laws could apply to the preferred alternative considered in this Draft Supplemental RP/EA. Federal laws, regulations, and EOs that could be applicable include the following:

- Endangered Species Act (16 United States Code [USC] 1531 et seq.)
- Magnuson-Stevens Fishery Conservation and Management Act (16 USC 1801 et seq.)
- Marine Mammal Protection Act (16 USC 1361 et seq.)
- Coastal Zone Management Act (16 USC 1451 et seq.)
- National Historic Preservation Act (16 USC 470 et seq.)
- Coastal Zone Management Act (16 USC 1451 et seq.)
- Migratory Bird Treaty Act (16 USC 703 et seq.)
- Bald and Golden Eagle Protection Act (16 USC 668 et seq.)
- Clean Air Act (42 USC 7401 et seq.)

[7] DWH Trustee Council's website: http://www.gulfspillrestoration.noaa.gov/environmental-compliance/

- Clean Water Act (33 USC 1251 et seq.)
- Marine Protection, Research and Sanctuaries Act (16 USC 1431 et seq. and 33 USC 1401 et seq.)
- Estuary Protection Act (16 USC 1221 – 1226)
- Archaeological Resource Protection Act (16 USC 470aa – 470mm)
- Abandoned Shipwreck Act of 1987 (43 USC 2101 – 2106)
- American Indiana Religious Freedom Act (42 USC 1996)
- Antiquities Act of 1906 (54 USC 320301 – 320303 and 18 USC 1866[b])
- Archaeological and Historic Preservation Act of 1974 (16 USC 469 – 469c)
- Historic Sites Act of 1935 (54 USC 320101)
- Native American Graves and Repatriation Act (25 USC 3001 – 3013)
- Sunken Military Craft Act (10 USC 113 note)
- National Marine Sanctuaries Act (16 USC 1431 et seq.)
- Farmland Protection Policy Act (7 USC 4201 – 4209)
- Rivers and Harbors Act (33 USC 401 et seq.)
- EO 11988: Floodplain Management (augmented by EO 13690, January 30, 2015)
- EO 11990: Protection of Wetlands
- EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- EO 12962: Recreational Fisheries
- EO 13007: Indian Sacred Sites
- EO 13112: Safeguarding the Nation from the Impacts of Invasive Species
- EO 13175: Consultation and Coordination with Indian Tribal Governments
- EO 13186: Responsibilities of Federal Agencies to Protect Migratory Birds
- EO 13693: Planning for Federal Sustainability in the Next Decade

5.2 State and Local Laws

The LA TIG would ensure compliance with all applicable state and local laws and other applicable federal laws and regulations relevant to the State of Louisiana. State and local laws and regulations that could be applicable include the following:

- Archeological Finds on State Lands (Louisiana Revised Statute [RS] 41:1605)
- Coastal Wetlands Conservation and Restoration Authority (RS 49:213.1)
- Coastal Wetlands Conservation and Restoration Plan (RS 49:213.6)
- Louisiana State and Local Coastal Resources Management Act (RS 49:214.21 – 214.42)
- Louisiana Oil Spill Prevention and Response Act (RS 30:2451 et seq.)

- Management of State Lands (RS 41:1701.1 et seq.)
- Louisiana Coastal Resources Program (Louisiana Administrative Code [LAC] 43:700 et seq.)
- Louisiana Surface Water Quality Standards (LAC 33.IX, Chapter 11)
- Louisiana Archaeological Resources Law (RS 41:1601 – 1615)
- Louisiana Administrative Code (LAC Part I)
- Louisiana Unmarked Human Burial Sites Preservation Act (RS 8:671–681)
- Louisiana Historic Cemetery Preservation Act (RS 25:931–943)
- Louisiana Desecration of Graves (RS 14:101)
- Oyster Lease Relocation Program (LAC 43:I, 850-859, Subchapter B)
- Louisiana Scenic Rivers Program (RS 56:1856)

6 NEXT STEPS

Following public notice, this Draft Supplemental RP/EA will be available to the public for a 30-day comment period. The public is encouraged to review and comment on this Draft Supplemental RP/EA. The deadline for submitting written comments is specified in the public notices published in the Federal Register and Louisiana Register as well as on the NOAA Gulf Spill Restoration website. Comments provided on this Draft Supplemental RP/EA will be considered by the LA TIG. A summary of comments received on this Draft Supplemental RP/EA and the LA TIG's responses, where applicable, will be included in the Final Supplemental RP/EA.

Comments on this Draft Supplemental RP/EA can be submitted during the comment period by one of the following methods:

- **Online:** http://www.gulfspillrestoration.noaa.gov/restoration-areas/louisiana
- **By mail (hard copy), addressed to:**

  U.S. Fish and Wildlife Service
  P.O. Box 29649
  Atlanta, Georgia 30345

- **Public webinar:**

  The LA TIG will conduct a public webinar on April 28, 2020, at 12:00 p.m. Central Daylight Time to facilitate public review and comment on the Draft Supplemental RP/EA. The public webinar will include a presentation on the Draft Supplemental RP/EA. Public comments will be taken during the public webinar. The public may register for the webinar at https://attendee.gotowebinar.com/register/2110487686130281741. After registering, participants will receive a confirmation email with instructions for joining the webinar. The presentation will be posted on the web shortly after the webinar is conducted.

  Please note that personally identifiable information in submitted comments (e.g., address, telephone number, email address, etc.) could be made publicly available.

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APPENDIX A

Draft Monitoring and Adaptive Management Plan
Cypremort Point State Park Improvements Project

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1 INTRODUCTION

The State of Louisiana acquired 40 acres and established the Cypremort Point State Park in 1970. In 2004, the State of Louisiana entered a new lease for an additional 330 acres. The Cypremort Point State Park is one of the few places on the Louisiana Gulf Coast that can be accessed by road. It provides multiple recreational opportunities for both day-use and overnight visitors—including picnicking, fishing, crabbing, water skiing, windsurfing, sailing, camping, and bird and wildlife viewing—via its 0.5-mile-long human-made beach, six cabins with boat slips, two pavilions, picnic area, sailboat launch, and convenient access to the Cypremort Point boat ramp just outside of the park's entrance. However, recreational opportunities have been diminished due to the deteriorating conditions at the park.

Improvements to Cypremort Point State Park are needed in areas constantly exposed to erosional forces and storms, which have resulted in degraded conditions in several key areas of the park. Since the creation of the 0.5-mile-long human-made beach, storms and continuous erosional forces have significantly reduced the size and appeal of the exposed beach area, thereby reducing recreational opportunities and use. In addition, the clay sub-soil underneath the beach has been exposed and has also begun to erode. This erosion has reached a historic level and has undercut two beach shade pavilions that are closed as a result. Similarly, the south side of Beach Lane has experienced constant erosion along Quintana Canal from storms and increased boat traffic from the Cypremort Point boat ramp at the head of the canal. This was exacerbated by inadequate erosion protection along the north bank and could cause future safety issues for the park's only access route. In addition, the park's existing 100-foot-long fishing pier, which is located in the southwest portion of the park where Quintana Canal opens into Vermilion Bay, has been damaged from storms to the point that it is unsafe to use, significantly diminishing pier-based fishing opportunities at the park. All of these conditions have had a negative effect on recreational use of the park's facilities and threaten the long-term viability of the park's use.

In response to the decreased recreational opportunities, the Louisiana Office of State Parks is proposing the Cypremort Point State Park Improvements Project (Cypremort Improvements Project, or project), which would include:

1) reinforcing and extending the existing rock jetty along the north bank of the Quintana Canal and south side of Beach Lane at the entrance to Cypremort Point State Park to prevent further erosion on the Quintana Canal side and protect the park road and park property;
2) restoring the degraded beach area to its pre-eroded condition to support existing recreational access for swimming, sunbathing, paddle boarding, and other water-based activities, as well as shorebird habitat;
3) installing a new wooden boardwalk and trail (approximately 6 feet wide, with a total length of approximately 3,000 feet) within the park's marsh area, with seating, required toe and hand rails, and interpretive signage throughout to replace the park's fishing pier that has been damaged by storms and provide improved fishing and other shoreline-based recreational opportunities, including Americans with Disabilities Act (ADA)-compliant access where possible;
4) repairing and upgrading existing roads, parking lots (including base repairs requiring approximately 37,600 square feet of fill, a minimum 2-inch overlay, and restriping), and sidewalks damaged by repeat flooding and to provide access to the park including the beach access, cabins, pavilions, picnic area, sailboat launch, and restrooms, and preserve public access and recreational opportunities to the park's natural resources;

5) constructing an RV campground consisting of 30 new paved pull-through campsites with sewer, water, and electrical services to provide recreational infrastructure and support recreational opportunities;
6) constructing two mobile bathhouses with toilets, showers, and laundry equipment and ADA-compliant access (bathhouses would be mobile to permit movement during storm events) to support recreational use and experiences at the park;
7) installing water, sewer, and electrical tie-ins from the RV campground and mobile bathhouses to the park's existing onsite water well, sewer, and electric systems (i.e., utilities) to provide proper capacity for other proposed elements; and
8) constructing an 8-foot-wide, 300-foot-long (approximately 0.1 acre) boat dock/fishing pier with required toe and hand rails that connects to the RV campground area through a 15-foot gangway, which would provide ADA-compliant access from the park to the boat dock/fishing pier, to provide recreational opportunities and improve public access to natural resources.

The Cypremort Improvements Project is located in both St. Mary and Iberia Parishes approximately 1.5 miles northeast of Cypremort Point in Vermilion Bay (Figure A-1). The Cypremort Improvements Project would be located just west of the intersection of Louisiana Highway 319 and Beach Lane and extend along Quintana Canal and the west-east and north-south segments of Beach Lane. The project would also include the park's beach area, starting from the northern-most beach parking area and ending near the southern day-use parking area, plus a portion of the marsh area on the east side of the park, and an area of the park between the north-south segment of Beach Lane and along the marsh shore on the east side of the park, for a total area of 18.5 acres (see Figure A-1). The project address is 306 Beach Lane, Cypremort Point, Louisiana 70538.

The Cypremort Improvements Project would restore shoreline uses and boating opportunities, restore and enhance fishing and recreational opportunities, provide new opportunities for recreational and educational use, restore beach habitat for both recreation and wildlife, provide recreational infrastructure, and increase and enhance the public's ability to access a variety of recreational resources. The project would repair and protect existing park infrastructure that provide shoreline use, boating, fishing and recreational opportunities and provide additional terrestrial recreational opportunities. These components would restore and improve the public's access to recreational waterbodies, fishing, and other recreational opportunities; increase recreational use opportunities; and enhance the quality of future recreational visits to the area. Each of the proposed Cypremort Improvements Project components are further described below.

A preliminary design for the Cypremort Improvements Project has already been developed. The permit application for the project was submitted in September 2019. Once the permit is issued and the LA TIG approves the Cypremort Improvements Project through their decision on the Final Supplemental RP/EA, final design would take approximately 6 months, and project construction would take approximately 8 months. The order of construction for various proposed elements would be scheduled in a manner to ensure success (i.e., beach reclamation would occur after the jetty is reinforced). All work would be subject to approval of permits and environmental review. The construction schedule would include contracting, pre-construction, and construction activities.

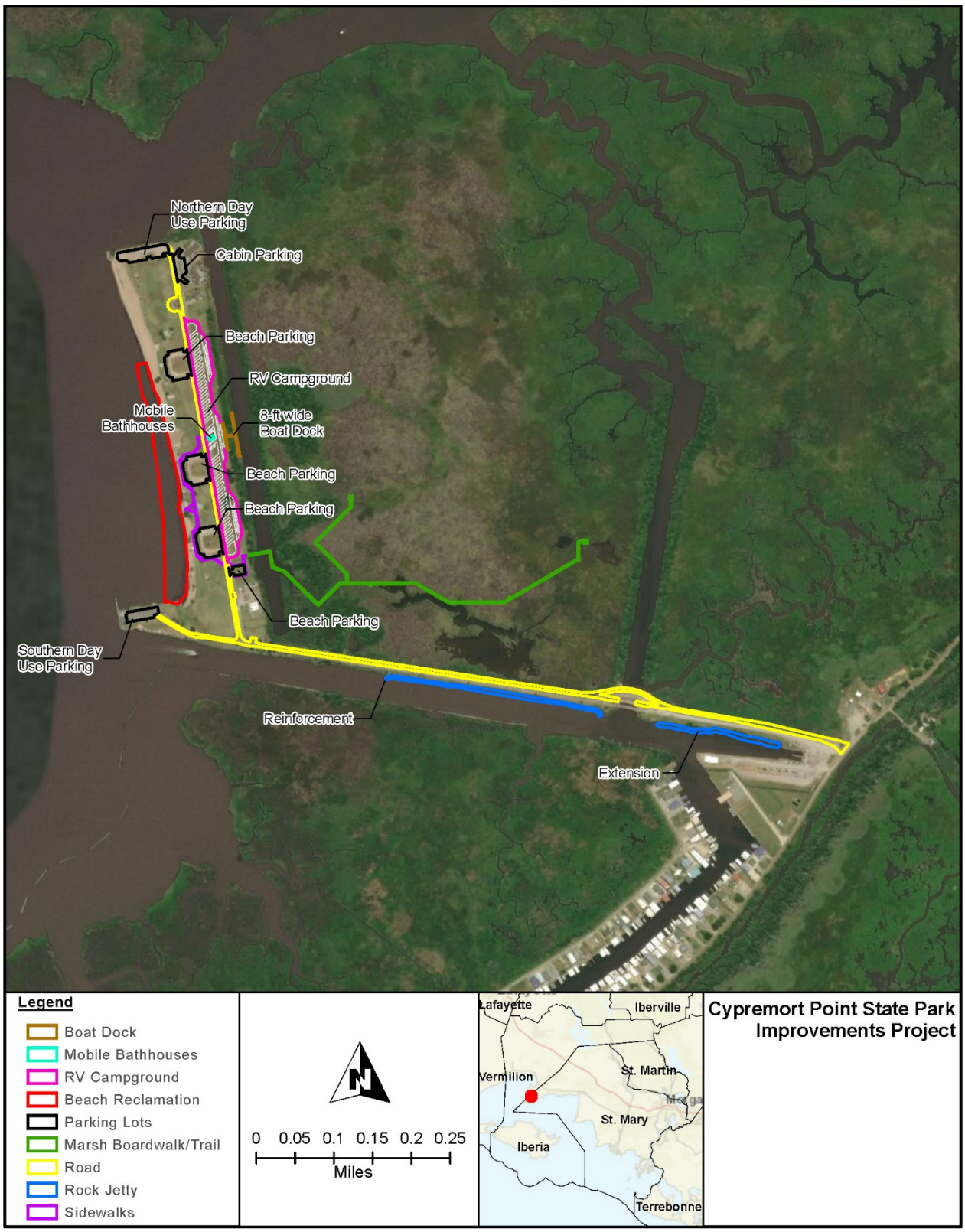

Figure A-1. Location of the proposed Cypremort Point State Park Improvements Project

The recreational benefits of the Cypremort Improvements Project would be broadly available to the public through existing park entrance fees ($3 per person) plus an estimated campsite fee ranging from $33 Friday through Saturday (year-round), $30 Sunday through Thursday (April through September), and $25 Sunday through Thursday (October through March) per campsite per night, plus applicable local and state taxes. The charges associated with the RV campsites under Alternative B would allow for enhanced recreational use and experiences in terms of expanded year-round recreational opportunities, as well as improved public access to natural resources.

The Cypremort Improvements Project has been evaluated for compliance with the Oil Pollution Act of 1990 (OPA) and the National Environmental Policy Act (NEPA) in the *Louisiana Trustee Implementation Group Draft Supplemental Restoration Plan and Environmental Assessment: Cypremort Point State Park Improvements Project Modification* (Louisiana Trustee Implementation Group [LA TIG] 2020), hereafter referred to as the Draft Supplemental RP/EA.

1.2 Rock Jetty

The proposed rock jetty improvement would consist of extension and reinforcement of the existing inadequate rock jetty along the north bank of the Quintana Canal and south side of Beach Lane at the entrance to the Cypremort Point State Park. After improvements, the total rock jetty would be approximately 4,400 feet long, 15 feet wide, and 18 inches deep. Rock jetty improvements would provide protection to existing park infrastructure. Improving and expanding the existing erosion protection along Beach Lane and Quintana Canal is needed to prevent compromising the entry to the State Park. Materials for jetty construction would be transported and staged via barge in the adjacent Vermillion Bay. Improving the existing rock jetty would include:

- an approximate 1,000-foot-long extension of the existing rock jetty from the cross-canal bridge east to the northern edge of the Cypremort Point boat ramp constructed with medium to large rocks; and
- approximately 3,300 feet of reinforcement of the existing rock jetty from the cross-canal bridge west to the northern end of the Quintana Canal and park entrance constructed with medium to large rocks matching the existing material.

Approximately 5,000 to 6,000 tons of medium to large rocks, which would match the existing material, would be needed for construction of the rock jetty extension and reinforcement.

1.3 Beach Reclamation

The proposed beach reclamation would restore the degraded beach area to its pre-eroded condition. The beach length is approximately 2,390 feet long and would be restored to approximately 78 feet wide using approximately 8,630 cubic yards of sand to reach a depth of 12 inches. The reclamation would include replacing the sub-soil layer as necessary, backfilling and compacting soil under the pavilions experiencing undercutting, and spreading imported sand across the approximately 186,420-square-foot beach shoreline.

This beach is a very popular swimming spot, and continued erosion would further degrade beach habitat and continue to threaten nearby recreational structures (i.e., pavilions, restrooms, and other existing park infrastructure). The beach provides recreational access for swimming, sunbathing, paddle boards, and other water-based activities, as well as shorebird habitat.

1.4 Marsh Boardwalk and Trail

The proposed marsh boardwalk and trail system would provide improved recreational fishing opportunities at the inland marsh area north of Beach Lane and east of the Cypremort Point State Park grounds. The Louisiana Office of State Parks determined that replacing or upgrading the existing fishing pier would not eliminate the future threat of similar damaging forces that destroyed the existing pier and protection from destruction was not feasible. An inland wooden boardwalk is proposed in the marsh area in the eastern portion of the park to replace and enhance fishing and other shoreline-based recreational opportunities provided by the existing fishing pier. The boardwalk/trail is intended to provide access to several marsh microenvironments and different inshore waterbodies and would be connected to the existing southern portion of the park's grounds by a bridge across the canal to the west. The boardwalk/trail would restore recreational fishing opportunities for all visitors and improve other recreational uses, such as bird and wildlife viewing and educational opportunities.

The proposed boardwalk/trail would be approximately 3,000 feet in length with most of the boardwalk/trail constructed above water, with mixed media and other areas constructed at ground level with crushed stone. Construction of the marsh boardwalk would include:

- an approximate 3,000-foot-long wooden boardwalk with a width of approximately 6 feet constructed from approximately six-hundred 7- to 8-inch piles driven into the sand bottom to support the boardwalk and either 6×6 or 8×8 marine-grade pressure-treated members and stainless-steel fasteners;
- ground-level trails, where possible, with a width of approximately 6 feet constructed from crushed stone;
- seating, toe rails, and handrails throughout the boardwalk;
- interpretive signage; and
- Americans with Disabilities Act (ADA)-compliant access (e.g., ramps).

Materials for construction of the proposed activities would either be stored within nearby parking lots.

1.5 Road, Parking Lot, and Sidewalk Repairs and Upgrades

The Cypremort Point State Park's roads, parking lots, and sidewalks provide access to existing park facilities, including the beach access, cabins, pavilions, picnic area, sailboat launch, and restrooms, and would provide access to other proposed park improvements. Repairs and upgrades to road, parking lots, and sidewalks within Cypremort Point State Park would support continued access to park facilities and address damages associated with repeated flooding. Repairing the park's roads and parking areas is vital for preserving public access and recreational opportunities to the park's natural resources. Road, parking lot, and sidewalk repairs and upgrades would be completed for the following:

Four existing 2-way roads, totaling approximately 1.85 miles, with 12-foot-wide travel lanes. The total area of road surface to be repaired is approximately 410,573 square feet. Road improvements would primarily consist of pothole repairs to the road base, 2-inch asphalt overlays, and restriping of the following areas:

- Approximately 1.37-mile-long Beach Lane (park entry)
- Approximately 0.11-mile-long southern day-use access road
- Three approximately 0.113-mile-long day-use beach parking access roads
- Approximately 0.034-mile-long cabin access road
- Six paved parking areas, totaling 116,337 square feet, pothole repairs as needed, 2-inch asphalt overlays, and restriping in the following areas:
- Approximately 15,360-square-foot southern day-use parking lot
- Three approximately 24,443-square-foot central beach loop parking areas
- Approximately 20,655-square-foot northern day-use beach parking lot
- Approximately 6,993-square-foot cabin parking area
- Sidewalks throughout the park that have been damaged due to flooding or erosion

The total fill area for roads, parking lots and sidewalks repairs and upgrades would be approximately 37,600 square feet, with a total fill volume of approximately 2,080 cubic yards.

1.6 RV Campground with Sewer, Water and Electrical Tie-ins

The RV campground would encompass approximately 4.2 acres and would be located along the north-south segment of Beach Lane—south of existing cabins, parking and sailboat launch, and park superintendent residence, and north of the existing park maintenance area, entrance, and check-in area—all of which would remain in place. A typical RV campsite would include:

- a paved (asphaltic concrete) pull-through RV site approximately 16 feet wide to accommodate a standard motor home, which is typically approximately 8.5 feet wide and 40 feet long;
- a grass recreational area approximately 20 feet wide that includes a firepit, grill, and a concrete patio area (approximately 9×16 feet) with a picnic table; and
- a limestone-surfaced utility area adjacent to the pull-through site with water, sewer, and electrical service hookups.

The paved areas for RV campsites could vary from site to site, depending on the existing base and distance to structures or marsh area, but would not exceed 20 feet wide. The campsite area would be elevated to approximately 1.5 feet, or approximately 18 inches above existing grade. This elevation would match that of adjacent roads constructed or improved under Alternative B. Compacted select fill material would be used to construct the RV campsites to provide proper drainage. Heavy equipment and machinery used to construct the campsite would include a bulldozer or grader, trucks, a backhoe, excavators, roller, generators, small trucks, and hand tools. The total fill area for RV campsite construction would be approximately 150,400 square feet with a total fill volume of approximately 8,320 cubic yards.

Each campsite would have access to existing, on-site electrical services through tie-ins. Electric hookups would be mounted at each campsite in a covered and grounded electrical box that is mounted to a post or in a manufactured assembly that includes a ground fault interrupter. The post would be located on the

driver's side of each campsite spur (i.e., pull-through site) at a point 0 to 15 feet from the rear of the spur. Electrical facilities at each campsite would be sized to comply with National Electrical Code (NEC): Article 551-Recreational Vehicles and Recreational Vehicle Parks: Part VI, 551.71 "Type Receptacles Provided". Electrical tie-ins would be planned and implemented through coordination with utility providers. Each campsite would also have sewer and water tie-ins to the park's existing onsite sewer system and water well. All utility tie-in infrastructure would be buried through trenching, using a trencher and heavy equipment and machinery similar to that previously described for construction of the campground. The depths of disturbance to accommodate electrical and water tie-ins would vary but would be buried at least 3 feet below the new grade. Gravity sewer lines would be buried a minimum of 3 feet below the new grade and as deep as practical based upon downstream elevations. Any upgrades necessary to the park's existing onsite water well, sewer, or electric systems would be completed in conjunction with construction of utility tie-ins.

1.7 Mobile Bathhouses with Sewer, Water and Electrical Tie-ins

Mobile bathhouses would be premanufactured and delivered and installed at the midway point of the RV campground area using a flatbed truck and forklift. Mobile bathhouses would encompass approximately 0.02 acre and would be at or near ground level to provide ADA-compliant access. In the event of a storm, mobile bathhouses would be moved to higher ground to avoid flooding and contamination of stormwater.

Sewer, water, and electrical tie-ins would be installed at the mobile bathhouses using the same methods as described for the RV campground. In the event of a storm, sewer, water, and electrical tie-ins at the mobile bathhouses would be disconnected and capped off, as necessary, and mobile bathhouses would be moved to higher ground to avoid flooding and contamination of stormwater.

1.8 Boat Dock/Fishing Pier

An 8-foot-wide, 300-foot-long boat dock/fishing pier, encompassing approximately 0.1 acre, would be located east of the mobile bathhouses along the RV campground and within the marsh area. Trucks or marsh buggies with cranes and pile drivers and hand tools would be used to construct the boat dock/fishing pier. The number of piles required for the boat dock/fishing pier would be determined during final E&D. Construction of the boat dock/fishing pier, including pile driving, would use similar equipment and methods as the over-water portions of the marsh boardwalk.

2 RESTORATION TYPE GOALS AND PROJECT RESTORATION OBJECTIVES

One of the five programmatic goals for restoration, as outlined by the Deepwater Horizon (DWH) Oil Spill Trustees (DWH Trustees) in the *Deepwater Horizon Oil Spill: Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement* (PDARP/PEIS) is to "provide and enhance recreational opportunities" across the Gulf Coast (DWH Trustees 2016:Section 1.5.3). Through the restoration planning process, the DWH Trustees then identified 13 distinct restoration types that pertain to the five programmatic goals, and further identified specific goals for each restoration type. The Cypremort Improvements Project fits within the restoration type

"provide and enhance recreational opportunities." The goals of this restoration type are as follows (DWH Trustees 2016: Section 5.5.14.1):

- Increase recreational opportunities such as fishing, beach-going, camping, and boating with a combination of ecological restoration and creation of infrastructure, access, and use opportunities.
- Use education and outreach to promote engagement in restoration and stewardship of natural resources, which could include education programs, social media, and print materials.

The Cypremort Improvements Project falls within both restoration type goals because it is designed to restore diminishing fishing and recreational opportunities, provide new opportunities for recreational and educational use, restore beach habitat for both recreation and wildlife, provide recreational infrastructure, enhance recreational use and experiences, and improve public access to natural resources. The project would meet the restoration goals outlined in the PDARP/PEIS (DWH Trustees 2016) by constructing infrastructure as a restoration technique to increase the recreational opportunities for shoreline users, fisherman and boaters across the state park.

As described in Chapter 3 of the *Louisiana Trustee Implementation Group Restoration Plan and Environmental Assessment #4: Nutrient Reduction (Nonpoint Source) and Recreational Use* (Louisiana Trustee Implementation Group [LA TIG] 2018), hereafter referred to as RP/EA #4, and Section 3 of the *Louisiana Trustee Implementation Group Draft Supplemental Restoration Plan and Environmental Assessment: Cypremort Point State Park Improvements Project Modification* (LA TIG 2020), the project would meet the Oil Pollution Act (OPA) criteria for the trustee restoration goals and objectives because the project has a strong nexus to the public's lost recreational fishing and access to shoreline uses during the DWH oil spill. Most of the recreational use loss in Louisiana as a result of the spill was to recreational fishing; however, the recreational assessment, discussed in the PDARP/PEIS (DWH Trustees 2016), focuses on loss of multiple shoreline uses and boating. Shoreline use refers to recreational activities conducted by individuals at locations near beaches, along the shoreline, or from shoreline structures, such as piers. These activities include swimming, sunbathing, surfing, walking, kayaking, and fishing. Boating refers to a variety of recreational boating activities that begin at sites providing access to saltwater near the Gulf Coast (boat-based fishing is included in this category).

The proposed project is designed to restore shoreline uses and boating opportunities, restore and enhance fishing and recreational opportunities, and increase and enhance the public's ability to access a variety of recreational resource. The project would repair and protect existing park infrastructure that provide shoreline use, boating, fishing and recreational opportunities. New infrastructure constructed under the project, including additional RV campgrounds, mobile bathhouses, and a boat dock/fishing pier, would support the use of the state park's existing sailboat launch, beach, cabins with boat slips, and day-use facilities and would provide additional terrestrial recreational opportunities. For these reasons, the proposed project's goal of creating and enhancing visitor access to recreational use (fishing) has the added benefit of providing both boat-based and shoreline-based recreational activities and fishing. Therefore, the proposed project has a strong nexus to the public's lost recreational fishing and access to shoreline uses. The recreational opportunities that would be created by the proposed project are similar to the shoreline uses that were lost as a result of the DWH oil spill (e.g., lost user-days of fishing, lost days on the water, and loss of wildlife viewing and shoreline access). Visitors to the park's facilities would be the same regional user population that the DWH oil spill affected and that would benefit from the Cypremort Point State Park Improvements project. Therefore, the project represents in-place, in-kind restoration.

The overall objectives of this project are to provide and enhance public access to natural resources through recreational use, and to use education to promote engagement in stewardship of natural resources. Specific objectives include the following:

- Enhance public access to shoreline recreational activities (such as fishing, boating, and swimming) through infrastructure development of a new boat dock/fishing pier, enhanced beach and roadways, and rock jetty improvements at the state park.
- Enhance public access by increasing visitor use of recreational opportunities for fishing, swimming, and boating within the Cypremort Point State Park.
- Enhance public access by providing expanded recreational opportunities and access through the RV campground and mobile bathhouses, which would support the use of the park's existing facilities.

The objectives of this project must be refined upon completion of the engineering and design phase of project development as more project information is developed.

3 CONCEPTUAL SETTING

The conceptual setting for any restoration project is the interaction and linkages between the project and the environment in which it is implemented. It is important to understand how the ecological system may affect the project and how the project may affect the ecological system. This understanding allows the project proponent to identify potential issues that may arise during the implementation and monitoring phases, as well as any long-term maintenance issues that could occur. Information on the existing environmental conditions and potential environmental impacts of the project can be found in RP/EA #4, Sections 4.1 and 4.6, respectively (LA TIG 2018) and Section 4 of the Draft Supplemental RP/EA (LA TIG 2020).

As noted and approved of in the *Monitoring and Adaptive Management* [MAM] *Procedures and Guidelines Manual Version 1.0* (MAM Manual) (DWH Trustees 2017), the LA TIG has chosen not to include some conceptual setting elements for this type of restoration project. Because this is a Provide and Enhance Recreational Opportunities restoration type, the information necessary to describe the conceptual setting of the project is not as in-depth as some other restoration types. For example, if the project were a Wetlands, Coastal, and Nearshore Habitats restoration type, chemical and biological attributes of the project would need to be considered as part of the conceptual setting. In addition, the critical thresholds of ecological processes and how those thresholds would be affected by the proposed project would also need to be considered.

Some aspects of the ecological system that may be affected include water quality, habitat, and rates of erosion. For example, water quality may be temporarily degraded during in-water construction activities when soil is disturbed, which could increase turbidity or distribute other pollutants into the water column. Water quality may also be impacted during construction of other facilities, such as the parking lot or RV campground, unless erosion control measures are implemented. Disturbed areas, such as those that would be cleared during construction, could create an opportunity for invasive plant species to establish and spread unless monitoring and maintenance activities are conducted to ensure the success of restored temporary impact areas. Post-construction, hydrology at and around constructed facilities could be altered. Disturbance of both aquatic and terrestrial habitat could increase after construction due to increased recreational opportunities that attract a greater number of recreational users. Additional

information about the conceptual setting and impacts to the ecological system should be evaluated and incorporated into this MAM plan as more project information becomes available. The following sections discuss how the project-specific attributes would interact with the environment, and vice versa, as well as what the major drivers are that may influence the outcomes of the project.

3.1 Drivers

Drivers are outside forces, natural or anthropogenic, that have the potential to influence the outcomes of a restoration project (DWH Trustees 2017:Section E.6.3). Drivers tend to be large-scale, long-term forces that are not easily controlled at the scale of a single restoration project (Harwell et al. 2016). When evaluating the proposed project, the following outside drivers and stressors were considered:

- Public acceptance and use
- Sea level rise
- Frequency and intensity of hurricanes
- Public interest or need

This list should not be considered exhaustive; additional drivers may be identified as the project is implemented and/or monitored. These drivers may affect the achievement of the restoration goals and objectives of the project. For example, if the intensity and frequency of hurricanes increase in the region, the enhanced beach, new boat dock/fishing pier and boardwalk, and jetty may not be engineered sufficiently to withstand these natural disasters; therefore, the project could no longer achieve the restoration goal of increasing recreational opportunities such as fishing, swimming, and boating throughout the state park. If any drivers are negatively impacting the project, adaptive management may be necessary to ensure the project's goals and objectives are being achieved. The adaptive management strategy for the project is outlined in Section 3 of this plan.

3.2 Potential Sources of Uncertainty

Project uncertainties, or information gaps, have the potential to affect adaptive management decisions for restoration projects, such as how to improve the likelihood of achieving the goals and objectives of the project, or identifying corrective actions if the project is not performing as intended. When evaluating this recreational use project, the following uncertainties were considered:

- Ability to attract public interest and use of the area
- Potential impacts to the ecosystem as a result of increased use of the area (e.g., impacts to species and habitat)
- Potential need for ecological restoration (e.g., as a result of increased use of the area)
- Potential impact on local community (e.g., noise related to having too many visitors, trash)

This list should not be considered exhaustive; additional uncertainties may be identified as the project is implemented and/or monitored. During the planning phase of the project, it was assumed that the recreational features would attract high rates of public use and better public access to the Cypremort Point State Park. However, anticipated user data for the project were not collected (e.g., boaters and/or fishermen in the area were not polled for anticipated use of the features). Therefore, the ability of the proposed project to increase recreation use in the area is unknown. Likewise, the potential impacts to the

ecosystems as a result of increased use of the area is not fully known at this time. Impacts to the environment are considered in RP/EA #4 (LA TIG 2018) and the Draft Supplemental RP/EA (LA TIG 2020). Best management practices to mitigate the potential environmental impacts of the project are also outlined in the PDARP/PEIS (DWH Trustees 2016), RP/EA #4 (LA TIG 2018), and the Draft Supplemental RP/EA (LA TIG 2020).

As the project is implemented and ongoing success monitoring is conducted, project uncertainties may become apparent. If negative impacts from the project occur, or if the project is unable to attract recreational users, adaptive management may be necessary to ensure the project's goals and objectives are achieved. The focus for adaptive management is on identifying and, where possible, reducing those uncertainties that affect the decisions within the scope of the project. If not addressed, uncertainties may delay the time it takes to achieve the restoration objectives or hinder the project's ability to fully achieve its objectives. The adaptive management strategy for the project is outlined in Section 3 of this plan.

4 PROJECT MONITORING

Monitoring is necessary to determine if the project achieves the restoration goals and objectives outlined by the LA TIG. To conduct successful project monitoring, parameters need to be established to evaluate progress toward the restoration goals. The monitoring parameters that may be considered should be geared toward resolving project uncertainties, explaining outside drivers, optimizing project implementation, supporting adaptive management and decisions about corrective actions, and informing the planning of future DWH natural resource damage assessment (NRDA) restoration projects. The sections below outline the Cypremort Improvements Project's monitoring parameters and the methods for measuring these parameters.

4.1 Monitoring Parameters

As identified in the MAM Manual, the DWH Trustee's identified two types of monitoring parameters under the "Enhance Public Access to Natural Resources for Recreational Use Restoration Approach" (DWH Trustees 2017):

1) Core performance monitoring parameters applicable to recreational use projects. Core performance monitoring parameters are those used consistently across projects in order to facilitate the aggregation of project monitoring results and the evaluation of restoration progress for each restoration type (DWH Trustees 2016:Appendix 5.E.4).
2) Objective-specific performance monitoring parameters that are only applicable to a project based on a particular restoration objective.

The restoration goal and project-specific objective for this project are related to access to and enhancing recreational use in the state park. The project would collect the core performance monitoring parameter of visitor use and access. Visitor use and access, is defined as the "public access to the natural resources or project area and/or the number of visitors using the recreational area" (DWH Trustees 2017: Section E.9.34.1). A second monitoring parameter for the project is specific to the project objective of enhancing recreational access through infrastructure. This parameter—infrastructure completed as designed—relies on project-specific information, such as engineering drawings, permit requirements, and project schedule to determine if the project is achieving its objectives.

The first parameter fit within the "core performance" monitoring type because it can be used consistently across projects for the Provide and Enhance Recreational Opportunities restoration type; establishing increased recreational opportunities at any restoration project site can help determine if the project is successful at meeting the restoration type objectives as outlined in the PDARP/PEIS (DWH Trustees 2016:Section 5.5.14.1). Likewise, because the proposed project objectives include building improved access and recreational features (e.g., enhanced beachfront, new marsh boardwalk and boat dock/fishing pier) to enhance recreation use in the state park, monitoring for visitor use would help determine if the project meets the objectives outlined in Section 1.1 of this MAM plan.

Section 2.2, below, outlines the measurement unit(s) and monitoring methods for each parameter. All methods have been cross-referenced to the Enhance Public Access to Natural Resources for Recreational Use Restoration Approach for the project to ensure the methods are appropriate.

4.2 Monitoring Methods

The monitoring methods for each parameter are outlined below, along with guidance on how, when, and where to conduct monitoring.

4.2.1 Parameter 1: Visitor Use and Access

The recommended methodology for monitoring this parameter is direct observation. Direct observation includes staging monitoring on-site to count and record the recreational users at the proposed project site. Hand counters and data recording forms should be used to note the number of vehicles, boats, and users at the project site. Because the proposed project includes constructing and updating recreational features throughout the state park, information collected on visitor use may need to occur at several different locations. For example, monitors could be stationed at the new marsh boardwalk, as well as fishing piers. Establishing cameras at state park entrance to record access information may also be used to determine if visitor use and access have occurred at the project site. The information generated from remote sensing would not be as accurate as an on-site monitor because only a single pass count of vessels may be recorded, and the total users and recreational activities being undertaken may need to be estimated. For this project, it is recommended that an on-site monitor(s) be used to gauge the visitor use and access. For guidance and methodologies of how to measure visitor use and access, see Cessford and Muhar (2003), Horsch et al. (2017), Leggett (2015, 2017), Moscardo and Ormsby (2004), and U.S. Fish and Wildlife Service (2005).

Because visitor use patterns may vary depending on the activity, the number of individuals engaged, and the areas these activities take place, the counting locations should be identified at strategic locations that are representative of the whole recreational use area. For the project, the priority areas for counts may need to be located at the beach and park entrance. However, the Louisiana State Park staff may also be stationed at the various fishing piers to determine user numbers. At any of the locations the on-site monitor can count the number of vehicles, boats, or other recreational vessels (e.g., kayaks) and recreational users that access the project site. In addition, the monitor can record the types of recreational activities the users are engaged in (such as strictly boating, fishing, etc.).

Data collection should be conducted post-implementation of the facilities and throughout various times of the year; the data collected should be representative of as full a range of site conditions as possible, taking into account varying times of the day, week, or year; seasonal variations; weather variation; and special use occasions such as holidays or community events (DWH Trustees 2017:Section E.9). To accurately

determine the number of recreational users at the project site accessing the new facilities, data should be collected during different seasons and on weekdays, weekends, and holidays. If this methodology is not used, skewed results may occur (e.g., more people recreating on holidays versus a normal weekday). Data should be collected on-site whenever possible, for at least 1 year after project implementation.

Data collection would be conducted in a manner that offers six monitoring sessions per month (two weekend sessions and four weekday sessions). These monthly monitoring sessions would capture recreational usage at varying times of day (morning, mid-day, afternoon/evening) to quantify varying usage rates. The total number of 72 survey sessions would be conducted during the 1-year monitoring period. If after 1 year of monitoring, visitor usage and access to the new facilities does not occur, then corrective actions may be taken. Potential corrective actions could include improving the project infrastructure and/or routine maintenance activities. Table A-1 outlines the preferred monitoring location, duration, frequency, and sample size for the proposed project.

Table A-1. Monitoring Parameter 1 Methodology

Monitoring Parameter	Location	Frequency	Monitoring Session Length	Sample Size	Duration
Visitor use and access	Piers, beach and/or park entrances	72 monitoring sessions: 6 sessions per month, 4 weekday sessions (at least 1 in the morning, 1 in the afternoon, and 1 in the evening), 2 weekend sessions (1 in the morning and 1 in the afternoon)	4 hours	Vehicles, vessels, and user counts within 4-hour periods	1 year

4.2.2 Parameter 2: Infrastructure Completed as Designed

The recommended methodology for this monitoring parameter is direct review of project documents and on-site comparison. Reviewing design plans, contractor reports, and permitting and planning documents (such as RP/EA #4 [LA TIG 2018]) would equip the project monitor with all of the relevant information needed to make a decision on whether the project has been implemented properly. On-site inspections during and after project implementation would need to be conducted to accurately compare the as-built project to the specifications outlined in the engineering drawings, project planning documents, and permits. Monitoring would occur during all design stages and construction activities from start to completion. The construction schedule for this project has not yet been determined because planning and design of the new features are still underway. Once the implementation schedule of the project has been finalized, this MAM plan should be updated to include accurate information regarding monitoring this parameter during construction. If the project is not being constructed as designed, planned, and permitted, then the on-site monitor would work with the construction contractor to ensure that all contract terms and permit requirements are met.

5 ADAPTIVE MANAGEMENT

As outlined in the MAM Manual, it is not appropriate for all projects to have an adaptive management plan. Adaptive management is appropriate for large-scale, complicated projects that propose novel restoration techniques or that have high levels of uncertainty (DWH Trustees 2017: Section 2.4.5). Adaptive management should not be used for projects where learning is unlikely, where decisions are

irreversible, or where no opportunity exists to revise or reevaluate decisions based on new information (Doremus et al. 2011).

The Cypremort Improvements Project proposes to use standard engineering specifications and tried-and-tested construction methodology for constructing the various features recreational features. No novel restoration approaches would be used for this small-scale, localized project. For example, construction of the approximately 3,000-foot-long trail and wooden boardwalk would likely require some in-water work and involve several phases of construction. First, piles would be driven into the marsh sediments along the proposed boardwalk placement, with a set of two piles installed at approximately a 10-foot interval. Each of these piles would be driven past the engineering-set minimum depth into the substrate. These piles would be approximately 6 to 8 feet long to allow for adequate penetration into the marsh sediments, varying water depths, height of water, and vegetation. Construction methods for the boardwalk would be similar to that of other boardwalks and include the use of marine-grade and pressure-treated large timber members and stainless steel fasteners. For additional information regarding the planned construction methodology of the proposed project, see Section 3.3.13 of RP/EA #4 (LA TIG 2018) and Section 2 of the Draft Supplemental RP/EA (LA TIG 2020).

Because the project proposes to establish physical infrastructure, the decision to implement the project is mostly irreversible, as is the opportunity to revise or reevaluate the decision to construct the boardwalk and RV campground and enhance the rock jetty, beach front, and roadways. For these reasons, an adaptive management plan is not included in this MAM plan. However, if monitoring determines that the project is not meeting its goals and objectives, then corrective actions should be used. Suggested corrective actions are described in Section 2 and 5 of this document.

6 EVALUATION

The project would be considered successful if it meets the restoration goals and project-specific objectives as outlined in this document. Project performance would be assessed against the following performance criteria, which are qualitative and based on the project's goals and objectives:

- Provide public access to recreational use of the restoration elements and services provided by the proposed project.
- The Cypremort Improvements Project is designed, constructed, and implemented according to plans and permitting requirements.

Methods for analyzing, evaluating, and interpreting the monitoring data collected for the project to determine if the performance criteria are being met, could include the following:

- Data summarization and characterization: This analysis would include calculation of the basic statistics of the monitoring data (e.g., how many users recreate at the site on a monthly basis). This information would form the basis for more compressive analysis (if needed). Data from this analysis can be presented in both graphical and tabular formats.
- Status determination: This evaluation would help determine if the project is meeting the performance criteria. Observed values from the monitoring efforts would be compared to the performance criteria and perhaps to observed historical values. For example, if the monitoring results indicate no recreational users are visiting the proposed project site, there may be an issue with new recreational features. Or, it may be possible to compare the number of users at the project site to other comparable state parks along the coast of Louisiana, to see if project is

attracting a comparable number of recreational users. This evaluation methodology would involve both expert interpretation and statistical analysis.

- Trends evaluation: This evaluation methodology can be used to address whether increased recreational opportunities have been established over time. This analysis can inform how trends form, and if those trends are randomly occurring.

Data evaluation would be refined at a later date when additional project information becomes available.

7 PROJECT-LEVEL DECISIONS: PERFORMANCE CRITERIA AND POTENTIAL CORRECTIVE ACTIONS

Performance criteria and potential corrective actions have been developed for each monitoring parameter for the project (Table A-2). Additional corrective actions may be identified post-implementation, as appropriate. This section would be updated to reflect changes throughout project implementation.

Table A-2. Performance Criteria and Potential Corrective Actions by Monitoring Parameter

Monitoring Parameter	Final Performance Criteria	Potential Corrective Actions
Visitor use and access	Increased recreational opportunities following implementation of the restoration elements and services.	Implement public outreach and marketing for the project (e.g., news articles or signage promoting the new recreational features at the state park).
Infrastructure completed as designed	Project is designed, constructed, and implemented according to plans and permitting requirements	Work with the construction contractor to ensure that all contract terms and permit requirements are met.

8 MONITORING SCHEDULE

The schedule for the project monitoring is shown in Table A-3, separated by monitoring activity. The duration of monitoring would be determined prior to implementation of this MAM plan. This information would be added and revised as needed whenever monitoring methods are refined or revised.

Table A-3. Project Monitoring Schedule

Monitoring Parameter	Monitoring Timeframe		
	Pre-construction	Construction	Post-construction
Visitor use and access			X
Infrastructure completed as designed	X	X	X

9 DATA MANAGEMENT

Qualitative and quantitative data would be collected as part of this MAM plan. The type of data to be collected, as well as how those data would be collected, processed, reviewed, stored, and shared, is outlined below. Section 3 of the MAM Manual (DWH Trustees 2017) provides detailed guidance on data collection, review, storage, and accessibility, and should be followed, along with this MAM plan.

9.1 Data Description

Descriptions of the data to be collected as part of this MAM plan are described in Table A-4.

Table A-4. Project Data

Monitoring Parameter	Data Description			
	Type of Data	Collection Method	Timing and Frequency	Location and Quantity
Visitor use and access	Total counts of vehicles, boats (or other recreational vessels [e.g., kayaks]), and users	Direct observation conducted in-person and on-site	Six counts per month, post-project implementation: 2 weekend monitoring sessions and 4 weekday sessions) for 1 year	Various locations throughout the project area. 72 observation sessions, each lasting 4 hours, would be conducted during the 1-year period.
Infrastructure completed as designed	Monitoring datasheets confirming construction is completed to the engineering specifications and permit requirements	Direct observation conducted in-person and on-site	During project implementation, daily Once after project is constructed	On-site The quantity would depend on the construction schedule.

All data would be collected either by hand on monitoring forms or by tablet on electronic forms. If data are recorded on hardcopy field datasheets, these entries would be scanned to a Portable Document Format (PDF) file, and archived, along with the hardcopy. All photographs, datasheets, notebooks, and revised data files would be retained. If data are collected electronically, metadata would be developed for consistency. All electronic files would be stored in a secure location in such a way that the LA TIG would have guaranteed access to all versions of the data.

All data would be collected following the standard guidelines that were developed during early restoration, as discussed in the MAM Manual (DWH Trustees 2017:Section 3.2).

9.2 Data Review

A quality assurance project plan (QAPP) would be required by the LA TIG prior to project implementation. This QAPP would outline the appropriate quality assurance/quality control (QA/QC) process in accordance with the data management section of the MAM Manual (DWH Trustees 2017). The plan should include, at minimum, information and guidance on the following QA/QC procedures:

1) Data verification: Ensure the data were collected correctly, errors are identified and addressed appropriately, and that any metadata are in standard format. In addition, if transcription of data is required, then the QAPP should include a process to verify that the transcription process is completely accurately.
2) Data procurement: Ensure that the submittal of data to the DWH Trustees via the online portal, Data Integration Visualization Exploration and Reporting (DRIVER), is done correctly.
3) Data validation and final QA/QC: Ensure that the Louisiana Office of State Parks can adequately conduct a final QA/QC check for non-data entry errors (date/time, latitude/longitude, units, expected value range, etc.).

4) Information package creation: Guidance for Louisiana Office of State Parks to create a public information package.

9.3 Data Storage and Accessibility

MAM data would be stored in the DIVER Restoration Portal or a similar outside data platform. Data would be submitted as soon as possible, but no more than 1 year from when the data were collected. Data would be submitted yearly. Data storage and accessibility would be consistent with the guidelines in Section 3.1.3 of the MAM Manual (DWH Trustees 2017).

9.4 Data Sharing

The LA TIG would ensure that data sharing follows standards and protocols set forth in the Open Data Policy (Trustee Council 2016: Section 10.6.6). No data release can occur if it is contrary to federal or state laws (Trustee Council 2016: Section 10.6.4). The DWH Trustees would provide notification to the Cross-TIG MAM work group when new data and information packages have been uploaded to DIVER (DWH Trustees 2017). In the event of a public records request related to project data and information that are not already publicly available, the trustee to whom the request is addressed would provide notice to the other LA TIG trustees prior to releasing any project data that are the subject of the request.

As noted in Section 7.3, the project's data would be stored in the DIVER Restoration Portal. These data would be shared with the public by publishing the data to the Trustee Council website (Trustee Council 2016: Section 10.6.6). For further instructions on this process, see the DIVER Restoration Portal Manual (National Oceanic and Atmospheric Administration DWH Data Management Team, Undated).

10 REPORTING

Reporting should follow the guidelines set forth in Section 2.6.3 and Attachment D of the MAM Manual (DWH Trustees 2017). Information to be reported includes the following:

1. An introduction that provides an overview of the project, location, and restoration activities, as well as restoration objectives and performance criteria applicable to the project
    a. This information can be taken from this MAM plan and repeated in all reports.
2. A detailed description of the methods used for implementation of the MAM
    a. This information can be taken from this MAM plan and repeated in all reports.
3. Results from the reporting period, or, in the case of the final report, a comprehensive summary of results from the entire MAM plan implementation period
    a. Results should be presented clearly and show progress that has been made toward performance criteria and/or restoration objectives. Information that can be used to present results includes tables or graphs, site visit summaries, and other datasets that support analysis of the project's progress toward meeting performance standard.
4. A discussion of the results (optional for interim reports, required for final report)
5. Conclusions that summarize the findings, progress toward meeting performance criteria and restoration objectives, and recommendations for corrective actions (optional for interim reports, required for final report)

6. Project highlights showcasing lessons learned to inform future project planning and implementation
7. Transmission of data and meta-data used in the report, as well as a description of all data collected during the reporting period, even if they were not used in the report
8. A complete list of references

Three reports should be submitted, excluding any additional reports deemed necessary as a result of corrective actions that require an extension of the monitoring period. The first report should be submitted after the completion of pre-construction monitoring, the second report should be submitted after the completion of construction monitoring, and the third (final) report should be submitted after completion of the 1-year post-construction monitoring.

The DWH Trustees, as stewards of public resources under OPA, should inform the public on the restoration project's progress and performance. Therefore, the LA TIG should report the process of the proposed project via the DIVER Restoration Portal, as outlined in Chapter 7 of the PDARP/PEIS (DWH Trustees 2016).

11 ROLES AND RESPONSIBILITIES

The LA TIG is responsible for "addressing MAM objectives that pertain to their restoration activities and for communicating information to the Trustee Council or Cross-TIG MAM work group" (DWH Trustees 2016). This includes reviewing and approving MAM plans, identifying MAM priorities for the Louisiana Restoration Area, ensuring that MAM implementation is compatible with the MAM Manual guidelines and that data are submitted to the Restoration Portal, aggregating and evaluating MAM data, ensuring quality control of MAM data, and communicating regarding implementation status and results of MAMs with the Trustee Council and Cross-TIG MAM work group.

As the implementing trustee, the Louisiana Office of State Parks is responsible for developing the MAM plan, conducting all monitoring activities, evaluating project progress toward restoration objectives using the identified performance criteria, identifying the need for and proposing corrective actions to the LA TIG, and submitting MAM data and project information into the Restoration Portal in accordance with the data management procedures outlined within this MAM (Trustee Council 2016).

The project proponent, the Louisiana Office of State Parks, is responsible for all maintenance activities and costs related to the new and enhanced recreational features, including any repairs needed over the life of the features.

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13 MAM PLAN REVISION HISTORY

Version No.	Date Updated	Reason for Update	Summary of Changes
1	June 1, 2018	Draft MAM Plan	N/A
2	March 5, 2020	Revised Draft MAM Plan	MAM Plan was updated to reflect changes to project components, as analyzed in the Draft Supplemental RP/EA, including the removal of the breakwater system and the addition of the RV campground, mobile bathhouses, sewer, water and electrical tie-ins, and boat dock/fishing pier.