

**LOUISIANA COASTAL PROTECTION AND RESTORATION
FINAL TECHNICAL REPORT**

REAL ESTATE APPENDIX

June 2009



**U. S. Army Corps of Engineers
New Orleans District
Mississippi Valley Division**

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Exhibits

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PURPOSE

The Louisiana Coastal Protection and Restoration (LACPR) Technical Report has been developed by the United States Army Corps of Engineers (USACE) in response to Public Laws 109-103 and 109-148. Under these laws, Congress and the President directed the Secretary of the Army, acting through the Chief of Engineers, to:

- Conduct a comprehensive hurricane protection analysis and design in close coordination with the State of Louisiana and its appropriate agencies;
- Develop and present a full range of flood control, coastal restoration, and hurricane protection measures exclusive of normal policy considerations for South Louisiana;
- Consider providing protection for a storm surge equivalent to a Category 5 hurricane; and
- Submit preliminary and final technical reports.

The purpose of this appendix is to support the main LACPR technical report by describing the related real estate issues.

LOCATION

The LACPR planning area stretches across Louisiana's coast from the Pearl River on the Mississippi state border to the Sabine River on the Texas state border. The planning area has been divided into five planning units as listed below:

PU 1 – Pontchartrain Basin – This area represents the entire Lake Pontchartrain Basin. It stretches from the East Bank of the Mississippi River to the Mississippi State Line.

PU2 - Barataria Basin – This area is a triangular-shaped area bounded by the Mississippi River, Bayou Lafourche, and the Gulf of Mexico.

PU3a – East Terrebonne Basin – This area consists of the parishes of Terrebonne, St. Mary (east), Lafourche (west), Assumption, and St. Martin (east).

PU3b – Atchafalaya Influence Area – This region extends from Bayou de West located west of Houma and south of Bay Junop, then westward to Freshwater Bayou. It covers part of Terrebone, St. Mary, Iberia and Vermilion parishes.

PU4 – Chenier Plain – This unit extends from the western bank of Freshwater Bayou Canal westward toward the Louisiana/Texas border. This includes parts of Vermilion, Cameron, Acadia, Jefferson Davis and Calcasieu parishes.

Exhibit A of this appendix includes a general planning area map.

GENERAL DESCRIPTION

The LACPR Technical Report integrates hurricane risk reduction, coastal restoration, and non-structural measures to evaluate a range of alternatives that would reduce damages associated with hurricanes in Southern Louisiana. The report describes a multiple line of defense strategy which incorporates many of the existing hurricane risk reduction project components already studied in other hurricane risk reduction and flood control project studies. Alternatives include structural measures such as constructing barriers, levees, and water control structures; nonstructural measures such as raising buildings and performing buyouts of buildings in certain areas; and coastal restoration such as restoring barrier islands, marsh, and swamps. The various structural hurricane risk reduction measures under consideration for LACPR will inevitably result in unavoidable impacts to wetlands and other aquatic resources. In these cases, compensatory mitigation would be needed to ensure that such unavoidable impacts are fully offset, consistent with the policy of no-net-loss. The LACPR analysis includes a range of alternatives designed to reduce risk from a 100-year, 400-year or 1,000-year flood events.

Based on screening, and in consideration of the need to investigate a range of potential ways to reduce the risk from hurricane surge, 41 comprehensive measures or alternatives, which include all three (3) risk reduction strategies, were selected for detailed evaluation in all five (5) planning units. The sections that follow address Real Estate issues, limitations, opportunities and considerations that impact all five (5) planning units. The next section offers a brief description of the projects considered for each of the five (5) planning units.

Planning Unit 1

Two structural alternative strategies were considered for Planning Unit 1. One strategy includes raising the existing levees on the south shore of Lake Pontchartrain to a higher level of risk reduction and adding structural features in Laplace and on the north shore of Lake Pontchartrain (**High Level alternatives**). By contrast, the second strategy or **Lake Pontchartrain Surge Reduction alternatives** include the construction of a weir barrier with gated structures across the two tidal passes connecting Lake Pontchartrain with the Gulf of Mexico. This alternative also includes consideration of additional structural features in Laplace and on the north shore of Lake Pontchartrain. Common to both alternatives are structural elements in New Orleans East, portions of St. Bernard Parish, upper portion of Plaquemines Parish and a floodgate across the Gulf Intracoastal Waterway (GIWW). Following the tiered screening process, 11 structural alternatives were selected for further analysis in Planning Unit 1.

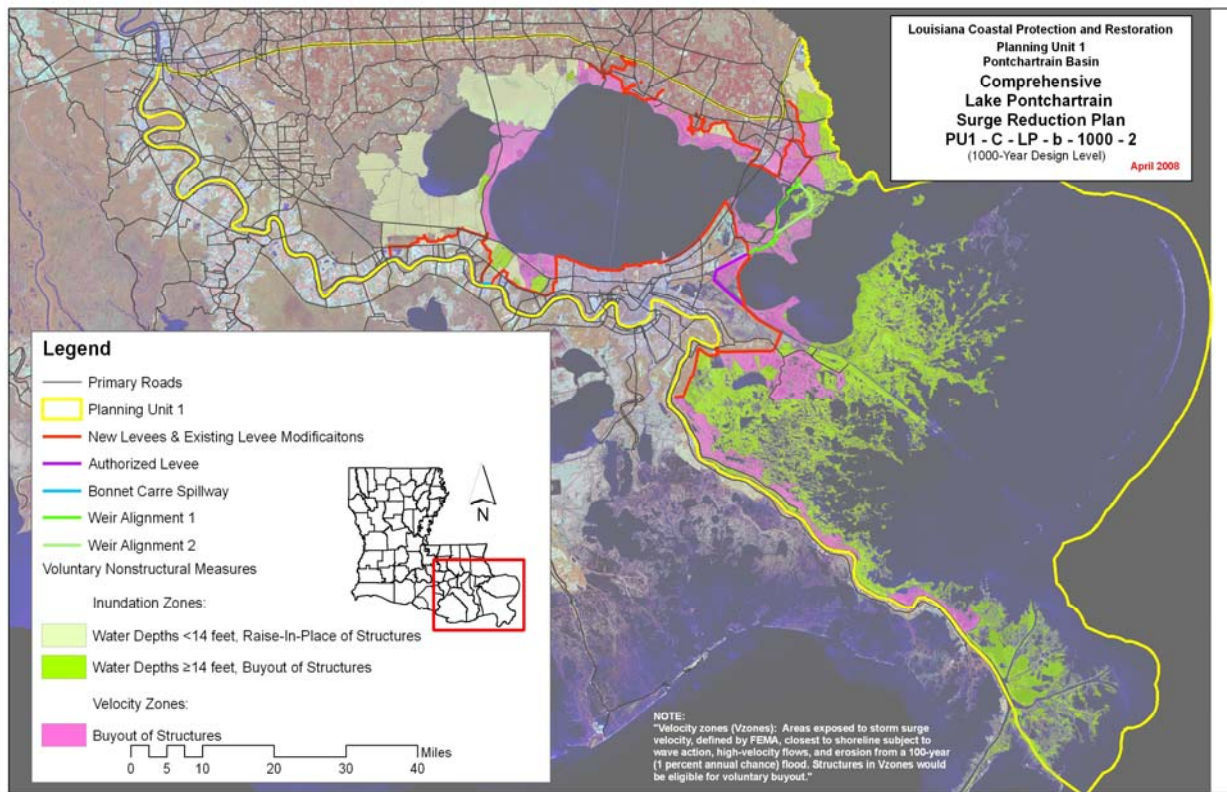
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Category	Alternative	Alternative Description
No Action	PU1-0	No action (without project) alternative.
Coastal Restoration Only	PU1-R1, R2, and R3	Sustain coastal landscape through restoration including shoreline protection, marsh creation, and diversions. R1 proposes steady state diversions while R2 proposes pulsed diversions. R3 is as proposed in the State Master Plan.
Coastal Restoration and Nonstructural Measures	PU1-NS-100, -400, and -1000	Sustain coastal landscape through restoration. Implement comprehensive 100-year, 400-year or 1000-year nonstructural measures.
Coastal Restoration and Structural Measures	PU1-LP-a-100-1	Sustain coastal landscape through restoration and construct barrier-weir and levees to reduce risk to the Lake Pontchartrain area. Raise upper Plaquemines levees to 100-year level of risk reduction.
	PU1-LP-a-100-2	Sustain coastal landscape through restoration and construct barrier-weir and levees to reduce risk to the Lake Pontchartrain area. Raise upper Plaquemines levees and construct new levees around Laplace and across the Northshore to the 100-year level of risk reduction.
	PU1-LP-a-100-3	Sustain coastal landscape through restoration and construct barrier-weir and levees to reduce risk to the Lake Pontchartrain area. Raise upper Plaquemines levees and construct new levees around Laplace and Slidell to the 100-year level of risk reduction.
	PU1-LP-b-400-1	Sustain coastal landscape through restoration and construct barrier-weir and levees to reduce risk to the Lake Pontchartrain area. Raise Lake Pontchartrain and Vicinity and upper Plaquemines levees to 400-year level of risk reduction.
	PU1-LP-b-400-3	Sustain coastal landscape through restoration and construct barrier-weir and levees to reduce risk to the Lake Pontchartrain area. Raise Lake Pontchartrain and Vicinity and upper Plaquemines levees and construct new levees around Laplace and Slidell to the 400-year level of risk reduction.
	PU1-LP-b-1000-1	Sustain coastal landscape through restoration and construct barrier-weir and levees to reduce risk to the Lake Pontchartrain area. Raise Lake Pontchartrain and Vicinity and upper Plaquemines levees to 1000-year level of risk reduction.
	PU1-LP-b-1000-2	Sustain coastal landscape through restoration and construct barrier-weir and levees to reduce risk to the Lake Pontchartrain area. Raise Lake Pontchartrain and Vicinity and upper Plaquemines levees and construct new levees around Laplace and across the Northshore to the 1000-year level of risk reduction.
	PU1-HL-a-100-3	Sustain coastal landscape through restoration and construct high level plan providing 100-year design level of risk reduction to Laplace, upper Plaquemines, and Slidell.
	PU1-HL-a-100-2	Sustain coastal landscape through restoration and construct high level plan providing 100-year design level of risk

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Category	Alternative	Alternative Description
		reduction to Northshore of Lake Pontchartrain, upper Plaquemines, and Laplace.
	PU1-HL-b-400-3	Sustain coastal landscape through restoration and construct high level plan providing 400-year design level of risk reduction to Southshore of Lake Pontchartrain, upper Plaquemines, Laplace and Slidell.
	PU1-HL-b-400-2	Sustain coastal landscape through restoration and construct high level plan providing 400-year design level of risk reduction to the Northshore and Southshore of Lake Pontchartrain, upper Plaquemines, Laplace and Slidell.
Comprehensive (Coastal, Structural, and Nonstructural)	PU1-C-XX-x-xxx-x	Structural/coastal alternatives are made comprehensive by adding complementary nonstructural measures to reduce residual risk in areas without structural risk reduction measures. Comprehensive alternatives are noted by a "C-" in front of the structural/coastal alternative code.

Below is a map showing the areas encompassed by Planning Unit 1.



Planning Unit 2

Three primary strategies for structural risk reduction have been identified within Planning Unit 2. These strategies include the **GIWW levee alternatives**, alignments along the **West Bank Interior** (improvement to, or extension of the existing West Bank levee and construction of a sector gate on the GIWW in Bayou Barataria at the confluence with the Algiers and Harvey Canals), and **ridge alternatives**. Variations to the ridge and GIWW strategies include risk reduction to the areas of Lafitte, Boutte, Des Allemands and/or other areas. Common to the three basic alignments is a ring levee encompassing Golden Meadow and Larose. Following the tiered screening process, 13 structural alternatives were selected for further analysis in Planning Unit 2.

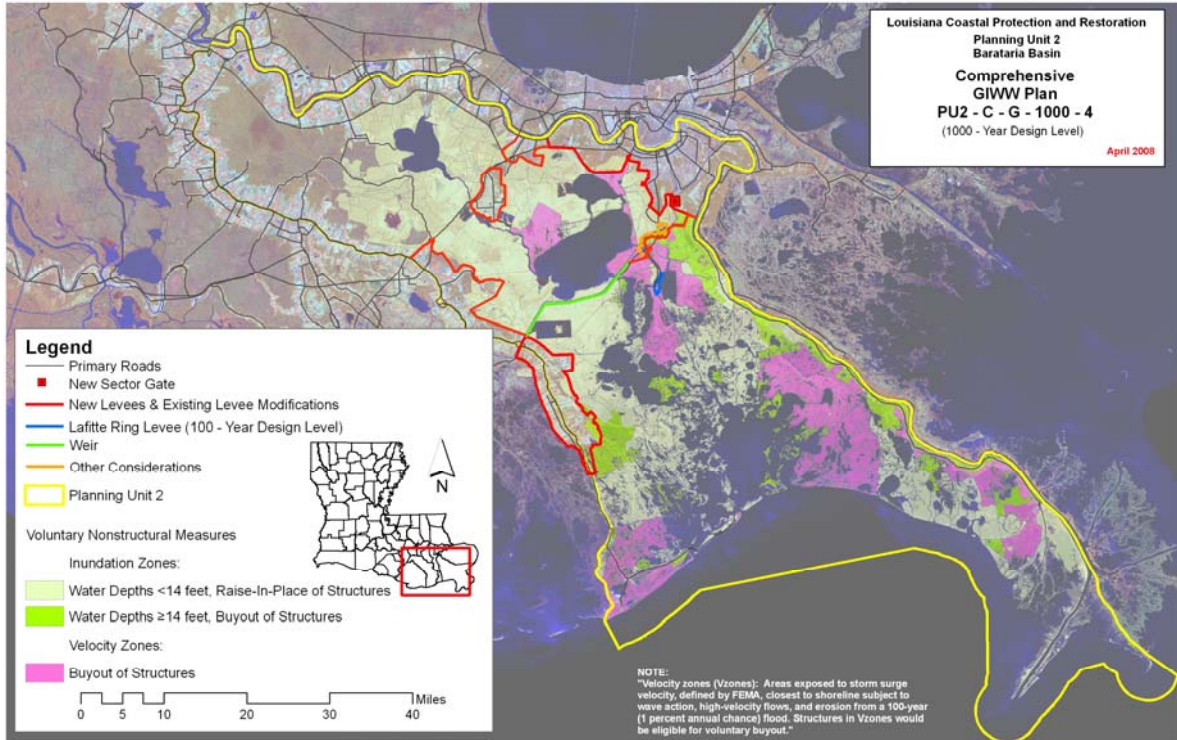
Category	Alternative	Alternative Description
No Action	PU2-0	No action (without project) alternative.
Coastal Restoration Only	PU2-R1, R2, and R3	Sustain coastal landscape through restoration including shoreline protection, marsh creation, and diversions. R1 proposes steady state diversions while R2 proposes pulsed diversions. R3 is as proposed in the State Master Plan.
Coastal Restoration and Nonstructural Measures	PU2-NS-100, -400, and -1000	Sustain coastal landscape through restoration. Implement comprehensive 100-year, 400-year or 1000-year nonstructural measures.
Coastal Restoration and Structural Measures	PU2-WBI-100-1	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank.
	PU2-WBI-400-1	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank. Raise West Bank and Vicinity and Larose to Golden Meadow levees to 400-year level of risk reduction.
	PU2-R-100-2	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank. Extend West Bank and Vicinity levees to Boutte and construct/raise Lafitte ring levees to 100-year level of risk reduction.
	PU2-R-400-2	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank. Extend West Bank and Vicinity levees to Boutte and raise those levees as well as Larose to Golden Meadow levees to 400-year level of risk reduction. Construct/raise Lafitte ring levees to 100-year level of risk reduction.
	PU2-R-100-3	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank. Extend West Bank and Vicinity levees to Boutte and construct/raise Lafitte and Des Allemands ring levees to 100-year level of risk reduction.
	PU2-R-400-3	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank. Extend West Bank and Vicinity levees to Boutte and raise those levees as well as Des Allemands and Larose to Golden Meadow levees to 400-year level of risk reduction. Construct/raise Lafitte

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Category	Alternative	Alternative Description
		ring levees to 100-year level of risk reduction.
	PU2-R-100-4	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank. Construct/raise Lafitte and Des Allemands ring levees to 100-year level of risk reduction and build new levees around Boutte and up the east side of Bayou Lafourche from Larose to Highway 90 at the 100-year level of risk reduction.
	PU2-R-400-4	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank. Extend West Bank and Vicinity levees to Boutte; extend levees from Larose up Bayou Lafourche to Highway 90; and raise Des Allemands ring levees to 400-year level of risk reduction. Construct/raise Lafitte ring levees to 100-year level of risk reduction.
	PU2-R-1000-4	Sustain coastal landscape through restoration. Construct new sector gate on Bayou Barataria to reduce risk on the West Bank. Extend West Bank and Vicinity levees to Boutte; extend levees from Larose up Bayou Lafourche to Highway 90; and raise Des Allemands ring levees to 1000-year level of risk reduction. Construct/raise Lafitte ring levees to 100-year level of risk reduction.
	PU2-G-100-1	Sustain coastal landscape through restoration. Similar structural features as PU2-WBI-100-1 but with additional barrier-weir and levees along the GIWW to reduce risk to areas within the Barataria Basin. Also reduces risk to the Lafitte area.
	PU2-G-100-4	Sustain coastal landscape through restoration. Similar structural features as PU2-R-100-4 but with additional barrier-weir and levees along the GIWW to reduce risk to areas within the Barataria Basin. Also reduces risk to the Lafitte area.
	PU2-G-400-4	Sustain coastal landscape through restoration. Similar structural features as PU2-R-400-4 but with additional barrier-weir and levees along the GIWW to reduce risk to areas within the Barataria Basin. Also reduces risk to the Lafitte area.
	PU2-G-1000-4	Sustain coastal landscape through restoration. Similar structural features as PU2-R-1000-4 but with additional barrier-weir and levees along the GIWW to reduce risk to areas within the Barataria Basin. Also reduces risk to the Lafitte area.
Comprehensive (Coastal, Structural, and Nonstructural)	PU2-C-X-xxx-x	Structural/coastal alternatives are made comprehensive by adding complementary nonstructural measures to reduce residual risk in areas without structural risk reduction measures. Comprehensive alternatives are noted by a “C-“ in front of the structural/coastal alternative code.

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Below is a map showing the areas encompassed by Planning Unit 2.



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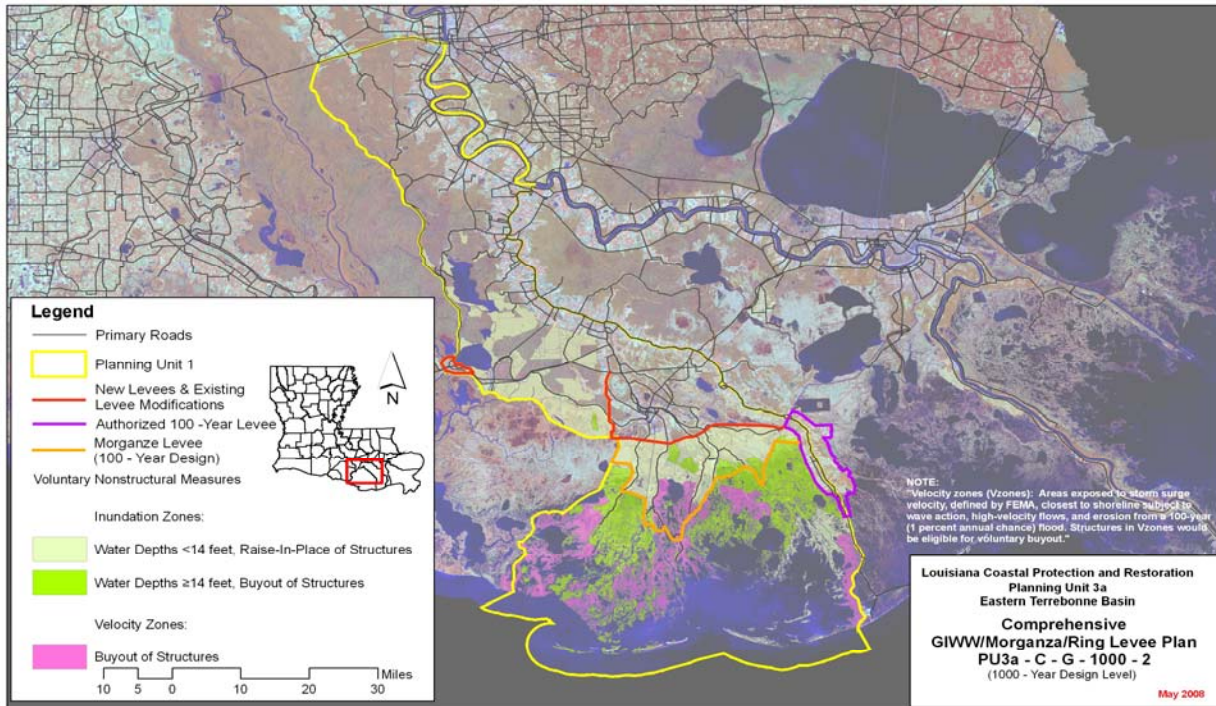
Planning Unit 3a

Levee alignment strategies included analysis of variations on the alignment and design heights for the currently proposed 100-year **Morganza to the Gulf** project, as authorized by the Water Resources Development Act of 2007. Alternative alignments include: extending the proposed Morganza alignment westward to Morgan City and into the Atchafalaya basin; tying the proposed Morganza alignment into high ground to the west of Houma with a ring levee around Morgan City; and using the Morganza levee as a first line of defense at a 100-year design level and then providing a second levee alignment further inland, along the **GIWW**, to prevent inner flooding around Houma at a 400-year and 1000-year frequency design, and again including a ring levee around Morgan City. Following the tiered screening process, four structural alternatives were selected for further analysis in Planning Unit 3a.

Category	Alternative	Alternative Description
No Action	PU3a-0	No action (without project) alternative.
Coastal Restoration Only	PU3a-R1	Sustain coastal landscape through restoration including shoreline protection, marsh creation, and diversions from the Mississippi River.
Coastal Restoration and Nonstructural Measures	PU3a-NS-100, -400, and -1000	Sustain coastal landscape through restoration. Implement comprehensive 100-year, 400-year or 1000-year nonstructural measures.
Coastal Restoration and Structural Measures	PU3a-M-100-1	Sustain coastal landscape through restoration. Construct Morganza to the Gulf levee with extension tying into high ground west of Morgan City at 100-year design level.
	PU3a-M-100-2	Sustain coastal landscape through restoration. Construct Morganza to the Gulf levee with tieback to high ground south of Thibodaux and ring levee around Morgan City at 100-year design level.
	PU3a-G-400-2	Sustain coastal landscape through restoration. Construct Morganza to the Gulf levee at the 100-year design level with a second levee along the GIWW with tieback to high ground south of Thibodaux and ring levee around Morgan City providing a 400-year level of risk reduction for Houma and Morgan City.
	PU3a-G-1000-2	Sustain coastal landscape through restoration. Construct Morganza to the Gulf levee at the 100-year design level and a second levee along the GIWW with tieback to high ground south of Thibodaux and ring levee around Morgan City providing a 1000-year level of risk reduction for Houma and Morgan City.
Comprehensive (Coastal, Structural, and Nonstructural)	PU3a-C-X-xxx-x	Structural/coastal alternatives are made comprehensive by adding complementary nonstructural measures to reduce residual risk in areas without structural risk reduction measures. Comprehensive alternatives are noted by a "C-" in front of the structural/coastal alternative code.

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Below is a map showing the areas encompassed by Planning Unit 3a.



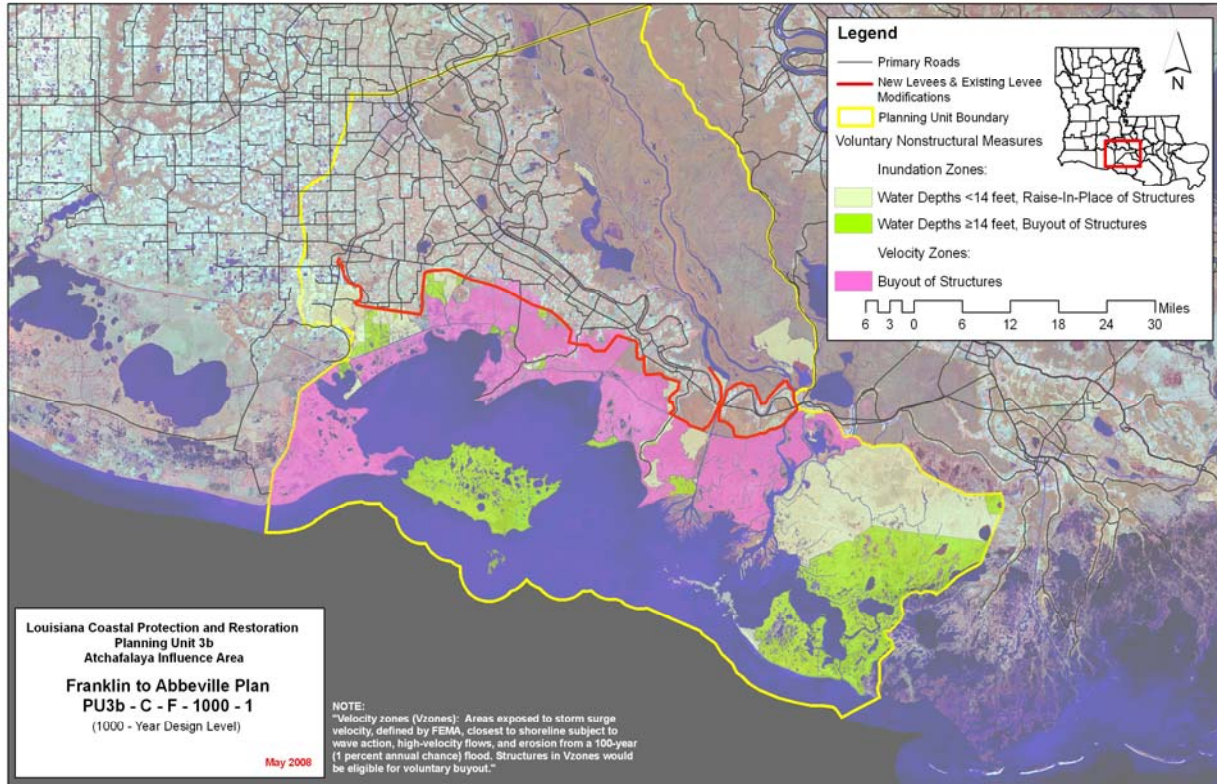
Planning Unit 3b

The primary levee alignment strategies considered in Planning Unit 3b included two parallel alignments extending from Morgan City west across Vermilion Bay. The southern alignment follows the **GIWW** and extends into Planning Unit 4. The northern alignment, designated as the **Franklin to Abbeville** alignment, provides a ring levee around Patterson and a continuous levee from Patterson, around Franklin and Baldwin and tying to high ground to the west of Abbeville. A third levee alignment strategy considers **ring levees** surrounding concentrated population centers, including Patterson, Franklin, Baldwin, New Iberia, Erath, Delcambre and Abbeville. Following the tiered screening process, six structural alternatives were selected for further analysis in Planning Unit 3b.

Category	Alternative	Alternative Description
No Action	PU3b-0	No action (without project) alternative.
Coastal Restoration Only	PU3b-R1	Sustain coastal landscape through restoration including shoreline protection, marsh creation, etc.
Coastal Restoration and Nonstructural Measures	PU3b-NS-100, -400, and -1000	Sustain coastal landscape through restoration. Implement comprehensive 100-year, 400-year or 1000-year nonstructural measures.
Coastal Restoration and Structural Measures	PU3b-G-100-1	Sustain coastal landscape through restoration. Raise ring levee around Patterson/Berwick to 100-year design level and construct levee along the GIWW west to the boundary of Planning Unit 4 at the 100-year design level.
	PU3b-F-100-1	Sustain coastal landscape through restoration. Raise ring levee around Patterson/Berwick to 100-year design level and construct levee along the edge of development north of the GIWW to high ground west of Abbeville at the 100-year design level.
	PU3b-F-400-1	Sustain coastal landscape through restoration. Raise ring levee around Patterson/Berwick to 400-year design level and construct levee along the edge of development north of the GIWW to high ground west of Abbeville at the 400-year design level.
	PU3b-F-1000-1	Sustain coastal landscape through restoration. Raise ring levee around Patterson/Berwick to 1000-year design level and construct levee along the edge of development north of the GIWW to high ground west of Abbeville at the 1000-year design level.
	PU3b-RL-100-1	Sustain coastal landscape through restoration. Raise ring levee around Patterson/Berwick to 100-year design level and construct ring levees around Franklin/Baldwin, New Iberia, Erath, Delcambre, and Abbeville at the 100-year design level.
	PU3b-RL-400-1	Sustain coastal landscape through restoration. Raise ring levee around Patterson/Berwick to 400-year design level and construct ring levees around Franklin/Baldwin, New Iberia, Erath, Delcambre, and Abbeville at the 400-year design level.
Comprehensive (Coastal, Structural, and Nonstructural)	PU3b-C-X-xxx-x	Structural/coastal alternatives are made comprehensive by adding complementary nonstructural measures to reduce residual risk in areas without structural risk reduction measures. Comprehensive alternatives are noted by a "C-" in front of the structural/coastal alternative code.

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Below is a map showing the areas encompassed by Planning Unit 3b.



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Planning Unit 4

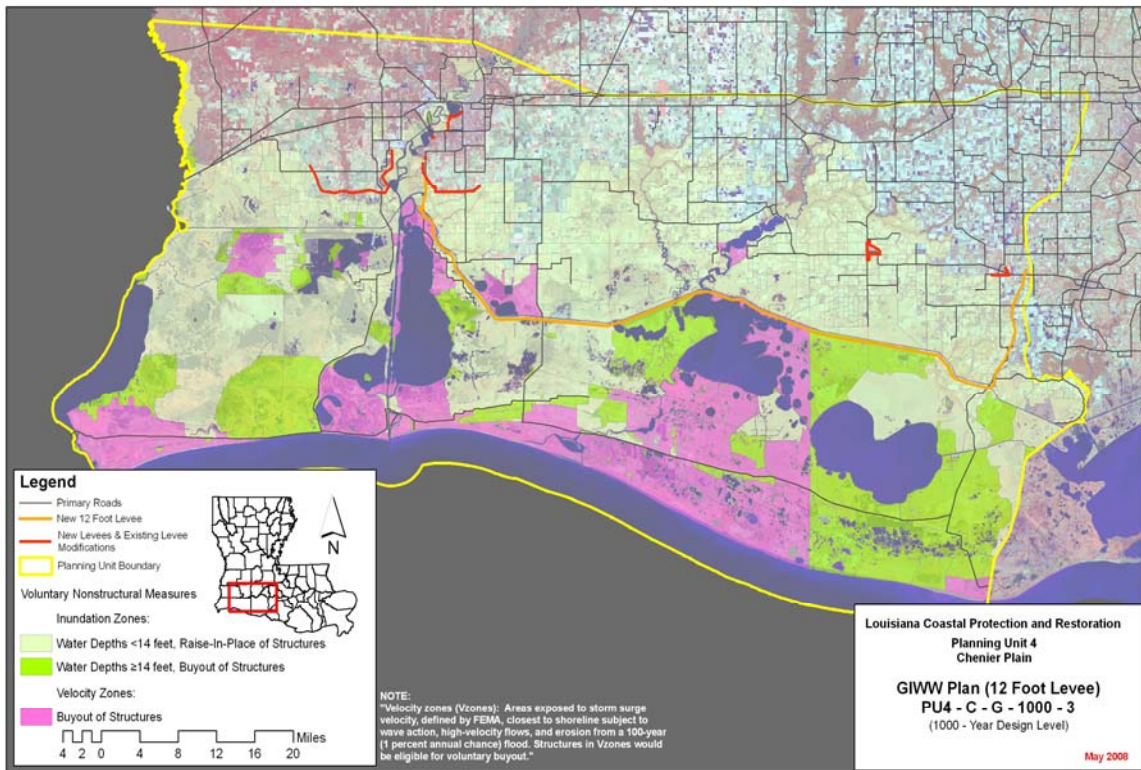
The levee alignment strategies for this planning unit are relatively similar for the two continuous levees extending along the **GIWW** westward from near Vermilion Bay to the Calcasieu River just below Lake Charles, with a separable reach west of the river. The first of these alignments joins with the same alignment in Planning Unit 3b. The second alignment has a return to high ground to the west of the Vermilion River so that this alternative can be evaluated as “stand alone.” The second alignment strategy consists primarily of a series of **ring levees** to the east and west of Lake Charles. The third alignment strategy is a hybrid of the first two strategies where a **12-foot GIWW levee** performs essentially as an overtopping weir with ring levees behind it. Common to all three strategies is a series of small levees within Lake Charles to separate the river from the land. Following the tiered screening process, seven structural alternatives were selected for further analysis in Planning Unit 4.

Category	Alternative	Alternative Description
No Action	PU4-0	No action (without project) alternative.
Coastal Restoration Only	PU4-R1	Sustain coastal landscape through restoration including shoreline protection, marsh creation, etc.
Coastal Restoration and Nonstructural Measures	PU4-NS-100, -400, and -1000	Sustain coastal landscape through restoration. Implement comprehensive 100-year, 400-year or 1000-year nonstructural measures.
Coastal Restoration and Structural Measures	PU4-G-100-1	Sustain coastal landscape through restoration. Construct a continuous levee (with gates) along the GIWW plus a ring levee to the west of the Calcasieu River and a series of levees within Lake Charles to separate the river from the land at the 100-year design level. Alignment joins with similar alignment in Planning Unit 3b.
	PU4-G-100-2	Sustain coastal landscape through restoration. Construct a continuous levee (with gates) along the GIWW plus a ring levee to the west of the Calcasieu River and a series of levees within Lake Charles to separate the river from the land at the 100-year design level. Alignment ties to high ground to the west of the Vermilion River so this alternative can be evaluated as "stand alone" from alternatives in Planning Unit 3b.
	PU4-G-400-3	Sustain coastal landscape through restoration. Construct a continuous 12-foot levee (with gates) along the GIWW plus a ring levee to the west of the Calcasieu River and a series of levees within Lake Charles to separate the river from the land. Includes small ring levees around parts of Lake Charles, Gueydan, and Kaplan to provide 400-year level of risk reduction. Alignment ties to high ground to the west of the Vermilion River so this alternative can be evaluated as "stand alone" from alternatives in Planning Unit 3b.
	PU4-G-1000-3	Sustain coastal landscape through restoration. Construct a 12-foot continuous levee (with gates) along the GIWW plus a ring levee to the west of the Calcasieu River and a series of levees within Lake Charles to separate the river from the land. Includes small ring levees around parts of Lake Charles, Gueydan, and Kaplan to provide 1000-year level of risk reduction. Alignment ties to high ground to the west of the Vermilion River so this alternative can

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Category	Alternative	Alternative Description
		be evaluated as "stand alone" from alternatives in Planning Unit 3b.
	PU4-RL-100-1	Sustain coastal landscape through restoration. Construct ring levees to the east and west of Lake Charles; construct a series of levees within Lake Charles to separate the river from the land; and construct ring levees around Kaplan and Gueydan to the 100-year design level.
	PU4-RL-400-1	Sustain coastal landscape through restoration. Construct ring levees to the east and west of Lake Charles; construct a series of levees within Lake Charles to separate the river from the land; and construct ring levees around Kaplan and Gueydan to the 400-year design level.
	PU4-RL-1000-1	Sustain coastal landscape through restoration. Construct ring levees to the east and west of Lake Charles; construct a series of levees within Lake Charles to separate the river from the land; and construct ring levees around Kaplan and Gueydan to 1000-year design level.
Comprehensive (Coastal, Structural, and Nonstructural)	PU4-C-X-xxx-x	Structural/coastal alternatives are made comprehensive by adding complementary nonstructural measures to reduce residual risk in areas without structural risk reduction measures. Comprehensive alternatives are noted by a "C-" in front of the structural/coastal alternative code.

Below is a map showing the areas encompassed by Planning Unit 4.



FACILITY, TOWN AND CEMETERY RELOCATIONS

For cost shared projects, it is the responsibility of the non-federal sponsor to accomplish relocation of facilities and utilities. Costs associated with relocations are creditable as part of the non-federal sponsor's LERRD credit. The term relocation generally means providing a functionally equivalent facility to the owner of an existing facility or utility by one of the following means: alteration, lowering, raising or replacement of the facility or utility. Engineering Division used the 1990 Louisiana Pipeline and Industrial Atlas as well as information obtained from Louisiana Department of Natural Resources (LDNR) to identify oil and gas producing facilities located in the proposed planning area. State and Parish highways impacted by alternatives were also identified. Relocations must be accomplished prior to granting right of entry for construction. Utility and facility relocations are a lengthy and costly process; although the number of relocations is not known at this time, the projected acquisition schedules take into account the fact that relocations will need to be accomplished.

Prior to any relocations, an Attorney's Opinion of Compensability must be accomplished to determine the extent of the legal obligation to relocate a utility or public facility. A Preliminary Attorney's Opinion of Compensability will be performed during the feasibility phase for recommended alternatives.

Relocation of towns is not planned at this time. At this time, it is not known if cemeteries will be impacted by alternatives. It is New Orleans District's policy to avoid impact to cemeteries to the greatest extent possible. If during the feasibility phase, it is discovered that cemeteries are impacted by project features, a cemetery relocation plan will be prepared. That feature of the project will be scheduled accordingly since cemetery relocations require an extensive amount of time and effort to accomplish. The relocation of cemeteries is premised on the acquisition of a real estate interest and extinguishment of the legal right of the next of kin to visit and preserve the burial grounds for their ancestors and relatives. It is the policy of the Corps of Engineers to respect the wishes of the next of kin as to the removal and reinterment of bodies. Ordinarily just compensation for the acquisition of an existing cemetery site will consist of furnishing a new site comparable to the existing site, plus disinterment and reinterment of the bodies as well as transferring monuments and other facilities from the old to the new site. The existing cemetery will be acquired through condemnation; whereas the site for the new cemetery will be acquired through conventional means unless negotiations are unsuccessful.

ENVIRONMENTAL ISSUES

Hazardous, Toxic, and Radiological Waste (HTRW)

Due to the nature of the LACPR Technical Report, a Programmatic Environmental Impact Statement (PEIS) was not prepared. However, the Planning Units for LACPR were based upon a prior programmatic study, Louisiana Coastal Authority (LCA) Programmatic Study, in which a PEIS was prepared. Please consult section 3.21.2, Existing Conditions, of the LCA Programmatic Environmental Impact Statement, November 2004 for more comprehensive information pertaining to HTRW within the project areas.

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HTRW includes any material listed as a “hazardous substance” under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and any material listed as a hazardous waste under the Resource Conservation and Recovery Act (RCRA) and other pertinent Acts & Legislation.

A review of Federal and state agencies’ databases reveals numerous HTRW sites of concern within the parishes in the coastal Louisiana study area which could potentially pose a problem. The Federal agencies’ databases revealed numerous sites under the National Priority List (Superfund); CERCLA; RCRA waste generators; RCRA Corrective Action (CORRACTS) list; RCRA non-CORRACTS treatment, storage or disposal facilities; and sites listed under the National Response center for incidents involving oil and chemical spills. The state databases also revealed numerous inactive and abandoned sites, landfills, and leaking underground storage tanks. In addition to these known areas of concern, a large number of unknown/unidentified environmental sites of concern are likely located within the coastal Louisiana study area.

Compilation of a list of sites of concern for the entire LACPR Study area is not practicable at this time since specific right of way alignments have not been determined. As alternative plans become more defined, detailed HTRW analyses will be performed to evaluate and eliminate, where possible, potential HTRW problem sites from consideration. Addressing existing HTRW sites of concern for proposed LACPR Plan projects will include a review of site-specific historical uses as well as soil borings. Prior to initiation of any acquisition activities, HTRW clearances will be obtained; remediation/clean up of lands needed for construction, operation and/or maintenance of any project is considered a non-Federal sponsor responsibility.

Oyster Leases

An oyster lease has been recognized as a real estate interest by both statute and case law. Should the project features impact oyster leases, the non-federal sponsor will acquire the oyster leases. With acceptance of payment for an affected lease, the lessee will execute a purchase agreement with the State of Louisiana and a receipt, release, indemnity and hold harmless agreement in favor of the United States, including the U.S. Army Corps of Engineers (USACE), and the State of Louisiana, including Louisiana Department of Natural Resources (LDNR) and Louisiana Department of Wildlife and Fisheries (LDWF); The purchase agreement will indicate that full and fair compensation has been made in complete satisfaction of all claims against the State and the U.S., related to past, present, or future damages to the affected lease.

Depending on the project schedule, the oyster lessee may be allowed to harvest the oysters at his own expense. However, if the plan schedule prevents the oyster lessee from removing the oysters, then the lessee will be compensated for the oyster crop. The lessee will not be allowed to harvest the crop if payment has been made for the oysters. Under the federal method, no payment will be made for loss of future crop. Compensation for the oysters is limited to the contributory value of the crop.

Oyster leases are located on State owned water bottoms. The designated areas are leased for \$2 per acre per year. Leases are for a duration of 15 years with option to renew. The State has the right to cancel leases with written notice in the event that a public works project is planned

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within leased areas. The compensation is based upon the market value of the lease at the time of the lease cancelation. *Productive oyster* leases sell in the private market for an average price of approximately \$400.00/acre. Given the preliminary nature of alternative feature designs, oyster lease impacts could not be evaluated in this technical report. It is likely that hundreds of acres of oyster leases could be impacted by some of the coastal restoration and water diversion features of the LACPR projects. Because the market value of oyster leases is very comparable to the market value of privately owned marsh, in preparation of the real estate cost estimates, it was assumed that all areas impacted by the coastal restoration and water diversion features were privately owned. Therefore, the cost estimates include a portion of the costs associated with impacts to oyster leases but do not include the costs associated with business relocation. These costs will be estimated during subsequent feasibility studies when identification of oyster leases is possible.

Timber

As with Row Crops (below) determining the impact of LACPR projects on timber, timber production, timber conservation and impact on the foresting industry is unknown at this time. However, the following information, taken from the LCA PEIS from November 2004 sheds some light on the potential impacts of LACPR projects, once construction commences. Please refer to section 3.22.12 of the LCA PEIS for additional information.

Timber production in Louisiana's forested wetlands is an important renewable resource. Bottomland forests in southern Louisiana serve as a source for merchantable lumber. Presently, Louisiana's forest land covers about 13.8 million acres (5.6 million ha), which is about 2,000,000 acres (810,000 ha) less than the early 1960s forestland area. Private, non-industrial companies own over 60 percent of Louisiana's forestland, while forest-product industries and the public own the remaining 40 percent of forestland.

It is the general intent of the plan to reserve to the landowners the right to harvest timber. Where the estate prohibits timber harvesting, the landowner will be compensated for the merchantable timber. The prices paid for a specific stand of timber will vary considerably due to factors such as size, species, quality, quantity, logging conditions, distance to the mill, end product, demand and competition. Stumpage prices paid for pine sawtimber during the second quarter of 2008 averaged \$290 per thousand board feet Doyle. Prices for mixed hardwood sawtimber averaged \$289 per thousand board feet Doyle. Pulpwood stumpage prices averaged \$28 per standard cord for pine and \$19 per standard cord for hardwood. (*LA Dept of Agriculture & Forestry, Quarterly Report, April – June 2008*)

Because the impact of the LACPR alternatives on actual timber stands could not be determined at this time, the contributory value of timber was estimated in the overall value of the land.

Row Crop

It is assumed that landowners will be allowed to harvest mature crops prior to construction of the plan. In that instance, compensation would be for the impact of the easement on the value of the property. If time constraints do not permit the landowner to harvest crops, the landowner will also be compensated for the market value of the crops.

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Specifically pertaining to the type of row crops in the area, stage-damage relationships were developed for the agricultural resources in the planning areas. The National Agricultural Statistics Service GIS database for the year 2005 (pre-Katrina and Rita) was used to provide the location of each of the various crops farmed in the LACPR planning area. These crops include corn, citrus, rice, soybeans, strawberries, sugar cane, and tomatoes. . There are approximately 800 acres in citrus production in planning unit 1 with a total gross farm value of \$6,431,000. Strawberries and tomatoes are also a large crop in planning unit 1 with approximately 500 acres in strawberry production and approximately 136,300 acres in tomato production yielding a combined total gross farm value of \$20,610,000. Major crops found in Planning units 2, 3a, 3b and 4 include corn, rice, soybeans, and sugar cane. Estimated planted acreage for these crops are as follow: corn-726,900 acres, rice – 370,100 acres, soybeans – 620,400 acres, and sugarcane – 418,933 acres. The combined gross farm value of these crops is approximately 1,315,000,000. Planning units 2, 3a, 3b and 4 also have numerous acres in aquaculture for crawfish. It is estimated that approximately 168,000 acres are farmed for crawfish yielding a gross farm value of \$84,600,000.

Mitigation

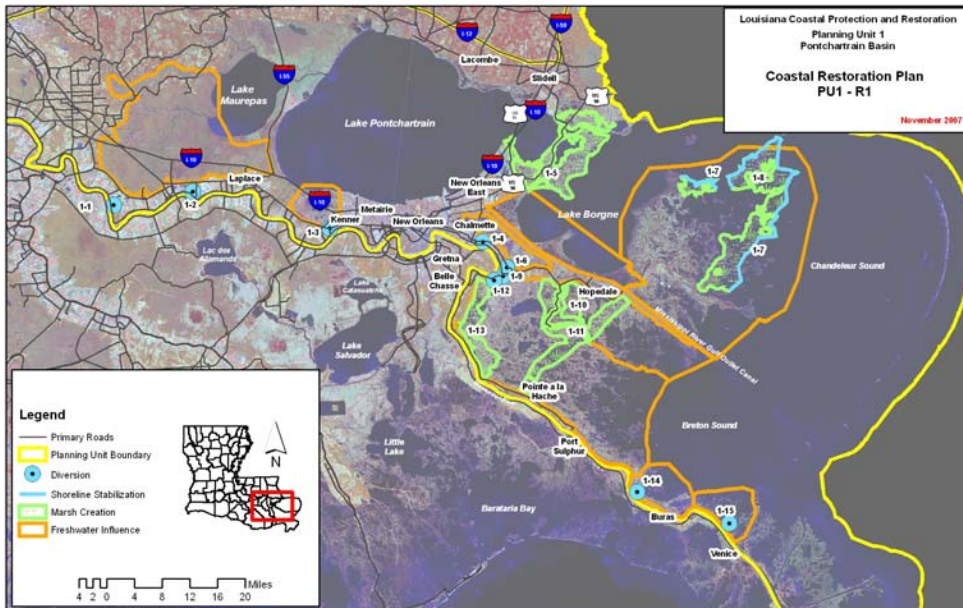
The term *compensatory mitigation* generally refers to actions taken to offset environmental impacts by replacing or providing substitute resources or environments. The various structural hurricane risk reduction measures under consideration for LACPR will inevitably result in unavoidable impacts to wetlands and other aquatic resources. In these cases, compensatory mitigation would be needed to ensure that such unavoidable impacts are fully offset, consistent with the policy of no-net-loss.

Acres of mitigation required (ratio) will vary depending upon quality functions and values of acres impacted, quality of acres of mitigation area. Furthermore the quantity of acres required to meet mitigation requirements will fluctuate depending upon length of the project analysis period (i.e., 50 or 100 years). Consistent with long-standing Federal mitigation policy, and based on extensive experience with compensatory mitigation in Louisiana, the LACPR Habitat Evaluation Team recommends use of a minimum of a 1.5:1 mitigation ratio for estimating implementation needs (e.g., cost, sediment resources, and timing).

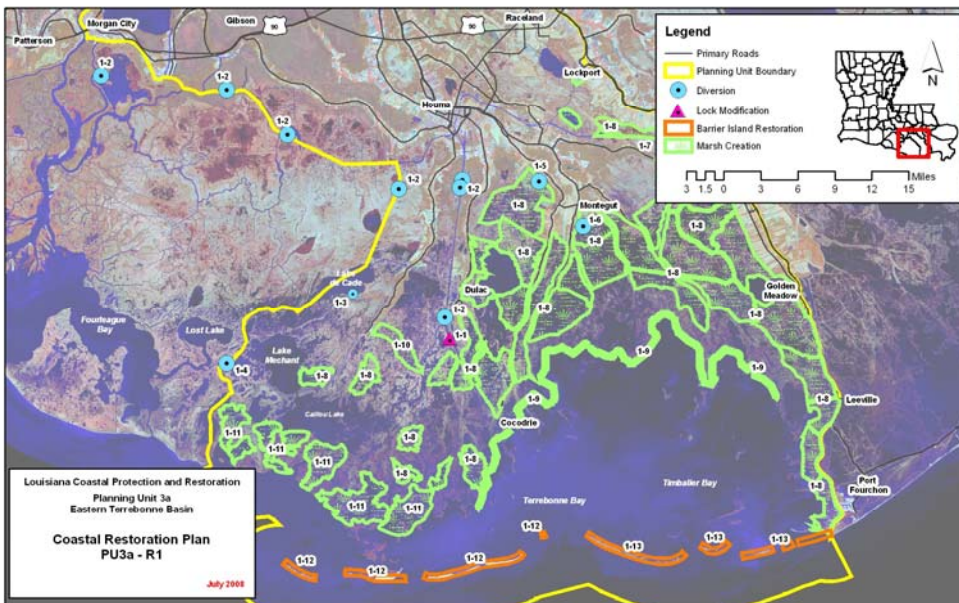
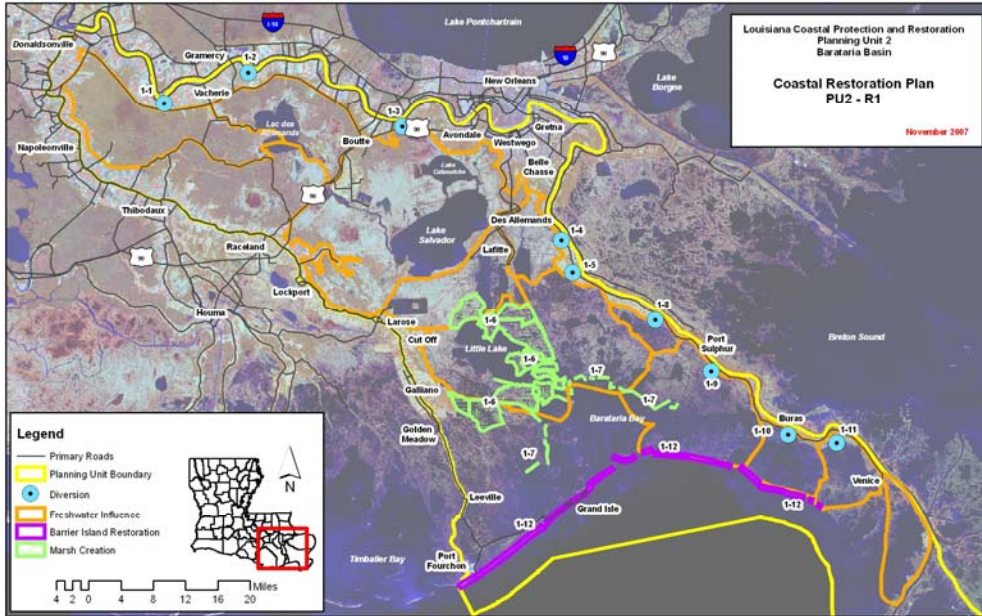
Compensatory mitigation for any future projects will be conducted in advance or concurrent with implementation of the structural hurricane risk reduction projects for which the mitigation is required. Mitigation lands will be acquired by the non-federal sponsors after cost-sharing agreements have been signed. The proposed estate is to acquire fee excluding minerals (with restrictions on use of the surface). Real estate costs will depend upon the location of the mitigation sites and the highest and best use potential of those properties.

INDUCED FLOODING

Some alternatives include freshwater diversion channels to restore wetland areas. Therefore, there is a potential that various features of LACPR may induce flooding. The diversion features will require the acquisition of a standard channel easement and a standard flowage easement. The maps below indicate the areas where diversion channels would be constructed and the areas of freshwater influence. Planning Unit 4 does not propose any freshwater diversion areas.

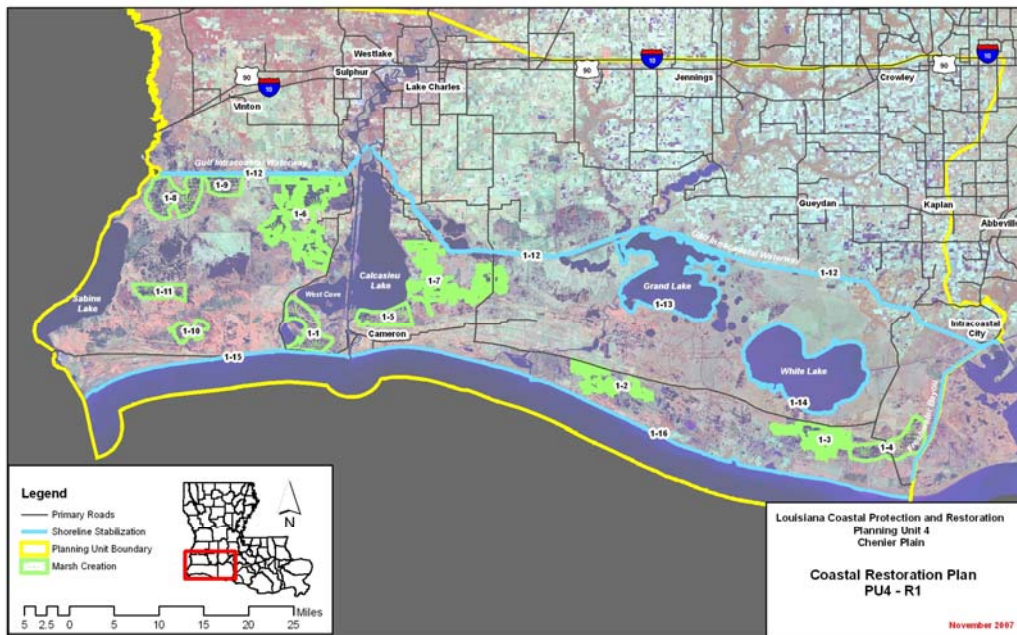
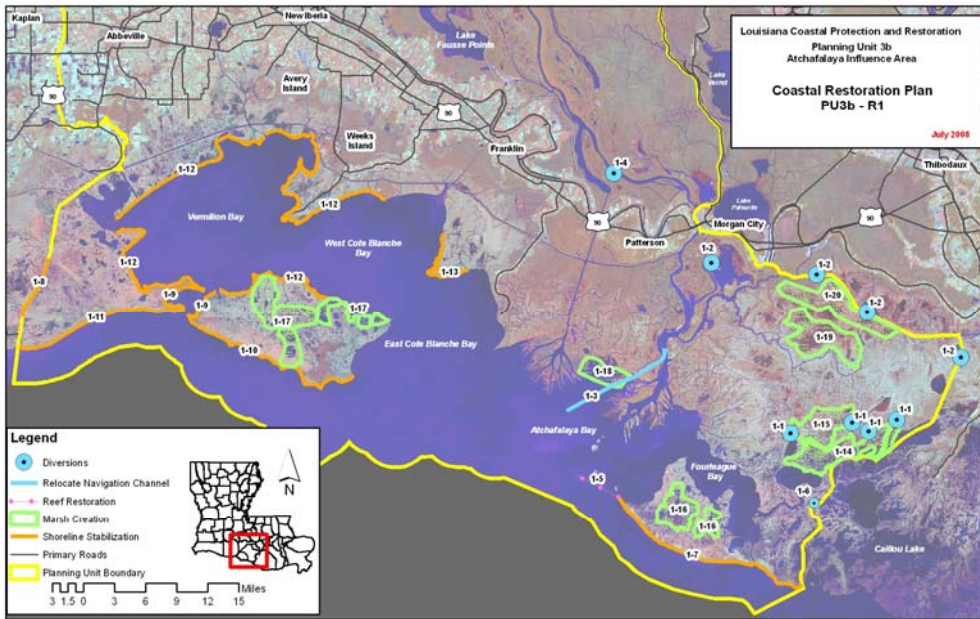


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MINERAL ACTIVITY

Mineral rights will not be acquired since project features at this time do not impact subsurface rights. The estates will expressly reserve to the landowner all mineral interests. Although the mineral interest owner will be allowed to continue ongoing mineral activities, in some areas there may be prohibitions or restrictions on future use of the surface of the property for mineral purposes. Alternative drilling methods may allow access to the minerals, e.g., via directional drilling. Specifically, in areas where fee title will be acquired and where permanent features would preclude surface access, e.g., channel or levee easements, the estates would expressly prohibit surface exploration or extraction. In other areas, the estates would restrict, rather than prohibit, the surface use, and would require prior written approval by the USACE and the non-federal sponsor for mineral activities on the surface. Such approval would be granted if the surface activity does not interfere with the construction, operation, or maintenance of the project.

For most project features, the restrictions of surface use would not preclude the exploration of minerals given that the right of way to be acquired will be minimal in size compared to remaining ownership size. In those situations where the majority of the ownership is impacted by an easement that restricts the use of the surface, it is assumed that remote access to the minerals would be feasible, e.g., via directional drilling or other methods.

It is common in the market for sellers to reserve mineral interests. For those properties that are not in current production, there is no market evidence that the mineral interests have any contributory value to the property value. If the project features were to impact properties encumbered by leases, the government would obtain a waiver of surface rights or a partial cancellation of the lease (for the portion of the lease in the right of way). The only instance where there could be costs associated with mineral interests is if the project were to impact conservation units (sites actively producing minerals). In those instances, an appraisal of the contributory value of the minerals to the overall property value will be estimated for compensation. The real estate costs include sufficient funds to cover negotiations with outstanding third party mineral interest holders.

ZONING ORDINANCES

No zoning ordinances are proposed in lieu of acquisition of realty interests in connection with the proposed study alternatives.

FEDERALLY OWNED AND STATE OWNED LANDS

The LACPR alternatives may impact federally owned lands. For those features that are located in federally owned property, a memorandum of agreement will be signed between the USACE and the other federal agency. For those agencies that do not accept a memorandum of agreement; acquisition/exchange documents will be prepared in coordination with the agencies to ensure that all Federal regulations are adhered to.

Features of the LACPR alternatives may also impact State of Louisiana lands. For those areas that are owned by the State of Louisiana, the State will issue a grant of particular use to the USACE providing right-of-entry to its property. For planning purposes, it is assumed that the

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State owns the bed and bottoms of navigable waterways, including areas of open water. A detailed determination of ownership of the State, including any political subdivisions of the State, will be made for each particular feature. Moreover, section 3.7 of the Programmatic Cumulative Effects Report, a portion of the LACPR Main Report, specifically identifies areas within the state of Louisiana that are designated for Wildlife Management, Conservation and Recreational Opportunities, such as hunting, fishing, hiking, etc.. Figure 3.7-1 depicts the aforesaid areas and are listed in the Recreational Resources Annex (Annex B). For more details pertaining to State & Federally owned recreational areas, please consult the aforementioned sections in other portions of the LACPR Final Report. LACPR project areas are overlay Corps projects currently underway. For a list of the Corps projects within the LACPR project areas, please consult the Programmatic Cumulative Effects Analysis Appendix Annex A - Ongoing Projects in Study Area. Corps' project types include navigation, flood control, marsh creation & protection.

NAVIGATION SERVITUDE

Derived from the Commerce Clause of the U.S. Constitution, article I, section 8, clause 3, the navigation servitude is the dominant right of the United States to use, control and regulate the navigable waters and submerged lands thereunder. The applicability of the navigation servitude depends on both legal and factual determinations. If the legal determination supports assertion of the navigation servitude, then the second step is to determine the geographical area over which the servitude can be asserted. In tidal areas, the servitude extends to all lands below the mean high water mark, whereas in non-tidal areas, the servitude extends to all lands within the bed and banks of a navigable stream that lie below the ordinary high water mark. For planning purposes, the real estate cost estimates do not consider the effect of the navigation servitude, given the extensive technical analysis required for such a factual determination. The navigation servitude will be asserted where appropriate. It is the relation to navigation rather than the stated project purpose that determines whether navigational servitude should be asserted.

ESTATES

An array of both standard and non-standard estates and the typical language for each is included below. The brackets indicate optional language for rights that may need to be acquired, if necessary, for a project feature. Because LACPR is a programmatic study and does not identify a tentatively selected plan for any of the planning units or study areas, not all of the following estates will necessarily apply for all of the alternatives considered in this LACPR programmatic report; the non-standard estates are contained herein for informational purposes only. It is anticipated the LACPR study area will be partitioned into several smaller feasibility-level studies, requiring a Real Estate Plan for each authorized study. The proposed non-standard estates for each of these smaller studies will require approval from headquarters (HQUSACE).

Fee Excluding Minerals (With Restriction on use of the Surface) (Standard Estate)

The fee simple title to the land, subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines; excepting and excluding all (coal) (oil and gas), in and under said land and all appurtenant rights for the exploration, development,

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production and removal of said (coal) (oil and gas), but without the right to enter upon or over the surface of said land for the for the purpose of exploration, development, production and removal therefrom of said (coal) (oil and gas).

Flowage Easement (Permanent Flooding) (Standard Estate)

The perpetual right, power, privilege and easement permanently to overflow, flood and submerge (the land described in Schedule A) Tracts Nos. _____, _____ and _____), (and to maintain mosquito control) in connection with the operation maintenance of the project as authorized by the Act of Congress approved _____, and the continuing right to clear and remove and brush, debris and natural obstructions which, in the opinion of the representative of the United States in charge of the project, may be detrimental to the project, together with all right, title and interest in and to the timber, structures and improvements situate on the land ¹ (excepting _____, (here identify those structures not designed for human habitation which the District Engineer determines may remain on the land)); provided that no structures for human habitation shall be constructed or maintained on the land, that no other structures shall be constructed or maintained on the land except as may be approved in writing by the representative of the United States in charge of the project, and that no excavation shall be conducted and no landfill placed on the land without such approval as to the location and method of excavation and/or placement of. landfill; ² the above estate is taken subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by Congress or abridging the rights and easement hereby acquired; provided further that any use of the land shall be subject to Federal and State laws with respect to pollution.

Channel or Channel Improvement Easement (Standard Estate)

A perpetual and assignable right and easement to construct, operate, and maintain channel improvement works on, over and across (tract no. _____) for the purpose as authorized by the Act of Congress approved _____, including the right to clear, cut, fell, remove and dispose of any and all timber, trees, underbrush, building, improvements and/or other obstructions therefrom; to excavate, dredge, cut away, and remove any or all of said land and to place thereon excavated material; and for such other purposes as may be required in connection with said work of improvement; reserving, however, to the owners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

¹ Any structures existing in areas that will be allowed to remain must be evaluated using the same criteria that would be used to grant permission for a new structure to be placed in the easement, in coordination with the operational office.

² If sand and gravel or other quarriable material is in the easement area and the excavation thereof will not interfere with the operation of the project, the following clause will be added: "excepting that excavation for the purpose of quarrying (sand) (gravel) (etc.) shall be permitted, subject only to such approval as to the placement of overburden, if any, in connection with such excavation;"

Wetland Creation and Restoration Easement (Non-Standard Estate)

A perpetual and assignable right, servitude and easement in, on, over and across those lands to construct, operate and maintain the creation and/or restoration of wetlands and associated coastal habitats on the land hereinafter described, including the right to deposit dredged material sediment or other beneficial materials thereon; to construct dikes and to install, alter, relocate, repair or plug cuts in the banks of said dikes; to accomplish any alterations of contours on said land for the purpose of accommodating the deposition of dredged and/or other beneficial materials as necessary in connection with such works; to clear, trim, cut, fell, and remove therefrom any or all trees, timber, underbrush, obstructions and any other vegetation, structures, or obstacles as required in connection with said work; to clear, borrow, excavate and remove therefrom all soil, dirt and any other materials, including dredged material, as required in connection with said work; to construct, operate and maintain pipelines to transport and/or deposit dredged and/or other beneficial material on said lands; to place, move and utilize machinery necessary and useful in the operation of such pipelines; to place, move and utilize other equipment useful in the control of the such material and effluent; to plant or cause the growth of vegetation on said land; and to create, restore, nourish and enhance the wetlands and associated coastal habitats in, over, across and upon the said lands; provided that no structures for human habitation shall be constructed on the land but existing structures may be maintained and that no other structures shall be constructed or maintained on the land without the prior written approval of the United States, as represented by the U.S. Army Corps of Engineers, or the State of Louisiana, as represented by the Louisiana Department of Natural Resources, or authorized representative, and that no excavation shall be conducted and no disposal of any kind placed on the land without such written approval, including approval of the location and method of excavation and/or placement of disposal; the above estate is taken subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the Grantor, its successors and assigns, all such rights and privileges in said land as may be used and enjoyed without interfering with or abridging the use of the project for the purposes authorized by Congress or the rights, servitudes and easements hereby acquired, *[and expressly excepting and excluding from the taking all oil, gas and other minerals in and under said land and all appurtenant rights used in connection with the exploration, development, production and removal of said oil, gas and other minerals but without the right to enter upon or over the surface of said land for the purpose of drilling and extracting therefrom said oil, gas and other minerals]*.

Flowage and Deposition Easement (Non-Standard Estate)

The perpetual right, power, privilege, and easement permanently to overflow, flood and submerge the land, including the right to deposit dredged or sediment material on, over and across the land and the continuing right to clear and remove any brush, debris and natural obstructions which, in the opinion of the representative of the United States in charge of the project, may be detrimental to the project; provided that no structures for human habitation shall be constructed but existing structures may be maintained on the land, no other structures shall be constructed on the land except as may be approved in writing by the representative of the United States in charge of the project, and no excavation shall be conducted and no landfill placed on the land without such approval as to the location and method of excavation and/or placement of

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landfill; the above estate is taken subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by Congress or abridging the rights and easement hereby acquired [*and expressly excepting and excluding from the taking all oil, gas and other minerals in and under said land and all appurtenant rights used in connection with the exploration, development, production and removal of said oil, gas and other minerals but without the right to enter upon or over the surface of said land for the purpose of drilling and extracting therefrom said oil, gas and other minerals*].

Dredged Material Pipeline Easement (Non-Standard Estate)

A temporary and assignable easement and right-of-way in, on, over and across the land described in Schedule A, for a period not to exceed ____ years, beginning with the date possession of the land is granted to the United States, for the location, construction, operation, maintenance, alteration, repair and patrol of a dredged material pipeline; together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions and other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

Dredged Material Disposal Easement (Non-Standard Estate)

An assignable right and easement in, on, over and across those lands described in Schedule A, for a period not to exceed ____ years, beginning with the date possession of the land is granted to the (United States) (____{local sponsor}____), for use by the United States, its representatives, agents and contractors, to construct, operate and maintain a dredged material disposal area on the land, [including the right to construct dikes]; to deposit dredged material thereon; [to accomplish any alterations of contours on said land for the purpose of accommodating the deposit of dredged material as necessary in connection with such works]; [to borrow, excavate and remove soil, dirt and other materials, including dredged material, from said land;] [to undertake any management practice designed to enhance use of or extend the life of said land for the deposit of dredged material]; to clear, cut, fell and remove any and all trees, timber, underbrush or other obstructions therefrom; and for such other purposes as may be required in connection with said works; provided that no structures for human habitation shall be constructed on the land but existing structures may be maintained, no other structures shall be constructed on the land except as may be approved in writing by (the District Engineer of the U.S. Army Engineer District, New Orleans) (____{local sponsor}____), or authorized representative, and no excavation shall be conducted and no landfill placed on the land without such approval as to the location and method of excavation and/or placement of landfill; subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the Grantors, (their heirs) (its successors) and assigns, all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by Congress or abridging the rights and easements herein conveyed [*and expressly excepting and excluding from the taking all oil, gas and other minerals in and under said land and all appurtenant rights used in connection with the exploration, development, production and removal of said oil, gas and*

other minerals but without the right to enter upon or over the surface of said land for the purpose of drilling and extracting therefrom said oil, gas and other minerals].

Dike (and/or Weir) Easement (Non-Standard Estate)

A perpetual and exclusive right, servitude and easement in, on, over and across those lands described in Schedule A, including all appurtenances thereto, together with all rights, title and interest in and to the structure and improvements to be situated thereon, to construct, maintain, repair, operate, patrol and replace [an earthen] [a stone]dike, including the right to clear, trim, cut, fell, borrow, excavate and remove therefrom all trees, timber, underbrush, soil, dirt, obstructions and any other vegetation, structures, or obstacles as required in connection with said work; [and to install metal box weirs in the dike]; the above estate is taken subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges in said land as may be used and enjoyed without interfering with or abridging the use of the project for the purposes authorized by Congress or the rights, servitudes and easements hereby acquired.

Levee and Channel Easement (Non-Standard Estate)

A perpetual and assignable right and easement in the land, to construct, maintain, repair, operate, patrol and replace a levee, rock weir, drainage ditch, channel and/or channel improvement works, and all appurtenances thereto, and the right to clear, dredge, cutaway, borrow, excavate and remove any and all land, soil, dirt and other material from the land; including the right and easement to permanently overflow, flood and submerge the land, and the right to deposit dredged, excavated and sediment material on, over and across the land; with the continuing right to clear, cut, fell, remove and dispose of any and all timber, trees, underbrush, structures, improvements and/or other obstructions therefrom; provided that no structures for human habitation shall be constructed, existing structures may be maintained on the land, no other structures shall be constructed on the land except as may be approved in writing by the representative of the United States in charge of the project, and no excavation shall be conducted and no landfill placed on the land without such approval as to the location and method of excavation and/or placement of landfill; subject to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowners, their successors and assigns all such rights and privileges as may be used and enjoyed without interfering with the use of the project for the purposes authorized by Congress or abridging the rights and easements hereby acquired.

Flood Protection Levee Easement (Standard Estate)

A perpetual and assignable right and easement in (the land described in Schedule A) (Tracts Nos, ____, ____ and ____) to construct, maintain, repair, operate, patrol and replace a flood protection (levee) (floodwall)(gate closure) (sandbag closure), including all appurtenances thereto; reserving, however, to the owners, their heirs and assigns, all such rights and privileges in the land as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

Borrow Easement (Standard Estate)

A perpetual and assignable right and easement to clear, borrow, excavate and remove soil, dirt, and other materials from (the land described in Schedule A) (Tracts Nos. _____, _____ and _____);³ subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges in said land as may be used without interfering with or abridging the rights and easement hereby acquired.

Temporary Work Area Easement (Standard Estate)

A temporary easement and right-of-way in, on, over and across (the land described in Schedule A) (Tracts Nos. _____, _____ and _____), for a period not to exceed _____, beginning with date possession of the land is granted to the United States, for use by the United States, its representatives, agents, and contractors as a (work area), including the right to (move, store and remove equipment and supplies, and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

PUBLIC LAW 91-646

Note: As a conservative cost-estimating approach, both permanent and temporary relocation assistance costs are included in the cost of nonstructural measures for LACPR; however, P.L. 91-646 benefits may be applied differently during implementation of actual projects.

The United States Constitution and the State of Louisiana Constitution require that a property owner be paid just compensation when the government acquires private property for a public use. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (P.L. 91-646) was enacted to ensure uniformity in the treatment of persons displaced by a federal project. The Act requires that property owners be offered the market value of the real estate interest to be acquired; this offer is to be based upon an approved appraisal of the property. The government is required to conduct good faith negotiations with each landowner in an effort to acquire the property in an amicable manner. The government must pay the agreed purchase price for the property interest before requiring the owner to surrender possession of the property being acquired. Lastly, if an occupant is to be displaced from a dwelling or business the government must provide at least 90 days advance written notice of the date by which the move must occur and must offer relocation assistance. All acquisition of private property for this project will be done in accordance with the provisions of Public Law 91-646, as amended.

It is anticipated that numerous dwellings, farms and businesses may be impacted by the structural alternatives proposed in this technical report. For the LACPR technical evaluation, however, an assessment of the number of improvements that could possibly be impacted could

³ The easement estate may be limited as to time, depending upon project requirements.

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not be performed. As the location of structures is refined, an identification of improvements may be possible.

Likewise, the nonstructural alternatives propose the voluntary buyout and/or permanent relocation of structures and raising-in-place of structures. The technical report identifies nonstructural measures at the planning unit level. Smaller geographical boundaries would be considered during the implementation phase, and nonstructural projects would be identified according to these smaller boundaries.

Relocation of a large number of residents, farms or businesses will pose significant hurdles to the acquisition schedule. A displaced person cannot be required to move from the right of way until a replacement dwelling is found. In small towns this could create a hardship in that there could possibly not be sufficient number of comparable dwellings into which displaced persons could move. In addition, persons with special needs will require special accommodations which could require construction of new dwellings or rehabilitation of existing dwellings. Typical relocations usually take six to twelve months to accomplish.

Numerous relocations of residences, business and farms will undoubtedly also impact project costs. In addition to the costs of moving personal property for all displaced persons, qualified homeowners may receive a housing differential payment if the amount of just compensation is not sufficient to purchase a comparable replacement dwelling. Likewise, qualified tenants may receive rent differential payments to offset additional housing costs. It is expected that the relocation costs for most displaced persons will exceed the statutory amounts of \$22,500 for homeowners and \$5,250 for tenants. Business/Commercial & Non-for Profit organizations relocation costs are determined by two factors: reestablishment expenses & moving expenses. Reestablishment expenses are related to the operation of the business at the new location, up to \$10,000 for reasonable expenses actually incurred. Moving expenses vary and depend on the following: the moving of inventory, machinery, equipment, and similar business-related property including dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property; the loss of personal property due to the inability to move or transport the material; the cost for searching for a new business location, up to \$1,000. For estimated costs related to relocation and reestablishment of businesses, please consult the cost section of this appendix. The New Orleans District will seek authority for last resort housing payments on a project by project basis as needed.

All five planning units are eligible for FEMA's Federal Disaster Public Assistance Program, the Hazard Mitigation Grant Program, the Pre-disaster Hazard Mitigation, Federal Assistance to Individuals and Households, and the Flood Mitigation Assistance Program pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, U.S. C, 5121 et seq., and their implementing regulations contained in Title 44, Code of Federal Regulations (CFR) Part 206, the National Flood Insurance Reform Act of 1994 and its implement regulations contained in 44 CFR Part 78, and the Disaster Mitigation Act of 2000 and its implementing regulations.

The Hazard Mitigation Grant Program and the Flood Mitigation Assistance Program cover properties that have sustained repetitive losses due to floods within a ten year period. The program provides homeowners and business owners with grants to mitigate against future losses

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by way of raising structures to above the base flood elevation, incorporating dry floodproofing techniques, relocating the structure outside the floodplain, acquisition and demolition of the structure. These programs, however, are voluntary on the part of the owners. For various reasons, it is the minority of owners that participate in the program. The property must meet qualifying criteria and often the mitigation costs could exceed the grant allowance.

The only FEMA program that could possibly pose an issue for an LACPR alternative could be the Hazard Mitigation Grant Program where an alternative impacts properties that may have participated in the acquisition and demolition feature. These properties are to remain vacant. However, if such properties are encountered during the feasibility phase, reports will address this issue so that the Congressional Authority of individual projects may allow construction of the proposed alternative.

PROJECT SPONSOR(S)

The acquisition of all lands, easements, rights of way, relocations, and any other interests, including suitable borrow and dredged or excavated material disposal areas (LERRDs) for the various features of future projects will be performed by non-federal sponsors. Once feasibility studies are initiated, non-federal sponsors will be identified. Feasibility Cost Sharing Agreements will be signed and the non-federal sponsors will be part of the Project Delivery Team. As project alternatives/features are studied, the sponsor's input will be considered. At that time sponsors will be advised of Public Law 91-646 requirements and the requirements for documenting expenses during the acquisition phase for credit purposes. At that time, the sponsors will also be advised of risks associated with initiation of acquisition activities prior to Congressional authorization of projects and appropriation of funds.

During the feasibility phase, an assessment of each sponsor will be conducted to determine whether they have the capability necessary to acquire the realty interests for the various projects. For a non-federal sponsor to be deemed fully capable of performing the LERRDs acquisition, the sponsor must have the authority to acquire and hold title to the real property; must have the power of eminent domain and quick take authority. Historically if the governmental agencies where projects are located do not have such authorities, they partner with the Louisiana Department of Transportation (LADOTD) and the Louisiana Department of Natural Resources (LADNR) to do the acquisitions. If the LADOTD and LADNR do not wish to perform the acquisitions, then the non-federal sponsors will ask the Federal Government to perform the acquisition of LERRDs and reimburse the Federal Government for those costs.

In the event that the non-federal sponsor has the authorities necessary to acquire the LERRDs but does not have sufficient staff to do so, the non-federal sponsor may elect to augment its staff or contract the work. Exhibit B includes a copy of a sample "Assessment of Non-Federal Sponsor's Real Estate Acquisition Capability."

ACQUISITION SCHEDULE

A representative acquisition schedule is presented below for the alternative within each planning unit that would require the most real estate acquisitions. As individual feasibility studies are prepared in the future for selected planning unit alignments, acquisition schedules will also be developed. Acquisition would be accomplished in reaches by feature location; however, since that is not available at this time, an overall time frame is provided.

Acquisition activities include obtaining tract ownership data, preparation of plat and legal descriptions for each impacted ownership, researching title information, appraising the realty interests to be acquired and conducting negotiations and relocations as necessary. If the government were not able to acquire realty interests amicably, those interests would be acquired through condemnation.

Planning Unit 1 – PU1-C-LP-b-1000-2 – This alternative would involve acquisition from approximately 1,500 private landowners. It is estimated that approximately one-third of the ownerships would need to be acquired through condemnation. It is estimated that it would take approximately 10 years to complete the acquisition process.

Planning Unit 2 – PU2-C-G-1000-4 – This alternative would involve acquisition from approximately 1,200 private landowners. It is estimated that approximately one-third of the ownerships would need to be acquired through condemnation. It is estimated that it would take approximately 8 years to complete the acquisition process.

Planning Unit 3a – PU3a-C-G-1000-2 – This alternative would involve acquisition from approximately 900 private landowners. It is estimated that approximately one-third of the ownerships would need to be acquired through condemnation. It is estimated that it would take approximately 6 years to complete the acquisition process.

Planning Unit 3b – PU3b-C-F-1000-1 – This alternative would involve acquisition from approximately 600 private landowners. It is estimated that approximately one-third of the ownerships would need to be acquired through condemnation. It is estimated that it would take approximately 5 years to complete the acquisition process.

Planning Unit 4 – PU4-C-G-1000-3 – This alternative would involve acquisition from approximately 300 private landowners. It is estimated that approximately one-third of the ownerships would need to be acquired through condemnation. It is estimated that it would take approximately 3 years to complete the acquisition process.

ACQUISITION COSTS

The cost estimates prepared for this technical report are preliminary in nature. They are restricted use cost estimates. The estimates do not comply with USPAP and were prepared in accordance with USACE Engineering Circular 405-1-04, Appraisal, paragraph 4-19. The costs prepared and presented in the report are not to be used for making funding decisions. The costs are sufficient in detail for comparison of plans for initial screening and for use in performing

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Multi-Criteria Decision Analysis (MCDA). More detailed cost estimates will be generated for individual feasibility studies in the future.

Real estate costs associated with each plan feature were provided to Engineering Division to be included in an overall cost estimate for each alternative. Due to the large number of alternatives, a parametric matrix approach was used to combine and ratio the various individual features that were estimated into the costs for each alternative. Below is a total real estate cost for each planning unit. The estimates listed below are for real estate interests to be acquired for the structural measures and coast restoration measures associated with providing 1,000 year level of protection in each planning unit. The estimates include the costs of LERRDs (excluding improvements), contingencies (25%), and administrative costs of acquisition. .

Total Real Estate Costs	
Planning Unit 1	\$1,918,000,000
Planning Unit 2	\$1,172,000,000
Planning Unit 3a	\$376,000,000
Planning Unit 3b	\$62,000,000
Planning Unit 4	\$77,000,000

Real Estate worked with Economics to prepare the estimates for the buyout alternatives. Economics developed the baseline for determining how many improvements would require buyout. Real Estate provided LER costs, P.L. 91-646, Title II costs, and acquisition costs. A total cost per structure was developed per parish. Note no distinction was made by Economics between residential structures and commercial/industrial structures; all were assumed to be residential properties. The average cost was estimated to be between \$220,000 and \$335,000 per structure.

Non structural buyouts must include not only improved properties but also the purchase of unimproved properties to prevent future development. The average cost of buying the vacant lots ranged between \$30,000 and \$80,000 per lot.

Below are the assumptions and limiting conditions associated with the real estate cost estimates.

The alternative designs are preliminary. Maps were provided showing overall location of plan features; maps were of a scale of 1 inch = 126,720 linear feet. Maps of such scale do not allow for identification of improvements or accurate identification of land classes. Engineering Division estimated acreage needs per feature. It was not possible to identify existing rights-of-ways for existing levees. This will be accomplished in future studies as design details are developed. No temporary rights-of-ways for access, staging, or construction areas have been identified at this time.

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No wetland determinations were available for the vacant undeveloped lands impacted by the plans.

Physical inspection of sites was not possible. Inspection of the areas was made using aerial photography with alternative alignments. Property values were determined based on comparable sales on file and the appraiser's experience in the planning areas. Due to time constraints, specific values for each plan area could not be developed. An average price per acre was estimated for each land class. That average price was applied to all alternatives without distinction of location or size of the acquisitions.

The cost estimates for structural alternatives do not include costs associated with relocation of improvements. The maps provided were of a scale of 1 inch = 126,720 linear feet which do not allow for identification of improvements. Once the number of plans are reduced and maps of a reasonable scale are produced for the various alternatives, cost estimates will be prepared for each alternative. Because the costs of improvements could not be evaluated, the costs estimated for these alternatives exclude costs associated with relocations of dwellings, businesses or farms. Numerous relocations will undoubtedly also impact project costs. In addition to the costs of moving personal property for all displaced persons, qualified homeowners may receive a housing differential payment if the amount of just compensation is not sufficient to purchase a comparable replacement dwelling. Likewise, qualified tenants may receive rent differential payments to offset additional housing costs. It is expected that the relocation costs for most displaced persons will exceed the statutory amounts of \$22,500 for homeowners and \$5,280 for tenants. The New Orleans District will seek authority for last resort housing payments on a project by project basis as needed. Business owners and farm operations are entitled to receive reimbursement for actual costs associated with moving personal property to another location and up to \$10,000 for re-establishment costs. Relocation of businesses and farms can be very costly and take a significant amount of time depending upon the type and size of the operation as well as the size of the acquisition area versus the size of the remainder property

Ownership count is based on the location of alternatives. It was assumed that rural and wetland properties impacted by the plans were part of large acreage ownerships; whereas, urban areas impacted small lot properties.

Acquisition costs include costs for tract ownership data research, title research, appraisals, negotiations, closing and/or condemnations, and where needed relocation assistance. The acquisition costs are determined to be an average cost per ownership impacted by the plan.

LANDOWNER ATTITUDE

Public meetings have been conducted. At this time the content of the information presented to the public has been conceptual and general in nature. It is reasonable to suggest that the general public is in favor of risk reduction and environmental restoration projects; however, until more detailed alignments are available, which will more definitively determine which landowners are impacted, attempting to realize actual landowner attitudes at this time is premature.

RISK ANALYSIS

For those alternatives that are being recommended for further study, a risk analysis will be performed during the feasibility study. Possible risks associated with all alternatives are:

- Negative landowner sentiment
- Availability of dredged material for construction of levees
- Availability of replacement housing for displaced persons
- HTRW contamination within necessary right of ways

Louisiana Coastal Protection and Restoration (LACPR) Real Estate Appendix Prepared and Approved by:

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EXHIBITS

Exhibit A –General Planning Area Map

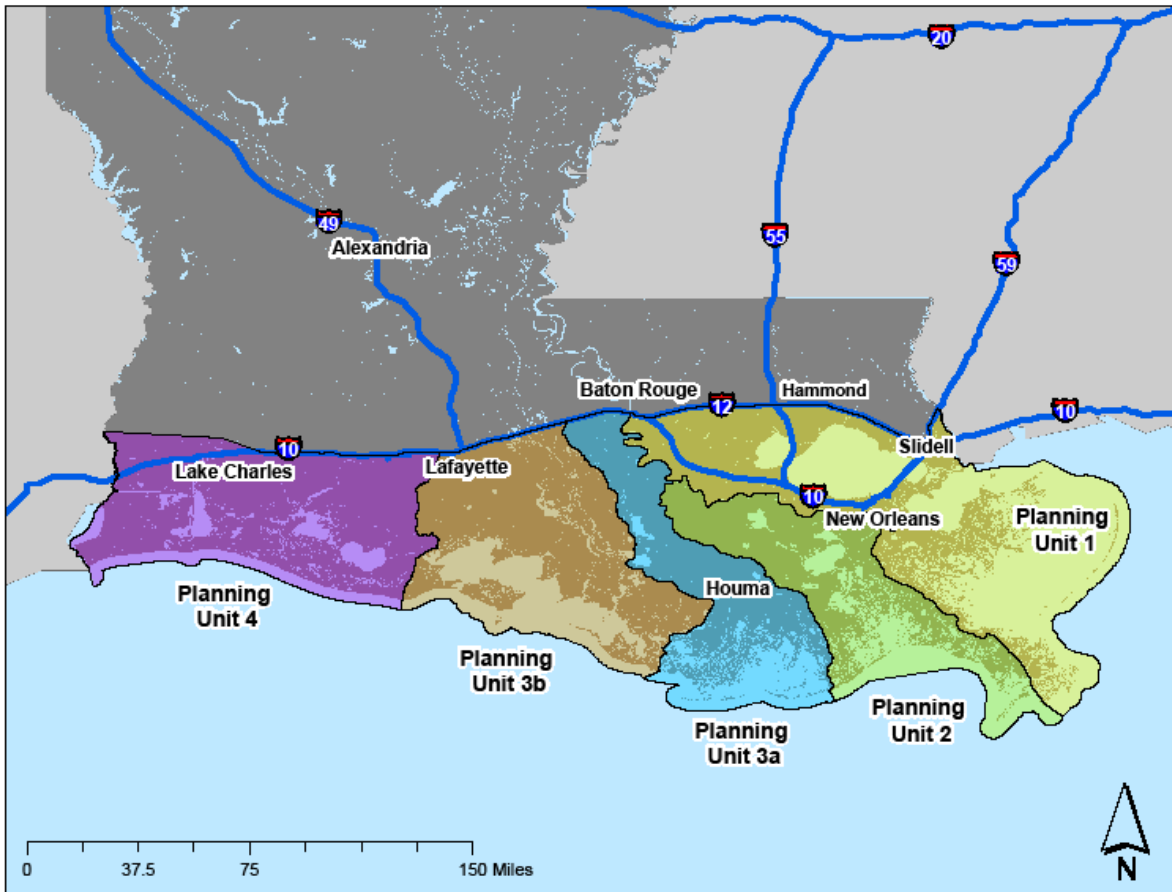


Exhibit B

ASSESSMENT OF NON-FEDERAL SPONSOR'S REAL ESTATE ACQUISITION CAPABILITY (name of sponsor)

I. Legal Authority:

- a. Does the sponsor have legal authority to acquire and hold title to real property for project purposes? (yes/no)
- b. Does the sponsor have the power of eminent domain for this project? (yes/no)
- c. Does the sponsor have "quick-take" authority for this project? (yes/no)
- d. Are any of the lands/interests in land required for the project located outside the sponsor's political boundary (yes/no)
- e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? (yes/no)

II. Human Resource Requirements:

- a. Will the sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including P.L. 91-646, as amended? (yes/no)
- b. If the answer to II.a. is "yes," has a reasonable plan been developed to provide such training? (yes/no)
- c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to

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meet its responsibilities for the project? (yes/no)

d. Is the sponsor's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule? (yes/no)

e. Can the sponsor obtain contractor support, if required in a timely fashion? (yes/no)

f. Will the sponsor likely request USACE assistance in acquiring real estate? (yes/no – If yes provide description)

III. Other Project Variables:

a. Will the sponsor's staff be located within reasonable proximity to the project site? (yes/no)

b. Has the sponsor approved the project/real estate schedule/milestones? (yes/no)

IV. Overall Assessment:

a. Has the sponsor performed satisfactorily on other USACE projects? (yes/no/not applicable)

b. With regard to this project, the sponsor is anticipated to be: highly capable/fully capable/moderately capable/marginally capable/insufficiently capable. (If sponsor is believed to be “insufficiently capable,” provide explanation.)

V. Coordination:

a. Has this assessment been coordinated with the sponsor? (yes/no)

b. Does the sponsor concur with this assessment? (yes/no)