

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

EVALUATION RESULTS APPENDIX

June 2009



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

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 provide a detailed and uniform presentation of evaluation results for the LACPR alternatives in the form of maps and tables as well as hurricane surge inundation maps by planning unit. The base and future conditions for LACPR are described in the main report. This appendix does not address the potential impacts to the Mississippi coast, which is included in the main report and the *Regional Considerations for LACPR and MsCIP Appendix*.

Water Surface Elevation and Depth Maps

In order to identify the extent of hurricane surge inundation, water surface elevation, water depth, and/or change in depth of flooding maps are included for the 100-year, 400-year, and 1000-year frequency events for the following conditions:

- **Base/Existing Conditions**
- **Future Conditions**
 - No Action/Degraded Coast
 - Maintain Coast
- **Comparison of Base and Future Conditions** (Planning Units 1 and 2 only)
 - Base vs. Future No Action
 - Future No Action vs. Maintain Coast

In Planning Units 1 and 2, a comparison of basic alternative performance (changes in depth of flooding) of primary structural alternatives is also presented through a series of maps (e.g., comparison of weir-barrier plan in Planning Unit 1 to high level plan; comparison of GIWW weir-barrier in Planning Unit 2 to ridge alternative).

In addition to developing the maps described above, the hydraulic analysis plays a key role in the evaluation of the LACPR alternatives. Each levee alternative affects the surge and the waves during a storm in a different way which leads to different residual risk/damages. For details on the methodology and results of the hydraulic analysis refer to Volumes I and II of the Hydraulics and Hydrology Appendix.

Performance Results by Alternative

As described in the main report, each LACPR alternative is evaluated on the basis of informed metrics and risk reduction performance. In order to display these results, the following maps and tables are provided by alternative:

- **Metric/Data Table** – provides a “thumbnail sketch” of each alternative’s performance; includes results for each of the metrics across four future scenarios and as well as other performance data.
- **Alternative Map** – an aerial photograph providing the geographic location of features included in the alternative, e.g. structural levee alignments, coastal restoration diversions, nonstructural velocity zones, etc.
- **Water Surface Elevation Table** – shows the alternative’s performance in reducing water surface elevations for selected planning subunits for the with and without project baseline and future conditions.
- **Planning Subunit Key Map** – corresponds with the water surface elevation table described above; also shows levee design heights for structural measures.

The appendix is organized so that when printed double-sided the metric/data table for a particular alternative can be viewed at the same time as the map of that alternative and the water surface evaluation table can be viewed at the same time as the planning subunit key map (when applicable).

Metric/Data Tables and Alternative Maps

Each **metric/data table** is organized in four sections as follows (from top to bottom): alternative description, results by scenario with uncertainty bands, other results, and residual risk/damages by frequency.

General Alternative Information

The top section provides the following general information about the alternative:

- Planning Unit
- Alternative Number, e.g. PU1-NS-100
- Category, e.g. coastal restoration + nonstructural measures
- Alternative Description
- Coastal Component, e.g. R2
- Nonstructural Component, e.g. 1000-year stand alone measures
- Structural Component, e.g. No new levees or increases in risk reduction for existing levees.

Results by Scenario with Uncertainty Bands

The section below the general alternative information provides the results by scenario with uncertainty bands for seven of the LACPR metrics:

- Life Cycle Cost
- Population Impacted
- Residual Damages

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- Employment Impacted
- Archeological Sites Protected
- Historic Properties Protected
- Historic Districts Protected

Additional data is provided on impacts to the regional economy, i.e. gross regional output and earned income impacted.

The four scenarios represent two conditions of relative sea level rise (low and high) and two conditions of population growth (high employment/dispersed population growth and business-as-usual employment/compact population growth). Additional information on the four scenarios can be found in the main report.

The three levels of uncertainty—high, mid, low—represent relative high uncertainty, moderate uncertainty, and low uncertainty. For the economic metrics, these uncertainty levels correspond to the 10%, 50%, and 90% water levels. For example, the 90% water levels should only be exceeded in 10% of the cases, which indicates a low uncertainty (or high confidence) in the economic metric values. Alternatively, the 10% water levels may be exceeded 90% of the time, which indicates a high uncertainty (or low confidence).

The metric values represent the performance of each alternative over the period of analysis. Development of metric values required a statistical analysis of a range of storm surges to measure relative impacts of alternatives considered. This range of surges was applied equally to each alternative.

Note: Annual equivalent metric values shown for economic and cost metrics presented in this section are calculated for the period from 2010 to 2075 at the common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Other Results

In the next section of the table, results are provided for the other three LACPR metrics:

- Construction Time
- Direct Wetland Impacts
- Indirect Environmental Impacts

In addition, information is provided on Federal and non-Federal cost components, spatial integrity (or landscape stability) of coastal restoration plans, and the percentage of wetlands predicted to remain after 50 and 100 years.

The coastal, nonstructural, and structural plan component costs are provided in this section as present values of life cycle costs rather than annual equivalents; the present value costs are calculated over the same period and for the same base year as described in the note above. The non-Federal share of costs is also provided (35% or more of the total cost). The color coding links all costs by scenario (yellow = scenario 1; green = scenario 2; blue = scenario 3; orange = scenario 4).

Residual Risk/Damages by Frequency Event

The bottom section of the table expresses residual risk as residual damages at year 2075 for the storm frequencies addressed in the economic analysis (10-, 100-, 400-, 1000-, and 2000-year). Low uncertainty values are provided for the four scenarios for both no action and with the alternative projects in place.

The square in the bottom right of the table contains a quick reference to the planning unit, type of alternative, and design level (level of risk reduction provided). The corresponding **alternative map** appears on the next page facing the metric/data table.

Planning Subunit Key Map and Water Surface Elevation Table

The **planning subunit key map** provides the location and designators for selected planning subunits within a planning unit for which sample performance data related to change in water surface elevations are provided. The planning subunits shown represent only a small subset of the over 900 planning subunits used in the overall analysis. This map is the key to the subunits listed in the water surface elevation table on the facing page. The planning subunit key map also specifies the levee heights by reach for each of the structural alternatives.

The **water surface elevation table** presents the base and future conditions for the 100-, 400-, and 1000-year frequency events for both with and without the alternative project in place. The two rows at the bottom of the table provide the basic assumptions that relate to the water surface results. These assumptions are the same for every water surface elevation table included in this appendix. The 90% confidence level is a statistically derived probability of the surge elevations. As previously explained, the 90% values denote a high confidence or low uncertainty. A “high” relative sea level rise rate was assumed and used in the calculations. The levee design and overtopping boxes capture the friction conditions used in the surge generating model, i.e. no friction waves.

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| | Water Surface Elevations -400-year Event-2060 Maintain | 12 |
| | Water Surface Elevations -1000-year Event-2060 Maintain | 13 |

| PLANNING UNIT 3b Performance Results by Alternative | | Page | |
|--|--|-------------------------------|----|
| PU3b-0 | No Action Alternative (Future Degraded) | Metric/Data Table | 14 |
| | | Alternative Map | 15 |
| | | Planning Subunit Key Map | 16 |
| | | Water Surface Elevation Table | 17 |
| PU3b-R1 | Coastal Restoration Plan | Metric/Data Table | 18 |
| | | Alternative Map | 19 |
| | | Planning Subunit Key Map | 20 |
| | | Water Surface Elevation Table | 21 |
| PU3b-NS-100 | Nonstructural Stand Alone Plans (water levels same as base maps) | Metric/Data Table | 22 |
| | | Alternative Map | 23 |
| PU3b-NS-400 | | Metric/Data Table | 24 |
| | | Alternative Map | 25 |
| PU3b-NS-1000 | | Metric/Data Table | 26 |
| | | Alternative Map | 27 |
| PU3b-G-100-1 | GIWW Plan | Metric/Data Table | 28 |
| | | Alternative Map | 29 |
| | | Planning Subunit Key Map | 30 |

Louisiana Coastal Protection and Restoration (LACPR) Final Technical Report
Evaluation Results Appendix

| PLANNING UNIT 3b Performance Results by Alternative | | | Page |
|--|--|-------------------------------|-------------|
| | | Water Surface Elevation Table | 31 |
| PU3b-F-100-1 | Franklin to Abbeville Plan | Metric/Data Table | 32 |
| | | Alternative Map | 33 |
| | | Planning Subunit Key Map | 34 |
| | | Water Surface Elevation Table | 35 |
| | | Metric/Data Table | 36 |
| PU3b-F-400-1 | Franklin to Abbeville Plan | Alternative Map | 37 |
| | | Planning Subunit Key Map | 38 |
| | | Water Surface Elevation Table | 39 |
| | | Metric/Data Table | 40 |
| PU3b-F-1000-1 | Franklin to Abbeville Plan | Alternative Map | 41 |
| | | Planning Subunit Key Map | 42 |
| | | Water Surface Elevation Table | 43 |
| | | Metric/Data Table | 44 |
| PU3b-RL-100-1 | Ring Levee Plan | Alternative Map | 45 |
| | | Planning Subunit Key Map | 46 |
| | | Water Surface Elevation Table | 47 |
| | | Metric/Data Table | 48 |
| PU3b-RL-400-1 | Ring Levee Plan | Alternative Map | 49 |
| | | Planning Subunit Key Map | 50 |
| | | Water Surface Elevation Table | 51 |
| | | Metric/Data Table | 52 |
| PU3b-C-G-100-1 | Same titles as corresponding structural plans but with "Comprehensive" on the line above the structural title. | Alternative Map | 53 |
| PU3b-C-F-100-1 | | Metric/Data Table | 54 |
| PU3b-C-F-400-1 | | Alternative Map | 55 |
| PU3b-C-F-1000-1 | | Metric/Data Table | 56 |
| PU3b-C-F-1000-1 | | Alternative Map | 57 |
| PU3b-C-F-1000-1 | | Metric/Data Table | 58 |
| PU3b-C-F-1000-1 | | Alternative Map | 59 |
| PU3b-C-RL-100-1 | | Metric/Data Table | 60 |
| PU3b-C-RL-100-1 | | Alternative Map | 61 |
| PU3b-C-RL-400-1 | | Metric/Data Table | 62 |
| PU3b-C-RL-400-1 | | Alternative Map | 63 |

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Evaluation Results Appendix

| PLANNING UNIT 4 Water Surface Elevation and Depth Maps | | Page |
|---|--|-------------|
| Planning Unit 4 Title Page | | 1 |
| Base/Existing Conditions | Water Surface Elevations- 100-year Event - 2010 Base Conditions | 2 |
| | Water Depths - 100-year Event - 2010 Base Conditions | 3 |
| | Water Surface Elevations- 400-year Event - 2010 Base Conditions | 4 |
| | Water Depths - 400-year Event - 2010 Base Conditions | 5 |
| | Water Surface Elevations- 1000-year Event - 2010 Base Conditions | 6 |
| | Water Depths - 1000-year Event - 2010 Base Conditions | 7 |
| Future Conditions (No Action/Degraded Coast) | Water Surface Elevations - 100-year Event - 2060 No Action | 8 |
| | Water Surface Elevations - 400-year Event - 2060 No Action | 9 |
| | Water Surface Elevations - 1000-year Event - 2060 No Action | 10 |
| Future Maintain Coast | Water Surface Elevations -100-year Event-2060 Maintain | 11 |
| | Water Surface Elevations -400-year Event-2060 Maintain | 12 |
| | Water Surface Elevations -1000-year Event-2060 Maintain | 13 |

| PLANNING UNIT 4 Performance Results by Alternative | | | Page |
|---|---|-------------------------------|-------------|
| PU4-0 | No Action Alternative (Future Degraded) | Metric/Data Table | 14 |
| | | Alternative Map | 15 |
| | | Planning Subunit Key Map | 16 |
| | | Water Surface Elevation Table | 17 |
| PU4-R1 | Coastal Restoration Plan | Metric/Data Table | 18 |
| | | Alternative Map | 19 |
| | | Planning Subunit Key Map | 20 |
| | | Water Surface Elevation Table | 21 |
| PU4-NS-100 | Nonstructural Stand Alone Plans (water levels same as base maps) | Metric/Data Table | 22 |
| | | Alternative Map | 23 |
| PU4-NS-400 | | Metric/Data Table | 24 |
| | | Alternative Map | 25 |
| PU4-NS-1000 | | Metric/Data Table | 26 |
| | | Alternative Map | 27 |

Louisiana Coastal Protection and Restoration (LACPR) Final Technical Report
Evaluation Results Appendix

| PLANNING UNIT 4 Performance Results by Alternative | | | Page |
|---|--|-------------------------------|-------------|
| PU4-G-100-1 | GIWW Plan | Metric/Data Table | 28 |
| | | Alternative Map | 29 |
| | | Planning Subunit Key Map | 30 |
| | | Water Surface Elevation Table | 31 |
| PU4-G-100-2 | GIWW Plan | Metric/Data Table | 32 |
| | | Alternative Map | 33 |
| | | Planning Subunit Key Map | 34 |
| | | Water Surface Elevation Table | 35 |
| PU4-G-400-3 | GIWW Plan (12-ft Levee) | Metric/Data Table | 36 |
| | | Alternative Map | 37 |
| | | Planning Subunit Key Map | 38 |
| | | Water Surface Elevation Table | 39 |
| PU4-G-1000-3 | GIWW Plan (12-ft Levee) | Metric/Data Table | 40 |
| | | Alternative Map | 41 |
| | | Planning Subunit Key Map | 42 |
| | | Water Surface Elevation Table | 43 |
| PU4-RL-100-1 | Ring Levee Plan | Metric/Data Table | 44 |
| | | Alternative Map | 45 |
| | | Planning Subunit Key Map | 46 |
| | | Water Surface Elevation Table | 47 |
| PU4-RL-400-1 | Ring Levee Plan | Metric/Data Table | 48 |
| | | Alternative Map | 49 |
| | | Planning Subunit Key Map | 50 |
| | | Water Surface Elevation Table | 51 |
| PU4-RL-1000-1 | Ring Levee Plan | Metric/Data Table | 52 |
| | | Alternative Map | 53 |
| | | Planning Subunit Key Map | 54 |
| | | Water Surface Elevation Table | 55 |
| PU4-C-G-100-1 | Same titles as corresponding structural plans but with "Comprehensive" on the line above the structural title. | Metric/Data Table | 56 |
| | | Alternative Map | 57 |
| PU4-C-G-100-2 | | Metric/Data Table | 58 |
| | | Alternative Map | 59 |
| PU4-C-G-400-3 | | Metric/Data Table | 60 |

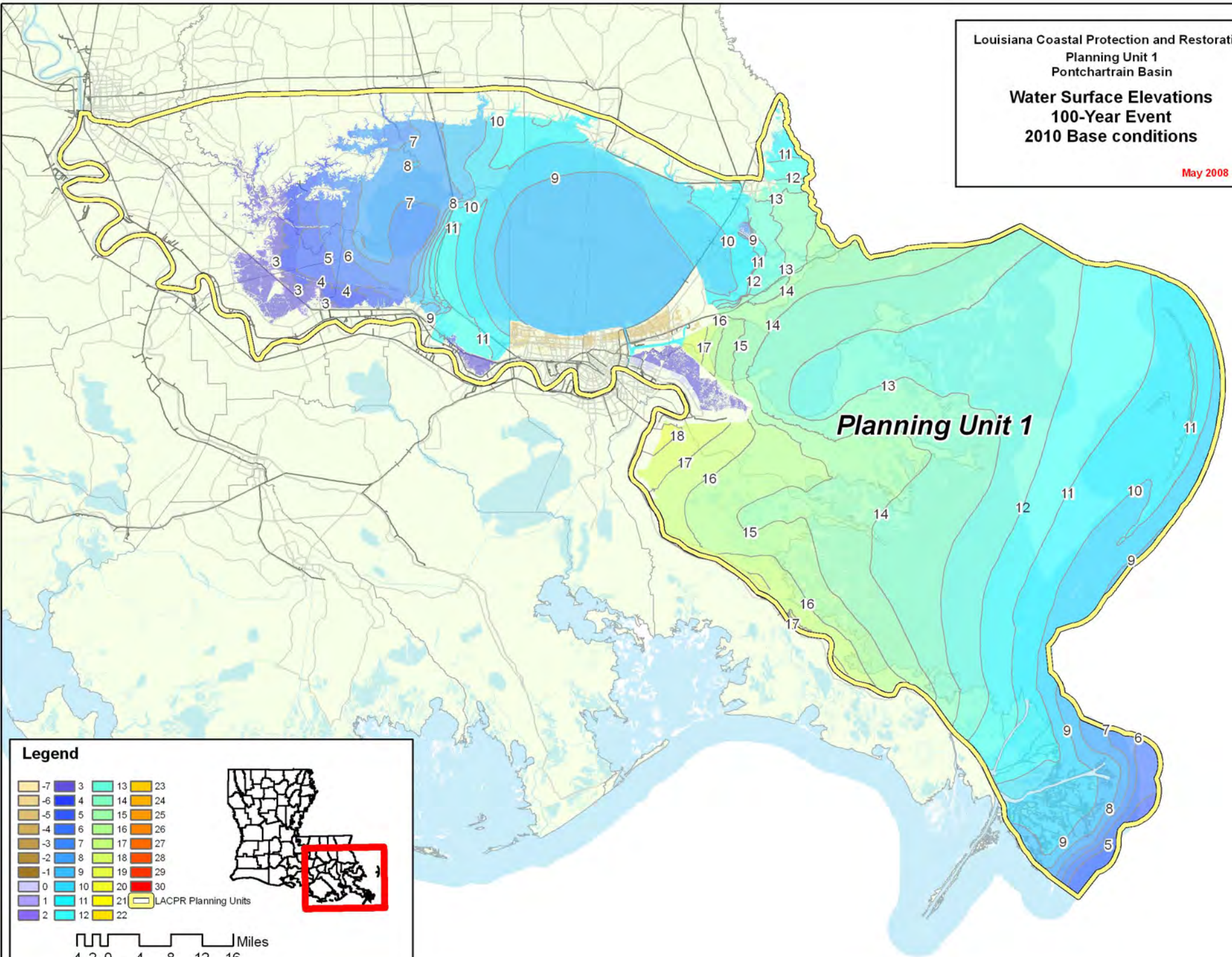
Louisiana Coastal Protection and Restoration (LACPR) Final Technical Report
Evaluation Results Appendix

| PLANNING UNIT 4 Performance Results by Alternative | | | Page |
|---|--|-------------------|-------------|
| | | Alternative Map | 61 |
| PU4-C-G-1000-3 | | Metric/Data Table | 62 |
| | | Alternative Map | 63 |
| PU4-C-RL-100-1 | | Metric/Data Table | 64 |
| | | Alternative Map | 65 |
| PU4-C-RL-400-1 | | Metric/Data Table | 66 |
| | | Alternative Map | 67 |
| PU4-C-RL-1000-1 | | Metric/Data Table | 68 |
| | | Alternative Map | 69 |

**LOUISIANA COASTAL PROTECTION AND RESTORATION FINAL TECHNICAL REPORT
EVALUATION RESULTS APPENDIX**

Planning Unit 1

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 100-Year Event
 2010 Base conditions**
 May 2008



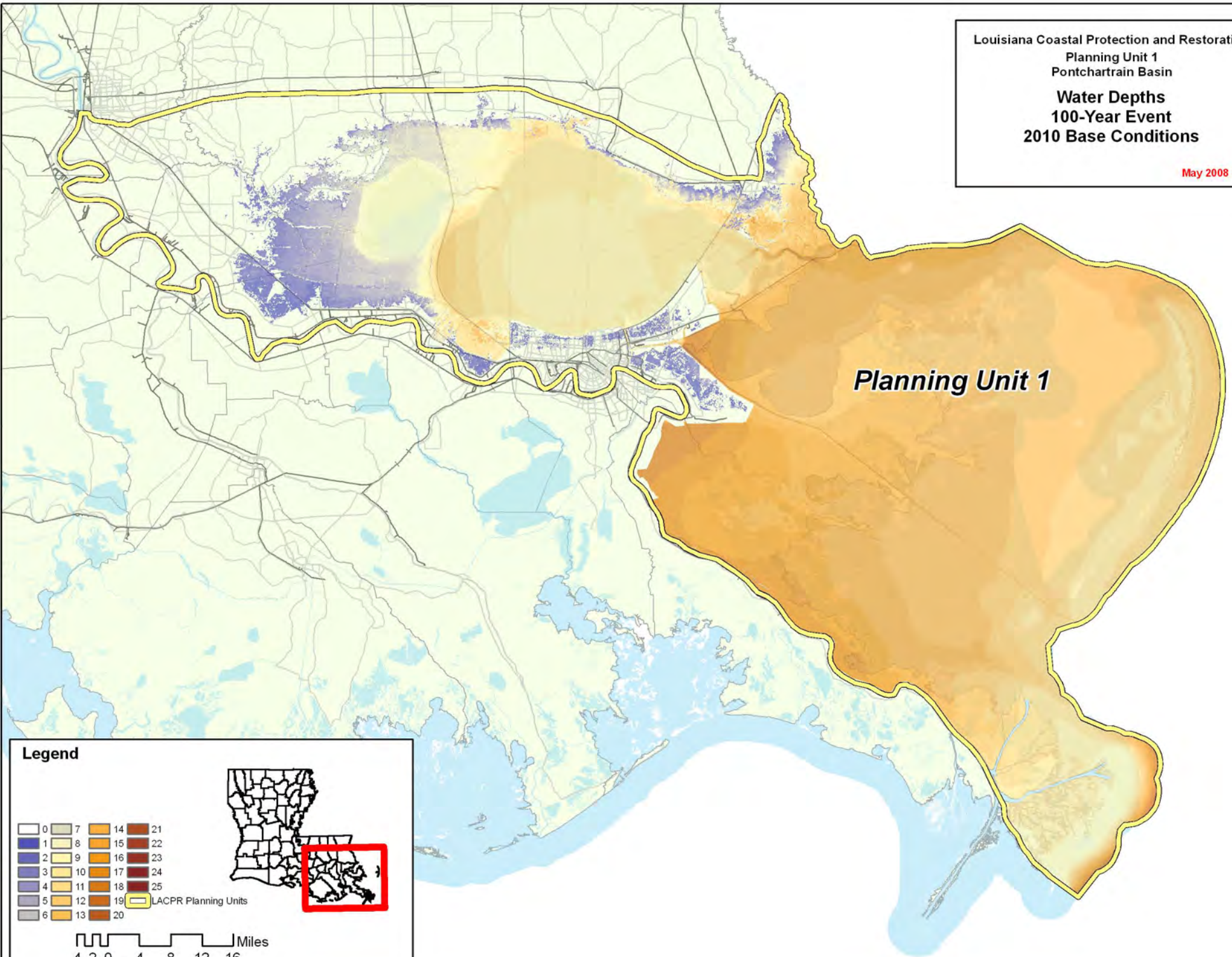
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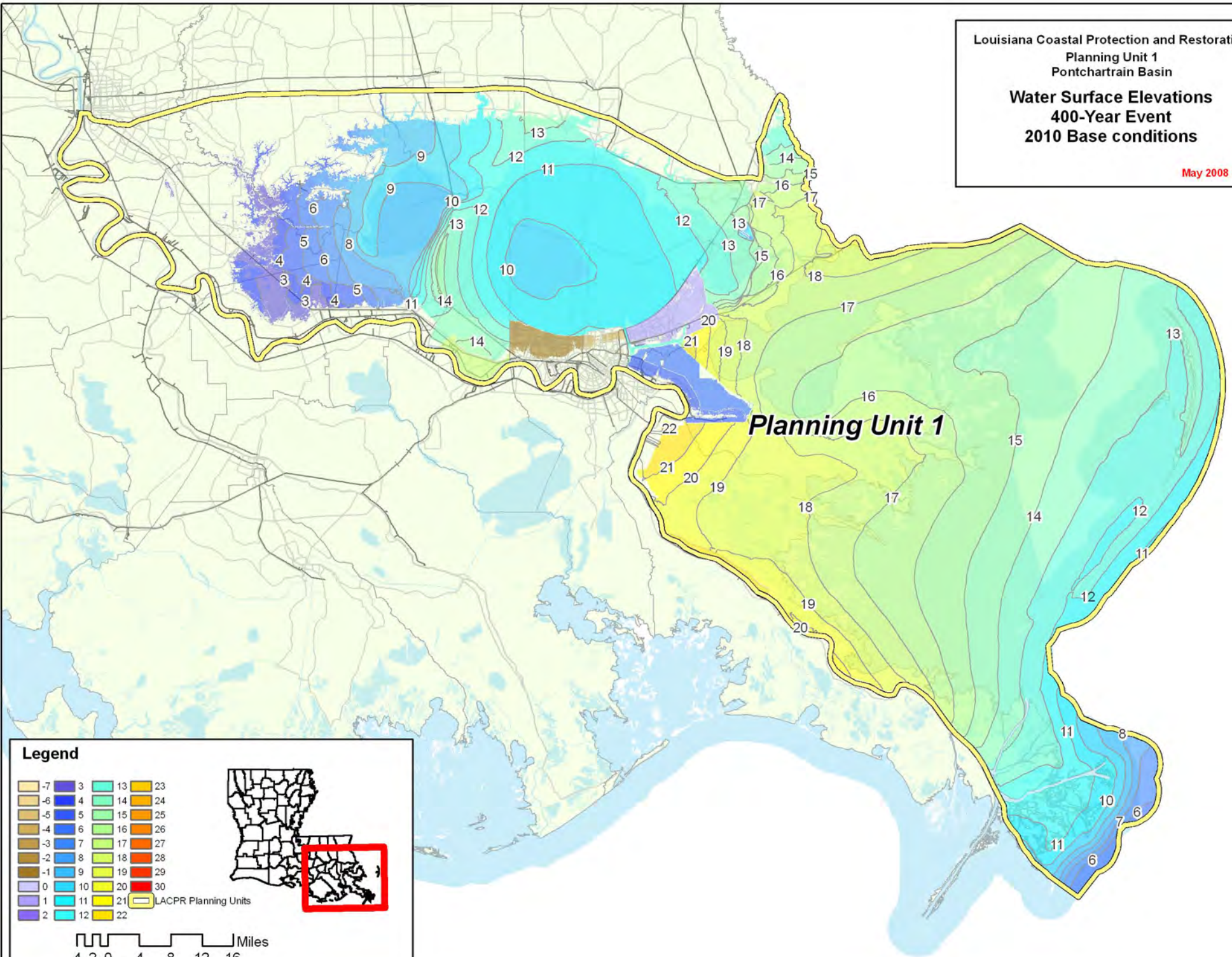
LACPR Planning Units

Miles
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Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Depths
 100-Year Event
 2010 Base Conditions**
 May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 400-Year Event
 2010 Base conditions**
 May 2008



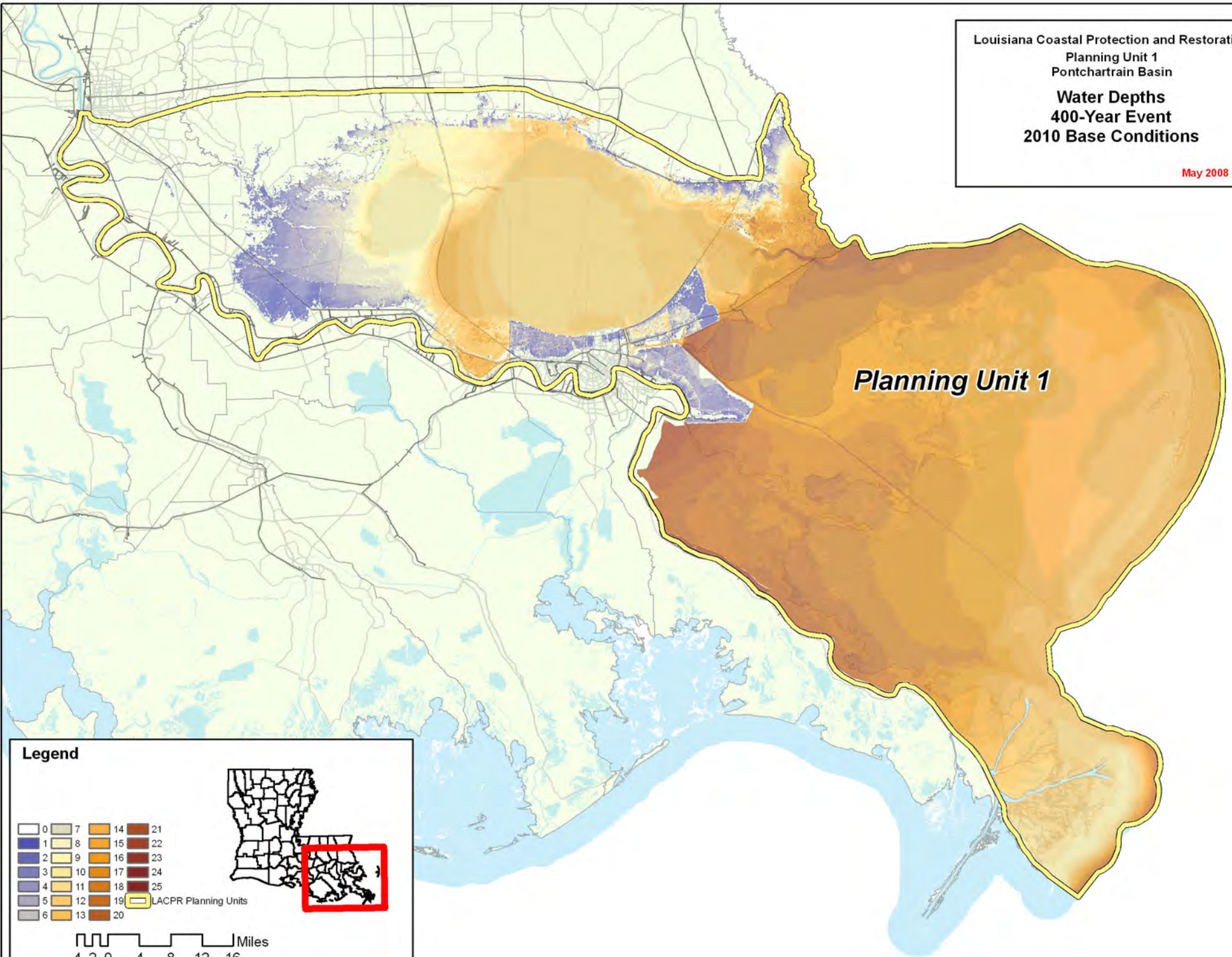
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LACPR Planning Units

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Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Depths
 400-Year Event
 2010 Base Conditions**
 May 2008



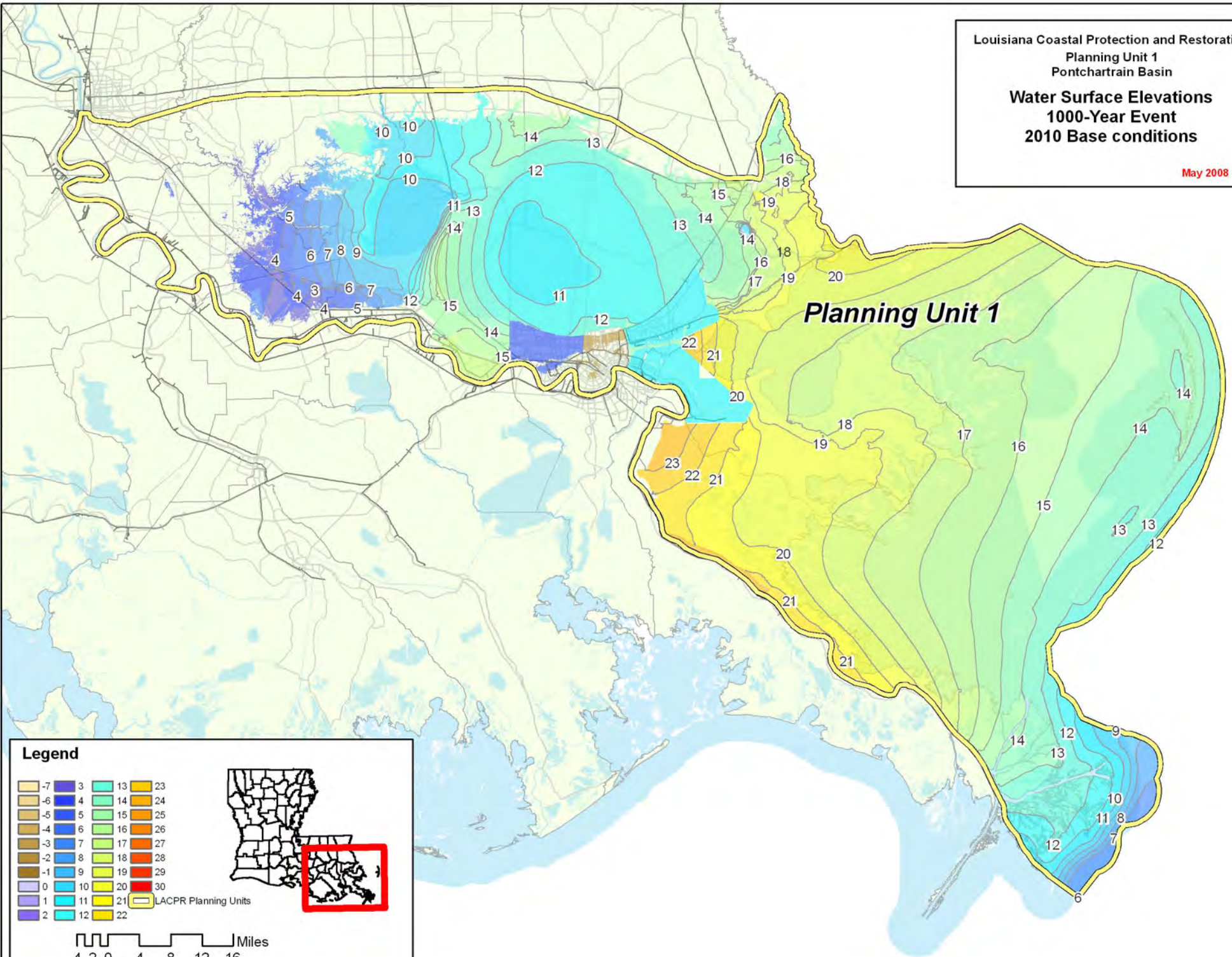
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LACPR Planning Units

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Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 1000-Year Event
 2010 Base conditions**
 May 2008



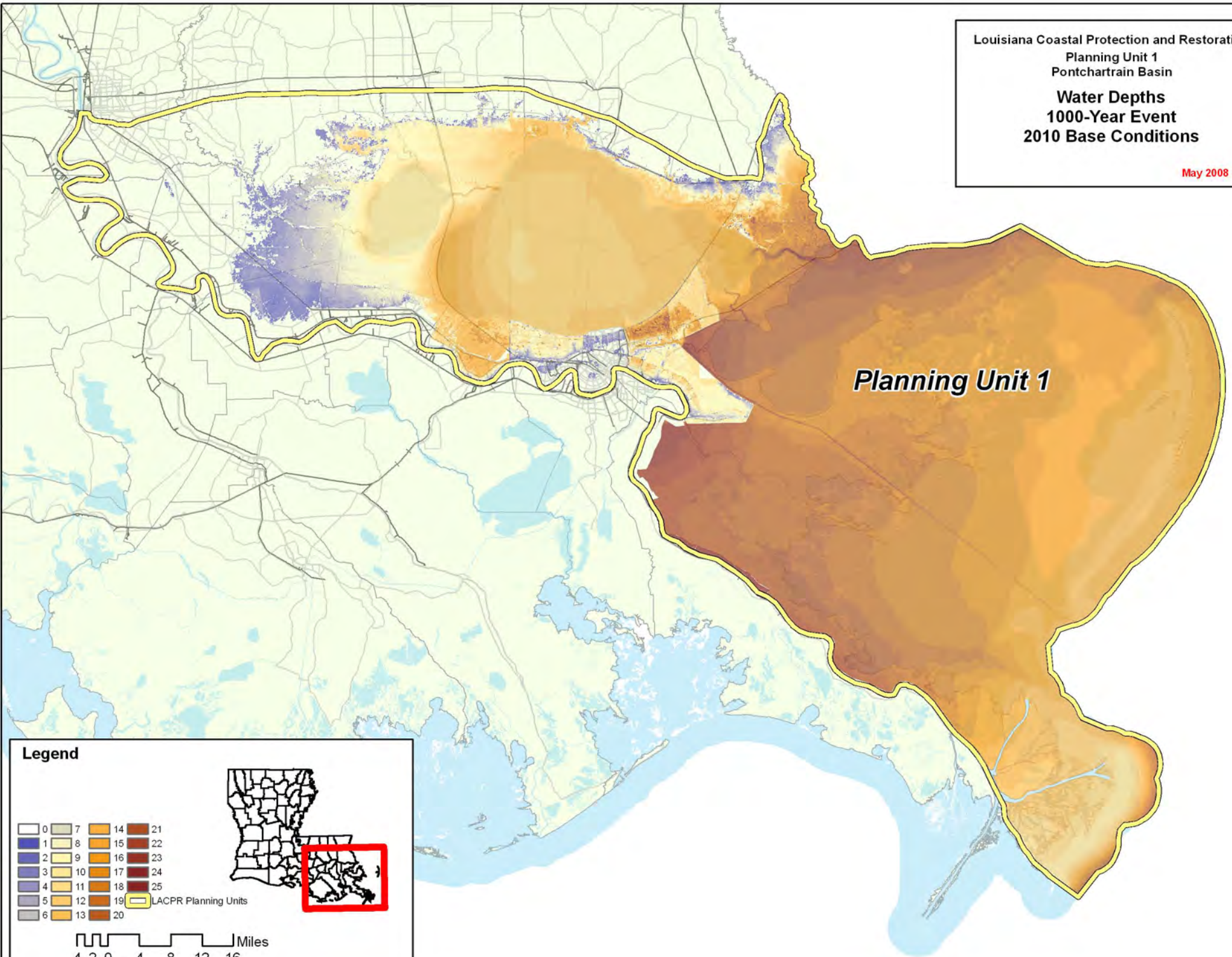
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LACPR Planning Units


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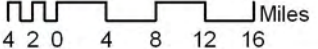
Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Depths
 1000-Year Event
 2010 Base Conditions**
 May 2008



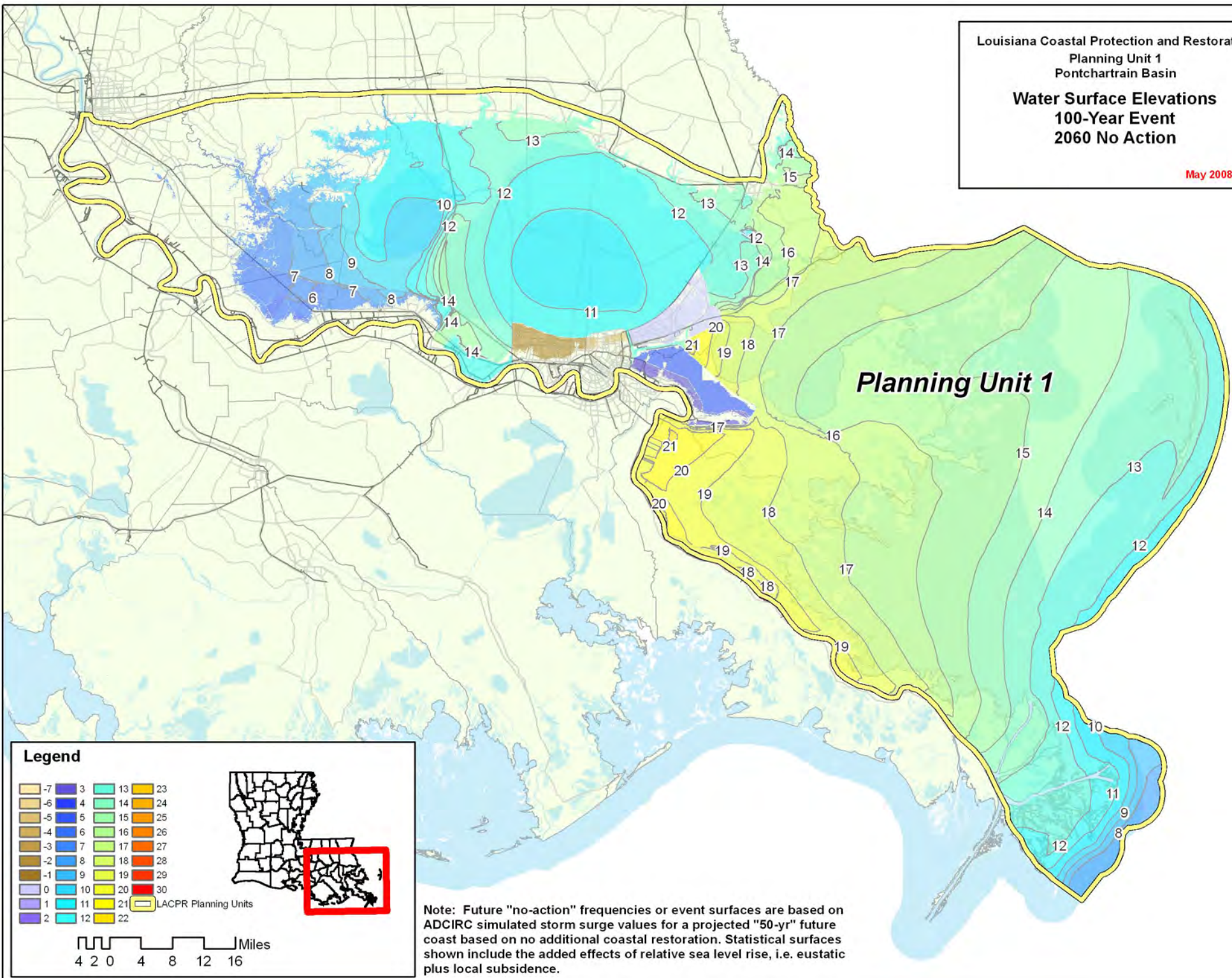
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 LACPR Planning Units


 Miles
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Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 100-Year Event
 2060 No Action**
 May 2008



Legend

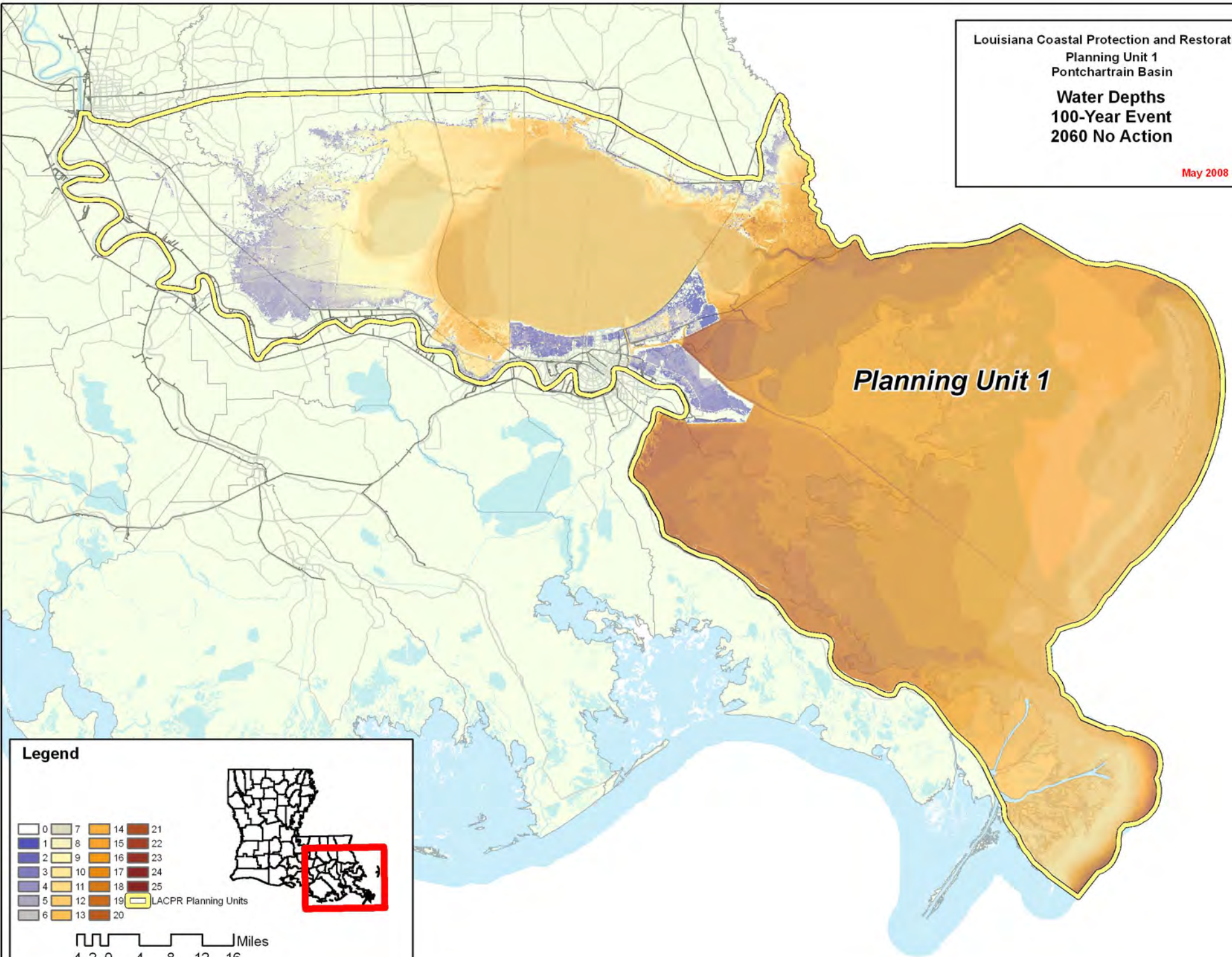
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LACPR Planning Units

Miles
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Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Depths
 100-Year Event
 2060 No Action**
 May 2008



Legend

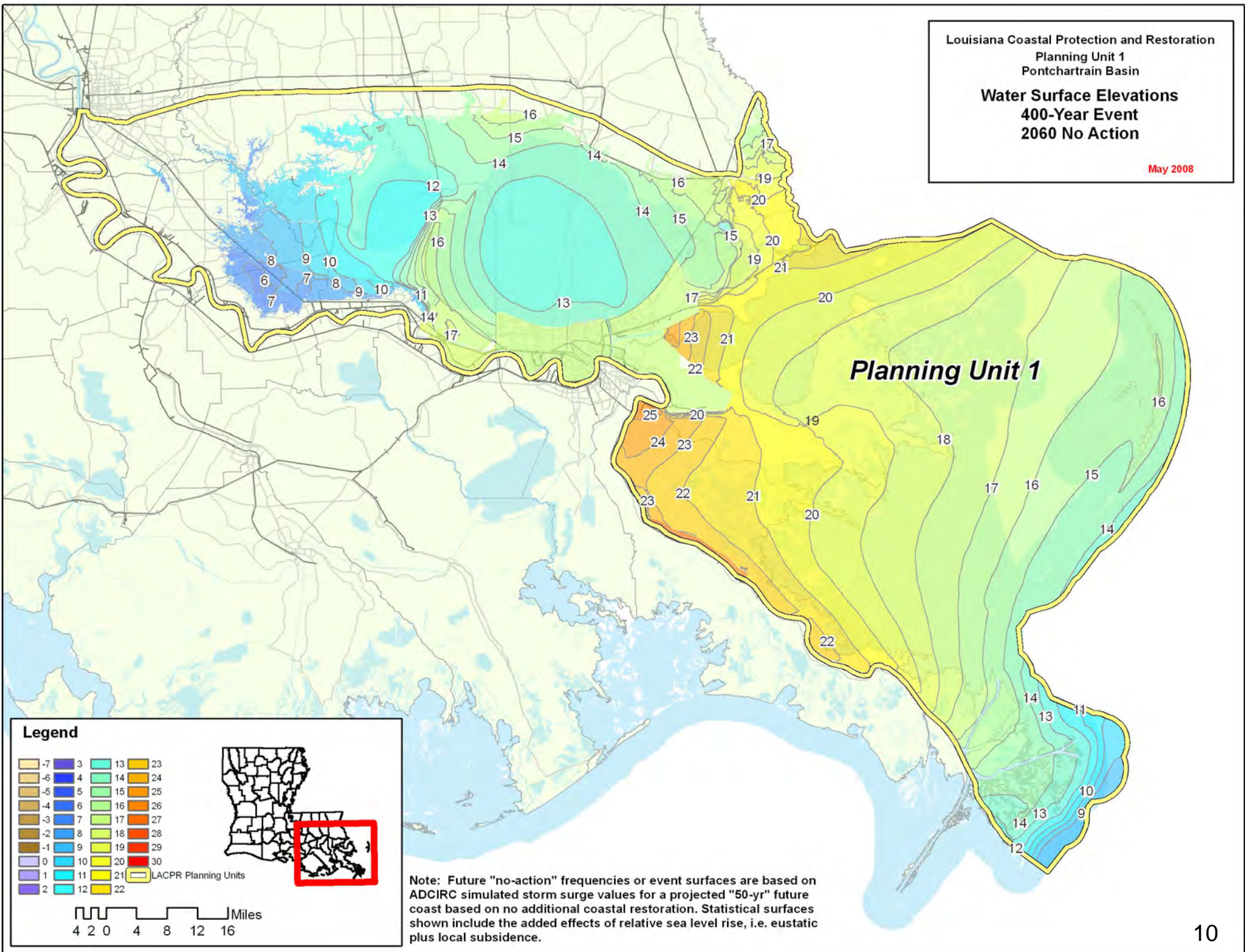
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LACPR Planning Units

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Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 400-Year Event
 2060 No Action**

May 2008



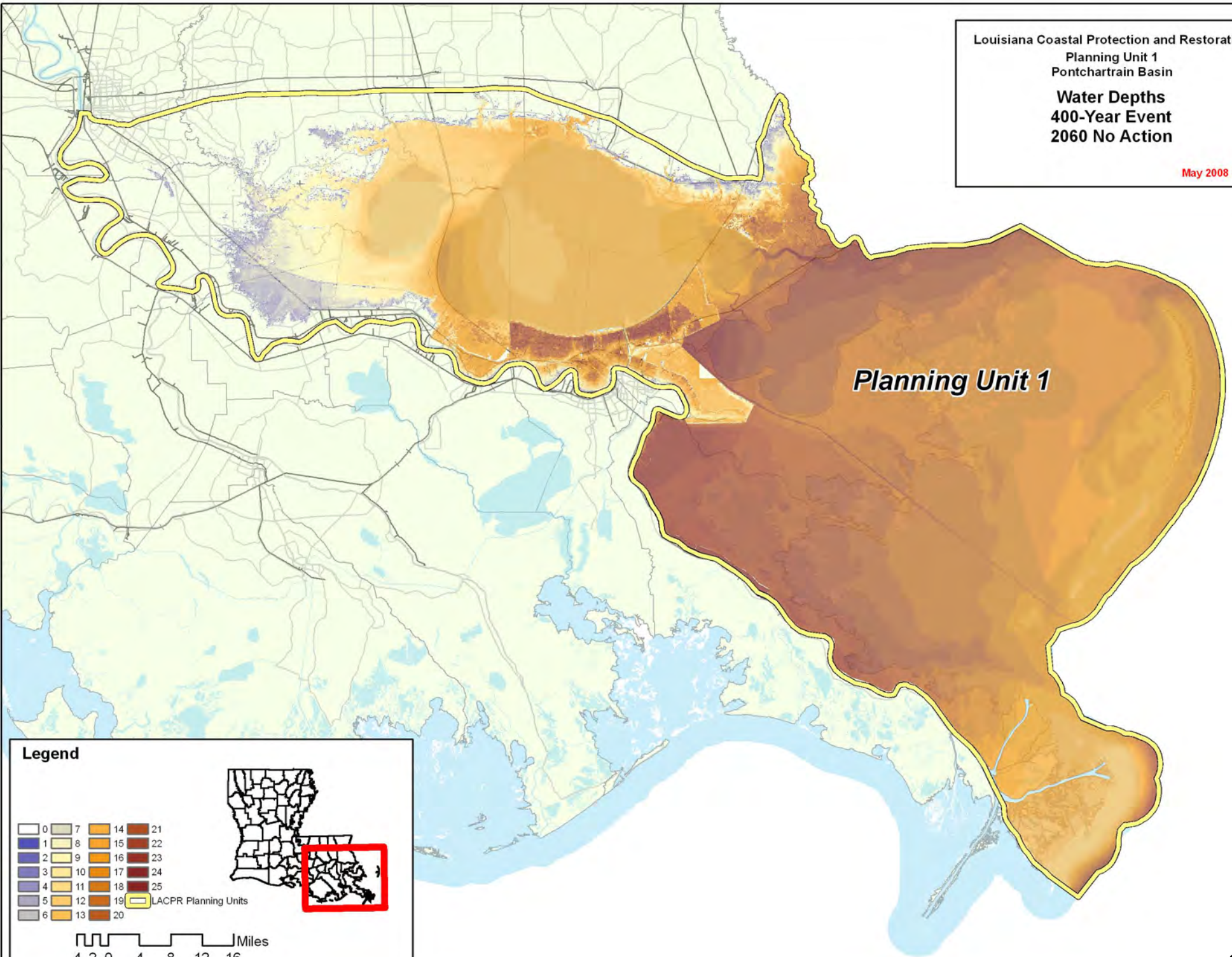
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Miles
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Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.



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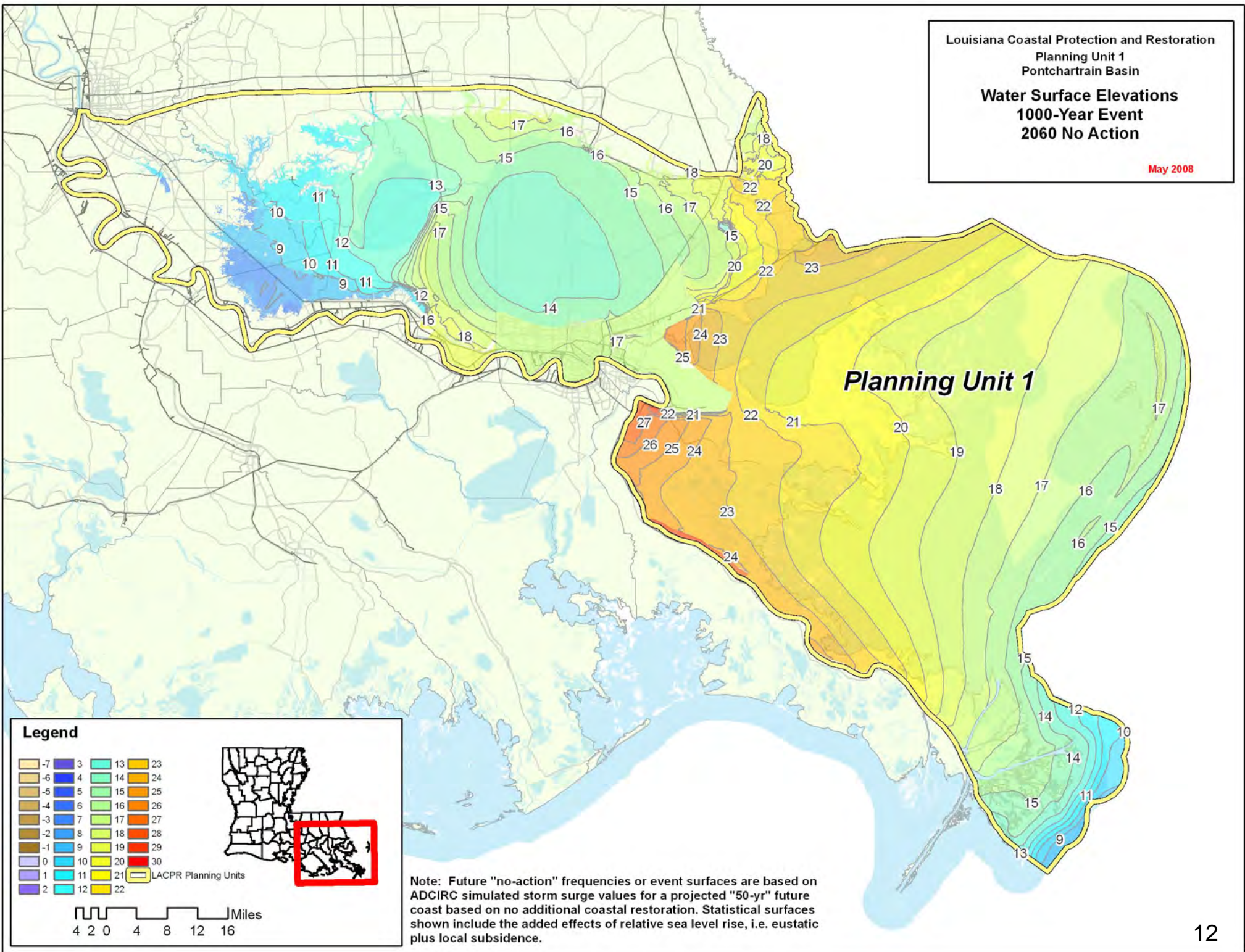
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| 6 | 13 | 20 | |



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Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 1000-Year Event
 2060 No Action**

May 2008



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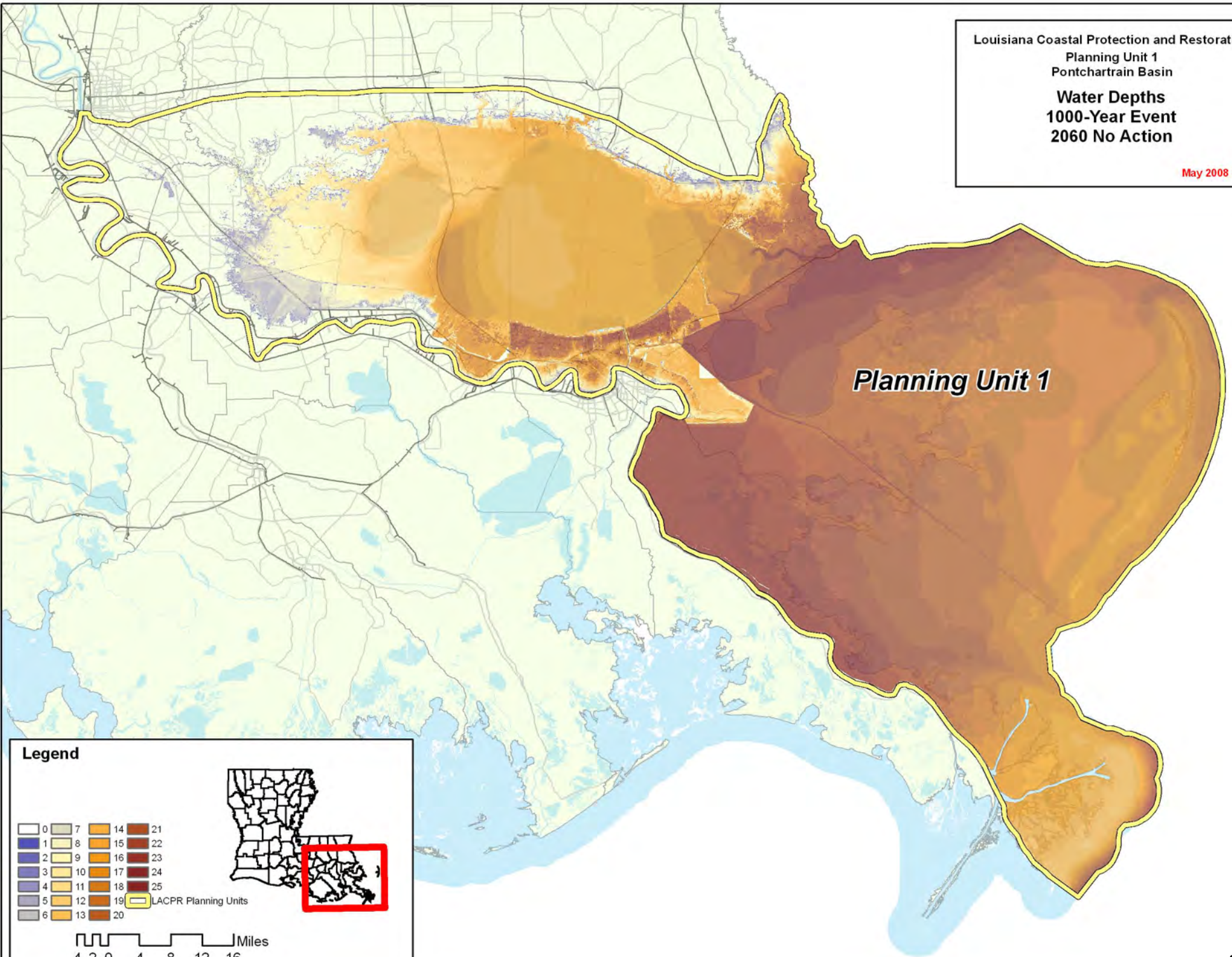
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| 1 | 11 | 21 | |
| 2 | 12 | 22 | |



Miles
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Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Depths
 1000-Year Event
 2060 No Action**
 May 2008



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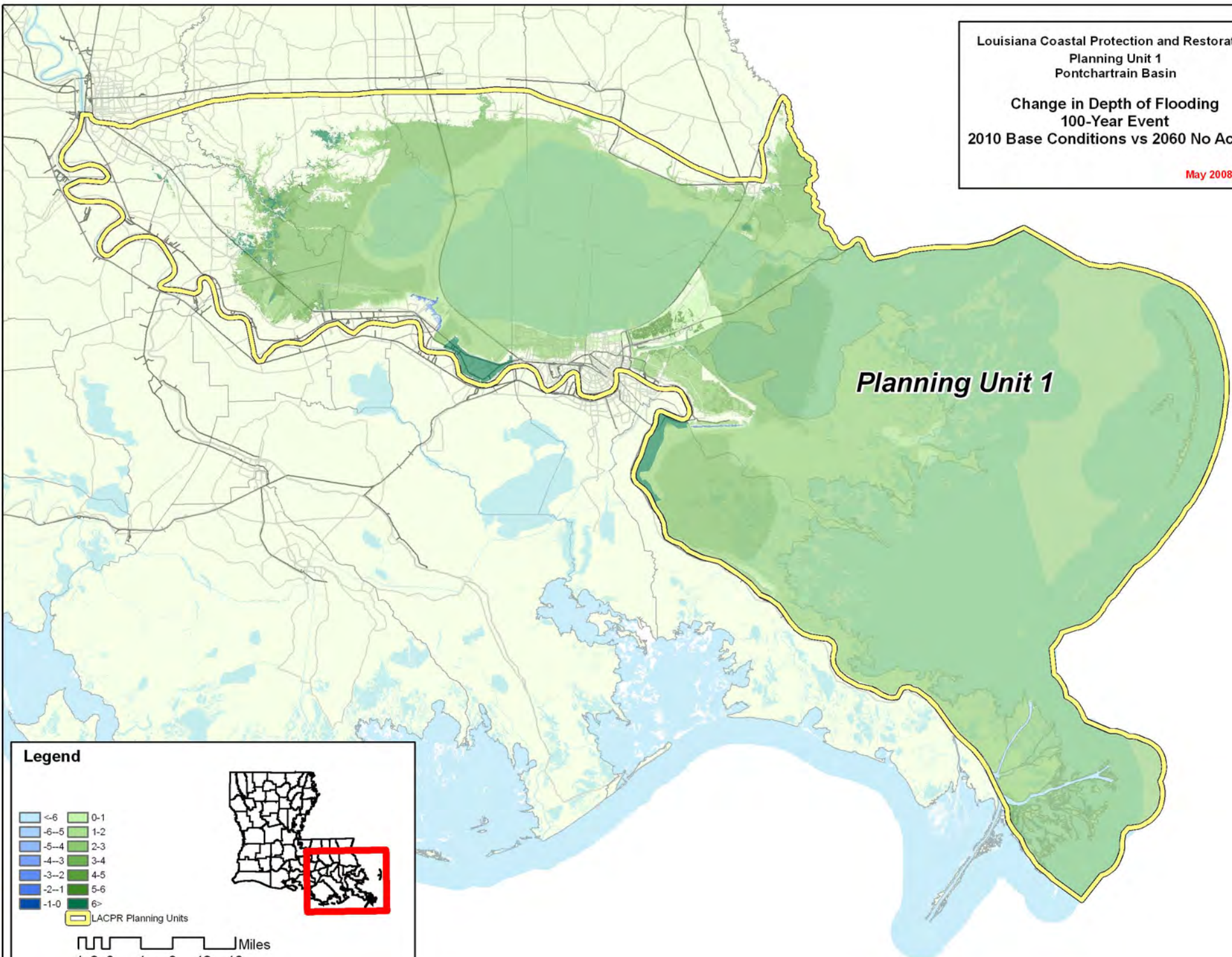
LACPR Planning Units

Miles
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Louisiana Coastal Protection and Restoration
Planning Unit 1
Pontchartrain Basin

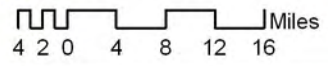
Change in Depth of Flooding
100-Year Event
2010 Base Conditions vs 2060 No Action

May 2008



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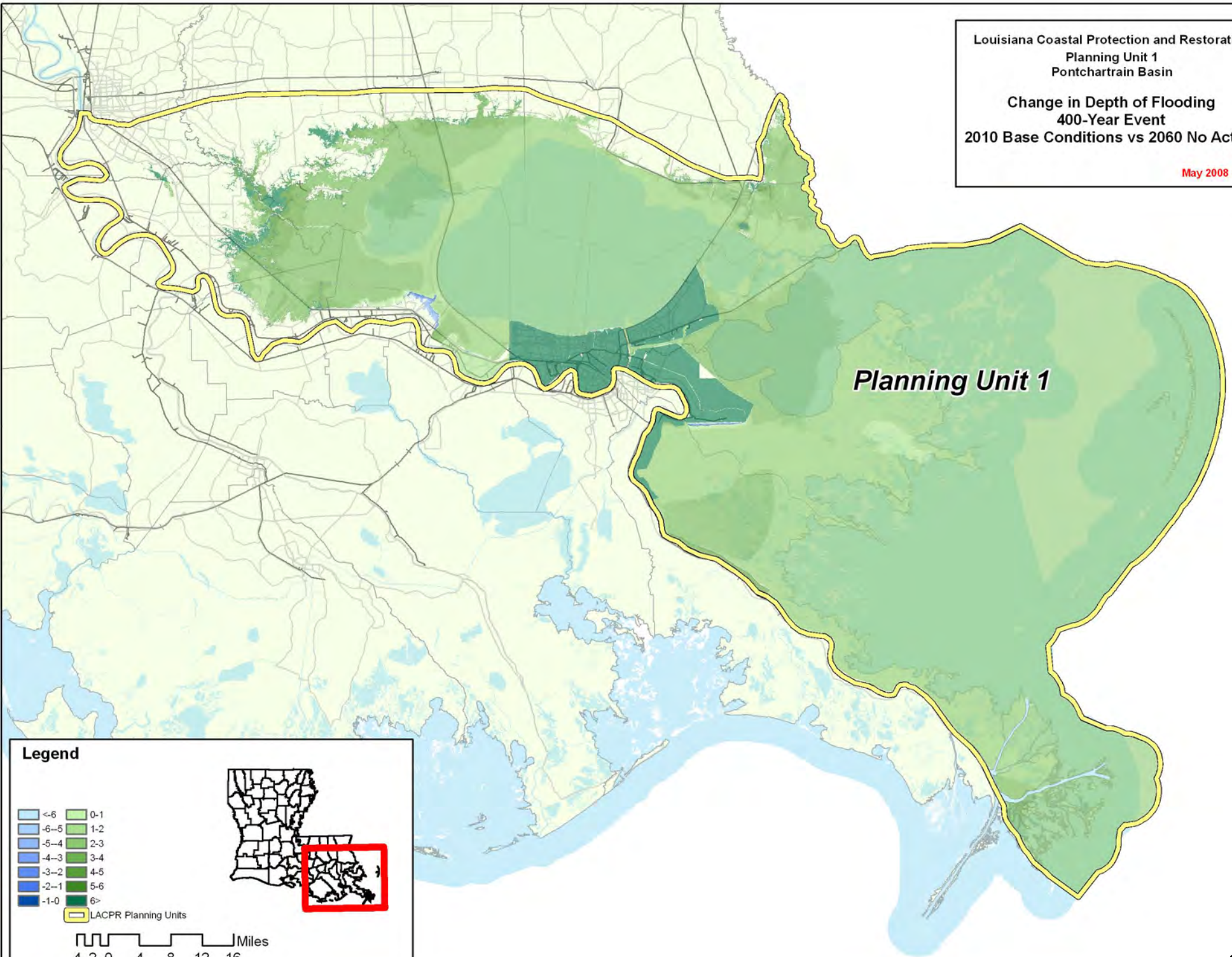
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Louisiana Coastal Protection and Restoration
Planning Unit 1
Pontchartrain Basin

Change in Depth of Flooding
400-Year Event
2010 Base Conditions vs 2060 No Action

May 2008



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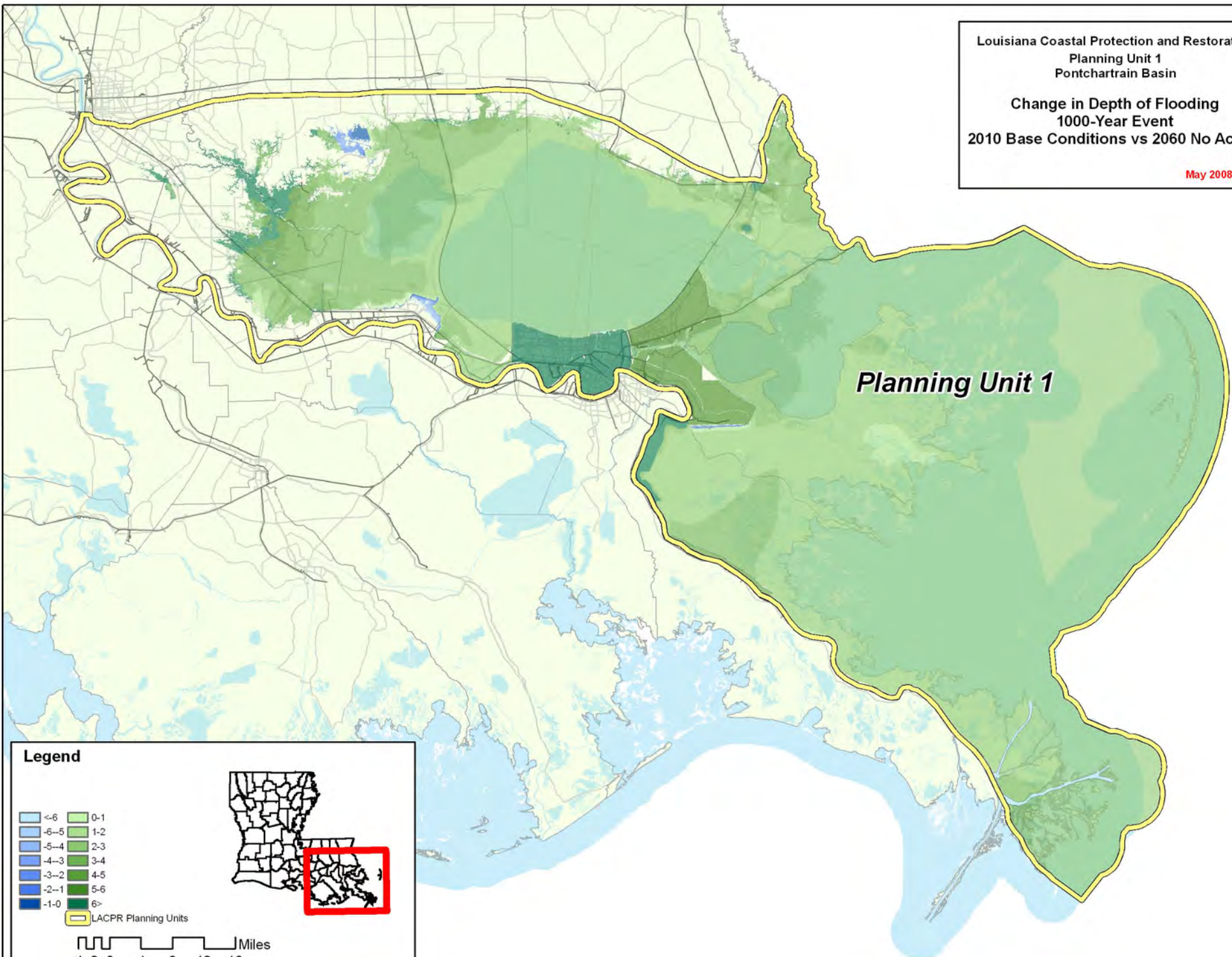


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Louisiana Coastal Protection and Restoration
Planning Unit 1
Pontchartrain Basin

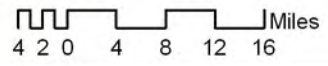
Change in Depth of Flooding
1000-Year Event
2010 Base Conditions vs 2060 No Action

May 2008

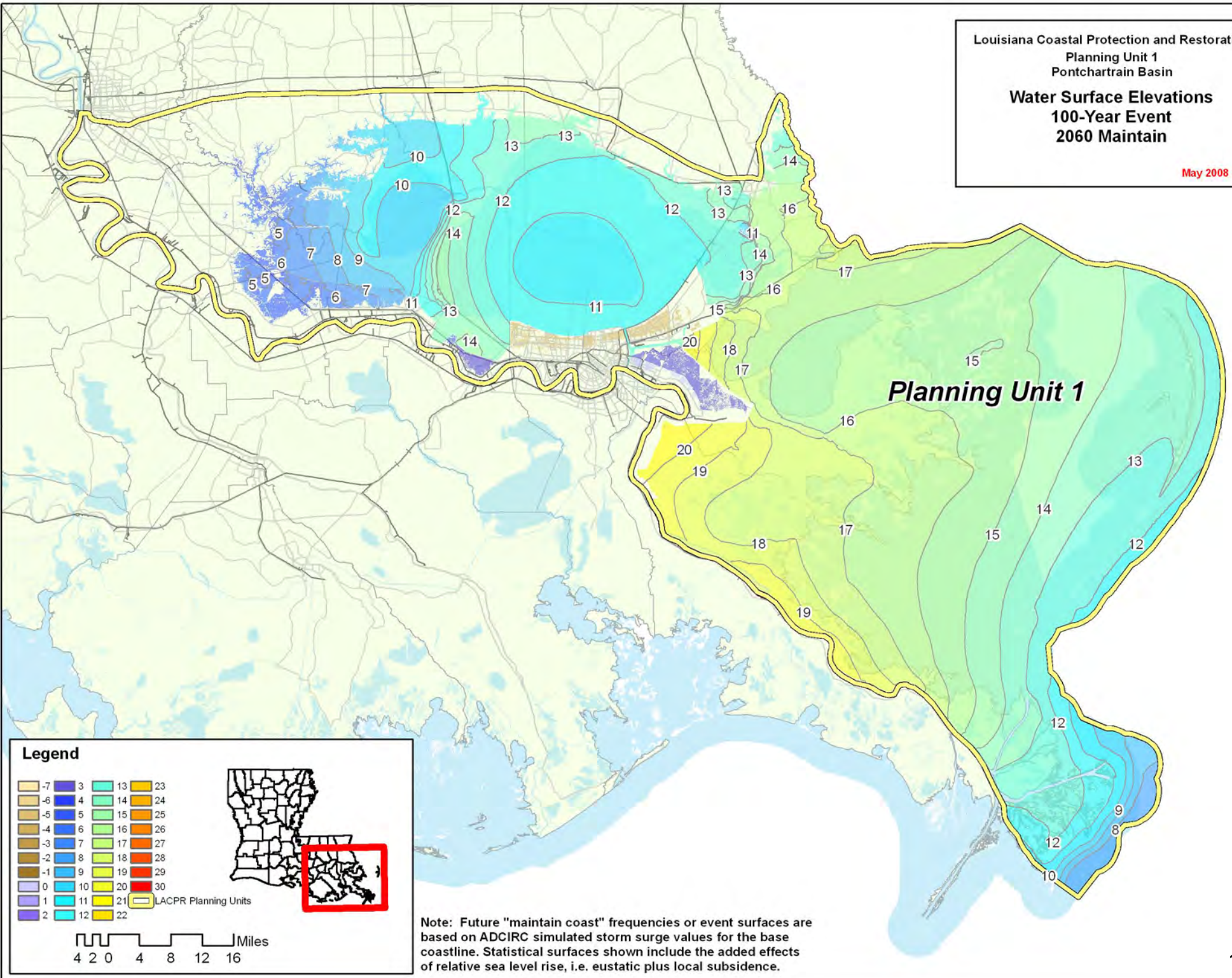


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| -1-0 | 6> |
- LACPR Planning Units



Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 100-Year Event
 2060 Maintain**
 May 2008



Legend

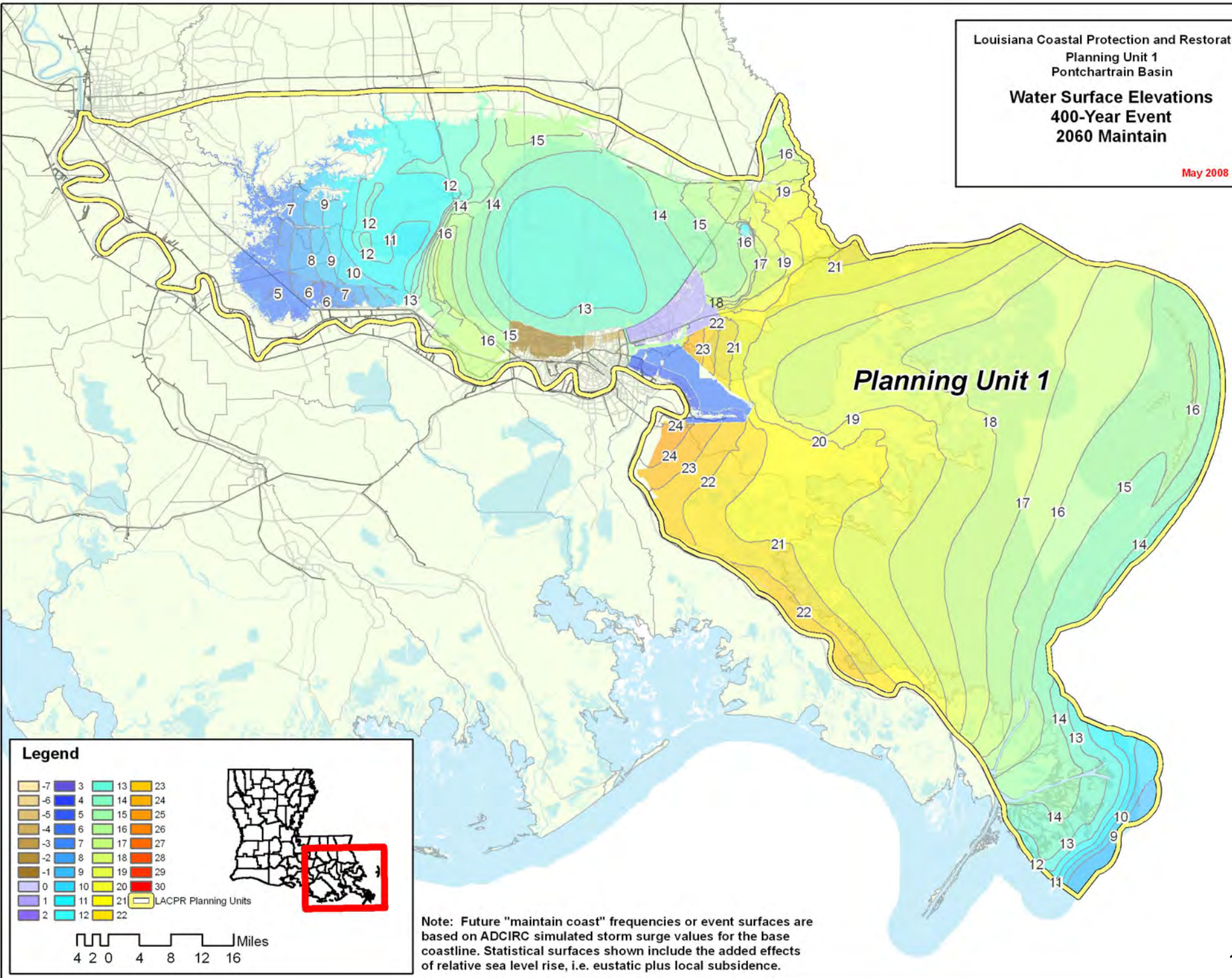
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LACPR Planning Units

Miles
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Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 400-Year Event
 2060 Maintain**
 May 2008



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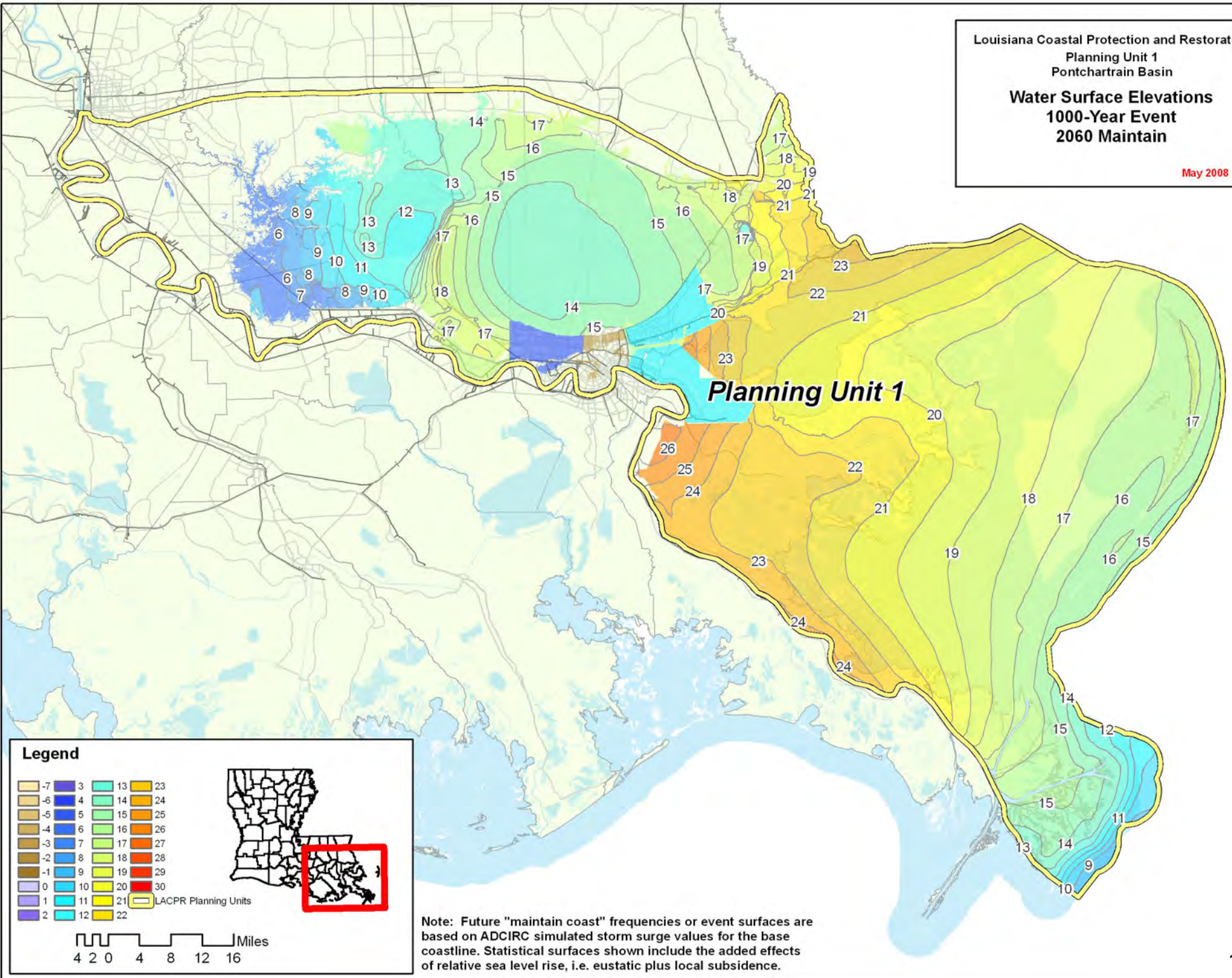
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LACPR Planning Units

Miles
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Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

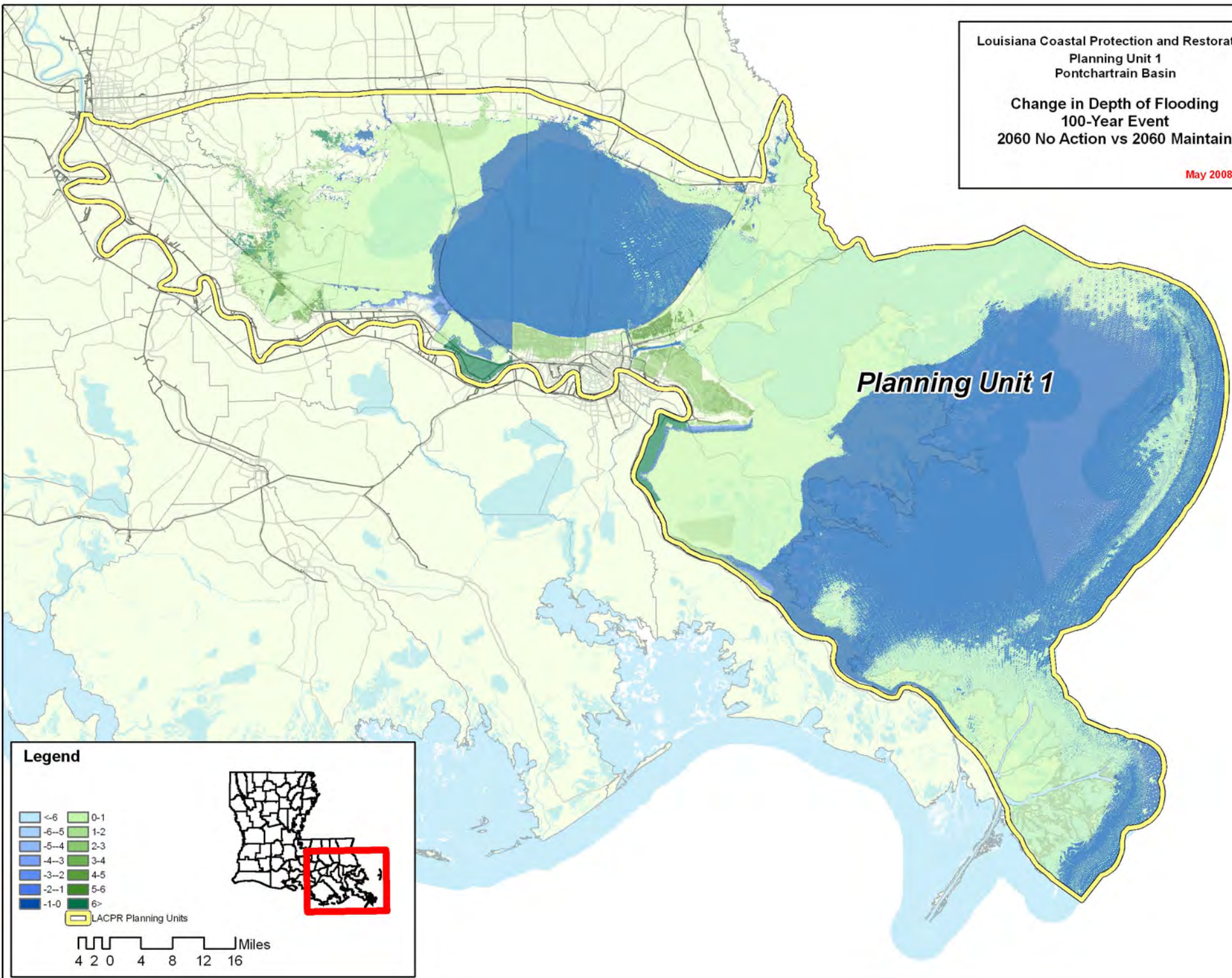
Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Water Surface Elevations
 1000-Year Event
 2060 Maintain**
 May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin

Change in Depth of Flooding
 100-Year Event
 2060 No Action vs 2060 Maintain

May 2008



Legend

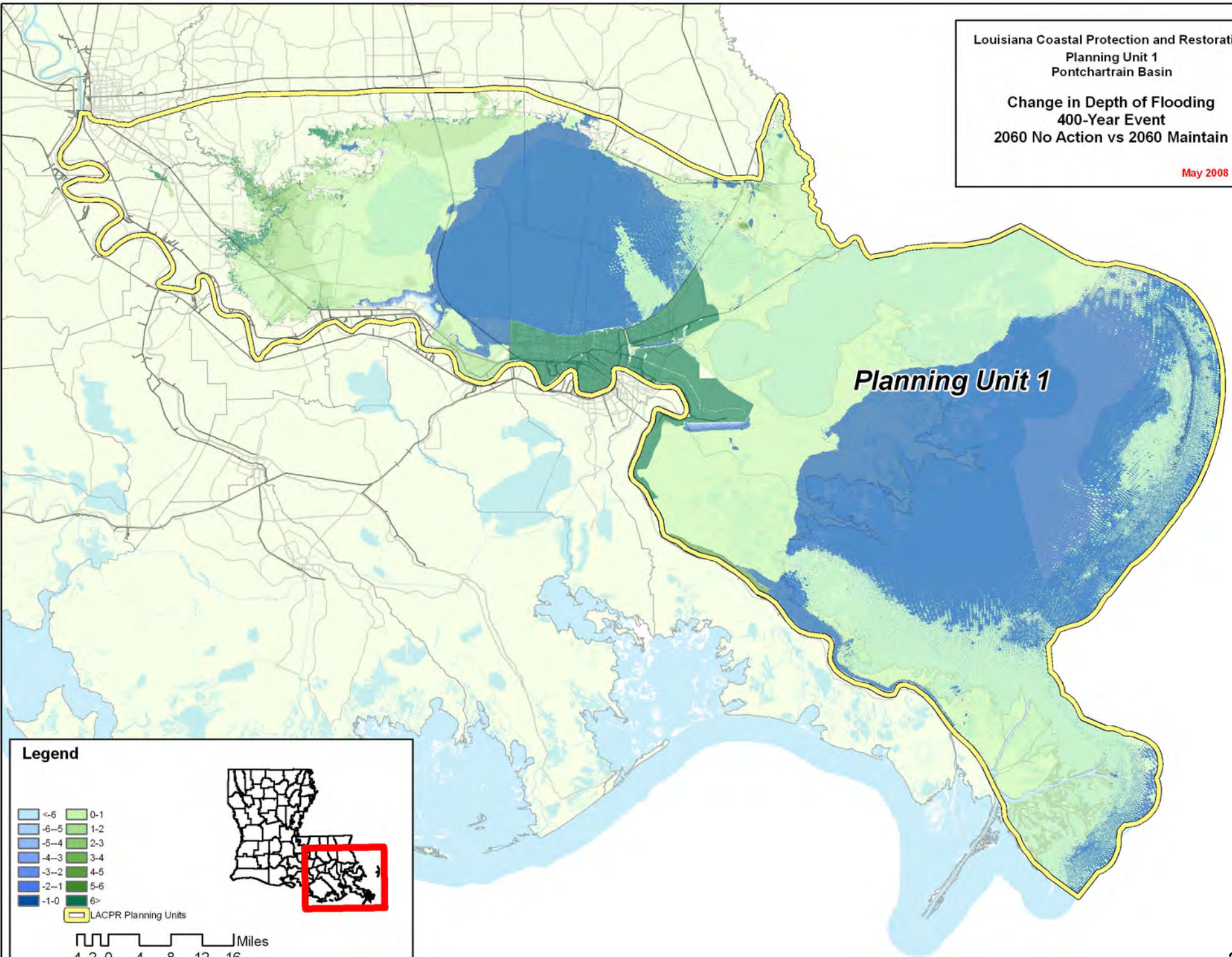
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LACPR Planning Units

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin

Change in Depth of Flooding
 400-Year Event
 2060 No Action vs 2060 Maintain

May 2008



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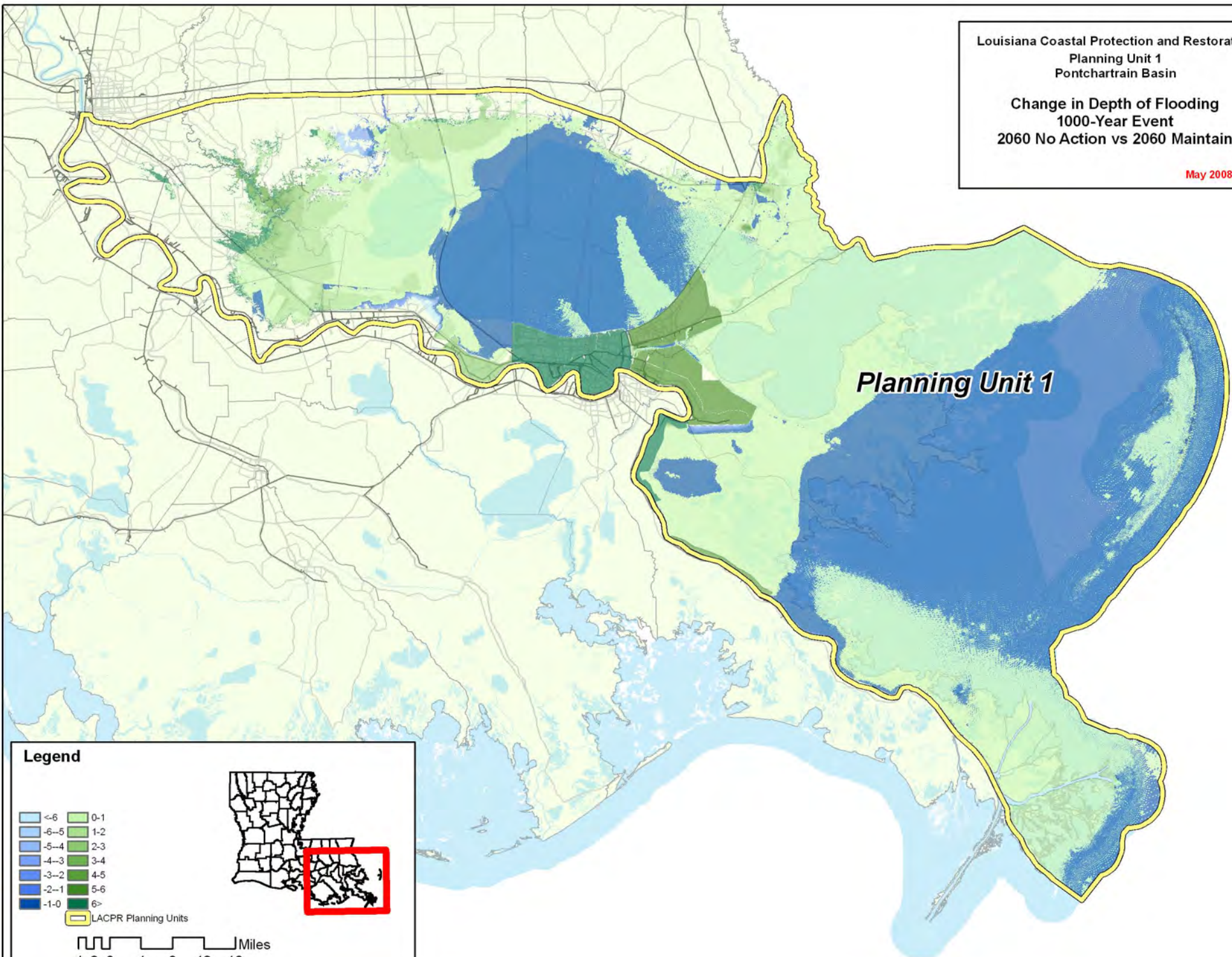
LACPR Planning Units

Miles
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Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin

Change in Depth of Flooding
 1000-Year Event
 2060 No Action vs 2060 Maintain

May 2008



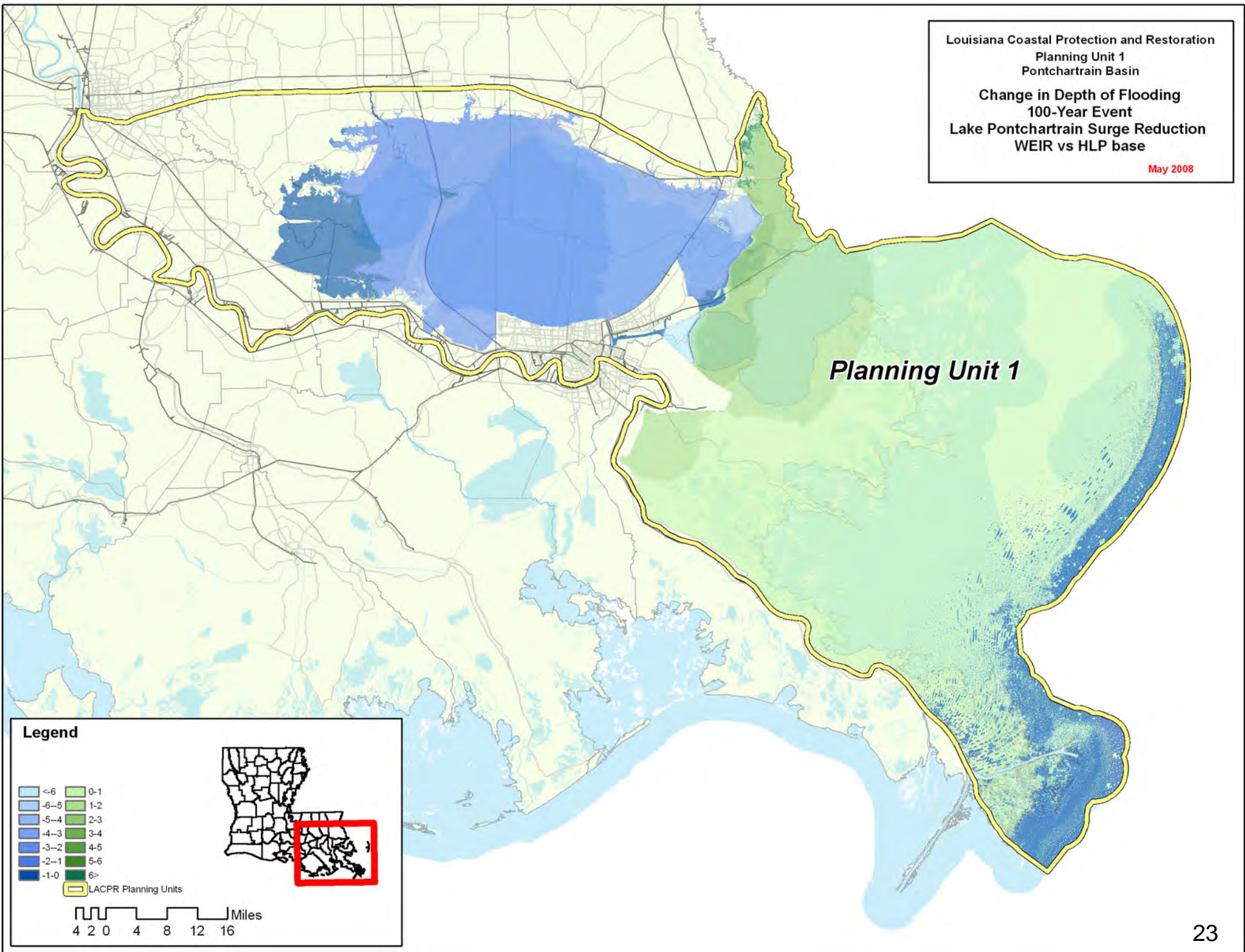
Legend

| | | | |
|--|-------------------|--|-----|
| | <math>< -6</math> | | 0-1 |
| | -6-5 | | 1-2 |
| | -5-4 | | 2-3 |
| | -4-3 | | 3-4 |
| | -3-2 | | 4-5 |
| | -2-1 | | 5-6 |
| | -1-0 | | 6+ |

LACPR Planning Units

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 Change in Depth of Flooding
 100-Year Event
 Lake Pontchartrain Surge Reduction
 WEIR vs HLP base

May 2008



Legend

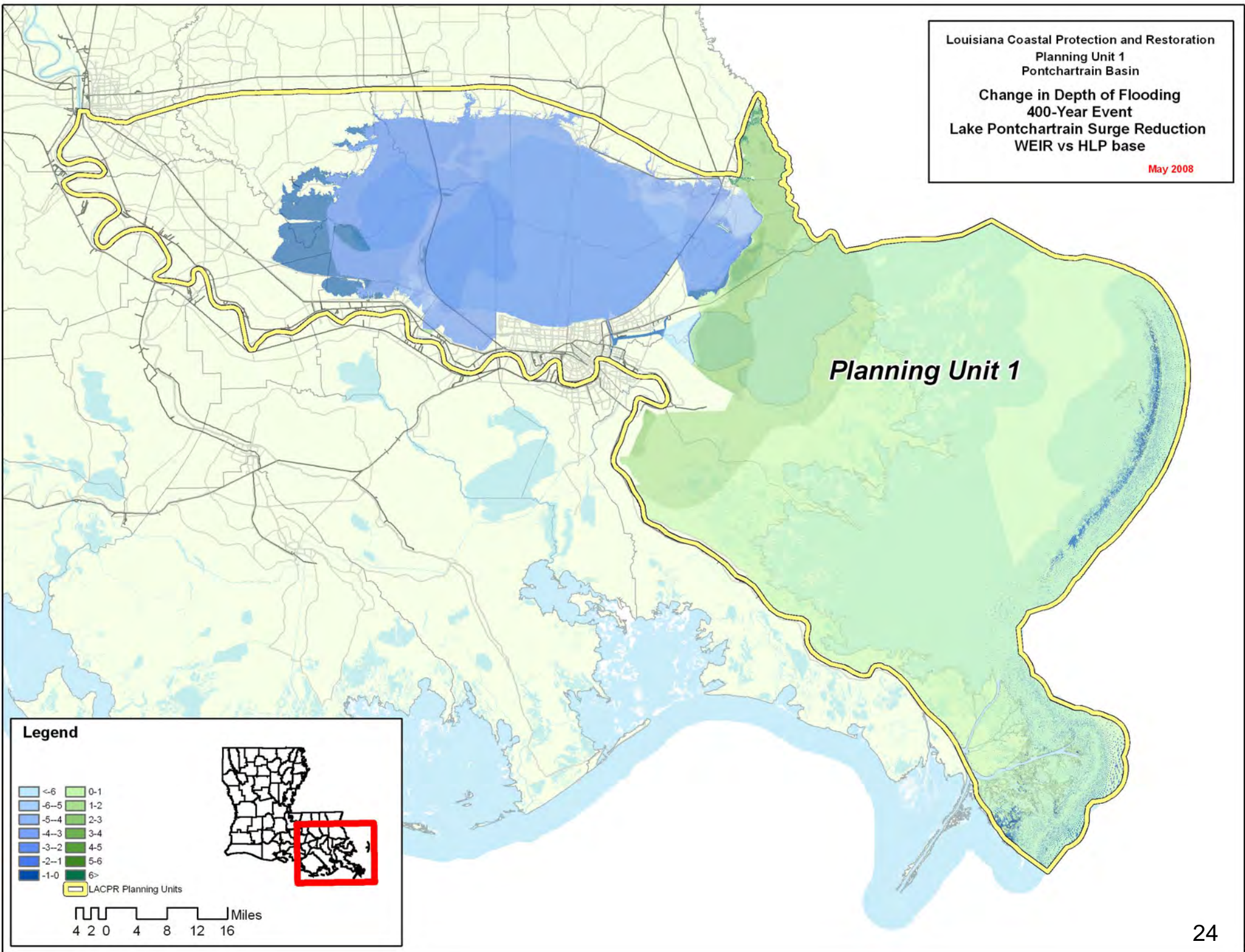
| | | | |
|--|------|--|-----|
| | <-6 | | 0-1 |
| | -6-5 | | 1-2 |
| | -5-4 | | 2-3 |
| | -4-3 | | 3-4 |
| | -3-2 | | 4-5 |
| | -2-1 | | 5-6 |
| | -1-0 | | 6> |

LACPR Planning Units

Miles
 4 2 0 4 8 12 16

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 Change in Depth of Flooding
 400-Year Event
 Lake Pontchartrain Surge Reduction
 WEIR vs HLP base

May 2008



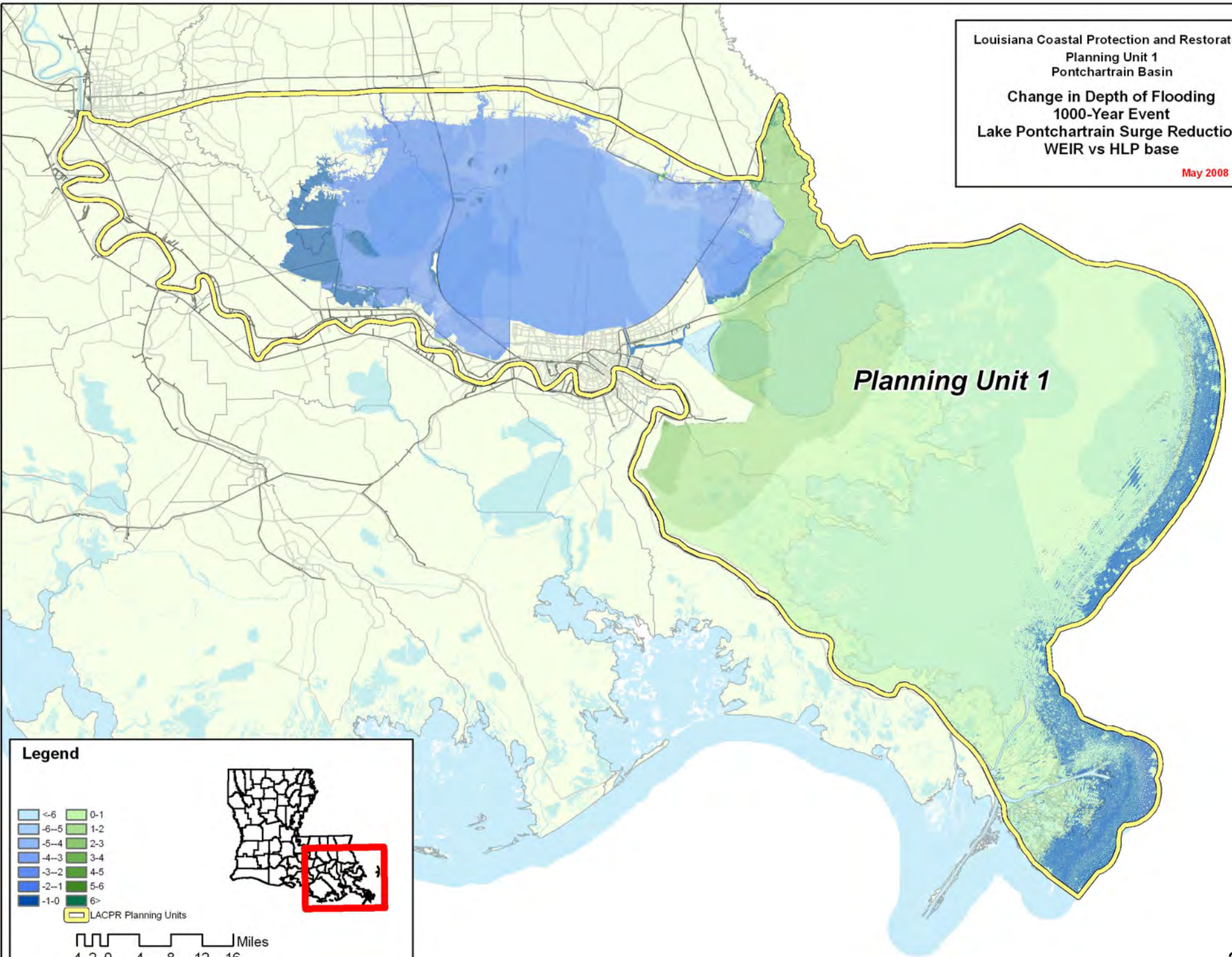
Legend

- | | | | |
|--|------|--|-----|
| | <-6 | | 0-1 |
| | -6-5 | | 1-2 |
| | -5-4 | | 2-3 |
| | -4-3 | | 3-4 |
| | -3-2 | | 4-5 |
| | -2-1 | | 5-6 |
| | -1-0 | | 6> |
- LACPR Planning Units



Miles
 4 2 0 4 8 12 16

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 Change in Depth of Flooding
 1000-Year Event
 Lake Pontchartrain Surge Reduction
 WEIR vs HLP base
 May 2008



Legend

| | | | |
|--|------|--|-----|
| | <-6 | | 0-1 |
| | -6-5 | | 1-2 |
| | -5-4 | | 2-3 |
| | -4-3 | | 3-4 |
| | -3-2 | | 4-5 |
| | -2-1 | | 5-6 |
| | -1-0 | | 6> |

LACPR Planning Units

| | | | | | |
|---------------------------------|---|---------------------------------|-------|------------------|-----------|
| Planning Unit: | 1 | Alt. No.: | PU1-0 | Category: | No Action |
| Alternative Description: | No action (without project) alternative. | | | | |
| Coastal Component: | Degraded coast--increasing risk. | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 0 | 37,371 | 442 | 287 | 1,471 | 76 | 143 | 130 | 50 |
| | | Mid | | 41,502 | 716 | 787 | 3,036 | 204 | 127 | 126 | 46 |
| | | Low | | 51,017 | 1,401 | 1,742 | 6,339 | 449 | 111 | 122 | 41 |
| 2 | High RSLR High Employment Dispersed Population | High | 0 | 38,803 | 522 | 524 | 2,092 | 134 | 143 | 130 | 50 |
| | | Mid | | 45,147 | 930 | 1,222 | 4,267 | 314 | 127 | 125 | 44 |
| | | Low | | 55,748 | 2,129 | 3,440 | 11,040 | 897 | 111 | 119 | 38 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 0 | 32,147 | 441 | 290 | 1,503 | 78 | 143 | 130 | 50 |
| | | Mid | | 35,876 | 684 | 656 | 2,785 | 174 | 127 | 126 | 46 |
| | | Low | | 43,832 | 1,267 | 1,262 | 5,246 | 341 | 111 | 122 | 41 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 0 | 33,074 | 509 | 425 | 1,954 | 120 | 143 | 130 | 50 |
| | | Mid | | 38,592 | 852 | 879 | 3,526 | 239 | 127 | 125 | 44 |
| | | Low | | 47,254 | 1,800 | 2,710 | 8,909 | 700 | 111 | 119 | 38 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|----|
| Construction Time (years) | | | 0 | After 50 yrs (% of baseline) | | 74 | 71 | 74 | 71 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 49 | 37 | 49 | 37 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.24 | Coastal Component | | 0 | 0 | 0 | 0 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 0 | 0 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 0 | 0 | Total Project | | 0 | 0 | 0 | 0 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 No Action Plan |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---------------------------------------|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | N/A | 1,472 | N/A | 1,081 | N/A | 1,345 | N/A | |
| 100-year | 11,935 | N/A | 34,000 | N/A | 9,879 | N/A | 26,076 | N/A | |
| 400-year | 89,937 | N/A | 116,204 | N/A | 62,688 | N/A | 80,694 | N/A | |
| 1,000-year | 118,260 | N/A | 122,423 | N/A | 81,963 | N/A | 84,515 | N/A | |
| 2,000-year | 122,343 | N/A | 125,886 | N/A | 84,351 | N/A | 86,336 | N/A | |

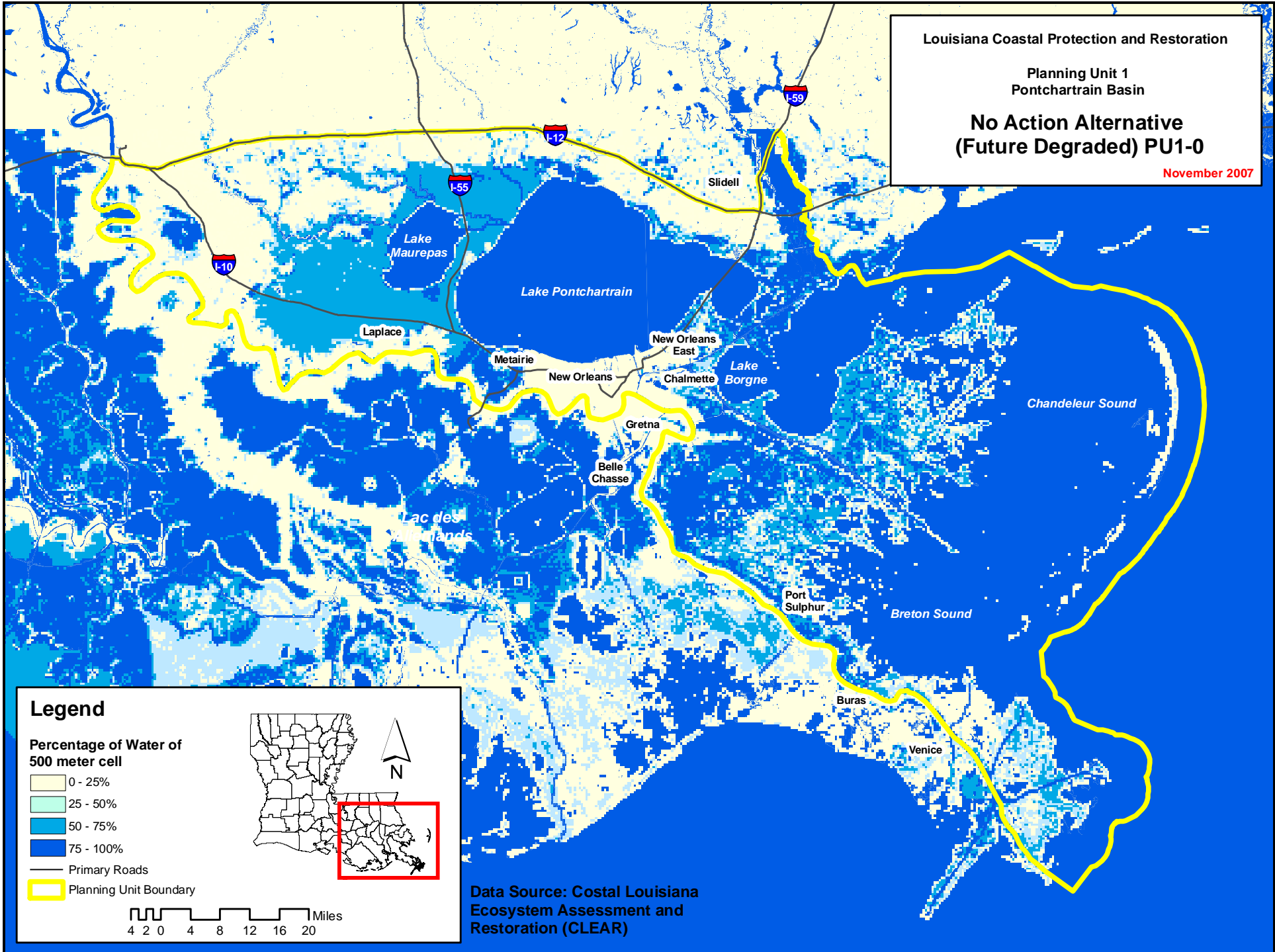
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

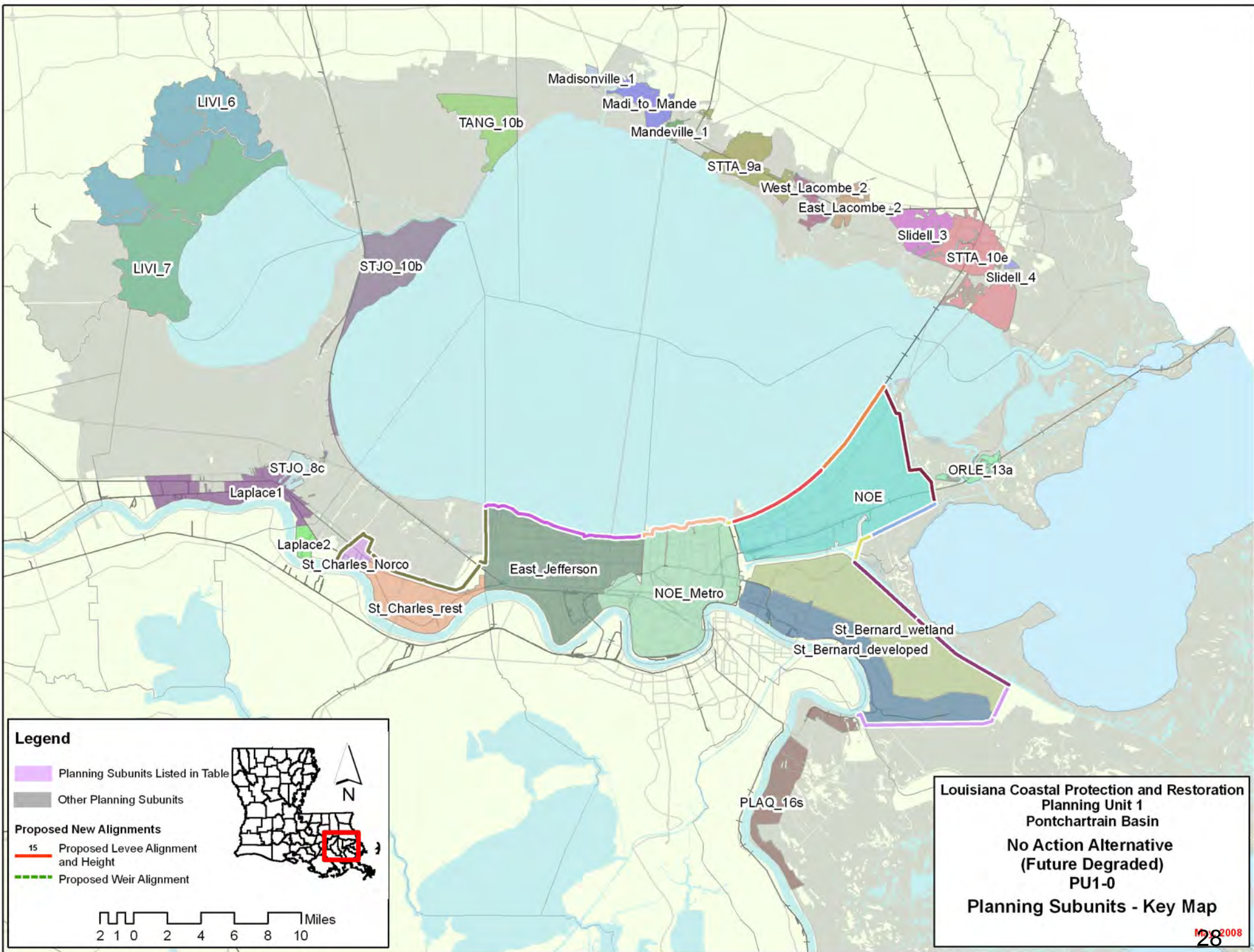
Louisiana Coastal Protection and Restoration

Planning Unit 1
Pontchartrain Basin

No Action Alternative
(Future Degraded) PU1-0

November 2007



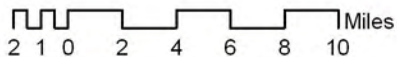


Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment



**Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 No Action Alternative
 (Future Degraded)
 PU1-0
 Planning Subunits - Key Map**

Alternative: PU1-0
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | | -1.3 | | 4.4 | | -2.6 | | 16.0 | | 16.0 | |
| East_Lacombe_2 | 10.9 | | 14.3 | | 15.9 | | 17.3 | | 21.7 | | 23.6 | |
| Laplace1 | 9.4 | | 12.2 | | 14.0 | | 12.4 | | 15.0 | | 16.8 | |
| Laplace2 | 8.5 | | 11.0 | | 12.8 | | 11.2 | | 14.3 | | 16.2 | |
| LIVI_6 | 7.3 | | 9.7 | | 11.1 | | 10.3 | | 12.8 | | 13.9 | |
| LIVI_7 | 7.5 | | 9.7 | | 10.9 | | 11.0 | | 13.1 | | 14.4 | |
| Madi_to_Mande | 11.0 | | 13.1 | | 14.3 | | 13.8 | | 16.7 | | 18.3 | |
| Madisonville_1 | 11.7 | | 14.6 | | 16.1 | | 13.5 | | 15.8 | | 16.9 | |
| Mandeville_1 | 11.0 | | 13.1 | | 14.3 | | 14.9 | | 19.1 | | 21.4 | |
| NOE | -5.8 | | 0.5 | | 10.9 | | -0.1 | | 16.0 | | 16.0 | |
| NOE_Metro | -5.1 | | -4.8 | | -3.0 | | -5.0 | | 16.0 | | 16.0 | |
| ORLE_13a | 14.6 | | 17.8 | | 19.4 | | 17.9 | | 21.5 | | 23.8 | |
| PLAQ_16s | 19.2 | | 25.3 | | 30.0 | | 21.4 | | 27.8 | | 31.8 | |
| Slidell_3 | 11.5 | | 15.1 | | 16.8 | | 13.4 | | 16.8 | | 18.5 | |
| Slidell_4 | 14.1 | | 18.3 | | 20.4 | | 20.5 | | 24.3 | | 26.5 | |
| St_Bernard_developed | -0.1 | | 4.3 | | 10.6 | | 2.3 | | 16.0 | | 16.0 | |
| St_Bernard_wetland | 2.4 | | 5.2 | | 10.6 | | 4.5 | | 16.0 | | 16.0 | |
| St_Charles_Norco | 4.4 | | 16.0 | | 16.0 | | 11.5 | | 17.3 | | 18.6 | |
| St_Charles_rest | 2.1 | | 16.0 | | 16.0 | | 11.5 | | 17.3 | | 18.6 | |
| STJO_10b | 10.6 | | 12.9 | | 14.1 | | 13.3 | | 15.6 | | 16.7 | |
| STJO_8c | 9.4 | | 12.2 | | 14.0 | | 12.7 | | 15.4 | | 17.2 | |
| STTA_10e | 12.2 | | 16.2 | | 18.2 | | 13.3 | | 16.7 | | 18.6 | |
| STTA_9a | 10.4 | | 12.7 | | 14.0 | | 13.2 | | 15.6 | | 17.5 | |
| TANG_10b | 11.0 | | 13.6 | | 15.0 | | 13.7 | | 16.3 | | 17.8 | |
| West_Lacombe_2 | 10.5 | | 13.5 | | 15.0 | | 13.2 | | 15.8 | | 17.3 | |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

| | | | | | |
|---------------------------------|--|---------------------------------|--------|------------------|--------------------------|
| Planning Unit: | 1 | Alt. No.: | PU1-R1 | Category: | Coastal Restoration Only |
| Alternative Description: | Sustain coastal landscape through restoration including shoreline protection, marsh creation, and steady state diversions. | | | | |
| Coastal Component: | R1 (steady state diversions) | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv \$ Millions | Ann. Equiv. # | Ann. Equiv \$ Millions | Ann. Equiv \$ Millions | Ann. Equiv # | Ann. Equiv \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 484 | 37,016 | 423 | 278 | 1,443 | 74 | 313 | 134 | 51 |
| | | Mid | | 40,243 | 616 | 486 | 2,219 | 123 | 267 | 130 | 48 |
| | | Low | | 45,113 | 1,106 | 1,237 | 4,983 | 323 | 221 | 126 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 496 | 38,180 | 483 | 428 | 1,847 | 111 | 313 | 134 | 51 |
| | | Mid | | 41,354 | 693 | 811 | 3,225 | 217 | 267 | 129 | 45 |
| | | Low | | 46,581 | 1,313 | 1,344 | 5,378 | 358 | 221 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 484 | 31,844 | 424 | 273 | 1,468 | 74 | 313 | 134 | 51 |
| | | Mid | | 34,923 | 614 | 441 | 2,189 | 116 | 267 | 130 | 48 |
| | | Low | | 39,623 | 1,075 | 981 | 4,536 | 275 | 221 | 126 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 496 | 32,620 | 480 | 378 | 1,818 | 107 | 313 | 134 | 51 |
| | | Mid | | 35,729 | 677 | 648 | 2,955 | 189 | 267 | 129 | 45 |
| | | Low | | 40,585 | 1,210 | 1,072 | 4,876 | 305 | 221 | 123 | 40 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|-------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 107 | 104 | 107 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 105 | 96 | 105 | 96 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.43 | Coastal Component | | 9,476 | 9,710 | 9,476 | 9,710 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 3,317 | 3,398 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 3,317 | 3,398 | Total Project | | 9,476 | 9,710 | 9,476 | 9,710 |

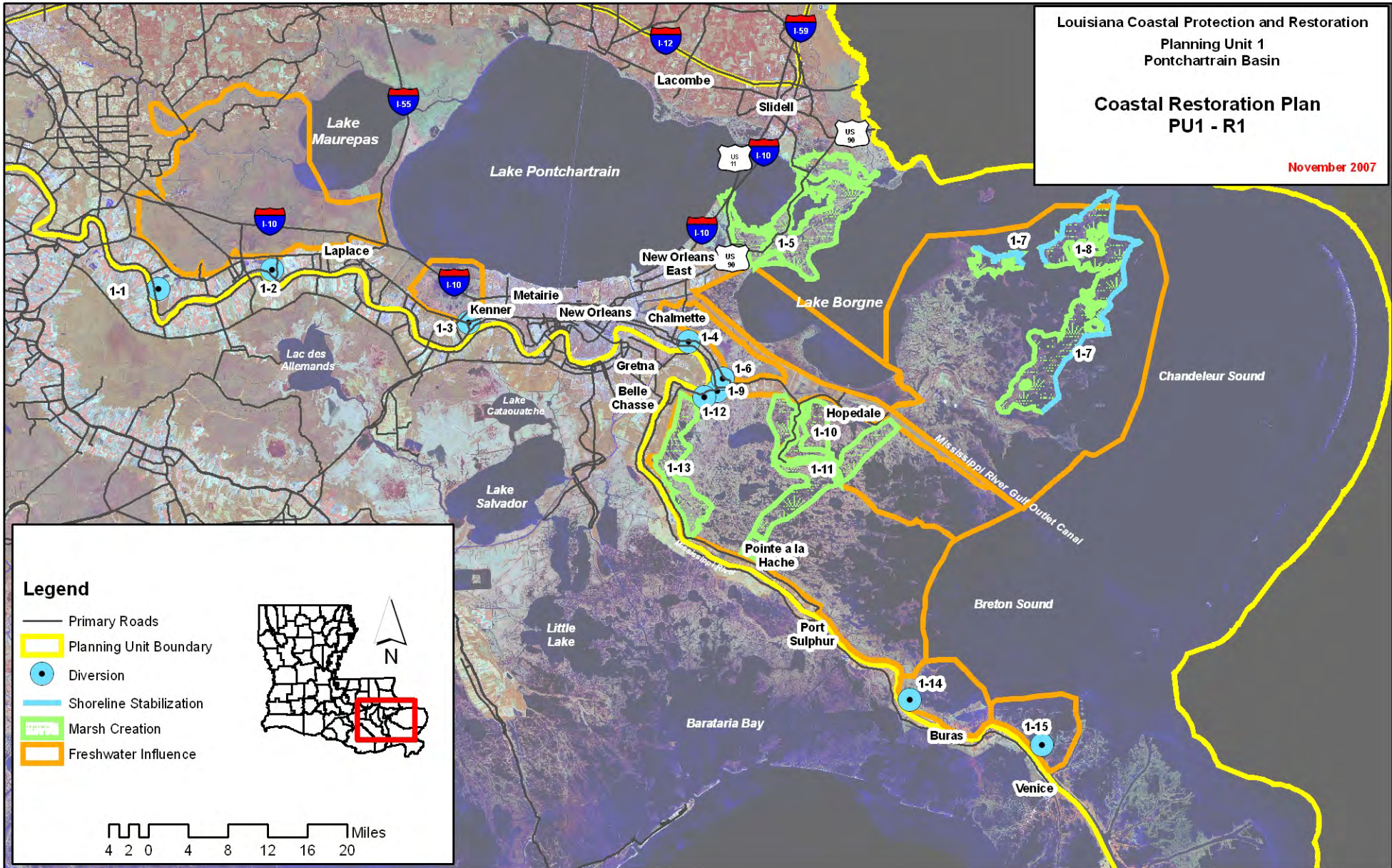
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 1,214 | 1,472 | 1,466 | 1,081 | 1,081 | 1,345 | 1,339 | |
| 100-year | 11,935 | 5,957 | 34,000 | 12,291 | 9,879 | 5,946 | 26,076 | 9,992 | |
| 400-year | 89,937 | 54,550 | 116,204 | 58,923 | 62,688 | 40,242 | 80,694 | 42,875 | |
| 1,000-year | 118,260 | 78,763 | 122,423 | 82,448 | 81,963 | 56,290 | 84,515 | 58,415 | |
| 2,000-year | 122,343 | 119,248 | 125,886 | 123,202 | 84,351 | 82,754 | 86,336 | 84,994 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin

**Coastal Restoration Plan
 PU1 - R1**

November 2007



| | | | | | |
|---------------------------------|--|---------------------------------|--------|------------------|--------------------------|
| Planning Unit: | 1 | Alt. No.: | PU1-R2 | Category: | Coastal Restoration Only |
| Alternative Description: | Sustain coastal landscape through restoration including shoreline protection, marsh creation, and pulsed diversions. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|----------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 543 | 37,016 | 423 | 278 | 1,443 | 74 | 313 | 134 | 51 |
| | | Mid | | 40,243 | 616 | 486 | 2,219 | 123 | 267 | 130 | 48 |
| | | Low | | 45,113 | 1,106 | 1,237 | 4,983 | 323 | 221 | 126 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 557 | 38,180 | 483 | 428 | 1,847 | 111 | 313 | 134 | 51 |
| | | Mid | | 41,354 | 693 | 811 | 3,225 | 217 | 267 | 129 | 45 |
| | | Low | | 46,581 | 1,313 | 1,344 | 5,378 | 358 | 221 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 543 | 31,844 | 424 | 273 | 1,468 | 74 | 313 | 134 | 51 |
| | | Mid | | 34,923 | 614 | 441 | 2,189 | 116 | 267 | 130 | 48 |
| | | Low | | 39,623 | 1,075 | 981 | 4,536 | 275 | 221 | 126 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 557 | 32,620 | 480 | 378 | 1,818 | 107 | 313 | 134 | 51 |
| | | Mid | | 35,729 | 677 | 648 | 2,955 | 189 | 267 | 129 | 45 |
| | | Low | | 40,585 | 1,210 | 1,072 | 4,876 | 305 | 221 | 123 | 40 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 3,733 | 3,815 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 3,733 | 3,815 | Total Project | | 10,666 | 10,899 | 10,666 | 10,899 |

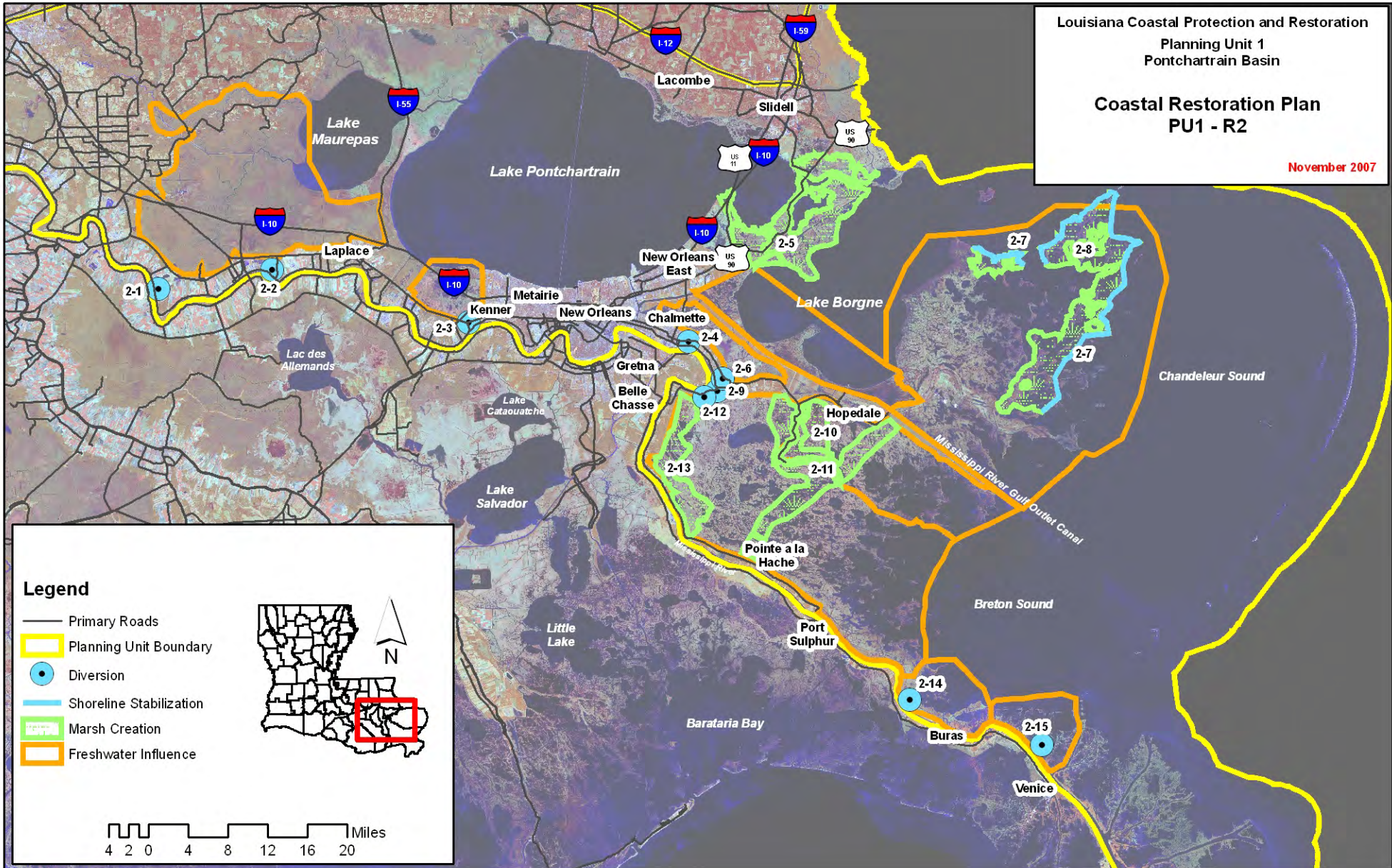
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 1,214 | 1,472 | 1,466 | 1,081 | 1,081 | 1,345 | 1,339 | |
| 100-year | 11,935 | 5,957 | 34,000 | 12,291 | 9,879 | 5,946 | 26,076 | 9,992 | |
| 400-year | 89,937 | 54,550 | 116,204 | 58,923 | 62,688 | 40,242 | 80,694 | 42,875 | |
| 1,000-year | 118,260 | 78,763 | 122,423 | 82,448 | 81,963 | 56,290 | 84,515 | 58,415 | |
| 2,000-year | 122,343 | 119,248 | 125,886 | 123,202 | 84,351 | 82,754 | 86,336 | 84,994 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin

**Coastal Restoration Plan
 PU1 - R2**

November 2007



Legend

- Primary Roads
- Planning Unit Boundary
- Diversion
- Shoreline Stabilization
- ▨ Marsh Creation
- Freshwater Influence

Miles
 4 2 0 4 8 12 16 20

| | | | | | |
|---------------------------------|--|---------------------------------|--------|------------------|--------------------------|
| Planning Unit: | 1 | Alt. No.: | PU1-R3 | Category: | Coastal Restoration Only |
| Alternative Description: | Sustain coastal landscape through restoration including shoreline protection, marsh creation, and diversions as proposed in the State Master Plan. | | | | |
| Coastal Component: | R3 (state plan) | Nonstructural Component: | None | | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

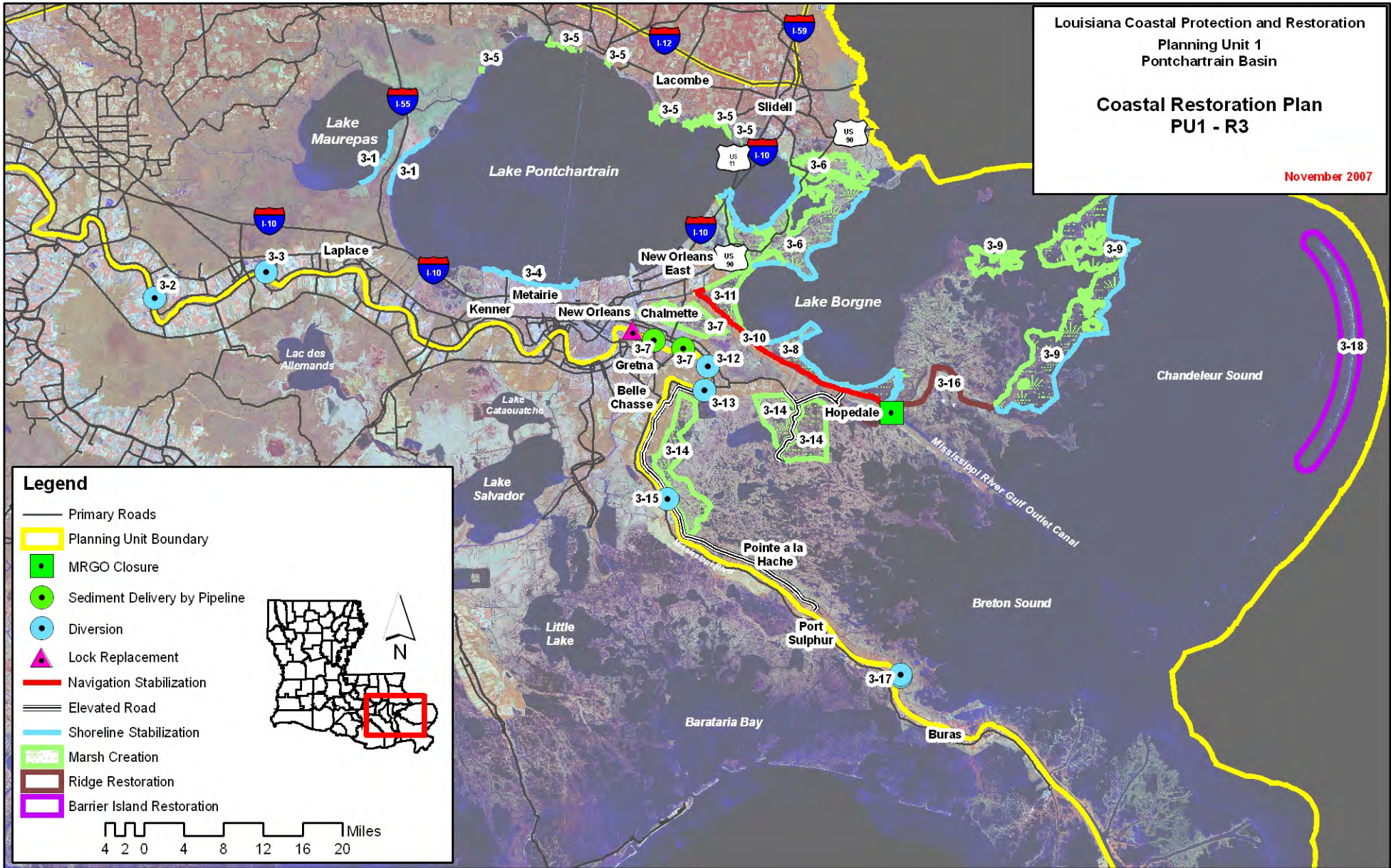
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv \$ Millions | Ann. Equiv. # | Ann. Equiv \$ Millions | Ann. Equiv \$ Millions | Ann. Equiv # | Ann. Equiv \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 777 | 37,016 | 423 | 278 | 1,443 | 74 | 313 | 134 | 51 |
| | | Mid | | 40,243 | 616 | 486 | 2,219 | 123 | 267 | 130 | 48 |
| | | Low | | 45,113 | 1,106 | 1,237 | 4,983 | 323 | 221 | 126 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 798 | 38,180 | 483 | 428 | 1,847 | 111 | 313 | 134 | 51 |
| | | Mid | | 41,354 | 693 | 811 | 3,225 | 217 | 267 | 129 | 45 |
| | | Low | | 46,581 | 1,313 | 1,344 | 5,378 | 358 | 221 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 777 | 31,844 | 424 | 273 | 1,468 | 74 | 313 | 134 | 51 |
| | | Mid | | 34,923 | 614 | 441 | 2,189 | 116 | 267 | 130 | 48 |
| | | Low | | 39,623 | 1,075 | 981 | 4,536 | 275 | 221 | 126 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 798 | 32,620 | 480 | 378 | 1,818 | 107 | 313 | 134 | 51 |
| | | Mid | | 35,729 | 677 | 648 | 2,955 | 189 | 267 | 129 | 45 |
| | | Low | | 40,585 | 1,210 | 1,072 | 4,876 | 305 | 221 | 123 | 40 |

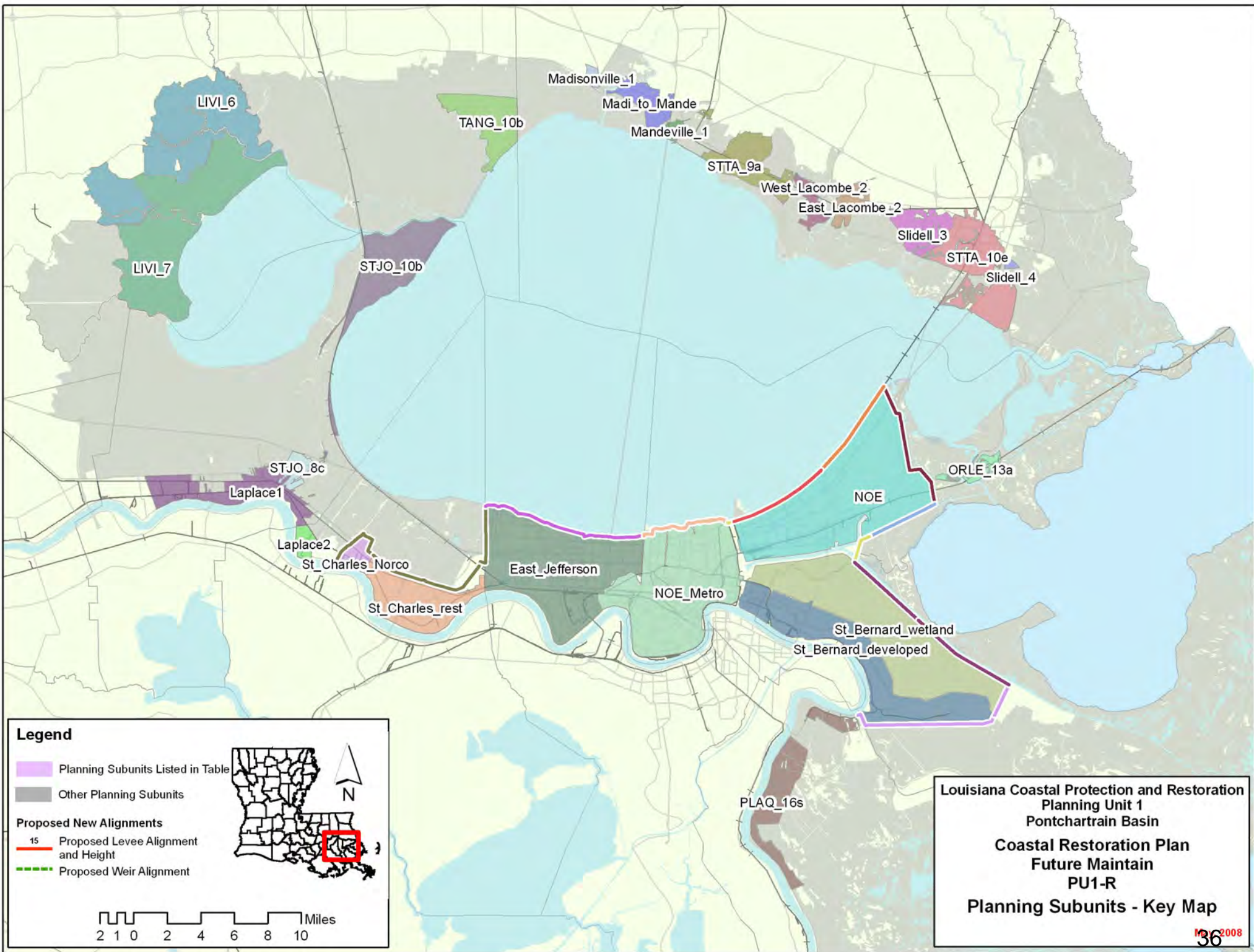
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 109 | 107 | 109 | 107 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 101 | 94 | 101 | 94 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | Coastal Component | | 15,208 | 15,618 | 15,208 | 15,618 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 5,323 | 5,466 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 5,323 | 5,466 | Total Project | | 15,208 | 15,618 | 15,208 | 15,618 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 1,214 | 1,472 | 1,466 | 1,081 | 1,081 | 1,345 | 1,339 | |
| 100-year | 11,935 | 5,957 | 34,000 | 12,291 | 9,879 | 5,946 | 26,076 | 9,992 | |
| 400-year | 89,937 | 54,550 | 116,204 | 58,923 | 62,688 | 40,242 | 80,694 | 42,875 | |
| 1,000-year | 118,260 | 78,763 | 122,423 | 82,448 | 81,963 | 56,290 | 84,515 | 58,415 | |
| 2,000-year | 122,343 | 119,248 | 125,886 | 123,202 | 84,351 | 82,754 | 86,336 | 84,994 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 Coastal Restoration Plan
 PU1 - R3
 November 2007





LIVI_6

LIVI_7

Madisonville_1

Madi_to_Mande

Mandeville_1

TANG_10b

STTA_9a

West_Lacombe_2

East_Lacombe_2

Slidell_3

STTA_10e

Slidell_4

STJO_10b

STJO_8c

Laplace1

Laplace2

St_Charles_Norco

St_Charles_rest

East_Jefferson

NOE_Metro

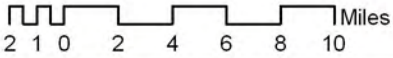
NOE

ORLE_13a

St_Bernard_wetland

St_Bernard_developed

PLAQ_16s



Alternative: PU1-R1, R2, and R3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions* | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.1 | -1.3 | -1.3 | 4.4 | 4.4 | -2.6 | -5.1 | 16.0 | -1.3 | 16.0 | 4.4 |
| East_Lacombe_2 | 10.9 | 10.9 | 14.3 | 14.3 | 15.9 | 15.9 | 17.3 | 13.5 | 21.7 | 16.9 | 23.6 | 18.5 |
| Laplace1 | 9.4 | 9.4 | 12.2 | 12.2 | 14.0 | 14.0 | 12.4 | 12.0 | 15.0 | 14.8 | 16.8 | 16.6 |
| Laplace2 | 8.5 | 8.5 | 11.0 | 11.0 | 12.8 | 12.8 | 11.2 | 11.1 | 14.3 | 13.6 | 16.2 | 15.4 |
| LIVI_6 | 7.3 | 7.3 | 9.7 | 9.7 | 11.1 | 11.1 | 10.3 | 9.9 | 12.8 | 12.3 | 13.9 | 13.7 |
| LIVI_7 | 7.5 | 7.5 | 9.7 | 9.7 | 10.9 | 10.9 | 11.0 | 10.1 | 13.1 | 12.3 | 14.4 | 13.5 |
| Madi_to_Mande | 11.0 | 11.0 | 13.1 | 13.1 | 14.3 | 14.3 | 13.8 | 13.6 | 16.7 | 15.7 | 18.3 | 16.9 |
| Madisonville_1 | 11.7 | 11.7 | 14.6 | 14.6 | 16.1 | 16.1 | 13.5 | 13.5 | 15.8 | 15.8 | 16.9 | 16.9 |
| Mandeville_1 | 11.0 | 11.0 | 13.1 | 13.1 | 14.3 | 14.3 | 14.9 | 13.6 | 19.1 | 15.7 | 21.4 | 16.9 |
| NOE | -5.8 | -5.8 | 0.5 | 0.5 | 10.9 | 10.9 | -0.1 | -5.8 | 16.0 | 0.5 | 16.0 | 10.9 |
| NOE_Metro | -5.1 | -5.1 | -4.8 | -4.8 | -3.0 | -3.0 | -5.0 | -5.1 | 16.0 | -4.8 | 16.0 | -3.0 |
| ORLE_13a | 14.6 | 14.6 | 17.8 | 17.8 | 19.4 | 19.4 | 17.9 | 17.2 | 21.5 | 20.4 | 23.8 | 22.0 |
| PLAQ_16s | 19.2 | 19.2 | 25.3 | 25.3 | 30.0 | 30.0 | 21.4 | 21.8 | 27.8 | 27.8 | 31.8 | 31.8 |
| Slidell_3 | 11.5 | 11.5 | 15.1 | 15.1 | 16.8 | 16.8 | 13.4 | 13.4 | 16.8 | 16.8 | 18.5 | 18.5 |
| Slidell_4 | 14.1 | 14.1 | 18.3 | 18.3 | 20.4 | 20.4 | 20.5 | 16.7 | 24.3 | 20.9 | 26.5 | 23.0 |
| St_Bernard_developed | -0.1 | -0.1 | 4.3 | 4.3 | 10.6 | 10.6 | 2.3 | -0.1 | 16.0 | 4.3 | 16.0 | 10.6 |
| St_Bernard_wetland | 2.4 | 2.4 | 5.2 | 5.2 | 10.6 | 10.6 | 4.5 | 2.4 | 16.0 | 5.2 | 16.0 | 10.6 |
| St_Charles_Norco | 4.4 | 4.4 | 16.0 | 16.0 | 16.0 | 16.0 | 11.5 | 4.4 | 17.3 | 16.0 | 18.6 | 16.0 |
| St_Charles_rest | 2.1 | 2.1 | 16.0 | 16.0 | 16.0 | 16.0 | 11.5 | 2.1 | 17.3 | 16.0 | 18.6 | 16.0 |
| STJO_10b | 10.6 | 10.6 | 12.9 | 12.9 | 14.1 | 14.1 | 13.3 | 13.2 | 15.6 | 15.5 | 16.7 | 16.7 |
| STJO_8c | 9.4 | 9.4 | 12.2 | 12.2 | 14.0 | 14.0 | 12.7 | 12.0 | 15.4 | 12.0 | 17.2 | 16.6 |
| STTA_10e | 12.2 | 12.2 | 16.2 | 16.2 | 18.2 | 18.2 | 13.3 | 13.3 | 16.7 | 16.7 | 18.6 | 18.6 |
| STTA_9a | 10.4 | 10.4 | 12.7 | 12.7 | 14.0 | 14.0 | 13.2 | 13.0 | 15.6 | 15.3 | 17.5 | 16.6 |
| TANG_10b | 11.0 | 11.0 | 13.6 | 13.6 | 15.0 | 15.0 | 13.7 | 13.6 | 16.3 | 16.2 | 17.8 | 17.6 |
| West_Lacombe_2 | 10.5 | 10.5 | 13.5 | 13.5 | 15.0 | 15.0 | 13.2 | 13.1 | 15.8 | 15.8 | 17.3 | 17.3 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

* With and without project base conditions (2010) are the same for coastal restoration only plans.

| | | | | | |
|---------------------------------|---|---------------------------------|------------|-----------------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-NS-100 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 100-year nonstructural measures. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | 100-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 873 | 32,289 | 204 | 79 | 542 | 21 | 313 | 134 | 51 |
| | | Mid | | 35,151 | 319 | 212 | 1,146 | 54 | 267 | 130 | 48 |
| | | Low | | 39,672 | 732 | 687 | 3,236 | 180 | 221 | 126 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 885 | 32,854 | 222 | 164 | 750 | 42 | 313 | 134 | 51 |
| | | Mid | | 35,717 | 354 | 370 | 1,628 | 97 | 267 | 129 | 45 |
| | | Low | | 40,410 | 834 | 740 | 3,430 | 197 | 221 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 844 | 30,285 | 201 | 74 | 551 | 21 | 313 | 134 | 51 |
| | | Mid | | 33,272 | 317 | 195 | 1,187 | 53 | 267 | 130 | 48 |
| | | Low | | 37,927 | 724 | 607 | 3,186 | 169 | 221 | 126 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 866 | 30,673 | 216 | 143 | 751 | 42 | 313 | 134 | 51 |
| | | Mid | | 33,684 | 346 | 326 | 1,636 | 95 | 267 | 129 | 45 |
| | | Low | | 38,414 | 803 | 651 | 3,351 | 183 | 221 | 123 | 40 |

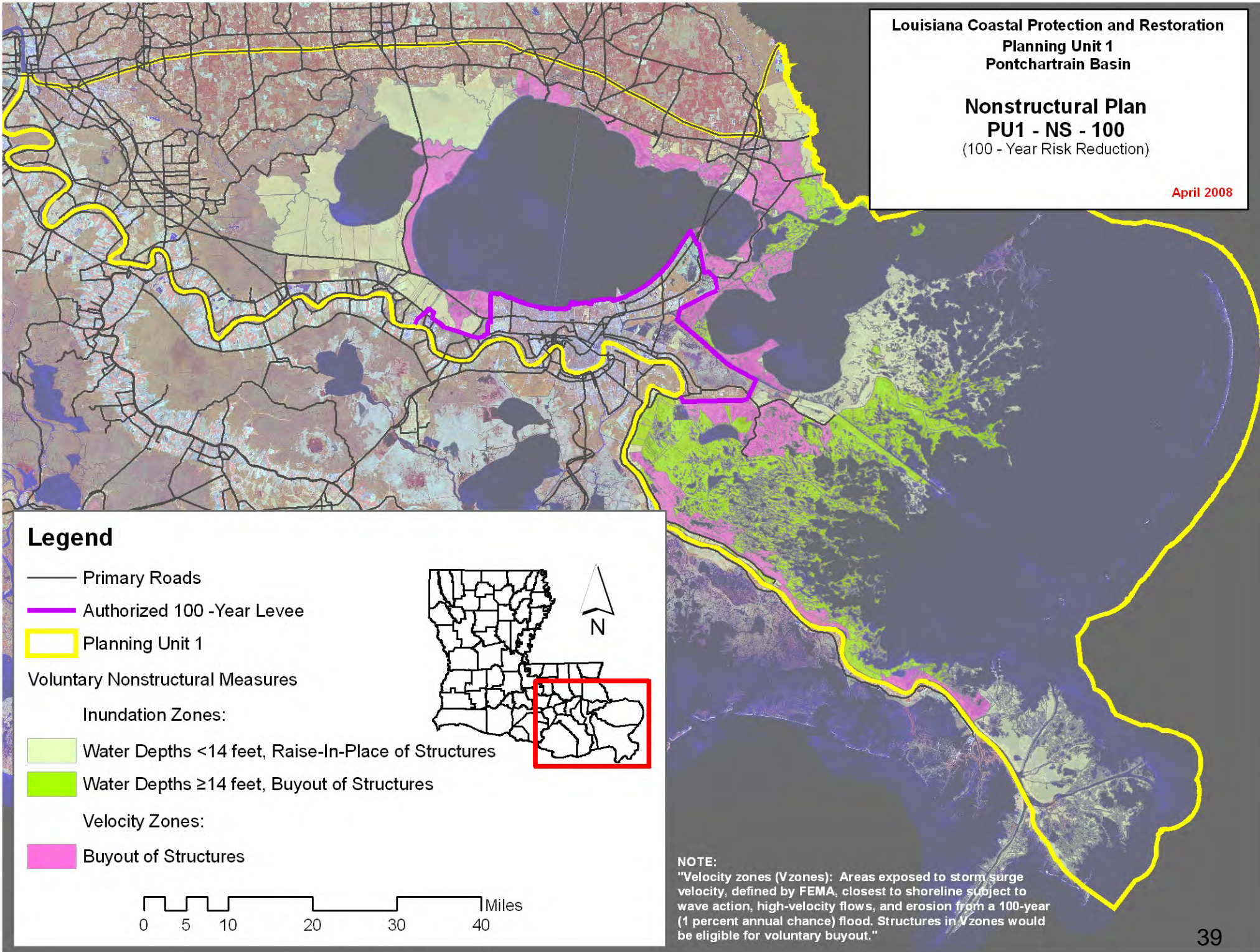
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 6,453 | 6,453 | 6,069 | 6,069 |
| | 1 / 2 | 5,992 | 6,073 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 5,857 | 5,939 | Total Project | | 17,119 | 17,352 | 16,735 | 16,968 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Nonstructural Plan 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 490 | 1,472 | 529 | 1,081 | 372 | 1,345 | 399 | |
| 100-year | 11,935 | 2,191 | 34,000 | 8,386 | 9,879 | 1,945 | 26,076 | 6,799 | |
| 400-year | 89,937 | 50,601 | 116,204 | 55,036 | 62,688 | 37,766 | 80,694 | 40,722 | |
| 1,000-year | 118,260 | 74,874 | 122,423 | 78,489 | 81,963 | 54,169 | 84,515 | 56,320 | |
| 2,000-year | 122,343 | 115,364 | 125,886 | 119,181 | 84,351 | 80,708 | 86,336 | 82,932 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.

Nonstructural Plan
PU1 - NS - 100
(100 - Year Risk Reduction)

April 2008



| | | | | | |
|---------------------------------|---|---------------------------------|------------|-----------------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-NS-400 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 400-year nonstructural measures. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | 400-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,761 | 31,188 | 167 | 45 | 413 | 13 | 313 | 134 | 51 |
| | | Mid | | 34,018 | 229 | 91 | 642 | 23 | 267 | 130 | 48 |
| | | Low | | 38,517 | 463 | 343 | 1,760 | 82 | 221 | 126 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,773 | 31,753 | 169 | 48 | 421 | 13 | 313 | 134 | 51 |
| | | Mid | | 34,583 | 236 | 120 | 722 | 31 | 267 | 129 | 45 |
| | | Low | | 39,255 | 482 | 365 | 1,818 | 88 | 221 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,949 | 29,321 | 166 | 47 | 432 | 13 | 313 | 134 | 51 |
| | | Mid | | 32,274 | 232 | 96 | 692 | 25 | 267 | 130 | 48 |
| | | Low | | 36,904 | 466 | 341 | 1,810 | 81 | 221 | 126 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,971 | 29,708 | 168 | 49 | 439 | 14 | 313 | 134 | 51 |
| | | Mid | | 32,685 | 238 | 122 | 759 | 32 | 267 | 129 | 45 |
| | | Low | | 37,391 | 480 | 359 | 1,855 | 86 | 221 | 123 | 40 |

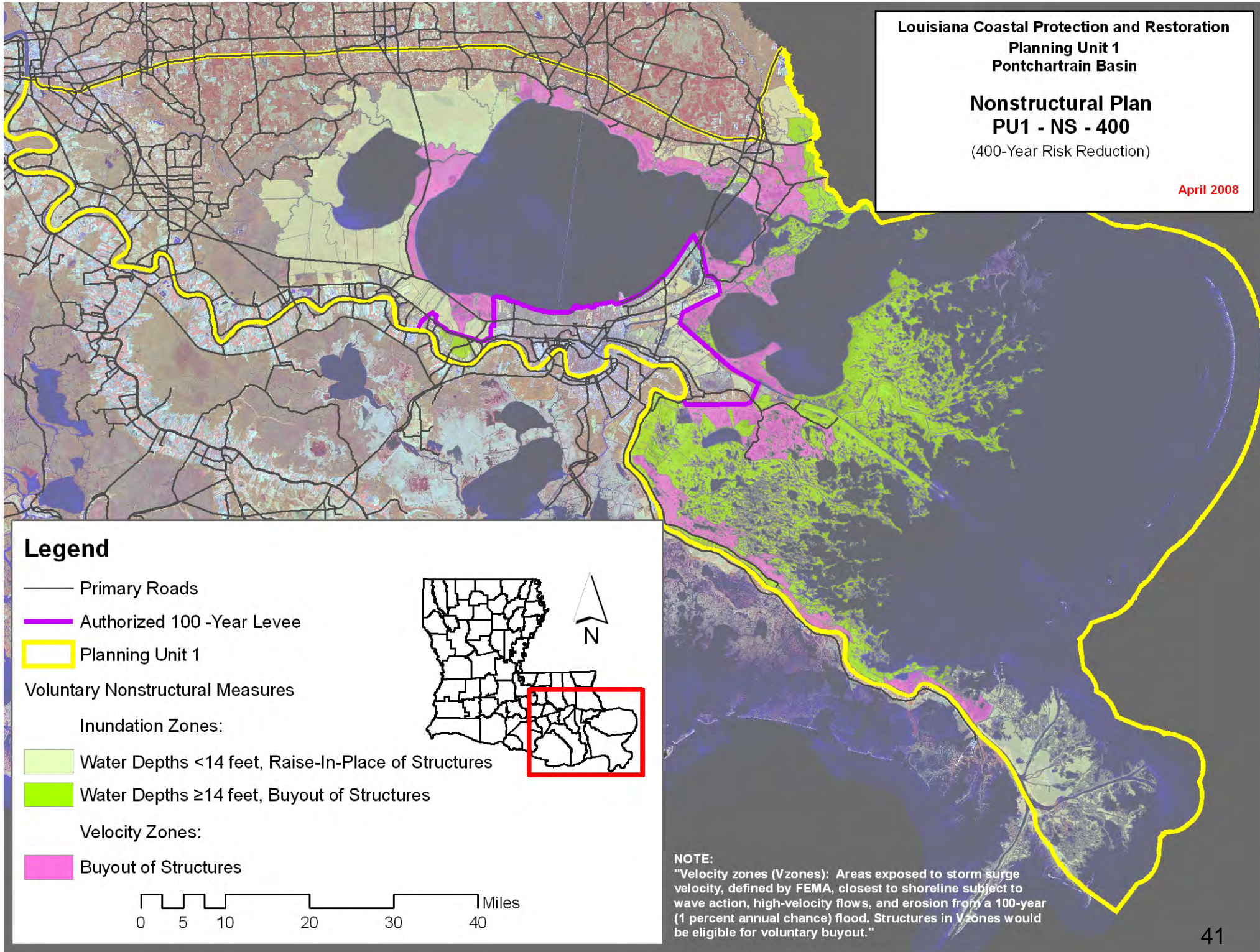
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 23,873 | 23,873 | 27,758 | 27,758 |
| | 1 / 2 | 12,088 | 12,170 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 13,448 | 13,530 | Total Project | | 34,538 | 34,772 | 38,423 | 38,657 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Nonstructural Plan 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 246 | 1,472 | 283 | 1,081 | 162 | 1,345 | 186 | |
| 100-year | 11,935 | 804 | 34,000 | 1,219 | 9,879 | 657 | 26,076 | 987 | |
| 400-year | 89,937 | 5,450 | 116,204 | 13,075 | 62,688 | 4,087 | 80,694 | 9,940 | |
| 1,000-year | 118,260 | 61,995 | 122,423 | 67,873 | 81,963 | 44,770 | 84,515 | 48,444 | |
| 2,000-year | 122,343 | 106,842 | 125,886 | 112,307 | 84,351 | 74,337 | 86,336 | 77,619 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

**Nonstructural Plan
PU1 - NS - 400**
(400-Year Risk Reduction)

April 2008



| | | | | | |
|---------------------------------|--|---------------------------------|-------------|------------------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-NS-1000 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 1000-year nonstructural measures. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | 1000-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,535 | 25,999 | 151 | 44 | 411 | 13 | 313 | 134 | 51 |
| | | Mid | | 28,761 | 211 | 83 | 613 | 21 | 267 | 130 | 48 |
| | | Low | | 33,107 | 384 | 262 | 1,370 | 58 | 221 | 126 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,547 | 26,564 | 153 | 44 | 411 | 13 | 313 | 134 | 51 |
| | | Mid | | 29,326 | 214 | 89 | 629 | 23 | 267 | 129 | 45 |
| | | Low | | 33,845 | 391 | 276 | 1,414 | 62 | 221 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,595 | 25,257 | 152 | 46 | 430 | 13 | 313 | 134 | 51 |
| | | Mid | | 28,162 | 217 | 89 | 664 | 23 | 267 | 130 | 48 |
| | | Low | | 32,686 | 395 | 271 | 1,436 | 60 | 221 | 126 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,617 | 25,644 | 154 | 47 | 430 | 13 | 313 | 134 | 51 |
| | | Mid | | 28,574 | 219 | 94 | 677 | 24 | 267 | 129 | 45 |
| | | Low | | 33,173 | 401 | 282 | 1,469 | 63 | 221 | 123 | 40 |

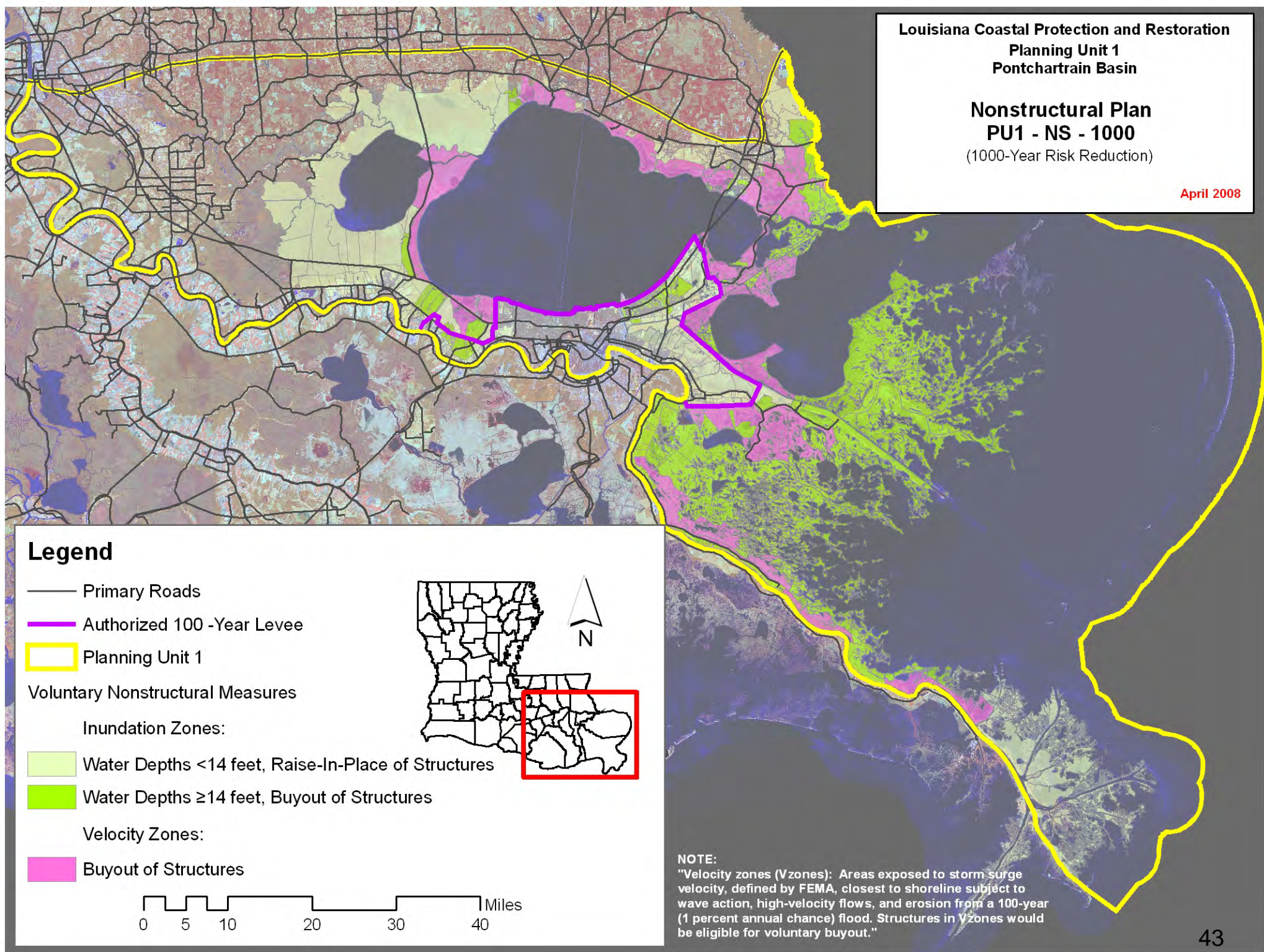
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 39,066 | 39,066 | 40,442 | 40,442 |
| | 1 / 2 | 17,406 | 17,488 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 17,888 | 17,969 | Total Project | | 49,732 | 49,966 | 51,107 | 51,341 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Nonstructural Plan 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 139 | 1,472 | 175 | 1,081 | 90 | 1,345 | 114 | |
| 100-year | 11,935 | 618 | 34,000 | 721 | 9,879 | 514 | 26,076 | 600 | |
| 400-year | 89,937 | 2,090 | 116,204 | 3,188 | 62,688 | 1,761 | 80,694 | 2,579 | |
| 1,000-year | 118,260 | 5,057 | 122,423 | 14,723 | 81,963 | 3,981 | 84,515 | 10,921 | |
| 2,000-year | 122,343 | 89,283 | 125,886 | 97,921 | 84,351 | 63,811 | 86,336 | 69,581 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Nonstructural Plan
PU1 - NS - 1000
 (1000-Year Risk Reduction)

April 2008



Legend

- Primary Roads
- Authorized 100 -Year Levee
- Planning Unit 1

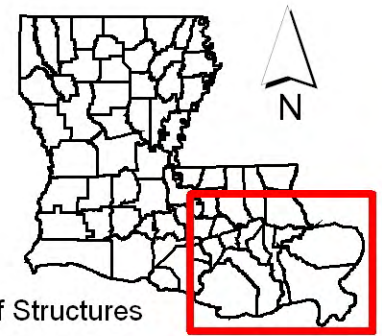
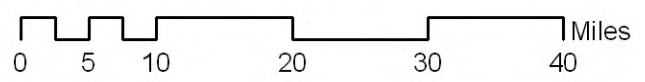
Voluntary Nonstructural Measures

Inundation Zones:

- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

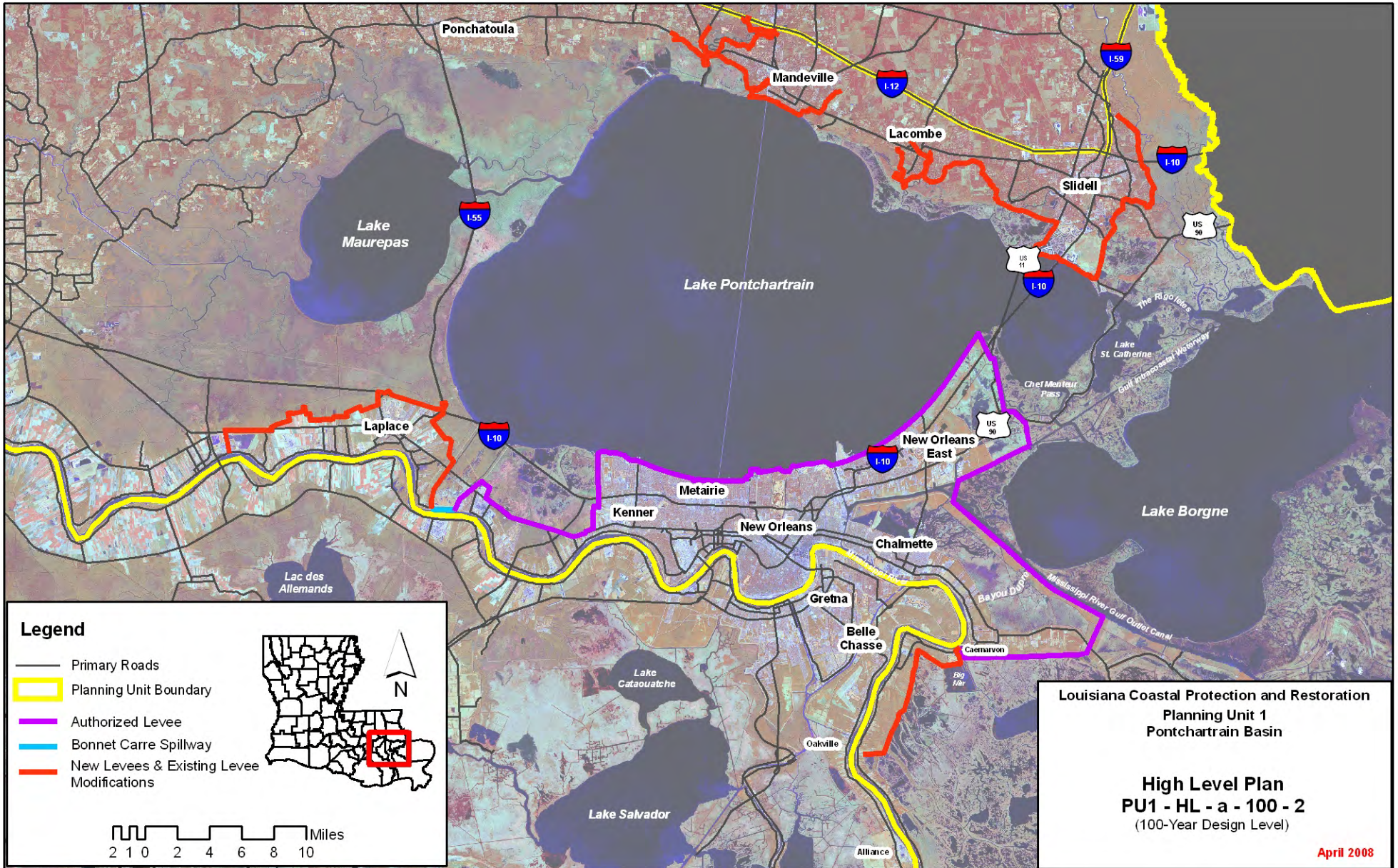
| | | | | | |
|---------------------------------|--|---------------------------------|----------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-HL-a-100-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration and construct high level plan providing 100-year design level of risk reduction to Northshore of Lake Pontchartrain, upper Plaquemines, and Laplace. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

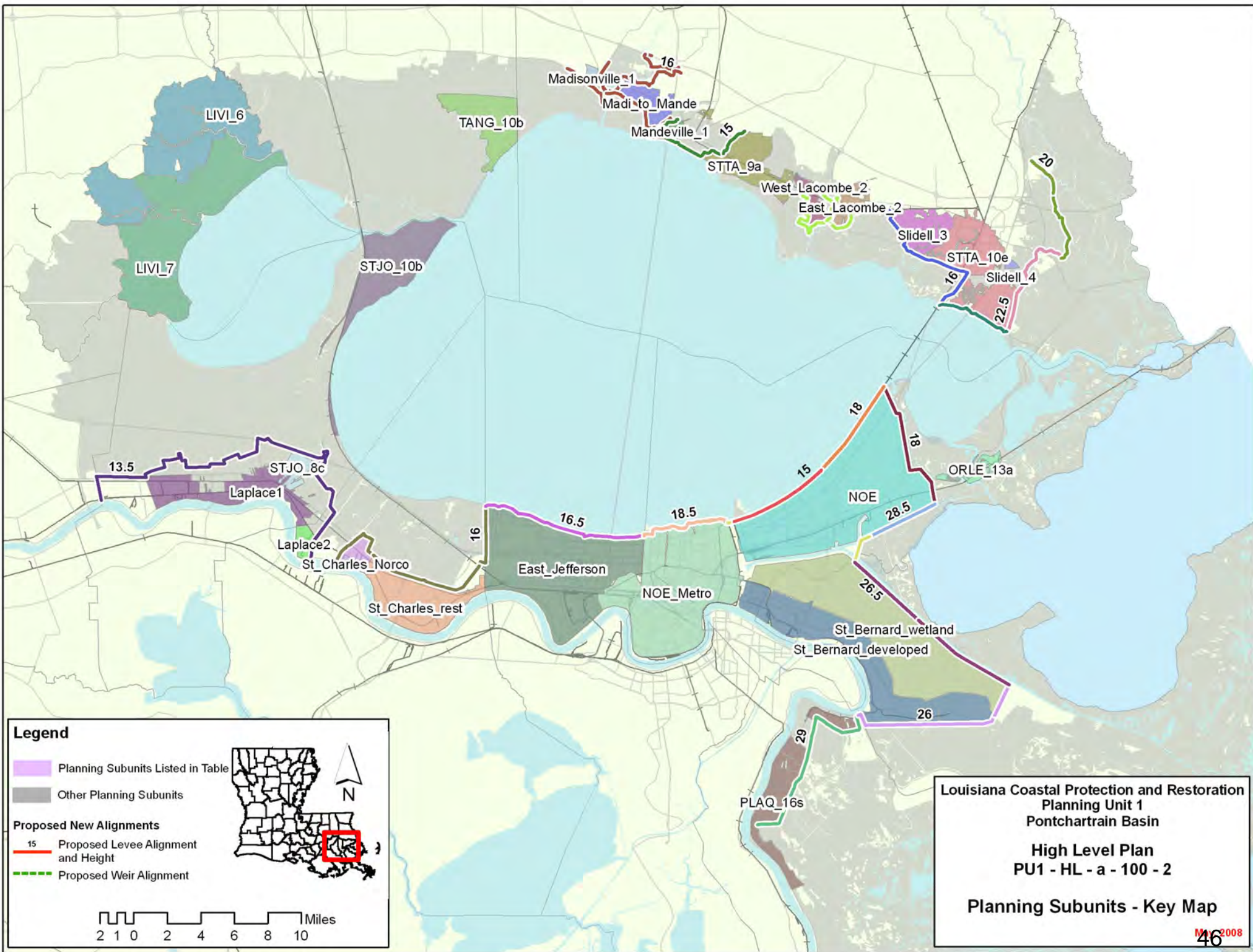
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,525 | 31,894 | 318 | 164 | 1,085 | 46 | 342 | 141 | 51 |
| | | Mid | | 34,647 | 468 | 368 | 1,823 | 94 | 312 | 138 | 50 |
| | | Low | | 39,955 | 950 | 890 | 4,019 | 234 | 282 | 132 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,540 | 32,301 | 339 | 327 | 1,265 | 62 | 342 | 138 | 51 |
| | | Mid | | 35,358 | 516 | 484 | 2,141 | 124 | 312 | 135 | 49 |
| | | Low | | 40,911 | 1,106 | 1,176 | 4,810 | 309 | 282 | 129 | 41 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,525 | 27,886 | 311 | 161 | 1,089 | 45 | 342 | 141 | 51 |
| | | Mid | | 30,543 | 455 | 317 | 1,738 | 83 | 312 | 138 | 50 |
| | | Low | | 35,503 | 905 | 721 | 3,683 | 194 | 282 | 132 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,540 | 28,107 | 327 | 188 | 1,175 | 53 | 342 | 138 | 51 |
| | | Mid | | 31,025 | 488 | 362 | 1,883 | 96 | 312 | 135 | 49 |
| | | Low | | 36,126 | 1,002 | 965 | 4,300 | 254 | 282 | 129 | 41 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 12 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 4,200 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -2 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 10,764 | 10,865 | Structural Component | | 19,194 | 19,251 | 19,194 | 19,251 |
| | 3 / 4 | 10,764 | 10,865 | Total Project | | 29,860 | 30,150 | 29,860 | 30,150 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan High Level Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 960 | 1,472 | 1,039 | 1,081 | 823 | 1,345 | 901 | |
| 100-year | 11,935 | 2,156 | 34,000 | 3,965 | 9,879 | 1,879 | 26,076 | 2,254 | |
| 400-year | 89,937 | 52,133 | 116,204 | 52,965 | 62,688 | 39,023 | 80,694 | 39,216 | |
| 1,000-year | 118,260 | 72,433 | 122,423 | 73,856 | 81,963 | 52,486 | 84,515 | 52,963 | |
| 2,000-year | 122,343 | 116,819 | 125,886 | 118,268 | 84,351 | 81,010 | 86,336 | 81,444 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU1-HL-a-100-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.1 | -1.3 | -1.3 | 4.4 | 4.4 | -2.6 | -5.1 | 16.0 | -1.3 | 16.0 | 4.4 |
| East_Lacombe_2 | 10.9 | 5.2 | 14.3 | 15.0 | 15.9 | 15.0 | 17.3 | 5.2 | 21.7 | 15.0 | 23.6 | 15.0 |
| Laplace1 | 9.4 | 4.4 | 12.2 | 13.5 | 14.0 | 14.0 | 12.4 | 4.4 | 15.0 | 13.5 | 16.8 | 14.0 |
| Laplace2 | 8.5 | 4.4 | 11.0 | 13.5 | 12.8 | 13.5 | 11.2 | 4.4 | 14.3 | 13.5 | 16.2 | 13.5 |
| LIVI_6 | 7.3 | 7.3 | 9.7 | 9.7 | 11.1 | 11.1 | 10.3 | 9.9 | 12.8 | 12.3 | 13.9 | 13.7 |
| LIVI_7 | 7.5 | 7.5 | 9.7 | 9.7 | 10.9 | 10.9 | 11.0 | 10.1 | 13.1 | 12.3 | 14.4 | 13.5 |
| Madi_to_Mande | 11.0 | 5.9 | 13.1 | 13.1 | 14.3 | 16.0 | 13.8 | 5.9 | 16.7 | 13.1 | 18.3 | 16.0 |
| Madisonville_1 | 11.7 | 6.4 | 14.6 | 16.0 | 16.1 | 16.0 | 13.5 | 6.4 | 15.8 | 16.0 | 16.9 | 16.0 |
| Mandeville_1 | 11.0 | 6.8 | 13.1 | 15.0 | 14.3 | 15.0 | 14.9 | 6.8 | 19.1 | 15.0 | 21.4 | 15.0 |
| NOE | -5.8 | -5.8 | 0.5 | 0.5 | 10.9 | 10.9 | -0.1 | -5.8 | 16.0 | 0.5 | 16.0 | 10.9 |
| NOE_Metro | -5.1 | -5.1 | -4.8 | -4.8 | -3.0 | -3.0 | -5.0 | -5.1 | 16.0 | -4.8 | 16.0 | -3.0 |
| ORLE_13a | 14.6 | 14.6 | 17.8 | 17.8 | 19.4 | 19.4 | 17.9 | 17.2 | 21.5 | 20.4 | 23.8 | 22.0 |
| PLAQ_16s | 19.2 | 0.4 | 25.3 | 11.3 | 30.0 | 18.0 | 21.4 | 0.4 | 27.8 | 11.3 | 31.8 | 18.0 |
| Slidell_3 | 11.5 | 4.6 | 15.1 | 16.5 | 16.8 | 16.5 | 13.4 | 4.6 | 16.8 | 16.5 | 18.5 | 16.5 |
| Slidell_4 | 14.1 | 6.2 | 18.3 | 16.5 | 20.4 | 16.5 | 20.5 | 6.2 | 24.3 | 16.5 | 26.5 | 16.5 |
| St_Bernard_developed | -0.1 | -0.1 | 4.3 | 4.3 | 10.6 | 10.6 | 2.3 | -0.1 | 16.0 | 4.3 | 16.0 | 10.6 |
| St_Bernard_wetland | 2.4 | 2.4 | 5.2 | 5.2 | 10.6 | 10.6 | 4.5 | 2.4 | 16.0 | 5.2 | 16.0 | 10.6 |
| St_Charles_Norco | 4.4 | 4.4 | 16.0 | 16.0 | 16.0 | 16.0 | 11.5 | 4.4 | 17.3 | 16.0 | 18.6 | 16.0 |
| St_Charles_rest | 2.1 | 2.1 | 16.0 | 16.0 | 16.0 | 16.0 | 11.5 | 2.1 | 17.3 | 16.0 | 18.6 | 16.0 |
| STJO_10b | 10.6 | 10.6 | 12.9 | 12.9 | 14.1 | 14.1 | 13.3 | 13.2 | 15.6 | 15.5 | 16.7 | 16.7 |
| STJO_8c | 9.4 | 4.4 | 12.2 | 13.5 | 14.0 | 14.0 | 12.7 | 4.4 | 15.4 | 13.5 | 17.2 | 14.0 |
| STTA_10e | 12.2 | 4.6 | 16.2 | 16.5 | 18.2 | 16.5 | 13.3 | 4.6 | 16.7 | 16.5 | 18.6 | 16.5 |
| STTA_9a | 10.4 | 10.4 | 12.7 | 12.7 | 14.0 | 14.0 | 13.2 | 13.0 | 15.6 | 15.3 | 17.5 | 16.6 |
| TANG_10b | 11.0 | 11.0 | 13.6 | 13.6 | 15.0 | 15.0 | 13.7 | 13.6 | 16.3 | 16.2 | 17.8 | 17.6 |
| West_Lacombe_2 | 10.5 | 4.1 | 13.5 | 15.0 | 15.0 | 15.0 | 13.2 | 4.1 | 15.8 | 15.0 | 17.3 | 15.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

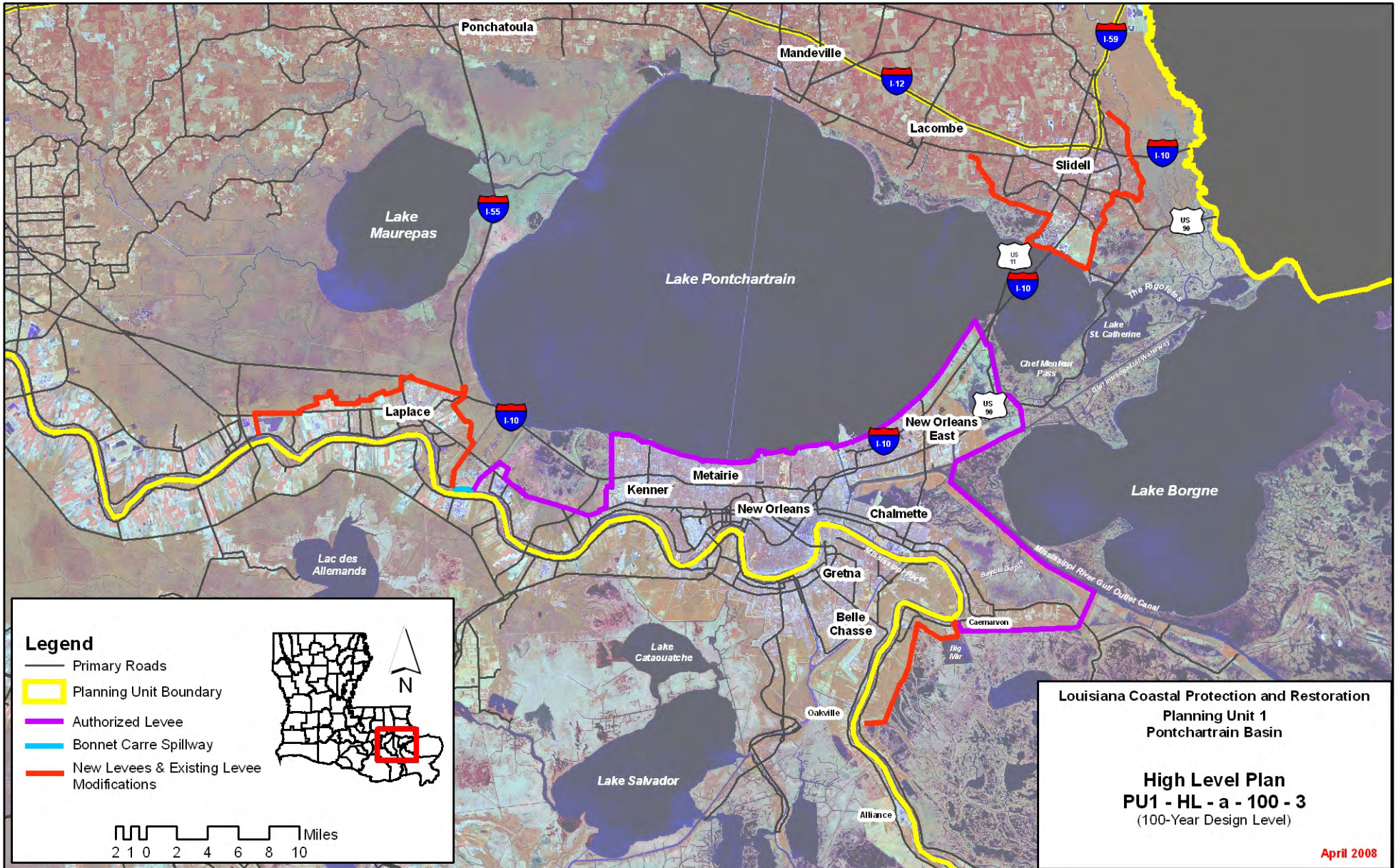
| | | | | | |
|---------------------------------|---|---------------------------------|----------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-HL-a-100-3 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration and construct high level plan providing 100-year design level of risk reduction to Laplace, upper Plaquemines, and Slidell. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

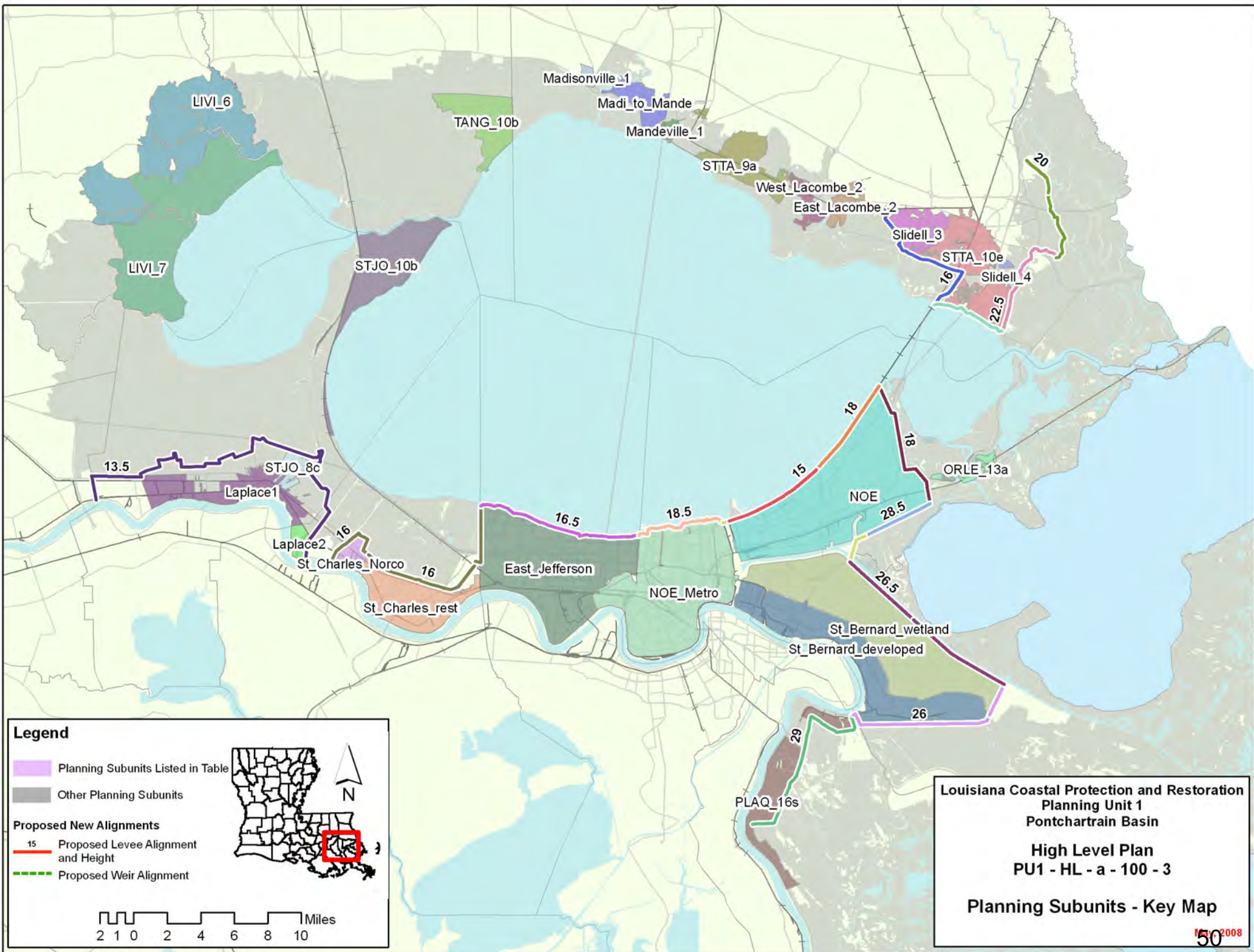
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,356 | 32,157 | 326 | 169 | 1,101 | 47 | 335 | 137 | 51 |
| | | Mid | | 35,012 | 479 | 375 | 1,853 | 96 | 305 | 133 | 50 |
| | | Low | | 40,309 | 961 | 902 | 4,058 | 237 | 275 | 126 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,370 | 32,670 | 349 | 250 | 1,306 | 66 | 335 | 134 | 51 |
| | | Mid | | 35,824 | 531 | 503 | 2,201 | 129 | 305 | 128 | 48 |
| | | Low | | 41,369 | 1,125 | 1,198 | 4,884 | 315 | 275 | 124 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,356 | 28,051 | 320 | 165 | 1,106 | 46 | 335 | 137 | 51 |
| | | Mid | | 30,784 | 467 | 324 | 1,761 | 85 | 305 | 133 | 50 |
| | | Low | | 35,750 | 917 | 729 | 3,704 | 195 | 275 | 126 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,370 | 28,342 | 337 | 197 | 1,204 | 55 | 335 | 134 | 51 |
| | | Mid | | 31,336 | 502 | 377 | 1,937 | 101 | 305 | 128 | 48 |
| | | Low | | 36,442 | 1,018 | 983 | 4,360 | 259 | 275 | 124 | 40 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 12 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 3,600 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -1 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 9,515 | 9,608 | Structural Component | | 15,893 | 15,928 | 15,893 | 15,928 |
| | 3 / 4 | 9,515 | 9,608 | Total Project | | 26,559 | 26,827 | 26,559 | 26,827 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan High Level Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 1,011 | 1,472 | 1,120 | 1,081 | 873 | 1,345 | 981 | |
| 100-year | 11,935 | 2,398 | 34,000 | 4,571 | 9,879 | 2,116 | 26,076 | 2,717 | |
| 400-year | 89,937 | 52,213 | 116,204 | 53,587 | 62,688 | 39,049 | 80,694 | 39,536 | |
| 1,000-year | 118,260 | 72,825 | 122,423 | 75,020 | 81,963 | 52,668 | 84,515 | 53,491 | |
| 2,000-year | 122,343 | 117,664 | 125,886 | 120,372 | 84,351 | 81,362 | 86,336 | 82,565 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

N

Miles

2 1 0 2 4 6 8 10

Louisiana Coastal Protection and Restoration
Planning Unit 1
Pontchartrain Basin

High Level Plan
PU1 - HL - a - 100 - 3

Planning Subunits - Key Map

1/5/2008
50

Alternative: PU1-HL-a-100-3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.1 | -1.3 | -1.3 | 4.4 | 4.4 | -2.6 | -5.1 | 16.0 | -1.3 | 16.0 | 4.4 |
| East_Lacombe_2 | 10.9 | 10.9 | 14.3 | 14.3 | 15.9 | 15.9 | 17.3 | 13.5 | 21.7 | 16.9 | 23.6 | 18.5 |
| Laplace1 | 9.4 | 4.4 | 12.2 | 13.5 | 14.0 | 14.0 | 12.4 | 4.4 | 15.0 | 13.5 | 16.8 | 14.0 |
| Laplace2 | 8.5 | 4.4 | 11.0 | 13.5 | 12.8 | 13.5 | 11.2 | 4.4 | 14.3 | 13.5 | 16.2 | 13.5 |
| LIVI_6 | 7.3 | 7.3 | 9.7 | 9.7 | 11.1 | 11.1 | 10.3 | 9.9 | 12.8 | 12.3 | 13.9 | 13.7 |
| LIVI_7 | 7.5 | 7.5 | 9.7 | 9.7 | 10.9 | 10.9 | 11.0 | 10.1 | 13.1 | 12.3 | 14.4 | 13.5 |
| Madi_to_Mande | 11.0 | 11.0 | 13.1 | 13.1 | 14.3 | 14.3 | 13.8 | 13.6 | 16.7 | 15.7 | 18.3 | 16.9 |
| Madisonville_1 | 11.7 | 11.7 | 14.6 | 14.6 | 16.1 | 16.1 | 13.5 | 14.3 | 15.8 | 17.2 | 16.9 | 18.7 |
| Mandeville_1 | 11.0 | 11.0 | 13.1 | 13.1 | 14.3 | 14.3 | 14.9 | 13.6 | 19.1 | 15.7 | 21.4 | 16.9 |
| NOE | -5.8 | -5.8 | 0.5 | 0.5 | 10.9 | 10.9 | -0.1 | -5.8 | 16.0 | 0.5 | 16.0 | 10.9 |
| NOE_Metro | -5.1 | -5.1 | -4.8 | -4.8 | -3.0 | -3.0 | -5.0 | -5.1 | 16.0 | -4.8 | 16.0 | -3.0 |
| ORLE_13a | 14.6 | 14.6 | 17.8 | 17.8 | 19.4 | 19.4 | 17.9 | 17.2 | 21.5 | 20.4 | 23.8 | 22.0 |
| PLAQ_16s | 19.2 | 0.4 | 25.3 | 11.3 | 30.0 | 18.0 | 21.4 | 0.4 | 27.8 | 11.3 | 31.8 | 18.0 |
| Slidell_3 | 11.5 | 4.6 | 15.1 | 16.5 | 16.8 | 16.5 | 13.4 | 4.6 | 16.8 | 16.5 | 18.5 | 16.5 |
| Slidell_4 | 14.1 | 6.2 | 18.3 | 16.5 | 20.4 | 16.5 | 20.5 | 6.2 | 24.3 | 16.5 | 26.5 | 16.5 |
| St_Bernard_developed | -0.1 | -0.1 | 4.3 | 4.3 | 10.6 | 10.6 | 2.3 | -0.1 | 16.0 | 4.3 | 16.0 | 10.6 |
| St_Bernard_wetland | 2.4 | 2.4 | 5.2 | 5.2 | 10.6 | 10.6 | 4.5 | 2.4 | 16.0 | 5.2 | 16.0 | 10.6 |
| St_Charles_Norco | 4.4 | 4.4 | 16.0 | 16.0 | 16.0 | 16.0 | 11.5 | 4.4 | 17.3 | 16.0 | 18.6 | 16.0 |
| St_Charles_rest | 2.1 | 2.1 | 16.0 | 16.0 | 16.0 | 16.0 | 11.5 | 2.1 | 17.3 | 16.0 | 18.6 | 16.0 |
| STJO_10b | 10.6 | 10.6 | 12.9 | 12.9 | 14.1 | 14.1 | 13.3 | 13.2 | 15.6 | 15.5 | 16.7 | 16.7 |
| STJO_8c | 9.4 | 4.4 | 12.2 | 13.5 | 14.0 | 14.0 | 12.7 | 4.4 | 15.4 | 13.5 | 17.2 | 14.0 |
| STTA_10e | 12.2 | 4.6 | 16.2 | 16.5 | 18.2 | 16.5 | 13.3 | 4.6 | 16.7 | 16.5 | 18.6 | 16.5 |
| STTA_9a | 10.4 | 10.4 | 12.7 | 12.7 | 14.0 | 14.0 | 13.2 | 13.0 | 15.6 | 15.3 | 17.5 | 16.6 |
| TANG_10b | 11.0 | 11.0 | 13.6 | 13.6 | 15.0 | 15.0 | 13.7 | 13.6 | 16.3 | 16.2 | 17.8 | 17.6 |
| West_Lacombe_2 | 10.5 | 10.5 | 13.5 | 13.5 | 15.0 | 15.0 | 13.2 | 13.1 | 15.8 | 16.1 | 17.3 | 17.6 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

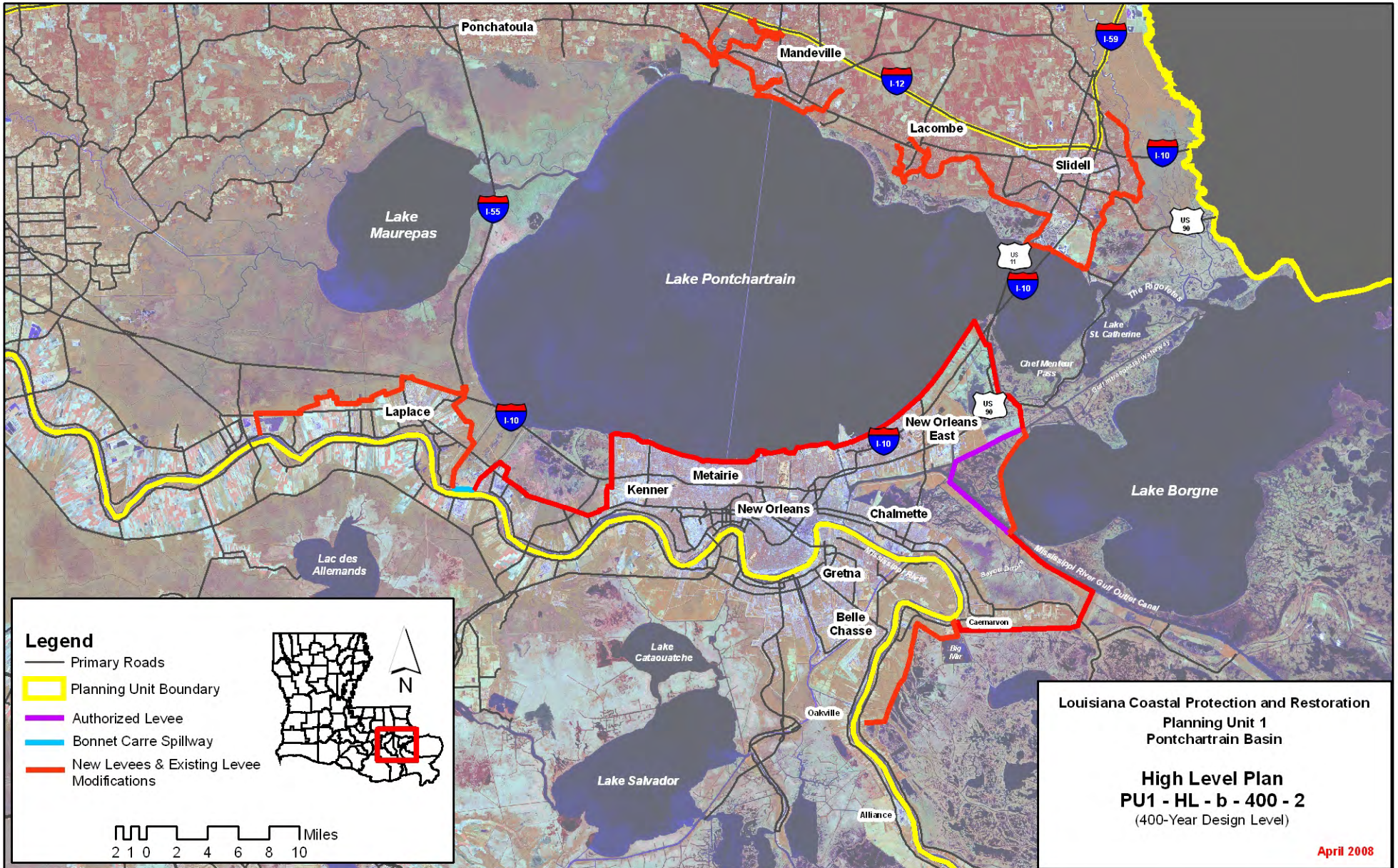
| | | | | | |
|---------------------------------|---|---------------------------------|----------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-HL-b-400-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

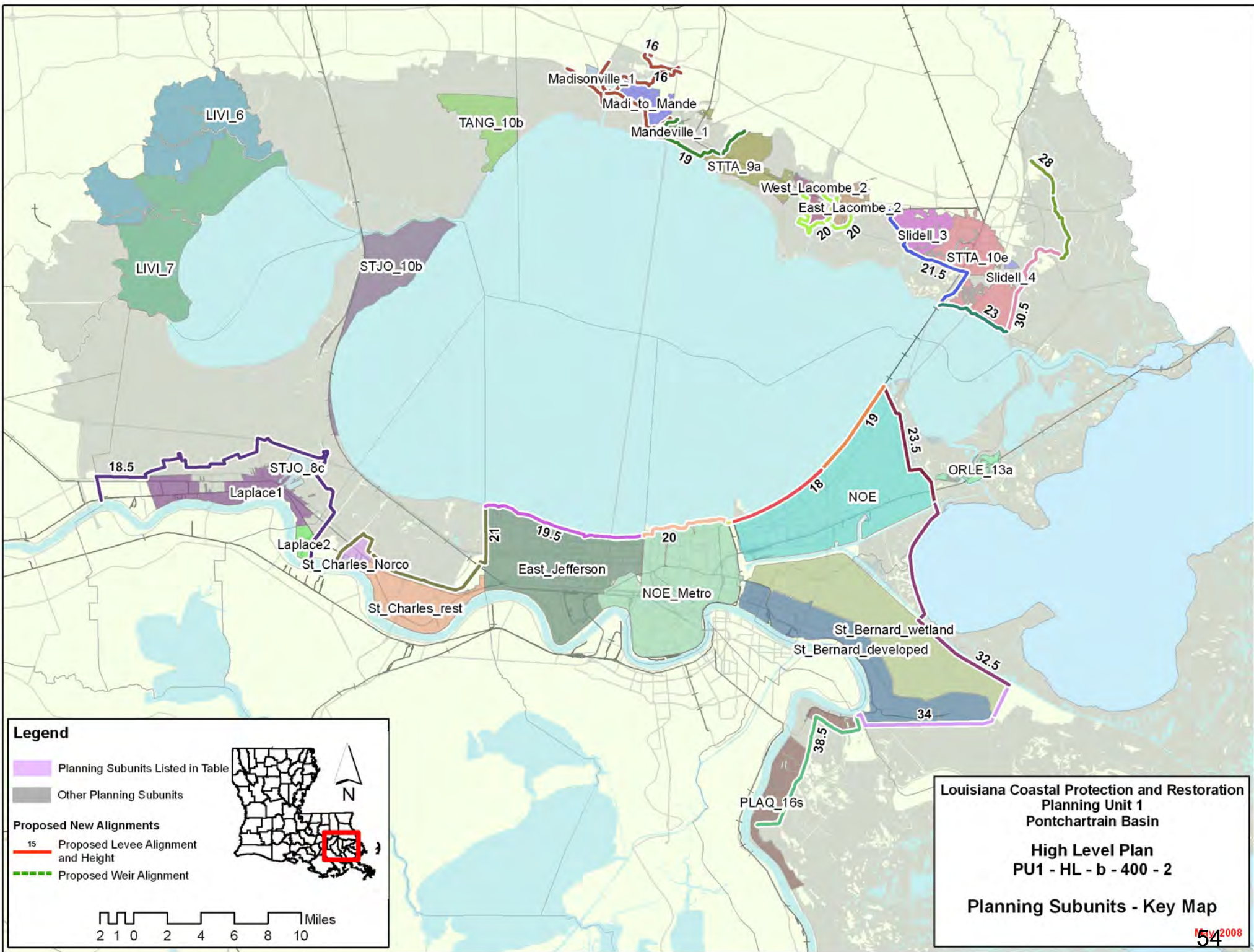
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 3,076 | 32,301 | 336 | 176 | 1,139 | 49 | 344 | 158 | 52 |
| | | Mid | | 34,414 | 470 | 363 | 1,797 | 94 | 314 | 153 | 51 |
| | | Low | | 38,544 | 797 | 715 | 3,261 | 186 | 284 | 148 | 50 |
| 2 | High RSLR High Employment Dispersed Population | High | 3,100 | 32,792 | 361 | 261 | 1,355 | 69 | 344 | 158 | 51 |
| | | Mid | | 35,400 | 533 | 506 | 2,193 | 130 | 314 | 150 | 49 |
| | | Low | | 39,851 | 1,005 | 1,138 | 4,430 | 298 | 284 | 142 | 46 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 3,076 | 28,540 | 330 | 173 | 1,150 | 48 | 344 | 158 | 52 |
| | | Mid | | 30,596 | 459 | 310 | 1,718 | 83 | 314 | 153 | 51 |
| | | Low | | 34,436 | 763 | 551 | 2,925 | 149 | 284 | 148 | 50 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 3,100 | 28,823 | 350 | 211 | 1,271 | 60 | 344 | 158 | 51 |
| | | Mid | | 31,293 | 504 | 371 | 1,919 | 101 | 314 | 150 | 49 |
| | | Low | | 35,325 | 901 | 911 | 3,837 | 238 | 284 | 142 | 46 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 16 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 6,000 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -2 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 21,509 | 21,675 | Structural Component | | 49,569 | 49,808 | 49,569 | 49,808 |
| | 3 / 4 | 21,509 | 21,675 | Total Project | | 60,234 | 60,707 | 60,234 | 60,707 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan High Level Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 958 | 1,472 | 1,038 | 1,081 | 822 | 1,345 | 899 | |
| 100-year | 11,935 | 1,952 | 34,000 | 3,761 | 9,879 | 1,695 | 26,076 | 2,070 | |
| 400-year | 89,937 | 5,474 | 116,204 | 6,306 | 62,688 | 2,591 | 80,694 | 2,784 | |
| 1,000-year | 118,260 | 9,482 | 122,423 | 10,904 | 81,963 | 5,397 | 84,515 | 5,875 | |
| 2,000-year | 122,343 | 26,064 | 125,886 | 27,513 | 84,351 | 17,818 | 86,336 | 18,252 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU1-HL-b-400-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.2 | -1.3 | -5.0 | 4.4 | -4.4 | -2.6 | -5.2 | 16.0 | -5.0 | 16.0 | -4.4 |
| East_Lacombe_2 | 10.9 | 4.7 | 14.3 | 5.2 | 15.9 | 6.9 | 17.3 | 4.7 | 21.7 | 5.2 | 23.6 | 6.9 |
| Laplace1 | 9.4 | 4.1 | 12.2 | 4.5 | 14.0 | 7.8 | 12.4 | 4.1 | 15.0 | 4.5 | 16.8 | 7.8 |
| Laplace2 | 8.5 | 4.1 | 11.0 | 4.5 | 12.8 | 7.8 | 11.2 | 4.1 | 14.3 | 4.5 | 16.2 | 7.8 |
| LIVI_6 | 7.3 | 7.3 | 9.7 | 9.7 | 11.1 | 11.1 | 10.3 | 9.9 | 12.8 | 12.3 | 13.9 | 13.7 |
| LIVI_7 | 7.5 | 7.5 | 9.7 | 9.7 | 10.9 | 10.9 | 11.0 | 10.1 | 13.1 | 12.3 | 14.4 | 13.5 |
| Madi_to_Mande | 11.0 | 5.3 | 13.1 | 5.9 | 14.3 | 7.5 | 13.8 | 5.3 | 16.7 | 5.9 | 18.3 | 7.5 |
| Madisonville_1 | 11.7 | 5.6 | 14.6 | 6.5 | 16.1 | 8.8 | 13.5 | 5.6 | 15.8 | 6.5 | 16.9 | 8.8 |
| Mandeville_1 | 11.0 | 5.9 | 13.1 | 6.8 | 14.3 | 9.4 | 14.9 | 5.9 | 19.1 | 6.8 | 21.4 | 9.4 |
| NOE | -5.8 | -6.0 | 0.5 | -5.9 | 10.9 | -5.1 | -0.1 | -6.0 | 16.0 | -5.9 | 16.0 | -5.1 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.0 | -3.0 | -4.2 | -5.0 | -5.2 | 16.0 | -5.0 | 16.0 | -4.2 |
| ORLE_13a | 14.6 | 14.6 | 17.8 | 17.8 | 19.4 | 19.4 | 17.9 | 17.2 | 21.5 | 20.4 | 23.8 | 22.0 |
| PLAQ_16s | 19.2 | -0.1 | 25.3 | 0.4 | 30.0 | 2.0 | 21.4 | -0.1 | 27.8 | 0.4 | 31.8 | 2.0 |
| Slidell_3 | 11.5 | 4.3 | 15.1 | 4.6 | 16.8 | 5.9 | 13.4 | 4.3 | 16.8 | 4.6 | 18.5 | 5.9 |
| Slidell_4 | 14.1 | 6.2 | 18.3 | 6.2 | 20.4 | 6.2 | 20.5 | 6.2 | 24.3 | 6.2 | 26.5 | 6.2 |
| St_Bernard_developed | -0.1 | -0.4 | 4.3 | -0.1 | 10.6 | 0.8 | 2.3 | -0.4 | 16.0 | -0.1 | 16.0 | 0.8 |
| St_Bernard_wetland | 2.4 | 1.7 | 5.2 | 1.8 | 10.6 | 2.2 | 4.5 | 1.7 | 16.0 | 1.8 | 16.0 | 2.2 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 4.5 | 16.0 | 4.5 | 11.5 | 3.4 | 17.3 | 4.5 | 18.6 | 4.5 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 2.1 | 16.0 | 4.2 | 11.5 | 1.9 | 17.3 | 2.1 | 18.6 | 4.2 |
| STJO_10b | 10.6 | 10.6 | 12.9 | 12.9 | 14.1 | 14.1 | 13.3 | 13.2 | 15.6 | 15.5 | 16.7 | 16.7 |
| STJO_8c | 9.4 | 4.1 | 12.2 | 4.5 | 14.0 | 7.8 | 12.7 | 4.1 | 15.4 | 4.5 | 17.2 | 7.8 |
| STTA_10e | 12.2 | 4.3 | 16.2 | 4.6 | 18.2 | 5.9 | 13.3 | 4.3 | 16.7 | 4.6 | 18.6 | 5.9 |
| STTA_9a | 10.4 | 10.4 | 12.7 | 12.7 | 14.0 | 14.0 | 13.2 | 13.0 | 15.6 | 15.3 | 17.5 | 16.6 |
| TANG_10b | 11.0 | 11.0 | 13.6 | 13.6 | 15.0 | 15.0 | 13.7 | 13.6 | 16.3 | 16.2 | 17.8 | 17.6 |
| West_Lacombe_2 | 10.5 | 3.6 | 13.5 | 4.1 | 15.0 | 5.9 | 13.2 | 3.6 | 15.8 | 4.1 | 17.3 | 5.9 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

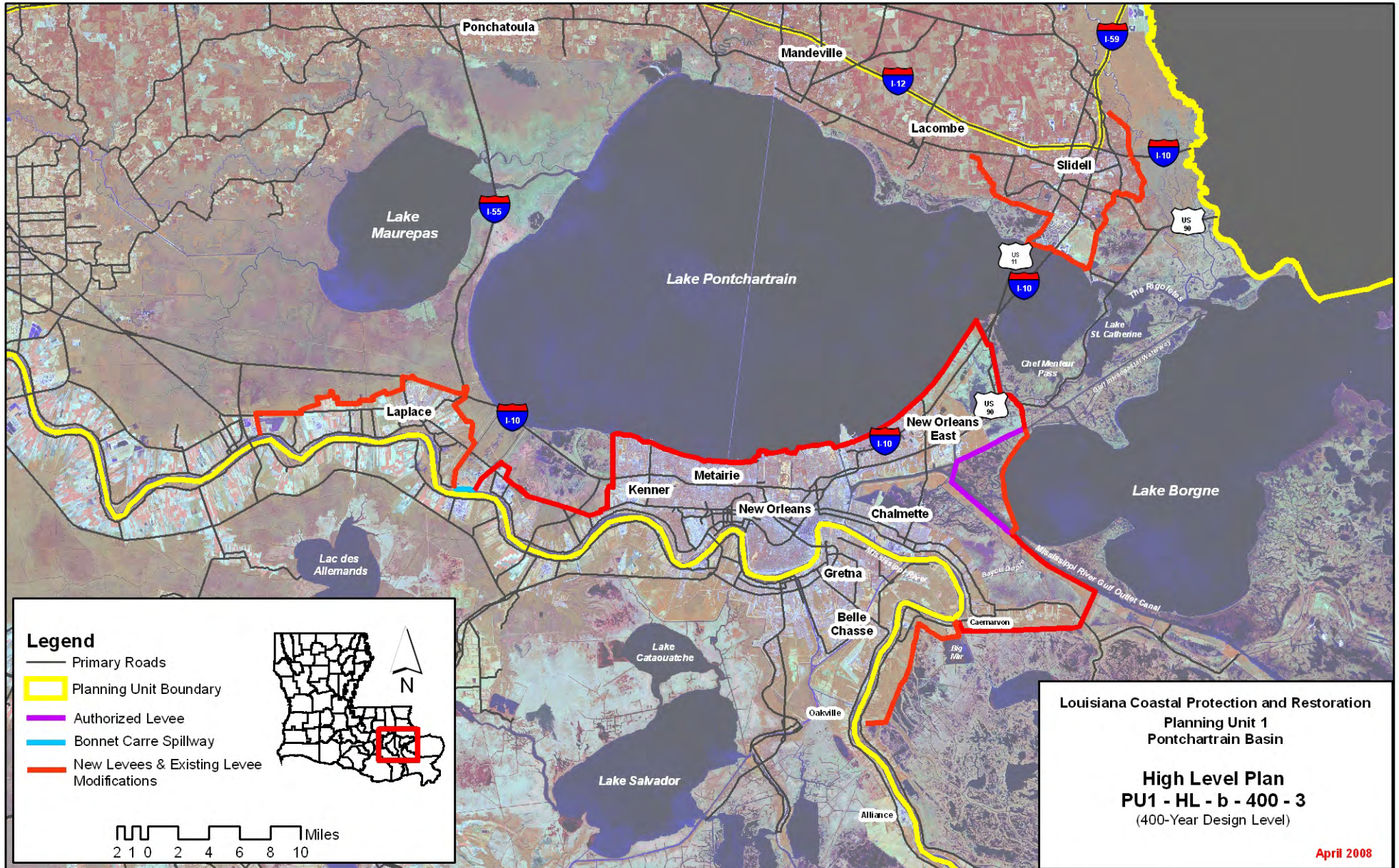
| | | | | | |
|---------------------------------|--|---------------------------------|----------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-HL-b-400-3 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration and construct high level plan providing 400-year design level of risk reduction to Southshore of Lake Pontchartrain, upper Plaquemines, Laplace and Slidell. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

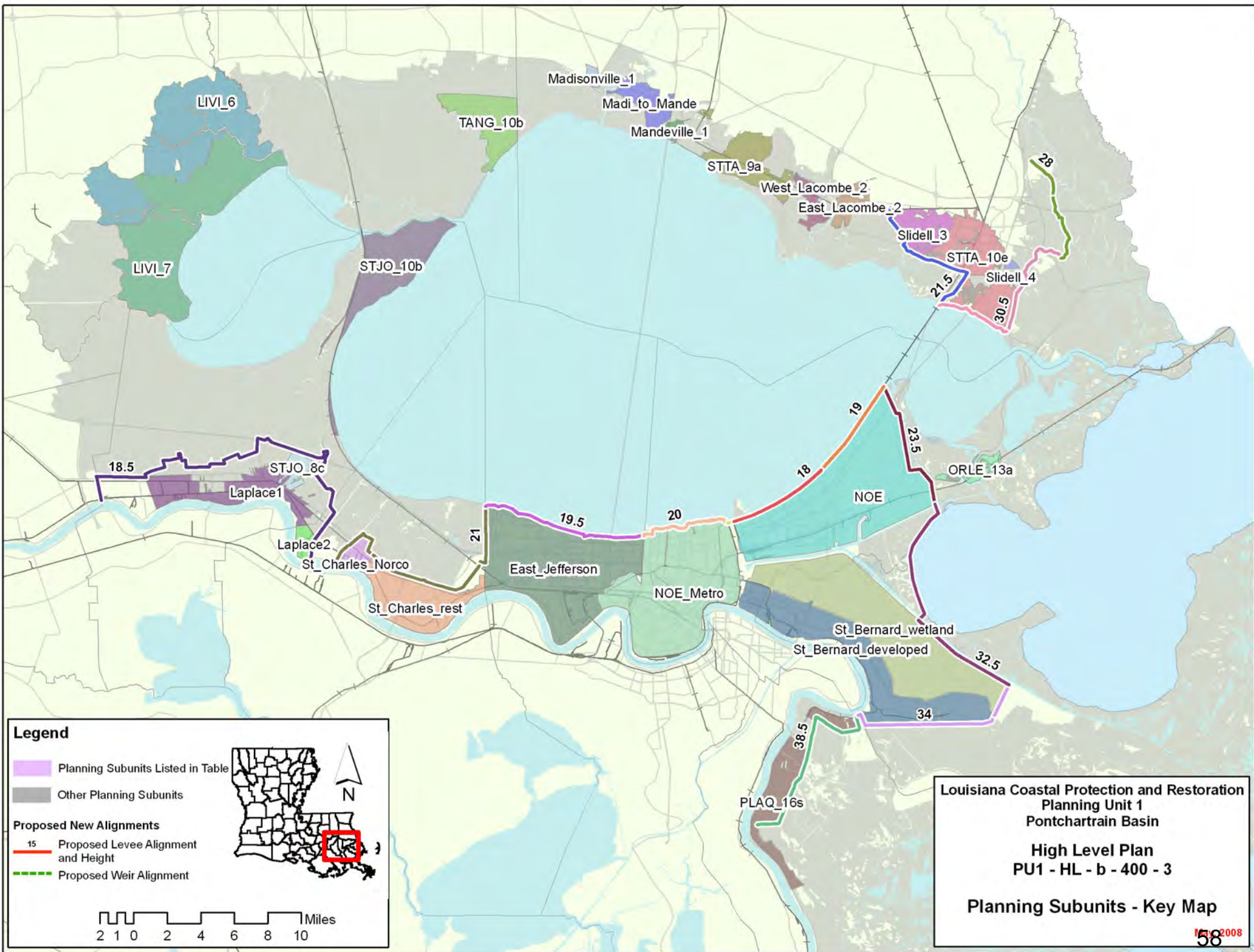
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,837 | 32,516 | 342 | 179 | 1,152 | 49 | 307 | 143 | 51 |
| | | Mid | | 34,727 | 480 | 370 | 1,822 | 96 | 307 | 143 | 50 |
| | | Low | | 38,940 | 810 | 729 | 3,306 | 190 | 277 | 140 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,860 | 33,092 | 369 | 271 | 1,388 | 71 | 337 | 143 | 51 |
| | | Mid | | 35,795 | 546 | 522 | 2,243 | 135 | 307 | 141 | 49 |
| | | Low | | 40,330 | 1,025 | 1,160 | 4,504 | 304 | 277 | 133 | 45 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,837 | 28,675 | 337 | 177 | 1,164 | 49 | 307 | 143 | 51 |
| | | Mid | | 30,806 | 469 | 316 | 1,740 | 85 | 307 | 143 | 50 |
| | | Low | | 34,720 | 775 | 561 | 2,966 | 152 | 277 | 140 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,860 | 29,014 | 359 | 218 | 1,295 | 61 | 337 | 143 | 51 |
| | | Mid | | 31,559 | 516 | 384 | 1,966 | 105 | 307 | 141 | 49 |
| | | Low | | 35,665 | 918 | 930 | 3,910 | 244 | 277 | 133 | 45 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 16 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 5,500 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -2 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 19,790 | 19,945 | Structural Component | | 44,895 | 45,103 | 44,895 | 45,103 |
| | 3 / 4 | 19,790 | 19,945 | Total Project | | 55,561 | 56,002 | 55,561 | 56,002 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan High Level Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 1,011 | 1,472 | 1,120 | 1,081 | 873 | 1,345 | 981 | |
| 100-year | 11,935 | 2,209 | 34,000 | 4,382 | 9,879 | 1,946 | 26,076 | 2,547 | |
| 400-year | 89,937 | 6,516 | 116,204 | 7,890 | 62,688 | 3,270 | 80,694 | 3,757 | |
| 1,000-year | 118,260 | 11,051 | 122,423 | 13,246 | 81,963 | 6,320 | 84,515 | 7,143 | |
| 2,000-year | 122,343 | 28,009 | 125,886 | 30,717 | 84,351 | 18,776 | 86,336 | 19,980 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU1-HL-b-400-3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.2 | -1.3 | -5.0 | 4.4 | -4.4 | -2.6 | -5.2 | 16.0 | -5.0 | 16.0 | -4.4 |
| East_Lacombe_2 | 10.9 | 10.9 | 14.3 | 14.3 | 15.9 | 15.9 | 17.3 | 13.5 | 21.7 | 16.9 | 23.6 | 18.5 |
| Laplace1 | 9.4 | 4.1 | 12.2 | 4.5 | 14.0 | 7.8 | 12.4 | 4.1 | 15.0 | 4.5 | 16.8 | 7.8 |
| Laplace2 | 8.5 | 4.1 | 11.0 | 4.5 | 12.8 | 7.8 | 11.2 | 4.1 | 14.3 | 4.5 | 16.2 | 7.8 |
| LIVI_6 | 7.3 | 7.3 | 9.7 | 9.7 | 11.1 | 11.1 | 10.3 | 9.9 | 12.8 | 12.3 | 13.9 | 13.7 |
| LIVI_7 | 7.5 | 7.5 | 9.7 | 9.7 | 10.9 | 10.9 | 11.0 | 10.1 | 13.1 | 12.3 | 14.4 | 13.5 |
| Madi_to_Mande | 11.0 | 11.0 | 13.1 | 13.1 | 14.3 | 14.3 | 13.8 | 13.6 | 16.7 | 15.7 | 18.3 | 16.9 |
| Madisonville_1 | 11.7 | 11.7 | 14.6 | 14.6 | 16.1 | 16.1 | 13.5 | 14.3 | 15.8 | 17.2 | 16.9 | 18.7 |
| Mandeville_1 | 11.0 | 11.0 | 13.1 | 13.1 | 14.3 | 14.3 | 14.9 | 13.6 | 19.1 | 15.7 | 21.4 | 16.9 |
| NOE | -5.8 | -6.0 | 0.5 | -5.7 | 10.9 | -4.2 | -0.1 | -6.0 | 16.0 | -5.7 | 16.0 | -4.2 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.0 | -3.0 | -4.2 | -5.0 | -5.2 | 16.0 | -5.0 | 16.0 | -4.2 |
| ORLE_13a | 14.6 | 14.6 | 17.8 | 17.8 | 19.4 | 19.4 | 17.9 | 17.2 | 21.5 | 20.4 | 23.8 | 22.0 |
| PLAQ_16s | 19.2 | -0.1 | 25.3 | 0.4 | 30.0 | 2.0 | 21.4 | -0.1 | 27.8 | 0.4 | 31.8 | 2.0 |
| Slidell_3 | 11.5 | 4.3 | 15.1 | 4.6 | 16.8 | 5.9 | 13.4 | 4.3 | 16.8 | 4.6 | 18.5 | 5.9 |
| Slidell_4 | 14.1 | 6.2 | 18.3 | 6.2 | 20.4 | 6.2 | 20.5 | 6.2 | 24.3 | 6.2 | 26.5 | 6.2 |
| St_Bernard_developed | -0.1 | -0.4 | 4.3 | -0.1 | 10.6 | 0.8 | 2.3 | -0.4 | 16.0 | -0.1 | 16.0 | 0.8 |
| St_Bernard_wetland | 2.4 | 2.3 | 5.2 | 2.5 | 10.6 | 2.8 | 4.5 | 2.3 | 16.0 | 2.5 | 16.0 | 2.8 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 4.5 | 16.0 | 4.5 | 11.5 | 3.4 | 17.3 | 4.5 | 18.6 | 4.5 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 2.1 | 16.0 | 4.2 | 11.5 | 1.9 | 17.3 | 2.1 | 18.6 | 4.2 |
| STJO_10b | 10.6 | 10.6 | 12.9 | 12.9 | 14.1 | 14.1 | 13.3 | 13.2 | 15.6 | 15.5 | 16.7 | 16.7 |
| STJO_8c | 9.4 | 4.1 | 12.2 | 4.5 | 14.0 | 7.8 | 12.7 | 4.1 | 15.4 | 4.5 | 17.2 | 7.8 |
| STTA_10e | 12.2 | 4.3 | 16.2 | 4.6 | 18.2 | 5.9 | 13.3 | 4.3 | 16.7 | 4.6 | 18.6 | 5.9 |
| STTA_9a | 10.4 | 10.4 | 12.7 | 12.7 | 14.0 | 14.0 | 13.2 | 13.0 | 15.6 | 15.3 | 17.5 | 16.6 |
| TANG_10b | 11.0 | 11.0 | 13.6 | 13.6 | 15.0 | 15.0 | 13.7 | 13.6 | 16.3 | 16.2 | 17.8 | 17.6 |
| West_Lacombe_2 | 10.5 | 10.5 | 13.5 | 13.5 | 15.0 | 15.0 | 13.2 | 13.1 | 15.8 | 16.1 | 17.3 | 17.6 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

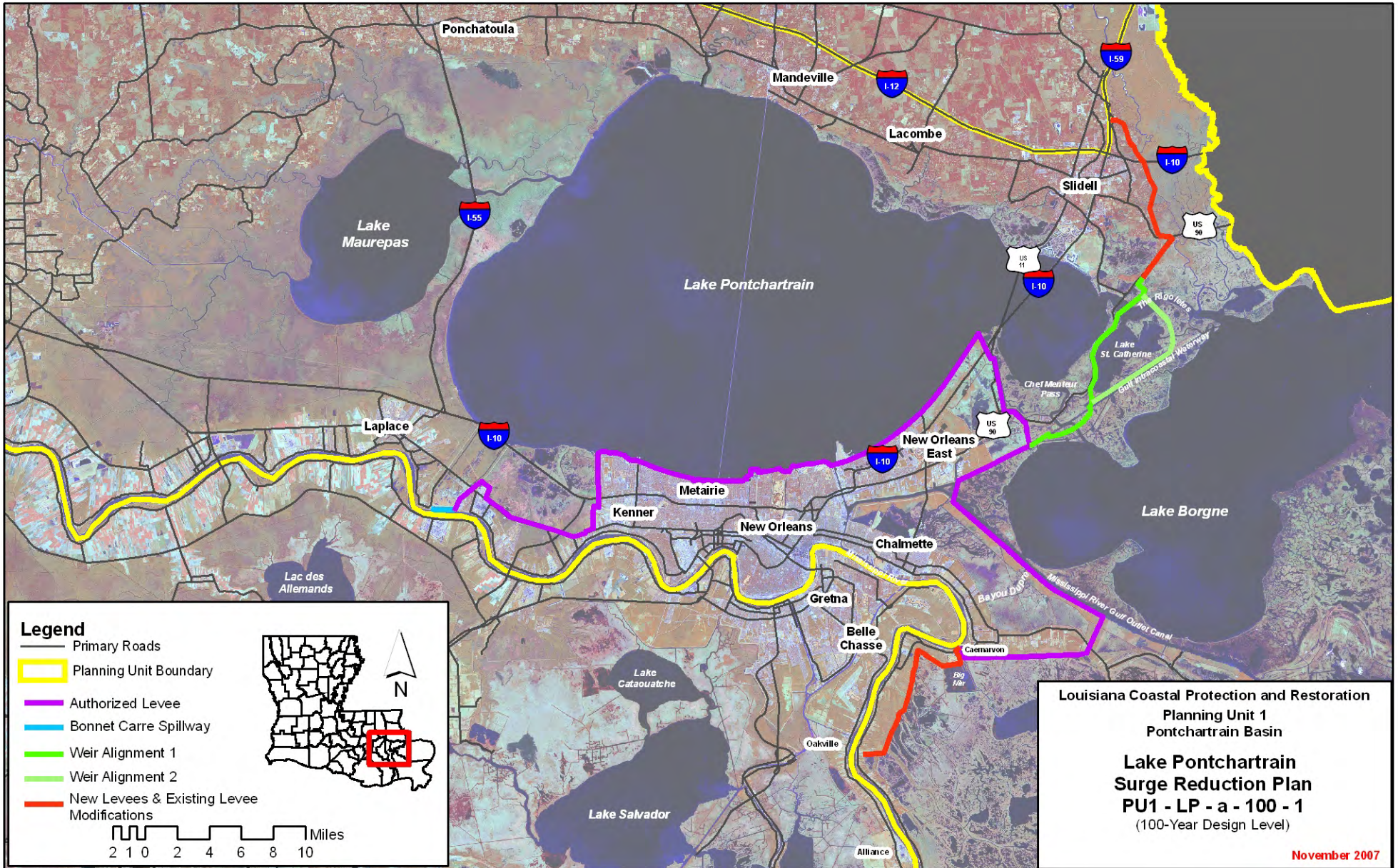
| | | | | | |
|---------------------------------|--|---------------------------------|----------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-LP-a-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 903 | 32,794 | 354 | 221 | 1,285 | 61 | 325 | 140 | 51 |
| | | Mid | | 35,620 | 511 | 411 | 1,991 | 107 | 295 | 133 | 50 |
| | | Low | | 40,916 | 904 | 823 | 3,715 | 214 | 265 | 127 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 921 | 33,978 | 391 | 312 | 1,537 | 85 | 325 | 136 | 51 |
| | | Mid | | 37,219 | 582 | 551 | 2,379 | 142 | 295 | 129 | 45 |
| | | Low | | 42,568 | 1,096 | 1,237 | 4,808 | 319 | 265 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 903 | 29,002 | 341 | 187 | 1,197 | 53 | 325 | 140 | 51 |
| | | Mid | | 31,669 | 487 | 328 | 1,840 | 90 | 295 | 133 | 50 |
| | | Low | | 36,632 | 849 | 627 | 3,335 | 172 | 265 | 127 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 921 | 29,765 | 370 | 230 | 1,347 | 67 | 325 | 136 | 51 |
| | | Mid | | 32,824 | 542 | 397 | 2,072 | 111 | 295 | 129 | 45 |
| | | Low | | 37,791 | 991 | 962 | 4,173 | 255 | 265 | 123 | 40 |

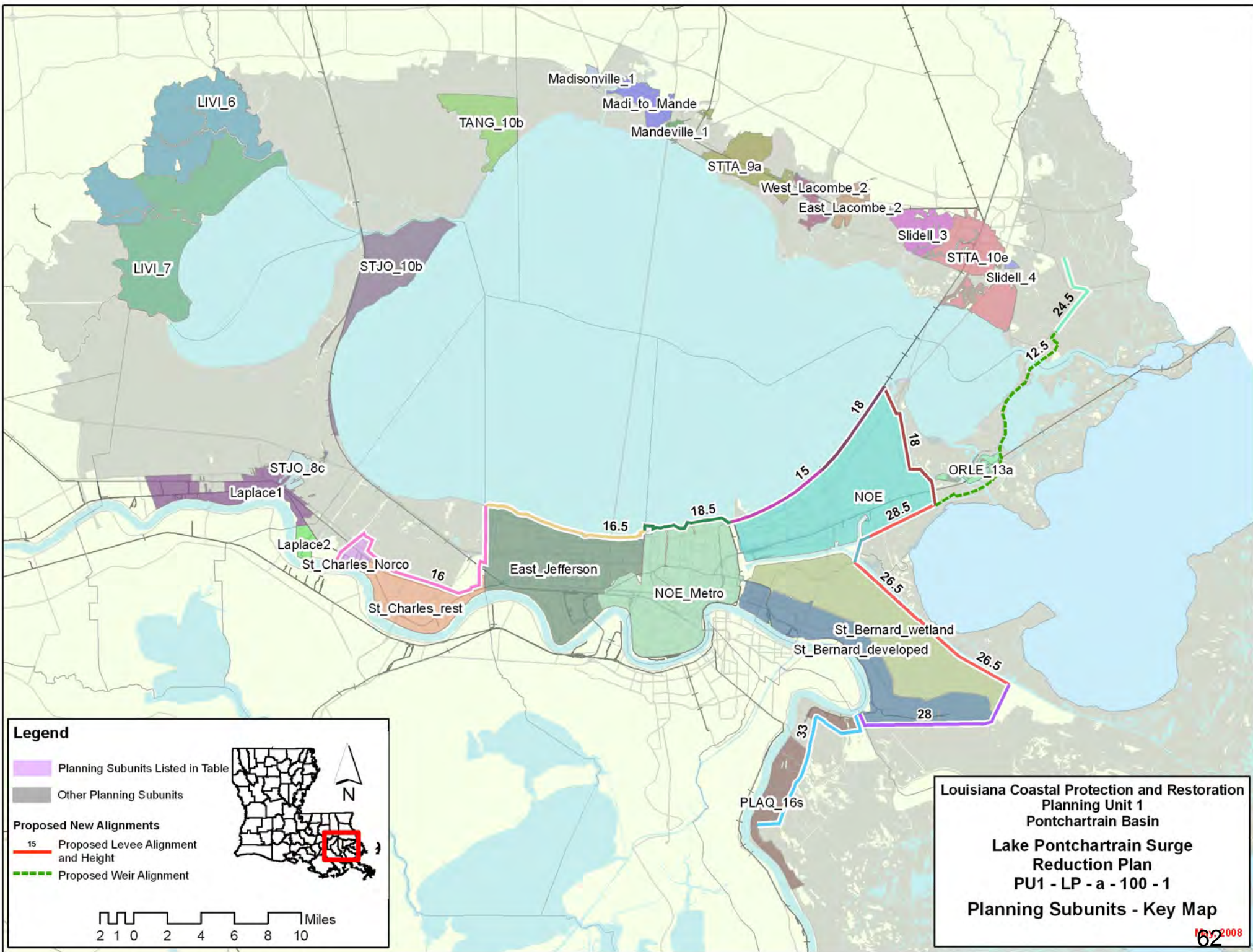
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 14 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 1,000 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 6,255 | 6,375 | Structural Component | | 7,024 | 7,132 | 7,024 | 7,132 |
| | 3 / 4 | 6,255 | 6,375 | Total Project | | 17,690 | 18,031 | 17,690 | 18,031 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan Lake Pontchartrain Surge Reduction Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 1,034 | 1,472 | 1,211 | 1,081 | 906 | 1,345 | 1,074 | |
| 100-year | 11,935 | 4,200 | 34,000 | 6,145 | 9,879 | 3,194 | 26,076 | 4,731 | |
| 400-year | 89,937 | 19,737 | 116,204 | 24,112 | 62,688 | 13,418 | 80,694 | 16,202 | |
| 1,000-year | 118,260 | 54,345 | 122,423 | 58,424 | 81,963 | 37,801 | 84,515 | 40,213 | |
| 2,000-year | 122,343 | 108,114 | 125,886 | 111,525 | 84,351 | 75,417 | 86,336 | 77,362 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Lake Pontchartrain
 Surge Reduction Plan**
PUI - LP - a - 100 - 1
 (100-Year Design Level)
 November 2007



Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

N

Miles

Louisiana Coastal Protection and Restoration
Planning Unit 1
Pontchartrain Basin
Lake Pontchartrain Surge
Reduction Plan
PU1 - LP - a - 100 - 1
Planning Subunits - Key Map

1/2008

Alternative: PU1-LP-a-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.3 | -1.3 | -4.7 | 4.4 | -2.1 | -2.6 | -5.3 | 16.0 | -4.7 | 16.0 | -2.1 |
| East_Lacombe_2 | 10.9 | 7.2 | 14.3 | 11.1 | 15.9 | 13.2 | 17.3 | 9.8 | 21.7 | 13.7 | 23.6 | 15.8 |
| Laplace1 | 9.4 | 6.1 | 12.2 | 10.5 | 14.0 | 13.6 | 12.4 | 8.7 | 15.0 | 13.1 | 16.8 | 16.2 |
| Laplace2 | 8.5 | 9.4 | 11.0 | 11.9 | 12.8 | 13.4 | 11.2 | 12.0 | 14.3 | 14.5 | 16.2 | 16.0 |
| LIVI_6 | 7.3 | 4.1 | 9.7 | 5.2 | 11.1 | 6.1 | 10.3 | 6.7 | 12.8 | 7.8 | 13.9 | 8.7 |
| LIVI_7 | 7.5 | 5.5 | 9.7 | 6.9 | 10.9 | 7.8 | 11.0 | 8.1 | 13.1 | 9.5 | 14.4 | 10.4 |
| Madi_to_Mande | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 13.8 | 14.1 | 16.7 | 15.1 | 18.3 | 15.9 |
| Madisonville_1 | 11.7 | 10.1 | 14.6 | 14.9 | 16.1 | 27.3 | 13.5 | 12.7 | 15.8 | 17.5 | 16.9 | 29.9 |
| Mandeville_1 | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 14.9 | 14.1 | 19.1 | 15.1 | 21.4 | 15.9 |
| NOE | -5.8 | -5.9 | 0.5 | -4.0 | 10.9 | -0.2 | -0.1 | -5.9 | 16.0 | -4.0 | 16.0 | -0.2 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.1 | -3.0 | -5.1 | -5.0 | -5.2 | 16.0 | -5.1 | 16.0 | -5.1 |
| ORLE_13a | 14.6 | 16.4 | 17.8 | 21.8 | 19.4 | 26.5 | 17.9 | 19.0 | 21.5 | 24.4 | 23.8 | 29.1 |
| PLAQ_16s | 19.2 | 17.8 | 25.3 | 25.7 | 30.0 | 29.9 | 21.4 | 20.4 | 27.8 | 28.3 | 31.8 | 32.5 |
| Slidell_3 | 11.5 | 8.5 | 15.1 | 12.8 | 16.8 | 14.9 | 13.4 | 11.1 | 16.8 | 15.4 | 18.5 | 17.5 |
| Slidell_4 | 14.1 | 10.0 | 18.3 | 16.4 | 20.4 | 22.2 | 20.5 | 12.6 | 24.3 | 19.0 | 26.5 | 24.8 |
| St_Bernard_developed | -0.1 | -0.1 | 4.3 | 4.8 | 10.6 | 12.5 | 2.3 | -0.1 | 16.0 | 4.8 | 16.0 | 12.5 |
| St_Bernard_wetland | 2.4 | 2.4 | 5.2 | 5.4 | 10.6 | 12.5 | 4.5 | 2.4 | 16.0 | 5.4 | 16.0 | 12.5 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 4.6 | 16.0 | 16.0 | 11.5 | 3.4 | 17.3 | 4.6 | 18.6 | 16.0 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 4.6 | 16.0 | 16.0 | 11.5 | 1.9 | 17.3 | 4.6 | 18.6 | 16.0 |
| STJO_10b | 10.6 | 8.9 | 12.9 | 11.4 | 14.1 | 12.8 | 13.3 | 11.5 | 15.6 | 14.0 | 16.7 | 15.4 |
| STJO_8c | 9.4 | 6.1 | 12.2 | 10.5 | 14.0 | 13.6 | 12.7 | 8.7 | 15.4 | 13.1 | 17.2 | 16.2 |
| STTA_10e | 12.2 | 8.8 | 16.2 | 13.1 | 18.2 | 15.3 | 13.3 | 11.4 | 16.7 | 15.7 | 18.6 | 17.9 |
| STTA_9a | 10.4 | 8.0 | 12.7 | 9.4 | 14.0 | 10.4 | 13.2 | 10.6 | 15.6 | 12.0 | 17.5 | 13.0 |
| TANG_10b | 11.0 | 7.7 | 13.6 | 10.6 | 15.0 | 12.1 | 13.7 | 10.3 | 16.3 | 13.2 | 17.8 | 14.7 |
| West_Lacombe_2 | 10.5 | 7.4 | 13.5 | 10.0 | 15.0 | 11.5 | 13.2 | 10.0 | 15.8 | 12.6 | 17.3 | 14.1 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

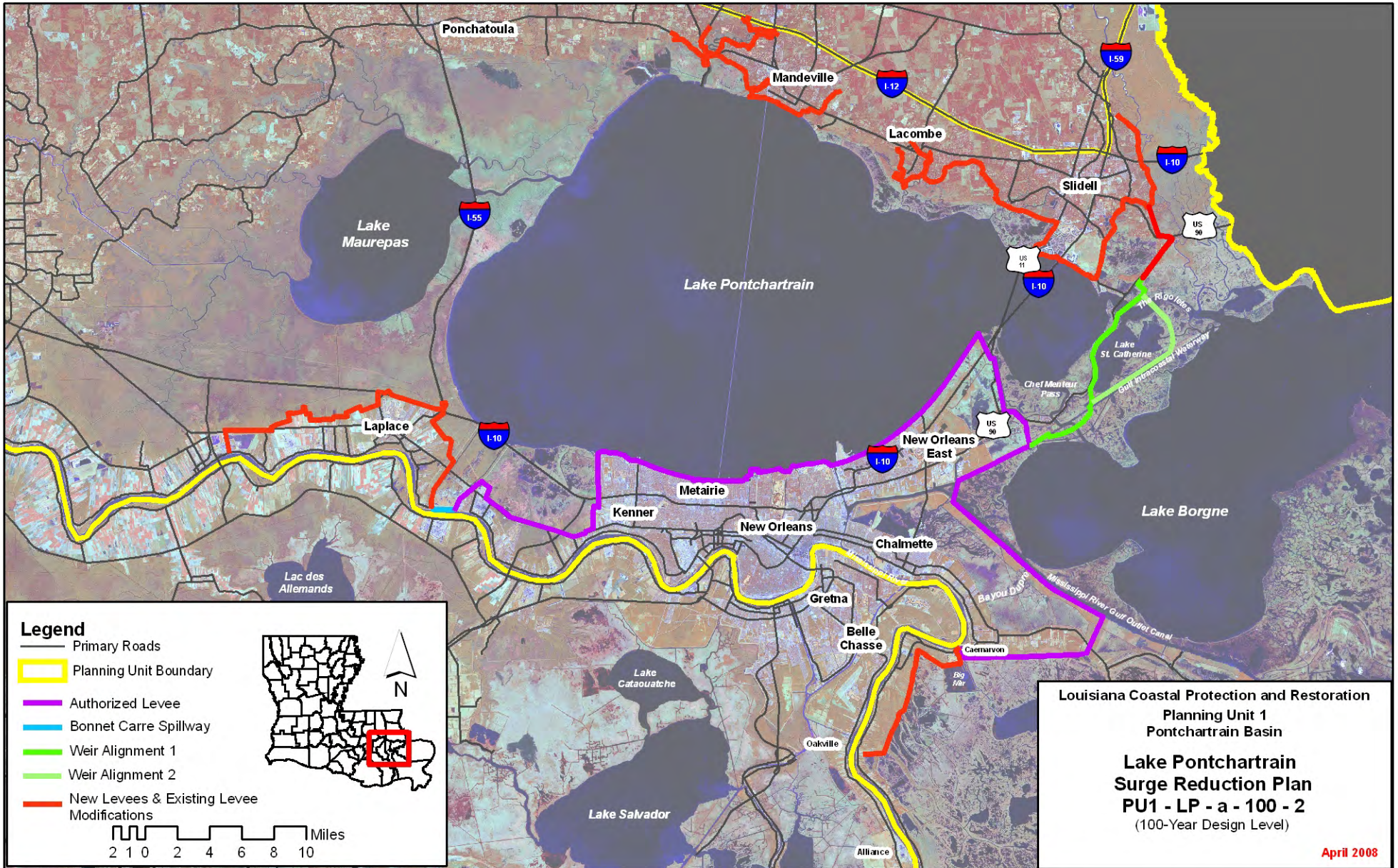
| | | | | | |
|---------------------------------|---|------------------|---------------------------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-LP-a-100-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through 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 ri | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

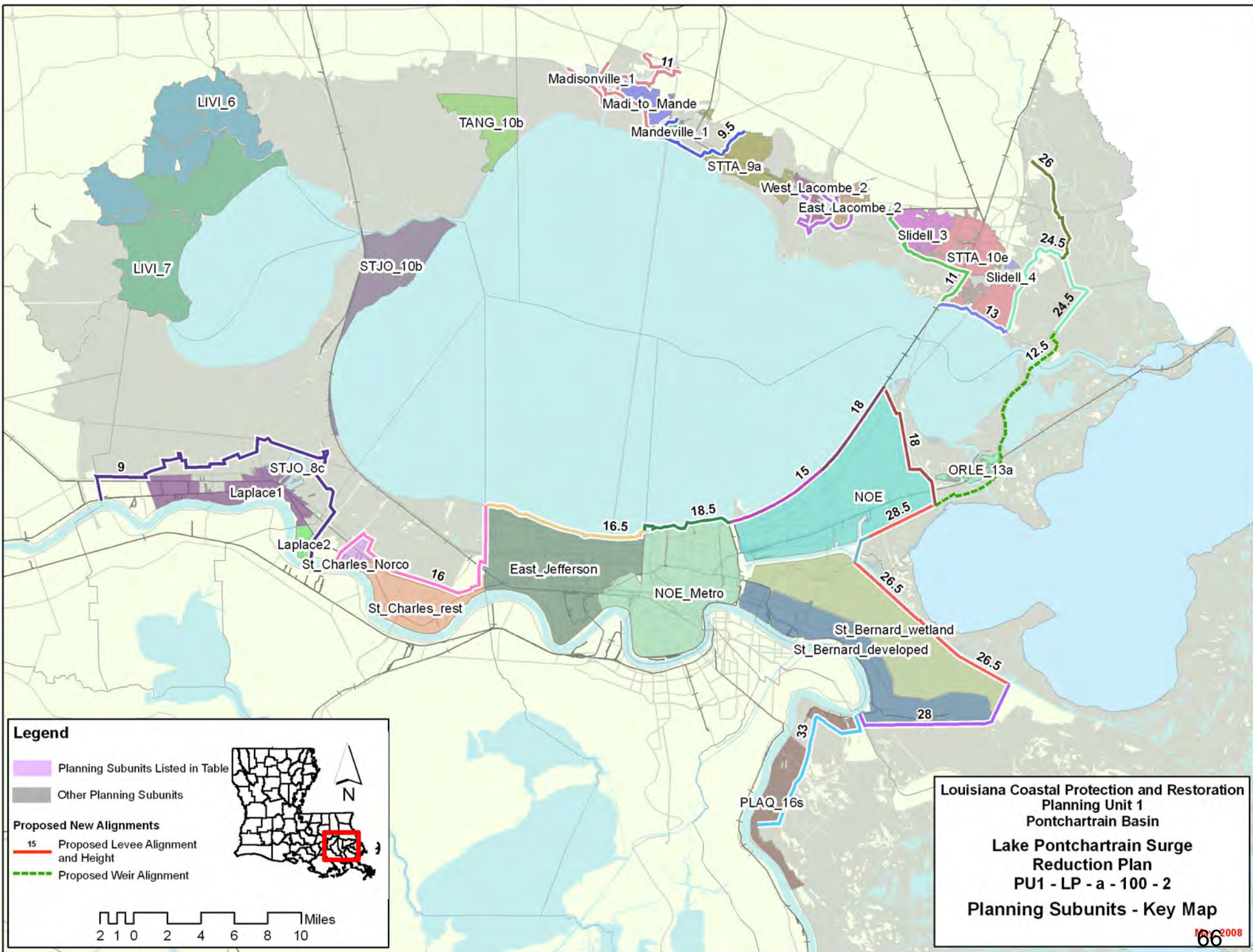
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,691 | 31,733 | 329 | 203 | 1,213 | 56 | 361 | 145 | 51 |
| | | Mid | | 34,111 | 474 | 376 | 1,839 | 97 | 331 | 137 | 50 |
| | | Low | | 38,655 | 842 | 745 | 3,435 | 193 | 301 | 134 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,710 | 32,310 | 354 | 266 | 1,360 | 69 | 361 | 138 | 51 |
| | | Mid | | 35,036 | 525 | 467 | 2,097 | 120 | 331 | 135 | 49 |
| | | Low | | 39,833 | 999 | 1,102 | 4,432 | 288 | 301 | 129 | 41 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,691 | 28,104 | 316 | 171 | 1,128 | 48 | 361 | 145 | 51 |
| | | Mid | | 30,373 | 451 | 305 | 1,708 | 82 | 331 | 137 | 50 |
| | | Low | | 34,531 | 788 | 583 | 3,102 | 158 | 301 | 134 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,710 | 28,401 | 334 | 200 | 1,224 | 57 | 361 | 138 | 51 |
| | | Mid | | 31,006 | 489 | 352 | 1,864 | 96 | 331 | 135 | 49 |
| | | Low | | 35,298 | 901 | 882 | 3,859 | 232 | 301 | 129 | 41 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 14 | | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 4,100 | | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 11,805 | 11,936 | Structural Component | | 22,443 | 22,582 | 22,443 | 22,582 | |
| | 3 / 4 | 11,805 | 11,936 | Total Project | | 33,109 | 33,481 | 33,109 | 33,481 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan Lake Pontchartrain Surge Reduction Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 941 | 1,472 | 1,007 | 1,081 | 811 | 1,345 | 870 | |
| 100-year | 11,935 | 2,536 | 34,000 | 2,851 | 9,879 | 1,678 | 26,076 | 1,816 | |
| 400-year | 89,937 | 16,183 | 116,204 | 16,791 | 62,688 | 10,505 | 80,694 | 10,730 | |
| 1,000-year | 118,260 | 50,576 | 122,423 | 51,287 | 81,963 | 34,816 | 84,515 | 35,037 | |
| 2,000-year | 122,343 | 105,784 | 125,886 | 106,664 | 84,351 | 73,501 | 86,336 | 73,745 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

N

Miles

Louisiana Coastal Protection and Restoration
Planning Unit 1
Pontchartrain Basin
Lake Pontchartrain Surge
Reduction Plan
PU1 - LP - a - 100 - 2
Planning Subunits - Key Map

1/6/2008

Alternative: PU1-LP-a-100-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.3 | -1.3 | -4.7 | 4.4 | -2.1 | -2.6 | -5.3 | 16.0 | -4.7 | 16.0 | -2.1 |
| East_Lacombe_2 | 10.9 | 4.9 | 14.3 | 9.6 | 15.9 | 11.5 | 17.3 | 4.9 | 21.7 | 9.6 | 23.6 | 11.5 |
| Laplace1 | 9.4 | 4.6 | 12.2 | 9.0 | 14.0 | 10.9 | 12.4 | 4.6 | 15.0 | 9.0 | 16.8 | 10.9 |
| Laplace2 | 8.5 | 4.6 | 11.0 | 9.0 | 12.8 | 10.9 | 11.2 | 4.6 | 14.3 | 9.0 | 16.2 | 10.9 |
| LIVI_6 | 7.3 | 4.1 | 9.7 | 5.2 | 11.1 | 6.1 | 10.3 | 6.7 | 12.8 | 7.8 | 13.9 | 8.7 |
| LIVI_7 | 7.5 | 5.5 | 9.7 | 6.9 | 10.9 | 7.8 | 11.0 | 8.1 | 13.1 | 9.5 | 14.4 | 10.4 |
| Madi_to_Mande | 11.0 | 5.9 | 13.1 | 11.0 | 14.3 | 11.1 | 13.8 | 5.9 | 16.7 | 11.0 | 18.3 | 11.1 |
| Madisonville_1 | 11.7 | 6.4 | 14.6 | 11.0 | 16.1 | 11.1 | 13.5 | 6.4 | 15.8 | 11.0 | 16.9 | 11.1 |
| Mandeville_1 | 11.0 | 6.7 | 13.1 | 9.5 | 14.3 | 10.1 | 14.9 | 6.7 | 19.1 | 9.5 | 21.4 | 10.1 |
| NOE | -5.8 | -5.9 | 0.5 | -4.0 | 10.9 | -0.2 | -0.1 | -5.9 | 16.0 | -4.0 | 16.0 | -0.2 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.1 | -3.0 | -5.1 | -5.0 | -5.2 | 16.0 | -5.1 | 16.0 | -5.1 |
| ORLE_13a | 14.6 | 16.4 | 17.8 | 21.8 | 19.4 | 26.5 | 17.9 | 19.0 | 21.5 | 24.4 | 23.8 | 29.1 |
| PLAQ_16s | 19.2 | 0.5 | 25.3 | 16.4 | 30.0 | 18.0 | 21.4 | 0.5 | 27.8 | 16.4 | 31.8 | 18.0 |
| Slidell_3 | 11.5 | 4.5 | 15.1 | 13.9 | 16.8 | 16.4 | 13.4 | 4.5 | 16.8 | 13.9 | 18.5 | 16.4 |
| Slidell_4 | 14.1 | 6.2 | 18.3 | 13.9 | 20.4 | 16.4 | 20.5 | 6.2 | 24.3 | 13.9 | 26.5 | 16.4 |
| St_Bernard_developed | -0.1 | -0.1 | 4.3 | 4.8 | 10.6 | 12.5 | 2.3 | -0.1 | 16.0 | 4.8 | 16.0 | 12.5 |
| St_Bernard_wetland | 2.4 | 2.4 | 5.2 | 5.4 | 10.6 | 12.5 | 4.5 | 2.4 | 16.0 | 5.4 | 16.0 | 12.5 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 4.6 | 16.0 | 16.0 | 11.5 | 3.4 | 17.3 | 4.6 | 18.6 | 16.0 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 4.6 | 16.0 | 16.0 | 11.5 | 1.9 | 17.3 | 4.6 | 18.6 | 16.0 |
| STJO_10b | 10.6 | 8.9 | 12.9 | 11.4 | 14.1 | 12.8 | 13.3 | 11.5 | 15.6 | 14.0 | 16.7 | 15.4 |
| STJO_8c | 9.4 | 4.6 | 12.2 | 9.0 | 14.0 | 10.9 | 12.7 | 4.6 | 15.4 | 9.0 | 17.2 | 10.9 |
| STTA_10e | 12.2 | 4.5 | 16.2 | 13.9 | 18.2 | 16.4 | 13.3 | 4.5 | 16.7 | 13.9 | 18.6 | 16.4 |
| STTA_9a | 10.4 | 8.0 | 12.7 | 9.4 | 14.0 | 10.4 | 13.2 | 10.6 | 15.6 | 12.0 | 17.5 | 13.0 |
| TANG_10b | 11.0 | 7.7 | 13.6 | 10.6 | 15.0 | 12.1 | 13.7 | 10.3 | 16.3 | 13.2 | 17.8 | 14.7 |
| West_Lacombe_2 | 10.5 | 3.9 | 13.5 | 9.6 | 15.0 | 11.5 | 13.2 | 3.9 | 15.8 | 9.6 | 17.3 | 11.5 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

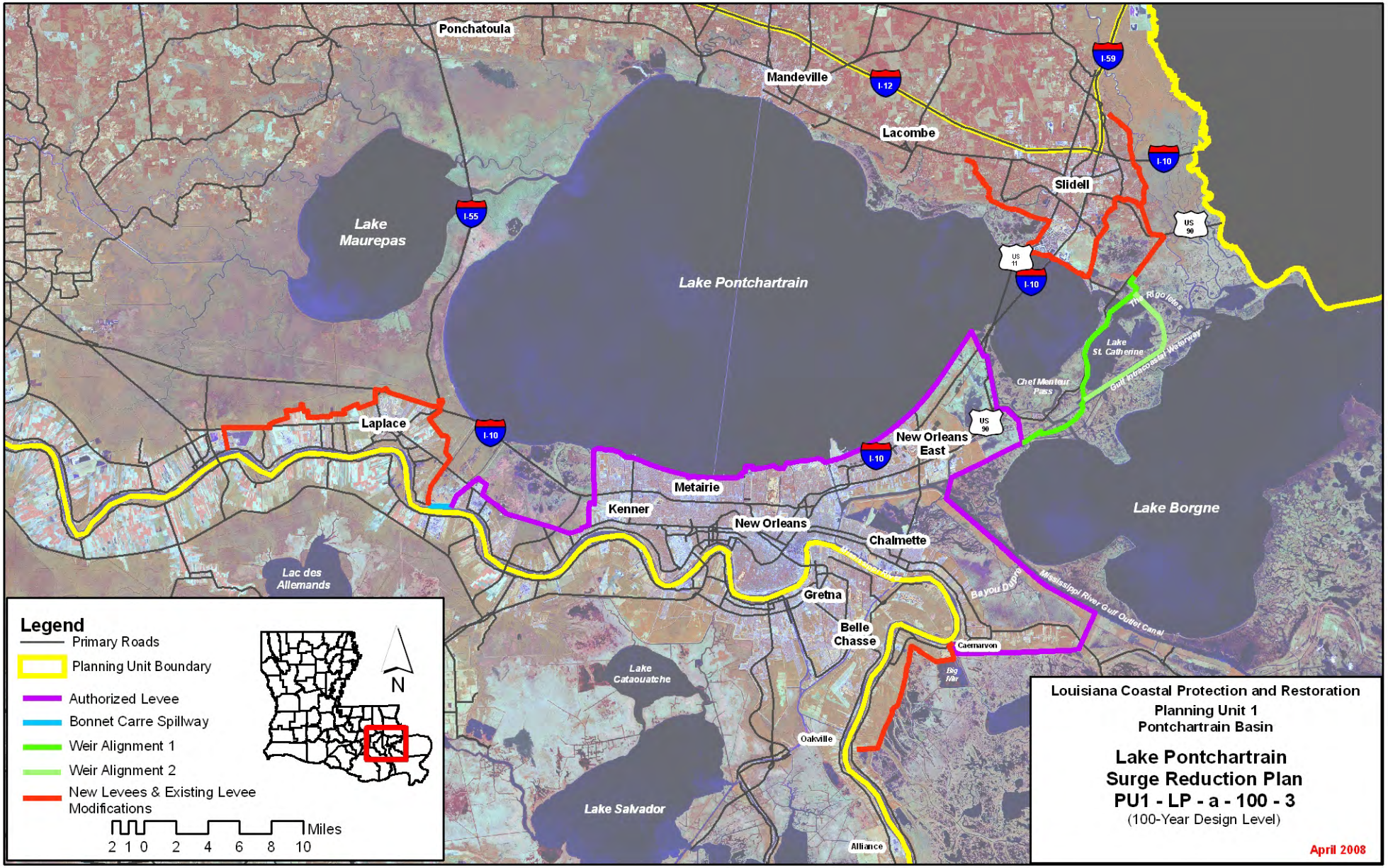
| | | | | | |
|---------------------------------|--|------------------|---------------------------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-LP-a-100-3 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

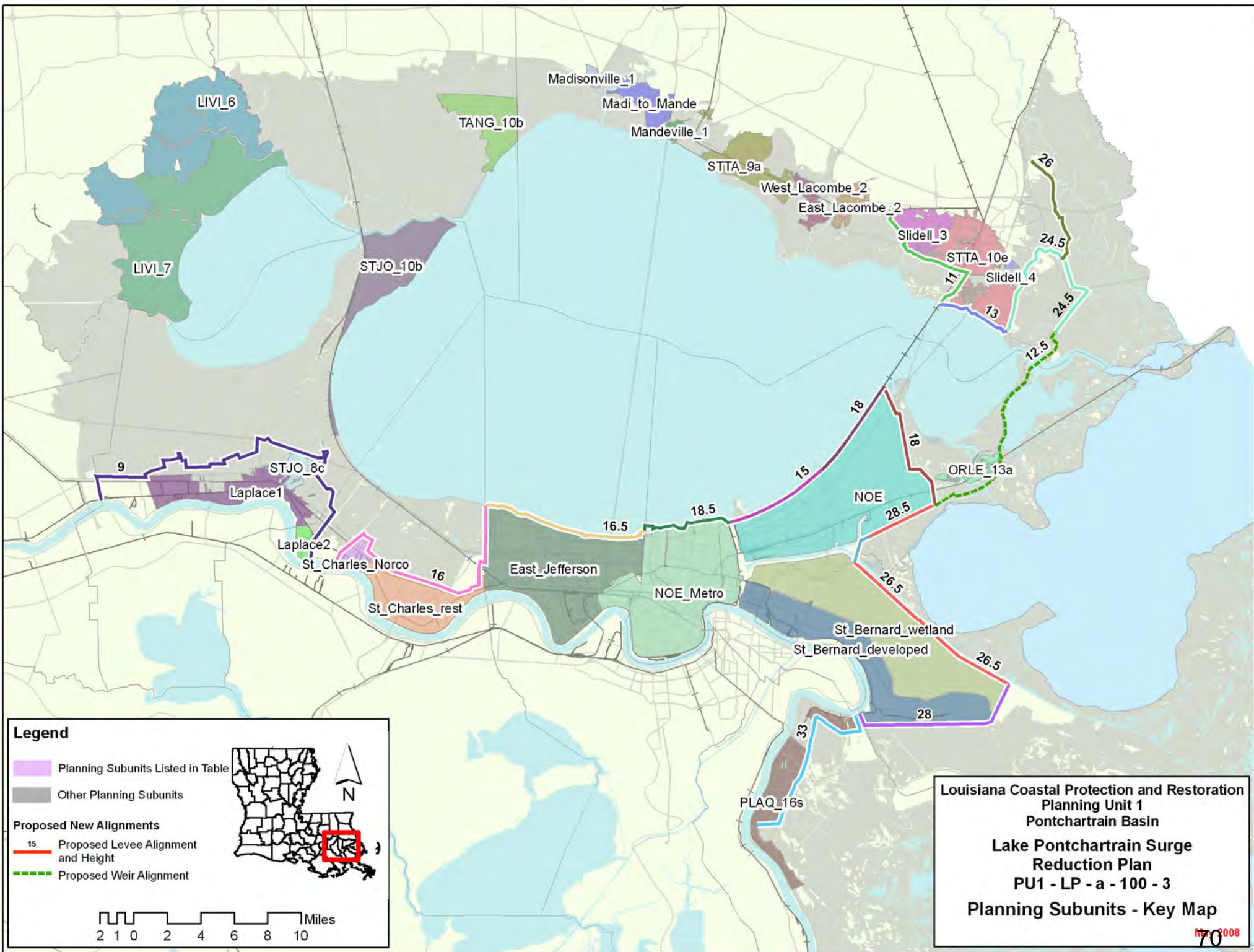
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,622 | 31,942 | 333 | 205 | 1,227 | 56 | 354 | 143 | 51 |
| | | Mid | | 34,379 | 479 | 380 | 1,856 | 98 | 324 | 133 | 50 |
| | | Low | | 38,931 | 850 | 753 | 3,467 | 196 | 294 | 127 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,643 | 32,603 | 360 | 273 | 1,387 | 72 | 354 | 137 | 51 |
| | | Mid | | 35,378 | 535 | 477 | 2,133 | 122 | 324 | 128 | 45 |
| | | Low | | 40,198 | 1,012 | 1,119 | 4,485 | 293 | 294 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,622 | 28,214 | 321 | 173 | 1,136 | 48 | 354 | 143 | 51 |
| | | Mid | | 30,523 | 457 | 307 | 1,719 | 83 | 324 | 133 | 50 |
| | | Low | | 34,704 | 795 | 588 | 3,123 | 160 | 294 | 127 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,643 | 28,552 | 340 | 204 | 1,242 | 58 | 354 | 137 | 51 |
| | | Mid | | 31,198 | 497 | 359 | 1,889 | 98 | 324 | 128 | 45 |
| | | Low | | 35,522 | 912 | 894 | 3,896 | 236 | 294 | 123 | 40 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 14 | | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 3,700 | | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 11,284 | 11,431 | Structural Component | | 21,092 | 21,279 | 21,092 | 21,279 | |
| | 3 / 4 | 11,284 | 11,431 | Total Project | | 31,758 | 32,178 | 31,758 | 32,178 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan Lake Pontchartrain Surge Reduction Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 960 | 1,472 | 1,052 | 1,081 | 828 | 1,345 | 913 | |
| 100-year | 11,935 | 2,742 | 34,000 | 3,299 | 9,879 | 1,853 | 26,076 | 2,159 | |
| 400-year | 89,937 | 16,545 | 116,204 | 17,507 | 62,688 | 10,729 | 80,694 | 11,128 | |
| 1,000-year | 118,260 | 51,238 | 122,423 | 52,430 | 81,963 | 35,144 | 84,515 | 35,612 | |
| 2,000-year | 122,343 | 106,606 | 125,886 | 108,011 | 84,351 | 73,883 | 86,336 | 74,417 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

Miles

**Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 Lake Pontchartrain Surge
 Reduction Plan
 PU1 - LP - a - 100 - 3
 Planning Subunits - Key Map**

1/7/08
70

Alternative: PU1-LP-a-100-3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.3 | -1.3 | -4.7 | 4.4 | -2.1 | -2.6 | -5.3 | 16.0 | -4.7 | 16.0 | -2.1 |
| East_Lacombe_2 | 10.9 | 7.2 | 14.3 | 11.1 | 15.9 | 13.2 | 17.3 | 9.8 | 21.7 | 13.7 | 23.6 | 15.8 |
| Laplace1 | 9.4 | 4.6 | 12.2 | 9.0 | 14.0 | 10.9 | 12.4 | 4.6 | 15.0 | 9.0 | 16.8 | 10.9 |
| Laplace2 | 8.5 | 4.6 | 11.0 | 9.0 | 12.8 | 10.9 | 11.2 | 4.6 | 14.3 | 9.0 | 16.2 | 10.9 |
| LIVI_6 | 7.3 | 4.1 | 9.7 | 5.2 | 11.1 | 6.1 | 10.3 | 6.7 | 12.8 | 7.8 | 13.9 | 8.7 |
| LIVI_7 | 7.5 | 5.5 | 9.7 | 6.9 | 10.9 | 7.8 | 11.0 | 8.1 | 13.1 | 9.5 | 14.4 | 10.4 |
| Madi_to_Mande | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 13.8 | 14.1 | 16.7 | 15.1 | 18.3 | 15.9 |
| Madisonville_1 | 11.7 | 10.1 | 14.6 | 14.9 | 16.1 | 27.3 | 13.5 | 12.7 | 15.8 | 17.5 | 16.9 | 29.9 |
| Mandeville_1 | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 14.9 | 14.1 | 19.1 | 15.1 | 21.4 | 15.9 |
| NOE | -5.8 | -5.9 | 0.5 | -4.0 | 10.9 | -0.2 | -0.1 | -5.9 | 16.0 | -4.0 | 16.0 | -0.2 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.1 | -3.0 | -5.1 | -5.0 | -5.2 | 16.0 | -5.1 | 16.0 | -5.1 |
| ORLE_13a | 14.6 | 16.4 | 17.8 | 21.8 | 19.4 | 26.5 | 17.9 | 19.0 | 21.5 | 24.4 | 23.8 | 29.1 |
| PLAQ_16s | 19.2 | 0.5 | 25.3 | 16.4 | 30.0 | 18.0 | 21.4 | 0.5 | 27.8 | 16.4 | 31.8 | 18.0 |
| Slidell_3 | 11.5 | 4.5 | 15.1 | 13.9 | 16.8 | 16.4 | 13.4 | 4.5 | 16.8 | 13.9 | 18.5 | 16.4 |
| Slidell_4 | 14.1 | 6.2 | 18.3 | 13.9 | 20.4 | 16.4 | 20.5 | 6.2 | 24.3 | 13.9 | 26.5 | 16.4 |
| St_Bernard_developed | -0.1 | -0.1 | 4.3 | 4.8 | 10.6 | 12.5 | 2.3 | -0.1 | 16.0 | 4.8 | 16.0 | 12.5 |
| St_Bernard_wetland | 2.4 | 2.4 | 5.2 | 5.4 | 10.6 | 12.5 | 4.5 | 2.4 | 16.0 | 5.4 | 16.0 | 12.5 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 4.6 | 16.0 | 16.0 | 11.5 | 3.4 | 17.3 | 4.6 | 18.6 | 16.0 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 4.6 | 16.0 | 16.0 | 11.5 | 1.9 | 17.3 | 4.6 | 18.6 | 16.0 |
| STJO_10b | 10.6 | 8.9 | 12.9 | 11.4 | 14.1 | 12.8 | 13.3 | 11.5 | 15.6 | 14.0 | 16.7 | 15.4 |
| STJO_8c | 9.4 | 4.6 | 12.2 | 9.0 | 14.0 | 10.9 | 12.7 | 4.6 | 15.4 | 9.0 | 17.2 | 10.9 |
| STTA_10e | 12.2 | 4.5 | 16.2 | 13.9 | 18.2 | 16.4 | 13.3 | 4.5 | 16.7 | 13.9 | 18.6 | 16.4 |
| STTA_9a | 10.4 | 8.0 | 12.7 | 9.4 | 14.0 | 10.4 | 13.2 | 10.6 | 15.6 | 12.0 | 17.5 | 13.0 |
| TANG_10b | 11.0 | 7.7 | 13.6 | 10.6 | 15.0 | 12.1 | 13.7 | 10.3 | 16.3 | 13.2 | 17.8 | 14.7 |
| West_Lacombe_2 | 10.5 | 7.4 | 13.5 | 10.0 | 15.0 | 11.5 | 13.2 | 10.0 | 15.8 | 12.6 | 17.3 | 14.1 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

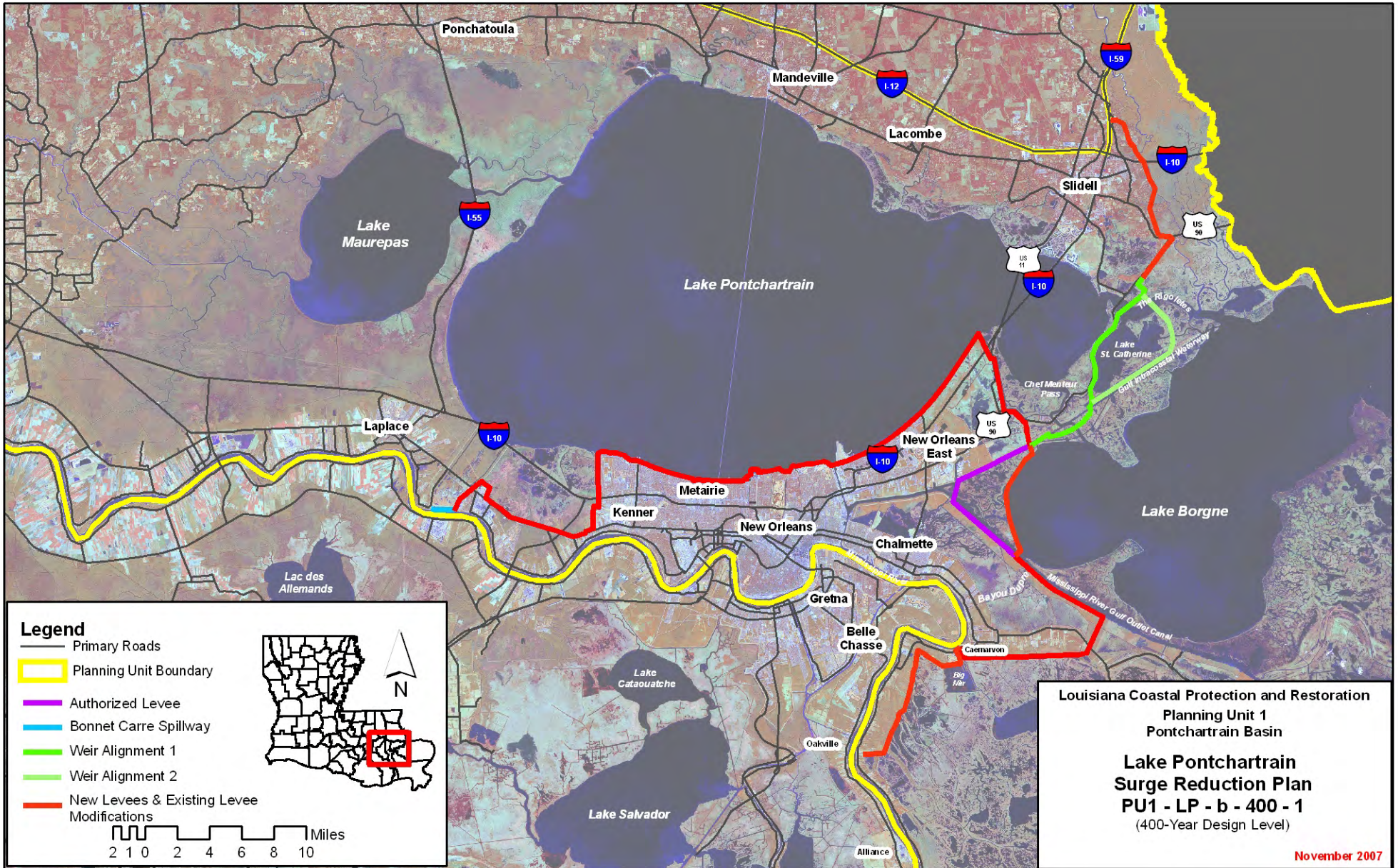
| | | | | | |
|---------------------------------|--|------------------|---------------------------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-LP-b-400-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

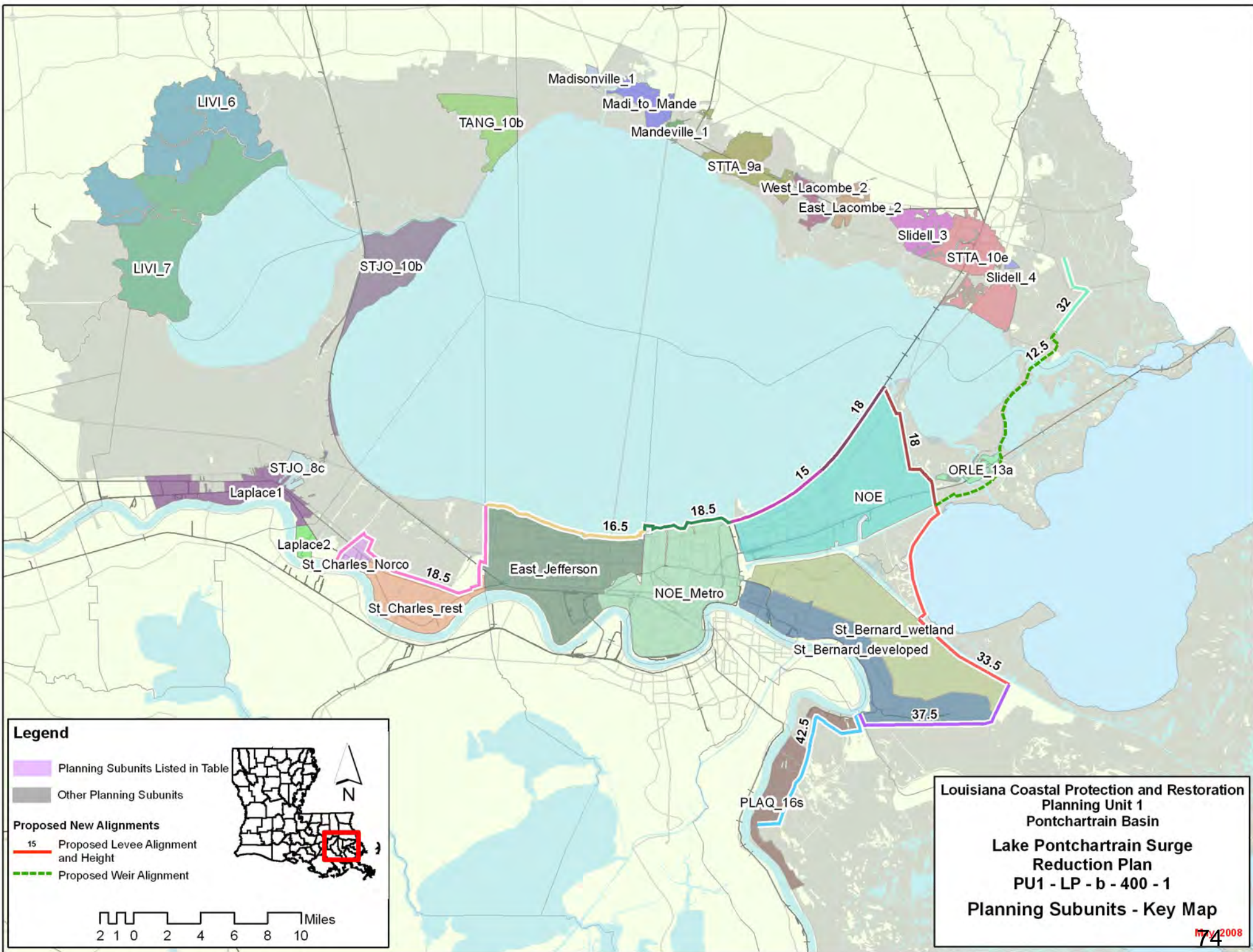
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,849 | 32,873 | 359 | 220 | 1,291 | 60 | 327 | 142 | 51 |
| | | Mid | | 35,618 | 517 | 420 | 2,021 | 109 | 297 | 137 | 50 |
| | | Low | | 40,570 | 878 | 797 | 3,598 | 207 | 267 | 131 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,865 | 34,007 | 397 | 316 | 1,553 | 85 | 354 | 138 | 51 |
| | | Mid | | 37,263 | 594 | 572 | 2,443 | 148 | 324 | 133 | 50 |
| | | Low | | 42,333 | 1,096 | 1,273 | 4,869 | 330 | 294 | 129 | 45 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,849 | 29,237 | 348 | 190 | 1,217 | 53 | 327 | 142 | 51 |
| | | Mid | | 31,861 | 496 | 341 | 1,884 | 93 | 297 | 137 | 50 |
| | | Low | | 36,549 | 833 | 609 | 3,243 | 168 | 267 | 131 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,865 | 29,968 | 378 | 237 | 1,379 | 69 | 354 | 138 | 51 |
| | | Mid | | 33,054 | 556 | 416 | 2,136 | 115 | 324 | 133 | 50 |
| | | Low | | 37,792 | 994 | 1,000 | 4,223 | 265 | 294 | 129 | 45 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 16 | | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 4,200 | | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | | 1 / 2 | 12,754 | 12,865 | Structural Component | | 25,538 | 25,620 | 25,538 | 25,620 |
| | | 3 / 4 | 12,754 | 12,865 | Total Project | | 36,204 | 36,519 | 36,204 | 36,519 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan Lake Pontchartrain Surge Reduction Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 1,033 | 1,472 | 1,210 | 1,081 | 905 | 1,345 | 1,073 | |
| 100-year | 11,935 | 4,144 | 34,000 | 6,088 | 9,879 | 3,146 | 26,076 | 4,684 | |
| 400-year | 89,937 | 11,216 | 116,204 | 15,591 | 62,688 | 8,666 | 80,694 | 11,450 | |
| 1,000-year | 118,260 | 20,434 | 122,423 | 24,513 | 81,963 | 14,819 | 84,515 | 17,231 | |
| 2,000-year | 122,343 | 39,642 | 125,886 | 43,054 | 84,351 | 28,407 | 86,336 | 30,352 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.







Legend

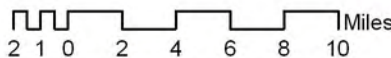
- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment







**Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 Lake Pontchartrain Surge
 Reduction Plan
 PU1 - LP - b - 400 - 1
 Planning Subunits - Key Map**

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Alternative: PU1-LP-b-400-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.3 | -1.3 | -5.1 | 4.4 | -4.5 | -2.6 | -5.3 | 16.0 | -5.1 | 16.0 | -4.5 |
| East_Lacombe_2 | 10.9 | 7.2 | 14.3 | 11.1 | 15.9 | 13.2 | 17.3 | 9.8 | 21.7 | 13.7 | 23.6 | 15.8 |
| Laplace1 | 9.4 | 6.1 | 12.2 | 10.5 | 14.0 | 13.6 | 12.4 | 8.7 | 15.0 | 13.1 | 16.8 | 16.2 |
| Laplace2 | 8.5 | 9.4 | 11.0 | 11.9 | 12.8 | 13.4 | 11.2 | 12.0 | 14.3 | 14.5 | 16.2 | 16.0 |
| LIVI_6 | 7.3 | 4.1 | 9.7 | 5.2 | 11.1 | 6.1 | 10.3 | 6.7 | 12.8 | 7.8 | 13.9 | 8.7 |
| LIVI_7 | 7.5 | 5.5 | 9.7 | 6.9 | 10.9 | 7.8 | 11.0 | 8.1 | 13.1 | 9.5 | 14.4 | 10.4 |
| Madi_to_Mande | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 13.8 | 14.1 | 16.7 | 15.1 | 18.3 | 15.9 |
| Madisonville_1 | 11.7 | 10.1 | 14.6 | 14.9 | 16.1 | 27.3 | 13.5 | 12.7 | 15.8 | 17.5 | 16.9 | 29.9 |
| Mandeville_1 | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 14.9 | 14.1 | 19.1 | 15.1 | 21.4 | 15.9 |
| NOE | -5.8 | -6.0 | 0.5 | -5.9 | 10.9 | -4.6 | -0.1 | -6.0 | 16.0 | -5.9 | 16.0 | -4.6 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.1 | -3.0 | -5.1 | -5.0 | -5.2 | 16.0 | -5.1 | 16.0 | -5.1 |
| ORLE_13a | 14.6 | 16.4 | 17.8 | 21.8 | 19.4 | 26.5 | 17.9 | 19.0 | 21.5 | 24.4 | 23.8 | 29.1 |
| PLAQ_16s | 19.2 | 17.8 | 25.3 | 25.7 | 30.0 | 29.9 | 21.4 | 20.4 | 27.8 | 28.3 | 31.8 | 32.5 |
| Slidell_3 | 11.5 | 8.5 | 15.1 | 12.8 | 16.8 | 14.9 | 13.4 | 11.1 | 16.8 | 15.4 | 18.5 | 17.5 |
| Slidell_4 | 14.1 | 10.0 | 18.3 | 16.4 | 20.4 | 22.2 | 20.5 | 12.6 | 24.3 | 19.0 | 26.5 | 24.8 |
| St_Bernard_developed | -0.1 | -0.4 | 4.3 | -0.1 | 10.6 | 0.7 | 2.3 | -0.4 | 16.0 | -0.1 | 16.0 | 0.7 |
| St_Bernard_wetland | 2.4 | 1.7 | 5.2 | 1.8 | 10.6 | 2.2 | 4.5 | 1.7 | 16.0 | 1.8 | 16.0 | 2.2 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 4.2 | 16.0 | 4.5 | 11.5 | 3.4 | 17.3 | 4.2 | 18.6 | 4.5 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 2.1 | 16.0 | 4.3 | 11.5 | 1.9 | 17.3 | 2.1 | 18.6 | 4.3 |
| STJO_10b | 10.6 | 8.9 | 12.9 | 11.4 | 14.1 | 12.8 | 13.3 | 11.5 | 15.6 | 14.0 | 16.7 | 15.4 |
| STJO_8c | 9.4 | 6.1 | 12.2 | 10.5 | 14.0 | 13.6 | 12.7 | 8.7 | 15.4 | 13.1 | 17.2 | 16.2 |
| STTA_10e | 12.2 | 8.8 | 16.2 | 13.1 | 18.2 | 15.3 | 13.3 | 11.4 | 16.7 | 15.7 | 18.6 | 17.9 |
| STTA_9a | 10.4 | 8.0 | 12.7 | 9.4 | 14.0 | 10.4 | 13.2 | 10.6 | 15.6 | 12.0 | 17.5 | 13.0 |
| TANG_10b | 11.0 | 7.7 | 13.6 | 10.6 | 15.0 | 12.1 | 13.7 | 10.3 | 16.3 | 13.2 | 17.8 | 14.7 |
| West_Lacombe_2 | 10.5 | 7.4 | 13.5 | 10.0 | 15.0 | 11.5 | 13.2 | 10.0 | 15.8 | 12.6 | 17.3 | 14.1 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

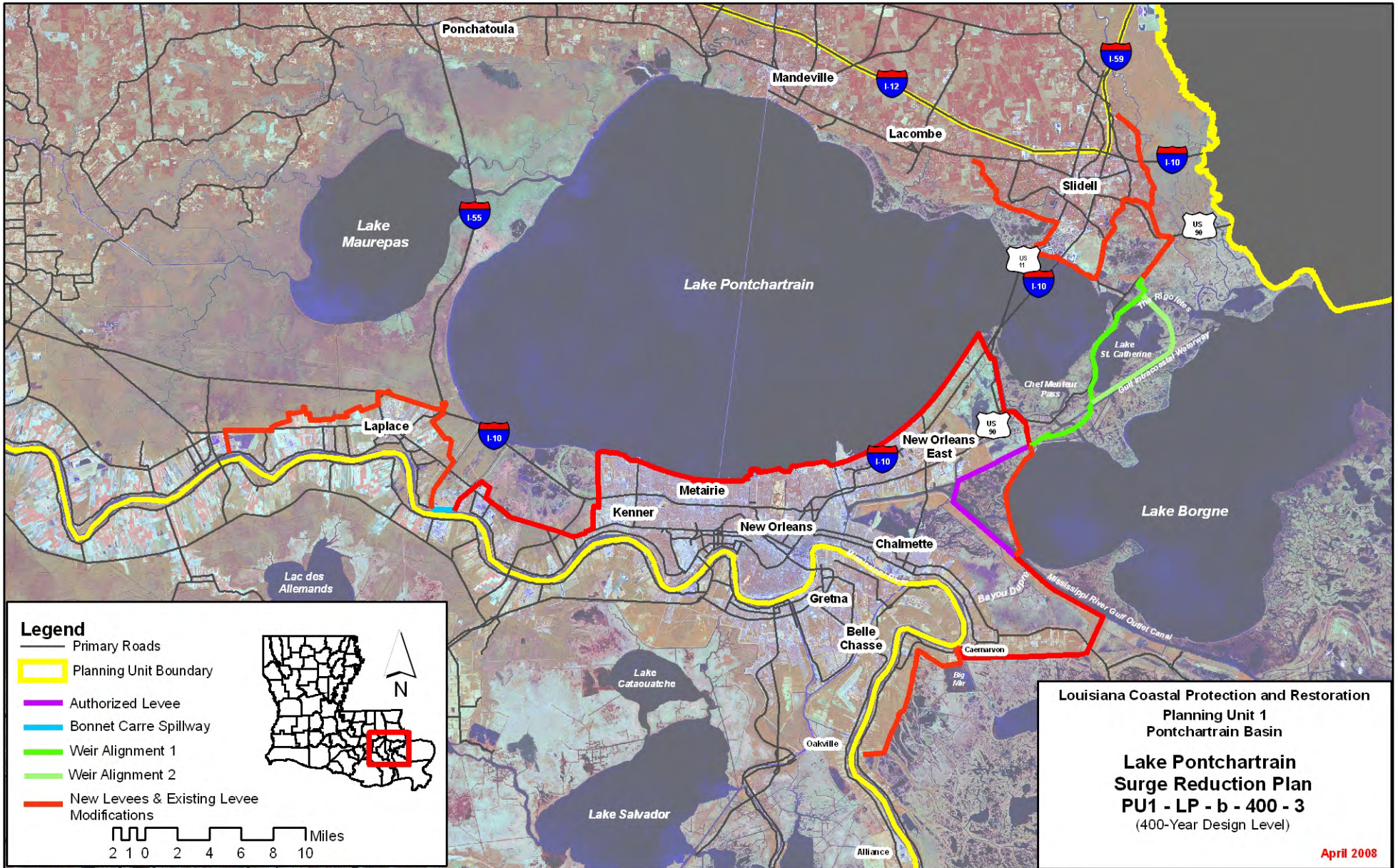
| | | | | | |
|---------------------------------|--|------------------|---------------------------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-LP-b-400-3 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration 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 t | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

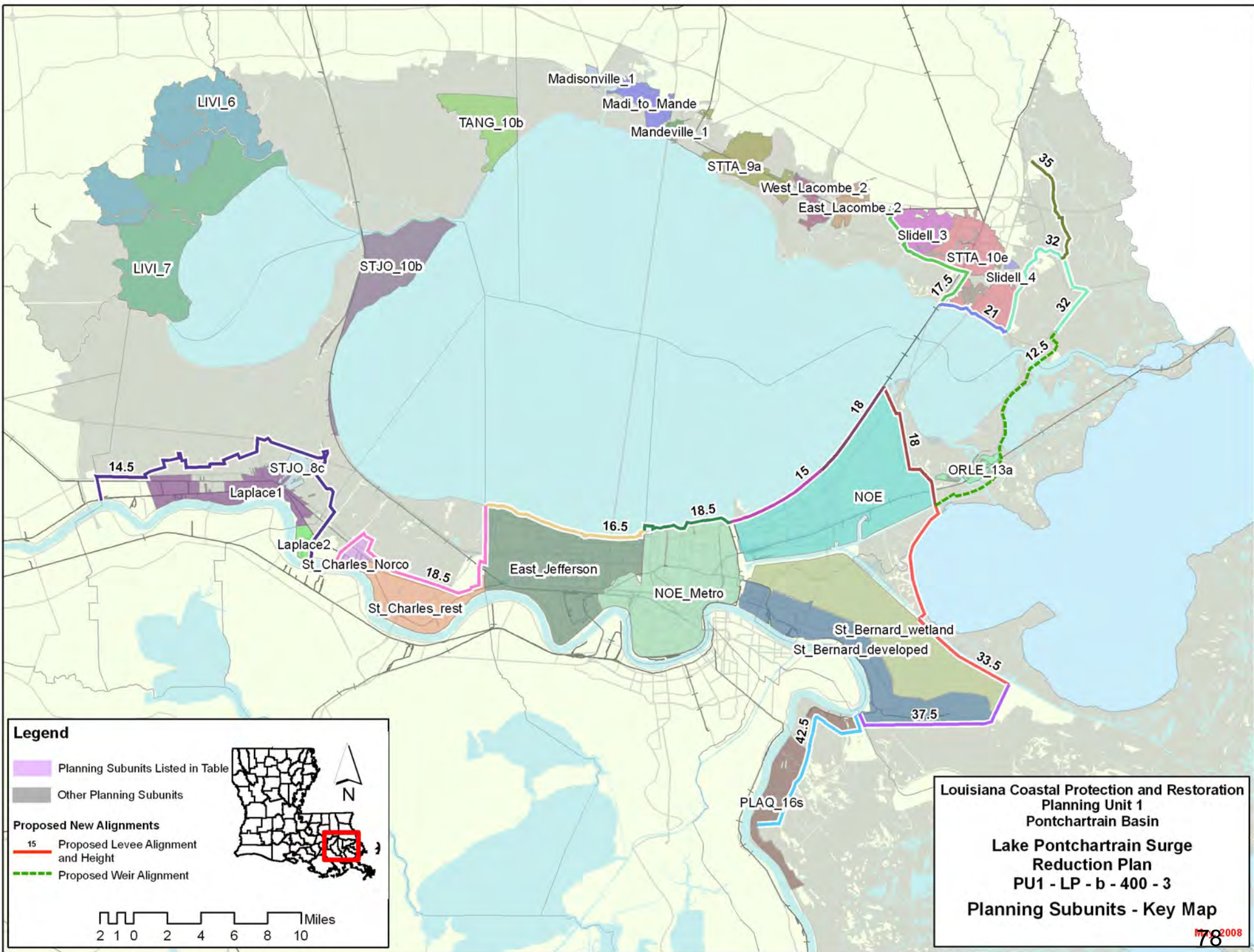
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,847 | 32,087 | 339 | 205 | 1,235 | 56 | 356 | 149 | 51 |
| | | Mid | | 34,302 | 478 | 383 | 1,859 | 99 | 326 | 146 | 50 |
| | | Low | | 38,442 | 811 | 714 | 3,279 | 185 | 296 | 141 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,867 | 32,762 | 368 | 280 | 1,417 | 73 | 356 | 147 | 51 |
| | | Mid | | 35,421 | 541 | 497 | 2,184 | 128 | 326 | 142 | 50 |
| | | Low | | 39,867 | 1,001 | 1,148 | 4,485 | 301 | 296 | 134 | 45 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,847 | 28,496 | 328 | 176 | 1,158 | 49 | 356 | 149 | 51 |
| | | Mid | | 30,580 | 458 | 311 | 1,724 | 83 | 326 | 146 | 50 |
| | | Low | | 34,419 | 766 | 554 | 2,943 | 150 | 296 | 141 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,867 | 28,854 | 350 | 213 | 1,281 | 61 | 356 | 147 | 51 |
| | | Mid | | 31,353 | 504 | 371 | 1,922 | 101 | 326 | 142 | 50 |
| | | Low | | 35,364 | 903 | 918 | 3,865 | 241 | 296 | 134 | 45 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 16 | | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 7,500 | | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 19,733 | 19,870 | Structural Component | | 45,081 | 45,238 | 45,081 | 45,238 | |
| | 3 / 4 | 19,733 | 19,870 | Total Project | | 55,747 | 56,137 | 55,747 | 56,137 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan Lake Pontchartrain Surge Reduction Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 959 | 1,472 | 1,051 | 1,081 | 827 | 1,345 | 912 | |
| 100-year | 11,935 | 2,668 | 34,000 | 3,226 | 9,879 | 1,789 | 26,076 | 2,095 | |
| 400-year | 89,937 | 4,448 | 116,204 | 5,411 | 62,688 | 2,452 | 80,694 | 2,851 | |
| 1,000-year | 118,260 | 10,316 | 122,423 | 11,508 | 81,963 | 7,048 | 84,515 | 7,516 | |
| 2,000-year | 122,343 | 29,258 | 125,886 | 30,663 | 84,351 | 21,861 | 86,336 | 22,395 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

Miles

**Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 Lake Pontchartrain Surge
 Reduction Plan
 PU1 - LP - b - 400 - 3
 Planning Subunits - Key Map**

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Alternative: PU1-LP-b-400-3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.3 | -1.3 | -5.1 | 4.4 | -4.5 | -2.6 | -5.3 | 16.0 | -5.1 | 16.0 | -4.5 |
| East_Lacombe_2 | 10.9 | 7.2 | 14.3 | 11.1 | 15.9 | 13.2 | 17.3 | 9.8 | 21.7 | 13.7 | 23.6 | 15.8 |
| Laplace1 | 9.4 | 4.1 | 12.2 | 4.5 | 14.0 | 9.8 | 12.4 | 4.1 | 15.0 | 4.5 | 16.8 | 9.8 |
| Laplace2 | 8.5 | 4.1 | 11.0 | 4.5 | 12.8 | 9.8 | 11.2 | 4.1 | 14.3 | 4.5 | 16.2 | 9.8 |
| LIVI_6 | 7.3 | 4.1 | 9.7 | 5.2 | 11.1 | 6.1 | 10.3 | 6.7 | 12.8 | 7.8 | 13.9 | 8.7 |
| LIVI_7 | 7.5 | 5.5 | 9.7 | 6.9 | 10.9 | 7.8 | 11.0 | 8.1 | 13.1 | 9.5 | 14.4 | 10.4 |
| Madi_to_Mande | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 13.8 | 14.1 | 16.7 | 15.1 | 18.3 | 15.9 |
| Madisonville_1 | 11.7 | 10.1 | 14.6 | 14.9 | 16.1 | 27.3 | 13.5 | 12.7 | 15.8 | 17.5 | 16.9 | 29.9 |
| Mandeville_1 | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 14.9 | 14.1 | 19.1 | 15.1 | 21.4 | 15.9 |
| NOE | -5.8 | -6.0 | 0.5 | -5.9 | 10.9 | -4.6 | -0.1 | -6.0 | 16.0 | -5.9 | 16.0 | -4.6 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.1 | -3.0 | -5.1 | -5.0 | -5.2 | 16.0 | -5.1 | 16.0 | -5.1 |
| ORLE_13a | 14.6 | 16.4 | 17.8 | 21.8 | 19.4 | 26.5 | 17.9 | 19.0 | 21.5 | 24.4 | 23.8 | 29.1 |
| PLAQ_16s | 19.2 | -0.1 | 25.3 | 0.9 | 30.0 | 4.0 | 21.4 | -0.1 | 27.8 | 0.9 | 31.8 | 4.0 |
| Slidell_3 | 11.5 | 4.3 | 15.1 | 4.5 | 16.8 | 6.4 | 13.4 | 4.3 | 16.8 | 4.5 | 18.5 | 6.4 |
| Slidell_4 | 14.1 | 6.2 | 18.3 | 6.2 | 20.4 | 6.2 | 20.5 | 6.2 | 24.3 | 6.2 | 26.5 | 6.2 |
| St_Bernard_developed | -0.1 | -0.4 | 4.3 | -0.1 | 10.6 | 0.7 | 2.3 | -0.4 | 16.0 | -0.1 | 16.0 | 0.7 |
| St_Bernard_wetland | 2.4 | 1.7 | 5.2 | 1.8 | 10.6 | 2.2 | 4.5 | 1.7 | 16.0 | 1.8 | 16.0 | 2.2 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 4.2 | 16.0 | 4.5 | 11.5 | 3.4 | 17.3 | 4.2 | 18.6 | 4.5 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 2.1 | 16.0 | 4.3 | 11.5 | 1.9 | 17.3 | 2.1 | 18.6 | 4.3 |
| STJO_10b | 10.6 | 8.9 | 12.9 | 11.4 | 14.1 | 12.8 | 13.3 | 11.5 | 15.6 | 14.0 | 16.7 | 15.4 |
| STJO_8c | 9.4 | 4.1 | 12.2 | 4.5 | 14.0 | 9.8 | 12.7 | 4.1 | 15.4 | 4.5 | 17.2 | 9.8 |
| STTA_10e | 12.2 | 4.3 | 16.2 | 4.5 | 18.2 | 6.4 | 13.3 | 4.3 | 16.7 | 4.5 | 18.6 | 6.4 |
| STTA_9a | 10.4 | 8.0 | 12.7 | 9.4 | 14.0 | 10.4 | 13.2 | 10.6 | 15.6 | 12.0 | 17.5 | 13.0 |
| TANG_10b | 11.0 | 7.7 | 13.6 | 10.6 | 15.0 | 12.1 | 13.7 | 10.3 | 16.3 | 13.2 | 17.8 | 14.7 |
| West_Lacombe_2 | 10.5 | 7.4 | 13.5 | 10.0 | 15.0 | 11.5 | 13.2 | 10.0 | 15.8 | 12.6 | 17.3 | 14.1 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

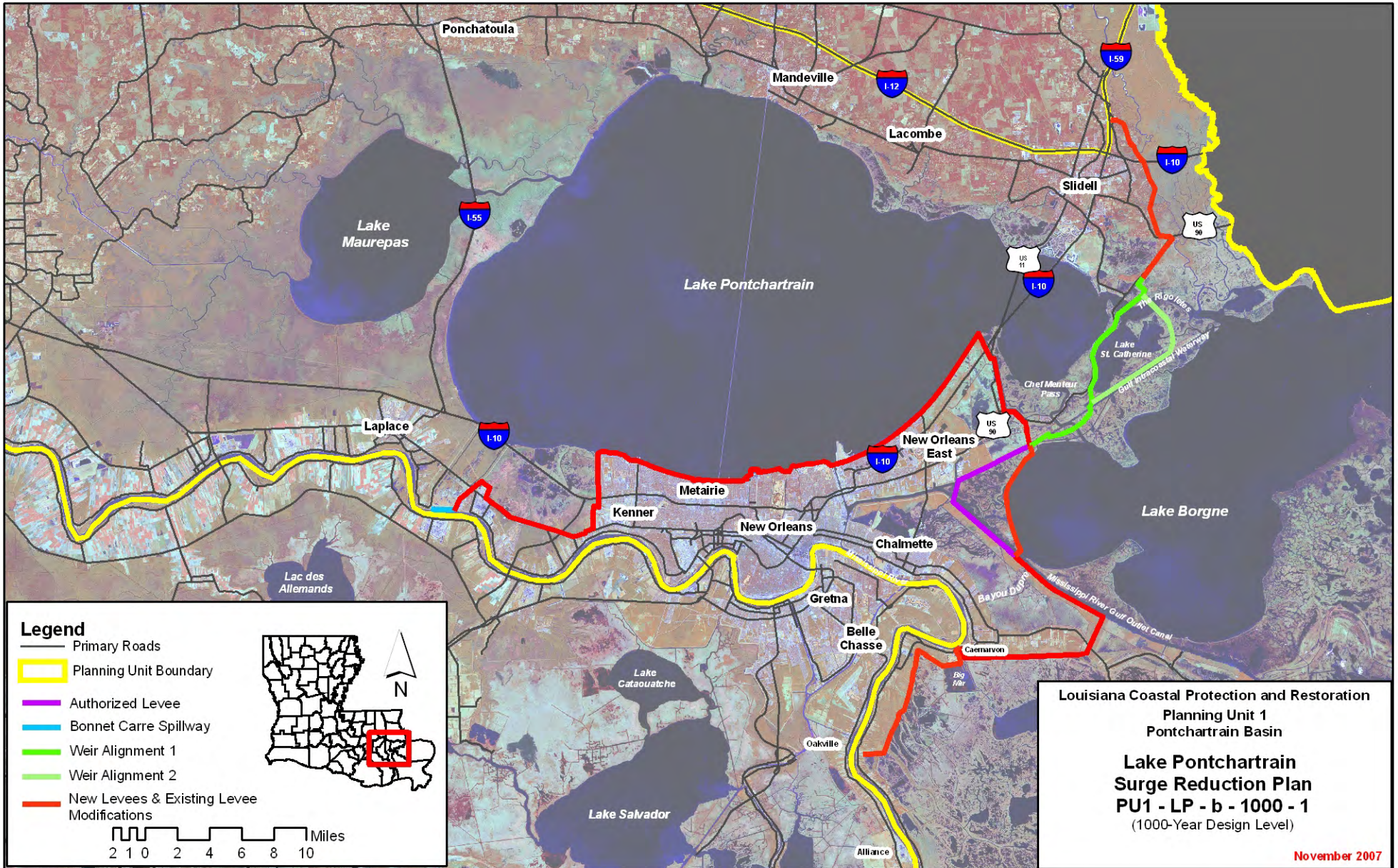
| | | | | | |
|---------------------------------|---|------------------|---------------------------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-LP-b-1000-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

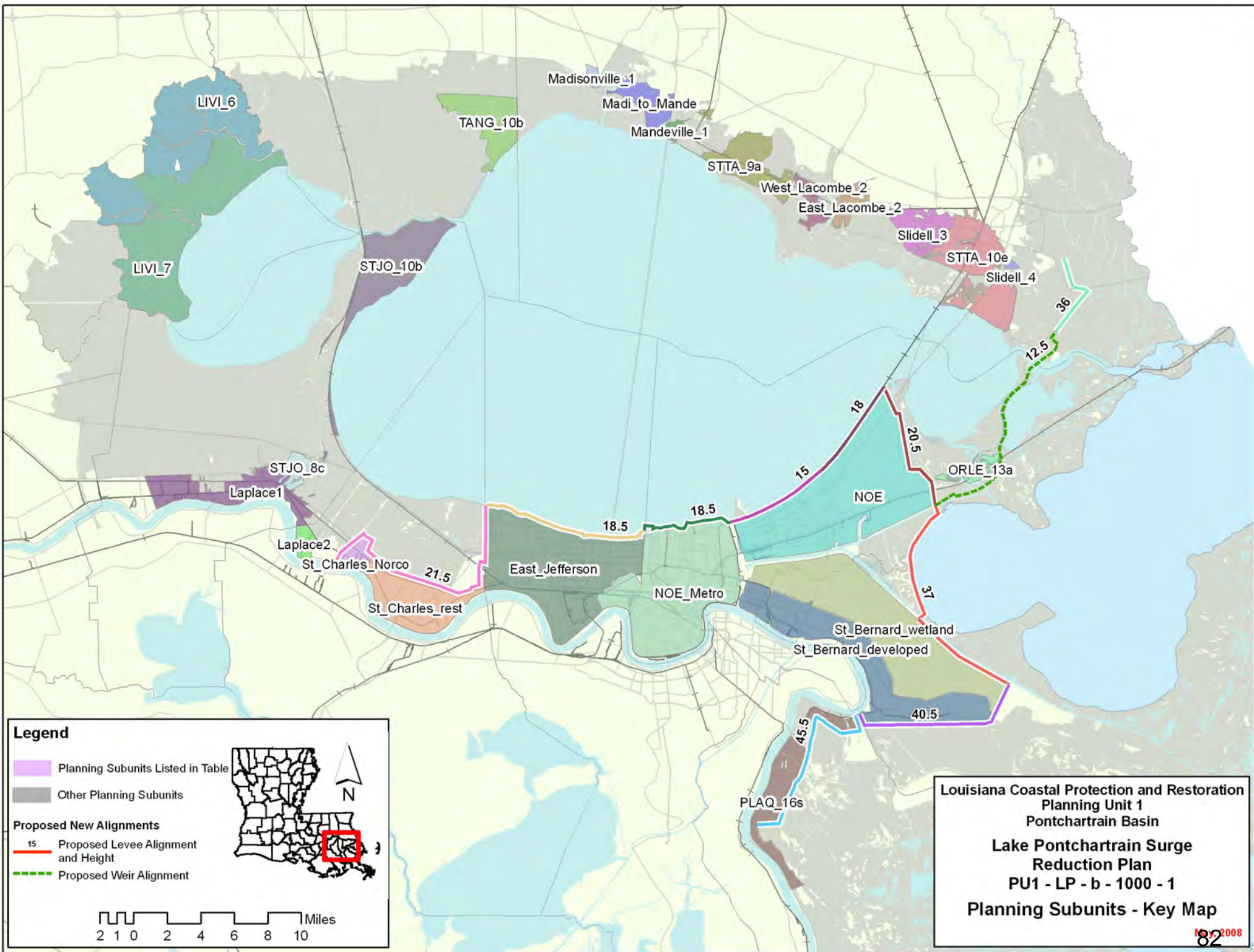
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,247 | 32,873 | 359 | 220 | 1,291 | 60 | 327 | 142 | 51 |
| | | Mid | | 35,605 | 517 | 420 | 2,021 | 109 | 297 | 137 | 50 |
| | | Low | | 40,423 | 874 | 789 | 3,561 | 205 | 267 | 131 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,270 | 34,007 | 397 | 316 | 1,553 | 85 | 327 | 138 | 51 |
| | | Mid | | 37,249 | 594 | 372 | 2,443 | 147 | 297 | 133 | 50 |
| | | Low | | 42,186 | 1,091 | 1,264 | 4,832 | 327 | 267 | 129 | 45 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,247 | 29,237 | 348 | 190 | 1,217 | 53 | 327 | 142 | 51 |
| | | Mid | | 31,850 | 496 | 341 | 1,884 | 93 | 297 | 137 | 50 |
| | | Low | | 36,414 | 829 | 602 | 3,214 | 166 | 267 | 131 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,270 | 29,968 | 378 | 237 | 1,379 | 69 | 327 | 138 | 51 |
| | | Mid | | 33,043 | 556 | 416 | 2,136 | 115 | 297 | 133 | 50 |
| | | Low | | 37,657 | 989 | 993 | 4,193 | 263 | 267 | 129 | 45 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 16 | | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 5,100 | | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 15,628 | 15,788 | Structural Component | | 33,339 | 33,562 | 33,339 | 33,562 | |
| | 3 / 4 | 15,628 | 15,788 | Total Project | | 44,005 | 44,461 | 44,005 | 44,461 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan Lake Pontchartrain Surge Reduction Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 1,033 | 1,472 | 1,210 | 1,081 | 1,210 | 1,345 | 1,073 | |
| 100-year | 11,935 | 4,142 | 34,000 | 6,087 | 9,879 | 6,087 | 26,076 | 4,683 | |
| 400-year | 89,937 | 11,126 | 116,204 | 15,501 | 62,688 | 15,501 | 80,694 | 11,368 | |
| 1,000-year | 118,260 | 18,304 | 122,423 | 22,384 | 81,963 | 22,384 | 84,515 | 15,520 | |
| 2,000-year | 122,343 | 23,524 | 125,886 | 26,936 | 84,351 | 26,936 | 86,336 | 18,675 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





LIVI_6

LIVI_7

Madisonville_1

Madi_to_Mande

Mandeville_1

TANG_10b

STTA_9a

West_Lacombe_2

East_Lacombe_2

Slidell_3

STTA_10e

Slidell_4

STJO_10b

STJO_8c

Laplace1

Laplace2

St_Charles_Norco

St_Charles_rest

East_Jefferson

NOE_Metro

St_Bernard_wetland

St_Bernard_developed

ORLE_13a

15

18

20.5

18.5

18.5

21.5

31

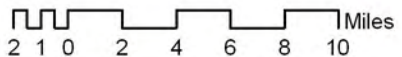
12.5

36

45.5

40.5

PLAQ_16s



Alternative: PU1-LP-b-1000-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.3 | -1.3 | -5.2 | 4.4 | -5.0 | -2.6 | -5.3 | 16.0 | -5.2 | 16.0 | -5.0 |
| East_Lacombe_2 | 10.9 | 7.2 | 14.3 | 11.1 | 15.9 | 13.2 | 17.3 | 9.8 | 21.7 | 13.7 | 23.6 | 15.8 |
| Laplace1 | 9.4 | 6.1 | 12.2 | 10.5 | 14.0 | 13.6 | 12.4 | 8.7 | 15.0 | 13.1 | 16.8 | 16.2 |
| Laplace2 | 8.5 | 9.4 | 11.0 | 11.9 | 12.8 | 13.4 | 11.2 | 12.0 | 14.3 | 14.5 | 16.2 | 16.0 |
| LIVI_6 | 7.3 | 4.1 | 9.7 | 5.2 | 11.1 | 6.1 | 10.3 | 6.7 | 12.8 | 7.8 | 13.9 | 8.7 |
| LIVI_7 | 7.5 | 5.5 | 9.7 | 6.9 | 10.9 | 7.8 | 11.0 | 8.1 | 13.1 | 9.5 | 14.4 | 10.4 |
| Madi_to_Mande | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 13.8 | 14.1 | 16.7 | 15.1 | 18.3 | 15.9 |
| Madisonville_1 | 11.7 | 10.1 | 14.6 | 14.9 | 16.1 | 27.3 | 13.5 | 12.7 | 15.8 | 17.5 | 16.9 | 29.9 |
| Mandeville_1 | 11.0 | 11.5 | 13.1 | 12.5 | 14.3 | 13.3 | 14.9 | 14.1 | 19.1 | 15.1 | 21.4 | 15.9 |
| NOE | -5.8 | -6.0 | 0.5 | -6.0 | 10.9 | -5.9 | -0.1 | -6.0 | 16.0 | -6.0 | 16.0 | -5.9 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.1 | -3.0 | -5.1 | -5.0 | -5.2 | 16.0 | -5.1 | 16.0 | -5.1 |
| ORLE_13a | 14.6 | 16.4 | 17.8 | 21.8 | 19.4 | 26.5 | 17.9 | 19.0 | 21.5 | 24.4 | 23.8 | 29.1 |
| PLAQ_16s | 19.2 | 17.8 | 25.3 | 25.7 | 30.0 | 29.9 | 21.4 | 20.4 | 27.8 | 28.3 | 31.8 | 32.5 |
| Slidell_3 | 11.5 | 8.5 | 15.1 | 12.8 | 16.8 | 14.9 | 13.4 | 11.1 | 16.8 | 15.4 | 18.5 | 17.5 |
| Slidell_4 | 14.1 | 10.0 | 18.3 | 16.4 | 20.4 | 22.2 | 20.5 | 12.6 | 24.3 | 19.0 | 26.5 | 24.8 |
| St_Bernard_developed | -0.1 | -0.4 | 4.3 | -0.3 | 10.6 | 0.1 | 2.3 | -0.4 | 16.0 | -0.3 | 16.0 | 0.1 |
| St_Bernard_wetland | 2.4 | 1.7 | 5.2 | 1.7 | 10.6 | 1.8 | 4.5 | 1.7 | 16.0 | 1.7 | 16.0 | 1.8 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 3.5 | 16.0 | 4.5 | 11.5 | 3.4 | 17.3 | 3.5 | 18.6 | 4.5 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 1.9 | 16.0 | 2.1 | 11.5 | 1.9 | 17.3 | 1.9 | 18.6 | 2.1 |
| STJO_10b | 10.6 | 8.9 | 12.9 | 11.4 | 14.1 | 12.8 | 13.3 | 11.5 | 15.6 | 14.0 | 16.7 | 15.4 |
| STJO_8c | 9.4 | 6.1 | 12.2 | 10.5 | 14.0 | 13.6 | 12.7 | 8.7 | 15.4 | 13.1 | 17.2 | 16.2 |
| STTA_10e | 12.2 | 8.8 | 16.2 | 13.1 | 18.2 | 15.3 | 13.3 | 11.4 | 16.7 | 15.7 | 18.6 | 17.9 |
| STTA_9a | 10.4 | 8.0 | 12.7 | 9.4 | 14.0 | 10.4 | 13.2 | 10.6 | 15.6 | 12.0 | 17.5 | 13.0 |
| TANG_10b | 11.0 | 7.7 | 13.6 | 10.6 | 15.0 | 12.1 | 13.7 | 10.3 | 16.3 | 13.2 | 17.8 | 14.7 |
| West_Lacombe_2 | 10.5 | 7.4 | 13.5 | 10.0 | 15.0 | 11.5 | 13.2 | 10.0 | 15.8 | 12.6 | 17.3 | 14.1 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

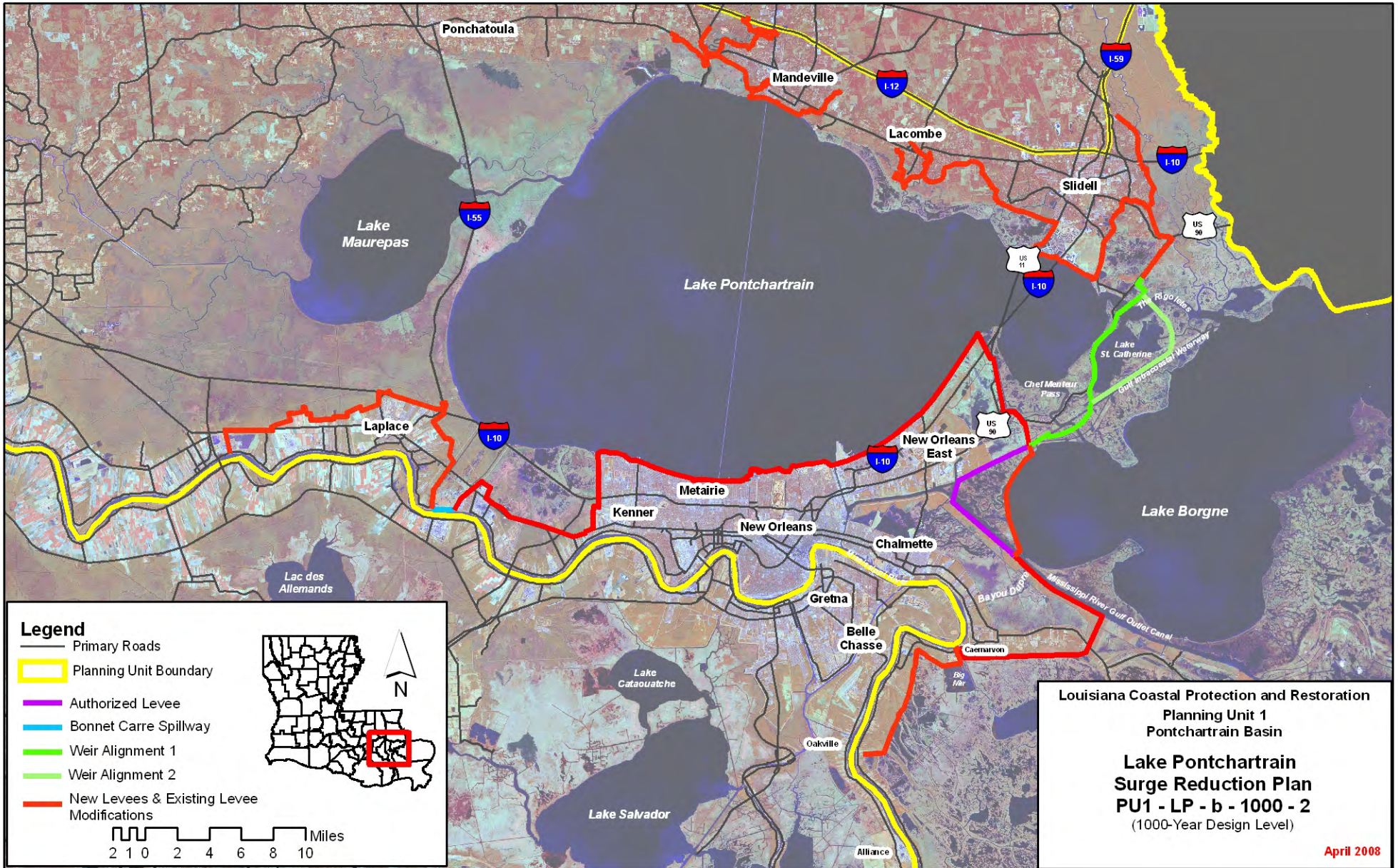
| | | | | | |
|---------------------------------|---|------------------|---------------------------------|------------------|---|
| Planning Unit: | 1 | Alt. No.: | PU1-LP-b-1000-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through 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 No | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

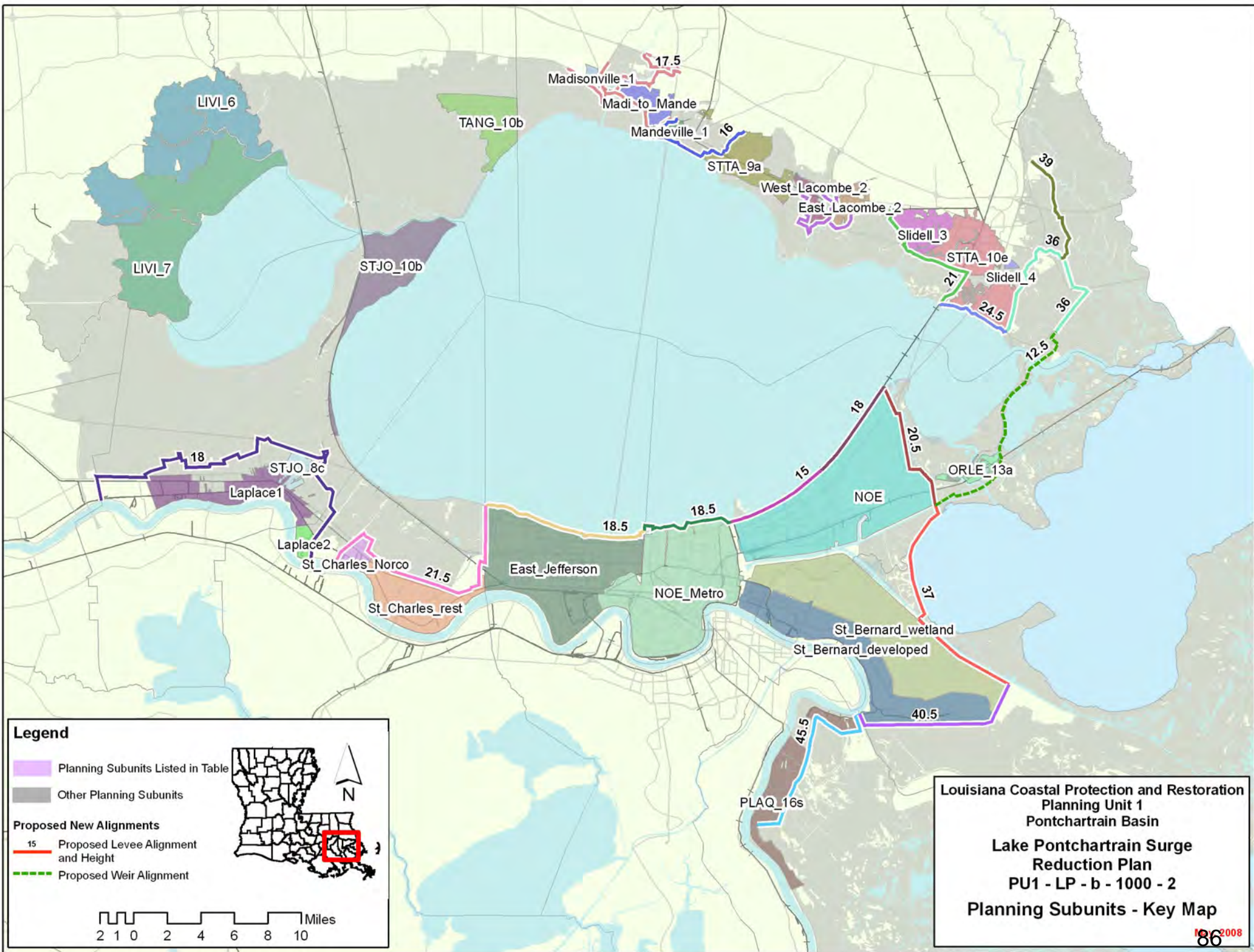
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 3,578 | 31,899 | 335 | 202 | 1,223 | 55 | 363 | 159 | 52 |
| | | Mid | | 34,031 | 473 | 379 | 1,843 | 98 | 333 | 159 | 50 |
| | | Low | | 37,940 | 796 | 696 | 3,203 | 180 | 303 | 156 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 3,600 | 32,500 | 363 | 274 | 1,393 | 71 | 363 | 138 | 51 |
| | | Mid | | 35,084 | 532 | 488 | 2,152 | 125 | 333 | 135 | 49 |
| | | Low | | 39,287 | 981 | 1,122 | 4,390 | 293 | 303 | 129 | 41 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 3,578 | 28,396 | 325 | 175 | 1,151 | 49 | 363 | 159 | 52 |
| | | Mid | | 30,418 | 452 | 309 | 1,713 | 83 | 333 | 159 | 50 |
| | | Low | | 34,039 | 751 | 540 | 2,881 | 146 | 303 | 156 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 3,600 | 28,718 | 345 | 209 | 1,265 | 59 | 363 | 138 | 51 |
| | | Mid | | 31,154 | 497 | 365 | 1,899 | 99 | 333 | 135 | 49 |
| | | Low | | 34,940 | 885 | 898 | 3,789 | 235 | 303 | 129 | 41 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 16 | | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 9,100 | | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | | 1 / 2 | 24,889 | 25,043 | Structural Component | | 59,398 | 59,605 | 59,398 | 59,605 |
| | | 3 / 4 | 24,889 | 25,043 | Total Project | | 70,064 | 70,504 | 70,064 | 70,504 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Structural Plan Lake Pontchartrain Surge Reduction Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 939 | 1,472 | 1,006 | 1,081 | 810 | 1,345 | 869 | |
| 100-year | 11,935 | 2,451 | 34,000 | 2,766 | 9,879 | 1,601 | 26,076 | 1,740 | |
| 400-year | 89,937 | 3,853 | 116,204 | 4,462 | 62,688 | 1,999 | 80,694 | 2,223 | |
| 1,000-year | 118,260 | 5,330 | 122,423 | 6,040 | 81,963 | 2,505 | 84,515 | 2,726 | |
| 2,000-year | 122,343 | 7,208 | 125,886 | 8,088 | 84,351 | 3,853 | 86,336 | 4,096 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





LIVI_6

LIVI_7

TANG_10b

Madisonville_1

Madi_to_Mande

Mandeville_1

STTA_9a

West_Lacombe_2

East_Lacombe_2

Slidell_3

STTA_10e

Slidell_4

STJO_10b

STJO_8c

Laplace1

Laplace2

St_Charles_Norco

St_Charles_rest

East_Jefferson

NOE_Metro

St_Bernard_wetland

St_Bernard_developed

ORLE_13a

PLAQ_16s

17.5

16

39

36

36

12.5

18

20.5

15

31

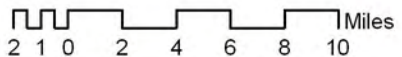
18.5

18.5

21.5

45.5

40.5



Alternative: PU1-LP-b-1000-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| East_Jefferson | -5.1 | -5.3 | -1.3 | -5.2 | 4.4 | -5.0 | -2.6 | -5.3 | 16.0 | -5.2 | 16.0 | -5.0 |
| East_Lacombe_2 | 10.9 | 4.6 | 14.3 | 4.7 | 15.9 | 4.9 | 17.3 | 4.6 | 21.7 | 4.7 | 23.6 | 4.9 |
| Laplace1 | 9.4 | 4.1 | 12.2 | 4.1 | 14.0 | 4.5 | 12.4 | 4.1 | 15.0 | 4.1 | 16.8 | 4.5 |
| Laplace2 | 8.5 | 4.1 | 11.0 | 4.1 | 12.8 | 4.5 | 11.2 | 4.1 | 14.3 | 4.1 | 16.2 | 4.5 |
| LIVI_6 | 7.3 | 4.1 | 9.7 | 5.2 | 11.1 | 6.1 | 10.3 | 6.7 | 12.8 | 7.8 | 13.9 | 8.7 |
| LIVI_7 | 7.5 | 5.5 | 9.7 | 6.9 | 10.9 | 7.8 | 11.0 | 8.1 | 13.1 | 9.5 | 14.4 | 10.4 |
| Madi_to_Mande | 11.0 | 5.3 | 13.1 | 5.4 | 14.3 | 5.8 | 13.8 | 5.3 | 16.7 | 5.4 | 18.3 | 5.8 |
| Madisonville_1 | 11.7 | 5.6 | 14.6 | 5.7 | 16.1 | 6.3 | 13.5 | 5.6 | 15.8 | 5.7 | 16.9 | 6.3 |
| Mandeville_1 | 11.0 | 5.9 | 13.1 | 6.0 | 14.3 | 6.5 | 14.9 | 5.9 | 19.1 | 6.0 | 21.4 | 6.5 |
| NOE | -5.8 | -6.0 | 0.5 | -6.0 | 10.9 | -5.9 | -0.1 | -6.0 | 16.0 | -6.0 | 16.0 | -5.9 |
| NOE_Metro | -5.1 | -5.2 | -4.8 | -5.1 | -3.0 | -5.1 | -5.0 | -5.2 | 16.0 | -5.1 | 16.0 | -5.1 |
| ORLE_13a | 14.6 | 16.4 | 17.8 | 21.8 | 19.4 | 26.5 | 17.9 | 19.0 | 21.5 | 24.4 | 23.8 | 29.1 |
| PLAQ_16s | 19.2 | -0.1 | 25.3 | 0.3 | 30.0 | 2.0 | 21.4 | -0.1 | 27.8 | 0.3 | 31.8 | 2.0 |
| Slidell_3 | 11.5 | 4.3 | 15.1 | 4.3 | 16.8 | 4.6 | 13.4 | 4.3 | 16.8 | 4.3 | 18.5 | 4.6 |
| Slidell_4 | 14.1 | 6.2 | 18.3 | 6.2 | 20.4 | 6.2 | 20.5 | 6.2 | 24.3 | 6.2 | 26.5 | 6.2 |
| St_Bernard_developed | -0.1 | -0.4 | 4.3 | -0.3 | 10.6 | 0.1 | 2.3 | -0.4 | 16.0 | -0.3 | 16.0 | 0.1 |
| St_Bernard_wetland | 2.4 | 1.7 | 5.2 | 1.7 | 10.6 | 1.8 | 4.5 | 1.7 | 16.0 | 1.7 | 16.0 | 1.8 |
| St_Charles_Norco | 4.4 | 3.4 | 16.0 | 3.5 | 16.0 | 4.5 | 11.5 | 3.4 | 17.3 | 3.5 | 18.6 | 4.5 |
| St_Charles_rest | 2.1 | 1.9 | 16.0 | 1.9 | 16.0 | 2.1 | 11.5 | 1.9 | 17.3 | 1.9 | 18.6 | 2.1 |
| STJO_10b | 10.6 | 8.9 | 12.9 | 11.4 | 14.1 | 12.8 | 13.3 | 11.5 | 15.6 | 14.0 | 16.7 | 15.4 |
| STJO_8c | 9.4 | 4.1 | 12.2 | 4.1 | 14.0 | 4.5 | 12.7 | 4.1 | 15.4 | 4.1 | 17.2 | 4.5 |
| STTA_10e | 12.2 | 4.3 | 16.2 | 4.3 | 18.2 | 4.6 | 13.3 | 4.3 | 16.7 | 4.3 | 18.6 | 4.6 |
| STTA_9a | 10.4 | 8.0 | 12.7 | 9.4 | 14.0 | 10.4 | 13.2 | 10.6 | 15.6 | 12.0 | 17.5 | 13.0 |
| TANG_10b | 11.0 | 7.7 | 13.6 | 10.6 | 15.0 | 12.1 | 13.7 | 10.3 | 16.3 | 13.2 | 17.8 | 14.7 |
| West_Lacombe_2 | 10.5 | 3.6 | 13.5 | 3.6 | 15.0 | 3.9 | 13.2 | 3.6 | 15.8 | 3.6 | 17.3 | 3.9 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

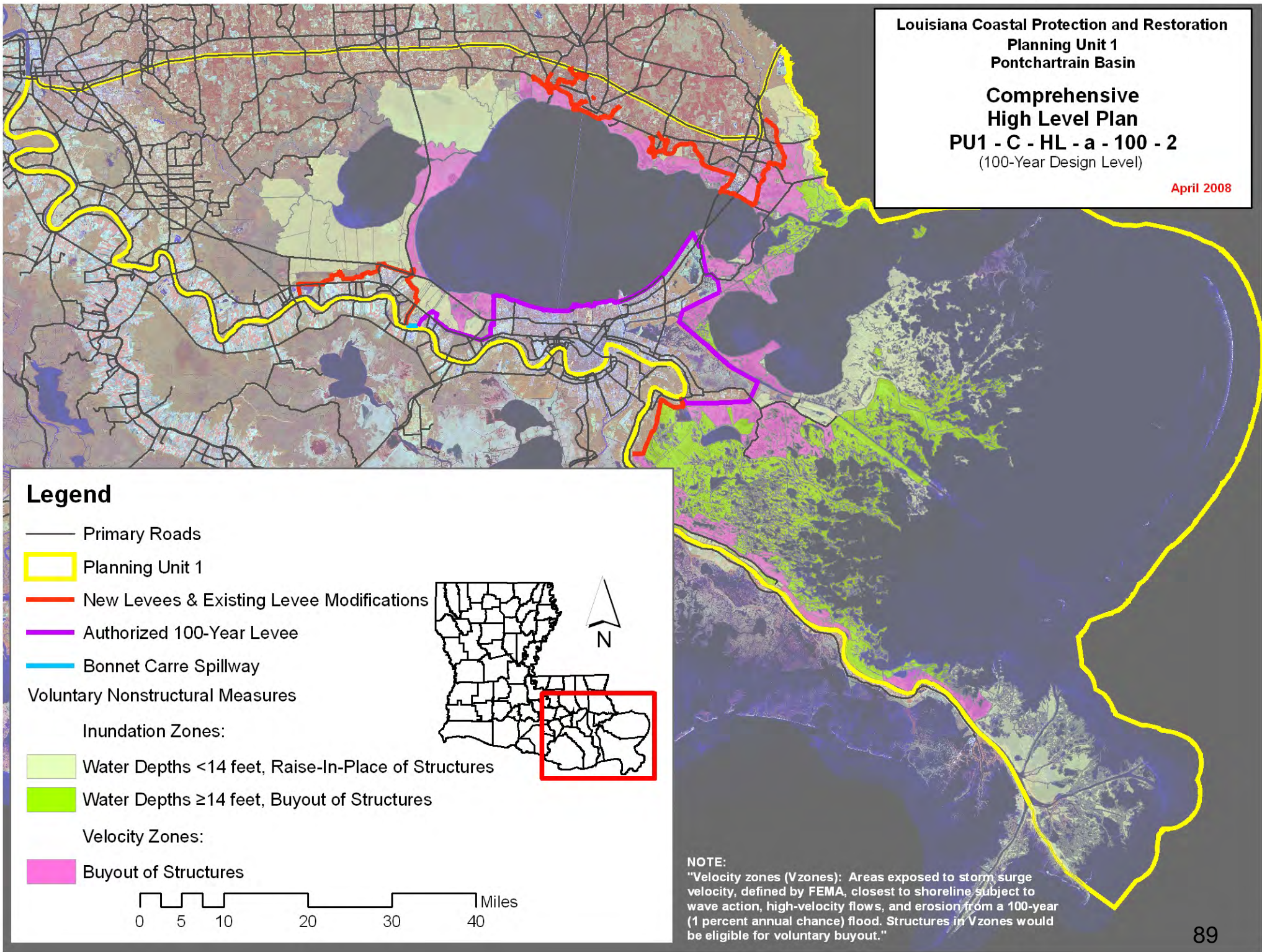
| | | | | | |
|---------------------------------|---|------------------|---------------------------------|-------------------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-HL-a-100-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-HL-a-100-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU1-HL-a-100-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,672 | 31,018 | 264 | 129 | 882 | 36 | 342 | 141 | 51 |
| | | Mid | | 33,710 | 399 | 325 | 1,594 | 83 | 312 | 138 | 50 |
| | | Low | | 39,008 | 873 | 817 | 3,709 | 214 | 282 | 132 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,687 | 31,392 | 281 | 196 | 1,048 | 51 | 342 | 138 | 51 |
| | | Mid | | 34,415 | 445 | 412 | 1,837 | 105 | 312 | 135 | 49 |
| | | Low | | 39,947 | 1,014 | 1,102 | 4,498 | 289 | 282 | 129 | 41 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,640 | 27,282 | 257 | 129 | 907 | 36 | 342 | 141 | 51 |
| | | Mid | | 29,896 | 388 | 284 | 1,551 | 74 | 312 | 138 | 50 |
| | | Low | | 34,845 | 831 | 685 | 3,480 | 183 | 282 | 132 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,654 | 27,491 | 270 | 156 | 994 | 44 | 342 | 138 | 51 |
| | | Mid | | 30,375 | 419 | 326 | 1,687 | 86 | 312 | 135 | 49 |
| | | Low | | 35,460 | 925 | 928 | 4,095 | 243 | 282 | 129 | 41 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 12 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 4,200 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -2 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,896 | 2,896 | 2,254 | 2,254 |
| | 1 / 2 | 11,777 | 11,879 | Structural Component | | 19,194 | 19,251 | 19,194 | 19,251 |
| | 3 / 4 | 11,553 | 11,654 | Total Project | | 32,756 | 33,046 | 32,114 | 32,405 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan High Level Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 717 | 1,472 | 729 | 1,081 | 592 | 1,345 | 599 | |
| 100-year | 11,935 | 1,368 | 34,000 | 2,323 | 9,879 | 1,106 | 26,076 | 1,406 | |
| 400-year | 89,937 | 49,813 | 116,204 | 50,452 | 62,688 | 38,075 | 80,694 | 38,237 | |
| 1,000-year | 118,260 | 69,880 | 122,423 | 71,216 | 81,963 | 51,501 | 84,515 | 51,964 | |
| 2,000-year | 122,343 | 114,192 | 125,886 | 115,532 | 84,351 | 80,011 | 86,336 | 80,443 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
- ▭ Planning Unit 1
- New Levees & Existing Levee Modifications
- Authorized 100-Year Levee
- Bonnet Carre Spillway

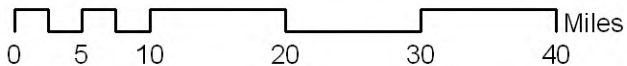
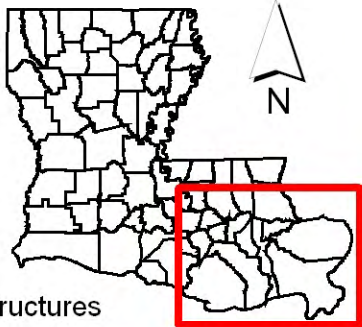
Voluntary Nonstructural Measures

Inundation Zones:

- ▭ Water Depths <14 feet, Raise-In-Place of Structures
- ▭ Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- ▭ Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-HL-a-100-3 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-HL-a-100-3 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-HL-a-100-3 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,514 | 31,233 | 263 | 129 | 874 | 36 | 335 | 137 | 51 |
| | | Mid | | 34,023 | 398 | 329 | 1,601 | 84 | 305 | 133 | 50 |
| | | Low | | 39,309 | 870 | 825 | 3,717 | 216 | 275 | 126 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,528 | 31,712 | 282 | 206 | 1,066 | 54 | 335 | 134 | 51 |
| | | Mid | | 34,829 | 448 | 428 | 1,875 | 109 | 305 | 128 | 48 |
| | | Low | | 40,352 | 1,020 | 1,120 | 4,540 | 294 | 275 | 124 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,483 | 27,407 | 255 | 128 | 897 | 36 | 335 | 137 | 51 |
| | | Mid | | 30,093 | 385 | 286 | 1,549 | 75 | 305 | 133 | 50 |
| | | Low | | 35,048 | 827 | 687 | 3,468 | 184 | 275 | 126 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,496 | 27,686 | 270 | 162 | 1,000 | 46 | 335 | 134 | 51 |
| | | Mid | | 30,641 | 419 | 338 | 1,718 | 90 | 305 | 128 | 48 |
| | | Low | | 35,731 | 926 | 941 | 4,121 | 248 | 275 | 124 | 40 |

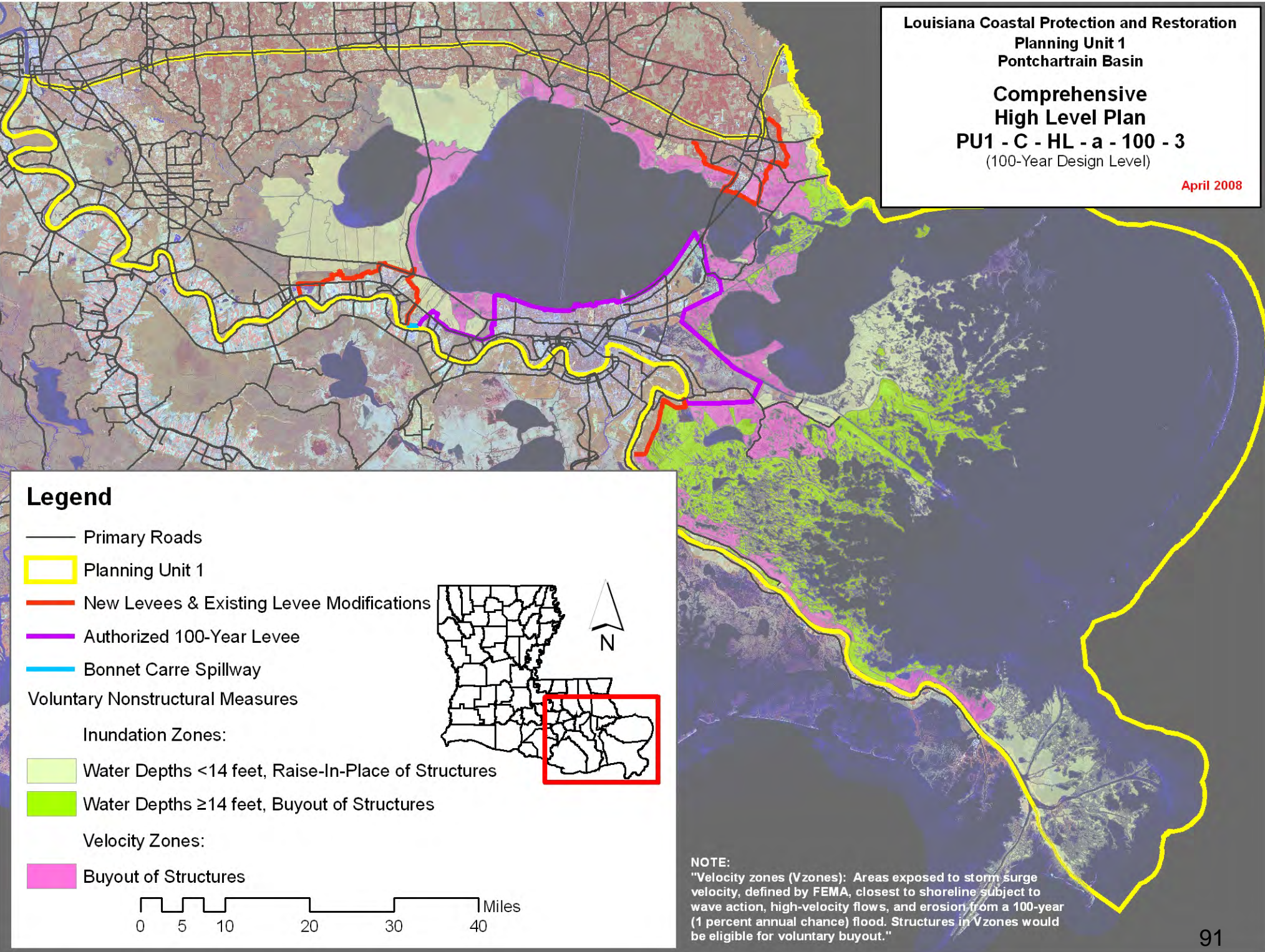
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 12 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 3,600 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -1 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,102 | 3,102 | 2,483 | 2,483 |
| | 1 / 2 | 10,600 | 10,694 | Structural Component | | 15,893 | 15,928 | 15,893 | 15,928 |
| | 3 / 4 | 10,384 | 10,477 | Total Project | | 29,661 | 29,929 | 29,042 | 29,310 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan High Level Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 721 | 1,472 | 736 | 1,081 | 590 | 1,345 | 599 | |
| 100-year | 11,935 | 1,440 | 34,000 | 2,774 | 9,879 | 1,157 | 26,076 | 1,712 | |
| 400-year | 89,937 | 49,754 | 116,204 | 50,953 | 62,688 | 37,969 | 80,694 | 38,452 | |
| 1,000-year | 118,260 | 70,154 | 122,423 | 72,279 | 81,963 | 51,581 | 84,515 | 52,420 | |
| 2,000-year | 122,343 | 114,933 | 125,886 | 117,538 | 84,351 | 80,285 | 86,336 | 81,502 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.

**Comprehensive
 High Level Plan**
PU1 - C - HL - a - 100 - 3
 (100-Year Design Level)

April 2008



Legend

- Primary Roads
- ▭ Planning Unit 1
- New Levees & Existing Levee Modifications
- Authorized 100-Year Levee
- Bonnet Carre Spillway

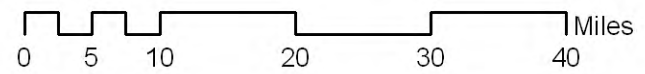
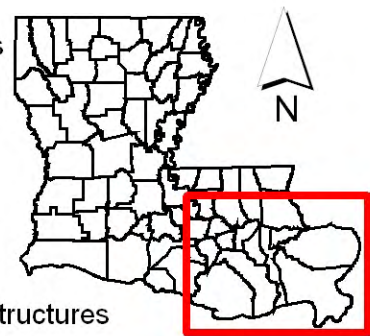
Voluntary Nonstructural Measures

Inundation Zones:

- ▭ Water Depths <14 feet, Raise-In-Place of Structures
- ▭ Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- ▭ Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in V zones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|---|------------------|---------------------------------|-------------------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-HL-b-400-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-HL-b-400-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 400-yr complementary measures | |
| Structural Component: | Same as Alternative PU1-HL-b-400-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 3,238 | 31,154 | 279 | 136 | 924 | 37 | 344 | 158 | 52 |
| | | Mid | | 33,173 | 395 | 292 | 1,494 | 76 | 314 | 153 | 51 |
| | | Low | | 37,294 | 708 | 610 | 2,864 | 159 | 284 | 148 | 50 |
| 2 | High RSLR High Employment Dispersed Population | High | 3,262 | 31,611 | 299 | 193 | 1,076 | 51 | 344 | 158 | 51 |
| | | Mid | | 34,153 | 449 | 401 | 1,801 | 104 | 314 | 150 | 49 |
| | | Low | | 38,583 | 890 | 1,032 | 4,031 | 271 | 284 | 142 | 46 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 3,203 | 27,820 | 274 | 140 | 964 | 39 | 344 | 158 | 52 |
| | | Mid | | 29,799 | 387 | 268 | 1,503 | 72 | 314 | 153 | 51 |
| | | Low | | 33,628 | 683 | 504 | 2,688 | 136 | 284 | 148 | 50 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 3,228 | 28,091 | 292 | 173 | 1,075 | 49 | 344 | 158 | 51 |
| | | Mid | | 30,492 | 429 | 326 | 1,690 | 88 | 314 | 150 | 49 |
| | | Low | | 34,510 | 816 | 865 | 3,597 | 225 | 284 | 142 | 46 |

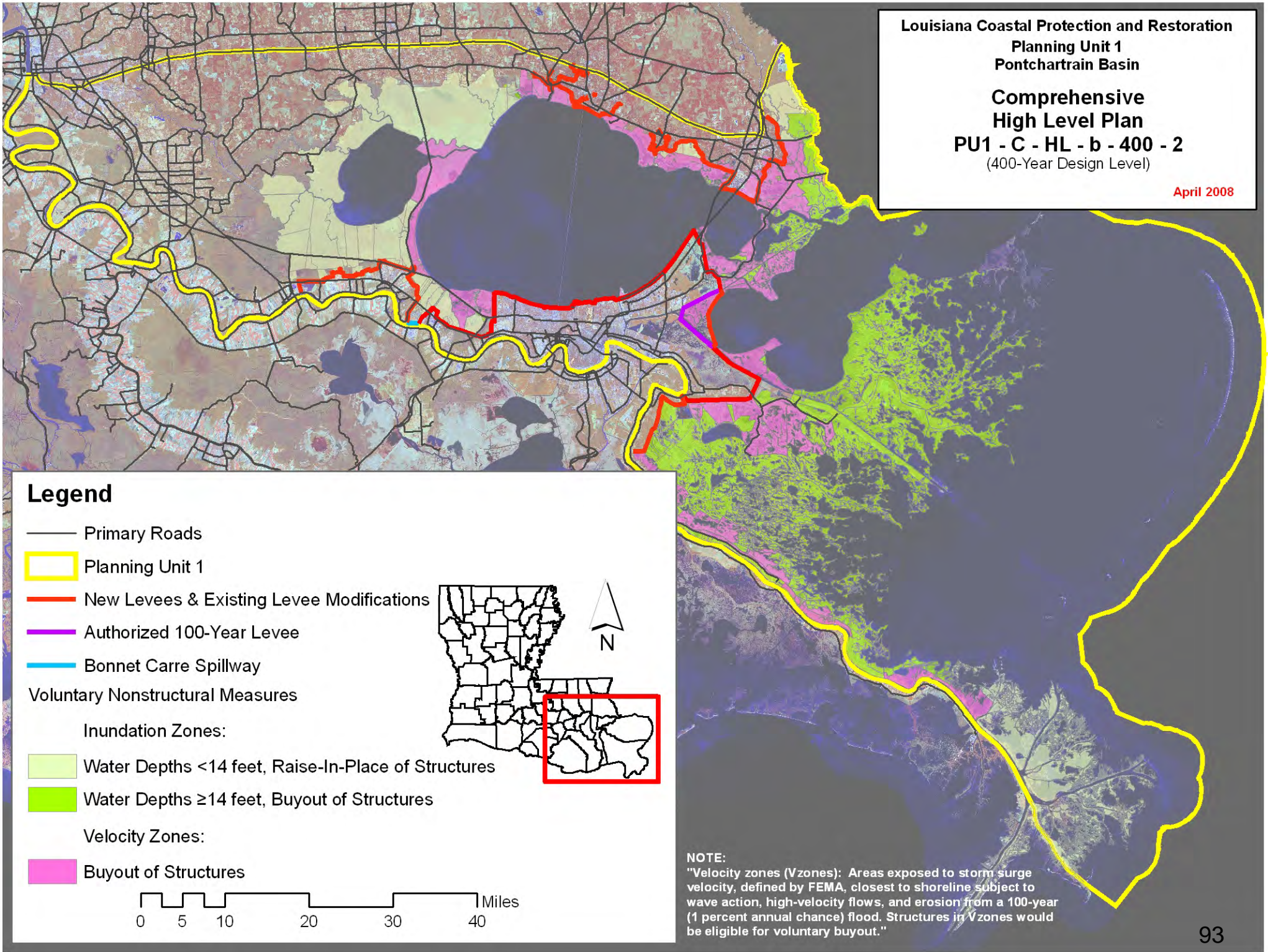
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 16 | | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 6,000 | | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,182 | 3,182 | 2,506 | 2,506 | |
| | 1 / 2 | 22,623 | 22,788 | Structural Component | | 49,569 | 49,808 | 49,569 | 49,808 | |
| | 3 / 4 | 22,386 | 22,552 | Total Project | | 63,416 | 63,889 | 62,740 | 63,212 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan High Level Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 703 | 1,472 | 712 | 1,081 | 585 | 1,345 | 589 | |
| 100-year | 11,935 | 980 | 34,000 | 1,106 | 9,879 | 837 | 26,076 | 912 | |
| 400-year | 89,937 | 1,531 | 116,204 | 2,491 | 62,688 | 1,178 | 80,694 | 1,432 | |
| 1,000-year | 118,260 | 5,672 | 122,423 | 7,379 | 81,963 | 4,049 | 84,515 | 4,586 | |
| 2,000-year | 122,343 | 22,470 | 125,886 | 23,948 | 84,351 | 16,517 | 86,336 | 16,966 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Comprehensive
 High Level Plan**
PU1 - C - HL - b - 400 - 2
 (400-Year Design Level)

April 2008



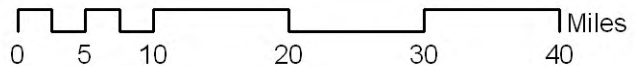
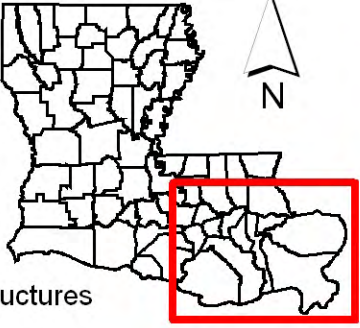
Legend

- Primary Roads
- Planning Unit 1
- New Levees & Existing Levee Modifications
- Authorized 100-Year Levee
- Bonnet Carre Spillway

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures

- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

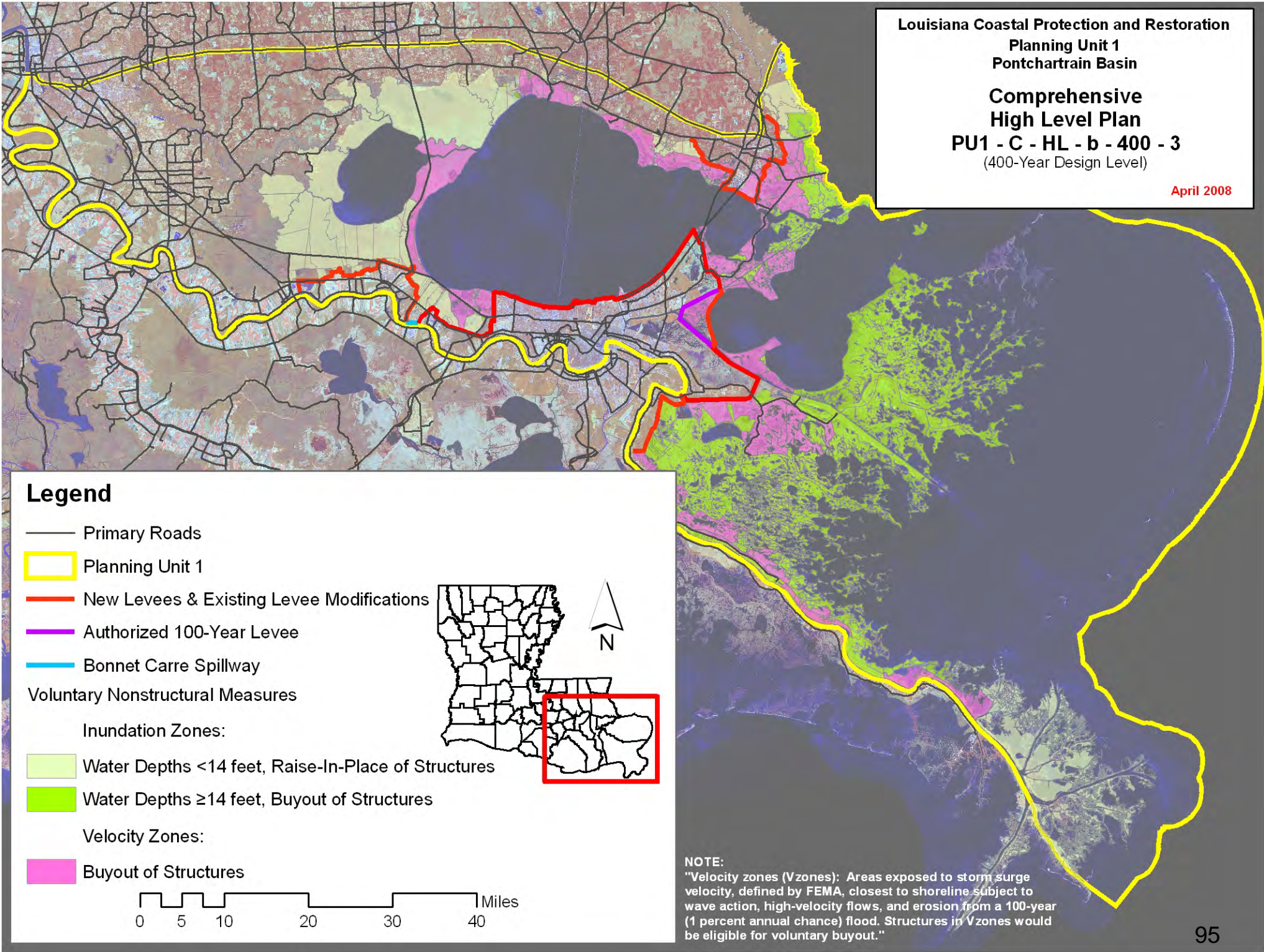
| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-HL-b-400-3 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-HL-b-400-3 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 400-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-HL-b-400-3 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 3,011 | 31,321 | 277 | 134 | 910 | 37 | 307 | 143 | 51 |
| | | Mid | | 33,435 | 391 | 291 | 1,481 | 76 | 307 | 143 | 50 |
| | | Low | | 37,636 | 704 | 610 | 2,853 | 159 | 277 | 140 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 3,034 | 31,863 | 297 | 192 | 1,063 | 51 | 337 | 143 | 51 |
| | | Mid | | 34,496 | 446 | 402 | 1,796 | 104 | 307 | 141 | 49 |
| | | Low | | 39,009 | 889 | 1,036 | 4,037 | 272 | 277 | 133 | 45 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,986 | 27,914 | 271 | 138 | 948 | 38 | 307 | 143 | 51 |
| | | Mid | | 29,965 | 383 | 267 | 1,489 | 71 | 307 | 143 | 50 |
| | | Low | | 33,867 | 678 | 504 | 2,676 | 136 | 277 | 140 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 3,009 | 28,241 | 289 | 172 | 1,061 | 49 | 337 | 143 | 51 |
| | | Mid | | 30,714 | 426 | 326 | 1,683 | 89 | 307 | 141 | 49 |
| | | Low | | 34,803 | 812 | 867 | 3,600 | 227 | 277 | 133 | 45 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 16 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 5,500 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -2 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,415 | 3,415 | 2,929 | 2,929 |
| | 1 / 2 | 20,985 | 21,140 | Structural Component | | 44,895 | 45,103 | 44,895 | 45,103 |
| | 3 / 4 | 20,815 | 20,970 | Total Project | | 58,975 | 59,417 | 58,489 | 58,931 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan High Level Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 708 | 1,472 | 721 | 1,081 | 584 | 1,345 | 591 | |
| 100-year | 11,935 | 1,023 | 34,000 | 1,248 | 9,879 | 869 | 26,076 | 1,029 | |
| 400-year | 89,937 | 1,793 | 116,204 | 3,387 | 62,688 | 1,389 | 80,694 | 2,019 | |
| 1,000-year | 118,260 | 6,558 | 122,423 | 9,086 | 81,963 | 4,590 | 84,515 | 5,527 | |
| 2,000-year | 122,343 | 23,779 | 125,886 | 26,611 | 84,351 | 17,141 | 86,336 | 18,415 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
- Planning Unit 1
- New Levees & Existing Levee Modifications
- Authorized 100-Year Levee
- Bonnet Carre Spillway

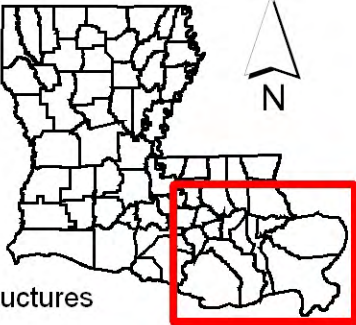
Voluntary Nonstructural Measures

Inundation Zones:

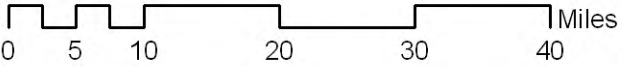
- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures



N



Miles

NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-LP-a-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-LP-a-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-LP-a-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,100 | 31,885 | 271 | 132 | 825 | 35 | 325 | 140 | 51 |
| | | Mid | | 34,496 | 387 | 299 | 1,421 | 78 | 295 | 133 | 50 |
| | | Low | | 39,725 | 744 | 710 | 3,102 | 183 | 265 | 127 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,118 | 32,929 | 295 | 211 | 1,068 | 59 | 325 | 136 | 51 |
| | | Mid | | 36,027 | 450 | 451 | 1,815 | 114 | 295 | 129 | 45 |
| | | Low | | 41,341 | 933 | 1,115 | 4,183 | 287 | 265 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,071 | 28,339 | 264 | 131 | 870 | 36 | 325 | 140 | 51 |
| | | Mid | | 30,883 | 378 | 263 | 1,411 | 71 | 295 | 133 | 50 |
| | | Low | | 35,788 | 712 | 557 | 2,869 | 152 | 265 | 127 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,088 | 29,053 | 285 | 175 | 1,022 | 50 | 325 | 136 | 51 |
| | | Mid | | 32,008 | 428 | 333 | 1,644 | 92 | 295 | 129 | 45 |
| | | Low | | 36,932 | 851 | 891 | 3,701 | 234 | 265 | 123 | 40 |

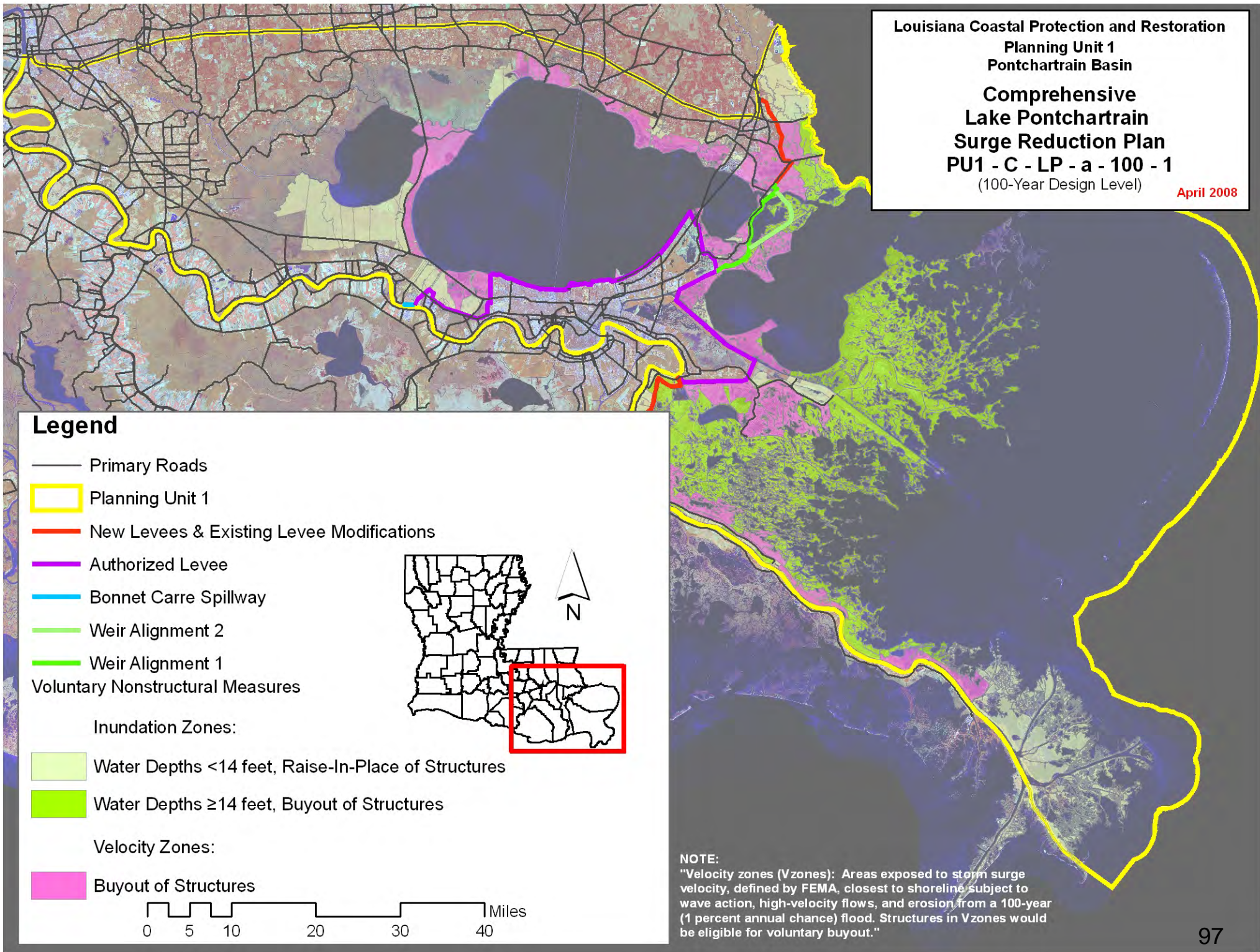
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 14 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 1,000 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,869 | 3,869 | 3,291 | 3,291 |
| | 1 / 2 | 7,609 | 7,729 | Structural Component | | 7,024 | 7,132 | 7,024 | 7,132 |
| | 3 / 4 | 7,407 | 7,527 | Total Project | | 21,559 | 21,901 | 20,981 | 21,323 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan Lake Pontchartrain Surge Reduction Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 723 | 1,472 | 784 | 1,081 | 594 | 1,345 | 646 | |
| 100-year | 11,935 | 1,703 | 34,000 | 3,524 | 9,879 | 1,516 | 26,076 | 2,955 | |
| 400-year | 89,937 | 16,335 | 116,204 | 20,709 | 62,688 | 11,352 | 80,694 | 14,331 | |
| 1,000-year | 118,260 | 50,410 | 122,423 | 54,445 | 81,963 | 35,865 | 84,515 | 38,371 | |
| 2,000-year | 122,343 | 104,180 | 125,886 | 107,583 | 84,351 | 73,593 | 86,336 | 75,637 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Comprehensive
 Lake Pontchartrain
 Surge Reduction Plan**
PU1 - C - LP - a - 100 - 1
 (100-Year Design Level)

April 2008



Legend

- Primary Roads
- Planning Unit 1
- New Levees & Existing Levee Modifications
- Authorized Levee
- Bonnet Carre Spillway
- Weir Alignment 2
- Weir Alignment 1
- Voluntary Nonstructural Measures
- Inundation Zones:
 - Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
 - Buyout of Structures

NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

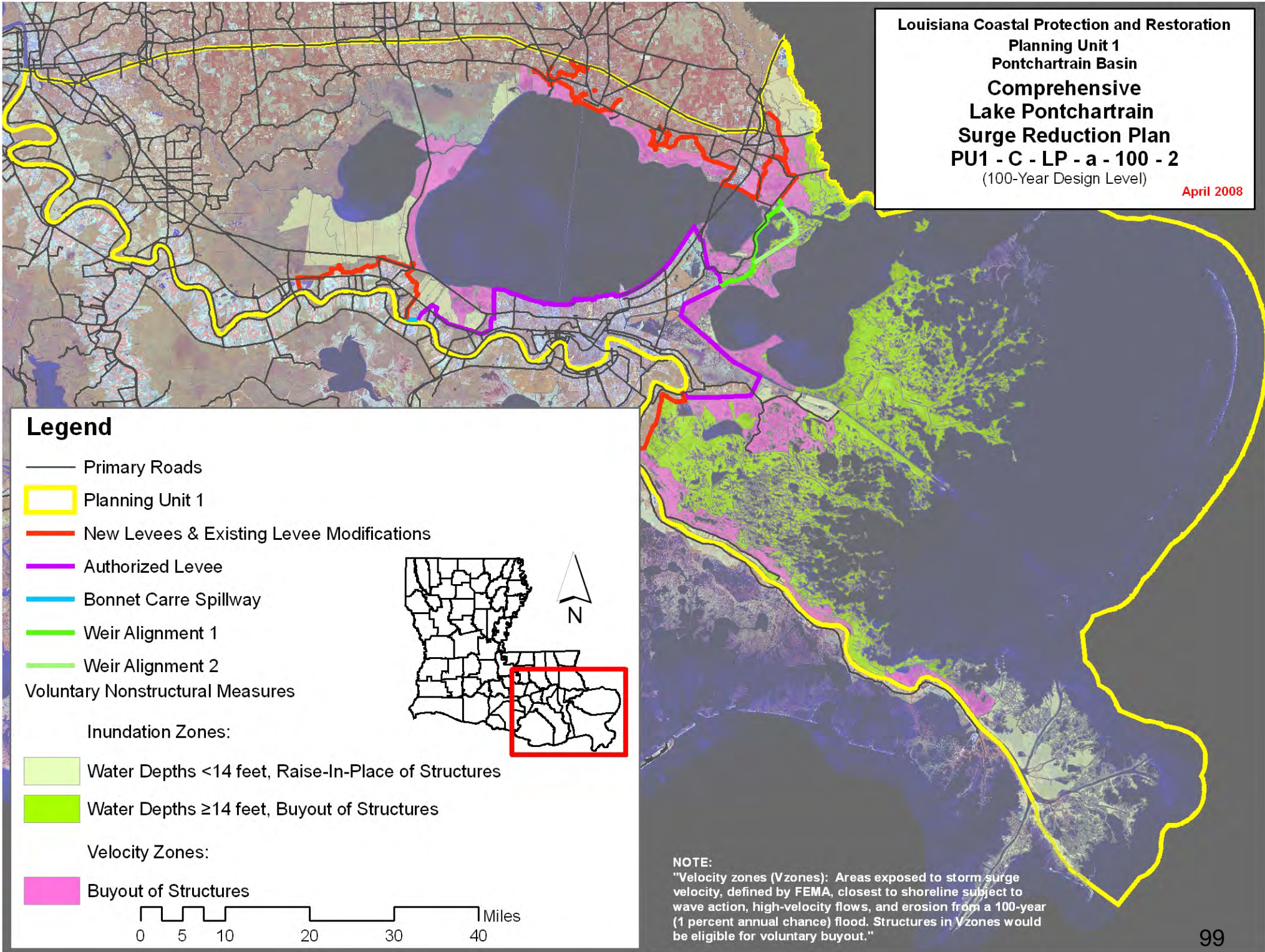
| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-LP-a-100-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-LP-a-100-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-LP-a-100-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,834 | 30,998 | 276 | 133 | 884 | 37 | 361 | 145 | 51 |
| | | Mid | | 33,212 | 399 | 292 | 1,479 | 76 | 331 | 137 | 50 |
| | | Low | | 37,747 | 751 | 661 | 3,057 | 172 | 301 | 134 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,853 | 31,467 | 294 | 184 | 1,017 | 49 | 361 | 138 | 51 |
| | | Mid | | 34,100 | 446 | 394 | 1,746 | 100 | 331 | 135 | 49 |
| | | Low | | 38,891 | 905 | 1,017 | 4,049 | 267 | 301 | 129 | 41 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,798 | 27,582 | 270 | 137 | 943 | 38 | 361 | 145 | 51 |
| | | Mid | | 29,762 | 391 | 269 | 1,512 | 72 | 331 | 137 | 50 |
| | | Low | | 33,915 | 721 | 544 | 2,892 | 147 | 301 | 134 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,817 | 27,843 | 285 | 165 | 1,038 | 47 | 361 | 138 | 51 |
| | | Mid | | 30,381 | 428 | 316 | 1,669 | 85 | 331 | 135 | 49 |
| | | Low | | 34,669 | 832 | 842 | 3,646 | 221 | 301 | 129 | 41 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 14 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 4,100 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,820 | 2,820 | 2,113 | 2,113 |
| | 1 / 2 | 12,792 | 12,923 | Structural Component | | 22,443 | 22,582 | 22,443 | 22,582 |
| | 3 / 4 | 12,545 | 12,675 | Total Project | | 35,929 | 36,301 | 35,222 | 35,594 |

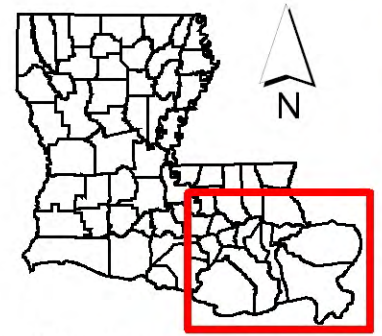
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan Lake Pontchartrain Surge Reduction Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 713 | 1,472 | 734 | 1,081 | 593 | 1,345 | 612 | |
| 100-year | 11,935 | 1,109 | 34,000 | 1,310 | 9,879 | 952 | 26,076 | 1,062 | |
| 400-year | 89,937 | 14,016 | 116,204 | 14,462 | 62,688 | 9,602 | 80,694 | 9,803 | |
| 1,000-year | 118,260 | 47,839 | 122,423 | 48,458 | 81,963 | 33,836 | 84,515 | 34,043 | |
| 2,000-year | 122,343 | 102,967 | 125,886 | 103,784 | 84,351 | 72,511 | 86,336 | 72,749 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
 - Planning Unit 1
 - New Levees & Existing Levee Modifications
 - Authorized Levee
 - Bonnet Carre Spillway
 - Weir Alignment 1
 - Weir Alignment 2
 - Voluntary Nonstructural Measures
 - Inundation Zones:
 - Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
 - Velocity Zones:
 - Buyout of Structures
- 0 5 10 20 30 40 Miles



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-LP-a-100-3 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-LP-a-100-3 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-LP-a-100-3 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,773 | 31,162 | 275 | 134 | 876 | 36 | 354 | 143 | 51 |
| | | Mid | | 33,433 | 397 | 294 | 1,477 | 76 | 324 | 133 | 50 |
| | | Low | | 37,976 | 750 | 667 | 3,068 | 174 | 294 | 127 | 43 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,795 | 31,715 | 294 | 189 | 1,030 | 51 | 354 | 137 | 51 |
| | | Mid | | 34,395 | 447 | 402 | 1,763 | 102 | 324 | 128 | 45 |
| | | Low | | 39,208 | 909 | 1,031 | 4,081 | 271 | 294 | 123 | 40 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,738 | 27,654 | 269 | 137 | 932 | 35 | 354 | 143 | 51 |
| | | Mid | | 29,874 | 389 | 269 | 1,503 | 72 | 324 | 133 | 50 |
| | | Low | | 34,048 | 718 | 547 | 2,894 | 148 | 294 | 127 | 43 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,760 | 27,956 | 285 | 168 | 1,039 | 48 | 354 | 137 | 51 |
| | | Mid | | 30,534 | 428 | 321 | 1,673 | 87 | 324 | 128 | 45 |
| | | Low | | 34,853 | 833 | 851 | 3,663 | 224 | 294 | 123 | 40 |

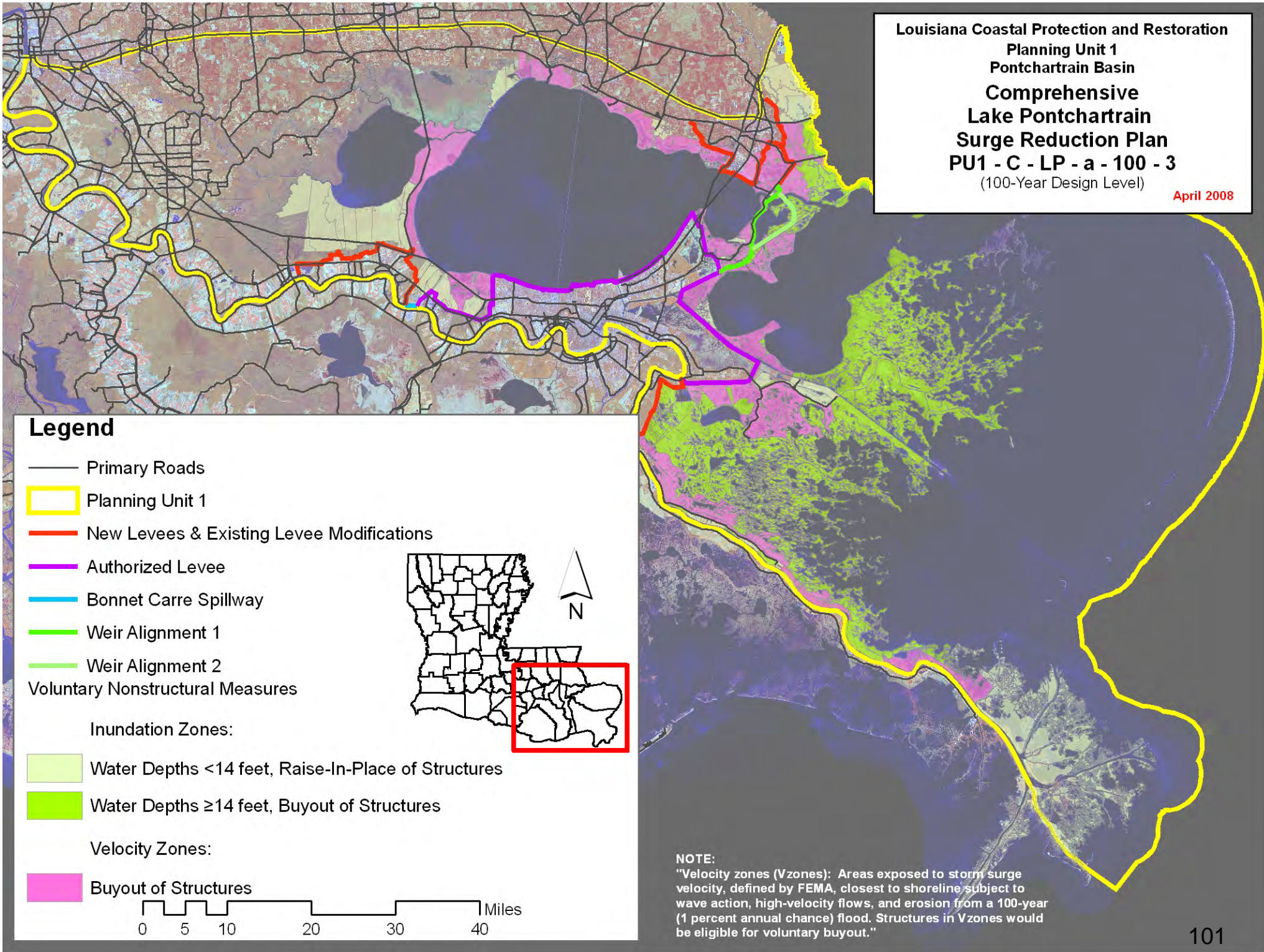
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 14 | After 50 yrs (% of baseline) | 106 | 104 | 106 | 104 | |
| Direct Wetland Impacts (acres) | | | 3,700 | After 100 yrs (% of baseline) | 104 | 95 | 104 | 95 | |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,977 | 2,977 | 2,287 | 2,287 |
| | 1 / 2 | 12,326 | 12,473 | Structural Component | | 21,092 | 21,279 | 21,092 | 21,279 |
| | 3 / 4 | 12,085 | 12,232 | Total Project | | 34,735 | 35,155 | 34,045 | 34,465 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan Lake Pontchartrain Surge Reduction Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 714 | 1,472 | 738 | 1,081 | 590 | 1,345 | 611 | |
| 100-year | 11,935 | 1,166 | 34,000 | 1,599 | 9,879 | 991 | 26,076 | 1,257 | |
| 400-year | 89,937 | 14,212 | 116,204 | 15,043 | 62,688 | 9,672 | 80,694 | 10,069 | |
| 1,000-year | 118,260 | 48,364 | 122,423 | 49,464 | 81,963 | 34,033 | 84,515 | 34,504 | |
| 2,000-year | 122,343 | 103,665 | 125,886 | 104,997 | 84,351 | 72,777 | 86,336 | 73,318 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.

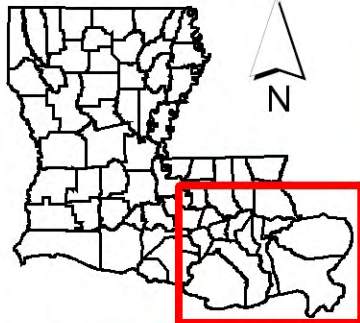
Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
**Comprehensive
 Lake Pontchartrain
 Surge Reduction Plan**
PU1 - C - LP - a - 100 - 3
 (100-Year Design Level)

April 2008



Legend

- Primary Roads
- Planning Unit 1
- New Levees & Existing Levee Modifications
- Authorized Levee
- Bonnet Carre Spillway
- Weir Alignment 1
- Weir Alignment 2
- Voluntary Nonstructural Measures

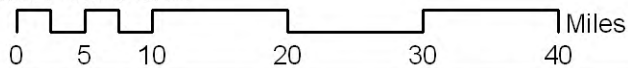


Inundation Zones:

- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures



NOTE:

"Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

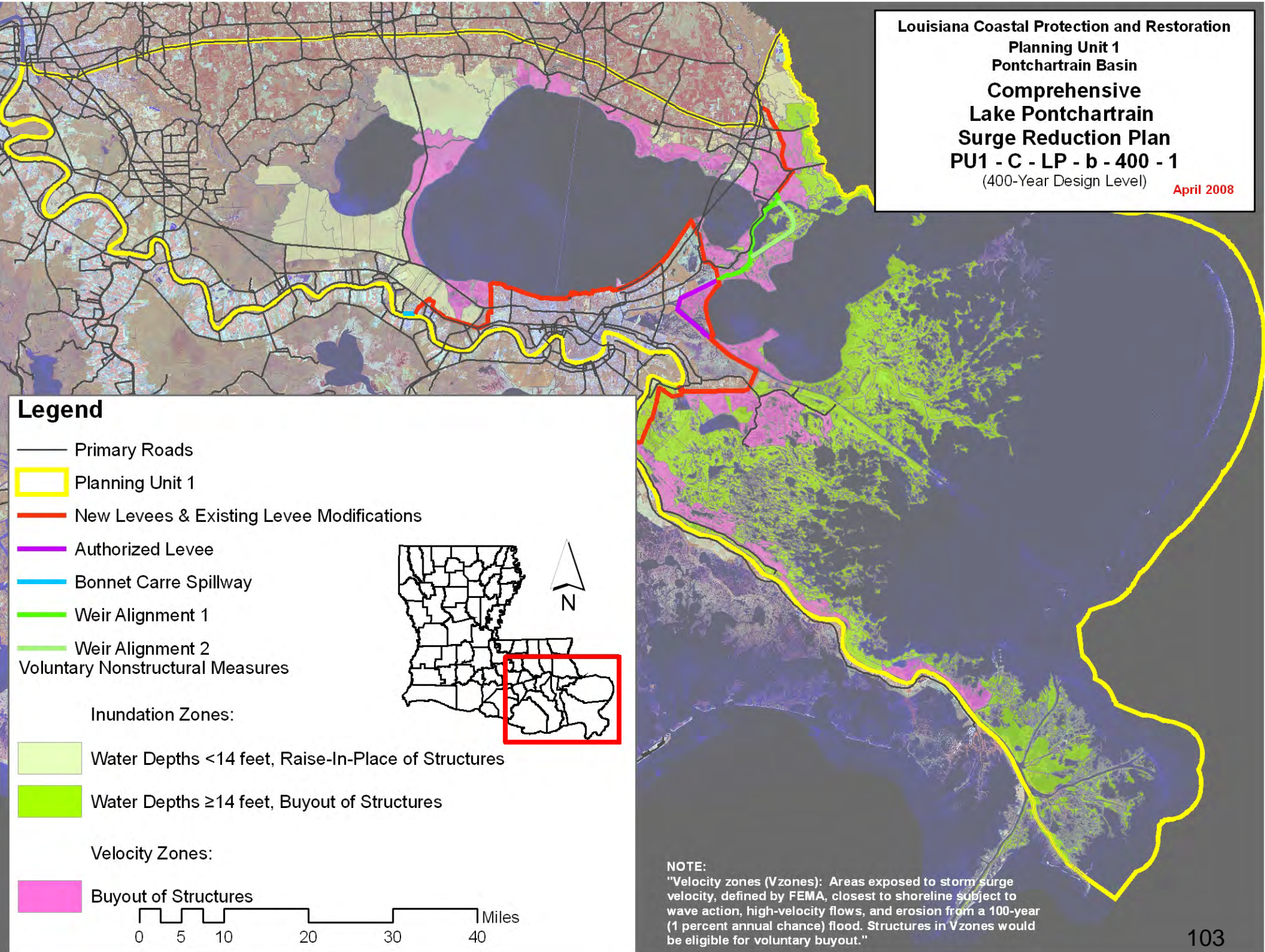
| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-LP-b-400-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-LP-b-400-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 400-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-LP-b-400-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,147 | 31,572 | 272 | 123 | 816 | 34 | 327 | 142 | 51 |
| | | Mid | | 34,075 | 378 | 277 | 1,346 | 72 | 297 | 137 | 50 |
| | | Low | | 38,960 | 684 | 611 | 2,758 | 161 | 267 | 131 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,163 | 32,555 | 293 | 186 | 987 | 50 | 354 | 138 | 51 |
| | | Mid | | 35,646 | 436 | 416 | 1,768 | 111 | 324 | 133 | 50 |
| | | Low | | 40,681 | 878 | 1,069 | 4,039 | 284 | 294 | 129 | 45 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,178 | 28,231 | 266 | 132 | 882 | 36 | 327 | 142 | 51 |
| | | Mid | | 30,703 | 372 | 257 | 1,371 | 68 | 297 | 137 | 50 |
| | | Low | | 35,332 | 661 | 505 | 2,581 | 137 | 267 | 131 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,194 | 28,906 | 285 | 169 | 1,005 | 48 | 354 | 138 | 51 |
| | | Mid | | 31,862 | 417 | 330 | 1,615 | 90 | 324 | 133 | 50 |
| | | Low | | 36,557 | 803 | 884 | 3,555 | 233 | 294 | 129 | 45 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 16 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 4,200 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 5,858 | 5,858 | 6,453 | 6,453 |
| | 1 / 2 | 14,804 | 14,915 | Structural Component | | 25,538 | 25,620 | 25,538 | 25,620 |
| | 3 / 4 | 15,012 | 15,123 | Total Project | | 42,061 | 42,377 | 42,656 | 42,972 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan Lake Pontchartrain Surge Reduction Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 704 | 1,472 | 749 | 1,081 | 579 | 1,345 | 614 | |
| 100-year | 11,935 | 1,175 | 34,000 | 1,544 | 9,879 | 995 | 26,076 | 1,277 | |
| 400-year | 89,937 | 2,761 | 116,204 | 8,697 | 62,688 | 2,367 | 80,694 | 6,868 | |
| 1,000-year | 118,260 | 14,209 | 122,423 | 18,516 | 81,963 | 11,121 | 84,515 | 13,955 | |
| 2,000-year | 122,343 | 33,494 | 125,886 | 37,673 | 84,351 | 25,057 | 86,336 | 27,508 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
 - ▭ Planning Unit 1
 - New Levees & Existing Levee Modifications
 - Authorized Levee
 - Bonnet Carre Spillway
 - Weir Alignment 1
 - Weir Alignment 2
 - Voluntary Nonstructural Measures
- Inundation Zones:
- ▭ Water Depths <14 feet, Raise-In-Place of Structures
 - ▭ Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- ▭ Buyout of Structures
- 0 5 10 20 30 40 Miles

NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

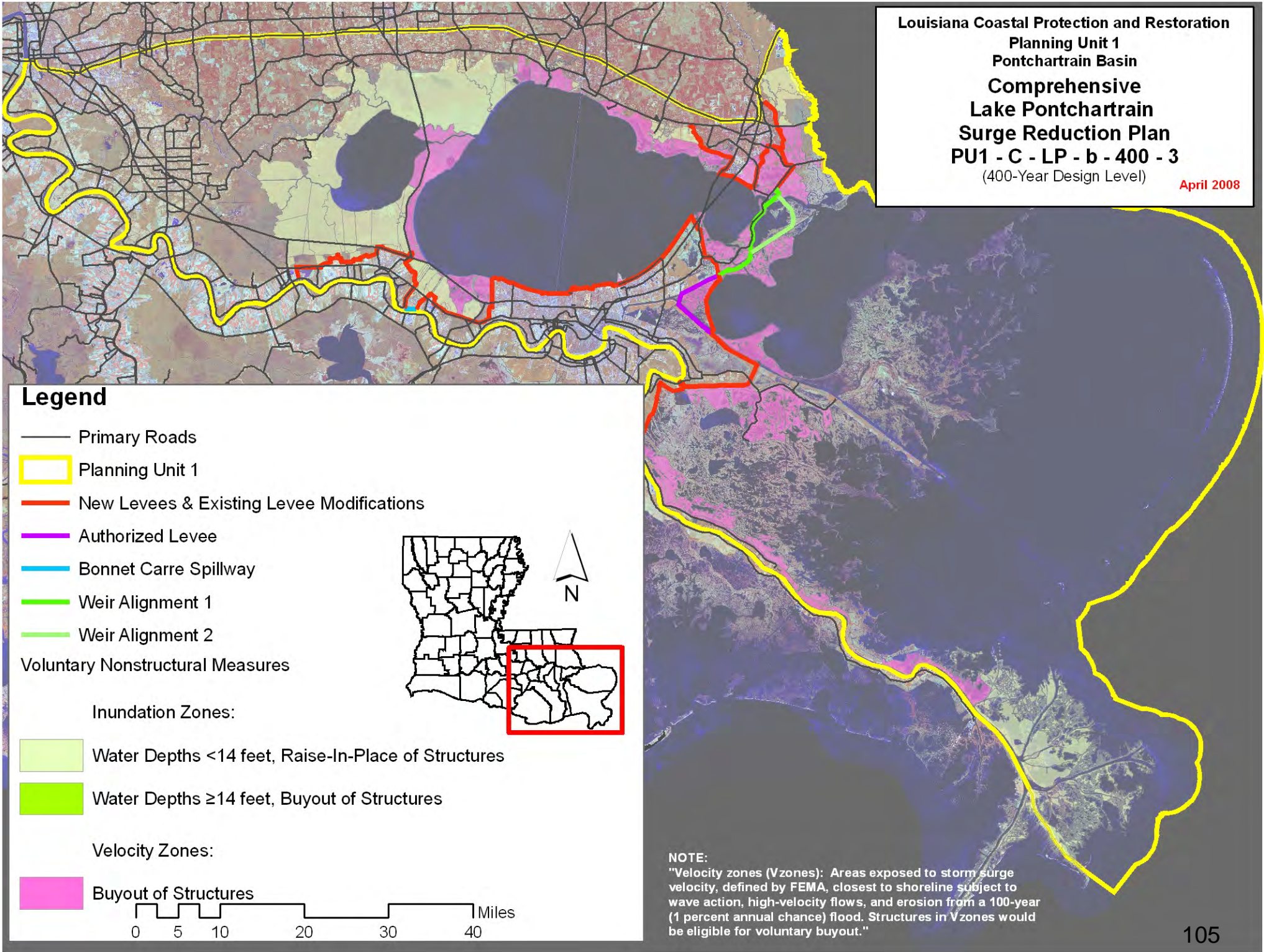
| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-LP-b-400-3 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-LP-b-400-3 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 400-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-LP-b-400-3 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 3,008 | 31,109 | 279 | 130 | 878 | 36 | 356 | 149 | 51 |
| | | Mid | | 33,133 | 393 | 286 | 1,449 | 75 | 326 | 146 | 50 |
| | | Low | | 37,263 | 705 | 605 | 2,830 | 160 | 296 | 141 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 3,028 | 31,666 | 300 | 191 | 1,044 | 51 | 356 | 147 | 51 |
| | | Mid | | 34,208 | 448 | 402 | 1,781 | 105 | 326 | 142 | 50 |
| | | Low | | 38,647 | 889 | 1,034 | 4,015 | 273 | 296 | 134 | 45 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,975 | 27,852 | 275 | 139 | 952 | 38 | 356 | 149 | 51 |
| | | Mid | | 29,818 | 388 | 267 | 1,489 | 71 | 326 | 146 | 50 |
| | | Low | | 33,650 | 684 | 506 | 2,688 | 137 | 296 | 141 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,995 | 28,167 | 293 | 175 | 1,072 | 50 | 356 | 147 | 51 |
| | | Mid | | 30,571 | 431 | 328 | 1,689 | 89 | 326 | 142 | 50 |
| | | Low | | 34,577 | 819 | 869 | 3,608 | 227 | 296 | 134 | 45 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 16 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 7,500 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,172 | 3,172 | 2,520 | 2,520 |
| | 1 / 2 | 20,843 | 20,980 | Structural Component | | 45,081 | 45,238 | 45,081 | 45,238 |
| | 3 / 4 | 20,615 | 20,752 | Total Project | | 58,919 | 59,309 | 58,267 | 58,657 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan Lake Pontchartrain Surge Reduction Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 702 | 1,472 | 720 | 1,081 | 583 | 1,345 | 597 | |
| 100-year | 11,935 | 995 | 34,000 | 1,218 | 9,879 | 855 | 26,076 | 1,024 | |
| 400-year | 89,937 | 1,337 | 116,204 | 2,323 | 62,688 | 1,127 | 80,694 | 1,514 | |
| 1,000-year | 118,260 | 6,866 | 122,423 | 8,000 | 81,963 | 5,668 | 84,515 | 6,172 | |
| 2,000-year | 122,343 | 25,731 | 125,886 | 27,153 | 84,351 | 20,497 | 86,336 | 21,082 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
 - Planning Unit 1
 - New Levees & Existing Levee Modifications
 - Authorized Levee
 - Bonnet Carre Spillway
 - Weir Alignment 1
 - Weir Alignment 2
- Voluntary Nonstructural Measures
- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures
- 0 5 10 20 30 40 Miles

NOTE:
 "Velocity zones (V zones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in V zones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|--|---------------------------------|--------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-LP-b-1000-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-LP-b-1000-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 1000-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-LP-b-1000-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,579 | 31,285 | 270 | 123 | 816 | 34 | 327 | 142 | 51 |
| | | Mid | | 33,710 | 375 | 272 | 1,326 | 71 | 297 | 137 | 50 |
| | | Low | | 38,446 | 667 | 575 | 2,618 | 151 | 267 | 131 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,602 | 32,247 | 290 | 180 | 966 | 48 | 327 | 138 | 51 |
| | | Mid | | 35,269 | 429 | 382 | 1,642 | 99 | 297 | 133 | 50 |
| | | Low | | 40,146 | 852 | 1,019 | 3,867 | 270 | 267 | 129 | 45 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,667 | 28,145 | 265 | 132 | 881 | 36 | 327 | 142 | 51 |
| | | Mid | | 30,547 | 369 | 253 | 1,353 | 67 | 297 | 137 | 50 |
| | | Low | | 35,039 | 645 | 477 | 2,447 | 128 | 267 | 131 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,690 | 28,809 | 282 | 165 | 992 | 46 | 327 | 138 | 51 |
| | | Mid | | 31,700 | 411 | 310 | 1,545 | 84 | 297 | 133 | 50 |
| | | Low | | 36,257 | 780 | 851 | 3,410 | 223 | 267 | 129 | 45 |

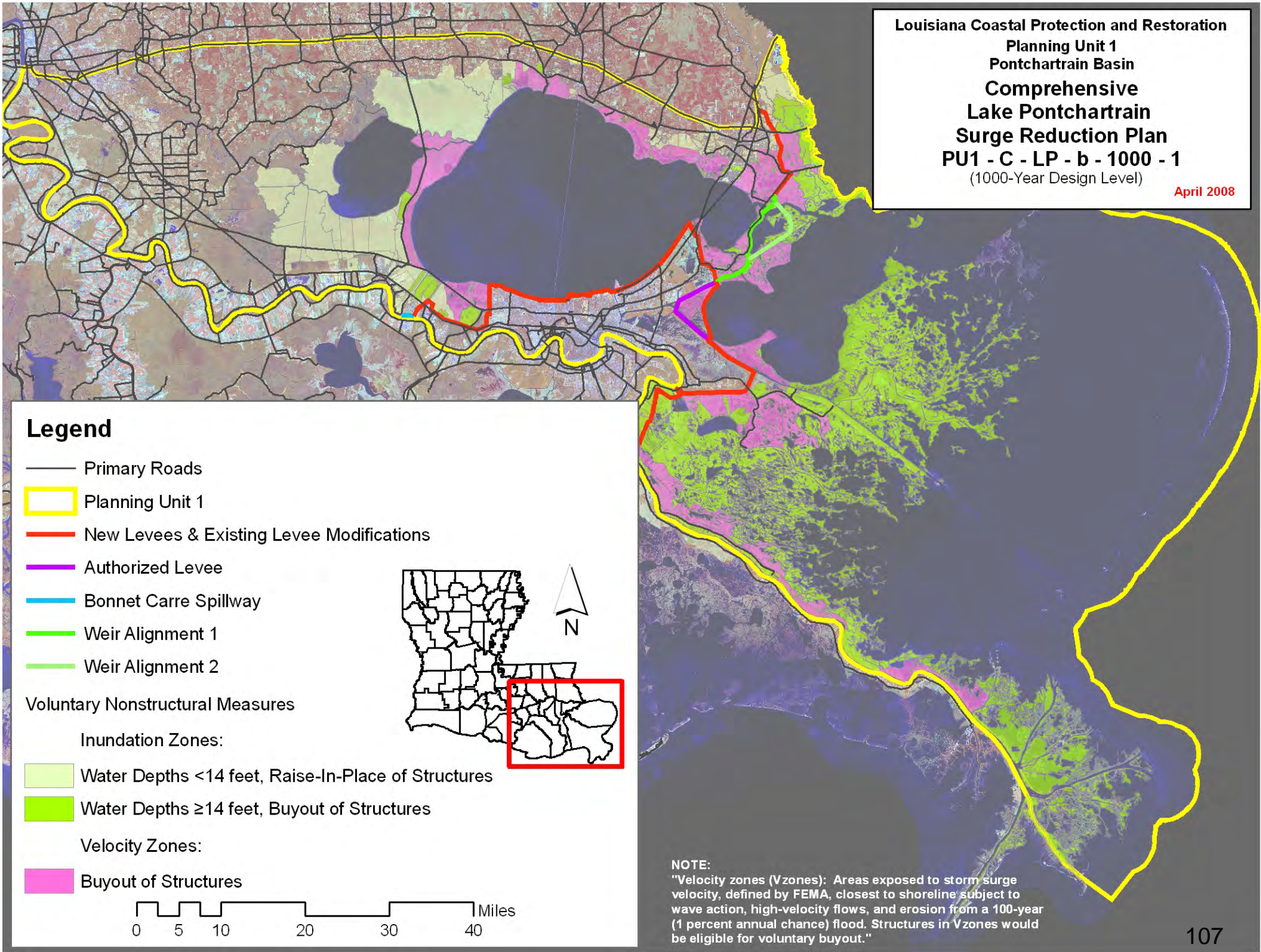
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 16 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 5,100 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 6,508 | 6,508 | 8,243 | 8,243 |
| | 1 / 2 | 17,906 | 18,066 | Structural Component | | 33,339 | 33,562 | 33,339 | 33,562 |
| | 3 / 4 | 18,513 | 18,673 | Total Project | | 50,512 | 50,969 | 52,248 | 52,704 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan Lake Pontchartrain Surge Reduction Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 695 | 1,472 | 732 | 1,081 | 573 | 1,345 | 599 | |
| 100-year | 11,935 | 1,125 | 34,000 | 1,296 | 9,879 | 953 | 26,076 | 1,086 | |
| 400-year | 89,937 | 1,408 | 116,204 | 2,250 | 62,688 | 1,195 | 80,694 | 1,750 | |
| 1,000-year | 118,260 | 3,324 | 122,423 | 10,985 | 81,963 | 2,636 | 84,515 | 8,711 | |
| 2,000-year | 122,343 | 12,020 | 125,886 | 17,240 | 84,351 | 10,022 | 86,336 | 13,278 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 1
 Pontchartrain Basin
 Comprehensive
 Lake Pontchartrain
 Surge Reduction Plan
PU1 - C - LP - b - 1000 - 1
 (1000-Year Design Level)

April 2008



Legend

- Primary Roads
- Planning Unit 1
- New Levees & Existing Levee Modifications
- Authorized Levee
- Bonnet Carre Spillway
- Weir Alignment 1
- Weir Alignment 2

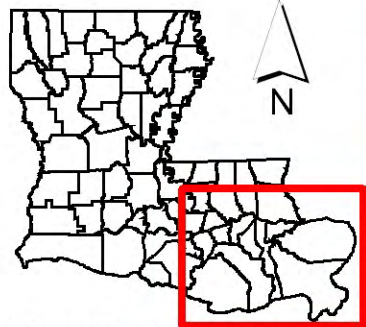
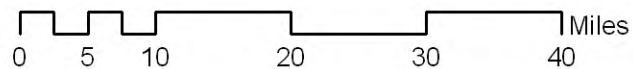
Voluntary Nonstructural Measures

Inundation Zones:

- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures



NOTE:

"Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

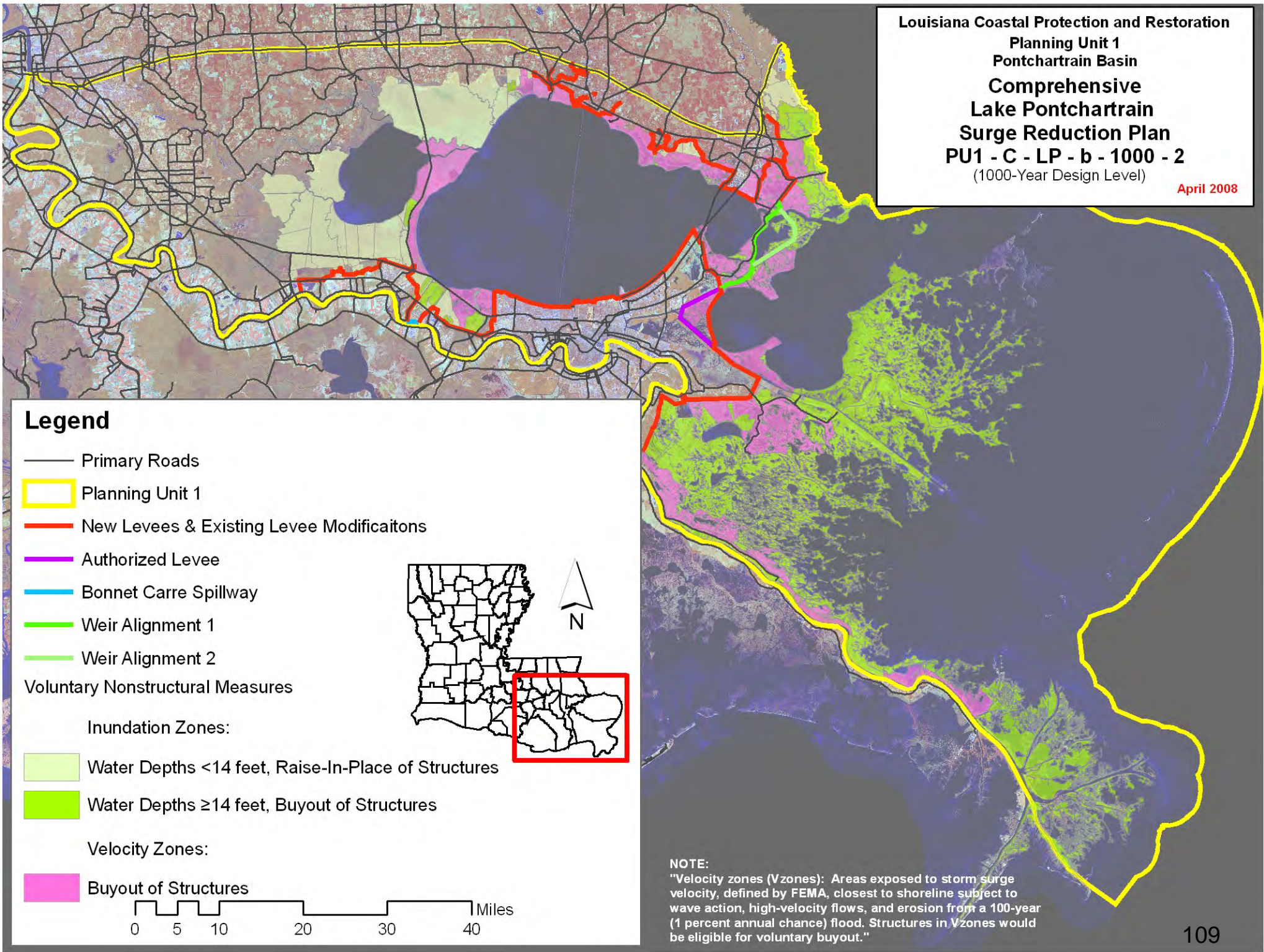
| | | | | | |
|---------------------------------|--|---------------------------------|--------------------------------|------------------|--|
| Planning Unit: | 1 | Alt. No.: | PU1-C-LP-b-1000-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU1-LP-b-1000-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 1000-yr complementary measures | | |
| Structural Component: | Same as Alternative PU1-LP-b-1000-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 3,754 | 30,761 | 280 | 131 | 889 | 36 | 363 | 159 | 52 |
| | | Mid | | 32,697 | 393 | 287 | 1,459 | 75 | 333 | 159 | 50 |
| | | Low | | 36,596 | 697 | 591 | 2,780 | 155 | 303 | 156 | 48 |
| 2 | High RSLR High Employment Dispersed Population | High | 3,777 | 31,242 | 299 | 189 | 1,042 | 50 | 363 | 138 | 51 |
| | | Mid | | 33,707 | 446 | 395 | 1,763 | 102 | 333 | 135 | 49 |
| | | Low | | 37,903 | 878 | 1,010 | 3,939 | 266 | 303 | 129 | 41 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 3,701 | 27,765 | 276 | 140 | 964 | 39 | 363 | 159 | 52 |
| | | Mid | | 29,663 | 389 | 268 | 1,502 | 71 | 333 | 159 | 50 |
| | | Low | | 33,279 | 679 | 495 | 2,651 | 134 | 303 | 156 | 48 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 3,724 | 28,043 | 293 | 174 | 1,075 | 49 | 363 | 138 | 51 |
| | | Mid | | 30,381 | 431 | 323 | 1,685 | 88 | 333 | 135 | 49 |
| | | Low | | 34,161 | 810 | 852 | 3,555 | 222 | 303 | 129 | 41 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 16 | After 50 yrs (% of baseline) | | 106 | 104 | 106 | 104 |
| Direct Wetland Impacts (acres) | | | 9,100 | After 100 yrs (% of baseline) | | 104 | 95 | 104 | 95 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.42 | Coastal Component | | 10,666 | 10,899 | 10,666 | 10,899 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,459 | 3,459 | 2,424 | 2,424 |
| | 1 / 2 | 26,099 | 26,254 | Structural Component | | 59,398 | 59,605 | 59,398 | 59,605 |
| | 3 / 4 | 25,737 | 25,891 | Total Project | | 73,523 | 73,963 | 72,488 | 72,929 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 1 Comprehensive Plan Lake Pontchartrain Surge Reduction Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,215 | 696 | 1,472 | 707 | 1,081 | 582 | 1,345 | 589 | |
| 100-year | 11,935 | 931 | 34,000 | 968 | 9,879 | 807 | 26,076 | 832 | |
| 400-year | 89,937 | 996 | 116,204 | 1,172 | 62,688 | 854 | 80,694 | 969 | |
| 1,000-year | 118,260 | 1,362 | 122,423 | 1,933 | 81,963 | 1,137 | 84,515 | 1,376 | |
| 2,000-year | 122,343 | 3,099 | 125,886 | 4,018 | 84,351 | 2,488 | 86,336 | 2,790 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
- Planning Unit 1
- New Levees & Existing Levee Modificaitons
- Authorized Levee
- Bonnet Carre Spillway
- Weir Alignment 1
- Weir Alignment 2

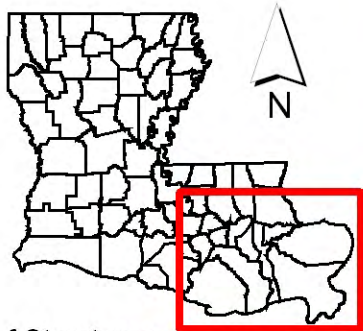
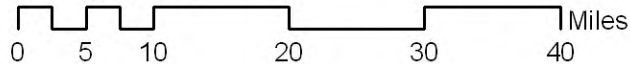
Voluntary Nonstructural Measures

Inundation Zones:

- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

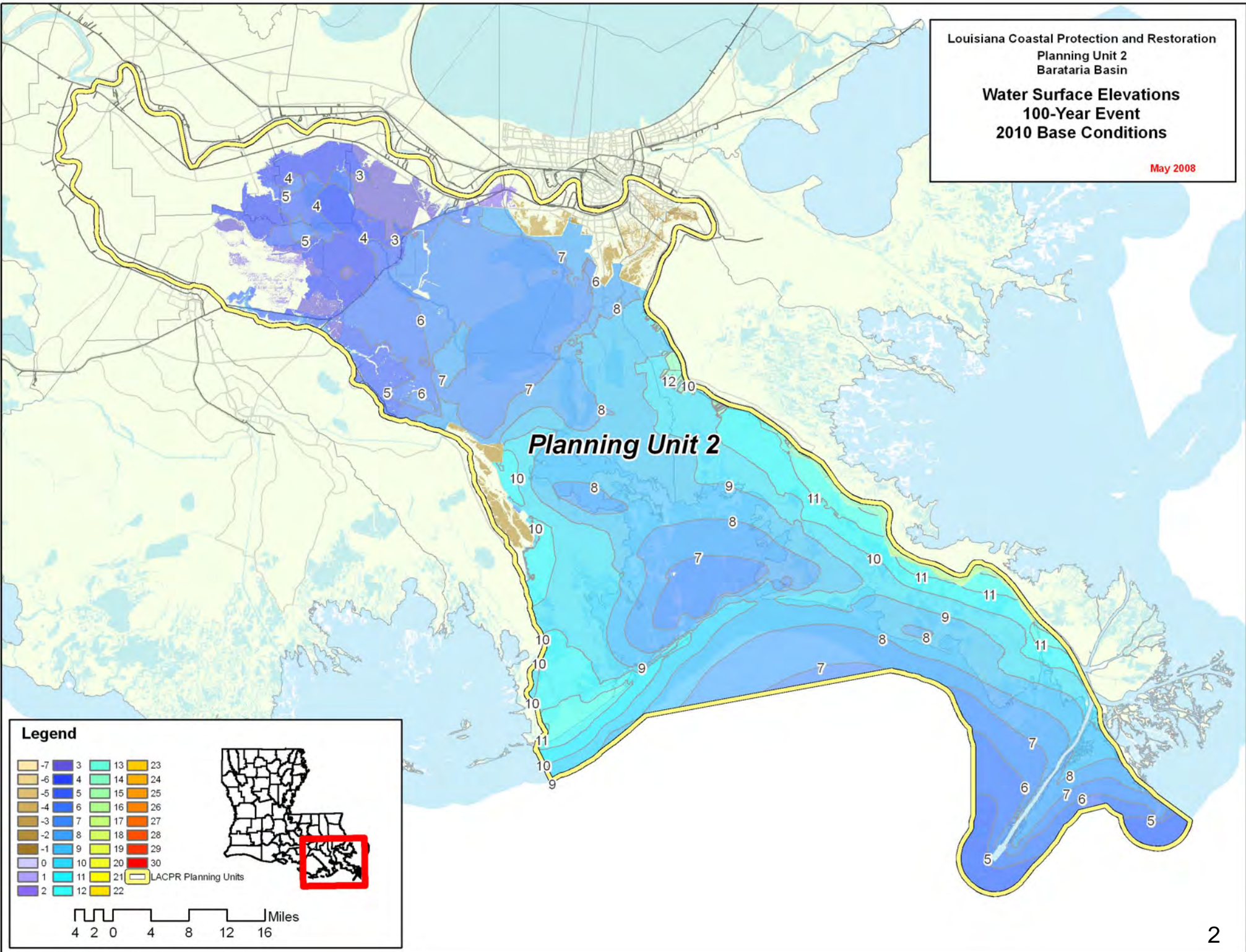
**LOUISIANA COASTAL PROTECTION AND RESTORATION FINAL TECHNICAL REPORT
EVALUATION RESULTS APPENDIX**

Planning Unit 2

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Water Surface Elevations
 100-Year Event
 2010 Base Conditions**

May 2008



Legend

| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
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| -1 | 9 | 19 | 29 |
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| 1 | 11 | 21 | |
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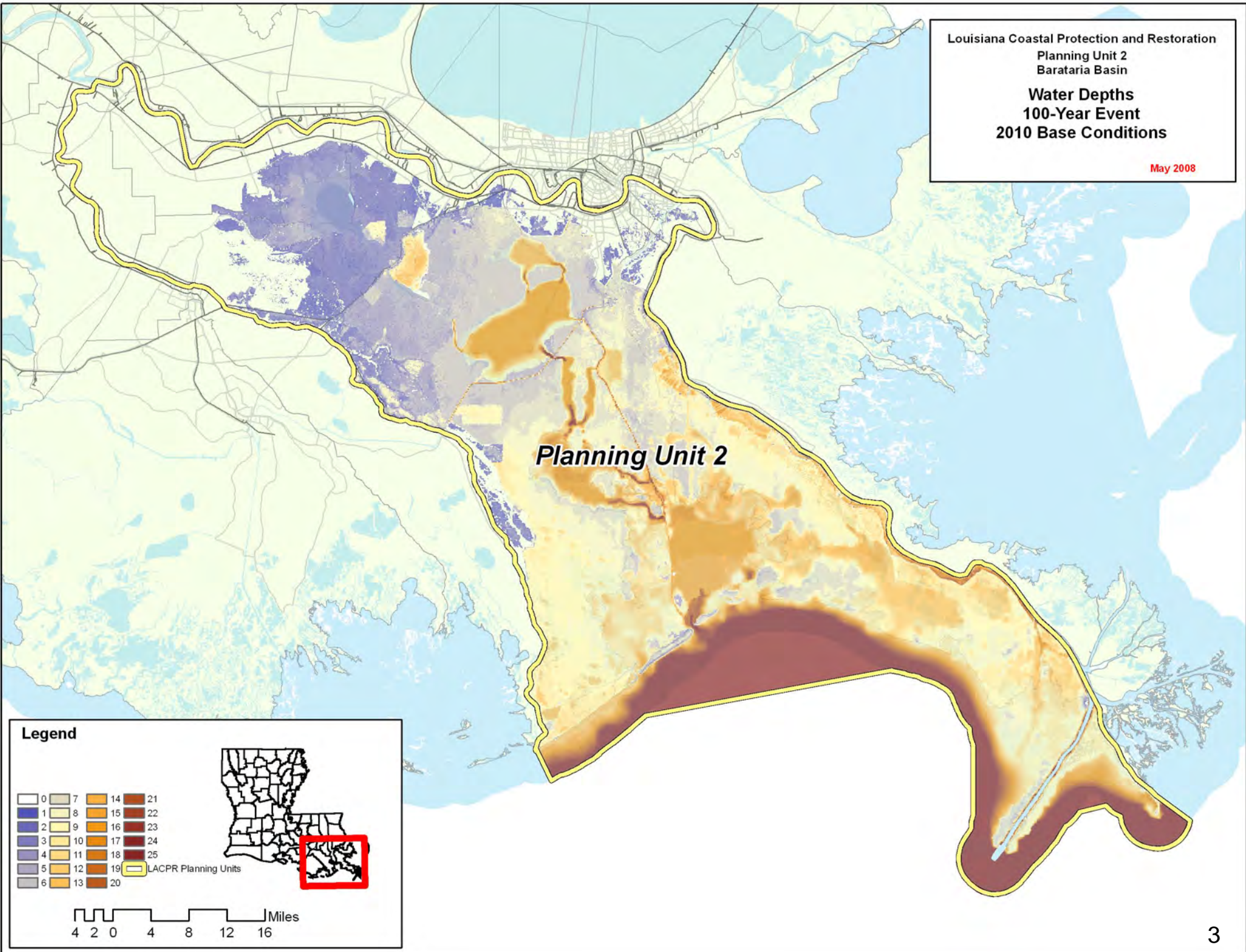
LACPR Planning Units

Miles
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Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Water Depths
 100-Year Event
 2010 Base Conditions**

May 2008



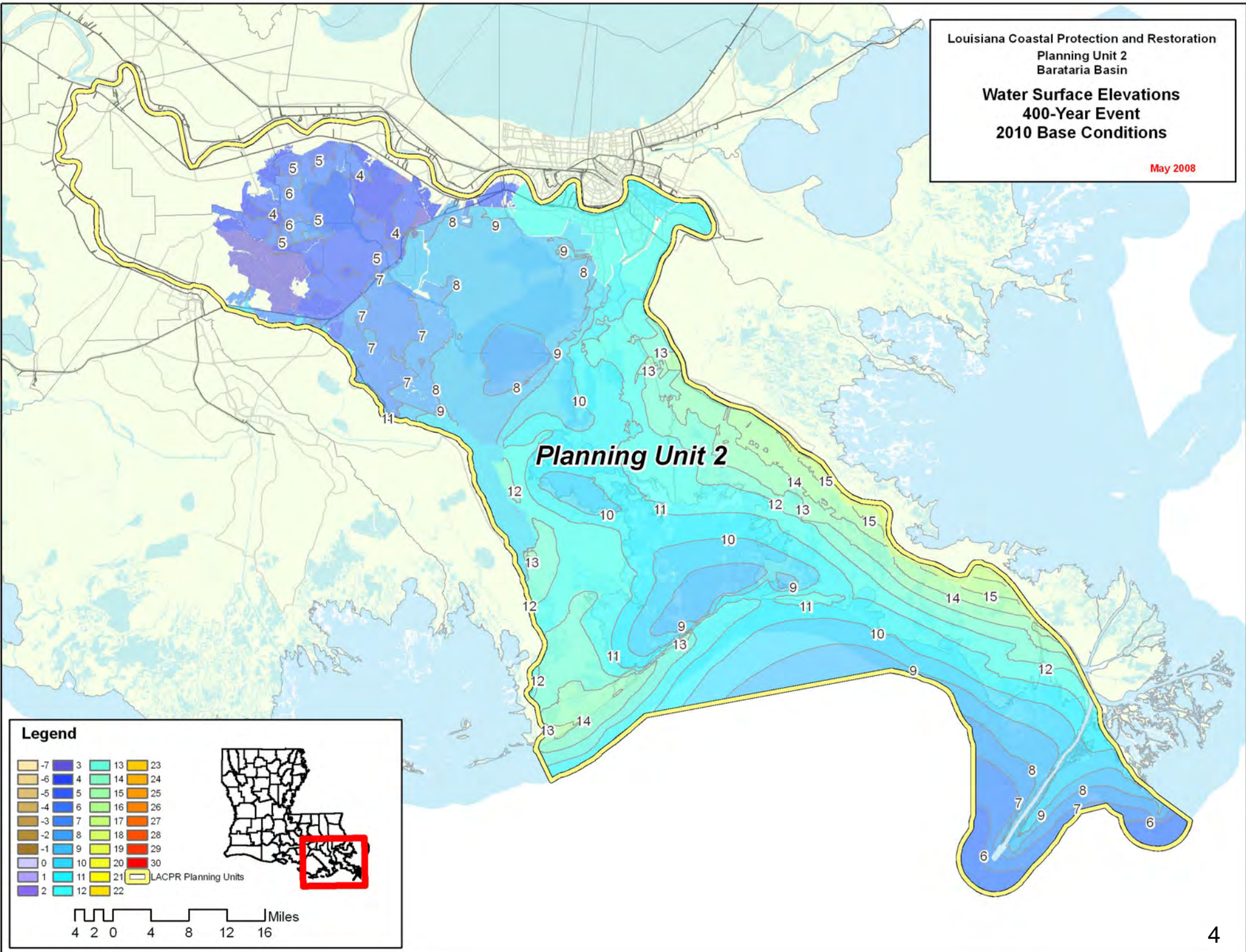
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LACPR Planning Units

Miles
 4 2 0 4 8 12 16

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Water Surface Elevations
 400-Year Event
 2010 Base Conditions**
 May 2008



Legend

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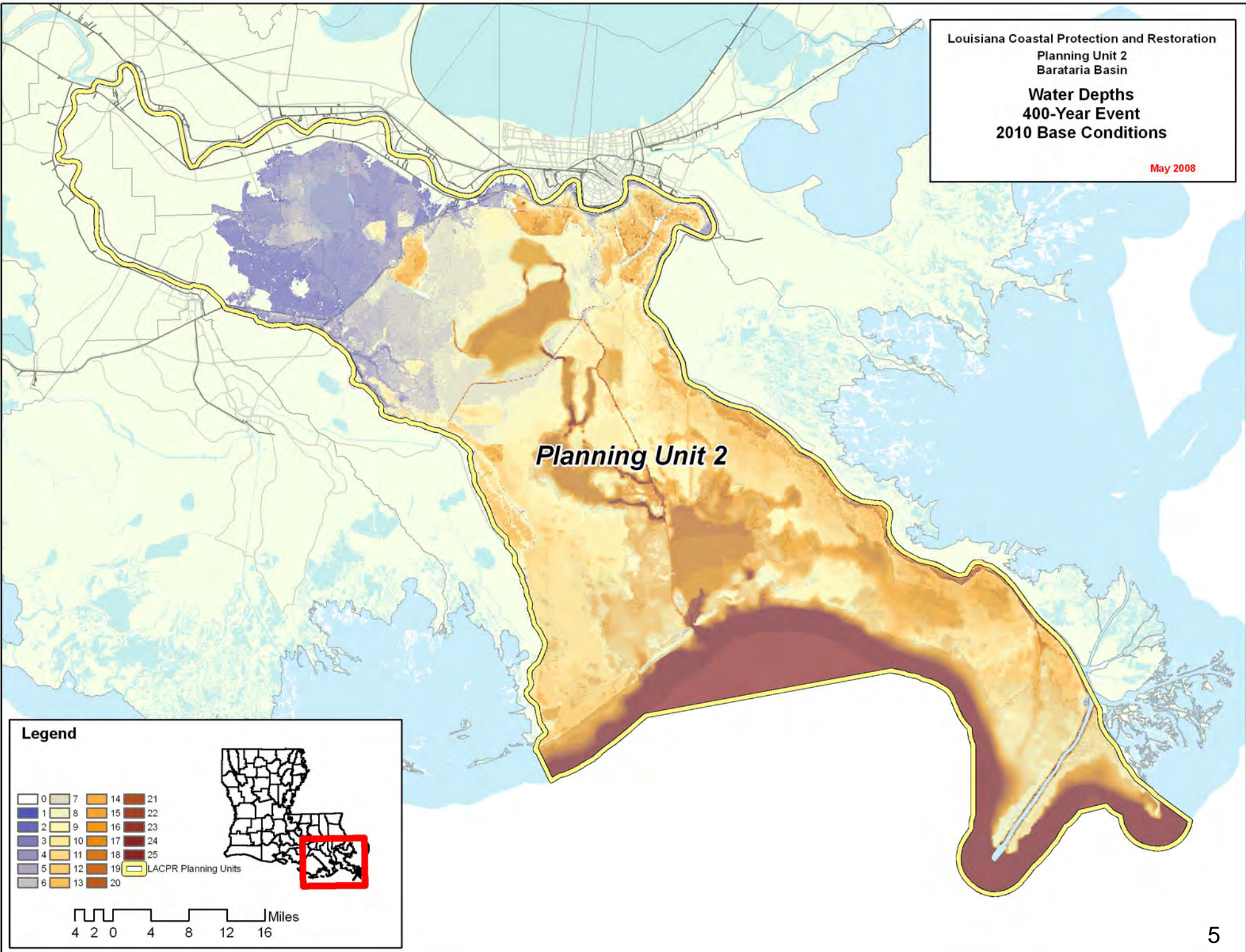
LACPR Planning Units

Miles

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Water Depths
 400-Year Event
 2010 Base Conditions**

May 2008



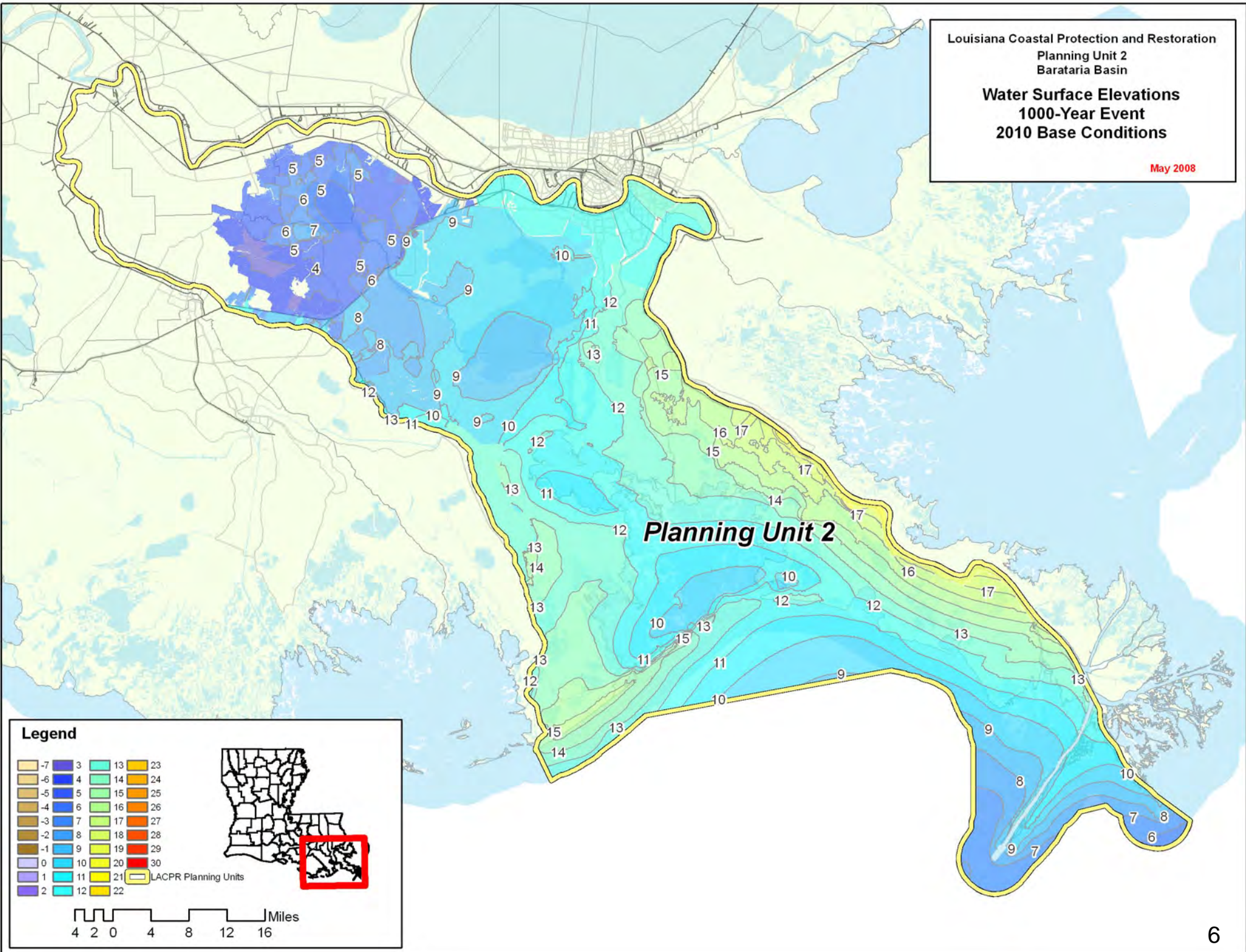
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| 1 | 8 | 15 | 22 |
| 2 | 9 | 16 | 23 |
| 3 | 10 | 17 | 24 |
| 4 | 11 | 18 | 25 |
| 5 | 12 | 19 | |
| 6 | 13 | 20 | |

LACPR Planning Units

Miles
 4 2 0 4 8 12 16

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Water Surface Elevations
 1000-Year Event
 2010 Base Conditions**
 May 2008



Legend

| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
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| -3 | 7 | 17 | 27 |
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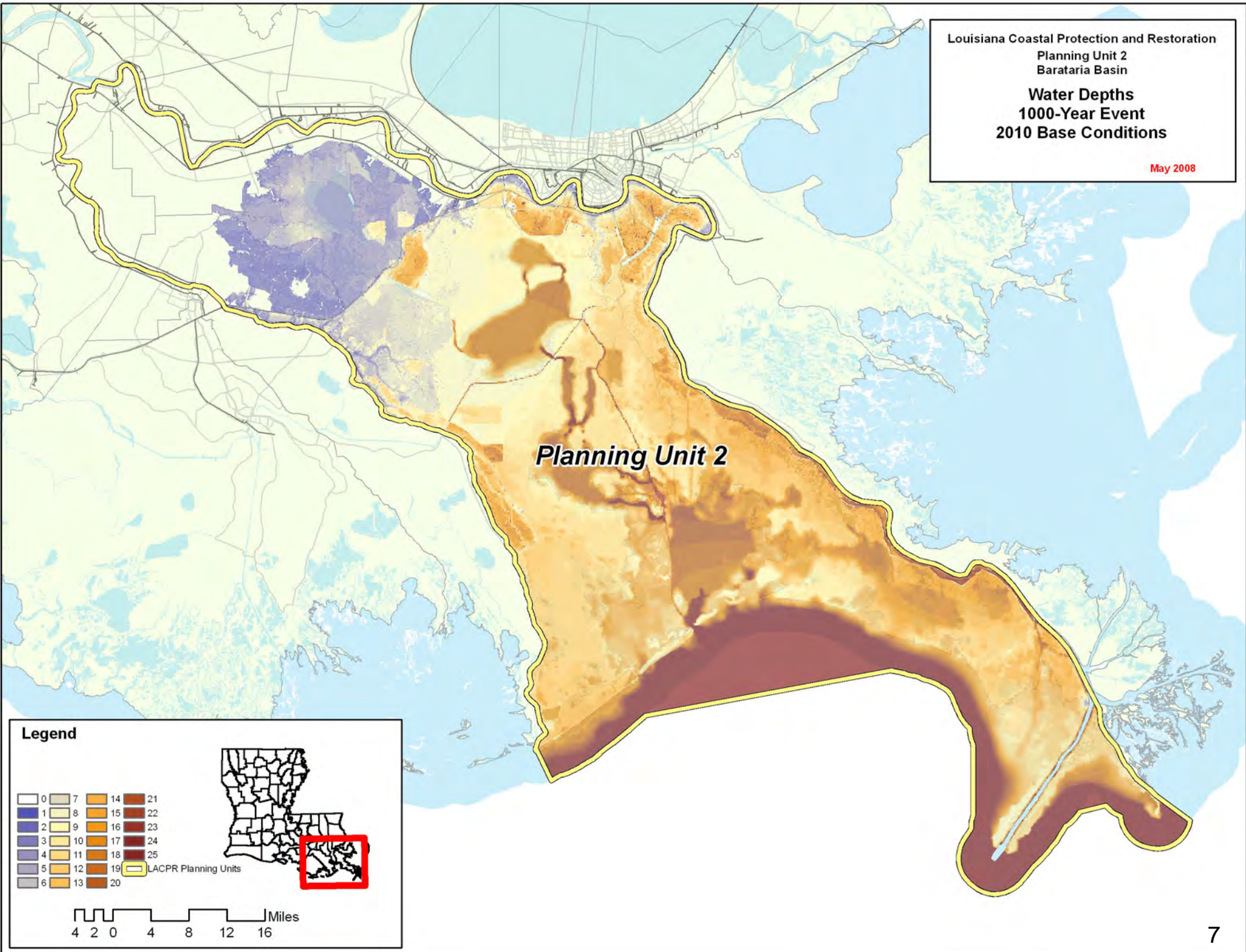
LACPR Planning Units

Miles

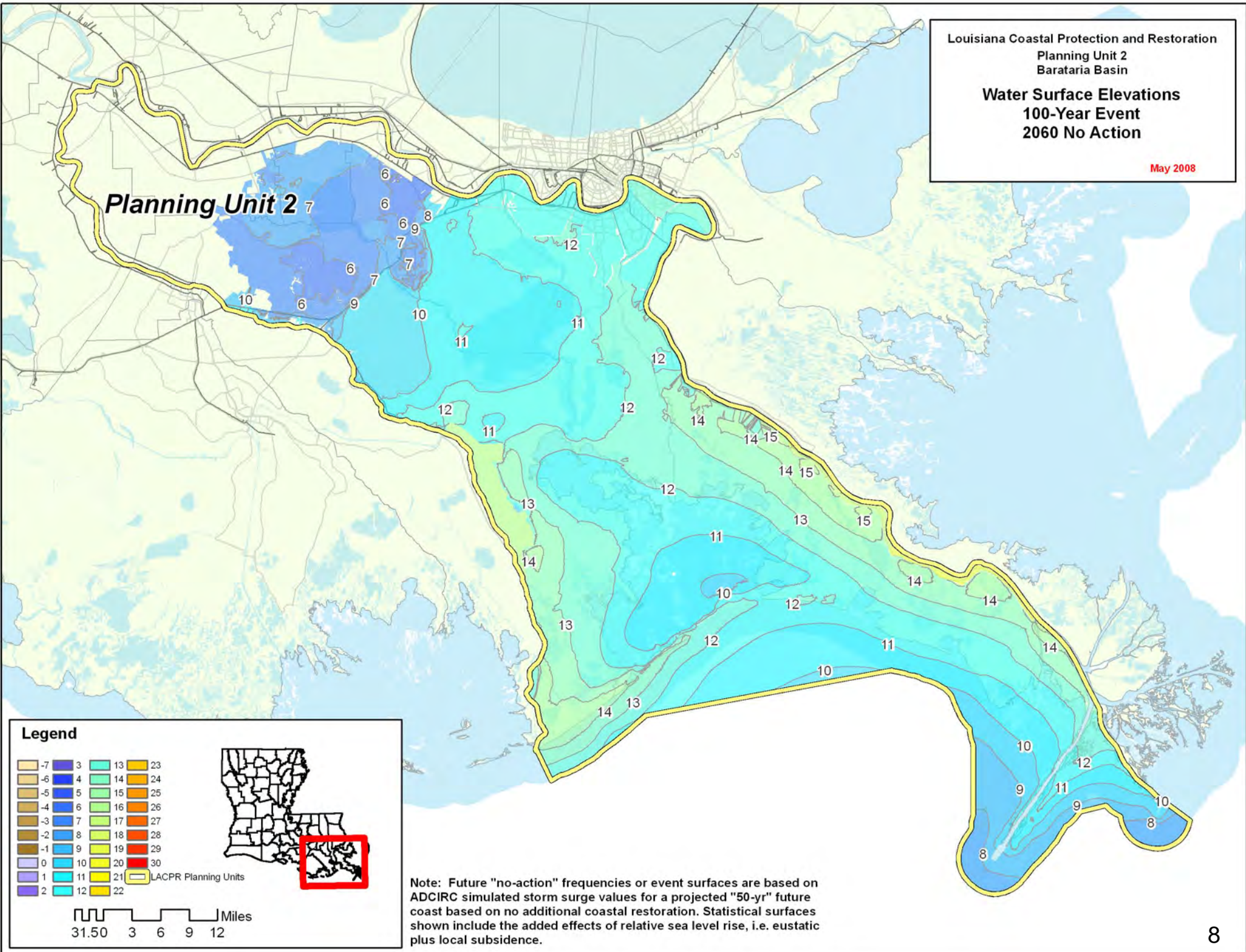
Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Water Depths
 1000-Year Event
 2010 Base Conditions**

May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Water Surface Elevations
 100-Year Event
 2060 No Action**
 May 2008



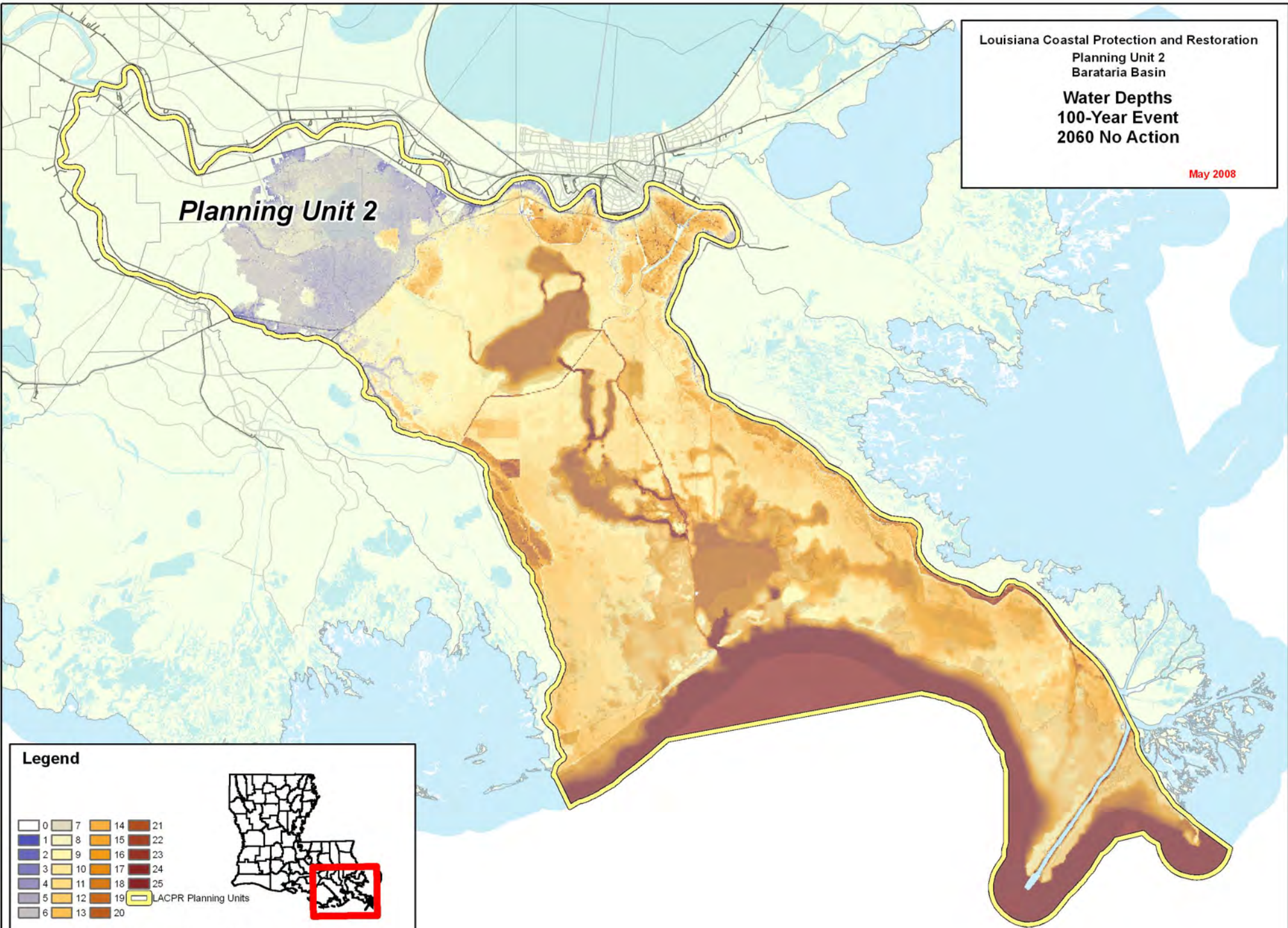
Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Water Depths
 100-Year Event
 2060 No Action**

May 2008

Planning Unit 2

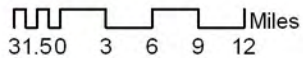


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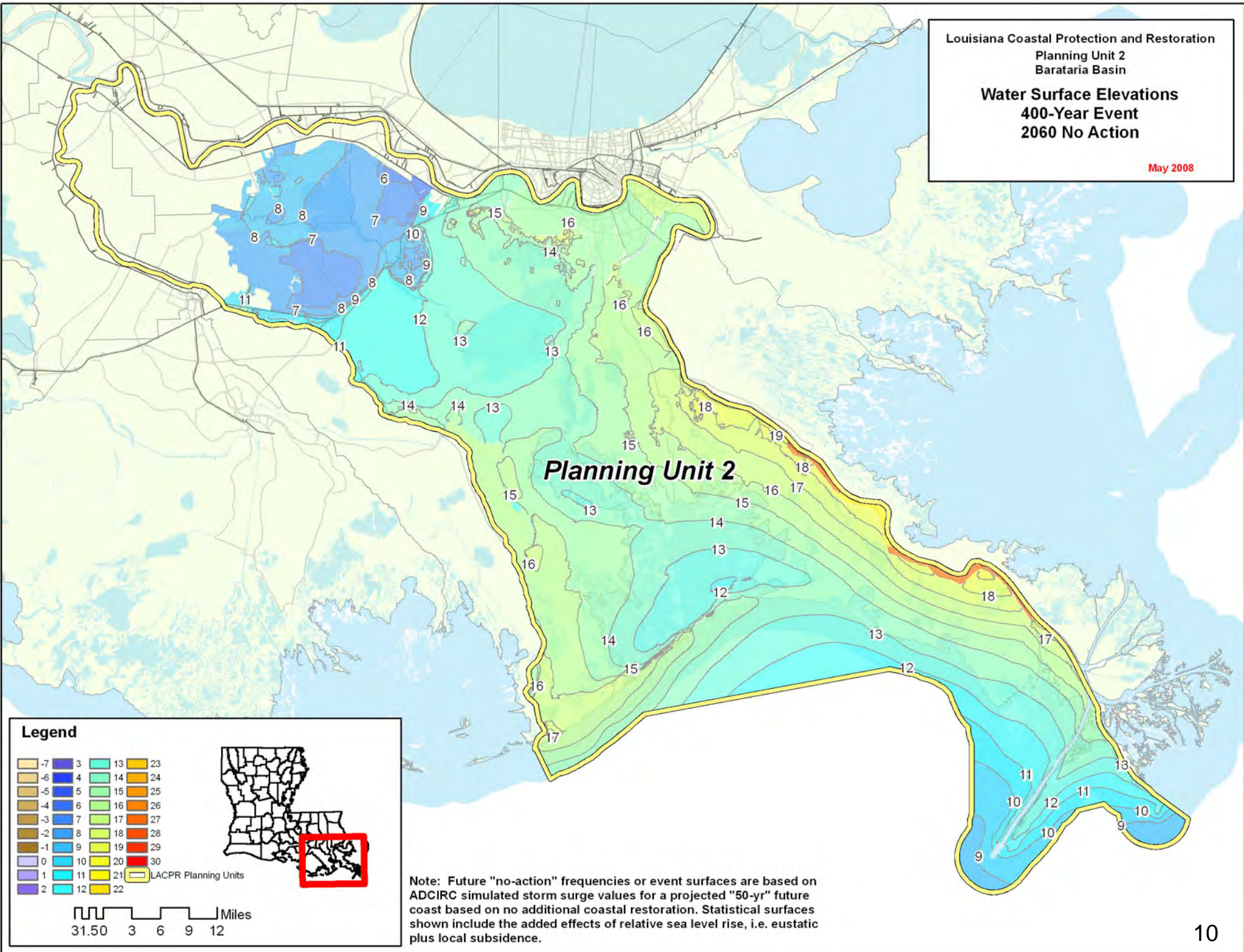
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LACPR Planning Units



Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Water Surface Elevations
 400-Year Event
 2060 No Action**
 May 2008



Planning Unit 2

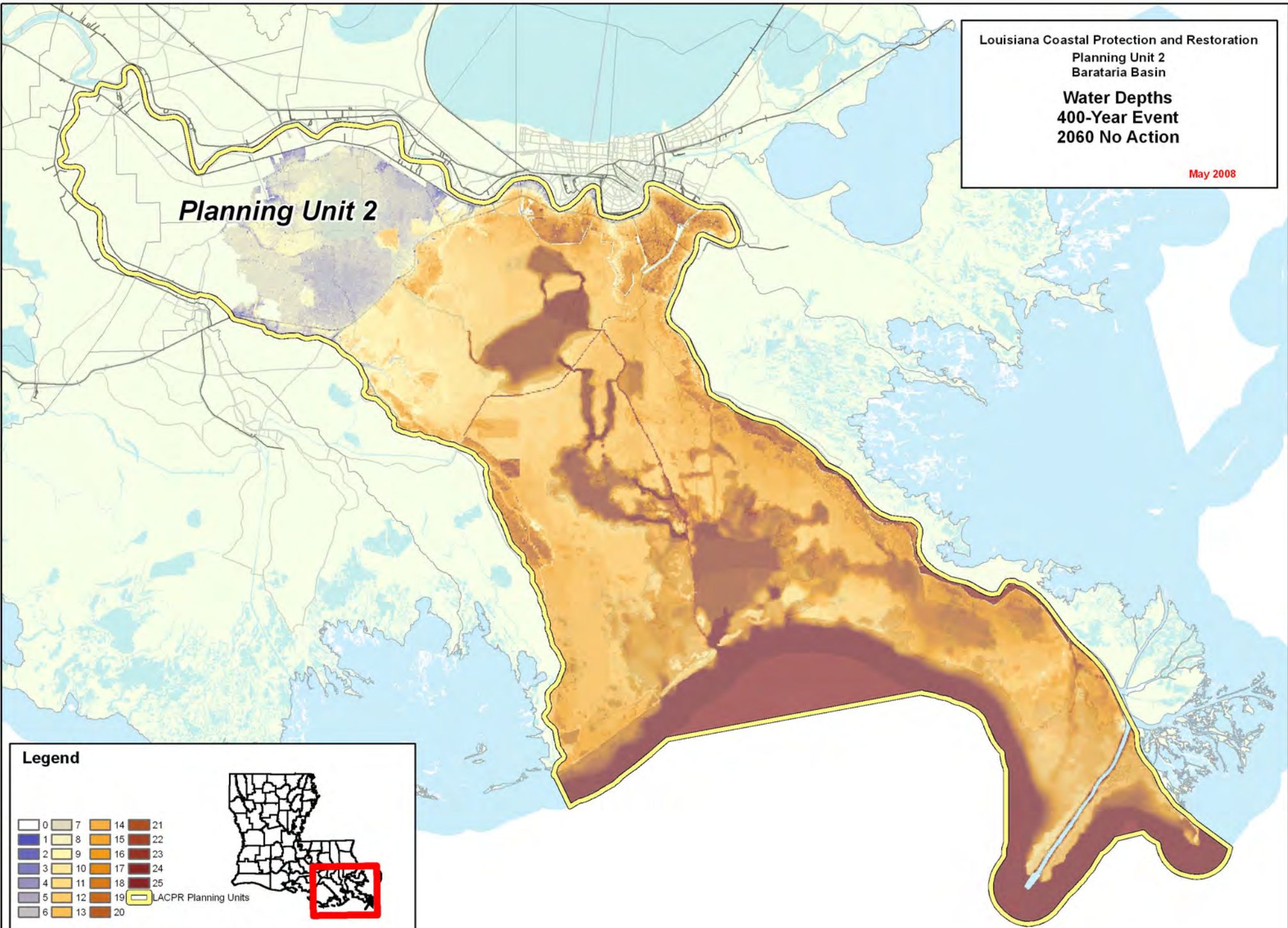
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Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Water Depths
 400-Year Event
 2060 No Action**

May 2008

Planning Unit 2

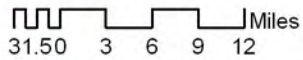


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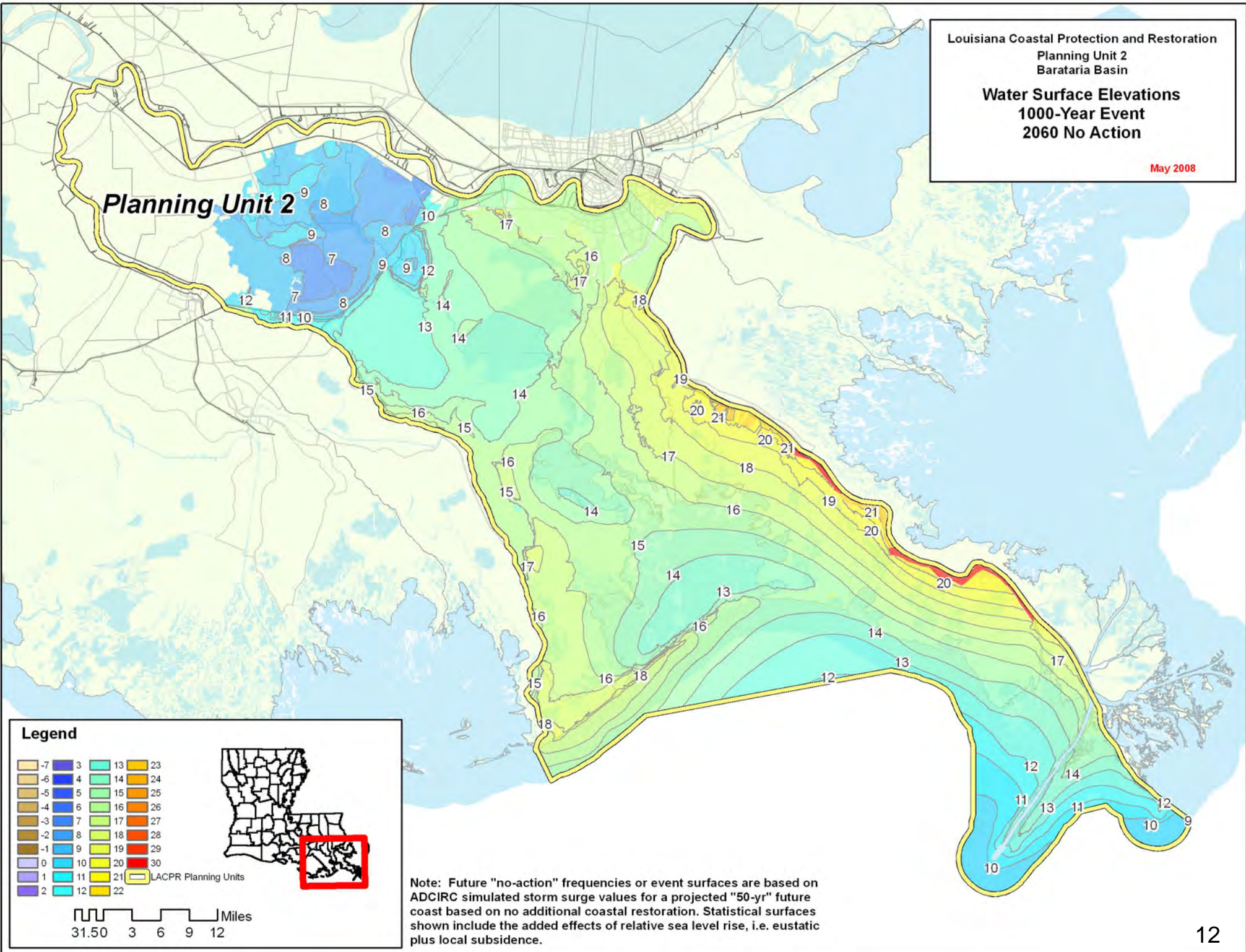
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LACPR Planning Units



Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Water Surface Elevations
 1000-Year Event
 2060 No Action**
 May 2008



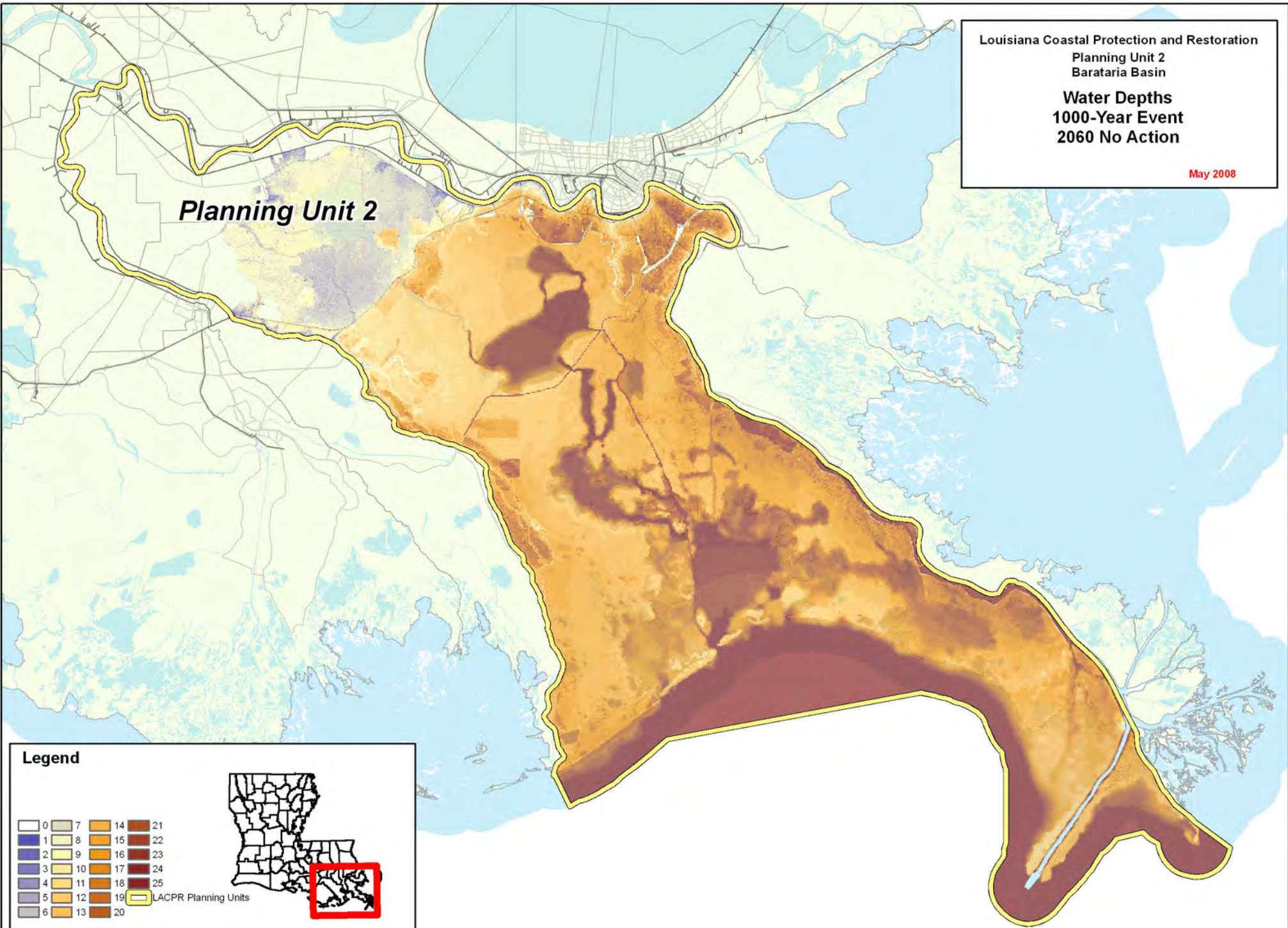
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Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Water Depths
 1000-Year Event
 2060 No Action**

May 2008

Planning Unit 2



Legend

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LACPR Planning Units

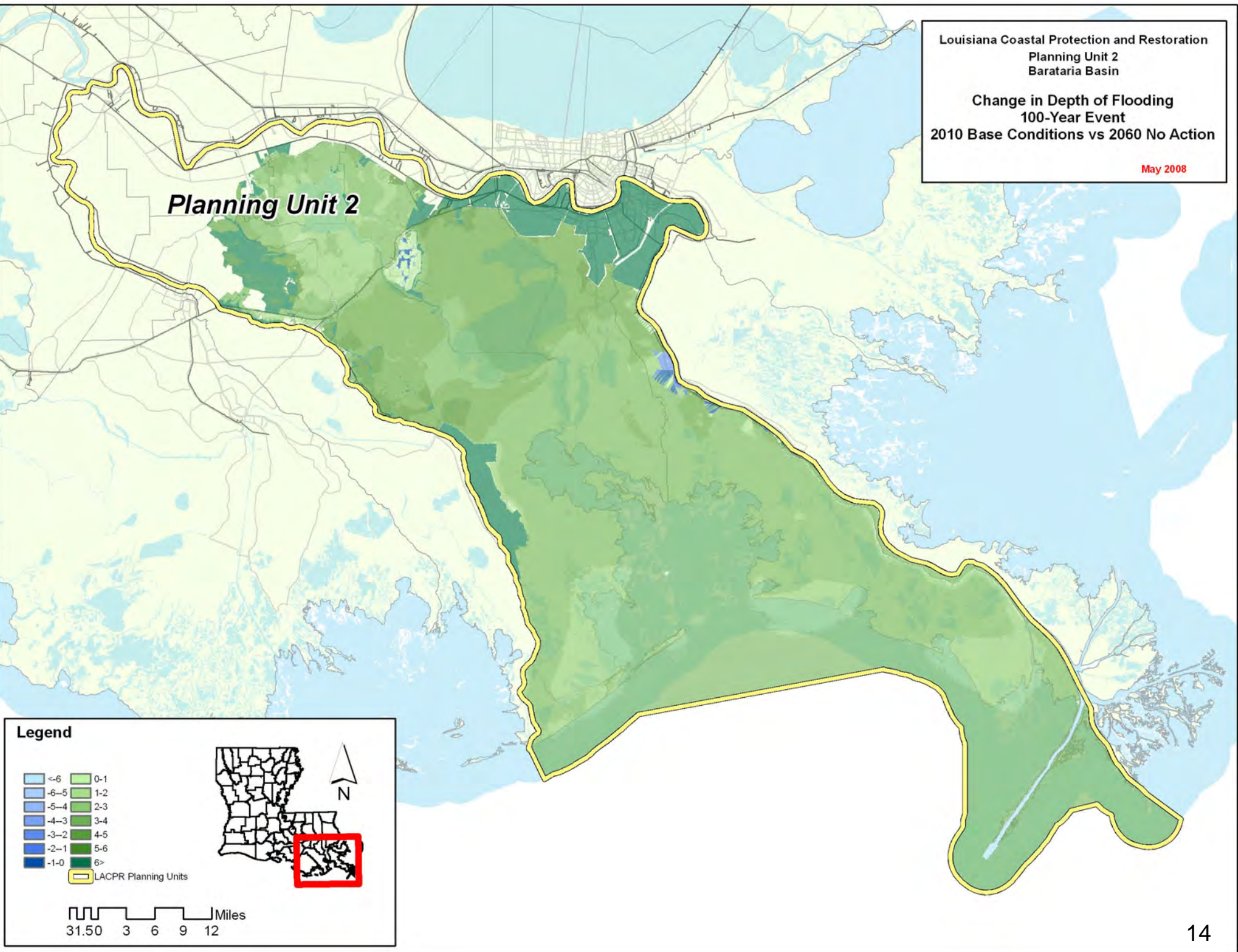
Miles
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Louisiana Coastal Protection and Restoration
Planning Unit 2
Barataria Basin

Change in Depth of Flooding
100-Year Event
2010 Base Conditions vs 2060 No Action

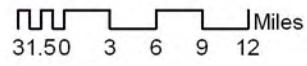
May 2008

Planning Unit 2



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| -1-0 | 6+ |
- LACPR Planning Units

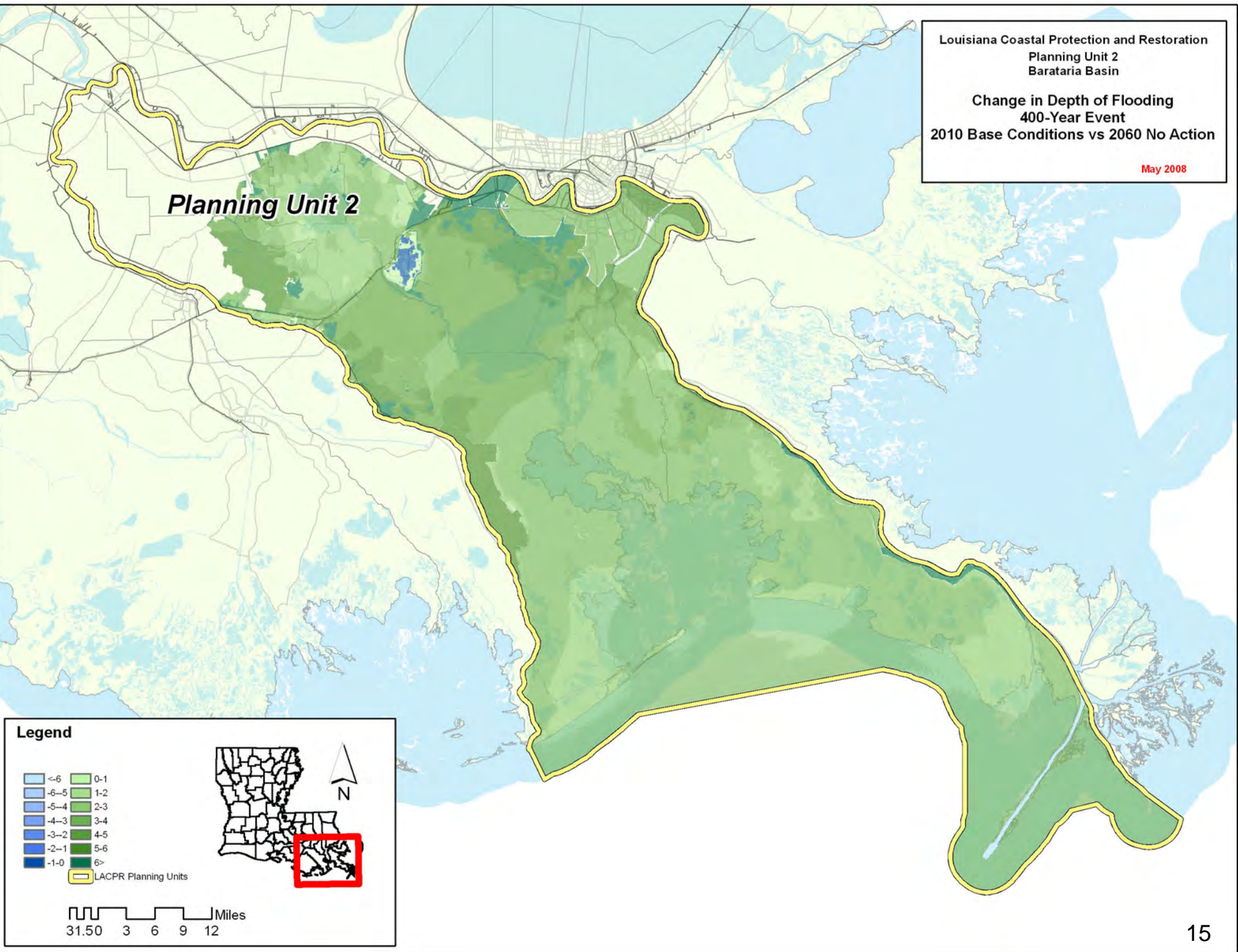


Louisiana Coastal Protection and Restoration
Planning Unit 2
Barataria Basin

Change in Depth of Flooding
400-Year Event
2010 Base Conditions vs 2060 No Action

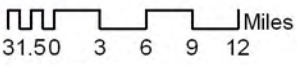
May 2008

Planning Unit 2



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- LACPR Planning Units

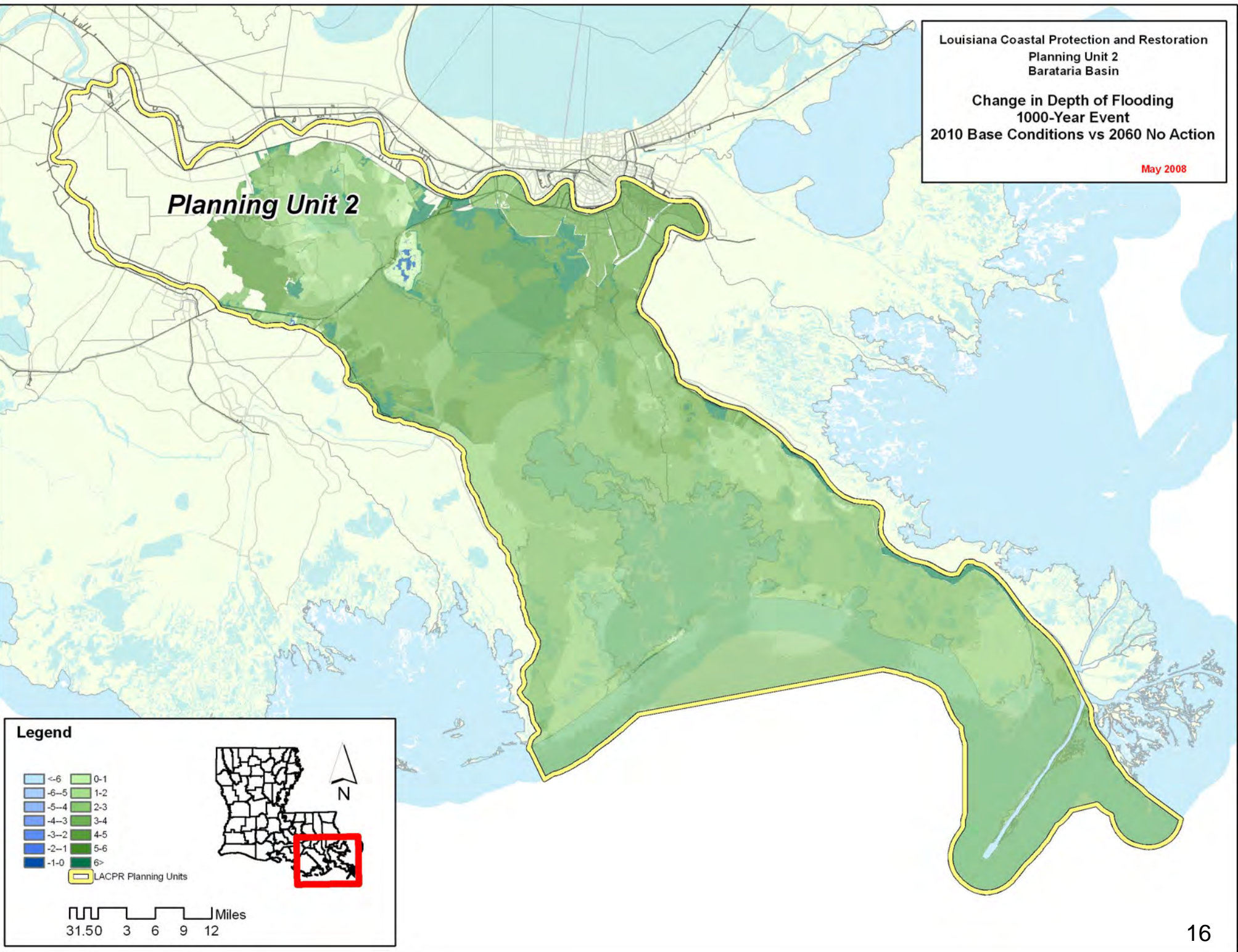


Louisiana Coastal Protection and Restoration
Planning Unit 2
Barataria Basin

Change in Depth of Flooding
1000-Year Event
2010 Base Conditions vs 2060 No Action

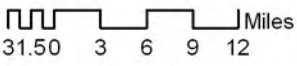
May 2008

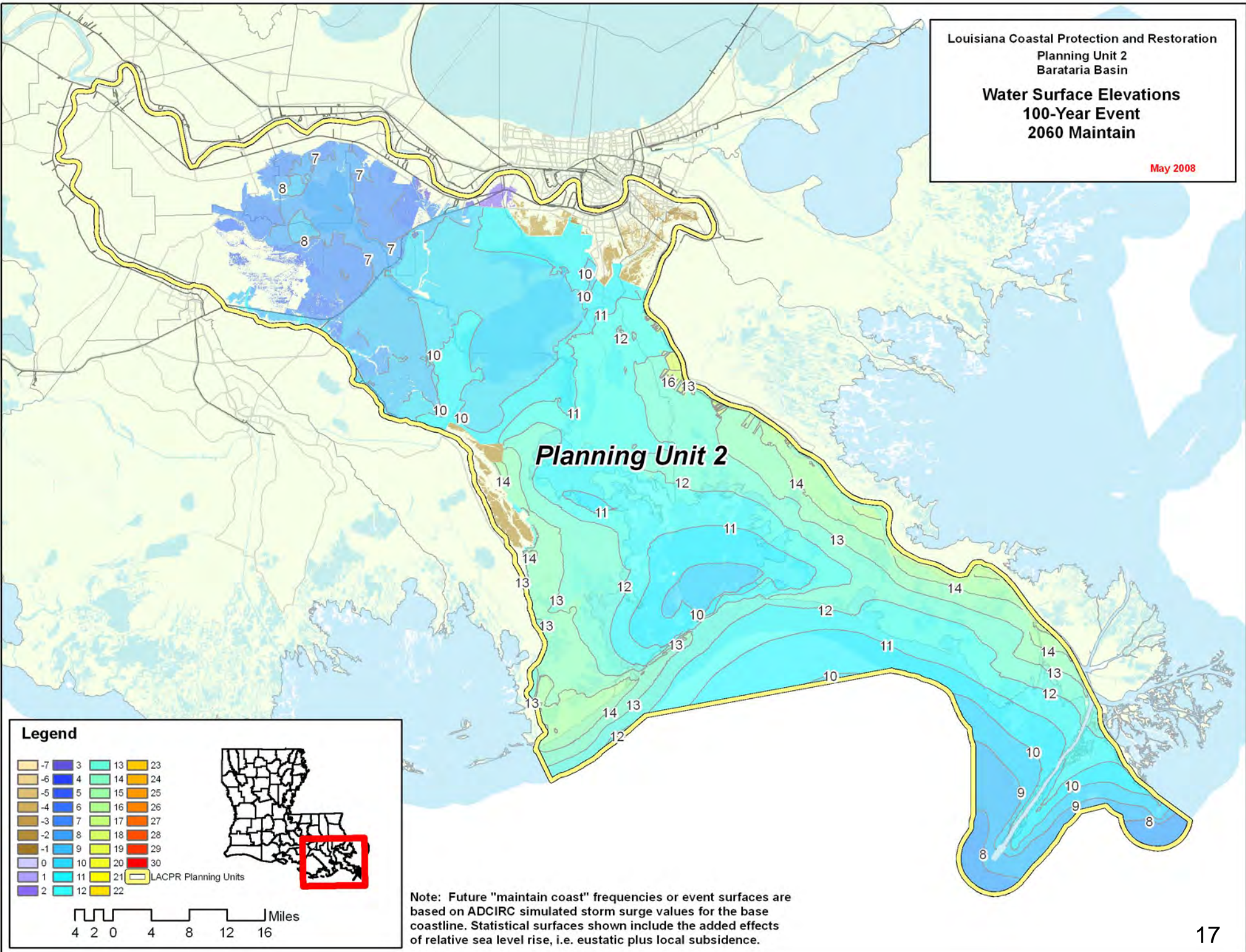
Planning Unit 2



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| LACPR Planning Units | |





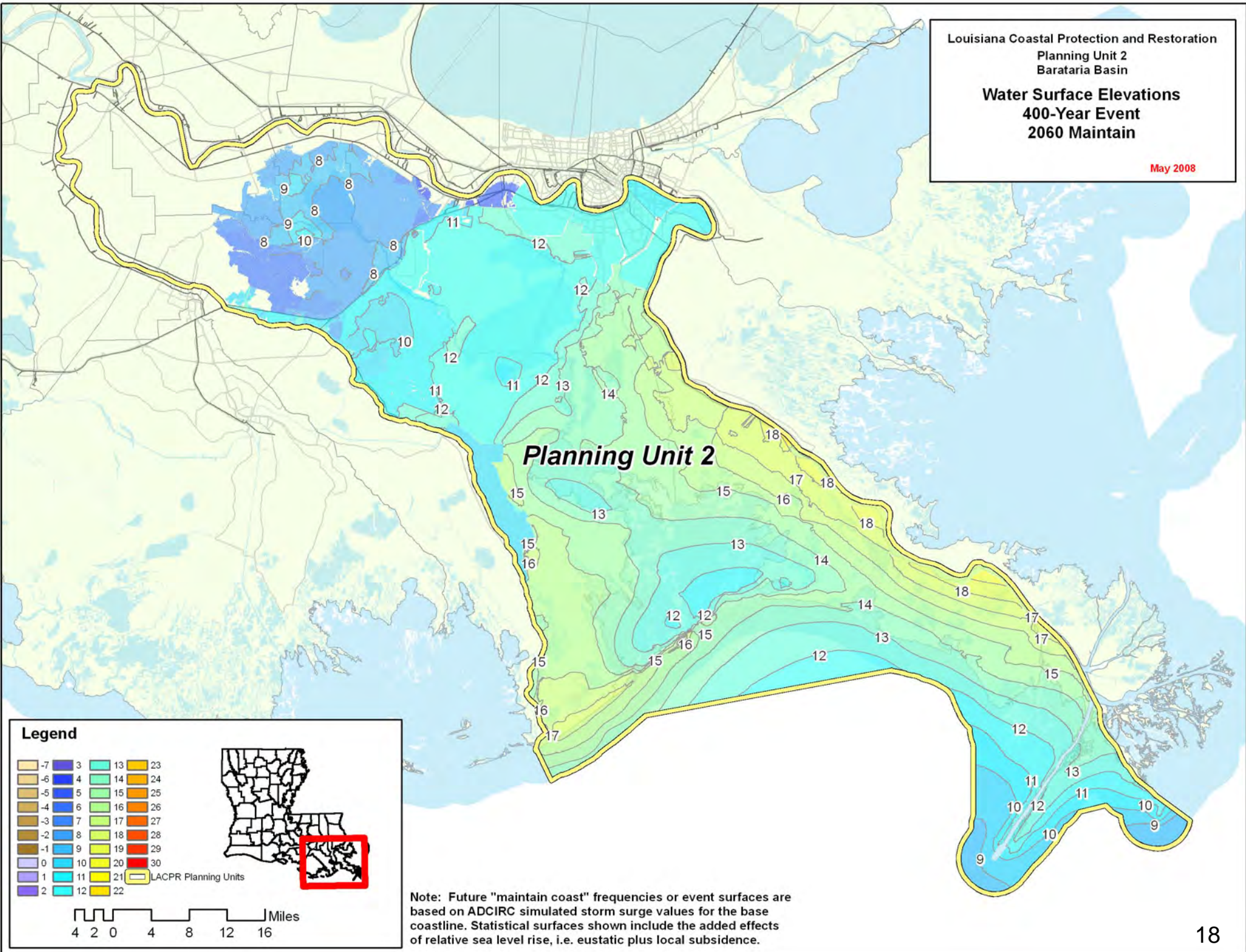
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LACPR Planning Units

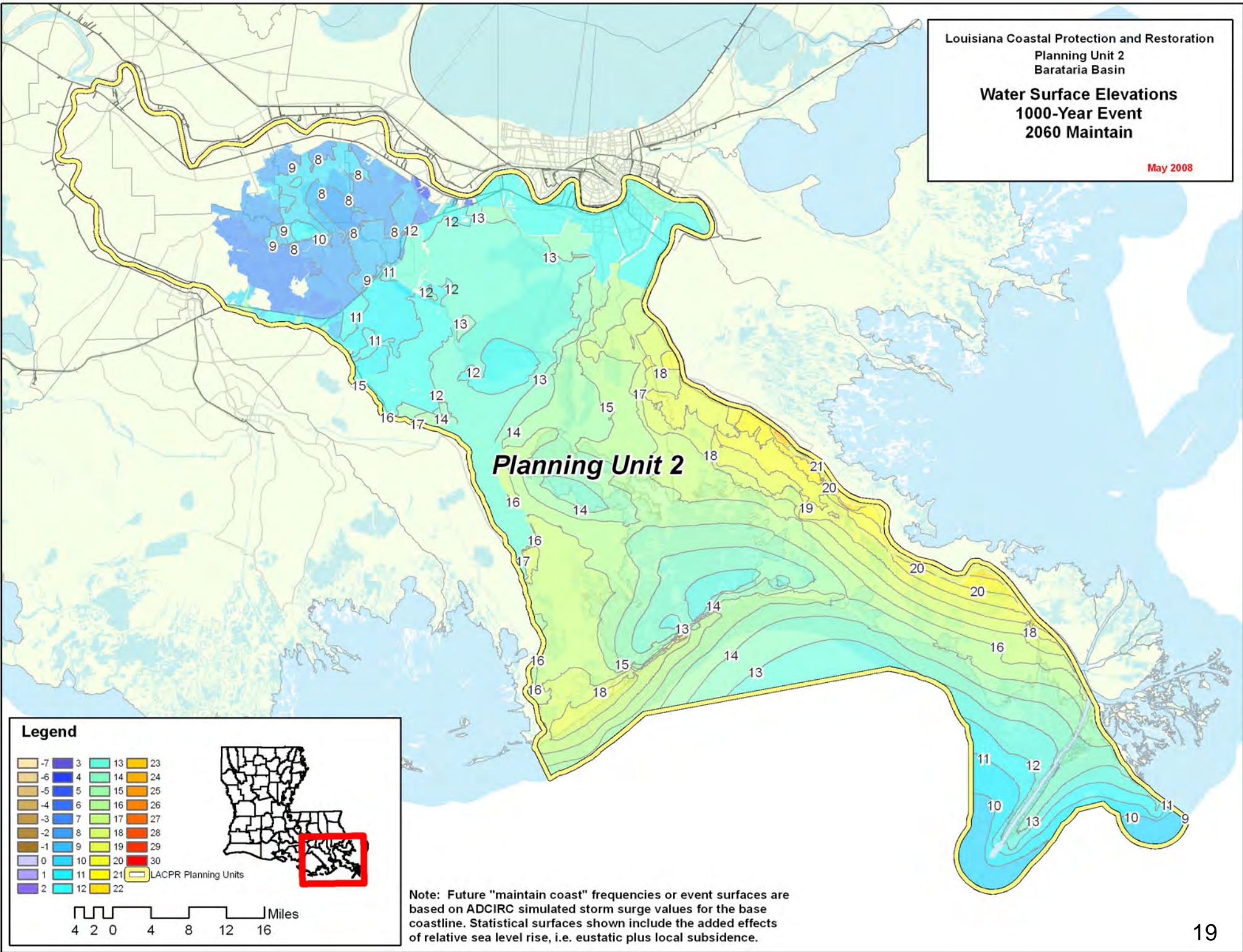
Miles

Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.



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Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Water Surface Elevations
 1000-Year Event
 2060 Maintain**
 May 2008

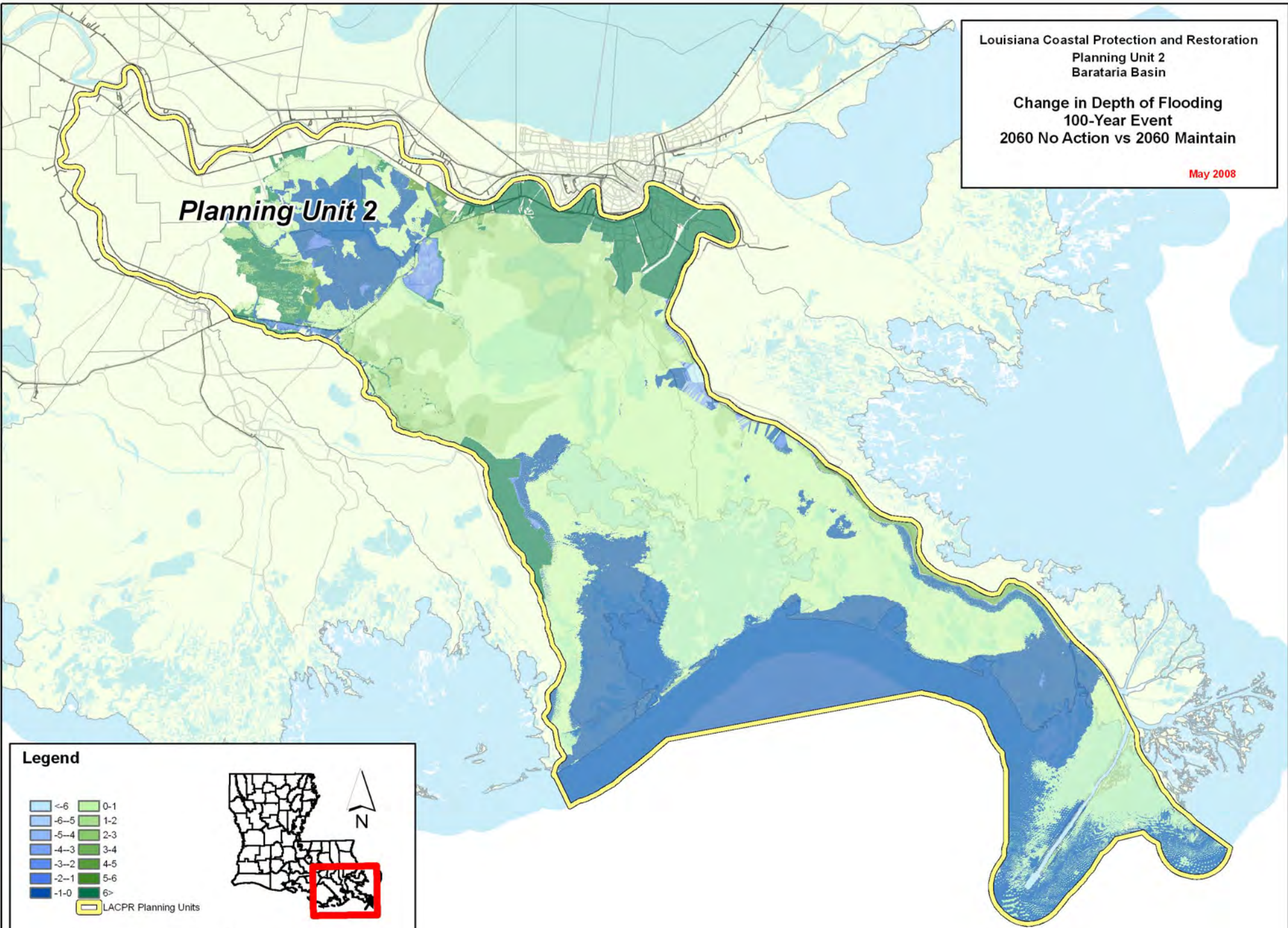


Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin







Change in Depth of Flooding
 100-Year Event
 2060 No Action vs 2060 Maintain

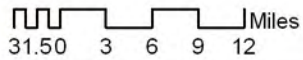
May 2008

Planning Unit 2



Legend

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|  LACPR Planning Units | |

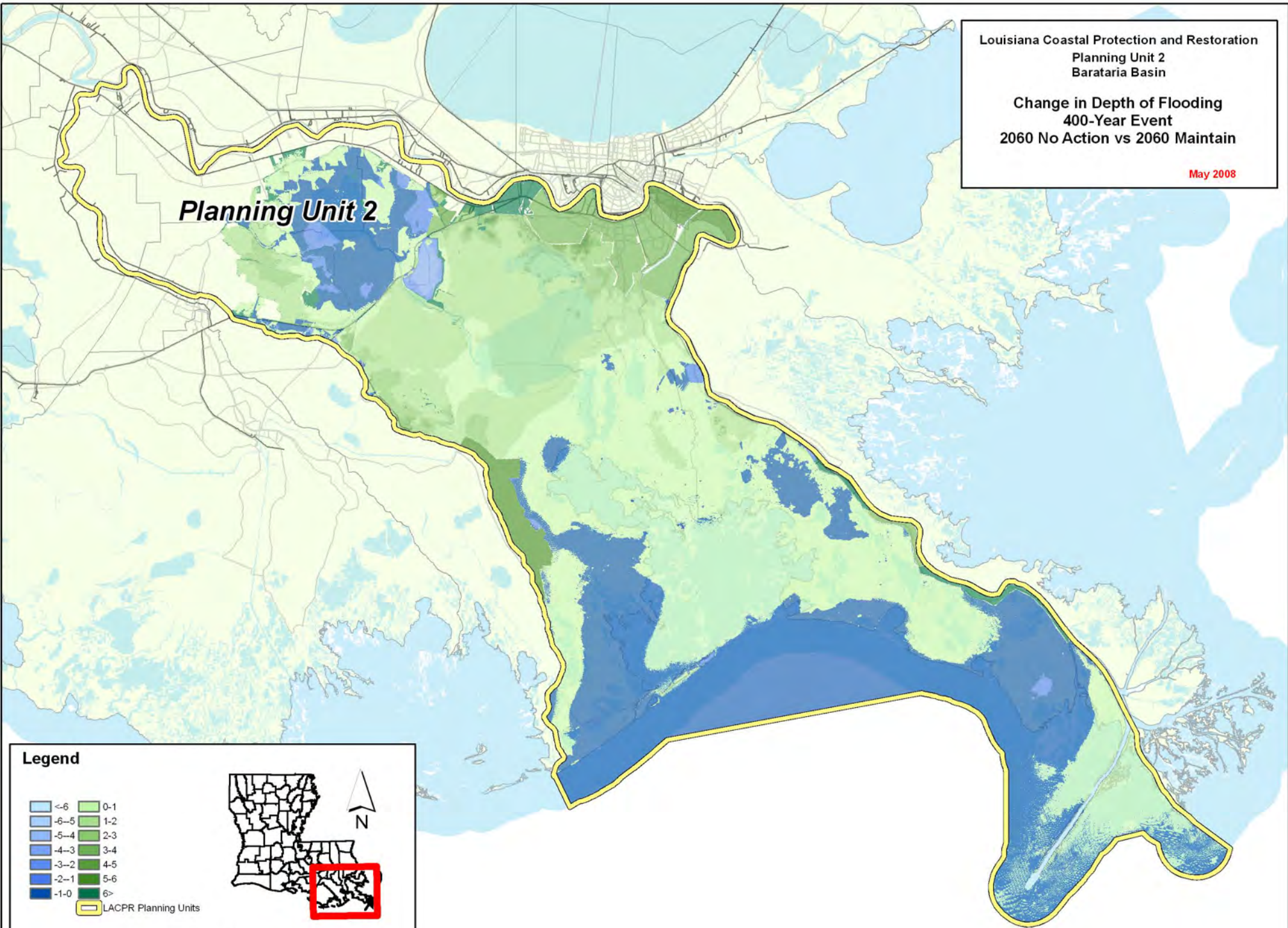


Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

Change in Depth of Flooding
 400-Year Event
 2060 No Action vs 2060 Maintain

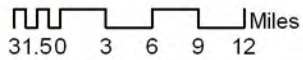
May 2008

Planning Unit 2



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- LACPR Planning Units

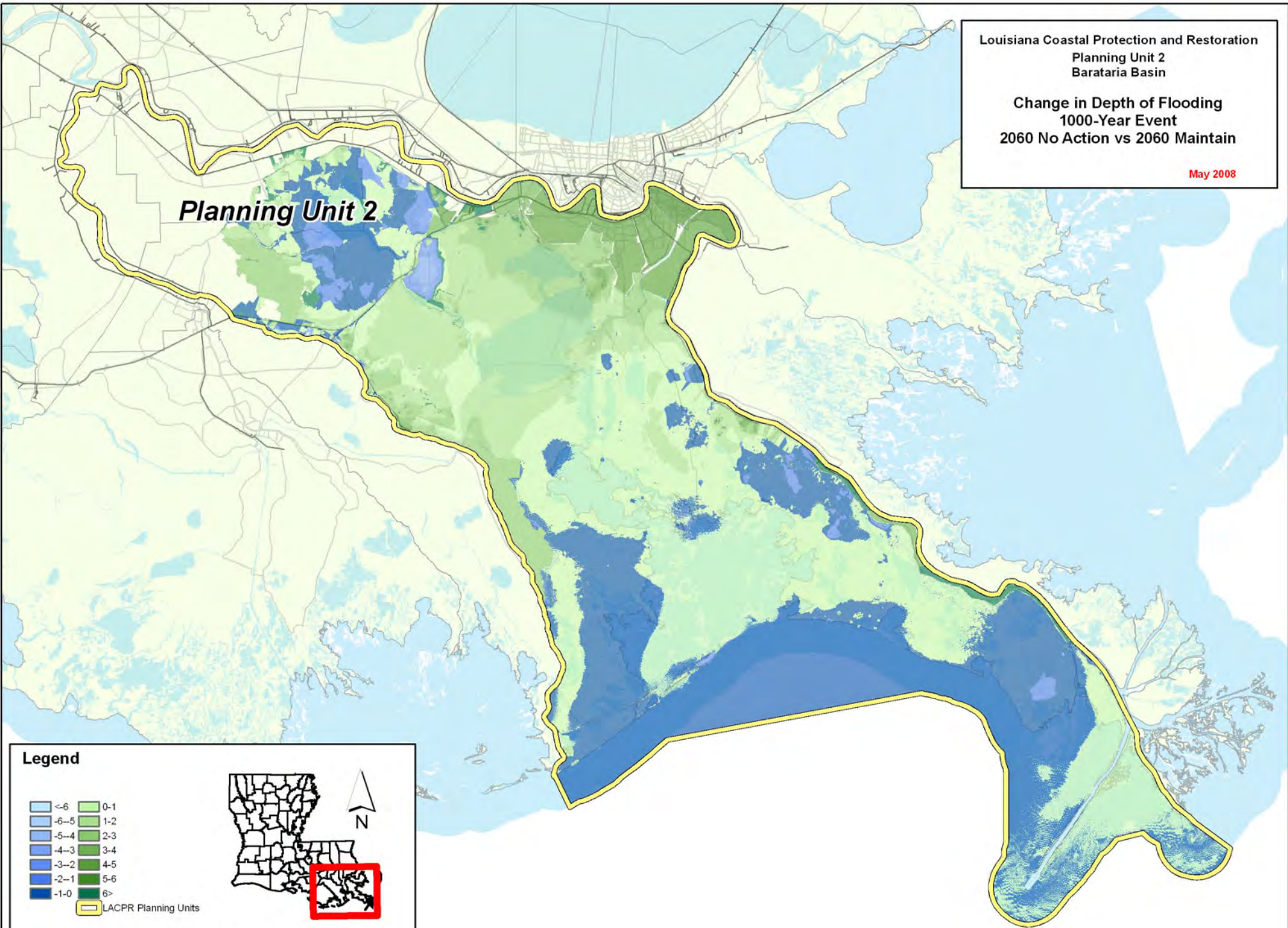


Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

Change in Depth of Flooding
 1000-Year Event
 2060 No Action vs 2060 Maintain

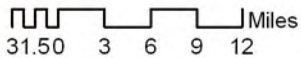
May 2008

Planning Unit 2



Legend

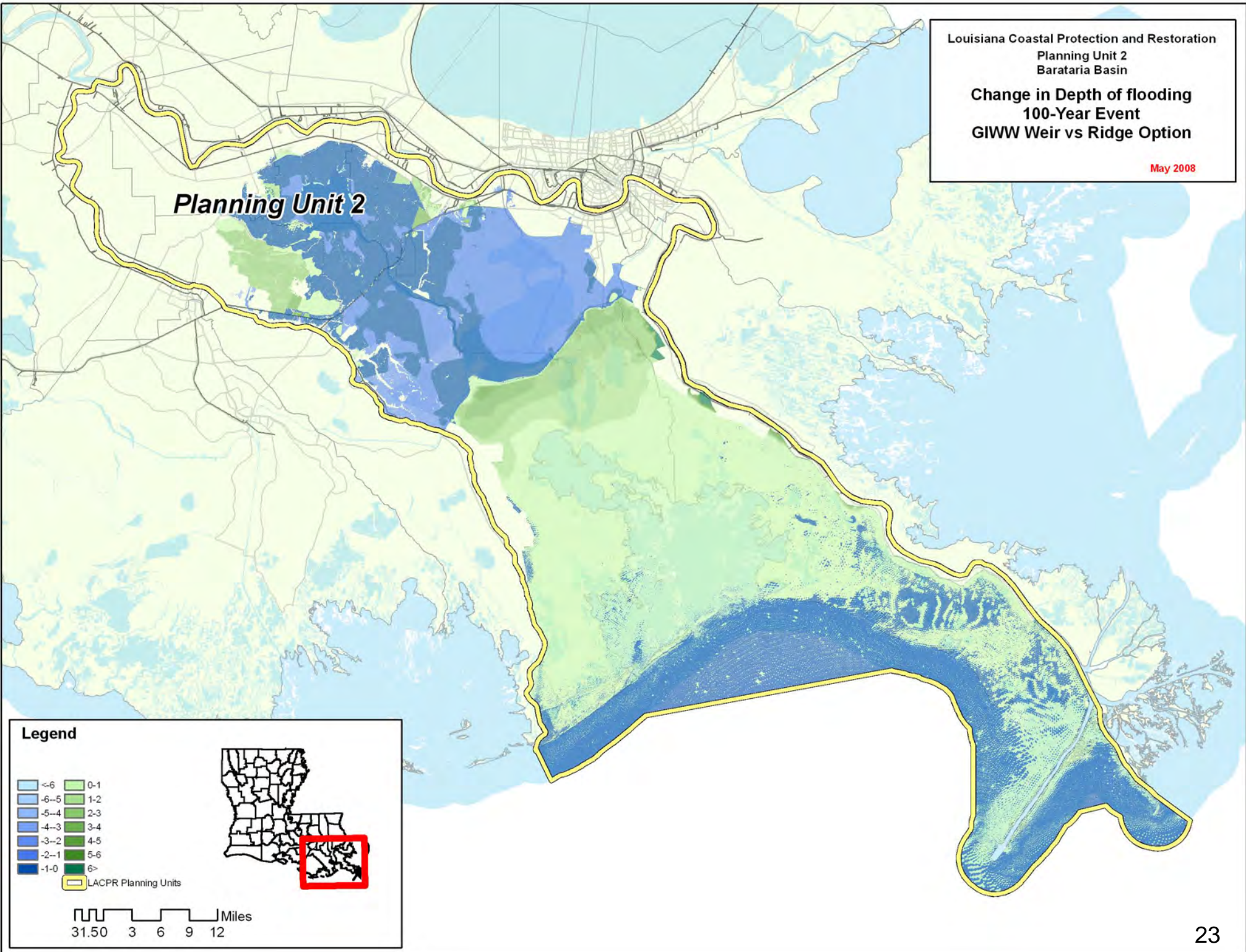
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| | -1-0 | | 6-> |
- LACPR Planning Units



Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Change in Depth of flooding
 100-Year Event
 GIWW Weir vs Ridge Option**

May 2008



Legend

| | | | |
|--|-------------------|--|-----|
| | <math>< -6</math> | | 0-1 |
| | -6-5 | | 1-2 |
| | -5-4 | | 2-3 |
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LACPR Planning Units

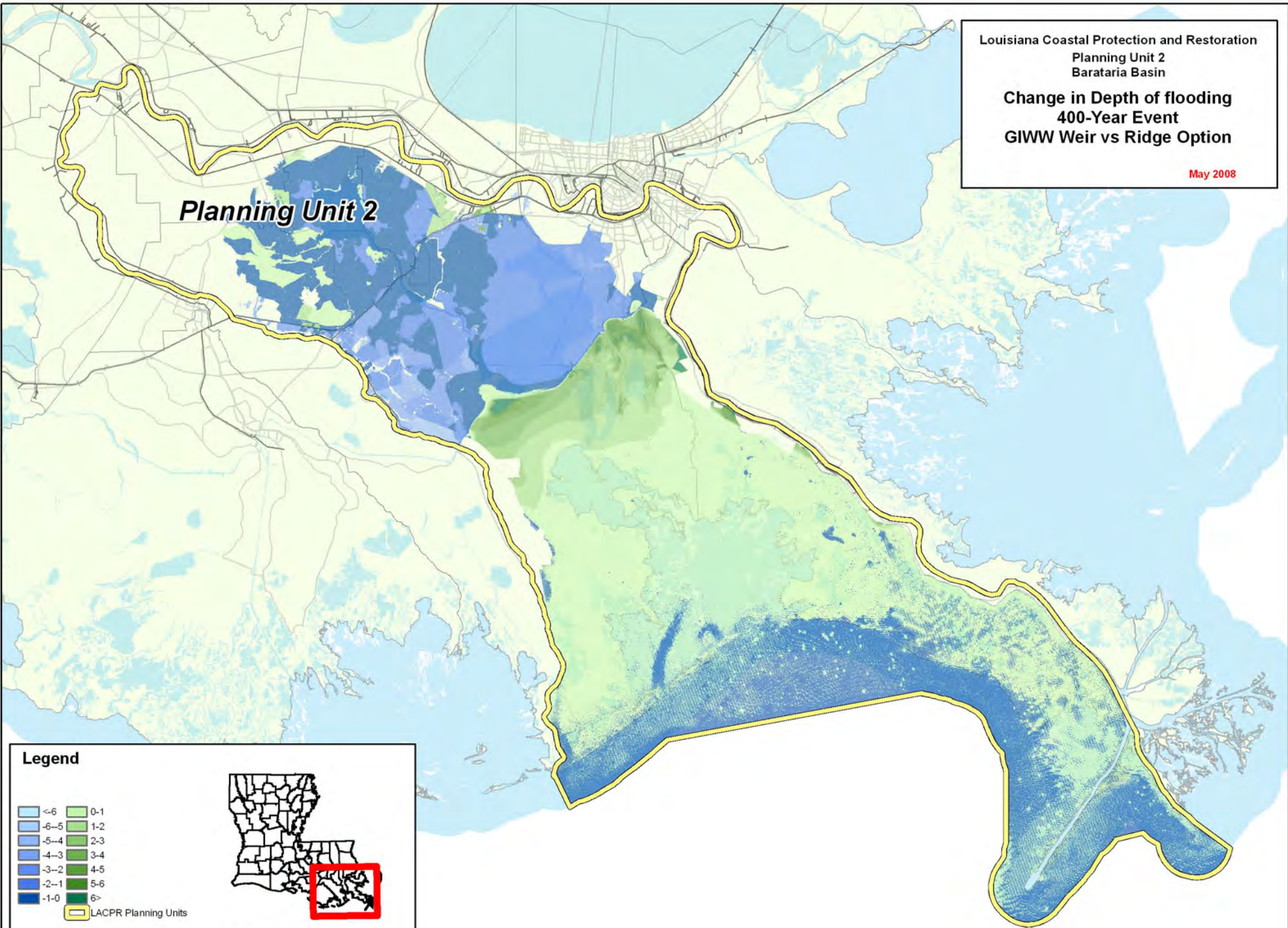
31.50 3 6 9 12 Miles

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Change in Depth of flooding
 400-Year Event
 GIWW Weir vs Ridge Option**

May 2008

Planning Unit 2



Legend

| | | | |
|--|-------------------|--|-----|
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| | -6-5 | | 1-2 |
| | -5-4 | | 2-3 |
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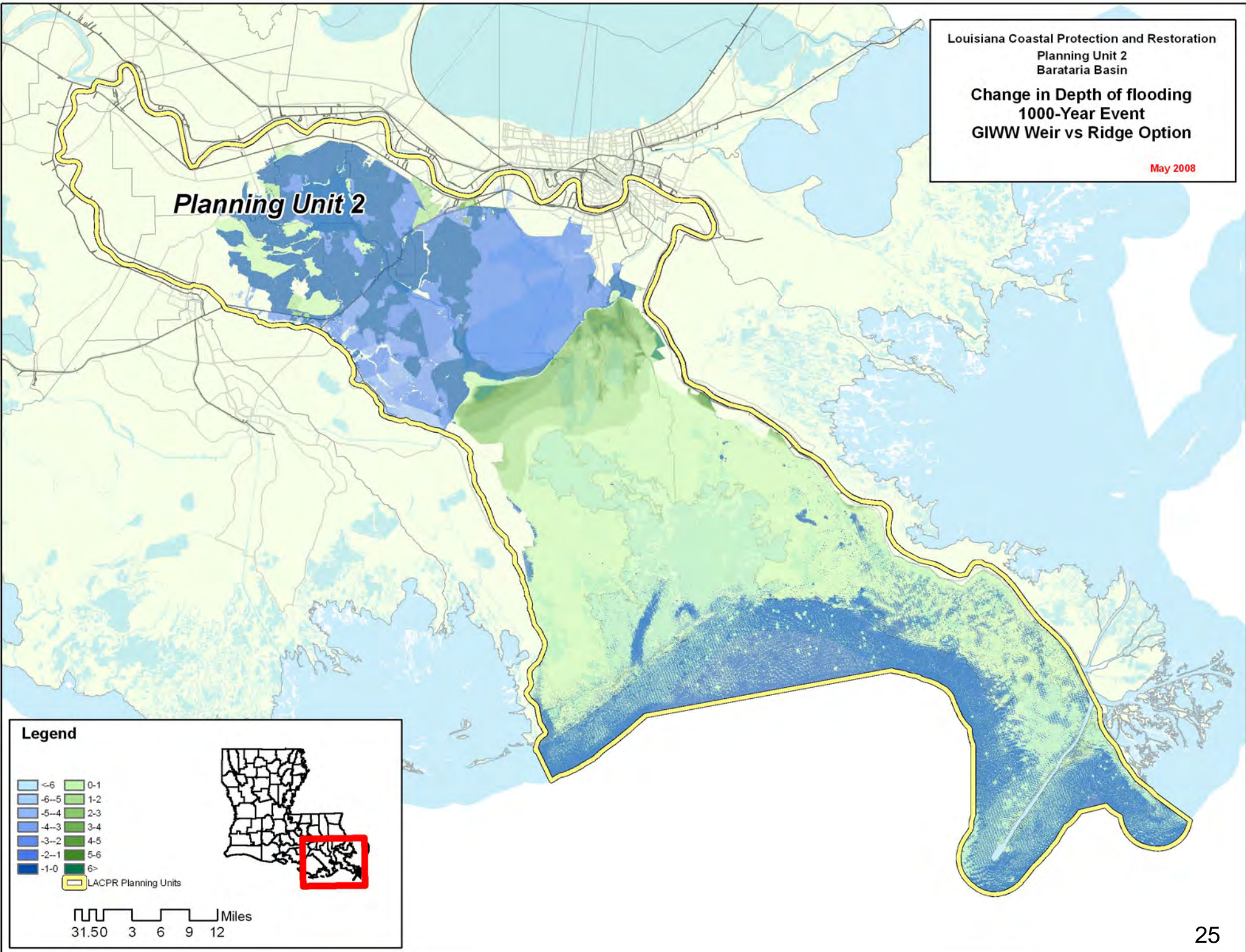
LACPR Planning Units

Miles
 31.50 3 6 9 12

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Change in Depth of flooding
 1000-Year Event
 GIWW Weir vs Ridge Option**

May 2008



| | | | | | |
|---------------------------------|---|---------------------------------|-------|------------------|-----------|
| Planning Unit: | 2 | Alt. No.: | PU2-0 | Category: | No Action |
| Alternative Description: | No action (without project) alternative. | | | | |
| Coastal Component: | Degraded coast--increasing risk. | Nonstructural Component: | None | | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 0 | 22,019 | 792 | 1,461 | 3,239 | 285 | 54 | 16 | 3 |
| | | Mid | | 29,484 | 1,848 | 3,443 | 8,264 | 705 | 48 | 14 | 2 |
| | | Low | | 31,156 | 2,164 | 3,784 | 9,054 | 749 | 42 | 12 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 0 | 25,950 | 1,443 | 2,586 | 6,480 | 581 | 54 | 14 | 3 |
| | | Mid | | 30,305 | 2,044 | 3,604 | 8,513 | 729 | 48 | 13 | 2 |
| | | Low | | 31,441 | 2,285 | 3,967 | 9,325 | 780 | 42 | 11 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 0 | 16,175 | 696 | 1,281 | 2,793 | 240 | 54 | 16 | 3 |
| | | Mid | | 22,294 | 1,601 | 2,753 | 6,635 | 552 | 48 | 14 | 2 |
| | | Low | | 23,789 | 1,851 | 3,050 | 7,283 | 587 | 42 | 12 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 0 | 19,128 | 1,238 | 2,121 | 5,035 | 450 | 54 | 14 | 3 |
| | | Mid | | 22,774 | 1,737 | 2,932 | 6,880 | 577 | 48 | 13 | 2 |
| | | Low | | 23,929 | 1,927 | 3,243 | 7,484 | 612 | 42 | 11 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|---|
| Construction Time (years) | | | 0 | After 50 yrs (% of baseline) | 81 | 79 | 81 | 79 | |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | 74 | 70 | 74 | 70 | |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.21 | Coastal Component | | 0 | 0 | 0 | 0 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 0 | 0 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 0 | 0 | Total Project | | 0 | 0 | 0 | 0 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 No Action Plan |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---------------------------------------|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | N/A | 2,834 | N/A | 1,512 | N/A | 2,129 | N/A | |
| 100-year | 46,652 | N/A | 49,467 | N/A | 37,218 | N/A | 39,133 | N/A | |
| 400-year | 51,671 | N/A | 53,124 | N/A | 40,614 | N/A | 41,659 | N/A | |
| 1,000-year | 53,208 | N/A | 54,188 | N/A | 41,777 | N/A | 42,556 | N/A | |
| 2,000-year | 53,965 | N/A | 54,716 | N/A | 42,386 | N/A | 42,963 | N/A | |

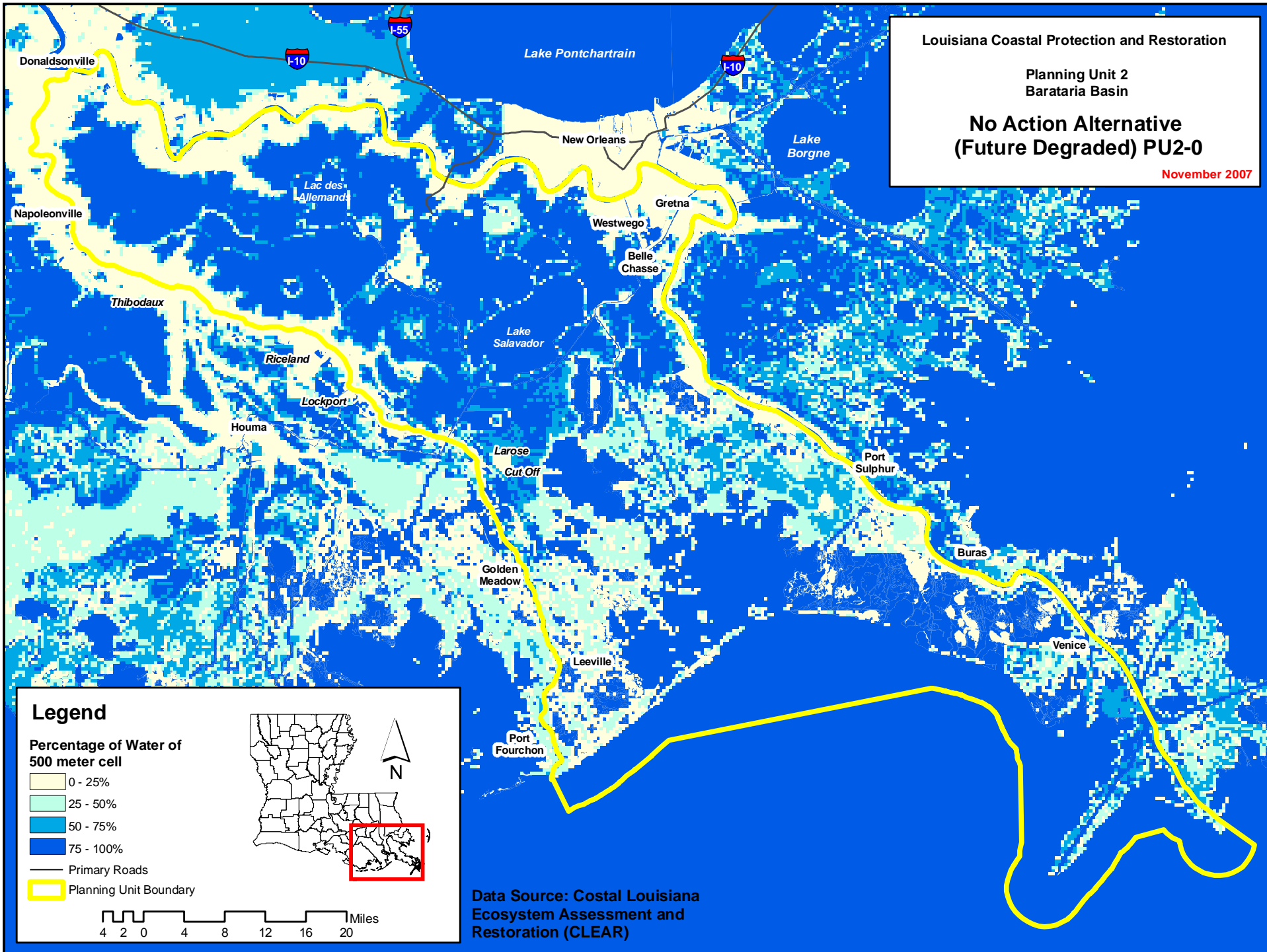
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

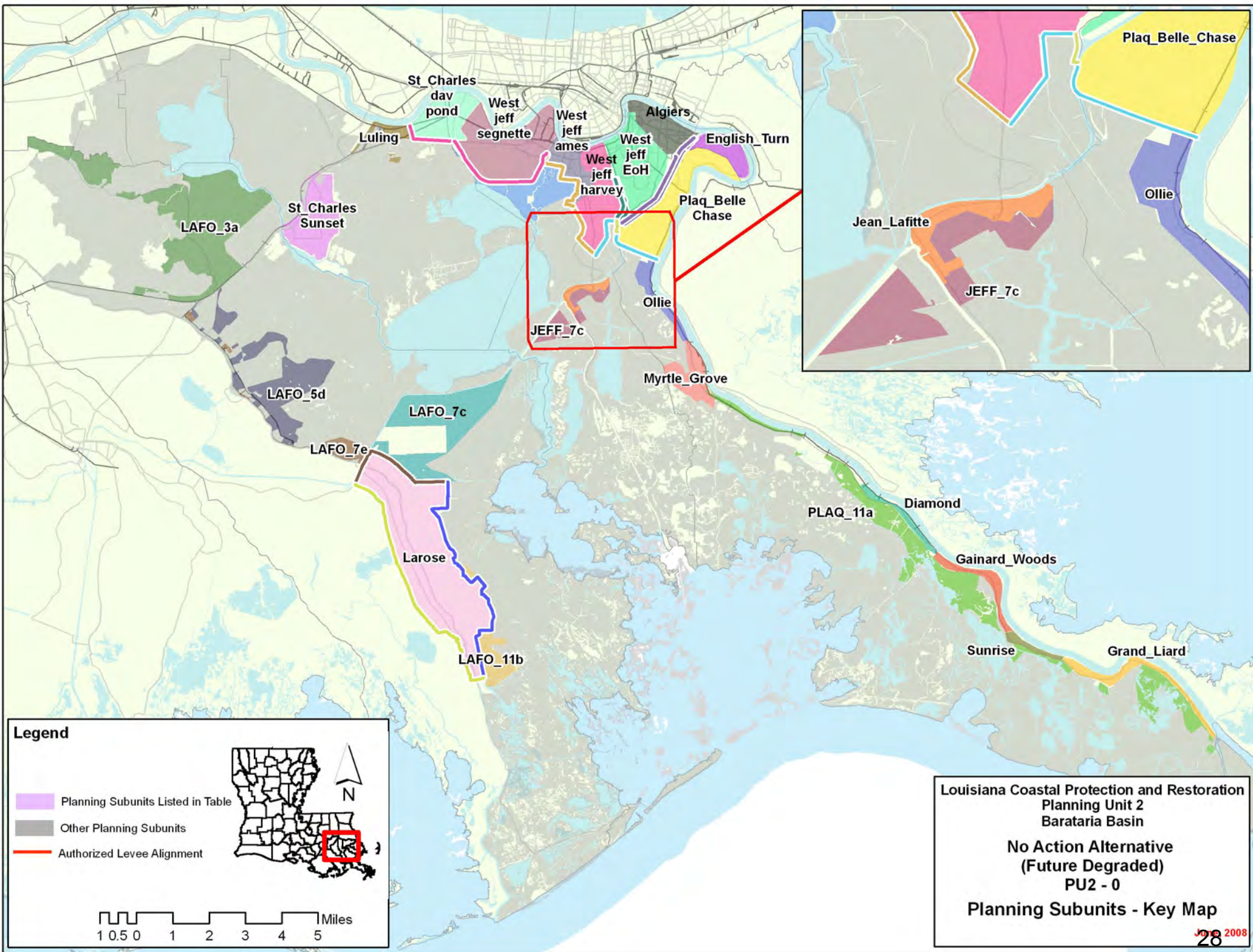
Louisiana Coastal Protection and Restoration

Planning Unit 2
Barataria Basin

No Action Alternative
(Future Degraded) PU2-0

November 2007





LAFO_3a

St Charles Sunset

LAFO_5d

LAFO_7c

LAFO_7e

Larose

LAFO_11b

St Charles dav pond

West jeff segnette

West jeff ames

West jeff EoH

West jeff harvey

Algiers

English_Turn

Plaq_Belle Chase

JEFF_7c

Ollie

Myrtle_Grove

PLAQ_11a

Diamond

Gainard_Woods

Sunrise

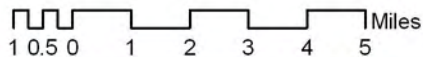
Grand_Liard

Plaq_Belle_Chase

Ollie

Jean_Lafitte

JEFF_7c



Alternative: PU2-0
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|-------------------|-----------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | | 10.7 | | 12.1 | | 12.9 | | 16.3 | | 17.9 | |
| Diamond | 13.0 | | 16.7 | | 18.9 | | 16.2 | | 26.3 | | 30.2 | |
| English_Turn | -1.7 | | 10.7 | | 12.1 | | 12.9 | | 16.3 | | 17.9 | |
| Gainard_Woods | 13.5 | | 17.3 | | 19.7 | | 16.7 | | 20.5 | | 22.9 | |
| Grand_Liard | 15.0 | | 16.7 | | 18.9 | | 18.2 | | 26.3 | | 30.2 | |
| Jean_Lafitte | 8.4 | | 11.9 | | 14.0 | | 13.0 | | 16.9 | | 19.3 | |
| JEFF_7a | 7.7 | | 10.8 | | 13.1 | | 12.8 | | 17.1 | | 18.2 | |
| JEFF_7c | 8.4 | | 11.9 | | 14.0 | | 22.7 | | 27.6 | | 30.0 | |
| LAFO_11b | 11.6 | | 14.5 | | 16.1 | | 14.4 | | 16.9 | | 18.4 | |
| LAFO_3a | 3.9 | | 5.1 | | 6.0 | | 7.0 | | 8.2 | | 9.0 | |
| LAFO_5d | 5.8 | | 8.7 | | 10.9 | | 10.6 | | 13.4 | | 15.1 | |
| LAFO_7c | 7.1 | | 9.1 | | 10.3 | | 12.0 | | 14.2 | | 15.4 | |
| LAFO_7e | 8.1 | | 11.3 | | 13.4 | | 12.5 | | 15.3 | | 17.3 | |
| Larose | -2.5 | | 9.0 | | 12.0 | | 15.0 | | 15.0 | | 15.0 | |
| Luling | 6.1 | | 8.6 | | 10.2 | | 11.8 | | 15.5 | | 17.4 | |
| Myrtle_Grove | 10.3 | | 13.8 | | 15.7 | | 13.5 | | 17.3 | | 18.6 | |
| Ollie | 8.0 | | 13.2 | | 15.3 | | 11.2 | | 19.2 | | 22.1 | |
| PLAQ_11a | 12.5 | | 16.7 | | 18.9 | | 15.9 | | 20.5 | | 22.9 | |
| Plaq_Belle_Chase | -2.6 | | 11.0 | | 11.3 | | 11.6 | | 14.3 | | 15.8 | |
| St_Charles_dav_pond | 1.6 | | 4.8 | | 11.0 | | 11.0 | | 13.2 | | 14.5 | |
| St_Charles_Sunset | 7.0 | | 9.4 | | 10.7 | | 10.0 | | 12.3 | | 13.7 | |
| Sunrise | 15.0 | | 16.7 | | 18.9 | | 18.2 | | 26.3 | | 30.2 | |
| West_jeff_ames | -1.5 | | 11.0 | | 11.3 | | 11.6 | | 14.3 | | 15.8 | |
| West_jeff_EoH | -3.5 | | 11.0 | | 11.3 | | 11.6 | | 14.3 | | 15.8 | |
| West_jeff_harvey | -2.4 | | 11.0 | | 11.3 | | 11.6 | | 14.3 | | 15.8 | |
| West_jeff_segnette | -3.9 | | 11.0 | | 11.3 | | 11.6 | | 14.3 | | 15.8 | |
| Evaluation Parameters | Confidence Level: | | 90% | | | Levee Design: | | No Friction Waves | | | | |
| | Future Relative Sea Level Rise: | | 3.2 feet | | | Levee Overtopping: | | No Friction Waves | | | | |

| | | | | | |
|---------------------------------|--|------------------|---------------------------------|------------------|--------------------------|
| Planning Unit: | 2 | Alt. No.: | PU2-R1 | Category: | Coastal Restoration Only |
| Alternative Description: | Sustain coastal landscape through restoration including shoreline protection, marsh creation, and steady state diversions. | | | | |
| Coastal Component: | R1 (steady state diversions) | | Nonstructural Component: | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv \$ Millions | Ann. Equiv. # | Ann. Equiv \$ Millions | Ann. Equiv \$ Millions | Ann. Equiv # | Ann. Equiv \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 766 | 15,567 | 338 | 563 | 1,203 | 77 | 272 | 16 | 7 |
| | | Mid | | 19,716 | 722 | 1,063 | 2,885 | 187 | 213 | 15 | 6 |
| | | Low | | 21,148 | 967 | 1,521 | 3,806 | 249 | 154 | 13 | 4 |
| 2 | High RSLR High Employment Dispersed Population | High | 768 | 15,853 | 407 | 711 | 1,521 | 110 | 272 | 14 | 7 |
| | | Mid | | 20,012 | 799 | 1,193 | 3,074 | 208 | 213 | 14 | 6 |
| | | Low | | 21,392 | 1,063 | 1,649 | 4,020 | 275 | 154 | 12 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 766 | 10,722 | 330 | 540 | 1,193 | 75 | 272 | 16 | 7 |
| | | Mid | | 14,505 | 682 | 938 | 2,655 | 161 | 213 | 15 | 6 |
| | | Low | | 15,958 | 898 | 1,318 | 3,411 | 211 | 154 | 13 | 4 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 768 | 10,953 | 370 | 688 | 1,433 | 99 | 272 | 14 | 7 |
| | | Mid | | 14,697 | 740 | 1,106 | 2,857 | 185 | 213 | 14 | 6 |
| | | Low | | 16,058 | 962 | 1,484 | 3,568 | 232 | 154 | 12 | 4 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 |
|--|----------|---------------|-------|---|--|------------|------------|------------|------------|
| Construction Time (years) | | 15 | | After 50 yrs (% of baseline) | | 101 | 99 | 101 | 99 |
| Direct Wetland Impacts (acres) | | 0 | | After 100 yrs (% of baseline) | | 108 | 104 | 108 | 104 |
| Indirect Impacts (unitless) | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | 0.36 | | Coastal Component | | 15,001 | 15,033 | 15,001 | 15,033 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 5,250 | 5,261 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 5,250 | 5,261 | Total Project | | 15,001 | 15,033 | 15,001 | 15,033 |

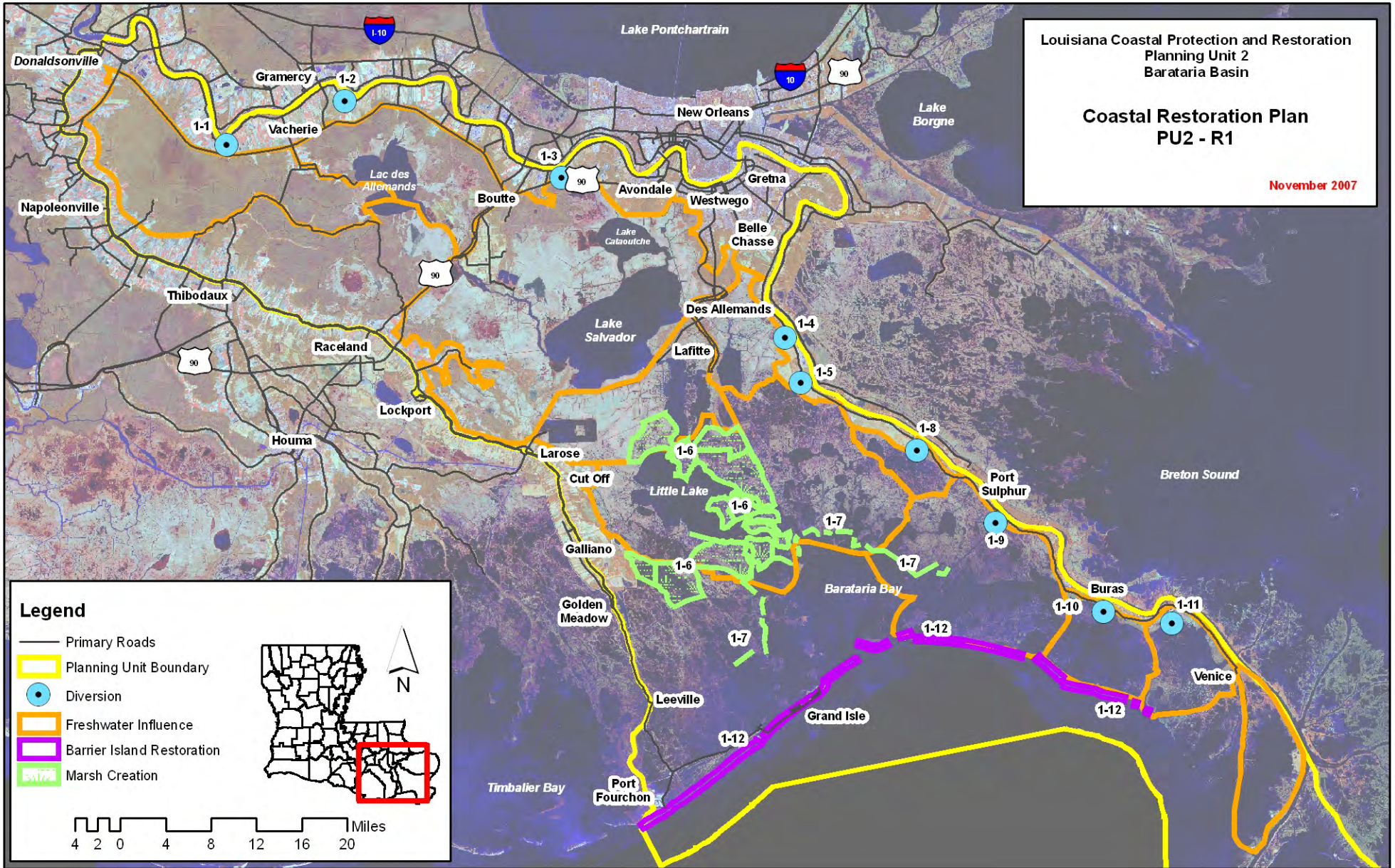
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,805 | 2,834 | 3,062 | 1,512 | 1,692 | 2,129 | 2,316 | |
| 100-year | 46,652 | 6,117 | 49,467 | 8,115 | 37,218 | 4,915 | 39,133 | 6,429 | |
| 400-year | 51,671 | 46,912 | 53,124 | 47,987 | 40,614 | 37,201 | 41,659 | 37,872 | |
| 1,000-year | 53,208 | 50,259 | 54,188 | 51,146 | 41,777 | 39,600 | 42,556 | 40,134 | |
| 2,000-year | 53,965 | 51,581 | 54,716 | 52,300 | 42,386 | 40,485 | 42,963 | 40,926 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Coastal Restoration Plan
 PU2 - R1**

November 2007



| | | | | | |
|---------------------------------|--|------------------|---------------------------------|------------------|--------------------------|
| Planning Unit: | 2 | Alt. No.: | PU2-R2 | Category: | Coastal Restoration Only |
| Alternative Description: | Sustain coastal landscape through restoration including shoreline protection, marsh creation, and pulsed diversions. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 800 | 15,567 | 338 | 563 | 1,203 | 77 | 272 | 16 | 7 |
| | | Mid | | 19,716 | 722 | 1,063 | 2,885 | 187 | 213 | 15 | 6 |
| | | Low | | 21,148 | 967 | 1,521 | 3,806 | 249 | 154 | 13 | 4 |
| 2 | High RSLR High Employment Dispersed Population | High | 801 | 15,853 | 407 | 711 | 1,521 | 110 | 272 | 14 | 7 |
| | | Mid | | 20,012 | 799 | 1,193 | 3,074 | 208 | 213 | 14 | 6 |
| | | Low | | 21,392 | 1,063 | 1,649 | 4,020 | 275 | 154 | 12 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 800 | 10,722 | 330 | 540 | 1,193 | 75 | 272 | 16 | 7 |
| | | Mid | | 14,505 | 682 | 938 | 2,655 | 161 | 213 | 15 | 6 |
| | | Low | | 15,958 | 898 | 1,318 | 3,411 | 211 | 154 | 13 | 4 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 801 | 10,953 | 370 | 688 | 1,433 | 99 | 272 | 14 | 7 |
| | | Mid | | 14,697 | 740 | 1,106 | 2,857 | 185 | 213 | 14 | 6 |
| | | Low | | 16,058 | 962 | 1,484 | 3,568 | 232 | 154 | 12 | 4 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|------|---------------|---|-------------------------|------------|------------|------------|------------|--------|
| Construction Time (years) | | 15 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 | |
| Direct Wetland Impacts (acres) | | 0 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 | |
| Indirect Impacts (unitless) | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | | |
| Spatial Integrity (unitless) | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 | |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | | 5,480 | 5,491 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | | 5,480 | 5,491 | Total Project | | 15,657 | 15,689 | 15,657 | 15,689 |

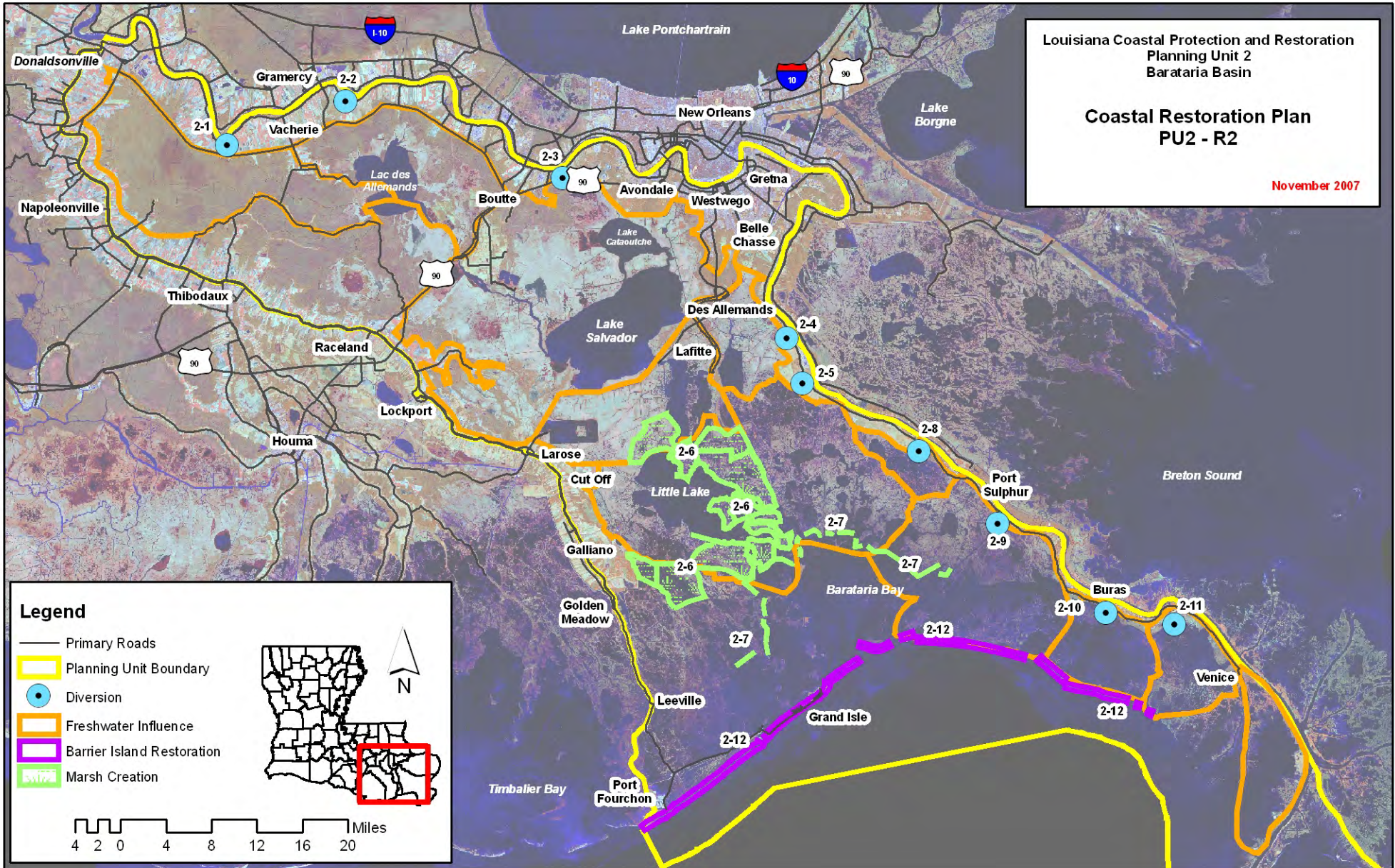
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,805 | 2,834 | 3,062 | 1,512 | 1,692 | 2,129 | 2,316 | |
| 100-year | 46,652 | 6,117 | 49,467 | 8,115 | 37,218 | 4,915 | 39,133 | 6,429 | |
| 400-year | 51,671 | 46,912 | 53,124 | 47,987 | 40,614 | 37,201 | 41,659 | 37,872 | |
| 1,000-year | 53,208 | 50,259 | 54,188 | 51,146 | 41,777 | 39,600 | 42,556 | 40,134 | |
| 2,000-year | 53,965 | 51,581 | 54,716 | 52,300 | 42,386 | 40,485 | 42,963 | 40,926 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

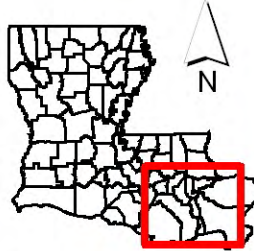
Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Coastal Restoration Plan
 PU2 - R2**

November 2007



- Legend**
- Primary Roads
 - ▭ Planning Unit Boundary
 - Diversion
 - ▭ Freshwater Influence
 - ▭ Barrier Island Restoration
 - ▭ Marsh Creation



4 2 0 4 8 12 16 20 Miles

| | | | | | |
|---------------------------------|--|---------------------------------|--------|------------------|--------------------------|
| Planning Unit: | 2 | Alt. No.: | PU2-R3 | Category: | Coastal Restoration Only |
| Alternative Description: | Sustain coastal landscape through restoration including shoreline protection, marsh creation, and diversions as proposed in the State Master Plan. | | | | |
| Coastal Component: | R3 (state plan) | Nonstructural Component: | None | | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv \$ Millions | Ann. Equiv. # | Ann. Equiv \$ Millions | Ann. Equiv \$ Millions | Ann. Equiv # | Ann. Equiv \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 932 | 15,567 | 338 | 563 | 1,203 | 77 | 272 | 16 | 7 |
| | | Mid | | 19,716 | 722 | 1,063 | 2,885 | 187 | 213 | 15 | 6 |
| | | Low | | 21,148 | 967 | 1,521 | 3,806 | 249 | 154 | 13 | 4 |
| 2 | High RSLR High Employment Dispersed Population | High | 937 | 15,853 | 407 | 711 | 1,521 | 110 | 272 | 14 | 7 |
| | | Mid | | 20,012 | 799 | 1,193 | 3,074 | 208 | 213 | 14 | 6 |
| | | Low | | 21,392 | 1,063 | 1,649 | 4,020 | 275 | 154 | 12 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 932 | 10,722 | 330 | 540 | 1,193 | 75 | 272 | 16 | 7 |
| | | Mid | | 14,505 | 682 | 938 | 2,655 | 161 | 213 | 15 | 6 |
| | | Low | | 15,958 | 898 | 1,318 | 3,411 | 211 | 154 | 13 | 4 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 937 | 10,953 | 370 | 688 | 1,433 | 99 | 272 | 14 | 7 |
| | | Mid | | 14,697 | 740 | 1,106 | 2,857 | 185 | 213 | 14 | 6 |
| | | Low | | 16,058 | 962 | 1,484 | 3,568 | 232 | 154 | 12 | 4 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 101 | 98 | 101 | 98 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.40 | Coastal Component | | 18,245 | 18,355 | 18,245 | 18,355 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 6,386 | 6,424 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 6,386 | 6,424 | Total Project | | 18,245 | 18,355 | 18,245 | 18,355 |

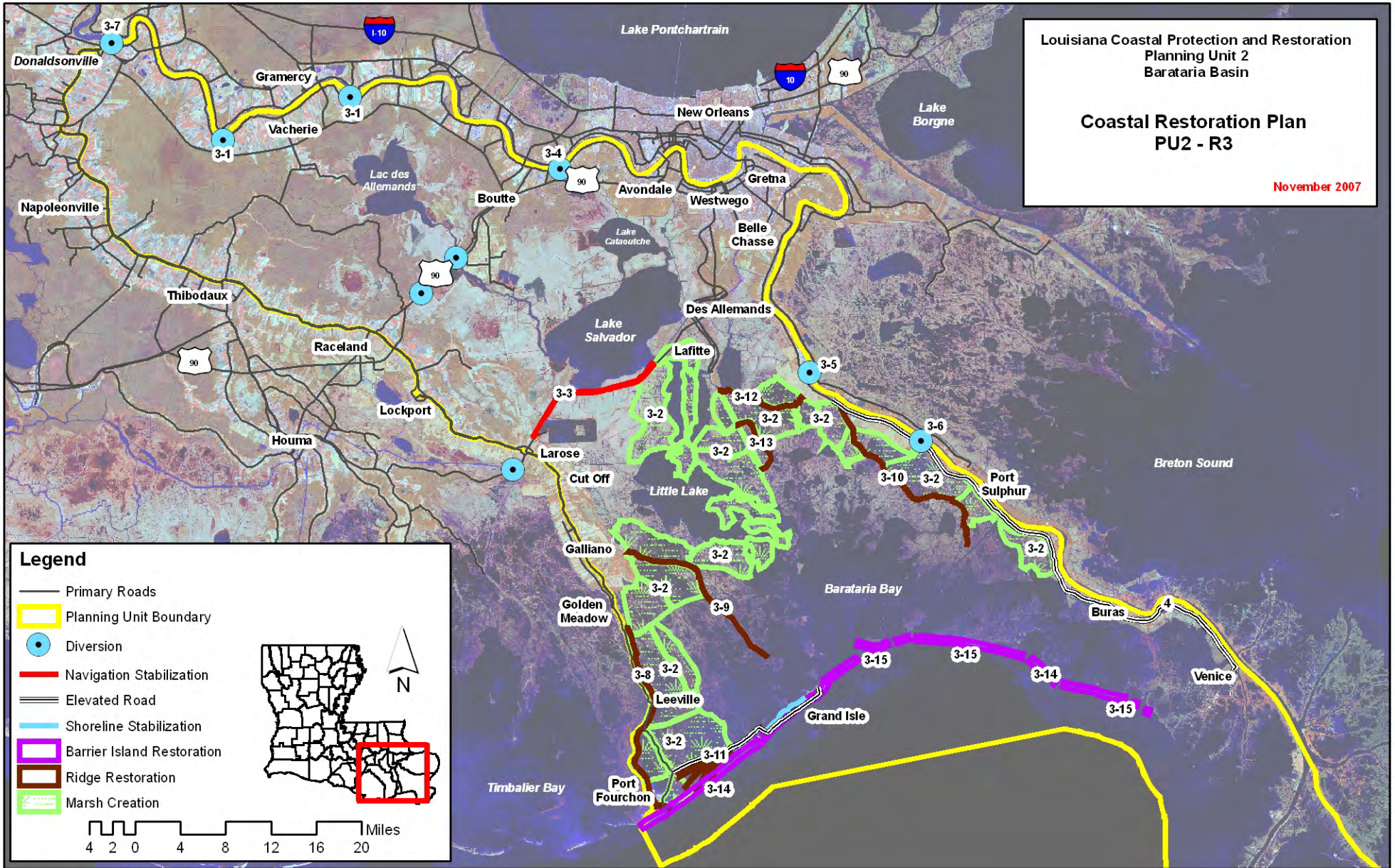
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,805 | 2,834 | 3,062 | 1,512 | 1,692 | 2,129 | 2,316 | |
| 100-year | 46,652 | 6,117 | 49,467 | 8,115 | 37,218 | 4,915 | 39,133 | 6,429 | |
| 400-year | 51,671 | 46,912 | 53,124 | 47,987 | 40,614 | 37,201 | 41,659 | 37,872 | |
| 1,000-year | 53,208 | 50,259 | 54,188 | 51,146 | 41,777 | 39,600 | 42,556 | 40,134 | |
| 2,000-year | 53,965 | 51,581 | 54,716 | 52,300 | 42,386 | 40,485 | 42,963 | 40,926 | |

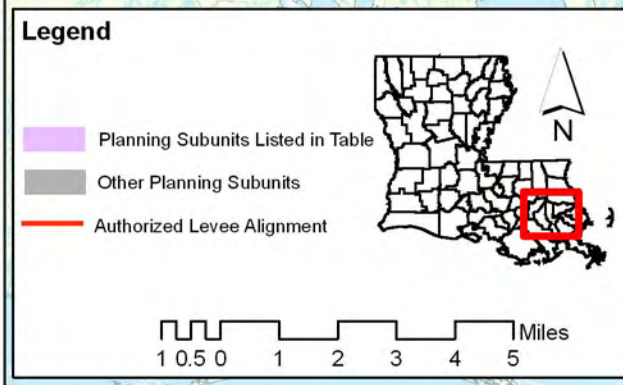
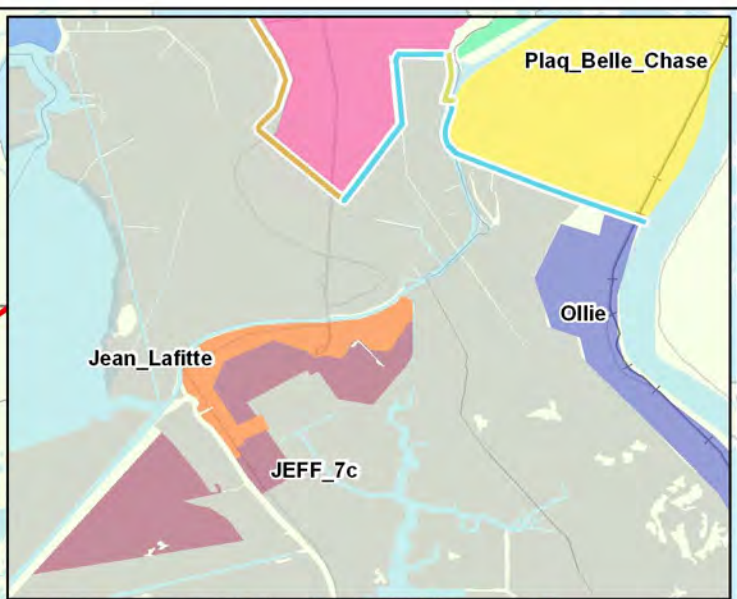
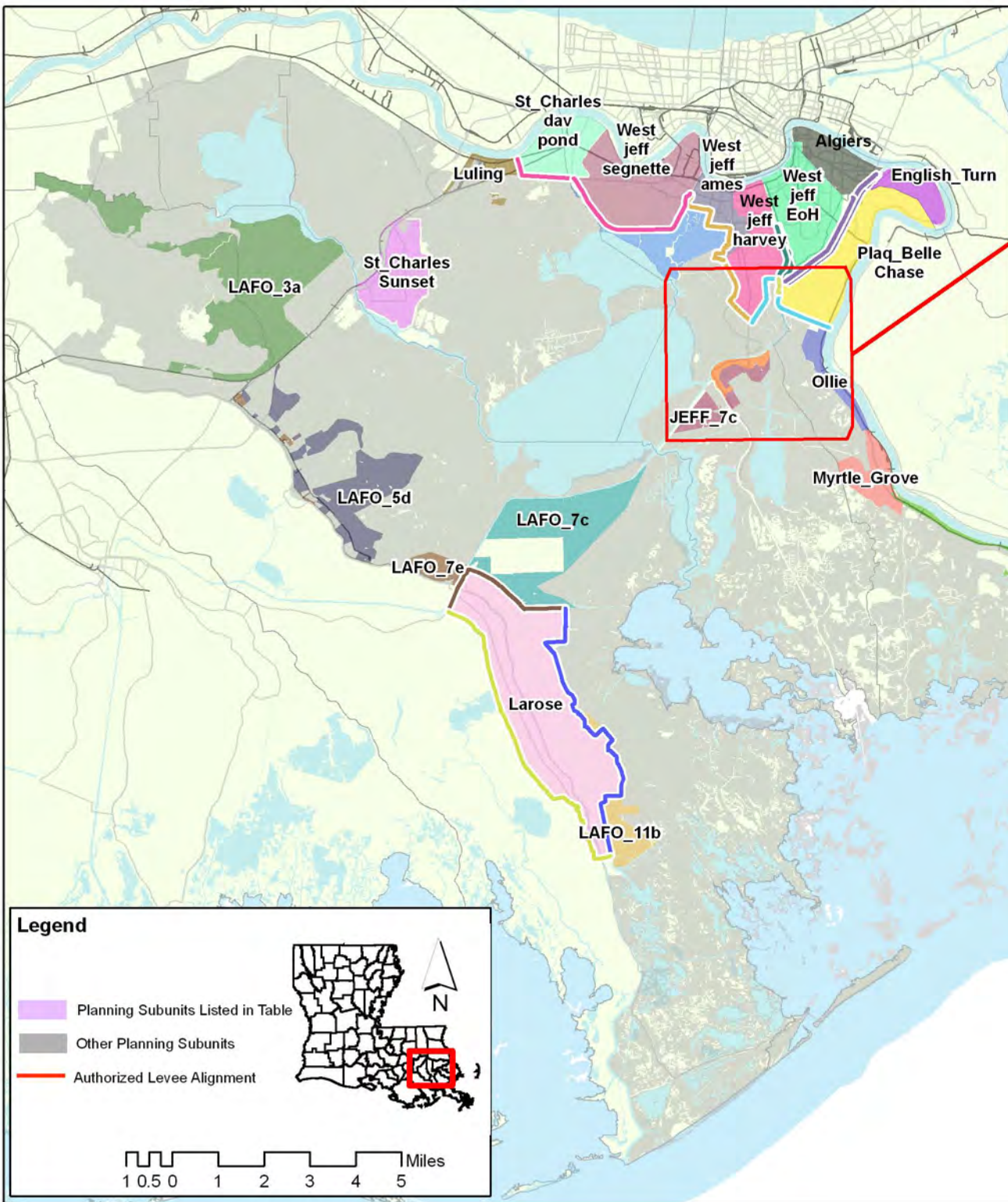
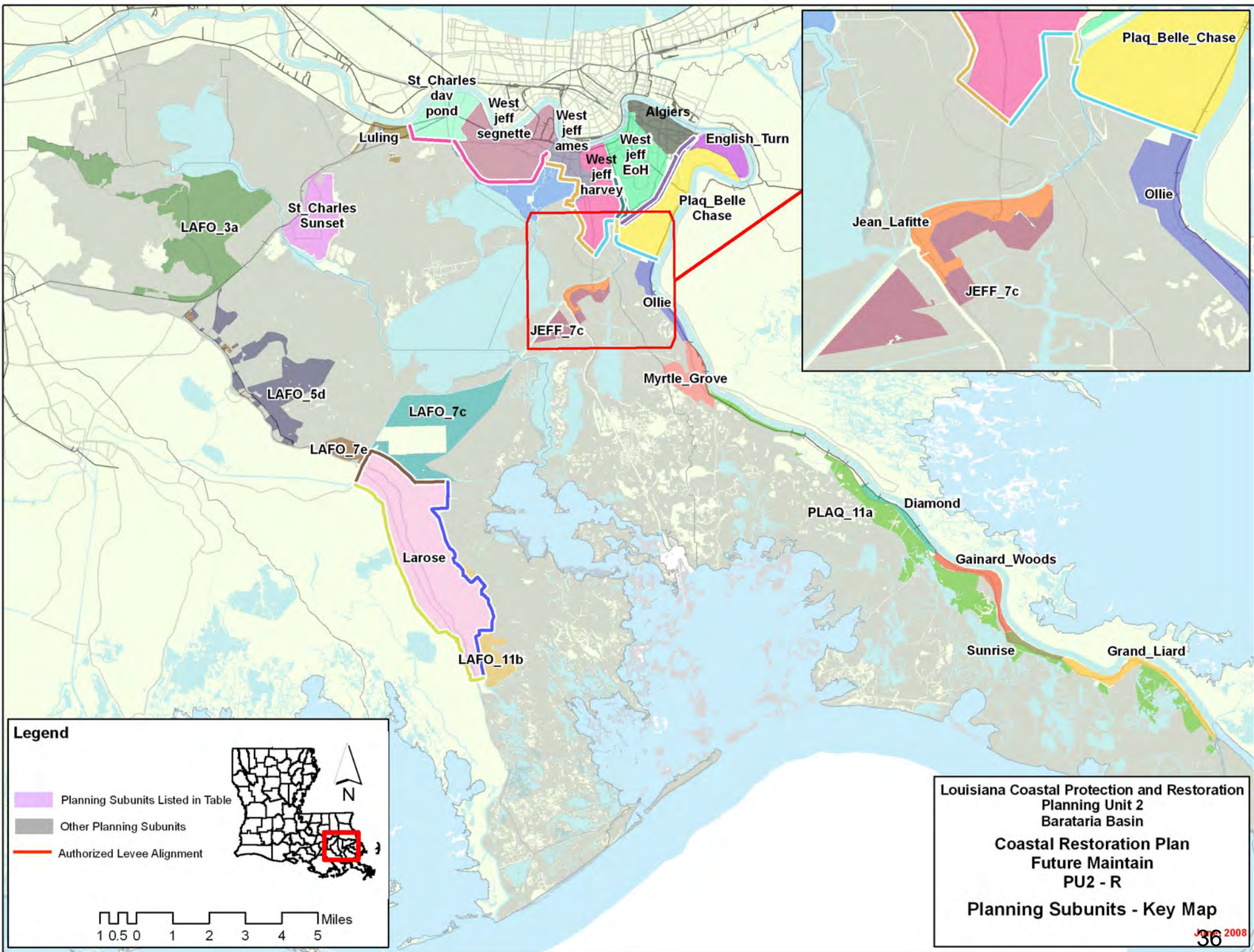
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Coastal Restoration Plan
 PU2 - R3**

November 2007





Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
 Coastal Restoration Plan
 Future Maintain
 PU2 - R
 Planning Subunits - Key Map

Alternative: PU2-R1, R2, and R3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions* | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|-------------------|-----------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.9 | -3.9 | 10.7 | 10.7 | 12.1 | 12.1 | 12.9 | -3.9 | 16.3 | 10.7 | 17.9 | 10.7 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | 10.7 | 12.1 | 12.1 | 12.9 | -1.7 | 16.3 | 10.7 | 17.9 | 12.1 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.4 | 16.9 | 16.9 | 18.4 | 18.4 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.0 | 8.2 | 8.2 | 9.0 | 9.0 |
| LAFO_5d | 5.8 | 5.8 | 8.7 | 8.7 | 10.9 | 10.9 | 10.6 | 9.0 | 13.4 | 11.9 | 15.1 | 14.1 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 8.1 | 11.3 | 11.3 | 13.4 | 13.4 | 12.5 | 11.3 | 15.3 | 14.5 | 17.3 | 16.6 |
| Larose | -2.5 | -2.5 | 9.0 | 9.0 | 12.0 | 12.0 | 15.0 | -2.5 | 15.0 | 9.0 | 15.0 | 12.0 |
| Luling | 6.1 | 6.1 | 8.6 | 8.6 | 10.2 | 10.2 | 11.8 | 9.3 | 15.5 | 11.8 | 17.4 | 13.4 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.6 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.7 | -2.7 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -2.7 | 14.3 | 11.0 | 15.8 | 11.3 |
| St_Charles_dav_pond | 1.6 | 1.6 | 4.8 | 4.8 | 11.0 | 11.0 | 11.0 | 1.6 | 13.2 | 4.8 | 14.5 | 11.0 |
| St_Charles_Sunset | 7.0 | 7.0 | 9.4 | 9.4 | 10.7 | 10.7 | 10.0 | 10.0 | 12.3 | 12.3 | 13.7 | 13.7 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -1.5 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_EoH | -3.6 | -3.6 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.6 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_harvey | -2.4 | -2.4 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -2.4 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_segnette | -3.9 | -3.9 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.9 | 14.3 | 11.0 | 15.8 | 11.3 |
| Evaluation Parameters | Confidence Level: | | 90% | | | Levee Design: | | No Friction Waves | | | | |
| | Future Relative Sea Level Rise: | | 3.2 feet | | | Levee Overtopping: | | No Friction Waves | | | | |

* With and without project base conditions (2010) are the same for coastal restoration only plans.

| | | | | | |
|---------------------------------|---|------------------|---------------------------------|-----------------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-NS-100 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 100-year nonstructural measures. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 100-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,017 | 14,024 | 159 | 166 | 462 | 24 | 272 | 16 | 7 |
| | | Mid | | 17,787 | 444 | 549 | 1,890 | 105 | 213 | 15 | 6 |
| | | Low | | 19,187 | 649 | 797 | 2,611 | 145 | 154 | 13 | 4 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,018 | 14,171 | 187 | 262 | 668 | 44 | 272 | 14 | 7 |
| | | Mid | | 17,939 | 487 | 617 | 2,019 | 117 | 213 | 14 | 6 |
| | | Low | | 19,312 | 701 | 868 | 2,745 | 160 | 154 | 12 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,023 | 9,774 | 147 | 157 | 458 | 23 | 272 | 16 | 7 |
| | | Mid | | 13,326 | 420 | 492 | 1,783 | 92 | 213 | 15 | 6 |
| | | Low | | 14,794 | 592 | 709 | 2,415 | 127 | 154 | 13 | 4 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,025 | 9,893 | 165 | 255 | 628 | 40 | 272 | 14 | 7 |
| | | Mid | | 13,425 | 451 | 588 | 1,931 | 107 | 213 | 14 | 6 |
| | | Low | | 14,846 | 630 | 801 | 2,523 | 139 | 154 | 12 | 4 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|------------------------|--|----------------------------|-------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 15 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 0 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario (\$ Millions) | | Nonstructural Component | | 4,263 | 4,263 | 4,391 | 4,391 | | |
| | 1 / 2 | | 6,972 | 6,983 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | | 7,017 | 7,028 | Total Project | | 19,920 | 19,952 | 20,048 | 20,080 |

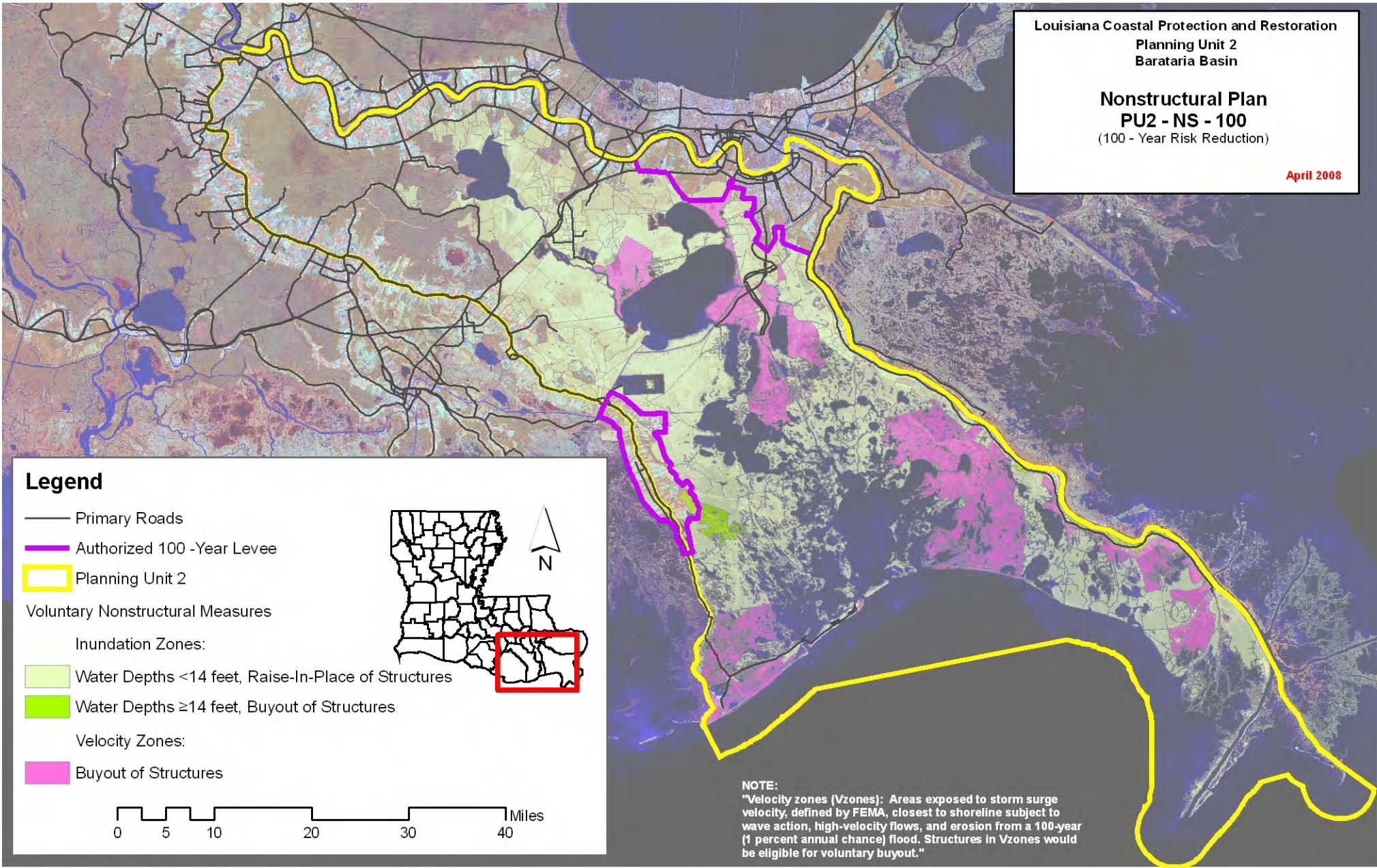
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Nonstructural Plan 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 629 | 2,834 | 1,754 | 1,512 | 491 | 2,129 | 983 | |
| 100-year | 46,652 | 3,483 | 49,467 | 5,724 | 37,218 | 2,278 | 39,133 | 4,200 | |
| 400-year | 51,671 | 44,758 | 53,124 | 46,011 | 40,614 | 35,265 | 41,659 | 36,162 | |
| 1,000-year | 53,208 | 48,282 | 54,188 | 49,205 | 41,777 | 37,928 | 42,556 | 38,541 | |
| 2,000-year | 53,965 | 49,627 | 54,716 | 50,418 | 42,386 | 38,886 | 42,963 | 39,404 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

Nonstructural Plan
PU2 - NS - 100
 (100 - Year Risk Reduction)

April 2008

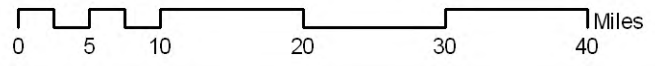


Legend

- Primary Roads
- Authorized 100 -Year Levee
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|---|---------------------------------|-----------------------------|------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-NS-400 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 400-year nonstructural measures. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 400-yr stand alone measures | | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,603 | 11,761 | 115 | 108 | 306 | 14 | 272 | 16 | 7 |
| | | Mid | | 15,241 | 241 | 230 | 935 | 43 | 213 | 15 | 6 |
| | | Low | | 16,460 | 332 | 488 | 1,873 | 92 | 154 | 13 | 4 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,604 | 11,908 | 120 | 127 | 343 | 17 | 272 | 14 | 7 |
| | | Mid | | 15,394 | 252 | 253 | 966 | 46 | 213 | 14 | 6 |
| | | Low | | 16,586 | 360 | 595 | 2,045 | 110 | 154 | 12 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,206 | 7,989 | 113 | 107 | 303 | 13 | 272 | 16 | 7 |
| | | Mid | | 11,306 | 239 | 227 | 942 | 42 | 213 | 15 | 6 |
| | | Low | | 12,534 | 324 | 457 | 1,826 | 87 | 154 | 13 | 4 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,208 | 8,108 | 116 | 129 | 359 | 18 | 272 | 14 | 7 |
| | | Mid | | 11,406 | 247 | 250 | 985 | 46 | 213 | 14 | 6 |
| | | Low | | 12,585 | 339 | 584 | 2,001 | 105 | 154 | 12 | 4 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 15,762 | 15,762 | 27,608 | 27,608 |
| | 1 / 2 | 10,997 | 11,008 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 15,143 | 15,154 | Total Project | | 31,419 | 31,451 | 43,265 | 43,297 |

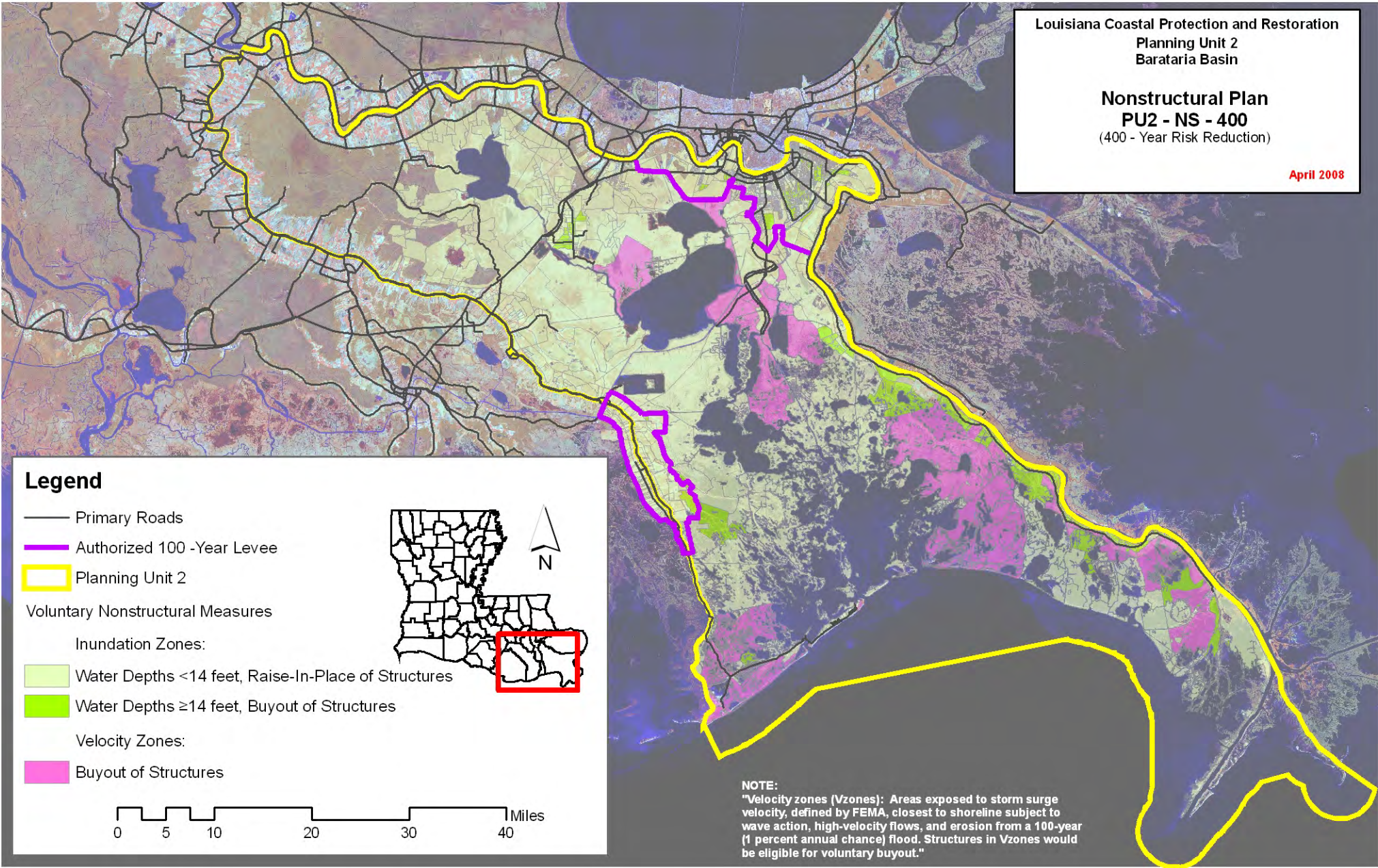
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Nonstructural Plan 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 256 | 2,834 | 577 | 1,512 | 211 | 2,129 | 405 | |
| 100-year | 46,652 | 517 | 49,467 | 1,821 | 37,218 | 445 | 39,133 | 1,044 | |
| 400-year | 51,671 | 5,548 | 53,124 | 7,537 | 40,614 | 4,016 | 41,659 | 5,752 | |
| 1,000-year | 53,208 | 13,451 | 54,188 | 14,793 | 41,777 | 9,816 | 42,556 | 10,693 | |
| 2,000-year | 53,965 | 24,867 | 54,716 | 25,943 | 42,386 | 18,767 | 42,963 | 19,548 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

Nonstructural Plan
PU2 - NS - 400
 (400 - Year Risk Reduction)

April 2008

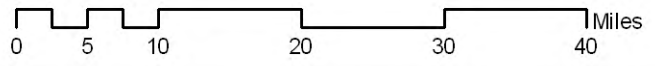
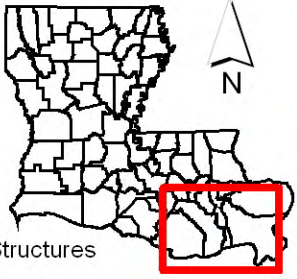


Legend

- Primary Roads
- Authorized 100 -Year Levee
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|--|------------------|---------------------------------|------------------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-NS-1000 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 1000-year nonstructural measures. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 1000-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,294 | 11,358 | 111 | 108 | 304 | 14 | 272 | 16 | 7 |
| | | Mid | | 14,699 | 227 | 180 | 761 | 32 | 213 | 15 | 6 |
| | | Low | | 15,909 | 302 | 270 | 1,058 | 45 | 154 | 13 | 4 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,296 | 11,505 | 113 | 109 | 308 | 14 | 272 | 14 | 7 |
| | | Mid | | 14,852 | 232 | 190 | 783 | 34 | 213 | 14 | 6 |
| | | Low | | 16,035 | 312 | 305 | 1,128 | 51 | 154 | 12 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,316 | 7,845 | 110 | 106 | 300 | 13 | 272 | 16 | 7 |
| | | Mid | | 11,051 | 228 | 178 | 769 | 32 | 213 | 15 | 6 |
| | | Low | | 12,275 | 301 | 261 | 1,035 | 43 | 154 | 13 | 4 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,318 | 7,963 | 111 | 107 | 307 | 14 | 272 | 14 | 7 |
| | | Mid | | 11,150 | 231 | 186 | 794 | 34 | 213 | 14 | 6 |
| | | Low | | 12,326 | 306 | 309 | 1,137 | 52 | 154 | 12 | 4 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|------|---------------|---|-------------------------|------------|------------|------------|------------|--------|
| Construction Time (years) | | 15 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 | |
| Direct Wetland Impacts (acres) | | 0 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 | |
| Indirect Impacts (unitless) | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | | |
| Spatial Integrity (unitless) | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 | |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | | (\$ Millions) | | Nonstructural Component | | 29,329 | 29,329 | 29,764 | 29,764 |
| | 1 / 2 | | 15,745 | 15,756 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | | 15,897 | 15,908 | Total Project | | 44,986 | 45,018 | 45,421 | 45,453 |

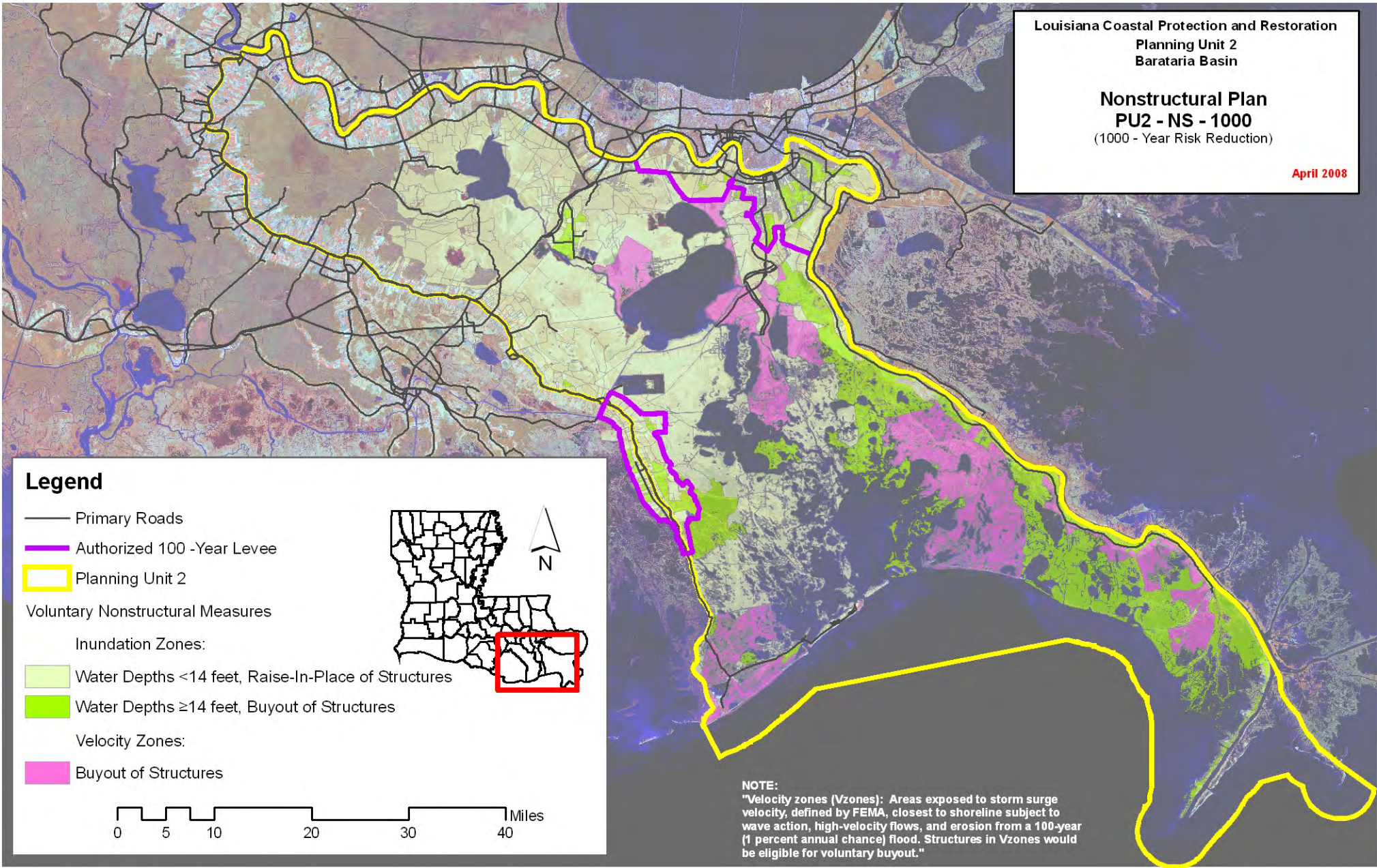
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Nonstructural Plan 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 155 | 2,834 | 288 | 1,512 | 131 | 2,129 | 187 | |
| 100-year | 46,652 | 349 | 49,467 | 670 | 37,218 | 310 | 39,133 | 491 | |
| 400-year | 51,671 | 1,950 | 53,124 | 3,902 | 40,614 | 1,573 | 41,659 | 2,652 | |
| 1,000-year | 53,208 | 4,675 | 54,188 | 6,759 | 41,777 | 3,346 | 42,556 | 5,180 | |
| 2,000-year | 53,965 | 9,862 | 54,716 | 11,766 | 42,386 | 7,641 | 42,963 | 8,659 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

Nonstructural Plan
PU2 - NS - 1000
 (1000 - Year Risk Reduction)

April 2008

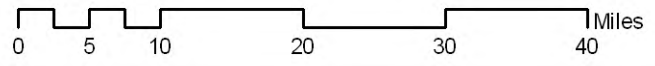
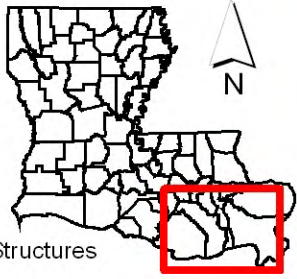


Legend

- Primary Roads
- Authorized 100 -Year Levee
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

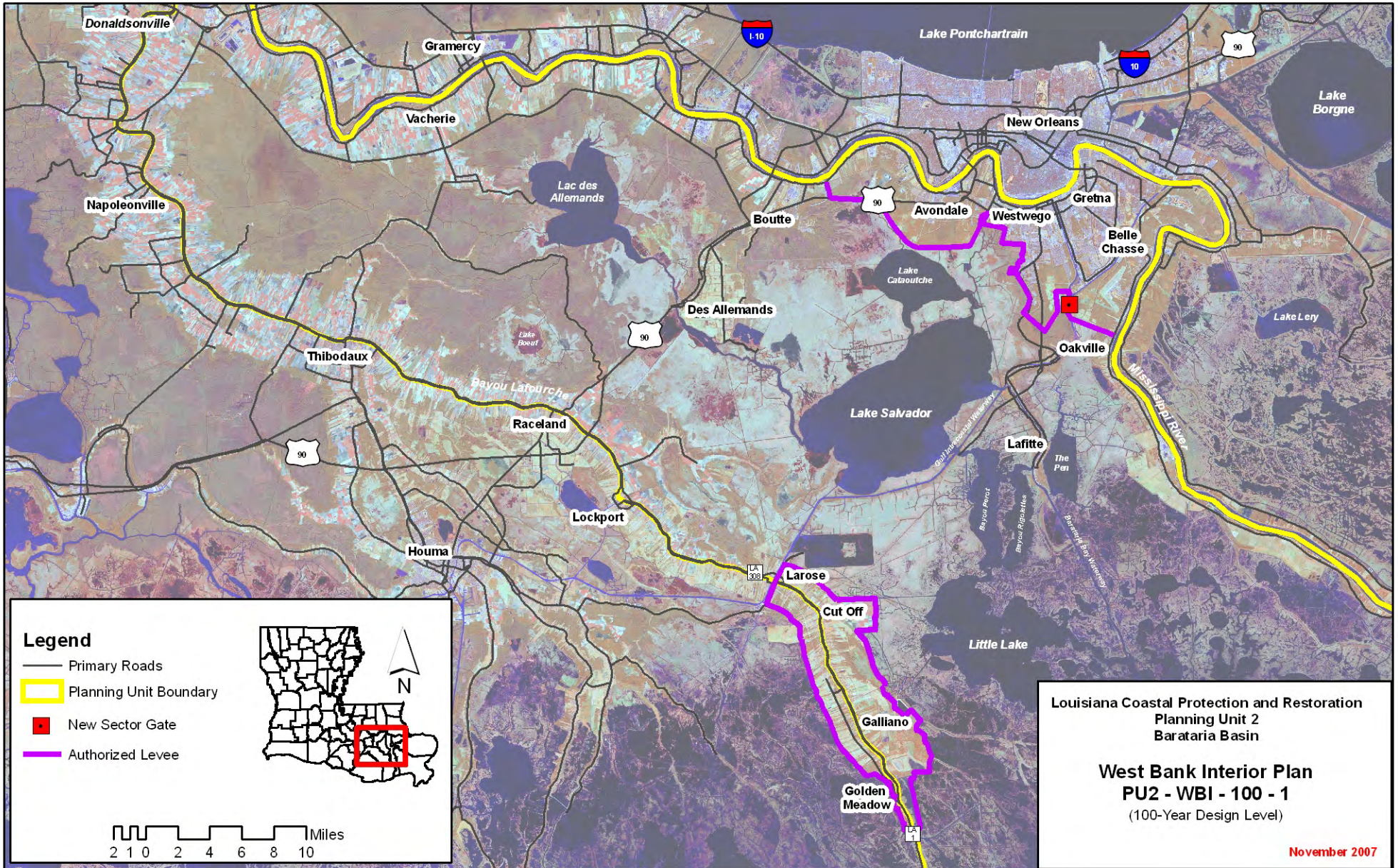
| | | | | | |
|---------------------------------|--|------------------|---------------------------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-WBI-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Construct new sector gate on Bayou Baratavia to reduce risk on the West Bank. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 851 | 15,555 | 353 | 581 | 1,264 | 84 | 266 | 17 | 8 |
| | | Mid | | 19,088 | 683 | 1,050 | 2,670 | 179 | 213 | 15 | 7 |
| | | Low | | 20,935 | 983 | 1,541 | 3,883 | 256 | 160 | 14 | 6 |
| 2 | High RSLR High Employment Dispersed Population | High | 853 | 16,029 | 449 | 772 | 1,722 | 128 | 266 | 15 | 7 |
| | | Mid | | 19,381 | 758 | 1,167 | 2,840 | 197 | 213 | 14 | 7 |
| | | Low | | 21,153 | 1,070 | 1,657 | 4,075 | 279 | 160 | 13 | 6 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 851 | 10,792 | 340 | 523 | 1,230 | 80 | 266 | 17 | 8 |
| | | Mid | | 14,045 | 644 | 916 | 2,449 | 154 | 213 | 15 | 7 |
| | | Low | | 15,876 | 921 | 1,335 | 3,491 | 218 | 160 | 14 | 6 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 853 | 11,162 | 406 | 725 | 1,563 | 112 | 266 | 15 | 7 |
| | | Mid | | 14,233 | 700 | 1,064 | 2,629 | 175 | 213 | 14 | 7 |
| | | Low | | 15,966 | 977 | 1,483 | 3,632 | 236 | 160 | 13 | 6 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 |
|--|----------|-------|---------------|---|-------------------------|------------|------------|------------|------------|
| Construction Time (years) | | 6 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | 0 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 |
| | 1 / 2 | 5,858 | 5,877 | Structural Component | | 999 | 1,024 | 999 | 1,024 |
| | 3 / 4 | 5,858 | 5,877 | Total Project | | 16,656 | 16,713 | 16,656 | 16,713 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan West Bank Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,805 | 2,834 | 3,062 | 1,512 | 1,692 | 2,129 | 2,316 | |
| 100-year | 46,652 | 6,102 | 49,467 | 8,100 | 37,218 | 4,903 | 39,133 | 6,416 | |
| 400-year | 51,671 | 40,302 | 53,124 | 41,377 | 40,614 | 33,950 | 41,659 | 34,622 | |
| 1,000-year | 53,208 | 44,147 | 54,188 | 45,034 | 41,777 | 36,705 | 42,556 | 37,239 | |
| 2,000-year | 53,965 | 45,405 | 54,716 | 46,123 | 42,386 | 37,560 | 42,963 | 38,001 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Alternative: PU2-WBI-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 5.8 | 8.7 | 8.7 | 10.9 | 10.9 | 10.6 | 9.0 | 13.4 | 11.9 | 15.1 | 14.1 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 8.1 | 11.3 | 11.3 | 13.4 | 13.4 | 12.5 | 11.3 | 15.3 | 14.5 | 17.3 | 16.6 |
| Larose | -2.5 | -2.5 | 9.0 | 9.0 | 12.0 | 12.0 | 15.0 | -2.5 | 15.0 | 9.0 | 15.0 | 12.0 |
| Luling | 6.1 | 6.1 | 8.6 | 8.6 | 10.2 | 10.2 | 11.8 | 11.2 | 15.5 | 13.7 | 17.4 | 15.3 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.7 | 11.0 | 5.1 | 11.3 | 11.3 | 11.6 | -2.7 | 14.3 | 5.1 | 15.8 | 11.3 |
| St_Charles_dav_pond | 1.6 | 1.6 | 4.8 | 4.8 | 11.0 | 11.0 | 11.0 | 1.6 | 13.2 | 4.8 | 14.5 | 11.0 |
| St_Charles_Sunset | 7.0 | 7.0 | 9.4 | 9.4 | 10.7 | 10.7 | 10.0 | 10.2 | 12.3 | 12.6 | 13.7 | 13.9 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -1.5 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_EoH | -3.5 | -3.6 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.6 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_harvey | -2.4 | -2.4 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -2.4 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_segnette | -3.9 | -3.9 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.9 | 14.3 | 11.0 | 15.8 | 11.3 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

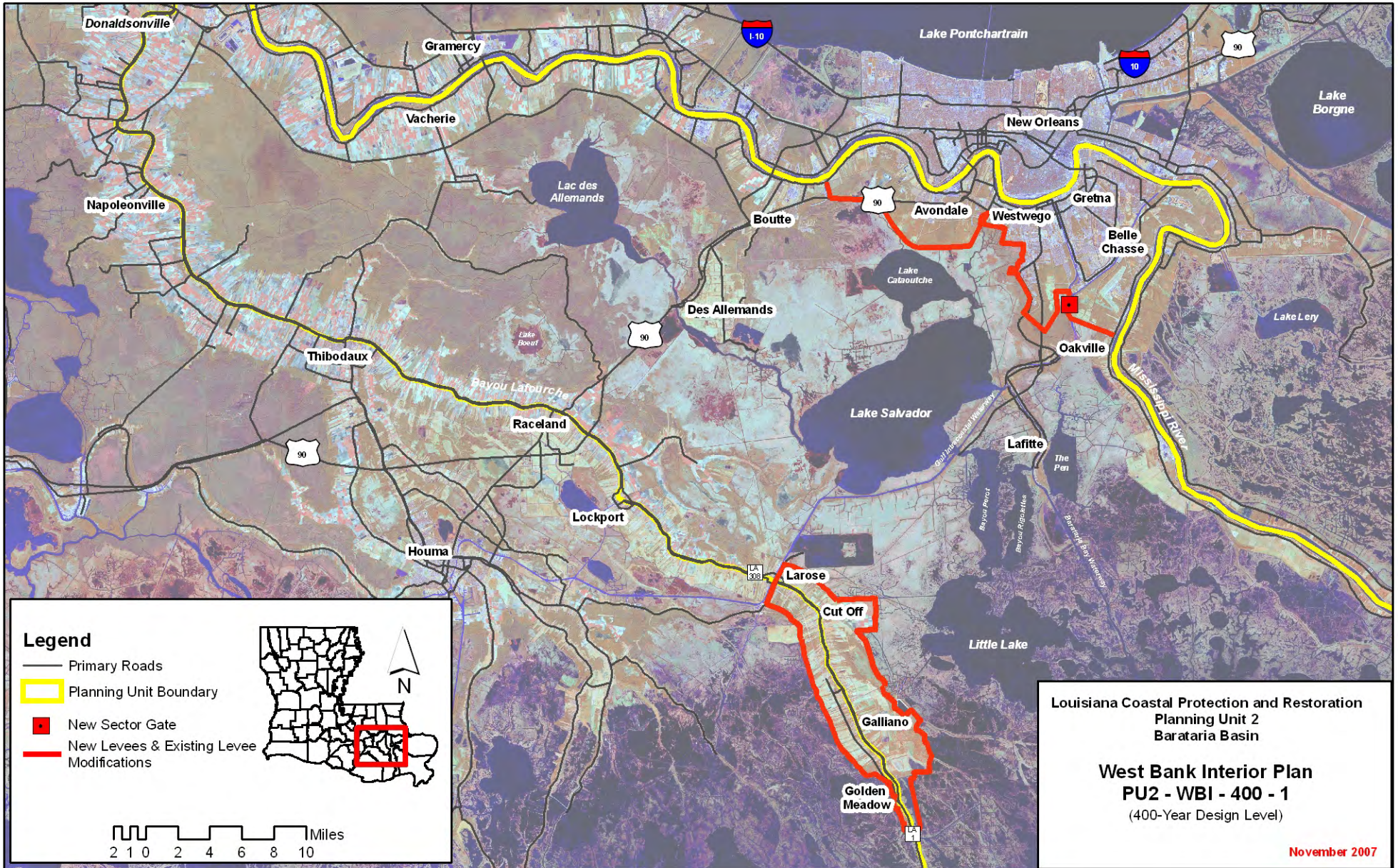
| | | | | | |
|---------------------------------|---|---------------------------------|---------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-WBI-400-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Construct new sector gate on Bayou Baratavia 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

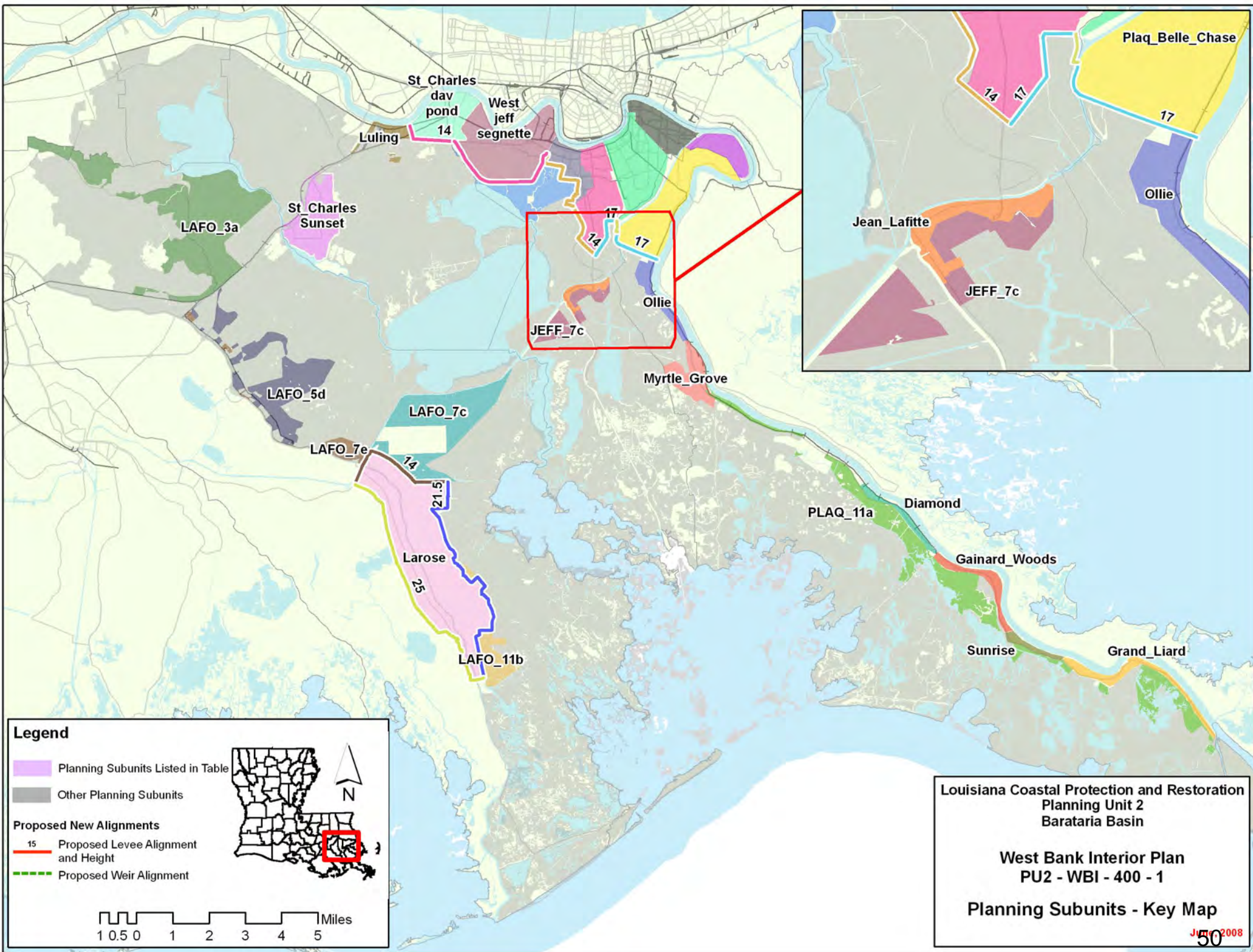
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,734 | 15,882 | 387 | 647 | 1,431 | 101 | 266 | 26 | 9 |
| | | Mid | | 19,334 | 754 | 1,194 | 3,024 | 214 | 213 | 26 | 9 |
| | | Low | | 20,472 | 944 | 1,487 | 3,660 | 251 | 160 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,737 | 16,705 | 537 | 923 | 2,160 | 169 | 266 | 26 | 9 |
| | | Mid | | 19,651 | 833 | 1,301 | 3,181 | 231 | 213 | 25 | 9 |
| | | Low | | 20,669 | 1,023 | 1,596 | 3,836 | 271 | 160 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,734 | 11,124 | 366 | 604 | 1,349 | 92 | 266 | 26 | 9 |
| | | Mid | | 14,215 | 697 | 1,022 | 2,678 | 178 | 213 | 26 | 9 |
| | | Low | | 15,397 | 867 | 1,278 | 3,220 | 209 | 160 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,737 | 11,752 | 480 | 833 | 1,866 | 141 | 266 | 26 | 9 |
| | | Mid | | 14,412 | 755 | 1,154 | 2,842 | 197 | 213 | 25 | 9 |
| | | Low | | 15,481 | 919 | 1,412 | 3,349 | 226 | 160 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 12 | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 3,700 | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 2 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 12,464 | 12,484 | Structural Component | | 18,294 | 18,319 | 18,294 | 18,319 |
| | 3 / 4 | 12,464 | 12,484 | Total Project | | 33,951 | 34,008 | 33,951 | 34,008 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan West Bank Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,805 | 2,834 | 3,062 | 1,512 | 1,692 | 2,129 | 2,316 | |
| 100-year | 46,652 | 6,097 | 49,467 | 8,094 | 37,218 | 4,897 | 39,133 | 6,410 | |
| 400-year | 51,671 | 9,802 | 53,124 | 10,877 | 40,614 | 7,207 | 41,659 | 7,879 | |
| 1,000-year | 53,208 | 15,047 | 54,188 | 15,934 | 41,777 | 11,652 | 42,556 | 12,186 | |
| 2,000-year | 53,965 | 33,812 | 54,716 | 34,531 | 42,386 | 28,473 | 42,963 | 28,914 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU2-WBI-400-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|-------------------|-----------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 5.8 | 8.7 | 8.7 | 10.9 | 10.9 | 10.6 | 9.0 | 13.4 | 11.9 | 15.1 | 14.1 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 8.1 | 11.3 | 11.3 | 13.4 | 13.4 | 12.5 | 11.3 | 15.3 | 14.5 | 17.3 | 16.6 |
| Larose | -2.5 | -2.9 | 9.0 | -2.3 | 12.0 | -0.5 | 15.0 | -2.9 | 15.0 | -2.3 | 15.0 | -0.5 |
| Luling | 6.1 | 6.1 | 8.6 | 8.6 | 10.2 | 10.2 | 11.8 | 11.2 | 15.5 | 13.7 | 17.4 | 15.3 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.8 | 11.0 | -2.6 | 11.3 | -1.8 | 11.6 | -2.8 | 14.3 | -2.6 | 15.8 | -1.8 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.7 | 11.0 | 2.7 | 11.0 | 1.5 | 13.2 | 1.7 | 14.5 | 2.7 |
| St_Charles_Sunset | 7.0 | 7.0 | 9.4 | 9.4 | 10.7 | 10.7 | 10.0 | 10.2 | 12.3 | 12.6 | 13.7 | 13.9 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -0.3 | 11.3 | 5.0 | 11.6 | -1.5 | 14.3 | -0.3 | 15.8 | 5.0 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.6 | 11.3 | -3.4 | 11.6 | -3.7 | 14.3 | -3.6 | 15.8 | -3.4 |
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.2 | 11.3 | 1.8 | 11.6 | -2.5 | 14.3 | -2.2 | 15.8 | 1.8 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -3.8 | 11.3 | -1.0 | 11.6 | -4.0 | 14.3 | -3.8 | 15.8 | -1.0 |
| Evaluation Parameters | Confidence Level: | | 90% | | | Levee Design: | | No Friction Waves | | | | |
| | Future Relative Sea Level Rise: | | 3.2 feet | | | Levee Overtopping: | | No Friction Waves | | | | |

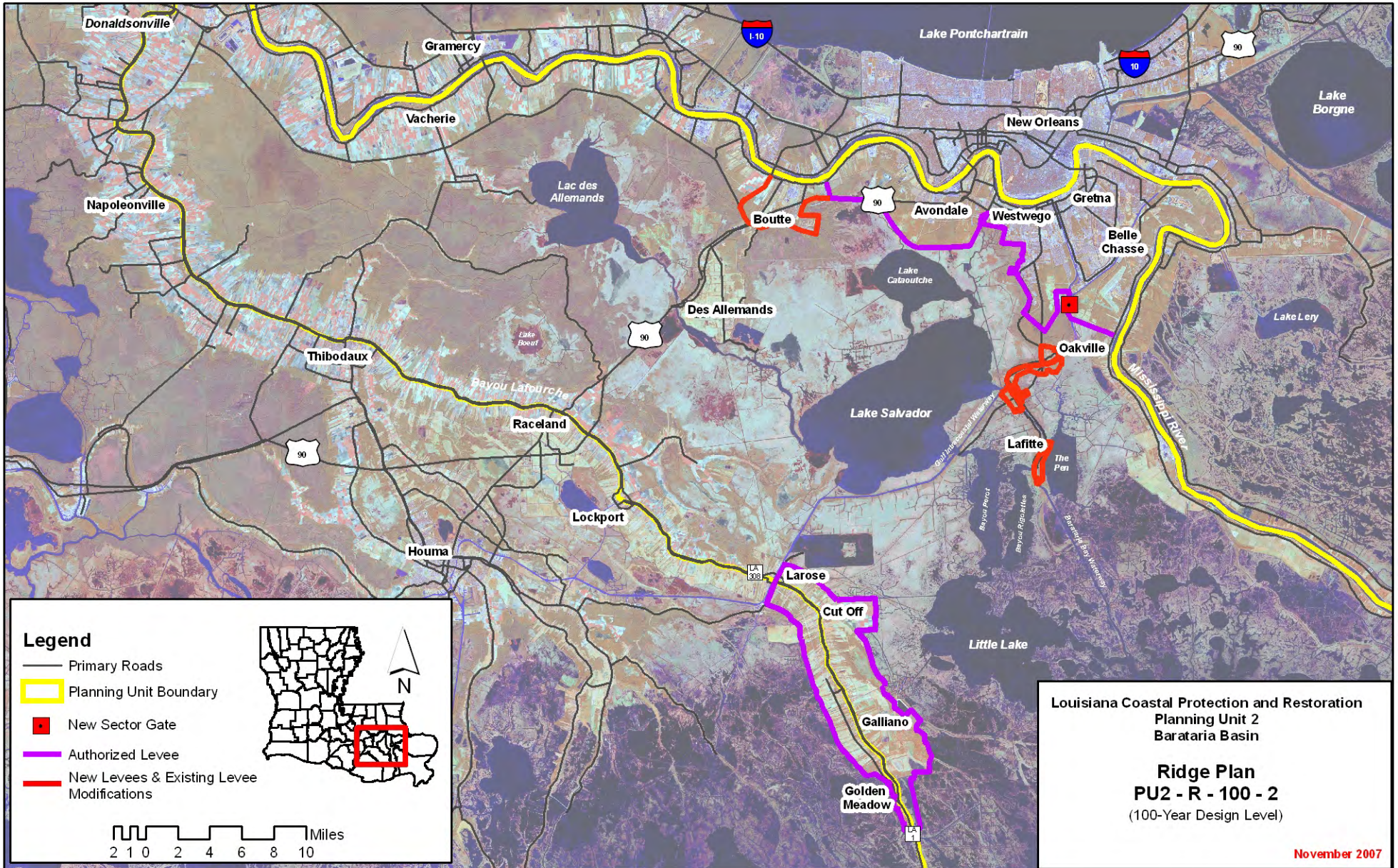
| | | | | | |
|---------------------------------|--|---------------------------------|-------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-R-100-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

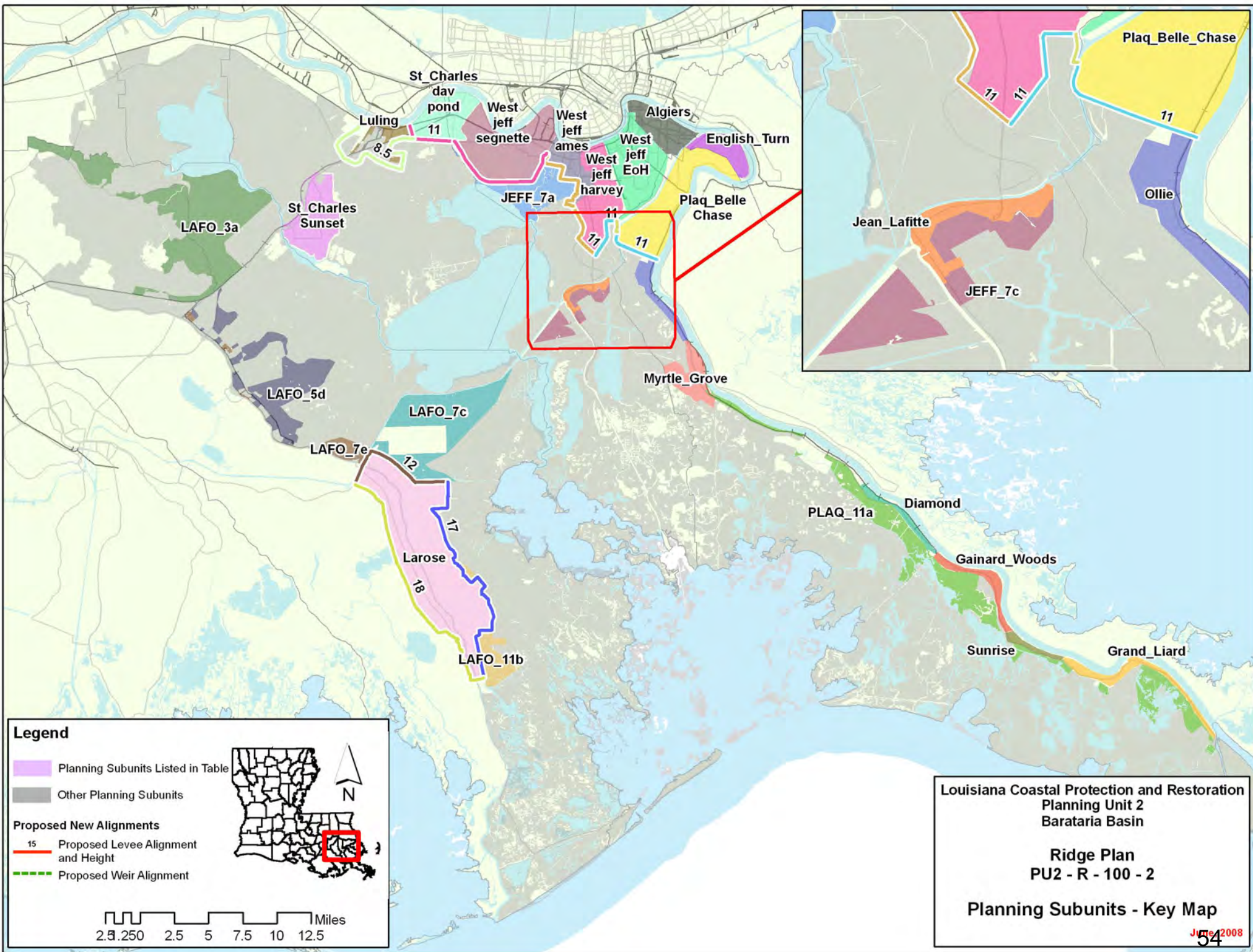
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,194 | 14,816 | 357 | 610 | 1,313 | 92 | 449 | 17 | 8 |
| | | Mid | | 18,681 | 744 | 1,178 | 2,977 | 209 | 266 | 15 | 7 |
| | | Low | | 20,398 | 1,017 | 1,585 | 4,056 | 272 | 160 | 14 | 6 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,198 | 15,543 | 484 | 856 | 1,941 | 153 | 449 | 15 | 7 |
| | | Mid | | 18,975 | 809 | 1,234 | 3,075 | 218 | 266 | 14 | 7 |
| | | Low | | 20,576 | 1,083 | 1,644 | 4,180 | 286 | 160 | 13 | 6 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,194 | 10,055 | 335 | 558 | 1,214 | 82 | 449 | 17 | 8 |
| | | Mid | | 13,558 | 687 | 964 | 2,595 | 170 | 266 | 15 | 7 |
| | | Low | | 15,244 | 936 | 1,310 | 3,510 | 221 | 160 | 14 | 6 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,198 | 10,584 | 429 | 731 | 1,619 | 121 | 449 | 15 | 7 |
| | | Mid | | 13,716 | 732 | 1,012 | 2,671 | 177 | 266 | 14 | 7 |
| | | Low | | 15,321 | 975 | 1,359 | 3,565 | 227 | 160 | 13 | 6 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|---|-------------------------|------------|------------|------------|------------|--------|
| Construction Time (years) | 11 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 | |
| Direct Wetland Impacts (acres) | 700 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 | |
| Indirect Impacts (unitless) | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | | |
| Spatial Integrity (unitless) | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 | |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 8,306 | 8,331 | Structural Component | | 7,730 | 7,770 | 7,730 | 7,770 |
| | 3 / 4 | 8,306 | 8,331 | Total Project | | 23,386 | 23,459 | 23,386 | 23,459 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan Ridge Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,155 | 2,834 | 2,154 | 1,512 | 1,039 | 2,129 | 1,404 | |
| 100-year | 46,652 | 4,924 | 49,467 | 6,496 | 37,218 | 3,728 | 39,133 | 4,848 | |
| 400-year | 51,671 | 39,518 | 53,124 | 40,414 | 40,614 | 33,221 | 41,659 | 33,699 | |
| 1,000-year | 53,208 | 43,310 | 54,188 | 44,076 | 41,777 | 35,876 | 42,556 | 36,271 | |
| 2,000-year | 53,965 | 44,520 | 54,716 | 45,136 | 42,386 | 36,663 | 42,963 | 36,985 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU2-R-100-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 5.8 | 8.7 | 8.7 | 10.9 | 10.9 | 10.6 | 9.0 | 13.4 | 11.9 | 15.1 | 14.1 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 8.1 | 11.3 | 11.3 | 13.4 | 13.4 | 12.5 | 11.3 | 15.3 | 14.5 | 17.3 | 16.6 |
| Larose | -2.5 | -2.5 | 9.0 | 9.0 | 12.0 | 12.0 | 15.0 | -2.5 | 15.0 | 9.0 | 15.0 | 12.0 |
| Luling | 6.1 | 2.2 | 8.6 | 8.1 | 10.2 | 8.5 | 11.8 | 2.2 | 15.5 | 8.1 | 17.4 | 8.5 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.7 | 11.0 | 5.1 | 11.3 | 11.3 | 11.6 | -2.7 | 14.3 | 5.1 | 15.8 | 11.3 |
| St_Charles_dav_pond | 1.6 | 1.6 | 4.8 | 4.8 | 11.0 | 11.0 | 11.0 | 1.6 | 13.2 | 4.8 | 14.5 | 11.0 |
| St_Charles_Sunset | 7.0 | 7.0 | 9.4 | 9.4 | 10.7 | 10.7 | 10.0 | 10.2 | 12.3 | 12.6 | 13.7 | 13.9 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -1.5 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_EoH | -3.5 | -3.6 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.6 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_harvey | -2.4 | -2.4 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -2.4 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_segnette | -3.9 | -3.9 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.9 | 14.3 | 11.0 | 15.8 | 11.3 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

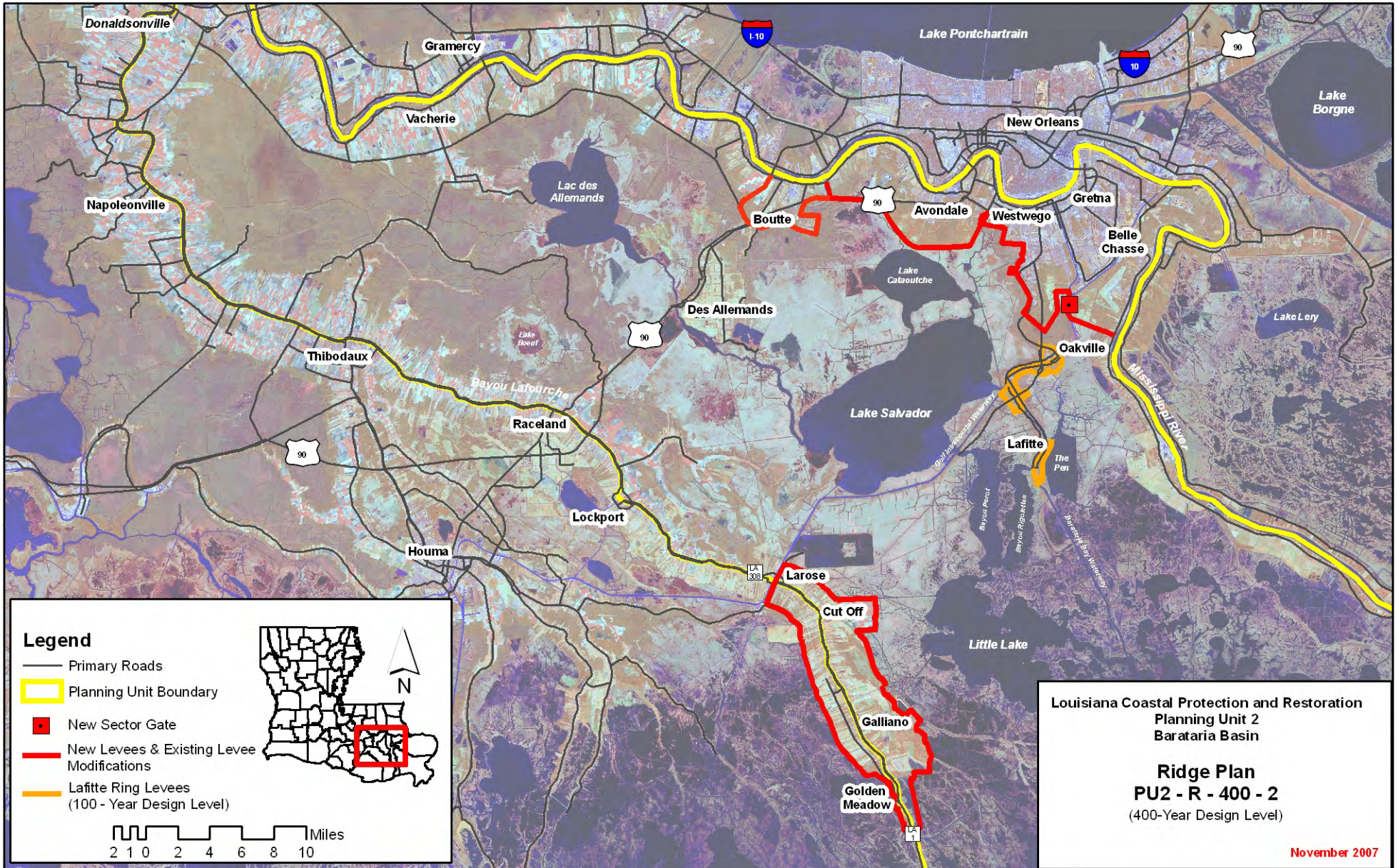
| | | | | | |
|---------------------------------|--|---------------------------------|-------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-R-400-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

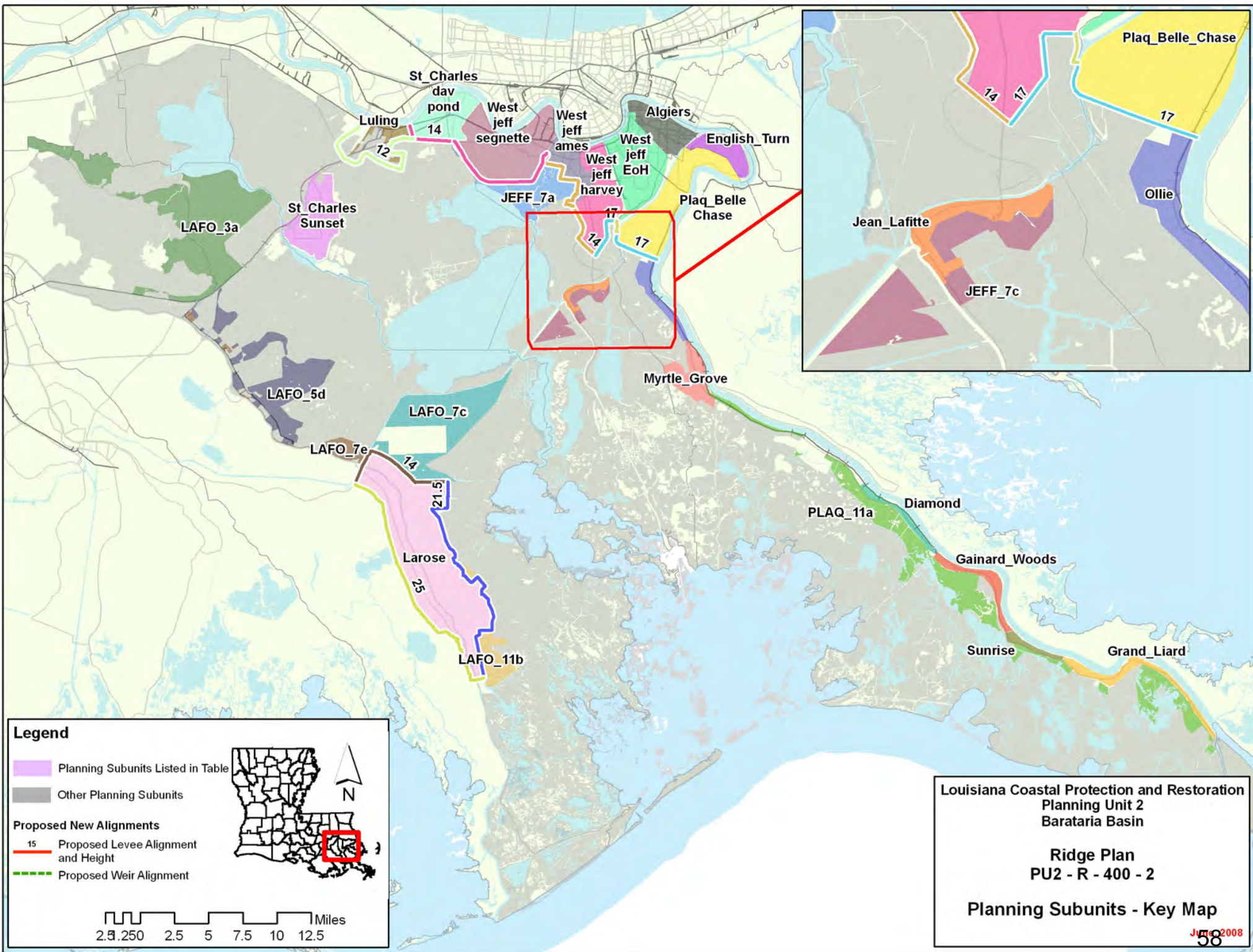
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,097 | 14,989 | 370 | 639 | 1,378 | 99 | 266 | 26 | 9 |
| | | Mid | | 18,421 | 741 | 1,206 | 2,984 | 216 | 213 | 26 | 9 |
| | | Low | | 19,489 | 916 | 1,458 | 3,570 | 246 | 160 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,104 | 15,857 | 520 | 923 | 2,120 | 170 | 266 | 26 | 9 |
| | | Mid | | 18,733 | 810 | 1,266 | 3,087 | 225 | 213 | 25 | 9 |
| | | Low | | 19,668 | 983 | 1,521 | 3,698 | 260 | 160 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,097 | 10,200 | 344 | 583 | 1,263 | 87 | 266 | 26 | 9 |
| | | Mid | | 13,242 | 677 | 985 | 2,559 | 173 | 213 | 26 | 9 |
| | | Low | | 14,331 | 831 | 1,195 | 3,034 | 196 | 160 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,104 | 10,837 | 458 | 785 | 1,749 | 134 | 266 | 26 | 9 |
| | | Mid | | 13,411 | 726 | 1,038 | 2,642 | 181 | 213 | 25 | 9 |
| | | Low | | 14,409 | 871 | 1,249 | 3,095 | 203 | 160 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 4,400 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 14,963 | 15,011 | Structural Component | | 25,409 | 25,515 | 25,409 | 25,515 | |
| | 3 / 4 | 14,963 | 15,011 | Total Project | | 41,066 | 41,204 | 41,066 | 41,204 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan Ridge Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,155 | 2,834 | 2,154 | 1,512 | 1,039 | 2,129 | 1,404 | |
| 100-year | 46,652 | 4,916 | 49,467 | 6,488 | 37,218 | 3,720 | 39,133 | 4,839 | |
| 400-year | 51,671 | 7,969 | 53,124 | 8,865 | 40,614 | 5,405 | 41,659 | 5,883 | |
| 1,000-year | 53,208 | 13,049 | 54,188 | 13,815 | 41,777 | 9,667 | 42,556 | 10,062 | |
| 2,000-year | 53,965 | 32,054 | 54,716 | 32,670 | 42,386 | 26,735 | 42,963 | 27,057 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

Ridge Plan
 PU2 - R - 400 - 2

Planning Subunits - Key Map

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Alternative: PU2-R-400-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|---------------------|------------------------|--------------|-----------------|--------------|-----------------|--------------|--------------------------|--------------|-----------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 5.8 | 8.7 | 8.7 | 10.9 | 10.9 | 10.6 | 9.0 | 13.4 | 11.9 | 15.1 | 14.1 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 8.1 | 11.3 | 11.3 | 13.4 | 13.4 | 12.5 | 11.3 | 15.3 | 14.5 | 17.3 | 16.6 |
| Larose | -2.5 | -2.9 | 9.0 | -2.3 | 12.0 | -0.5 | 15.0 | -2.9 | 15.0 | -2.3 | 15.0 | -0.5 |
| Luling | 6.1 | 1.5 | 8.6 | 2.1 | 10.2 | 3.6 | 11.8 | 1.5 | 15.5 | 2.1 | 17.4 | 3.6 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.8 | 11.0 | -2.6 | 11.3 | -1.8 | 11.6 | -2.8 | 14.3 | -2.6 | 15.8 | -1.8 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.7 | 11.0 | 2.7 | 11.0 | 1.5 | 13.2 | 1.7 | 14.5 | 2.7 |
| St_Charles_Sunset | 7.0 | 7.0 | 9.4 | 9.4 | 10.7 | 10.7 | 10.0 | 10.2 | 12.3 | 12.6 | 13.7 | 13.9 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -0.3 | 11.3 | 5.0 | 11.6 | -1.5 | 14.3 | -0.3 | 15.8 | 5.0 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.6 | 11.3 | -3.4 | 11.6 | -3.7 | 14.3 | -3.6 | 15.8 | -3.4 |

| | | | | | | | | | | | | |
|-----------------------|------------------------|------|----------|------|------|--------------------|------|-------------------|------|------|------|------|
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.2 | 11.3 | 1.8 | 11.6 | -2.5 | 14.3 | -2.2 | 15.8 | 1.8 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -3.8 | 11.3 | -1.0 | 11.6 | -4.0 | 14.3 | -3.8 | 15.8 | -1.0 |
| Evaluation Parameters | Confidence Level: | | 90% | | | Levee Design: | | No Friction Waves | | | | |
| | Future Sea Level Rise: | | 3.2 feet | | | Levee Overtopping: | | No Friction Waves | | | | |

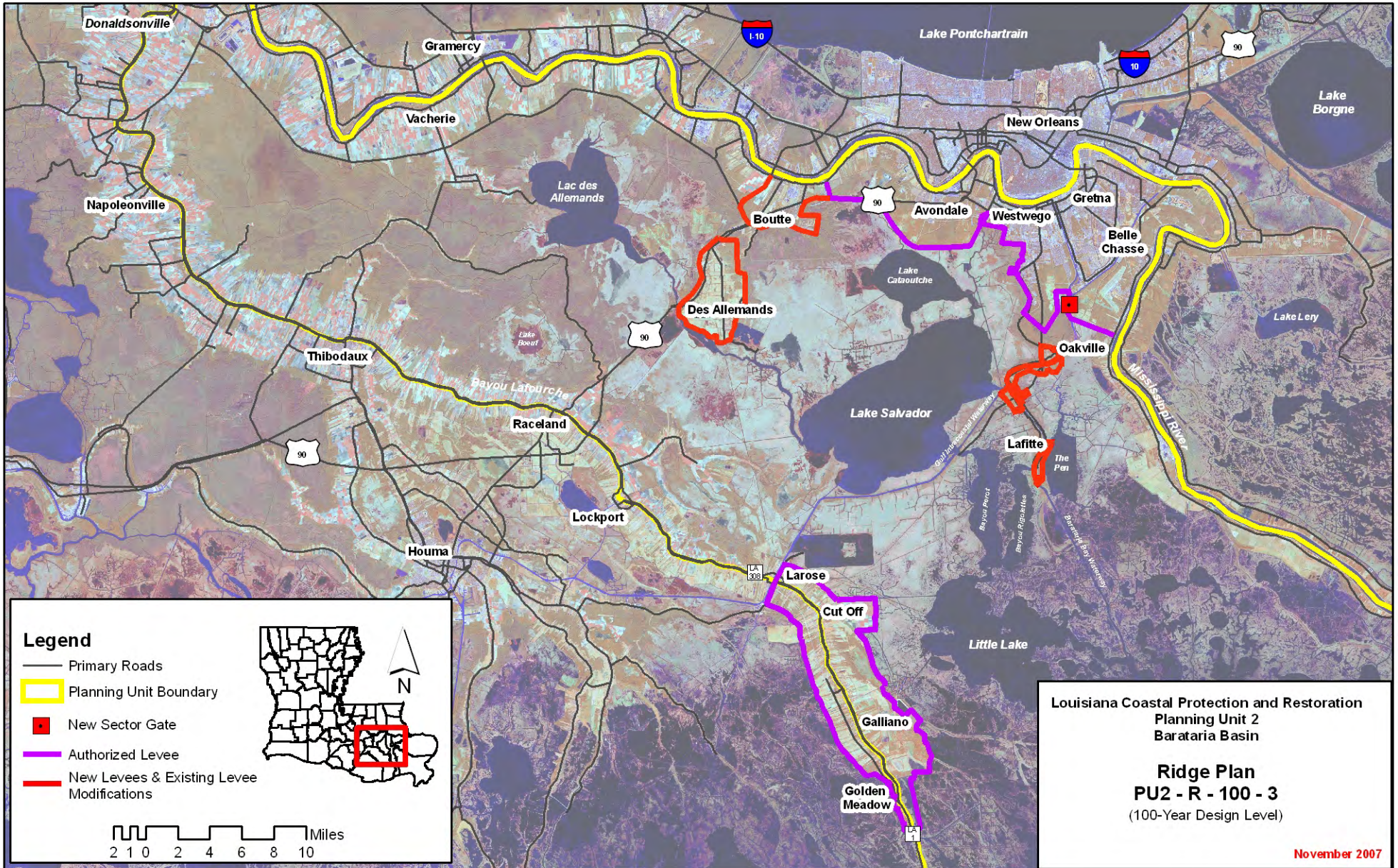
| | | | | | |
|---------------------------------|---|---------------------------------|-------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-R-100-3 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

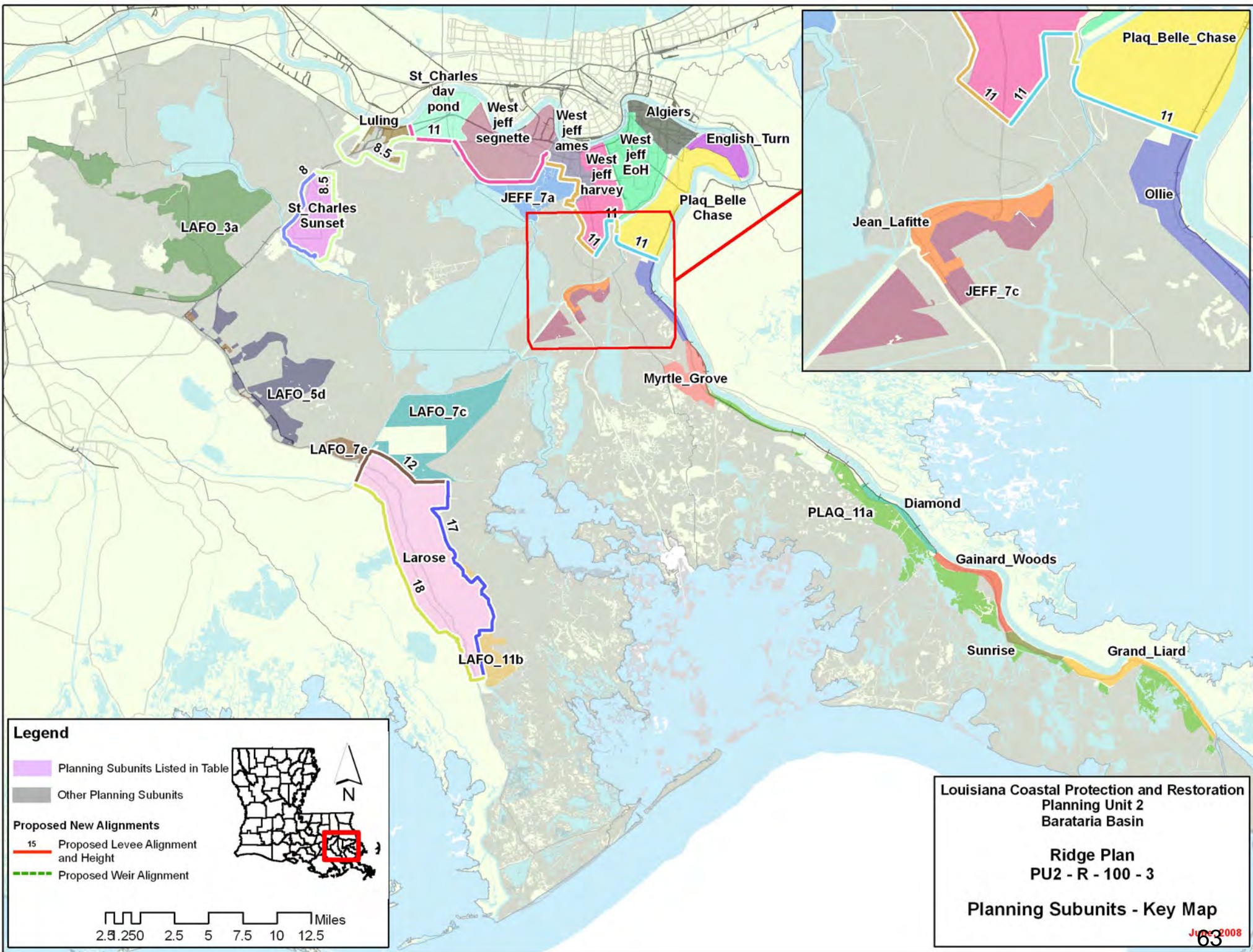
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,318 | 13,925 | 341 | 591 | 1,260 | 89 | 449 | 17 | 7 |
| | | Mid | | 17,790 | 722 | 1,145 | 2,883 | 202 | 266 | 15 | 7 |
| | | Low | | 19,537 | 993 | 1,554 | 3,967 | 266 | 160 | 14 | 6 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,322 | 14,652 | 463 | 826 | 1,860 | 147 | 449 | 15 | 7 |
| | | Mid | | 18,084 | 783 | 1,201 | 2,981 | 211 | 266 | 14 | 7 |
| | | Low | | 19,716 | 1,054 | 1,612 | 4,092 | 279 | 160 | 13 | 6 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,318 | 9,462 | 319 | 539 | 1,161 | 79 | 449 | 17 | 7 |
| | | Mid | | 12,955 | 668 | 938 | 2,525 | 166 | 266 | 15 | 7 |
| | | Low | | 14,663 | 914 | 1,285 | 3,442 | 217 | 160 | 14 | 6 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,322 | 9,992 | 410 | 708 | 1,562 | 118 | 449 | 15 | 7 |
| | | Mid | | 13,113 | 709 | 986 | 2,601 | 173 | 266 | 14 | 7 |
| | | Low | | 14,740 | 949 | 1,333 | 3,497 | 223 | 160 | 13 | 6 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|--|--|-------------------------------|--|---|------------|----------------------|------------|--|--|
| Construction Time (years) | | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 | | |
| Direct Wetland Impacts (acres) | | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 | | |
| Indirect Impacts (unitless) | | | | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | | Coastal Component | | | | | |
| | | | | | 15,657 | 15,689 | 15,657 | 15,689 | | |
| Non-Federal Share of Present Value of Life Cycle Costs | | | Scenario (\$ Millions) | | Nonstructural Component | | | | | |
| | | | 1 / 2 | | 9,190 | 9,220 | Structural Component | | | |
| | | | 3 / 4 | | 9,190 | 9,220 | Total Project | | | |
| | | | | | 25,803 | 25,890 | 25,803 | 25,890 | | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan Ridge Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,012 | 2,834 | 1,931 | 1,512 | 892 | 2,129 | 1,146 | |
| 100-year | 46,652 | 4,440 | 49,467 | 5,799 | 37,218 | 3,382 | 39,133 | 4,356 | |
| 400-year | 51,671 | 38,985 | 53,124 | 39,790 | 40,614 | 32,964 | 41,659 | 33,401 | |
| 1,000-year | 53,208 | 42,957 | 54,188 | 43,656 | 41,777 | 35,733 | 42,556 | 36,100 | |
| 2,000-year | 53,965 | 44,131 | 54,716 | 44,688 | 42,386 | 36,509 | 42,963 | 36,809 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.






Legend

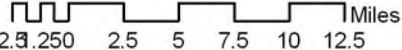
- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment



N



Miles
2.5 2.5 5 7.5 10 12.5

Louisiana Coastal Protection and Restoration
Planning Unit 2
Barataria Basin

Ridge Plan
PU2 - R - 100 - 3

Planning Subunits - Key Map

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Alternative: PU2-R-100-3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 5.8 | 8.7 | 8.7 | 10.9 | 10.9 | 10.6 | 9.0 | 13.4 | 11.9 | 15.1 | 14.1 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 8.1 | 11.3 | 11.3 | 13.4 | 13.4 | 12.5 | 11.3 | 15.3 | 14.5 | 17.3 | 16.6 |
| Larose | -2.5 | -2.5 | 9.0 | 9.0 | 12.0 | 12.0 | 15.0 | -2.5 | 15.0 | 9.0 | 15.0 | 12.0 |
| Luling | 6.1 | 2.2 | 8.6 | 8.1 | 10.2 | 8.5 | 11.8 | 2.2 | 15.5 | 8.1 | 17.4 | 8.5 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.7 | 11.0 | 5.1 | 11.3 | 11.3 | 11.6 | -2.7 | 14.3 | 5.1 | 15.8 | 11.3 |
| St_Charles_dav_pond | 1.6 | 1.6 | 4.8 | 4.8 | 11.0 | 11.0 | 11.0 | 1.6 | 13.2 | 4.8 | 14.5 | 11.0 |
| St_Charles_Sunset | 7.0 | -4.7 | 9.4 | 5.7 | 10.7 | 8.5 | 10.0 | -4.7 | 12.3 | 5.7 | 13.7 | 8.5 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -1.5 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_EoH | -3.5 | -3.6 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.6 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_harvey | -2.4 | -2.4 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -2.4 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_segnette | -3.9 | -3.9 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.9 | 14.3 | 11.0 | 15.8 | 11.3 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

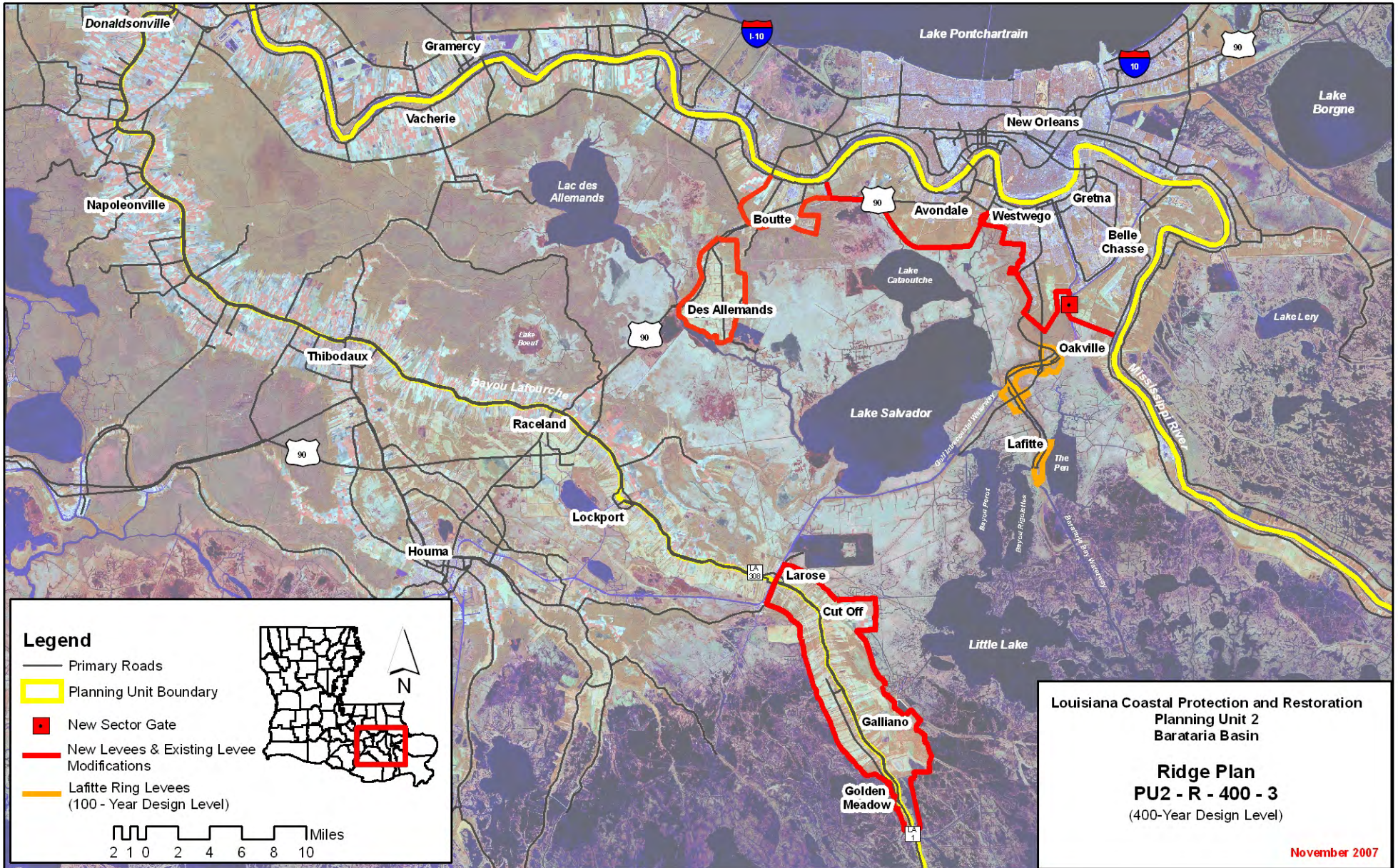
| | | | | | |
|---------------------------------|--|---------------------------------|-------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-R-400-3 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

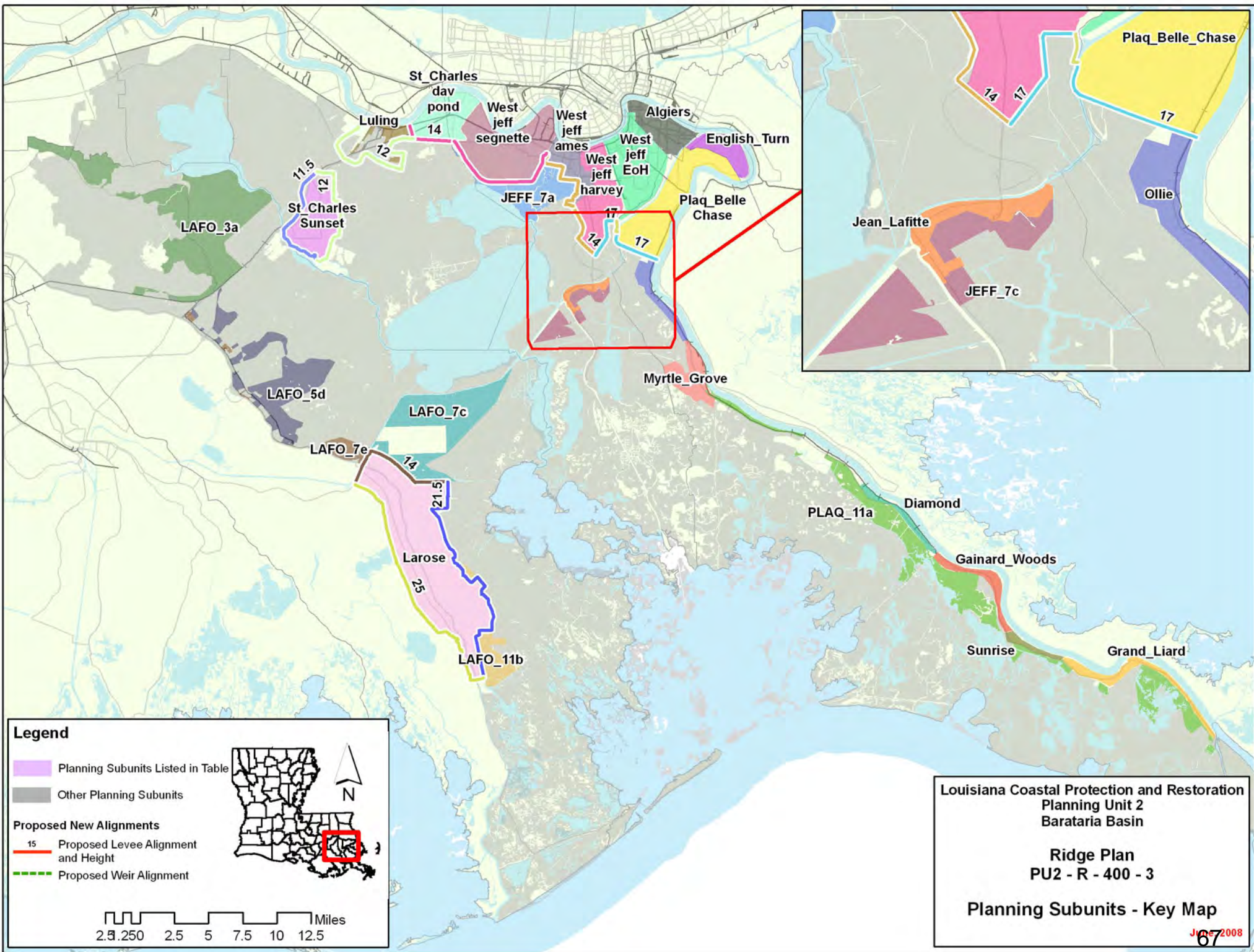
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,246 | 13,733 | 332 | 585 | 1,236 | 88 | 449 | 26 | 9 |
| | | Mid | | 16,883 | 660 | 1,070 | 2,611 | 185 | 266 | 26 | 9 |
| | | Low | | 17,898 | 821 | 1,316 | 3,173 | 214 | 160 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,253 | 14,459 | 455 | 821 | 1,837 | 145 | 449 | 26 | 9 |
| | | Mid | | 17,177 | 720 | 1,126 | 2,710 | 194 | 266 | 25 | 9 |
| | | Low | | 18,076 | 881 | 1,375 | 3,298 | 228 | 160 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,246 | 9,265 | 310 | 533 | 1,135 | 78 | 449 | 26 | 9 |
| | | Mid | | 12,064 | 607 | 874 | 2,262 | 150 | 266 | 26 | 9 |
| | | Low | | 13,106 | 748 | 1,078 | 2,715 | 172 | 160 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,253 | 9,795 | 402 | 702 | 1,536 | 117 | 449 | 26 | 9 |
| | | Mid | | 12,222 | 648 | 922 | 2,338 | 157 | 266 | 25 | 9 |
| | | Low | | 13,182 | 783 | 1,126 | 2,770 | 179 | 160 | 23 | 8 |

| Other Results | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---|--------|-------------------------|------------|------------|------------|--------|--------|
| Construction Time (years) | 11 | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 | | |
| Direct Wetland Impacts (acres) | 4,700 | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 | | |
| Indirect Impacts (unitless) | 4 | Present Value of Life Cycle Costs (\$ Millions) | | | | | | | |
| Spatial Integrity (unitless) | 0.36 | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 | | |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 15,965 | 16,019 | Structural Component | | 28,318 | 28,440 | 28,318 | 28,440 |
| | 3 / 4 | 15,965 | 16,019 | Total Project | | 43,975 | 44,128 | 43,975 | 44,128 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan Ridge Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,012 | 2,834 | 1,931 | 1,512 | 892 | 2,129 | 1,146 | |
| 100-year | 46,652 | 4,431 | 49,467 | 5,790 | 37,218 | 3,374 | 39,133 | 4,347 | |
| 400-year | 51,671 | 7,165 | 53,124 | 7,970 | 40,614 | 4,850 | 41,659 | 5,287 | |
| 1,000-year | 53,208 | 12,156 | 54,188 | 12,854 | 41,777 | 9,073 | 42,556 | 9,439 | |
| 2,000-year | 53,965 | 31,126 | 54,716 | 31,684 | 42,386 | 26,134 | 42,963 | 26,433 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU2-R-400-3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 5.8 | 8.7 | 8.7 | 10.9 | 10.9 | 10.6 | 9.0 | 13.4 | 11.9 | 15.1 | 14.1 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 8.1 | 11.3 | 11.3 | 13.4 | 13.4 | 12.5 | 11.3 | 15.3 | 14.5 | 17.3 | 16.6 |
| Larose | -2.5 | -2.9 | 9.0 | -2.3 | 12.0 | -0.5 | 15.0 | -2.9 | 15.0 | -2.3 | 15.0 | -0.5 |
| Luling | 6.1 | 1.5 | 8.6 | 2.1 | 10.2 | 3.6 | 11.8 | 1.5 | 15.5 | 2.1 | 17.4 | 3.6 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.8 | 11.0 | -2.6 | 11.3 | -1.8 | 11.6 | -2.8 | 14.3 | -2.6 | 15.8 | -1.8 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.7 | 11.0 | 2.7 | 11.0 | 1.5 | 13.2 | 1.7 | 14.5 | 2.7 |
| St_Charles_Sunset | 7.0 | -5.1 | 9.4 | -4.8 | 10.7 | -3.4 | 10.0 | -5.1 | 12.3 | -4.8 | 13.7 | -3.4 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -0.3 | 11.3 | 5.0 | 11.6 | -1.5 | 14.3 | -0.3 | 15.8 | 5.0 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.6 | 11.3 | -3.4 | 11.6 | -3.7 | 14.3 | -3.6 | 15.8 | -3.4 |
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.2 | 11.3 | 1.8 | 11.6 | -2.5 | 14.3 | -2.2 | 15.8 | 1.8 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -3.8 | 11.3 | -1.0 | 11.6 | -4.0 | 14.3 | -3.8 | 15.8 | -1.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

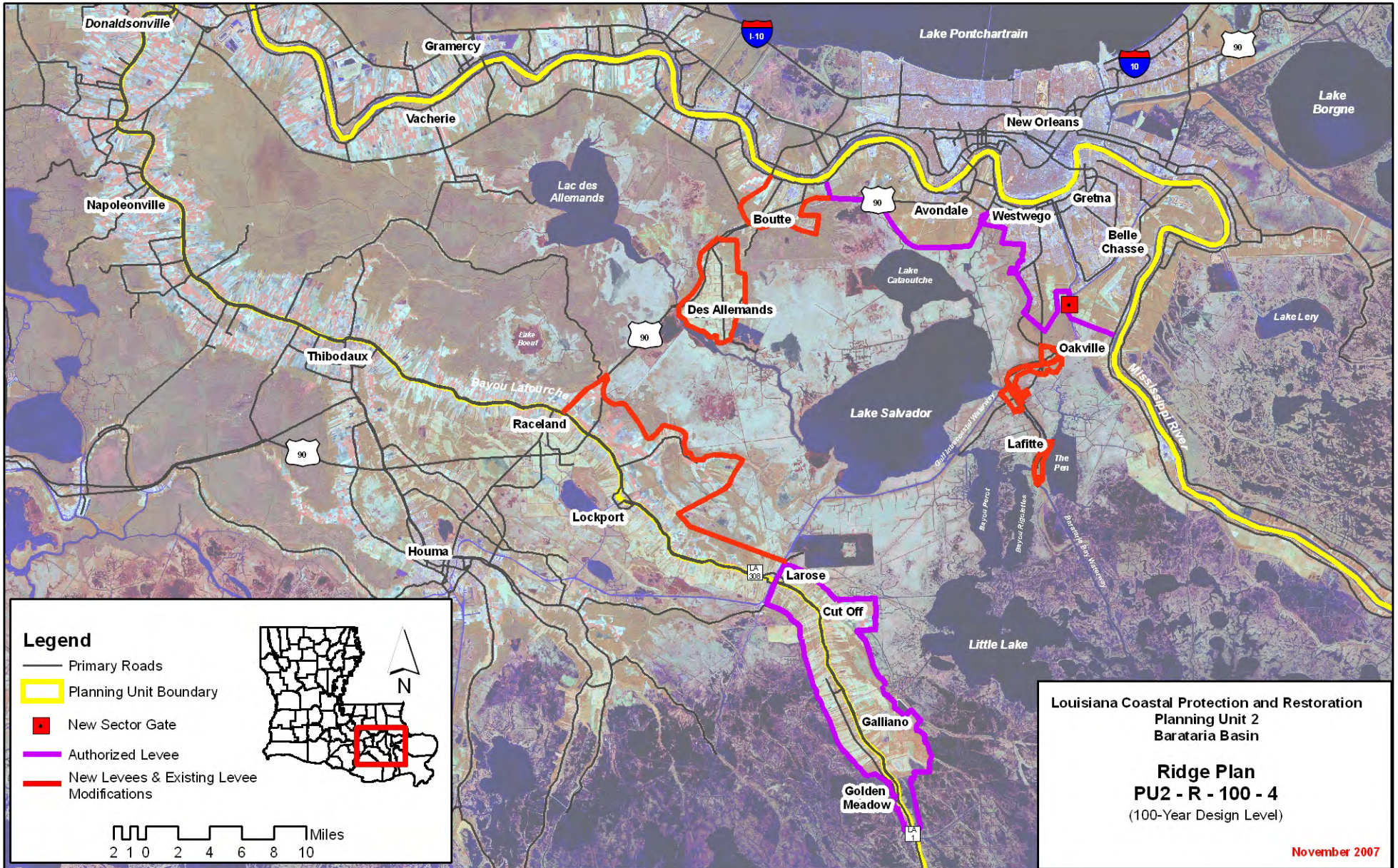
| | | | | | |
|---------------------------------|---|---------------------------------|-------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-R-100-4 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 u | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

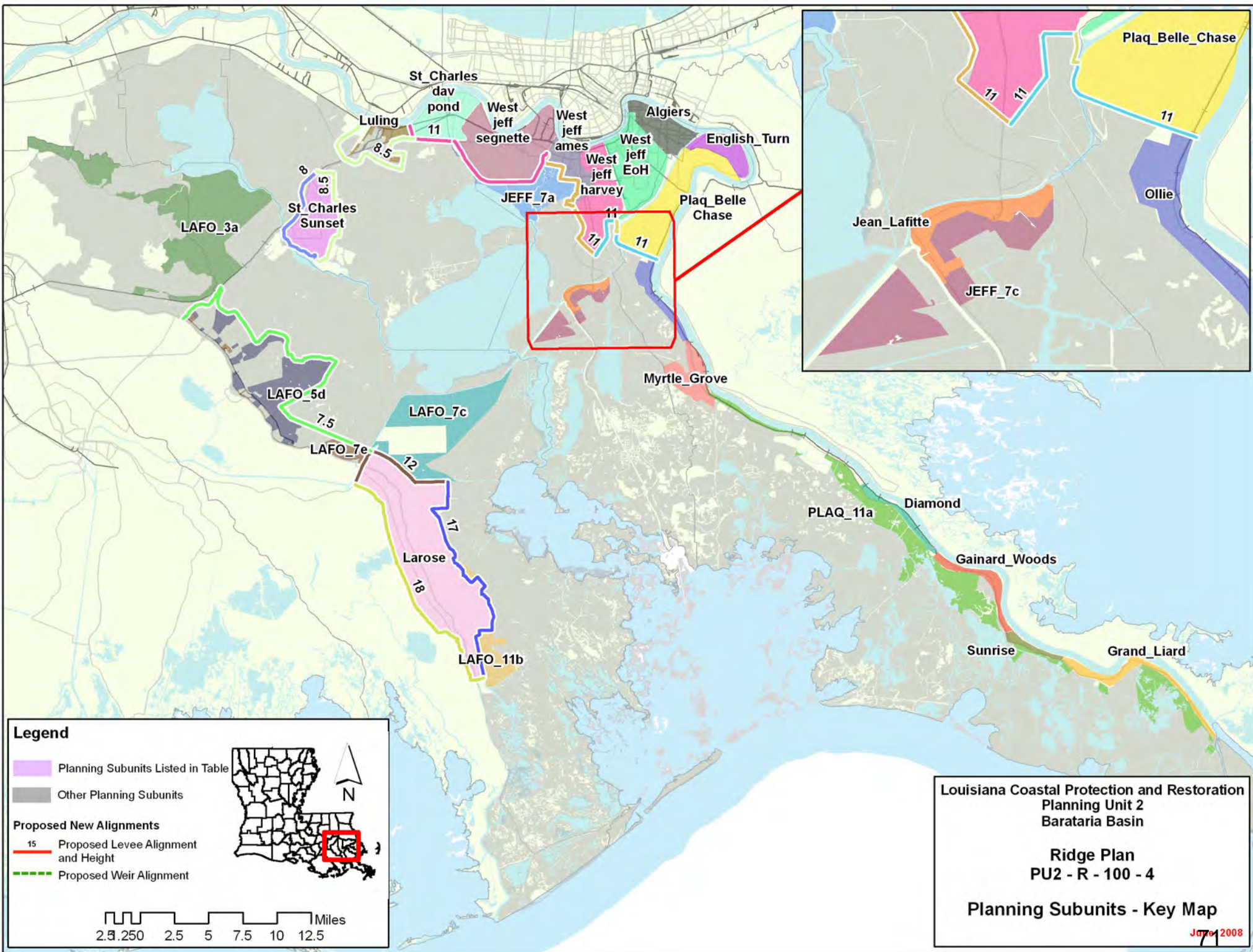
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,481 | 13,571 | 334 | 560 | 1,202 | 85 | 277 | 17 | 8 |
| | | Mid | | 17,385 | 713 | 1,086 | 2,802 | 195 | 224 | 15 | 7 |
| | | Low | | 19,105 | 980 | 1,484 | 3,849 | 256 | 171 | 14 | 6 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,486 | 14,251 | 454 | 761 | 1,772 | 138 | 277 | 15 | 7 |
| | | Mid | | 17,643 | 769 | 1,128 | 2,879 | 201 | 224 | 14 | 7 |
| | | Low | | 19,259 | 1,037 | 1,532 | 3,965 | 268 | 171 | 13 | 6 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,481 | 8,994 | 313 | 513 | 1,112 | 75 | 277 | 17 | 8 |
| | | Mid | | 12,444 | 658 | 881 | 2,430 | 157 | 224 | 15 | 7 |
| | | Low | | 14,071 | 898 | 1,219 | 3,316 | 205 | 171 | 14 | 6 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,486 | 9,494 | 401 | 643 | 1,458 | 108 | 277 | 15 | 7 |
| | | Mid | | 12,581 | 692 | 913 | 2,485 | 162 | 224 | 14 | 7 |
| | | Low | | 14,136 | 925 | 1,251 | 3,358 | 210 | 171 | 13 | 6 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 11 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 1,600 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 10,306 | 10,343 | Structural Component | | 13,348 | 13,420 | 13,348 | 13,420 | |
| | 3 / 4 | 10,306 | 10,343 | Total Project | | 29,005 | 29,109 | 29,005 | 29,109 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan Ridge Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 956 | 2,834 | 1,833 | 1,512 | 859 | 2,129 | 1,084 | |
| 100-year | 46,652 | 4,136 | 49,467 | 5,361 | 37,218 | 2,978 | 39,133 | 3,578 | |
| 400-year | 51,671 | 38,704 | 53,124 | 39,407 | 40,614 | 32,215 | 41,659 | 32,512 | |
| 1,000-year | 53,208 | 42,529 | 54,188 | 43,131 | 41,777 | 34,811 | 42,556 | 35,047 | |
| 2,000-year | 53,965 | 43,620 | 54,716 | 44,107 | 42,386 | 35,478 | 42,963 | 35,676 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU2-R-100-4
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 1.5 | 8.7 | 8.5 | 10.9 | 8.5 | 10.6 | 1.5 | 13.4 | 8.5 | 15.1 | 8.5 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 1.5 | 11.3 | 8.5 | 13.4 | 8.5 | 12.5 | 1.5 | 15.3 | 8.5 | 17.3 | 8.5 |
| Larose | -2.5 | -2.5 | 9.0 | 9.0 | 12.0 | 12.0 | 15.0 | -2.5 | 15.0 | 9.0 | 15.0 | 12.0 |
| Luling | 6.1 | 2.2 | 8.6 | 8.1 | 10.2 | 8.5 | 11.8 | 2.2 | 15.5 | 8.1 | 17.4 | 8.5 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.7 | 11.0 | 5.1 | 11.3 | 11.3 | 11.6 | -2.7 | 14.3 | 5.1 | 15.8 | 11.3 |
| St_Charles_dav_pond | 1.6 | 1.6 | 4.8 | 4.8 | 11.0 | 11.0 | 11.0 | 1.6 | 13.2 | 4.8 | 14.5 | 11.0 |
| St_Charles_Sunset | 7.0 | -4.7 | 9.4 | 5.7 | 10.7 | 8.5 | 10.0 | -4.7 | 12.3 | 5.7 | 13.7 | 8.5 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -1.5 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_EoH | -3.5 | -3.6 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.6 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_harvey | -2.4 | -2.4 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -2.4 | 14.3 | 11.0 | 15.8 | 11.3 |
| West_jeff_segnette | -3.9 | -3.9 | 11.0 | 11.0 | 11.3 | 11.3 | 11.6 | -3.9 | 14.3 | 11.0 | 15.8 | 11.3 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

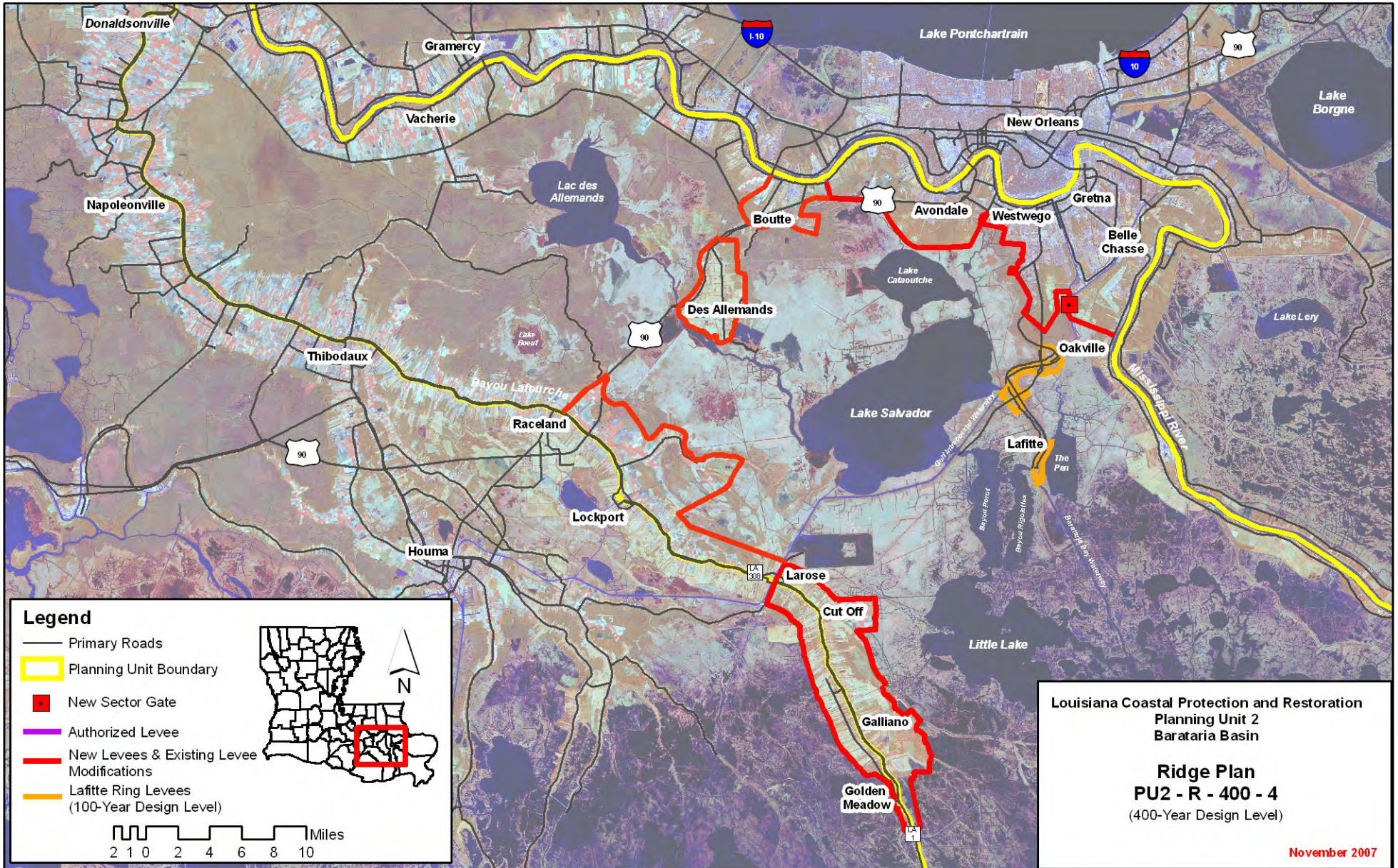
| | | | | | |
|---------------------------------|---|---------------------------------|-------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-R-400-4 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 Allemand | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

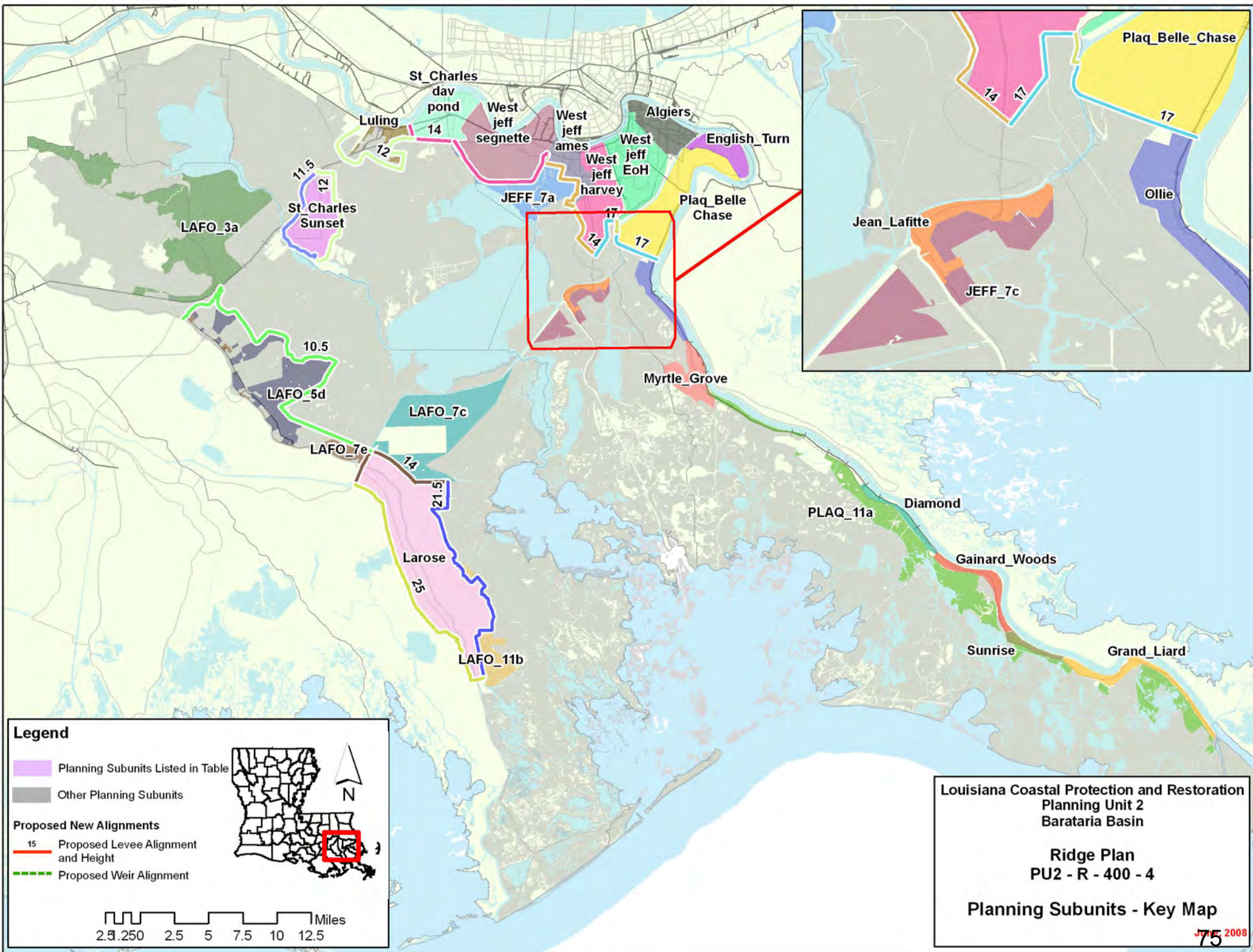
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,406 | 13,863 | 349 | 594 | 1,278 | 93 | 277 | 26 | 9 |
| | | Mid | | 17,220 | 712 | 1,122 | 2,823 | 202 | 224 | 26 | 9 |
| | | Low | | 18,233 | 879 | 1,360 | 3,366 | 230 | 171 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,415 | 14,687 | 492 | 836 | 1,966 | 156 | 277 | 26 | 9 |
| | | Mid | | 17,499 | 774 | 1,168 | 2,906 | 209 | 224 | 25 | 9 |
| | | Low | | 18,389 | 938 | 1,413 | 3,486 | 243 | 171 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,406 | 9,240 | 325 | 542 | 1,170 | 81 | 277 | 26 | 9 |
| | | Mid | | 12,216 | 651 | 908 | 2,408 | 161 | 224 | 26 | 9 |
| | | Low | | 13,189 | 794 | 1,105 | 2,846 | 182 | 171 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,415 | 9,850 | 432 | 704 | 1,602 | 122 | 277 | 26 | 9 |
| | | Mid | | 12,366 | 689 | 946 | 2,471 | 167 | 224 | 25 | 9 |
| | | Low | | 13,256 | 823 | 1,144 | 2,895 | 187 | 171 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 5,300 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 17,039 | 17,099 | Structural Component | | 31,466 | 31,605 | 31,466 | 31,605 | |
| | 3 / 4 | 17,039 | 17,099 | Total Project | | 47,123 | 47,294 | 47,123 | 47,294 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan Ridge Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 956 | 2,834 | 1,833 | 1,512 | 859 | 2,129 | 1,084 | |
| 100-year | 46,652 | 4,126 | 49,467 | 5,351 | 37,218 | 2,968 | 39,133 | 3,568 | |
| 400-year | 51,671 | 6,628 | 53,124 | 7,331 | 40,614 | 3,895 | 41,659 | 4,192 | |
| 1,000-year | 53,208 | 11,468 | 54,188 | 12,071 | 41,777 | 7,932 | 42,556 | 8,168 | |
| 2,000-year | 53,965 | 30,382 | 54,716 | 30,868 | 42,386 | 24,894 | 42,963 | 25,093 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.






Legend

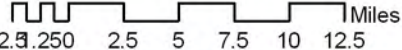
- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment



N



Miles
2.5 2.5 5 7.5 10 12.5

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

Ridge Plan
 PU2 - R - 400 - 4

Planning Subunits - Key Map

July 2008
75

Alternative: PU2-R-400-4
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 1.1 | 8.7 | 1.4 | 10.9 | 2.7 | 10.6 | 1.1 | 13.4 | 1.4 | 15.1 | 2.7 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 1.1 | 11.3 | 1.4 | 13.4 | 2.7 | 12.5 | 1.1 | 15.3 | 1.4 | 17.3 | 2.7 |
| Larose | -2.5 | -2.9 | 9.0 | -2.3 | 12.0 | -0.5 | 15.0 | -2.9 | 15.0 | -2.3 | 15.0 | -0.5 |
| Luling | 6.1 | 1.5 | 8.6 | 2.1 | 10.2 | 3.6 | 11.8 | 1.5 | 15.5 | 2.1 | 17.4 | 3.6 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.8 | 11.0 | -2.6 | 11.3 | -1.8 | 11.6 | -2.8 | 14.3 | -2.6 | 15.8 | -1.8 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.7 | 11.0 | 2.7 | 11.0 | 1.5 | 13.2 | 1.7 | 14.5 | 2.7 |
| St_Charles_Sunset | 7.0 | -5.1 | 9.4 | -4.8 | 10.7 | -3.4 | 10.0 | -5.1 | 12.3 | -4.8 | 13.7 | -3.4 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -0.3 | 11.3 | 5.0 | 11.6 | -1.5 | 14.3 | -0.3 | 15.8 | 5.0 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.6 | 11.3 | -3.4 | 11.6 | -3.7 | 14.3 | -3.6 | 15.8 | -3.4 |
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.2 | 11.3 | 1.8 | 11.6 | -2.5 | 14.3 | -2.2 | 15.8 | 1.8 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -3.8 | 11.3 | -1.0 | 11.6 | -4.0 | 14.3 | -3.8 | 15.8 | -1.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

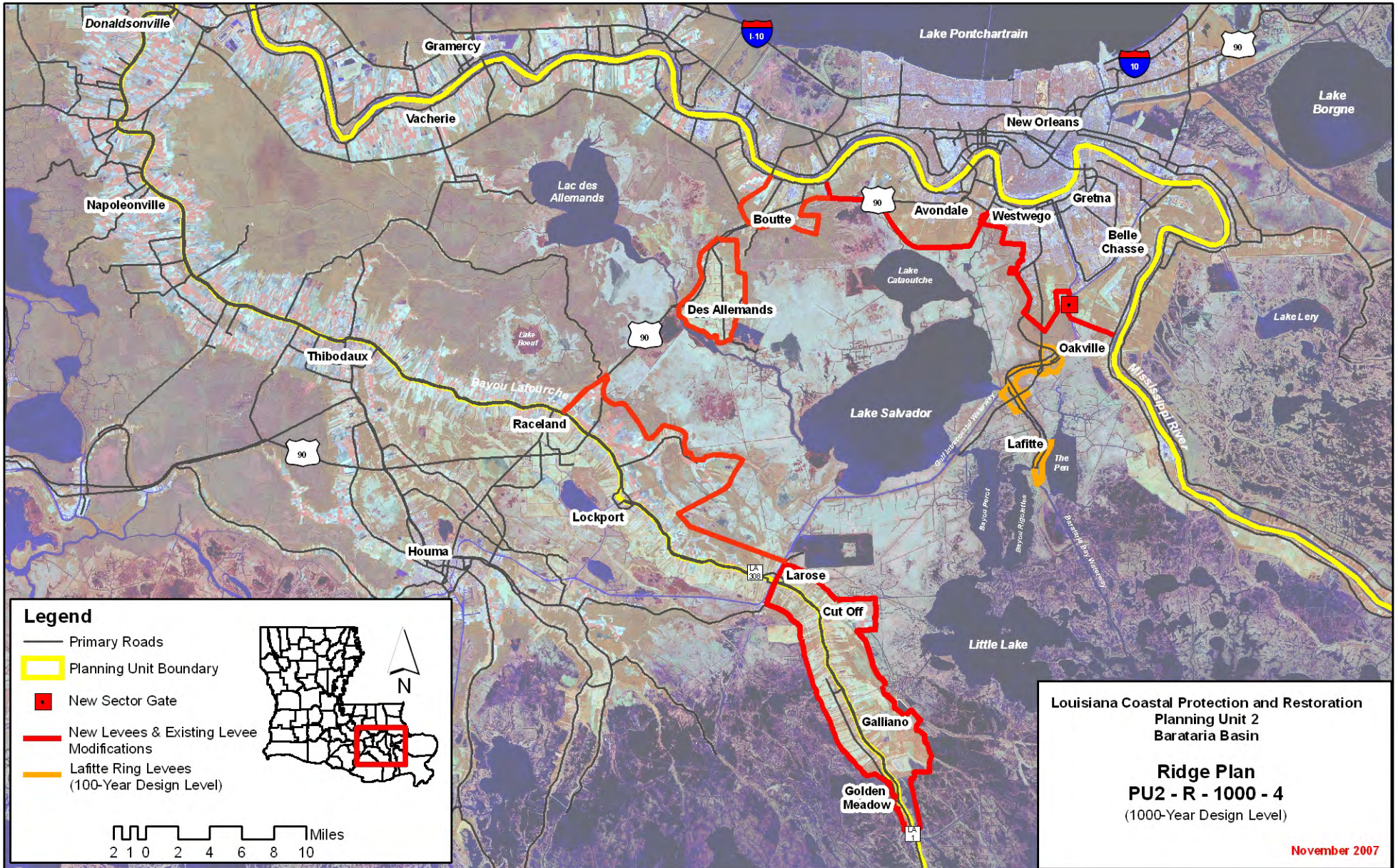
| | | | | | |
|---------------------------------|---|---------------------------------|--------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-R-1000-4 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Construct new sector gate on Bayou Baratavia 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 Allemand | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

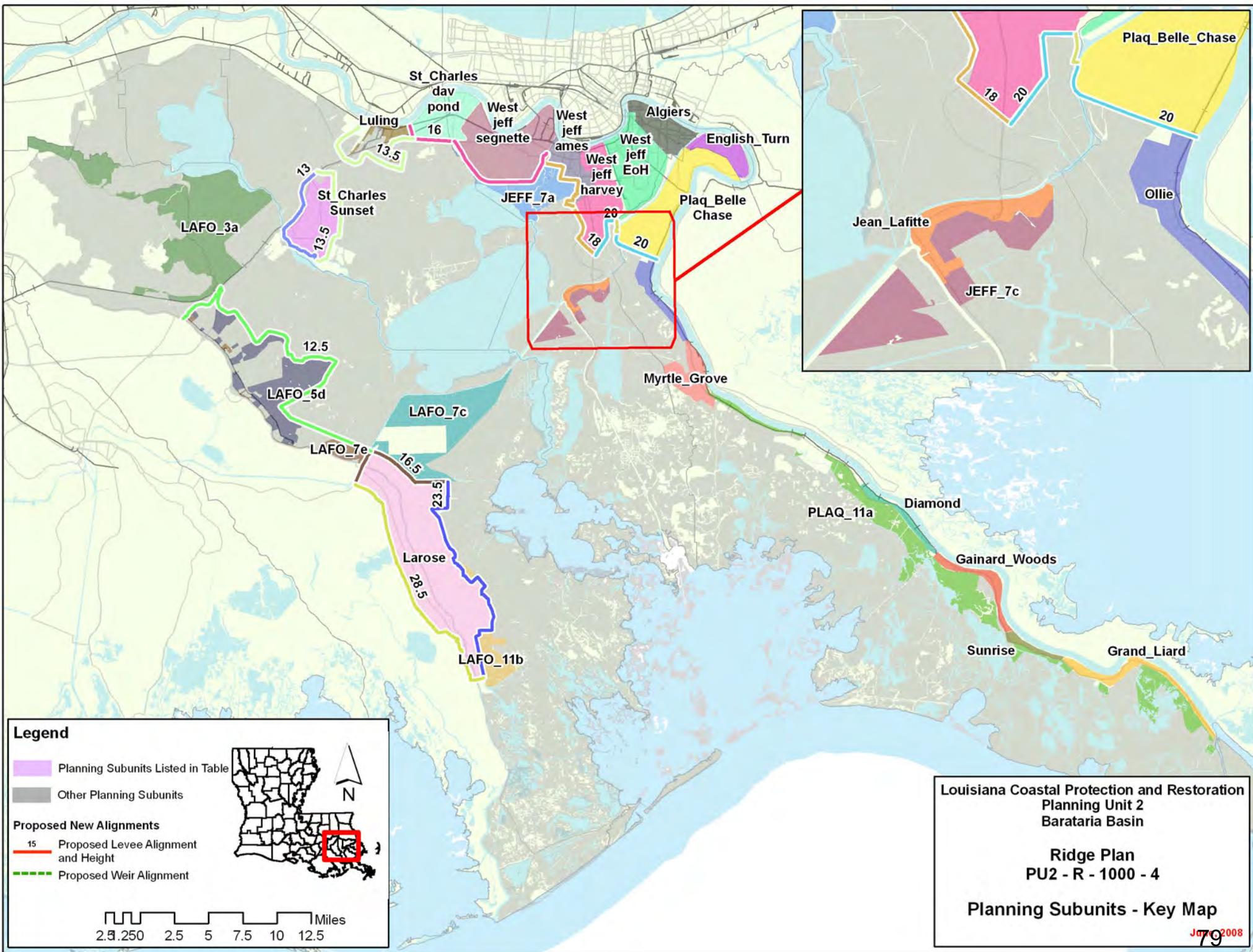
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,800 | 13,863 | 349 | 594 | 1,278 | 93 | 277 | 26 | 9 |
| | | Mid | | 17,199 | 711 | 1,121 | 2,821 | 202 | 224 | 26 | 9 |
| | | Low | | 18,067 | 870 | 1,351 | 3,331 | 228 | 171 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,832 | 14,687 | 492 | 836 | 1,966 | 156 | 277 | 26 | 9 |
| | | Mid | | 17,478 | 773 | 1,168 | 2,905 | 209 | 224 | 26 | 9 |
| | | Low | | 18,223 | 929 | 1,404 | 3,451 | 241 | 171 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,800 | 9,240 | 325 | 542 | 1,170 | 81 | 277 | 26 | 9 |
| | | Mid | | 12,195 | 650 | 907 | 2,406 | 161 | 224 | 26 | 9 |
| | | Low | | 13,029 | 786 | 1,097 | 2,811 | 180 | 171 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,832 | 9,850 | 432 | 704 | 1,602 | 122 | 277 | 26 | 9 |
| | | Mid | | 12,346 | 689 | 946 | 2,469 | 167 | 224 | 26 | 9 |
| | | Low | | 13,096 | 814 | 1,136 | 2,860 | 185 | 171 | 23 | 8 |

| Other Results | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|----------------------------|--------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | 6,800 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 19,773 | 19,994 | Structural Component | | 39,174 | 39,774 | 39,174 | 39,774 |
| | 3 / 4 | 19,773 | 19,994 | Total Project | | 54,831 | 55,462 | 54,831 | 55,462 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan Ridge Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 956 | 2,834 | 1,833 | 1,512 | 859 | 2,129 | 1,084 | |
| 100-year | 46,652 | 4,126 | 49,467 | 5,351 | 37,218 | 2,968 | 39,133 | 3,568 | |
| 400-year | 51,671 | 6,541 | 53,124 | 7,244 | 40,614 | 3,820 | 41,659 | 4,117 | |
| 1,000-year | 53,208 | 7,328 | 54,188 | 7,930 | 41,777 | 4,159 | 42,556 | 4,395 | |
| 2,000-year | 53,965 | 8,995 | 54,716 | 9,482 | 42,386 | 5,448 | 42,963 | 5,647 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU2-R-1000-4
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.7 | 18.9 | 18.9 | 16.2 | 16.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.3 | 19.7 | 19.7 | 16.7 | 16.7 | 20.5 | 20.5 | 22.9 | 22.9 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| Jean_Lafitte | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 13.0 | 11.6 | 16.9 | 15.1 | 19.3 | 17.2 |
| JEFF_7a | 7.7 | 7.7 | 10.8 | 10.8 | 13.1 | 13.1 | 12.8 | 10.9 | 17.1 | 14.0 | 18.2 | 16.3 |
| JEFF_7c | 8.4 | 8.4 | 11.9 | 11.9 | 14.0 | 14.0 | 22.7 | 11.6 | 27.6 | 15.1 | 30.0 | 17.2 |
| LAFO_11b | 11.6 | 11.6 | 14.5 | 14.5 | 16.1 | 16.1 | 14.4 | 14.8 | 16.9 | 17.7 | 18.4 | 19.3 |
| LAFO_3a | 3.9 | 3.9 | 5.1 | 5.1 | 6.0 | 6.0 | 7.0 | 7.1 | 8.2 | 8.3 | 9.0 | 9.2 |
| LAFO_5d | 5.8 | 1.1 | 8.7 | 1.1 | 10.9 | 1.5 | 10.6 | 1.1 | 13.4 | 1.1 | 15.1 | 1.5 |
| LAFO_7c | 7.1 | 7.1 | 9.1 | 9.1 | 10.3 | 10.3 | 12.0 | 10.3 | 14.2 | 12.3 | 15.4 | 13.5 |
| LAFO_7e | 8.1 | 1.1 | 11.3 | 1.1 | 13.4 | 1.5 | 12.5 | 1.1 | 15.3 | 1.1 | 17.3 | 1.5 |
| Larose | -2.5 | -2.9 | 9.0 | -2.8 | 12.0 | -2.4 | 15.0 | -2.9 | 15.0 | -2.8 | 15.0 | -2.4 |
| Luling | 6.1 | 1.5 | 8.6 | 1.6 | 10.2 | 2.2 | 11.8 | 1.5 | 15.5 | 1.6 | 17.4 | 2.2 |
| Myrtle_Grove | 10.3 | 10.3 | 13.8 | 13.8 | 15.7 | 15.7 | 13.5 | 13.5 | 17.3 | 17.0 | 18.6 | 18.9 |
| Ollie | 8.0 | 8.0 | 13.2 | 13.2 | 15.3 | 15.3 | 11.2 | 11.2 | 19.2 | 16.4 | 22.1 | 18.5 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.7 | 18.9 | 18.9 | 15.9 | 15.7 | 20.5 | 19.9 | 22.9 | 22.1 |
| Plaq_Belle_Chase | -2.6 | -2.8 | 11.0 | -2.7 | 11.3 | -2.6 | 11.6 | -2.8 | 14.3 | -2.7 | 15.8 | -2.6 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.6 | 11.0 | 1.7 | 11.0 | 1.5 | 13.2 | 1.6 | 14.5 | 1.7 |
| St_Charles_Sunset | 7.0 | -5.1 | 9.4 | -5.0 | 10.7 | -4.7 | 10.0 | -5.1 | 12.3 | -5.0 | 13.7 | -4.7 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.7 | 18.9 | 18.9 | 18.2 | 18.2 | 26.3 | 19.9 | 30.2 | 22.1 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -1.5 | 11.3 | -0.5 | 11.6 | -1.5 | 14.3 | -1.5 | 15.8 | -0.5 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.7 | 11.3 | -3.6 | 11.6 | -3.7 | 14.3 | -3.7 | 15.8 | -3.6 |
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.5 | 11.3 | -2.2 | 11.6 | -2.5 | 14.3 | -2.5 | 15.8 | -2.2 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -4.0 | 11.3 | -3.8 | 11.6 | -4.0 | 14.3 | -4.0 | 15.8 | -3.8 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

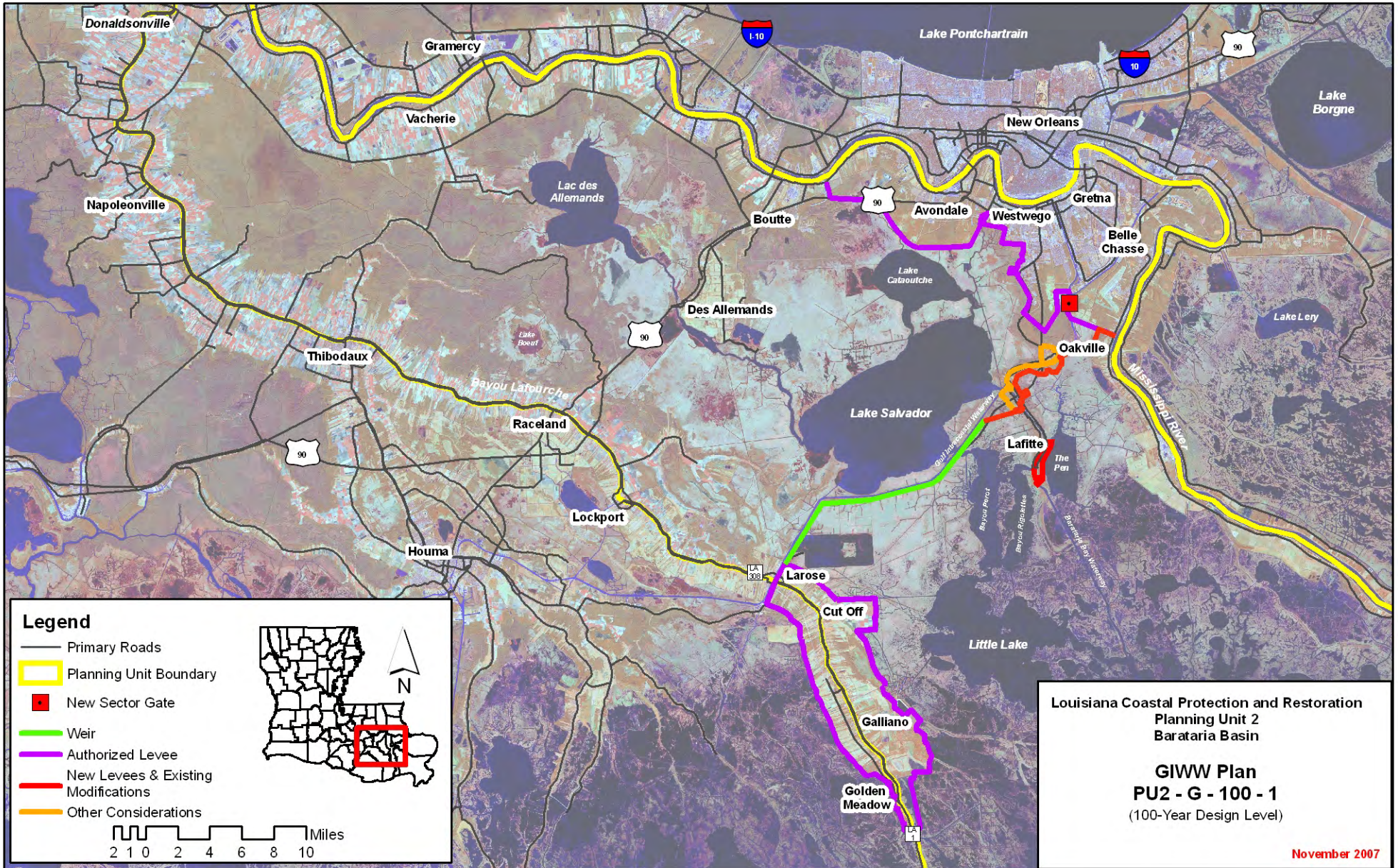
| | | | | | |
|---------------------------------|---|------------------|---------------------------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-G-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,188 | 15,688 | 352 | 639 | 1,347 | 94 | 502 | 26 | 9 |
| | | Mid | | 18,715 | 667 | 1,051 | 2,672 | 183 | 449 | 26 | 9 |
| | | Low | | 19,963 | 831 | 1,316 | 3,258 | 216 | 396 | 24 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,197 | 16,567 | 481 | 900 | 1,973 | 150 | 502 | 26 | 9 |
| | | Mid | | 19,072 | 736 | 1,153 | 2,817 | 196 | 449 | 26 | 9 |
| | | Low | | 20,223 | 891 | 1,385 | 3,407 | 229 | 396 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,188 | 10,632 | 331 | 595 | 1,259 | 85 | 502 | 26 | 9 |
| | | Mid | | 13,423 | 628 | 908 | 2,375 | 154 | 449 | 26 | 9 |
| | | Low | | 14,604 | 773 | 1,099 | 2,852 | 178 | 396 | 24 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,197 | 11,334 | 437 | 773 | 1,715 | 126 | 502 | 26 | 9 |
| | | Mid | | 13,711 | 676 | 1,014 | 2,543 | 169 | 449 | 26 | 9 |
| | | Low | | 14,798 | 814 | 1,228 | 3,042 | 197 | 396 | 23 | 8 |

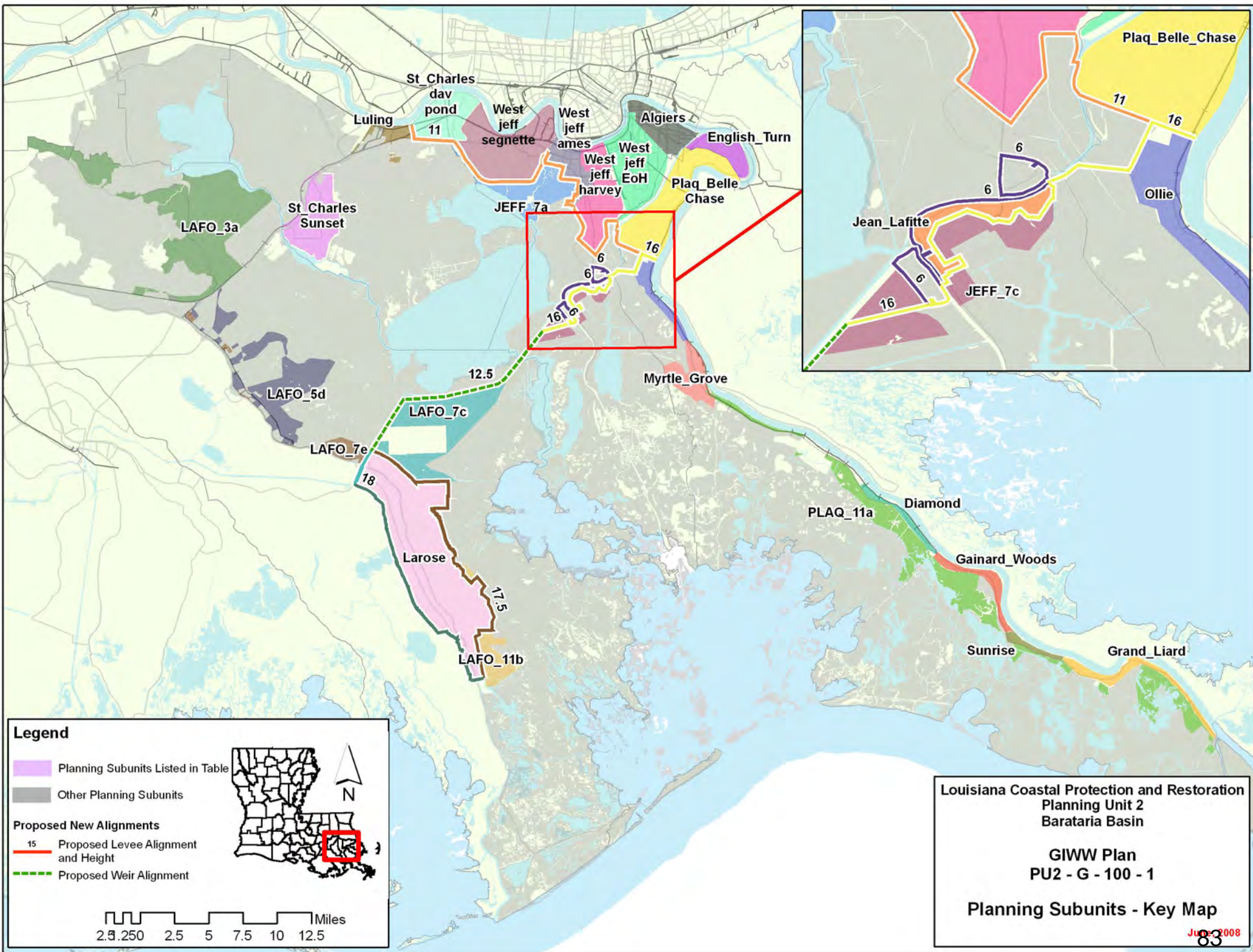
| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 |
|--|----------|---------------|-------|---|--|------------|------------|------------|------------|
| Construction Time (years) | | | 11 | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 1,000 | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 8,287 | 8,349 | Structural Component | | 7,604 | 7,748 | 7,604 | 7,748 |
| | 3 / 4 | 8,287 | 8,349 | Total Project | | 23,261 | 23,437 | 23,261 | 23,437 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 1,477 | 2,834 | 2,147 | 1,512 | 1,326 | 2,129 | 1,851 | |
| 100-year | 46,652 | 4,303 | 49,467 | 5,779 | 37,218 | 3,829 | 39,133 | 4,825 | |
| 400-year | 51,671 | 8,510 | 53,124 | 10,065 | 40,614 | 6,603 | 41,659 | 7,467 | |
| 1,000-year | 53,208 | 13,630 | 54,188 | 14,957 | 41,777 | 9,687 | 42,556 | 10,342 | |
| 2,000-year | 53,965 | 15,564 | 54,716 | 16,482 | 42,386 | 10,712 | 42,963 | 11,370 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



November 2007



Alternative: PU2-G-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.4 | 18.9 | 18.6 | 16.2 | 16.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.6 | 19.7 | 20.1 | 16.7 | 16.7 | 20.5 | 20.8 | 22.9 | 23.3 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.4 | 18.9 | 18.6 | 18.2 | 18.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| Jean_Lafitte | 8.4 | 3.5 | 11.9 | 6.0 | 14.0 | 6.0 | 13.0 | 3.5 | 16.9 | 6.0 | 19.3 | 6.0 |
| JEFF_7a | 7.7 | 4.5 | 10.8 | 7.2 | 13.1 | 9.8 | 12.8 | 7.7 | 17.1 | 10.4 | 18.2 | 13.0 |
| JEFF_7c | 8.4 | 12.0 | 11.9 | 15.5 | 14.0 | 17.6 | 22.7 | 15.2 | 27.6 | 18.7 | 30.0 | 20.8 |
| LAFO_11b | 11.6 | 11.4 | 14.5 | 14.6 | 16.1 | 16.3 | 14.4 | 14.6 | 16.9 | 17.8 | 18.4 | 19.5 |
| LAFO_3a | 3.9 | 3.2 | 5.1 | 4.3 | 6.0 | 5.1 | 7.0 | 6.4 | 8.2 | 7.5 | 9.0 | 8.3 |
| LAFO_5d | 5.8 | 3.1 | 8.7 | 4.4 | 10.9 | 5.4 | 10.6 | 6.3 | 13.4 | 7.6 | 15.1 | 8.6 |
| LAFO_7c | 7.1 | 10.2 | 9.1 | 12.2 | 10.3 | 13.5 | 12.0 | 13.4 | 14.2 | 15.4 | 15.4 | 16.7 |
| LAFO_7e | 8.1 | 5.0 | 11.3 | 6.2 | 13.4 | 6.9 | 12.5 | 8.2 | 15.3 | 9.4 | 17.3 | 10.1 |
| Larose | -2.5 | -2.6 | 9.0 | 6.9 | 12.0 | 15.0 | 15.0 | -2.6 | 15.0 | 6.9 | 15.0 | 15.0 |
| Luling | 6.1 | 4.3 | 8.6 | 5.9 | 10.2 | 7.0 | 11.8 | 7.5 | 15.5 | 9.1 | 17.4 | 10.2 |
| Myrtle_Grove | 10.3 | 9.4 | 13.8 | 11.7 | 15.7 | 12.8 | 13.5 | 12.6 | 17.3 | 14.9 | 18.6 | 16.0 |
| Ollie | 8.0 | 8.0 | 13.2 | 16.0 | 15.3 | 18.1 | 11.2 | 11.2 | 19.2 | 19.2 | 22.1 | 21.3 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.4 | 18.9 | 18.6 | 15.9 | 15.7 | 20.5 | 19.6 | 22.9 | 21.8 |
| Plaq_Belle_Chase | -2.6 | -2.7 | 11.0 | -0.8 | 11.3 | 2.9 | 11.6 | -2.7 | 14.3 | -0.8 | 15.8 | 2.9 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.5 | 11.0 | 1.6 | 11.0 | 1.5 | 13.2 | 1.5 | 14.5 | 1.6 |
| St_Charles_Sunset | 7.0 | 6.3 | 9.4 | 8.9 | 10.7 | 10.5 | 10.0 | 9.5 | 12.3 | 12.1 | 13.7 | 13.7 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.4 | 18.9 | 18.6 | 18.2 | 18.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -1.5 | 11.3 | -1.3 | 11.6 | -1.5 | 14.3 | -1.5 | 15.8 | -1.3 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.7 | 11.3 | -3.7 | 11.6 | -3.7 | 14.3 | -3.7 | 15.8 | -3.7 |
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.5 | 11.3 | -2.5 | 11.6 | -2.5 | 14.3 | -2.5 | 15.8 | -2.5 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -4.0 | 11.3 | -4.0 | 11.6 | -4.0 | 14.3 | -4.0 | 15.8 | -4.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

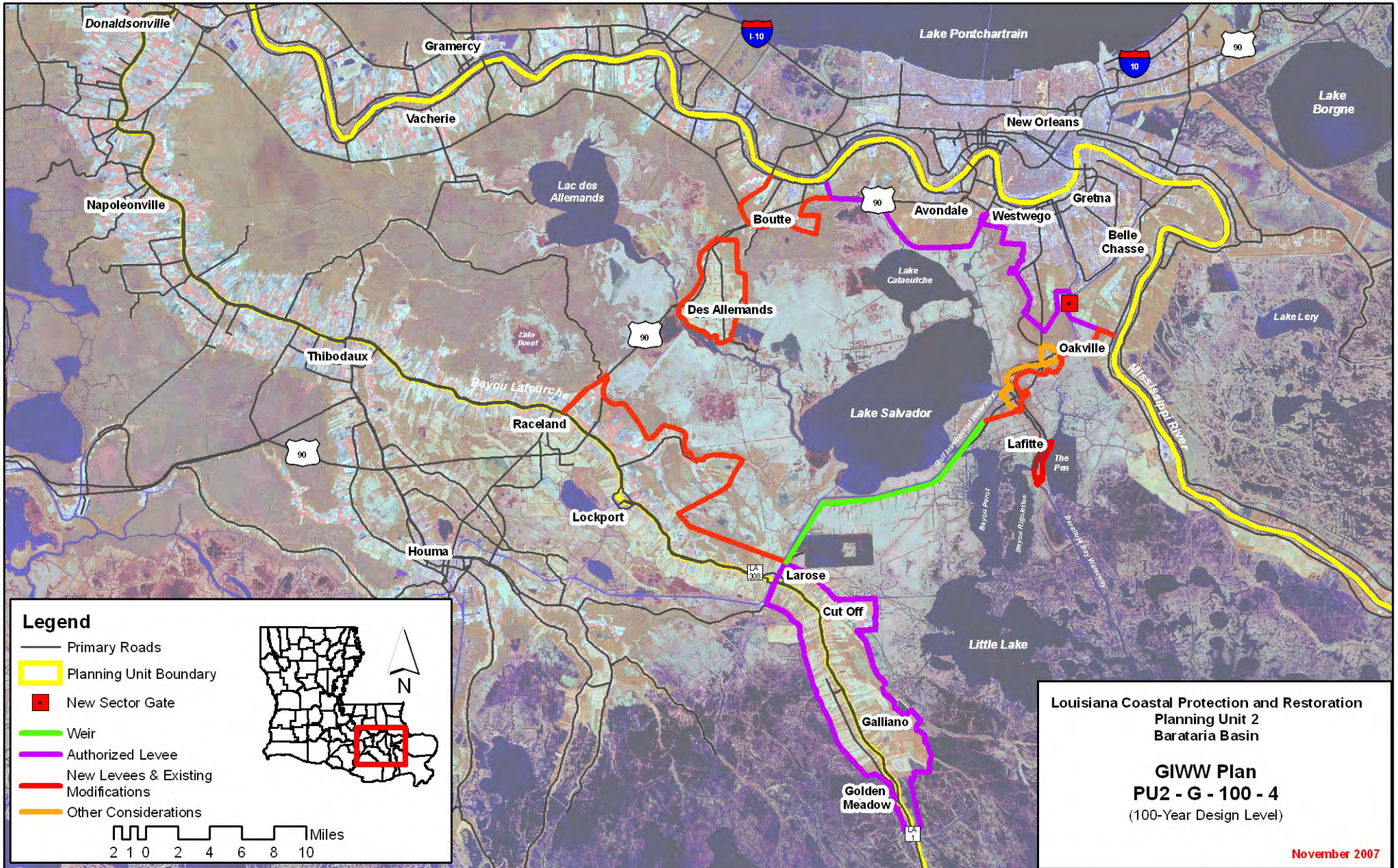
| | | | | | |
|---------------------------------|---|------------------|---------------------------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-G-100-4 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

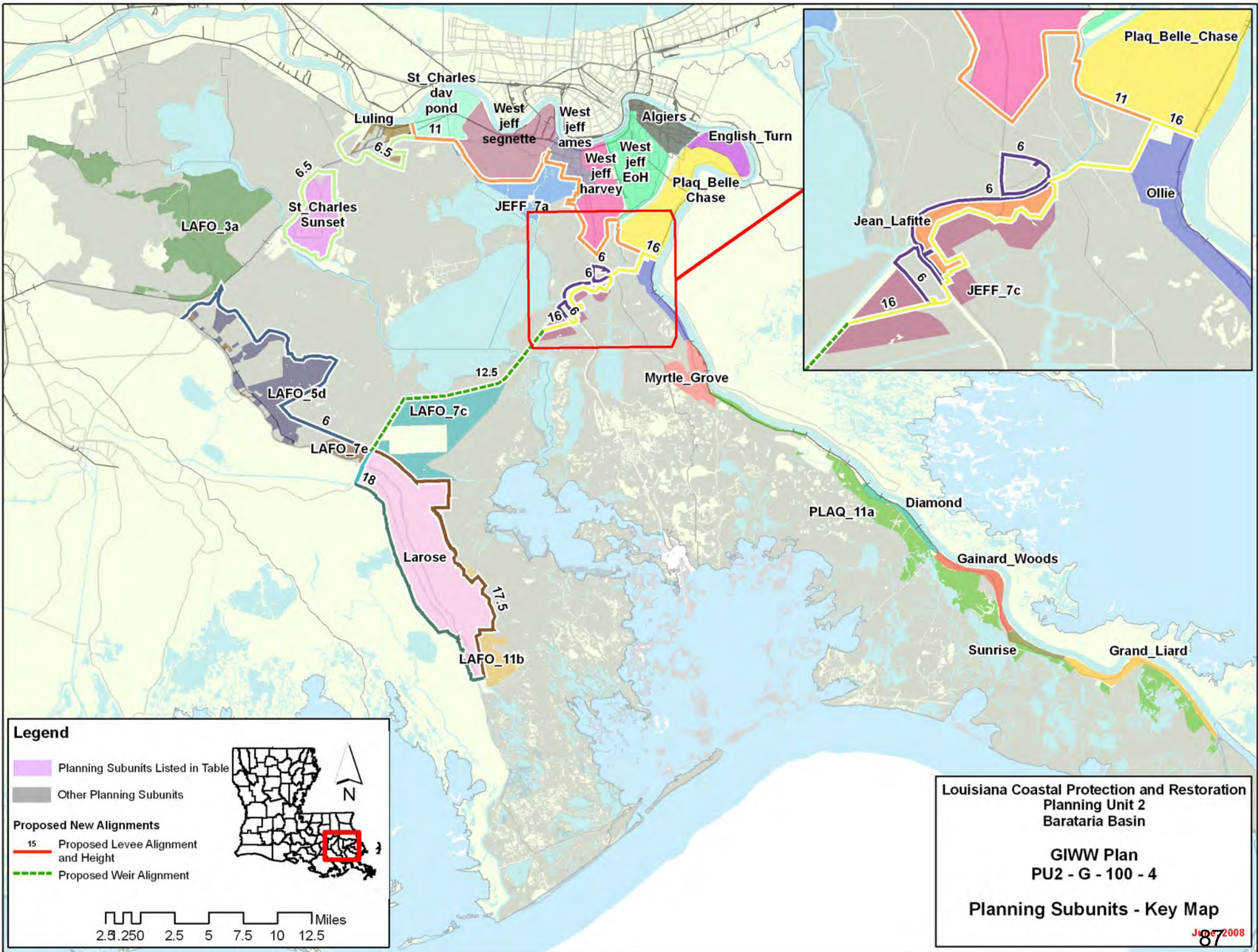
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,541 | 13,610 | 319 | 593 | 1,206 | 86 | 502 | 26 | 9 |
| | | Mid | | 16,492 | 626 | 985 | 2,472 | 170 | 449 | 26 | 9 |
| | | Low | | 17,697 | 782 | 1,242 | 3,040 | 202 | 396 | 24 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,552 | 14,375 | 433 | 825 | 1,753 | 135 | 502 | 26 | 9 |
| | | Mid | | 16,762 | 678 | 1,062 | 2,550 | 178 | 449 | 26 | 9 |
| | | Low | | 17,897 | 824 | 1,286 | 3,114 | 209 | 396 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,541 | 8,837 | 298 | 549 | 1,112 | 76 | 502 | 26 | 9 |
| | | Mid | | 11,481 | 587 | 847 | 2,185 | 142 | 449 | 26 | 9 |
| | | Low | | 12,569 | 725 | 1,026 | 2,641 | 165 | 396 | 24 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,552 | 9,397 | 390 | 700 | 1,499 | 111 | 502 | 26 | 9 |
| | | Mid | | 11,649 | 620 | 896 | 2,261 | 149 | 449 | 26 | 9 |
| | | Low | | 12,693 | 750 | 1,067 | 2,704 | 171 | 396 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 11 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 2,200 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 10,826 | 10,900 | Structural Component | | 14,521 | 14,700 | 14,521 | 14,700 | |
| | 3 / 4 | 10,826 | 10,900 | Total Project | | 30,178 | 30,389 | 30,178 | 30,389 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 959 | 2,834 | 1,352 | 1,512 | 800 | 2,129 | 1,061 | |
| 100-year | 46,652 | 3,227 | 49,467 | 4,105 | 37,218 | 2,832 | 39,133 | 3,291 | |
| 400-year | 51,671 | 7,521 | 53,124 | 8,395 | 40,614 | 5,852 | 41,659 | 6,164 | |
| 1,000-year | 53,208 | 12,199 | 54,188 | 13,026 | 41,777 | 8,630 | 42,556 | 8,866 | |
| 2,000-year | 53,965 | 13,855 | 54,716 | 14,329 | 42,386 | 9,449 | 42,963 | 9,655 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

Miles
2.5 2.50 2.5 5 7.5 10 12.5

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

GIWW Plan
 PU2 - G - 100 - 4

Planning Subunits - Key Map

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Alternative: PU2-G-100-4
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.4 | 18.9 | 18.6 | 16.2 | 16.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.6 | 19.7 | 20.1 | 16.7 | 16.7 | 20.5 | 20.8 | 22.9 | 23.3 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.4 | 18.9 | 18.6 | 18.2 | 18.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| Jean_Lafitte | 8.4 | 3.5 | 11.9 | 6.0 | 14.0 | 6.0 | 13.0 | 3.5 | 16.9 | 6.0 | 19.3 | 6.0 |
| JEFF_7a | 7.7 | 4.5 | 10.8 | 7.2 | 13.1 | 9.8 | 12.8 | 7.7 | 17.1 | 10.4 | 18.2 | 13.0 |
| JEFF_7c | 8.4 | 12.0 | 11.9 | 15.5 | 14.0 | 17.6 | 22.7 | 15.2 | 27.6 | 18.7 | 30.0 | 20.8 |
| LAFO_11b | 11.6 | 11.4 | 14.5 | 14.6 | 16.1 | 16.3 | 14.4 | 14.6 | 16.9 | 17.8 | 18.4 | 19.5 |
| LAFO_3a | 3.9 | 3.2 | 5.1 | 4.3 | 6.0 | 5.1 | 7.0 | 6.4 | 8.2 | 7.5 | 9.0 | 8.3 |
| LAFO_5d | 5.8 | 1.3 | 8.7 | 5.1 | 10.9 | 6.0 | 10.6 | 1.3 | 13.4 | 5.1 | 15.1 | 6.0 |
| LAFO_7c | 7.1 | 10.2 | 9.1 | 12.2 | 10.3 | 13.5 | 12.0 | 13.4 | 14.2 | 15.4 | 15.4 | 16.7 |
| LAFO_7e | 8.1 | 1.3 | 11.3 | 5.1 | 13.4 | 6.0 | 12.5 | 1.3 | 15.3 | 5.1 | 17.3 | 6.0 |
| Larose | -2.5 | -2.6 | 9.0 | 6.9 | 12.0 | 15.0 | 15.0 | -2.6 | 15.0 | 6.9 | 15.0 | 15.0 |
| Luling | 6.1 | 2.0 | 8.6 | 6.5 | 10.2 | 6.5 | 11.8 | 2.0 | 15.5 | 6.5 | 17.4 | 6.5 |
| Myrtle_Grove | 10.3 | 9.4 | 13.8 | 11.7 | 15.7 | 12.8 | 13.5 | 12.6 | 17.3 | 14.9 | 18.6 | 16.0 |
| Ollie | 8.0 | 8.0 | 13.2 | 16.0 | 15.3 | 18.1 | 11.2 | 11.2 | 19.2 | 19.2 | 22.1 | 21.3 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.4 | 18.9 | 18.6 | 15.9 | 15.7 | 20.5 | 19.6 | 22.9 | 21.8 |
| Plaq_Belle_Chase | -2.6 | -2.7 | 11.0 | -0.8 | 11.3 | 2.9 | 11.6 | -2.7 | 14.3 | -0.8 | 15.8 | 2.9 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.5 | 11.0 | 1.6 | 11.0 | 1.5 | 13.2 | 1.5 | 14.5 | 1.6 |
| St_Charles_Sunset | 7.0 | -4.8 | 9.4 | 5.1 | 10.7 | 6.5 | 10.0 | -4.8 | 12.3 | 5.1 | 13.7 | 6.5 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.4 | 18.9 | 18.6 | 18.2 | 18.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -1.5 | 11.3 | -1.3 | 11.6 | -1.5 | 14.3 | -1.5 | 15.8 | -1.3 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.7 | 11.3 | -3.7 | 11.6 | -3.7 | 14.3 | -3.7 | 15.8 | -3.7 |
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.5 | 11.3 | -2.5 | 11.6 | -2.5 | 14.3 | -2.5 | 15.8 | -2.5 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -4.0 | 11.3 | -4.0 | 11.6 | -4.0 | 14.3 | -4.0 | 15.8 | -4.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

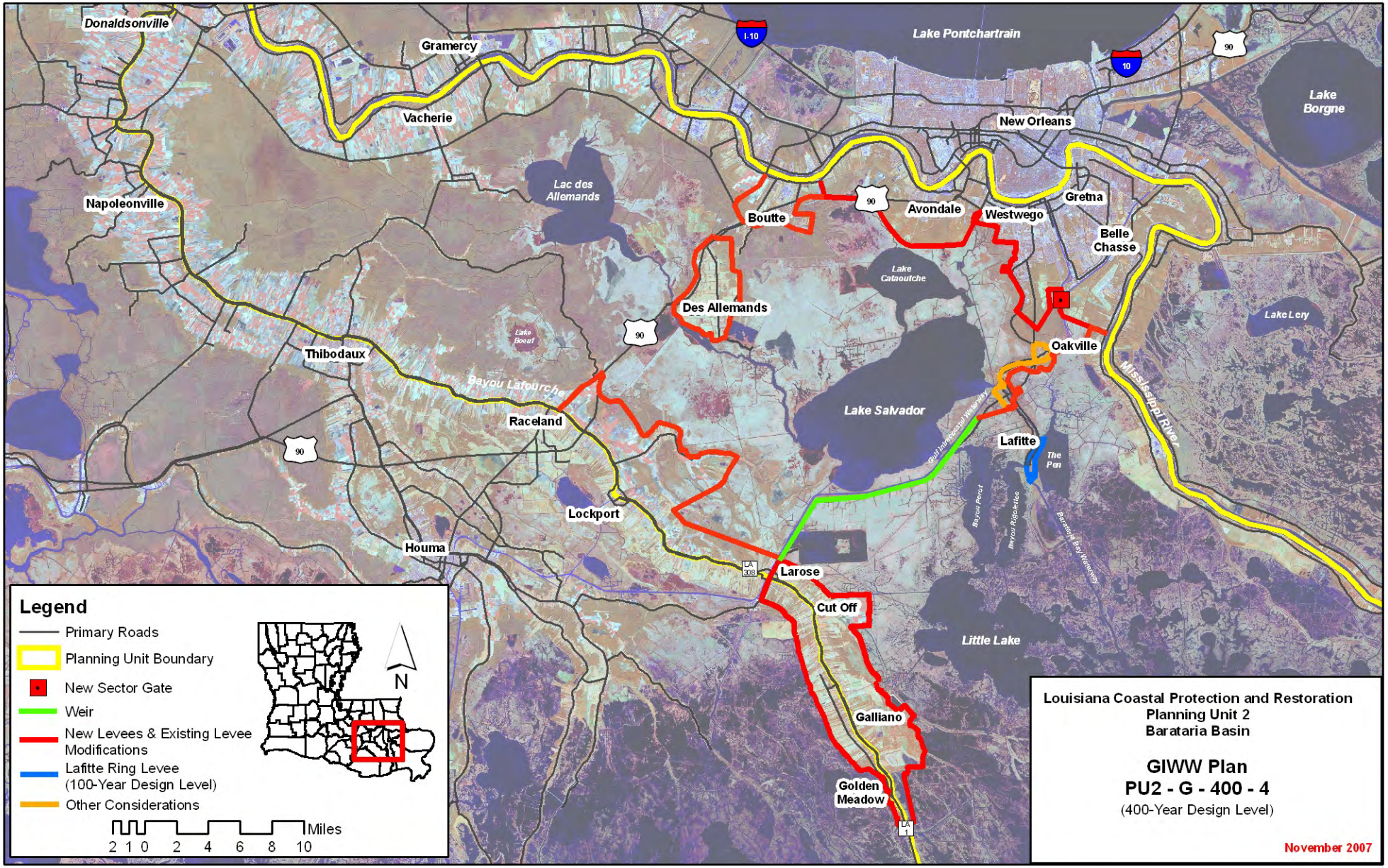
| | | | | | |
|---------------------------------|---|------------------|---------------------------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-G-400-4 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

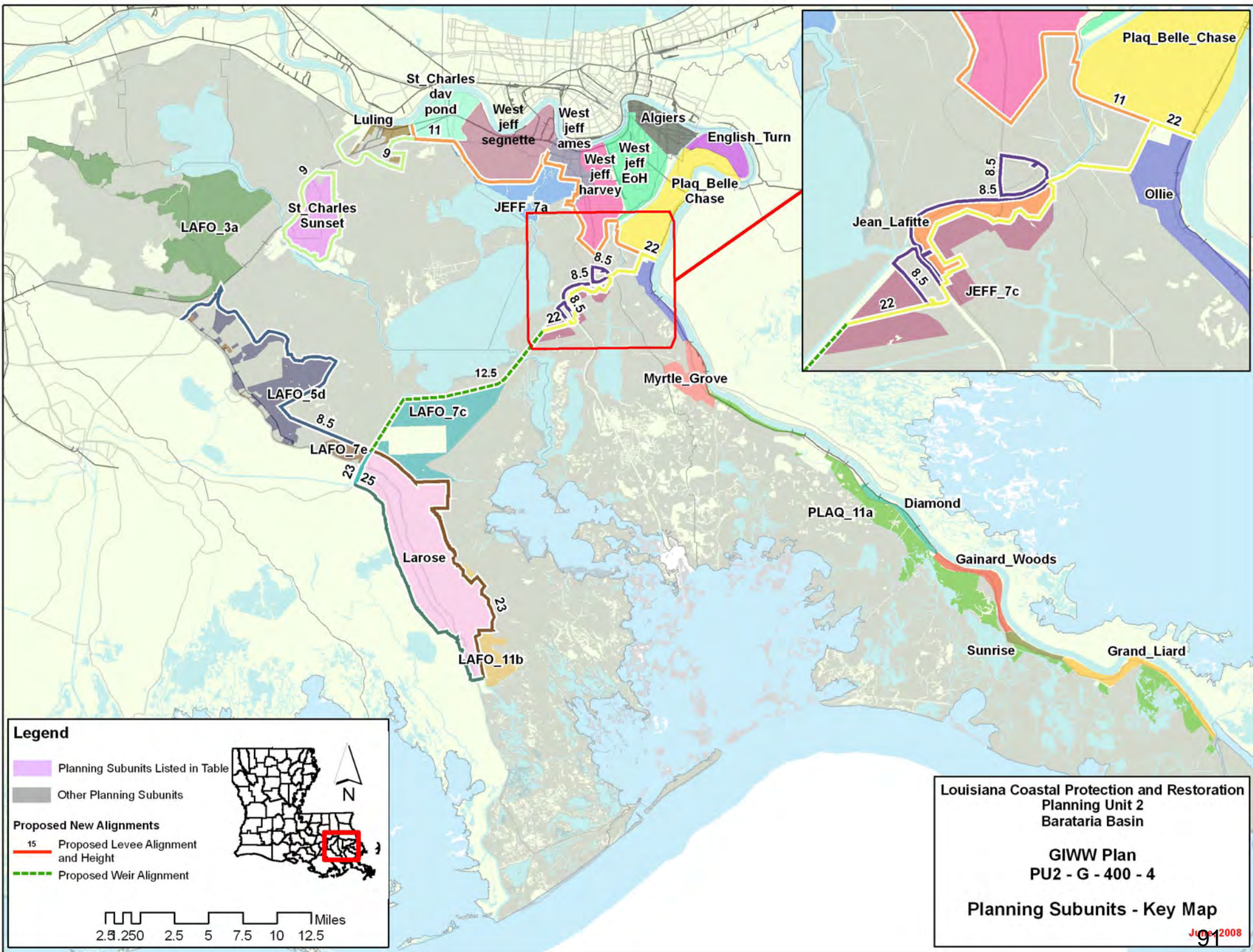
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,574 | 14,073 | 343 | 630 | 1,303 | 95 | 502 | 27 | 9 |
| | | Mid | | 17,142 | 688 | 1,094 | 2,760 | 195 | 449 | 27 | 9 |
| | | Low | | 18,067 | 839 | 1,327 | 3,262 | 221 | 396 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,582 | 14,977 | 481 | 900 | 1,970 | 155 | 502 | 27 | 9 |
| | | Mid | | 17,432 | 746 | 1,173 | 2,844 | 203 | 449 | 27 | 9 |
| | | Low | | 18,265 | 884 | 1,377 | 3,344 | 230 | 396 | 24 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,574 | 9,277 | 318 | 580 | 1,193 | 83 | 502 | 27 | 9 |
| | | Mid | | 12,074 | 640 | 931 | 2,414 | 161 | 449 | 27 | 9 |
| | | Low | | 12,944 | 772 | 1,095 | 2,813 | 180 | 396 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,582 | 9,942 | 430 | 761 | 1,663 | 127 | 502 | 27 | 9 |
| | | Mid | | 12,253 | 677 | 986 | 2,496 | 169 | 449 | 27 | 9 |
| | | Low | | 13,065 | 799 | 1,143 | 2,882 | 187 | 396 | 24 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 7,400 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 18,158 | 18,217 | Structural Component | | 34,745 | 34,880 | 34,745 | 34,880 | |
| | 3 / 4 | 18,158 | 18,217 | Total Project | | 50,402 | 50,569 | 50,402 | 50,569 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan GIWW Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 959 | 2,834 | 1,352 | 1,512 | 800 | 2,129 | 1,061 | |
| 100-year | 46,652 | 3,208 | 49,467 | 4,085 | 37,218 | 2,813 | 39,133 | 3,271 | |
| 400-year | 51,671 | 5,118 | 53,124 | 5,992 | 40,614 | 3,506 | 41,659 | 3,818 | |
| 1,000-year | 53,208 | 6,641 | 54,188 | 7,469 | 41,777 | 4,015 | 42,556 | 4,251 | |
| 2,000-year | 53,965 | 7,692 | 54,716 | 8,166 | 42,386 | 4,570 | 42,963 | 4,777 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.






Legend

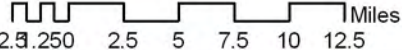
- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment



N



Miles
2.5 2.50 2.5 5 7.5 10 12.5

Louisiana Coastal Protection and Restoration
Planning Unit 2
Barataria Basin

GIWW Plan
PU2 - G - 400 - 4

Planning Subunits - Key Map

June 2008
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Alternative: PU2-G-400-4
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.4 | 18.9 | 18.6 | 16.2 | 16.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.6 | 19.7 | 20.1 | 16.7 | 16.7 | 20.5 | 20.8 | 22.9 | 23.3 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.4 | 18.9 | 18.6 | 18.2 | 18.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| Jean_Lafitte | 8.4 | 1.0 | 11.9 | 3.4 | 14.0 | 8.5 | 13.0 | 1.0 | 16.9 | 3.4 | 19.3 | 8.5 |
| JEFF_7a | 7.7 | 4.5 | 10.8 | 7.2 | 13.1 | 9.8 | 12.8 | 7.7 | 17.1 | 10.4 | 18.2 | 13.0 |
| JEFF_7c | 8.4 | 12.0 | 11.9 | 15.5 | 14.0 | 17.6 | 22.7 | 15.2 | 27.6 | 18.7 | 30.0 | 20.8 |
| LAFO_11b | 11.6 | 11.4 | 14.5 | 14.6 | 16.1 | 16.3 | 14.4 | 14.6 | 16.9 | 17.8 | 18.4 | 19.5 |
| LAFO_3a | 3.9 | 3.2 | 5.1 | 4.3 | 6.0 | 5.1 | 7.0 | 6.4 | 8.2 | 7.5 | 9.0 | 8.3 |
| LAFO_5d | 5.8 | 1.1 | 8.7 | 1.2 | 10.9 | 2.4 | 10.6 | 1.1 | 13.4 | 1.2 | 15.1 | 2.4 |
| LAFO_7c | 7.1 | 10.2 | 9.1 | 12.2 | 10.3 | 13.5 | 12.0 | 13.4 | 14.2 | 15.4 | 15.4 | 16.7 |
| LAFO_7e | 8.1 | 1.1 | 11.3 | 1.2 | 13.4 | 2.4 | 12.5 | 1.1 | 15.3 | 1.2 | 17.3 | 2.4 |
| Larose | -2.5 | -2.9 | 9.0 | -2.6 | 12.0 | -1.5 | 15.0 | -2.9 | 15.0 | -2.6 | 15.0 | -1.5 |
| Luling | 6.1 | 1.5 | 8.6 | 2.0 | 10.2 | 3.7 | 11.8 | 1.5 | 15.5 | 2.0 | 17.4 | 3.7 |
| Myrtle_Grove | 10.3 | 9.4 | 13.8 | 11.7 | 15.7 | 12.8 | 13.5 | 12.6 | 17.3 | 14.9 | 18.6 | 16.0 |
| Ollie | 8.0 | 8.0 | 13.2 | 16.0 | 15.3 | 18.1 | 11.2 | 11.2 | 19.2 | 19.2 | 22.1 | 21.3 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.4 | 18.9 | 18.6 | 15.9 | 15.7 | 20.5 | 19.6 | 22.9 | 21.8 |
| Plaq_Belle_Chase | -2.6 | -2.8 | 11.0 | -2.7 | 11.3 | -2.5 | 11.6 | -2.8 | 14.3 | -2.7 | 15.8 | -2.5 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.5 | 11.0 | 1.6 | 11.0 | 1.5 | 13.2 | 1.5 | 14.5 | 1.6 |
| St_Charles_Sunset | 7.0 | -5.1 | 9.4 | -4.7 | 10.7 | -2.6 | 10.0 | -5.1 | 12.3 | -4.7 | 13.7 | -2.6 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.4 | 18.9 | 18.6 | 18.2 | 18.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -1.5 | 11.3 | -1.3 | 11.6 | -1.5 | 14.3 | -1.5 | 15.8 | -1.3 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.7 | 11.3 | -3.7 | 11.6 | -3.7 | 14.3 | -3.7 | 15.8 | -3.7 |
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.5 | 11.3 | -2.5 | 11.6 | -2.5 | 14.3 | -2.5 | 15.8 | -2.5 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -4.0 | 11.3 | -4.0 | 11.6 | -4.0 | 14.3 | -4.0 | 15.8 | -4.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

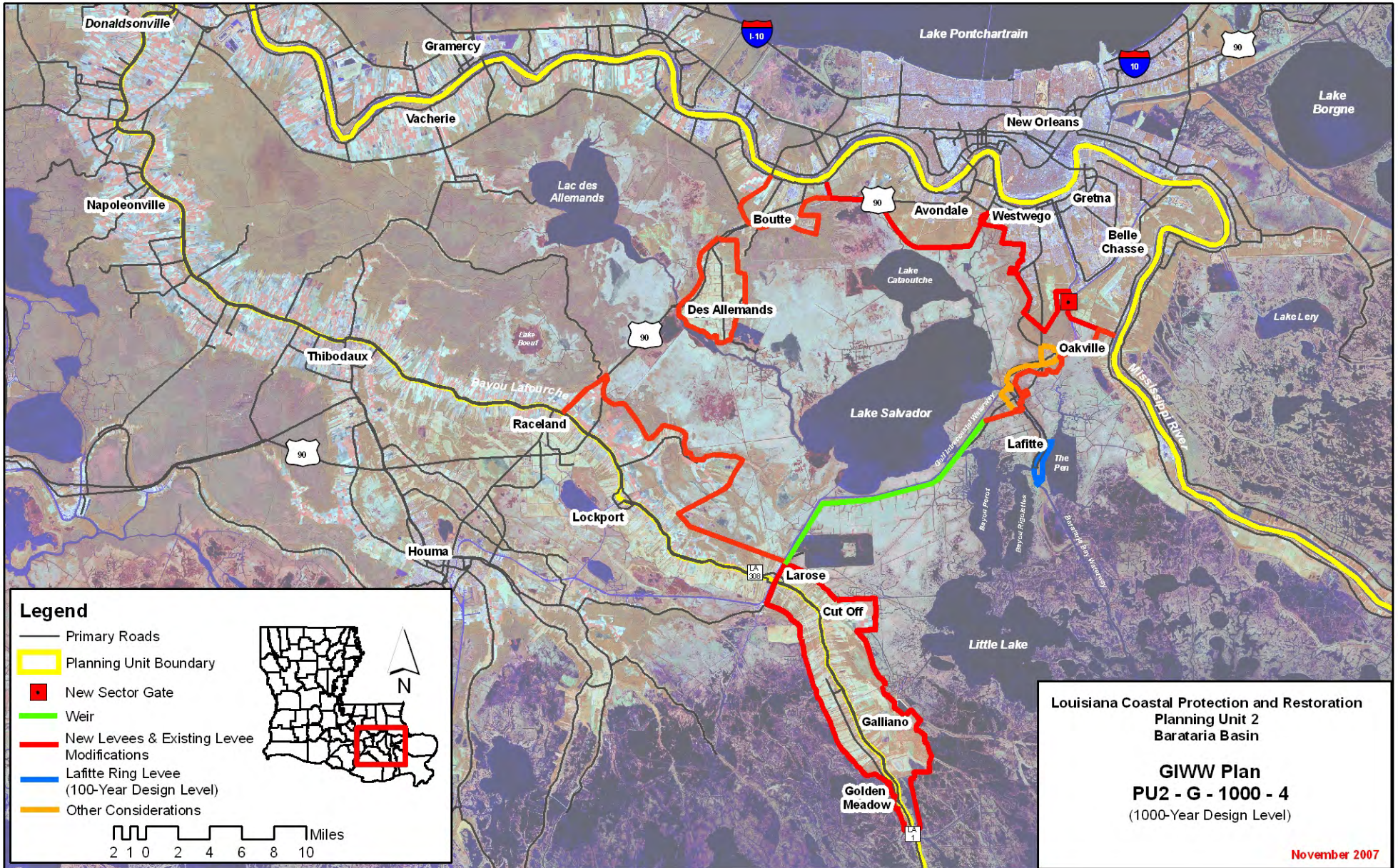
| | | | | | |
|---------------------------------|--|------------------|---------------------------------|------------------|---|
| Planning Unit: | 2 | Alt. No.: | PU2-G-1000-4 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | None | |
| Structural Component: | See alternative description above. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,961 | 14,073 | 343 | 630 | 1,303 | 95 | 502 | 27 | 9 |
| | | Mid | | 17,138 | 688 | 1,094 | 2,760 | 195 | 449 | 27 | 9 |
| | | Low | | 18,021 | 839 | 1,327 | 3,261 | 221 | 396 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,969 | 14,977 | 481 | 900 | 1,970 | 155 | 502 | 27 | 9 |
| | | Mid | | 17,429 | 746 | 1,173 | 2,844 | 203 | 449 | 27 | 9 |
| | | Low | | 18,219 | 884 | 1,377 | 3,343 | 230 | 396 | 24 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,961 | 9,277 | 318 | 580 | 1,193 | 83 | 502 | 27 | 9 |
| | | Mid | | 12,072 | 640 | 931 | 2,414 | 161 | 449 | 27 | 9 |
| | | Low | | 12,905 | 772 | 1,095 | 2,812 | 179 | 396 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,969 | 9,942 | 430 | 761 | 1,663 | 127 | 502 | 27 | 9 |
| | | Mid | | 12,250 | 677 | 986 | 2,496 | 169 | 449 | 27 | 9 |
| | | Low | | 13,026 | 798 | 1,142 | 2,880 | 187 | 396 | 24 | 8 |

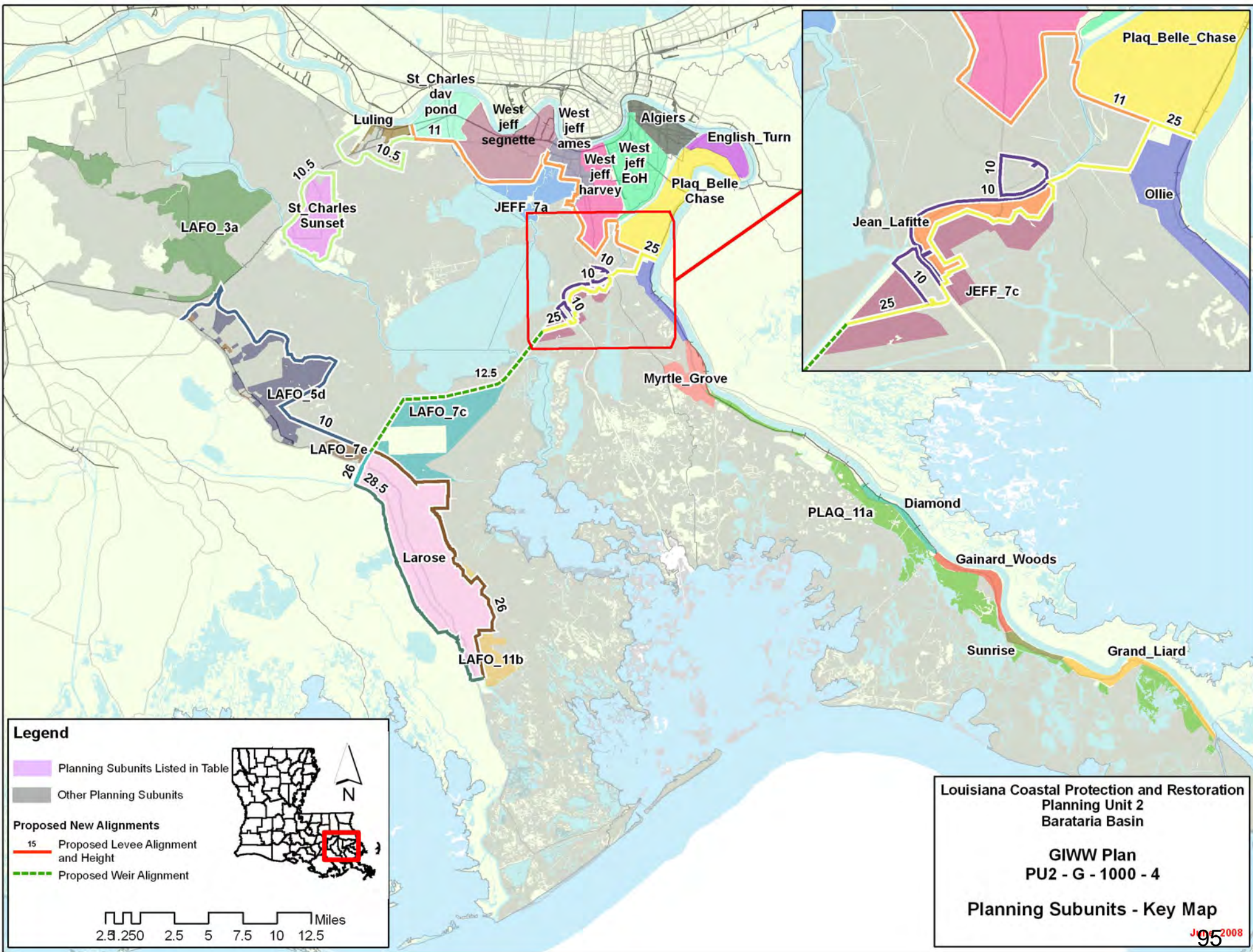
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 9,500 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 20,650 | 20,704 | Structural Component | | 42,335 | 42,457 | 42,335 | 42,457 | |
| | 3 / 4 | 20,650 | 20,704 | Total Project | | 57,992 | 58,146 | 57,992 | 58,146 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Structural Plan GIWW Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 959 | 2,834 | 1,352 | 1,512 | 800 | 2,129 | 1,061 | |
| 100-year | 46,652 | 3,208 | 49,467 | 4,085 | 37,218 | 2,813 | 39,133 | 3,271 | |
| 400-year | 51,671 | 5,103 | 53,124 | 5,977 | 40,614 | 3,491 | 41,659 | 3,802 | |
| 1,000-year | 53,208 | 6,424 | 54,188 | 7,251 | 41,777 | 3,799 | 42,556 | 4,035 | |
| 2,000-year | 53,965 | 7,228 | 54,716 | 7,703 | 42,386 | 4,081 | 42,963 | 4,288 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.



November 2007



Alternative: PU2-G-1000-4
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|-------------------|-----------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| Algiers | -3.8 | -3.9 | 10.7 | -3.9 | 12.1 | -3.9 | 12.9 | -3.9 | 16.3 | -3.9 | 17.9 | -3.9 |
| Diamond | 13.0 | 13.0 | 16.7 | 16.4 | 18.9 | 18.6 | 16.2 | 16.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| English_Turn | -1.7 | -1.7 | 10.7 | -1.7 | 12.1 | -1.7 | 12.9 | -1.7 | 16.3 | -1.7 | 17.9 | -1.7 |
| Gainard_Woods | 13.5 | 13.5 | 17.3 | 17.6 | 19.7 | 20.1 | 16.7 | 16.7 | 20.5 | 20.8 | 22.9 | 23.3 |
| Grand_Liard | 15.0 | 15.0 | 16.7 | 16.4 | 18.9 | 18.6 | 18.2 | 18.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| Jean_Lafitte | 8.4 | 0.9 | 11.9 | 1.4 | 14.0 | 3.7 | 13.0 | 0.9 | 16.9 | 1.4 | 19.3 | 3.7 |
| JEFF_7a | 7.7 | 4.5 | 10.8 | 7.2 | 13.1 | 9.8 | 12.8 | 7.7 | 17.1 | 10.4 | 18.2 | 13.0 |
| JEFF_7c | 8.4 | 12.0 | 11.9 | 15.5 | 14.0 | 17.6 | 22.7 | 15.2 | 27.6 | 18.7 | 30.0 | 20.8 |
| LAFO_11b | 11.6 | 11.4 | 14.5 | 14.6 | 16.1 | 16.3 | 14.4 | 14.6 | 16.9 | 17.8 | 18.4 | 19.5 |
| LAFO_3a | 3.9 | 3.2 | 5.1 | 4.3 | 6.0 | 5.1 | 7.0 | 6.4 | 8.2 | 7.5 | 9.0 | 8.3 |
| LAFO_5d | 5.8 | 1.1 | 8.7 | 1.1 | 10.9 | 1.3 | 10.6 | 1.1 | 13.4 | 1.1 | 15.1 | 1.3 |
| LAFO_7c | 7.1 | 10.2 | 9.1 | 12.2 | 10.3 | 13.5 | 12.0 | 13.4 | 14.2 | 15.4 | 15.4 | 16.7 |
| LAFO_7e | 8.1 | 1.1 | 11.3 | 1.1 | 13.4 | 1.3 | 12.5 | 1.1 | 15.3 | 1.1 | 17.3 | 1.3 |
| Larose | -2.5 | -2.9 | 9.0 | -2.8 | 12.0 | -2.7 | 15.0 | -2.9 | 15.0 | -2.8 | 15.0 | -2.7 |
| Luling | 6.1 | 1.5 | 8.6 | 1.6 | 10.2 | 2.1 | 11.8 | 1.5 | 15.5 | 1.6 | 17.4 | 2.1 |
| Myrtle_Grove | 10.3 | 9.4 | 13.8 | 11.7 | 15.7 | 12.8 | 13.5 | 12.6 | 17.3 | 14.9 | 18.6 | 16.0 |
| Ollie | 8.0 | 8.0 | 13.2 | 16.0 | 15.3 | 18.1 | 11.2 | 11.2 | 19.2 | 19.2 | 22.1 | 21.3 |
| PLAQ_11a | 12.5 | 12.5 | 16.7 | 16.4 | 18.9 | 18.6 | 15.9 | 15.7 | 20.5 | 19.6 | 22.9 | 21.8 |
| Plaq_Belle_Chase | -2.6 | -2.8 | 11.0 | -2.7 | 11.3 | -2.7 | 11.6 | -2.8 | 14.3 | -2.7 | 15.8 | -2.7 |
| St_Charles_dav_pond | 1.6 | 1.5 | 4.8 | 1.5 | 11.0 | 1.6 | 11.0 | 1.5 | 13.2 | 1.5 | 14.5 | 1.6 |
| St_Charles_Sunset | 7.0 | -5.1 | 9.4 | -5.0 | 10.7 | -4.6 | 10.0 | -5.1 | 12.3 | -5.0 | 13.7 | -4.6 |
| Sunrise | 15.0 | 15.0 | 16.7 | 16.4 | 18.9 | 18.6 | 18.2 | 18.2 | 26.3 | 19.6 | 30.2 | 21.8 |
| West_jeff_ames | -1.5 | -1.5 | 11.0 | -1.5 | 11.3 | -1.3 | 11.6 | -1.5 | 14.3 | -1.5 | 15.8 | -1.3 |
| West_jeff_EoH | -3.5 | -3.7 | 11.0 | -3.7 | 11.3 | -3.7 | 11.6 | -3.7 | 14.3 | -3.7 | 15.8 | -3.7 |
| West_jeff_harvey | -2.4 | -2.5 | 11.0 | -2.5 | 11.3 | -2.5 | 11.6 | -2.5 | 14.3 | -2.5 | 15.8 | -2.5 |
| West_jeff_segnette | -3.9 | -4.0 | 11.0 | -4.0 | 11.3 | -4.0 | 11.6 | -4.0 | 14.3 | -4.0 | 15.8 | -4.0 |
| Evaluation Parameters | Confidence Level: | | 90% | | | Levee Design: | | No Friction Waves | | | | |
| | Future Relative Sea Level Rise: | | 3.2 feet | | | Levee Overtopping: | | No Friction Waves | | | | |

| | | | | | |
|---------------------------------|--|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-WBI-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-WBI-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU2-WBI-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,065 | 14,954 | 200 | 290 | 637 | 47 | 266 | 17 | 8 |
| | | Mid | | 18,200 | 459 | 794 | 1,984 | 142 | 213 | 15 | 7 |
| | | Low | | 20,047 | 739 | 1,182 | 3,055 | 211 | 160 | 14 | 6 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,068 | 15,428 | 288 | 500 | 1,137 | 95 | 266 | 15 | 7 |
| | | Mid | | 18,493 | 537 | 911 | 2,186 | 162 | 213 | 14 | 7 |
| | | Low | | 20,265 | 827 | 1,303 | 3,272 | 236 | 160 | 13 | 6 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,072 | 10,244 | 180 | 267 | 611 | 44 | 266 | 17 | 8 |
| | | Mid | | 13,205 | 412 | 668 | 1,761 | 118 | 213 | 15 | 7 |
| | | Low | | 15,036 | 650 | 1,004 | 2,703 | 177 | 160 | 14 | 6 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,075 | 10,613 | 243 | 461 | 991 | 80 | 266 | 15 | 7 |
| | | Mid | | 13,392 | 468 | 827 | 1,986 | 142 | 213 | 14 | 7 |
| | | Low | | 15,126 | 711 | 1,158 | 2,871 | 197 | 160 | 13 | 6 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|---|-------------------------|------------|------------|------------|------------|--------|
| Construction Time (years) | 6 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 | |
| Direct Wetland Impacts (acres) | 0 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 | |
| Indirect Impacts (unitless) | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | | |
| Spatial Integrity (unitless) | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 | |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 4,218 | 4,218 | 4,348 | 4,348 |
| | 1 / 2 | 7,334 | 7,354 | Structural Component | | 999 | 1,024 | 999 | 1,024 |
| | 3 / 4 | 7,379 | 7,399 | Total Project | | 20,874 | 20,930 | 21,004 | 21,060 |

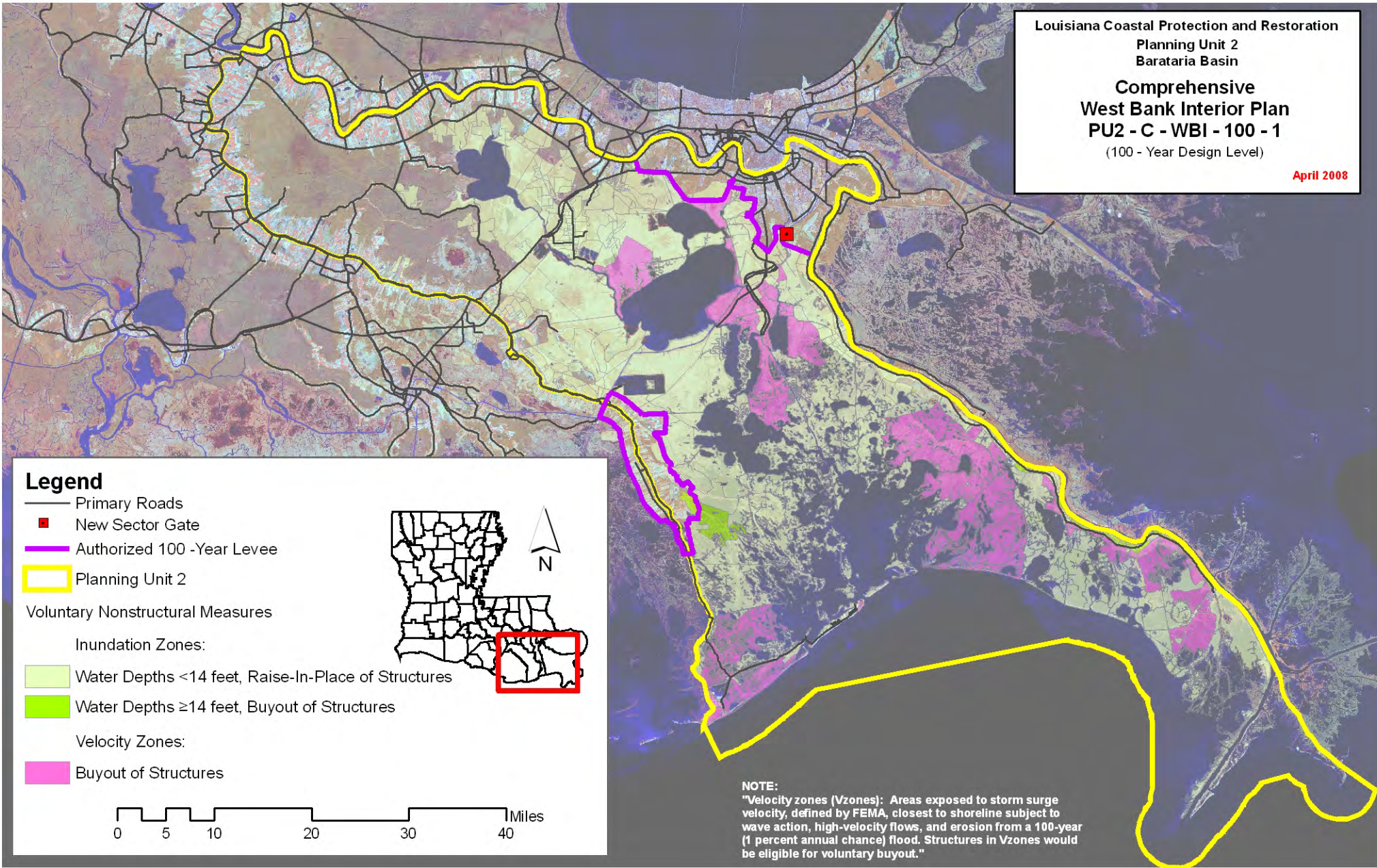
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan West Bank Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 650 | 2,834 | 1,775 | 1,512 | 510 | 2,129 | 1,002 | |
| 100-year | 46,652 | 3,493 | 49,467 | 5,734 | 37,218 | 2,289 | 39,133 | 4,211 | |
| 400-year | 51,671 | 38,149 | 53,124 | 39,402 | 40,614 | 32,015 | 41,659 | 32,912 | |
| 1,000-year | 53,208 | 42,170 | 54,188 | 43,093 | 41,777 | 35,034 | 42,556 | 35,646 | |
| 2,000-year | 53,965 | 43,451 | 54,716 | 44,242 | 42,386 | 35,961 | 42,963 | 36,479 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Comprehensive
 West Bank Interior Plan
 PU2 - C - WBI - 100 - 1**
 (100 - Year Design Level)

April 2008

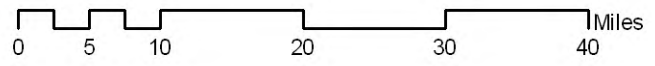
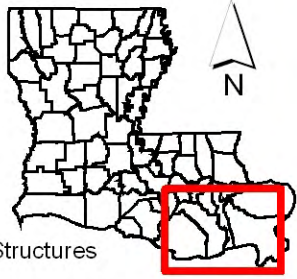


Legend

- Primary Roads
- New Sector Gate
- Authorized 100 -Year Levee
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|--|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-WBI-400-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-WBI-400-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 400-yr complementary measures | | |
| Structural Component: | Same as Alternative PU2-WBI-400-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,912 | 15,094 | 216 | 310 | 707 | 57 | 266 | 26 | 9 |
| | | Mid | | 18,072 | 480 | 721 | 1,930 | 145 | 213 | 26 | 9 |
| | | Low | | 19,210 | 605 | 869 | 2,337 | 167 | 160 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,914 | 15,917 | 335 | 528 | 1,310 | 112 | 266 | 26 | 9 |
| | | Mid | | 18,389 | 531 | 783 | 2,021 | 154 | 213 | 25 | 9 |
| | | Low | | 19,407 | 662 | 1,019 | 2,575 | 193 | 160 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,997 | 10,433 | 197 | 278 | 636 | 49 | 266 | 26 | 9 |
| | | Mid | | 13,083 | 434 | 604 | 1,666 | 119 | 213 | 26 | 9 |
| | | Low | | 14,265 | 541 | 736 | 2,036 | 140 | 160 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,000 | 11,061 | 293 | 454 | 1,084 | 91 | 266 | 26 | 9 |
| | | Mid | | 13,281 | 469 | 672 | 1,770 | 130 | 213 | 25 | 9 |
| | | Low | | 14,350 | 574 | 911 | 2,259 | 164 | 160 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|-------------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 | | |
| Direct Wetland Impacts (acres) | | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 | | |
| Indirect Impacts (unitless) | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,491 | 3,491 | 5,161 | 5,161 | |
| | 1 / 2 | 13,686 | 13,705 | Structural Component | | 18,294 | 18,319 | 18,294 | 18,319 | |
| | 3 / 4 | 14,270 | 14,290 | Total Project | | 37,442 | 37,499 | 39,112 | 39,169 | |

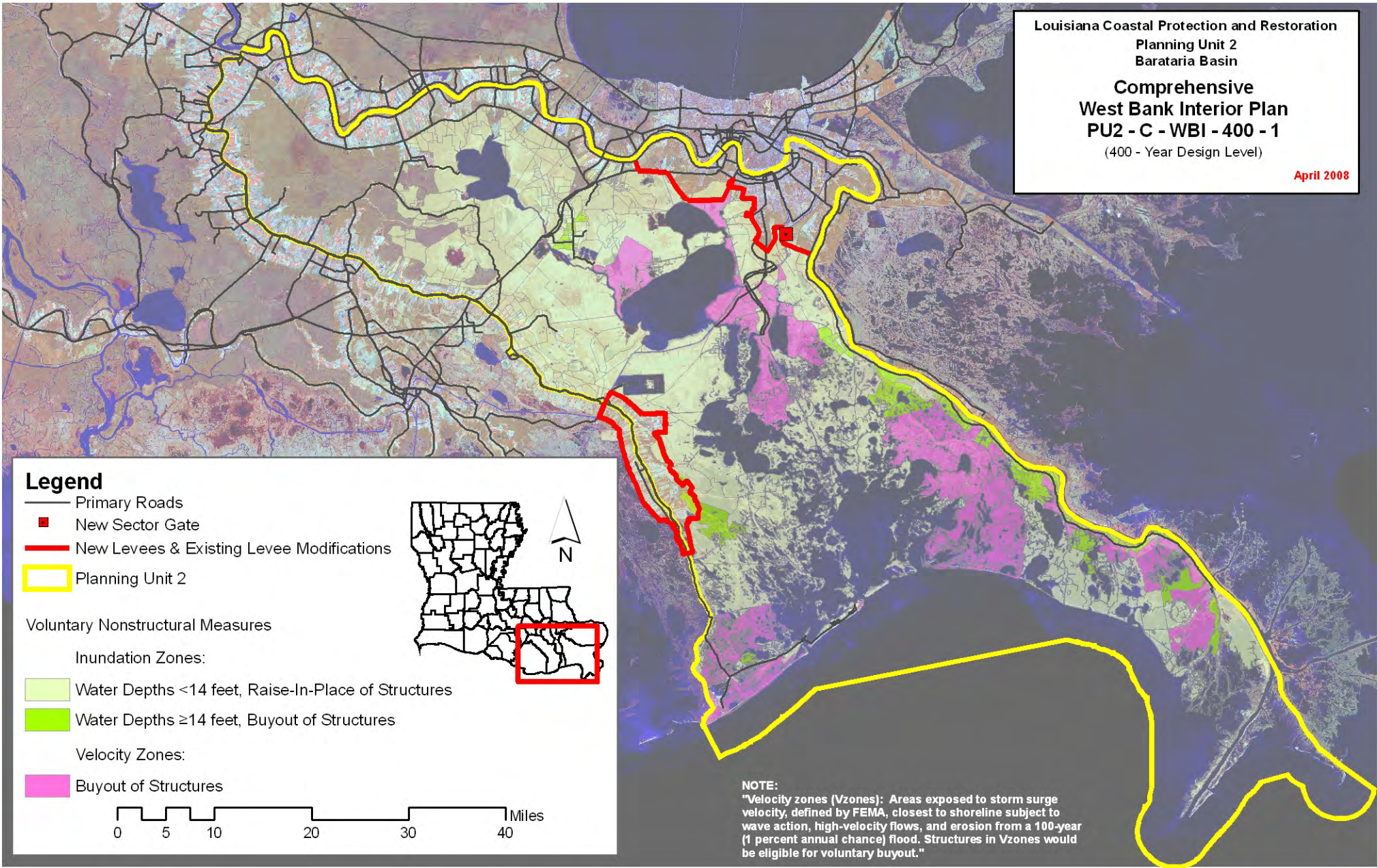
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan West Bank Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 351 | 2,834 | 672 | 1,512 | 296 | 2,129 | 490 | |
| 100-year | 46,652 | 629 | 49,467 | 1,933 | 37,218 | 547 | 39,133 | 1,145 | |
| 400-year | 51,671 | 3,900 | 53,124 | 5,889 | 40,614 | 2,673 | 41,659 | 4,409 | |
| 1,000-year | 53,208 | 10,662 | 54,188 | 12,005 | 41,777 | 8,317 | 42,556 | 9,194 | |
| 2,000-year | 53,965 | 29,791 | 54,716 | 30,867 | 42,386 | 25,438 | 42,963 | 26,219 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Comprehensive
 West Bank Interior Plan
 PU2 - C - WBI - 400 - 1**
 (400 - Year Design Level)

April 2008

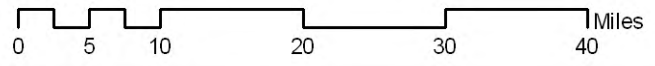


Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths < 14 feet, Raise-In-Place of Structures
 - Water Depths ≥ 14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|--|------------------|---------------------------------|-------------------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-R-100-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-R-100-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU2-R-100-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,366 | 14,215 | 229 | 333 | 758 | 59 | 449 | 17 | 8 |
| | | Mid | | 17,793 | 556 | 937 | 2,403 | 176 | 266 | 15 | 7 |
| | | Low | | 19,510 | 821 | 1,245 | 3,367 | 233 | 160 | 14 | 6 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,370 | 14,942 | 350 | 594 | 1,408 | 122 | 449 | 15 | 7 |
| | | Mid | | 18,087 | 624 | 987 | 2,503 | 185 | 266 | 14 | 7 |
| | | Low | | 19,688 | 886 | 1,302 | 3,493 | 246 | 160 | 13 | 6 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,368 | 9,506 | 203 | 289 | 676 | 50 | 449 | 17 | 8 |
| | | Mid | | 12,718 | 495 | 735 | 2,033 | 139 | 266 | 15 | 7 |
| | | Low | | 14,404 | 719 | 1,000 | 2,880 | 186 | 160 | 14 | 6 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,371 | 10,036 | 295 | 478 | 1,106 | 93 | 449 | 15 | 7 |
| | | Mid | | 12,876 | 540 | 785 | 2,121 | 147 | 266 | 14 | 7 |
| | | Low | | 14,481 | 759 | 1,048 | 2,936 | 192 | 160 | 13 | 6 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|--|----------------------------|-------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 11 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 700 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | | (\$ Millions) | | Nonstructural Component | | 3,369 | 3,369 | 3,402 | 3,402 |
| | 1 / 2 | | 9,485 | 9,510 | Structural Component | | 7,730 | 7,770 | 7,730 | 7,770 |
| | 3 / 4 | | 9,496 | 9,522 | Total Project | | 26,756 | 26,828 | 26,788 | 26,861 |

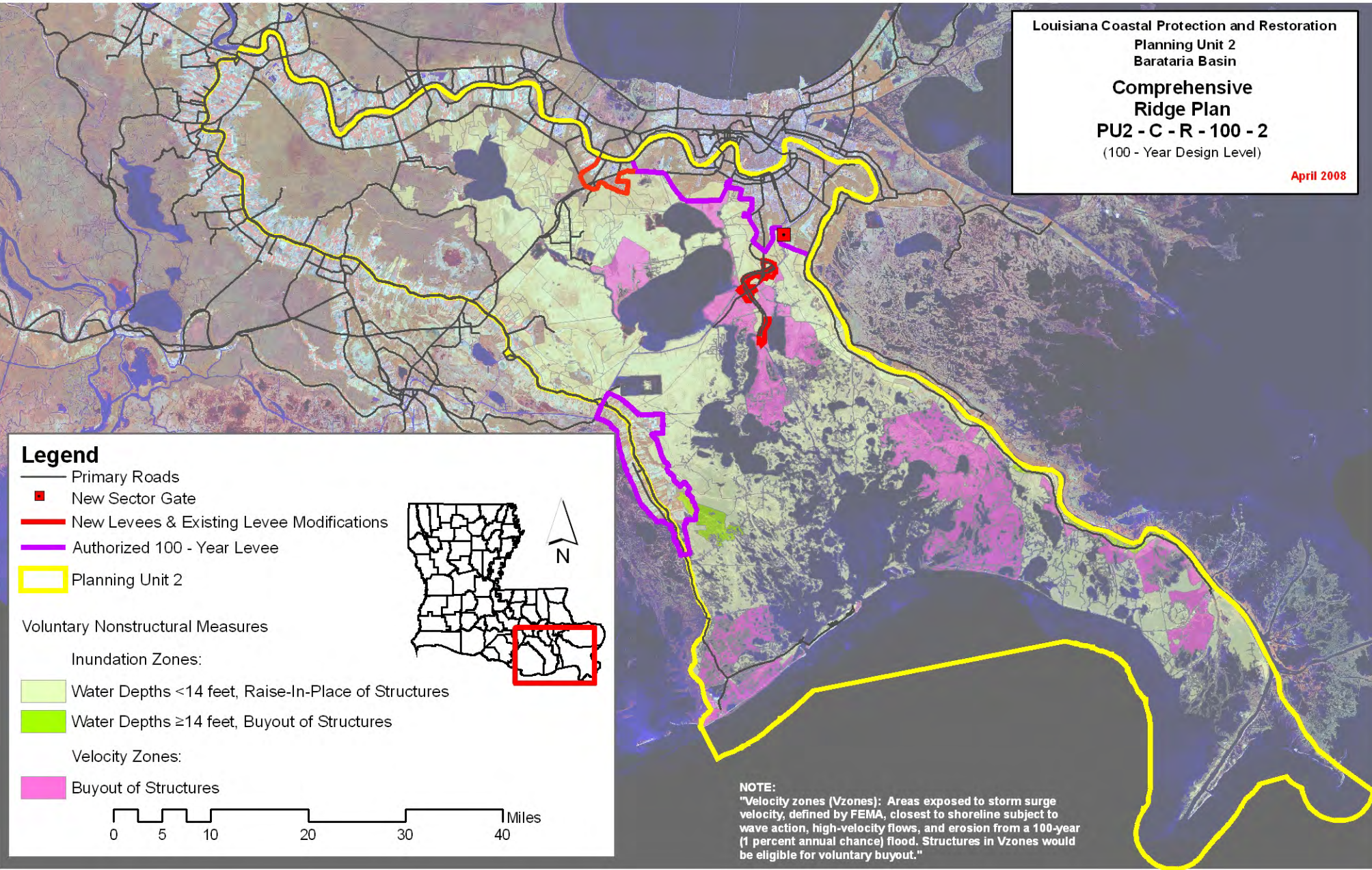
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan Ridge Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 361 | 2,834 | 1,205 | 1,512 | 262 | 2,129 | 469 | |
| 100-year | 46,652 | 2,783 | 49,467 | 4,430 | 37,218 | 1,637 | 39,133 | 2,977 | |
| 400-year | 51,671 | 37,566 | 53,124 | 38,571 | 40,614 | 31,510 | 41,659 | 32,136 | |
| 1,000-year | 53,208 | 41,457 | 54,188 | 42,230 | 41,777 | 34,342 | 42,556 | 34,785 | |
| 2,000-year | 53,965 | 42,668 | 54,716 | 43,327 | 42,386 | 35,178 | 42,963 | 35,544 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

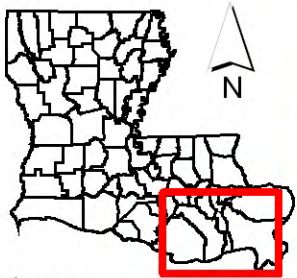
**Comprehensive
 Ridge Plan
 PU2 - C - R - 100 - 2**
 (100 - Year Design Level)

April 2008



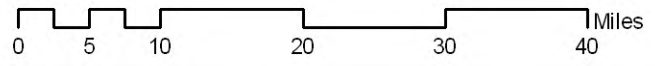
Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Authorized 100 - Year Levee
- Planning Unit 2



Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|--|------------------|---------------------------------|-------------------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-R-400-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-R-400-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 400-yr complementary measures | |
| Structural Component: | Same as Alternative PU2-R-400-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,233 | 14,201 | 226 | 325 | 750 | 60 | 266 | 26 | 9 |
| | | Mid | | 17,159 | 512 | 765 | 2,068 | 155 | 213 | 26 | 9 |
| | | Low | | 18,227 | 642 | 909 | 2,481 | 177 | 160 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,240 | 15,069 | 353 | 553 | 1,383 | 119 | 266 | 26 | 9 |
| | | Mid | | 17,471 | 560 | 817 | 2,150 | 163 | 213 | 25 | 9 |
| | | Low | | 18,406 | 689 | 1,003 | 2,642 | 192 | 160 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,302 | 9,509 | 206 | 290 | 667 | 52 | 266 | 26 | 9 |
| | | Mid | | 12,110 | 463 | 626 | 1,767 | 125 | 213 | 26 | 9 |
| | | Low | | 13,199 | 575 | 751 | 2,130 | 143 | 160 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,309 | 10,146 | 309 | 459 | 1,112 | 94 | 266 | 26 | 9 |
| | | Mid | | 12,279 | 495 | 677 | 1,853 | 133 | 213 | 25 | 9 |
| | | Low | | 13,277 | 600 | 834 | 2,251 | 155 | 160 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|------------------------|--------|----------------------------|----------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 4,400 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario (\$ Millions) | | Nonstructural Component | | 2,660 | 2,660 | 4,028 | 4,028 | | |
| | 1 / 2 | 15,894 | 15,942 | Structural Component | | 25,409 | 25,515 | 25,409 | 25,515 | |
| | 3 / 4 | 16,373 | 16,421 | Total Project | | 43,725 | 43,863 | 45,094 | 45,232 | |

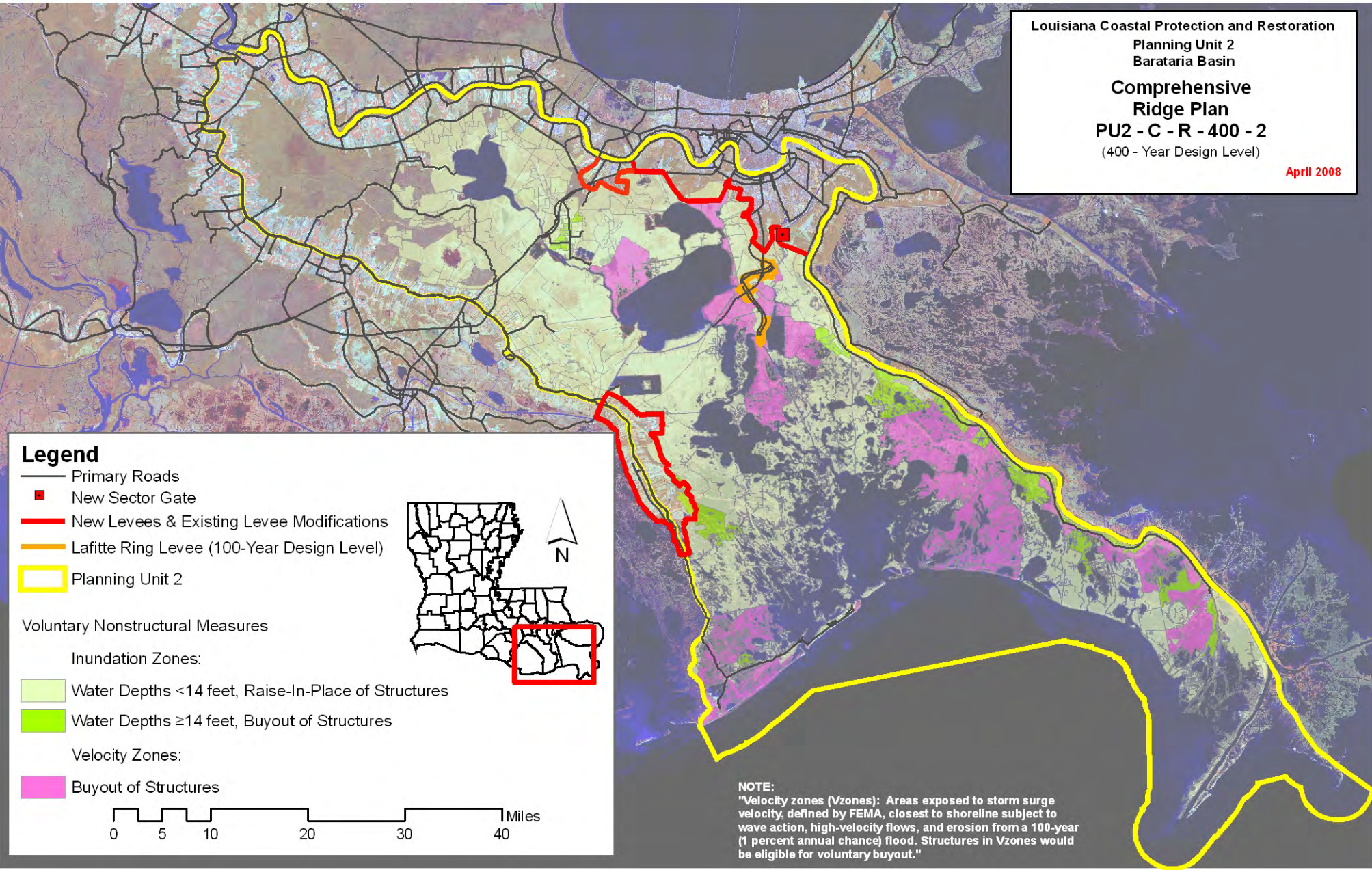
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan Ridge Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 249 | 2,834 | 396 | 1,512 | 197 | 2,129 | 244 | |
| 100-year | 46,652 | 486 | 49,467 | 1,450 | 37,218 | 420 | 39,133 | 715 | |
| 400-year | 51,671 | 2,859 | 53,124 | 4,392 | 40,614 | 1,705 | 41,659 | 2,982 | |
| 1,000-year | 53,208 | 9,147 | 54,188 | 10,221 | 41,777 | 6,868 | 42,556 | 7,456 | |
| 2,000-year | 53,965 | 28,398 | 54,716 | 29,262 | 42,386 | 24,117 | 42,963 | 24,664 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Comprehensive
 Ridge Plan**
PU2 - C - R - 400 - 2
 (400 - Year Design Level)

April 2008



Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Lafitte Ring Levee (100-Year Design Level)
- Planning Unit 2

Voluntary Nonstructural Measures

Inundation Zones:

- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures

0 5 10 20 30 40 Miles

NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

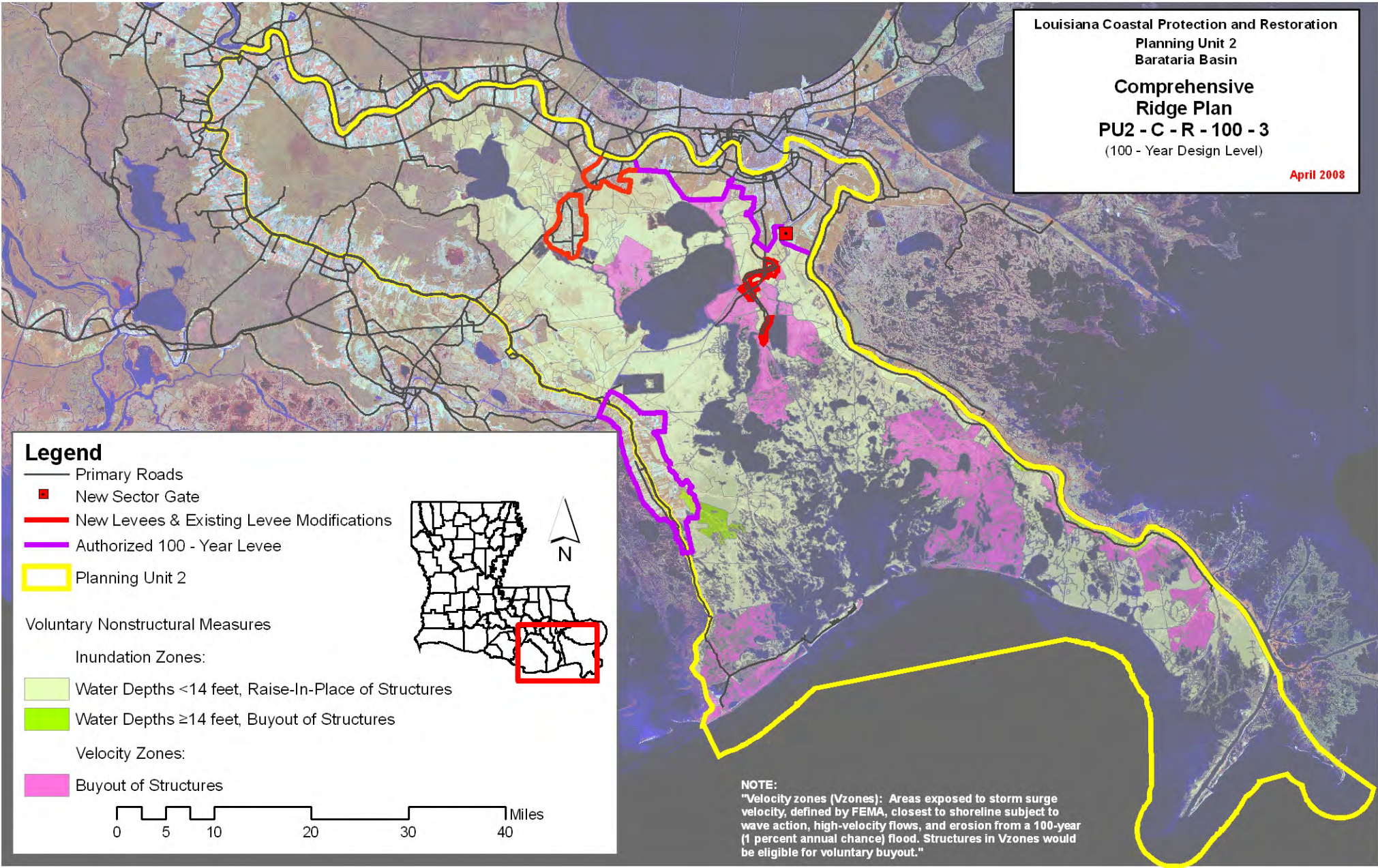
| | | | | | |
|---------------------------------|--|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-R-100-3 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-R-100-3 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU2-R-100-3 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,471 | 13,324 | 226 | 327 | 755 | 58 | 449 | 17 | 7 |
| | | Mid | | 16,902 | 551 | 918 | 2,368 | 172 | 266 | 15 | 7 |
| | | Low | | 18,650 | 814 | 1,228 | 3,340 | 228 | 160 | 14 | 6 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,476 | 14,051 | 343 | 574 | 1,372 | 116 | 449 | 15 | 7 |
| | | Mid | | 17,197 | 614 | 968 | 2,469 | 180 | 266 | 14 | 7 |
| | | Low | | 18,828 | 873 | 1,284 | 3,466 | 242 | 160 | 13 | 6 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,471 | 8,914 | 203 | 285 | 679 | 50 | 449 | 17 | 7 |
| | | Mid | | 12,115 | 494 | 723 | 2,031 | 137 | 266 | 15 | 7 |
| | | Low | | 13,823 | 717 | 991 | 2,882 | 184 | 160 | 14 | 6 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,475 | 9,443 | 293 | 466 | 1,099 | 90 | 449 | 15 | 7 |
| | | Mid | | 12,273 | 536 | 773 | 2,119 | 145 | 266 | 14 | 7 |
| | | Low | | 13,899 | 753 | 1,038 | 2,938 | 191 | 160 | 13 | 6 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 11 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 1,000 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,016 | 3,016 | 3,008 | 3,008 | |
| | 1 / 2 | 10,245 | 10,275 | Structural Component | | 10,147 | 10,201 | 10,147 | 10,201 | |
| | 3 / 4 | 10,242 | 10,273 | Total Project | | 28,819 | 28,906 | 28,811 | 28,898 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan Ridge Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 309 | 2,834 | 1,073 | 1,512 | 216 | 2,129 | 326 | |
| 100-year | 46,652 | 2,475 | 49,467 | 3,893 | 37,218 | 1,488 | 39,133 | 2,664 | |
| 400-year | 51,671 | 37,178 | 53,124 | 38,086 | 40,614 | 31,415 | 41,659 | 31,993 | |
| 1,000-year | 53,208 | 41,243 | 54,188 | 41,946 | 41,777 | 34,355 | 42,556 | 34,765 | |
| 2,000-year | 53,965 | 42,415 | 54,716 | 43,008 | 42,386 | 35,177 | 42,963 | 35,511 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

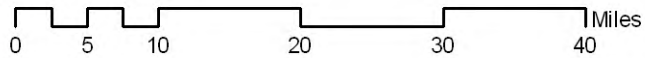


Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Authorized 100 - Year Levee
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|--|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-R-400-3 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-R-400-3 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 400-yr complementary measures | | |
| Structural Component: | Same as Alternative PU2-R-400-3 | | | | |

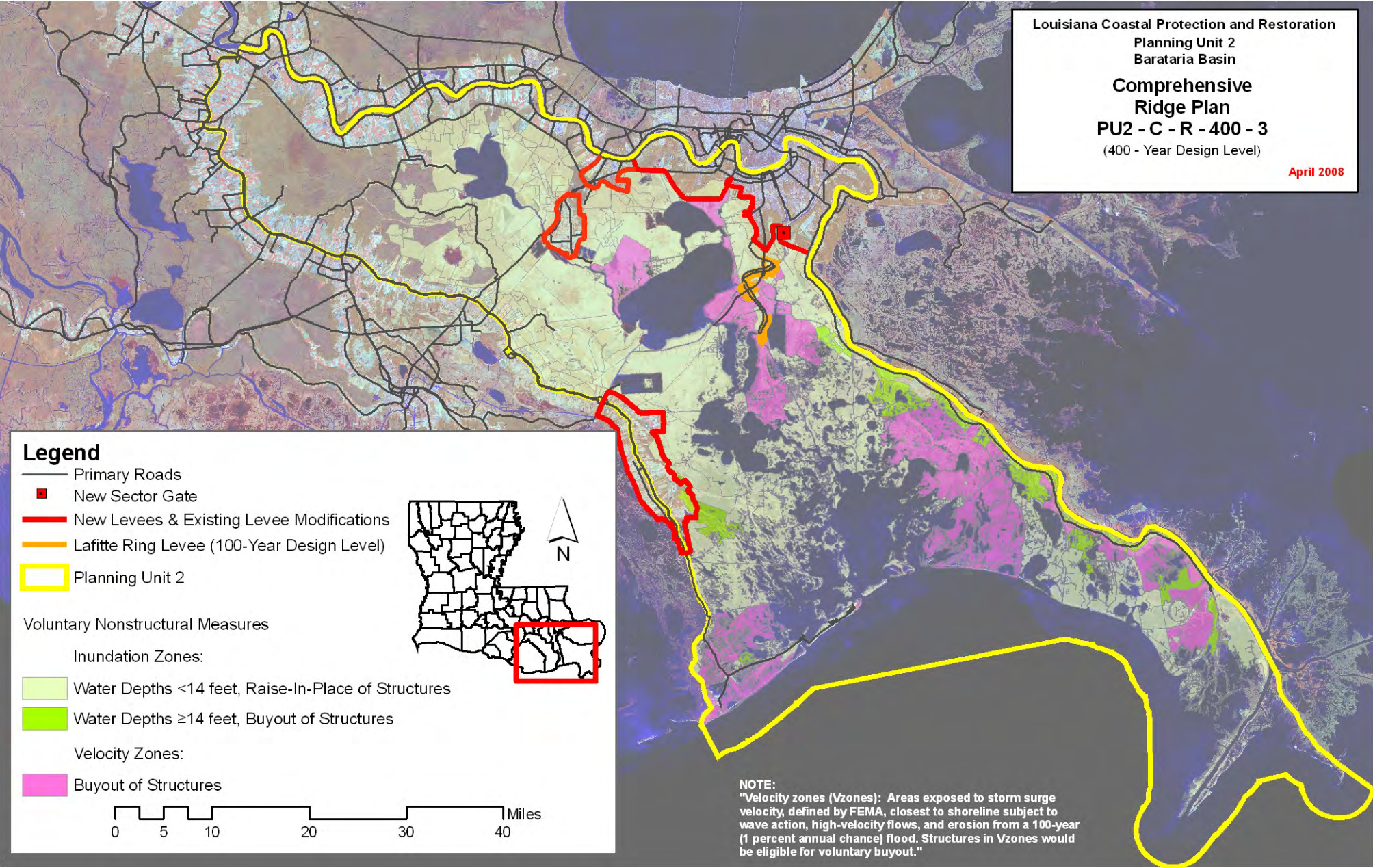
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|----------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,373 | 12,988 | 205 | 289 | 670 | 52 | 449 | 26 | 9 |
| | | Mid | | 15,664 | 453 | 660 | 1,800 | 132 | 266 | 26 | 9 |
| | | Low | | 16,679 | 573 | 799 | 2,188 | 152 | 160 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,381 | 13,715 | 308 | 477 | 1,181 | 99 | 449 | 26 | 9 |
| | | Mid | | 15,958 | 494 | 709 | 1,876 | 138 | 266 | 25 | 9 |
| | | Low | | 16,857 | 617 | 876 | 2,316 | 164 | 160 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,428 | 8,575 | 189 | 259 | 604 | 45 | 449 | 26 | 9 |
| | | Mid | | 10,933 | 413 | 543 | 1,557 | 107 | 266 | 26 | 9 |
| | | Low | | 11,975 | 517 | 662 | 1,899 | 124 | 160 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,436 | 9,104 | 272 | 398 | 966 | 79 | 449 | 26 | 9 |
| | | Mid | | 11,090 | 440 | 588 | 1,637 | 114 | 266 | 25 | 9 |
| | | Low | | 12,051 | 539 | 731 | 2,005 | 135 | 160 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 11 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 4,700 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,510 | 2,510 | 3,578 | 3,578 | |
| | 1 / 2 | 16,844 | 16,898 | Structural Component | | 28,318 | 28,440 | 28,318 | 28,440 | |
| | 3 / 4 | 17,218 | 17,272 | Total Project | | 46,485 | 46,638 | 47,553 | 47,707 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan Ridge Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 226 | 2,834 | 366 | 1,512 | 181 | 2,129 | 221 | |
| 100-year | 46,652 | 444 | 49,467 | 1,354 | 37,218 | 386 | 39,133 | 661 | |
| 400-year | 51,671 | 2,584 | 53,124 | 3,923 | 40,614 | 1,530 | 41,659 | 2,680 | |
| 1,000-year | 53,208 | 8,675 | 54,188 | 9,604 | 41,777 | 6,565 | 42,556 | 7,072 | |
| 2,000-year | 53,965 | 27,832 | 54,716 | 28,595 | 42,386 | 23,767 | 42,963 | 24,256 | |

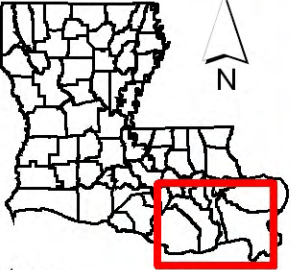
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Comprehensive
 Ridge Plan**
PU2 - C - R - 400 - 3
 (400 - Year Design Level)
 April 2008



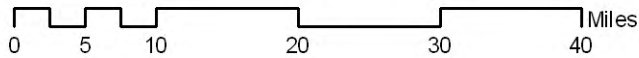
Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Lafitte Ring Levee (100-Year Design Level)
- Planning Unit 2



Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|--|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-R-100-4 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-R-100-4 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU2-R-100-4 | | | | |

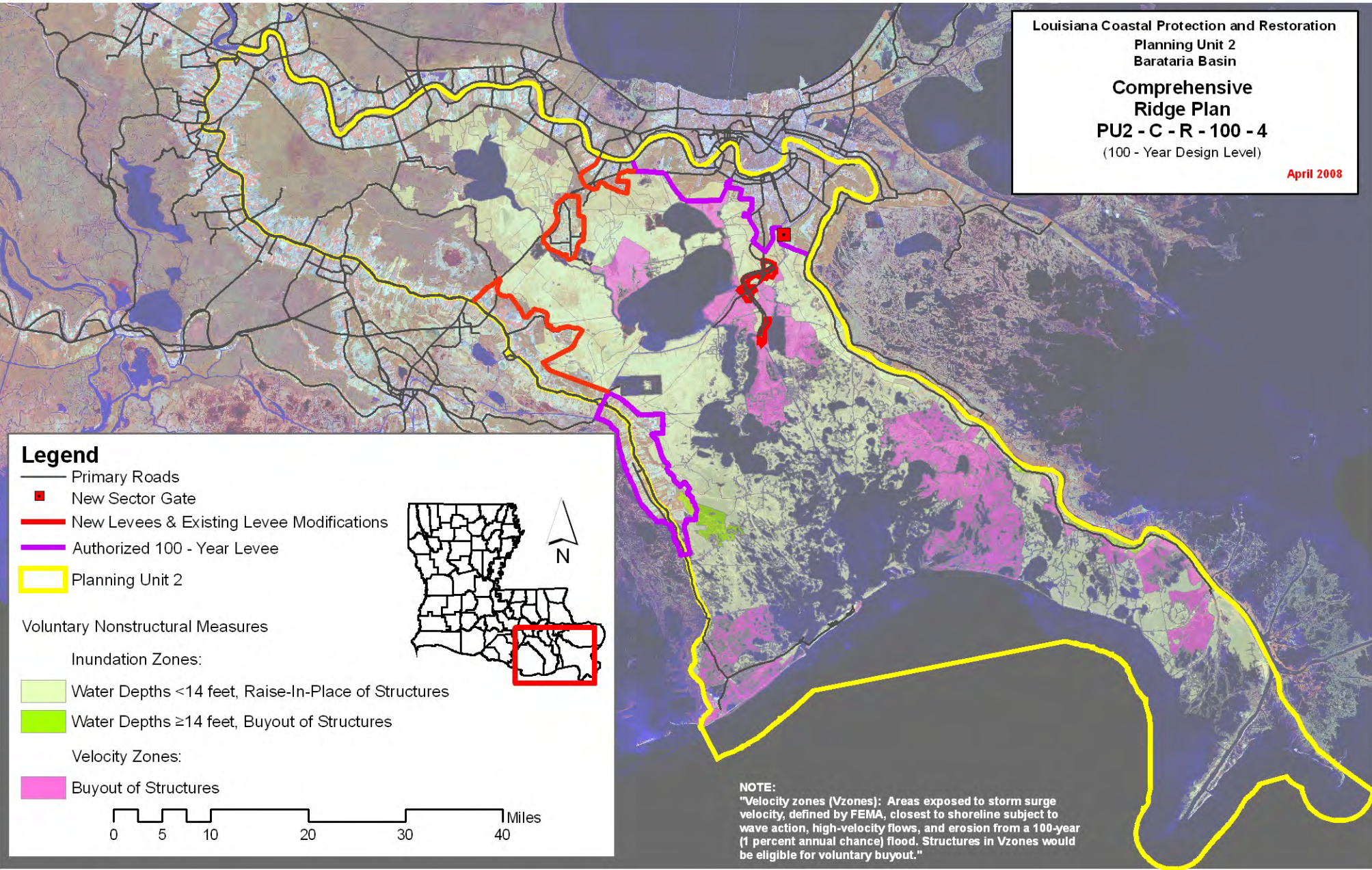
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,626 | 12,971 | 226 | 321 | 752 | 57 | 277 | 17 | 8 |
| | | Mid | | 16,497 | 549 | 878 | 2,332 | 167 | 224 | 15 | 7 |
| | | Low | | 18,217 | 810 | 1,185 | 3,307 | 223 | 171 | 14 | 6 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,631 | 13,650 | 340 | 530 | 1,334 | 111 | 277 | 15 | 7 |
| | | Mid | | 16,755 | 608 | 913 | 2,411 | 173 | 224 | 14 | 7 |
| | | Low | | 18,371 | 866 | 1,234 | 3,424 | 235 | 171 | 13 | 6 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,627 | 8,445 | 202 | 277 | 669 | 48 | 277 | 17 | 8 |
| | | Mid | | 11,604 | 491 | 680 | 1,969 | 130 | 224 | 15 | 7 |
| | | Low | | 13,231 | 709 | 944 | 2,817 | 176 | 171 | 14 | 6 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,632 | 8,945 | 289 | 417 | 1,031 | 82 | 277 | 15 | 7 |
| | | Mid | | 11,741 | 525 | 713 | 2,035 | 136 | 224 | 14 | 7 |
| | | Low | | 13,296 | 737 | 977 | 2,861 | 181 | 171 | 13 | 6 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 11 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 1,600 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,838 | 2,838 | 2,866 | 2,866 | |
| | 1 / 2 | 11,299 | 11,336 | Structural Component | | 13,348 | 13,420 | 13,348 | 13,420 | |
| | 3 / 4 | 11,309 | 11,346 | Total Project | | 31,843 | 31,947 | 31,871 | 31,975 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan Ridge Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 288 | 2,834 | 1,034 | 1,512 | 210 | 2,129 | 308 | |
| 100-year | 46,652 | 2,293 | 49,467 | 3,554 | 37,218 | 1,177 | 39,133 | 1,963 | |
| 400-year | 51,671 | 36,990 | 53,124 | 37,779 | 40,614 | 30,738 | 41,659 | 31,163 | |
| 1,000-year | 53,208 | 40,879 | 54,188 | 41,462 | 41,777 | 33,481 | 42,556 | 33,744 | |
| 2,000-year | 53,965 | 41,942 | 54,716 | 42,447 | 42,386 | 34,174 | 42,963 | 34,395 | |

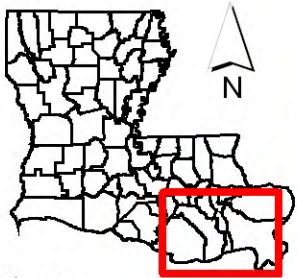
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Comprehensive
 Ridge Plan**
PU2 - C - R - 100 - 4
 (100 - Year Design Level)
 April 2008



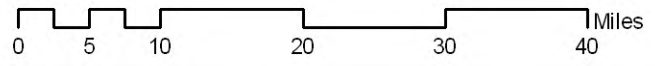
Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Authorized 100 - Year Levee
- Planning Unit 2



Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|--|------------------|---------------------------------|-------------------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-R-400-4 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-R-400-4 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 400-yr complementary measures | |
| Structural Component: | Same as Alternative PU2-R-400-4 | | | | |

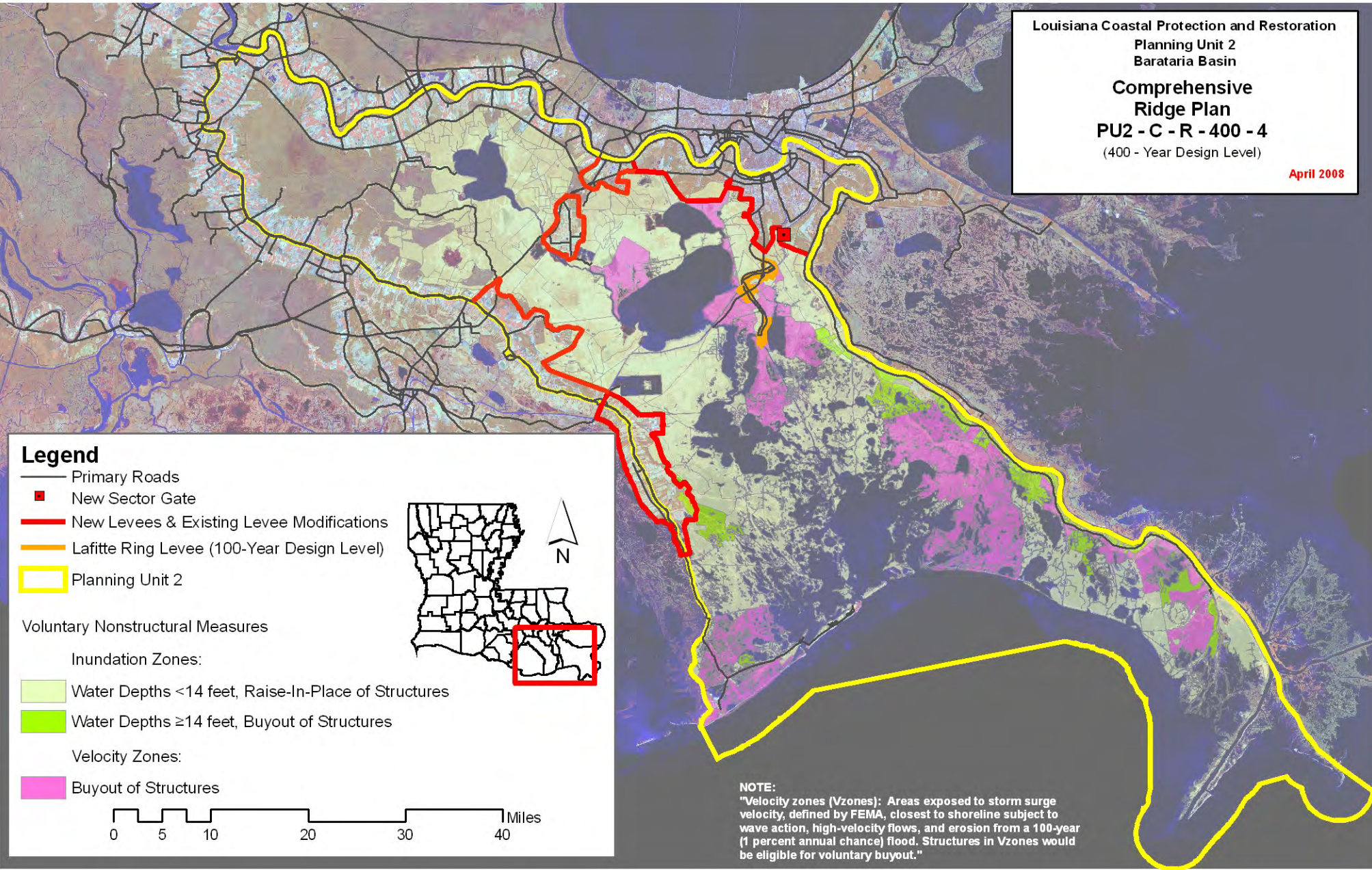
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,523 | 13,119 | 228 | 329 | 776 | 61 | 277 | 26 | 9 |
| | | Mid | | 16,002 | 515 | 765 | 2,098 | 155 | 224 | 26 | 9 |
| | | Low | | 17,014 | 645 | 910 | 2,522 | 177 | 171 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,532 | 13,943 | 354 | 550 | 1,399 | 118 | 277 | 26 | 9 |
| | | Mid | | 16,281 | 560 | 810 | 2,171 | 162 | 224 | 25 | 9 |
| | | Low | | 17,170 | 689 | 977 | 2,634 | 188 | 171 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,573 | 8,549 | 208 | 293 | 692 | 52 | 277 | 26 | 9 |
| | | Mid | | 11,085 | 466 | 626 | 1,794 | 125 | 224 | 26 | 9 |
| | | Low | | 12,058 | 579 | 750 | 2,162 | 143 | 171 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,582 | 9,160 | 310 | 454 | 1,124 | 92 | 277 | 26 | 9 |
| | | Mid | | 11,235 | 496 | 668 | 1,864 | 132 | 224 | 25 | 9 |
| | | Low | | 12,125 | 600 | 802 | 2,236 | 150 | 171 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|--|----------------------------|--------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 5,300 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | | (\$ Millions) | | Nonstructural Component | | 2,300 | 2,300 | 3,272 | 3,272 |
| | 1 / 2 | | 17,844 | 17,904 | Structural Component | | 31,466 | 31,605 | 31,466 | 31,605 |
| | 3 / 4 | | 18,184 | 18,244 | Total Project | | 49,423 | 49,594 | 50,395 | 50,566 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan Ridge Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 218 | 2,834 | 347 | 1,512 | 175 | 2,129 | 212 | |
| 100-year | 46,652 | 416 | 49,467 | 1,296 | 37,218 | 354 | 39,133 | 599 | |
| 400-year | 51,671 | 2,390 | 53,124 | 3,576 | 40,614 | 1,237 | 41,659 | 1,978 | |
| 1,000-year | 53,208 | 8,294 | 54,188 | 9,130 | 41,777 | 5,791 | 42,556 | 6,162 | |
| 2,000-year | 53,965 | 27,377 | 54,716 | 27,999 | 42,386 | 22,873 | 42,963 | 23,210 | |

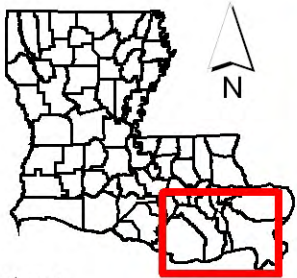
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin
**Comprehensive
 Ridge Plan**
PU2 - C - R - 400 - 4
 (400 - Year Design Level)
 April 2008



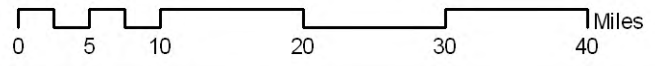
Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Lafitte Ring Levee (100-Year Design Level)
- Planning Unit 2



Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

| | | | | | |
|---------------------------------|---|---------------------------------|--------------------------------|------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-R-1000-4 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-R-1000-4 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 1000-yr complementary measures | | |
| Structural Component: | Same as Alternative PU2-R-1000-4 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,943 | 12,903 | 225 | 329 | 776 | 61 | 277 | 26 | 9 |
| | | Mid | | 15,761 | 509 | 758 | 2,084 | 154 | 224 | 26 | 9 |
| | | Low | | 16,628 | 626 | 886 | 2,462 | 172 | 171 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,976 | 13,727 | 349 | 543 | 1,389 | 117 | 277 | 26 | 9 |
| | | Mid | | 16,040 | 551 | 797 | 2,152 | 160 | 224 | 26 | 9 |
| | | Low | | 16,784 | 660 | 937 | 2,548 | 182 | 171 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,975 | 8,511 | 205 | 293 | 692 | 52 | 277 | 26 | 9 |
| | | Mid | | 11,021 | 462 | 623 | 1,788 | 125 | 224 | 26 | 9 |
| | | Low | | 11,856 | 565 | 732 | 2,110 | 140 | 171 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 3,007 | 9,121 | 307 | 450 | 1,114 | 92 | 277 | 26 | 9 |
| | | Mid | | 11,172 | 490 | 661 | 1,854 | 131 | 224 | 26 | 9 |
| | | Low | | 11,922 | 584 | 778 | 2,170 | 146 | 171 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 6,800 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | 4 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,815 | 2,815 | 3,436 | 3,436 | |
| | 1 / 2 | 20,758 | 20,979 | Structural Component | | 39,174 | 39,774 | 39,174 | 39,774 | |
| | 3 / 4 | 20,975 | 21,196 | Total Project | | 57,646 | 58,277 | 58,267 | 58,899 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan Ridge Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 190 | 2,834 | 291 | 1,512 | 164 | 2,129 | 188 | |
| 100-year | 46,652 | 336 | 49,467 | 607 | 37,218 | 300 | 39,133 | 444 | |
| 400-year | 51,671 | 666 | 53,124 | 1,942 | 40,614 | 488 | 41,659 | 979 | |
| 1,000-year | 53,208 | 2,264 | 54,188 | 3,423 | 41,777 | 1,254 | 42,556 | 1,945 | |
| 2,000-year | 53,965 | 4,415 | 54,716 | 5,716 | 42,386 | 2,978 | 42,963 | 3,363 | |

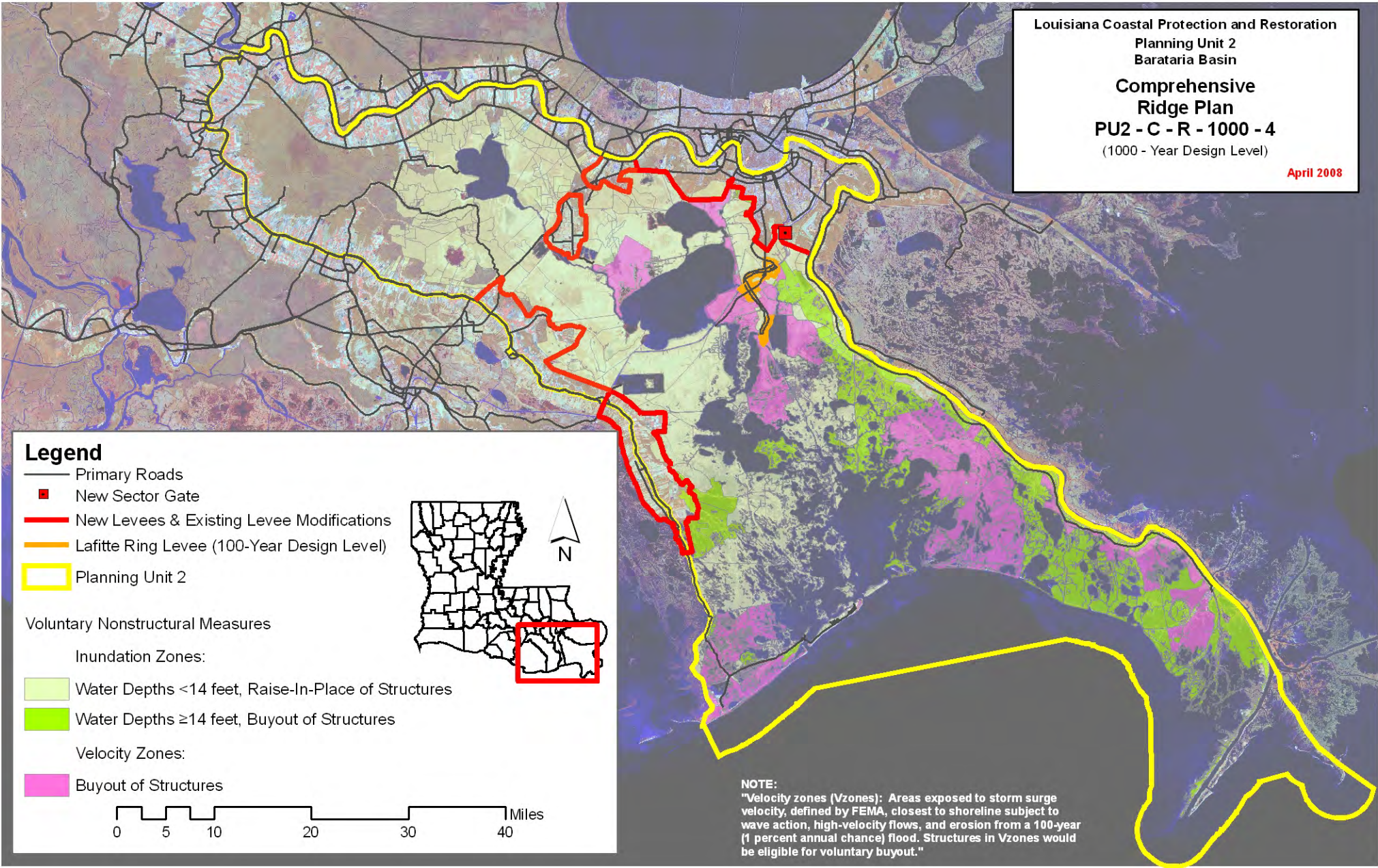
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration
 Planning Unit 2
 Barataria Basin

**Comprehensive
 Ridge Plan**

PU2 - C - R - 1000 - 4
 (1000 - Year Design Level)

April 2008

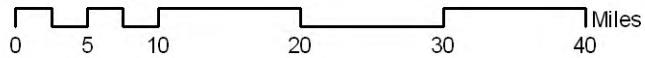


Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Lafitte Ring Levee (100-Year Design Level)
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

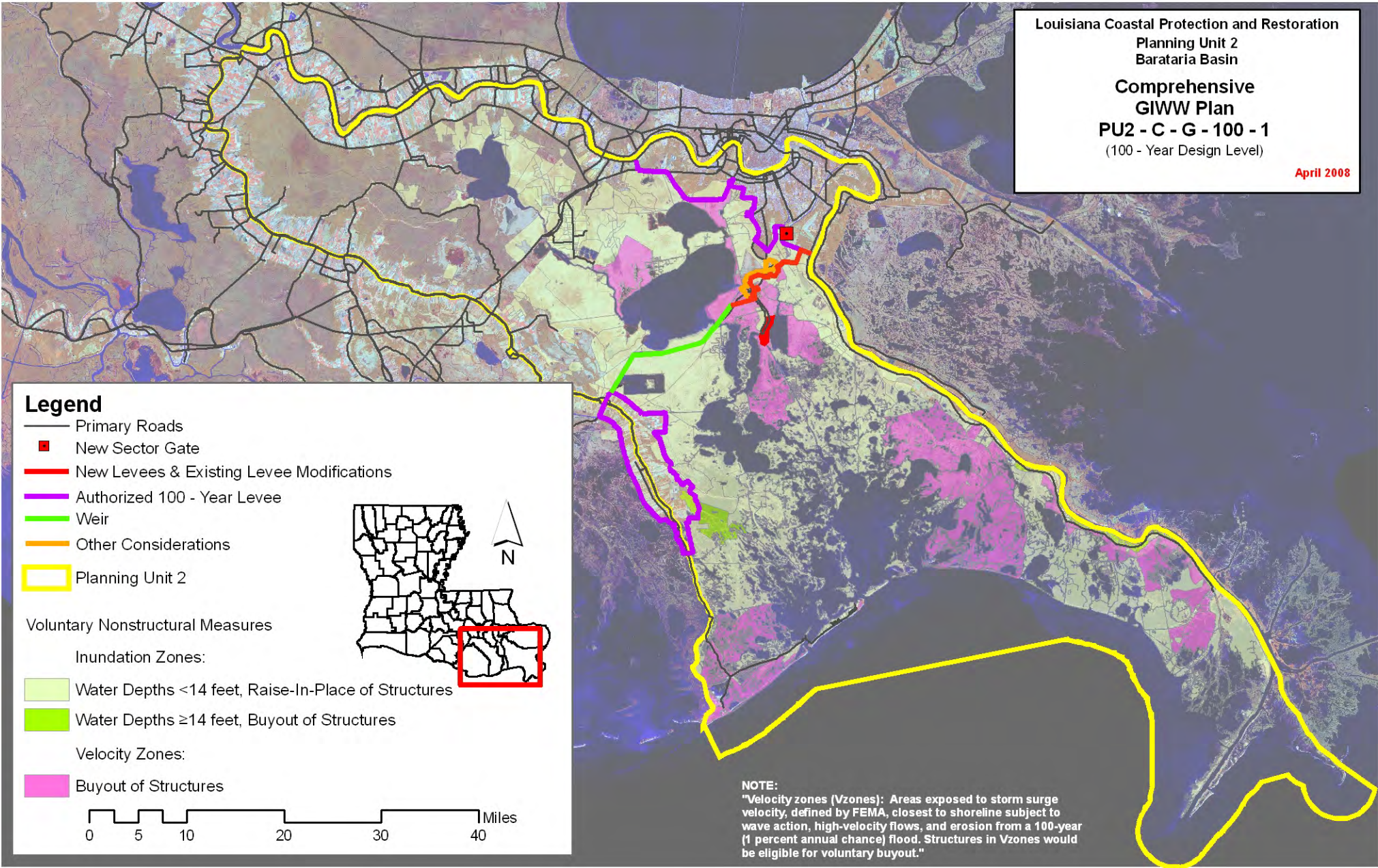
| | | | | | |
|---------------------------------|--|------------------|---------------------------------|-------------------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-G-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-G-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU2-G-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,343 | 14,977 | 232 | 330 | 747 | 58 | 502 | 26 | 9 |
| | | Mid | | 17,773 | 495 | 751 | 2,062 | 148 | 449 | 26 | 9 |
| | | Low | | 19,020 | 633 | 984 | 2,558 | 176 | 396 | 24 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,352 | 15,799 | 355 | 638 | 1,396 | 116 | 502 | 26 | 9 |
| | | Mid | | 18,099 | 562 | 882 | 2,203 | 161 | 449 | 26 | 9 |
| | | Low | | 19,250 | 697 | 1,044 | 2,693 | 188 | 396 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,347 | 10,008 | 211 | 294 | 676 | 51 | 502 | 26 | 9 |
| | | Mid | | 12,546 | 449 | 611 | 1,778 | 120 | 449 | 26 | 9 |
| | | Low | | 13,727 | 569 | 791 | 2,201 | 143 | 396 | 24 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,356 | 10,671 | 311 | 518 | 1,152 | 93 | 502 | 26 | 9 |
| | | Mid | | 12,812 | 496 | 749 | 1,943 | 136 | 449 | 26 | 9 |
| | | Low | | 13,899 | 608 | 920 | 2,388 | 161 | 396 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 11 | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 1,000 | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | -8 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,053 | 3,053 | 3,128 | 3,128 |
| | 1 / 2 | 9,356 | 9,417 | Structural Component | | 7,604 | 7,748 | 7,604 | 7,748 |
| | 3 / 4 | 9,382 | 9,443 | Total Project | | 26,315 | 26,490 | 26,389 | 26,565 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 702 | 2,834 | 1,209 | 1,512 | 586 | 2,129 | 888 | |
| 100-year | 46,652 | 2,148 | 49,467 | 4,027 | 37,218 | 1,748 | 39,133 | 2,871 | |
| 400-year | 51,671 | 6,471 | 53,124 | 8,140 | 40,614 | 4,781 | 41,659 | 5,812 | |
| 1,000-year | 53,208 | 11,684 | 54,188 | 13,014 | 41,777 | 8,052 | 42,556 | 8,754 | |
| 2,000-year | 53,965 | 13,601 | 54,716 | 14,559 | 42,386 | 9,115 | 42,963 | 9,812 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

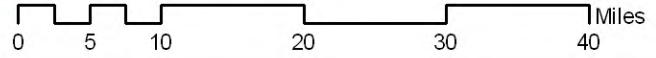


Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Authorized 100 - Year Levee
- Weir
- Other Considerations
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

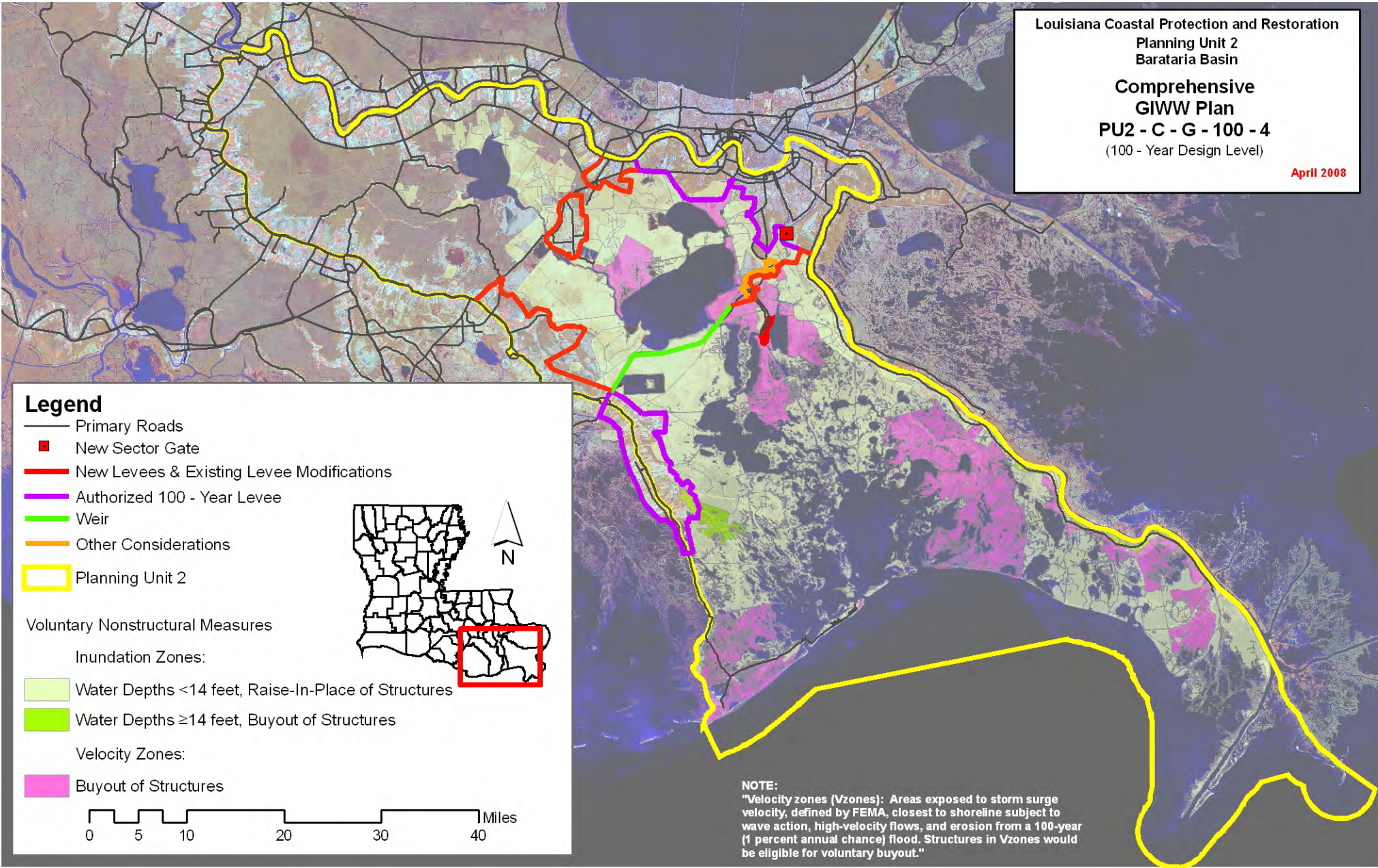
| | | | | | |
|---------------------------------|--|------------------|---------------------------------|-------------------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-G-100-4 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-G-100-4 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU2-G-100-4 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,671 | 12,898 | 218 | 315 | 713 | 54 | 502 | 26 | 9 |
| | | Mid | | 15,549 | 477 | 716 | 1,986 | 140 | 449 | 26 | 9 |
| | | Low | | 16,755 | 611 | 945 | 2,484 | 168 | 396 | 24 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,682 | 13,607 | 327 | 591 | 1,278 | 106 | 502 | 26 | 9 |
| | | Mid | | 15,789 | 528 | 822 | 2,059 | 148 | 449 | 26 | 9 |
| | | Low | | 16,924 | 658 | 980 | 2,543 | 174 | 396 | 23 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,673 | 8,213 | 198 | 206 | 635 | 46 | 502 | 26 | 9 |
| | | Mid | | 10,604 | 433 | 348 | 1,708 | 113 | 449 | 26 | 9 |
| | | Low | | 11,692 | 550 | 645 | 2,125 | 135 | 396 | 24 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,684 | 8,734 | 286 | 471 | 1,036 | 84 | 502 | 26 | 9 |
| | | Mid | | 10,750 | 465 | 659 | 1,779 | 121 | 449 | 26 | 9 |
| | | Low | | 11,794 | 575 | 790 | 2,182 | 141 | 396 | 23 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 11 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 2,200 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,559 | 2,559 | 2,599 | 2,599 | |
| | 1 / 2 | 11,722 | 11,795 | Structural Component | | 14,521 | 14,700 | 14,521 | 14,700 | |
| | 3 / 4 | 11,736 | 11,809 | Total Project | | 32,737 | 32,948 | 32,777 | 32,988 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 336 | 2,834 | 611 | 1,512 | 220 | 2,129 | 303 | |
| 100-year | 46,652 | 1,396 | 49,467 | 2,674 | 37,218 | 1,092 | 39,133 | 1,672 | |
| 400-year | 51,671 | 5,785 | 53,124 | 6,754 | 40,614 | 4,345 | 41,659 | 4,800 | |
| 1,000-year | 53,208 | 10,537 | 54,188 | 11,352 | 41,777 | 7,286 | 42,556 | 7,551 | |
| 2,000-year | 53,965 | 12,167 | 54,716 | 12,656 | 42,386 | 8,132 | 42,963 | 8,353 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

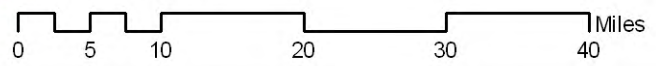


Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Authorized 100 - Year Levee
- Weir
- Other Considerations
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

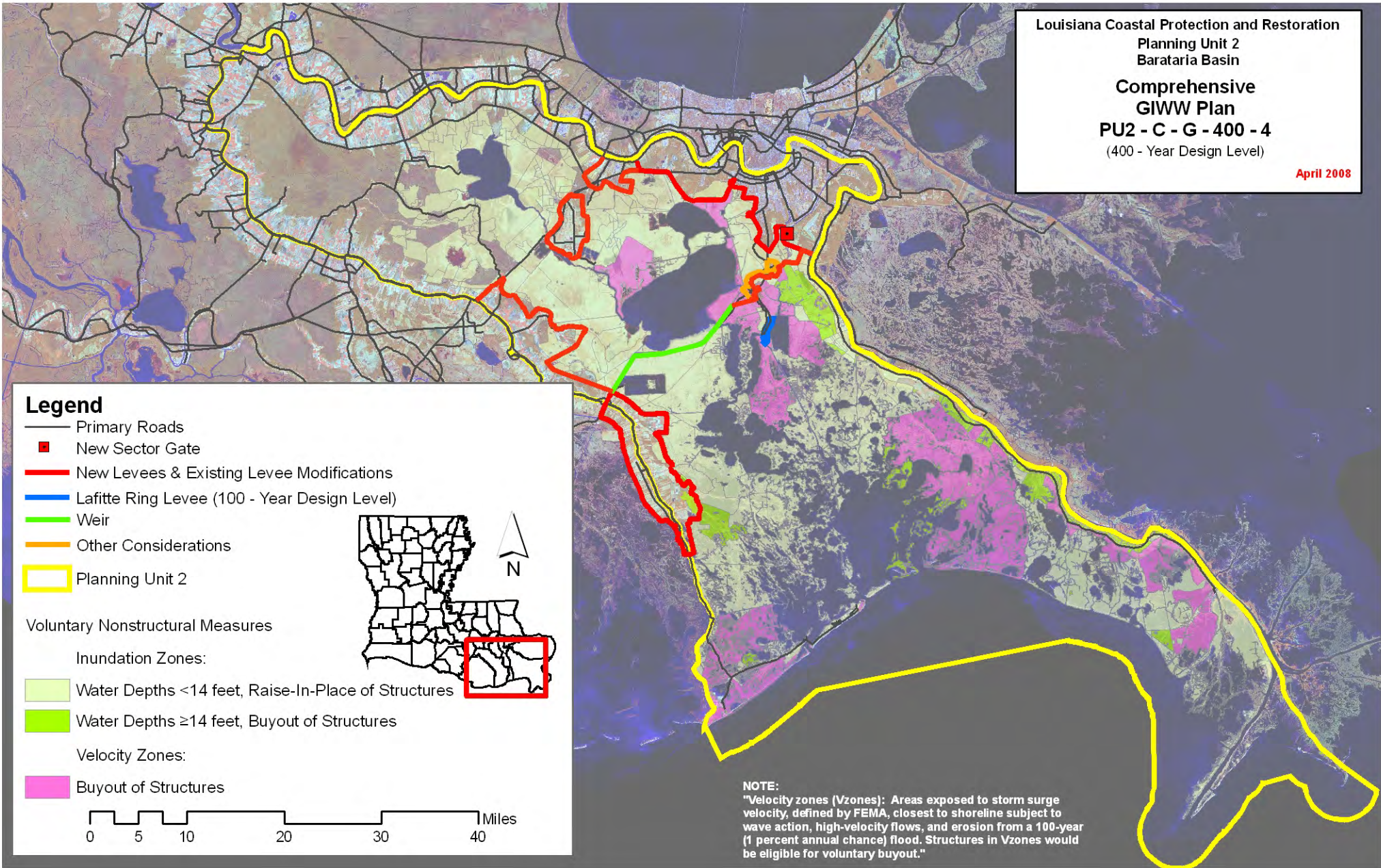
| | | | | | |
|---------------------------------|--|------------------|---------------------------------|-------------------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-G-400-4 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-G-400-4 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | | Nonstructural Component: | 400-yr complementary measures | |
| Structural Component: | Same as Alternative PU2-G-400-4 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,691 | 13,140 | 234 | 336 | 781 | 61 | 502 | 27 | 9 |
| | | Mid | | 15,847 | 521 | 768 | 2,097 | 155 | 449 | 27 | 9 |
| | | Low | | 16,772 | 644 | 899 | 2,492 | 174 | 396 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,700 | 13,960 | 363 | 567 | 1,406 | 119 | 502 | 27 | 9 |
| | | Mid | | 16,089 | 571 | 814 | 2,176 | 162 | 449 | 27 | 9 |
| | | Low | | 16,922 | 687 | 1,015 | 2,590 | 185 | 396 | 24 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,726 | 8,471 | 213 | 298 | 690 | 52 | 502 | 27 | 9 |
| | | Mid | | 10,895 | 471 | 633 | 1,793 | 125 | 449 | 27 | 9 |
| | | Low | | 11,765 | 577 | 742 | 2,127 | 141 | 396 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,735 | 9,081 | 317 | 471 | 1,140 | 94 | 502 | 27 | 9 |
| | | Mid | | 11,041 | 501 | 679 | 1,875 | 133 | 449 | 27 | 9 |
| | | Low | | 11,853 | 598 | 835 | 2,210 | 150 | 396 | 24 | 8 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|--------|---------------|---|-------------------------|------------|------------|------------|------------|-------|
| Construction Time (years) | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 | |
| Direct Wetland Impacts (acres) | | 7,400 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 | |
| Indirect Impacts (unitless) | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | | |
| Spatial Integrity (unitless) | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 | |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | | (\$ Millions) | | Nonstructural Component | | 2,302 | 2,302 | 2,988 | 2,988 |
| | 1 / 2 | 18,964 | 19,022 | Structural Component | | 34,745 | 34,880 | 34,745 | 34,880 | |
| | 3 / 4 | 19,204 | 19,262 | Total Project | | 52,704 | 52,871 | 53,390 | 53,557 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan GIWW Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 260 | 2,834 | 492 | 1,512 | 177 | 2,129 | 225 | |
| 100-year | 46,652 | 522 | 49,467 | 1,343 | 37,218 | 412 | 39,133 | 637 | |
| 400-year | 51,671 | 2,201 | 53,124 | 3,288 | 40,614 | 1,158 | 41,659 | 1,764 | |
| 1,000-year | 53,208 | 3,927 | 54,188 | 4,869 | 41,777 | 1,994 | 42,556 | 2,366 | |
| 2,000-year | 53,965 | 5,011 | 54,716 | 5,635 | 42,386 | 2,623 | 42,963 | 2,966 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

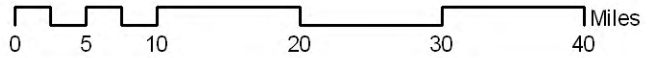


Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Lafitte Ring Levee (100 - Year Design Level)
- Weir
- Other Considerations
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

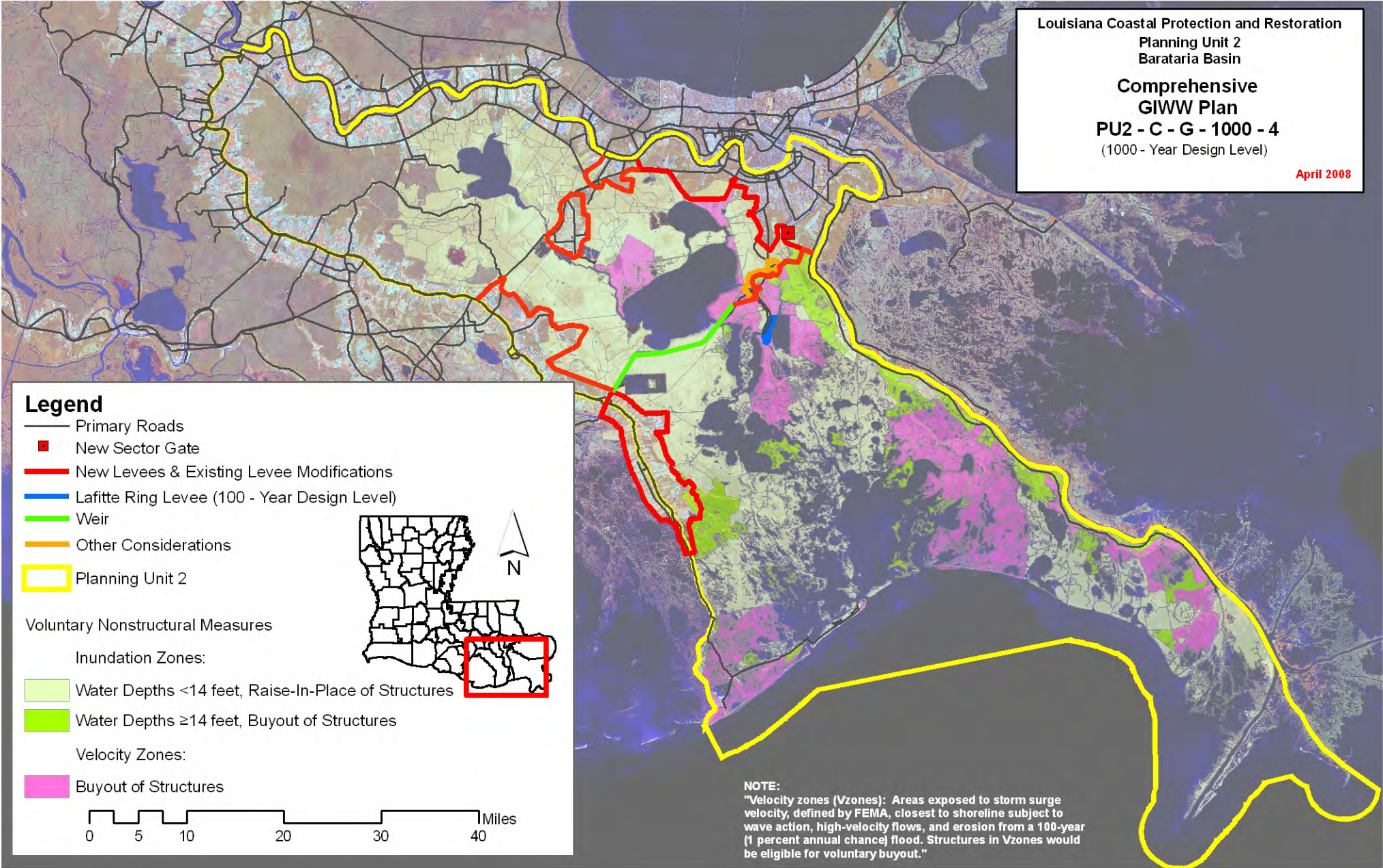
| | | | | | |
|---------------------------------|---|---------------------------------|--------------------------------|------------------|--|
| Planning Unit: | 2 | Alt. No.: | PU2-C-G-1000-4 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU2-G-1000-4 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R2 (pulsed diversions) | Nonstructural Component: | 1000-yr complementary measures | | |
| Structural Component: | Same as Alternative PU2-G-1000-4 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 3,113 | 12,782 | 228 | 335 | 780 | 61 | 502 | 27 | 9 |
| | | Mid | | 15,367 | 512 | 759 | 2,088 | 154 | 449 | 27 | 9 |
| | | Low | | 16,250 | 630 | 889 | 2,465 | 172 | 396 | 25 | 8 |
| 2 | High RSLR High Employment Dispersed Population | High | 3,121 | 13,584 | 355 | 553 | 1,393 | 117 | 502 | 27 | 9 |
| | | Mid | | 15,593 | 557 | 805 | 2,152 | 160 | 449 | 27 | 9 |
| | | Low | | 16,383 | 665 | 934 | 2,542 | 181 | 396 | 24 | 8 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 3,139 | 8,165 | 208 | 297 | 689 | 52 | 502 | 27 | 9 |
| | | Mid | | 10,440 | 465 | 626 | 1,787 | 125 | 449 | 27 | 9 |
| | | Low | | 11,274 | 568 | 736 | 2,110 | 139 | 396 | 25 | 8 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 3,147 | 8,760 | 311 | 463 | 1,128 | 93 | 502 | 27 | 9 |
| | | Mid | | 10,573 | 493 | 675 | 1,860 | 132 | 449 | 27 | 9 |
| | | Low | | 11,349 | 586 | 784 | 2,178 | 147 | 396 | 24 | 8 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 13 | | After 50 yrs (% of baseline) | | 103 | 99 | 103 | 99 |
| Direct Wetland Impacts (acres) | | | 9,500 | | After 100 yrs (% of baseline) | | 110 | 104 | 110 | 104 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.36 | | Coastal Component | | 15,657 | 15,689 | 15,657 | 15,689 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,981 | 2,981 | 3,492 | 3,492 | |
| | 1 / 2 | 21,694 | 21,748 | Structural Component | | 42,335 | 42,457 | 42,335 | 42,457 | |
| | 3 / 4 | 21,872 | 21,926 | Total Project | | 60,973 | 61,127 | 61,483 | 61,638 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 2 Comprehensive Plan GIWW Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,583 | 185 | 2,834 | 326 | 1,512 | 157 | 2,129 | 183 | |
| 100-year | 46,652 | 323 | 49,467 | 652 | 37,218 | 280 | 39,133 | 393 | |
| 400-year | 51,671 | 651 | 53,124 | 1,781 | 40,614 | 395 | 41,659 | 804 | |
| 1,000-year | 53,208 | 1,926 | 54,188 | 2,856 | 41,777 | 782 | 42,556 | 1,297 | |
| 2,000-year | 53,965 | 3,063 | 54,716 | 3,996 | 42,386 | 1,169 | 42,963 | 1,592 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

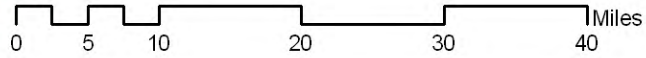


Legend

- Primary Roads
- New Sector Gate
- New Levees & Existing Levee Modifications
- Lafitte Ring Levee (100 - Year Design Level)
- Weir
- Other Considerations
- Planning Unit 2

Voluntary Nonstructural Measures

- Inundation Zones:
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:
- Buyout of Structures

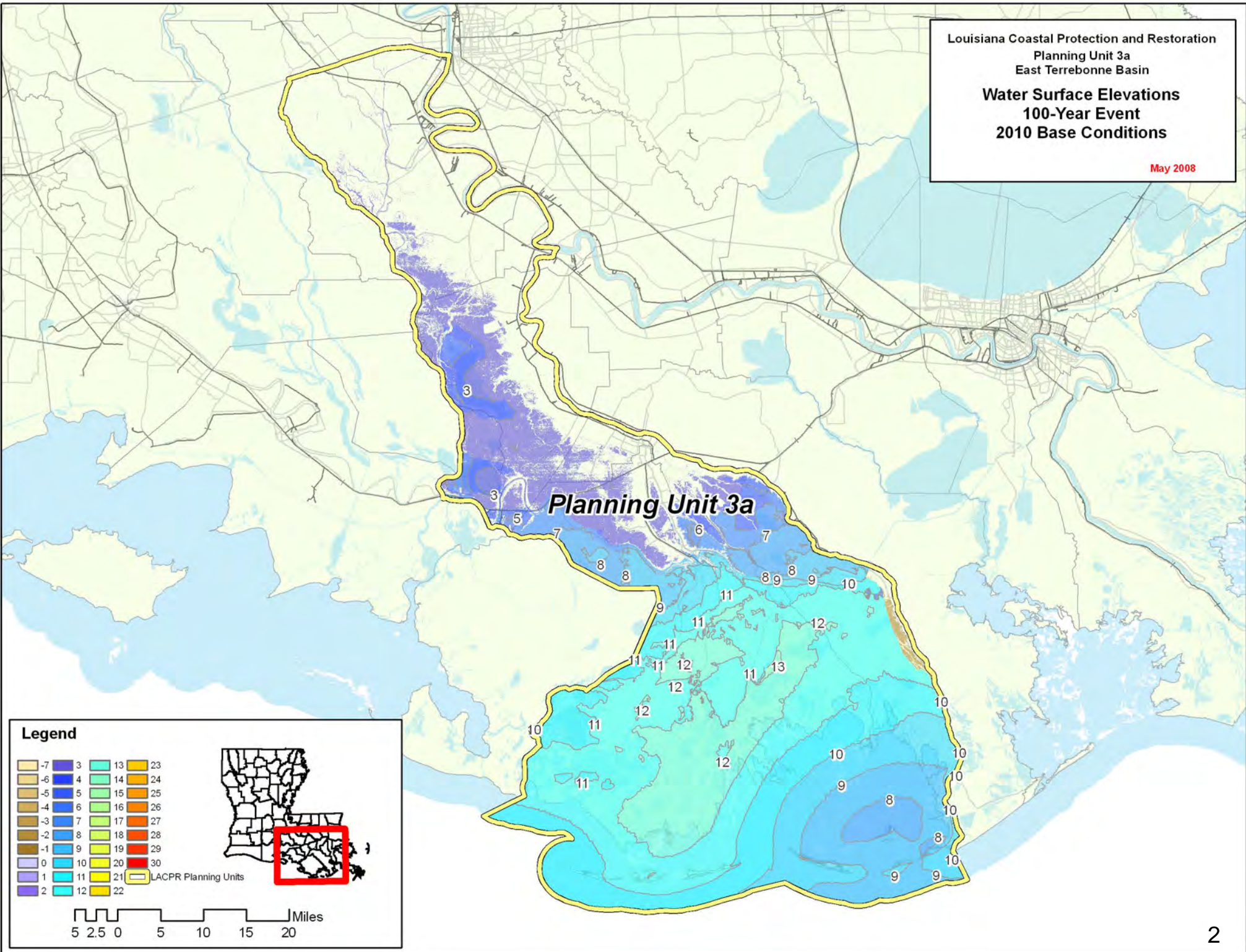


NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

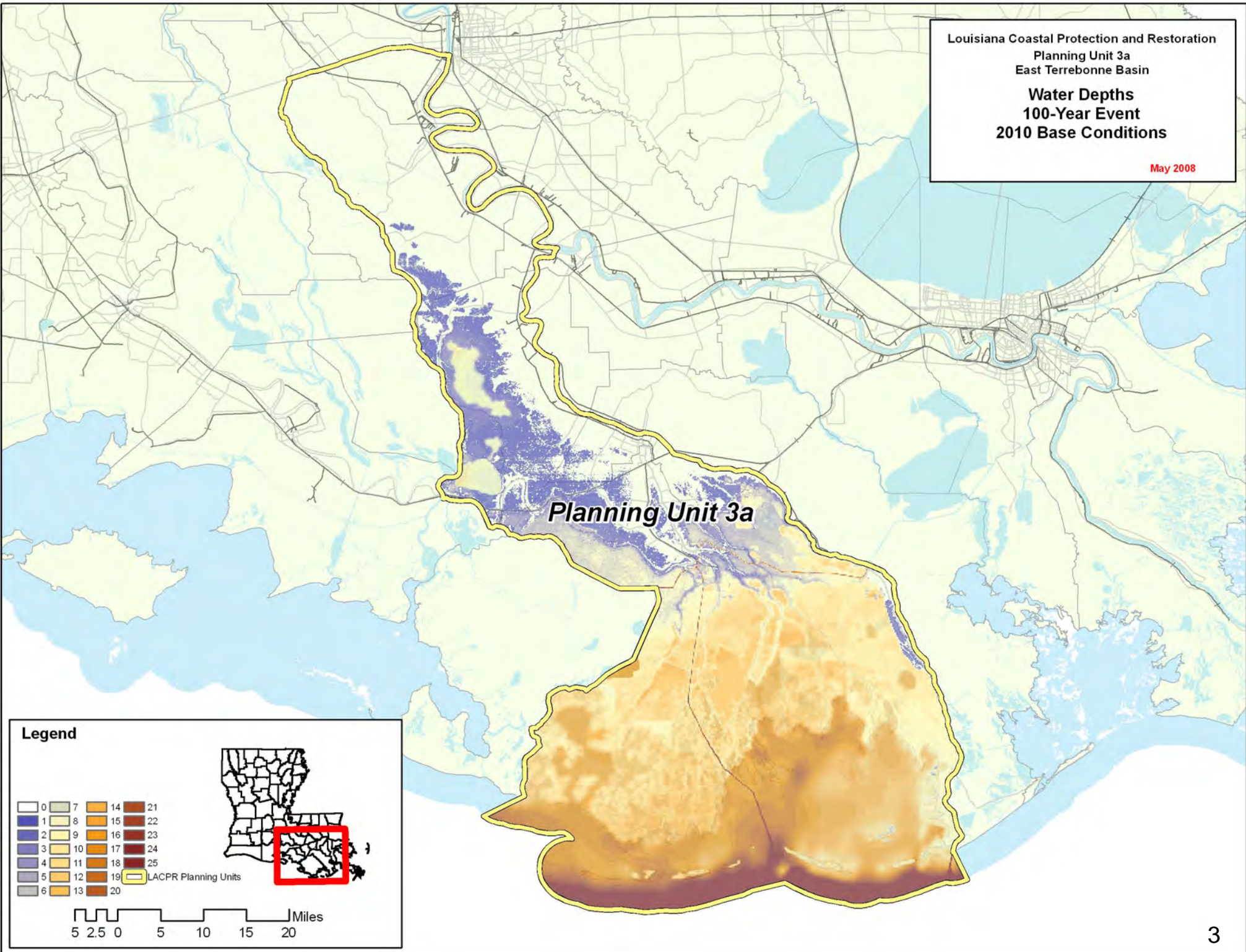
**LOUISIANA COASTAL PROTECTION AND RESTORATION FINAL TECHNICAL REPORT
EVALUATION RESULTS APPENDIX**

Planning Unit 3a

Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 100-Year Event
 2010 Base Conditions**
 May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Depths
 100-Year Event
 2010 Base Conditions**
 May 2008



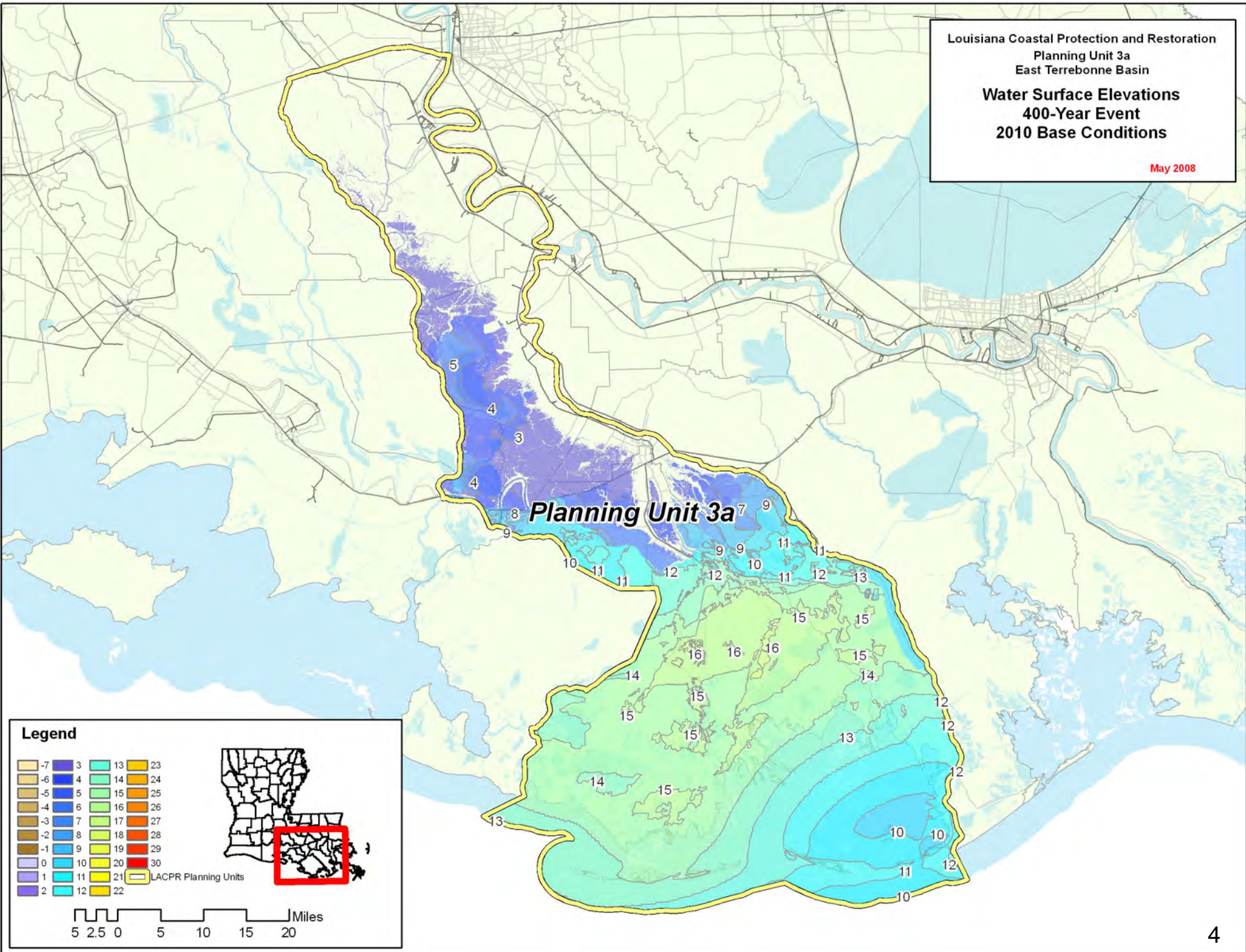
Legend

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| 1 | 8 | 15 | 22 |
| 2 | 9 | 16 | 23 |
| 3 | 10 | 17 | 24 |
| 4 | 11 | 18 | 25 |
| 5 | 12 | 19 | |
| 6 | 13 | 20 | |

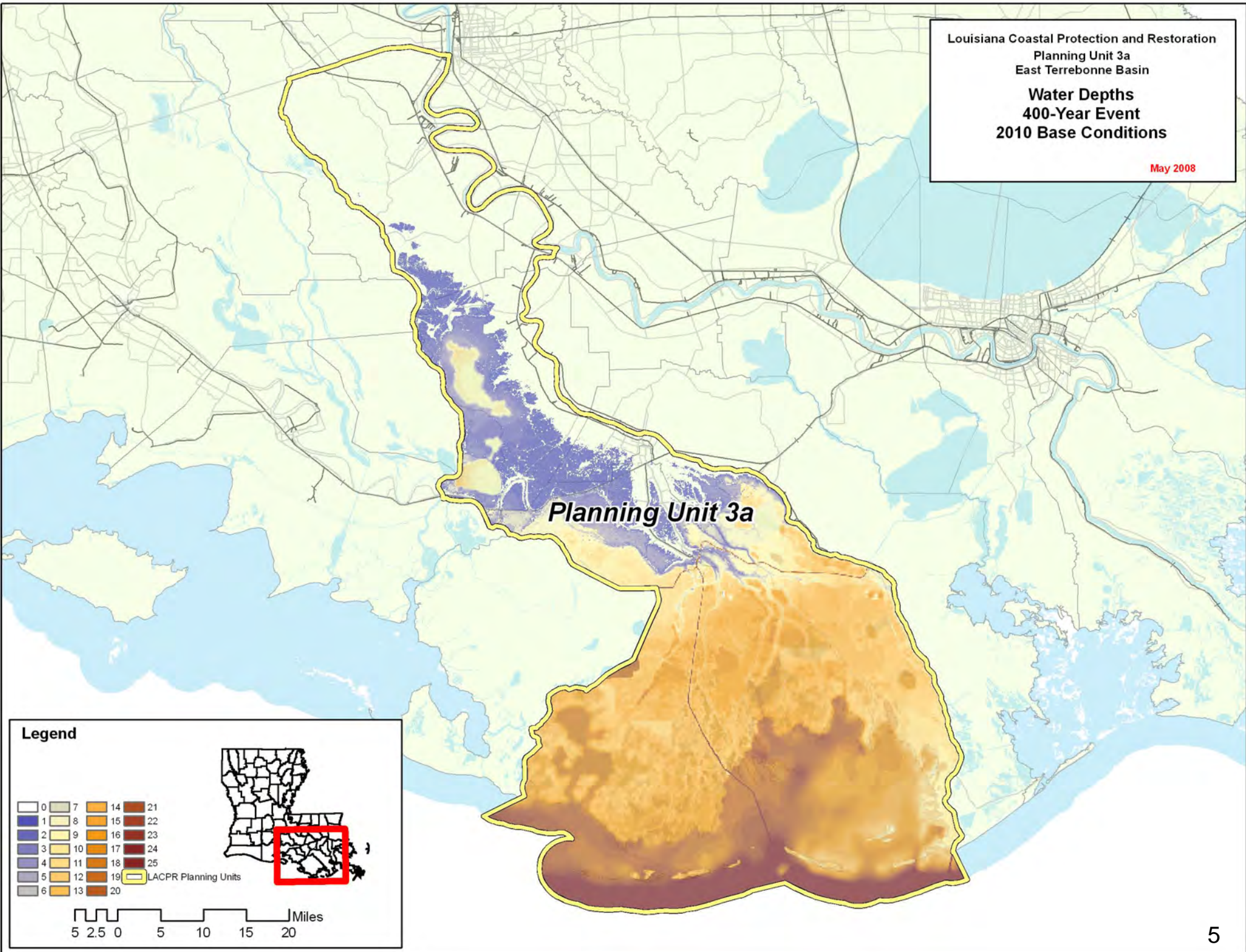
LACPR Planning Units

Miles
 5 2.5 0 5 10 15 20

Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 400-Year Event
 2010 Base Conditions**
 May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Depths
 400-Year Event
 2010 Base Conditions**
 May 2008

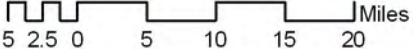


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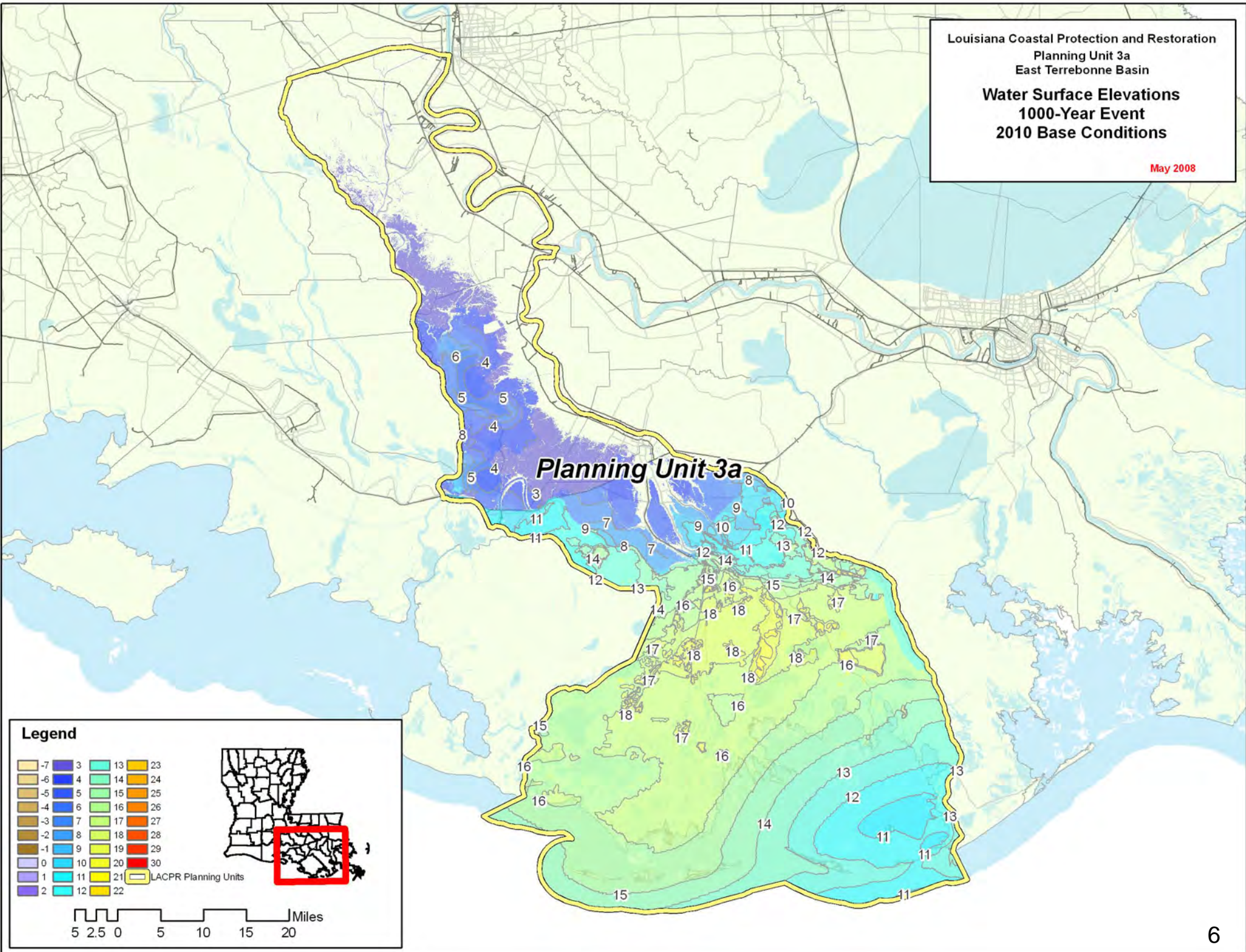
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| 1 | 8 | 15 | 22 |
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| 4 | 11 | 18 | 25 |
| 5 | 12 | 19 | |
| 6 | 13 | 20 | |



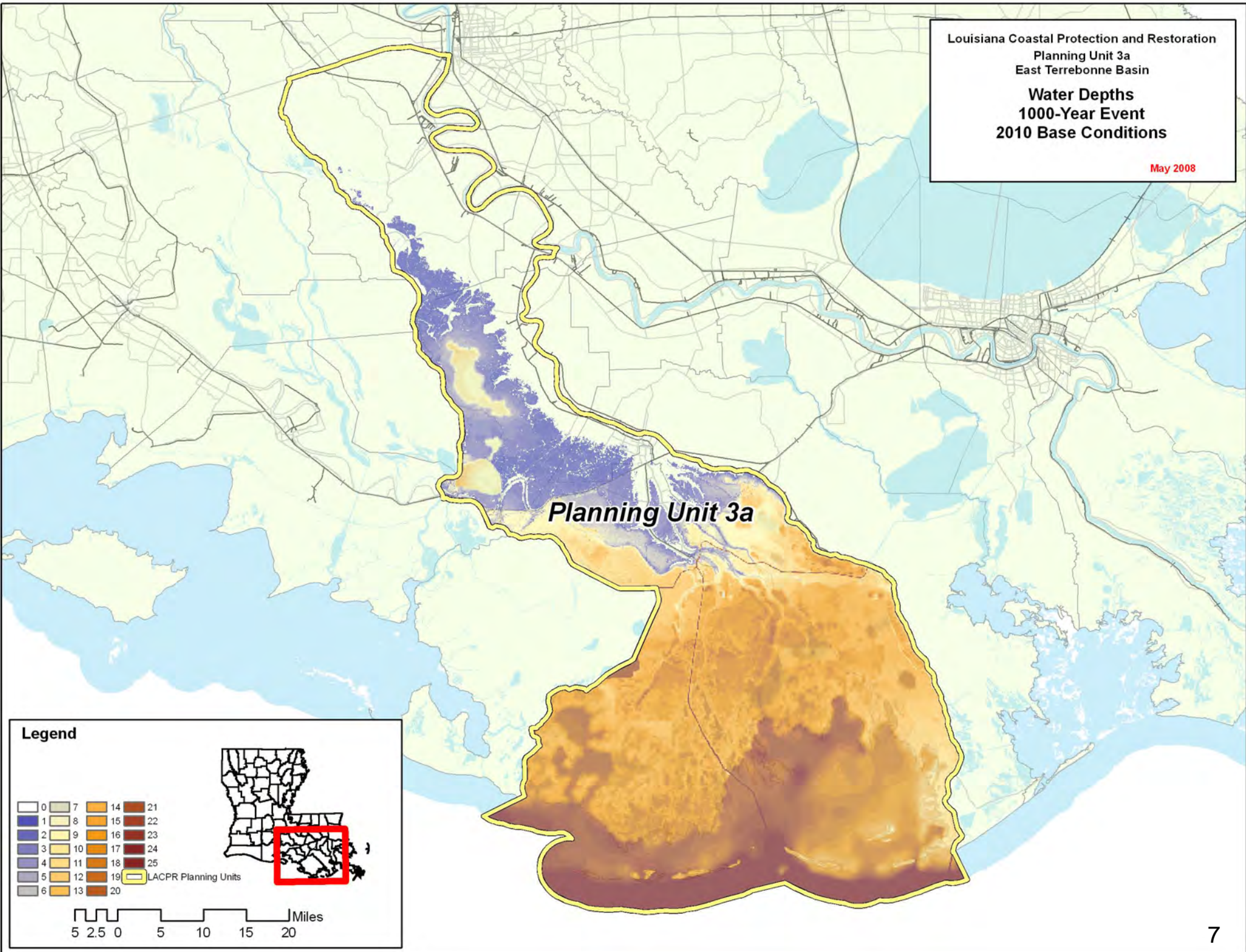
LACPR Planning Units



Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 1000-Year Event
 2010 Base Conditions**
 May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Depths
 1000-Year Event
 2010 Base Conditions**
 May 2008



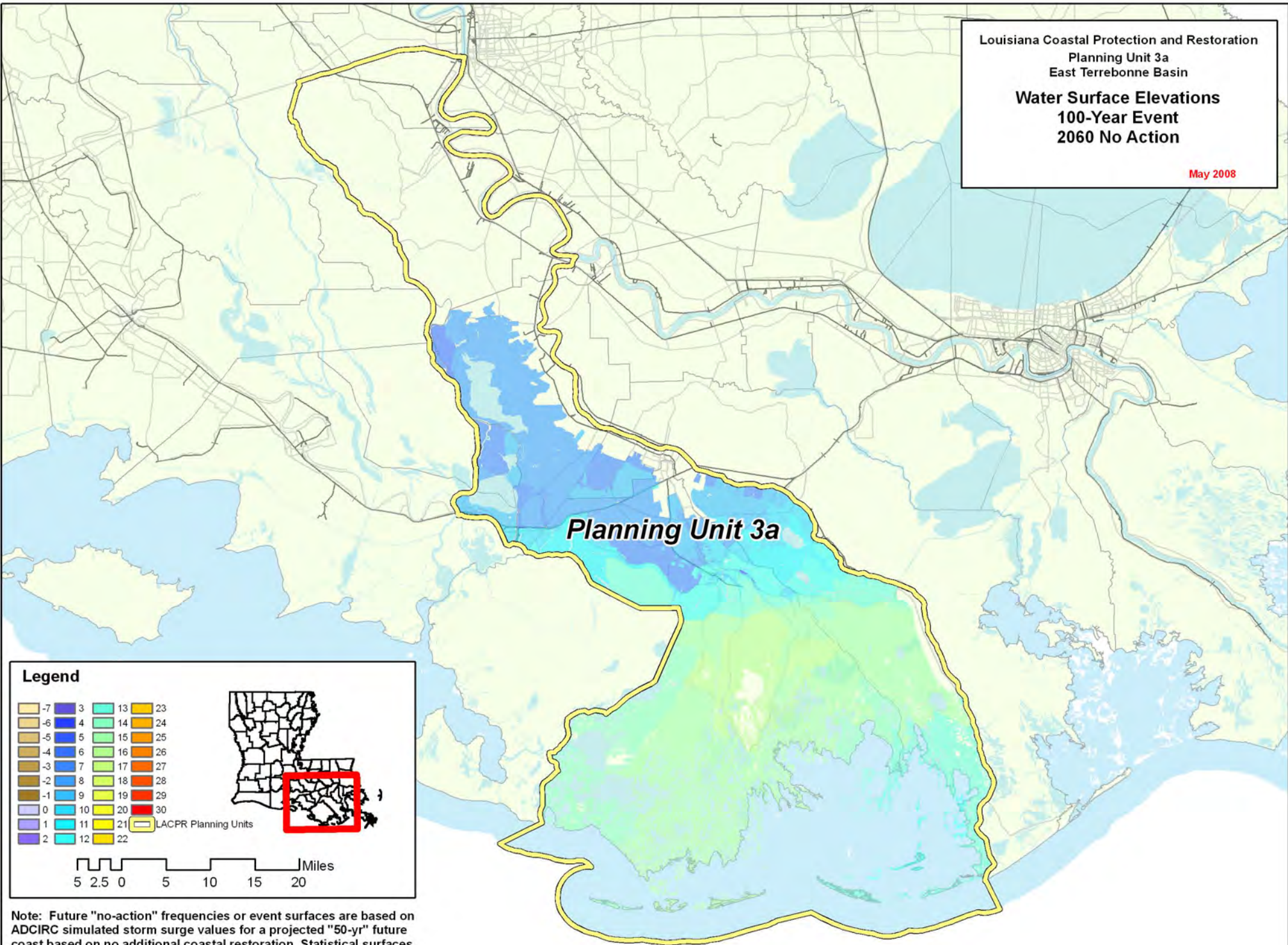
Legend

| | | | |
|---|----|----|----|
| 0 | 7 | 14 | 21 |
| 1 | 8 | 15 | 22 |
| 2 | 9 | 16 | 23 |
| 3 | 10 | 17 | 24 |
| 4 | 11 | 18 | 25 |
| 5 | 12 | 19 | |
| 6 | 13 | 20 | |

LACPR Planning Units

Miles

Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 100-Year Event
 2060 No Action**
 May 2008



Legend

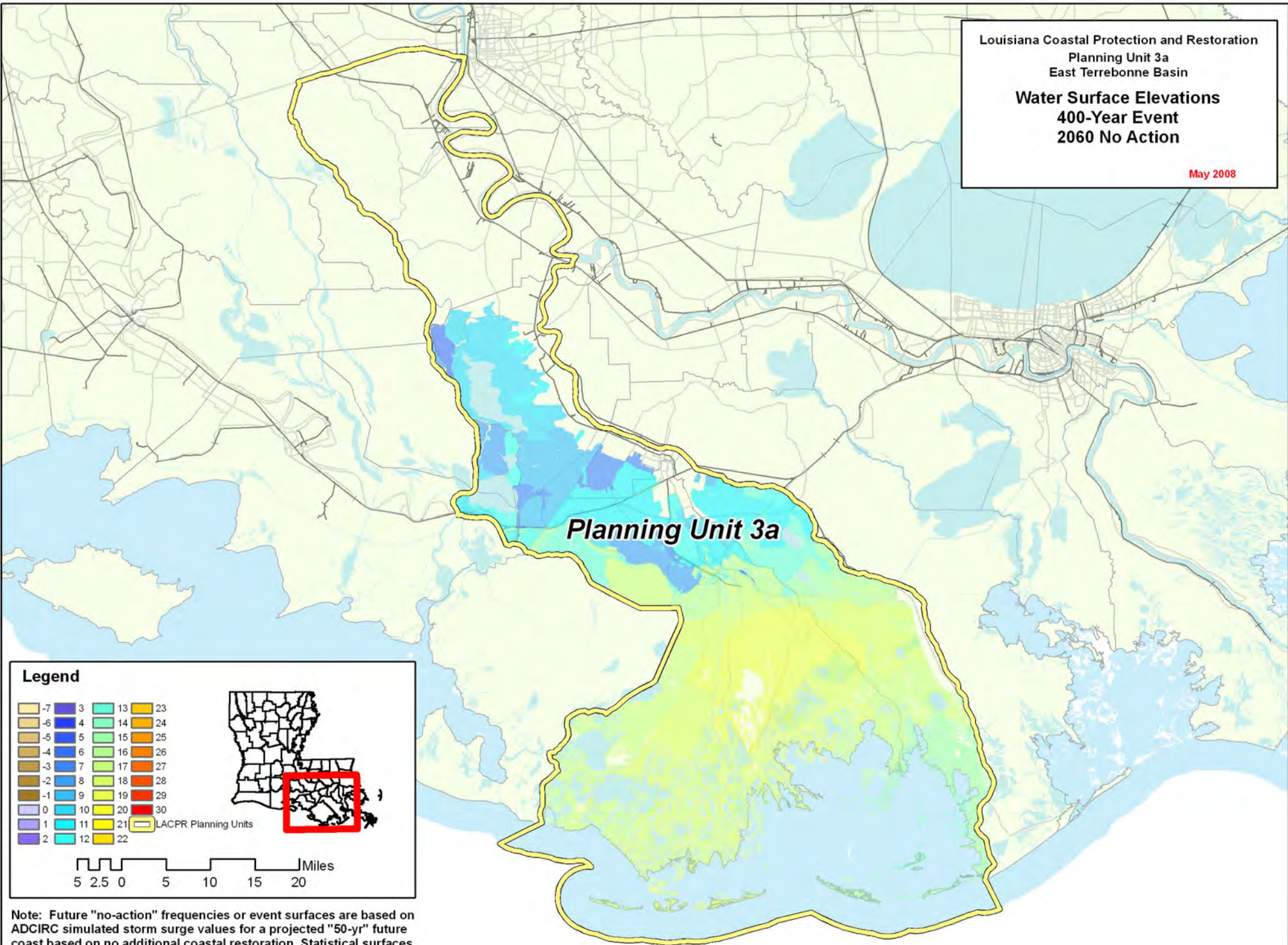
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|----|----|----|----|
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| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles
 5 2.5 0 5 10 15 20

Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 400-Year Event
 2060 No Action**
 May 2008



Legend

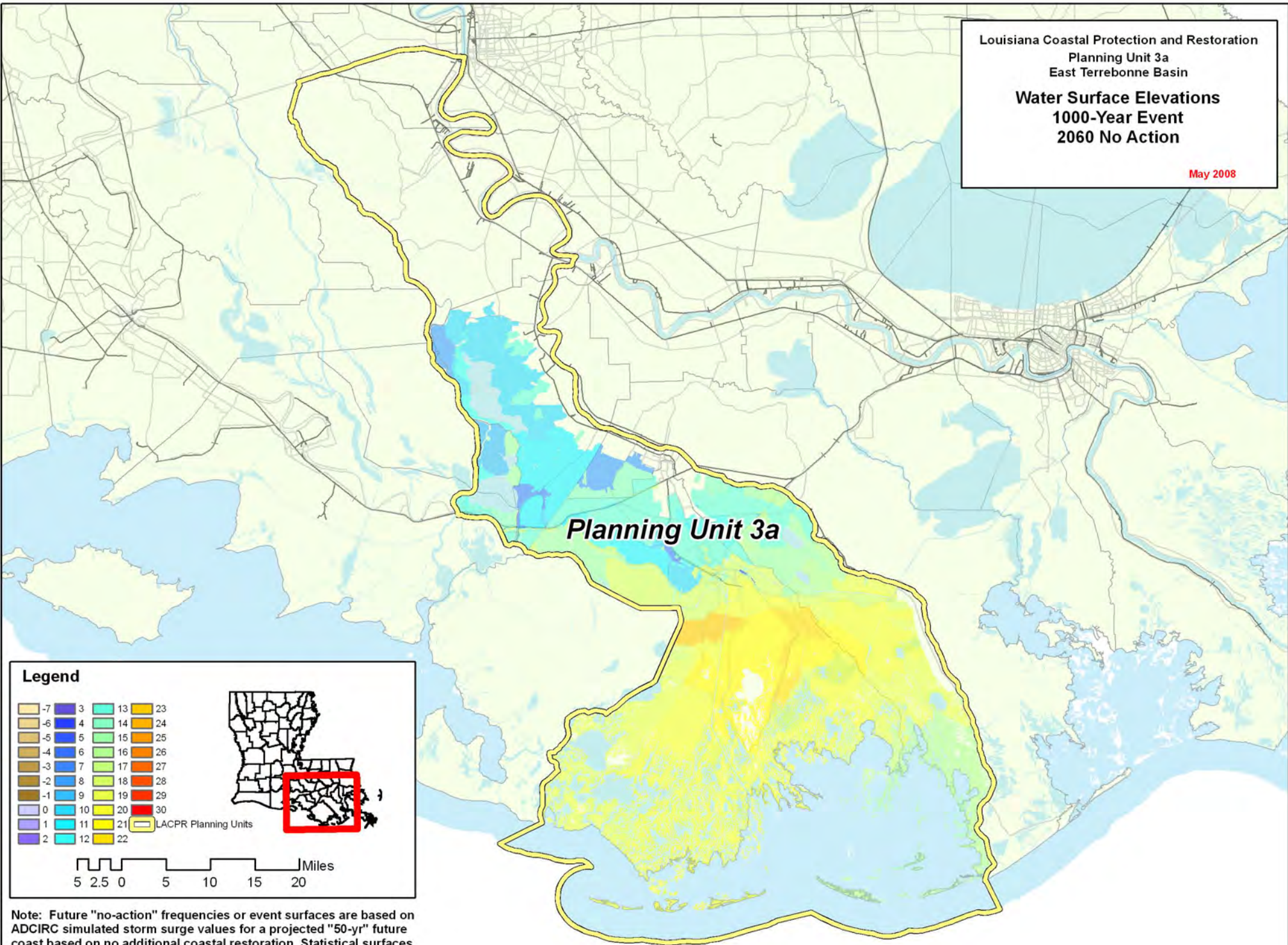
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|----|----|----|----|
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| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles
 5 2.5 0 5 10 15 20

Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 1000-Year Event
 2060 No Action**
 May 2008



Legend

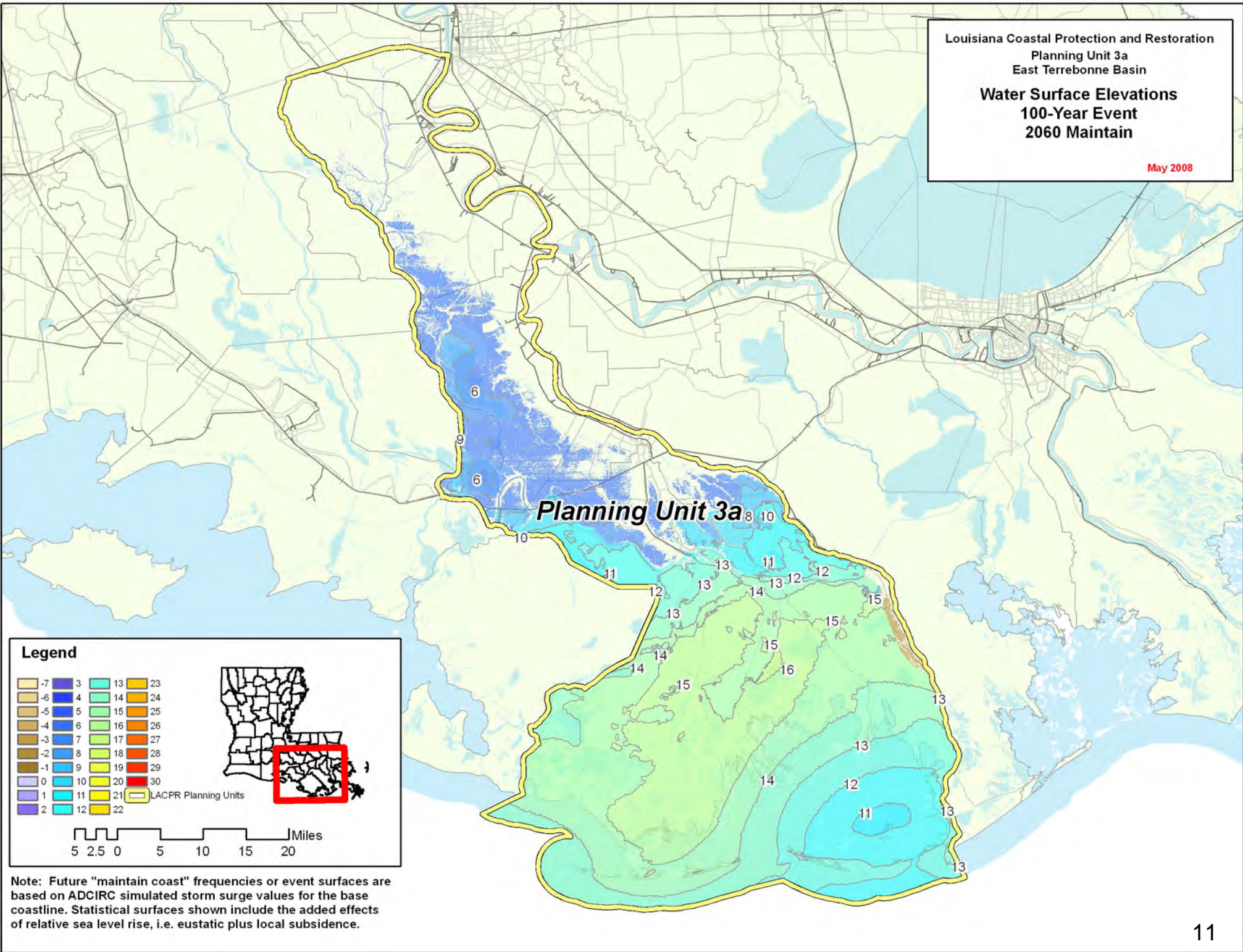
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| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles
 5 2.5 0 5 10 15 20

Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 100-Year Event
 2060 Maintain**
 May 2008



Legend

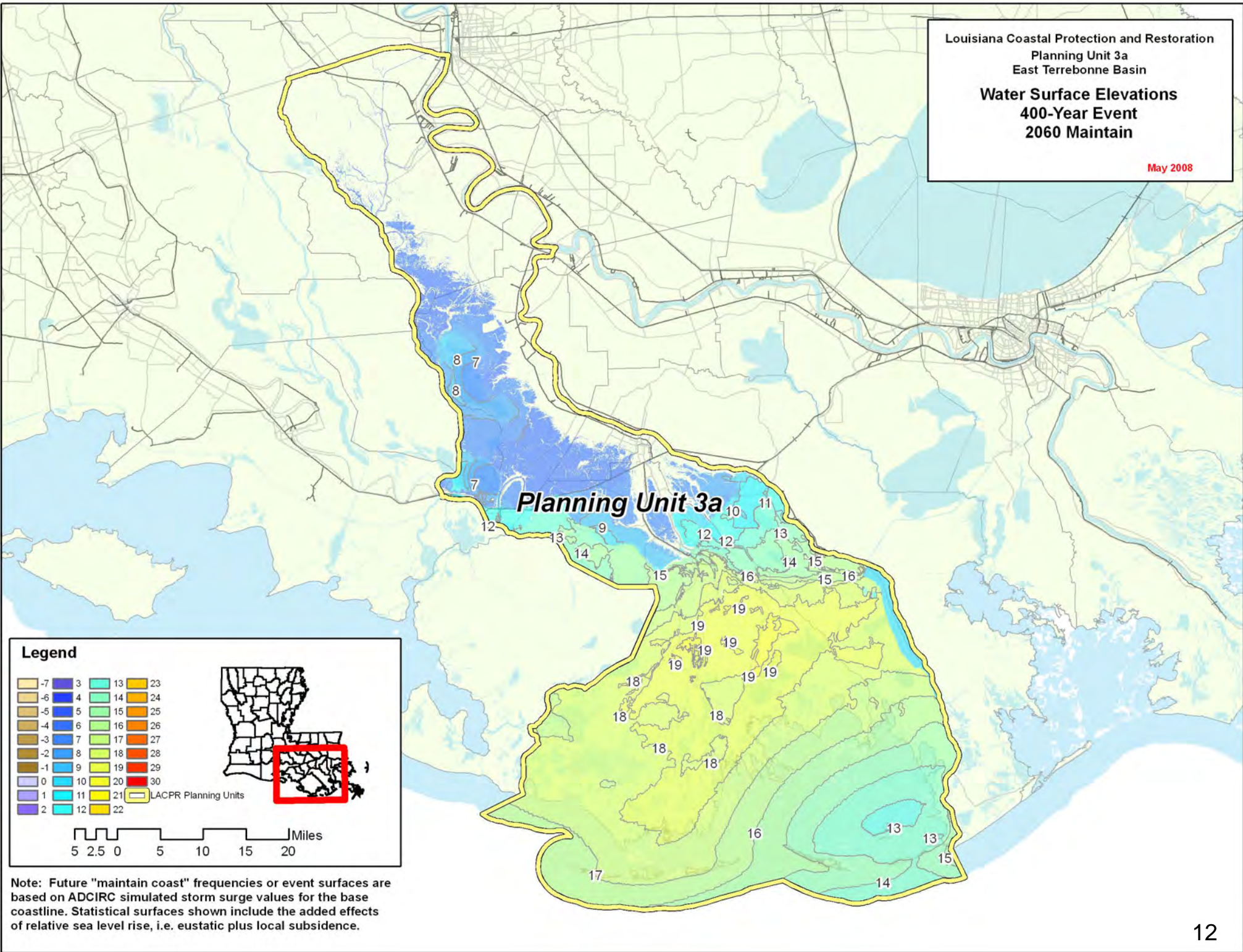
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|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 400-Year Event
 2060 Maintain**
 May 2008



Legend

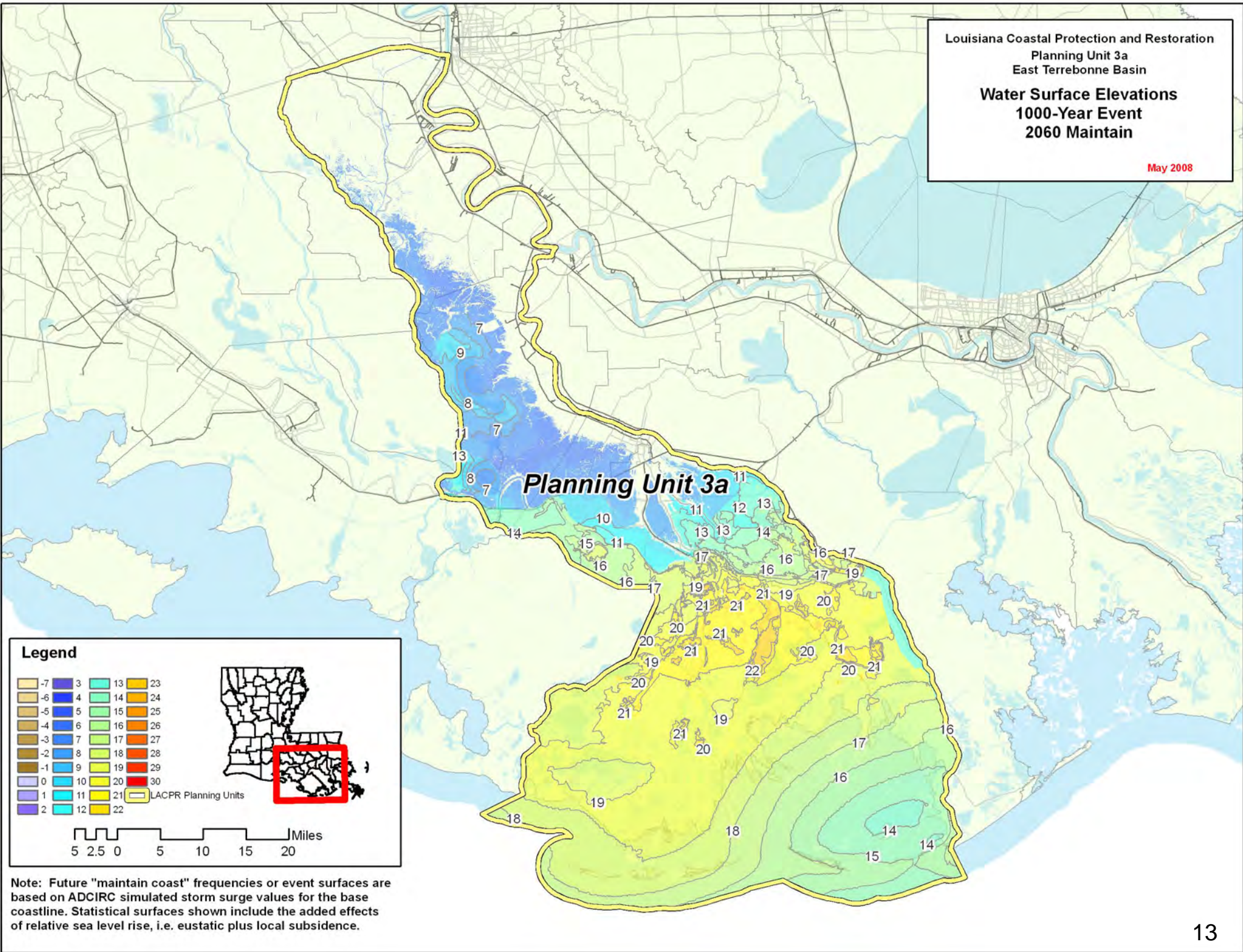
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|----|----|----|----|
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| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin
**Water Surface Elevations
 1000-Year Event
 2060 Maintain**
 May 2008



Legend

| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

| | | | | | |
|---------------------------------|---|---------------------------------|--------|------------------|-----------|
| Planning Unit: | 3a | Alt. No.: | PU3a-0 | Category: | No Action |
| Alternative Description: | No action (without project) alternative. | | | | |
| Coastal Component: | Degraded coast--increasing risk. | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 0 | 12,448 | 491 | 869 | 2,329 | 168 | 92 | 7 | 1 |
| | | Mid | | 16,540 | 752 | 1,361 | 3,941 | 269 | 82 | 4 | 0 |
| | | Low | | 19,069 | 1,028 | 1,800 | 5,462 | 367 | 72 | 0 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 0 | 14,323 | 596 | 1,131 | 2,872 | 223 | 92 | 5 | 1 |
| | | Mid | | 18,121 | 911 | 1,828 | 4,951 | 367 | 82 | 3 | 0 |
| | | Low | | 20,475 | 1,220 | 2,088 | 6,018 | 423 | 72 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 0 | 10,774 | 477 | 844 | 2,259 | 161 | 92 | 7 | 1 |
| | | Mid | | 14,918 | 723 | 1,271 | 3,809 | 257 | 82 | 4 | 0 |
| | | Low | | 17,236 | 967 | 1,634 | 5,167 | 341 | 72 | 0 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 0 | 12,164 | 570 | 854 | 2,854 | 221 | 92 | 5 | 1 |
| | | Mid | | 16,092 | 855 | 1,197 | 4,715 | 345 | 82 | 3 | 0 |
| | | Low | | 18,171 | 1,115 | 1,343 | 5,787 | 405 | 72 | 0 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|---|
| Construction Time (years) | | | 0 | After 50 yrs (% of baseline) | 68 | 66 | 68 | 66 | |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | 55 | 50 | 55 | 50 | |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.24 | Coastal Component | | 0 | 0 | 0 | 0 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 0 | 0 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 0 | 0 | Total Project | | 0 | 0 | 0 | 0 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a No Action Plan |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | N/A | 2,472 | N/A | 1,422 | N/A | 2,425 | N/A | |
| 100-year | 10,629 | N/A | 15,966 | N/A | 9,695 | N/A | 13,659 | N/A | |
| 400-year | 22,650 | N/A | 25,236 | N/A | 17,848 | N/A | 19,693 | N/A | |
| 1,000-year | 26,922 | N/A | 28,128 | N/A | 20,766 | N/A | 21,591 | N/A | |
| 2,000-year | 28,659 | N/A | 29,317 | N/A | 21,942 | N/A | 22,348 | N/A | |

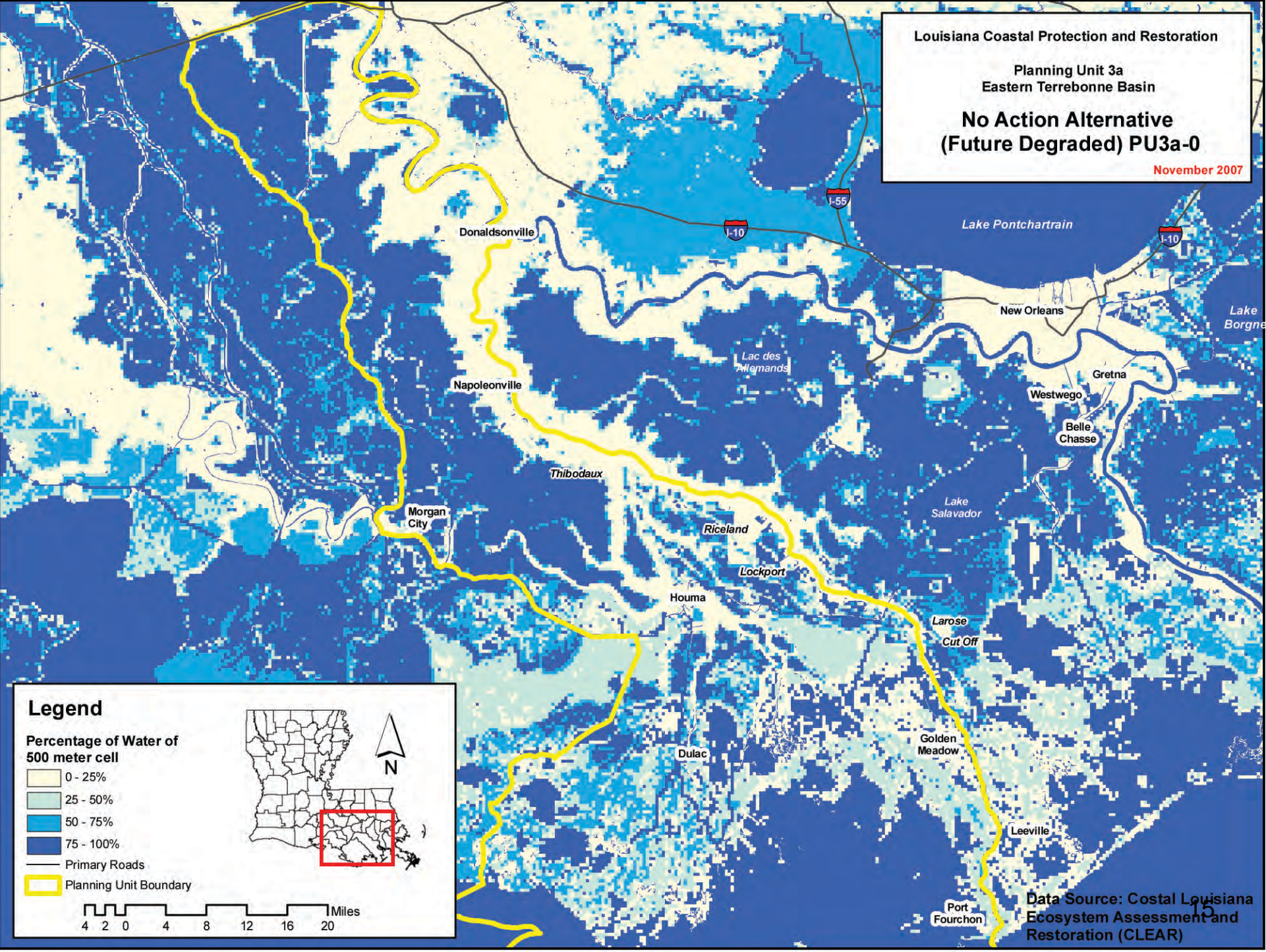
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration

Planning Unit 3a
Eastern Terrebonne Basin

**No Action Alternative
(Future Degraded) PU3a-0**

November 2007

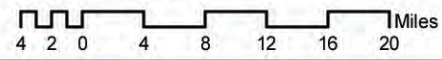


Legend

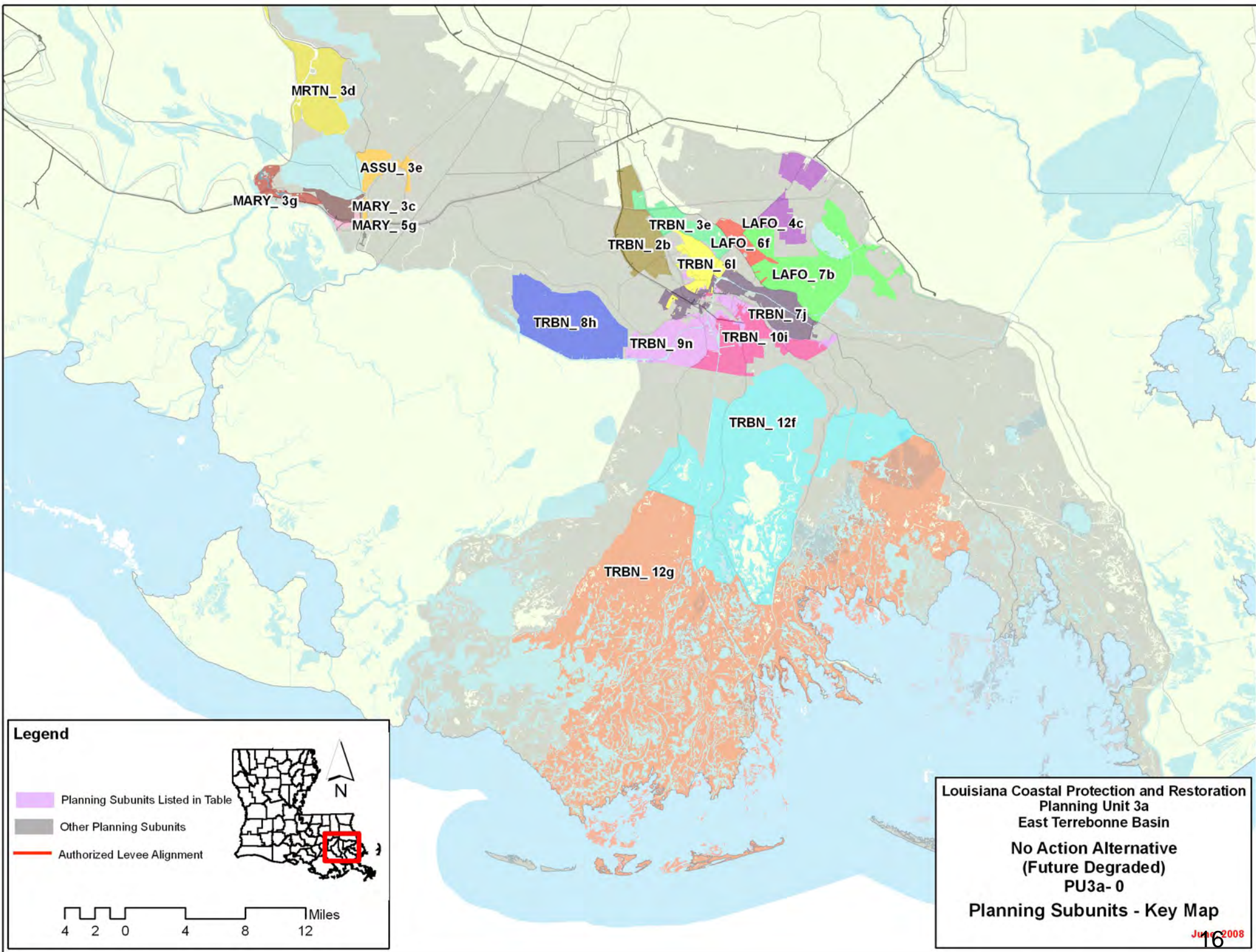
Percentage of Water of
500 meter cell

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%

- Primary Roads
- Planning Unit Boundary




Data Source: Coastal Louisiana
Ecosystem Assessment and
Restoration (CLEAR)



Legend

- Planning Subunits Listed in Table
- Other Planning Subunits
- Authorized Levee Alignment



N

4 2 0 4 8 12 Miles

Louisiana Coastal Protection and Restoration
Planning Unit 3a
East Terrebonne Basin
No Action Alternative
(Future Degraded)
PU3a-0
Planning Subunits - Key Map
 June 2008

Alternative: PU3a-0
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ASSU_ 3e | 3.7 | | 3.9 | | 4.3 | | 6.9 | | 7.1 | | 7.5 | |
| LAFO_ 4c | 7.0 | | 11.7 | | 13.6 | | 10.2 | | 14.9 | | 16.8 | |
| LAFO_ 6f | 8.4 | | 13.4 | | 16.7 | | 11.6 | | 16.6 | | 19.9 | |
| LAFO_ 7b | 7.8 | | 11.5 | | 13.6 | | 11.0 | | 14.7 | | 16.8 | |
| MARY_ 2f | 6.3 | | 8.5 | | 9.9 | | 9.5 | | 11.7 | | 13.1 | |
| MARY_ 3c | 6.3 | | 10.8 | | 13.1 | | 9.5 | | 14.0 | | 16.3 | |
| MARY_ 3g | 6.1 | | 9.6 | | 11.4 | | 9.3 | | 12.8 | | 14.6 | |
| MARY_ 5g | 7.8 | | 9.9 | | 12.0 | | 11.0 | | 13.1 | | 15.2 | |
| MRTN_ 3d | 3.8 | | 5.9 | | 7.1 | | 7.0 | | 9.1 | | 10.3 | |
| TRBN_ 10i | 11.2 | | 16.1 | | 19.5 | | 14.4 | | 19.3 | | 22.7 | |
| TRBN_ 12f | 13.5 | | 18.0 | | 20.8 | | 16.7 | | 21.2 | | 24.0 | |
| TRBN_ 12g | 13.2 | | 16.9 | | 19.0 | | 16.1 | | 19.6 | | 21.8 | |
| TRBN_ 2b | 6.6 | | 9.5 | | 12.8 | | 9.8 | | 12.7 | | 16.0 | |
| TRBN_ 3e | 4.9 | | 8.8 | | 11.7 | | 8.1 | | 12.0 | | 14.9 | |
| TRBN_ 6l | 7.8 | | 8.8 | | 10.5 | | 11.0 | | 12.0 | | 13.7 | |
| TRBN_ 7j | 9.3 | | 14.0 | | 16.3 | | 12.5 | | 17.2 | | 19.5 | |
| TRBN_ 8h | 9.7 | | 14.5 | | 17.4 | | 14.3 | | 18.7 | | 20.7 | |
| TRBN_ 9n | 8.4 | | 12.1 | | 14.1 | | 11.6 | | 15.3 | | 17.3 | |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

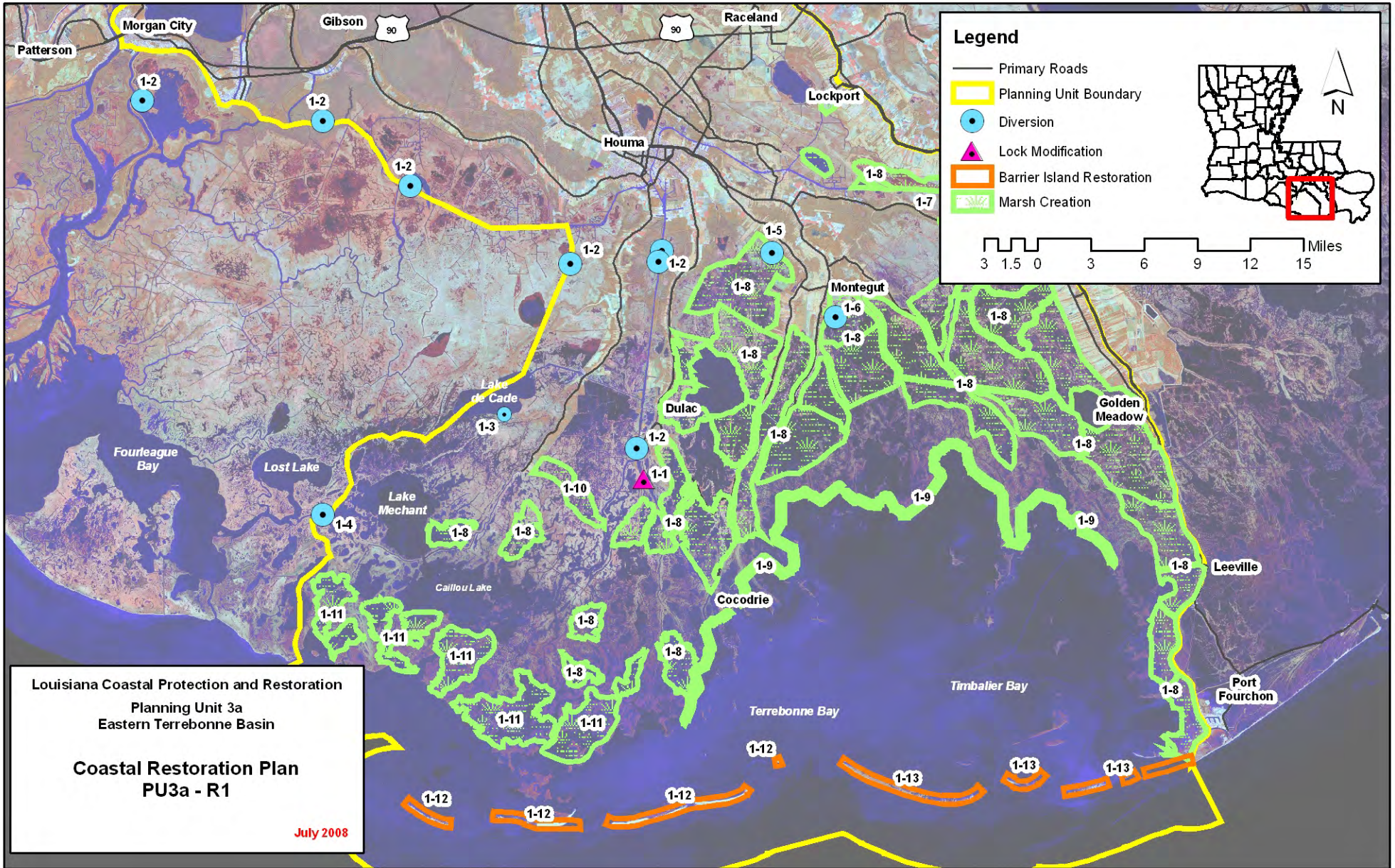
| | | | | | |
|---------------------------------|---|---------------------------------|---------|------------------|--------------------------|
| Planning Unit: | 3a | Alt. No.: | PU3a-R1 | Category: | Coastal Restoration Only |
| Alternative Description: | | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

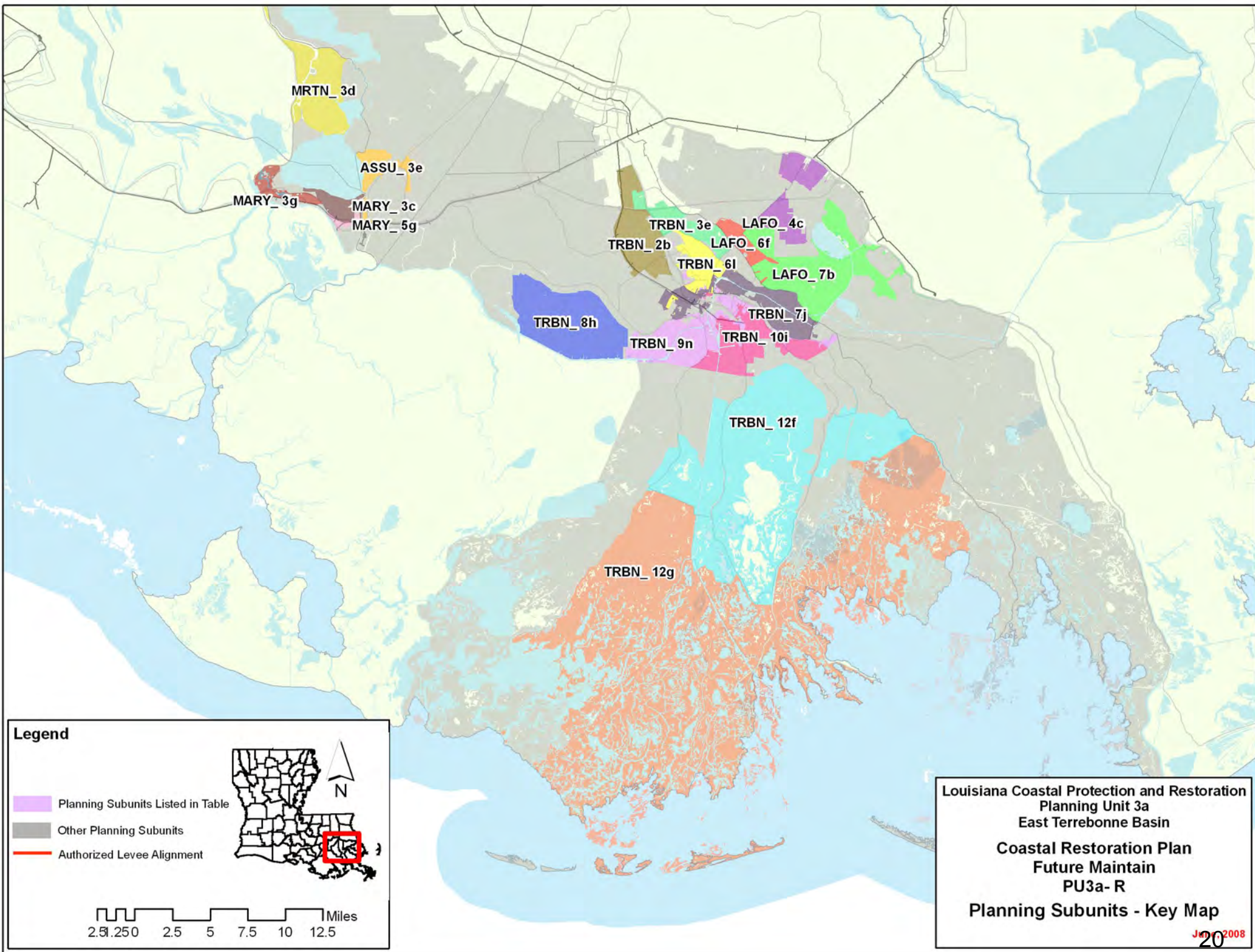
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,189 | 12,456 | 490 | 864 | 2,317 | 167 | 157 | 10 | 1 |
| | | Mid | | 16,592 | 750 | 1,357 | 3,929 | 268 | 134 | 6 | 0 |
| | | Low | | 19,115 | 1,027 | 1,796 | 5,451 | 366 | 111 | 3 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,210 | 14,325 | 595 | 1,131 | 2,873 | 223 | 157 | 10 | 1 |
| | | Mid | | 18,185 | 910 | 1,829 | 4,952 | 367 | 134 | 6 | 0 |
| | | Low | | 20,522 | 1,221 | 2,090 | 6,024 | 424 | 111 | 3 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,189 | 10,768 | 476 | 843 | 2,258 | 161 | 157 | 10 | 1 |
| | | Mid | | 14,958 | 722 | 1,272 | 3,809 | 257 | 134 | 6 | 0 |
| | | Low | | 17,274 | 967 | 1,633 | 5,163 | 341 | 111 | 3 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,210 | 12,171 | 569 | 1,140 | 2,853 | 221 | 157 | 10 | 1 |
| | | Mid | | 16,142 | 855 | 1,684 | 4,716 | 345 | 134 | 6 | 0 |
| | | Low | | 18,207 | 1,117 | 1,944 | 5,789 | 405 | 111 | 3 | 0 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|-------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | | 15 | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | | 0 | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | 0.37 | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 8,146 | 8,296 | Structural Component | | 0 | 0 | 0 | 0 | |
| | 3 / 4 | 8,146 | 8,296 | Total Project | | 23,276 | 23,703 | 23,276 | 23,703 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 1,466 | 2,472 | 2,479 | 1,422 | 1,428 | 2,425 | 2,431 | |
| 100-year | 10,629 | 10,574 | 15,966 | 15,993 | 9,695 | 9,683 | 13,659 | 13,697 | |
| 400-year | 22,650 | 22,760 | 25,236 | 25,351 | 17,848 | 17,925 | 19,693 | 19,779 | |
| 1,000-year | 26,922 | 27,034 | 28,128 | 28,244 | 20,766 | 20,855 | 21,591 | 21,683 | |
| 2,000-year | 28,659 | 28,781 | 29,317 | 29,437 | 21,942 | 22,035 | 22,348 | 22,440 | |


Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Legend

- Planning Subunits Listed in Table
- Other Planning Subunits
- Authorized Levee Alignment



N

Miles

2.5 2.50 2.5 5 7.5 10 12.5

Louisiana Coastal Protection and Restoration
Planning Unit 3a
East Terrebonne Basin
Coastal Restoration Plan
Future Maintain
PU3a- R
Planning Subunits - Key Map

JUN 20 2008
20

Alternative: PU3a-R1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions* | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ASSU_ 3e | 3.7 | 3.7 | 3.9 | 3.9 | 4.3 | 4.3 | 6.9 | 6.9 | 7.1 | 7.1 | 7.5 | 7.5 |
| LAFO_ 4c | 7.0 | 7.0 | 11.7 | 11.7 | 13.6 | 13.6 | 10.2 | 10.2 | 14.9 | 14.9 | 16.8 | 16.8 |
| LAFO_ 6f | 8.4 | 8.4 | 13.4 | 13.4 | 16.7 | 16.7 | 11.6 | 11.6 | 16.6 | 16.6 | 19.9 | 19.9 |
| LAFO_ 7b | 7.8 | 7.8 | 11.5 | 11.5 | 13.6 | 13.6 | 11.0 | 11.0 | 14.7 | 14.7 | 16.8 | 16.8 |
| MARY_ 2f | 6.3 | 6.3 | 8.5 | 8.5 | 9.9 | 9.9 | 9.5 | 9.5 | 11.7 | 11.7 | 13.1 | 13.1 |
| MARY_ 3c | 6.3 | 6.3 | 10.8 | 10.8 | 13.1 | 13.1 | 9.5 | 9.5 | 14.0 | 14.0 | 16.3 | 16.3 |
| MARY_ 3g | 6.1 | 6.1 | 9.6 | 9.6 | 11.4 | 11.4 | 9.3 | 9.3 | 12.8 | 12.8 | 14.6 | 14.6 |
| MARY_ 5g | 7.8 | 7.8 | 9.9 | 9.9 | 12.0 | 12.0 | 11.0 | 11.0 | 13.1 | 13.1 | 15.2 | 15.2 |
| MRTN_ 3d | 3.8 | 3.8 | 5.9 | 5.9 | 7.1 | 7.1 | 7.0 | 7.0 | 9.1 | 9.1 | 10.3 | 10.3 |
| TRBN_ 10i | 11.2 | 11.2 | 16.1 | 16.1 | 19.5 | 19.5 | 14.4 | 14.4 | 19.3 | 19.3 | 22.7 | 22.7 |
| TRBN_ 12f | 13.5 | 13.5 | 18.0 | 18.0 | 20.8 | 20.8 | 16.7 | 16.7 | 21.2 | 21.2 | 24.0 | 24.0 |
| TRBN_ 12g | 13.2 | 13.2 | 16.9 | 16.9 | 19.0 | 19.0 | 16.1 | 16.4 | 19.6 | 20.1 | 21.8 | 22.2 |
| TRBN_ 2b | 6.6 | 6.6 | 9.5 | 9.5 | 12.8 | 12.8 | 9.8 | 9.8 | 12.7 | 12.7 | 16.0 | 16.0 |
| TRBN_ 3e | 4.9 | 4.9 | 8.8 | 8.8 | 11.7 | 11.7 | 8.1 | 8.1 | 12.0 | 12.0 | 14.9 | 14.9 |
| TRBN_ 6l | 7.8 | 7.8 | 8.8 | 8.8 | 10.5 | 10.5 | 11.0 | 11.0 | 12.0 | 12.0 | 13.7 | 13.7 |
| TRBN_ 7j | 9.3 | 9.3 | 14.0 | 14.0 | 16.3 | 16.3 | 12.5 | 12.5 | 17.2 | 17.2 | 19.5 | 19.5 |
| TRBN_ 8h | 9.7 | 9.7 | 14.5 | 14.5 | 17.4 | 17.4 | 14.3 | 12.9 | 18.7 | 17.7 | 20.7 | 20.6 |
| TRBN_ 9n | 8.4 | 8.4 | 12.1 | 12.1 | 14.1 | 14.1 | 11.6 | 11.6 | 15.3 | 15.3 | 17.3 | 17.3 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

* With and without project base conditions (2010) are the same for coastal restoration only plans.

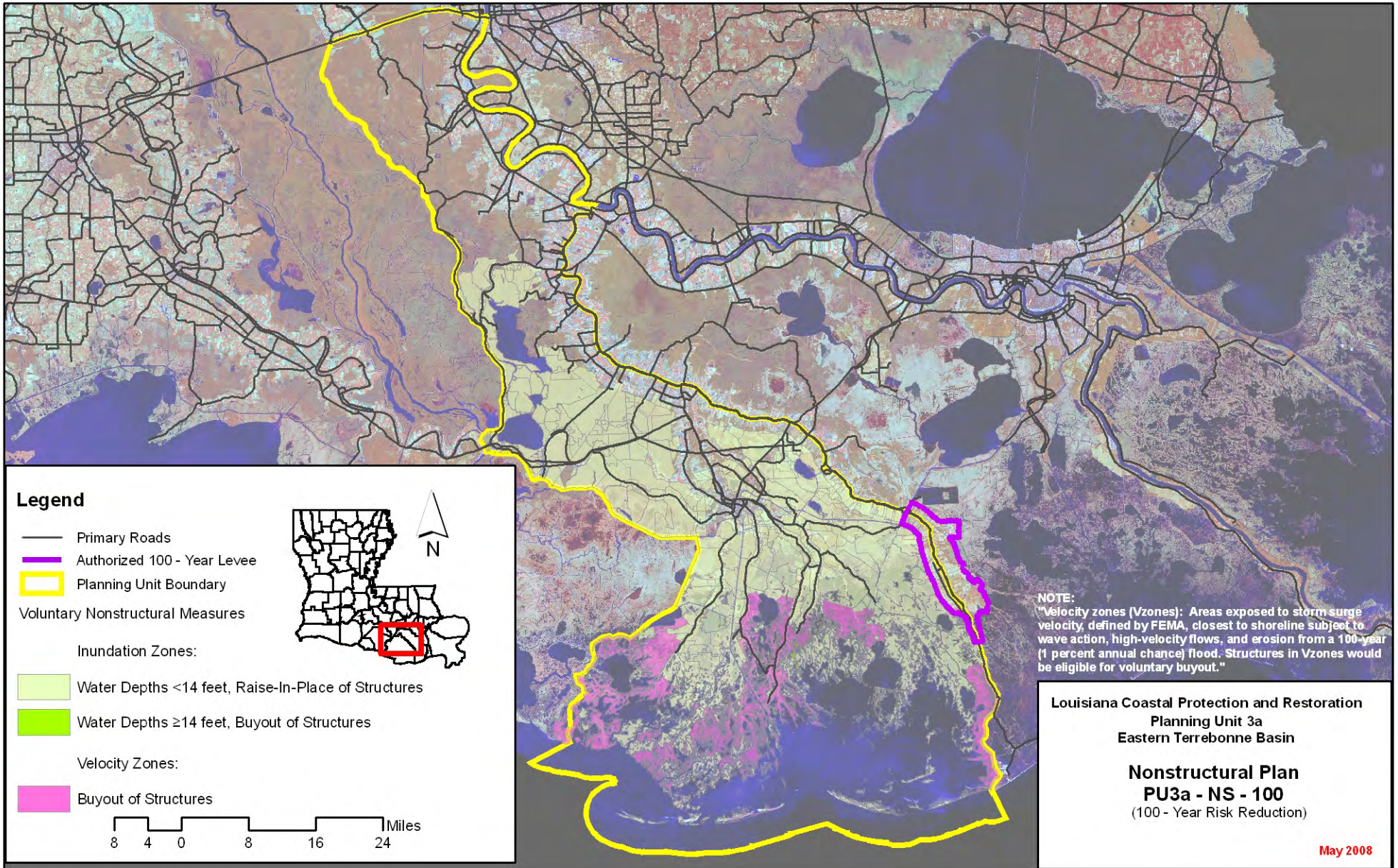
| | | | | | |
|---------------------------------|---|---------------------------------|-------------|-----------------------------|--|
| Planning Unit: | 3a | Alt. No.: | PU3a-NS-100 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 100-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 100-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,587 | 11,127 | 195 | 279 | 902 | 54 | 157 | 10 | 1 |
| | | Mid | | 15,021 | 327 | 640 | 2,047 | 127 | 134 | 6 | 0 |
| | | Low | | 17,559 | 512 | 932 | 3,078 | 193 | 111 | 3 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,609 | 12,090 | 225 | 407 | 1,154 | 81 | 157 | 10 | 1 |
| | | Mid | | 15,841 | 406 | 861 | 2,550 | 175 | 134 | 6 | 0 |
| | | Low | | 18,284 | 625 | 1,032 | 3,313 | 214 | 111 | 3 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,587 | 9,856 | 189 | 257 | 852 | 49 | 157 | 10 | 1 |
| | | Mid | | 13,882 | 313 | 591 | 1,989 | 121 | 134 | 6 | 0 |
| | | Low | | 16,267 | 476 | 843 | 2,926 | 179 | 111 | 3 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,608 | 10,579 | 212 | 267 | 1,120 | 77 | 157 | 10 | 1 |
| | | Mid | | 14,492 | 377 | 552 | 2,424 | 163 | 134 | 6 | 0 |
| | | Low | | 16,747 | 566 | 671 | 3,181 | 203 | 111 | 3 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.37 | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 7,827 | 7,827 | 7,811 | 7,811 |
| | 1 / 2 | 10,886 | 11,035 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 10,880 | 11,030 | Total Project | | 31,102 | 31,530 | 31,086 | 31,514 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Nonstructural Plan 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 179 | 2,472 | 401 | 1,422 | 161 | 2,425 | 365 | |
| 100-year | 10,629 | 5,111 | 15,966 | 12,047 | 9,695 | 4,257 | 13,659 | 9,796 | |
| 400-year | 22,650 | 20,976 | 25,236 | 24,215 | 17,848 | 16,213 | 19,693 | 18,694 | |
| 1,000-year | 26,922 | 26,215 | 28,128 | 27,711 | 20,766 | 20,075 | 21,591 | 21,178 | |
| 2,000-year | 28,659 | 28,308 | 29,317 | 29,086 | 21,942 | 21,587 | 22,348 | 22,107 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



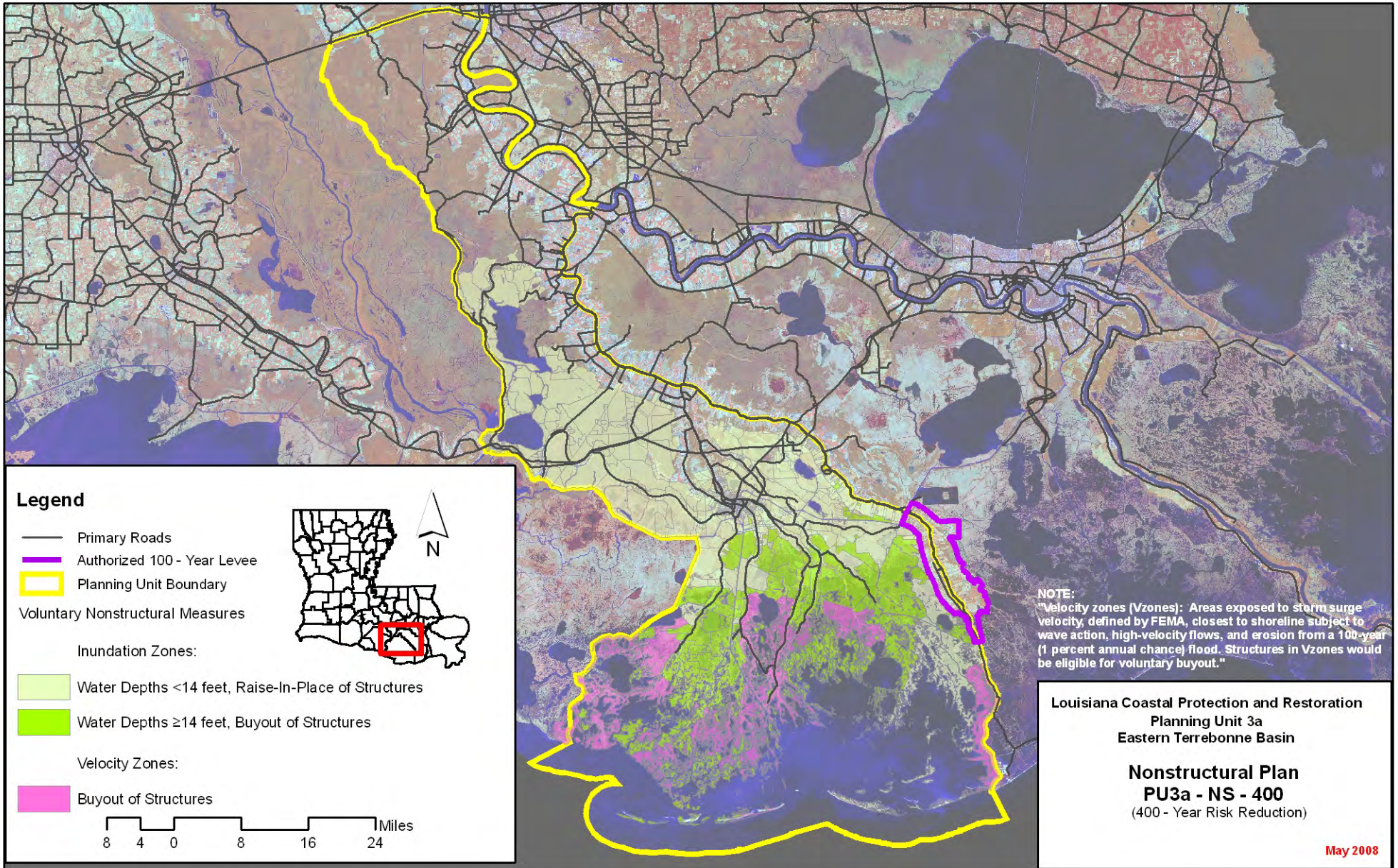
| | | | | | |
|---------------------------------|---|---------------------------------|-------------|-----------------------------|--|
| Planning Unit: | 3a | Alt. No.: | PU3a-NS-400 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 400-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 400-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,733 | 9,442 | 159 | 153 | 603 | 28 | 157 | 10 | 1 |
| | | Mid | | 13,320 | 249 | 289 | 1,149 | 56 | 134 | 6 | 0 |
| | | Low | | 15,858 | 365 | 460 | 1,805 | 94 | 111 | 3 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,755 | 10,389 | 165 | 165 | 628 | 31 | 157 | 10 | 1 |
| | | Mid | | 14,140 | 270 | 378 | 1,335 | 75 | 134 | 6 | 0 |
| | | Low | | 16,583 | 403 | 548 | 1,992 | 113 | 111 | 3 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,724 | 8,300 | 156 | 154 | 604 | 28 | 157 | 10 | 1 |
| | | Mid | | 12,317 | 242 | 287 | 1,157 | 56 | 134 | 6 | 0 |
| | | Low | | 14,702 | 348 | 463 | 1,770 | 93 | 111 | 3 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,746 | 9,014 | 161 | 40 | 631 | 31 | 157 | 10 | 1 |
| | | Mid | | 12,927 | 260 | 165 | 1,343 | 76 | 134 | 6 | 0 |
| | | Low | | 15,183 | 380 | 280 | 1,995 | 115 | 111 | 3 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.37 | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 10,683 | 10,683 | 10,516 | 10,516 |
| | 1 / 2 | 11,886 | 12,035 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 11,827 | 11,977 | Total Project | | 33,959 | 34,386 | 33,792 | 34,219 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Nonstructural Plan 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 123 | 2,472 | 221 | 1,422 | 112 | 2,425 | 226 | |
| 100-year | 10,629 | 1,271 | 15,966 | 3,002 | 9,695 | 1,148 | 13,659 | 2,601 | |
| 400-year | 22,650 | 8,151 | 25,236 | 15,182 | 17,848 | 6,366 | 19,693 | 11,875 | |
| 1,000-year | 26,922 | 19,436 | 28,128 | 22,703 | 20,766 | 14,870 | 21,591 | 17,415 | |
| 2,000-year | 28,659 | 23,655 | 29,317 | 25,586 | 21,942 | 18,102 | 22,348 | 19,453 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



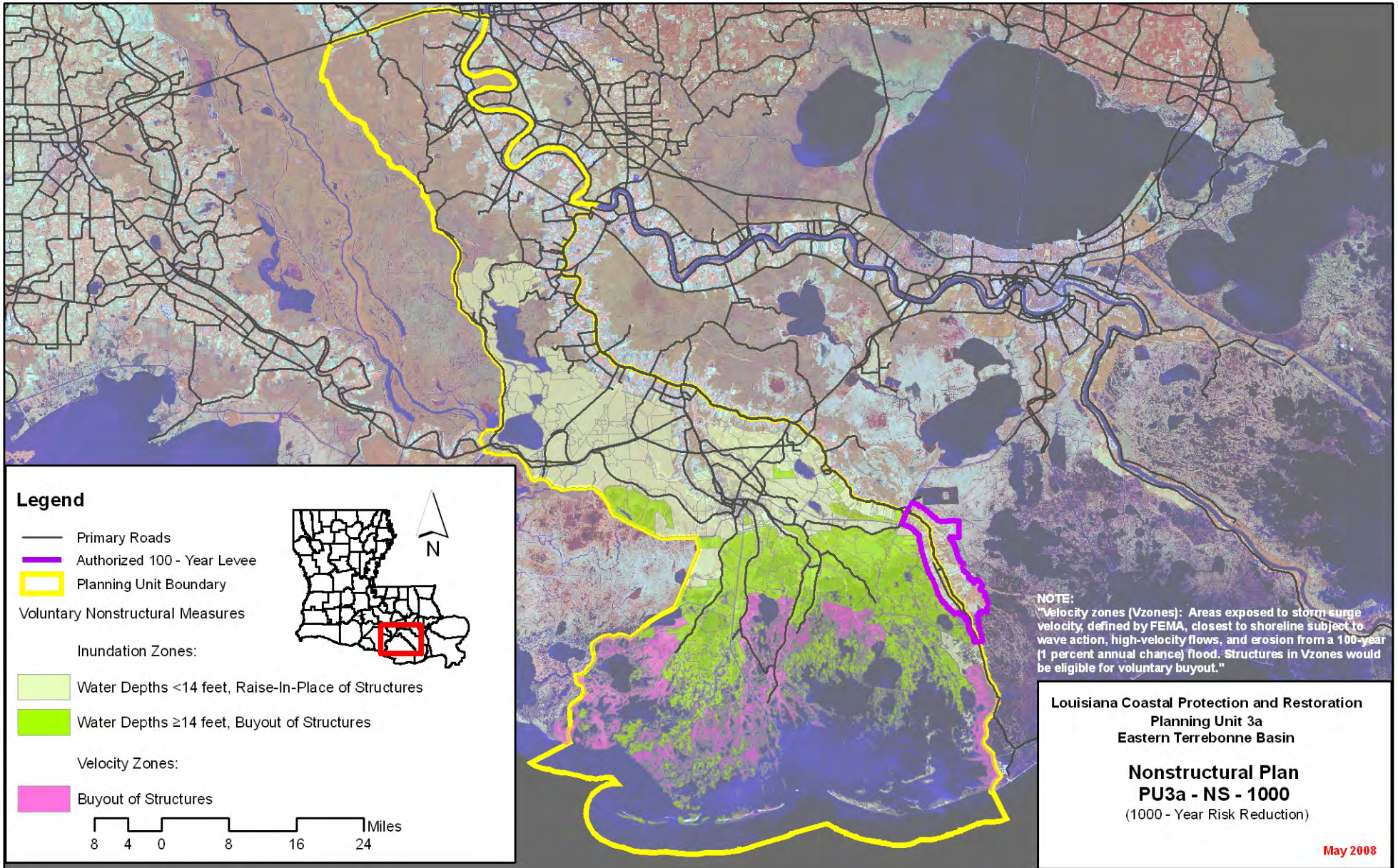
| | | | | | |
|---------------------------------|--|---------------------------------|--------------|------------------------------|--|
| Planning Unit: | 3a | Alt. No.: | PU3a-NS-1000 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 1000-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 1000-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,786 | 8,229 | 152 | 134 | 557 | 25 | 157 | 10 | 1 |
| | | Mid | | 12,045 | 235 | 237 | 1,007 | 45 | 134 | 6 | 0 |
| | | Low | | 14,544 | 330 | 319 | 1,457 | 65 | 111 | 3 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,808 | 9,161 | 155 | 145 | 581 | 27 | 157 | 10 | 1 |
| | | Mid | | 12,852 | 243 | 267 | 1,071 | 52 | 134 | 6 | 0 |
| | | Low | | 15,262 | 344 | 444 | 1,727 | 91 | 111 | 3 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,798 | 7,368 | 149 | 135 | 560 | 25 | 157 | 10 | 1 |
| | | Mid | | 11,326 | 230 | 235 | 1,009 | 45 | 134 | 6 | 0 |
| | | Low | | 13,678 | 317 | 317 | 1,424 | 63 | 111 | 3 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,819 | 8,076 | 151 | 13 | 579 | 27 | 157 | 10 | 1 |
| | | Mid | | 11,931 | 236 | 48 | 1,073 | 52 | 134 | 6 | 0 |
| | | Low | | 14,157 | 329 | 175 | 1,683 | 89 | 111 | 3 | 0 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|--------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | | 15 | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | | 0 | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | 0.37 | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 11,724 | 11,724 | 11,954 | 11,954 | |
| | 1 / 2 | 12,250 | 12,399 | Structural Component | | 0 | 0 | 0 | 0 | |
| | 3 / 4 | 12,331 | 12,480 | Total Project | | 34,999 | 35,427 | 35,230 | 35,657 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Nonstructural Plan 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 79 | 2,472 | 159 | 1,422 | 73 | 2,425 | 145 | |
| 100-year | 10,629 | 717 | 15,966 | 1,232 | 9,695 | 652 | 13,659 | 1,108 | |
| 400-year | 22,650 | 3,068 | 25,236 | 4,819 | 17,848 | 2,199 | 19,693 | 3,555 | |
| 1,000-year | 26,922 | 8,156 | 28,128 | 15,160 | 20,766 | 5,917 | 21,591 | 11,435 | |
| 2,000-year | 28,659 | 16,545 | 29,317 | 20,336 | 21,942 | 12,660 | 22,348 | 15,570 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
- Authorized 100 - Year Levee
- Planning Unit Boundary

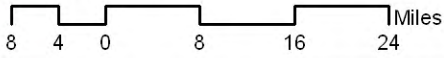
Voluntary Nonstructural Measures

Inundation Zones:

- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

**Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 Eastern Terrebonne Basin**

**Nonstructural Plan
 PU3a - NS - 1000
 (1000 - Year Risk Reduction)**

May 2008

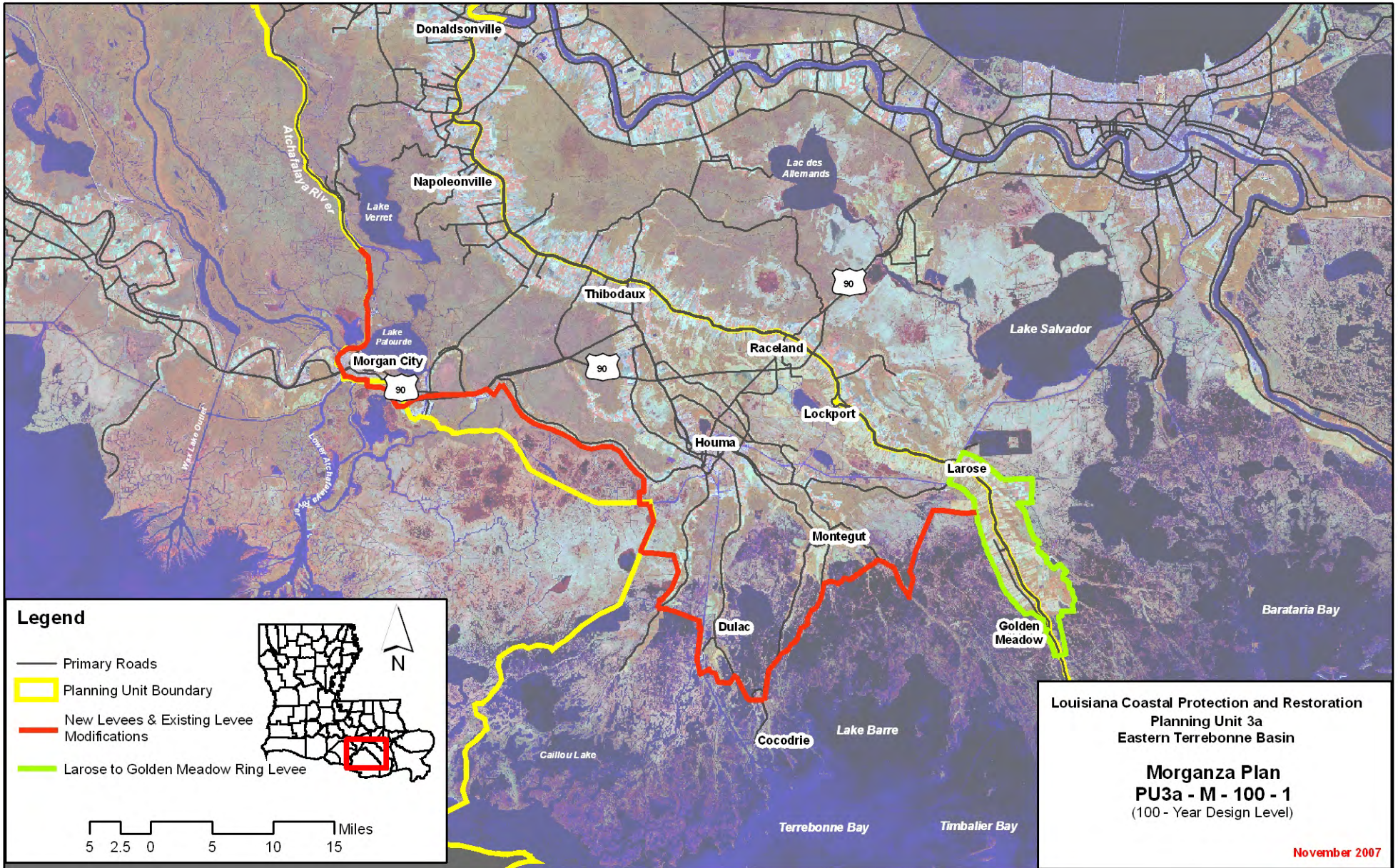
| | | | | | |
|---------------------------------|---|---------------------------------|--------------|------------------|---|
| Planning Unit: | 3a | Alt. No.: | PU3a-M-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Construct Morganza to the Gulf levee with extension tying into high ground west of Morgan City at 100-year design level. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

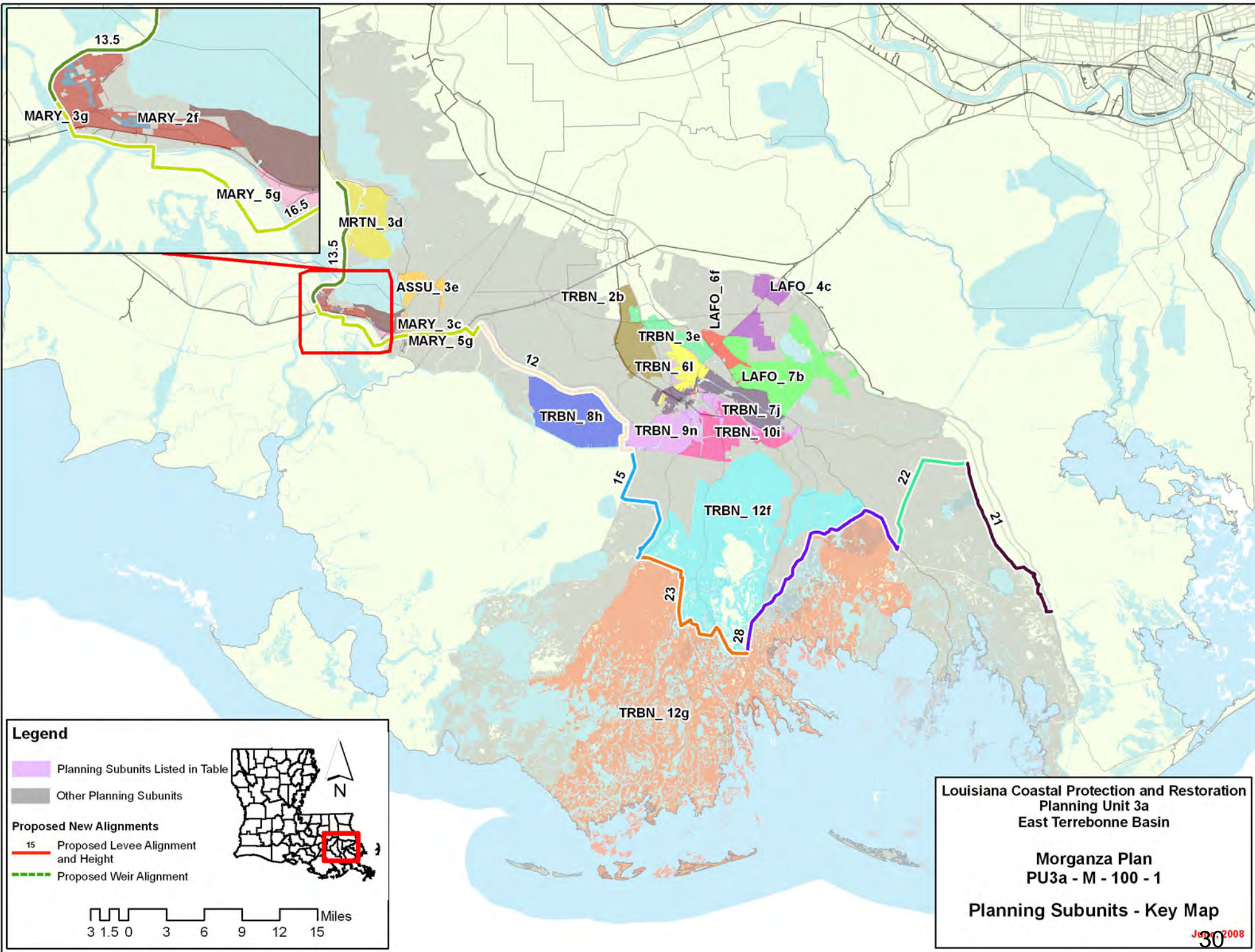
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,282 | 5,918 | 236 | 333 | 1,022 | 62 | 203 | 18 | 1 |
| | | Mid | | 7,658 | 343 | 539 | 1,790 | 102 | 180 | 17 | 1 |
| | | Low | | 9,106 | 474 | 677 | 2,444 | 136 | 157 | 13 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,330 | 6,165 | 253 | 407 | 1,149 | 76 | 203 | 18 | 1 |
| | | Mid | | 7,878 | 367 | 638 | 1,977 | 122 | 180 | 14 | 1 |
| | | Low | | 9,285 | 503 | 757 | 2,578 | 151 | 157 | 8 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,282 | 5,249 | 231 | 334 | 1,017 | 63 | 203 | 18 | 1 |
| | | Mid | | 7,041 | 334 | 528 | 1,776 | 102 | 180 | 17 | 1 |
| | | Low | | 8,388 | 455 | 653 | 2,392 | 132 | 157 | 13 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,330 | 5,433 | 246 | 265 | 1,161 | 79 | 203 | 18 | 1 |
| | | Mid | | 7,198 | 354 | 363 | 1,958 | 121 | 180 | 14 | 1 |
| | | Low | | 8,507 | 478 | 417 | 2,544 | 150 | 157 | 8 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | 4,900 | | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | -7 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.37 | | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 15,791 | 16,121 | Structural Component | | 21,412 | 21,928 | 21,412 | 21,928 | |
| | 3 / 4 | 15,791 | 16,121 | Total Project | | 44,688 | 45,631 | 44,688 | 45,631 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Structural Plan Morganza Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 347 | 2,472 | 445 | 1,422 | 329 | 2,425 | 431 | |
| 100-year | 10,629 | 873 | 15,966 | 996 | 9,695 | 859 | 13,659 | 946 | |
| 400-year | 22,650 | 2,015 | 25,236 | 2,046 | 17,848 | 1,891 | 19,693 | 1,924 | |
| 1,000-year | 26,922 | 15,270 | 28,128 | 15,273 | 20,766 | 12,948 | 21,591 | 12,951 | |
| 2,000-year | 28,659 | 20,250 | 29,317 | 20,251 | 21,942 | 16,667 | 22,348 | 16,669 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

Miles
3 1.5 0 3 6 9 12 15

**Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin**

**Morganza Plan
 PU3a - M - 100 - 1**

Planning Subunits - Key Map

Jun 2008
 30

Alternative: PU3a-M-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ASSU_ 3e | 3.7 | 2.4 | 3.9 | 4.8 | 4.3 | 9.1 | 6.9 | 2.4 | 7.1 | 4.8 | 7.5 | 9.1 |
| LAFO_ 4c | 7.0 | 1.0 | 11.7 | 4.8 | 13.6 | 10.9 | 10.2 | 1.0 | 14.9 | 4.8 | 16.8 | 10.9 |
| LAFO_ 6f | 8.4 | 1.0 | 13.4 | 4.8 | 16.7 | 10.9 | 11.6 | 1.0 | 16.6 | 4.8 | 19.9 | 10.9 |
| LAFO_ 7b | 7.8 | 1.0 | 11.5 | 4.8 | 13.6 | 10.9 | 11.0 | 1.0 | 14.7 | 4.8 | 16.8 | 10.9 |
| MARY_ 2f | 6.3 | 2.4 | 8.5 | 4.8 | 9.9 | 9.1 | 9.5 | 2.4 | 11.7 | 4.8 | 13.1 | 9.1 |
| MARY_ 3c | 6.3 | 2.4 | 10.8 | 4.8 | 13.1 | 9.1 | 9.5 | 2.4 | 14.0 | 4.8 | 16.3 | 9.1 |
| MARY_ 3g | 6.1 | 2.4 | 9.6 | 4.8 | 11.4 | 9.1 | 9.3 | 2.4 | 12.8 | 4.8 | 14.6 | 9.1 |
| MARY_ 5g | 7.8 | 2.4 | 9.9 | 4.8 | 12.0 | 9.1 | 11.0 | 2.4 | 13.1 | 4.8 | 15.2 | 9.1 |
| MRTN_ 3d | 3.8 | 2.4 | 5.9 | 4.8 | 7.1 | 9.1 | 7.0 | 2.4 | 9.1 | 4.8 | 10.3 | 9.1 |
| TRBN_ 10i | 11.2 | 1.0 | 16.1 | 4.8 | 19.5 | 10.9 | 14.4 | 1.0 | 19.3 | 4.8 | 22.7 | 10.9 |
| TRBN_ 12f | 13.5 | 1.0 | 18.0 | 4.8 | 20.8 | 10.9 | 16.7 | 1.0 | 21.2 | 4.8 | 24.0 | 10.9 |
| TRBN_ 12g | 13.2 | 14.7 | 16.9 | 18.9 | 19.0 | 21.3 | 16.1 | 17.9 | 19.6 | 22.1 | 21.8 | 24.5 |
| TRBN_ 2b | 6.6 | 1.0 | 9.5 | 4.8 | 12.8 | 10.9 | 9.8 | 1.0 | 12.7 | 4.8 | 16.0 | 10.9 |
| TRBN_ 3e | 4.9 | 1.0 | 8.8 | 4.8 | 11.7 | 10.9 | 8.1 | 1.0 | 12.0 | 4.8 | 14.9 | 10.9 |
| TRBN_ 6l | 7.8 | 1.0 | 8.8 | 4.8 | 10.5 | 10.9 | 11.0 | 1.0 | 12.0 | 4.8 | 13.7 | 10.9 |
| TRBN_ 7j | 9.3 | 1.0 | 14.0 | 4.8 | 16.3 | 10.9 | 12.5 | 1.0 | 17.2 | 4.8 | 19.5 | 10.9 |
| TRBN_ 8h | 9.7 | 9.9 | 14.5 | 14.8 | 17.4 | 17.7 | 14.3 | 13.1 | 18.7 | 18.0 | 20.7 | 20.9 |
| TRBN_ 9n | 8.4 | 1.0 | 12.1 | 4.8 | 14.1 | 10.9 | 11.6 | 1.0 | 15.3 | 4.8 | 17.3 | 10.9 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

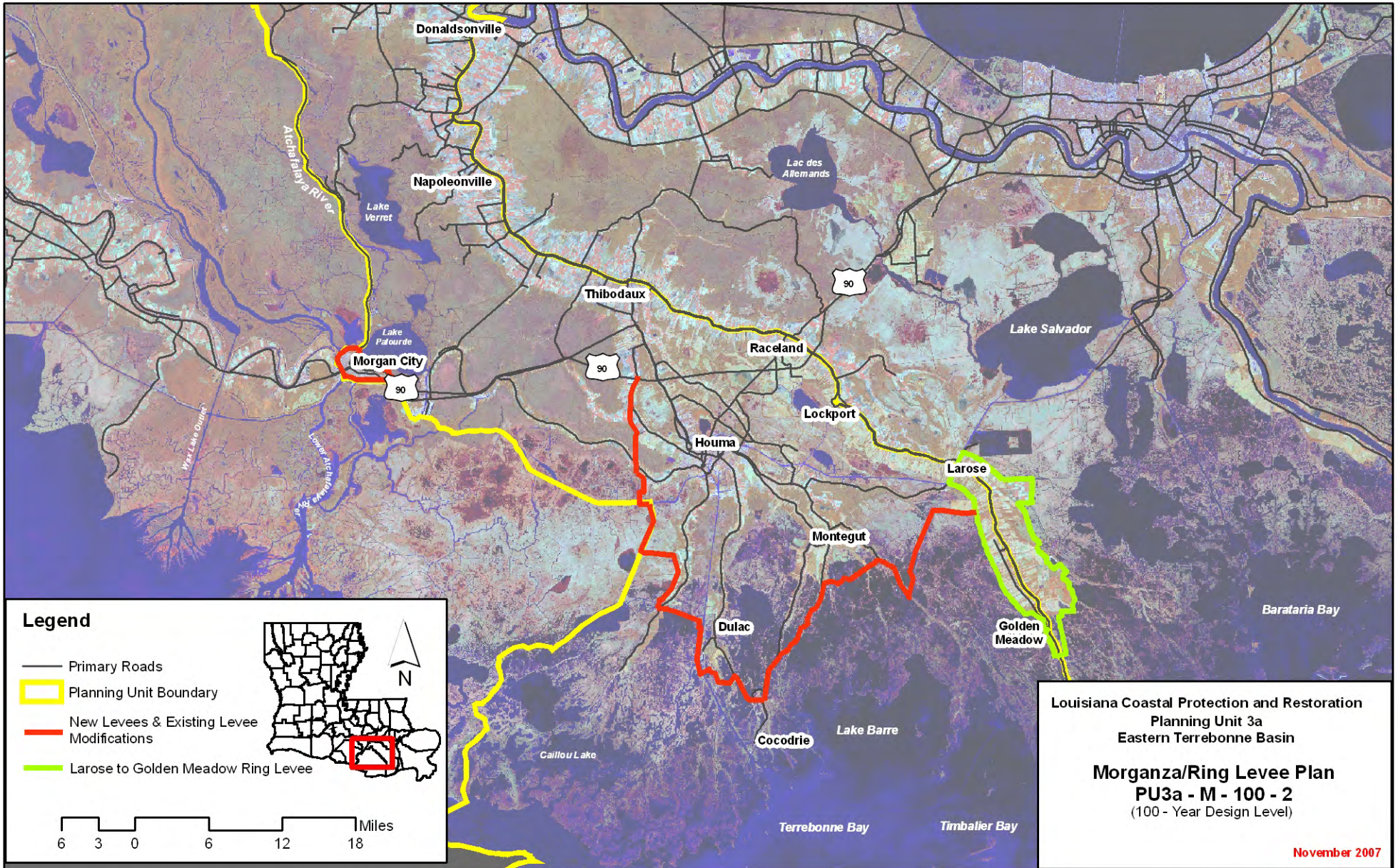
| | | | | | |
|---------------------------------|---|---------------------------------|--------------|------------------|---|
| Planning Unit: | 3a | Alt. No.: | PU3a-M-100-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Construct Morganza to the Gulf levee with with tieback to high ground south of Thibodaux and ring levee around Morgan City at 100-year design level. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

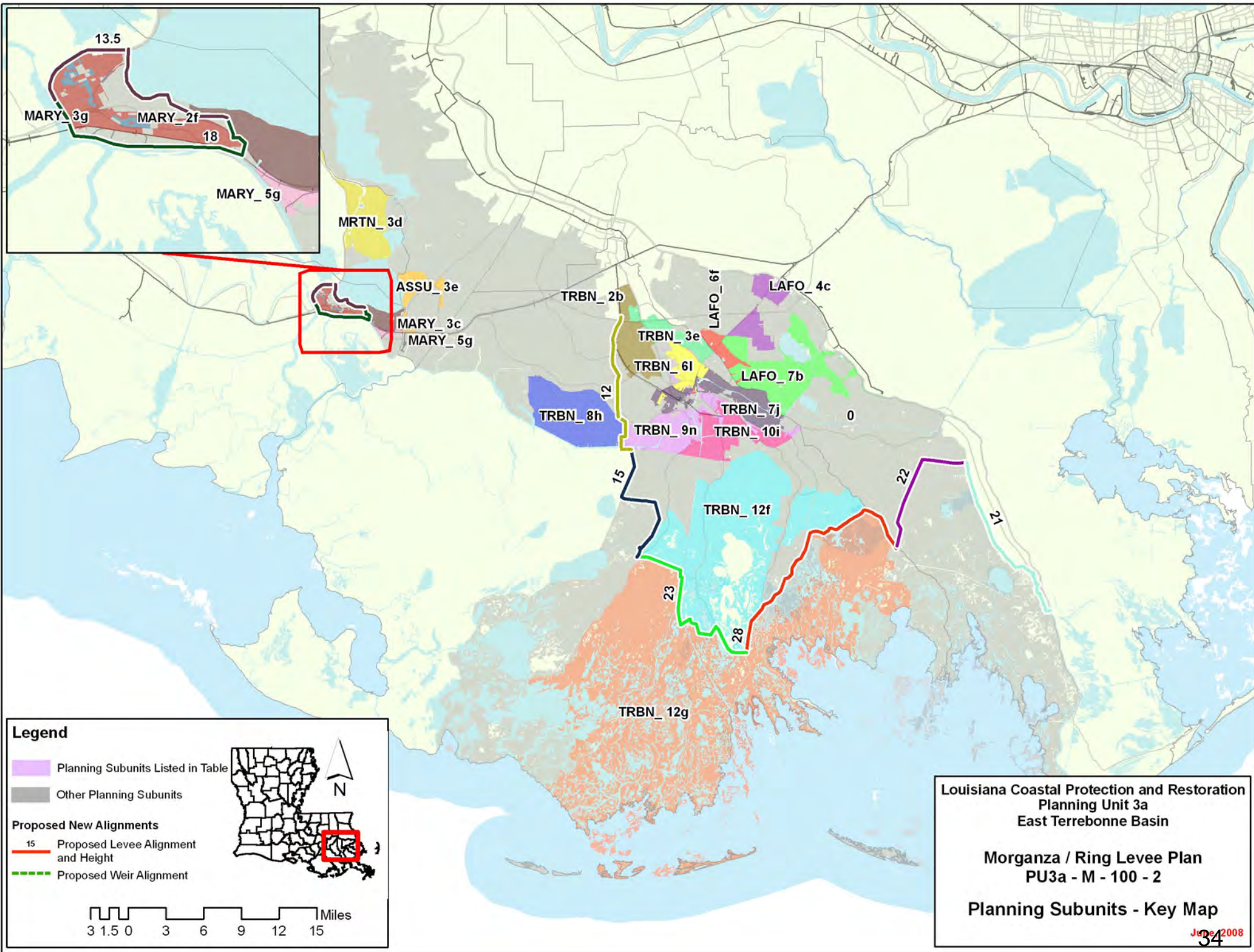
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,158 | 6,053 | 245 | 358 | 1,036 | 66 | 174 | 17 | 1 |
| | | Mid | | 8,182 | 374 | 579 | 1,854 | 110 | 151 | 14 | 1 |
| | | Low | | 9,937 | 537 | 747 | 2,606 | 149 | 128 | 10 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,186 | 6,516 | 273 | 456 | 1,199 | 85 | 174 | 15 | 1 |
| | | Mid | | 8,554 | 413 | 697 | 2,065 | 133 | 151 | 11 | 0 |
| | | Low | | 10,221 | 579 | 843 | 2,763 | 168 | 128 | 8 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,158 | 5,341 | 240 | 365 | 1,034 | 67 | 174 | 17 | 1 |
| | | Mid | | 7,507 | 365 | 577 | 1,844 | 110 | 151 | 14 | 1 |
| | | Low | | 9,148 | 518 | 731 | 2,556 | 146 | 128 | 10 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,186 | 5,698 | 267 | 323 | 1,218 | 88 | 174 | 15 | 1 |
| | | Mid | | 7,788 | 400 | 431 | 2,053 | 133 | 151 | 11 | 0 |
| | | Low | | 9,331 | 553 | 514 | 2,735 | 167 | 128 | 8 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 10 | After 50 yrs (% of baseline) | 98 | 97 | 98 | 97 | |
| Direct Wetland Impacts (acres) | | | 4,200 | After 100 yrs (% of baseline) | 110 | 100 | 110 | 100 | |
| Indirect Impacts (unitless) | | | -4 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.37 | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 14,974 | 15,164 | Structural Component | | 18,983 | 19,098 | 18,983 | 19,098 |
| | 3 / 4 | 14,974 | 15,164 | Total Project | | 42,258 | 42,801 | 42,258 | 42,801 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Structural Plan Morganza Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 399 | 2,472 | 725 | 1,422 | 390 | 2,425 | 762 | |
| 100-year | 10,629 | 2,082 | 15,966 | 2,670 | 9,695 | 2,056 | 13,659 | 2,532 | |
| 400-year | 22,650 | 5,312 | 25,236 | 5,528 | 17,848 | 4,933 | 19,693 | 5,088 | |
| 1,000-year | 26,922 | 20,567 | 28,128 | 20,702 | 20,766 | 16,857 | 21,591 | 16,937 | |
| 2,000-year | 28,659 | 20,763 | 29,317 | 20,780 | 21,942 | 17,002 | 22,348 | 17,028 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin

Morganza / Ring Levee Plan
 PU3a - M - 100 - 2

Planning Subunits - Key Map

Alternative: PU3a-M-100-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ASSU_ 3e | 3.7 | 4.4 | 3.9 | 4.6 | 4.3 | 5.0 | 6.9 | 7.6 | 7.1 | 7.8 | 7.5 | 8.2 |
| LAFO_ 4c | 7.0 | 1.1 | 11.7 | 5.7 | 13.6 | 12.0 | 10.2 | 1.1 | 14.9 | 5.7 | 16.8 | 12.0 |
| LAFO_ 6f | 8.4 | 1.1 | 13.4 | 5.7 | 16.7 | 12.0 | 11.6 | 1.1 | 16.6 | 5.7 | 19.9 | 12.0 |
| LAFO_ 7b | 7.8 | 1.1 | 11.5 | 5.7 | 13.6 | 12.0 | 11.0 | 1.1 | 14.7 | 5.7 | 16.8 | 12.0 |
| MARY_ 2f | 6.3 | 1.3 | 8.5 | 10.1 | 9.9 | 18.0 | 9.5 | 1.3 | 11.7 | 10.1 | 13.1 | 18.0 |
| MARY_ 3c | 6.3 | 7.0 | 10.8 | 11.5 | 13.1 | 13.9 | 9.5 | 10.2 | 14.0 | 14.7 | 16.3 | 17.1 |
| MARY_ 3g | 6.1 | 1.3 | 9.6 | 10.1 | 11.4 | 18.0 | 9.3 | 1.3 | 12.8 | 10.1 | 14.6 | 18.0 |
| MARY_ 5g | 7.8 | 8.5 | 9.9 | 10.6 | 12.0 | 12.7 | 11.0 | 11.7 | 13.1 | 13.8 | 15.2 | 15.9 |
| MRTN_ 3d | 3.8 | 4.5 | 5.9 | 6.6 | 7.1 | 7.8 | 7.0 | 7.7 | 9.1 | 9.8 | 10.3 | 11.0 |
| TRBN_ 10i | 11.2 | 1.1 | 16.1 | 5.7 | 19.5 | 12.0 | 14.4 | 1.1 | 19.3 | 5.7 | 22.7 | 12.0 |
| TRBN_ 12f | 13.5 | 1.1 | 18.0 | 5.7 | 20.8 | 12.0 | 16.7 | 1.1 | 21.2 | 5.7 | 24.0 | 12.0 |
| TRBN_ 12g | 13.2 | 14.7 | 16.9 | 18.9 | 19.0 | 21.3 | 16.1 | 17.9 | 19.6 | 22.1 | 21.8 | 24.5 |
| TRBN_ 2b | 6.6 | 1.1 | 9.5 | 5.7 | 12.8 | 12.0 | 9.8 | 1.1 | 12.7 | 5.7 | 16.0 | 12.0 |
| TRBN_ 3e | 4.9 | 1.1 | 8.8 | 5.7 | 11.7 | 12.0 | 8.1 | 1.1 | 12.0 | 5.7 | 14.9 | 12.0 |
| TRBN_ 6l | 7.8 | 1.1 | 8.8 | 5.7 | 10.5 | 12.0 | 11.0 | 1.1 | 12.0 | 5.7 | 13.7 | 12.0 |
| TRBN_ 7j | 9.3 | 1.1 | 14.0 | 5.7 | 16.3 | 12.0 | 12.5 | 1.1 | 17.2 | 5.7 | 19.5 | 12.0 |
| TRBN_ 8h | 9.7 | 9.9 | 14.5 | 14.8 | 17.4 | 17.7 | 14.3 | 13.1 | 18.7 | 18.0 | 20.7 | 20.9 |
| TRBN_ 9n | 8.4 | 1.1 | 12.1 | 5.7 | 14.1 | 12.0 | 11.6 | 1.1 | 15.3 | 5.7 | 17.3 | 12.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

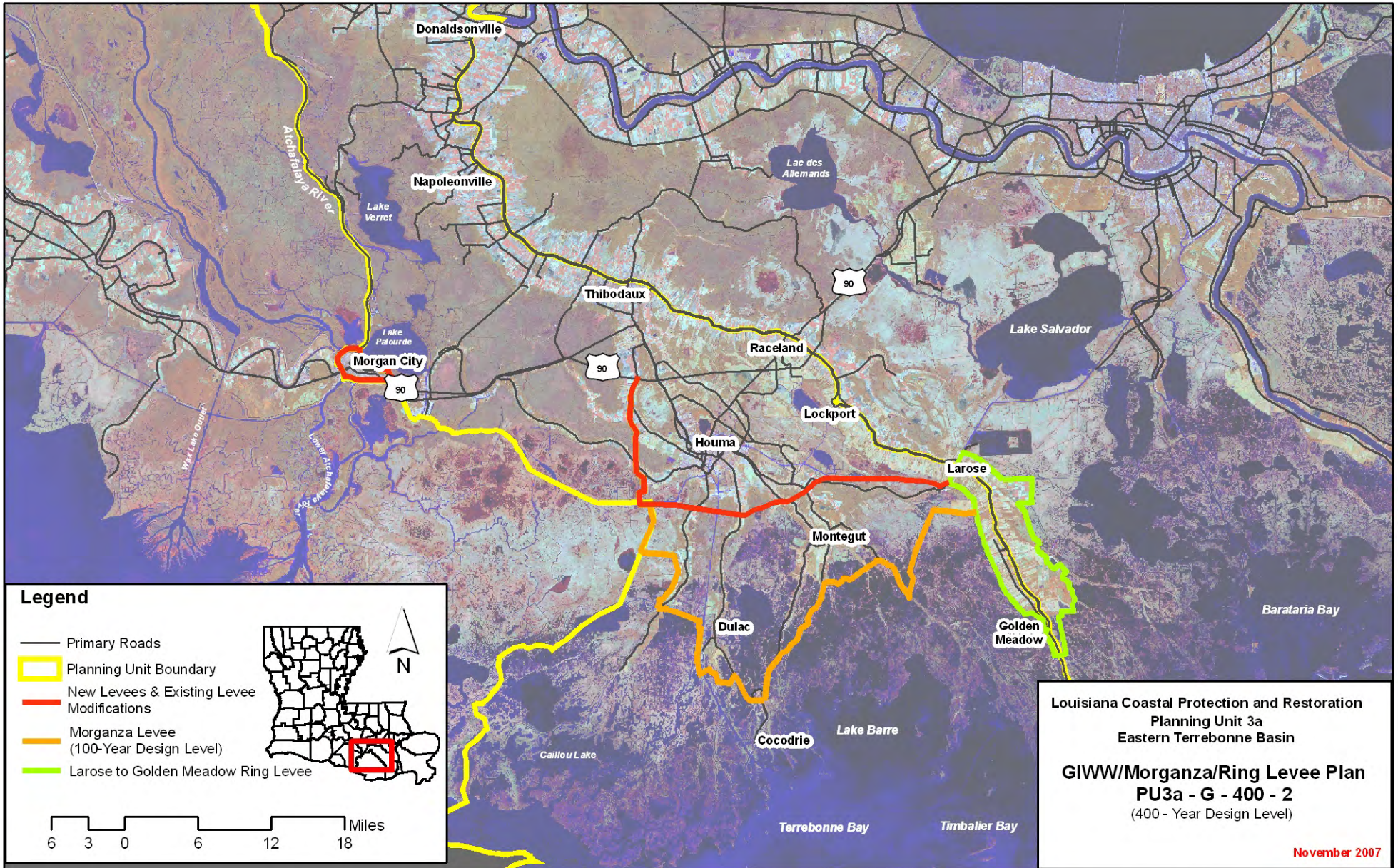
| | | | | | |
|---------------------------------|---|---------------------------------|--------------|------------------|---|
| Planning Unit: | 3a | Alt. No.: | PU3a-G-400-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 levee | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

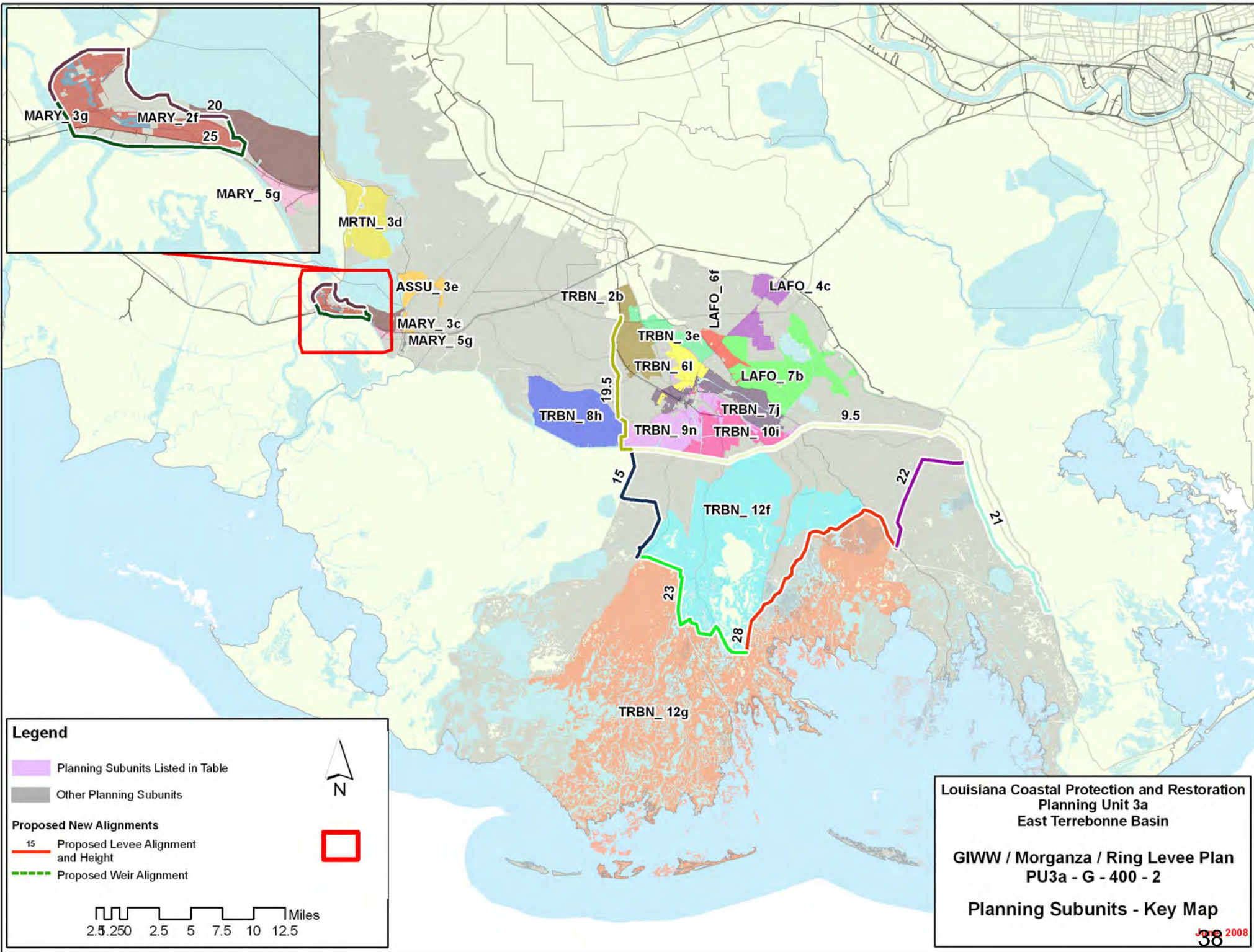
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,476 | 6,212 | 254 | 371 | 1,081 | 69 | 174 | 13 | 1 |
| | | Mid | | 8,210 | 377 | 585 | 1,871 | 111 | 151 | 11 | 1 |
| | | Low | | 9,659 | 514 | 715 | 2,489 | 142 | 128 | 5 | 1 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,502 | 6,675 | 281 | 469 | 1,243 | 88 | 174 | 11 | 1 |
| | | Mid | | 8,582 | 416 | 702 | 2,082 | 134 | 151 | 9 | 1 |
| | | Low | | 9,943 | 556 | 812 | 2,645 | 161 | 128 | 4 | 1 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,476 | 5,489 | 247 | 377 | 1,077 | 70 | 174 | 13 | 1 |
| | | Mid | | 7,549 | 368 | 583 | 1,860 | 111 | 151 | 11 | 1 |
| | | Low | | 8,923 | 497 | 701 | 2,441 | 140 | 128 | 5 | 1 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,502 | 5,846 | 273 | 335 | 1,260 | 91 | 174 | 11 | 1 |
| | | Mid | | 7,830 | 402 | 436 | 2,069 | 134 | 151 | 9 | 1 |
| | | Low | | 9,106 | 532 | 484 | 2,619 | 161 | 128 | 4 | 1 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | 5,300 | | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | -7 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.37 | | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 17,073 | 17,248 | Structural Component | | 25,212 | 25,285 | 25,212 | 25,285 | |
| | 3 / 4 | 17,073 | 17,248 | Total Project | | 48,488 | 48,988 | 48,488 | 48,988 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Structural Plan GIWW Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 403 | 2,472 | 729 | 1,422 | 392 | 2,425 | 764 | |
| 100-year | 10,629 | 2,080 | 15,966 | 2,668 | 9,695 | 2,053 | 13,659 | 2,529 | |
| 400-year | 22,650 | 3,483 | 25,236 | 3,699 | 17,848 | 3,198 | 19,693 | 3,353 | |
| 1,000-year | 26,922 | 10,993 | 28,128 | 11,127 | 20,766 | 9,148 | 21,591 | 9,227 | |
| 2,000-year | 28,659 | 11,503 | 29,317 | 11,520 | 21,942 | 9,600 | 22,348 | 9,626 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Louisiana Coastal Protection and Restoration
 Planning Unit 3a
 East Terrebonne Basin

GIWW / Morganza / Ring Levee Plan
 PU3a - G - 400 - 2

Planning Subunits - Key Map

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Alternative: PU3a-G-400-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ASSU_ 3e | 3.7 | 4.4 | 3.9 | 4.6 | 4.3 | 5.0 | 6.9 | 7.6 | 7.1 | 7.8 | 7.5 | 8.2 |
| LAFO_ 4c | 7.0 | 1.3 | 11.7 | 1.4 | 13.6 | 9.5 | 10.2 | 1.3 | 14.9 | 1.4 | 16.8 | 9.5 |
| LAFO_ 6f | 8.4 | 1.3 | 13.4 | 1.4 | 16.7 | 9.5 | 11.6 | 1.3 | 16.6 | 1.4 | 19.9 | 9.5 |
| LAFO_ 7b | 7.8 | 1.3 | 11.5 | 1.4 | 13.6 | 9.5 | 11.0 | 1.3 | 14.7 | 1.4 | 16.8 | 9.5 |
| MARY_ 2f | 6.3 | 0.8 | 8.5 | 1.3 | 9.9 | 2.8 | 9.5 | 0.8 | 11.7 | 1.3 | 13.1 | 2.8 |
| MARY_ 3c | 6.3 | 7.0 | 10.8 | 11.5 | 13.1 | 13.9 | 9.5 | 10.2 | 14.0 | 14.7 | 16.3 | 17.1 |
| MARY_ 3g | 6.1 | 0.8 | 9.6 | 1.3 | 11.4 | 2.8 | 9.3 | 0.8 | 12.8 | 1.3 | 14.6 | 2.8 |
| MARY_ 5g | 7.8 | 8.5 | 9.9 | 10.6 | 12.0 | 12.7 | 11.0 | 11.7 | 13.1 | 13.8 | 15.2 | 15.9 |
| MRTN_ 3d | 3.8 | 4.5 | 5.9 | 6.6 | 7.1 | 7.8 | 7.0 | 7.7 | 9.1 | 9.8 | 10.3 | 11.0 |
| TRBN_ 10i | 11.2 | 1.3 | 16.1 | 1.4 | 19.5 | 9.5 | 14.4 | 1.3 | 19.3 | 1.4 | 22.7 | 9.5 |
| TRBN_ 12f | 13.5 | 1.0 | 18.0 | 6.6 | 20.8 | 15.0 | 16.7 | 1.0 | 21.2 | 6.6 | 24.0 | 15.0 |
| TRBN_ 12g | 13.2 | 14.7 | 16.9 | 18.9 | 19.0 | 21.3 | 16.1 | 17.9 | 19.6 | 22.1 | 21.8 | 24.5 |
| TRBN_ 2b | 6.6 | 1.3 | 9.5 | 1.4 | 12.8 | 9.5 | 9.8 | 1.3 | 12.7 | 1.4 | 16.0 | 9.5 |
| TRBN_ 3e | 4.9 | 1.3 | 8.8 | 1.4 | 11.7 | 9.5 | 8.1 | 1.3 | 12.0 | 1.4 | 14.9 | 9.5 |
| TRBN_ 6l | 7.8 | 1.3 | 8.8 | 1.4 | 10.5 | 9.5 | 11.0 | 1.3 | 12.0 | 1.4 | 13.7 | 9.5 |
| TRBN_ 7j | 9.3 | 1.3 | 14.0 | 1.4 | 16.3 | 9.5 | 12.5 | 1.3 | 17.2 | 1.4 | 19.5 | 9.5 |
| TRBN_ 8h | 9.7 | 9.9 | 14.5 | 14.8 | 17.4 | 17.7 | 14.3 | 13.1 | 18.7 | 18.0 | 20.7 | 20.9 |
| TRBN_ 9n | 8.4 | 1.3 | 12.1 | 1.4 | 14.1 | 9.5 | 11.6 | 1.3 | 15.3 | 1.4 | 17.3 | 9.5 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

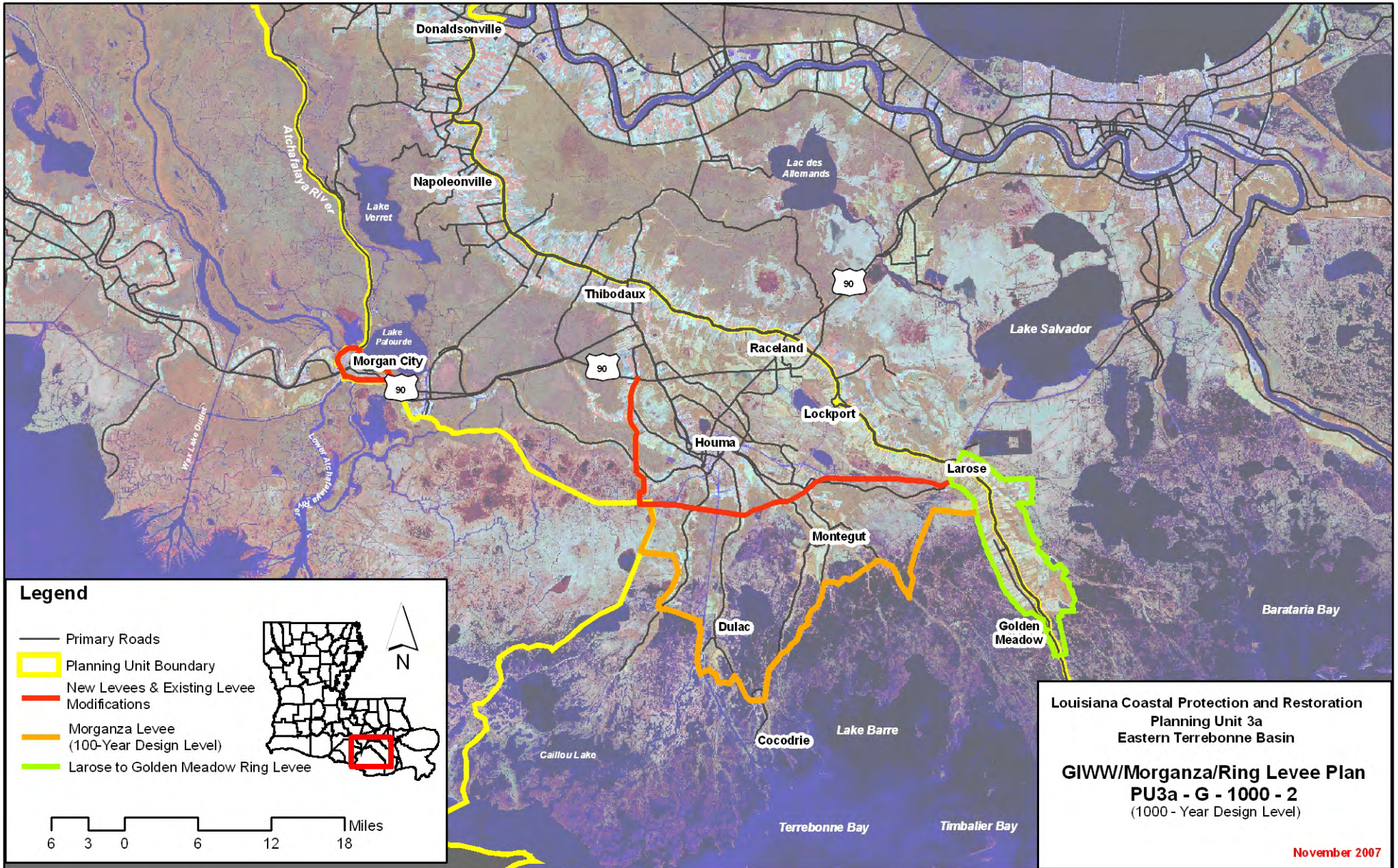
| | | | | | |
|---------------------------------|---|---------------------------------|---------------|------------------|---|
| Planning Unit: | 3a | Alt. No.: | PU3a-G-1000-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 levee | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

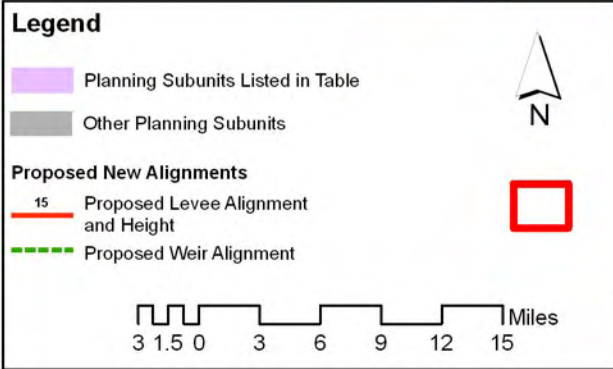
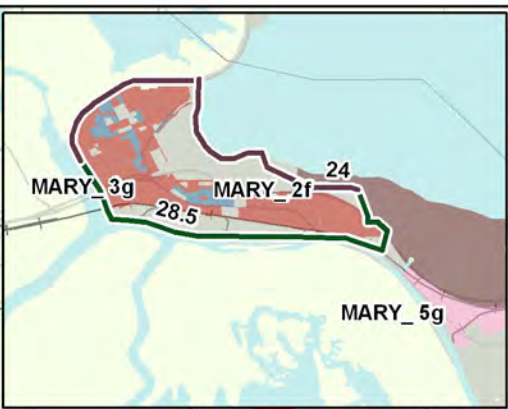
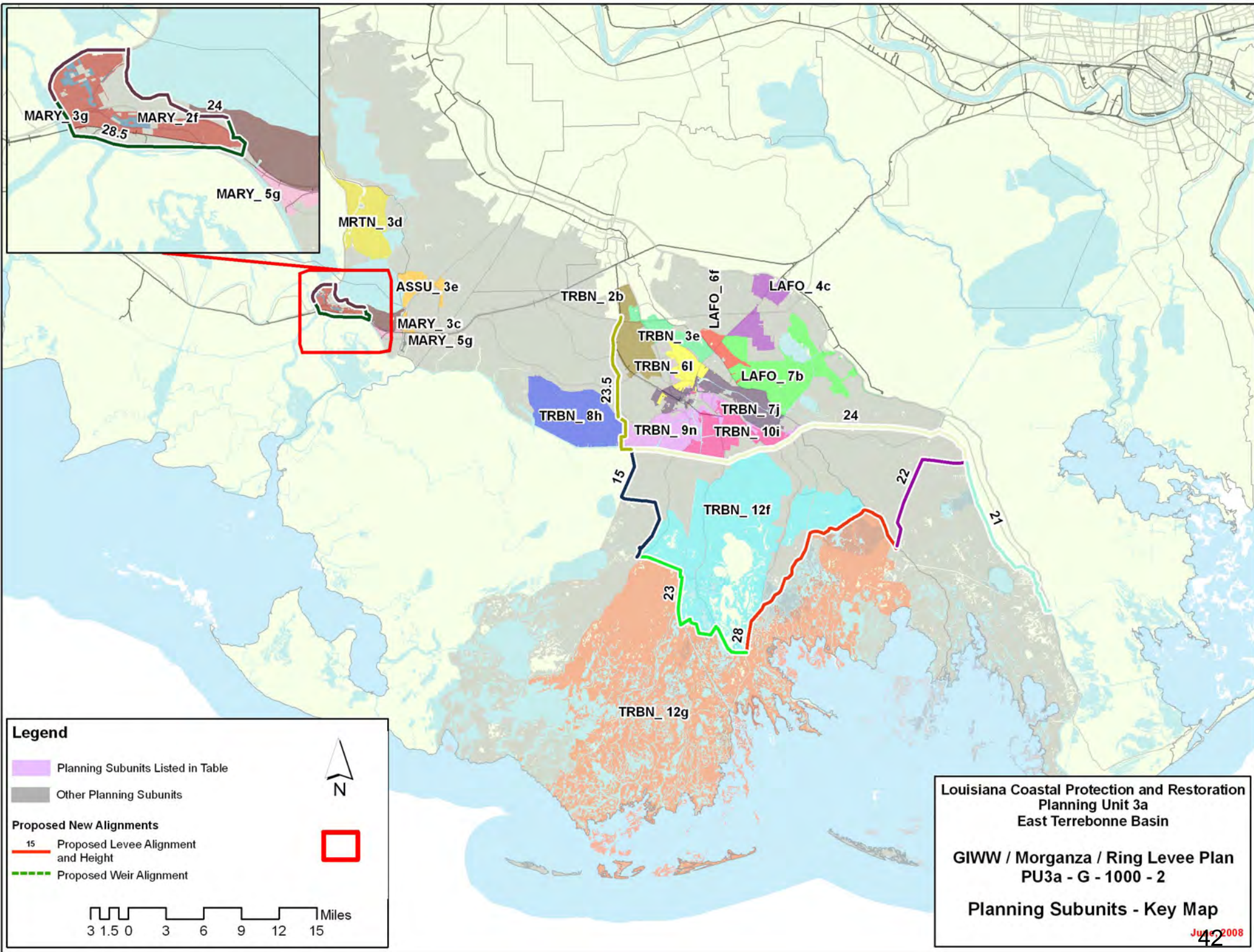
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,599 | 6,050 | 246 | 358 | 1,036 | 66 | 174 | 17 | 1 |
| | | Mid | | 8,047 | 370 | 572 | 1,826 | 108 | 151 | 16 | 1 |
| | | Low | | 9,493 | 506 | 703 | 2,442 | 139 | 128 | 16 | 1 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,625 | 6,512 | 274 | 456 | 1,199 | 85 | 174 | 16 | 1 |
| | | Mid | | 8,419 | 408 | 690 | 2,038 | 131 | 151 | 16 | 1 |
| | | Low | | 9,778 | 548 | 799 | 2,599 | 158 | 128 | 16 | 1 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,599 | 5,339 | 240 | 365 | 1,034 | 67 | 174 | 17 | 1 |
| | | Mid | | 7,399 | 361 | 570 | 1,817 | 108 | 151 | 16 | 1 |
| | | Low | | 8,768 | 490 | 688 | 2,397 | 137 | 128 | 16 | 1 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,625 | 5,696 | 267 | 323 | 1,218 | 88 | 174 | 16 | 1 |
| | | Mid | | 7,680 | 396 | 424 | 2,026 | 132 | 151 | 16 | 1 |
| | | Low | | 8,951 | 525 | 472 | 2,575 | 158 | 128 | 16 | 1 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | 6,600 | | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | -7 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.37 | | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 17,926 | 18,103 | Structural Component | | 27,625 | 27,703 | 27,625 | 27,703 | |
| | 3 / 4 | 17,926 | 18,103 | Total Project | | 50,901 | 51,406 | 50,901 | 51,406 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Structural Plan GIWW Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 403 | 2,472 | 729 | 1,422 | 392 | 2,425 | 764 | |
| 100-year | 10,629 | 2,080 | 15,966 | 2,668 | 9,695 | 2,053 | 13,659 | 2,529 | |
| 400-year | 22,650 | 3,476 | 25,236 | 3,692 | 17,848 | 3,192 | 19,693 | 3,346 | |
| 1,000-year | 26,922 | 5,200 | 28,128 | 5,335 | 20,766 | 4,661 | 21,591 | 4,741 | |
| 2,000-year | 28,659 | 5,655 | 29,317 | 5,672 | 21,942 | 5,035 | 22,348 | 5,060 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Louisiana Coastal Protection and Restoration Planning Unit 3a East Terrebonne Basin

GIWW / Morganza / Ring Levee Plan PU3a - G - 1000 - 2

Planning Subunits - Key Map

June 2008

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Alternative: PU3a-G-1000-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ASSU_ 3e | 3.7 | 4.4 | 3.9 | 4.6 | 4.3 | 5.0 | 6.9 | 7.6 | 7.1 | 7.8 | 7.5 | 8.2 |
| LAFO_ 4c | 7.0 | 1.3 | 11.7 | 1.3 | 13.6 | 1.4 | 10.2 | 1.3 | 14.9 | 1.3 | 16.8 | 1.4 |
| LAFO_ 6f | 8.4 | 1.3 | 13.4 | 1.3 | 16.7 | 1.4 | 11.6 | 1.3 | 16.6 | 1.3 | 19.9 | 1.4 |
| LAFO_ 7b | 7.8 | 1.3 | 11.5 | 1.3 | 13.6 | 1.4 | 11.0 | 1.3 | 14.7 | 1.3 | 16.8 | 1.4 |
| MARY_ 2f | 6.3 | 0.8 | 8.5 | 0.9 | 9.9 | 1.3 | 9.5 | 0.8 | 11.7 | 0.9 | 13.1 | 1.3 |
| MARY_ 3c | 6.3 | 7.0 | 10.8 | 11.5 | 13.1 | 13.9 | 9.5 | 10.2 | 14.0 | 14.7 | 16.3 | 17.1 |
| MARY_ 3g | 6.1 | 0.8 | 9.6 | 0.9 | 11.4 | 1.3 | 9.3 | 0.8 | 12.8 | 0.9 | 14.6 | 1.3 |
| MARY_ 5g | 7.8 | 8.5 | 9.9 | 10.6 | 12.0 | 12.7 | 11.0 | 11.7 | 13.1 | 13.8 | 15.2 | 15.9 |
| MRTN_ 3d | 3.8 | 4.5 | 5.9 | 6.6 | 7.1 | 7.8 | 7.0 | 7.7 | 9.1 | 9.8 | 10.3 | 11.0 |
| TRBN_ 10i | 11.2 | 1.3 | 16.1 | 1.3 | 19.5 | 1.4 | 14.4 | 1.3 | 19.3 | 1.3 | 22.7 | 1.4 |
| TRBN_ 12f | 13.5 | 1.0 | 18.0 | 6.6 | 20.8 | 15.0 | 16.7 | 1.0 | 21.2 | 6.6 | 24.0 | 15.0 |
| TRBN_ 12g | 13.2 | 14.7 | 16.9 | 18.9 | 19.0 | 21.3 | 16.1 | 17.9 | 19.6 | 22.1 | 21.8 | 24.5 |
| TRBN_ 2b | 6.6 | 1.3 | 9.5 | 1.3 | 12.8 | 1.4 | 9.8 | 1.3 | 12.7 | 1.3 | 16.0 | 1.4 |
| TRBN_ 3e | 4.9 | 1.3 | 8.8 | 1.3 | 11.7 | 1.4 | 8.1 | 1.3 | 12.0 | 1.3 | 14.9 | 1.4 |
| TRBN_ 6l | 7.8 | 1.3 | 8.8 | 1.3 | 10.5 | 1.4 | 11.0 | 1.3 | 12.0 | 1.3 | 13.7 | 1.4 |
| TRBN_ 7j | 9.3 | 1.3 | 14.0 | 1.3 | 16.3 | 1.4 | 12.5 | 1.3 | 17.2 | 1.3 | 19.5 | 1.4 |
| TRBN_ 8h | 9.7 | 9.9 | 14.5 | 14.8 | 17.4 | 17.7 | 14.3 | 13.1 | 18.7 | 18.0 | 20.7 | 20.9 |
| TRBN_ 9n | 8.4 | 1.3 | 12.1 | 1.3 | 14.1 | 1.4 | 11.6 | 1.3 | 15.3 | 1.3 | 17.3 | 1.4 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

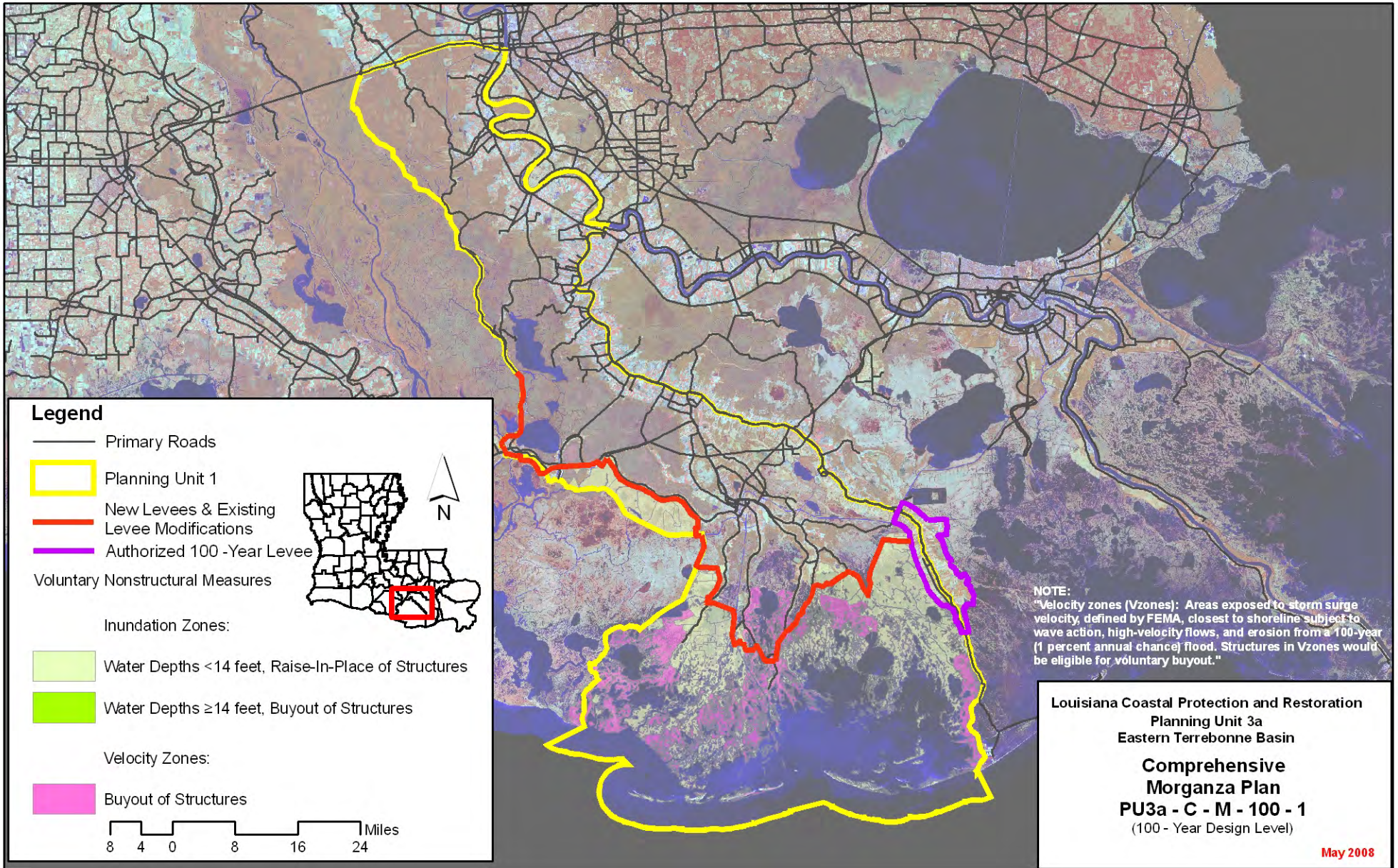
| | | | | | |
|---------------------------------|---|---------------------------------|----------------|-------------------------------|--|
| Planning Unit: | 3a | Alt. No.: | PU3a-C-M-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3a-M-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU3a-M-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,314 | 5,906 | 191 | 304 | 933 | 57 | 203 | 18 | 1 |
| | | Mid | | 7,646 | 296 | 517 | 1,718 | 99 | 180 | 17 | 1 |
| | | Low | | 9,095 | 426 | 651 | 2,332 | 130 | 157 | 13 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,362 | 6,153 | 207 | 384 | 1,075 | 73 | 203 | 18 | 1 |
| | | Mid | | 7,866 | 320 | 616 | 1,903 | 118 | 180 | 14 | 1 |
| | | Low | | 9,273 | 455 | 732 | 2,466 | 145 | 157 | 8 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,314 | 5,238 | 188 | 310 | 937 | 58 | 203 | 18 | 1 |
| | | Mid | | 7,030 | 289 | 511 | 1,711 | 99 | 180 | 17 | 1 |
| | | Low | | 8,377 | 409 | 632 | 2,290 | 127 | 157 | 13 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,362 | 5,422 | 202 | 247 | 1,097 | 76 | 203 | 18 | 1 |
| | | Mid | | 7,187 | 309 | 345 | 1,892 | 118 | 180 | 14 | 1 |
| | | Low | | 8,496 | 432 | 396 | 2,442 | 144 | 157 | 8 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 10 | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | 4,900 | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | -7 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.37 | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 631 | 631 | 623 | 623 |
| | 1 / 2 | 16,012 | 16,342 | Structural Component | | 21,412 | 21,928 | 21,412 | 21,928 |
| | 3 / 4 | 16,009 | 16,339 | Total Project | | 45,319 | 46,262 | 45,311 | 46,254 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Comprehensive Plan Morganza Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 107 | 2,472 | 162 | 1,422 | 99 | 2,425 | 162 | |
| 100-year | 10,629 | 422 | 15,966 | 614 | 9,695 | 434 | 13,659 | 593 | |
| 400-year | 22,650 | 1,852 | 25,236 | 1,934 | 17,848 | 1,752 | 19,693 | 1,830 | |
| 1,000-year | 26,922 | 15,182 | 28,128 | 15,207 | 20,766 | 12,875 | 21,591 | 12,896 | |
| 2,000-year | 28,659 | 20,184 | 29,317 | 20,196 | 21,942 | 16,613 | 22,348 | 16,623 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



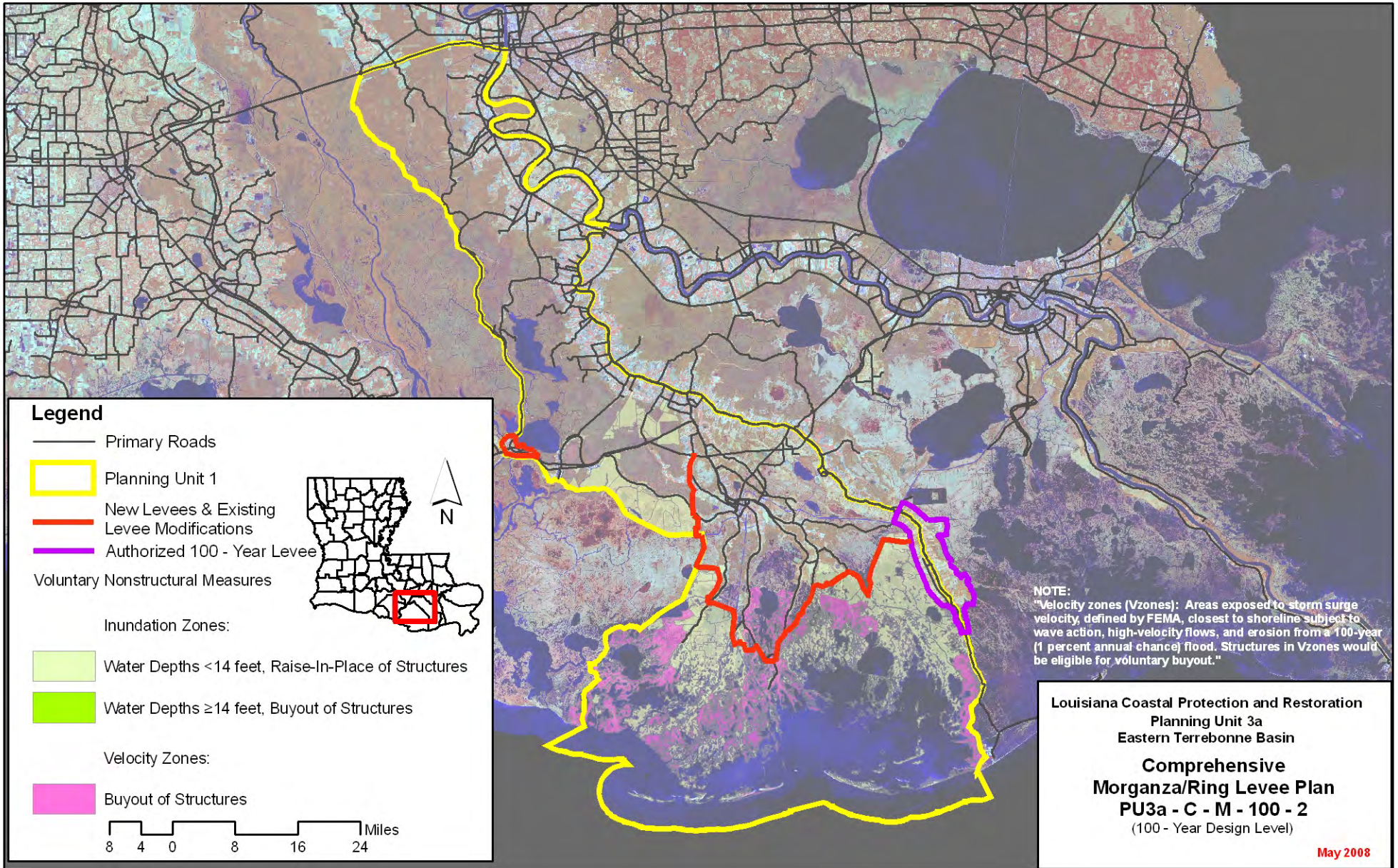
| | | | | | |
|---------------------------------|---|---------------------------------|----------------|-------------------------------|--|
| Planning Unit: | 3a | Alt. No.: | PU3a-C-M-100-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3a-M-100-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU3a-M-100-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,193 | 6,042 | 196 | 321 | 942 | 61 | 174 | 17 | 1 |
| | | Mid | | 8,171 | 322 | 549 | 1,775 | 106 | 151 | 14 | 1 |
| | | Low | | 9,925 | 483 | 717 | 2,490 | 143 | 128 | 10 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,221 | 6,504 | 224 | 420 | 1,118 | 81 | 174 | 15 | 1 |
| | | Mid | | 8,542 | 361 | 667 | 1,986 | 129 | 151 | 11 | 0 |
| | | Low | | 10,209 | 526 | 810 | 2,646 | 161 | 128 | 8 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,193 | 5,330 | 193 | 332 | 948 | 62 | 174 | 17 | 1 |
| | | Mid | | 7,496 | 315 | 551 | 1,773 | 106 | 151 | 14 | 1 |
| | | Low | | 9,137 | 466 | 704 | 2,449 | 141 | 128 | 10 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,221 | 5,687 | 218 | 292 | 1,147 | 85 | 174 | 15 | 1 |
| | | Mid | | 7,777 | 350 | 405 | 1,981 | 130 | 151 | 11 | 0 |
| | | Low | | 9,320 | 502 | 484 | 2,626 | 162 | 128 | 8 | 0 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|--------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | | 10 | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | | 4,200 | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | | -4 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | 0.37 | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 695 | 695 | 689 | 689 | |
| | 1 / 2 | 15,217 | 15,407 | Structural Component | | 18,983 | 19,098 | 18,983 | 19,098 | |
| | 3 / 4 | 15,215 | 15,405 | Total Project | | 42,954 | 43,496 | 42,947 | 43,490 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Comprehensive Plan Morganza Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 152 | 2,472 | 423 | 1,422 | 153 | 2,425 | 472 | |
| 100-year | 10,629 | 1,548 | 15,966 | 2,236 | 9,695 | 1,550 | 13,659 | 2,129 | |
| 400-year | 22,650 | 5,133 | 25,236 | 5,406 | 17,848 | 4,777 | 19,693 | 4,985 | |
| 1,000-year | 26,922 | 20,469 | 28,128 | 20,631 | 20,766 | 16,774 | 21,591 | 16,877 | |
| 2,000-year | 28,659 | 20,694 | 29,317 | 20,723 | 21,942 | 16,944 | 22,348 | 16,980 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



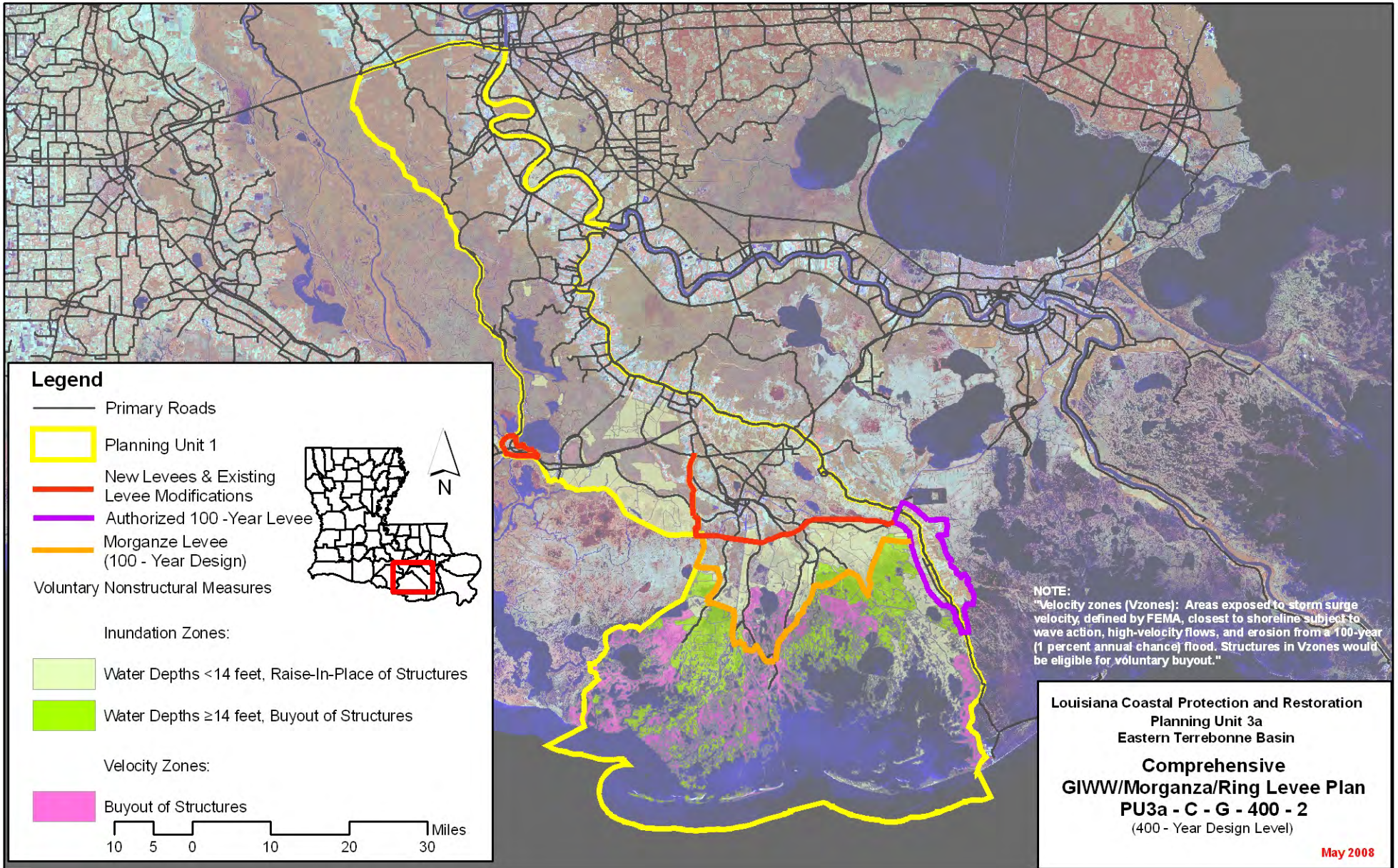
| | | | | | |
|---------------------------------|---|---------------------------------|----------------|-------------------------------|--|
| Planning Unit: | 3a | Alt. No.: | PU3a-C-G-400-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3a-G-400-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 400-yr complementary measures | |
| Structural Component: | Same as Alternative PU3a-G-400-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,553 | 5,990 | 198 | 274 | 873 | 51 | 174 | 13 | 1 |
| | | Mid | | 7,986 | 311 | 411 | 1,412 | 79 | 151 | 11 | 1 |
| | | Low | | 9,429 | 434 | 528 | 1,938 | 104 | 128 | 5 | 1 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,579 | 6,452 | 223 | 330 | 977 | 62 | 174 | 11 | 1 |
| | | Mid | | 8,358 | 346 | 497 | 1,584 | 97 | 151 | 9 | 1 |
| | | Low | | 9,714 | 472 | 593 | 2,056 | 118 | 128 | 4 | 1 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,569 | 5,275 | 193 | 280 | 874 | 51 | 174 | 13 | 1 |
| | | Mid | | 7,334 | 303 | 412 | 1,418 | 79 | 151 | 11 | 1 |
| | | Low | | 8,700 | 418 | 520 | 1,917 | 103 | 128 | 5 | 1 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,595 | 5,632 | 216 | 192 | 992 | 64 | 174 | 11 | 1 |
| | | Mid | | 7,615 | 334 | 232 | 1,583 | 97 | 151 | 9 | 1 |
| | | Low | | 8,884 | 450 | 267 | 2,049 | 118 | 128 | 4 | 1 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|--------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | | 10 | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | | 5,300 | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | | -7 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | 0.37 | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 1,520 | 1,520 | 1,831 | 1,831 | |
| | 1 / 2 | 17,605 | 17,780 | Structural Component | | 25,212 | 25,285 | 25,212 | 25,285 | |
| | 3 / 4 | 17,714 | 17,889 | Total Project | | 50,008 | 50,507 | 50,319 | 50,818 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Comprehensive Plan GIWW Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 125 | 2,472 | 331 | 1,422 | 125 | 2,425 | 370 | |
| 100-year | 10,629 | 1,188 | 15,966 | 1,628 | 9,695 | 1,168 | 13,659 | 1,540 | |
| 400-year | 22,650 | 2,110 | 25,236 | 2,557 | 17,848 | 1,917 | 19,693 | 2,273 | |
| 1,000-year | 26,922 | 9,204 | 28,128 | 9,505 | 20,766 | 7,400 | 21,591 | 7,638 | |
| 2,000-year | 28,659 | 9,921 | 29,317 | 10,025 | 21,942 | 8,048 | 22,348 | 8,160 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



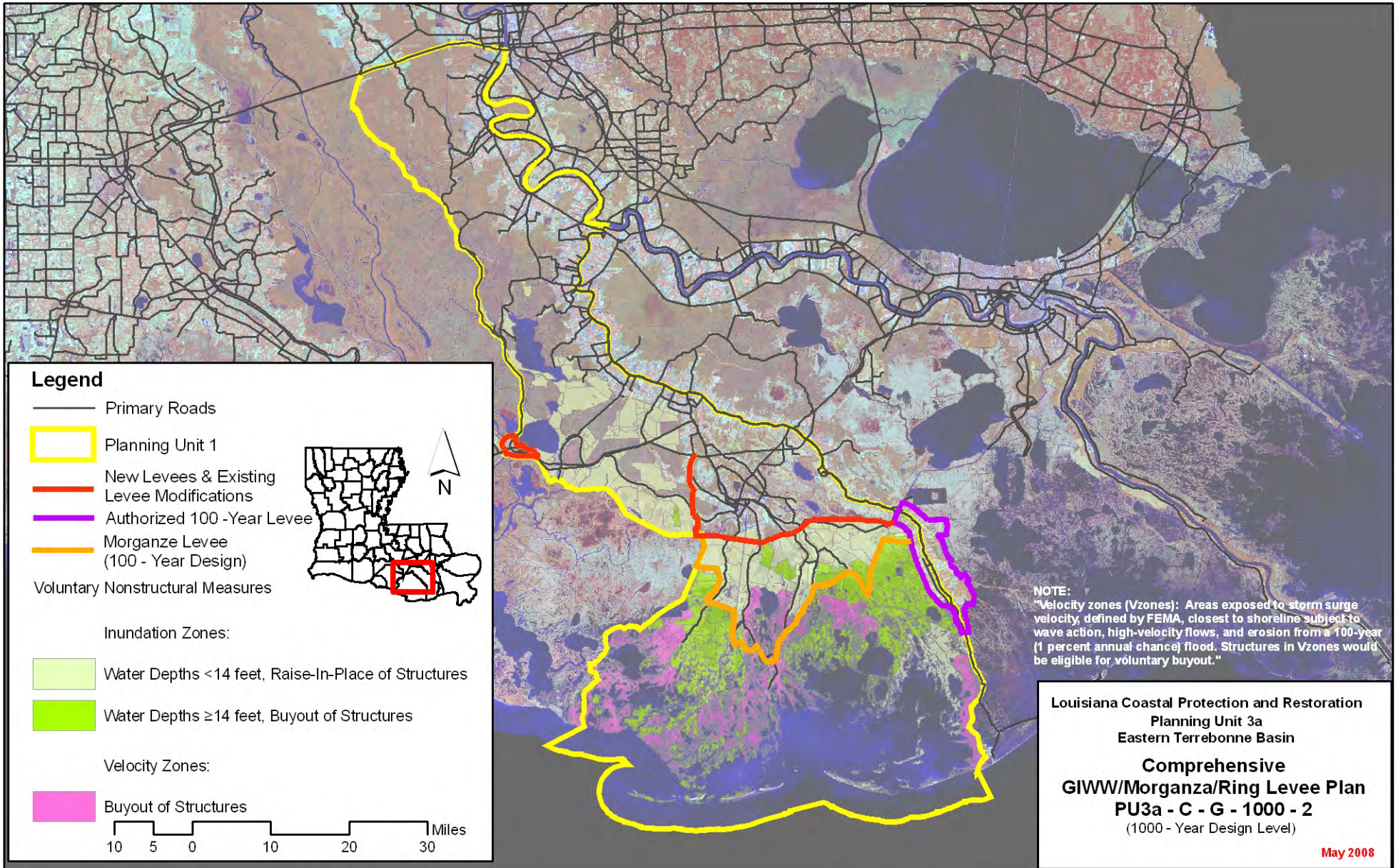
| | | | | | |
|---------------------------------|--|---------------------------------|-----------------|--------------------------------|--|
| Planning Unit: | 3a | Alt. No.: | PU3a-C-G-1000-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3a-G-1000-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 1000-yr complementary measures | |
| Structural Component: | Same as Alternative PU3a-G-1000-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 2,727 | 5,747 | 189 | 261 | 828 | 48 | 174 | 17 | 1 |
| | | Mid | | 7,742 | 298 | 395 | 1,357 | 75 | 151 | 16 | 1 |
| | | Low | | 9,168 | 415 | 507 | 1,871 | 100 | 128 | 16 | 1 |
| 2 | High RSLR High Employment Dispersed Population | High | 2,753 | 6,210 | 212 | 315 | 927 | 59 | 174 | 16 | 1 |
| | | Mid | | 8,114 | 331 | 472 | 1,514 | 91 | 151 | 16 | 1 |
| | | Low | | 9,453 | 453 | 568 | 1,980 | 112 | 128 | 16 | 1 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 2,739 | 5,049 | 185 | 265 | 828 | 48 | 174 | 17 | 1 |
| | | Mid | | 7,106 | 291 | 391 | 1,361 | 75 | 151 | 16 | 1 |
| | | Low | | 8,455 | 400 | 493 | 1,843 | 98 | 128 | 16 | 1 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 2,765 | 5,405 | 206 | 171 | 939 | 60 | 174 | 16 | 1 |
| | | Mid | | 7,387 | 319 | 204 | 1,511 | 91 | 151 | 16 | 1 |
| | | Low | | 8,638 | 431 | 239 | 1,968 | 112 | 128 | 16 | 1 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 98 | 97 | 98 | 97 |
| Direct Wetland Impacts (acres) | | | 6,600 | | After 100 yrs (% of baseline) | | 110 | 100 | 110 | 100 |
| Indirect Impacts (unitless) | | | -7 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.37 | | Coastal Component | | 23,276 | 23,703 | 23,276 | 23,703 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,504 | 2,504 | 2,745 | 2,745 | |
| | 1 / 2 | 18,802 | 18,979 | Structural Component | | 27,625 | 27,703 | 27,625 | 27,703 | |
| | 3 / 4 | 18,887 | 19,063 | Total Project | | 53,405 | 53,909 | 53,646 | 54,150 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3a Comprehensive Plan GIWW Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,460 | 102 | 2,472 | 276 | 1,422 | 98 | 2,425 | 289 | |
| 100-year | 10,629 | 977 | 15,966 | 1,358 | 9,695 | 931 | 13,659 | 1,250 | |
| 400-year | 22,650 | 1,651 | 25,236 | 1,951 | 17,848 | 1,438 | 19,693 | 1,681 | |
| 1,000-year | 26,922 | 2,272 | 28,128 | 2,718 | 20,766 | 1,853 | 21,591 | 2,230 | |
| 2,000-year | 28,659 | 3,156 | 29,317 | 3,313 | 21,942 | 2,627 | 22,348 | 2,796 | |

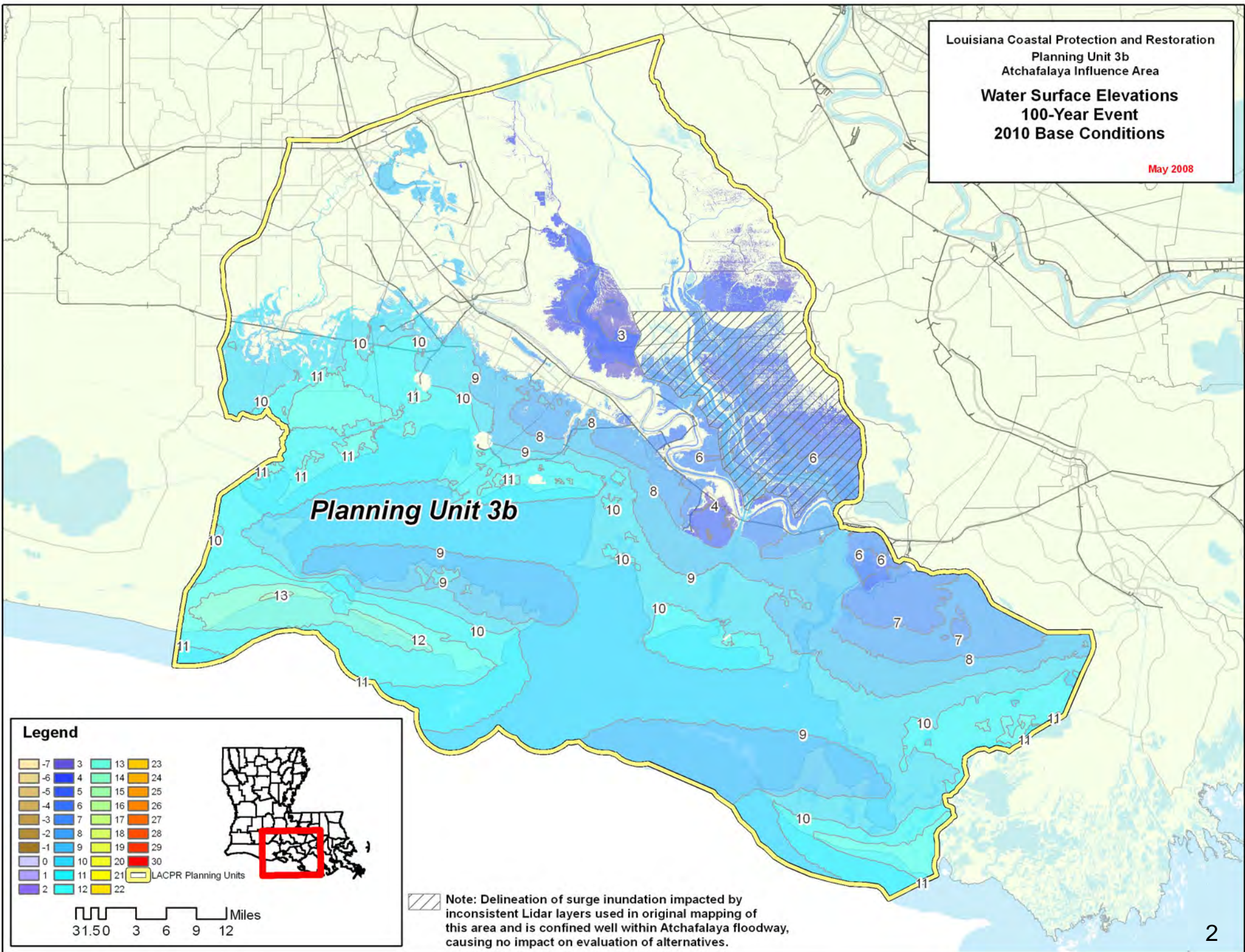
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



**LOUISIANA COASTAL PROTECTION AND RESTORATION FINAL TECHNICAL REPORT
EVALUATION RESULTS APPENDIX**

Planning Unit 3b

Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Surface Elevations
 100-Year Event
 2010 Base Conditions**
 May 2008



Legend

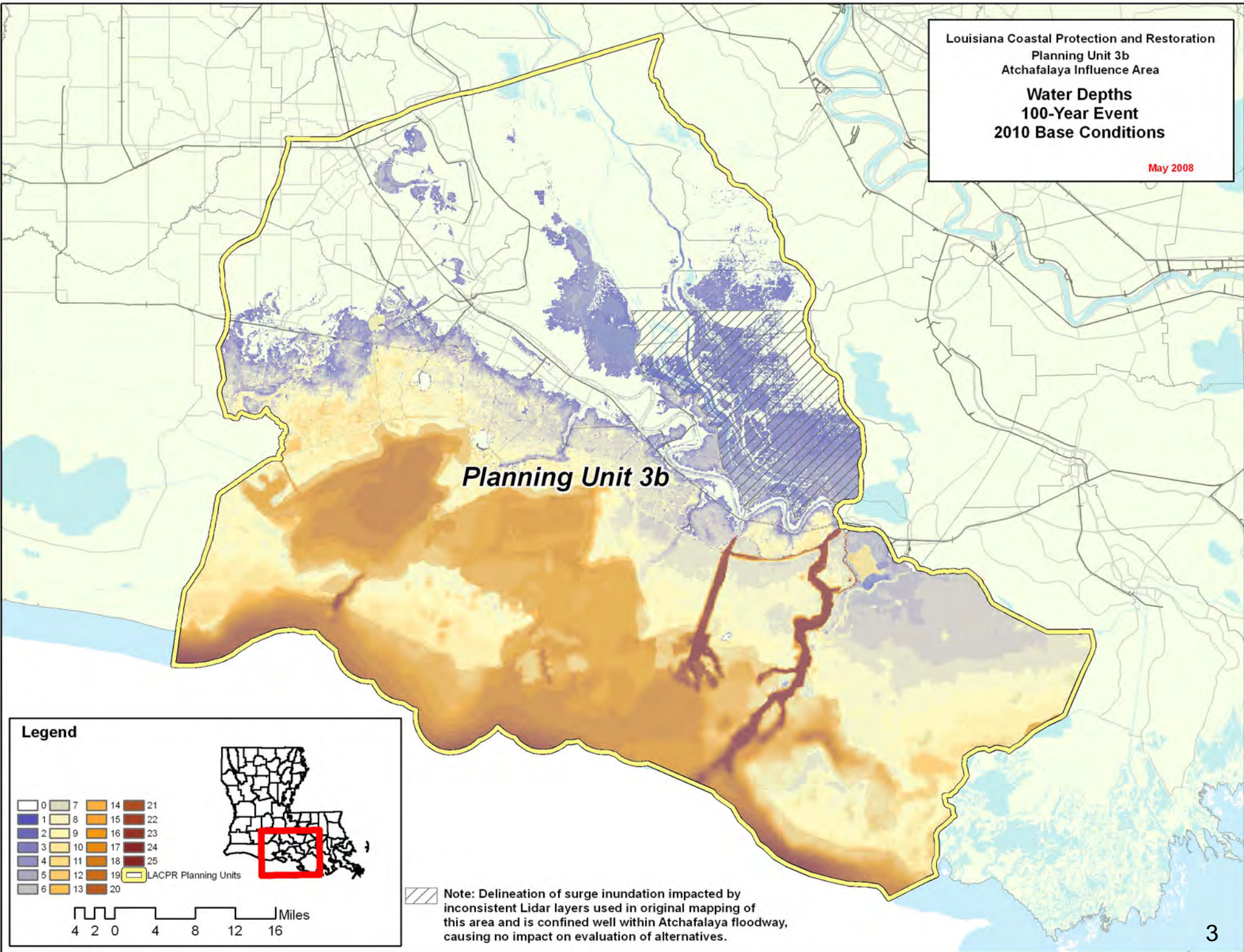
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|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

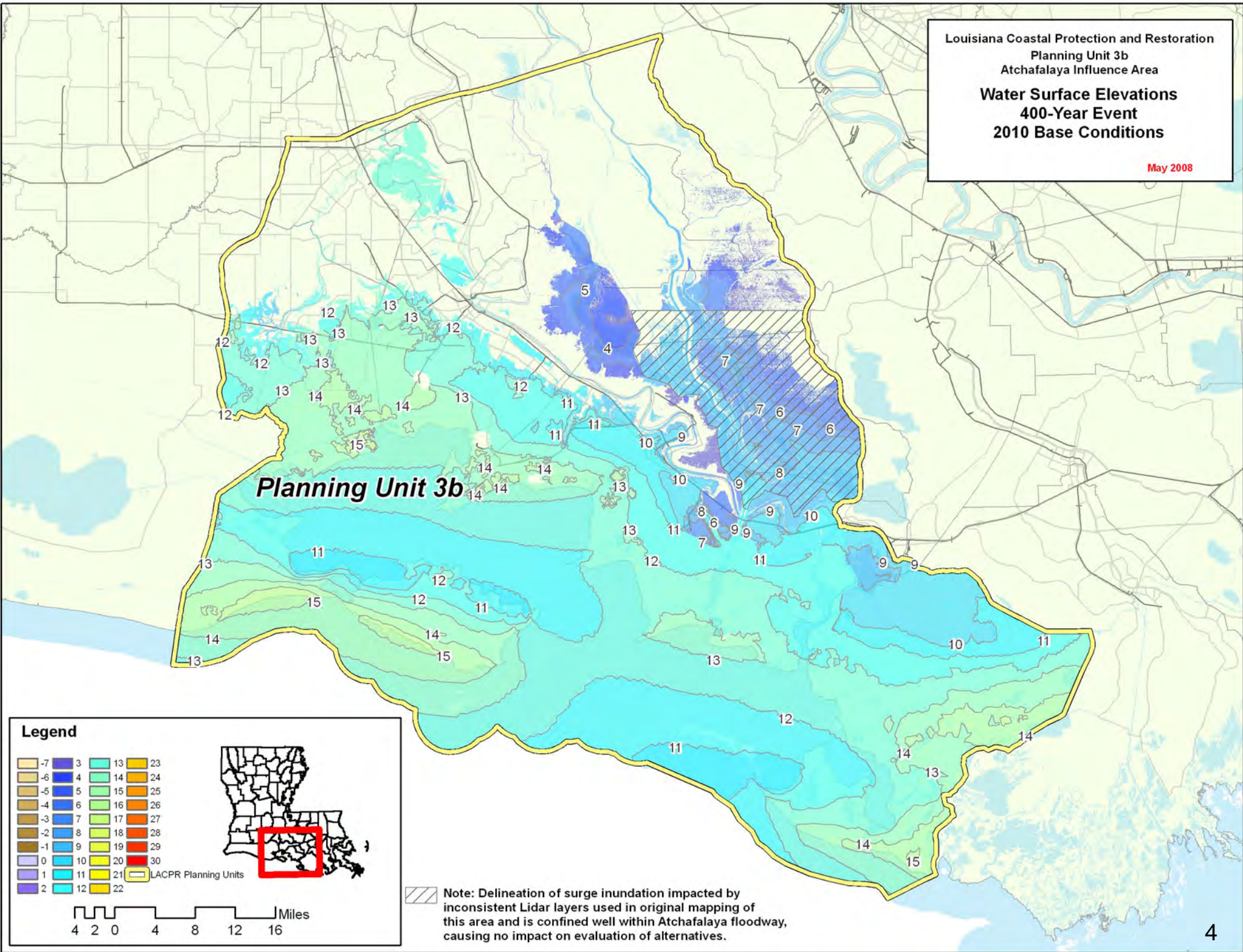
Miles
 31.50 3 6 9 12

Note: Delineation of surge inundation impacted by inconsistent Lidar layers used in original mapping of this area and is confined well within Atchafalaya floodway, causing no impact on evaluation of alternatives.

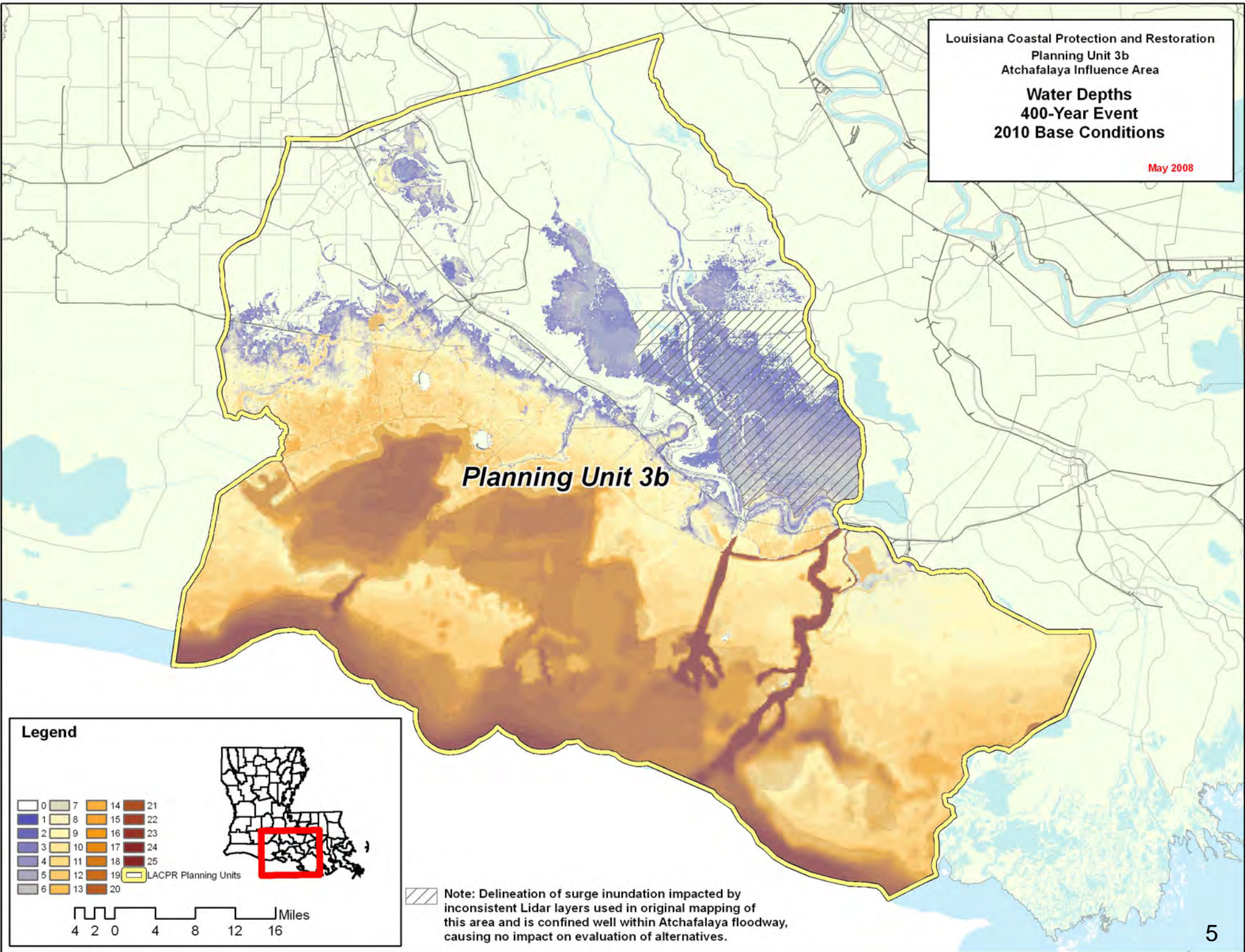
Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Depths
 100-Year Event
 2010 Base Conditions**
 May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Surface Elevations
 400-Year Event
 2010 Base Conditions**
 May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Depths
 400-Year Event
 2010 Base Conditions**
 May 2008



Legend

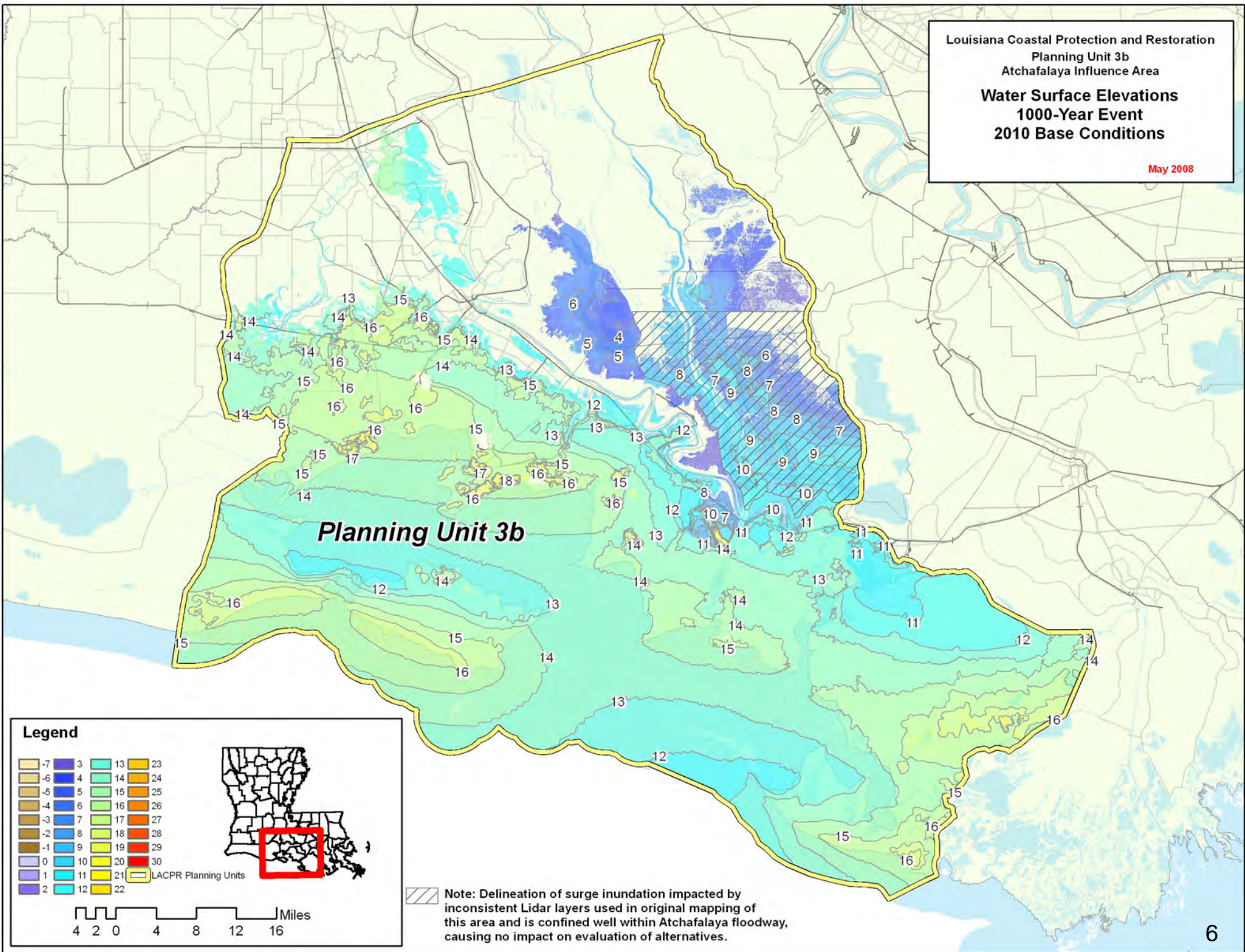
| | | | |
|---|----|----|----|
| 0 | 7 | 14 | 21 |
| 1 | 8 | 15 | 22 |
| 2 | 9 | 16 | 23 |
| 3 | 10 | 17 | 24 |
| 4 | 11 | 18 | 25 |
| 5 | 12 | 19 | |
| 6 | 13 | 20 | |

LACPR Planning Units

Miles

Note: Delineation of surge inundation impacted by inconsistent Lidar layers used in original mapping of this area and is confined well within Atchafalaya floodway, causing no impact on evaluation of alternatives.

Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Surface Elevations
 1000-Year Event
 2010 Base Conditions**
 May 2008



Legend

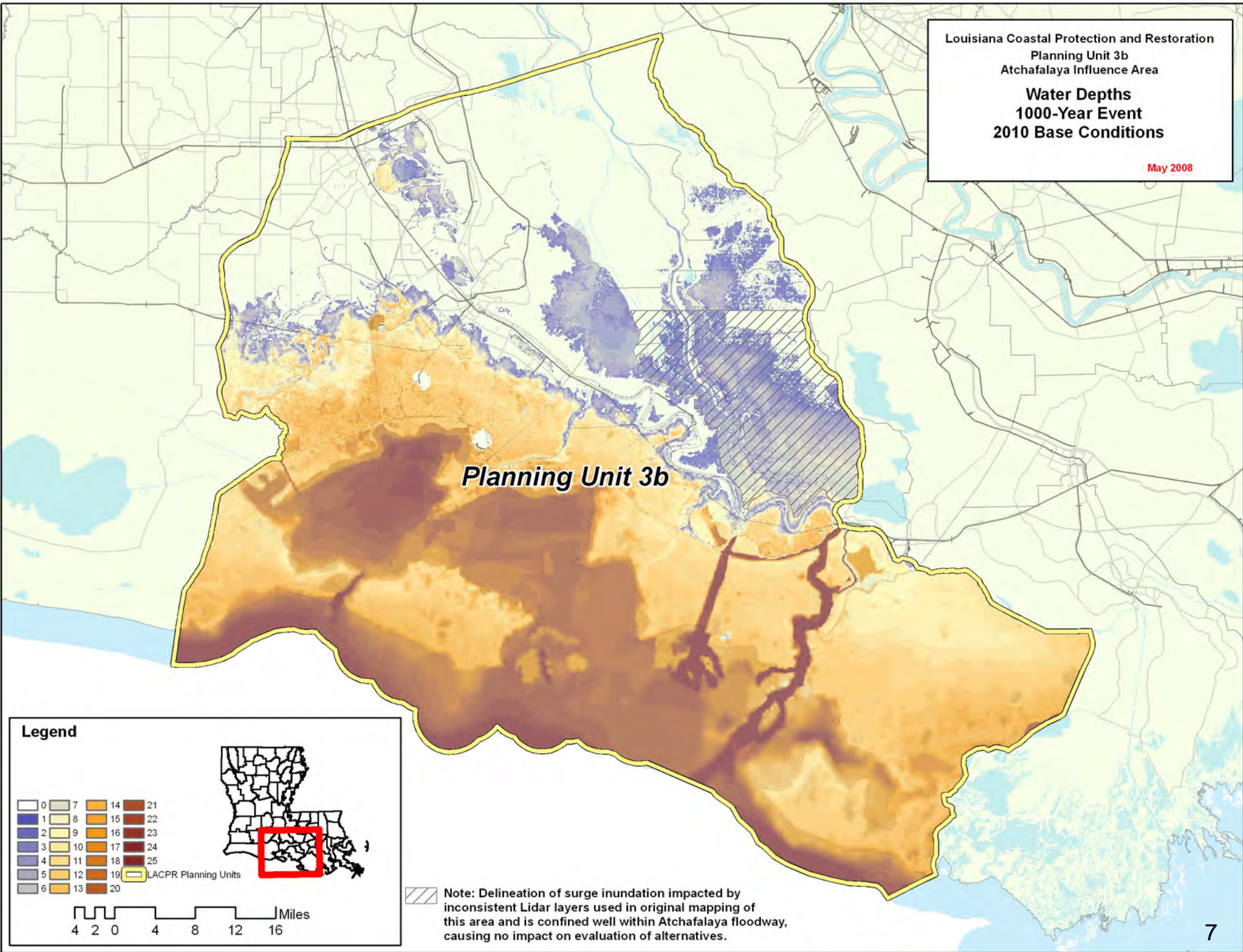
| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

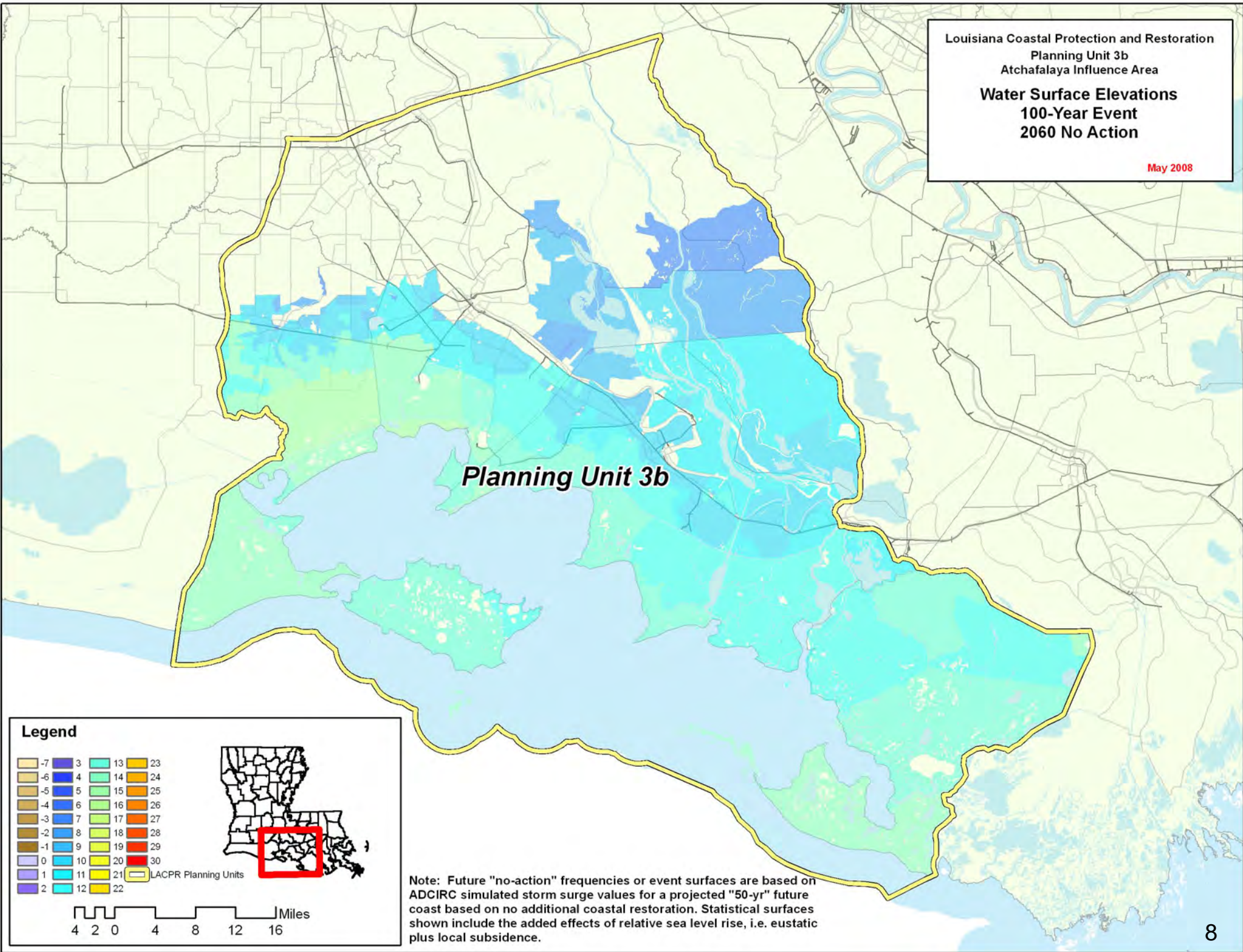
Miles

Note: Delineation of surge inundation impacted by inconsistent Lidar layers used in original mapping of this area and is confined well within Atchafalaya floodway, causing no impact on evaluation of alternatives.

Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Depths
 1000-Year Event
 2010 Base Conditions**
 May 2008



Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Surface Elevations
 100-Year Event
 2060 No Action**
 May 2008



Planning Unit 3b

Legend

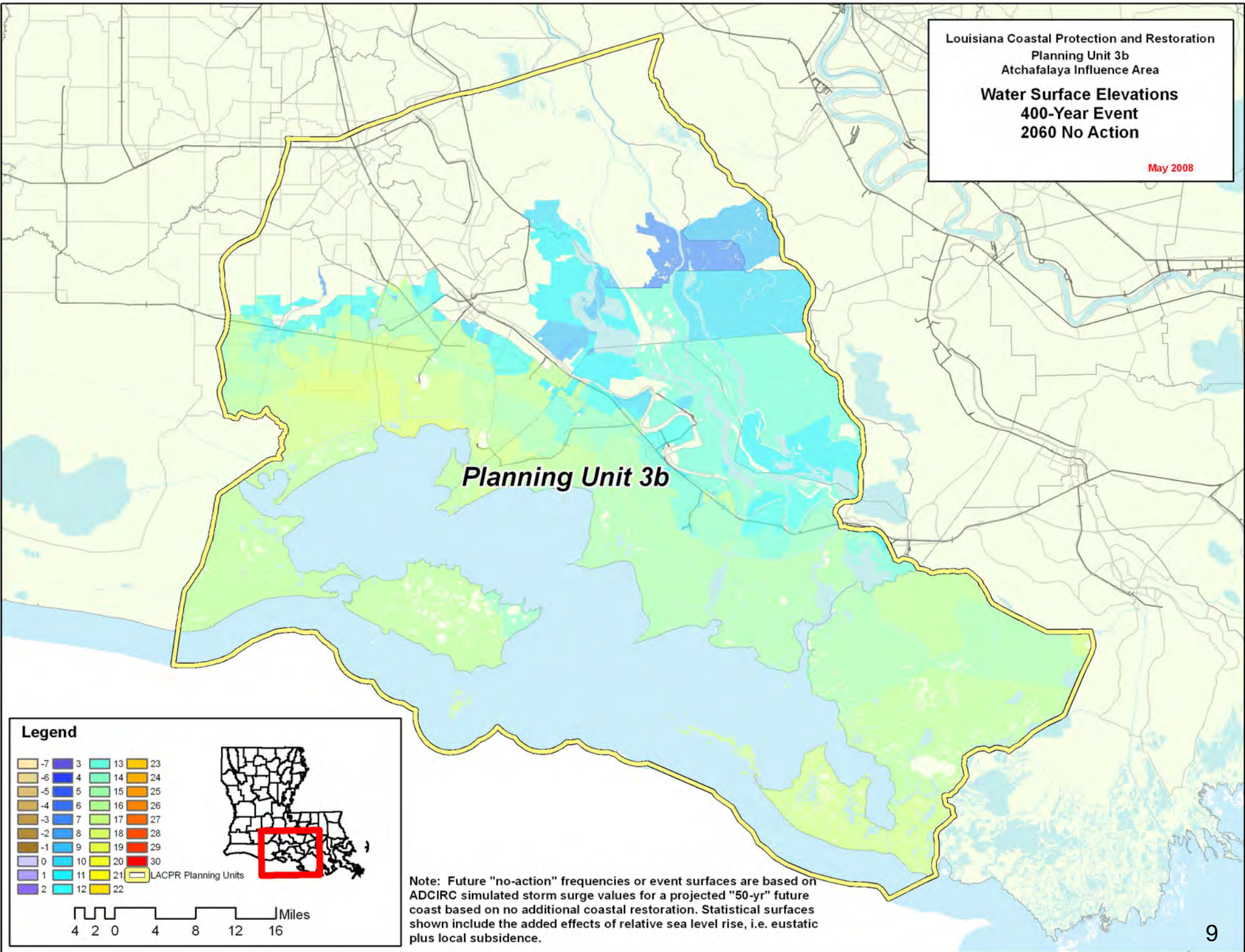
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|----|----|----|----|
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| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
Water Surface Elevations
400-Year Event
2060 No Action
 May 2008



Planning Unit 3b

Legend

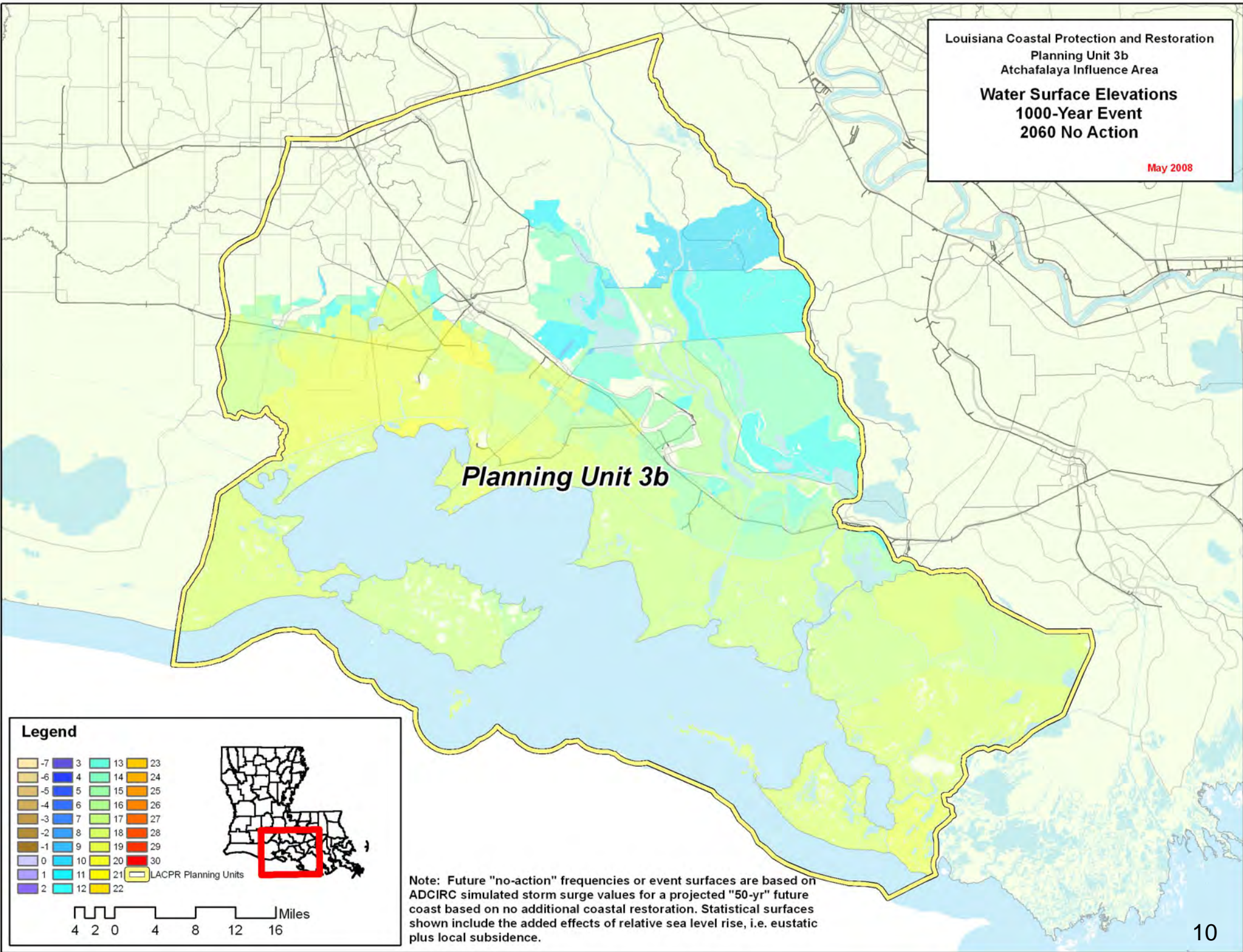
| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Surface Elevations
 1000-Year Event
 2060 No Action**
 May 2008



Planning Unit 3b

Legend

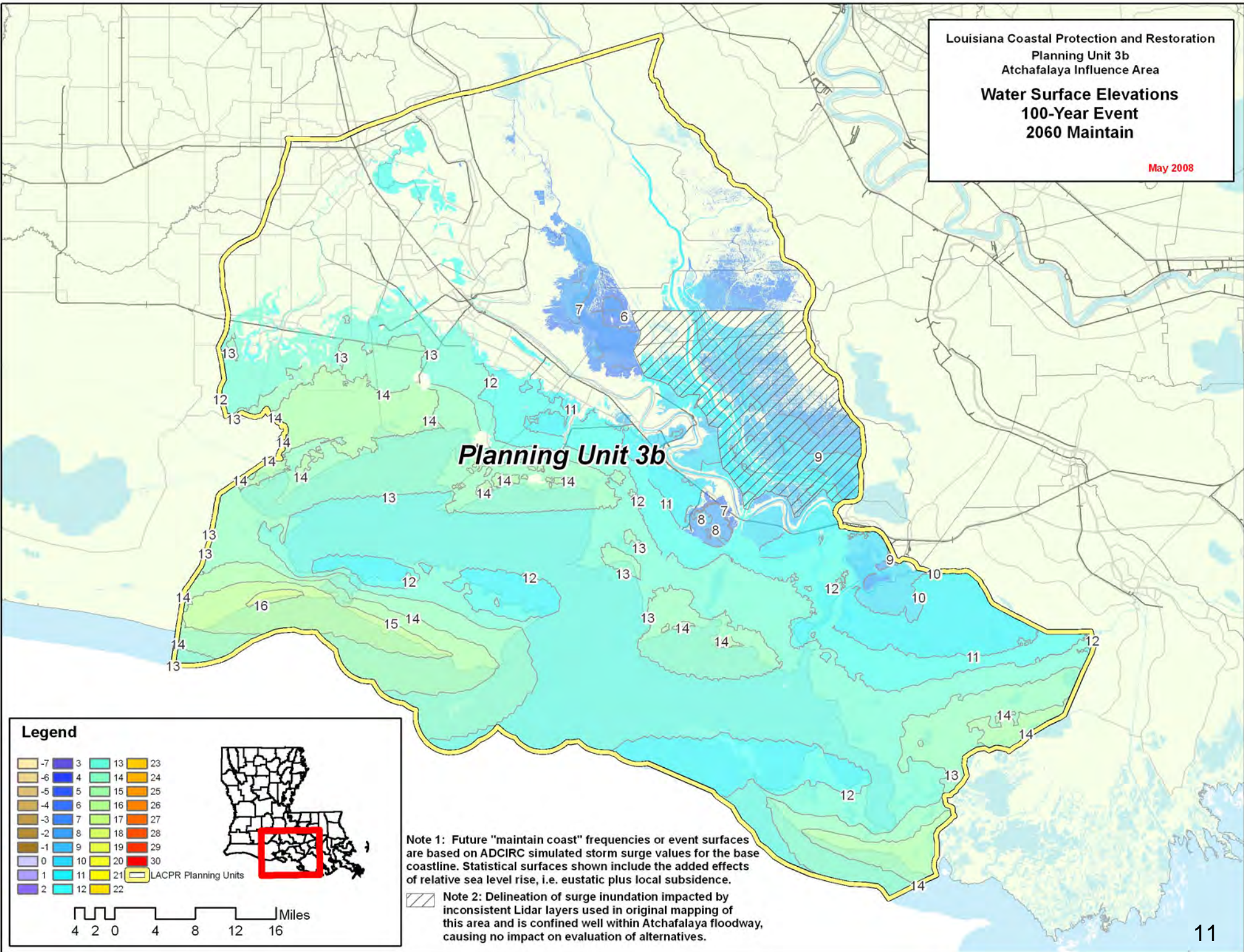
| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

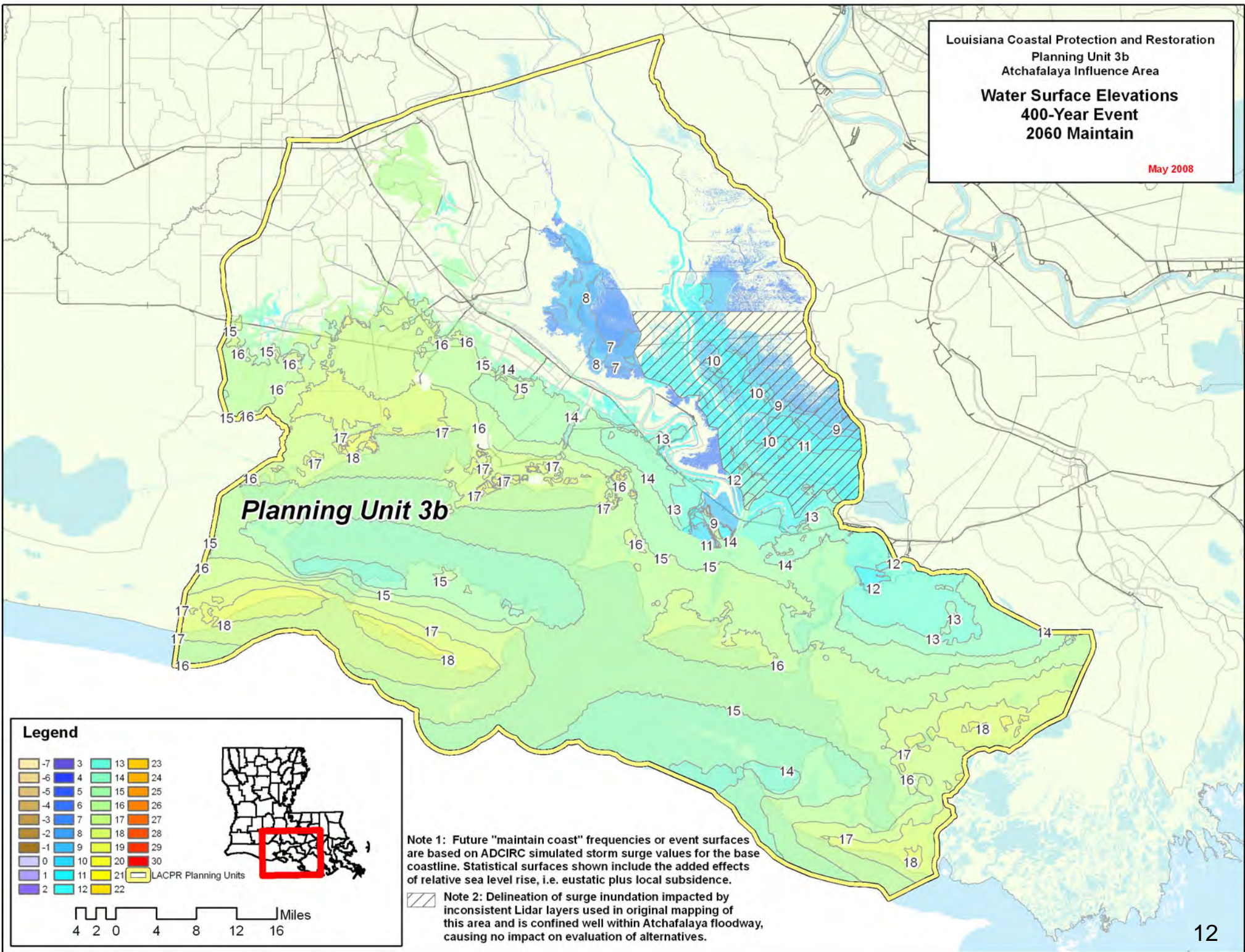
Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Surface Elevations
 100-Year Event
 2060 Maintain**
 May 2008



Note 1: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Note 2: Delineation of surge inundation impacted by inconsistent Lidar layers used in original mapping of this area and is confined well within Atchafalaya floodway, causing no impact on evaluation of alternatives.

Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Surface Elevations
 400-Year Event
 2060 Maintain**
 May 2008



Planning Unit 3b

Legend

| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

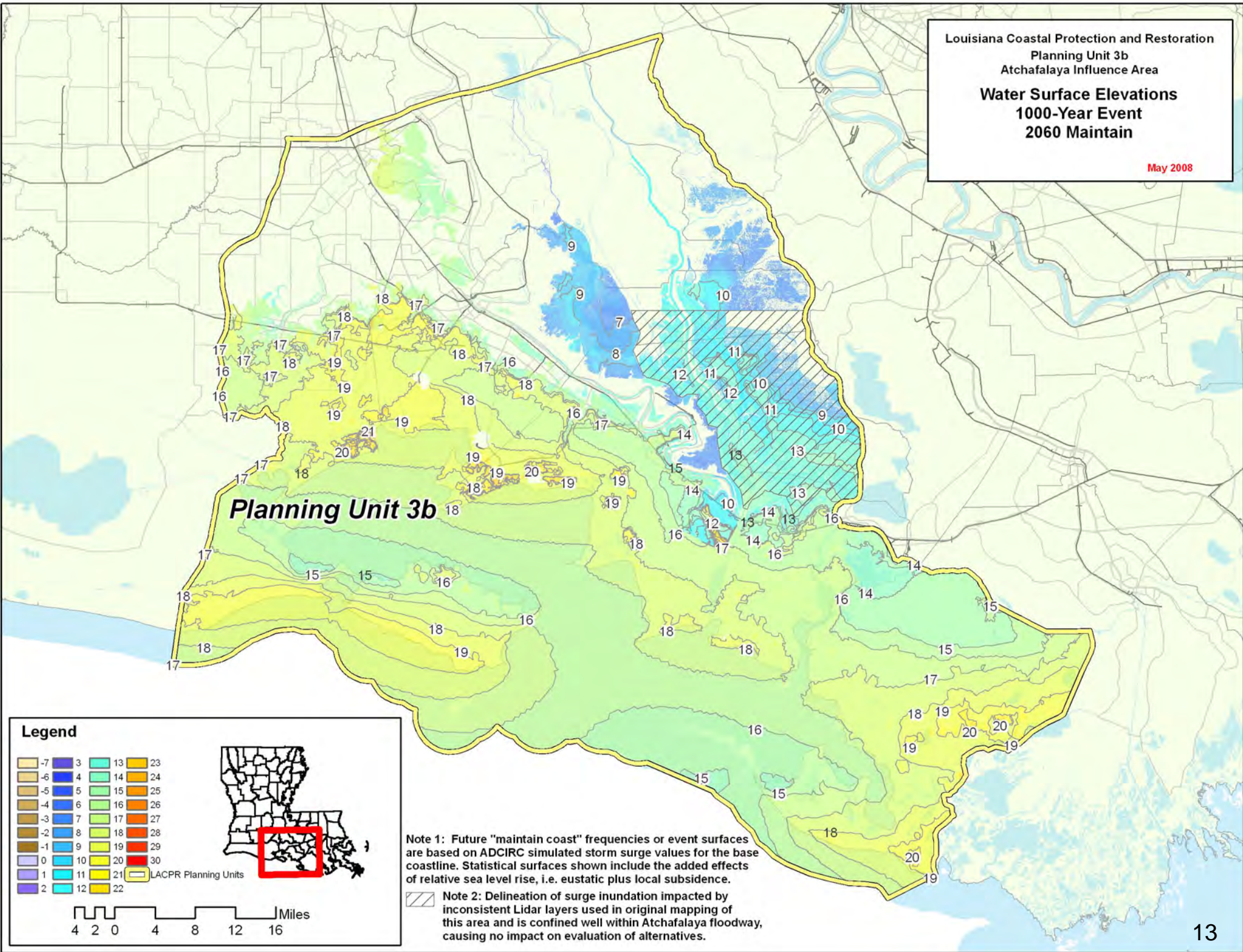
LACPR Planning Units

Miles

Note 1: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Note 2: Delineation of surge inundation impacted by inconsistent Lidar layers used in original mapping of this area and is confined well within Atchafalaya floodway, causing no impact on evaluation of alternatives.

Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area
**Water Surface Elevations
 1000-Year Event
 2060 Maintain**
 May 2008



| | | | | | |
|---------------------------------|---|---------------------------------|--------|------------------|-----------|
| Planning Unit: | 3b | Alt. No.: | PU3b-0 | Category: | No Action |
| Alternative Description: | No action (without project) alternative. | | | | |
| Coastal Component: | Degraded coast--increasing risk. | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|----------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 0 | 4,331 | 203 | 343 | 1,176 | 78 | 19 | 13 | 1 |
| | | Mid | | 6,163 | 326 | 503 | 1,849 | 118 | 17 | 10 | 1 |
| | | Low | | 7,655 | 469 | 614 | 2,248 | 141 | 14 | 6 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 0 | 4,852 | 242 | 272 | 1,347 | 94 | 19 | 11 | 1 |
| | | Mid | | 6,771 | 379 | 341 | 2,017 | 133 | 17 | 8 | 0 |
| | | Low | | 8,345 | 529 | 383 | 2,357 | 150 | 14 | 3 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 0 | 4,055 | 201 | 360 | 1,178 | 81 | 19 | 13 | 1 |
| | | Mid | | 5,863 | 323 | 525 | 1,826 | 119 | 17 | 10 | 1 |
| | | Low | | 7,317 | 460 | 645 | 2,207 | 142 | 14 | 6 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 0 | 4,571 | 239 | 431 | 1,332 | 94 | 19 | 11 | 1 |
| | | Mid | | 6,445 | 373 | 605 | 1,997 | 135 | 17 | 8 | 0 |
| | | Low | | 8,000 | 516 | 706 | 2,338 | 153 | 14 | 3 | 0 |

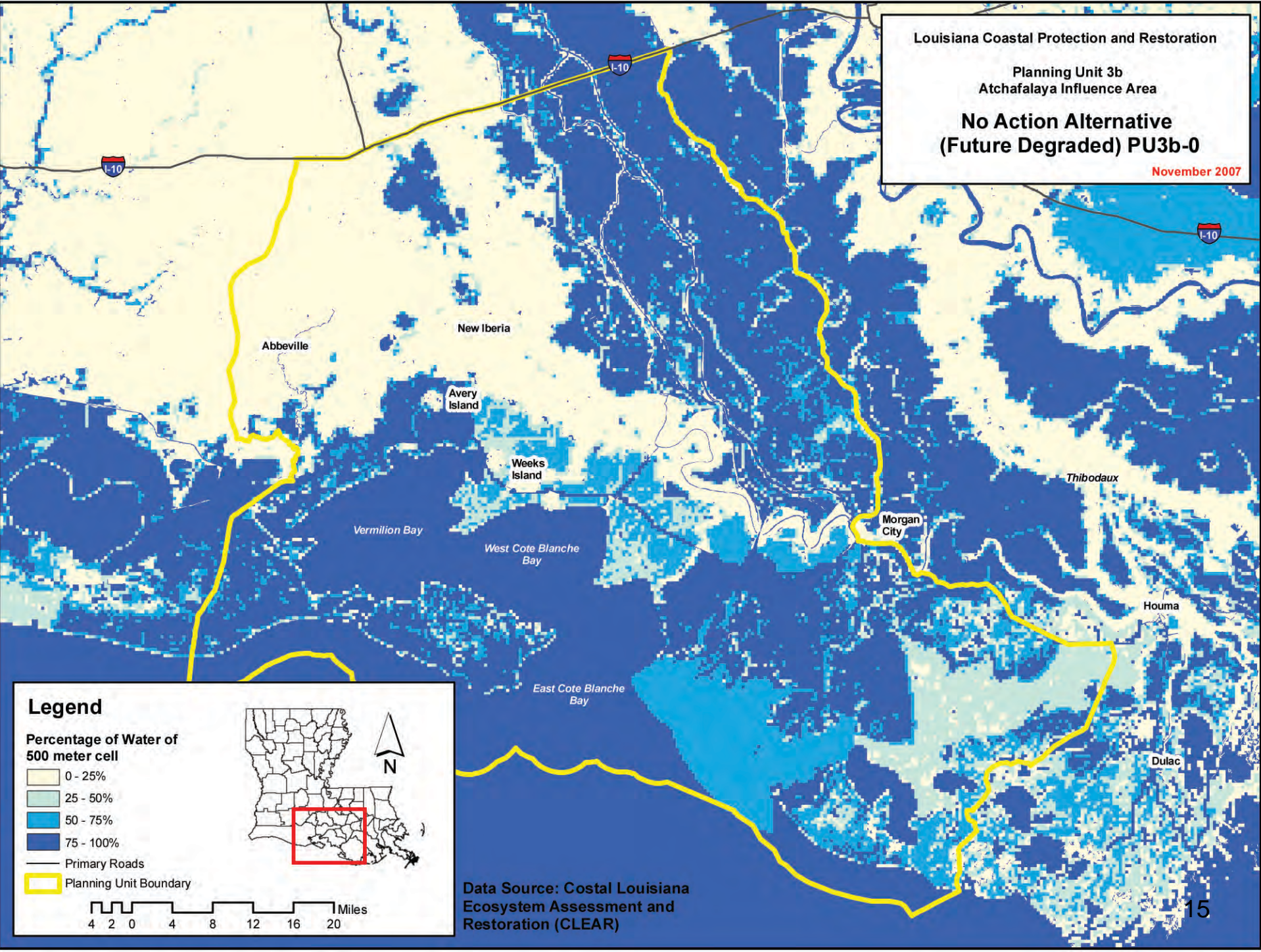
| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|----|
| Construction Time (years) | | | 0 | After 50 yrs (% of baseline) | | 97 | 95 | 97 | 95 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 94 | 89 | 94 | 89 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.31 | Coastal Component | | 0 | 0 | 0 | 0 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 0 | 0 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 0 | 0 | Total Project | | 0 | 0 | 0 | 0 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b No Action Plan |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | N/A | 1,523 | N/A | 1,013 | N/A | 1,543 | N/A | |
| 100-year | 4,254 | N/A | 5,717 | N/A | 4,148 | N/A | 5,447 | N/A | |
| 400-year | 8,571 | N/A | 9,628 | N/A | 7,772 | N/A | 8,782 | N/A | |
| 1,000-year | 11,203 | N/A | 11,827 | N/A | 10,886 | N/A | 11,680 | N/A | |
| 2,000-year | 12,281 | N/A | 12,591 | N/A | 12,370 | N/A | 12,769 | N/A | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

**No Action Alternative
(Future Degraded) PU3b-0**

November 2007



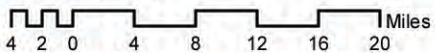
Legend

**Percentage of Water of
500 meter cell**

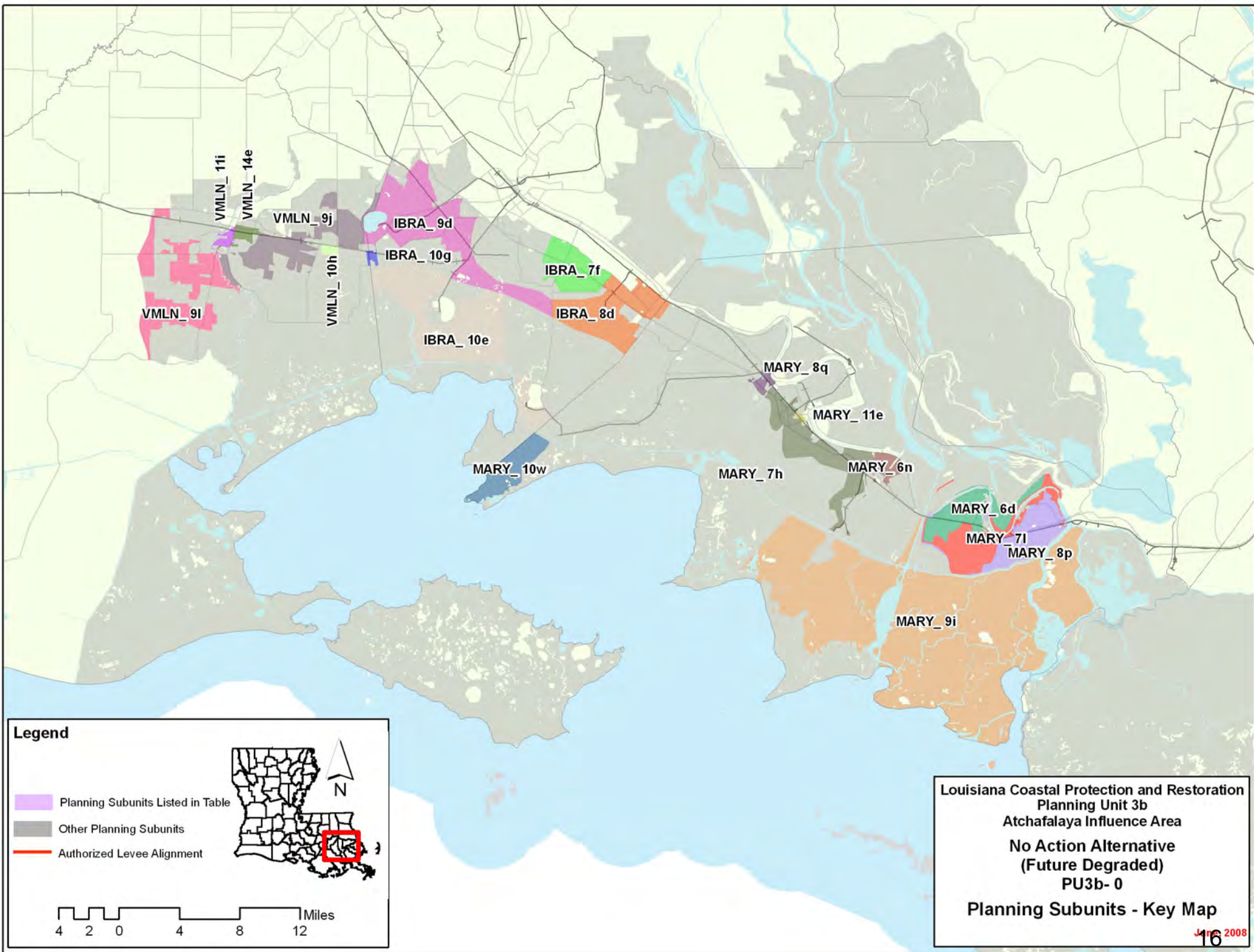
- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%

Primary Roads

Planning Unit Boundary



Data Source: Costal Louisiana
Ecosystem Assessment and
Restoration (CLEAR)



VMLN_11i
 VMLN_14e
 VMLN_9j
 VMLN_10h
 VMLN_9i

IBRA_9d
 IBRA_10g
 IBRA_7f
 IBRA_8d
 IBRA_10e

MARY_8q
 MARY_11e
 MARY_10w
 MARY_7h
 MARY_6n

MARY_6d
 MARY_7i
 MARY_8p

MARY_9i

Legend

- Planning Subunits Listed in Table
- Other Planning Subunits
- Authorized Levee Alignment

Louisiana Coastal Protection and Restoration Planning Unit 3b Atchafalaya Influence Area No Action Alternative (Future Degraded) PU3b-0 Planning Subunits - Key Map

June 2008

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Alternative: PU3b-0
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| IBRA_ 10e | 11.7 | | 15.2 | | 17.0 | | 14.9 | | 18.4 | | 20.2 | |
| IBRA_ 10g | 11.5 | | 15.4 | | 17.8 | | 14.7 | | 18.6 | | 21.0 | |
| IBRA_ 7f | 8.1 | | 11.3 | | 14.5 | | 11.3 | | 14.5 | | 17.7 | |
| IBRA_ 8d | 10.1 | | 15.2 | | 19.1 | | 13.3 | | 18.4 | | 22.3 | |
| IBRA_ 9d | 9.0 | | 13.8 | | 17.1 | | 12.2 | | 17.0 | | 20.3 | |
| MARY_ 10w | 11.7 | | 16.0 | | 17.9 | | 13.9 | | 17.6 | | 20.0 | |
| MARY_ 11e | 7.8 | | 11.3 | | 14.1 | | 11.0 | | 14.5 | | 17.3 | |
| MARY_ 6d | 7.8 | | 9.6 | | 12.0 | | 11.0 | | 12.8 | | 15.2 | |
| MARY_ 6n | 7.9 | | 13.9 | | 14.8 | | 11.1 | | 17.1 | | 18.0 | |
| MARY_ 7h | 7.8 | | 10.9 | | 13.2 | | 11.0 | | 14.1 | | 16.4 | |
| MARY_ 7l | 7.8 | | 10.6 | | 13.1 | | 11.0 | | 13.8 | | 16.3 | |
| MARY_ 8p | 8.6 | | 12.4 | | 14.8 | | 11.8 | | 15.6 | | 18.0 | |
| MARY_ 8q | 8.2 | | 13.5 | | 17.2 | | 11.4 | | 16.7 | | 20.4 | |
| MARY_ 9i | 9.9 | | 13.4 | | 15.4 | | 13.1 | | 16.6 | | 18.6 | |
| VMLN_ 10h | 11.4 | | 15.6 | | 18.3 | | 14.6 | | 18.8 | | 21.5 | |
| VMLN_ 11i | 7.8 | | 11.3 | | 14.8 | | 11.0 | | 14.5 | | 18.0 | |
| VMLN_ 14e | 7.8 | | 9.4 | | 14.3 | | 11.0 | | 12.6 | | 17.5 | |
| VMLN_ 9j | 7.8 | | 13.1 | | 16.3 | | 11.0 | | 16.3 | | 19.5 | |
| VMLN_ 9l | 10.6 | | 13.7 | | 15.5 | | 13.8 | | 16.9 | | 18.7 | |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

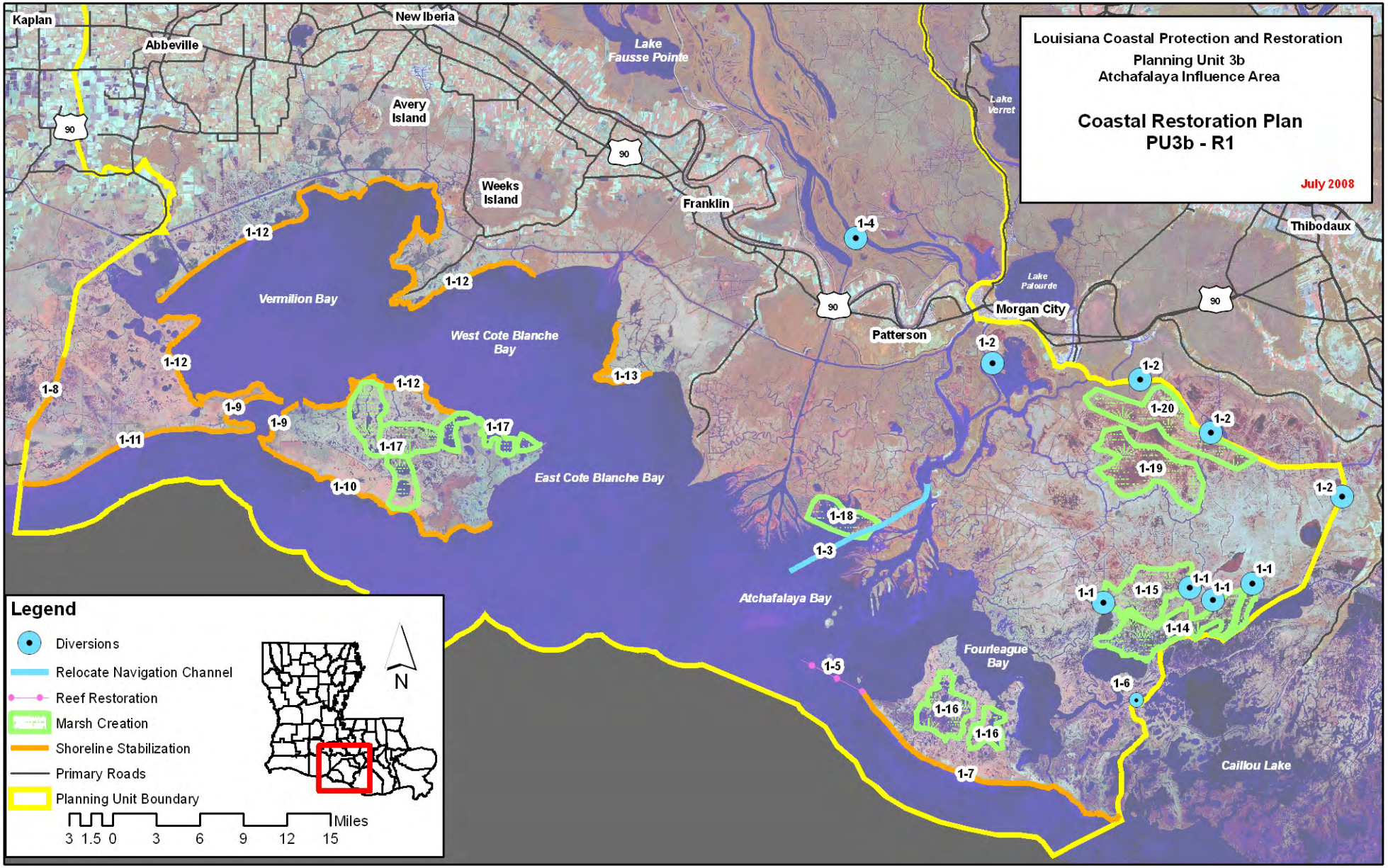
| | | | | | |
|---------------------------------|--|---------------------------------|---------|------------------|--------------------------|
| Planning Unit: | 3b | Alt. No.: | PU3b-R1 | Category: | Coastal Restoration Only |
| Alternative Description: | Sustain coastal landscape through restoration including shoreline protection, marsh creation, etc. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

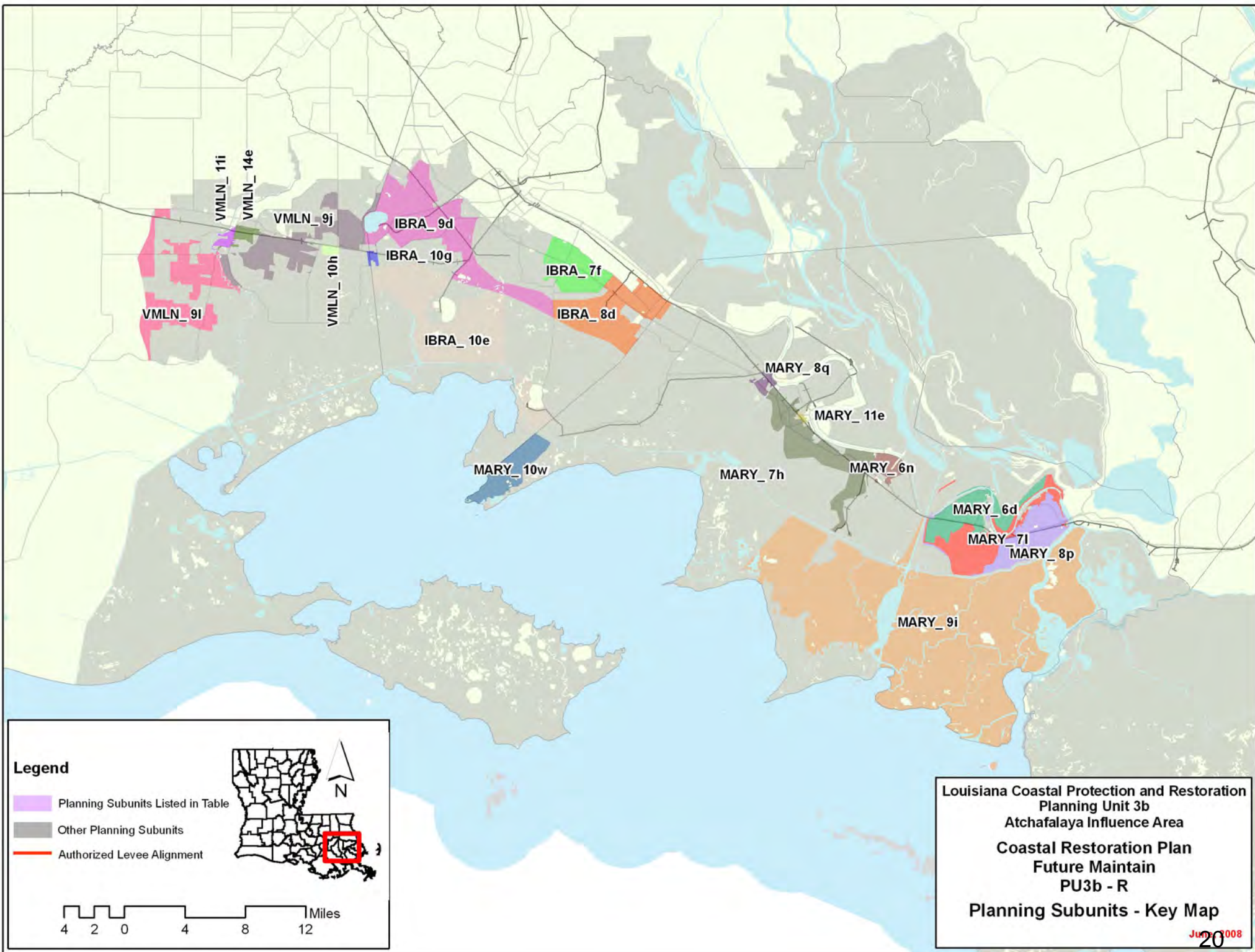
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 243 | 4,326 | 203 | 343 | 1,177 | 78 | 154 | 2 | 2 |
| | | Mid | | 6,162 | 327 | 502 | 1,847 | 118 | 130 | 2 | 2 |
| | | Low | | 7,655 | 469 | 613 | 2,247 | 141 | 106 | 2 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 245 | 4,854 | 242 | 413 | 1,347 | 94 | 154 | 4 | 2 |
| | | Mid | | 6,761 | 379 | 571 | 2,017 | 133 | 130 | 2 | 1 |
| | | Low | | 8,344 | 529 | 665 | 2,358 | 150 | 106 | 2 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 243 | 4,051 | 201 | 361 | 1,179 | 81 | 154 | 2 | 2 |
| | | Mid | | 5,862 | 323 | 524 | 1,823 | 119 | 130 | 2 | 2 |
| | | Low | | 7,316 | 460 | 645 | 2,207 | 142 | 106 | 2 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 245 | 4,574 | 239 | 431 | 1,332 | 94 | 154 | 4 | 2 |
| | | Mid | | 6,440 | 373 | 605 | 1,997 | 135 | 130 | 2 | 1 |
| | | Low | | 7,998 | 516 | 706 | 2,339 | 153 | 106 | 2 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|-------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 1,664 | 1,679 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 1,664 | 1,679 | Total Project | | 4,756 | 4,796 | 4,756 | 4,796 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 1,022 | 1,523 | 1,522 | 1,013 | 1,012 | 1,543 | 1,545 | |
| 100-year | 4,254 | 4,253 | 5,717 | 5,721 | 4,148 | 4,147 | 5,447 | 5,452 | |
| 400-year | 8,571 | 8,576 | 9,628 | 9,629 | 7,772 | 7,771 | 8,782 | 8,779 | |
| 1,000-year | 11,203 | 11,197 | 11,827 | 11,823 | 10,886 | 10,877 | 11,680 | 11,673 | |
| 2,000-year | 12,281 | 12,280 | 12,591 | 12,590 | 12,370 | 12,369 | 12,769 | 12,766 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





VMLN_11i
 VMLN_14e
 VMLN_9j
 VMLN_10h
 VMLN_9i

IBRA_9d
 IBRA_10g
 IBRA_7f
 IBRA_8d
 IBRA_10e

MARY_8q
 MARY_11e
 MARY_10w
 MARY_7h
 MARY_6n

MARY_6d
 MARY_7i
 MARY_8p

MARY_9i

4 2 0 4 8 12 Miles

Alternative: PU3b-R1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions* | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| IBRA_ 10e | 11.7 | 11.7 | 15.2 | 15.2 | 17.0 | 17.0 | 14.9 | 14.9 | 18.4 | 18.4 | 20.2 | 20.2 |
| IBRA_ 10g | 11.5 | 11.5 | 15.4 | 15.4 | 17.8 | 17.8 | 14.7 | 14.7 | 18.6 | 18.6 | 21.0 | 21.0 |
| IBRA_ 7f | 8.1 | 8.1 | 11.3 | 11.3 | 14.5 | 14.5 | 11.3 | 11.3 | 14.5 | 14.5 | 17.7 | 17.7 |
| IBRA_ 8d | 10.1 | 10.1 | 15.2 | 15.2 | 19.1 | 19.1 | 13.3 | 13.3 | 18.4 | 18.4 | 22.3 | 22.3 |
| IBRA_ 9d | 9.0 | 9.0 | 13.8 | 13.8 | 17.1 | 17.1 | 12.2 | 12.2 | 17.0 | 17.0 | 20.3 | 20.3 |
| MARY_ 10w | 11.7 | 11.7 | 16.0 | 16.0 | 17.9 | 17.9 | 13.9 | 14.9 | 17.6 | 19.2 | 20.0 | 21.1 |
| MARY_ 11e | 7.8 | 7.8 | 11.3 | 11.3 | 14.1 | 14.1 | 11.0 | 11.0 | 14.5 | 14.5 | 17.3 | 17.3 |
| MARY_ 6d | 7.8 | 7.8 | 9.6 | 9.6 | 12.0 | 12.0 | 11.0 | 11.0 | 12.8 | 12.8 | 15.2 | 15.2 |
| MARY_ 6n | 7.9 | 7.9 | 13.9 | 13.9 | 14.8 | 14.8 | 11.1 | 11.1 | 17.1 | 17.1 | 18.0 | 18.0 |
| MARY_ 7h | 7.8 | 7.8 | 10.9 | 10.9 | 13.2 | 13.2 | 11.0 | 11.0 | 14.1 | 14.1 | 16.4 | 16.4 |
| MARY_ 7l | 7.8 | 7.8 | 10.6 | 10.6 | 13.1 | 13.1 | 11.0 | 11.0 | 13.8 | 13.8 | 16.3 | 16.3 |
| MARY_ 8p | 8.6 | 8.6 | 12.4 | 12.4 | 14.8 | 14.8 | 11.8 | 11.8 | 15.6 | 15.6 | 18.0 | 18.0 |
| MARY_ 8q | 8.2 | 8.2 | 13.5 | 13.5 | 17.2 | 17.2 | 11.4 | 11.4 | 16.7 | 16.7 | 20.4 | 20.4 |
| MARY_ 9i | 9.9 | 9.9 | 13.4 | 13.4 | 15.4 | 15.4 | 13.1 | 13.1 | 16.6 | 16.6 | 18.6 | 18.6 |
| VMLN_ 10h | 11.4 | 11.4 | 15.6 | 15.6 | 18.3 | 18.3 | 14.6 | 14.6 | 18.8 | 18.8 | 21.5 | 21.5 |
| VMLN_ 11i | 7.8 | 7.8 | 11.3 | 11.3 | 14.8 | 14.8 | 11.0 | 11.0 | 14.5 | 14.5 | 18.0 | 18.0 |
| VMLN_ 14e | 7.8 | 7.8 | 9.4 | 9.4 | 14.3 | 14.3 | 11.0 | 11.0 | 12.6 | 12.6 | 17.5 | 17.5 |
| VMLN_ 9j | 7.8 | 7.8 | 13.1 | 13.1 | 16.3 | 16.3 | 11.0 | 11.0 | 16.3 | 16.3 | 19.5 | 19.5 |
| VMLN_ 9l | 10.6 | 10.6 | 13.7 | 13.7 | 15.5 | 15.5 | 13.8 | 13.8 | 16.9 | 16.9 | 18.7 | 18.7 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

* With and without project base conditions (2010) are the same for coastal restoration only plans.

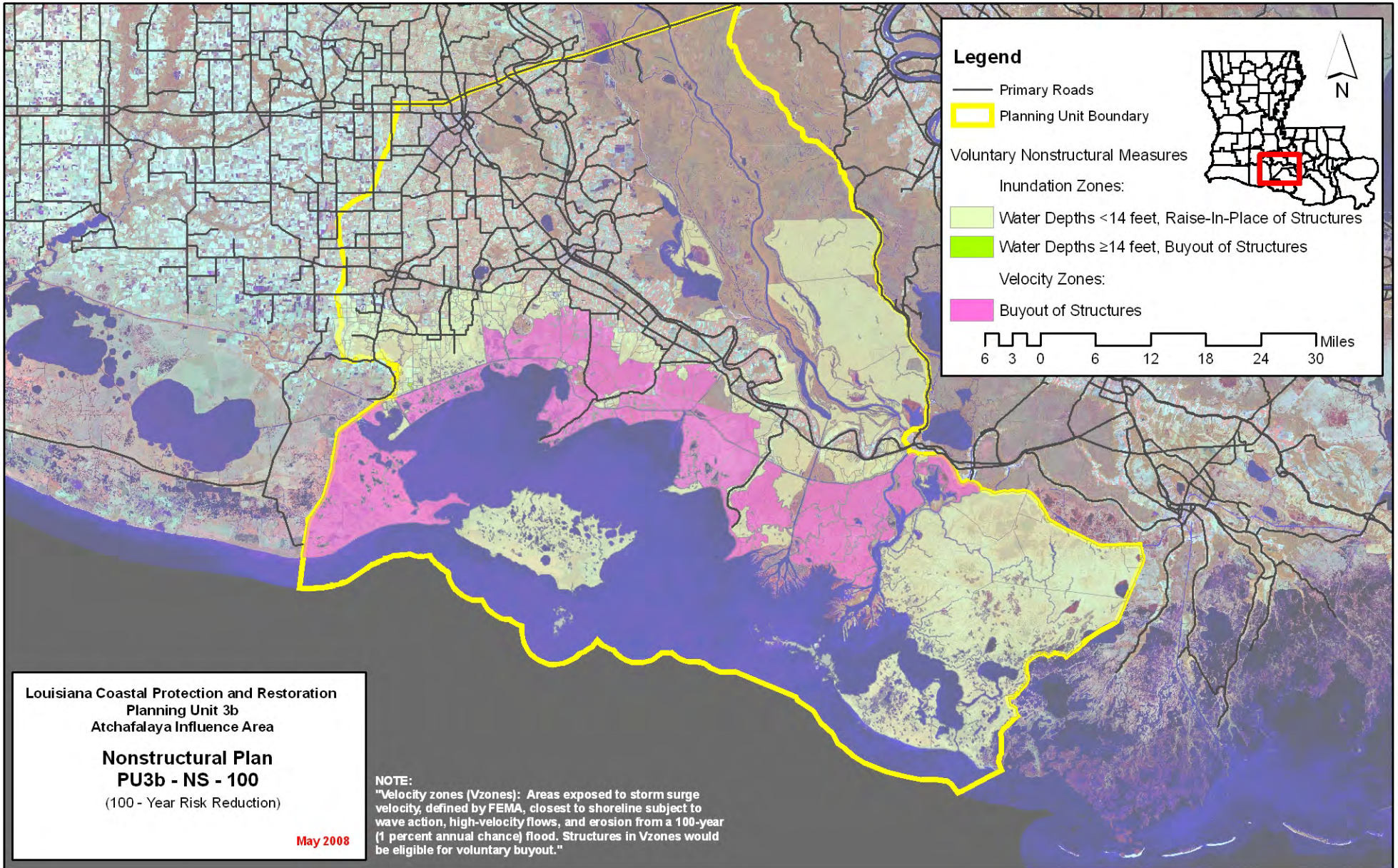
| | | | | | |
|---------------------------------|---|---------------------------------|-------------|-----------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-NS-100 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 100-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 100-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 377 | 3,848 | 81 | 82 | 383 | 19 | 154 | 2 | 2 |
| | | Mid | | 5,662 | 146 | 205 | 855 | 48 | 130 | 2 | 2 |
| | | Low | | 7,118 | 245 | 288 | 1,142 | 65 | 106 | 2 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 379 | 4,117 | 90 | 72 | 509 | 31 | 154 | 4 | 2 |
| | | Mid | | 5,970 | 173 | 147 | 971 | 60 | 130 | 2 | 1 |
| | | Low | | 7,473 | 283 | 195 | 1,230 | 74 | 106 | 2 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 380 | 3,603 | 80 | 80 | 358 | 17 | 154 | 2 | 2 |
| | | Mid | | 5,396 | 143 | 208 | 812 | 47 | 130 | 2 | 2 |
| | | Low | | 6,818 | 237 | 296 | 1,082 | 63 | 106 | 2 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 382 | 3,870 | 89 | 137 | 478 | 29 | 154 | 4 | 2 |
| | | Mid | | 5,693 | 169 | 263 | 933 | 59 | 130 | 2 | 1 |
| | | Low | | 7,169 | 272 | 339 | 1,188 | 73 | 106 | 2 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|-------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,628 | 2,628 | 2,698 | 2,698 |
| | 1 / 2 | 2,584 | 2,598 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 2,609 | 2,623 | Total Project | | 7,383 | 7,424 | 7,454 | 7,494 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Nonstructural Plan 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 141 | 1,523 | 331 | 1,013 | 137 | 1,543 | 347 | |
| 100-year | 4,254 | 2,344 | 5,717 | 4,542 | 4,148 | 2,237 | 5,447 | 4,259 | |
| 400-year | 8,571 | 7,954 | 9,628 | 9,163 | 7,772 | 7,133 | 8,782 | 8,294 | |
| 1,000-year | 11,203 | 10,805 | 11,827 | 11,505 | 10,886 | 10,465 | 11,680 | 11,338 | |
| 2,000-year | 12,281 | 11,993 | 12,591 | 12,328 | 12,370 | 12,068 | 12,769 | 12,492 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



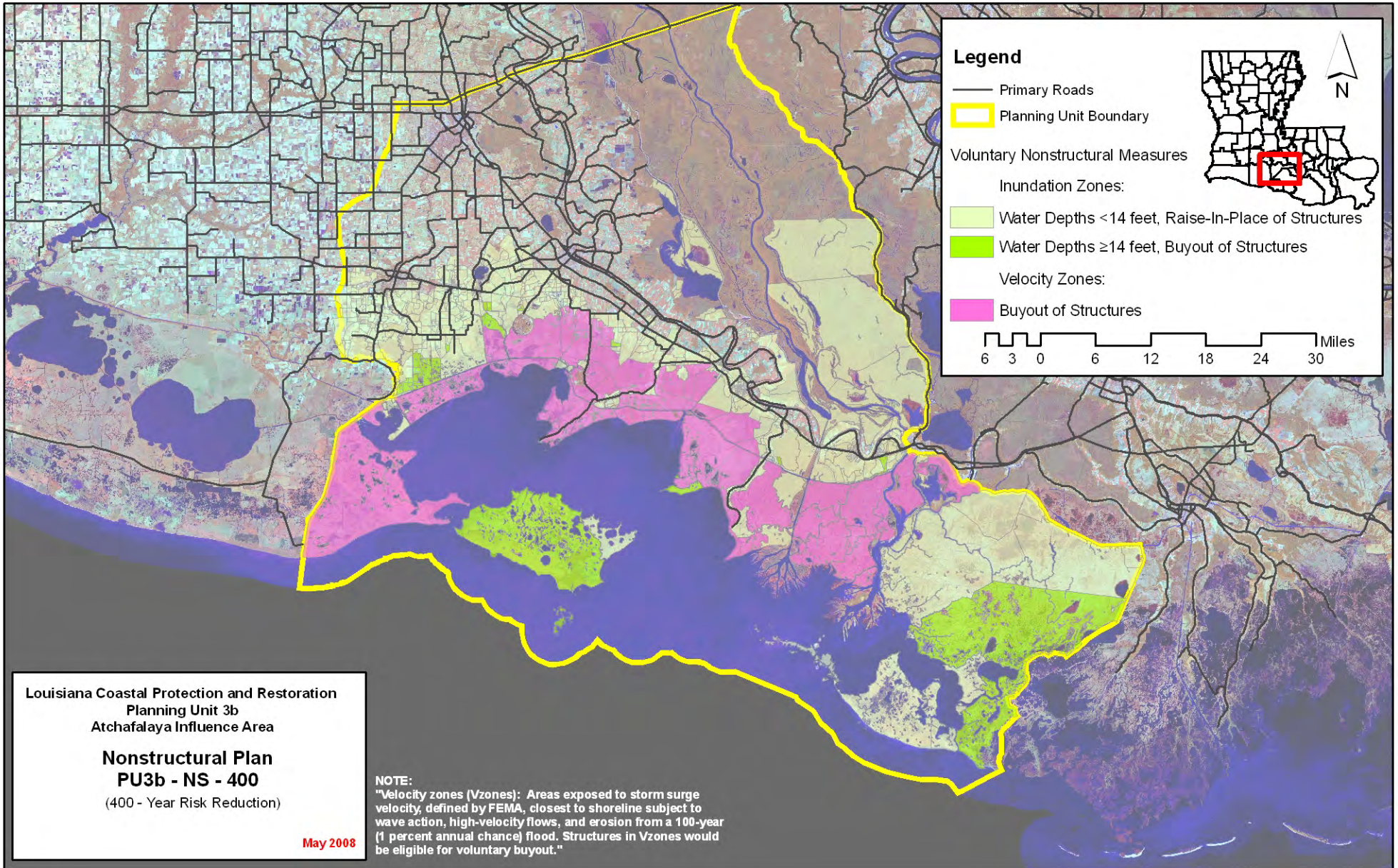
| | | | | | |
|---------------------------------|---|---------------------------------|-------------|-----------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-NS-400 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 400-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 400-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 475 | 3,848 | 72 | 66 | 333 | 15 | 154 | 2 | 2 |
| | | Mid | | 5,661 | 119 | 119 | 598 | 29 | 130 | 2 | 2 |
| | | Low | | 7,117 | 183 | 162 | 781 | 37 | 106 | 2 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 477 | 4,116 | 75 | 4 | 338 | 15 | 154 | 4 | 2 |
| | | Mid | | 5,969 | 125 | 20 | 615 | 30 | 130 | 2 | 1 |
| | | Low | | 7,472 | 193 | 66 | 845 | 44 | 106 | 2 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 481 | 3,602 | 72 | 63 | 311 | 14 | 154 | 2 | 2 |
| | | Mid | | 5,395 | 118 | 114 | 560 | 27 | 130 | 2 | 2 |
| | | Low | | 6,818 | 179 | 158 | 727 | 35 | 106 | 2 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 484 | 3,869 | 74 | 65 | 316 | 14 | 154 | 4 | 2 |
| | | Mid | | 5,692 | 123 | 122 | 577 | 29 | 130 | 2 | 1 |
| | | Low | | 7,169 | 189 | 194 | 788 | 41 | 106 | 2 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|-------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 4,557 | 4,557 | 4,683 | 4,683 |
| | 1 / 2 | 3,259 | 3,274 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 3,303 | 3,318 | Total Project | | 9,313 | 9,353 | 9,438 | 9,479 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Nonstructural Plan 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 116 | 1,523 | 167 | 1,013 | 112 | 1,543 | 162 | |
| 100-year | 4,254 | 537 | 5,717 | 853 | 4,148 | 524 | 5,447 | 825 | |
| 400-year | 8,571 | 3,643 | 9,628 | 6,793 | 7,772 | 3,185 | 8,782 | 6,048 | |
| 1,000-year | 11,203 | 9,691 | 11,827 | 10,927 | 10,886 | 9,314 | 11,680 | 10,695 | |
| 2,000-year | 12,281 | 11,524 | 12,591 | 12,009 | 12,370 | 11,536 | 12,769 | 12,144 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



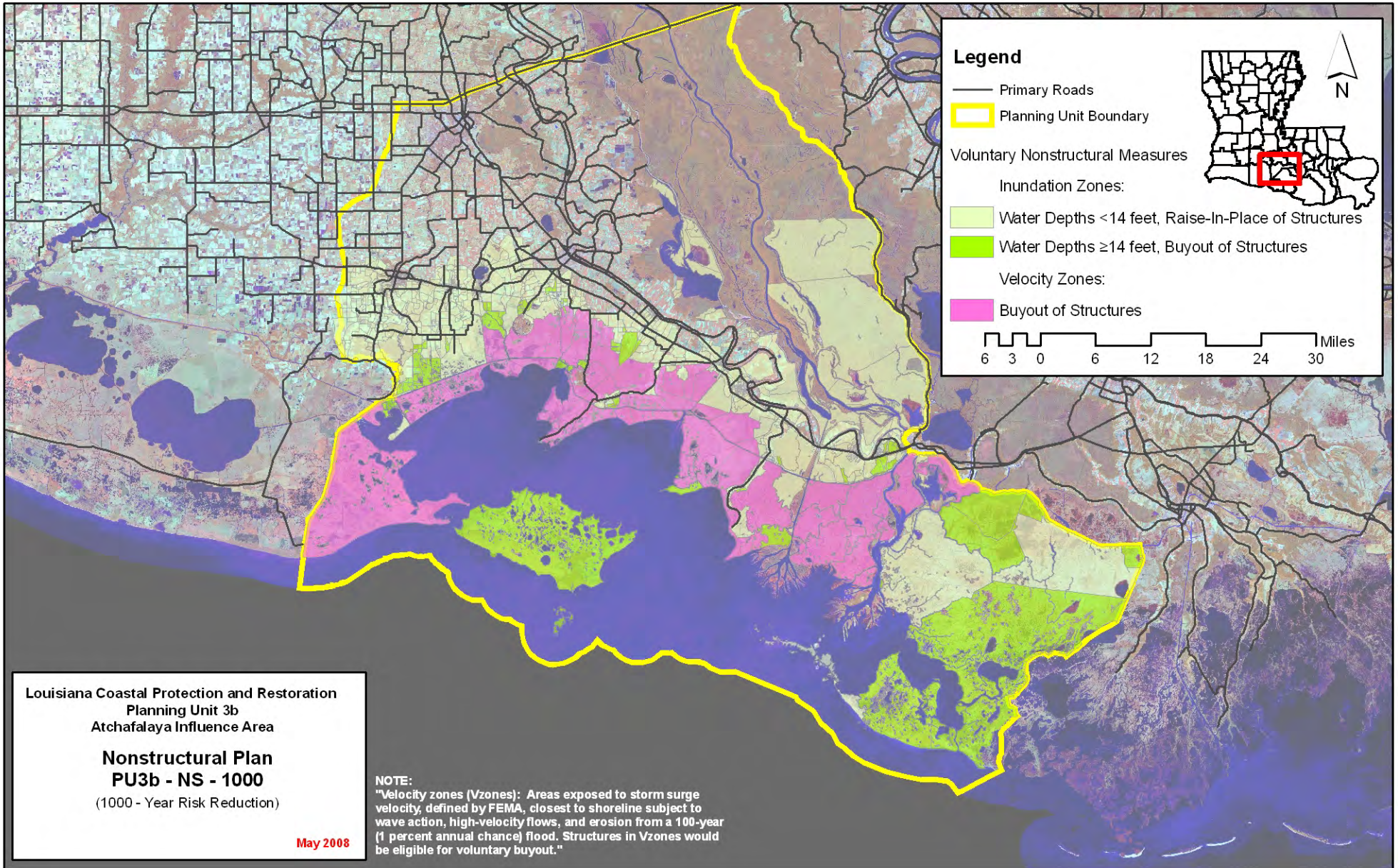
| | | | | | |
|---------------------------------|--|---------------------------------|--------------|------------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-NS-1000 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 1000-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 1000-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 533 | 3,755 | 70 | 65 | 329 | 15 | 154 | 2 | 2 |
| | | Mid | | 5,562 | 114 | 107 | 568 | 27 | 130 | 2 | 2 |
| | | Low | | 7,016 | 166 | 138 | 705 | 32 | 106 | 2 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 535 | 4,024 | 72 | 0 | 330 | 15 | 154 | 4 | 2 |
| | | Mid | | 5,870 | 117 | 4 | 575 | 27 | 130 | 2 | 1 |
| | | Low | | 7,370 | 171 | 15 | 723 | 34 | 106 | 2 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 567 | 3,519 | 70 | 62 | 308 | 14 | 154 | 2 | 2 |
| | | Mid | | 5,311 | 113 | 102 | 534 | 25 | 130 | 2 | 2 |
| | | Low | | 6,732 | 164 | 133 | 662 | 30 | 106 | 2 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 569 | 3,786 | 71 | 62 | 309 | 14 | 154 | 4 | 2 |
| | | Mid | | 5,609 | 116 | 105 | 540 | 26 | 130 | 2 | 1 |
| | | Low | | 7,083 | 168 | 141 | 680 | 32 | 106 | 2 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 15 | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 5,701 | 5,701 | 6,353 | 6,353 |
| | 1 / 2 | 3,660 | 3,674 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 3,888 | 3,902 | Total Project | | 10,457 | 10,497 | 11,108 | 11,149 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------------|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 103 | 1,523 | 139 | 1,013 | 100 | 1,543 | 135 | |
| 100-year | 4,254 | 433 | 5,717 | 565 | 4,148 | 424 | 5,447 | 555 | |
| 400-year | 8,571 | 817 | 9,628 | 1,370 | 7,772 | 801 | 8,782 | 1,309 | |
| 1,000-year | 11,203 | 3,928 | 11,827 | 7,609 | 10,886 | 3,963 | 11,680 | 7,536 | |
| 2,000-year | 12,281 | 9,274 | 12,591 | 10,830 | 12,370 | 9,374 | 12,769 | 10,929 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



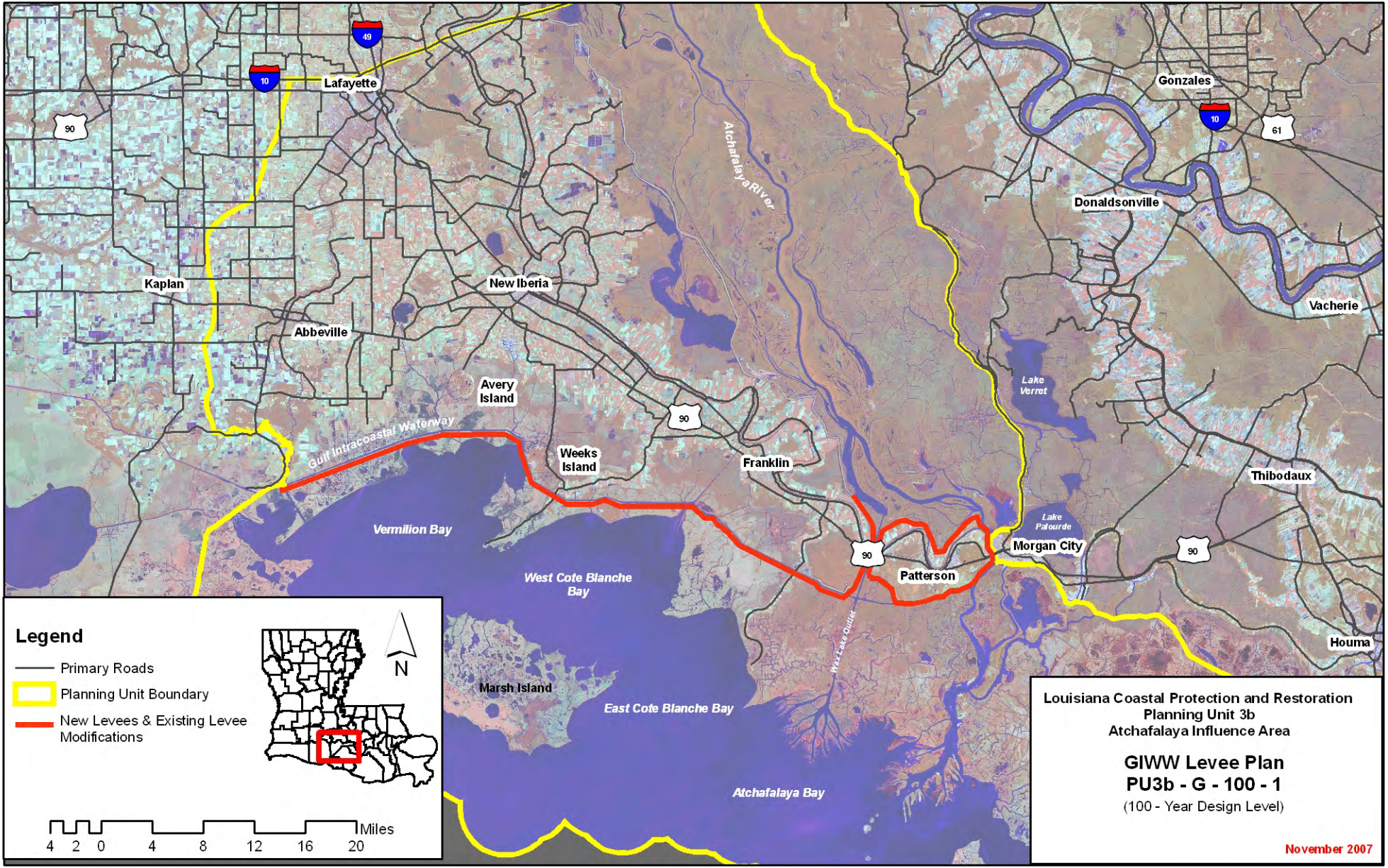
| | | | | | |
|---------------------------------|--|---------------------------------|--------------|------------------|---|
| Planning Unit: | 3b | Alt. No.: | PU3b-G-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

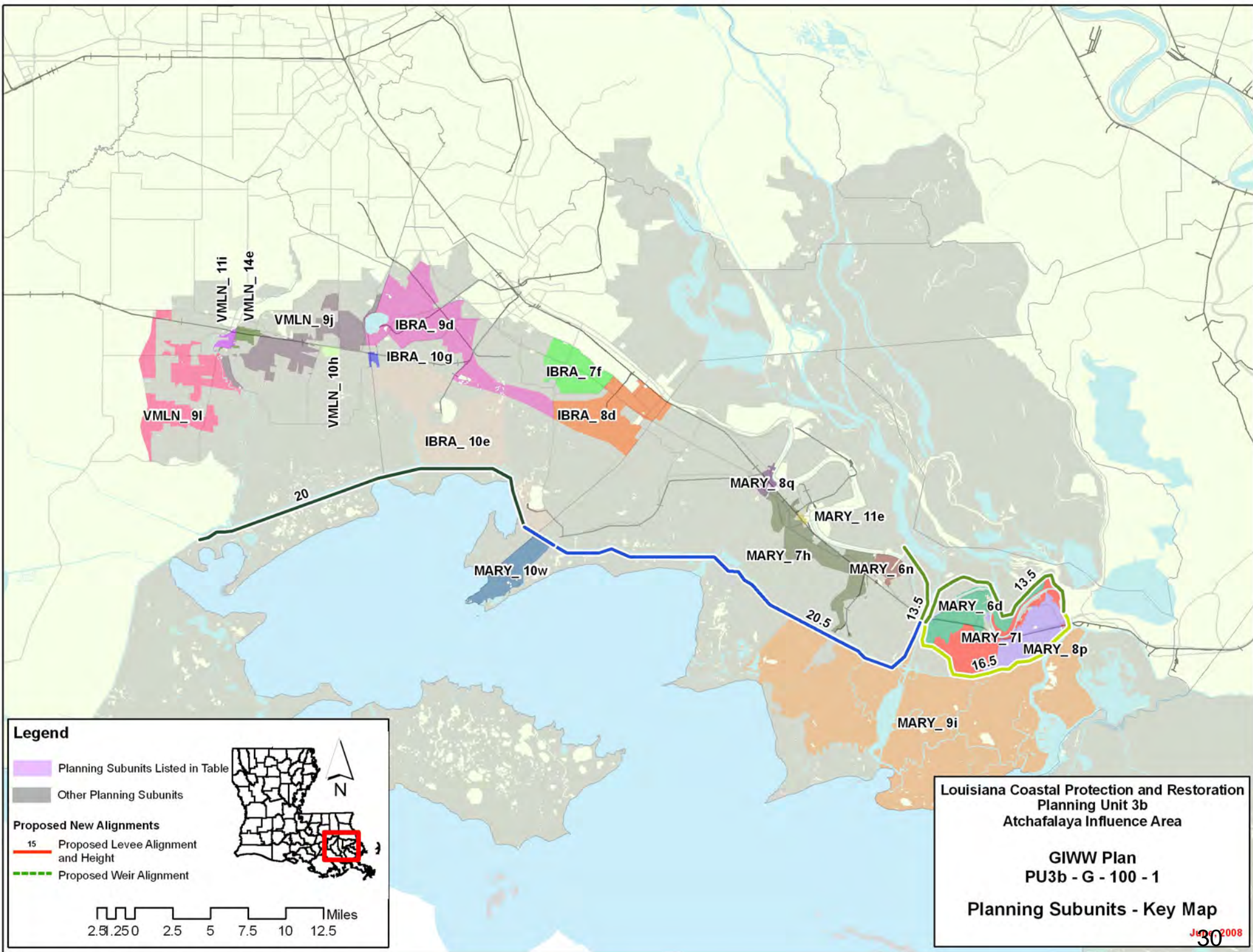
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,020 | 1,660 | 94 | 121 | 514 | 27 | 312 | 20 | 5 |
| | | Mid | | 2,465 | 146 | 180 | 816 | 43 | 288 | 19 | 5 |
| | | Low | | 3,227 | 210 | 225 | 1,000 | 52 | 264 | 18 | 5 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,023 | 1,733 | 100 | 54 | 536 | 29 | 312 | 20 | 5 |
| | | Mid | | 2,551 | 154 | 65 | 838 | 45 | 288 | 18 | 5 |
| | | Low | | 3,324 | 219 | 78 | 1,014 | 53 | 264 | 18 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,020 | 1,562 | 94 | 121 | 496 | 27 | 312 | 20 | 5 |
| | | Mid | | 2,357 | 145 | 179 | 782 | 42 | 288 | 19 | 5 |
| | | Low | | 3,101 | 208 | 226 | 957 | 50 | 264 | 18 | 5 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,023 | 1,633 | 100 | 131 | 516 | 29 | 312 | 20 | 5 |
| | | Mid | | 2,439 | 153 | 191 | 806 | 44 | 288 | 18 | 5 |
| | | Low | | 3,198 | 216 | 233 | 973 | 52 | 264 | 18 | 4 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 2,300 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 7,047 | 7,070 | Structural Component | | 15,214 | 15,238 | 15,214 | 15,238 | |
| | 3 / 4 | 7,047 | 7,070 | Total Project | | 19,970 | 20,035 | 19,970 | 20,035 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Structural Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 158 | 1,523 | 194 | 1,013 | 159 | 1,543 | 196 | |
| 100-year | 4,254 | 318 | 5,717 | 359 | 4,148 | 318 | 5,447 | 357 | |
| 400-year | 8,571 | 567 | 9,628 | 614 | 7,772 | 579 | 8,782 | 633 | |
| 1,000-year | 11,203 | 2,867 | 11,827 | 2,883 | 10,886 | 2,950 | 11,680 | 2,969 | |
| 2,000-year | 12,281 | 6,368 | 12,591 | 6,412 | 12,370 | 6,321 | 12,769 | 6,338 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU3b-G-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| IBRA_ 10e | 11.6 | 2.4 | 15.5 | 3.9 | 18.0 | 8.2 | 14.8 | 2.4 | 18.7 | 3.9 | 21.2 | 8.2 |
| IBRA_ 10g | 11.5 | 2.4 | 15.4 | 3.9 | 17.8 | 8.2 | 14.7 | 2.4 | 18.6 | 3.9 | 21.0 | 8.2 |
| IBRA_ 7f | 8.1 | 2.4 | 11.3 | 3.9 | 14.5 | 8.2 | 11.3 | 2.4 | 14.5 | 3.9 | 17.7 | 8.2 |
| IBRA_ 8d | 10.1 | 2.4 | 15.2 | 3.9 | 19.1 | 8.2 | 13.3 | 2.4 | 18.4 | 3.9 | 22.3 | 8.2 |
| IBRA_ 9d | 9.0 | 2.4 | 13.8 | 3.9 | 17.1 | 8.2 | 12.2 | 2.4 | 17.0 | 3.9 | 20.3 | 8.2 |
| MARY_ 10w | 11.7 | 13.6 | 16.0 | 19.0 | 17.9 | 22.7 | 13.9 | 16.8 | 17.6 | 22.2 | 20.0 | 25.9 |
| MARY_ 11e | 7.8 | 1.3 | 11.3 | 3.5 | 14.1 | 9.1 | 11.0 | 1.3 | 14.5 | 3.5 | 17.3 | 9.1 |
| MARY_ 6d | 7.8 | -0.4 | 9.6 | 3.5 | 12.0 | 10.8 | 11.0 | -0.4 | 12.8 | 3.5 | 15.2 | 10.8 |
| MARY_ 6n | 7.9 | 1.3 | 13.9 | 3.5 | 14.8 | 9.1 | 11.1 | 1.3 | 17.1 | 3.5 | 18.0 | 9.1 |
| MARY_ 7h | 7.8 | 1.3 | 10.9 | 3.5 | 13.2 | 9.1 | 11.0 | 1.3 | 14.1 | 3.5 | 16.4 | 9.1 |
| MARY_ 7l | 7.8 | -0.4 | 10.6 | 3.5 | 13.1 | 10.8 | 11.0 | -0.4 | 13.8 | 3.5 | 16.3 | 10.8 |
| MARY_ 8p | 8.6 | -0.4 | 12.4 | 3.5 | 14.8 | 10.8 | 11.8 | -0.4 | 15.6 | 3.5 | 18.0 | 10.8 |
| MARY_ 8q | 8.2 | 1.3 | 13.5 | 3.5 | 17.2 | 9.1 | 11.4 | 1.3 | 16.7 | 3.5 | 20.4 | 9.1 |
| MARY_ 9i | 9.9 | 10.6 | 13.4 | 14.6 | 15.4 | 16.8 | 13.1 | 13.8 | 16.6 | 17.8 | 18.6 | 20.0 |
| VMLN_ 10h | 11.4 | 2.4 | 15.6 | 3.9 | 18.3 | 8.2 | 14.6 | 2.4 | 18.8 | 3.9 | 21.5 | 8.2 |
| VMLN_ 11i | 7.8 | 2.4 | 11.3 | 3.9 | 14.8 | 8.2 | 11.0 | 2.4 | 14.5 | 3.9 | 18.0 | 8.2 |
| VMLN_ 14e | 7.8 | 2.4 | 9.4 | 3.9 | 14.3 | 8.2 | 11.0 | 2.4 | 12.6 | 3.9 | 17.5 | 8.2 |
| VMLN_ 9j | 7.8 | 2.4 | 13.1 | 3.9 | 16.3 | 8.2 | 11.0 | 2.4 | 16.3 | 3.9 | 19.5 | 8.2 |
| VMLN_ 9l | 10.6 | 2.4 | 13.7 | 3.9 | 15.5 | 8.2 | 13.8 | 2.4 | 16.9 | 3.9 | 18.7 | 8.2 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

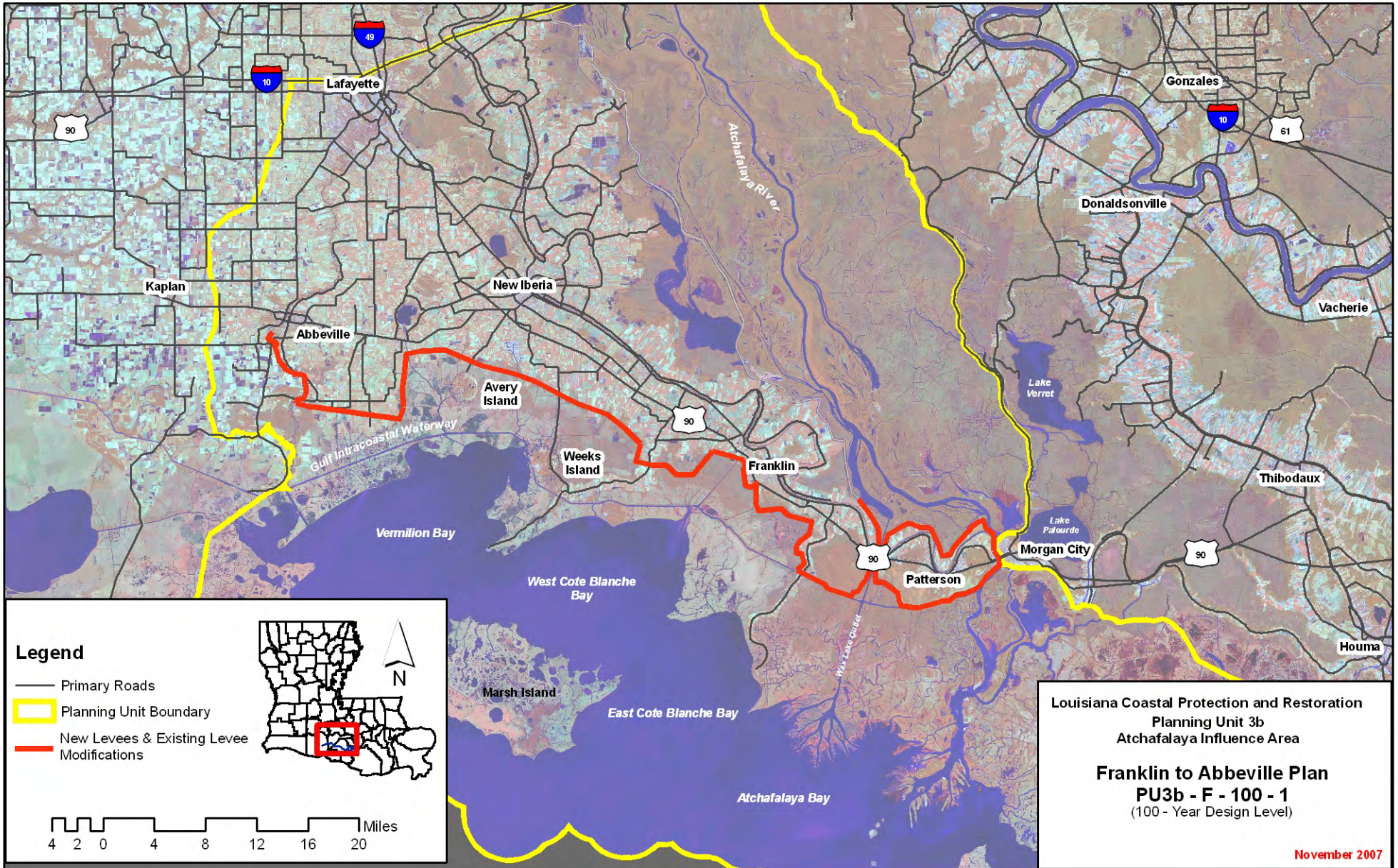
| | | | | | |
|---------------------------------|--|---------------------------------|--------------|------------------|---|
| Planning Unit: | 3b | Alt. No.: | PU3b-F-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

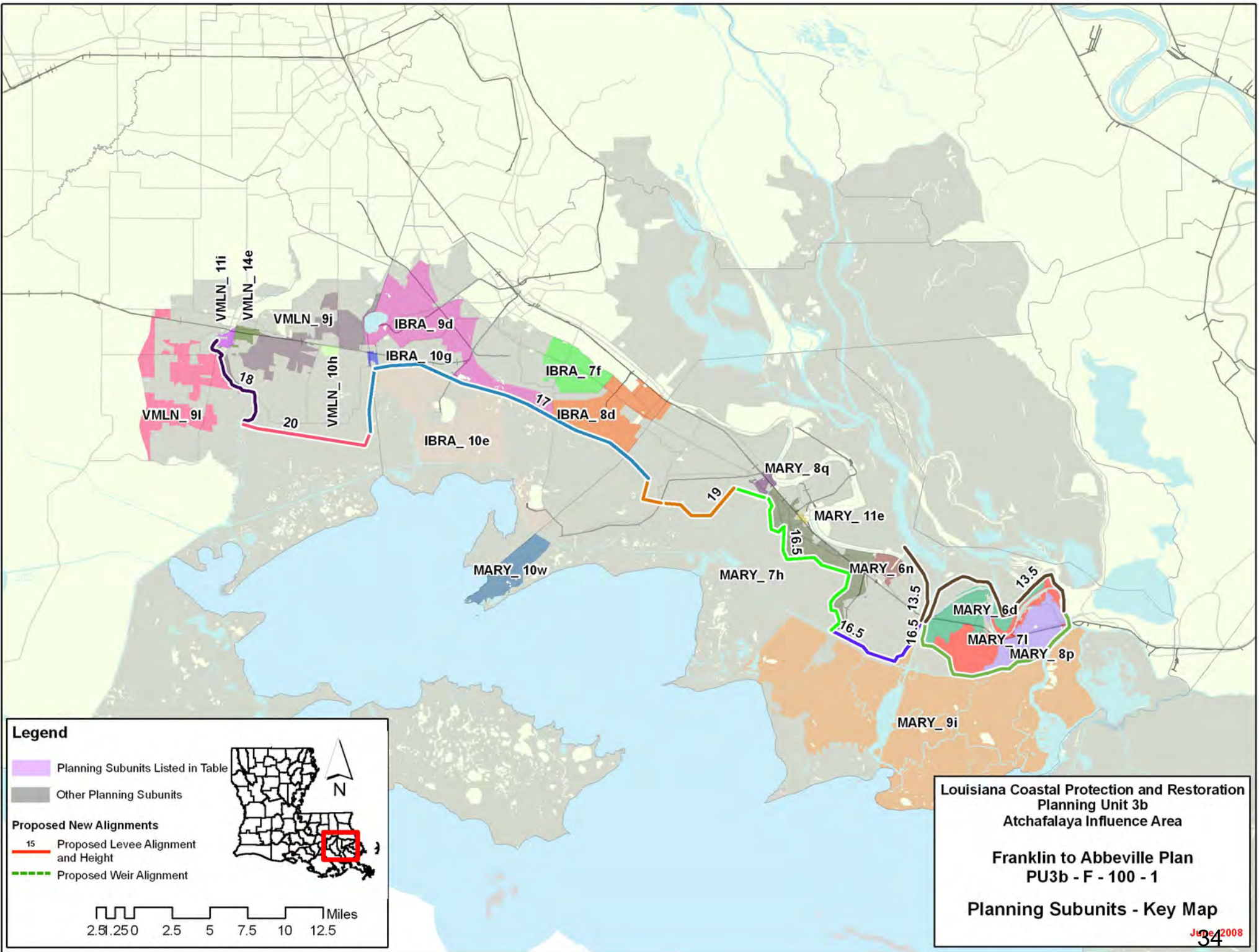
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 954 | 1,958 | 107 | 126 | 546 | 29 | 202 | 16 | 3 |
| | | Mid | | 2,881 | 167 | 192 | 875 | 46 | 178 | 15 | 3 |
| | | Low | | 3,909 | 261 | 260 | 1,148 | 61 | 154 | 14 | 1 |
| 2 | High RSLR High Employment Dispersed Population | High | 958 | 2,059 | 115 | 60 | 569 | 31 | 202 | 16 | 3 |
| | | Mid | | 2,991 | 178 | 81 | 910 | 50 | 178 | 15 | 2 |
| | | Low | | 4,057 | 273 | 113 | 1,163 | 62 | 154 | 14 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 954 | 1,829 | 106 | 125 | 523 | 28 | 202 | 16 | 3 |
| | | Mid | | 2,729 | 165 | 191 | 835 | 45 | 178 | 15 | 3 |
| | | Low | | 3,734 | 254 | 255 | 1,067 | 57 | 154 | 14 | 1 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 958 | 1,922 | 114 | 136 | 546 | 30 | 202 | 16 | 3 |
| | | Mid | | 2,836 | 175 | 203 | 859 | 47 | 178 | 15 | 2 |
| | | Low | | 3,869 | 265 | 264 | 1,088 | 59 | 154 | 14 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 2,500 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 6,622 | 6,648 | Structural Component | | 13,918 | 13,955 | 13,918 | 13,955 | |
| | 3 / 4 | 6,622 | 6,648 | Total Project | | 18,674 | 18,751 | 18,674 | 18,751 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Structural Plan Franklin to Abbeville Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 222 | 1,523 | 282 | 1,013 | 223 | 1,543 | 285 | |
| 100-year | 4,254 | 713 | 5,717 | 879 | 4,148 | 636 | 5,447 | 750 | |
| 400-year | 8,571 | 5,508 | 9,628 | 5,680 | 7,772 | 5,128 | 8,782 | 5,287 | |
| 1,000-year | 11,203 | 10,913 | 11,827 | 11,013 | 10,886 | 10,668 | 11,680 | 10,828 | |
| 2,000-year | 12,281 | 11,431 | 12,591 | 11,510 | 12,370 | 11,339 | 12,769 | 11,416 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU3b-F-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| IBRA_ 10e | 11.6 | 12.5 | 15.5 | 17.1 | 18.0 | 20.0 | 14.8 | 15.7 | 18.7 | 20.3 | 21.2 | 23.2 |
| IBRA_ 10g | 11.5 | 4.6 | 15.4 | 11.5 | 17.8 | 17.0 | 14.7 | 4.6 | 18.6 | 11.5 | 21.0 | 17.0 |
| IBRA_ 7f | 8.1 | 4.0 | 11.3 | 15.0 | 14.5 | 17.0 | 11.3 | 4.0 | 14.5 | 15.0 | 17.7 | 17.0 |
| IBRA_ 8d | 10.1 | 4.0 | 15.2 | 15.0 | 19.1 | 17.0 | 13.3 | 4.0 | 18.4 | 15.0 | 22.3 | 17.0 |
| IBRA_ 9d | 9.0 | 4.0 | 13.8 | 15.0 | 17.1 | 17.0 | 12.2 | 4.0 | 17.0 | 15.0 | 20.3 | 17.0 |
| MARY_ 10w | 11.7 | 11.9 | 16.0 | 16.2 | 17.9 | 19.2 | 13.9 | 15.1 | 17.6 | 19.4 | 20.0 | 22.4 |
| MARY_ 11e | 7.8 | 0.5 | 11.3 | 9.8 | 14.1 | 16.5 | 11.0 | 0.5 | 14.5 | 9.8 | 17.3 | 16.5 |
| MARY_ 6d | 7.8 | -0.4 | 9.6 | 3.5 | 12.0 | 10.8 | 11.0 | -0.4 | 12.8 | 3.5 | 15.2 | 10.8 |
| MARY_ 6n | 7.9 | 0.5 | 13.9 | 9.8 | 14.8 | 16.5 | 11.1 | 0.5 | 17.1 | 9.8 | 18.0 | 16.5 |
| MARY_ 7h | 7.8 | 0.5 | 10.9 | 9.8 | 13.2 | 16.5 | 11.0 | 0.5 | 14.1 | 9.8 | 16.4 | 16.5 |
| MARY_ 7l | 7.8 | -0.4 | 10.6 | 3.5 | 13.1 | 10.8 | 11.0 | -0.4 | 13.8 | 3.5 | 16.3 | 10.8 |
| MARY_ 8p | 8.6 | -0.4 | 12.4 | 3.5 | 14.8 | 10.8 | 11.8 | -0.4 | 15.6 | 3.5 | 18.0 | 10.8 |
| MARY_ 8q | 8.2 | 3.0 | 13.5 | 8.3 | 17.2 | 16.5 | 11.4 | 3.0 | 16.7 | 8.3 | 20.4 | 16.5 |
| MARY_ 9i | 9.9 | 10.5 | 13.4 | 14.2 | 15.4 | 16.4 | 13.1 | 13.7 | 16.6 | 17.4 | 18.6 | 19.6 |
| VMLN_ 10h | 11.4 | 4.6 | 15.6 | 11.5 | 18.3 | 17.0 | 14.6 | 4.6 | 18.8 | 11.5 | 21.5 | 17.0 |
| VMLN_ 11i | 7.8 | 4.6 | 11.3 | 11.5 | 14.8 | 17.0 | 11.0 | 4.6 | 14.5 | 11.5 | 18.0 | 17.0 |
| VMLN_ 14e | 7.8 | 4.6 | 9.4 | 11.5 | 14.3 | 17.0 | 11.0 | 4.6 | 12.6 | 11.5 | 17.5 | 17.0 |
| VMLN_ 9j | 7.8 | 4.6 | 13.1 | 11.5 | 16.3 | 17.0 | 11.0 | 4.6 | 16.3 | 11.5 | 19.5 | 17.0 |
| VMLN_ 9l | 10.6 | 10.9 | 13.7 | 12.5 | 15.5 | 14.0 | 13.8 | 14.1 | 16.9 | 15.7 | 18.7 | 17.2 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

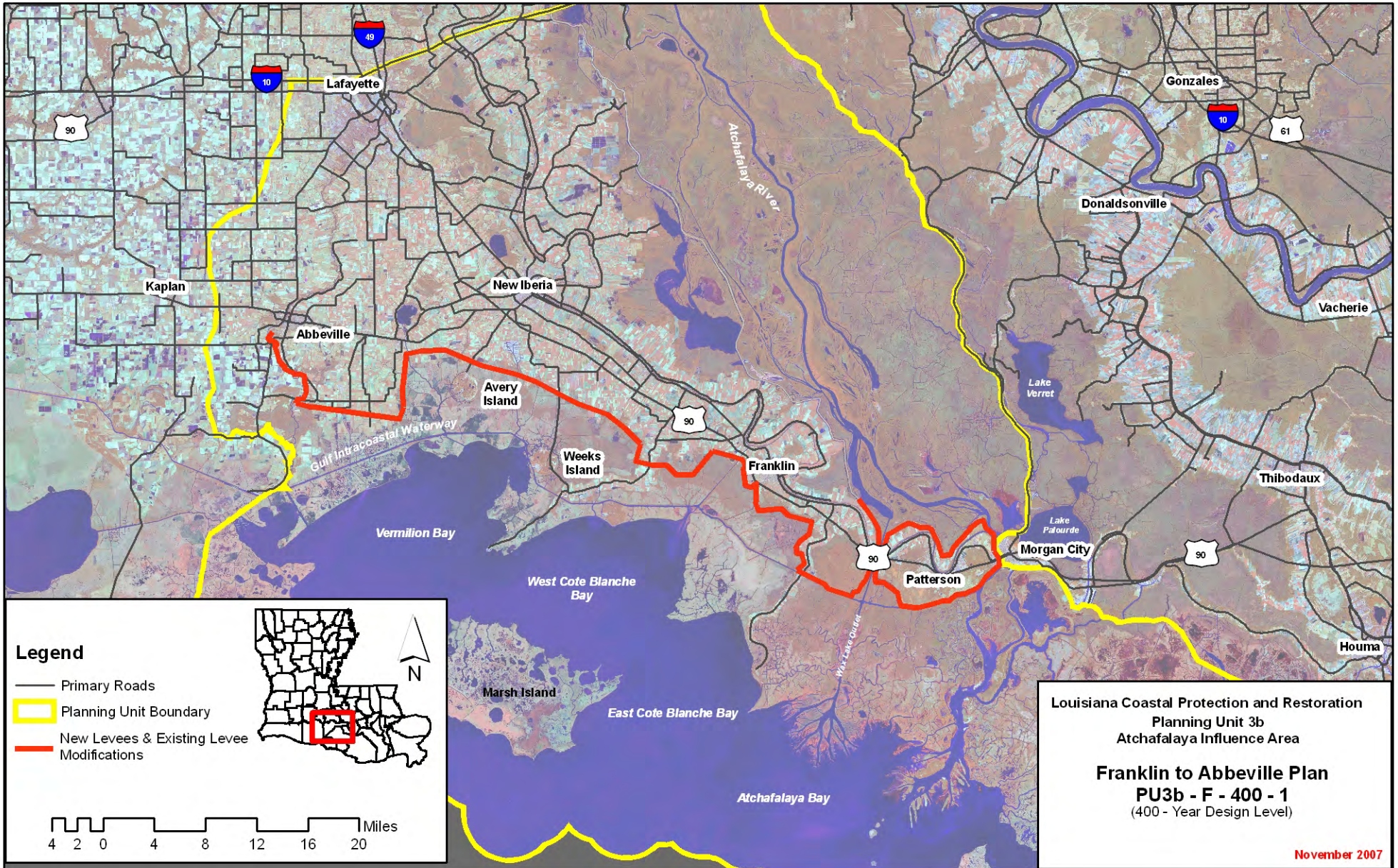
| | | | | | |
|---------------------------------|--|---------------------------------|--------------|------------------|---|
| Planning Unit: | 3b | Alt. No.: | PU3b-F-400-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,440 | 2,146 | 114 | 140 | 598 | 32 | 202 | 19 | 5 |
| | | Mid | | 3,071 | 175 | 208 | 940 | 50 | 178 | 19 | 5 |
| | | Low | | 3,871 | 248 | 256 | 1,135 | 60 | 154 | 18 | 5 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,452 | 2,264 | 123 | 67 | 628 | 35 | 202 | 19 | 5 |
| | | Mid | | 3,201 | 188 | 85 | 980 | 54 | 178 | 19 | 5 |
| | | Low | | 4,041 | 262 | 93 | 1,154 | 61 | 154 | 18 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,440 | 2,008 | 114 | 140 | 575 | 32 | 202 | 19 | 5 |
| | | Mid | | 2,914 | 173 | 206 | 899 | 49 | 178 | 19 | 5 |
| | | Low | | 3,692 | 242 | 253 | 1,074 | 57 | 154 | 18 | 5 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,452 | 2,118 | 122 | 153 | 604 | 34 | 202 | 19 | 5 |
| | | Mid | | 3,040 | 185 | 222 | 930 | 52 | 178 | 19 | 5 |
| | | Low | | 3,849 | 255 | 264 | 1,099 | 59 | 154 | 18 | 4 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|--|------------------------|--|----------------------------|--------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | | 12 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | | 3,900 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | | Scenario (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | | |
| | | 1 / 2 | | 9,958 | 10,041 | Structural Component | | 23,445 | 23,639 | 23,445 | 23,639 |
| | | 3 / 4 | | 9,958 | 10,041 | Total Project | | 28,200 | 28,436 | 28,200 | 28,436 |

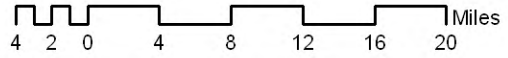
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Structural Plan Franklin to Abbeville Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 222 | 1,523 | 282 | 1,013 | 223 | 1,543 | 285 | |
| 100-year | 4,254 | 711 | 5,717 | 876 | 4,148 | 633 | 5,447 | 747 | |
| 400-year | 8,571 | 1,238 | 9,628 | 1,409 | 7,772 | 985 | 8,782 | 1,145 | |
| 1,000-year | 11,203 | 1,679 | 11,827 | 1,778 | 10,886 | 1,462 | 11,680 | 1,621 | |
| 2,000-year | 12,281 | 2,167 | 12,591 | 2,246 | 12,370 | 2,034 | 12,769 | 2,112 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

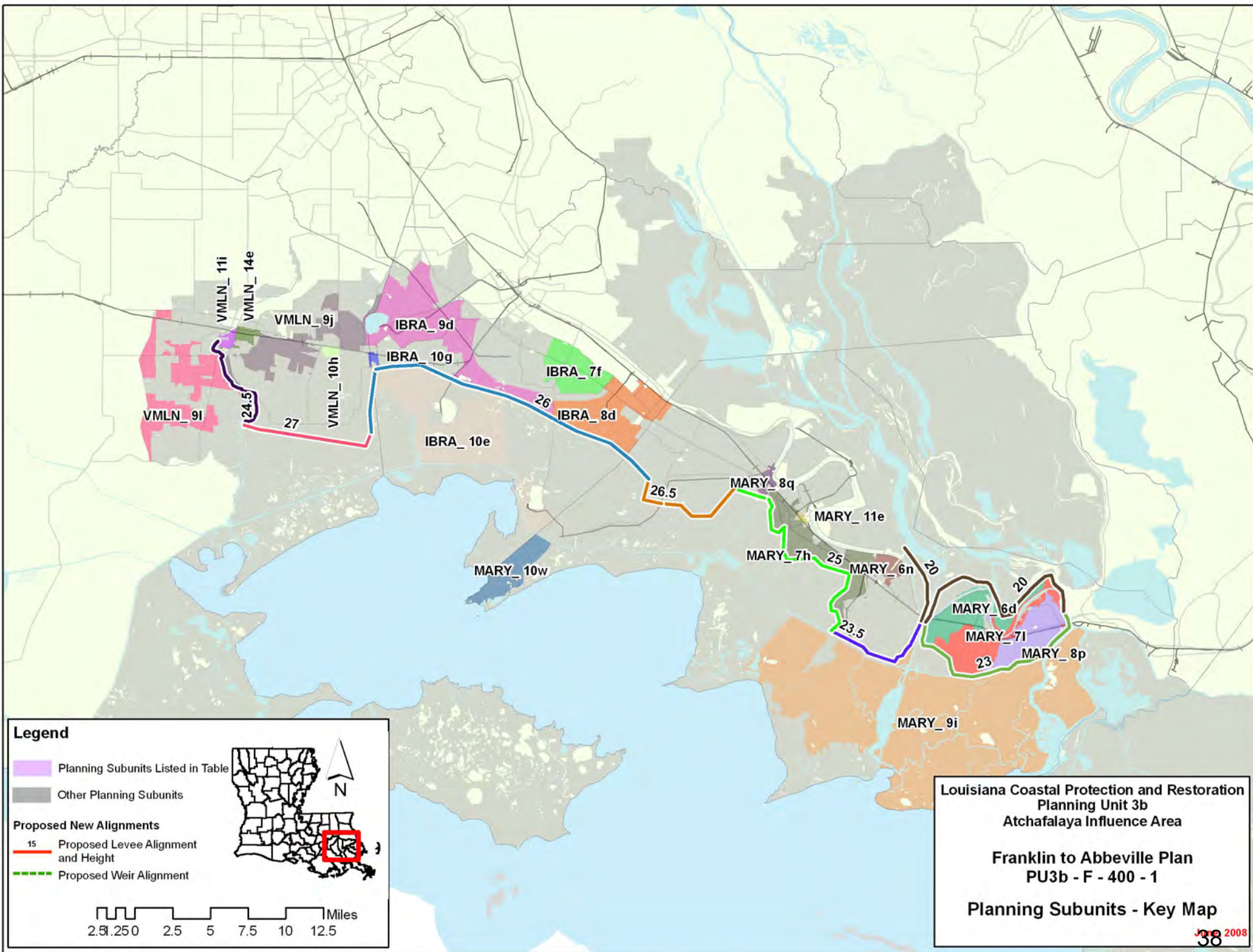
-  Primary Roads
-  Planning Unit Boundary
-  New Levees & Existing Levee Modifications



Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area

Franklin to Abbeville Plan
PU3b - F - 400 - 1
 (400 - Year Design Level)

November 2007



Louisiana Coastal Protection and Restoration
 Planning Unit 3b
 Atchafalaya Influence Area

Franklin to Abbeville Plan
 PU3b - F - 400 - 1

Planning Subunits - Key Map

Alternative: PU3b-F-400-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| IBRA_ 10e | 11.6 | 12.5 | 15.5 | 17.1 | 18.0 | 20.0 | 14.8 | 15.7 | 18.7 | 20.3 | 21.2 | 23.2 |
| IBRA_ 10g | 11.5 | 4.3 | 15.4 | 4.5 | 17.8 | 5.6 | 14.7 | 4.3 | 18.6 | 4.5 | 21.0 | 5.6 |
| IBRA_ 7f | 8.1 | 3.9 | 11.3 | 4.0 | 14.5 | 5.3 | 11.3 | 3.9 | 14.5 | 4.0 | 17.7 | 5.3 |
| IBRA_ 8d | 10.1 | 3.9 | 15.2 | 4.0 | 19.1 | 5.3 | 13.3 | 3.9 | 18.4 | 4.0 | 22.3 | 5.3 |
| IBRA_ 9d | 9.0 | 3.9 | 13.8 | 4.0 | 17.1 | 5.3 | 12.2 | 3.9 | 17.0 | 4.0 | 20.3 | 5.3 |
| MARY_ 10w | 11.7 | 11.9 | 16.0 | 16.2 | 17.9 | 19.2 | 13.9 | 15.1 | 17.6 | 19.4 | 20.0 | 22.4 |
| MARY_ 11e | 7.8 | 0.2 | 11.3 | 0.4 | 14.1 | 1.5 | 11.0 | 0.2 | 14.5 | 0.4 | 17.3 | 1.5 |
| MARY_ 6d | 7.8 | -0.6 | 9.6 | -0.5 | 12.0 | 0.1 | 11.0 | -0.6 | 12.8 | -0.5 | 15.2 | 0.1 |
| MARY_ 6n | 7.9 | 0.2 | 13.9 | 0.4 | 14.8 | 1.5 | 11.1 | 0.2 | 17.1 | 0.4 | 18.0 | 1.5 |
| MARY_ 7h | 7.8 | 0.2 | 10.9 | 0.4 | 13.2 | 1.5 | 11.0 | 0.2 | 14.1 | 0.4 | 16.4 | 1.5 |
| MARY_ 7l | 7.8 | -0.6 | 10.6 | -0.5 | 13.1 | 0.1 | 11.0 | -0.6 | 13.8 | -0.5 | 16.3 | 0.1 |
| MARY_ 8p | 8.6 | -0.6 | 12.4 | -0.5 | 14.8 | 0.1 | 11.8 | -0.6 | 15.6 | -0.5 | 18.0 | 0.1 |
| MARY_ 8q | 8.2 | 2.8 | 13.5 | 3.0 | 17.2 | 3.6 | 11.4 | 2.8 | 16.7 | 3.0 | 20.4 | 3.6 |
| MARY_ 9i | 9.9 | 10.5 | 13.4 | 14.2 | 15.4 | 16.4 | 13.1 | 13.7 | 16.6 | 17.4 | 18.6 | 19.6 |
| VMLN_ 10h | 11.4 | 4.3 | 15.6 | 4.5 | 18.3 | 5.6 | 14.6 | 4.3 | 18.8 | 4.5 | 21.5 | 5.6 |
| VMLN_ 11i | 7.8 | 4.3 | 11.3 | 4.5 | 14.8 | 5.6 | 11.0 | 4.3 | 14.5 | 4.5 | 18.0 | 5.6 |
| VMLN_ 14e | 7.8 | 4.3 | 9.4 | 4.5 | 14.3 | 5.6 | 11.0 | 4.3 | 12.6 | 4.5 | 17.5 | 5.6 |
| VMLN_ 9j | 7.8 | 4.3 | 13.1 | 4.5 | 16.3 | 5.6 | 11.0 | 4.3 | 16.3 | 4.5 | 19.5 | 5.6 |
| VMLN_ 9l | 10.6 | 10.9 | 13.7 | 12.5 | 15.5 | 14.0 | 13.8 | 14.1 | 16.9 | 15.7 | 18.7 | 17.2 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

| | | | | | |
|---------------------------------|--|---------------------------------|---------------|------------------|---|
| Planning Unit: | 3b | Alt. No.: | PU3b-F-1000-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | 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. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

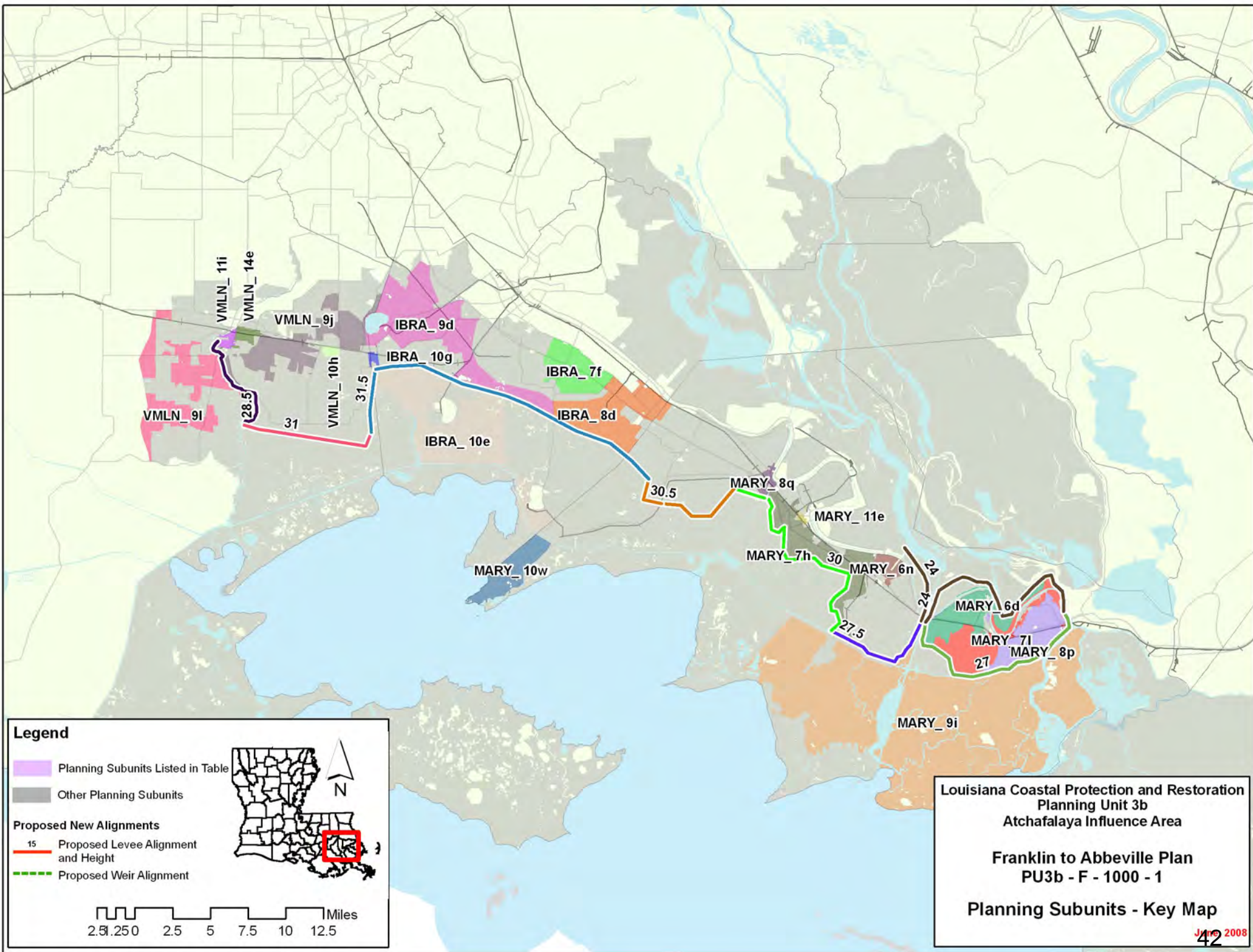
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,830 | 2,327 | 121 | 154 | 647 | 35 | 202 | 19 | 5 |
| | | Mid | | 3,340 | 188 | 229 | 1,023 | 55 | 178 | 19 | 5 |
| | | Low | | 4,201 | 267 | 282 | 1,236 | 66 | 154 | 18 | 5 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,832 | 2,463 | 132 | 76 | 684 | 38 | 202 | 19 | 5 |
| | | Mid | | 3,492 | 202 | 96 | 1,069 | 60 | 178 | 19 | 5 |
| | | Low | | 4,394 | 283 | 106 | 1,259 | 67 | 154 | 18 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,830 | 2,178 | 121 | 154 | 624 | 35 | 202 | 19 | 5 |
| | | Mid | | 3,172 | 186 | 229 | 981 | 54 | 178 | 19 | 5 |
| | | Low | | 4,011 | 261 | 280 | 1,173 | 63 | 154 | 18 | 5 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,832 | 2,307 | 131 | 170 | 659 | 38 | 202 | 19 | 5 |
| | | Mid | | 3,319 | 199 | 247 | 1,019 | 57 | 178 | 19 | 5 |
| | | Low | | 4,191 | 275 | 294 | 1,204 | 66 | 154 | 18 | 4 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 14 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 5,200 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 12,618 | 12,637 | Structural Component | | 31,074 | 31,087 | 31,074 | 31,087 | |
| | 3 / 4 | 12,618 | 12,637 | Total Project | | 35,830 | 35,884 | 35,830 | 35,884 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Structural Plan Franklin to Abbeville Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 222 | 1,523 | 282 | 1,013 | 223 | 1,543 | 285 | |
| 100-year | 4,254 | 711 | 5,717 | 876 | 4,148 | 633 | 5,447 | 747 | |
| 400-year | 8,571 | 1,236 | 9,628 | 1,408 | 7,772 | 983 | 8,782 | 1,143 | |
| 1,000-year | 11,203 | 1,652 | 11,827 | 1,751 | 10,886 | 1,433 | 11,680 | 1,593 | |
| 2,000-year | 12,281 | 1,844 | 12,591 | 1,922 | 12,370 | 1,696 | 12,769 | 1,773 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU3b-F-1000-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| IBRA_ 10e | 11.6 | 12.5 | 15.5 | 17.1 | 18.0 | 20.0 | 14.8 | 15.7 | 18.7 | 20.3 | 21.2 | 23.2 |
| IBRA_ 10g | 11.5 | 4.3 | 15.4 | 4.3 | 17.8 | 4.5 | 14.7 | 4.3 | 18.6 | 4.3 | 21.0 | 4.5 |
| IBRA_ 7f | 8.1 | 3.9 | 11.3 | 3.9 | 14.5 | 4.0 | 11.3 | 3.9 | 14.5 | 3.9 | 17.7 | 4.0 |
| IBRA_ 8d | 10.1 | 3.9 | 15.2 | 3.9 | 19.1 | 4.0 | 13.3 | 3.9 | 18.4 | 3.9 | 22.3 | 4.0 |
| IBRA_ 9d | 9.0 | 3.9 | 13.8 | 3.9 | 17.1 | 4.0 | 12.2 | 3.9 | 17.0 | 3.9 | 20.3 | 4.0 |
| MARY_ 10w | 11.7 | 11.9 | 16.0 | 16.2 | 17.9 | 19.2 | 13.9 | 15.1 | 17.6 | 19.4 | 20.0 | 22.4 |
| MARY_ 11e | 7.8 | 0.2 | 11.3 | 0.2 | 14.1 | 0.4 | 11.0 | 0.2 | 14.5 | 0.2 | 17.3 | 0.4 |
| MARY_ 6d | 7.8 | -0.6 | 9.6 | -0.6 | 12.0 | -0.5 | 11.0 | -0.6 | 12.8 | -0.6 | 15.2 | -0.5 |
| MARY_ 6n | 7.9 | 0.2 | 13.9 | 0.2 | 14.8 | 0.4 | 11.1 | 0.2 | 17.1 | 0.2 | 18.0 | 0.4 |
| MARY_ 7h | 7.8 | 0.2 | 10.9 | 0.2 | 13.2 | 0.4 | 11.0 | 0.2 | 14.1 | 0.2 | 16.4 | 0.4 |
| MARY_ 7l | 7.8 | -0.6 | 10.6 | -0.6 | 13.1 | -0.5 | 11.0 | -0.6 | 13.8 | -0.6 | 16.3 | -0.5 |
| MARY_ 8p | 8.6 | -0.6 | 12.4 | -0.6 | 14.8 | -0.5 | 11.8 | -0.6 | 15.6 | -0.6 | 18.0 | -0.5 |
| MARY_ 8q | 8.2 | 2.8 | 13.5 | 2.9 | 17.2 | 3.0 | 11.4 | 2.8 | 16.7 | 2.9 | 20.4 | 3.0 |
| MARY_ 9i | 9.9 | 10.5 | 13.4 | 14.2 | 15.4 | 16.4 | 13.1 | 13.7 | 16.6 | 17.4 | 18.6 | 19.6 |
| VMLN_ 10h | 11.4 | 4.3 | 15.6 | 4.3 | 18.3 | 4.5 | 14.6 | 4.3 | 18.8 | 4.3 | 21.5 | 4.5 |
| VMLN_ 11i | 7.8 | 4.3 | 11.3 | 4.3 | 14.8 | 4.5 | 11.0 | 4.3 | 14.5 | 4.3 | 18.0 | 4.5 |
| VMLN_ 14e | 7.8 | 4.3 | 9.4 | 4.3 | 14.3 | 4.5 | 11.0 | 4.3 | 12.6 | 4.3 | 17.5 | 4.5 |
| VMLN_ 9j | 7.8 | 4.3 | 13.1 | 4.3 | 16.3 | 4.5 | 11.0 | 4.3 | 16.3 | 4.3 | 19.5 | 4.5 |
| VMLN_ 9l | 10.6 | 10.9 | 13.7 | 12.5 | 15.5 | 14.0 | 13.8 | 14.1 | 16.9 | 15.7 | 18.7 | 17.2 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

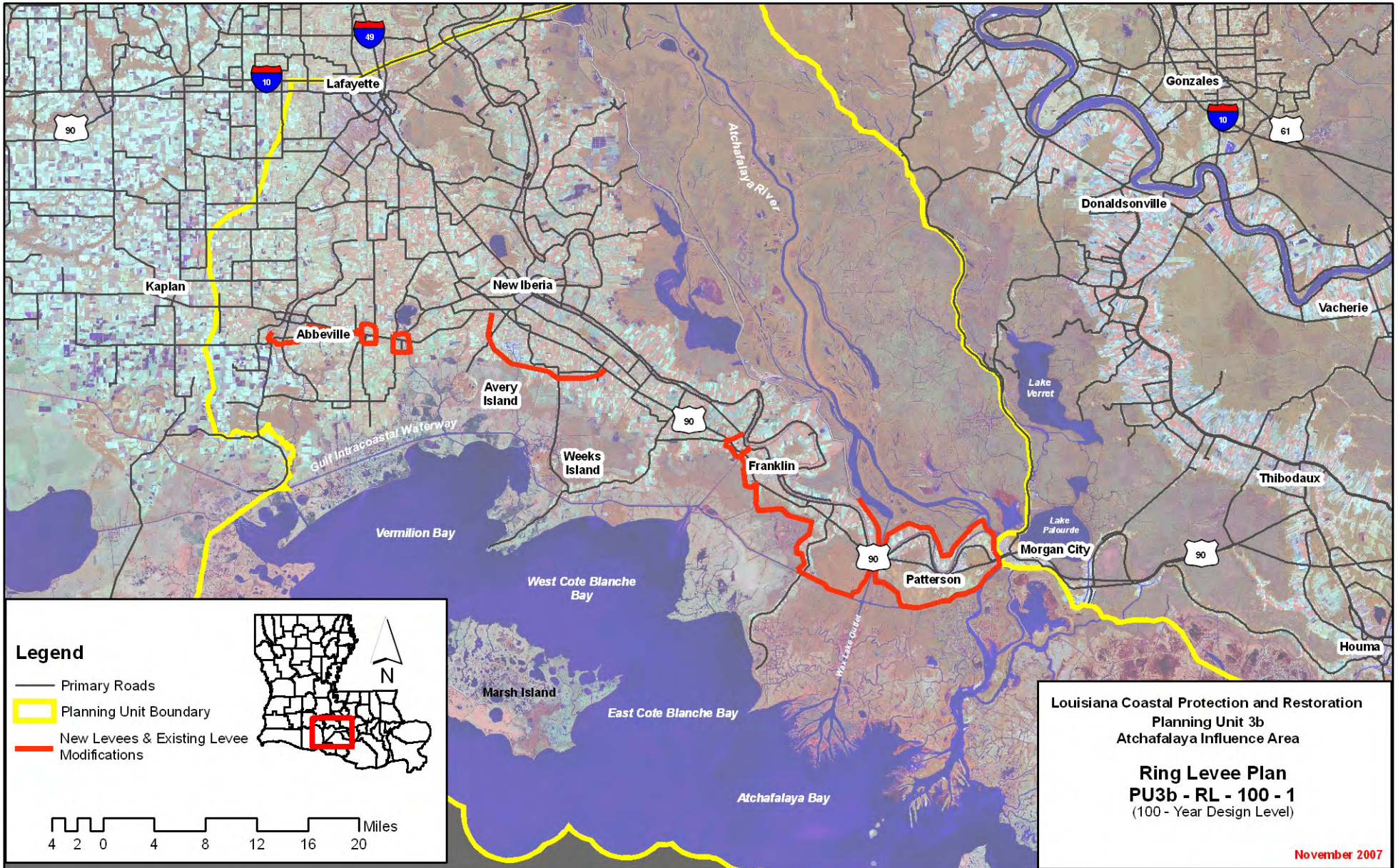
| | | | | | |
|---------------------------------|--|---------------------------------|---------------|------------------|---|
| Planning Unit: | 3b | Alt. No.: | PU3b-RL-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

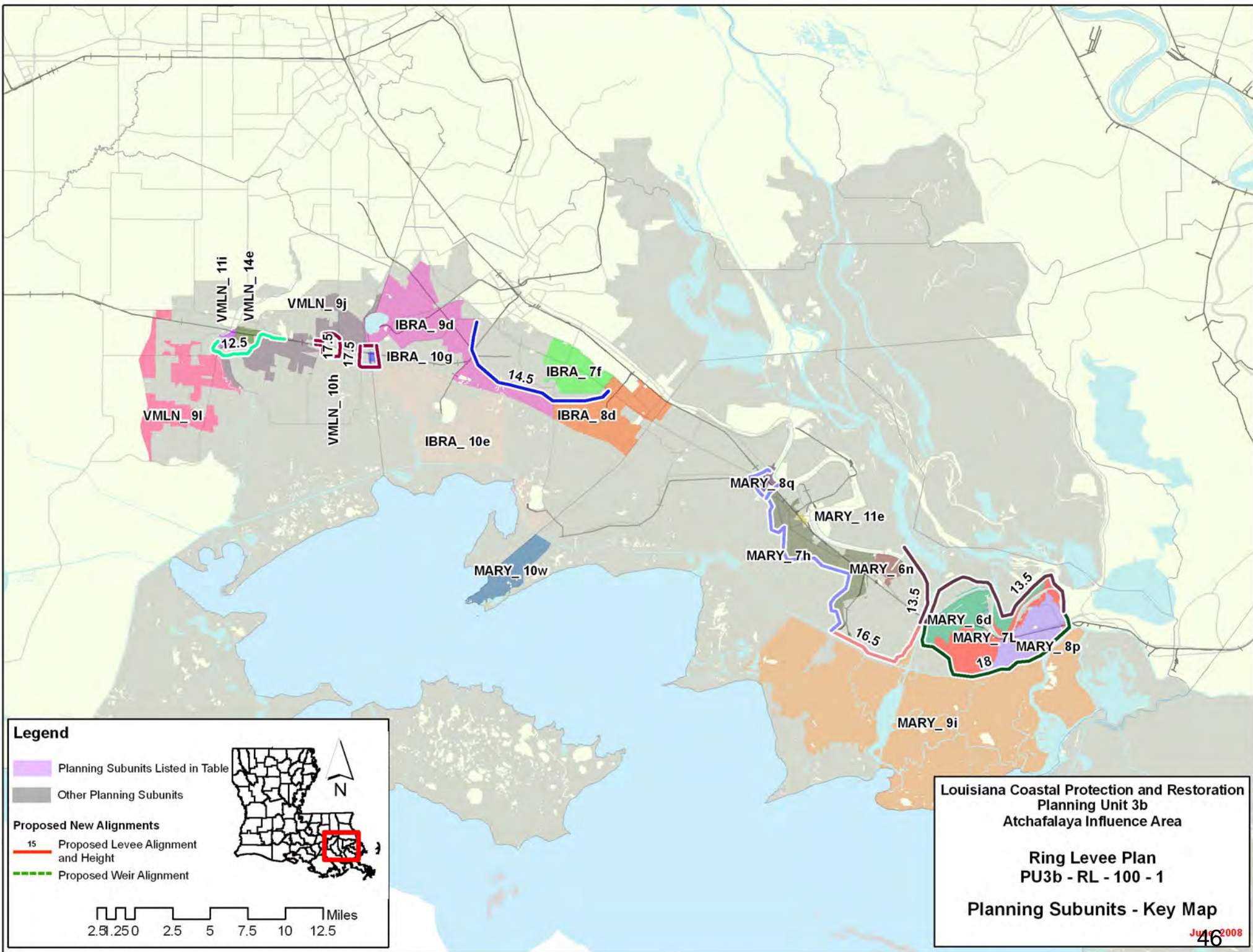
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|----------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 834 | 2,785 | 132 | 159 | 615 | 34 | 171 | 15 | 3 |
| | | Mid | | 3,885 | 205 | 234 | 974 | 54 | 147 | 12 | 3 |
| | | Low | | 5,093 | 303 | 297 | 1,221 | 66 | 123 | 11 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 838 | 2,959 | 146 | 101 | 664 | 39 | 171 | 13 | 3 |
| | | Mid | | 4,104 | 226 | 130 | 1,025 | 59 | 147 | 12 | 1 |
| | | Low | | 5,385 | 327 | 155 | 1,252 | 69 | 123 | 8 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 834 | 2,565 | 131 | 158 | 587 | 33 | 171 | 15 | 3 |
| | | Mid | | 3,644 | 203 | 233 | 925 | 52 | 147 | 12 | 3 |
| | | Low | | 4,811 | 296 | 295 | 1,141 | 63 | 123 | 11 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 838 | 2,737 | 144 | 174 | 623 | 36 | 171 | 13 | 3 |
| | | Mid | | 3,848 | 221 | 252 | 966 | 56 | 147 | 12 | 1 |
| | | Low | | 5,088 | 316 | 307 | 1,174 | 66 | 123 | 8 | 0 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 |
|--|--|----------|--|---|-------|-------------------------|------------|------------|------------|
| Construction Time (years) | | 10 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | 900 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | | Scenario | | (\$ Millions) | | Nonstructural Component | | 0 | 0 |
| | | 1 / 2 | | 5,890 | 5,916 | Structural Component | | 11,579 | 11,612 |
| | | 3 / 4 | | 5,890 | 5,916 | Total Project | | 16,335 | 16,408 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Structural Plan Ring Levee Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 316 | 1,523 | 453 | 1,013 | 315 | 1,543 | 456 | |
| 100-year | 4,254 | 1,664 | 5,717 | 2,321 | 4,148 | 1,564 | 5,447 | 2,055 | |
| 400-year | 8,571 | 6,800 | 9,628 | 7,302 | 7,772 | 6,294 | 8,782 | 6,694 | |
| 1,000-year | 11,203 | 9,637 | 11,827 | 9,951 | 10,886 | 9,032 | 11,680 | 9,388 | |
| 2,000-year | 12,281 | 10,525 | 12,591 | 10,723 | 12,370 | 10,107 | 12,769 | 10,340 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU3b-RL-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| IBRA_ 10e | 11.6 | 11.6 | 15.5 | 15.5 | 18.0 | 18.0 | 14.8 | 14.8 | 18.7 | 18.7 | 21.2 | 21.2 |
| IBRA_ 10g | 11.5 | 5.4 | 15.4 | 17.5 | 17.8 | 17.5 | 14.7 | 5.4 | 18.6 | 17.5 | 21.0 | 17.5 |
| IBRA_ 7f | 8.1 | 6.3 | 11.3 | 14.5 | 14.5 | 14.5 | 11.3 | 6.3 | 14.5 | 14.5 | 17.7 | 14.5 |
| IBRA_ 8d | 10.1 | 10.1 | 15.2 | 15.2 | 19.1 | 19.1 | 13.3 | 13.3 | 18.4 | 18.4 | 22.3 | 22.3 |
| IBRA_ 9d | 9.0 | 9.0 | 13.8 | 13.8 | 17.1 | 17.1 | 12.2 | 12.2 | 17.0 | 17.0 | 20.3 | 20.3 |
| MARY_ 10w | 11.7 | 11.7 | 16.0 | 16.0 | 17.9 | 17.9 | 13.9 | 14.9 | 17.6 | 19.2 | 20.0 | 21.1 |
| MARY_ 11e | 7.8 | 0.5 | 11.3 | 9.8 | 14.1 | 16.5 | 11.0 | 0.5 | 14.5 | 9.8 | 17.3 | 16.5 |
| MARY_ 6d | 7.8 | -0.4 | 9.6 | 3.5 | 12.0 | 10.8 | 11.0 | -0.4 | 12.8 | 3.5 | 15.2 | 10.8 |
| MARY_ 6n | 7.9 | 0.5 | 13.9 | 9.8 | 14.8 | 16.5 | 11.1 | 0.5 | 17.1 | 9.8 | 18.0 | 16.5 |
| MARY_ 7h | 7.8 | 0.5 | 10.9 | 9.8 | 13.2 | 16.5 | 11.0 | 0.5 | 14.1 | 9.8 | 16.4 | 16.5 |
| MARY_ 7l | 7.8 | -0.4 | 10.6 | 3.5 | 13.1 | 10.8 | 11.0 | -0.4 | 13.8 | 3.5 | 16.3 | 10.8 |
| MARY_ 8p | 8.6 | -0.4 | 12.4 | 3.5 | 14.8 | 10.8 | 11.8 | -0.4 | 15.6 | 3.5 | 18.0 | 10.8 |
| MARY_ 8q | 8.2 | 5.2 | 13.5 | 16.5 | 17.2 | 16.5 | 11.4 | 5.2 | 16.7 | 16.5 | 20.4 | 16.5 |
| MARY_ 9i | 9.9 | 9.9 | 13.4 | 13.4 | 15.4 | 15.4 | 13.1 | 13.1 | 16.6 | 16.6 | 18.6 | 18.6 |
| VMLN_ 10h | 11.4 | 6.5 | 15.6 | 17.5 | 18.3 | 17.5 | 14.6 | 6.5 | 18.8 | 17.5 | 21.5 | 17.5 |
| VMLN_ 11i | 7.8 | 9.3 | 11.3 | 12.5 | 14.8 | 12.5 | 11.0 | 9.3 | 14.5 | 12.5 | 18.0 | 12.5 |
| VMLN_ 14e | 7.8 | 9.3 | 9.4 | 12.5 | 14.3 | 12.5 | 11.0 | 9.3 | 12.6 | 12.5 | 17.5 | 12.5 |
| VMLN_ 9j | 7.8 | 7.8 | 13.1 | 13.1 | 16.3 | 16.3 | 11.0 | 11.0 | 16.3 | 16.3 | 19.5 | 19.5 |
| VMLN_ 9l | 10.6 | 10.6 | 13.7 | 13.7 | 15.5 | 15.5 | 13.8 | 13.8 | 16.9 | 16.9 | 18.7 | 18.7 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

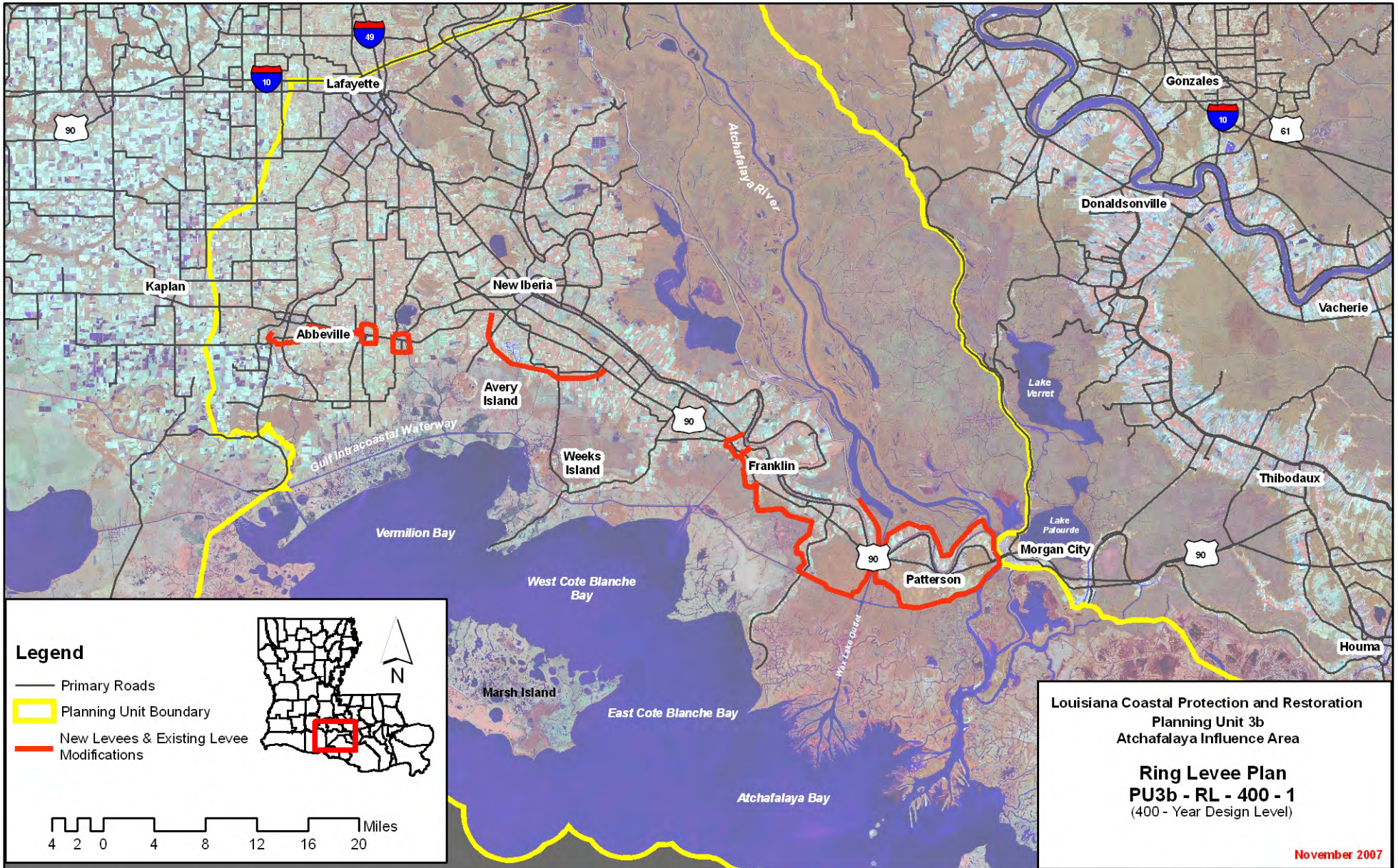
| | | | | | |
|---------------------------------|--|---------------------------------|---------------|------------------|---|
| Planning Unit: | 3b | Alt. No.: | PU3b-RL-400-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | None | |
| Structural Component: | See alternative description above. | | | | |

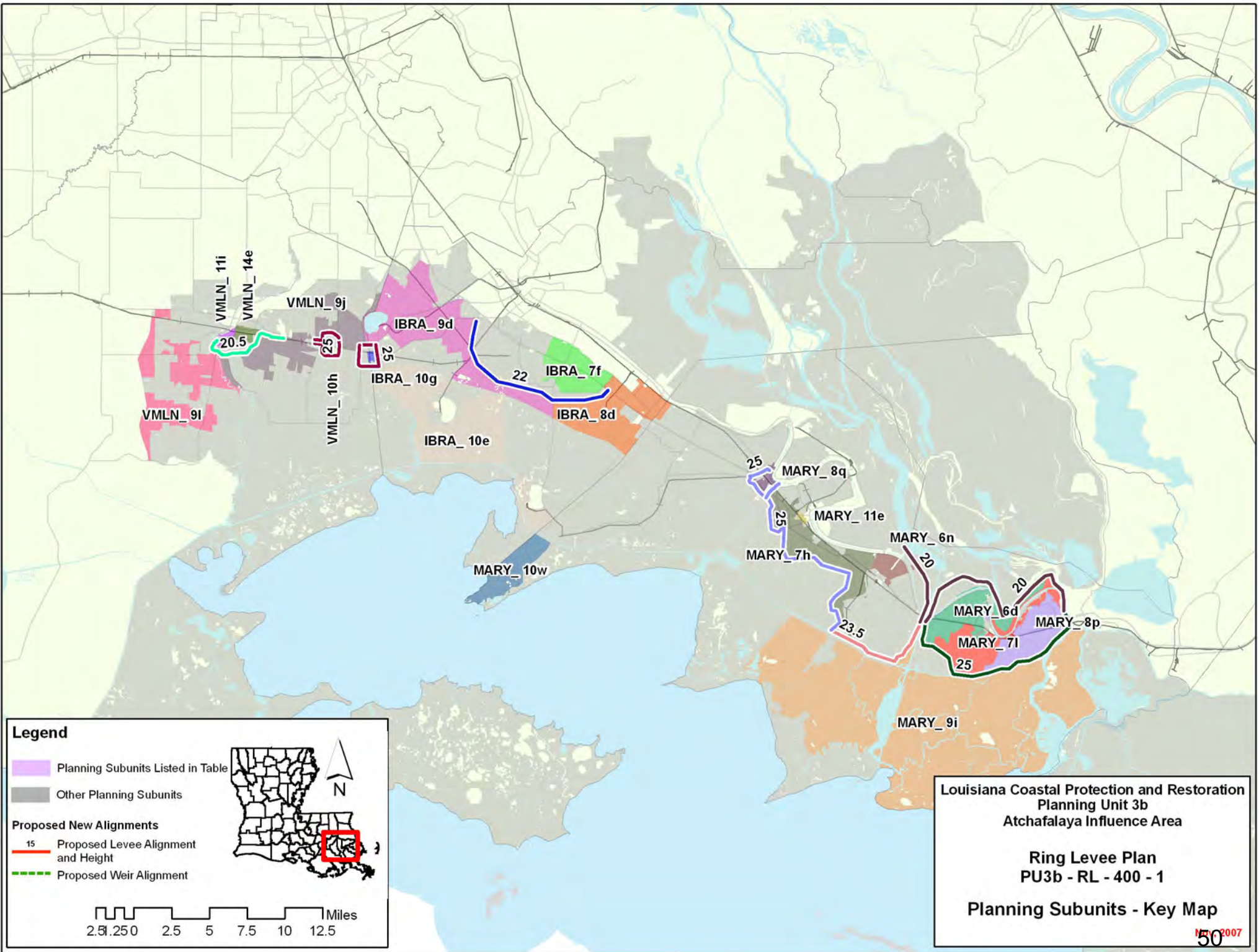
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,162 | 2,842 | 134 | 165 | 646 | 36 | 171 | 17 | 3 |
| | | Mid | | 3,943 | 207 | 239 | 1,009 | 56 | 147 | 16 | 3 |
| | | Low | | 4,988 | 299 | 297 | 1,238 | 67 | 123 | 15 | 3 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,165 | 3,027 | 150 | 100 | 698 | 41 | 171 | 15 | 3 |
| | | Mid | | 4,174 | 229 | 121 | 1,064 | 61 | 147 | 15 | 3 |
| | | Low | | 5,289 | 324 | 139 | 1,272 | 70 | 123 | 13 | 2 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,162 | 2,616 | 134 | 164 | 618 | 35 | 171 | 17 | 3 |
| | | Mid | | 3,695 | 204 | 237 | 960 | 54 | 147 | 16 | 3 |
| | | Low | | 4,698 | 290 | 294 | 1,163 | 64 | 123 | 15 | 3 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,165 | 2,799 | 148 | 182 | 658 | 39 | 171 | 15 | 3 |
| | | Mid | | 3,911 | 223 | 259 | 1,006 | 58 | 147 | 15 | 3 |
| | | Low | | 4,986 | 311 | 308 | 1,200 | 67 | 123 | 13 | 2 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 12 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 1,700 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 8,142 | 8,166 | Structural Component | | 17,996 | 18,024 | 17,996 | 18,024 | |
| | 3 / 4 | 8,142 | 8,166 | Total Project | | 22,752 | 22,820 | 22,752 | 22,820 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Structural Plan Ring Levee Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 316 | 1,523 | 453 | 1,013 | 315 | 1,543 | 456 | |
| 100-year | 4,254 | 1,628 | 5,717 | 2,284 | 4,148 | 1,526 | 5,447 | 2,017 | |
| 400-year | 8,571 | 3,993 | 9,628 | 4,495 | 7,772 | 3,117 | 8,782 | 3,516 | |
| 1,000-year | 11,203 | 6,852 | 11,827 | 7,166 | 10,886 | 5,917 | 11,680 | 6,273 | |
| 2,000-year | 12,281 | 9,058 | 12,591 | 9,256 | 12,370 | 8,573 | 12,769 | 8,807 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





VMLN_11i
VMLN_14e
VMLN_9j
VMLN_9i

VMLN_10h
VMLN_10g

IBRA_9d
IBRA_10g
IBRA_10e

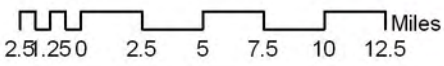
22
IBRA_7f
IBRA_8d

25
MARY_8q
MARY_11e
MARY_7h

MARY_6n
20
MARY_6d
MARY_7i
25
MARY_8p

MARY_9i

MARY_10w



Alternative: PU3b-RL-400-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| IBRA_ 10e | 11.6 | 11.6 | 15.5 | 15.5 | 18.0 | 18.0 | 14.8 | 14.8 | 18.7 | 18.7 | 21.2 | 21.2 |
| IBRA_ 10g | 11.5 | 3.7 | 15.4 | 5.5 | 17.8 | 10.5 | 14.7 | 3.7 | 18.6 | 5.5 | 21.0 | 10.5 |
| IBRA_ 7f | 8.1 | 6.0 | 11.3 | 6.2 | 14.5 | 8.4 | 11.3 | 6.0 | 14.5 | 6.2 | 17.7 | 8.4 |
| IBRA_ 8d | 10.1 | 10.1 | 15.2 | 15.2 | 19.1 | 19.1 | 13.3 | 13.3 | 18.4 | 18.4 | 22.3 | 22.3 |
| IBRA_ 9d | 9.0 | 9.0 | 13.8 | 13.8 | 17.1 | 17.1 | 12.2 | 12.2 | 17.0 | 17.0 | 20.3 | 20.3 |
| MARY_ 10w | 11.7 | 11.7 | 16.0 | 16.0 | 17.9 | 17.9 | 13.9 | 14.9 | 17.6 | 19.2 | 20.0 | 21.1 |
| MARY_ 11e | 7.8 | 0.2 | 11.3 | 0.4 | 14.1 | 1.5 | 11.0 | 0.2 | 14.5 | 0.4 | 17.3 | 1.5 |
| MARY_ 6d | 7.8 | -0.6 | 9.6 | -0.5 | 12.0 | 0.1 | 11.0 | -0.6 | 12.8 | -0.5 | 15.2 | 0.1 |
| MARY_ 6n | 7.9 | 0.2 | 13.9 | 0.4 | 14.8 | 1.5 | 11.1 | 0.2 | 17.1 | 0.4 | 18.0 | 1.5 |
| MARY_ 7h | 7.8 | 0.2 | 10.9 | 0.4 | 13.2 | 1.5 | 11.0 | 0.2 | 14.1 | 0.4 | 16.4 | 1.5 |
| MARY_ 7l | 7.8 | -0.6 | 10.6 | -0.5 | 13.1 | 0.1 | 11.0 | -0.6 | 13.8 | -0.5 | 16.3 | 0.1 |
| MARY_ 8p | 8.6 | -0.6 | 12.4 | -0.5 | 14.8 | 0.1 | 11.8 | -0.6 | 15.6 | -0.5 | 18.0 | 0.1 |
| MARY_ 8q | 8.2 | 3.9 | 13.5 | 4.7 | 17.2 | 9.6 | 11.4 | 3.9 | 16.7 | 4.7 | 20.4 | 9.6 |
| MARY_ 9i | 9.9 | 9.9 | 13.4 | 13.4 | 15.4 | 15.4 | 13.1 | 13.1 | 16.6 | 16.6 | 18.6 | 18.6 |
| VMLN_ 10h | 11.4 | 5.6 | 15.6 | 6.5 | 18.3 | 10.2 | 14.6 | 5.6 | 18.8 | 6.5 | 21.5 | 10.2 |
| VMLN_ 11i | 7.8 | 8.4 | 11.3 | 9.3 | 14.8 | 16.8 | 11.0 | 8.4 | 14.5 | 9.3 | 18.0 | 16.8 |
| VMLN_ 14e | 7.8 | 8.4 | 9.4 | 9.3 | 14.3 | 16.8 | 11.0 | 8.4 | 12.6 | 9.3 | 17.5 | 16.8 |
| VMLN_ 9j | 7.8 | 7.8 | 13.1 | 13.1 | 16.3 | 16.3 | 11.0 | 11.0 | 16.3 | 16.3 | 19.5 | 19.5 |
| VMLN_ 9l | 10.6 | 10.6 | 13.7 | 13.7 | 15.5 | 15.5 | 13.8 | 13.8 | 16.9 | 16.9 | 18.7 | 18.7 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 3.2 feet | | Levee Overtopping: | | | No Friction Waves | | | |

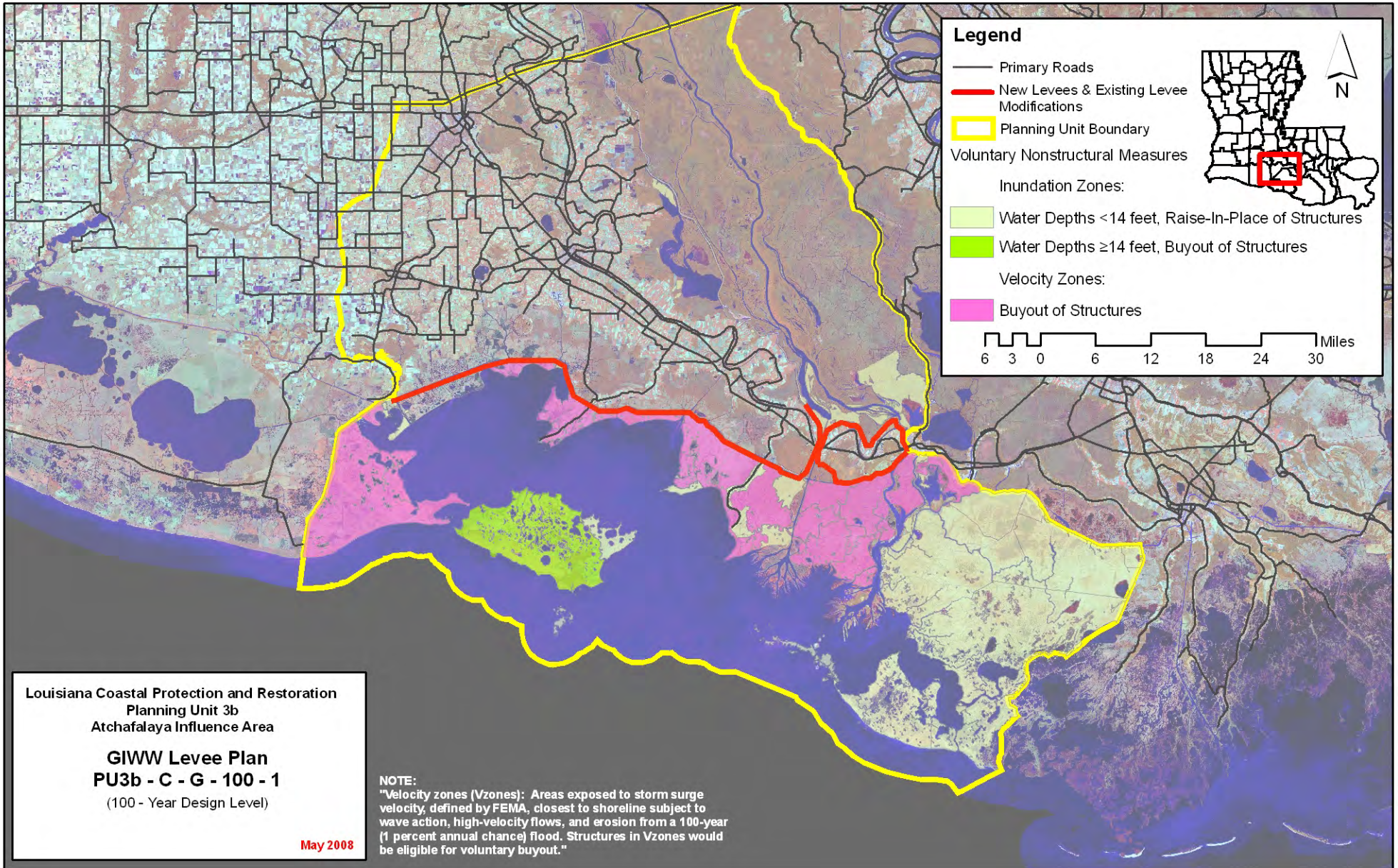
| | | | | | |
|---------------------------------|---|---------------------------------|----------------|-------------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-C-G-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3b-G-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU3b-G-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,032 | 1,624 | 78 | 100 | 432 | 23 | 312 | 20 | 5 |
| | | Mid | | 2,429 | 129 | 163 | 744 | 39 | 288 | 19 | 5 |
| | | Low | | 3,191 | 191 | 208 | 928 | 48 | 264 | 18 | 5 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,035 | 1,697 | 84 | 36 | 461 | 25 | 312 | 20 | 5 |
| | | Mid | | 2,515 | 136 | 48 | 766 | 41 | 288 | 18 | 5 |
| | | Low | | 3,288 | 201 | 61 | 942 | 49 | 264 | 18 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,033 | 1,526 | 78 | 100 | 415 | 22 | 312 | 20 | 5 |
| | | Mid | | 2,322 | 128 | 162 | 713 | 39 | 288 | 19 | 5 |
| | | Low | | 3,066 | 189 | 209 | 887 | 47 | 264 | 18 | 5 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,036 | 1,597 | 83 | 113 | 444 | 25 | 312 | 20 | 5 |
| | | Mid | | 2,404 | 135 | 174 | 736 | 41 | 288 | 18 | 5 |
| | | Low | | 3,162 | 198 | 216 | 904 | 48 | 264 | 18 | 4 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 2,300 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | -8 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 244 | 244 | 255 | 255 | |
| | 1 / 2 | 7,132 | 7,155 | Structural Component | | 15,214 | 15,238 | 15,214 | 15,238 | |
| | 3 / 4 | 7,136 | 7,159 | Total Project | | 20,214 | 20,278 | 20,225 | 20,290 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Comprehensive Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 68 | 1,523 | 83 | 1,013 | 68 | 1,543 | 84 | |
| 100-year | 4,254 | 147 | 5,717 | 204 | 4,148 | 146 | 5,447 | 200 | |
| 400-year | 8,571 | 426 | 9,628 | 478 | 7,772 | 435 | 8,782 | 496 | |
| 1,000-year | 11,203 | 2,733 | 11,827 | 2,754 | 10,886 | 2,815 | 11,680 | 2,839 | |
| 2,000-year | 12,281 | 6,240 | 12,591 | 6,286 | 12,370 | 6,192 | 12,769 | 6,211 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



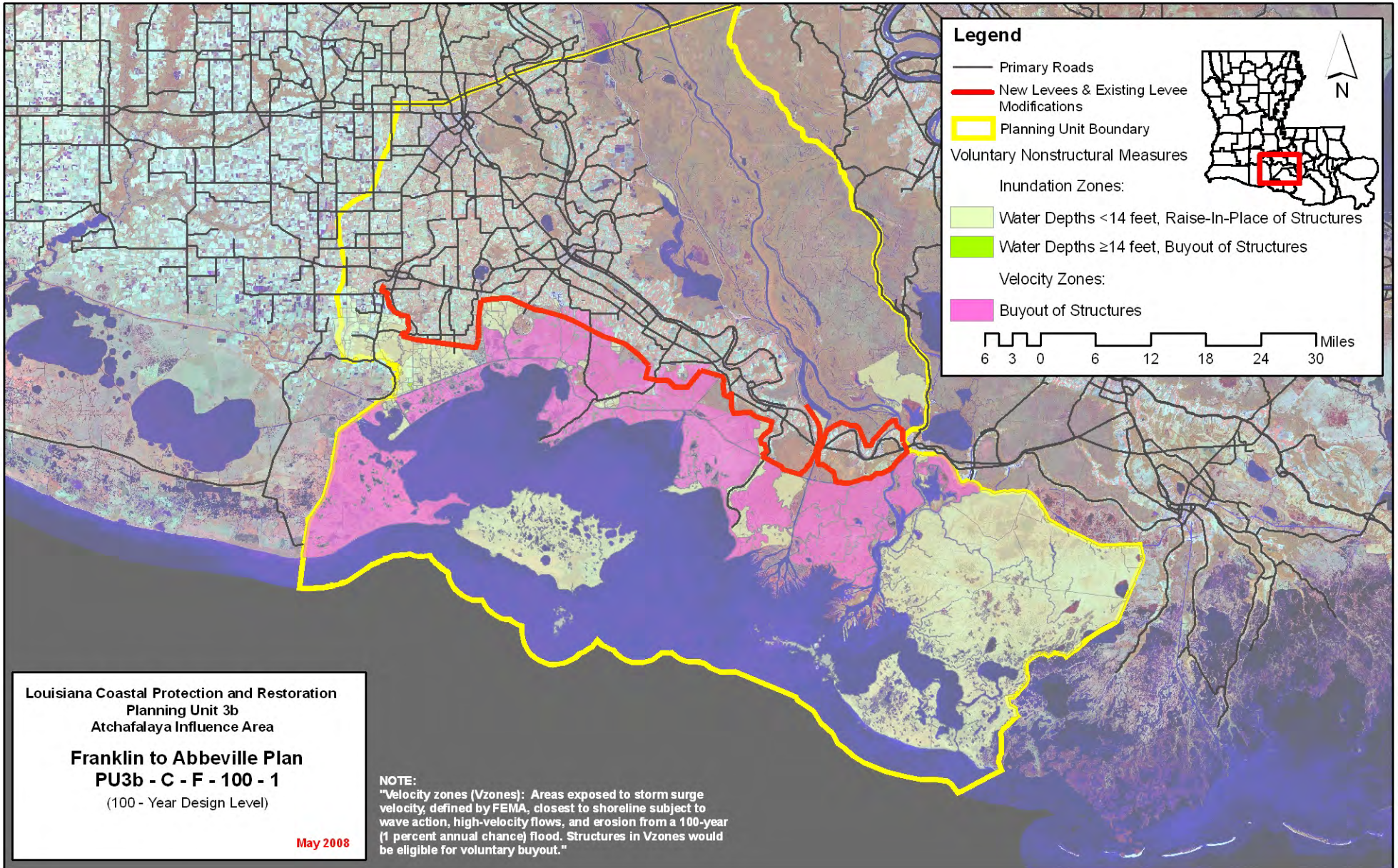
| | | | | | |
|---------------------------------|---|---------------------------------|----------------|-------------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-C-F-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3b-F-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU3b-F-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 972 | 1,904 | 80 | 101 | 432 | 23 | 202 | 16 | 3 |
| | | Mid | | 2,825 | 137 | 171 | 773 | 42 | 178 | 15 | 3 |
| | | Low | | 3,839 | 229 | 238 | 1,046 | 56 | 154 | 14 | 1 |
| 2 | High RSLR High Employment Dispersed Population | High | 976 | 2,002 | 87 | 38 | 465 | 26 | 202 | 16 | 3 |
| | | Mid | | 2,934 | 148 | 60 | 808 | 45 | 178 | 15 | 2 |
| | | Low | | 3,987 | 242 | 92 | 1,060 | 57 | 154 | 14 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 973 | 1,775 | 80 | 100 | 414 | 23 | 202 | 16 | 3 |
| | | Mid | | 2,672 | 135 | 170 | 739 | 41 | 178 | 15 | 3 |
| | | Low | | 3,666 | 223 | 234 | 970 | 52 | 154 | 14 | 1 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 977 | 1,866 | 87 | 115 | 447 | 25 | 202 | 16 | 3 |
| | | Mid | | 2,779 | 145 | 182 | 763 | 43 | 178 | 15 | 2 |
| | | Low | | 3,801 | 233 | 243 | 991 | 54 | 154 | 14 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 10 | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 2,500 | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 2 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 365 | 365 | 379 | 379 |
| | 1 / 2 | 6,749 | 6,776 | Structural Component | | 13,918 | 13,955 | 13,918 | 13,955 |
| | 3 / 4 | 6,754 | 6,781 | Total Project | | 19,039 | 19,116 | 19,053 | 19,130 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Comprehensive Plan Franklin to Abbeville Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 83 | 1,523 | 102 | 1,013 | 82 | 1,543 | 102 | |
| 100-year | 4,254 | 418 | 5,717 | 631 | 4,148 | 351 | 5,447 | 508 | |
| 400-year | 8,571 | 5,300 | 9,628 | 5,482 | 7,772 | 4,923 | 8,782 | 5,092 | |
| 1,000-year | 11,203 | 10,720 | 11,827 | 10,826 | 10,886 | 10,477 | 11,680 | 10,643 | |
| 2,000-year | 12,281 | 11,245 | 12,591 | 11,328 | 12,370 | 11,154 | 12,769 | 11,236 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



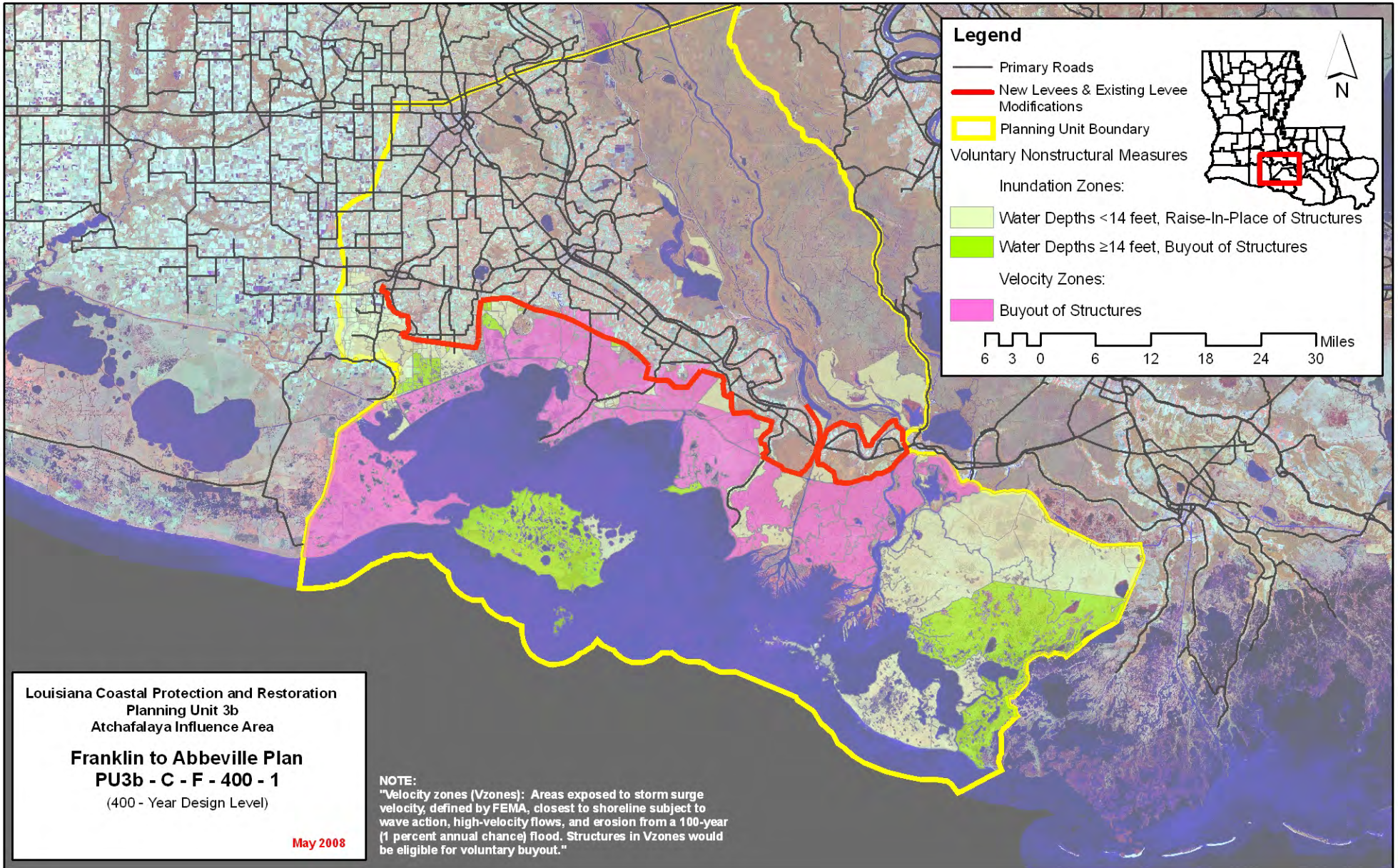
| | | | | | |
|---------------------------------|---|---------------------------------|----------------|-------------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-C-F-400-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3b-F-400-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 400-yr complementary measures | |
| Structural Component: | Same as Alternative PU3b-F-400-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,455 | 2,092 | 85 | 115 | 482 | 26 | 202 | 19 | 5 |
| | | Mid | | 3,014 | 141 | 181 | 821 | 44 | 178 | 19 | 5 |
| | | Low | | 3,801 | 209 | 229 | 1,017 | 54 | 154 | 18 | 5 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,467 | 2,207 | 93 | 41 | 511 | 29 | 202 | 19 | 5 |
| | | Mid | | 3,144 | 152 | 58 | 862 | 48 | 178 | 19 | 5 |
| | | Low | | 3,970 | 222 | 67 | 1,036 | 55 | 154 | 18 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,463 | 1,953 | 84 | 114 | 464 | 26 | 202 | 19 | 5 |
| | | Mid | | 2,857 | 139 | 180 | 785 | 43 | 178 | 19 | 5 |
| | | Low | | 3,624 | 204 | 226 | 960 | 51 | 154 | 18 | 5 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,475 | 2,061 | 92 | 126 | 490 | 28 | 202 | 19 | 5 |
| | | Mid | | 2,983 | 149 | 195 | 816 | 46 | 178 | 19 | 5 |
| | | Low | | 3,781 | 215 | 238 | 985 | 53 | 154 | 18 | 4 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 12 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 3,900 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 293 | 293 | 452 | 452 | |
| | 1 / 2 | 10,061 | 10,144 | Structural Component | | 23,445 | 23,639 | 23,445 | 23,639 | |
| | 3 / 4 | 10,117 | 10,199 | Total Project | | 28,494 | 28,729 | 28,652 | 28,888 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Comprehensive Plan Franklin to Abbeville Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 70 | 1,523 | 88 | 1,013 | 70 | 1,543 | 88 | |
| 100-year | 4,254 | 244 | 5,717 | 376 | 4,148 | 185 | 5,447 | 277 | |
| 400-year | 8,571 | 763 | 9,628 | 1,051 | 7,772 | 540 | 8,782 | 800 | |
| 1,000-year | 11,203 | 1,369 | 11,827 | 1,520 | 10,886 | 1,155 | 11,680 | 1,365 | |
| 2,000-year | 12,281 | 1,921 | 12,591 | 2,017 | 12,370 | 1,790 | 12,769 | 1,884 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



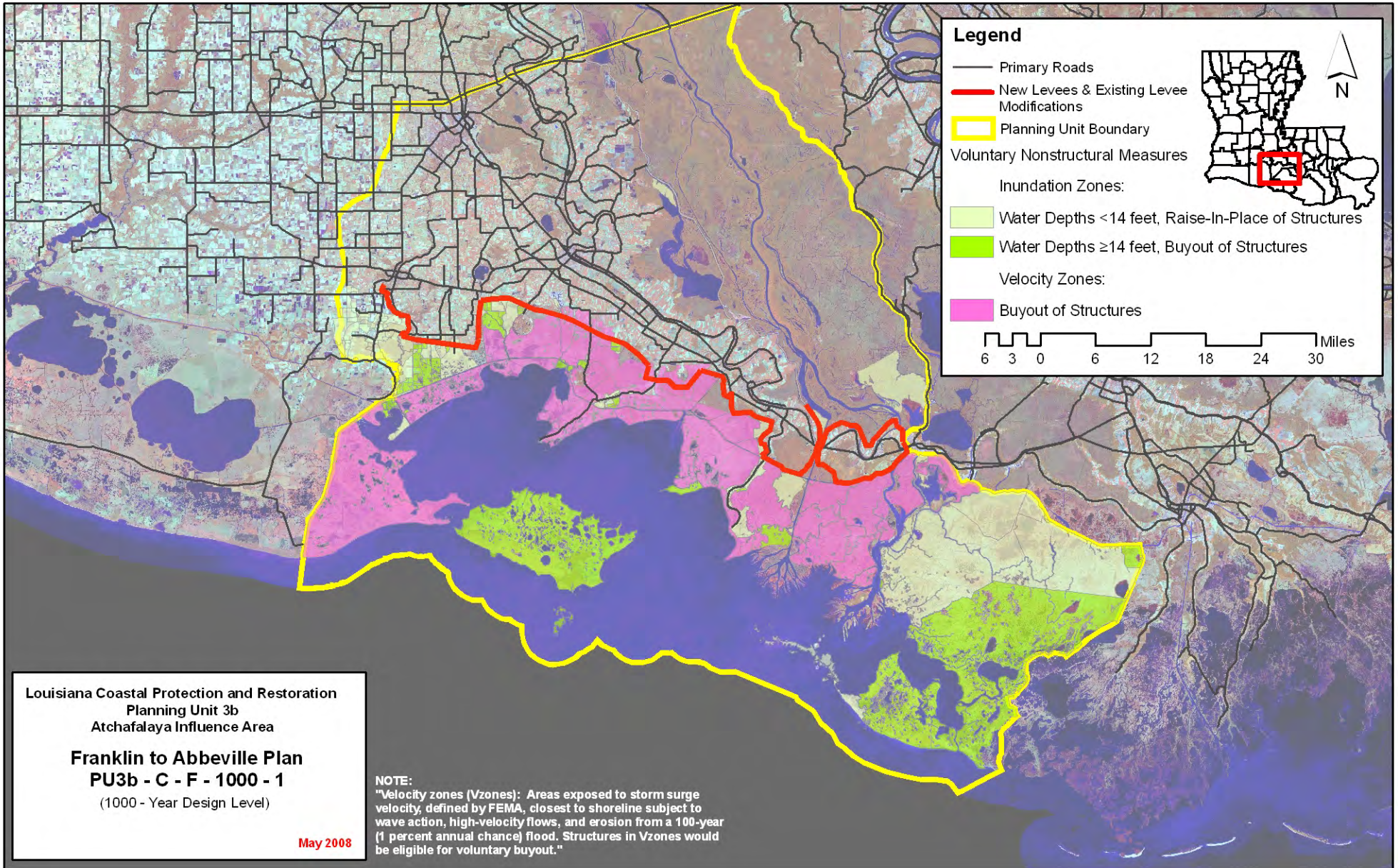
| | | | | | |
|---------------------------------|--|---------------------------------|-----------------|--------------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-C-F-1000-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3b-F-1000-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 1000-yr complementary measures | |
| Structural Component: | Same as Alternative PU3b-F-1000-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,853 | 2,269 | 91 | 128 | 530 | 29 | 202 | 19 | 5 |
| | | Mid | | 3,280 | 152 | 202 | 900 | 49 | 178 | 19 | 5 |
| | | Low | | 4,128 | 224 | 251 | 1,104 | 58 | 154 | 18 | 5 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,856 | 2,403 | 100 | 50 | 566 | 32 | 202 | 19 | 5 |
| | | Mid | | 3,431 | 164 | 65 | 937 | 52 | 178 | 19 | 5 |
| | | Low | | 4,320 | 239 | 78 | 1,137 | 61 | 154 | 18 | 4 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,855 | 2,119 | 91 | 129 | 512 | 29 | 202 | 19 | 5 |
| | | Mid | | 3,112 | 151 | 202 | 866 | 48 | 178 | 19 | 5 |
| | | Low | | 3,939 | 220 | 252 | 1,057 | 57 | 154 | 18 | 5 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,857 | 2,246 | 99 | 144 | 545 | 32 | 202 | 19 | 5 |
| | | Mid | | 3,258 | 162 | 219 | 903 | 51 | 178 | 19 | 5 |
| | | Low | | 4,119 | 233 | 267 | 1,088 | 60 | 154 | 18 | 4 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 14 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 5,200 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 459 | 459 | 492 | 492 | |
| | 1 / 2 | 12,779 | 12,798 | Structural Component | | 31,074 | 31,087 | 31,074 | 31,087 | |
| | 3 / 4 | 12,790 | 12,809 | Total Project | | 36,288 | 36,343 | 36,321 | 36,375 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Comprehensive Plan Franklin to Abbeville Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 65 | 1,523 | 81 | 1,013 | 65 | 1,543 | 82 | |
| 100-year | 4,254 | 153 | 5,717 | 226 | 4,148 | 144 | 5,447 | 196 | |
| 400-year | 8,571 | 556 | 9,628 | 811 | 7,772 | 402 | 8,782 | 616 | |
| 1,000-year | 11,203 | 1,125 | 11,827 | 1,365 | 10,886 | 956 | 11,680 | 1,228 | |
| 2,000-year | 12,281 | 1,507 | 12,591 | 1,636 | 12,370 | 1,368 | 12,769 | 1,491 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



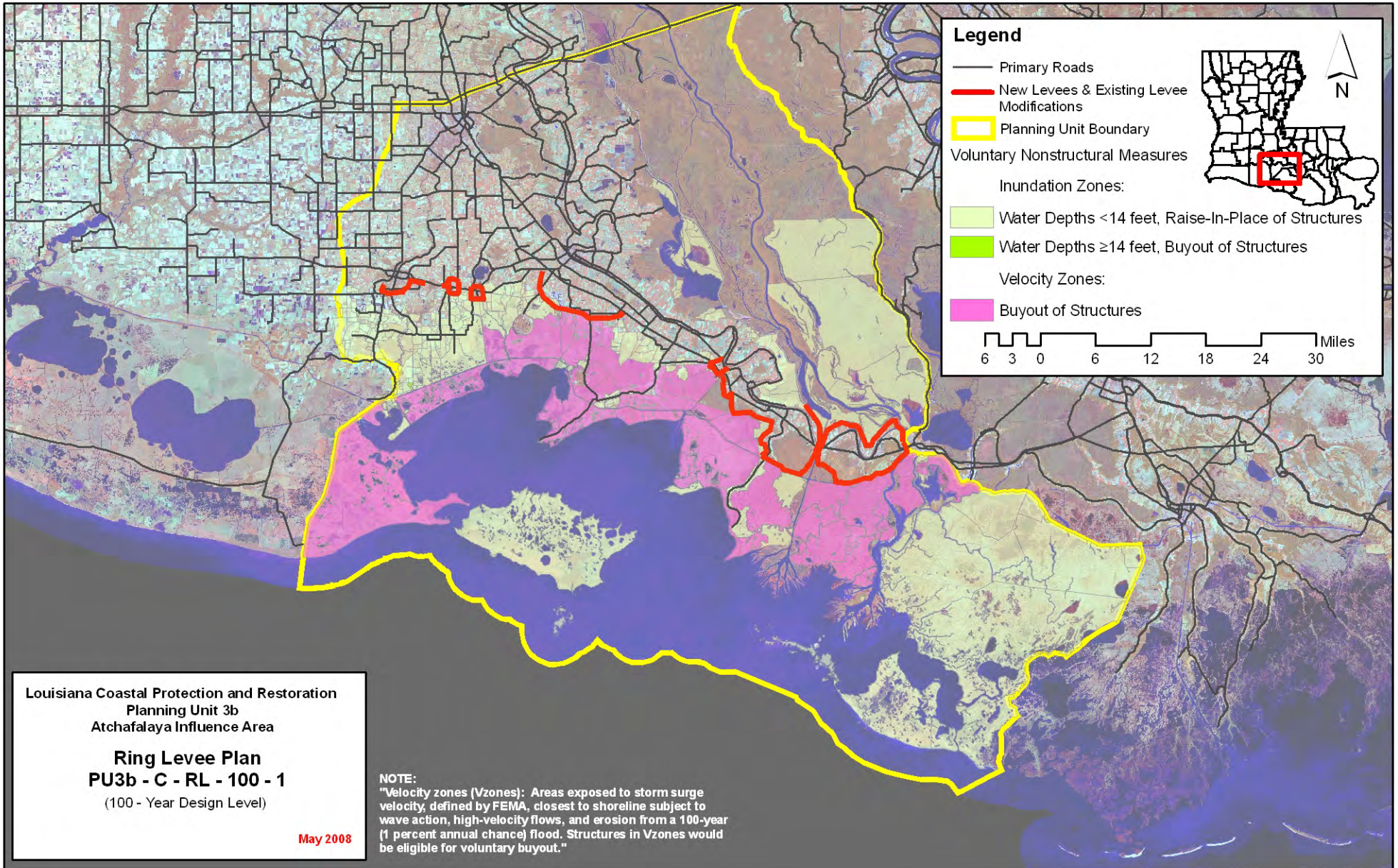
| | | | | | |
|---------------------------------|--|---------------------------------|-----------------|-------------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-C-RL-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3b-RL-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 100-yr complementary measures | |
| Structural Component: | Same as Alternative PU3b-RL-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 878 | 2,711 | 91 | 126 | 472 | 26 | 171 | 15 | 3 |
| | | Mid | | 3,807 | 154 | 204 | 841 | 47 | 147 | 12 | 3 |
| | | Low | | 4,988 | 244 | 267 | 1,085 | 60 | 123 | 11 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 882 | 2,882 | 103 | 73 | 535 | 32 | 171 | 13 | 3 |
| | | Mid | | 4,026 | 174 | 100 | 889 | 52 | 147 | 12 | 1 |
| | | Low | | 5,280 | 269 | 124 | 1,110 | 62 | 123 | 8 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 880 | 2,487 | 90 | 127 | 455 | 26 | 171 | 15 | 3 |
| | | Mid | | 3,563 | 151 | 205 | 802 | 46 | 147 | 12 | 3 |
| | | Low | | 4,704 | 236 | 266 | 1,014 | 57 | 123 | 11 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 884 | 2,657 | 101 | 147 | 504 | 30 | 171 | 13 | 3 |
| | | Mid | | 3,767 | 168 | 224 | 841 | 49 | 147 | 12 | 1 |
| | | Low | | 4,981 | 257 | 278 | 1,044 | 59 | 123 | 8 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 900 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 862 | 862 | 907 | 907 | |
| | 1 / 2 | 6,192 | 6,218 | Structural Component | | 11,579 | 11,612 | 11,579 | 11,612 | |
| | 3 / 4 | 6,208 | 6,233 | Total Project | | 17,197 | 17,271 | 17,242 | 17,315 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Comprehensive Plan Ring Levee Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 107 | 1,523 | 128 | 1,013 | 105 | 1,543 | 125 | |
| 100-year | 4,254 | 1,038 | 5,717 | 1,859 | 4,148 | 926 | 5,447 | 1,585 | |
| 400-year | 8,571 | 6,486 | 9,628 | 7,016 | 7,772 | 5,973 | 8,782 | 6,399 | |
| 1,000-year | 11,203 | 9,360 | 11,827 | 9,686 | 10,886 | 8,745 | 11,680 | 9,113 | |
| 2,000-year | 12,281 | 10,261 | 12,591 | 10,468 | 12,370 | 9,833 | 12,769 | 10,075 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



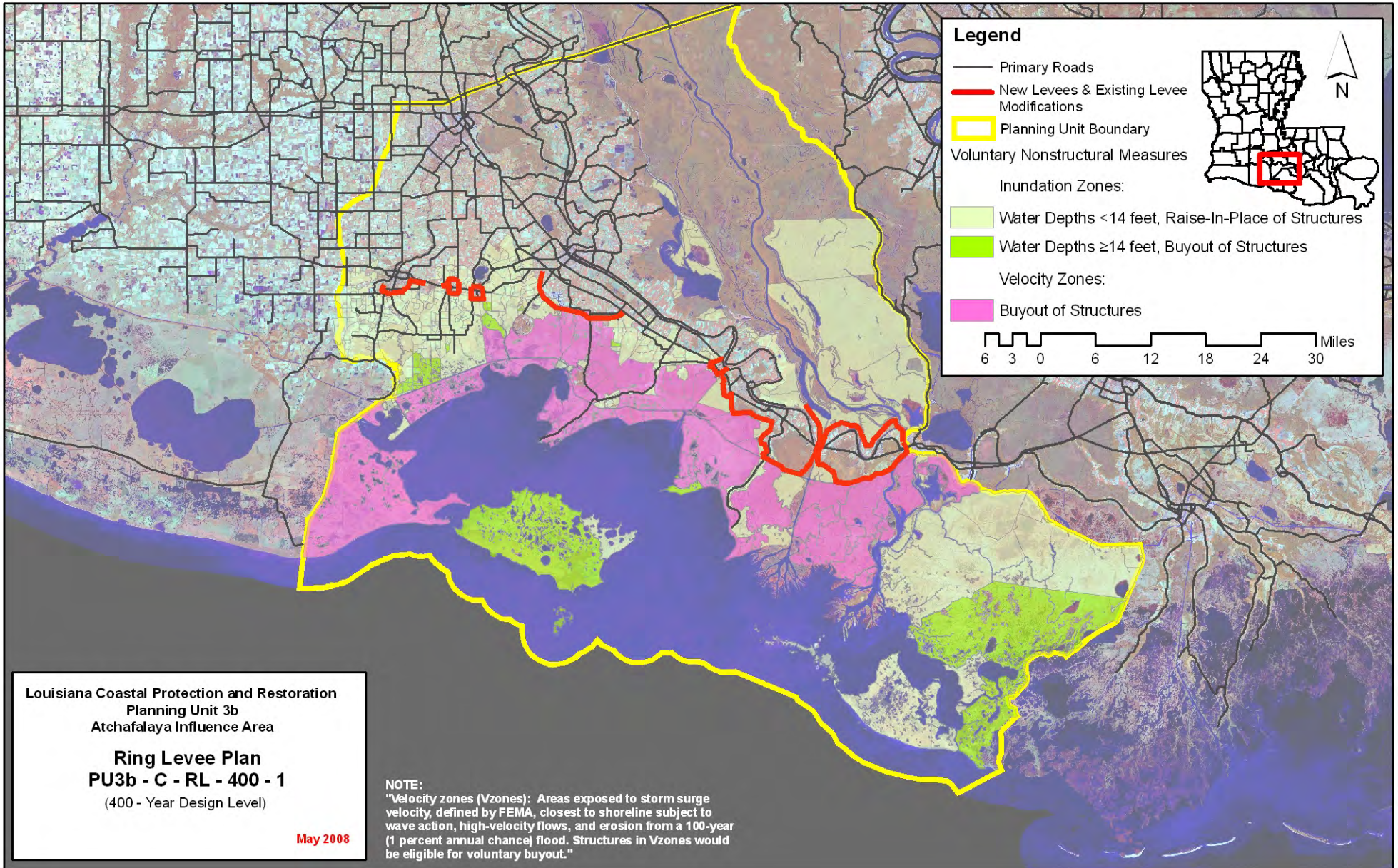
| | | | | | |
|---------------------------------|--|---------------------------------|-----------------|-------------------------------|--|
| Planning Unit: | 3b | Alt. No.: | PU3b-C-RL-400-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU3b-RL-400-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 400-yr complementary measures | |
| Structural Component: | Same as Alternative PU3b-RL-400-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,213 | 2,767 | 88 | 129 | 492 | 27 | 171 | 17 | 3 |
| | | Mid | | 3,864 | 143 | 196 | 832 | 46 | 147 | 16 | 3 |
| | | Low | | 4,882 | 213 | 247 | 1,037 | 56 | 123 | 15 | 3 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,216 | 2,949 | 97 | 57 | 525 | 31 | 171 | 15 | 3 |
| | | Mid | | 4,095 | 156 | 72 | 869 | 49 | 147 | 15 | 3 |
| | | Low | | 5,184 | 229 | 85 | 1,058 | 58 | 123 | 13 | 2 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,253 | 2,537 | 87 | 131 | 478 | 27 | 171 | 17 | 3 |
| | | Mid | | 3,613 | 142 | 197 | 801 | 45 | 147 | 16 | 3 |
| | | Low | | 4,591 | 208 | 248 | 990 | 54 | 123 | 15 | 3 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,256 | 2,718 | 96 | 144 | 506 | 30 | 171 | 15 | 3 |
| | | Mid | | 3,829 | 154 | 213 | 836 | 48 | 147 | 15 | 3 |
| | | Low | | 4,878 | 223 | 259 | 1,016 | 56 | 123 | 13 | 2 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|-------|
| Construction Time (years) | | | 12 | | After 50 yrs (% of baseline) | | 105 | 104 | 105 | 104 |
| Direct Wetland Impacts (acres) | | | 1,700 | | After 100 yrs (% of baseline) | | 105 | 100 | 105 | 100 |
| Indirect Impacts (unitless) | | | 2 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 4,756 | 4,796 | 4,756 | 4,796 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 1,002 | 1,002 | 1,785 | 1,785 | |
| | 1 / 2 | 8,493 | 8,516 | Structural Component | | 17,996 | 18,024 | 17,996 | 18,024 | |
| | 3 / 4 | 8,767 | 8,791 | Total Project | | 23,754 | 23,822 | 24,537 | 24,605 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 3b Comprehensive Plan Ring Levee Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 1,024 | 95 | 1,523 | 113 | 1,013 | 92 | 1,543 | 110 | |
| 100-year | 4,254 | 291 | 5,717 | 376 | 4,148 | 284 | 5,447 | 364 | |
| 400-year | 8,571 | 1,827 | 9,628 | 3,227 | 7,772 | 1,413 | 8,782 | 2,466 | |
| 1,000-year | 11,203 | 6,161 | 11,827 | 6,696 | 10,886 | 5,280 | 11,680 | 5,812 | |
| 2,000-year | 12,281 | 8,635 | 12,591 | 8,885 | 12,370 | 8,156 | 12,769 | 8,441 | |

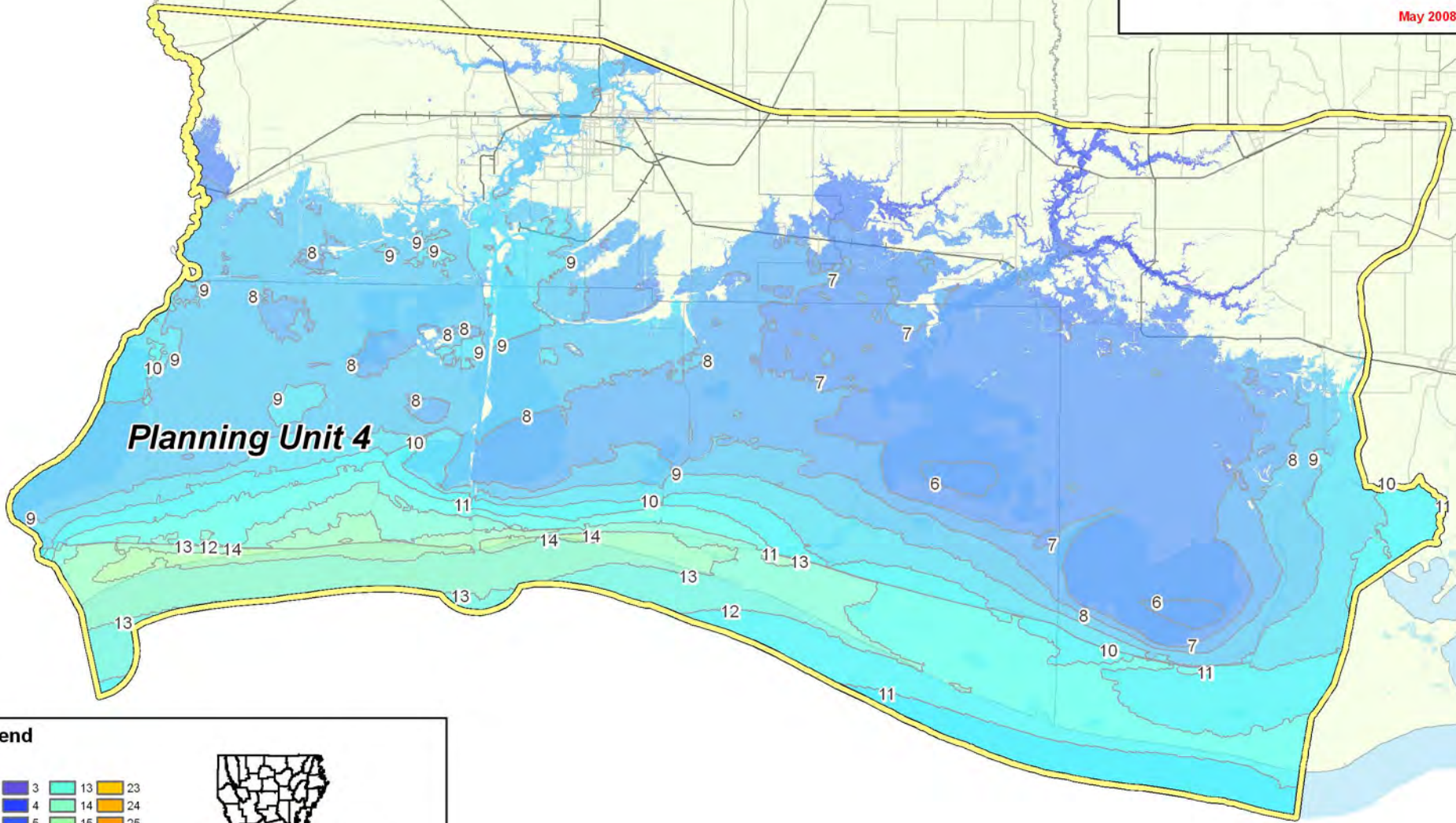
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



**LOUISIANA COASTAL PROTECTION AND RESTORATION FINAL TECHNICAL REPORT
EVALUATION RESULTS APPENDIX**

Planning Unit 4

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**Water Surface Elevations
 100-Year Event
 2010 Base Conditions**
 May 2008



Legend

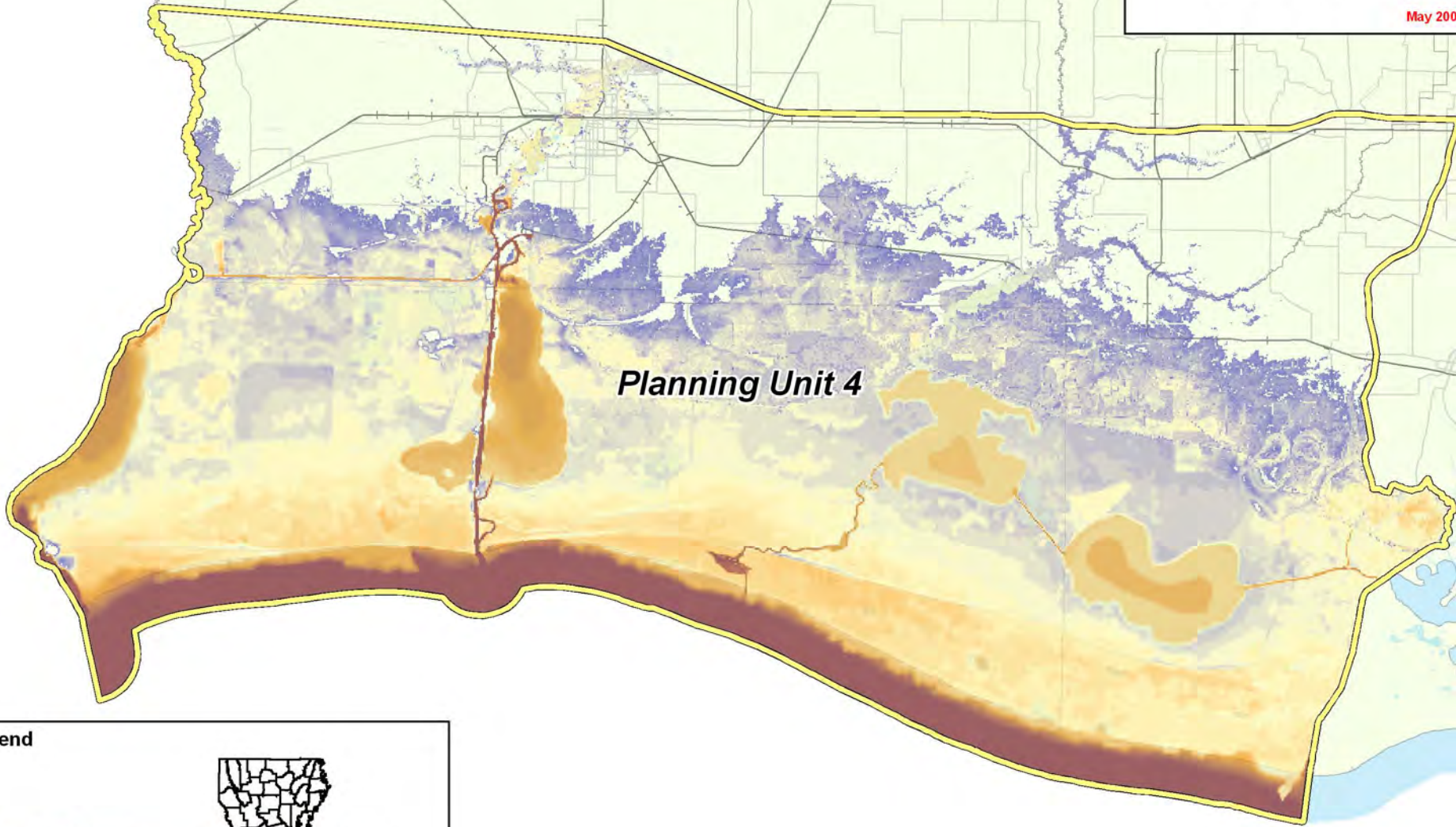
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| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | LACPR Planning Units |
| 2 | 12 | 22 | |

Miles
 4 2 0 4 8 12 16

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain

**Water Depths
 100-Year Event
 2010 Base Conditions**

May 2008



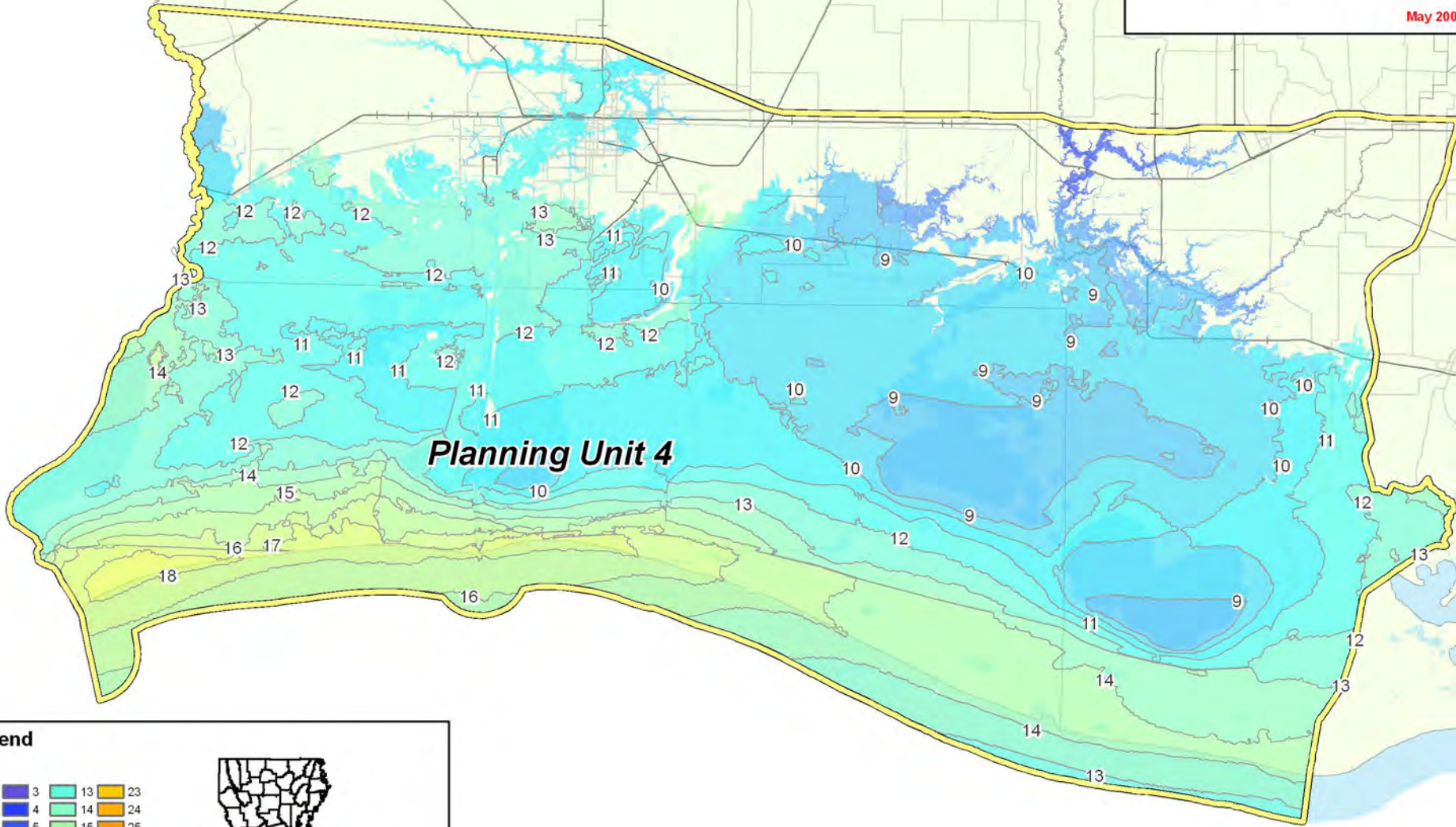
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|---|----|----|----|
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| 1 | 8 | 15 | 22 |
| 2 | 9 | 16 | 23 |
| 3 | 10 | 17 | 24 |
| 4 | 11 | 18 | 25 |
| 5 | 12 | 19 | |
| 6 | 13 | 20 | |

LACPR Planning Units

Miles

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**Water Surface Elevations
 400-Year Event
 2010 Base Conditions**
 May 2008



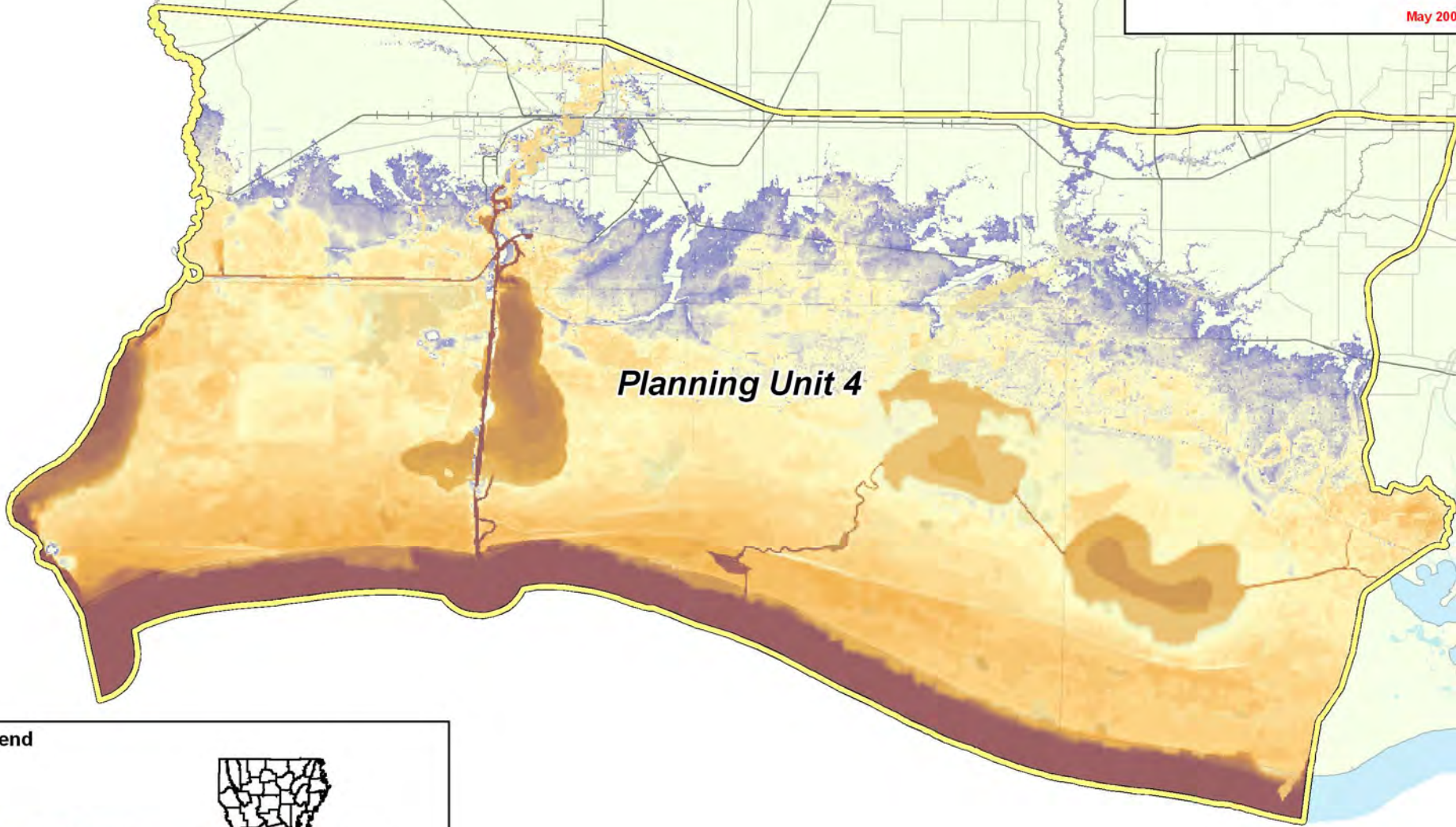
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| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**Water Depths
 400-Year Event
 2010 Base Conditions**
 May 2008



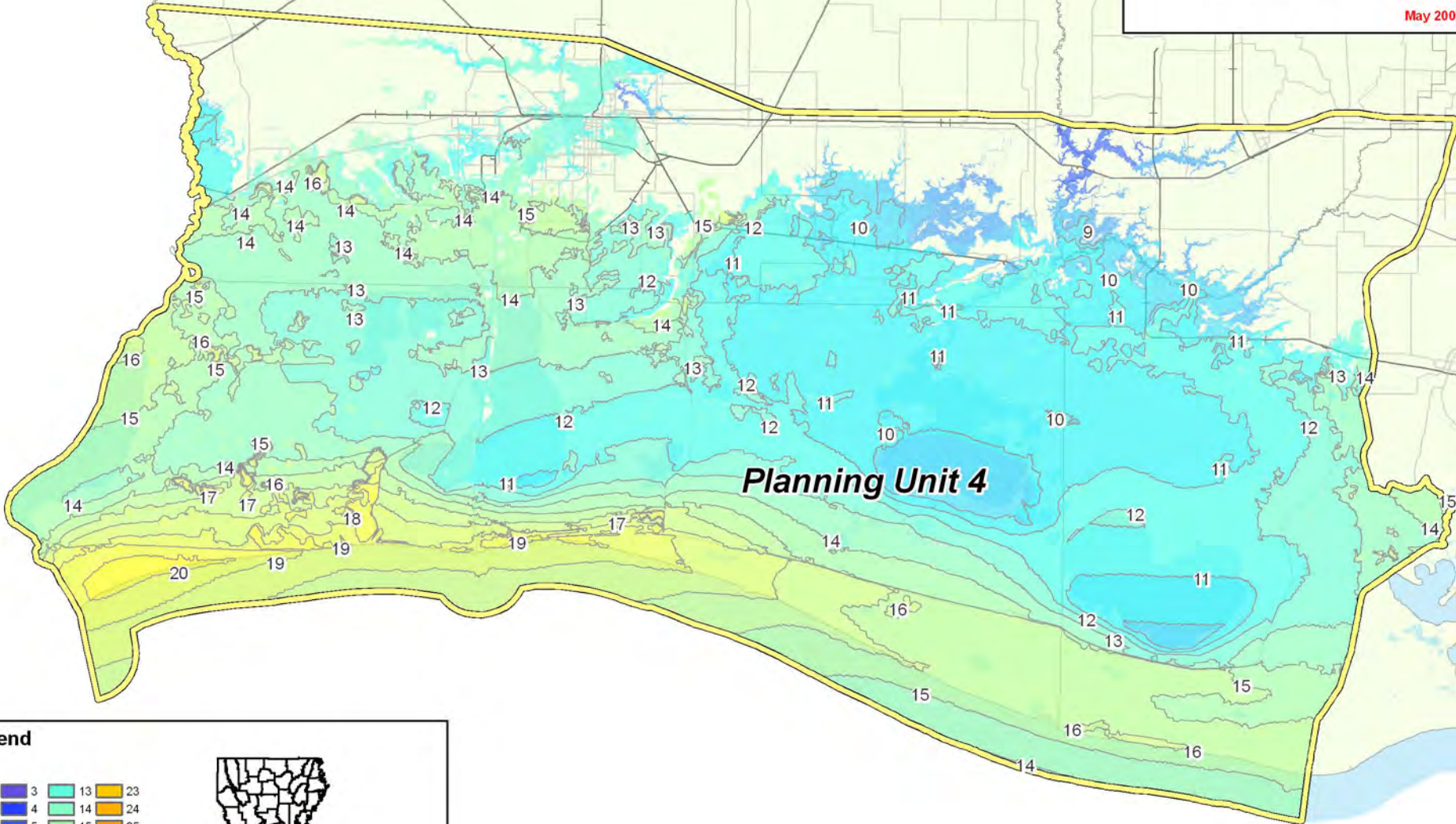
Legend

| | | | |
|---|----|----|----|
| 0 | 7 | 14 | 21 |
| 1 | 8 | 15 | 22 |
| 2 | 9 | 16 | 23 |
| 3 | 10 | 17 | 24 |
| 4 | 11 | 18 | 25 |
| 5 | 12 | 19 | |
| 6 | 13 | 20 | |

19 LACPR Planning Units

Miles
 4 2 0 4 8 12 16

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**Water Surface Elevations
 1000-Year Event
 2010 Base Conditions**
 May 2008



Legend

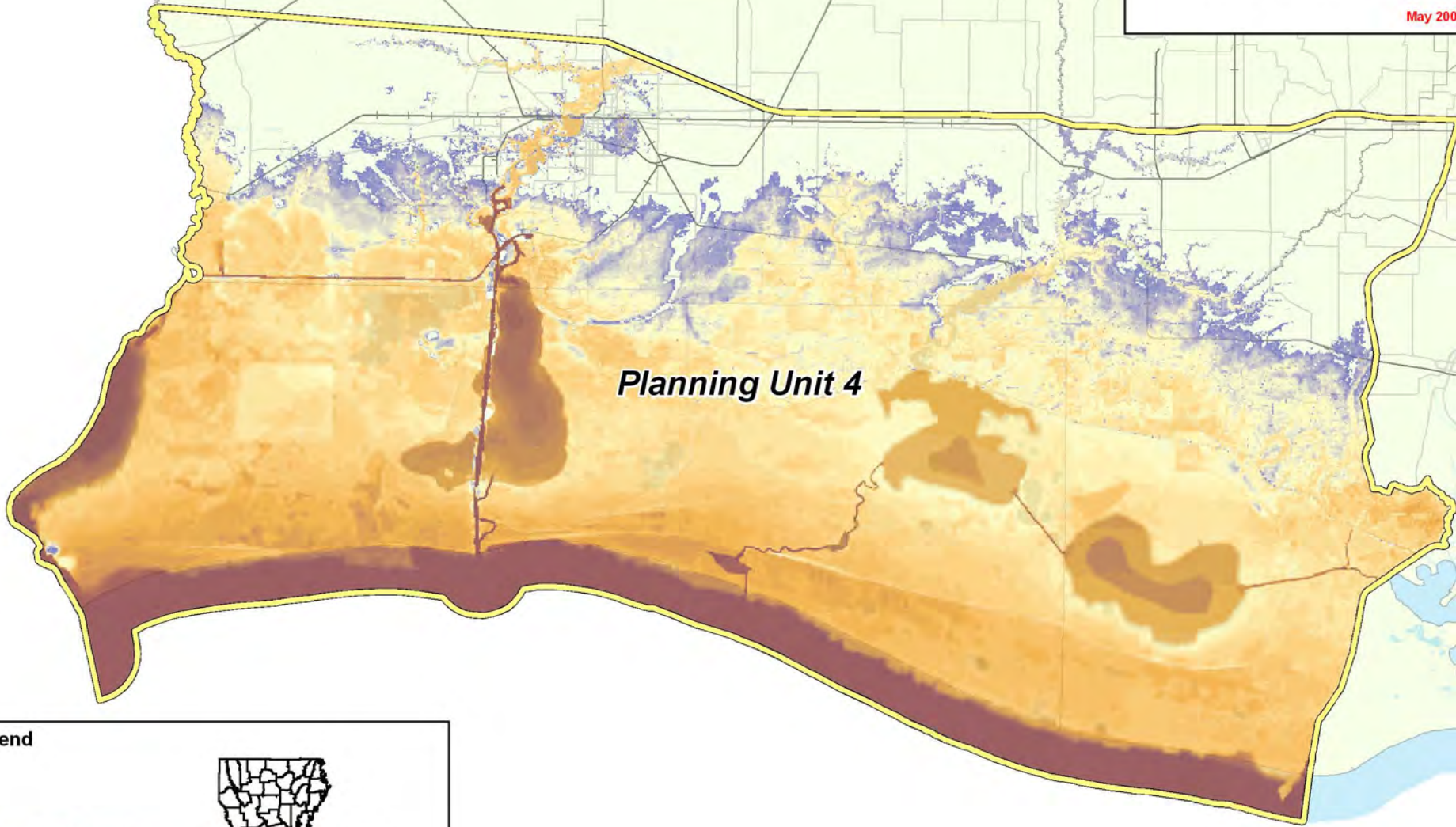
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|----|----|----|----------------------|
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| -6 | 4 | 14 | 24 |
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| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | LACPR Planning Units |
| 2 | 12 | 22 | |

Miles
 4 2 0 4 8 12 16

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain

**Water Depths
 1000-Year Event
 2010 Base Conditions**

May 2008



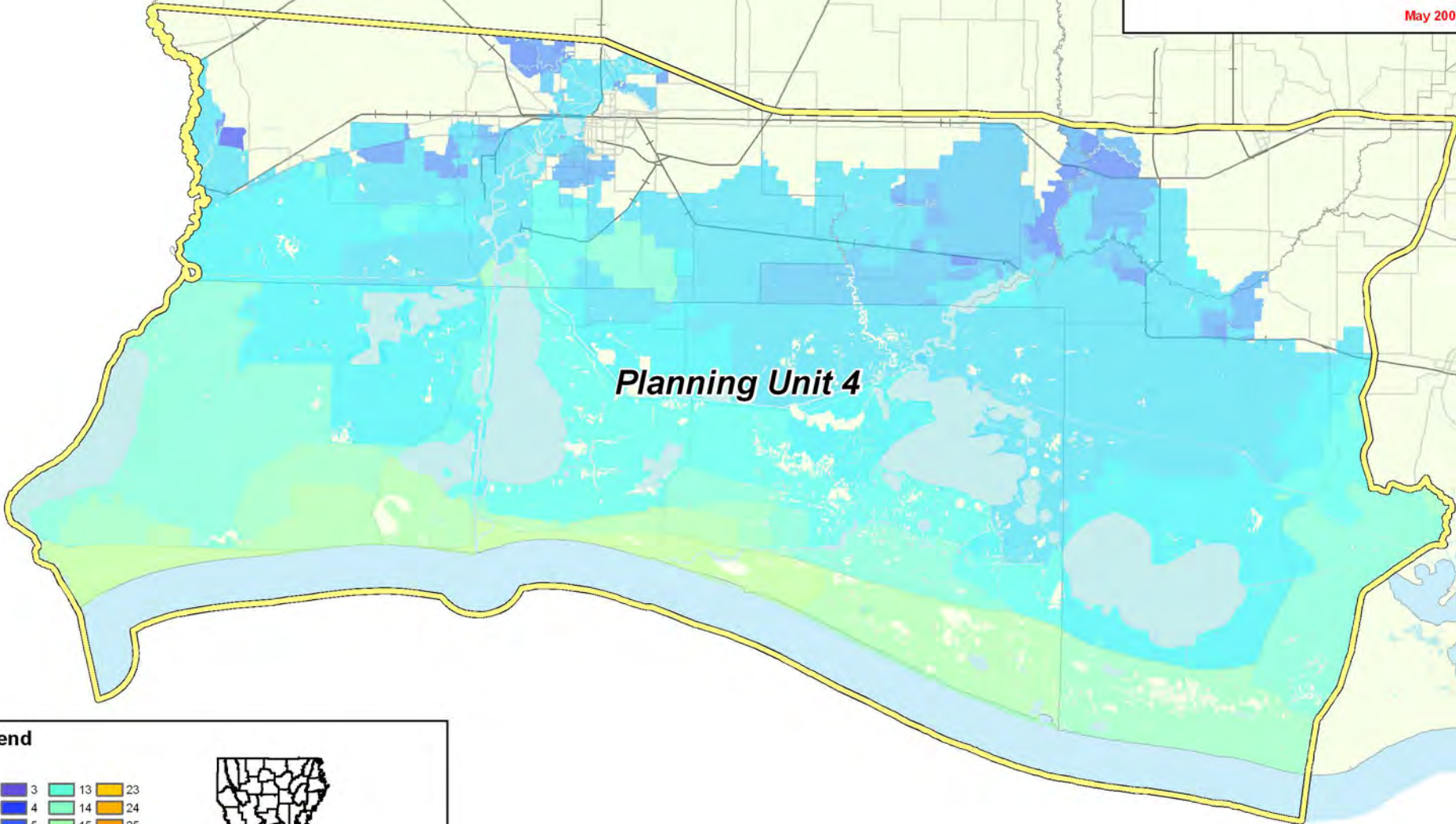
Legend

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|---|----|----|----|
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| 1 | 8 | 15 | 22 |
| 2 | 9 | 16 | 23 |
| 3 | 10 | 17 | 24 |
| 4 | 11 | 18 | 25 |
| 5 | 12 | 19 | |
| 6 | 13 | 20 | |

LACPR Planning Units

Miles

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**Water Surface Elevations
 100-Year Event
 2060 No Action**
 May 2008



Legend

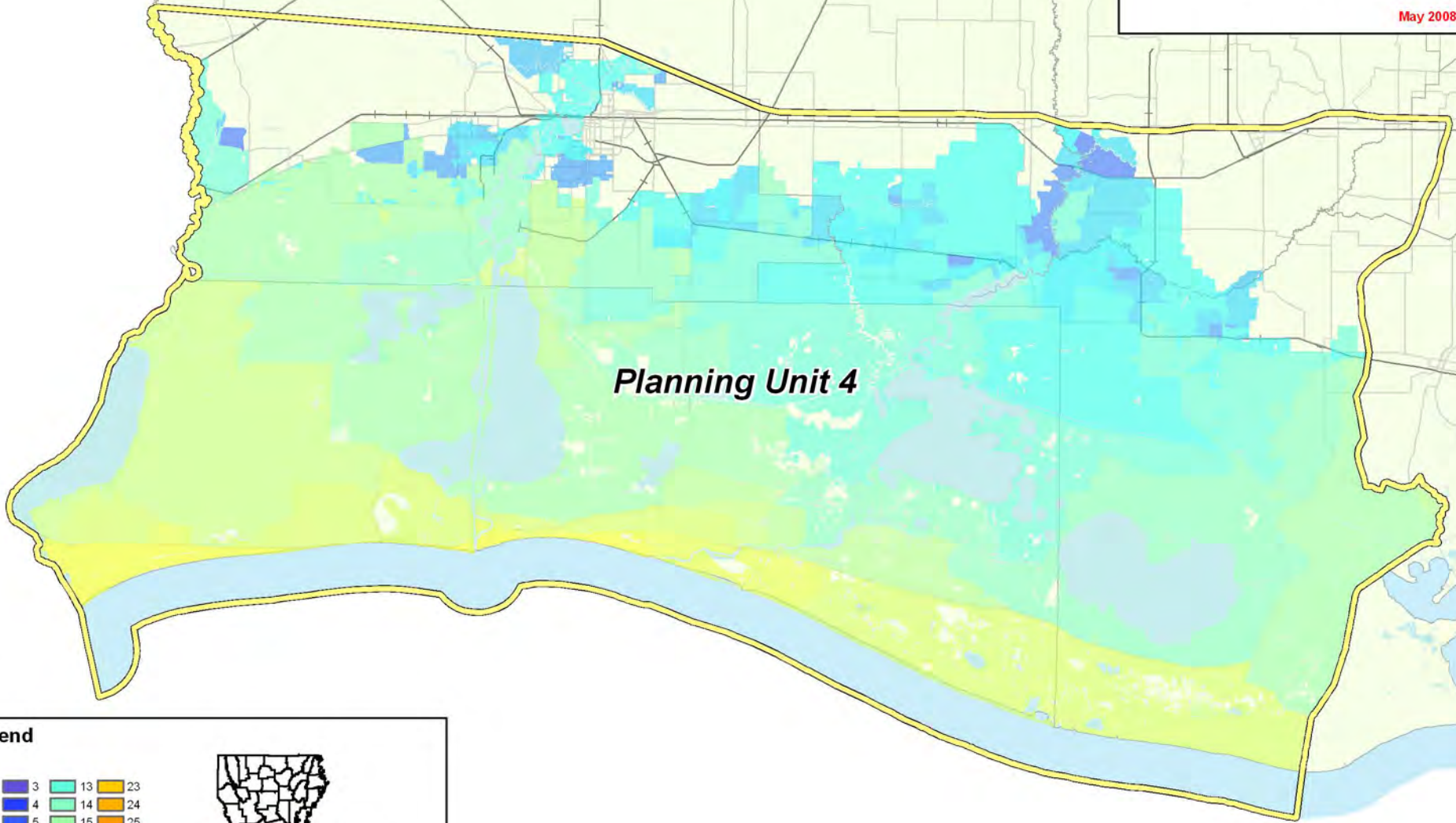
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| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
Water Surface Elevations
400-Year Event
2060 No Action
 May 2008



Legend

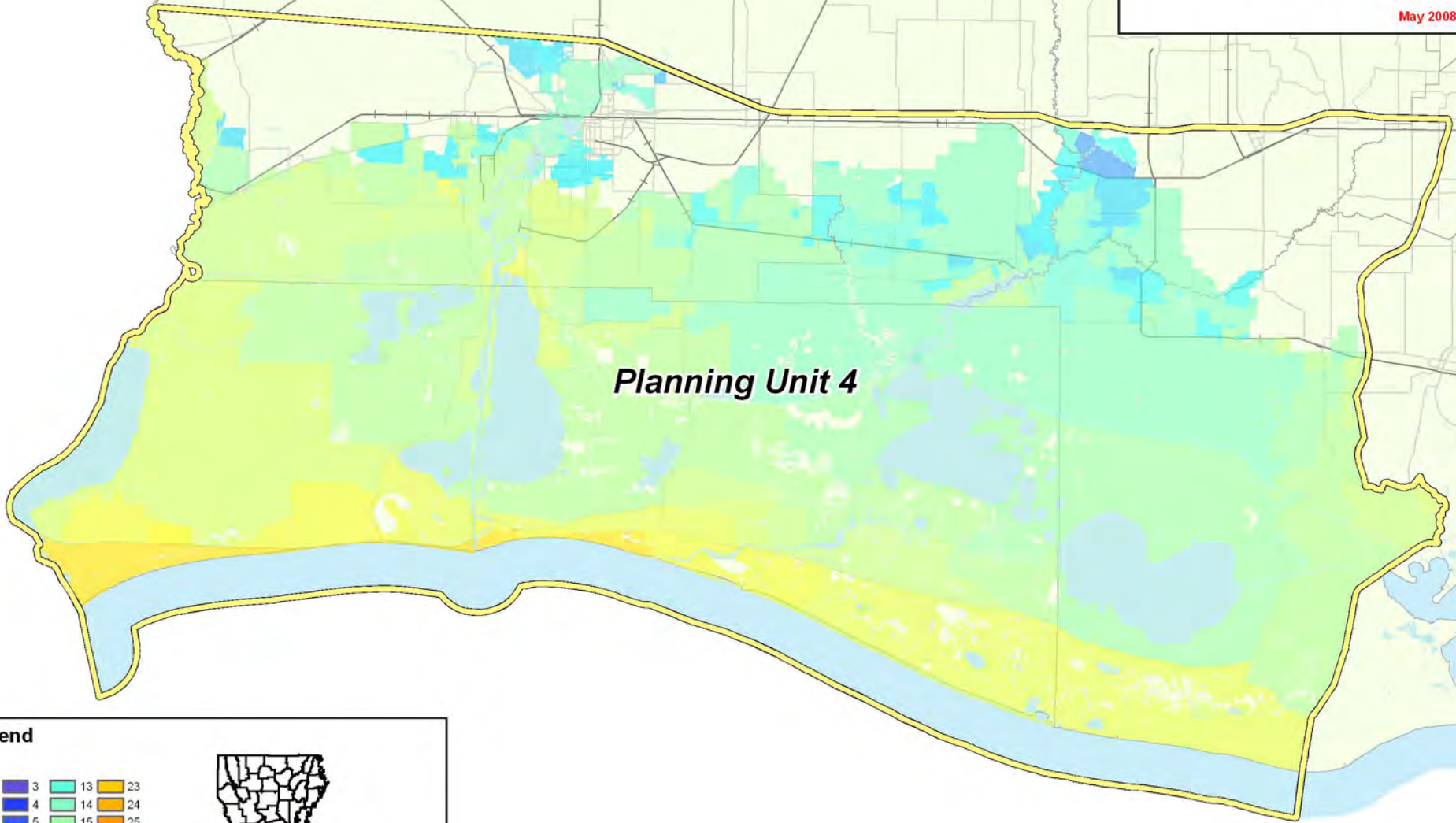
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| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
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| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

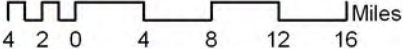
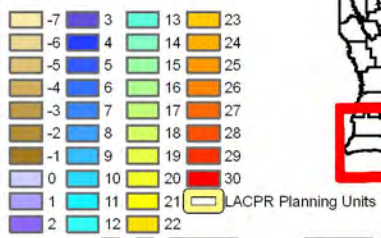
Miles

Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
Water Surface Elevations
1000-Year Event
2060 No Action
 May 2008

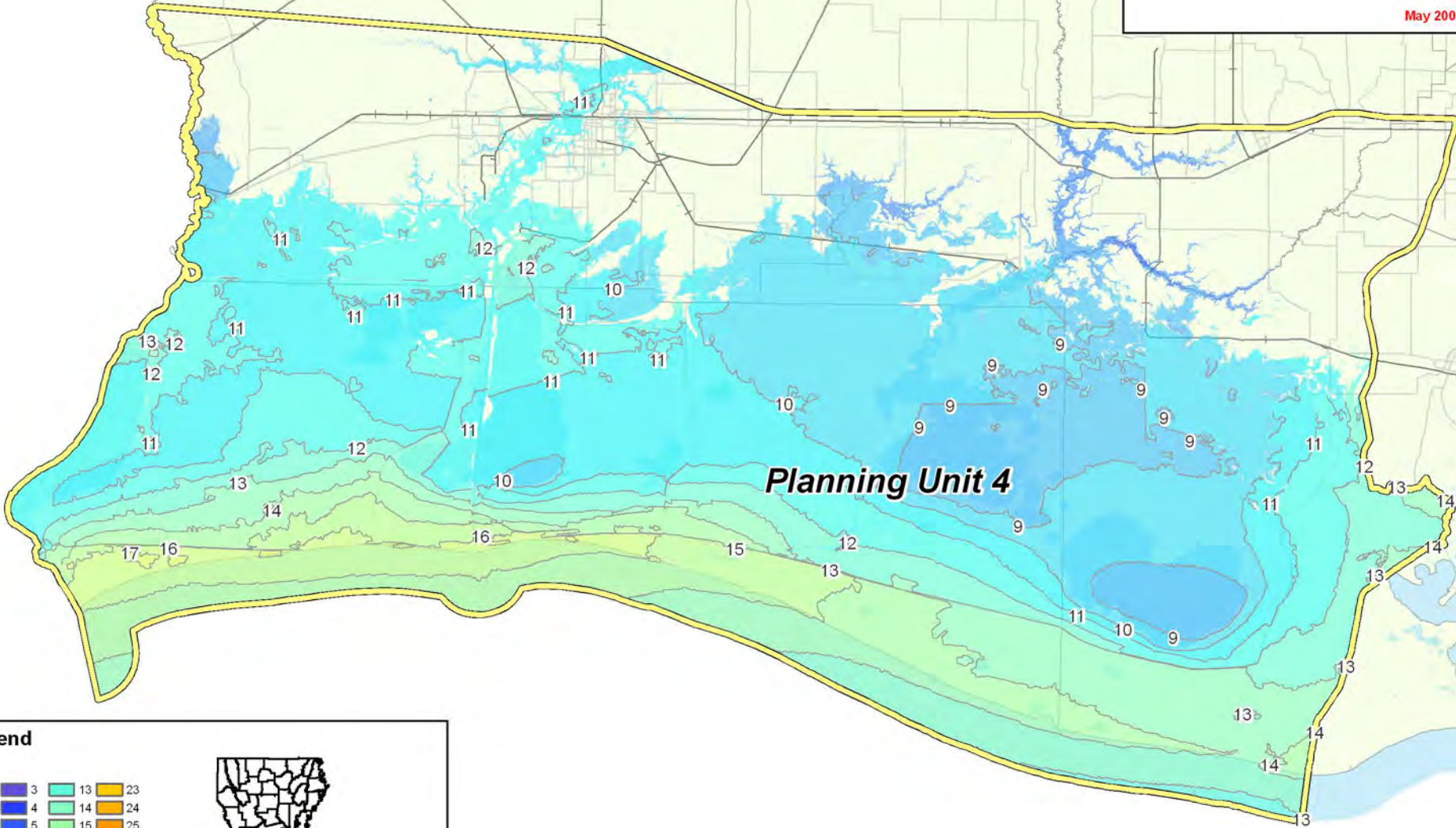


Legend



Note: Future "no-action" frequencies or event surfaces are based on ADCIRC simulated storm surge values for a projected "50-yr" future coast based on no additional coastal restoration. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**Water Surface Elevations
 100-Year Event
 2060 Maintain**
 May 2008



Legend

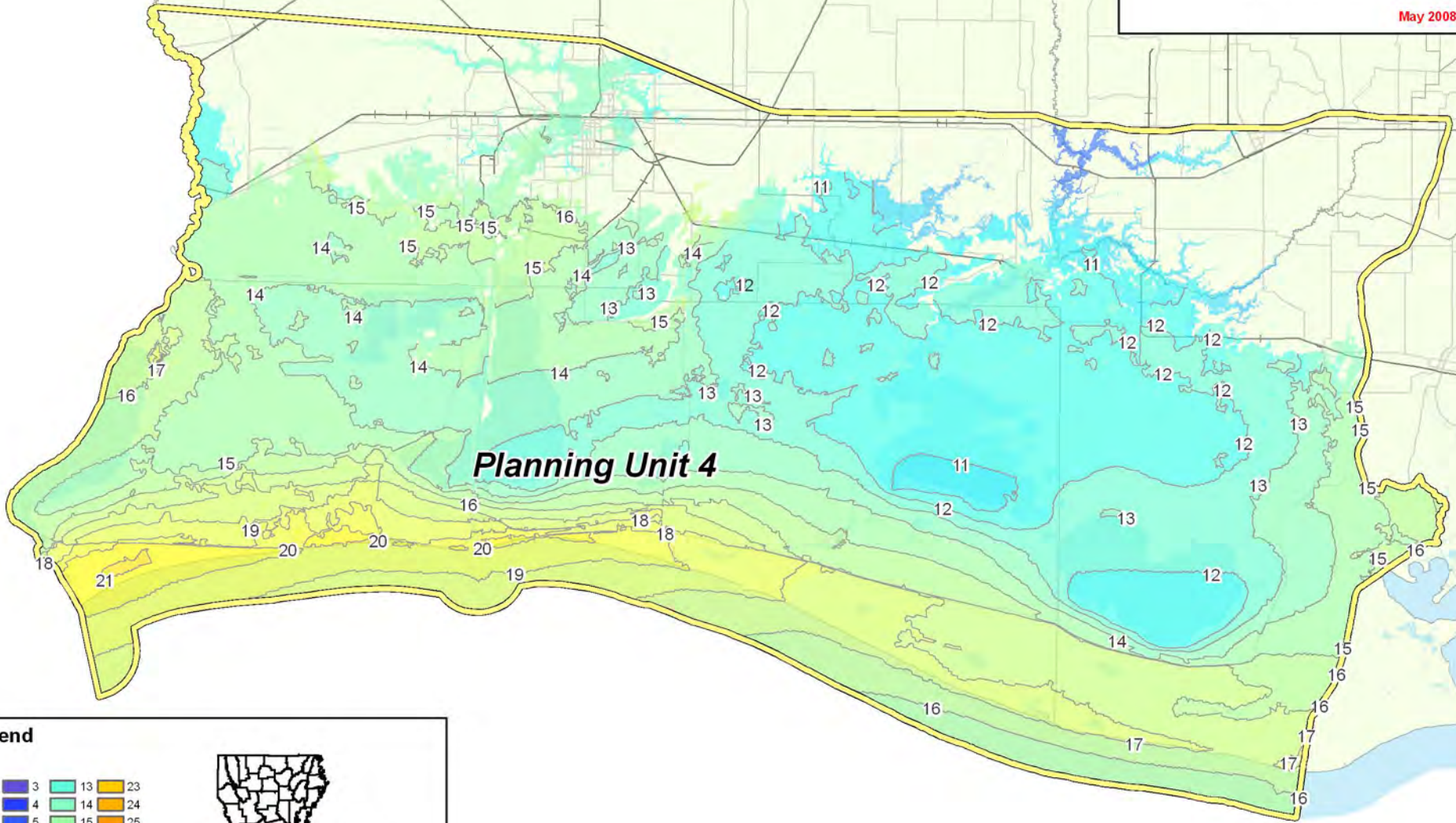
| | | | |
|----|----|----|----|
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| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**Water Surface Elevations
 400-Year Event
 2060 Maintain**
 May 2008



Legend

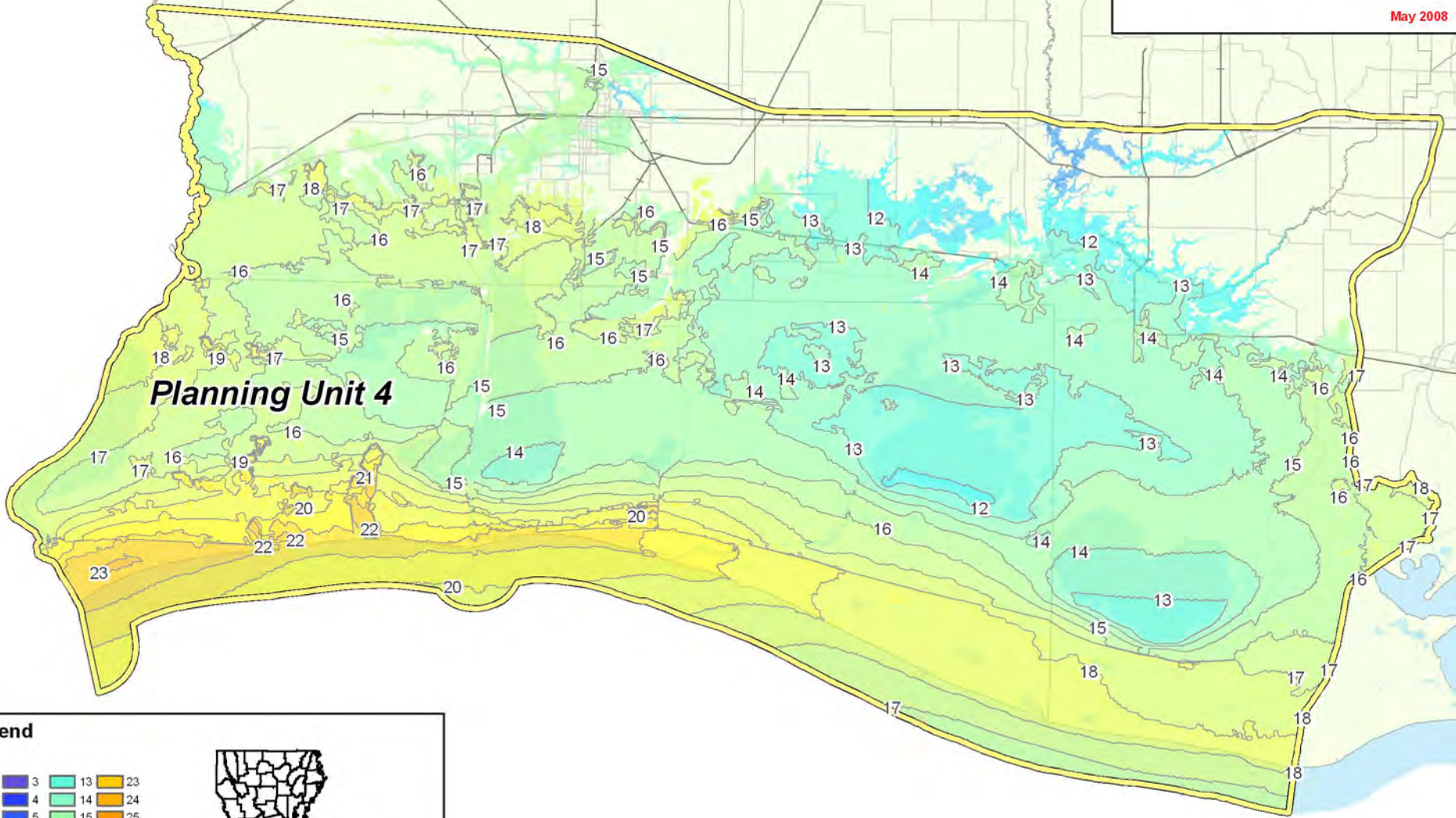
| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**Water Surface Elevations
 1000-Year Event
 2060 Maintain**
 May 2008



Legend

| | | | |
|----|----|----|----|
| -7 | 3 | 13 | 23 |
| -6 | 4 | 14 | 24 |
| -5 | 5 | 15 | 25 |
| -4 | 6 | 16 | 26 |
| -3 | 7 | 17 | 27 |
| -2 | 8 | 18 | 28 |
| -1 | 9 | 19 | 29 |
| 0 | 10 | 20 | 30 |
| 1 | 11 | 21 | |
| 2 | 12 | 22 | |

LACPR Planning Units

Miles

Note: Future "maintain coast" frequencies or event surfaces are based on ADCIRC simulated storm surge values for the base coastline. Statistical surfaces shown include the added effects of relative sea level rise, i.e. eustatic plus local subsidence.

| | | | | | |
|---------------------------------|---|---------------------------------|-------|------------------|-----------|
| Planning Unit: | 4 | Alt. No.: | PU4-0 | Category: | No Action |
| Alternative Description: | No action (without project) alternative. | | | | |
| Coastal Component: | Degraded coast--increasing risk. | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 0 | 2,630 | 217 | 255 | 690 | 46 | 37 | 1 | 0 |
| | | Mid | | 3,791 | 283 | 290 | 792 | 52 | 33 | 0 | 0 |
| | | Low | | 4,752 | 373 | 365 | 996 | 67 | 29 | 0 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 0 | 3,000 | 238 | 274 | 719 | 49 | 37 | 1 | 0 |
| | | Mid | | 4,046 | 318 | 375 | 926 | 65 | 33 | 0 | 0 |
| | | Low | | 5,278 | 417 | 465 | 1,080 | 76 | 29 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 0 | 2,551 | 224 | 272 | 722 | 49 | 37 | 1 | 0 |
| | | Mid | | 3,603 | 296 | 308 | 825 | 55 | 33 | 0 | 0 |
| | | Low | | 4,432 | 397 | 377 | 1,027 | 69 | 29 | 0 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 0 | 2,866 | 248 | 305 | 770 | 54 | 37 | 1 | 0 |
| | | Mid | | 3,851 | 339 | 388 | 961 | 69 | 33 | 0 | 0 |
| | | Low | | 4,862 | 463 | 462 | 1,104 | 78 | 29 | 0 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|----|
| Construction Time (years) | | | 0 | After 50 yrs (% of baseline) | | 96 | 95 | 96 | 95 |
| Direct Wetland Impacts (acres) | | | 0 | After 100 yrs (% of baseline) | | 92 | 87 | 92 | 87 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.31 | Coastal Component | | 0 | 0 | 0 | 0 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 0 | 0 | Structural Component | | 0 | 0 | 0 | 0 |
| | 3 / 4 | 0 | 0 | Total Project | | 0 | 0 | 0 | 0 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|-----------------|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | N/A | 725 | N/A | 511 | N/A | 794 | N/A | |
| 100-year | 3,034 | N/A | 4,142 | N/A | 3,315 | N/A | 5,183 | N/A | |
| 400-year | 6,592 | N/A | 7,874 | N/A | 8,001 | N/A | 9,283 | N/A | |
| 1,000-year | 10,316 | N/A | 11,581 | N/A | 11,241 | N/A | 12,313 | N/A | |
| 2,000-year | 12,755 | N/A | 13,904 | N/A | 13,422 | N/A | 14,373 | N/A | |

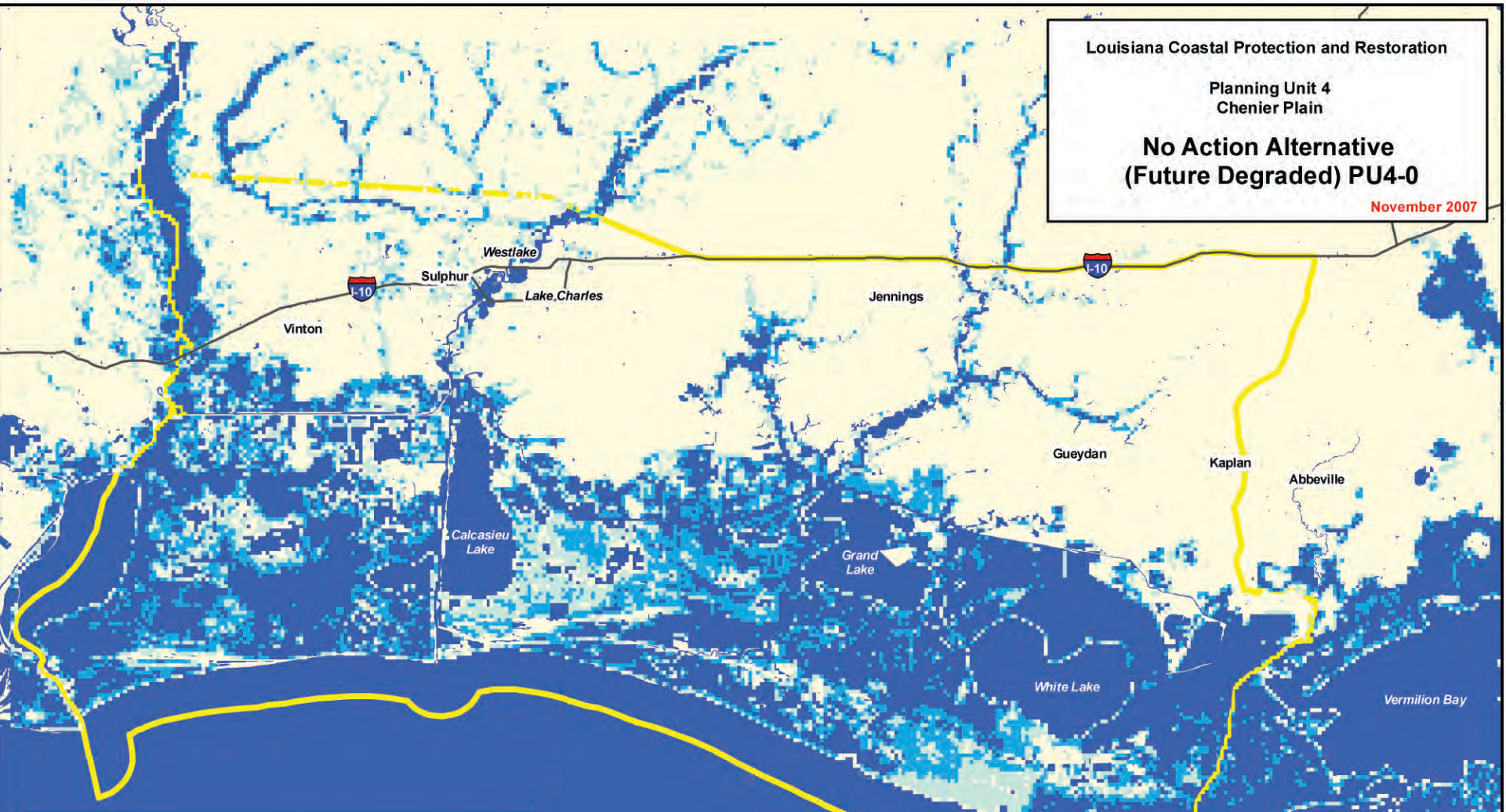
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

Louisiana Coastal Protection and Restoration

Planning Unit 4
Chenier Plain

No Action Alternative
(Future Degraded) PU4-0

November 2007



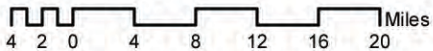
Legend

Percentage of Water of
500 meter cell

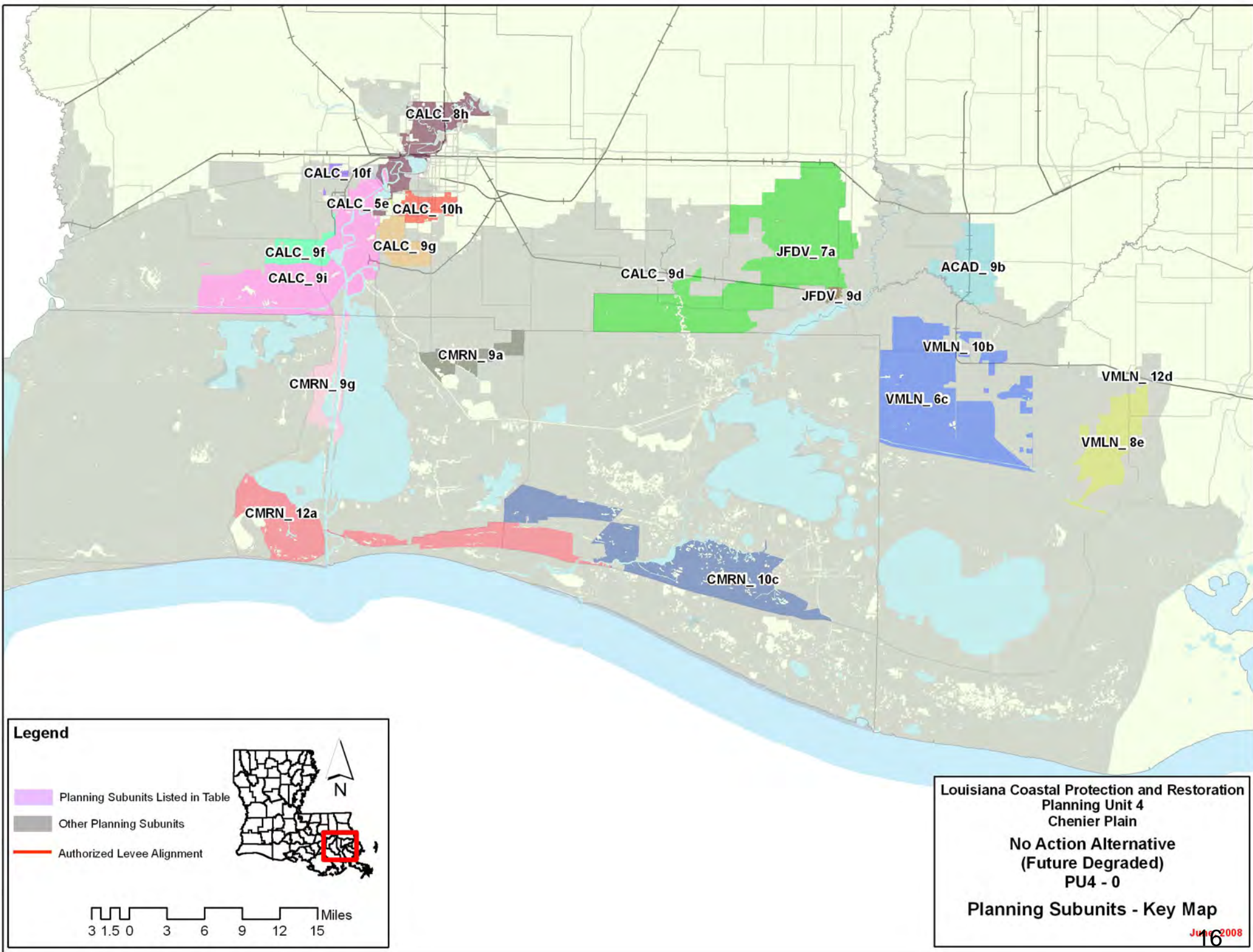
- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%

Primary Roads

Planning Unit Boundary



Data Source: Coastal Louisiana
Ecosystem Assessment and
Restoration (CLEAR)



Legend

- Planning Subunits Listed in Table
- Other Planning Subunits
- Authorized Levee Alignment

N

Miles

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
**No Action Alternative
 (Future Degraded)**
 PU4 - 0
Planning Subunits - Key Map

June 2008
 16

Alternative: PU4-0
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_ 9b | 7.8 | | 9.4 | | 12.2 | | 10.4 | | 12.0 | | 14.8 | |
| CALC_ 10f | 6.0 | | 8.1 | | 9.7 | | 8.6 | | 10.7 | | 12.3 | |
| CALC_ 10h | 5.5 | | 6.1 | | 9.1 | | 8.1 | | 8.7 | | 11.7 | |
| CALC_ 5e | 7.8 | | 8.5 | | 12.1 | | 10.4 | | 11.1 | | 14.7 | |
| CALC_ 8h | 7.8 | | 10.7 | | 12.8 | | 10.4 | | 13.3 | | 15.4 | |
| CALC_ 9d | 7.8 | | 9.7 | | 13.6 | | 10.4 | | 12.3 | | 16.2 | |
| CALC_ 9f | 8.8 | | 13.6 | | 16.0 | | 11.4 | | 16.2 | | 18.6 | |
| CALC_ 9g | 10.9 | | 14.6 | | 17.1 | | 13.5 | | 17.2 | | 19.7 | |
| CALC_ 9i | 8.4 | | 12.8 | | 15.3 | | 11.0 | | 15.4 | | 17.9 | |
| CMRN_ 10c | 11.1 | | 14.8 | | 16.8 | | 13.8 | | 17.1 | | 18.8 | |
| CMRN_ 12a | 13.0 | | 16.9 | | 19.0 | | 15.3 | | 18.9 | | 20.7 | |
| CMRN_ 9a | 9.5 | | 14.1 | | 16.3 | | 12.1 | | 16.7 | | 18.9 | |
| CMRN_ 9g | 9.6 | | 13.1 | | 15.2 | | 12.7 | | 16.4 | | 18.6 | |
| JFDV_ 7a | 7.5 | | 11.9 | | 14.7 | | 10.1 | | 14.5 | | 17.3 | |
| JFDV_ 9d | 6.4 | | 11.1 | | 13.5 | | 9.0 | | 13.7 | | 16.1 | |
| VMLN_ 10b | 7.8 | | 11.2 | | 13.5 | | 10.4 | | 13.8 | | 16.1 | |
| VMLN_ 12d | 7.8 | | 11.1 | | 14.3 | | 10.4 | | 13.7 | | 16.9 | |
| VMLN_ 6c | 7.8 | | 10.7 | | 12.7 | | 10.4 | | 13.3 | | 15.3 | |
| VMLN_ 8e | 8.6 | | 12.1 | | 14.2 | | 11.2 | | 14.7 | | 16.8 | |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

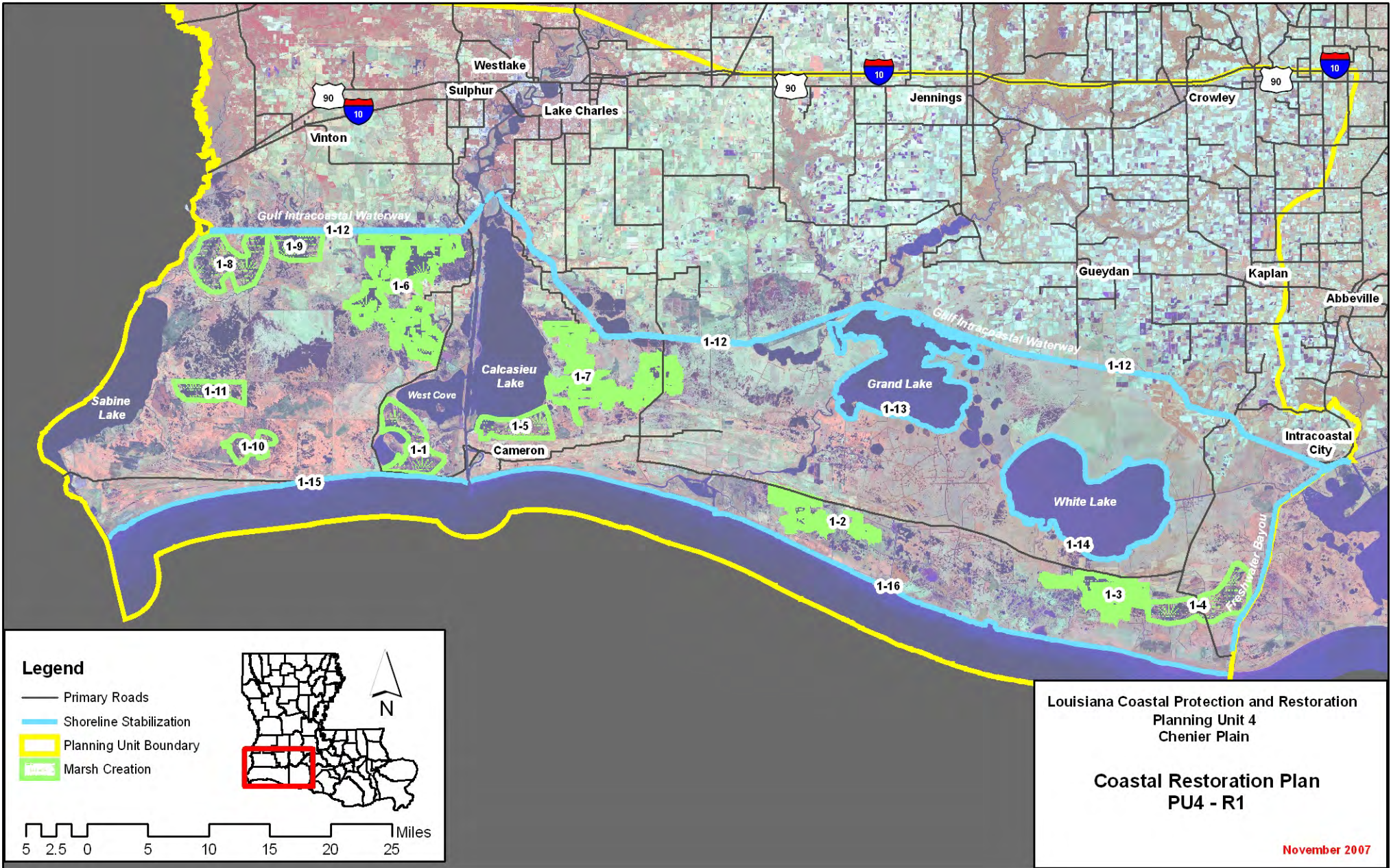
| | | | | | |
|---------------------------------|--|---------------------------------|--------|------------------|--------------------------|
| Planning Unit: | 4 | Alt. No.: | PU4-R1 | Category: | Coastal Restoration Only |
| Alternative Description: | Sustain coastal landscape through restoration including shoreline protection, marsh creation, etc. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | None | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

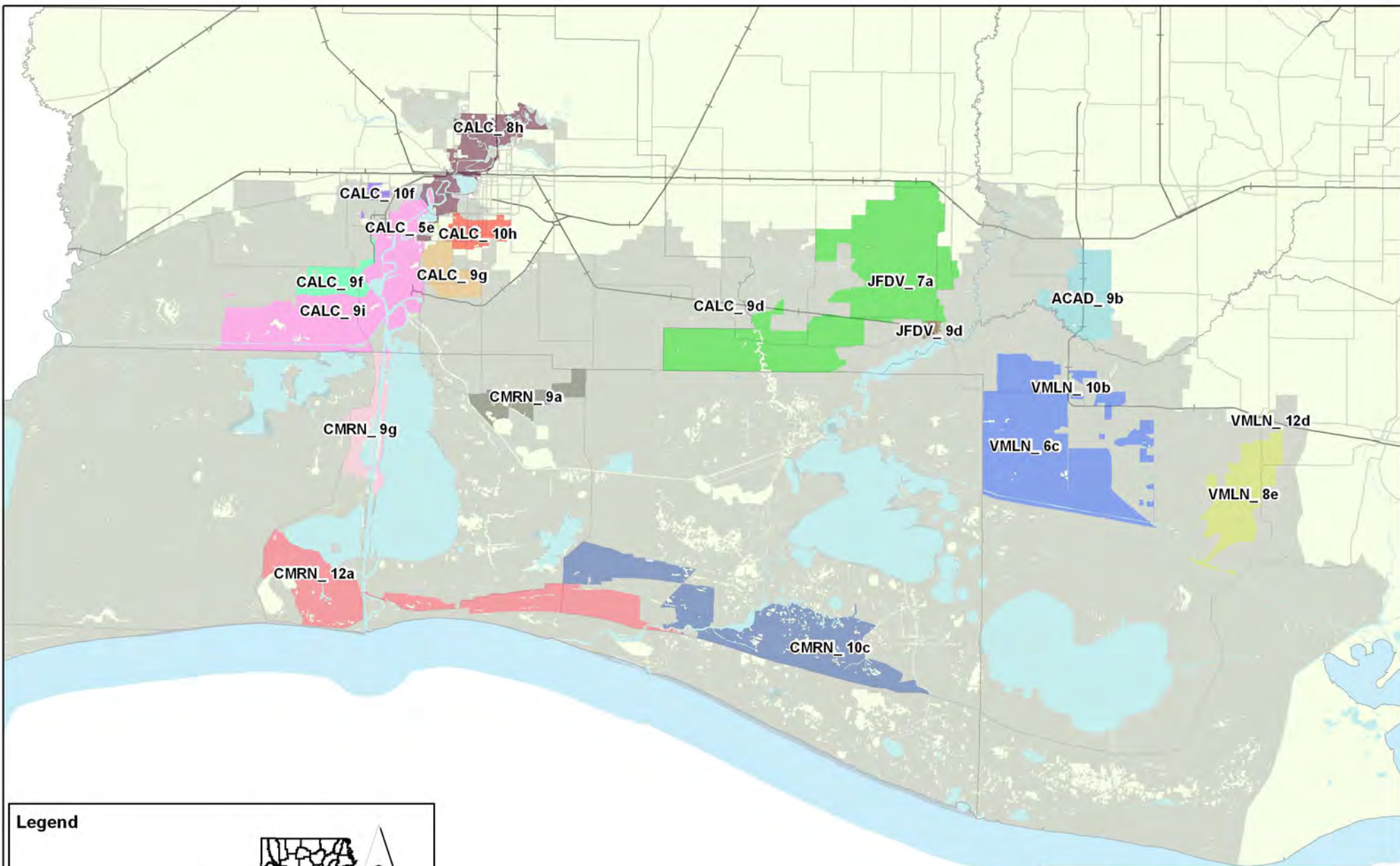
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 551 | 2,625 | 217 | 258 | 692 | 47 | 107 | 3 | 0 |
| | | Mid | | 3,790 | 283 | 289 | 791 | 52 | 83 | 3 | 0 |
| | | Low | | 4,753 | 373 | 365 | 996 | 67 | 58 | 2 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 566 | 3,003 | 238 | 284 | 729 | 51 | 107 | 3 | 0 |
| | | Mid | | 4,039 | 318 | 375 | 926 | 65 | 83 | 2 | 0 |
| | | Low | | 5,279 | 416 | 465 | 1,080 | 76 | 58 | 1 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 551 | 2,545 | 224 | 277 | 729 | 50 | 107 | 3 | 0 |
| | | Mid | | 3,600 | 296 | 309 | 825 | 55 | 83 | 3 | 0 |
| | | Low | | 4,432 | 393 | 377 | 1,027 | 69 | 58 | 2 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 566 | 2,870 | 248 | 313 | 782 | 56 | 107 | 3 | 0 |
| | | Mid | | 3,850 | 334 | 388 | 962 | 69 | 83 | 2 | 0 |
| | | Low | | 4,863 | 465 | 462 | 1,105 | 78 | 58 | 1 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 15 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 0 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 3,774 | 3,877 | Structural Component | | 0 | 0 | 0 | 0 | |
| | 3 / 4 | 3,774 | 3,877 | Total Project | | 10,783 | 11,077 | 10,783 | 11,077 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Coastal Plan Coastal Restoration Alt |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 472 | 725 | 726 | 511 | 511 | 794 | 795 | |
| 100-year | 3,034 | 3,023 | 4,142 | 4,125 | 3,315 | 3,206 | 5,183 | 5,224 | |
| 400-year | 6,592 | 6,577 | 7,874 | 7,869 | 8,001 | 7,967 | 9,283 | 9,263 | |
| 1,000-year | 10,316 | 10,304 | 11,581 | 11,560 | 11,241 | 11,229 | 12,313 | 12,299 | |
| 2,000-year | 12,755 | 12,731 | 13,904 | 13,898 | 13,422 | 13,395 | 14,373 | 14,387 | |



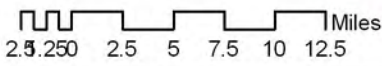
Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.






Legend

- Planning Subunits Listed in Table
- Other Planning Subunits
- Authorized Levee Alignment

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain
 Coastal Restoration Plan
 Future Maintian
 PU4 - R
 Planning Subunits - Key Map

 2008
20

Alternative: PU4-R1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions* | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_9b | 7.8 | 7.8 | 9.4 | 9.4 | 12.2 | 12.2 | 10.4 | 10.4 | 12.0 | 12.0 | 14.8 | 14.8 |
| CALC_10f | 6.0 | 6.0 | 8.1 | 8.1 | 9.7 | 9.7 | 8.6 | 8.6 | 10.7 | 10.7 | 12.3 | 12.3 |
| CALC_10h | 5.5 | 5.5 | 6.1 | 6.1 | 9.1 | 9.1 | 8.1 | 8.1 | 8.7 | 8.7 | 11.7 | 11.7 |
| CALC_5e | 7.8 | 7.8 | 8.5 | 8.5 | 12.1 | 12.1 | 10.4 | 10.4 | 11.1 | 11.1 | 14.7 | 14.7 |
| CALC_8h | 7.8 | 7.8 | 10.7 | 10.7 | 12.8 | 12.8 | 10.4 | 10.4 | 13.3 | 13.3 | 15.4 | 15.4 |
| CALC_9d | 7.8 | 7.8 | 9.7 | 9.7 | 13.6 | 13.6 | 10.4 | 10.4 | 12.3 | 12.3 | 16.2 | 16.2 |
| CALC_9f | 8.8 | 8.8 | 13.6 | 13.6 | 16.0 | 16.0 | 11.4 | 11.4 | 16.2 | 16.2 | 18.6 | 18.6 |
| CALC_9g | 10.9 | 10.9 | 14.6 | 14.6 | 17.1 | 17.1 | 13.5 | 13.5 | 17.2 | 17.2 | 19.7 | 19.7 |
| CALC_9i | 8.4 | 8.4 | 12.8 | 12.8 | 15.3 | 15.3 | 11.0 | 11.0 | 15.4 | 15.4 | 17.9 | 17.9 |
| CMRN_10c | 11.1 | 11.1 | 14.8 | 14.8 | 16.8 | 16.8 | 13.8 | 13.7 | 17.1 | 17.4 | 18.8 | 19.4 |
| CMRN_12a | 13.0 | 13.0 | 16.9 | 16.9 | 19.0 | 19.0 | 15.3 | 15.6 | 18.9 | 19.5 | 20.7 | 21.6 |
| CMRN_9a | 9.5 | 9.5 | 14.1 | 14.1 | 16.3 | 16.3 | 12.1 | 12.1 | 16.7 | 16.7 | 18.9 | 18.9 |
| CMRN_9g | 9.6 | 9.6 | 13.1 | 13.1 | 15.2 | 15.2 | 12.7 | 12.2 | 16.4 | 15.7 | 18.6 | 17.8 |
| JFDV_7a | 7.5 | 7.5 | 11.9 | 11.9 | 14.7 | 14.7 | 10.1 | 10.1 | 14.5 | 14.5 | 17.3 | 17.3 |
| JFDV_9d | 6.4 | 6.4 | 11.1 | 11.1 | 13.5 | 13.5 | 9.0 | 9.0 | 13.7 | 13.7 | 16.1 | 16.1 |
| VMLN_10b | 7.8 | 7.8 | 11.2 | 11.2 | 13.5 | 13.5 | 10.4 | 10.4 | 13.8 | 13.8 | 16.1 | 16.1 |
| VMLN_12d | 7.8 | 7.8 | 11.1 | 11.1 | 14.3 | 14.3 | 10.4 | 10.4 | 13.7 | 13.7 | 16.9 | 16.9 |
| VMLN_6c | 7.8 | 7.8 | 10.7 | 10.7 | 12.7 | 12.7 | 10.4 | 10.4 | 13.3 | 13.3 | 15.3 | 15.3 |
| VMLN_8e | 8.6 | 8.6 | 12.1 | 12.1 | 14.2 | 14.2 | 11.2 | 11.2 | 14.7 | 14.7 | 16.8 | 16.8 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

* With and without project base conditions (2010) are the same for coastal restoration only plans.

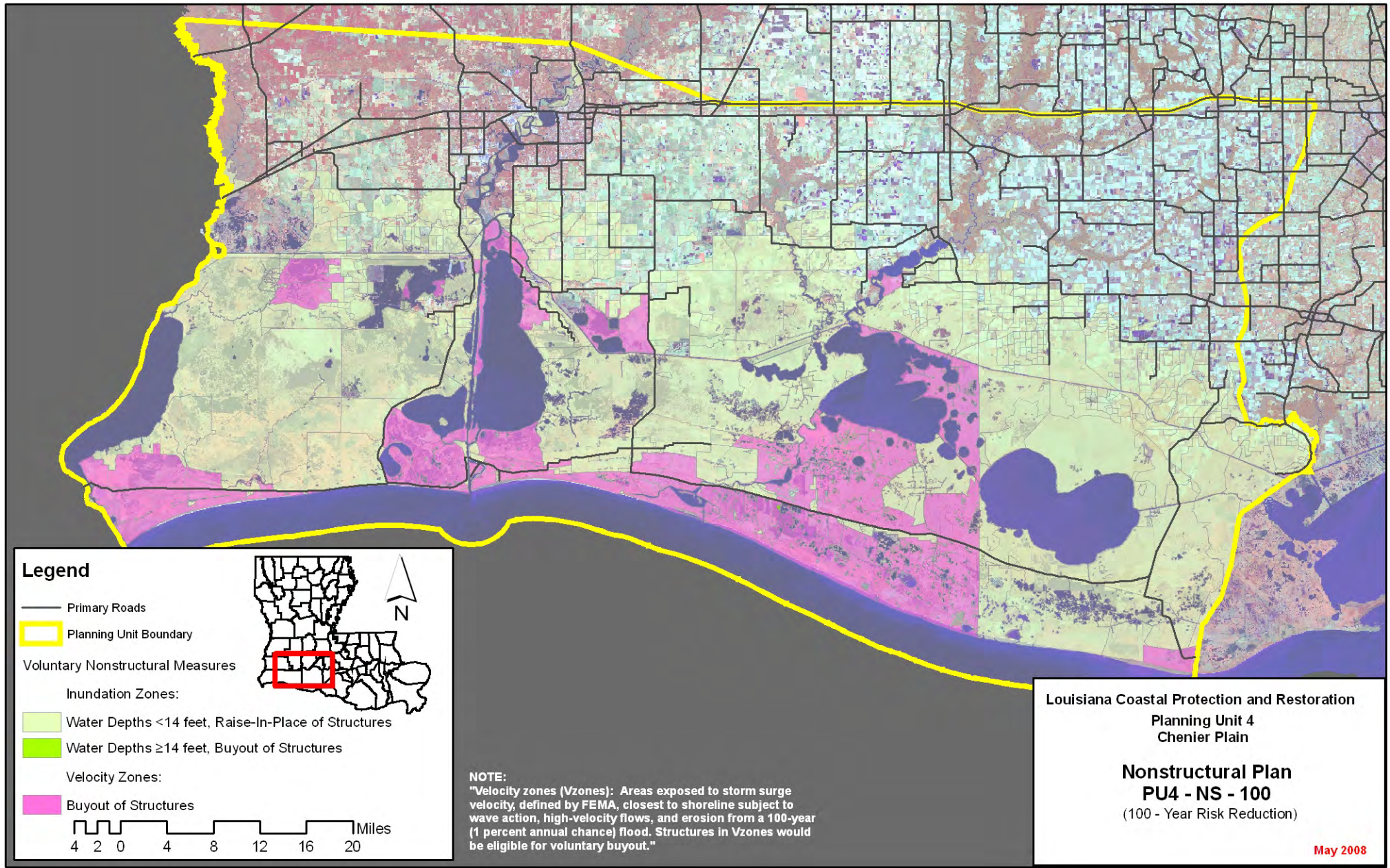
| | | | | | |
|---------------------------------|---|---------------------------------|------------|-----------------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-NS-100 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 100-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 100-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 660 | 2,072 | 103 | 89 | 272 | 16 | 107 | 3 | 0 |
| | | Mid | | 3,138 | 143 | 111 | 349 | 19 | 83 | 3 | 0 |
| | | Low | | 4,106 | 206 | 166 | 505 | 30 | 58 | 2 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 675 | 2,262 | 108 | 96 | 280 | 17 | 107 | 3 | 0 |
| | | Mid | | 3,260 | 157 | 157 | 429 | 27 | 83 | 2 | 0 |
| | | Low | | 4,374 | 229 | 208 | 535 | 33 | 58 | 1 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 660 | 1,938 | 103 | 84 | 263 | 15 | 107 | 3 | 0 |
| | | Mid | | 2,922 | 145 | 107 | 339 | 19 | 83 | 3 | 0 |
| | | Low | | 3,755 | 211 | 162 | 508 | 30 | 58 | 2 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 675 | 2,099 | 108 | 93 | 275 | 16 | 107 | 3 | 0 |
| | | Mid | | 3,044 | 159 | 149 | 426 | 27 | 83 | 2 | 0 |
| | | Low | | 3,973 | 241 | 193 | 529 | 32 | 58 | 1 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 15 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 0 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 2,142 | 2,142 | 2,145 | 2,145 | |
| | 1 / 2 | 4,524 | 4,627 | Structural Component | | 0 | 0 | 0 | 0 | |
| | 3 / 4 | 4,525 | 4,628 | Total Project | | 12,925 | 13,220 | 12,928 | 13,222 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Nonstructural Plan 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 151 | 725 | 181 | 511 | 152 | 794 | 182 | |
| 100-year | 3,034 | 1,249 | 4,142 | 2,570 | 3,315 | 1,209 | 5,183 | 2,969 | |
| 400-year | 6,592 | 5,340 | 7,874 | 6,737 | 8,001 | 5,530 | 9,283 | 6,818 | |
| 1,000-year | 10,316 | 9,206 | 11,581 | 10,545 | 11,241 | 8,784 | 12,313 | 9,869 | |
| 2,000-year | 12,755 | 11,720 | 13,904 | 12,999 | 13,422 | 10,972 | 14,373 | 11,978 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
- ▬ Planning Unit Boundary

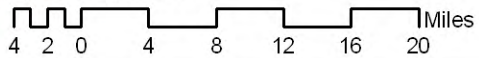
Voluntary Nonstructural Measures

Inundation Zones:

- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain

Nonstructural Plan
PU4 - NS - 100
 (100 - Year Risk Reduction)

May 2008

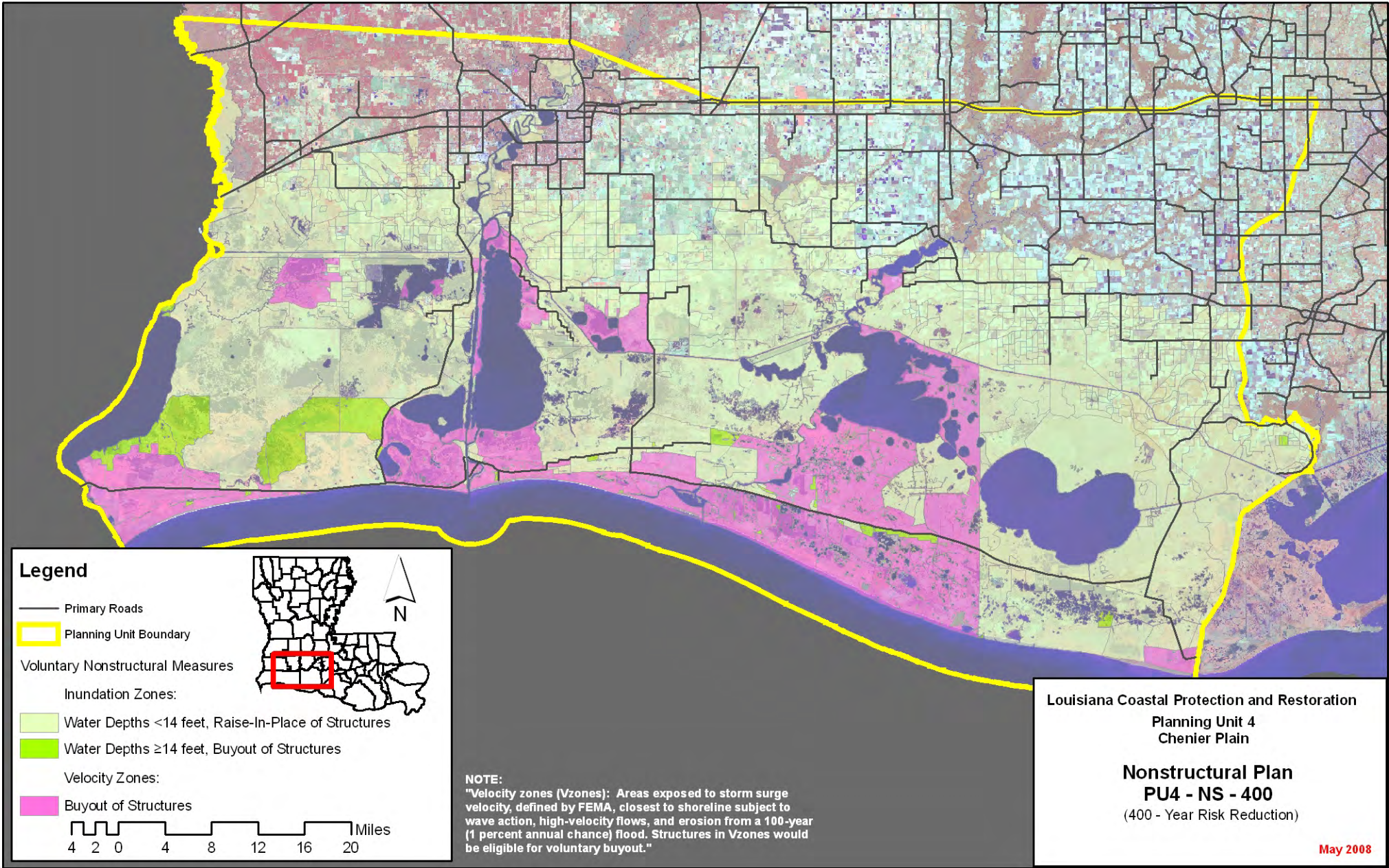
| | | | | | |
|---------------------------------|---|---------------------------------|------------|-----------------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-NS-400 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 400-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 400-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 727 | 1,990 | 97 | 68 | 234 | 12 | 107 | 3 | 0 |
| | | Mid | | 3,056 | 127 | 81 | 282 | 14 | 83 | 3 | 0 |
| | | Low | | 4,024 | 169 | 105 | 369 | 19 | 58 | 2 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 742 | 2,180 | 99 | 70 | 237 | 12 | 107 | 3 | 0 |
| | | Mid | | 3,178 | 131 | 92 | 295 | 15 | 83 | 2 | 0 |
| | | Low | | 4,292 | 176 | 107 | 376 | 19 | 58 | 1 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 723 | 1,861 | 98 | 64 | 227 | 11 | 107 | 3 | 0 |
| | | Mid | | 2,845 | 129 | 76 | 270 | 13 | 83 | 3 | 0 |
| | | Low | | 3,678 | 173 | 98 | 357 | 18 | 58 | 2 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 739 | 2,022 | 99 | 66 | 229 | 12 | 107 | 3 | 0 |
| | | Mid | | 2,967 | 132 | 85 | 281 | 14 | 83 | 2 | 0 |
| | | Low | | 3,896 | 180 | 99 | 363 | 18 | 58 | 1 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 15 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 0 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,455 | 3,455 | 3,392 | 3,392 | |
| | 1 / 2 | 4,983 | 5,086 | Structural Component | | 0 | 0 | 0 | 0 | |
| | 3 / 4 | 4,961 | 5,064 | Total Project | | 14,238 | 14,532 | 14,176 | 14,470 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Nonstructural Plan 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 142 | 725 | 165 | 511 | 144 | 794 | 166 | |
| 100-year | 3,034 | 504 | 4,142 | 682 | 3,315 | 507 | 5,183 | 668 | |
| 400-year | 6,592 | 2,214 | 7,874 | 4,520 | 8,001 | 1,973 | 9,283 | 4,524 | |
| 1,000-year | 10,316 | 7,707 | 11,581 | 9,629 | 11,241 | 7,162 | 12,313 | 8,855 | |
| 2,000-year | 12,755 | 10,905 | 13,904 | 12,344 | 13,422 | 10,061 | 14,373 | 11,202 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



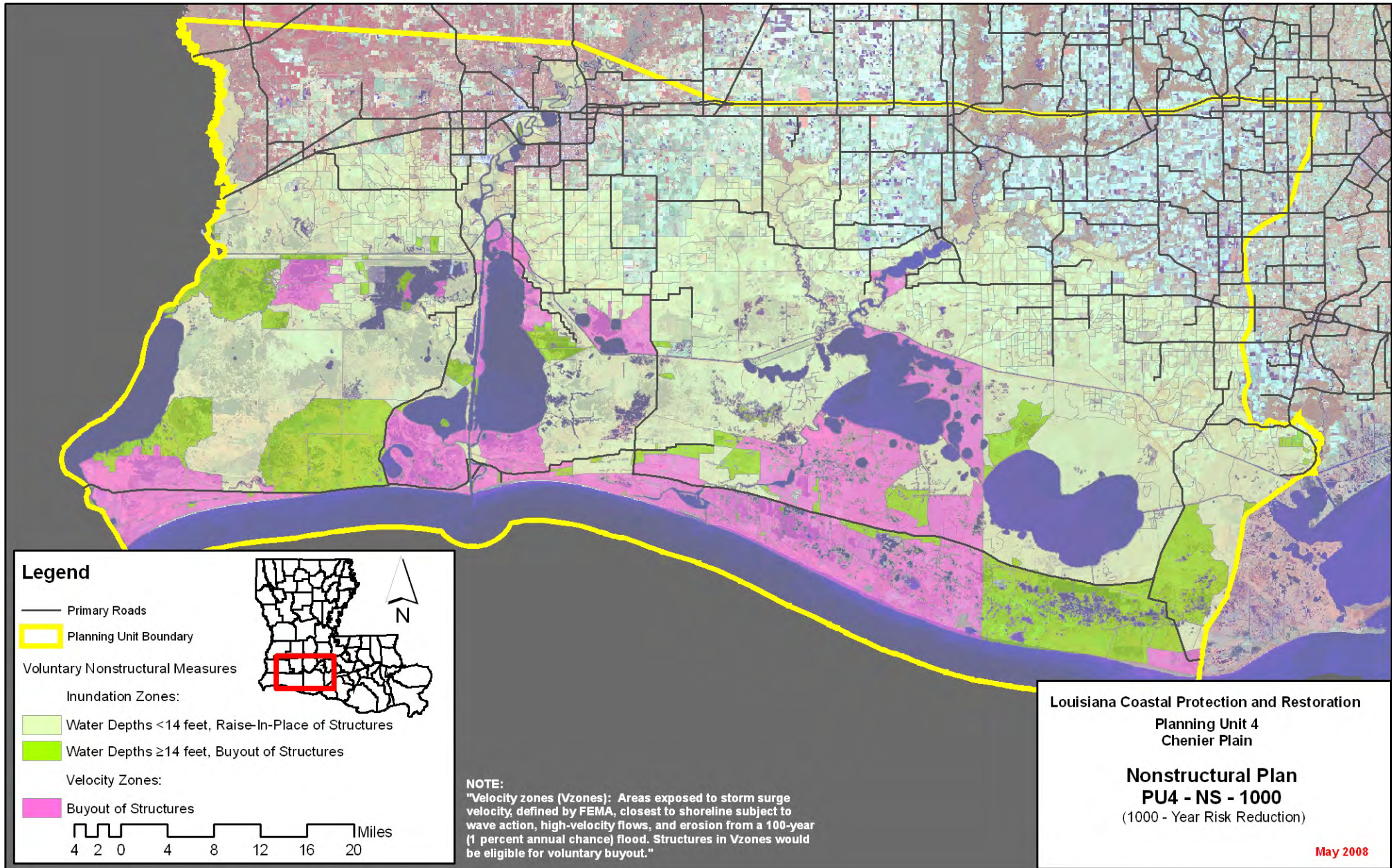
| | | | | | |
|---------------------------------|--|---------------------------------|-------------|------------------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-NS-1000 | Category: | Coastal Restoration + Nonstructural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. Implement comprehensive 1000-year nonstructural measures. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | | 1000-yr stand alone measures | |
| Structural Component: | No new levees or increases in risk reduction level for existing levees. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 796 | 1,876 | 93 | 67 | 232 | 12 | 107 | 3 | 0 |
| | | Mid | | 2,942 | 122 | 74 | 266 | 13 | 83 | 3 | 0 |
| | | Low | | 3,911 | 156 | 86 | 321 | 16 | 58 | 2 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 811 | 2,066 | 95 | 68 | 233 | 12 | 107 | 3 | 0 |
| | | Mid | | 3,063 | 123 | 77 | 271 | 13 | 83 | 2 | 0 |
| | | Low | | 4,178 | 160 | 90 | 331 | 16 | 58 | 1 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 803 | 1,741 | 94 | 63 | 225 | 11 | 107 | 3 | 0 |
| | | Mid | | 2,725 | 123 | 70 | 256 | 12 | 83 | 3 | 0 |
| | | Low | | 3,558 | 160 | 81 | 312 | 15 | 58 | 2 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 818 | 1,902 | 95 | 64 | 226 | 11 | 107 | 3 | 0 |
| | | Mid | | 2,846 | 125 | 72 | 261 | 13 | 83 | 2 | 0 |
| | | Low | | 3,776 | 163 | 85 | 320 | 15 | 58 | 1 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 15 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 0 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 4,807 | 4,807 | 4,955 | 4,955 | |
| | 1 / 2 | 5,457 | 5,560 | Structural Component | | 0 | 0 | 0 | 0 | |
| | 3 / 4 | 5,508 | 5,611 | Total Project | | 15,590 | 15,884 | 15,738 | 16,032 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Nonstructural Plan 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 121 | 725 | 143 | 511 | 121 | 794 | 143 | |
| 100-year | 3,034 | 458 | 4,142 | 557 | 3,315 | 454 | 5,183 | 550 | |
| 400-year | 6,592 | 935 | 7,874 | 1,466 | 8,001 | 820 | 9,283 | 1,229 | |
| 1,000-year | 10,316 | 3,146 | 11,581 | 6,250 | 11,241 | 2,561 | 12,313 | 5,665 | |
| 2,000-year | 12,755 | 8,278 | 13,904 | 10,868 | 13,422 | 7,423 | 14,373 | 9,552 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



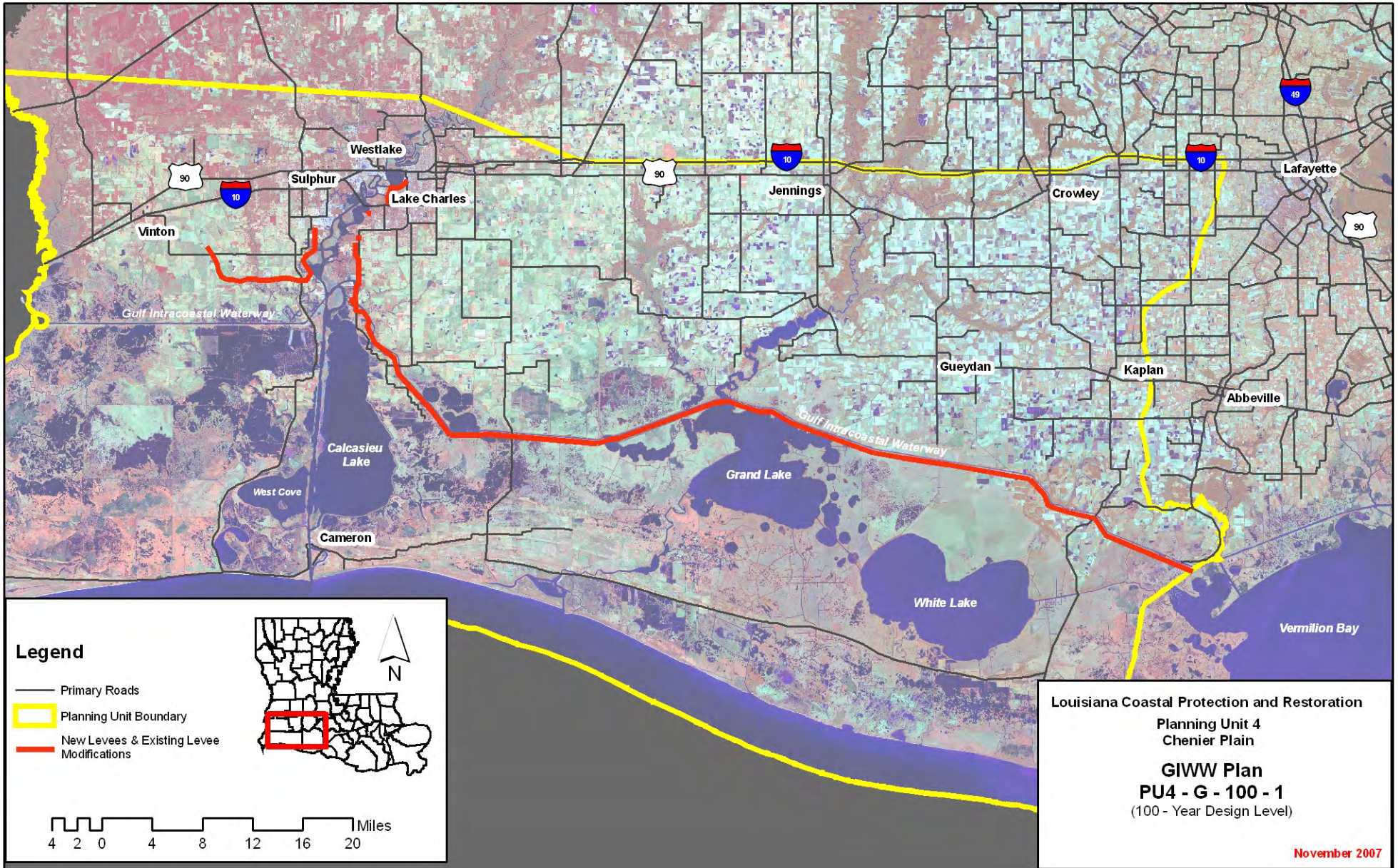
| | | | | | |
|---------------------------------|--|---------------------------------|-------------|------------------|---|
| Planning Unit: | 4 | Alt. No.: | PU4-G-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 de | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

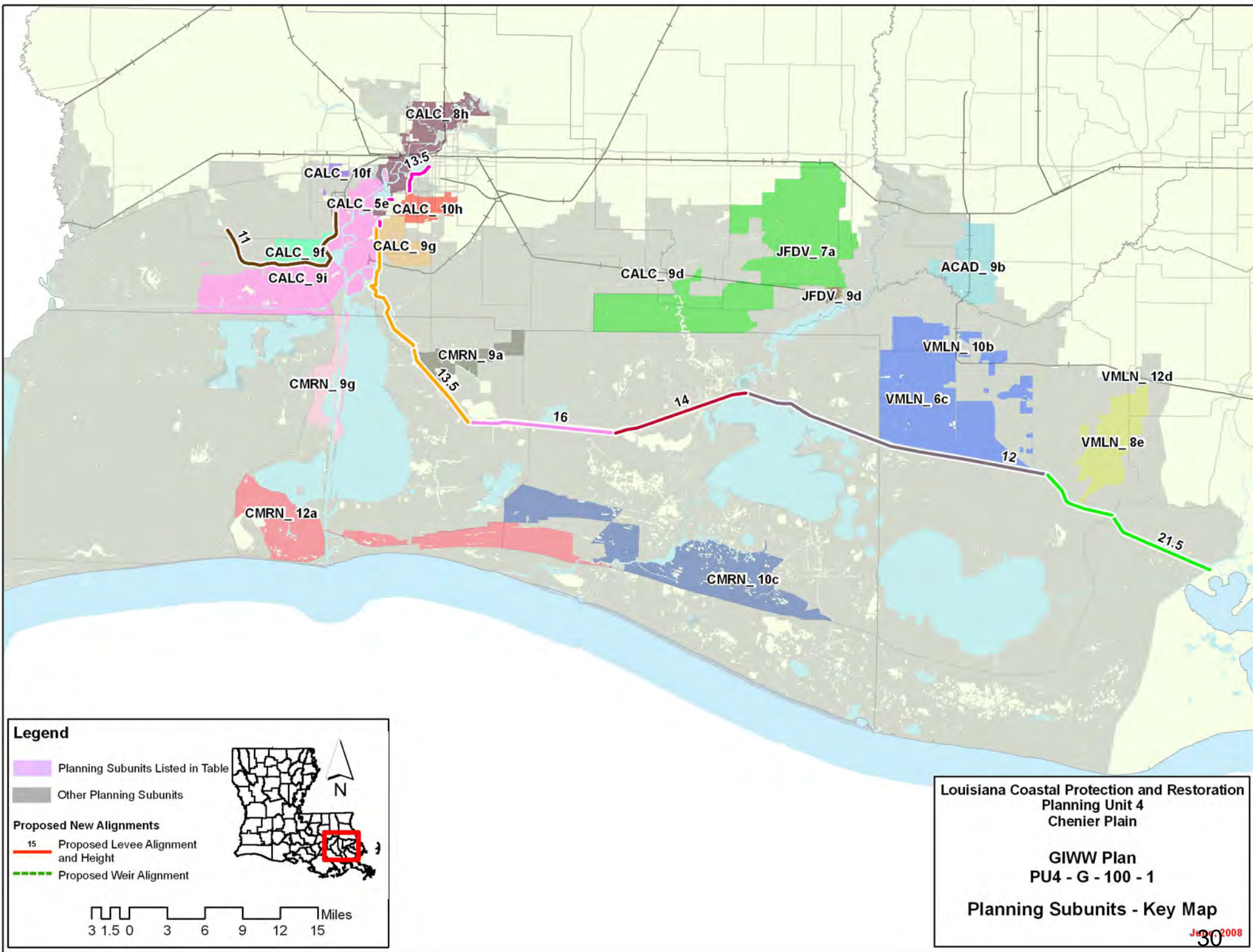
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,163 | 2,266 | 200 | 192 | 607 | 34 | 140 | 3 | 0 |
| | | Mid | | 2,961 | 247 | 219 | 697 | 38 | 116 | 3 | 0 |
| | | Low | | 3,672 | 307 | 272 | 851 | 47 | 91 | 3 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,192 | 2,403 | 209 | 211 | 633 | 37 | 140 | 3 | 0 |
| | | Mid | | 3,045 | 260 | 275 | 767 | 46 | 116 | 3 | 0 |
| | | Low | | 3,813 | 324 | 347 | 902 | 53 | 91 | 3 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,163 | 2,178 | 212 | 212 | 654 | 38 | 140 | 3 | 0 |
| | | Mid | | 2,815 | 268 | 240 | 739 | 42 | 116 | 3 | 0 |
| | | Low | | 3,474 | 346 | 279 | 871 | 49 | 91 | 3 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,192 | 2,296 | 224 | 240 | 692 | 42 | 140 | 3 | 0 |
| | | Mid | | 2,917 | 293 | 284 | 800 | 48 | 116 | 3 | 0 |
| | | Low | | 3,614 | 382 | 343 | 917 | 55 | 91 | 3 | 0 |

| Other Results | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---|-------|-------------------------|------------|------------|------------|--|
| Construction Time (years) | 10 | After 50 yrs (% of baseline) | 103 | 101 | 103 | 101 | 101 | |
| Direct Wetland Impacts (acres) | 2,200 | After 100 yrs (% of baseline) | 106 | 100 | 106 | 100 | 100 | |
| Indirect Impacts (unitless) | -5 | Present Value of Life Cycle Costs (\$ Millions) | | | | | | |
| Spatial Integrity (unitless) | 0.44 | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 | |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | |
| | 1 / 2 | 8,065 | 8,266 | Structural Component | | 11,989 | 12,272 | |
| | 3 / 4 | 8,065 | 8,266 | Total Project | | 22,773 | 23,349 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Structural Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 394 | 725 | 562 | 511 | 468 | 794 | 674 | |
| 100-year | 3,034 | 1,867 | 4,142 | 2,232 | 3,315 | 2,575 | 5,183 | 3,735 | |
| 400-year | 6,592 | 4,220 | 7,874 | 4,668 | 8,001 | 6,334 | 9,283 | 6,817 | |
| 1,000-year | 10,316 | 8,170 | 11,581 | 8,689 | 11,241 | 9,787 | 12,313 | 10,411 | |
| 2,000-year | 12,755 | 9,113 | 13,904 | 9,541 | 13,422 | 10,778 | 14,373 | 11,094 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





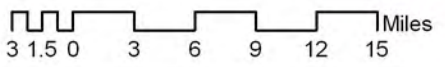


Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

Louisiana Coastal Protection and Restoration
Planning Unit 4
Chenier Plain

GIWW Plan
PU4 - G - 100 - 1
Planning Subunits - Key Map
 June 2008

Alternative: PU4-G-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_ 9b | 7.8 | 2.7 | 9.4 | 7.5 | 12.2 | 12.0 | 10.4 | 2.7 | 12.0 | 7.5 | 14.8 | 12.0 |
| CALC_ 10f | 6.0 | 6.0 | 8.1 | 8.1 | 9.7 | 9.7 | 8.6 | 8.6 | 10.7 | 10.7 | 12.3 | 12.3 |
| CALC_ 10h | 5.5 | 10.2 | 6.1 | 13.5 | 9.1 | 13.5 | 8.1 | 10.2 | 8.7 | 13.5 | 11.7 | 13.5 |
| CALC_ 5e | 7.8 | 8.3 | 8.5 | 13.5 | 12.1 | 13.5 | 10.4 | 8.3 | 11.1 | 13.5 | 14.7 | 13.5 |
| CALC_ 8h | 7.8 | 7.8 | 10.7 | 10.7 | 12.8 | 12.8 | 10.4 | 10.4 | 13.3 | 13.3 | 15.4 | 15.4 |
| CALC_ 9d | 7.8 | 2.6 | 9.7 | 6.7 | 13.6 | 13.3 | 10.4 | 2.6 | 12.3 | 6.7 | 16.2 | 13.3 |
| CALC_ 9f | 8.8 | 7.2 | 13.6 | 11.0 | 16.0 | 11.0 | 11.4 | 7.2 | 16.2 | 11.0 | 18.6 | 11.0 |
| CALC_ 9g | 10.9 | 4.3 | 14.6 | 12.4 | 17.1 | 13.5 | 13.5 | 4.3 | 17.2 | 12.4 | 19.7 | 13.5 |
| CALC_ 9i | 8.4 | 8.4 | 12.8 | 12.8 | 15.3 | 15.3 | 11.0 | 11.0 | 15.4 | 15.4 | 17.9 | 17.9 |
| CMRN_ 10c | 11.1 | 11.8 | 14.8 | 15.5 | 16.8 | 17.5 | 13.8 | 14.4 | 17.1 | 18.1 | 18.8 | 20.1 |
| CMRN_ 12a | 13.0 | 14.4 | 16.9 | 18.3 | 19.0 | 20.4 | 15.3 | 17.0 | 18.9 | 20.9 | 20.7 | 23.0 |
| CMRN_ 9a | 9.5 | 2.6 | 14.1 | 6.7 | 16.3 | 13.3 | 12.1 | 2.6 | 16.7 | 6.7 | 18.9 | 13.3 |
| CMRN_ 9g | 9.6 | 10.8 | 13.1 | 15.0 | 15.2 | 17.2 | 12.7 | 13.4 | 16.4 | 17.6 | 18.6 | 19.8 |
| JFDV_ 7a | 7.5 | 2.6 | 11.9 | 6.7 | 14.7 | 13.3 | 10.1 | 2.6 | 14.5 | 6.7 | 17.3 | 13.3 |
| JFDV_ 9d | 6.4 | 2.7 | 11.1 | 7.5 | 13.5 | 12.0 | 9.0 | 2.7 | 13.7 | 7.5 | 16.1 | 12.0 |
| VMLN_ 10b | 7.8 | 2.7 | 11.2 | 7.5 | 13.5 | 12.0 | 10.4 | 2.7 | 13.8 | 7.5 | 16.1 | 12.0 |
| VMLN_ 12d | 7.8 | 2.7 | 11.1 | 7.5 | 14.3 | 12.0 | 10.4 | 2.7 | 13.7 | 7.5 | 16.9 | 12.0 |
| VMLN_ 6c | 7.8 | 2.7 | 10.7 | 7.5 | 12.7 | 12.0 | 10.4 | 2.7 | 13.3 | 7.5 | 15.3 | 12.0 |
| VMLN_ 8e | 8.6 | 2.7 | 12.1 | 7.5 | 14.2 | 12.0 | 11.2 | 2.7 | 14.7 | 7.5 | 16.8 | 12.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

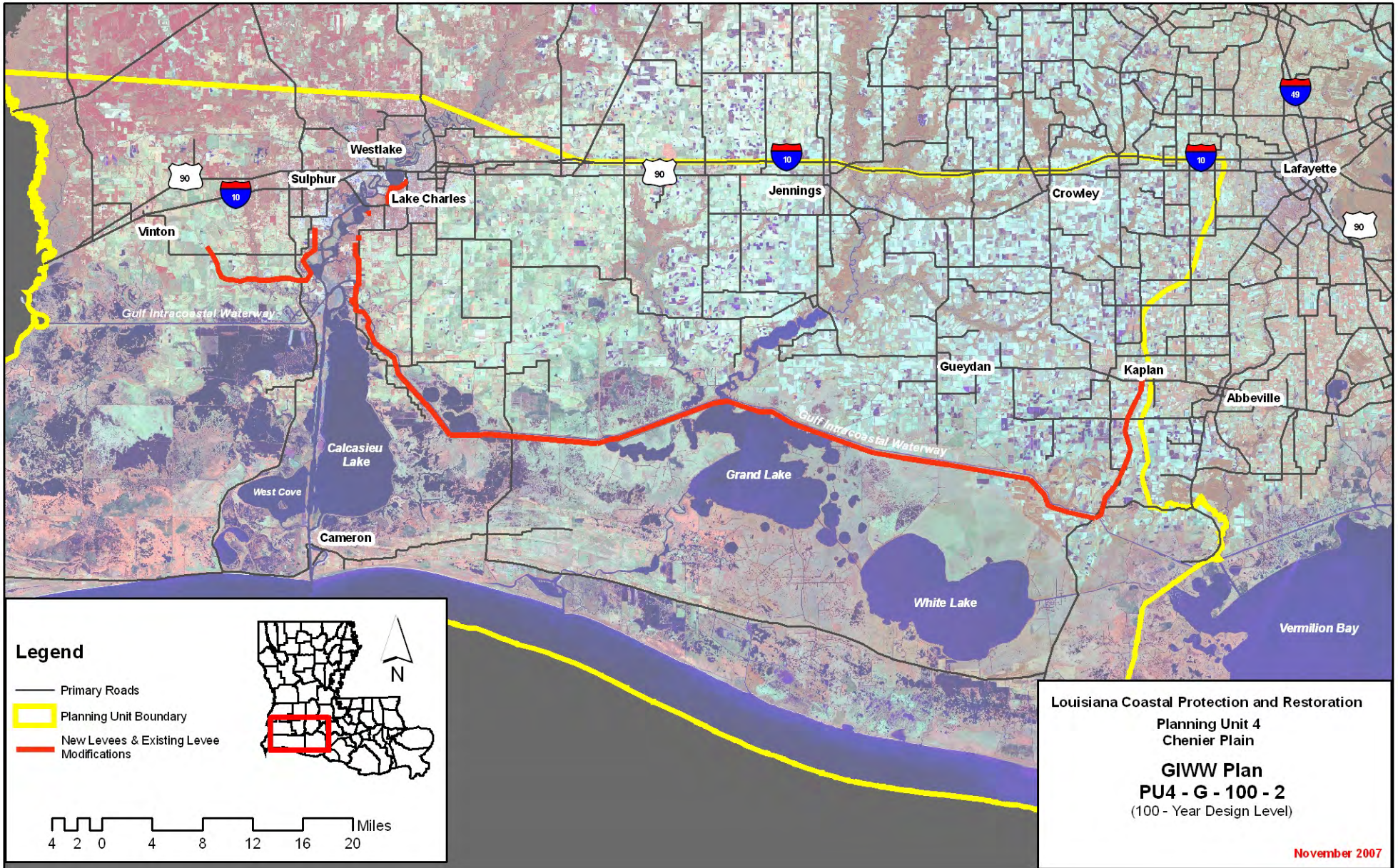
| | | | | | |
|---------------------------------|--|---------------------------------|-------------|------------------|---|
| Planning Unit: | 4 | Alt. No.: | PU4-G-100-2 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 de | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

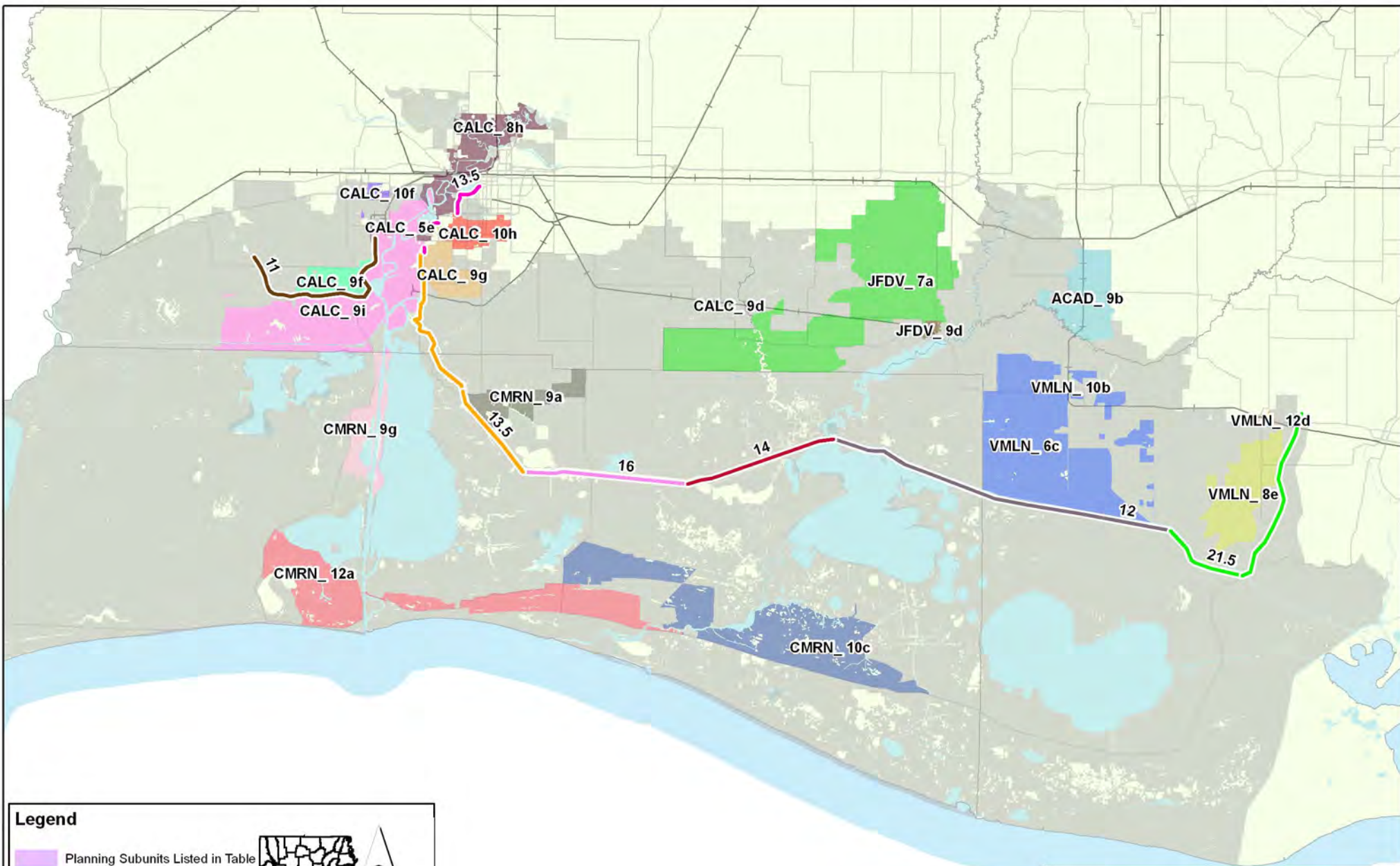
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,152 | 2,384 | 214 | 246 | 712 | 45 | 139 | 2 | 0 |
| | | Mid | | 3,085 | 262 | 274 | 806 | 49 | 115 | 0 | 0 |
| | | Low | | 3,800 | 324 | 326 | 959 | 58 | 90 | 0 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,182 | 2,525 | 225 | 266 | 740 | 48 | 139 | 2 | 0 |
| | | Mid | | 3,170 | 277 | 330 | 876 | 56 | 115 | 0 | 0 |
| | | Low | | 3,943 | 342 | 402 | 1,010 | 64 | 90 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,152 | 2,271 | 224 | 258 | 741 | 47 | 139 | 2 | 0 |
| | | Mid | | 2,913 | 281 | 287 | 830 | 51 | 115 | 0 | 0 |
| | | Low | | 3,576 | 360 | 326 | 961 | 58 | 90 | 0 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,182 | 2,391 | 238 | 287 | 781 | 51 | 139 | 2 | 0 |
| | | Mid | | 3,015 | 307 | 331 | 891 | 58 | 115 | 0 | 0 |
| | | Low | | 3,716 | 397 | 390 | 1,007 | 64 | 90 | 0 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 10 | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 1,800 | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | -5 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 7,995 | 8,196 | Structural Component | | 11,785 | 12,065 | 11,785 | 12,065 |
| | 3 / 4 | 7,995 | 8,196 | Total Project | | 22,568 | 23,143 | 22,568 | 23,143 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Structural Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 464 | 725 | 661 | 511 | 526 | 794 | 758 | |
| 100-year | 3,034 | 2,113 | 4,142 | 2,534 | 3,315 | 2,785 | 5,183 | 3,991 | |
| 400-year | 6,592 | 4,588 | 7,874 | 5,055 | 8,001 | 6,647 | 9,283 | 7,152 | |
| 1,000-year | 10,316 | 8,435 | 11,581 | 8,961 | 11,241 | 10,013 | 12,313 | 10,649 | |
| 2,000-year | 12,755 | 9,247 | 13,904 | 9,681 | 13,422 | 10,913 | 14,373 | 11,239 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.





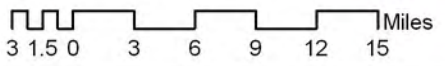


Legend

- Planning Subunits Listed in Table
- Other Planning Subunits

Proposed New Alignments

- 15 Proposed Levee Alignment and Height
- Proposed Weir Alignment

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain

GIWW Plan
 PU4 - G - 100 - 2

Planning Subunits - Key Map

June 2008
 34

Alternative: PU4-G-100-2
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_ 9b | 7.8 | 2.7 | 9.4 | 7.7 | 12.2 | 12.0 | 10.4 | 2.7 | 12.0 | 7.7 | 14.8 | 12.0 |
| CALC_ 10f | 6.0 | 6.0 | 8.1 | 8.1 | 9.7 | 9.7 | 8.6 | 8.6 | 10.7 | 10.7 | 12.3 | 12.3 |
| CALC_ 10h | 5.5 | 10.2 | 6.1 | 13.5 | 9.1 | 13.5 | 8.1 | 10.2 | 8.7 | 13.5 | 11.7 | 13.5 |
| CALC_ 5e | 7.8 | 8.3 | 8.5 | 13.5 | 12.1 | 13.5 | 10.4 | 8.3 | 11.1 | 13.5 | 14.7 | 13.5 |
| CALC_ 8h | 7.8 | 7.8 | 10.7 | 10.7 | 12.8 | 12.8 | 10.4 | 10.4 | 13.3 | 13.3 | 15.4 | 15.4 |
| CALC_ 9d | 7.8 | 2.6 | 9.7 | 6.7 | 13.6 | 13.3 | 10.4 | 2.6 | 12.3 | 6.7 | 16.2 | 13.3 |
| CALC_ 9f | 8.8 | 7.2 | 13.6 | 11.0 | 16.0 | 11.0 | 11.4 | 7.2 | 16.2 | 11.0 | 18.6 | 11.0 |
| CALC_ 9g | 10.9 | 4.3 | 14.6 | 12.4 | 17.1 | 13.5 | 13.5 | 4.3 | 17.2 | 12.4 | 19.7 | 13.5 |
| CALC_ 9i | 8.4 | 8.4 | 12.8 | 12.8 | 15.3 | 15.3 | 11.0 | 11.0 | 15.4 | 15.4 | 17.9 | 17.9 |
| CMRN_ 10c | 11.1 | 11.8 | 14.8 | 15.5 | 16.8 | 17.5 | 13.8 | 14.4 | 17.1 | 18.1 | 18.8 | 20.1 |
| CMRN_ 12a | 13.0 | 14.4 | 16.9 | 18.3 | 19.0 | 20.4 | 15.3 | 17.0 | 18.9 | 20.9 | 20.7 | 23.0 |
| CMRN_ 9a | 9.5 | 2.6 | 14.1 | 6.7 | 16.3 | 13.3 | 12.1 | 2.6 | 16.7 | 6.7 | 18.9 | 13.3 |
| CMRN_ 9g | 9.6 | 10.8 | 13.1 | 15.0 | 15.2 | 17.2 | 12.7 | 13.4 | 16.4 | 17.6 | 18.6 | 19.8 |
| JFDV_ 7a | 7.5 | 2.6 | 11.9 | 6.7 | 14.7 | 13.3 | 10.1 | 2.6 | 14.5 | 6.7 | 17.3 | 13.3 |
| JFDV_ 9d | 6.4 | 2.7 | 11.1 | 7.7 | 13.5 | 12.0 | 9.0 | 2.7 | 13.7 | 7.7 | 16.1 | 12.0 |
| VMLN_ 10b | 7.8 | 2.7 | 11.2 | 7.7 | 13.5 | 12.0 | 10.4 | 2.7 | 13.8 | 7.7 | 16.1 | 12.0 |
| VMLN_ 12d | 7.8 | 2.7 | 11.1 | 7.7 | 14.3 | 12.0 | 10.4 | 2.7 | 13.7 | 7.7 | 16.9 | 12.0 |
| VMLN_ 6c | 7.8 | 2.7 | 10.7 | 7.7 | 12.7 | 12.0 | 10.4 | 2.7 | 13.3 | 7.7 | 15.3 | 12.0 |
| VMLN_ 8e | 8.6 | 2.7 | 12.1 | 7.7 | 14.2 | 12.0 | 11.2 | 2.7 | 14.7 | 7.7 | 16.8 | 12.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

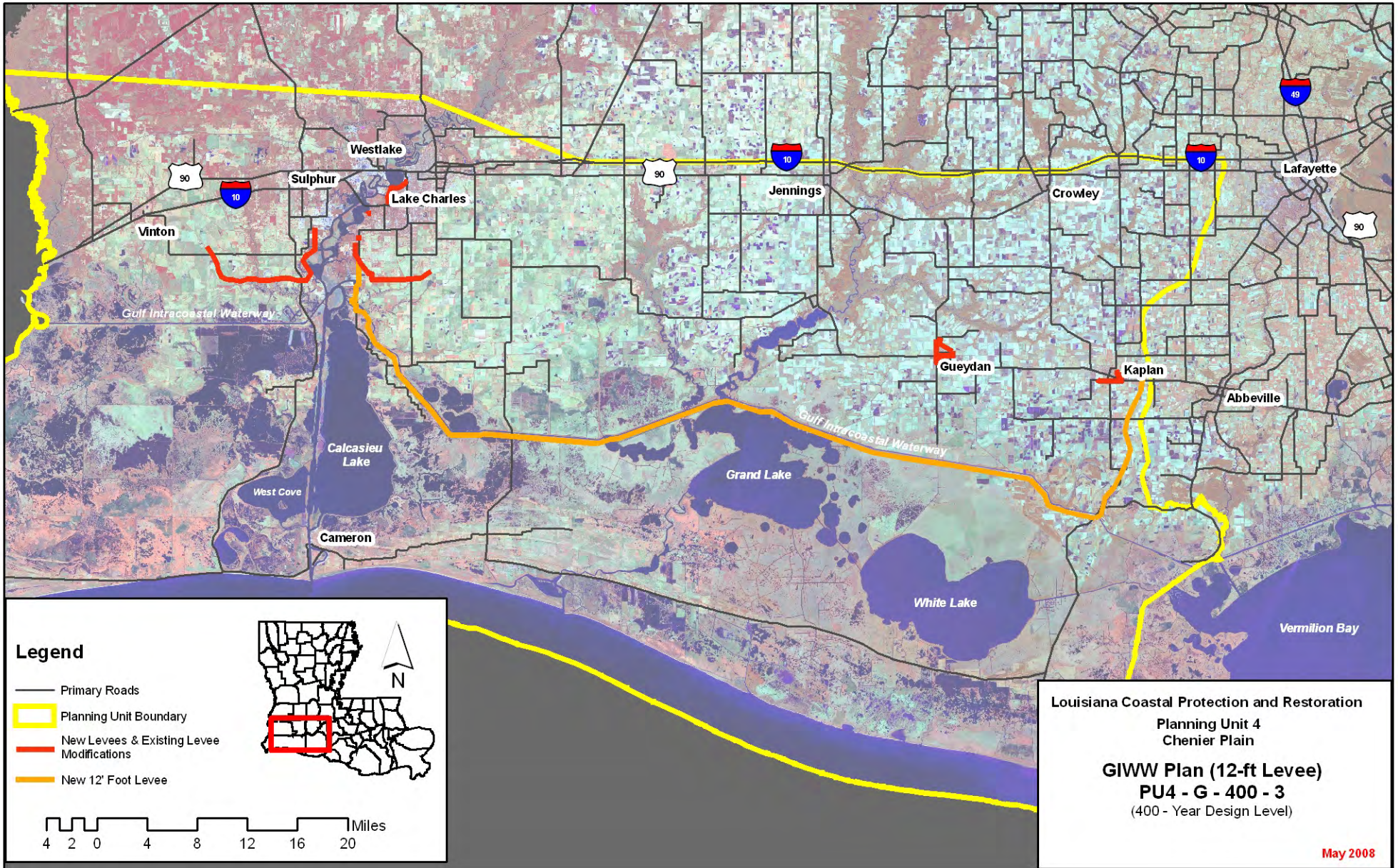
| | | | | | |
|---------------------------------|---|---------------------------------|-------------|------------------|---|
| Planning Unit: | 4 | Alt. No.: | PU4-G-400-3 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 s | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,150 | 2,576 | 215 | 246 | 712 | 45 | 139 | 1 | 0 |
| | | Mid | | 3,196 | 261 | 273 | 796 | 48 | 115 | 1 | 0 |
| | | Low | | 3,899 | 324 | 328 | 958 | 58 | 90 | 1 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,179 | 2,716 | 226 | 266 | 740 | 48 | 139 | 1 | 0 |
| | | Mid | | 3,281 | 276 | 329 | 866 | 56 | 115 | 1 | 0 |
| | | Low | | 4,041 | 342 | 404 | 1,009 | 64 | 90 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,150 | 2,454 | 225 | 258 | 741 | 47 | 139 | 1 | 0 |
| | | Mid | | 3,033 | 280 | 285 | 818 | 50 | 115 | 1 | 0 |
| | | Low | | 3,679 | 359 | 327 | 958 | 58 | 90 | 1 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,179 | 2,574 | 239 | 287 | 781 | 51 | 139 | 1 | 0 |
| | | Mid | | 3,135 | 306 | 329 | 878 | 57 | 115 | 1 | 0 |
| | | Low | | 3,818 | 396 | 390 | 1,005 | 64 | 90 | 0 | 0 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|-------|----------------------------|--|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | | 10 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | | 2,500 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | | -6 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | | |
| | 1 / 2 | 7,985 | 8,187 | Structural Component | | 11,732 | 12,012 | 11,732 | 12,012 | | |
| | 3 / 4 | 7,985 | 8,187 | Total Project | | 22,515 | 23,089 | 22,515 | 23,089 | | |

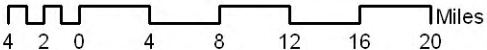
| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Structural Plan GIWW Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 469 | 725 | 667 | 511 | 532 | 794 | 763 | |
| 100-year | 3,034 | 2,137 | 4,142 | 2,557 | 3,315 | 2,808 | 5,183 | 4,013 | |
| 400-year | 6,592 | 3,645 | 7,874 | 4,112 | 8,001 | 5,660 | 9,283 | 6,166 | |
| 1,000-year | 10,316 | 10,277 | 11,581 | 10,802 | 11,241 | 11,569 | 12,313 | 12,205 | |
| 2,000-year | 12,755 | 12,551 | 13,904 | 12,984 | 13,422 | 13,834 | 14,373 | 14,160 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.75% Federal discount rate. All dollar metrics are based on 2007 price levels.



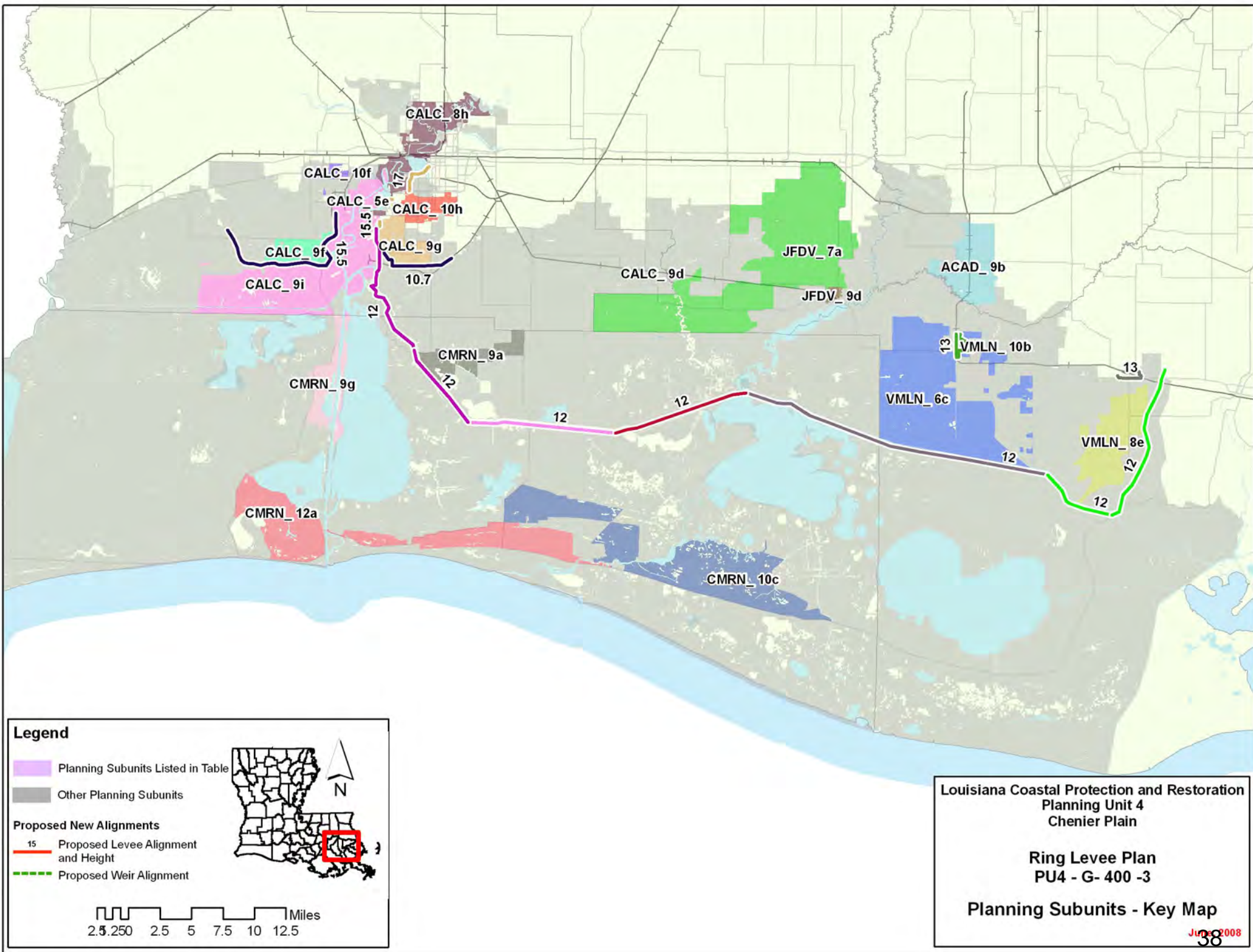
Legend

- Primary Roads
- ▭ Planning Unit Boundary
- New Levees & Existing Levee Modifications
- New 12' Foot Levee



Louisiana Coastal Protection and Restoration
Planning Unit 4
Chenier Plain
GIWW Plan (12-ft Levee)
PU4 - G - 400 - 3
 (400 - Year Design Level)

May 2008



Alternative: PU4-G-400-3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_ 9b | 7.8 | 3.7 | 9.4 | 7.6 | 12.2 | 12.0 | 10.4 | 3.7 | 12.0 | 7.6 | 14.8 | 12.0 |
| CALC_ 10f | 6.0 | 6.0 | 8.1 | 8.1 | 9.7 | 9.7 | 8.6 | 8.6 | 10.7 | 10.7 | 12.3 | 12.3 |
| CALC_ 10h | 5.5 | 10.1 | 6.1 | 10.4 | 9.1 | 14.9 | 8.1 | 10.1 | 8.7 | 10.4 | 11.7 | 14.9 |
| CALC_ 5e | 7.8 | 8.0 | 8.5 | 8.7 | 12.1 | 16.9 | 10.4 | 8.0 | 11.1 | 8.7 | 14.7 | 16.9 |
| CALC_ 8h | 7.8 | 7.8 | 10.7 | 10.7 | 12.8 | 12.8 | 10.4 | 10.4 | 13.3 | 13.3 | 15.4 | 15.4 |
| CALC_ 9d | 7.8 | 3.1 | 9.7 | 8.5 | 13.6 | 12.0 | 10.4 | 3.1 | 12.3 | 8.5 | 16.2 | 12.0 |
| CALC_ 9f | 8.8 | 7.2 | 13.6 | 7.2 | 16.0 | 15.2 | 11.4 | 7.2 | 16.2 | 7.2 | 18.6 | 15.2 |
| CALC_ 9g | 10.9 | 8.1 | 14.6 | 8.1 | 17.1 | 15.5 | 13.5 | 8.1 | 17.2 | 8.1 | 19.7 | 15.5 |
| CALC_ 9i | 8.4 | 8.4 | 12.8 | 12.8 | 15.3 | 15.3 | 11.0 | 11.0 | 15.4 | 15.4 | 17.9 | 17.9 |
| CMRN_ 10c | 11.1 | 11.8 | 14.8 | 15.5 | 16.8 | 17.5 | 13.8 | 14.4 | 17.1 | 18.1 | 18.8 | 20.1 |
| CMRN_ 12a | 13.0 | 14.4 | 16.9 | 18.3 | 19.0 | 20.4 | 15.3 | 17.0 | 18.9 | 20.9 | 20.7 | 23.0 |
| CMRN_ 9a | 9.5 | 3.1 | 14.1 | 8.5 | 16.3 | 12.0 | 12.1 | 3.1 | 16.7 | 8.5 | 18.9 | 12.0 |
| CMRN_ 9g | 9.6 | 10.8 | 13.1 | 15.0 | 15.2 | 17.2 | 12.7 | 13.4 | 16.4 | 17.6 | 18.6 | 19.8 |
| JFDV_ 7a | 7.5 | 3.1 | 11.9 | 8.5 | 14.7 | 12.0 | 10.1 | 3.1 | 14.5 | 8.5 | 17.3 | 12.0 |
| JFDV_ 9d | 6.4 | 3.7 | 11.1 | 7.6 | 13.5 | 12.0 | 9.0 | 3.7 | 13.7 | 7.6 | 16.1 | 12.0 |
| VMLN_ 10b | 7.8 | 5.7 | 11.2 | 6.7 | 13.5 | 15.5 | 10.4 | 5.7 | 13.8 | 6.7 | 16.1 | 15.5 |
| VMLN_ 12d | 7.8 | 11.3 | 11.1 | 12.1 | 14.3 | 15.5 | 10.4 | 11.3 | 13.7 | 12.1 | 16.9 | 15.5 |
| VMLN_ 6c | 7.8 | 3.7 | 10.7 | 7.6 | 12.7 | 12.0 | 10.4 | 3.7 | 13.3 | 7.6 | 15.3 | 12.0 |
| VMLN_ 8e | 8.6 | 3.7 | 12.1 | 7.6 | 14.2 | 12.0 | 11.2 | 3.7 | 14.7 | 7.6 | 16.8 | 12.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

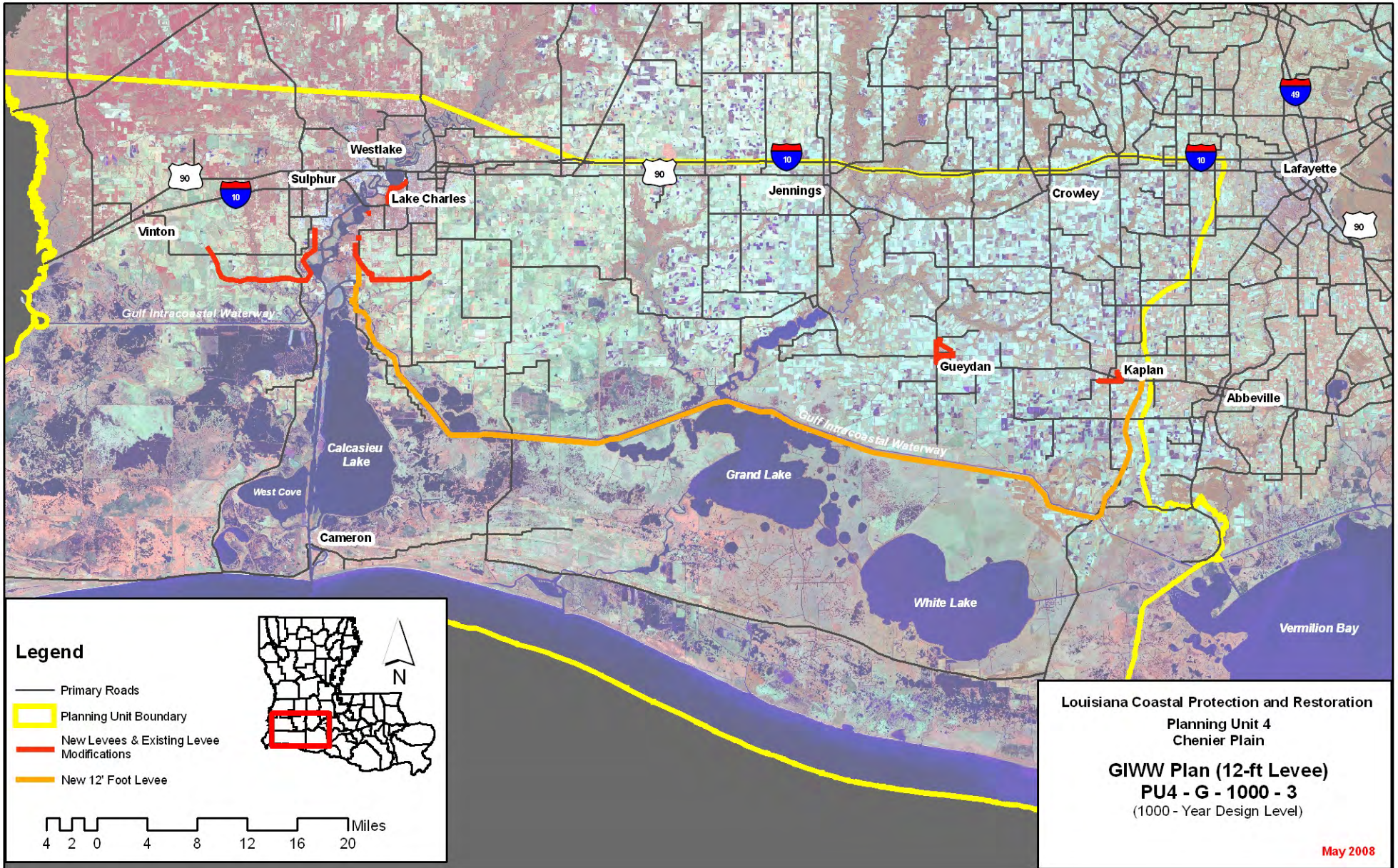
| | | | | | |
|---------------------------------|---|---------------------------------|--------------|------------------|---|
| Planning Unit: | 4 | Alt. No.: | PU4-G-1000-3 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

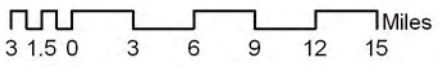
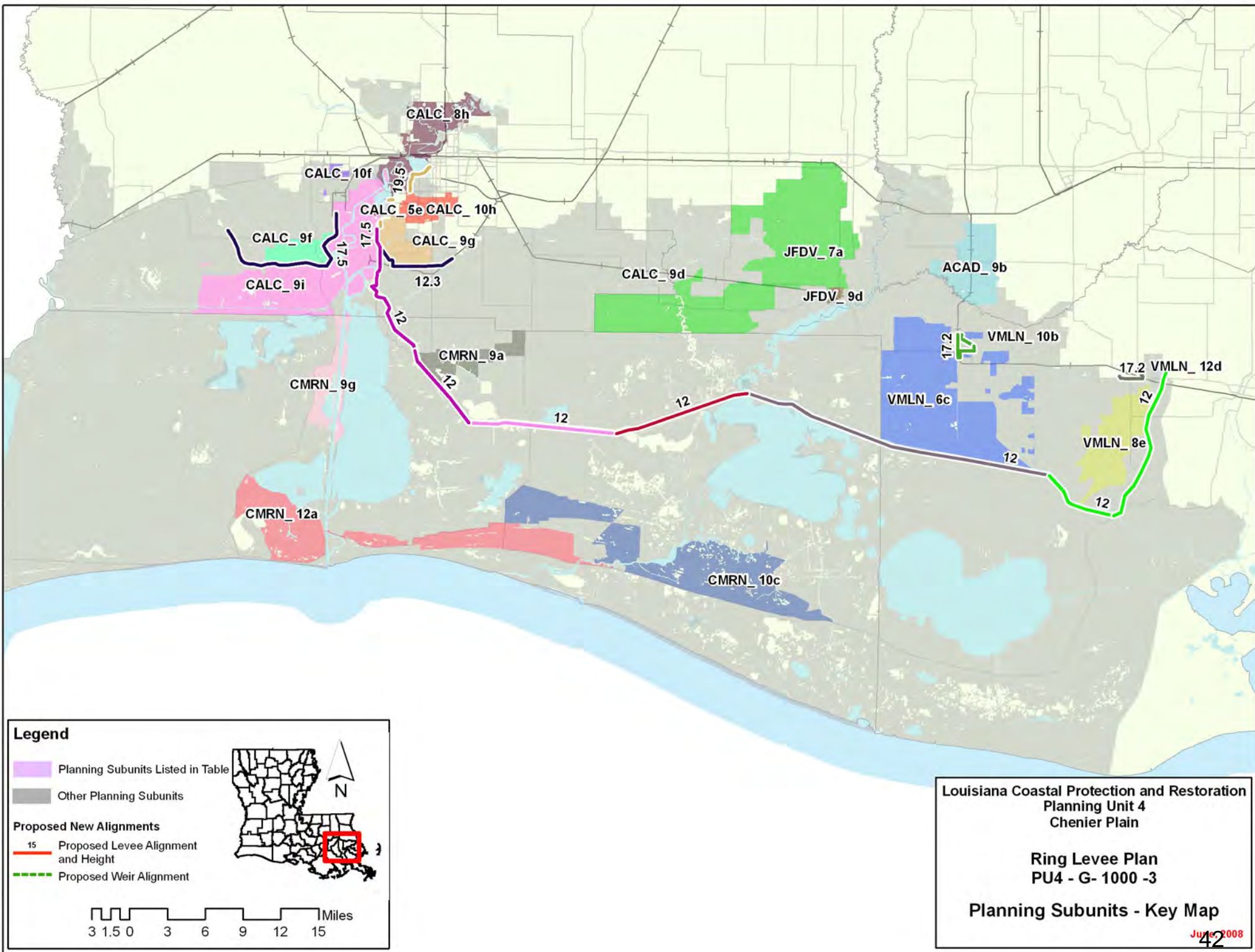
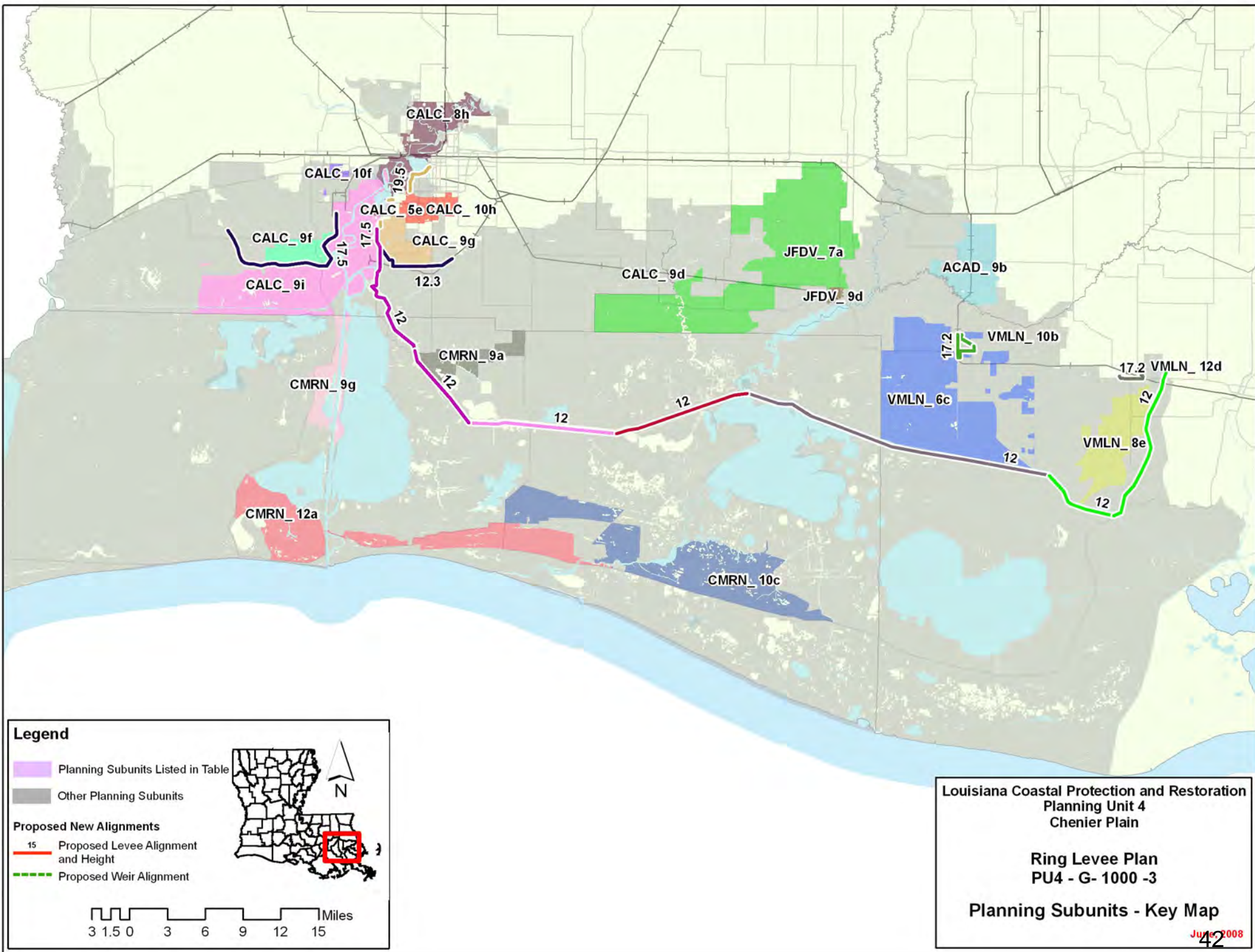
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,174 | 2,575 | 215 | 246 | 712 | 45 | 139 | 1 | 0 |
| | | Mid | | 3,193 | 261 | 273 | 795 | 48 | 115 | 1 | 0 |
| | | Low | | 3,832 | 319 | 323 | 935 | 57 | 90 | 1 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,203 | 2,716 | 226 | 266 | 740 | 48 | 139 | 1 | 0 |
| | | Mid | | 3,278 | 276 | 329 | 866 | 56 | 115 | 1 | 0 |
| | | Low | | 3,975 | 338 | 399 | 986 | 63 | 90 | 1 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,174 | 2,454 | 225 | 258 | 741 | 47 | 139 | 1 | 0 |
| | | Mid | | 3,030 | 280 | 285 | 818 | 50 | 115 | 1 | 0 |
| | | Low | | 3,620 | 355 | 322 | 934 | 57 | 90 | 1 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,203 | 2,574 | 239 | 287 | 781 | 51 | 139 | 1 | 0 |
| | | Mid | | 3,132 | 306 | 329 | 878 | 57 | 115 | 1 | 0 |
| | | Low | | 3,759 | 392 | 386 | 980 | 63 | 90 | 1 | 0 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | | 10 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | | 2,500 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | | -6 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | | 1 / 2 | 8,151 | 8,353 | Structural Component | | 12,205 | 12,488 | 12,205 | 12,488 | |
| | | 3 / 4 | 8,151 | 8,353 | Total Project | | 22,989 | 23,566 | 22,989 | 23,566 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Structural Plan GIWW Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 469 | 725 | 667 | 511 | 532 | 794 | 763 | |
| 100-year | 3,034 | 2,137 | 4,142 | 2,557 | 3,315 | 2,808 | 5,183 | 4,013 | |
| 400-year | 6,592 | 3,628 | 7,874 | 4,095 | 8,001 | 5,642 | 9,283 | 6,147 | |
| 1,000-year | 10,316 | 6,998 | 11,581 | 7,523 | 11,241 | 8,534 | 12,313 | 9,170 | |
| 2,000-year | 12,755 | 9,115 | 13,904 | 9,548 | 13,422 | 10,747 | 14,373 | 11,073 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4.78% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU4-G-1000-3
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_ 9b | 7.8 | 3.7 | 9.4 | 7.6 | 12.2 | 12.0 | 10.4 | 3.7 | 12.0 | 7.6 | 14.8 | 12.0 |
| CALC_ 10f | 6.0 | 6.0 | 8.1 | 8.1 | 9.7 | 9.7 | 8.6 | 8.6 | 10.7 | 10.7 | 12.3 | 12.3 |
| CALC_ 10h | 5.5 | 10.1 | 6.1 | 10.1 | 9.1 | 10.3 | 8.1 | 10.1 | 8.7 | 10.1 | 11.7 | 10.3 |
| CALC_ 5e | 7.8 | 8.0 | 8.5 | 8.0 | 12.1 | 8.4 | 10.4 | 8.0 | 11.1 | 8.0 | 14.7 | 8.4 |
| CALC_ 8h | 7.8 | 7.8 | 10.7 | 10.7 | 12.8 | 12.8 | 10.4 | 10.4 | 13.3 | 13.3 | 15.4 | 15.4 |
| CALC_ 9d | 7.8 | 3.1 | 9.7 | 8.5 | 13.6 | 12.0 | 10.4 | 3.1 | 12.3 | 8.5 | 16.2 | 12.0 |
| CALC_ 9f | 8.8 | 7.2 | 13.6 | 7.2 | 16.0 | 7.2 | 11.4 | 7.2 | 16.2 | 7.2 | 18.6 | 7.2 |
| CALC_ 9g | 10.9 | 8.1 | 14.6 | 8.1 | 17.1 | 8.1 | 13.5 | 8.1 | 17.2 | 8.1 | 19.7 | 8.1 |
| CALC_ 9i | 8.4 | 8.4 | 12.8 | 12.8 | 15.3 | 15.3 | 11.0 | 11.0 | 15.4 | 15.4 | 17.9 | 17.9 |
| CMRN_ 10c | 11.1 | 11.8 | 14.8 | 15.5 | 16.8 | 17.5 | 13.8 | 14.4 | 17.1 | 18.1 | 18.8 | 20.1 |
| CMRN_ 12a | 13.0 | 14.4 | 16.9 | 18.3 | 19.0 | 20.4 | 15.3 | 17.0 | 18.9 | 20.9 | 20.7 | 23.0 |
| CMRN_ 9a | 9.5 | 3.1 | 14.1 | 8.5 | 16.3 | 12.0 | 12.1 | 3.1 | 16.7 | 8.5 | 18.9 | 12.0 |
| CMRN_ 9g | 9.6 | 10.8 | 13.1 | 15.0 | 15.2 | 17.2 | 12.7 | 13.4 | 16.4 | 17.6 | 18.6 | 19.8 |
| JFDV_ 7a | 7.5 | 3.1 | 11.9 | 8.5 | 14.7 | 12.0 | 10.1 | 3.1 | 14.5 | 8.5 | 17.3 | 12.0 |
| JFDV_ 9d | 6.4 | 3.7 | 11.1 | 7.6 | 13.5 | 12.0 | 9.0 | 3.7 | 13.7 | 7.6 | 16.1 | 12.0 |
| VMLN_ 10b | 7.8 | 5.7 | 11.2 | 5.7 | 13.5 | 7.3 | 10.4 | 5.7 | 13.8 | 5.7 | 16.1 | 7.3 |
| VMLN_ 12d | 7.8 | 11.3 | 11.1 | 11.3 | 14.3 | 12.5 | 10.4 | 11.3 | 13.7 | 11.3 | 16.9 | 12.5 |
| VMLN_ 6c | 7.8 | 3.7 | 10.7 | 7.6 | 12.7 | 12.0 | 10.4 | 3.7 | 13.3 | 7.6 | 15.3 | 12.0 |
| VMLN_ 8e | 8.6 | 3.7 | 12.1 | 7.6 | 14.2 | 12.0 | 11.2 | 3.7 | 14.7 | 7.6 | 16.8 | 12.0 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

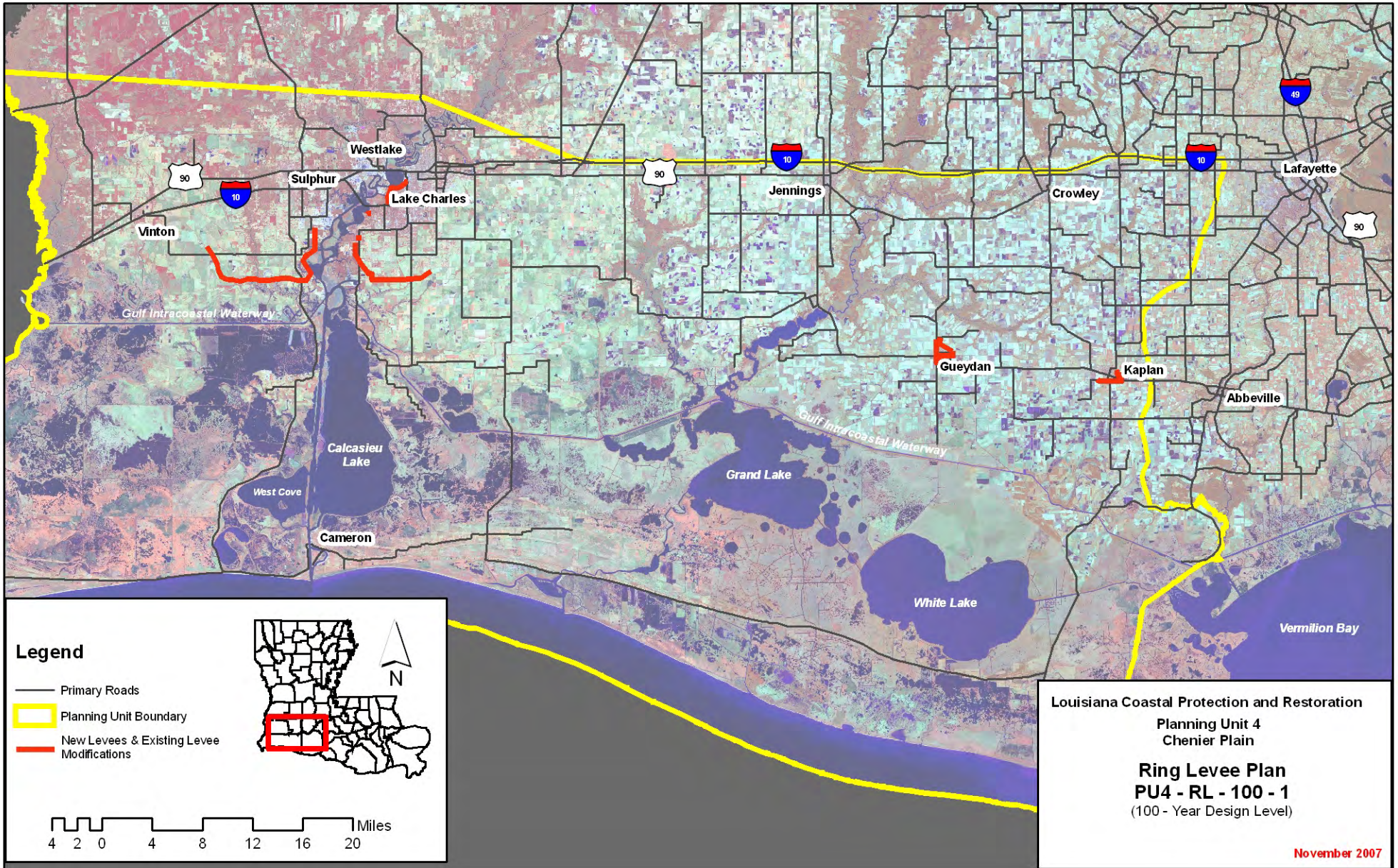
| | | | | | |
|---------------------------------|---|---------------------------------|--------------|------------------|---|
| Planning Unit: | 4 | Alt. No.: | PU4-RL-100-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

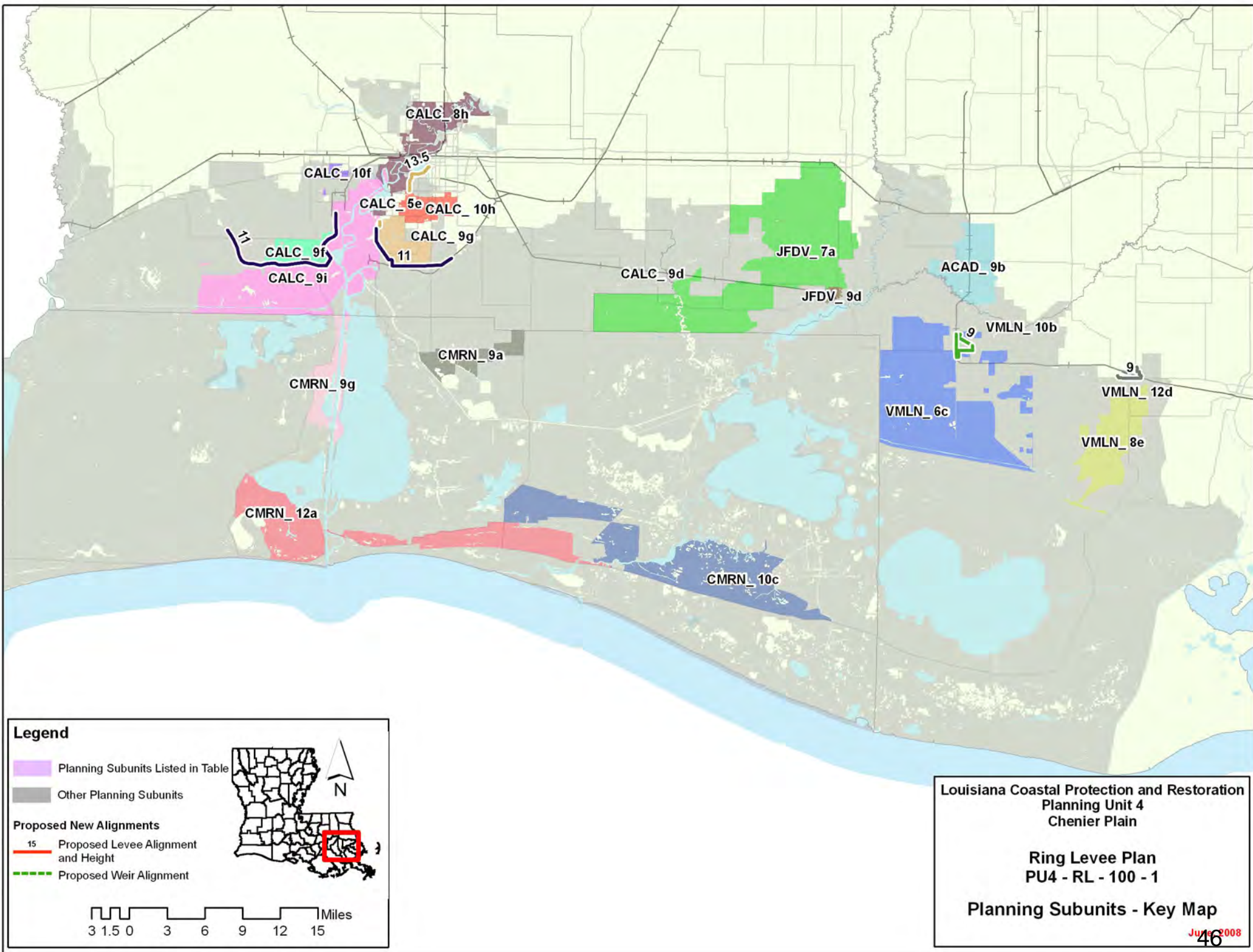
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 689 | 2,883 | 217 | 249 | 720 | 45 | 109 | 1 | 0 |
| | | Mid | | 3,817 | 277 | 278 | 821 | 49 | 85 | 1 | 0 |
| | | Low | | 4,704 | 352 | 335 | 982 | 60 | 60 | 0 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 705 | 3,121 | 233 | 268 | 745 | 48 | 109 | 1 | 0 |
| | | Mid | | 3,985 | 300 | 341 | 911 | 59 | 85 | 0 | 0 |
| | | Low | | 4,972 | 381 | 412 | 1,037 | 66 | 60 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 689 | 2,721 | 226 | 262 | 752 | 48 | 109 | 1 | 0 |
| | | Mid | | 3,576 | 292 | 291 | 848 | 52 | 85 | 1 | 0 |
| | | Low | | 4,358 | 376 | 336 | 1,002 | 61 | 60 | 0 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 705 | 2,924 | 244 | 289 | 789 | 52 | 109 | 1 | 0 |
| | | Mid | | 3,748 | 317 | 342 | 927 | 60 | 85 | 0 | 0 |
| | | Low | | 4,607 | 424 | 401 | 1,050 | 67 | 60 | 0 | 0 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 |
|--|----------|---------------|-------|---|--|------------|------------|------------|------------|
| Construction Time (years) | | 10 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | 100 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 4,749 | 4,858 | Structural Component | | 2,702 | 2,720 | 2,702 | 2,720 |
| | 3 / 4 | 4,749 | 4,858 | Total Project | | 13,485 | 13,797 | 13,485 | 13,797 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Structural Plan Ring Levee Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 504 | 725 | 752 | 511 | 565 | 794 | 843 | |
| 100-year | 3,034 | 2,666 | 4,142 | 3,524 | 3,315 | 2,871 | 5,183 | 4,570 | |
| 400-year | 6,592 | 5,958 | 7,874 | 6,826 | 8,001 | 7,614 | 9,283 | 8,523 | |
| 1,000-year | 10,316 | 8,701 | 11,581 | 9,566 | 11,241 | 9,957 | 12,313 | 10,673 | |
| 2,000-year | 12,755 | 9,937 | 13,904 | 10,733 | 13,422 | 10,962 | 14,373 | 11,663 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain

Ring Levee Plan
 PU4 - RL - 100 - 1

Planning Subunits - Key Map

Alternative: PU4-RL-100-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_ 9b | 7.8 | 7.8 | 9.4 | 9.4 | 12.2 | 12.2 | 10.4 | 10.4 | 12.0 | 12.0 | 14.8 | 14.8 |
| CALC_ 10f | 6.0 | 6.0 | 8.1 | 8.1 | 9.7 | 9.7 | 8.6 | 8.6 | 10.7 | 10.7 | 12.3 | 12.3 |
| CALC_ 10h | 5.5 | 10.2 | 6.1 | 13.5 | 9.1 | 13.5 | 8.1 | 10.2 | 8.7 | 13.5 | 11.7 | 13.5 |
| CALC_ 5e | 7.8 | 8.3 | 8.5 | 13.5 | 12.1 | 13.5 | 10.4 | 8.3 | 11.1 | 13.5 | 14.7 | 13.5 |
| CALC_ 8h | 7.8 | 7.8 | 10.7 | 10.7 | 12.8 | 12.8 | 10.4 | 10.4 | 13.3 | 13.3 | 15.4 | 15.4 |
| CALC_ 9d | 7.8 | 7.8 | 9.7 | 9.7 | 13.6 | 13.6 | 10.4 | 10.4 | 12.3 | 12.3 | 16.2 | 16.2 |
| CALC_ 9f | 8.8 | 7.2 | 13.6 | 11.0 | 16.0 | 11.0 | 11.4 | 7.2 | 16.2 | 11.0 | 18.6 | 11.0 |
| CALC_ 9g | 10.9 | 8.1 | 14.6 | 11.0 | 17.1 | 11.0 | 13.5 | 8.1 | 17.2 | 11.0 | 19.7 | 11.0 |
| CALC_ 9i | 8.4 | 8.4 | 12.8 | 12.8 | 15.3 | 15.3 | 11.0 | 11.0 | 15.4 | 15.4 | 17.9 | 17.9 |
| CMRN_ 10c | 11.1 | 11.1 | 14.8 | 14.8 | 16.8 | 16.8 | 13.8 | 13.7 | 17.1 | 17.4 | 18.8 | 19.4 |
| CMRN_ 12a | 13.0 | 13.0 | 16.9 | 16.9 | 19.0 | 19.0 | 15.3 | 15.6 | 18.9 | 19.5 | 20.7 | 21.6 |
| CMRN_ 9a | 9.5 | 9.5 | 14.1 | 14.1 | 16.3 | 16.3 | 12.1 | 12.1 | 16.7 | 16.7 | 18.9 | 18.9 |
| CMRN_ 9g | 9.6 | 9.6 | 13.1 | 13.1 | 15.2 | 15.2 | 12.7 | 12.2 | 16.4 | 15.7 | 18.6 | 17.8 |
| JFDV_ 7a | 7.5 | 7.5 | 11.9 | 11.9 | 14.7 | 14.7 | 10.1 | 10.1 | 14.5 | 14.5 | 17.3 | 17.3 |
| JFDV_ 9d | 6.4 | 6.4 | 11.1 | 11.1 | 13.5 | 13.5 | 9.0 | 9.0 | 13.7 | 13.7 | 16.1 | 16.1 |
| VMLN_ 10b | 7.8 | 6.2 | 11.2 | 9.0 | 13.5 | 9.0 | 10.4 | 6.2 | 13.8 | 9.0 | 16.1 | 9.0 |
| VMLN_ 12d | 7.8 | 7.8 | 11.1 | 11.1 | 14.3 | 14.3 | 10.4 | 10.4 | 13.7 | 13.7 | 16.9 | 16.9 |
| VMLN_ 6c | 7.8 | 7.8 | 10.7 | 10.7 | 12.7 | 12.7 | 10.4 | 10.4 | 13.3 | 13.3 | 15.3 | 15.3 |
| VMLN_ 8e | 8.6 | 8.6 | 12.1 | 12.1 | 14.2 | 14.2 | 11.2 | 11.2 | 14.7 | 14.7 | 16.8 | 16.8 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

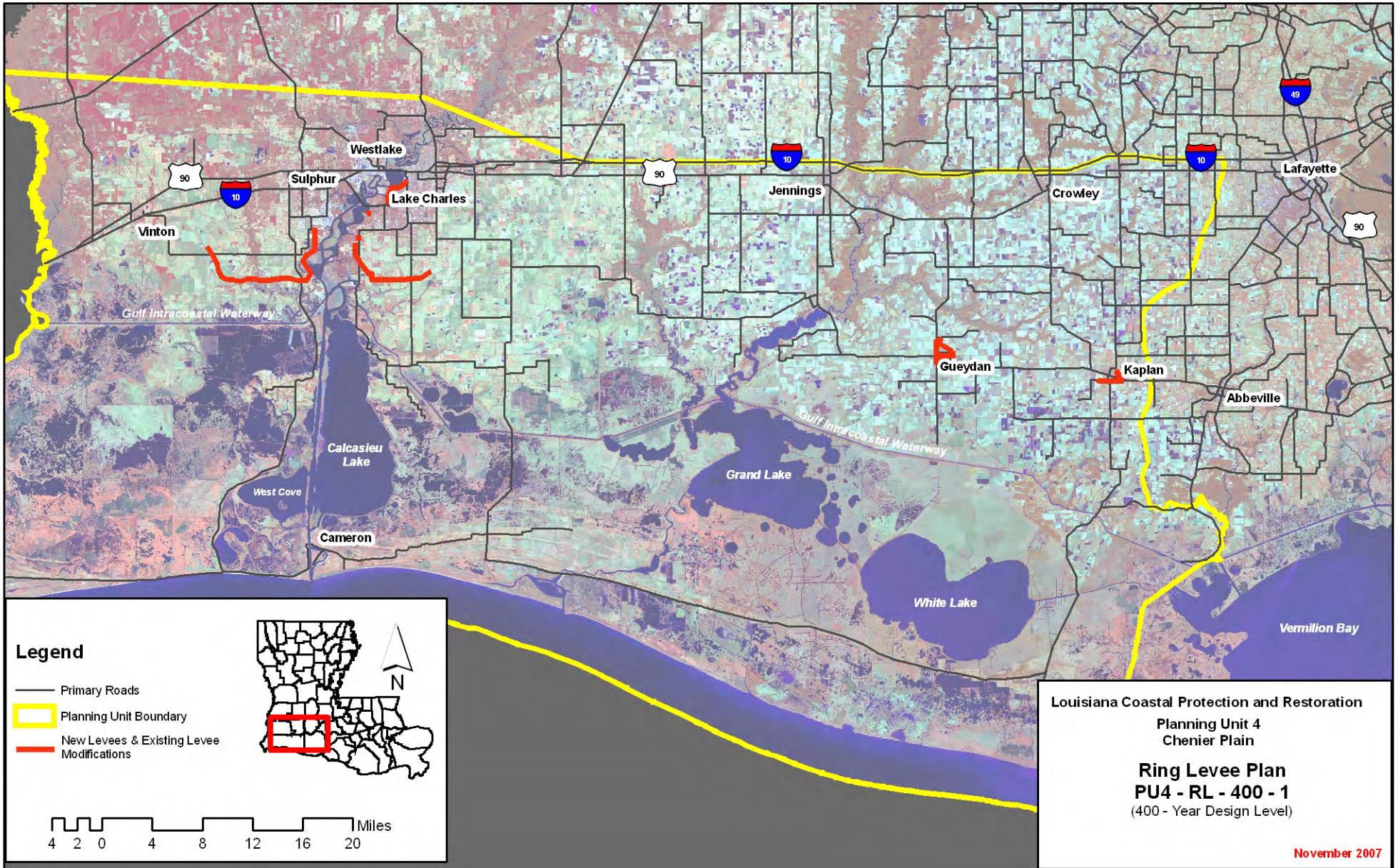
| | | | | | |
|---------------------------------|---|---------------------------------|--------------|------------------|---|
| Planning Unit: | 4 | Alt. No.: | PU4-RL-400-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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 | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

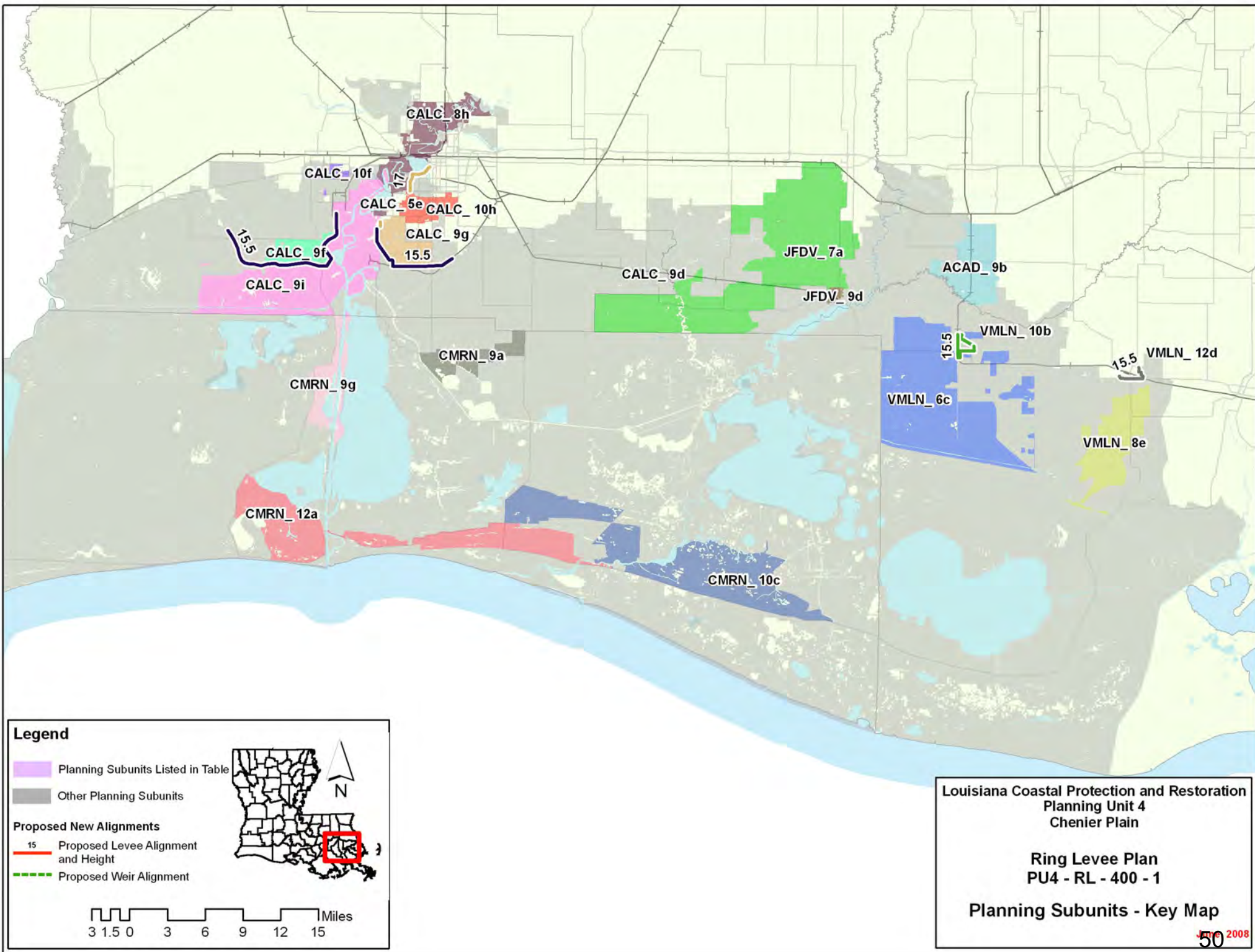
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 728 | 2,843 | 216 | 247 | 716 | 45 | 109 | 1 | 0 |
| | | Mid | | 3,705 | 274 | 275 | 806 | 49 | 85 | 1 | 0 |
| | | Low | | 4,590 | 352 | 335 | 978 | 60 | 60 | 1 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 744 | 3,079 | 231 | 266 | 740 | 47 | 109 | 1 | 0 |
| | | Mid | | 3,871 | 296 | 337 | 896 | 58 | 85 | 1 | 0 |
| | | Low | | 4,862 | 380 | 410 | 1,033 | 66 | 60 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 728 | 2,687 | 224 | 259 | 744 | 47 | 109 | 1 | 0 |
| | | Mid | | 3,483 | 288 | 286 | 829 | 51 | 85 | 1 | 0 |
| | | Low | | 4,257 | 374 | 334 | 993 | 61 | 60 | 1 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 744 | 2,888 | 242 | 285 | 780 | 51 | 109 | 1 | 0 |
| | | Mid | | 3,652 | 313 | 337 | 908 | 59 | 85 | 1 | 0 |
| | | Low | | 4,505 | 422 | 398 | 1,041 | 66 | 60 | 0 | 0 |

| Other Results | | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|-------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | | 12 | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | | 100 | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | | 0.44 | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 | |
| | 1 / 2 | 5,054 | 5,165 | Structural Component | | 3,471 | 3,494 | 3,471 | 3,494 | |
| | 3 / 4 | 5,054 | 5,165 | Total Project | | 14,254 | 14,571 | 14,254 | 14,571 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Structural Plan Ring Levee Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 504 | 725 | 752 | 511 | 566 | 794 | 844 | |
| 100-year | 3,034 | 2,661 | 4,142 | 3,519 | 3,315 | 2,865 | 5,183 | 4,564 | |
| 400-year | 6,592 | 5,007 | 7,874 | 5,860 | 8,001 | 6,592 | 9,283 | 7,485 | |
| 1,000-year | 10,316 | 11,014 | 11,581 | 11,876 | 11,241 | 11,954 | 12,313 | 12,666 | |
| 2,000-year | 12,755 | 13,725 | 13,904 | 14,521 | 13,422 | 14,329 | 14,373 | 15,029 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU4-RL-400-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_ 9b | 7.8 | 7.8 | 9.4 | 9.4 | 12.2 | 12.2 | 10.4 | 10.4 | 12.0 | 12.0 | 14.8 | 14.8 |
| CALC_ 10f | 6.0 | 6.0 | 8.1 | 8.1 | 9.7 | 9.7 | 8.6 | 8.6 | 10.7 | 10.7 | 12.3 | 12.3 |
| CALC_ 10h | 5.5 | 10.1 | 6.1 | 10.4 | 9.1 | 14.9 | 8.1 | 10.1 | 8.7 | 10.4 | 11.7 | 14.9 |
| CALC_ 5e | 7.8 | 8.0 | 8.5 | 8.7 | 12.1 | 16.9 | 10.4 | 8.0 | 11.1 | 8.7 | 14.7 | 16.9 |
| CALC_ 8h | 7.8 | 7.8 | 10.7 | 10.7 | 12.8 | 12.8 | 10.4 | 10.4 | 13.3 | 13.3 | 15.4 | 15.4 |
| CALC_ 9d | 7.8 | 7.8 | 9.7 | 9.7 | 13.6 | 13.6 | 10.4 | 10.4 | 12.3 | 12.3 | 16.2 | 16.2 |
| CALC_ 9f | 8.8 | 7.2 | 13.6 | 7.2 | 16.0 | 15.2 | 11.4 | 7.2 | 16.2 | 7.2 | 18.6 | 15.2 |
| CALC_ 9g | 10.9 | 8.1 | 14.6 | 8.1 | 17.1 | 15.5 | 13.5 | 8.1 | 17.2 | 8.1 | 19.7 | 15.5 |
| CALC_ 9i | 8.4 | 8.4 | 12.8 | 12.8 | 15.3 | 15.3 | 11.0 | 11.0 | 15.4 | 15.4 | 17.9 | 17.9 |
| CMRN_ 10c | 11.1 | 11.1 | 14.8 | 0.0 | 16.8 | 16.8 | 13.8 | 13.7 | 17.1 | 17.4 | 18.8 | 19.4 |
| CMRN_ 12a | 13.0 | 13.0 | 16.9 | 16.9 | 19.0 | 19.0 | 15.3 | 15.6 | 18.9 | 19.5 | 20.7 | 21.6 |
| CMRN_ 9a | 9.5 | 9.5 | 14.1 | 14.1 | 16.3 | 16.3 | 12.1 | 12.1 | 16.7 | 16.7 | 18.9 | 18.9 |
| CMRN_ 9g | 9.6 | 9.6 | 13.1 | 13.1 | 15.2 | 15.2 | 12.7 | 12.2 | 16.4 | 15.7 | 18.6 | 17.8 |
| JFDV_ 7a | 7.5 | 7.5 | 11.9 | 11.9 | 14.7 | 14.7 | 10.1 | 10.1 | 14.5 | 14.5 | 17.3 | 17.3 |
| JFDV_ 9d | 6.4 | 6.4 | 11.1 | 11.1 | 13.5 | 13.5 | 9.0 | 9.0 | 13.7 | 13.7 | 16.1 | 16.1 |
| VMLN_ 10b | 7.8 | 5.7 | 11.2 | 6.7 | 13.5 | 15.5 | 10.4 | 5.7 | 13.8 | 6.7 | 16.1 | 15.5 |
| VMLN_ 12d | 7.8 | 11.3 | 11.1 | 12.1 | 14.3 | 15.5 | 10.4 | 11.3 | 13.7 | 12.1 | 16.9 | 15.5 |
| VMLN_ 6c | 7.8 | 7.8 | 10.7 | 10.7 | 12.7 | 12.7 | 10.4 | 10.4 | 13.3 | 13.3 | 15.3 | 15.3 |
| VMLN_ 8e | 8.6 | 8.6 | 12.1 | 12.1 | 14.2 | 14.2 | 11.2 | 11.2 | 14.7 | 14.7 | 16.8 | 16.8 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

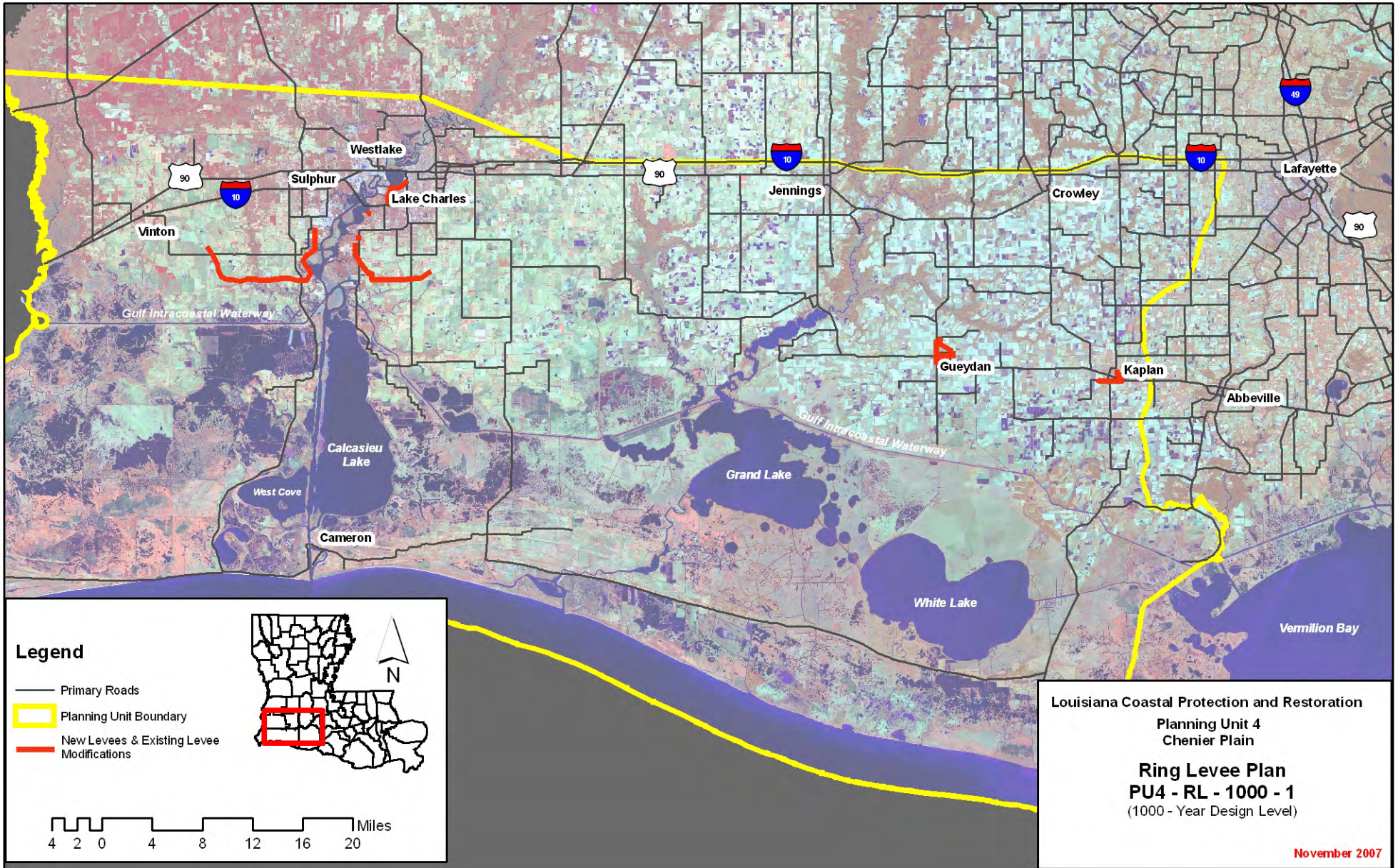
| | | | | | |
|---------------------------------|---|---------------------------------|---------------|------------------|---|
| Planning Unit: | 4 | Alt. No.: | PU4-RL-1000-1 | Category: | Coastal Restoration + Structural Measures |
| Alternative Description: | Sustain coastal landscape through restoration. 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-ye | | | | |
| Coastal Component: | R1 | Nonstructural Component: | None | | |
| Structural Component: | See alternative description above. | | | | |

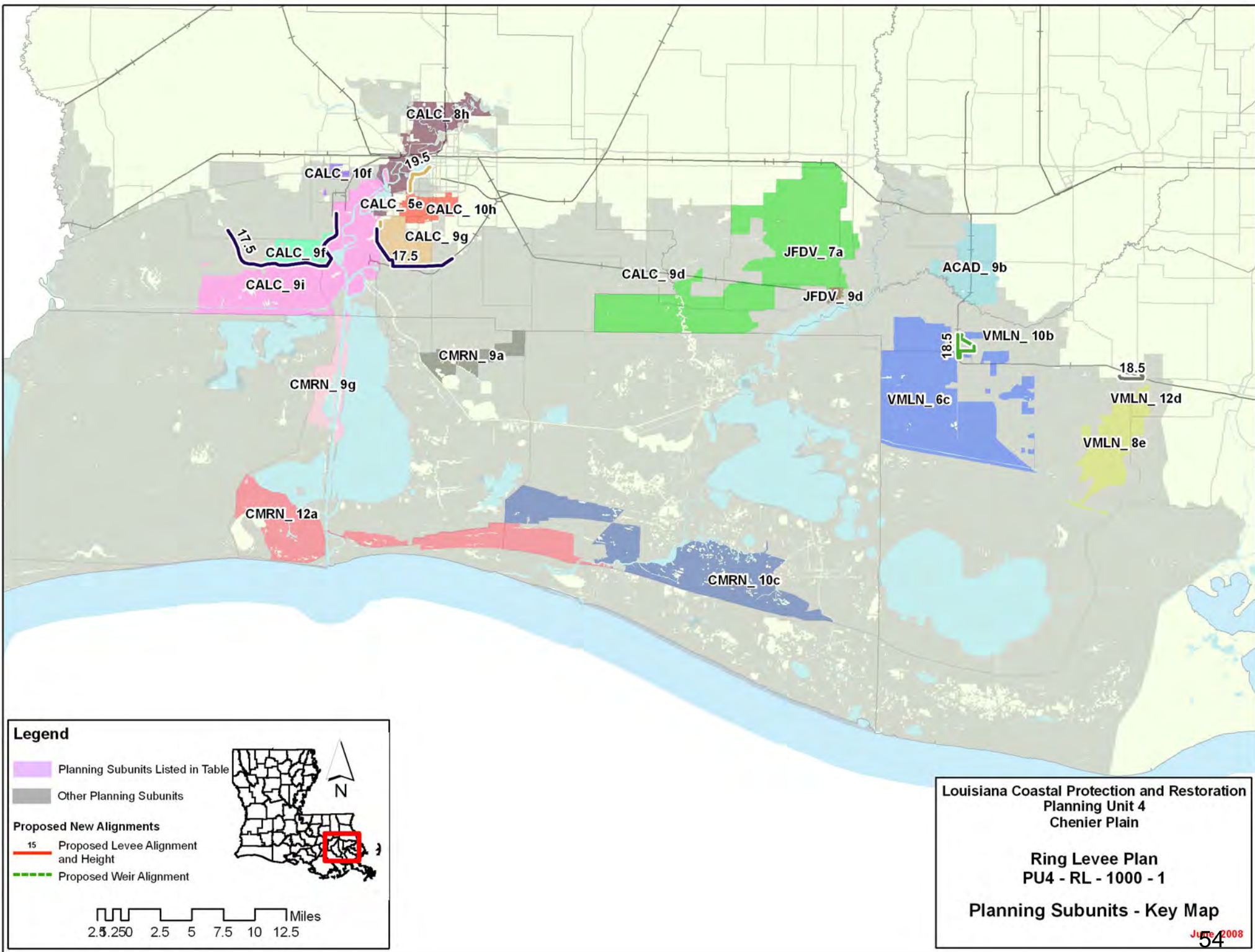
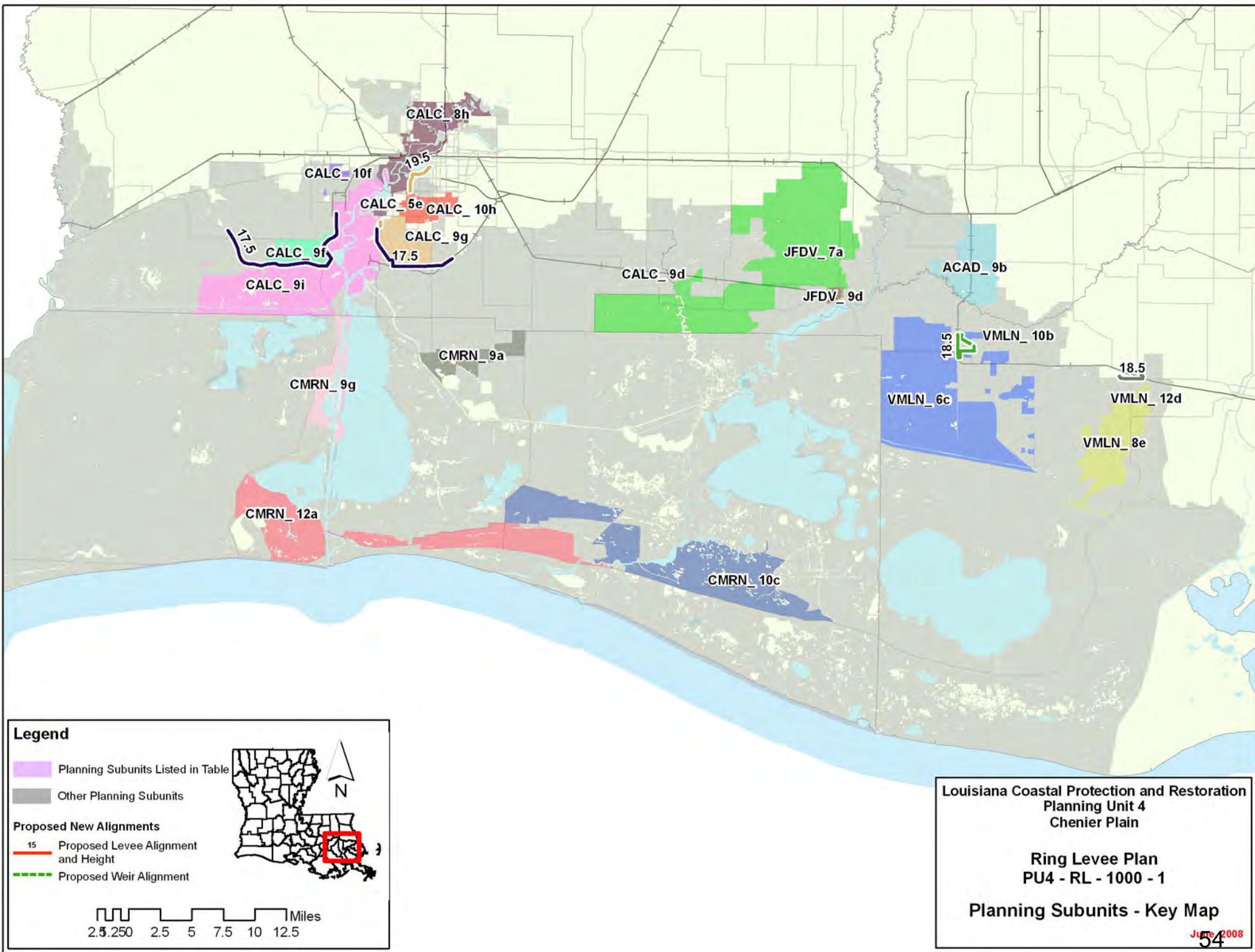
| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 742 | 2,814 | 216 | 246 | 713 | 45 | 109 | 1 | 0 |
| | | Mid | | 3,696 | 274 | 274 | 805 | 48 | 85 | 1 | 0 |
| | | Low | | 4,539 | 349 | 330 | 958 | 59 | 60 | 1 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 760 | 3,051 | 231 | 264 | 738 | 47 | 109 | 1 | 0 |
| | | Mid | | 3,862 | 297 | 336 | 894 | 58 | 85 | 1 | 0 |
| | | Low | | 4,817 | 378 | 405 | 1,013 | 65 | 60 | 1 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 742 | 2,663 | 223 | 257 | 740 | 47 | 109 | 1 | 0 |
| | | Mid | | 3,477 | 288 | 285 | 826 | 51 | 85 | 1 | 0 |
| | | Low | | 4,213 | 371 | 330 | 972 | 60 | 60 | 1 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 760 | 2,865 | 241 | 284 | 776 | 51 | 109 | 1 | 0 |
| | | Mid | | 3,464 | 313 | 336 | 908 | 59 | 85 | 1 | 0 |
| | | Low | | 4,464 | 419 | 393 | 1,020 | 65 | 60 | 1 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | |
|--|----------|---------------|----------------------------|---|------------|------------|------------|------------|--------|
| Construction Time (years) | | | 14 | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 100 | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | 0 | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 0 | 0 | 0 | 0 |
| | 1 / 2 | 5,120 | 5,249 | Structural Component | | 3,756 | 3,799 | 3,756 | 3,799 |
| | 3 / 4 | 5,120 | 5,249 | Total Project | | 14,540 | 14,876 | 14,540 | 14,876 |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Structural Plan Ring Levee Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 504 | 725 | 752 | 511 | 566 | 794 | 844 | |
| 100-year | 3,034 | 2,661 | 4,142 | 3,519 | 3,315 | 2,865 | 5,183 | 4,564 | |
| 400-year | 6,592 | 4,990 | 7,874 | 5,843 | 8,001 | 6,573 | 9,283 | 7,466 | |
| 1,000-year | 10,316 | 7,735 | 11,581 | 8,597 | 11,241 | 8,919 | 12,313 | 9,631 | |
| 2,000-year | 12,755 | 10,289 | 13,904 | 11,084 | 13,422 | 11,242 | 14,373 | 11,942 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.





Alternative: PU4-RL-1000-1
Water Surface Elevations (feet - NAVD88 2004.65)

| Planning Sub Unit | 2010 (Base) Conditions | | | | | | 2060 (Future) Conditions | | | | | |
|-----------------------|---------------------------------|--------------|-----------------|--------------|-----------------|--------------------|--------------------------|--------------|-------------------|--------------|-----------------|--------------|
| | 100-yr Event | | 400-year Event | | 1,000-yr Event | | 100-yr Event | | 400-year Event | | 1,000-yr Event | |
| | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project | Without Project | With Project |
| ACAD_ 9b | 7.8 | 7.8 | 9.4 | 9.4 | 12.2 | 12.2 | 10.4 | 10.4 | 12.0 | 12.0 | 14.8 | 14.8 |
| CALC_ 10f | 6.0 | 6.0 | 8.1 | 8.1 | 9.7 | 9.7 | 8.6 | 8.6 | 10.7 | 10.7 | 12.3 | 12.3 |
| CALC_ 10h | 5.5 | 10.1 | 6.1 | 10.1 | 9.1 | 10.3 | 8.1 | 10.1 | 8.7 | 10.1 | 11.7 | 10.3 |
| CALC_ 5e | 7.8 | 8.0 | 8.5 | 8.0 | 12.1 | 8.4 | 10.4 | 8.0 | 11.1 | 8.0 | 14.7 | 8.4 |
| CALC_ 8h | 7.8 | 7.8 | 10.7 | 10.7 | 12.8 | 12.8 | 10.4 | 10.4 | 13.3 | 13.3 | 15.4 | 15.4 |
| CALC_ 9d | 7.8 | 7.8 | 9.7 | 9.7 | 13.6 | 13.6 | 10.4 | 10.4 | 12.3 | 12.3 | 16.2 | 16.2 |
| CALC_ 9f | 8.8 | 7.2 | 13.6 | 7.2 | 16.0 | 7.2 | 11.4 | 7.2 | 16.2 | 7.2 | 18.6 | 7.2 |
| CALC_ 9g | 10.9 | 8.1 | 14.6 | 8.1 | 17.1 | 8.1 | 13.5 | 8.1 | 17.2 | 8.1 | 19.7 | 8.1 |
| CALC_ 9i | 8.4 | 8.4 | 12.8 | 12.8 | 15.3 | 15.3 | 11.0 | 11.0 | 15.4 | 15.4 | 17.9 | 17.9 |
| CMRN_ 10c | 11.1 | 11.1 | 14.8 | 14.8 | 16.8 | 16.8 | 13.8 | 13.7 | 17.1 | 17.4 | 18.8 | 19.4 |
| CMRN_ 12a | 13.0 | 13.0 | 16.9 | 16.9 | 19.0 | 19.0 | 15.3 | 15.6 | 18.9 | 19.5 | 20.7 | 21.6 |
| CMRN_ 9a | 9.5 | 9.5 | 14.1 | 14.1 | 16.3 | 16.3 | 12.1 | 12.1 | 16.7 | 16.7 | 18.9 | 18.9 |
| CMRN_ 9g | 9.6 | 9.6 | 13.1 | 13.1 | 15.2 | 15.2 | 12.7 | 12.2 | 16.4 | 15.7 | 18.6 | 17.8 |
| JFDV_ 7a | 7.5 | 7.5 | 11.9 | 11.9 | 14.7 | 14.7 | 10.1 | 10.1 | 14.5 | 14.5 | 17.3 | 17.3 |
| JFDV_ 9d | 6.4 | 6.4 | 11.1 | 11.1 | 13.5 | 13.5 | 9.0 | 9.0 | 13.7 | 13.7 | 16.1 | 16.1 |
| VMLN_ 10b | 7.8 | 5.7 | 11.2 | 5.7 | 13.5 | 7.3 | 10.4 | 5.7 | 13.8 | 5.7 | 16.1 | 7.3 |
| VMLN_ 12d | 7.8 | 11.3 | 11.1 | 11.3 | 14.3 | 12.5 | 10.4 | 11.3 | 13.7 | 11.3 | 16.9 | 12.5 |
| VMLN_ 6c | 7.8 | 7.8 | 10.7 | 10.7 | 12.7 | 12.7 | 10.4 | 10.4 | 13.3 | 13.3 | 15.3 | 15.3 |
| VMLN_ 8e | 8.6 | 8.6 | 12.1 | 12.1 | 14.2 | 14.2 | 11.2 | 11.2 | 14.7 | 14.7 | 16.8 | 16.8 |
| Evaluation Parameters | Confidence Level: | | | 90% | | Levee Design: | | | No Friction Waves | | | |
| | Future Relative Sea Level Rise: | | | 2.6 feet | | Levee Overtopping: | | | No Friction Waves | | | |

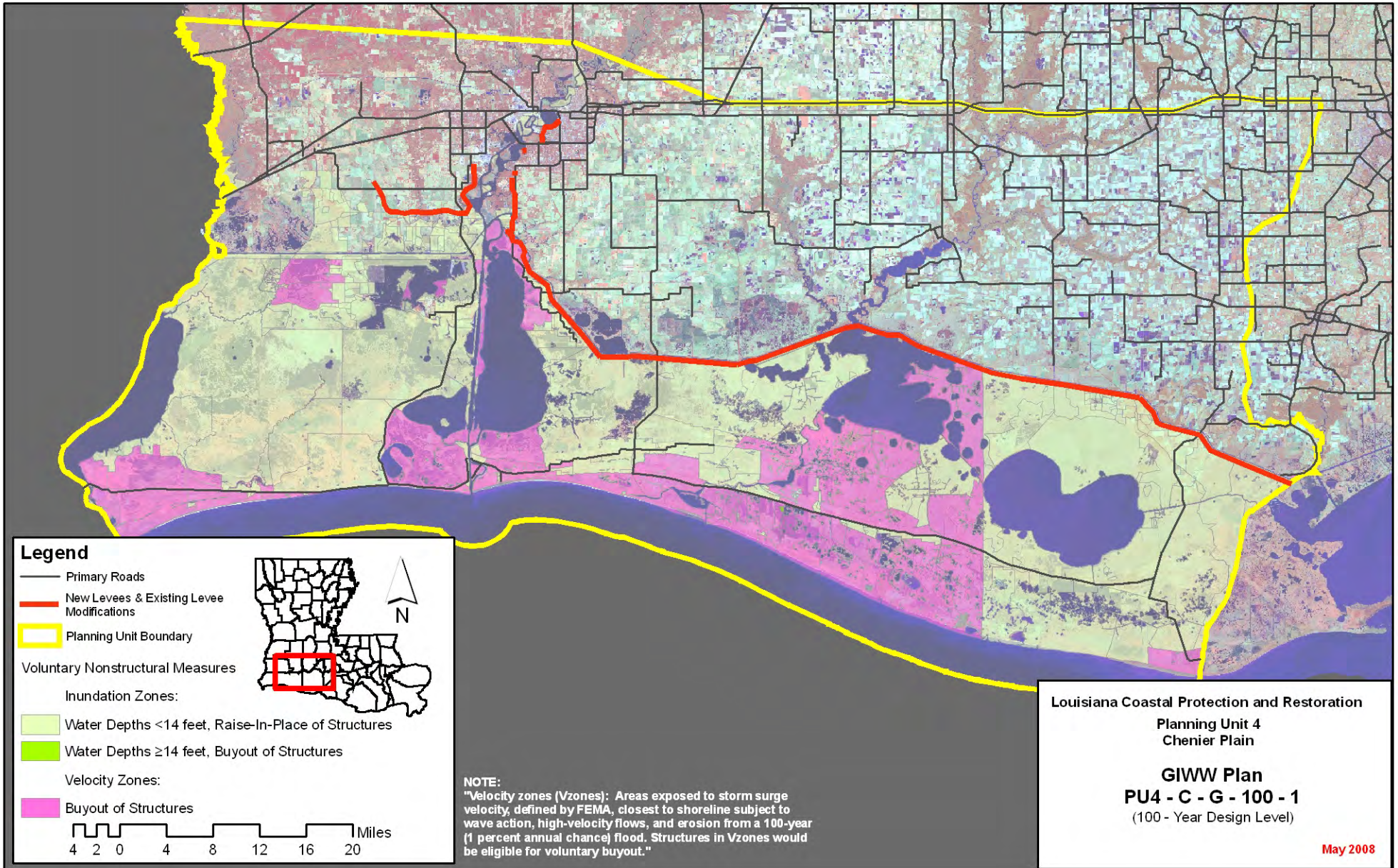
| | | | | | |
|---------------------------------|--|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-C-G-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU4-G-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU4-G-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,237 | 1,811 | 98 | 91 | 267 | 17 | 140 | 3 | 0 |
| | | Mid | | 2,506 | 131 | 114 | 344 | 20 | 116 | 3 | 0 |
| | | Low | | 3,197 | 182 | 173 | 490 | 31 | 91 | 3 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,266 | 1,943 | 104 | 102 | 279 | 18 | 140 | 3 | 0 |
| | | Mid | | 2,584 | 142 | 173 | 427 | 29 | 116 | 3 | 0 |
| | | Low | | 3,335 | 198 | 240 | 529 | 35 | 91 | 3 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,238 | 1,702 | 103 | 92 | 273 | 17 | 140 | 3 | 0 |
| | | Mid | | 2,339 | 138 | 114 | 345 | 21 | 116 | 3 | 0 |
| | | Low | | 2,980 | 196 | 167 | 496 | 31 | 91 | 3 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,267 | 1,815 | 110 | 106 | 289 | 19 | 140 | 3 | 0 |
| | | Mid | | 2,433 | 152 | 163 | 426 | 29 | 116 | 3 | 0 |
| | | Low | | 3,116 | 225 | 218 | 524 | 34 | 91 | 3 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 2,200 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | -5 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 1,451 | 1,451 | 1,467 | 1,467 | |
| | 1 / 2 | 8,573 | 8,774 | Structural Component | | 11,989 | 12,272 | 11,989 | 12,272 | |
| | 3 / 4 | 8,578 | 8,780 | Total Project | | 24,224 | 24,801 | 24,239 | 24,816 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Comprehensive Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 157 | 725 | 170 | 511 | 181 | 794 | 195 | |
| 100-year | 3,034 | 520 | 4,142 | 996 | 3,315 | 529 | 5,183 | 1,384 | |
| 400-year | 6,592 | 3,172 | 7,874 | 3,666 | 8,001 | 3,903 | 9,283 | 4,418 | |
| 1,000-year | 10,316 | 7,198 | 11,581 | 7,794 | 11,241 | 7,370 | 12,313 | 7,936 | |
| 2,000-year | 12,755 | 8,213 | 13,904 | 8,726 | 13,422 | 8,296 | 14,373 | 8,745 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



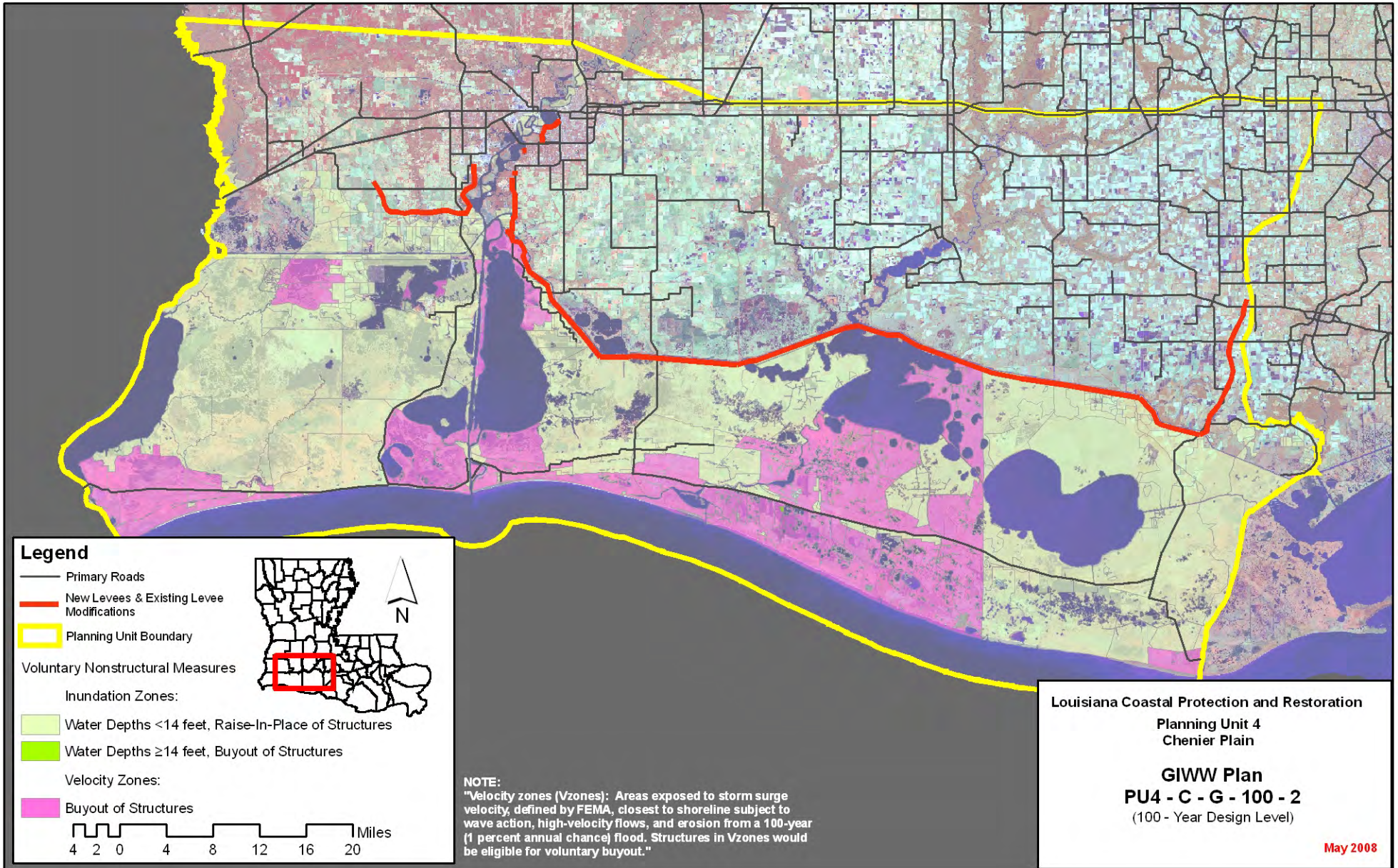
| | | | | | |
|---------------------------------|--|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-C-G-100-2 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU4-G-100-2 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU4-G-100-2 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,226 | 1,929 | 109 | 142 | 363 | 26 | 139 | 2 | 0 |
| | | Mid | | 2,629 | 142 | 165 | 445 | 30 | 115 | 0 | 0 |
| | | Low | | 3,325 | 194 | 225 | 590 | 41 | 90 | 0 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,256 | 2,065 | 116 | 153 | 377 | 28 | 139 | 2 | 0 |
| | | Mid | | 2,708 | 154 | 225 | 527 | 39 | 115 | 0 | 0 |
| | | Low | | 3,465 | 212 | 291 | 628 | 45 | 90 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,227 | 1,794 | 112 | 136 | 354 | 26 | 139 | 2 | 0 |
| | | Mid | | 2,436 | 148 | 159 | 430 | 29 | 115 | 0 | 0 |
| | | Low | | 3,081 | 206 | 211 | 580 | 40 | 90 | 0 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,257 | 1,909 | 121 | 150 | 371 | 27 | 139 | 2 | 0 |
| | | Mid | | 2,532 | 164 | 207 | 510 | 37 | 115 | 0 | 0 |
| | | Low | | 3,217 | 236 | 262 | 608 | 43 | 90 | 0 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 1,800 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | -5 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 1,453 | 1,453 | 1,468 | 1,468 | |
| | 1 / 2 | 8,503 | 8,705 | Structural Component | | 11,785 | 12,065 | 11,785 | 12,065 | |
| | 3 / 4 | 8,509 | 8,710 | Total Project | | 24,021 | 24,595 | 24,036 | 24,611 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Comprehensive Plan GIWW Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 207 | 725 | 243 | 511 | 224 | 794 | 259 | |
| 100-year | 3,034 | 713 | 4,142 | 1,247 | 3,315 | 697 | 5,183 | 1,596 | |
| 400-year | 6,592 | 3,488 | 7,874 | 4,003 | 8,001 | 4,168 | 9,283 | 4,705 | |
| 1,000-year | 10,316 | 7,412 | 11,581 | 8,019 | 11,241 | 7,548 | 12,313 | 8,125 | |
| 2,000-year | 12,755 | 8,298 | 13,904 | 8,819 | 13,422 | 8,382 | 14,373 | 8,840 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

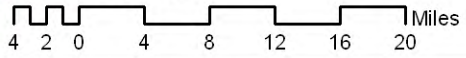


Legend

- Primary Roads
- New Levees & Existing Levee Modifications
- Planning Unit Boundary

Voluntary Nonstructural Measures

- Inundation Zones:**
- Water Depths <14 feet, Raise-In-Place of Structures
 - Water Depths ≥14 feet, Buyout of Structures
- Velocity Zones:**
- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

Louisiana Coastal Protection and Restoration
Planning Unit 4
Chenier Plain
GIWW Plan
PU4 - C - G - 100 - 2
 (100 - Year Design Level)
 May 2008

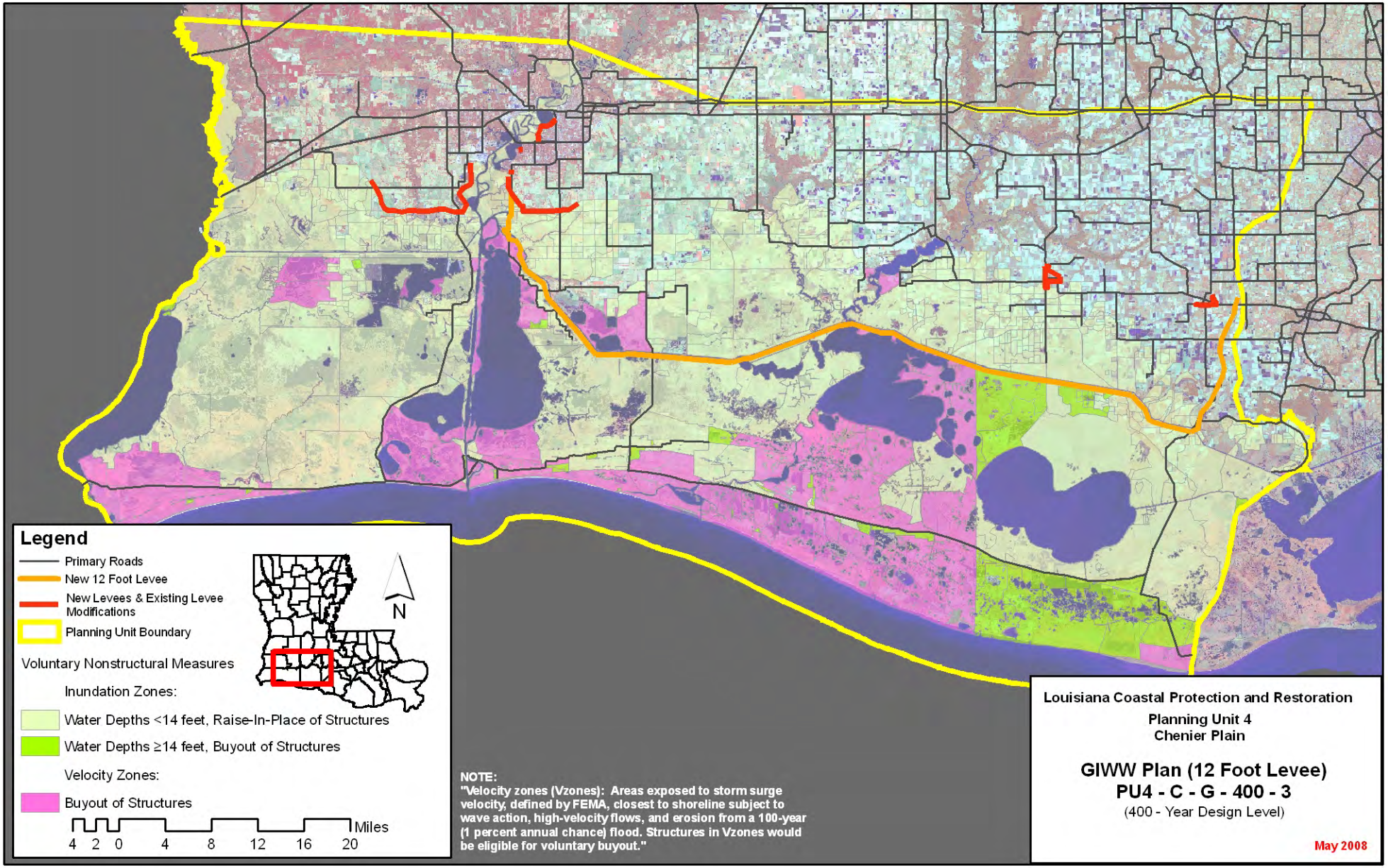
| | | | | | |
|---------------------------------|--|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-C-G-400-3 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU4-G-400-3 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | 400-yr complementary measures | | |
| Structural Component: | Same as Alternative PU4-G-400-3 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,226 | 1,979 | 100 | 82 | 243 | 16 | 139 | 1 | 0 |
| | | Mid | | 2,599 | 128 | 98 | 295 | 18 | 115 | 1 | 0 |
| | | Low | | 3,282 | 174 | 136 | 404 | 25 | 90 | 1 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,255 | 2,115 | 106 | 95 | 263 | 18 | 139 | 1 | 0 |
| | | Mid | | 2,678 | 137 | 133 | 340 | 24 | 115 | 1 | 0 |
| | | Low | | 3,422 | 185 | 167 | 433 | 29 | 90 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,261 | 1,829 | 104 | 87 | 256 | 17 | 139 | 1 | 0 |
| | | Mid | | 2,408 | 133 | 102 | 305 | 19 | 115 | 1 | 0 |
| | | Low | | 3,035 | 182 | 135 | 417 | 26 | 90 | 1 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,290 | 1,944 | 111 | 103 | 280 | 20 | 139 | 1 | 0 |
| | | Mid | | 2,503 | 145 | 132 | 346 | 24 | 115 | 1 | 0 |
| | | Low | | 3,171 | 201 | 163 | 446 | 29 | 90 | 0 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 2,500 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | -6 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 1,489 | 1,489 | 2,187 | 2,187 | |
| | 1 / 2 | 8,507 | 8,708 | Structural Component | | 11,732 | 12,012 | 11,732 | 12,012 | |
| | 3 / 4 | 8,751 | 8,952 | Total Project | | 24,004 | 24,578 | 24,702 | 25,276 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Comprehensive Plan GIWW Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 173 | 725 | 194 | 511 | 194 | 794 | 215 | |
| 100-year | 3,034 | 469 | 4,142 | 554 | 3,315 | 475 | 5,183 | 560 | |
| 400-year | 6,592 | 1,384 | 7,874 | 2,159 | 8,001 | 1,326 | 9,283 | 2,359 | |
| 1,000-year | 10,316 | 8,519 | 11,581 | 9,252 | 11,241 | 8,009 | 12,313 | 8,792 | |
| 2,000-year | 12,755 | 11,032 | 13,904 | 11,588 | 13,422 | 10,469 | 14,373 | 10,981 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



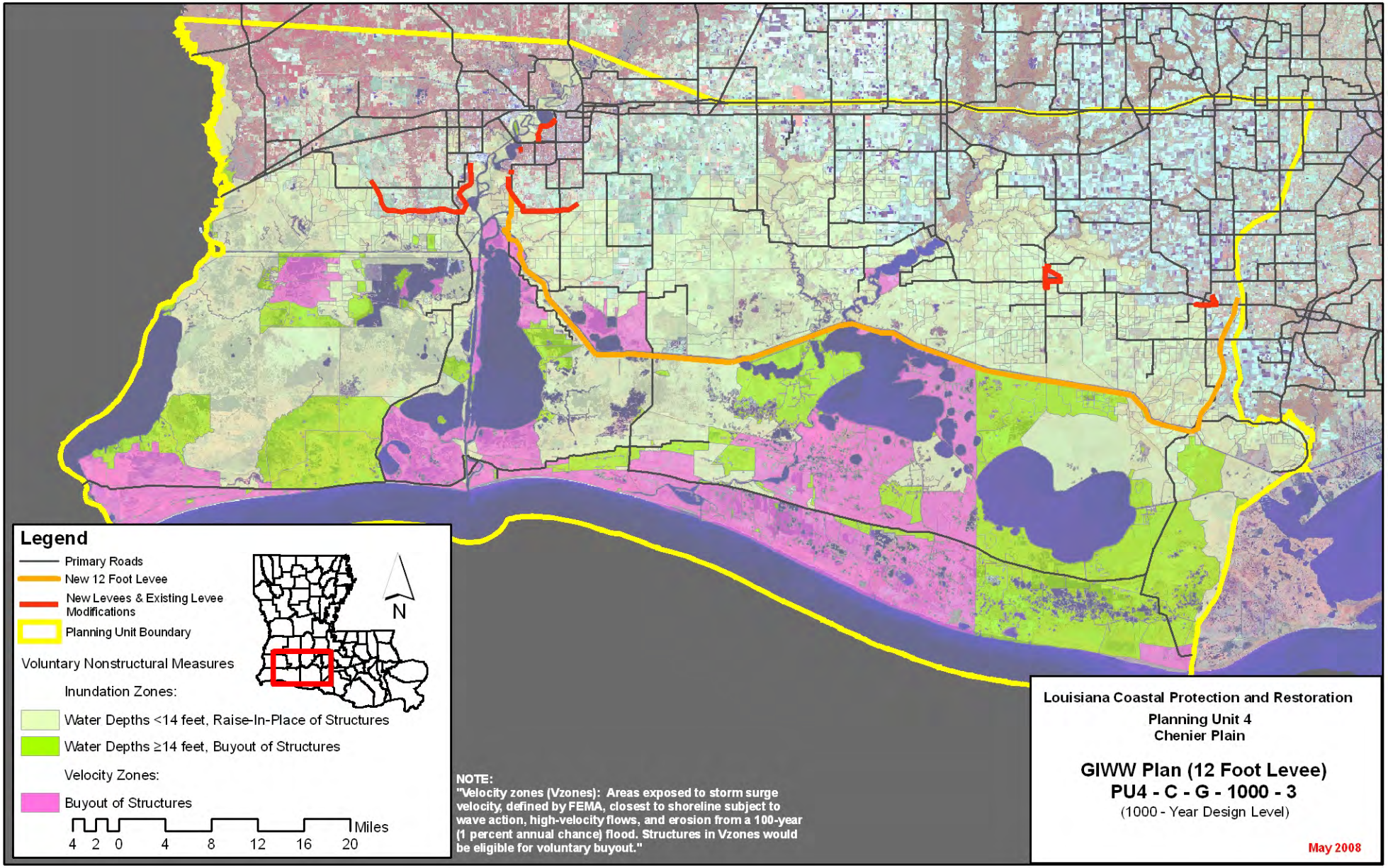
| | | | | | |
|---------------------------------|---|---------------------------------|--------------------------------|------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-C-G-1000-3 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU4-G-1000-3 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | 1000-yr complementary measures | | |
| Structural Component: | Same as Alternative PU4-G-1000-3 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 1,357 | 1,855 | 87 | 78 | 232 | 15 | 139 | 1 | 0 |
| | | Mid | | 2,471 | 114 | 89 | 271 | 16 | 115 | 1 | 0 |
| | | Low | | 3,089 | 152 | 112 | 337 | 21 | 90 | 1 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 1,386 | 1,989 | 92 | 85 | 244 | 16 | 139 | 1 | 0 |
| | | Mid | | 2,549 | 121 | 112 | 304 | 20 | 115 | 1 | 0 |
| | | Low | | 3,228 | 162 | 142 | 362 | 24 | 90 | 1 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 1,358 | 1,698 | 92 | 83 | 248 | 16 | 139 | 1 | 0 |
| | | Mid | | 2,273 | 119 | 94 | 285 | 18 | 115 | 1 | 0 |
| | | Low | | 2,842 | 161 | 114 | 353 | 22 | 90 | 1 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 1,388 | 1,811 | 98 | 94 | 264 | 18 | 139 | 1 | 0 |
| | | Mid | | 2,367 | 130 | 114 | 315 | 21 | 115 | 1 | 0 |
| | | Low | | 2,978 | 178 | 139 | 375 | 24 | 90 | 1 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 2,500 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | -6 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,587 | 3,587 | 3,621 | 3,621 | |
| | 1 / 2 | 9,407 | 9,609 | Structural Component | | 12,205 | 12,488 | 12,205 | 12,488 | |
| | 3 / 4 | 9,419 | 9,621 | Total Project | | 26,575 | 27,153 | 26,610 | 27,187 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Comprehensive Plan GIWW Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 122 | 725 | 130 | 511 | 145 | 794 | 153 | |
| 100-year | 3,034 | 304 | 4,142 | 357 | 3,315 | 326 | 5,183 | 375 | |
| 400-year | 6,592 | 864 | 7,874 | 1,127 | 8,001 | 854 | 9,283 | 1,073 | |
| 1,000-year | 10,316 | 3,220 | 11,581 | 4,471 | 11,241 | 2,761 | 12,313 | 4,216 | |
| 2,000-year | 12,755 | 6,445 | 13,904 | 7,378 | 13,422 | 6,097 | 14,373 | 6,970 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



Legend

- Primary Roads
- New 12 Foot Levee
- New Levees & Existing Levee Modifications
- Planning Unit Boundary

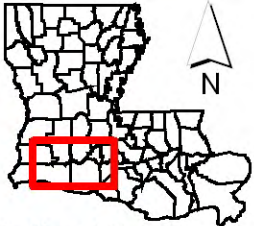
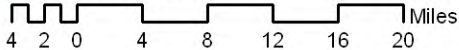
Voluntary Nonstructural Measures

Inundation Zones:

- Water Depths <14 feet, Raise-In-Place of Structures
- Water Depths ≥14 feet, Buyout of Structures

Velocity Zones:

- Buyout of Structures



NOTE:
 "Velocity zones (Vzones): Areas exposed to storm surge velocity, defined by FEMA, closest to shoreline subject to wave action, high-velocity flows, and erosion from a 100-year (1 percent annual chance) flood. Structures in Vzones would be eligible for voluntary buyout."

Louisiana Coastal Protection and Restoration
 Planning Unit 4
 Chenier Plain

GIWW Plan (12 Foot Levee)
PU4 - C - G - 1000 - 3
 (1000 - Year Design Level)

May 2008

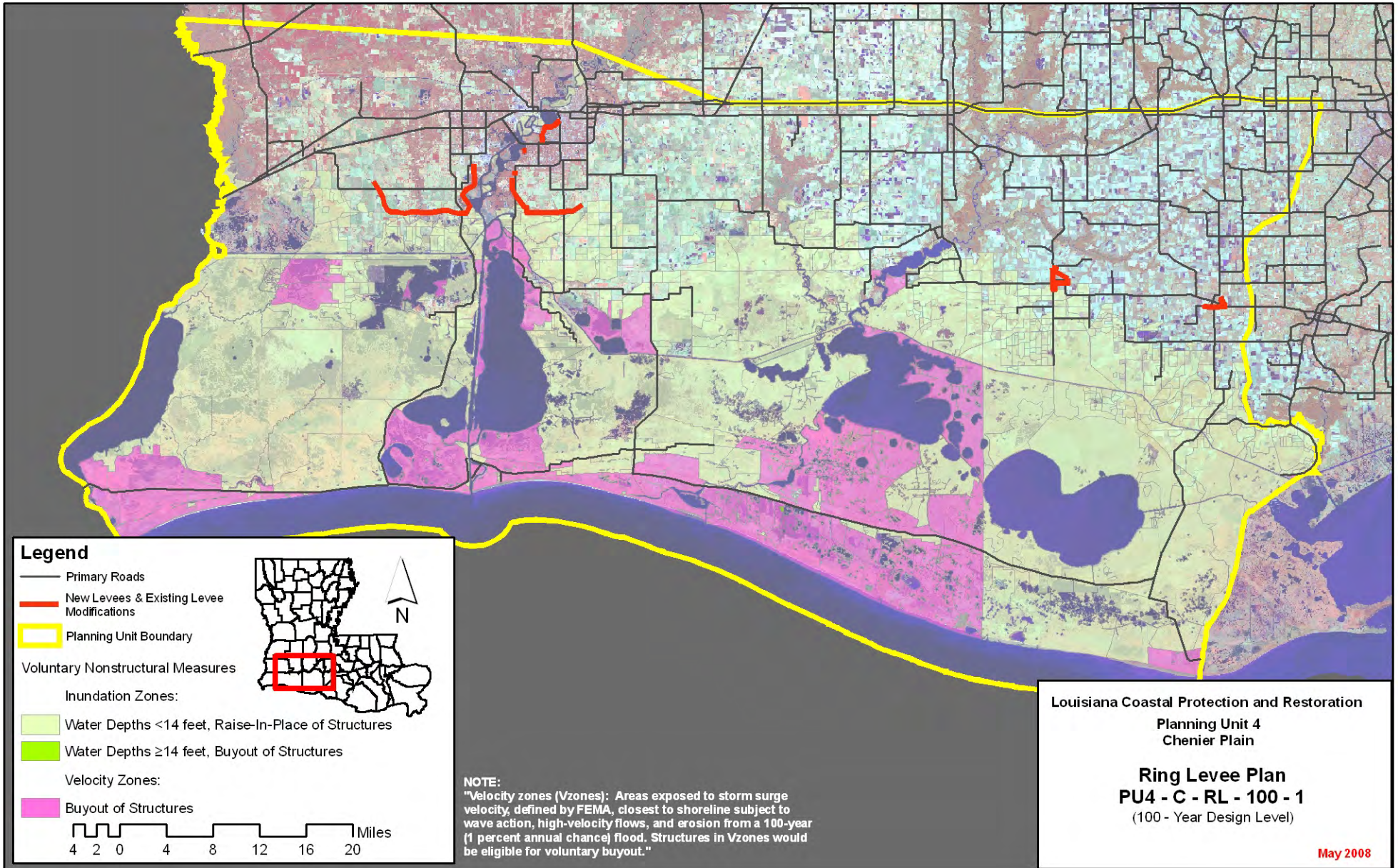
| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-C-RL-100-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU4-RL-100-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | 100-yr complementary measures | | |
| Structural Component: | Same as Alternative PU4-RL-100-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 786 | 2,421 | 105 | 101 | 272 | 19 | 109 | 1 | 0 |
| | | Mid | | 3,355 | 144 | 125 | 351 | 23 | 85 | 1 | 0 |
| | | Low | | 4,221 | 201 | 189 | 515 | 34 | 60 | 0 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 802 | 2,654 | 115 | 114 | 288 | 20 | 109 | 1 | 0 |
| | | Mid | | 3,516 | 163 | 189 | 450 | 33 | 85 | 0 | 0 |
| | | Low | | 4,486 | 230 | 256 | 557 | 39 | 60 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 786 | 2,238 | 109 | 105 | 288 | 20 | 109 | 1 | 0 |
| | | Mid | | 3,092 | 151 | 131 | 366 | 24 | 85 | 1 | 0 |
| | | Low | | 3,855 | 212 | 187 | 534 | 35 | 60 | 0 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 802 | 2,405 | 120 | 121 | 306 | 22 | 109 | 1 | 0 |
| | | Mid | | 3,241 | 171 | 180 | 456 | 33 | 85 | 0 | 0 |
| | | Low | | 4,092 | 253 | 236 | 560 | 38 | 60 | 0 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 10 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 100 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 1,906 | 1,906 | 1,915 | 1,915 | |
| | 1 / 2 | 5,416 | 5,525 | Structural Component | | 2,702 | 2,720 | 2,702 | 2,720 | |
| | 3 / 4 | 5,419 | 5,529 | Total Project | | 15,391 | 15,703 | 15,400 | 15,712 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Comprehensive Plan Ring Levee Alt 100-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 183 | 725 | 211 | 511 | 206 | 794 | 235 | |
| 100-year | 3,034 | 1,012 | 4,142 | 2,062 | 3,315 | 993 | 5,183 | 2,405 | |
| 400-year | 6,592 | 4,739 | 7,874 | 5,704 | 8,001 | 5,196 | 9,283 | 6,088 | |
| 1,000-year | 10,316 | 7,608 | 11,581 | 8,554 | 11,241 | 7,517 | 12,313 | 8,247 | |
| 2,000-year | 12,755 | 8,928 | 13,904 | 9,836 | 13,422 | 8,541 | 14,373 | 9,254 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



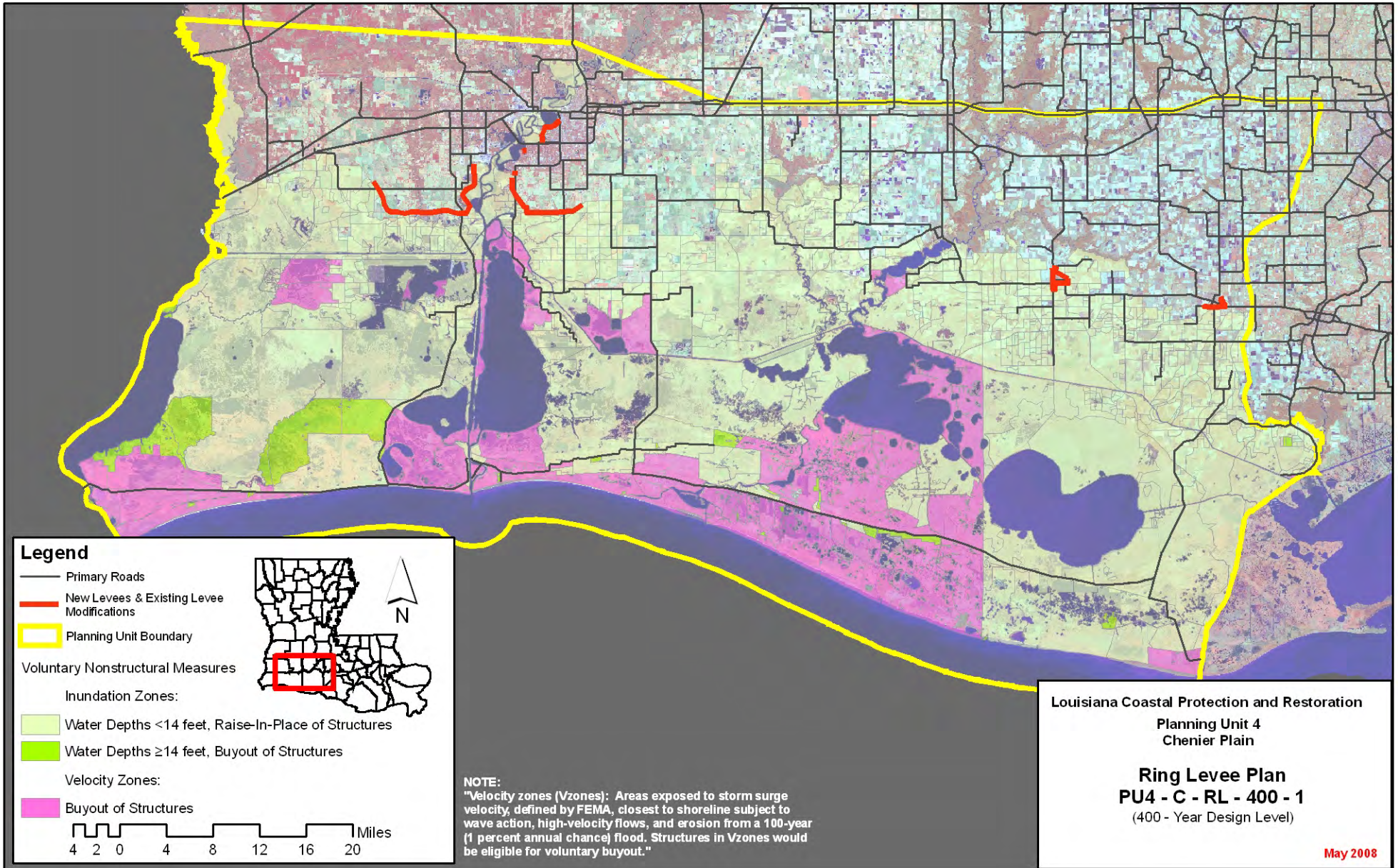
| | | | | | |
|---------------------------------|---|---------------------------------|-------------------------------|------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-C-RL-400-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU4-RL-400-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | 400-yr complementary measures | | |
| Structural Component: | Same as Alternative PU4-RL-400-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 813 | 2,294 | 99 | 78 | 232 | 15 | 109 | 1 | 0 |
| | | Mid | | 3,156 | 128 | 92 | 275 | 17 | 85 | 1 | 0 |
| | | Low | | 4,020 | 173 | 132 | 396 | 24 | 109 | 1 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 829 | 2,526 | 106 | 86 | 242 | 16 | 109 | 1 | 0 |
| | | Mid | | 3,315 | 139 | 125 | 319 | 21 | 85 | 1 | 0 |
| | | Low | | 4,289 | 189 | 159 | 421 | 27 | 60 | 0 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 865 | 2,122 | 103 | 83 | 246 | 16 | 109 | 1 | 0 |
| | | Mid | | 2,918 | 134 | 97 | 286 | 18 | 85 | 1 | 0 |
| | | Low | | 3,672 | 182 | 132 | 404 | 25 | 109 | 1 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 881 | 2,295 | 110 | 92 | 256 | 17 | 109 | 1 | 0 |
| | | Mid | | 3,077 | 147 | 124 | 326 | 22 | 85 | 1 | 0 |
| | | Low | | 3,924 | 204 | 154 | 426 | 27 | 60 | 0 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 12 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 100 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 1,670 | 1,670 | 2,696 | 2,696 | |
| | 1 / 2 | 5,638 | 5,749 | Structural Component | | 3,471 | 3,494 | 3,471 | 3,494 | |
| | 3 / 4 | 5,997 | 6,108 | Total Project | | 15,924 | 16,241 | 16,950 | 17,267 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Comprehensive Plan Ring Levee Alt 400-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|--|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 175 | 725 | 196 | 511 | 199 | 794 | 220 | |
| 100-year | 3,034 | 502 | 4,142 | 654 | 3,315 | 530 | 5,183 | 666 | |
| 400-year | 6,592 | 1,585 | 7,874 | 3,182 | 8,001 | 1,512 | 9,283 | 3,321 | |
| 1,000-year | 10,316 | 8,801 | 11,581 | 10,117 | 11,241 | 8,228 | 12,313 | 9,394 | |
| 2,000-year | 12,755 | 12,031 | 13,904 | 13,034 | 13,422 | 11,133 | 14,373 | 11,933 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.



| | | | | | |
|---------------------------------|--|---------------------------------|--------------------------------|------------------|--|
| Planning Unit: | 4 | Alt. No.: | PU4-C-RL-1000-1 | Category: | Comprehensive (Coastal+Structural+Nonstructural) |
| Alternative Description: | Comprehensive plan--Same coastal and structural measures as Alternative PU4-RL-1000-1 but with complementary nonstructural measures to reduce residual risk. | | | | |
| Coastal Component: | R1 | Nonstructural Component: | 1000-yr complementary measures | | |
| Structural Component: | Same as Alternative PU4-RL-1000-1 | | | | |

| Scenario | Future Conditions (Relative Sea Level Rise (RSLR) and Redevelopment Assumptions) | Uncertainty | Results by Scenario with Uncertainty Bands | | | | | | | | |
|----------|---|-------------|--|---------------------|-------------------------|--------------------------------|---------------------|---------------------------------|-------------------------|-------------------------------|------------------------------|
| | | | Life Cycle Cost | Population Impacted | Residual Damages | Gross Regional Output Impacted | Employment Impacted | People's Earned Income Impacted | Archeo. Sites Protected | Historic Properties Protected | Historic Districts Protected |
| | | | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | Ann. Equiv. \$ Millions | Ann. Equiv. # | Ann. Equiv. \$ Millions | # Sites | # Properties | # Districts |
| 1 | Low RSLR High Employment Dispersed Population | High | 921 | 2,145 | 94 | 76 | 227 | 14 | 109 | 1 | 0 |
| | | Mid | | 3,027 | 123 | 86 | 260 | 16 | 85 | 1 | 0 |
| | | Low | | 3,849 | 161 | 111 | 338 | 21 | 60 | 1 | 0 |
| 2 | High RSLR High Employment Dispersed Population | High | 938 | 2,377 | 101 | 82 | 236 | 15 | 109 | 1 | 0 |
| | | Mid | | 3,187 | 133 | 109 | 296 | 19 | 85 | 1 | 0 |
| | | Low | | 4,124 | 175 | 139 | 366 | 24 | 60 | 1 | 0 |
| 3 | Low RSLR Business-as-Usual Compact Population | High | 929 | 1,972 | 98 | 81 | 240 | 15 | 109 | 1 | 0 |
| | | Mid | | 2,786 | 129 | 91 | 273 | 17 | 85 | 1 | 0 |
| | | Low | | 3,502 | 169 | 113 | 346 | 21 | 60 | 1 | 0 |
| 4 | High RSLR Business-as-Usual Compact Population | High | 946 | 2,220 | 107 | 94 | 262 | 17 | 109 | 1 | 0 |
| | | Mid | | 2,959 | 140 | 114 | 312 | 21 | 85 | 1 | 0 |
| | | Low | | 3,728 | 187 | 139 | 370 | 24 | 60 | 1 | 0 |

| Other Results | | | Wetlands Created/Protected | | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 | | |
|--|----------|---------------|----------------------------|-------------------------|---|------------|------------|------------|--------|--------|
| Construction Time (years) | | | 14 | | After 50 yrs (% of baseline) | | 103 | 101 | 103 | 101 |
| Direct Wetland Impacts (acres) | | | 100 | | After 100 yrs (% of baseline) | | 106 | 100 | 106 | 100 |
| Indirect Impacts (unitless) | | | 0 | | Present Value of Life Cycle Costs (\$ Millions) | | | | | |
| Spatial Integrity (unitless) | | | 0.44 | | Coastal Component | | 10,783 | 11,077 | 10,783 | 11,077 |
| Non-Federal Share of Present Value of Life Cycle Costs | Scenario | (\$ Millions) | | Nonstructural Component | | 3,509 | 3,509 | 3,651 | 3,651 | |
| | 1 / 2 | 6,348 | 6,477 | Structural Component | | 3,756 | 3,799 | 3,756 | 3,799 | |
| | 3 / 4 | 6,398 | 6,527 | Total Project | | 18,049 | 18,385 | 18,191 | 18,528 | |

| 2075 Residual Risk / Damages - Low Uncertainty (\$ Millions) | | | | | | | | | Planning Unit 4 Comprehensive Plan Ring Levee Alt 1000-year Design |
|--|------------|-----------|------------|-----------|------------|-----------|------------|-----------|---|
| Frequency | Scenario 1 | | Scenario 2 | | Scenario 3 | | Scenario 4 | | |
| | No Action | With Proj | No Action | With Proj | No Action | With Proj | No Action | With Proj | |
| 10-year | 472 | 154 | 725 | 174 | 511 | 176 | 794 | 197 | |
| 100-year | 3,034 | 456 | 4,142 | 538 | 3,315 | 477 | 5,183 | 557 | |
| 400-year | 6,592 | 836 | 7,874 | 1,268 | 8,001 | 761 | 9,283 | 1,090 | |
| 1,000-year | 10,316 | 2,456 | 11,581 | 4,572 | 11,241 | 2,007 | 12,313 | 4,148 | |
| 2,000-year | 12,755 | 6,837 | 13,904 | 8,526 | 13,422 | 6,171 | 14,373 | 7,581 | |

Note: Present Value costs and Annual Equivalent numbers are calculated for the period from 2010 to 2075 at common base year 2025 using a 4 7/8% Federal discount rate. All dollar metrics are based on 2007 price levels.

