





**US Army Corps
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New Orleans District

Individual Environmental Reports (IERs) 8, 9, 10 and 11 and borrow

Chalmette Loop Hurricane Protection System and Improved Protection on the Inner Harbor Navigation Canal



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Why are we here tonight?

To discuss the status of completed, in-progress and potential improvements to the Lake Pontchartrain and Vicinity portion of the Hurricane Storm Damage and Risk Reduction System.



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National Environmental Policy Act: NEPA

- Required for all major Federal actions
- Analyze potential impacts to the human and natural environment and investigate reasonable alternatives
- Analyses documented in Individual Environmental Reports (IER)
- Public Involvement is KEY! We want to hear from you!
- Goal: more informed decision making through public involvement

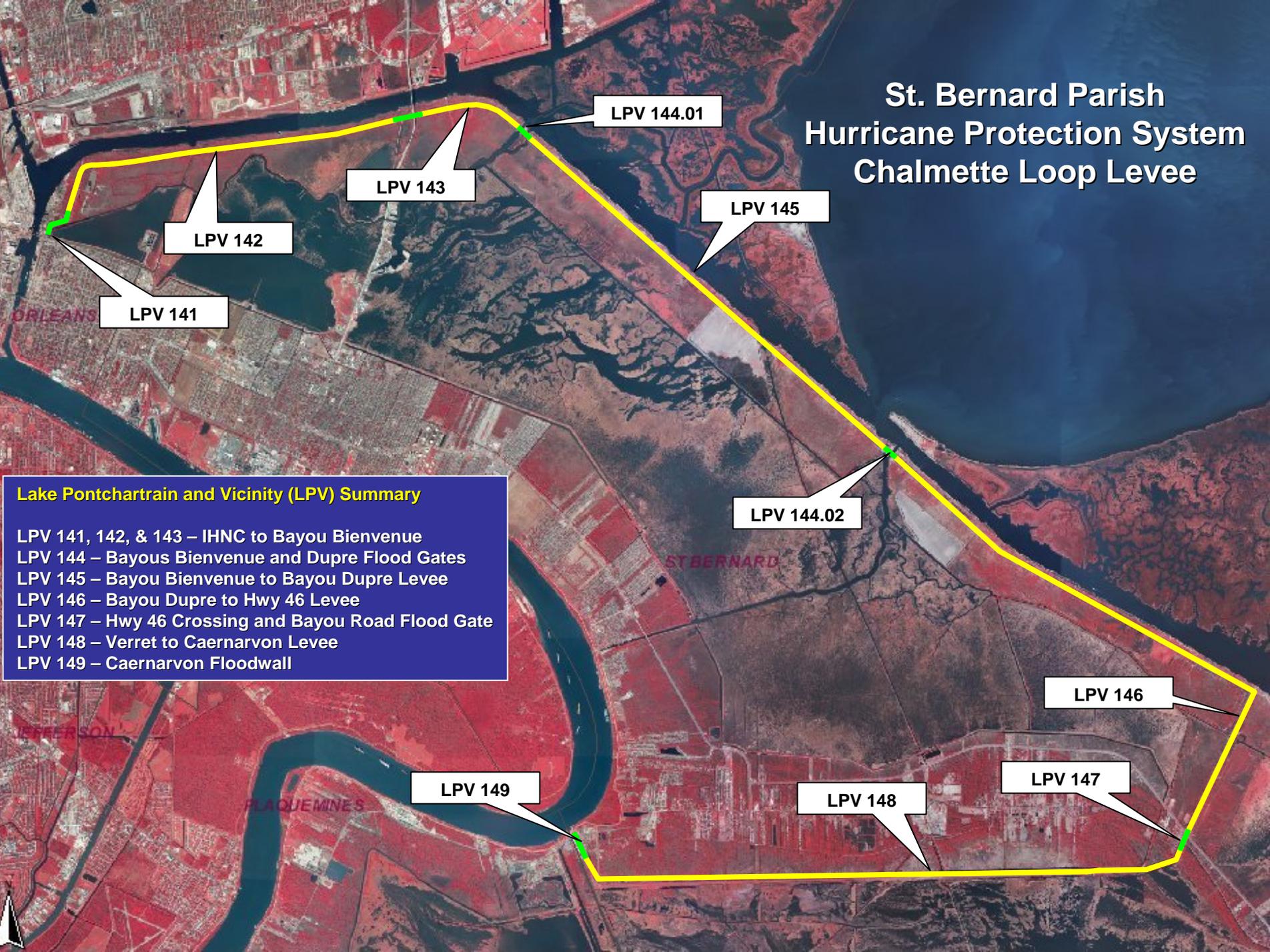


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NEPA Process and Path Ahead

- The NEPA process began with public scoping meetings for IERs 8,9,10 and 11 in March 2007
- From March 2007 through today, current project alternatives were developed, impacts were analyzed, and public input was solicited
- Tentative timeframe of draft IER 30-Day public review period:
 - IER 8: Late January 2008 – Early February 2008
 - IER 9: Late March 2008 – Early April 2008
 - IER 10: April 2008
 - IER 11: Late January 2008
- Final decisions will be made approximately 45 days later

St. Bernard Parish Hurricane Protection System Chalmette Loop Levee



Lake Pontchartrain and Vicinity (LPV) Summary

- LPV 141, 142, & 143 – IHNC to Bayou Bienvenue
- LPV 144 – Bayous Bienvenue and Dupre Flood Gates
- LPV 145 – Bayou Bienvenue to Bayou Dupre Levee
- LPV 146 – Bayou Dupre to Hwy 46 Levee
- LPV 147 – Hwy 46 Crossing and Bayou Road Flood Gate
- LPV 148 – Verret to Caernarvon Levee
- LPV 149 – Caernarvon Floodwall



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Current Status

- LPV 142: Southside of Gulf Intracoastal Waterway (GIWW)
 - Levee being raised to elevation 15.0 ft
 - Construction delayed due to rain
 - Continuing investigations to determine if sandy material is present, if found appropriate corrective actions will be taken
- LPV 148.01: Verret to Caernarvon (Phase I)
 - Contract awarded 31 Oct 07
 - Notice to proceed issued 14 Jan 08



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Current Status (cont.)

- LPV 144 – 149: Chalmette Loop Levee System
 - Investigating various options to provide 100-yr level of protection
 - Scheduled to initiate design March 2008
- St. Bernard Back Levee
 - Currently investigating the feasibility of incorporating the back levee into the Federal system
 - Developing a survey and boring plan for design effort



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IER 8

Bayou Bienvenue and Bayou Dupre Flood Control Structures



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Bayou Bienvenue and Bayou Dupre Flood Control Structures



**Bayou Bienvenue (LPV 144.1) on the
Orleans/St. Bernard Parish line**



**Bayou Dupre (LPV 144.2) in St.
Bernard Parish, Louisiana**



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Status of IER 8

Bayou Bienvenue and Bayou Dupre Flood Control Structures

- Draft IER is being finalized and will be available for public review in early February



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IER 8 – Proposed Action

- Construction of new flood control structures along the bayou channel approximately 300 ft to the protected-side of the existing structures.
- Construction of new T-walls that tie-in to the adjacent levee reaches.
- The new structures and T-Wall tie-ins would be built to a height of approximately +31 ft (NAVD88).
- A pontoon bridge is an additional feature that could be built.
- After construction of the new structures, the old structures would be de-authorized and left in the open position, unless the local sponsor chooses to maintain the old structures as an additional line of defense.



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IER 8 – Proposed Action (cont.)

- Final decision on Bayou Bienvenue floodgate is dependent on recommendations for IER 11 (improved protection for the Industrial Canal).
- The Proposed Action for Bayou Bienvenue may ultimately provide protection for an area also protected by the proposed action for IER 11.
- If the final engineering design for the IER 11 would provide adequate protection for the Bayou Bienvenue area, then the IER 8 decision may be re-evaluated for Bayou Bienvenue, and the No Action alternative for the Bayou Bienvenue control structure could be selected.

*IER 8 – Proposed Action
Bayou Bienvenue*

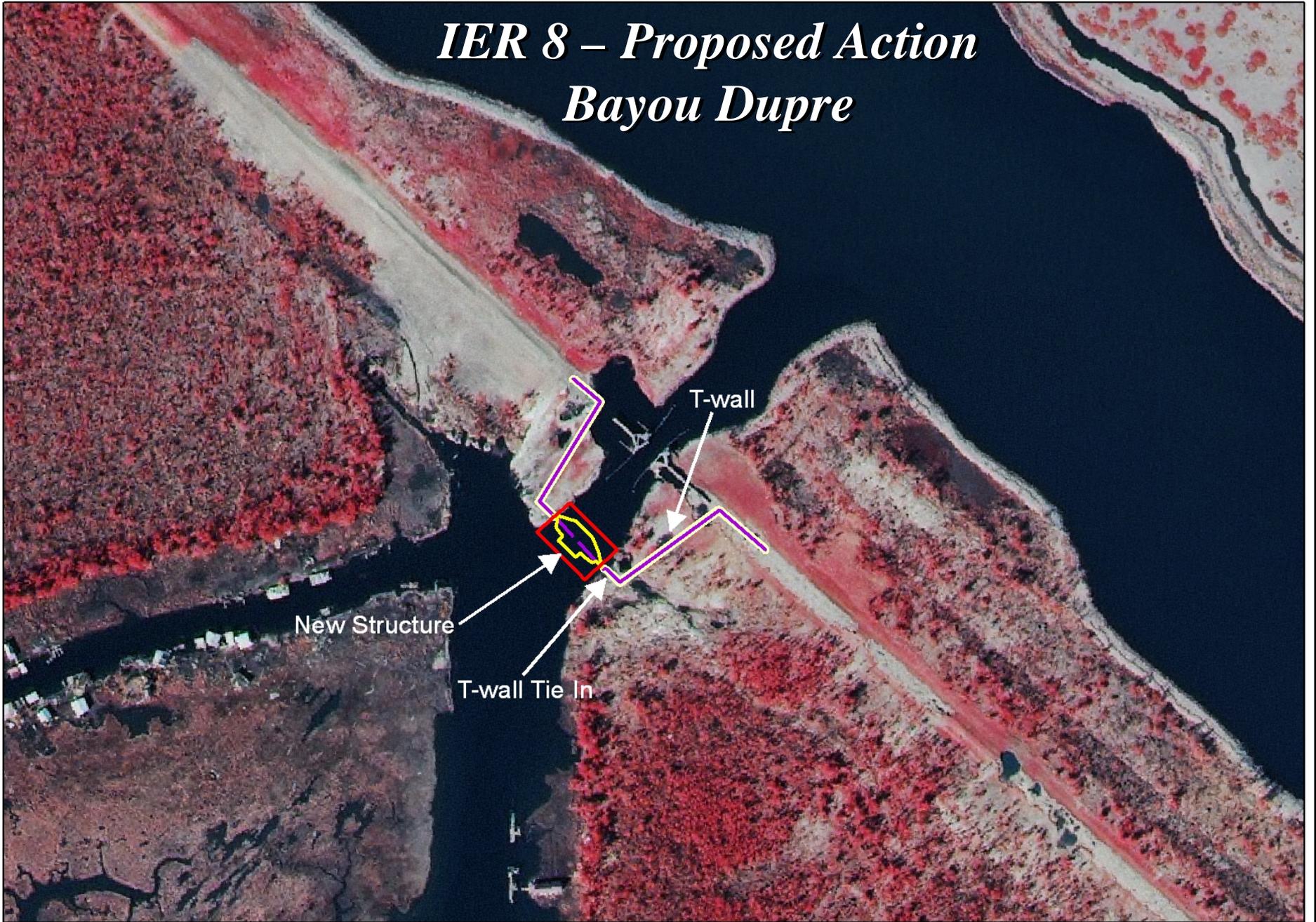
New Structure

T-Wall

T-Wall Tie In



IER 8 – Proposed Action Bayou Dupre



New Structure

T-wall

T-wall Tie In



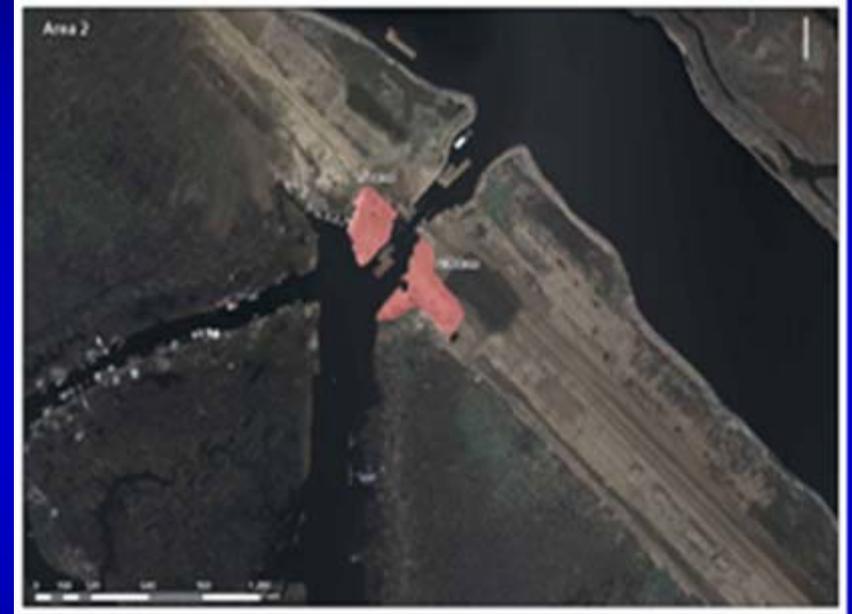


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Proposed Staging Areas During Construction



Bayou Bienvenue Staging Areas



Bayou Dupre Staging Areas



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IER 8 – Environmental Impacts of Proposed Action

- **Wetlands – Minimal Adverse:** Expected loss of wetlands only near Bayou Bienvenue is .5 acres, adverse impacts would occur primarily during construction
- **Fisheries – Minimal Adverse:** temporary impacts to fisheries during construction
- **Essential Fish Habitat – Minor Adverse:** temporary impacts to essential fish habitat in the vicinity of the project area during construction
- **Wildlife – Negligible Adverse:** temporary impacts to wildlife within the vicinity of the project area during construction
- **Endangered/Threatened Species – Insignificant and unlikely to have an adverse affect**



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IER 8 – Environmental Impacts of Proposed Action (cont.)

- Socioeconomic Resources – Substantial Beneficial: impacts to population, landuse, and employment due to heightened flood protection and construction-generated employment
- Environmental Justice – None Identified
- Cultural Resources – None Identified
- Recreation – Minimal Adverse
- Air Quality – None Identified
- Noise – Minimal Adverse: temporary impacts within 1,000 ft of the project area during construction
- Transportation – None Identified



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IER 9

Caernarvon Floodwall

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Status of IER 9

Caernarvon Floodwall

- **Draft IER anticipated for public release in early April 2008**
- **Once recommended plan is selected and IER is complete, Plans and Specifications (P&S) will begin**
- **Construction scheduled to begin early 2009**





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IER 9

Caernarvon Floodwall Alternatives

IER 9: Alternative 1A



— Floodwall Centerline
Alternative 1A

0 200 400 800 Feet

IER 9: Alternative 1B



— Floodwall Centerline
Alternative 1B



IER 9: Alternative 2



----- Structure
— Levee Centerline Alternative 2



IER 9: Alternative 3



- Structure
- Floodwall Centerline
- Alternative 3 220 ft
- Alternative 3 335 ft



Realignment of the Levee System to the Western Side of the Caernarvon Canal

IER 9: Alternative 4



- Structure
- Levee Centerline
- T-Wall Centerline
- Alternative 4 220 ft
- Alternative 4 335 ft



Realignment of the Levee System to the Far Western Side of SDEB

IER 9: Alternative 5



Realignment of the Levee System to the Eastern Side of Caernarvon Freshwater Diversion Project

IER 9: New Alternative



----- Structure

----- Levee Centerline

New Alternative

0 200 400 800 Feet

Realignment of T-Wall to the Far Western Side of Shallow Draft Elevating Boats



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IER 9 – Environmental Impacts

- Wetlands – Depends on alignment
- Fisheries – Not likely to adversely effect
- Essential Fish Habitat – Not likely to adversely effect
- Wildlife – Minimal Adverse: temporary displacement impacts to wildlife within the vicinity of the project area during construction
- Endangered/Threatened Species – No Impact
- Socioeconomic Resources – Substantial Beneficial: impacts to population, landuse, and employment due to heightened flood protection and construction-generated employment
- Environmental Justice – None Identified



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IER 9 – Environmental Impacts (cont.)

- Cultural Resources – currently under analysis
- Recreation – currently under analysis
- Air Quality – Negligible Adverse: temporary minor impact to air quality during construction; however, impact is considered negligible due to the fact that the project area is an attainment area
- Noise – Minimal Adverse: temporary impacts to receptors within 1,000 ft of the project area during construction
- Transportation – Minimal Adverse: worker and truck traffic resulting from the project could temporarily impact traffic on highways within the vicinity of the project area



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IER 10

Chalmette Loop Levee

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Alternatives Evaluation

IER 10 Chalmette Loop Levee

- A range of alternatives is being considered for both the Federal and non-Federal levees in the Orleans/St. Bernard parish area
- Screening analysis was performed for a range of alternatives.
- Alternatives were eliminated for several reasons including adverse impacts, engineering design feasibility, or cost. Some alternatives were eliminated from further analysis because they did not reasonably meet the project purpose and need



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Alternative Types Under Consideration Federal Levee System

- LPV 145: Bayou Bienvenue to Bayou Dupre
 - Earthen Levee with Narrow Right-of-Way
 - Earthen Levee with Protected Side Shift
 - T-Wall Floodwall / Cap
- LPV 146: Bayou Dupre to Mississippi River Gulf Outlet (MRGO)
 - Earthen Levee with Protected Side Shift
 - Earthen Levee with Narrow Right-of-Way and Protected Side Shift
 - Earthen Levee with Narrow Right-of-Way
 - T-Wall Floodwall / Cap
- LPV 146 (MRGO to Hwy 46)
 - Earthen Levee
 - Earthen Levee with Narrow Right-of-Way and Protected Side Shift
 - Earthen Levee with Narrow Right-of-Way
 - T-Wall Floodwall / Cap

LPV 146 Alternatives Right of Way Limits

Earthen Levee
Protected side Shift
with Narrow ROW
(Estimated ROW)

Earthen Levee
(Estimated ROW)

Existing
ROW

Earthen Levee Narrow ROW
and
T-Wall Floodwall / Cap
within existing ROW



0 250 500 1,000 1,500 2,000
Feet





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Alternative Types Under Consideration Federal Levee System

- LPV 147: Hwy 46 and Bayou Road
 - Earthen Levee with stability berm and Hwy 46 over the levee with overbuild
 - T-Wall Floodwall / Cap and Hwy 46 over the T-Wall with an overpass
 - Bayou Road replacement floodgate
 - Bayou Road replace floodgate with full levee section
- LPV 148: Verret to Caernarvon
 - Earthen Levee
 - Earthen Levee with Narrow Right-of-Way
 - T-Wall Floodwall / Cap

LPV 148 Alternatives Right of Way Limits

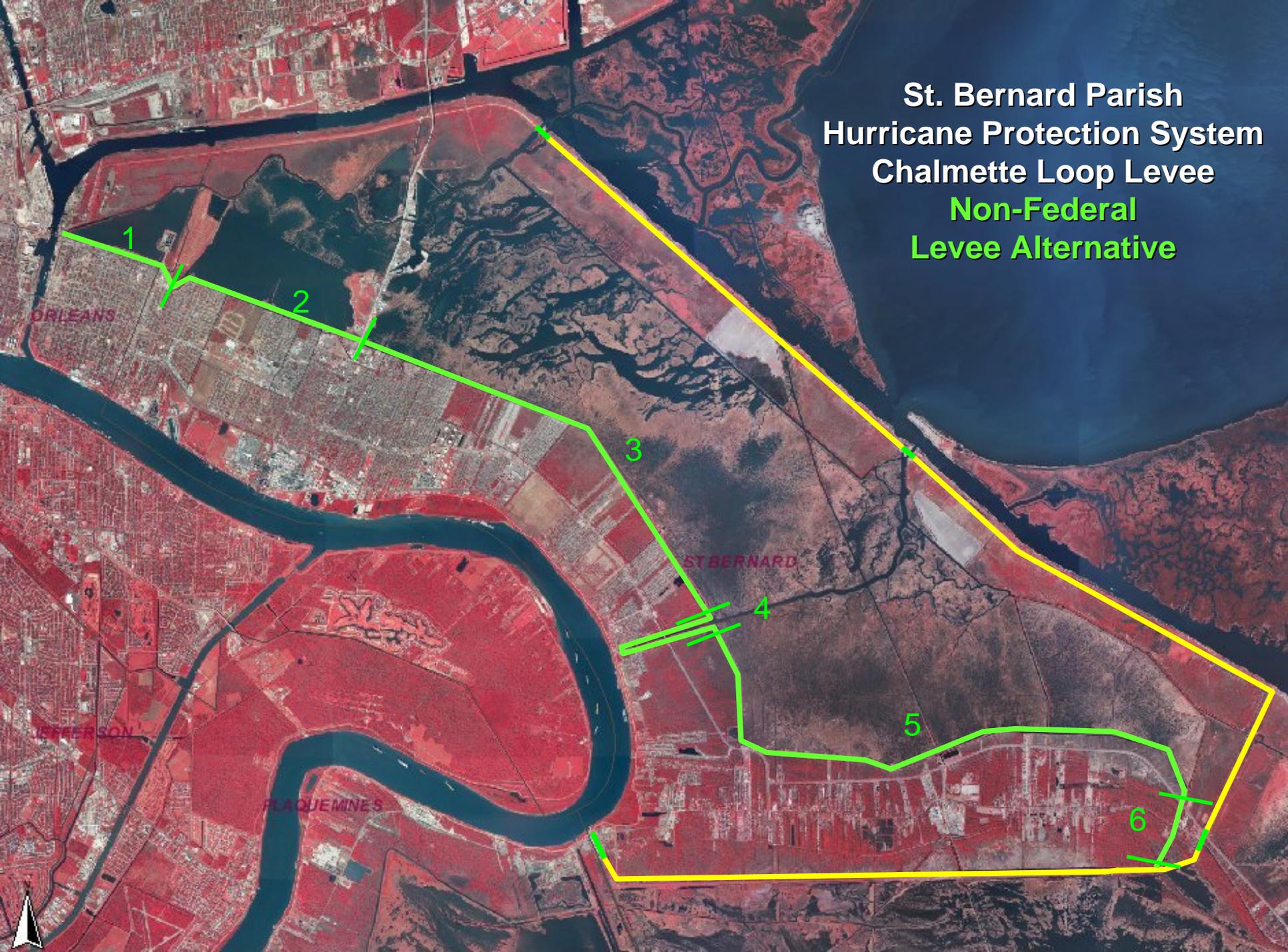
Earthen Levee
(Estimated ROW)

Existing
ROW

Earthen Levee Narrow ROW
and
T-Wall Floodwall / Cap
within existing ROW



**St. Bernard Parish
Hurricane Protection System
Chalmette Loop Levee
Non-Federal
Levee Alternative**



ORLEANS

ST BERNARD

JEFFERSON

PLAQUEMINES





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Alternative Types Under Consideration

Non-Federal Levee System

(40 Arpent Canal Levee)

- Reach 1
 - Earthen Levee with Flood-side Shift
 - T-Wall Floodwall
 - New T-Wall between railroad and Florida Ave
- Reach 2
 - Earthen Levee
 - T-Wall Floodwall
 - Earthen Levee to EL 13.5 and T-Wall Cap to EL. 17.0
- Reach 3
 - Earthen Levee
 - T-Wall Floodwall
 - Earthen Levee to EL 13.5 and T-Wall Cap to EL. 17.0



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Alternative Types Under Consideration

Non-Federal Levee System

(40 Arpent Canal Levee)

- Reach 4
 - Floodgate Closure Structure
- Reach 5
 - Earthen Levee
 - T-Wall Floodwall
 - Earthen Levee to EL 13.5 and T-Wall Cap to EL. 17.0
- Reach 6
 - Earthen Levee
 - T-Wall Floodwall
 - Earthen Levee to EL 13.5 and T-Wall Cap to EL. 17.0

Reach 2 Alternatives Right of Way Limits

Earthen Levee
(Proposed ROW)

Earthen Levee to EL 13.5
and T-Wall Cap to EL. 17.0
(Proposed ROW)

T-Wall Floodwall
(Proposed ROW)

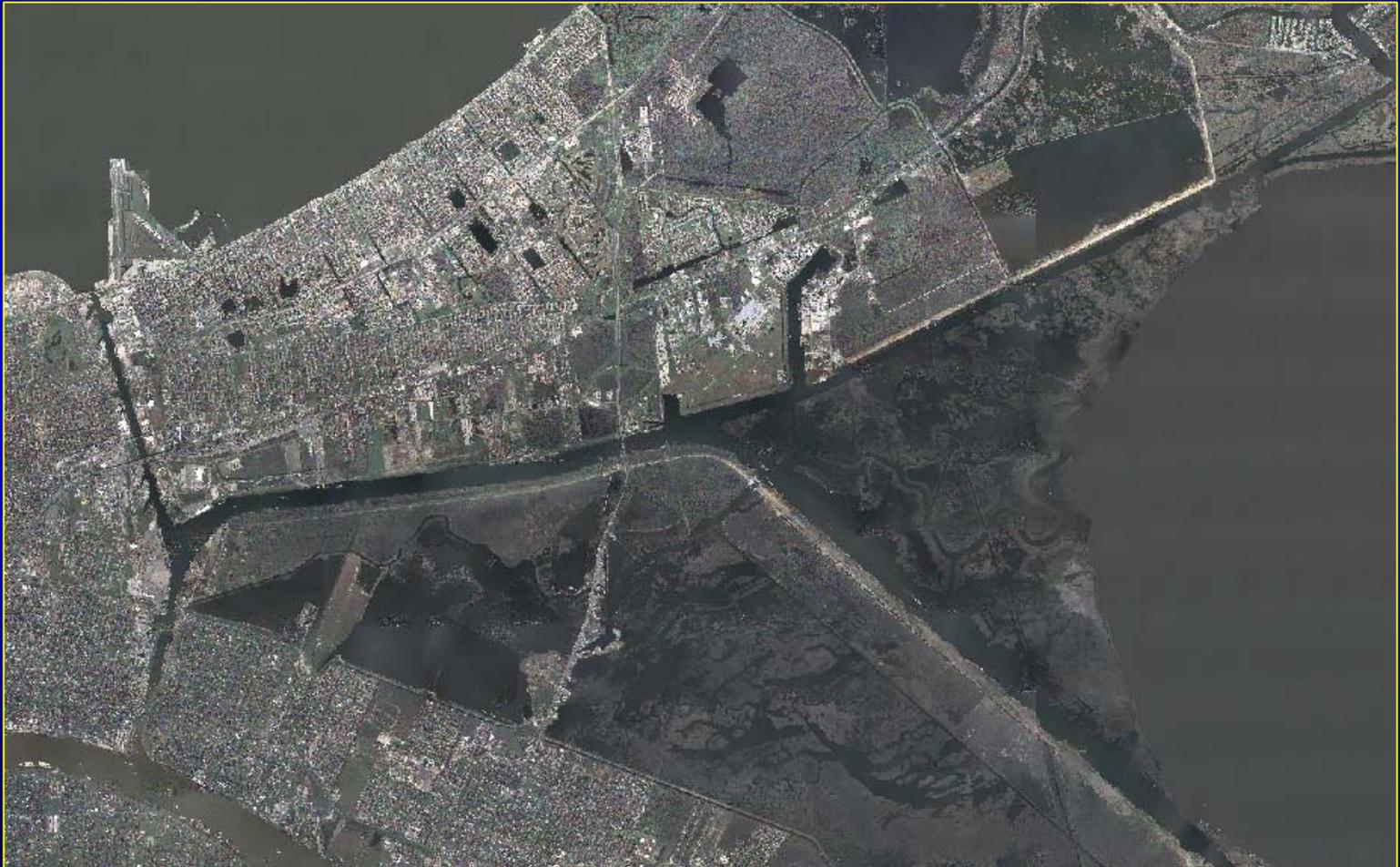
Existing
ROW





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Improving Hurricane Protection on the Inner Harbor Navigation Canal IER 11



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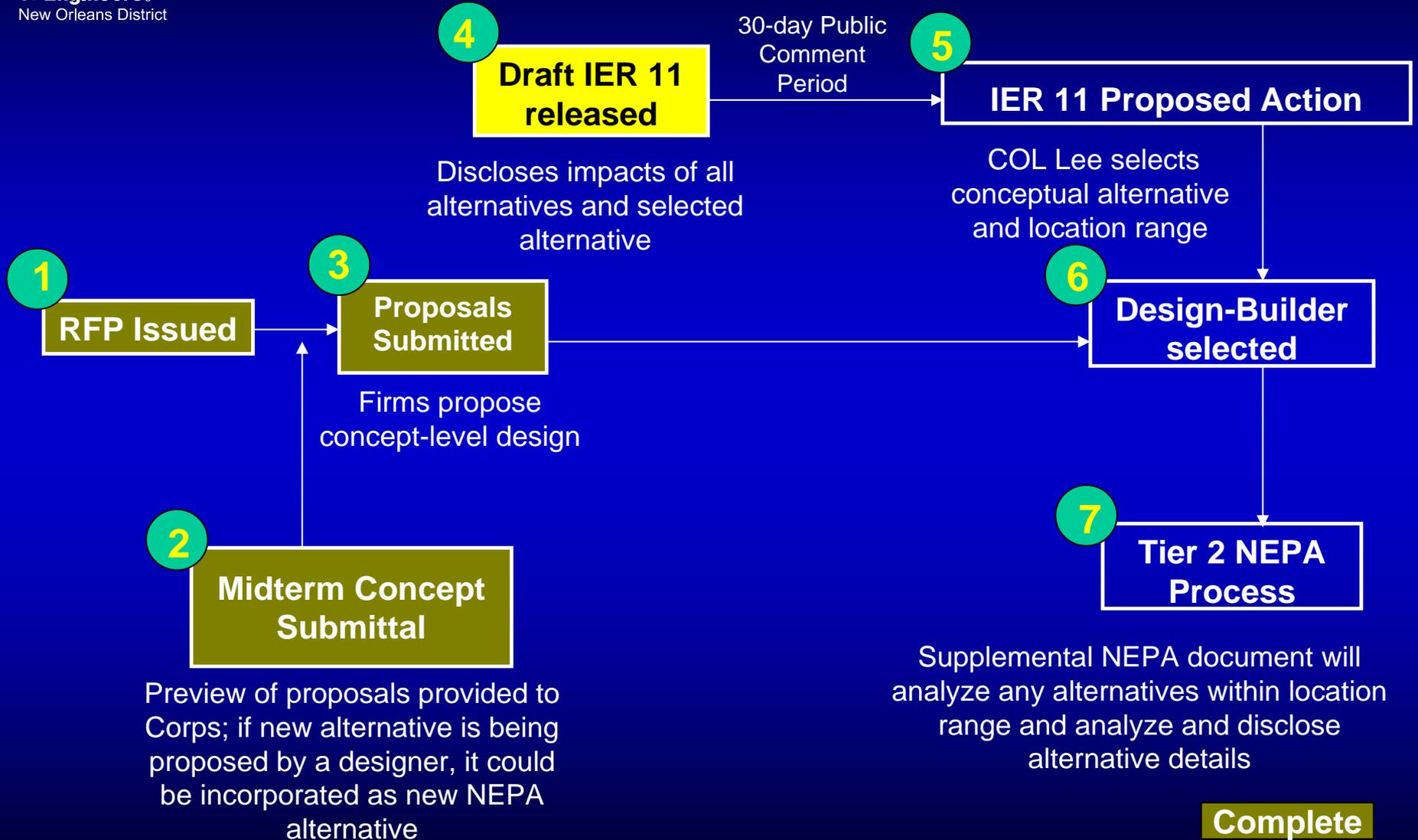
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Project Purpose

Provide 100-year Level of Protection to
the Inner Harbor Navigation Canal (IHNC)
from Hurricane-Induced Storm Surges
by 1 June 2011 with
Advance Measures in place by
1 June 2009.



Design-Build and NEPA Coordination Process





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Design Parameters

- Minimize the overall project footprint
- Minimize impacts to wetlands and natural hydrological regime
- Maintain a water flow capacity that is comparable to the waterway's capacity prior to construction
- Minimize the creation of steep environmental gradients (i.e., changes in salinity regimes, changes in physical slope of channel)
- Minimize potential adverse impacts to fisheries
- Accommodate vertical and horizontal fishery distribution patterns with interior marsh tidal pathways and coastal passage
- Minimize the migratory distance from opening to enclosed wetland habitats



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Design Parameters (cont.)

- Do not exceed a 2.6-foot-per-second (fps) water flow during peak flood or ebb tides to avoid or minimize impacts to migrating aquatic species
- Design structures to remain open except during storm events of sufficient magnitude that flooding is expected
- Provide for rapid reopening of structure even if electricity is unavailable
- Minimize potential for turbidity-causing sediment erosion during construction and throughout the project life
- Avoid or minimize disturbance of contaminated sediments and other hazardous, toxic, or radioactive waste (HTRW) in the study area if they are found to be present



Alternatives

1. No Action

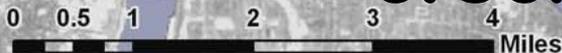
- Raise levees and floodwalls to previous authorized level

2. Raise / relocate buildings in flood zone

3. Raise levees and floodwalls to 100-year level of protection

4. Construct channel and/or water body structures

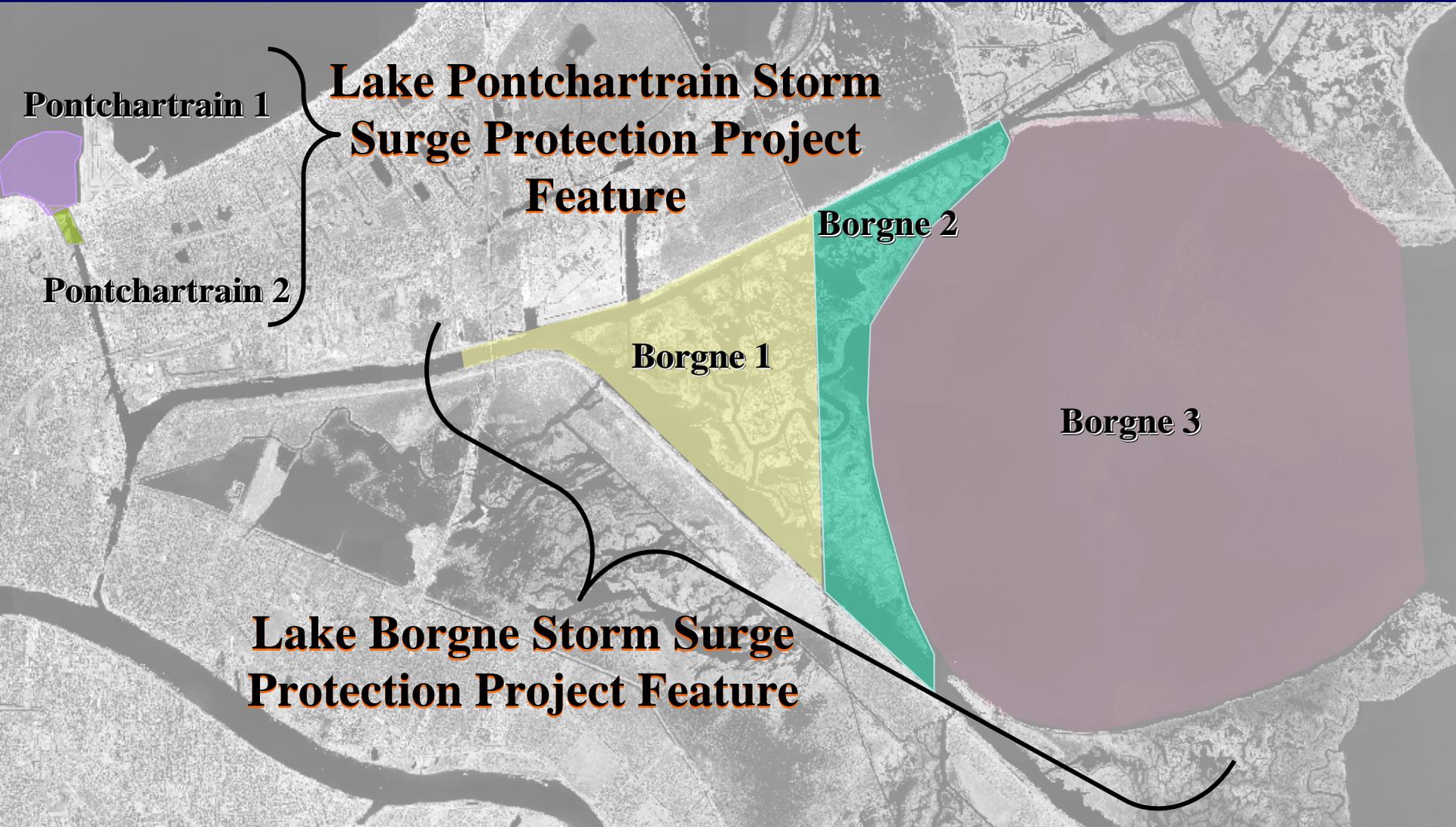
5. Construct wetlands





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Alternative 4: Project Features and Location Ranges





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Proposed Action: Pontchartrain 2 Location Range



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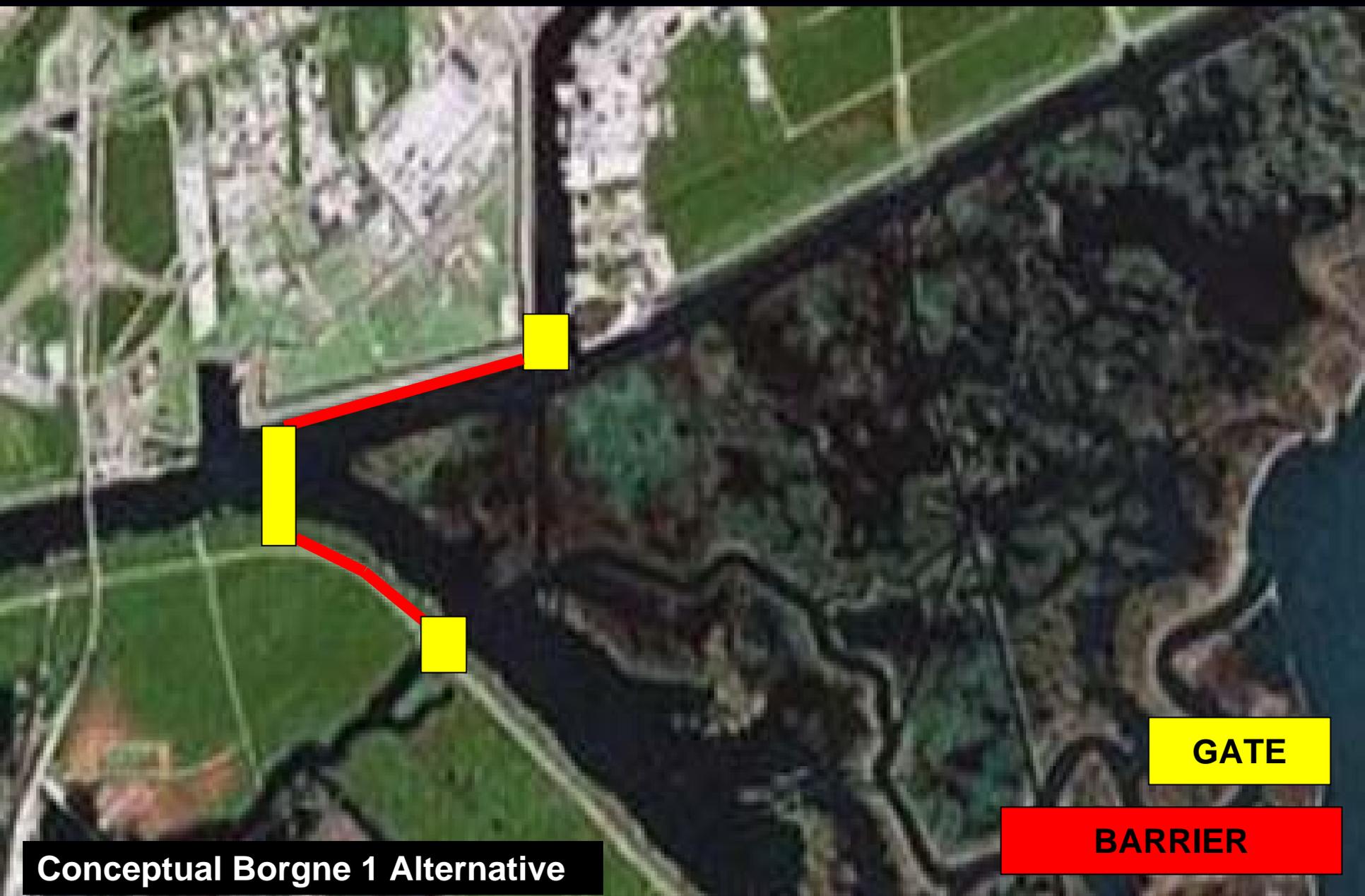


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Proposed Action: Borgne 1 Location Range



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Conceptual Borgne 1 Alternative

GATE

BARRIER



Conceptual Borgne 1 Alternative

GATE

BARRIER



Conceptual Borgne 1 Alternative

GATE

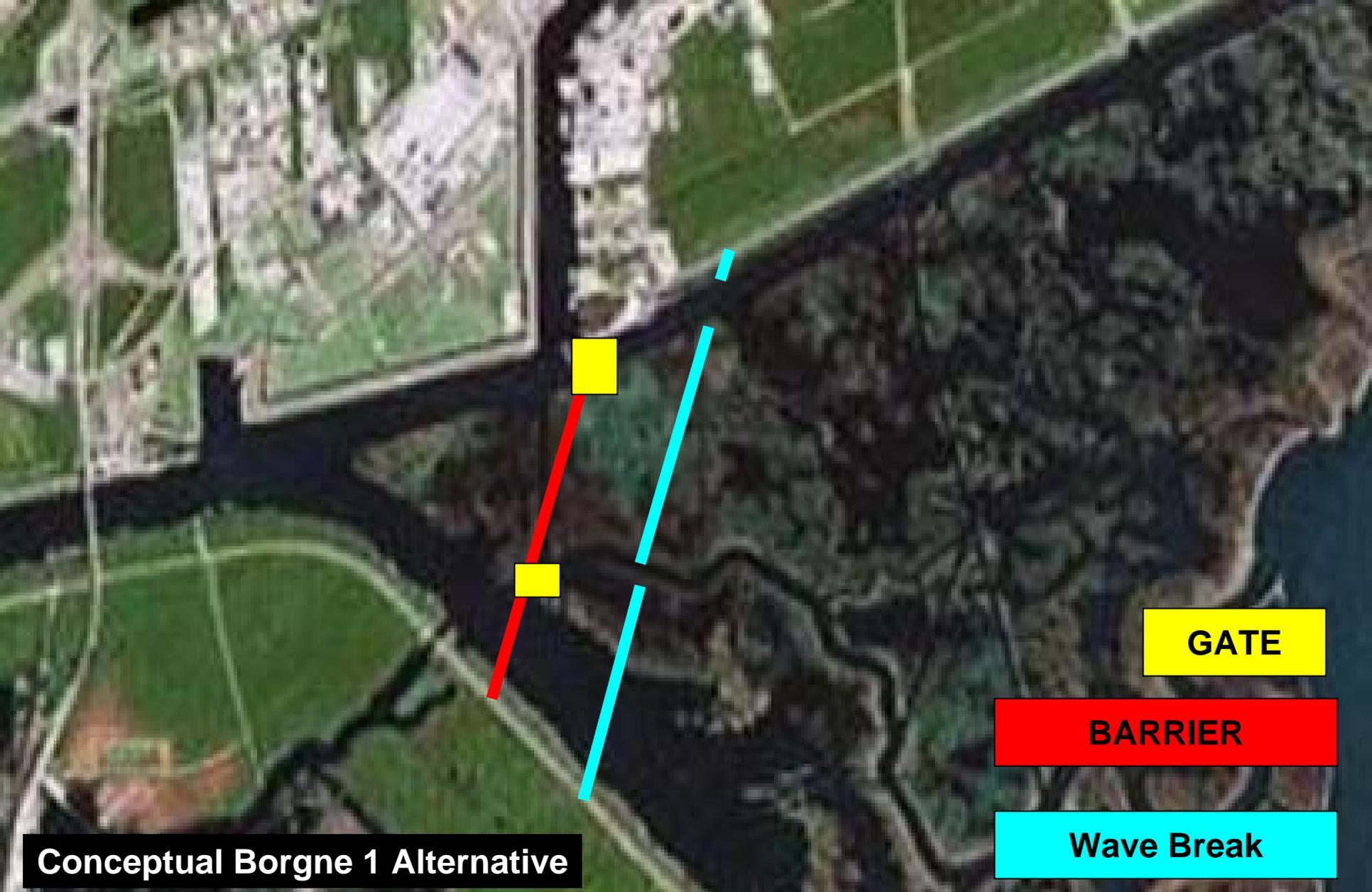
BARRIER



Conceptual Borgne 1 Alternative

GATE

BARRIER



Conceptual Borgne 1 Alternative

GATE

BARRIER

Wave Break



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Pontchartrain 2: Impacts to Significant Resources

- **Water Quality:** Temporary increases in turbidity (cloudiness)
- **Aquatic:** Up to 5 acres of open water lost
- **Wetlands:** No significant impacts
- **Human/Economic:** 40 acres of land taken; may impact some residential and industrial properties; long-term positive impacts from better flood protection
- **Recreation:** Possible impacts to Lakefront recreational facilities



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Borgne 1: Impacts to Significant Resources

- **Water Quality:** Temporary increases in turbidity
- **Aquatic:** Up to 296 acres of open water habitat lost
- **Wetlands:** Loss of up to 346 acres of brackish marsh lost
- **Human/Economic:** Minor temporary impacts from construction; long-term positive impacts would be repopulation of affected neighborhoods; long-term positive impacts from better flood protection
- **Recreation:** Impact to and protection of wetlands/recreational fishing opportunities



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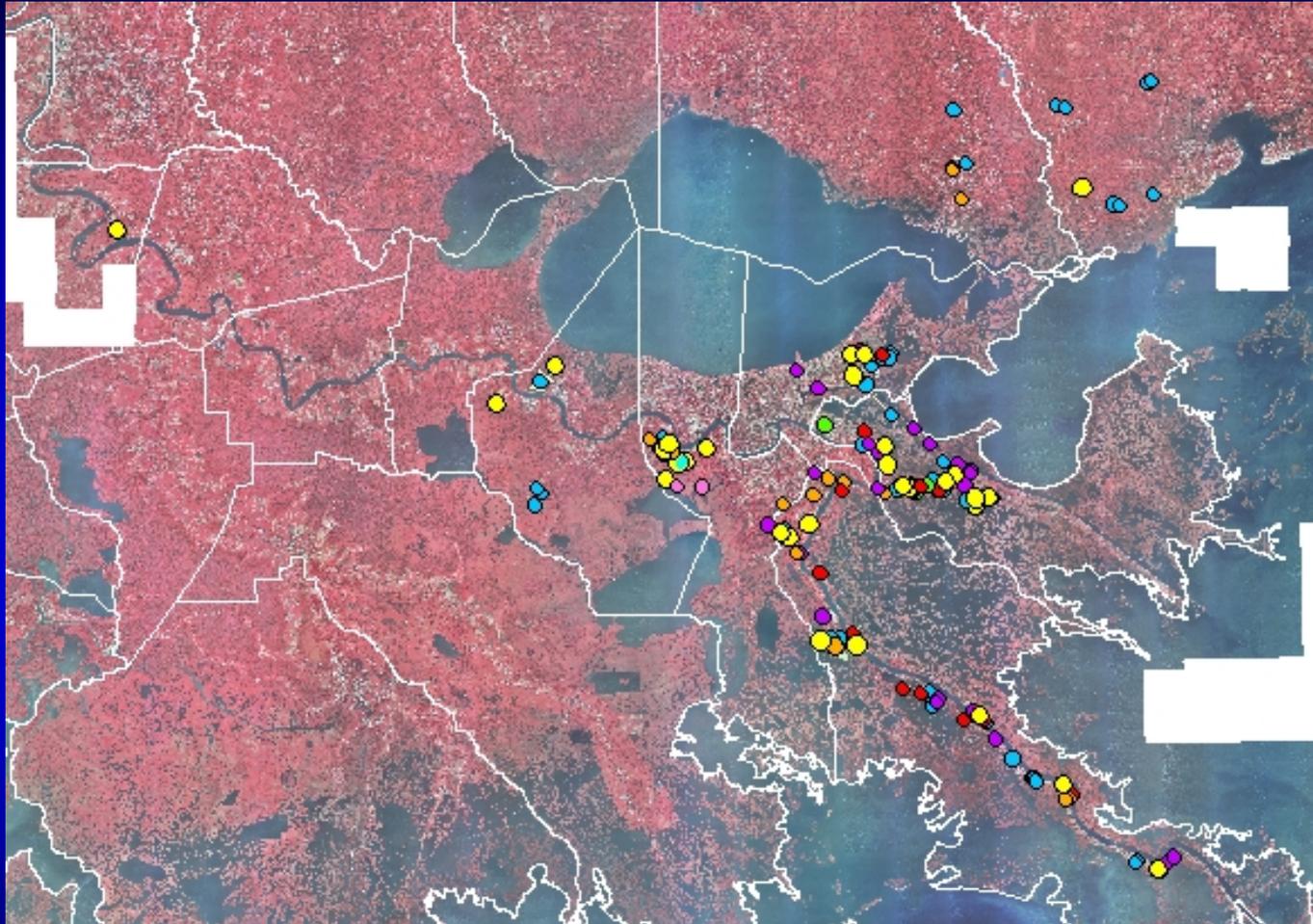
Advance Measures Update

- Goal: provide an improved level of protection & reduced risk to the areas protected by the IHNC by 1 June 2009
- Advertised advance measures with 100-year project solicitation on 26 October 2007
- The amount of protection will be determined after a contractor is selected
- Solution could be part of 100-year structure or a completely separate structure
 - Detailed design will be disclosed and analyzed in Tier 2 NEPA document



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Investigated Borrow Sites – System Wide



Borrow Areas included in IERs 18, 19, 22, and 23

Borrow Areas under Investigation

Borrow Areas Declined

Stockpile Area under Investigation

Borrow Area under Preliminary Investigation

Borrow Area Investigation being Initiated

Borrow Areas Investigated under Task Force Guardian

Revision 2; 15 January 2008

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Investigated Borrow Sites – St. Bernard





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IERs Currently Available for Public Review

IER 18 Addendum – Government Furnished Borrow

IER 19 Addendum – Pre-Approved Contractor Furnished Borrow

- Released for Public Review and Comment: January 10, 2008
- Public Comment Period closes: February 11, 2008

**** copies available at www.nolaenvironmental.gov or by contacting the Corps.**



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Opportunities for Public Input

- Monthly Public Meetings throughout New Orleans Metro Area
 - Make sure to sign in tonight to get on our meeting notification mailing list
- Comments can be submitted at any time at: www.nolaenvironmental.gov
- Individual Environmental Reports (IER) 30-day Public Review

Questions and comments regarding Hurricane Protection Projects

should be addressed to:

Gib Owen

PM-RS

P.O. Box 60267

New Orleans, LA 70160-0267

Phone: 504-862-1337

E-mail: mvnenvironmental@usace.army.mil



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Environmental Compliance Data Bank

www.nolaenvironmental.gov

PROJECTS MEETINGS LIBRARY DATA VIEWER GET INVOLVED RELATED LINKS

Welcome to NOLA Environmental! This site has been set up to share with the public the efforts being made by the U.S. Army Corps of Engineers and other Federal and state agencies in south Louisiana regarding the environmental compliance for proposed Federal and state Hurricane Protection Projects. Additional information pertaining to other Federal and state agencies' hurricane recovery efforts in southeast Louisiana will also be posted on the site as it becomes available.

FEATURED PROJECT



USACE-MVN Emergency Alternative Arrangements
West Bank & Vicinity & Lake Pontchartrain & Vicinity
Hurricane Protection Projects

The U.S. Army Corps of Engineers, Mississippi Valley Division, New Orleans District implemented Alternative Arrangements on March 13, 2007 under the provisions of the Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act (40 CFR § 1506.11). This process was implemented in order to expeditiously complete environmental analysis for the 100-year level of Hurricane and Storm Damage Reduction effort authorized and funded by the Administration and the Congress. The proposed actions are located in southern Louisiana area and relate to the Federal effort to rebuild the Hurricane and Storm Damage Reduction system in the New Orleans Metropolitan area as a result of Hurricanes Katrina and Rita. [\[Learn More\]](#)

NOW AVAILABLE:

[IER 18 Government Furnished Borrow Draft Report](#)

[IER 19 Contractor Furnished Borrow Draft Report](#)

[IER 18 Addendum](#)

[IER 19 Addendum](#)

Public Comment Period: Jan. 10, 2008 - Feb. 11, 2008

UPCOMING EVENTS: **Public Meetings**

[Jan. 15, 2008 7:00 - 9:00 pm, Jefferson Parish \(IERs 14, 15, 16, 17, and borrow\)](#)

[Jan. 17, 2008 7:00 - 9:00 pm Orleans and St. Bernard Parishes \(IERs 8, 9, 10, 11, and borrow\)](#)

[Feb. 7, 2008 7:00 - 9:00 pm Orleans and St. Bernard Parishes \(IER 11 and borrow\)](#)



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