

Greater New Orleans Hurricane & Storm Damage Risk Reduction System

GIWW West Closure Complex Operating Plan and Master Water Control Manual

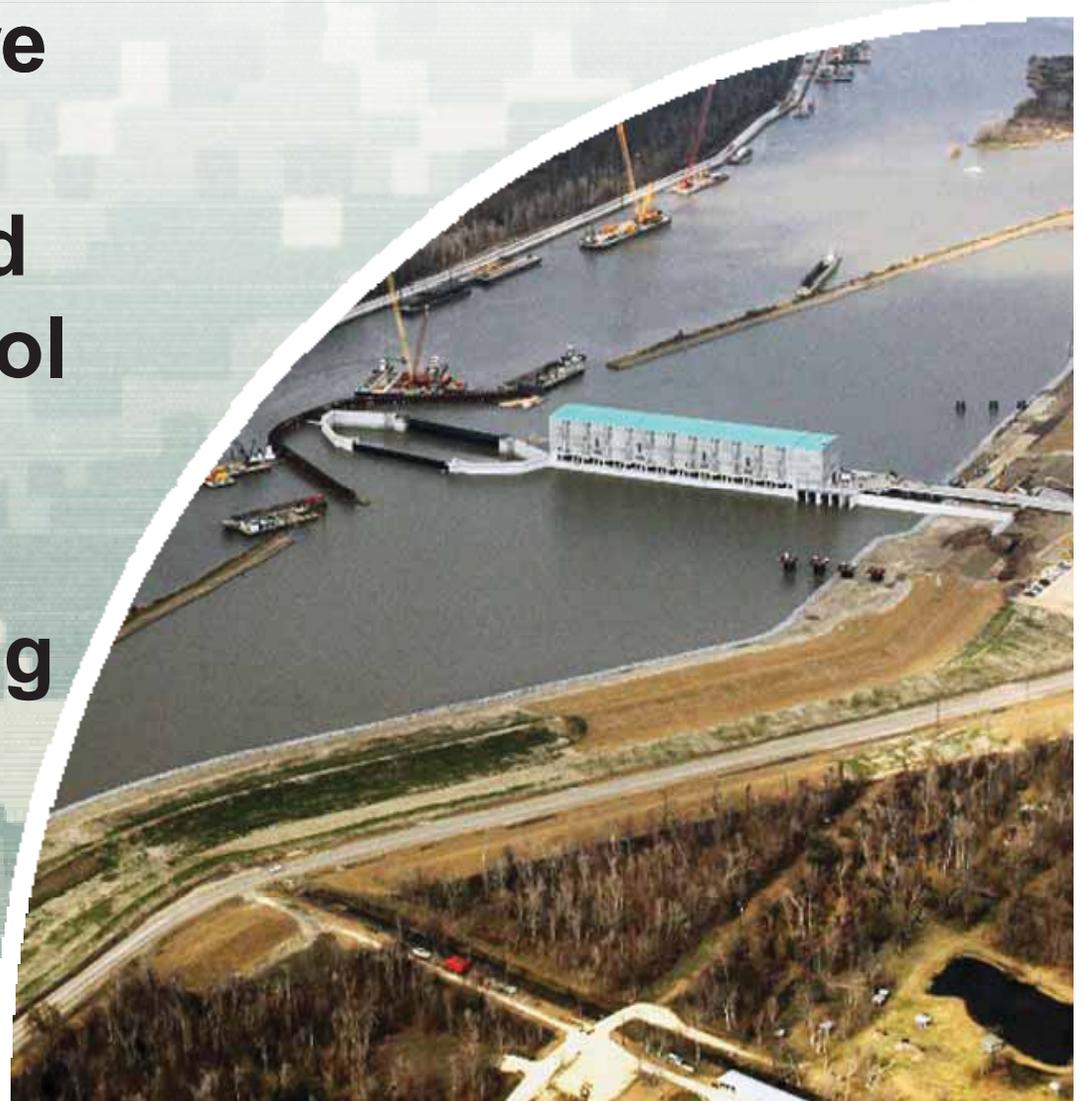
Stakeholder Meeting

March 15, 2011

Mi-SWACO



US Army Corps of Engineers
BUILDING STRONG[®]



Meeting Purpose

- Discuss the proposed operating plan for the GIWW West Closure complex: The interim plan for the 2011 season and the permanent plan for 2012 and future years.
- Obtain comments and feedback to improve and or modify the plan where appropriate.



Agenda

- **Update construction progress: Photos**
- **Discuss project changes since last meeting**
- **Discuss interim operating plan for 2011**
- **Discuss permanent operating plan and Water Control Manual for 2012 and future years**



Construction Progress



An aerial photograph showing a wide river flowing through a landscape of dense green forests and open fields. In the upper left, a large area of forest is being cleared, with a road and some construction equipment visible. The river curves through the center of the image, and a small structure or barge is visible in the water. In the background, a town or city is visible under a clear sky.

**Pre-
Construction
July 2009**

September
2010



October
2010



November
2010



January
2011



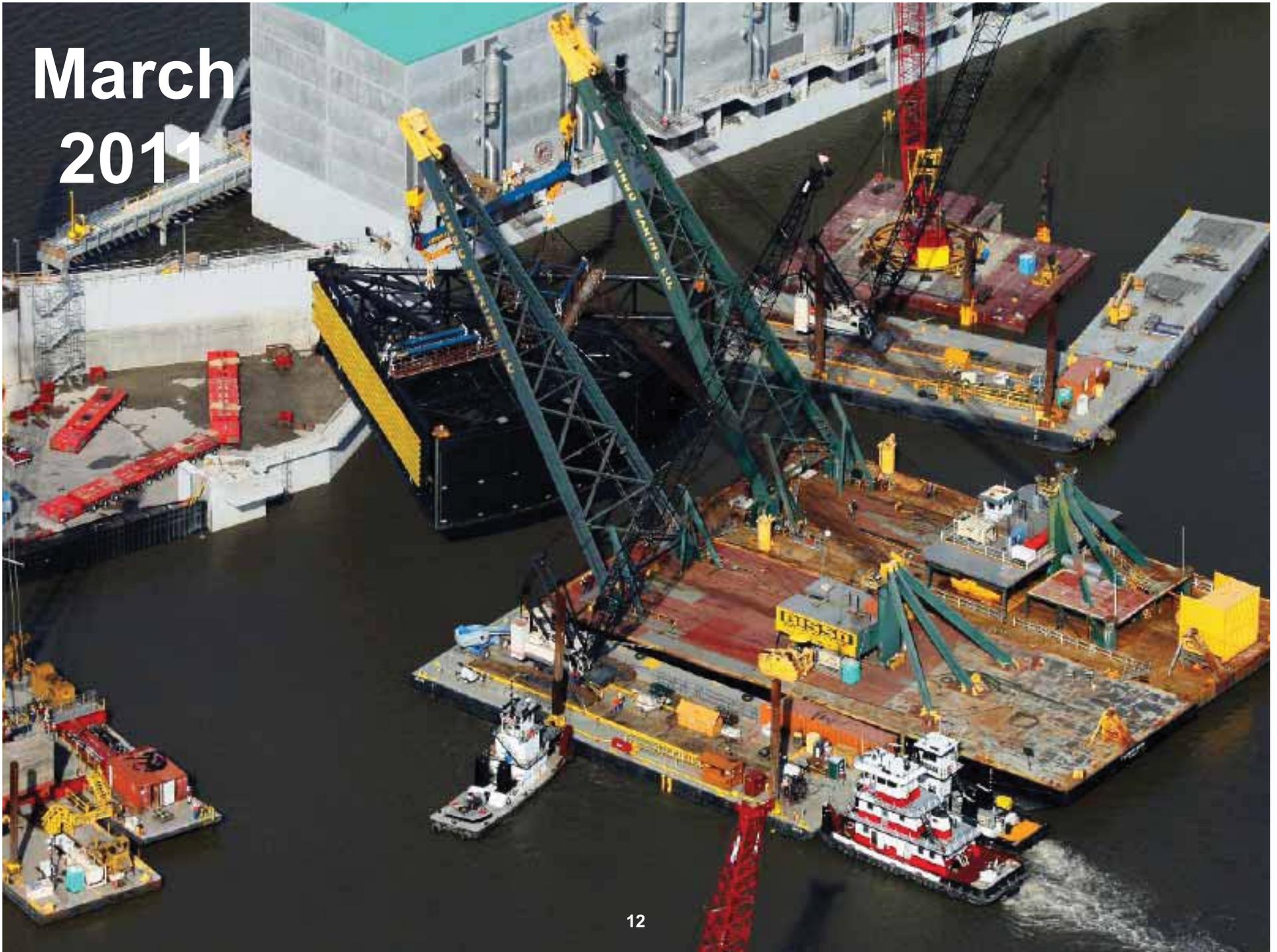
March
2011



**February
2011**



March
2011



March
2011



**Pump Station
Engine #13
(~ 95% Complete)
March 2011**



Pump Station Steel Beams Placed October 2010



Pump Station Pump Setting



First Pumps Set September 2010



Fuel Lines and Tanks March 2011



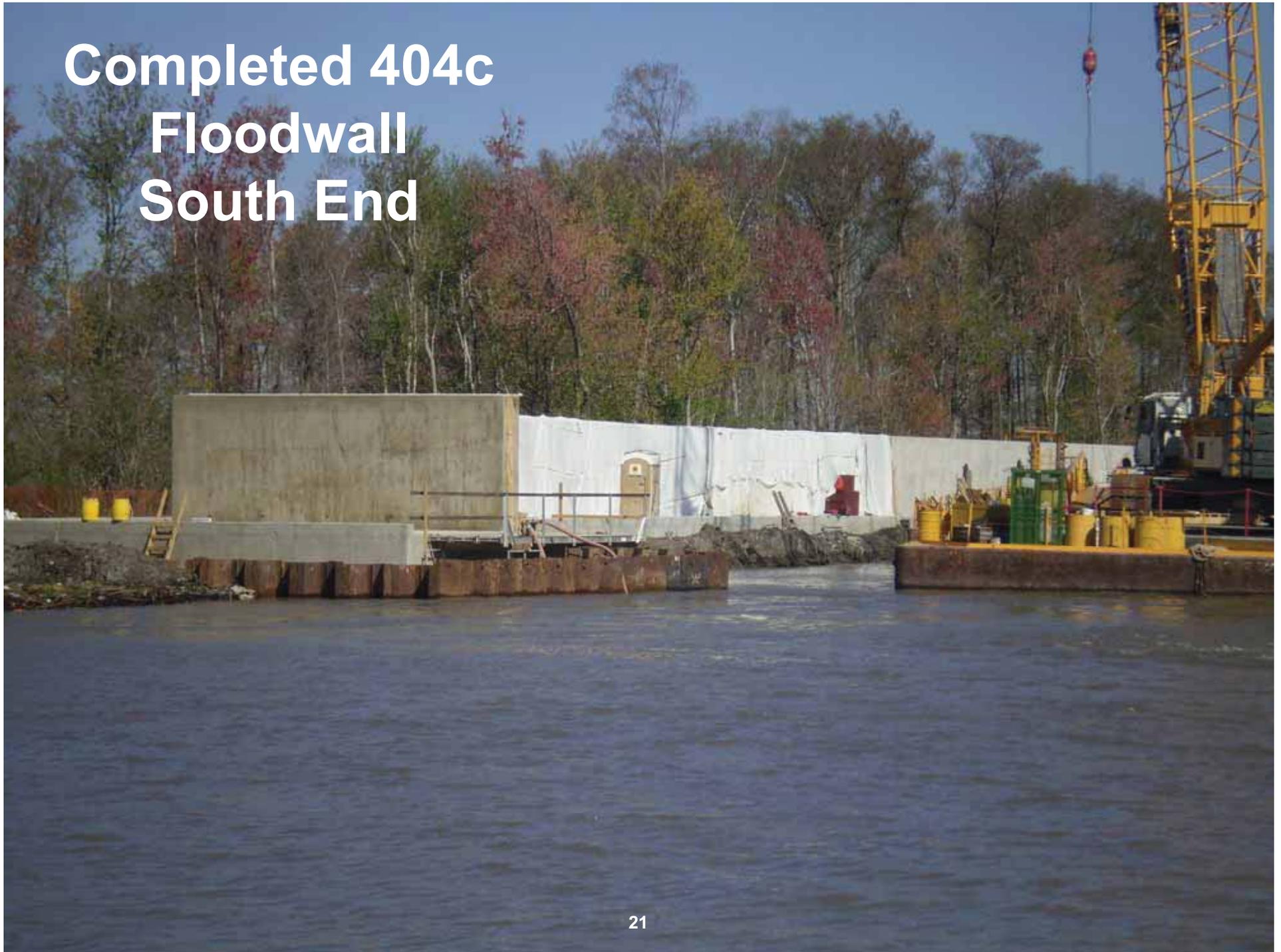
Safe House February 2011



**Bayou aux Carpes
404 (c) Wall
October 2010**



Completed 404c Floodwall South End



Lake Salvador “Geocrib Site” Beneficial Use

Project Evolution

- Original design and stipulations
- Evolution through Early Contractor Involvement
- Cost containment issues
- Design Summit
- Navigation industry feedback on gates
- Southeast Louisiana Flood Protection Authority-West feedback on Pumps
- EPA/NPS on Bayou aux Carpes 404c issues

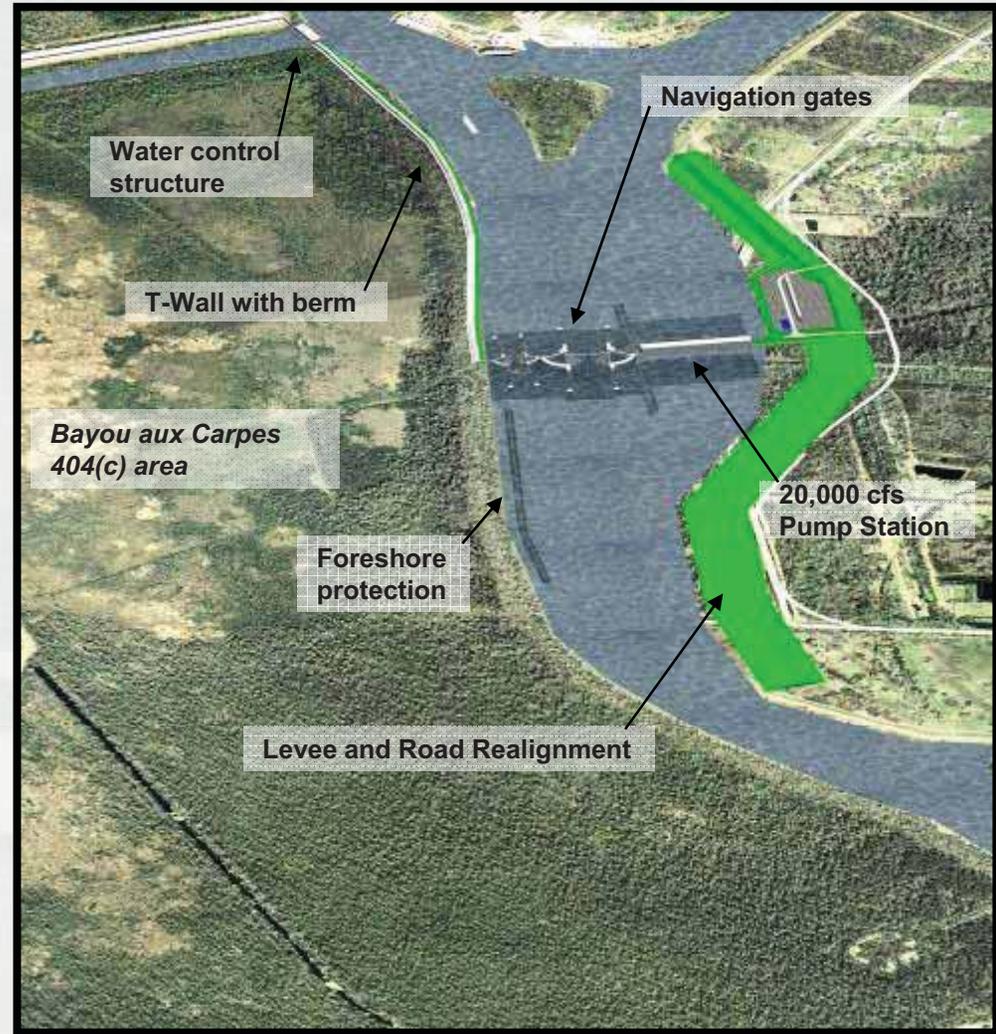


GIWW - West Closure Complex

(original)

Project Features:

- 20,000 cfs Drainage Pumping Station (13 x 1540 cfs vertical “Flower Pot” pumps)
- 225-foot primary navigation gate
- 75-foot secondary navigation gate
- T-wall along edge of Bayou aux Carpes CWA 404(c) wetlands (4200' X 100' construction corridor)
- Water Control Structure
- Levee and East Bayou Road Realignment
- Environmental Mitigation and Augmentations
- Foreshore Protection
- Algiers Canal dredging

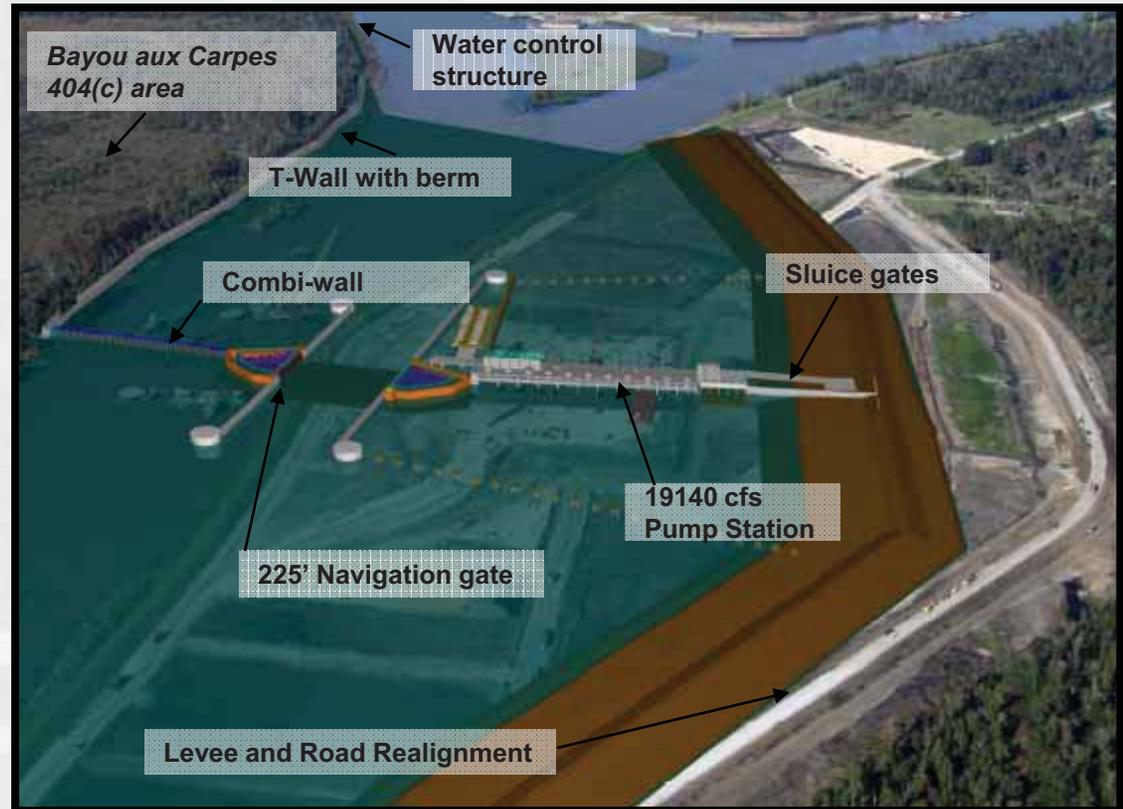


GIWW - West Closure Complex

(revised)

Project Features:

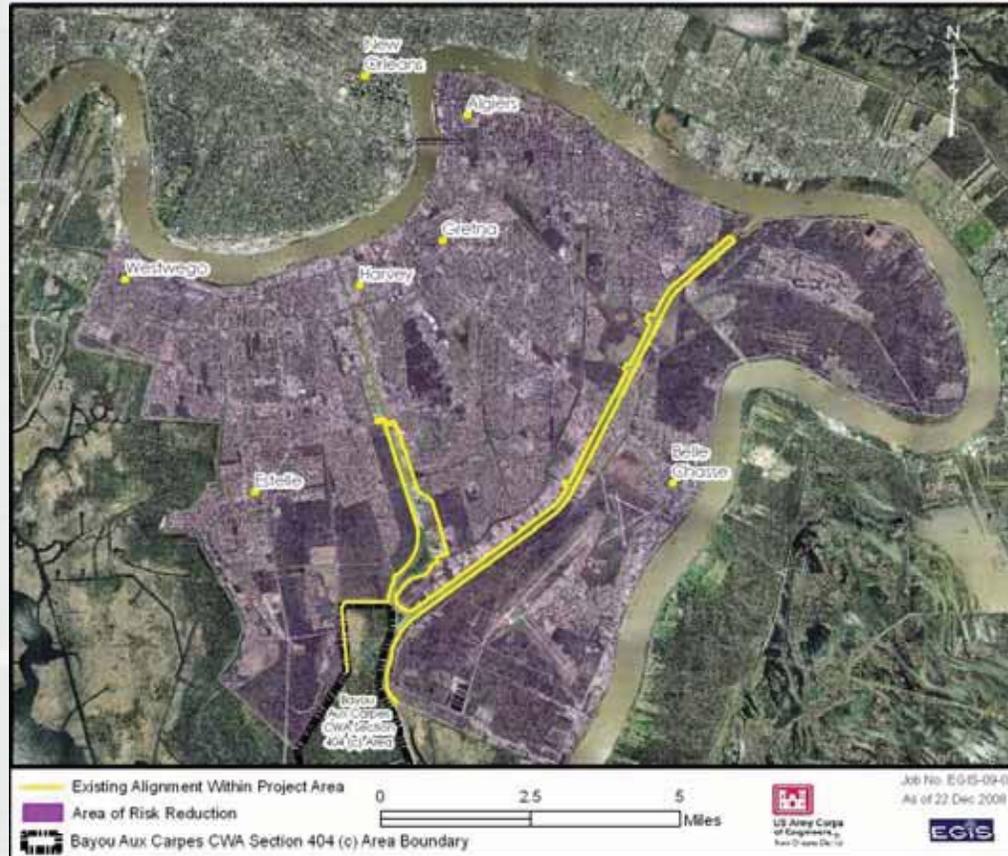
- 19,140 cfs Drainage Pumping Station (11 x 1740 cfs vertical “Flower Pot” pumps)
- 225-foot primary navigation gate
- Sluice gates (5 – 16’ x 16’)
- T-wall along edge of Bayou aux Carpes CWA 404(c) wetlands (4200’ X 100’ construction corridor)
- Water Control Structure
- Levee and East Bayou Road Realignment
- Environmental Mitigation and Augmentations
- Foreshore Protection
- Algiers Canal dredging



Operating and Water Control Plans



Key Messages



- The **PRIMARY FUNCTION** of GIWW West Closure Complex is Hurricane Storm Damage Risk Reduction for 250,000 residents included in the West Bank and Vicinity Project: It will be operated to assure that it performs this function.



Key Messages

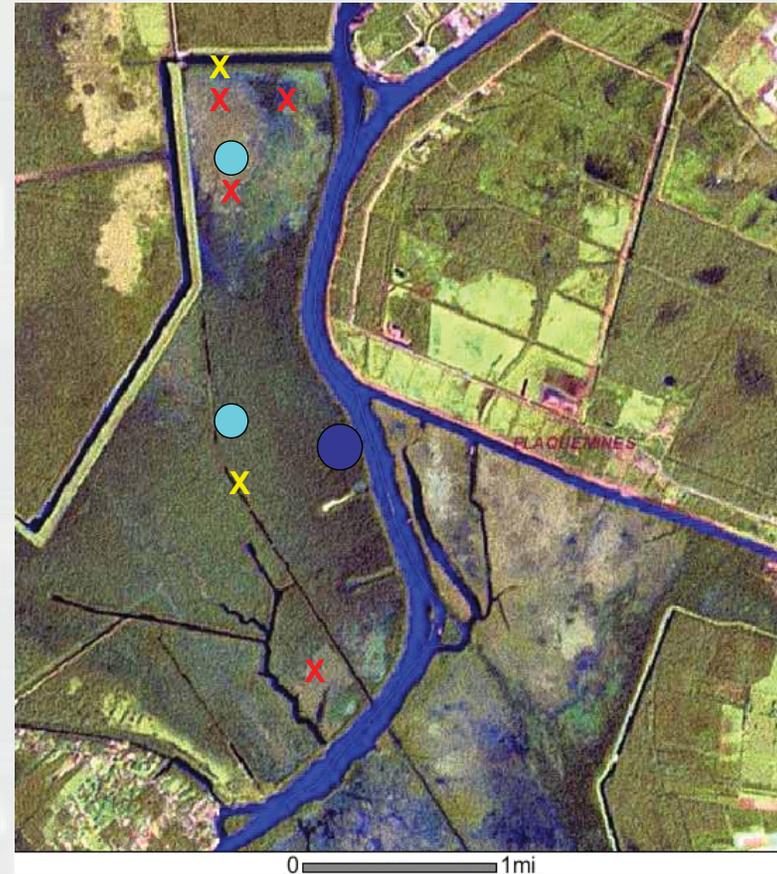
- Both commercial and recreational navigation, has been considered in the design and construction of the project and will be considered in the operation of the complex.
- Navigation interests must be aware that the structure will likely close for tropical events and must prepare accordingly.
- Once closed, the navigable gates will not be opened until the threat has passed.



Key Messages

Bayou aux Carpes CWA 404(c) Water Monitoring Stations

- Existing Coast-wide Reference Monitoring System (CRMS) site (0184) Continuous salinity and water level
- Continuous water level
- ✕ Herbicide/pesticide sampling (after major rain fall)
- ✕ Quarterly pore water sampling (nutrients, ions), marsh mat characterization, and soil descriptions



When modeling is complete, adaptive management techniques will be used to operate the Old Estelle Water Control Structure to enhance the 404c area by diverting fresh water from rainfall events into the 404c area.



Key Messages

- Effects to Lafitte / Crown Point have been numerically modeled and effects measured for various storm paths and intensities. The results show the impacts to be on the order of .1 to .2 feet. WCC will be operated to avoid additional adverse effects to the greatest extent possible.



Key Messages

- Joint Gulf Intracoastal Constructors / USACE team will be on-site to operate the WCC for the 2011 Hurricane Season.
- The Commander of the New Orleans District will be the decision maker for the operation of the structure, both gates and pumps.
- Proposed plan is GIC will provide technical expertise on-site for the actual operation of the components: GIC will not be involved in the decision making process for when the gates will be closed nor when the pumps will be operated.



Stakeholder Input

- Navigation: USACE, USCG and Navigation Industry through GICA, AWO and HCIA
- Hurricane Risk Reduction: SLFPA-W, OCPR, NWS & USACE
- Interior Drainage: Jefferson, Orleans and Plaquemines
- Environmental: EPA, NPS, Other Federal and State Environmental Agencies, NGOs



Notification and Communication

- Web sites –Corps and Non-Corps
- Local television and radio media outlets
- Gulf Coast Joint Hurricane Team communication network
- Local Government Liaisons (LGL) to Parishes
- USCG Marine Safety Broadcast
- COE Navigation Bulletin



Off-Season Activities

- Complex staffed throughout the year to perform routine maintenance and exercise equipment to assure readiness
- Activities will include:
 - Regular monthly exercising of pumps and engines
 - Bi-Monthly closing of gates
 - Fuel system maintenance
 - Other regular system scheduled maintenance



Pre-Season Activities

- Activities will include:
 - Large scale pump readiness test and regular bi-weekly exercising of pumps and engines
 - Dive inspections of gates
 - Monthly closing of gates
 - Complete fueling of station
 - Communications and data input checks
 - Other regular system scheduled maintenance



Within NWS 5 Day Warning Cone

- Activities to ensure readiness
- Exercise gates, pumps and all systems, etc.
- NOTE: Even if not in NWS warning cone, any storm entering the gulf will initiate some readiness actions
- Early communications with stakeholders initiated



Within NWS 3 Day Warning Cone

- Continue readiness activities
- Dive team called up to report and gate inspection performed
- Continue consultations with stakeholders
- Begin review information which could indicate need to close WCC gates



Within NWS 3 Day Warning Cone 48 hours

- Continue readiness activities
- Continue consultations with stakeholders
- Begin review information which could indicate need to close gates
- Communicate gate closure probabilities to all parties through communication networks



Within NWS 3 Day Warning Cone 24 hours

- Continue readiness activities
- Continue consultations with stakeholders
- Continue review and analysis of information which could indicate need to close gates
- Communicate gate closure probabilities to all parties through communication networks
- Decision to close structure likely



Gate Closure Decision

- Decision to close will be made by the MVN Commander with information input from:
 - National Weather Service
 - US Coast Guard
 - Emergency Operation Center
 - SLFPA-W, Office of Coastal Protection and Restoration
 - Parish Governments
 - Navigation Industry
- Wide variances in effects based upon storm path, speed intensity, expected rainfall, etc., require the flexibility to make the closure decision within a range of water elevations
- Proposed plan is to allow for closure when water surface elevation at the WCC is between 2.5' and 3.8' ft
- Minimum advance notice of closure is 12 hours



Within NWS 3 Day Warning Cone 12 hours

- Gates closed
- Pump down detention basin to elevation 0 in anticipation of rainfall



During the Event

- Continually monitor rainfall using radar and input from stations along the canals
- Operate pumps to maintain a level in the detention basin at the WCC below elevation 2
- Ensure pump operations do not lower detention basin elevations anywhere below elevation 0



Post Event 12 hours

- Once surge threat has receded below elevation 3.8 ft at the WCC, re-establish equilibrium between flood and protected sides using either pumps and or sluice gates
- Ensure that if detention basin is higher than flood side, equilibrium is achieved without opening main navigation gates
- Channel evaluated and declared open by Coast Guard, allow navigation passage



Discussion

