

Calcasieu DMMP

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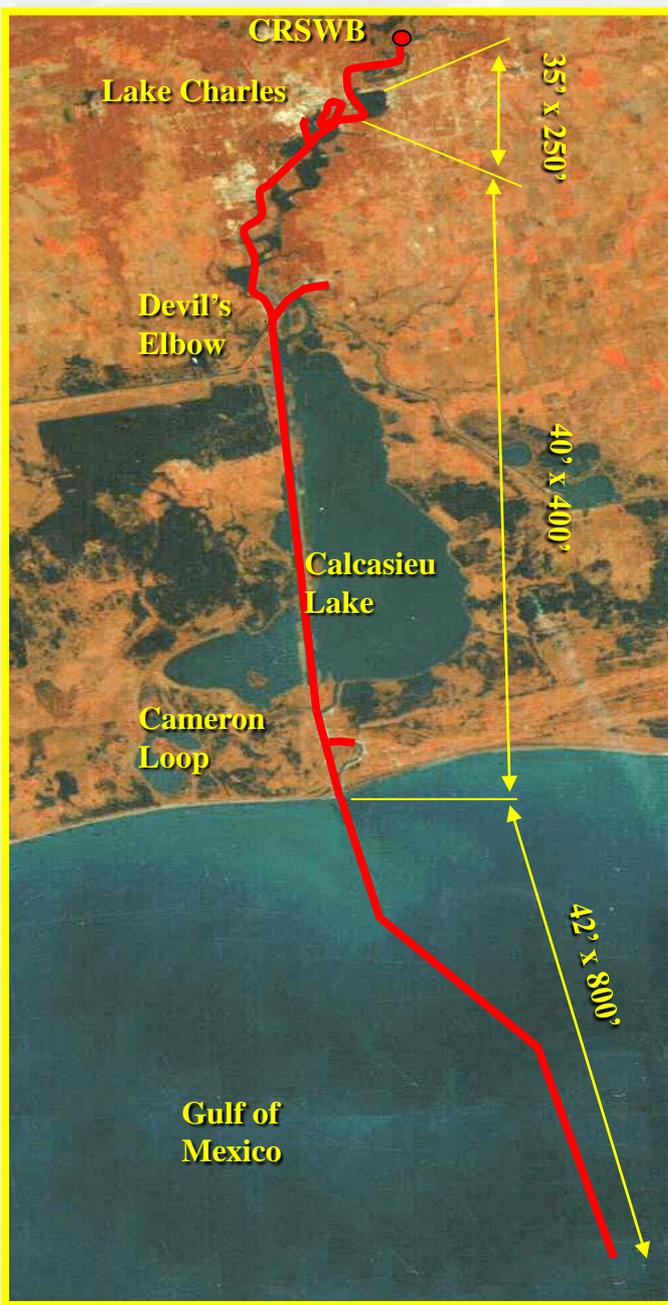
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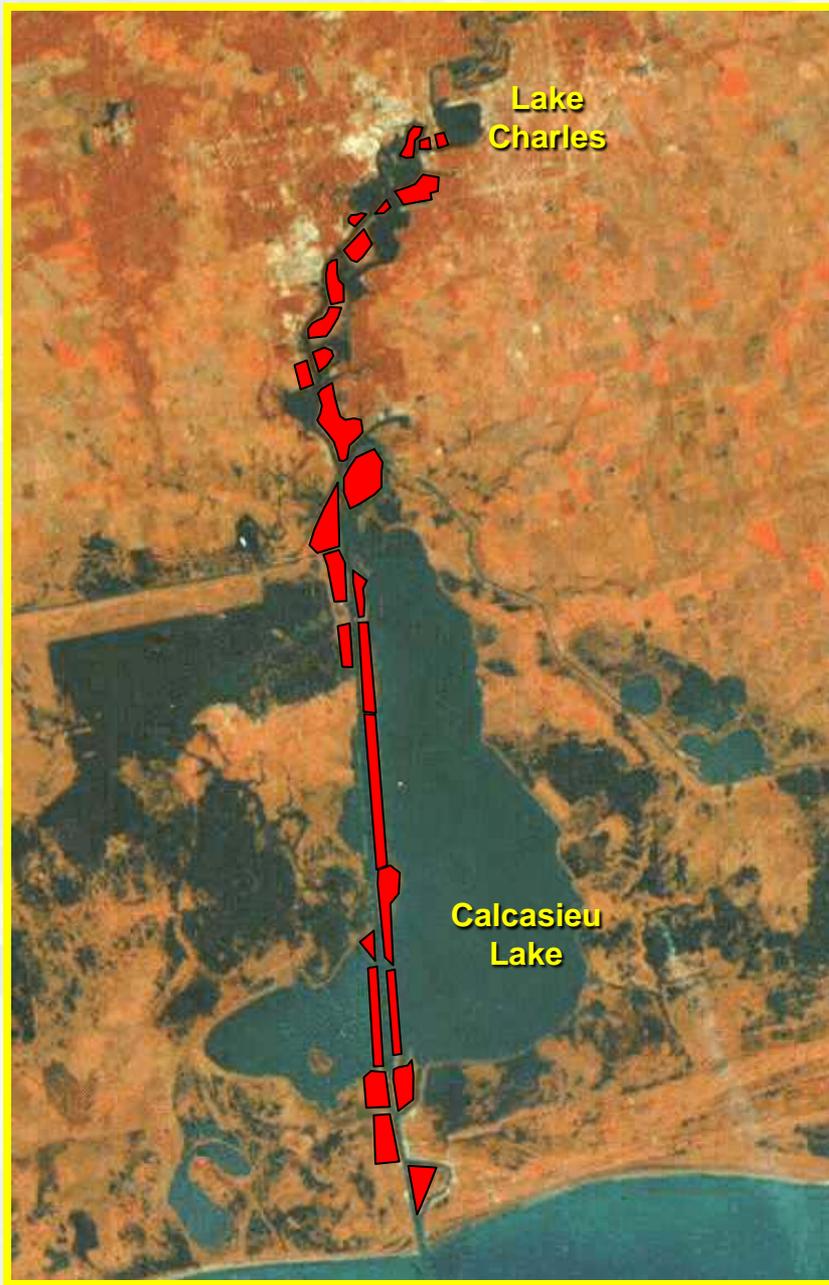
Pre-DMMP



- Authorized by the River & Harbor Act of 1960
- Authorized Dimensions:
 - ▶ Bar Channel: (-42') x 800'
 - ▶ Inland, Mile 0.0 to 34.0: (-40') x 400'
 - ▶ Mile 34.0 to 36.0: (-35') x 250'
 - ▶ Clooney Island Loop: (-40') x 400'
 - ▶ Cameron Loop (1 Mile): (-12') x 200'
- Additional Authorizations:
 - ▶ Calcasieu River Saltwater Barrier Structure
 - ▶ Devil's Elbow (2.3 Miles): (-40') x 400'
 - ▶ Coon Island (1.5 Mile): (-40') x 200'



Pre-DMMP



- Calcasieu constructed in 1960s
- CDFs still in use 50+ years later
- Annual Dredging:
 - ▶ 1-2 Bar channel contracts
 - ▶ 1 Inland dredging reach (Mi 5-17 or Mi 17-29)
 - ▶ Every 5-8 years, Mi 29-36, Coon Island and Clooney Island Loop
- Dredging quantities:
 - ▶ Bar channel: 7-8 MCY
 - ▶ Inland reach: 2-3 MCY
- Average Budget \$15M
- Capability about \$40M (included needs for SWB)



Pre-DMMP

- Loss of Disposal areas
 - ▶ No maintenance
 - Funding
 - Timing
 - ▶ Capacity
 - ▶ Development



Pre-DMMP

- Dredging to reduced width due to lack of capacity
- Dike failures



Pre-DMMP

- Issues triggered the need for a DMMP, mandated by ER 1105-2-100, stating:
 - ▶ “All Federally maintained navigation projects must demonstrate that there is sufficient dredged material disposal capacity for a minimum of 20 years.”
- Had full support of the local sponsor
- Local sponsor wanted documentation of needs for channel



DMMP Purpose

To develop a 20-year Dredged Material Management Plan for the placement of material dredged for the maintenance and operation of the Calcasieu River and Pass, LA

The DMMP shall

- **Be environmentally acceptable,**
- **Use sound engineering techniques**



What is the Problem?

- **Limited capacity of existing disposal areas**

 - Existing capacity - 5 million cubic yards

 - Needed 20 year capacity - 97 million cubic yards

- **Lack of funding for maintenance resulting in substantial erosion of existing disposal areas**

- **Channel has been dredged to reduced dimensions in the past due to lack of disposal capacity**

- **Loss of approved disposal facilities due to development**



Planning Objectives of the DMMP

- **Maintain the navigation channel to authorized dimensions**
- **Place the dredged material in the most cost-effective locations consistent with environmental and engineering requirements**
- **Optimize beneficial use of dredged material**
- **Provide flexibility for future disposal of dredged material**
- **Maintain dredged material disposal sites in a manner to optimize capacities and comply with economic and environmental principles**
- **Provide for the disposal of material dredged by private parties**

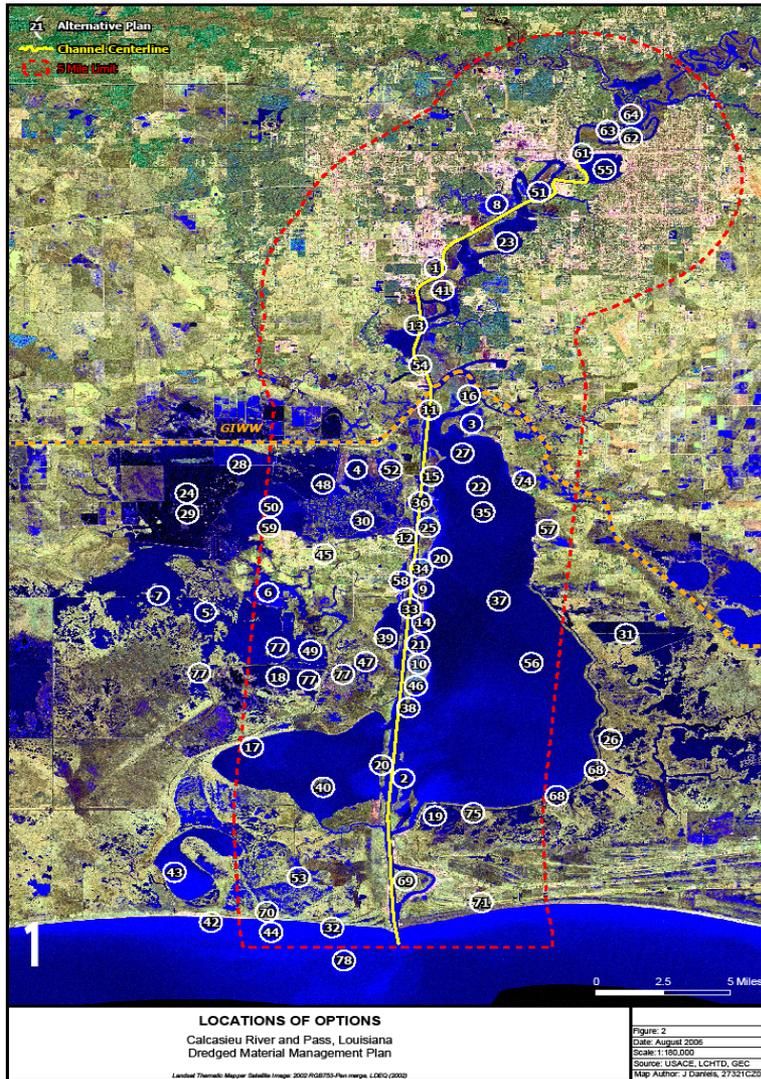


Plan Formulation Summary

- 1. Brainstorming Sessions – Resulted in 78 Dredged Material Placement Options**
- 2. These 78 Options were screened based on objectives, screening criteria, and technical studies**
- 3. Final array of options were used to develop the DMMP action alternatives**



Brainstorming Sessions were Conducted:



78 Options for Placing and Managing Dredge Material were identified



Alternatives



Alternative A: No Action Plan

The NEPA requires Federal Agencies to investigate the alternative of taking no action

Alternative B: Placement in confined disposal facilities (CDFs) and beneficial use with CDF capacity maximized from channel mile 12 to 21

Alternative C: Placement in CDFs and beneficial use, with beneficial use capacity maximized from channel mile 12 to 21.

Alternative D: Placement of material in the Ocean Dredged Material Disposal Site (ODMDS)



Plans Carried Forward

Plan A

- Provides the future without action for comparative purposes
- Complies with the NEPA

Plan B and Plan C

- **Both Plans:**
 - Met the objectives established for the DMMP
 - Use sound engineering judgment
 - Comply with environmental laws
 - Provide for beneficial use of the dredged material
 - Provide flexibility to the Operation and Maintenance of the Channel
 - Provide sufficient capacity



Recommended Plan: Plan B

- Least Costly Plan (ER 1105-2-100)
- Environmentally Sound
- Meets capacity requirements throughout the 20-year DMMP and beyond
- Complies with planning goals, objectives and evaluation criteria
- Supported by non federal sponsor



Plan B

- Was released for 45 day public review
 - May 22 thru July 6th, 2009
- HQ requested a 30 day Policy Review on DMMP prior to release of document for final 30 day review.
- HQ noted that additional work would be required to ensure that the Least costly Plan to the Government was being identified



Policy guidance from HQ

- **Recalculate unit cost for each placement site**
- **Develop a 20 year plan in which :**
 - **Dredge material for each dredge cycle will be placed into the most cost effective location**
- **Several plans were developed**
 - **Existing conditions proved to be a moving target for plan development**



Policy guidance from HQ

- **Several beneficial use sites that would afford cheaper disposal unit cost were lost during the plan formulation**
 - BU sites 4 and 48 which proved very cost effective were lost through land acquisition by a large channel user
- **Team with RIT support decided to reformulate plan to account for changes in the Existing Condition**
- **Other BU sites further from channel were considered but were more costly per cu/yrd**



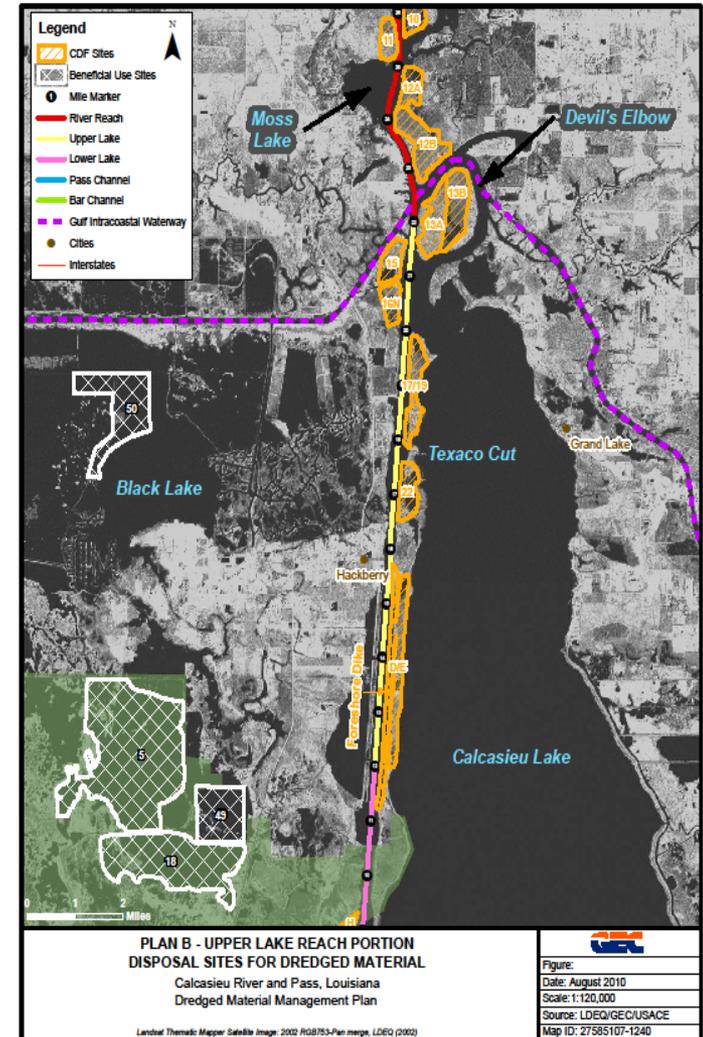
Policy guidance from HQ

- **This lead the team to explore newly constructed Foreshore dikes on the channel side of CDF 17, 19 and 22**
 - **These three sites combined added approximately 1.3 million cu/yd's of very cost effective upland disposal that were not available when the original Plan was selected**



Features of Plan B

- 5,840 acres of marsh created, including 4,600 acres in Sabine and Cameron Prairie NWRs
- Approx. 35% of the dredged material used in upper lake reach would be used beneficially
- Material dredged from Bar Channel (Mile 0 to 32 miles offshore) would continue to be transported to off-shore disposal
- Less impacts to the environment
 - No Lake expansion
 - No impacts to oyster seed ground
 - No Lake side impacts to fisheries
- Texaco Cut would remain open



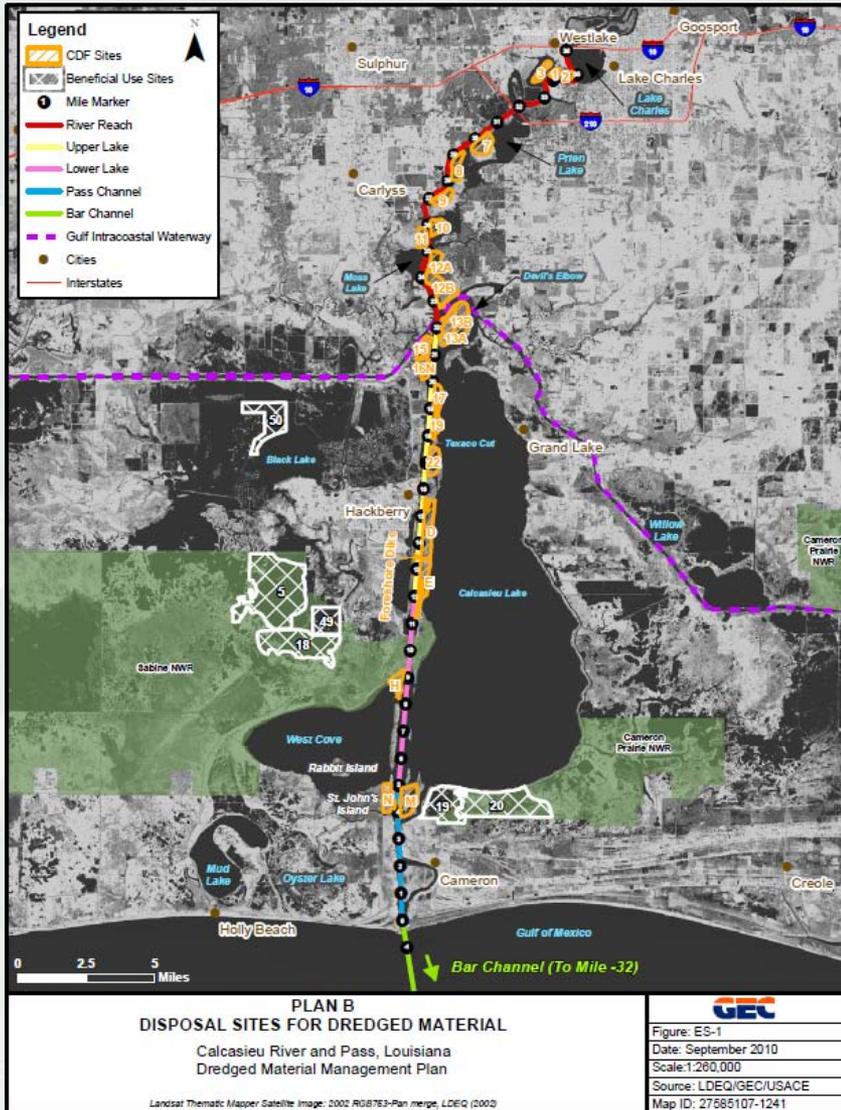
O&M Issues

- DMMP reformulation
 - ▶ Took 4.5 years to complete
 - ▶ Eventually had to stop and move forward
- Included in budget packages



Looking Forward

- PPA currently being worked on
- Living document
- Regulations call for reformulation, at a minimum, every 5 years
- Reformulation already needed



Looking Forward

- New Federal standard in place
- No funding available
- State agencies
 - ▶ Reluctant to pay contributed funds
 - ▶ Expecting Federal standard for CZM
- Certain programs no longer available for BU sites within the new Federal standard
 - ▶ Section 204
 - ▶ LCA Budmat

