

2013 WEDA/MVD Gulf Coast Regional Meeting

Dedicated Environmental Dredging Panel

Contrasts between Restoration Projects at
Cameron Shoreline, Caminada Headland, and Scofield Island

Moderator:

Crorey Lawton, USACE MVN

Panelists:

Brad Miller, CPRA

Rudy Simoneaux, CPRA

Steve Dartez, CEC Inc.

November 5th, 2013



Coastal Protection and
Restoration Authority of Louisiana



committed to our coast

Overview and History

- **Barataria Basin Projects:**

- Chaland Headland Complex (2005/2008)
- East Grand Terre Island Restoration (2009)
- Pelican Island Restoration (2011)
- West Belle Pass Barrier Headland Restoration (2011)
- Scofield Island Restoration (2012)
- Shell Island – East (2013)
- Caminada Headland (2013)

- **Cameron Parish Shoreline Projects:**

- Holly Beach Sand Management (2003)
- Cameron Parish Shoreline Restoration (2013)

- CPRA projects have historically utilized local sand sources (State waters) that were delivered using cutterhead suction/pipeline equipment
- Due to limited local sand resources, delivering sand from offshore deposits in Federal waters and the Mississippi River has become necessary
- Today's discussion focus on three projects that accomplished this utilizing different methods and equipment

Barataria Basin Island/Headland Projects



Cameron Parish Shoreline



Cameron Parish Shoreline Restoration

Cameron Parish Shoreline

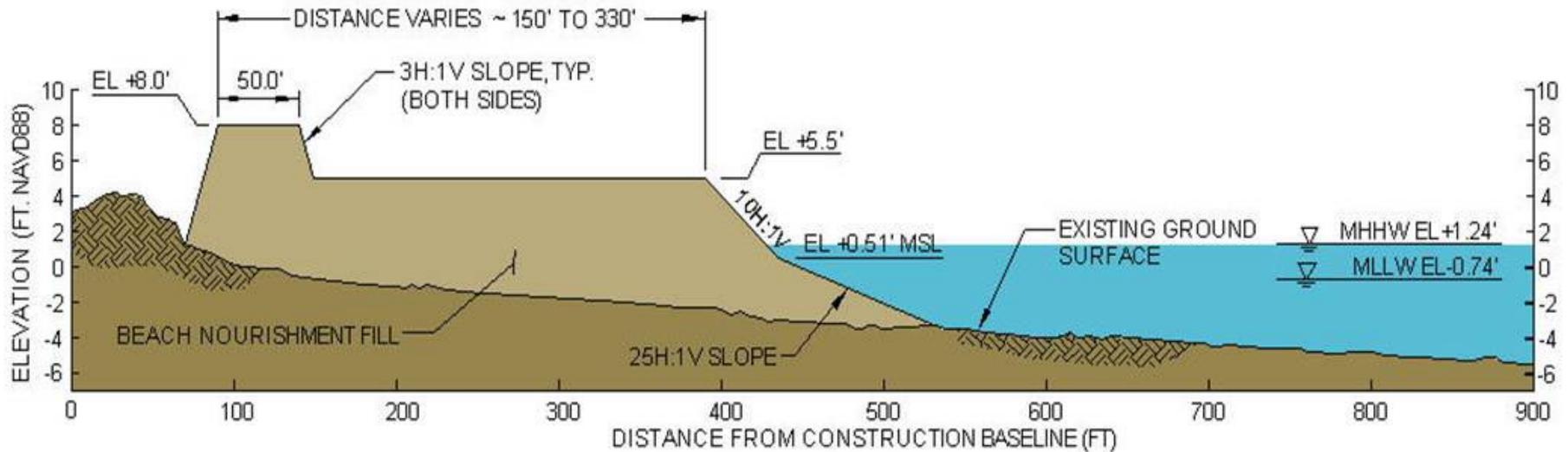


Cameron Parish Shoreline – Project Layout

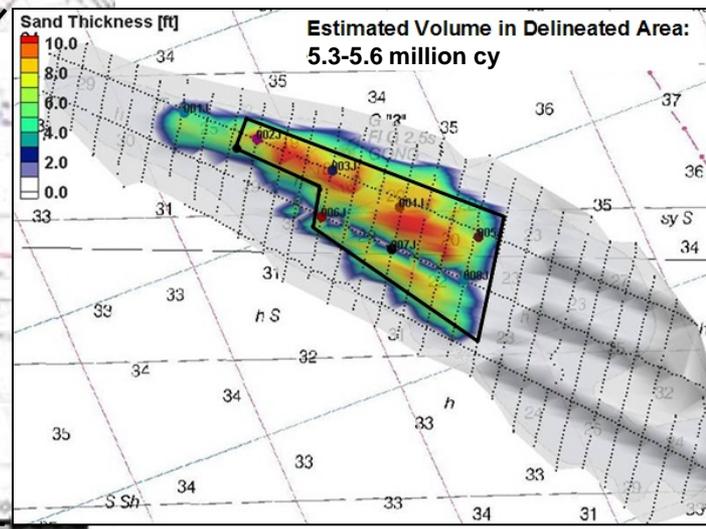
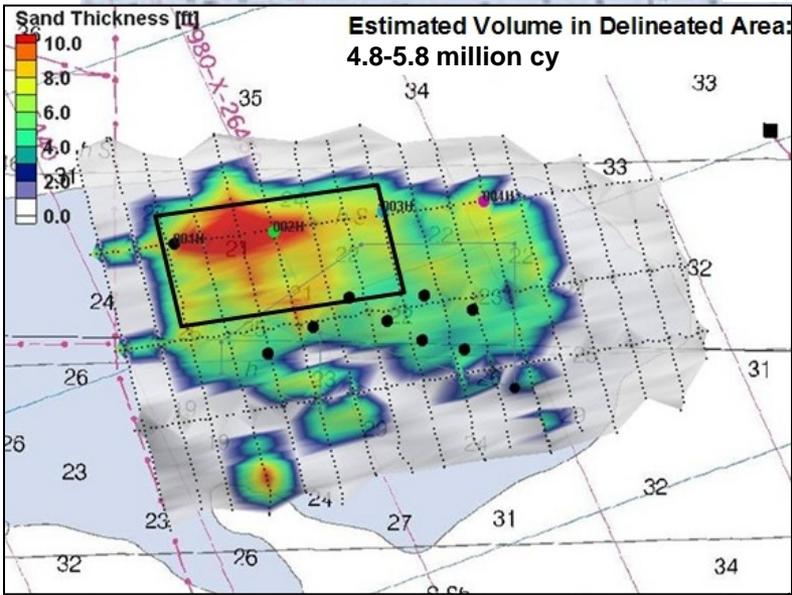
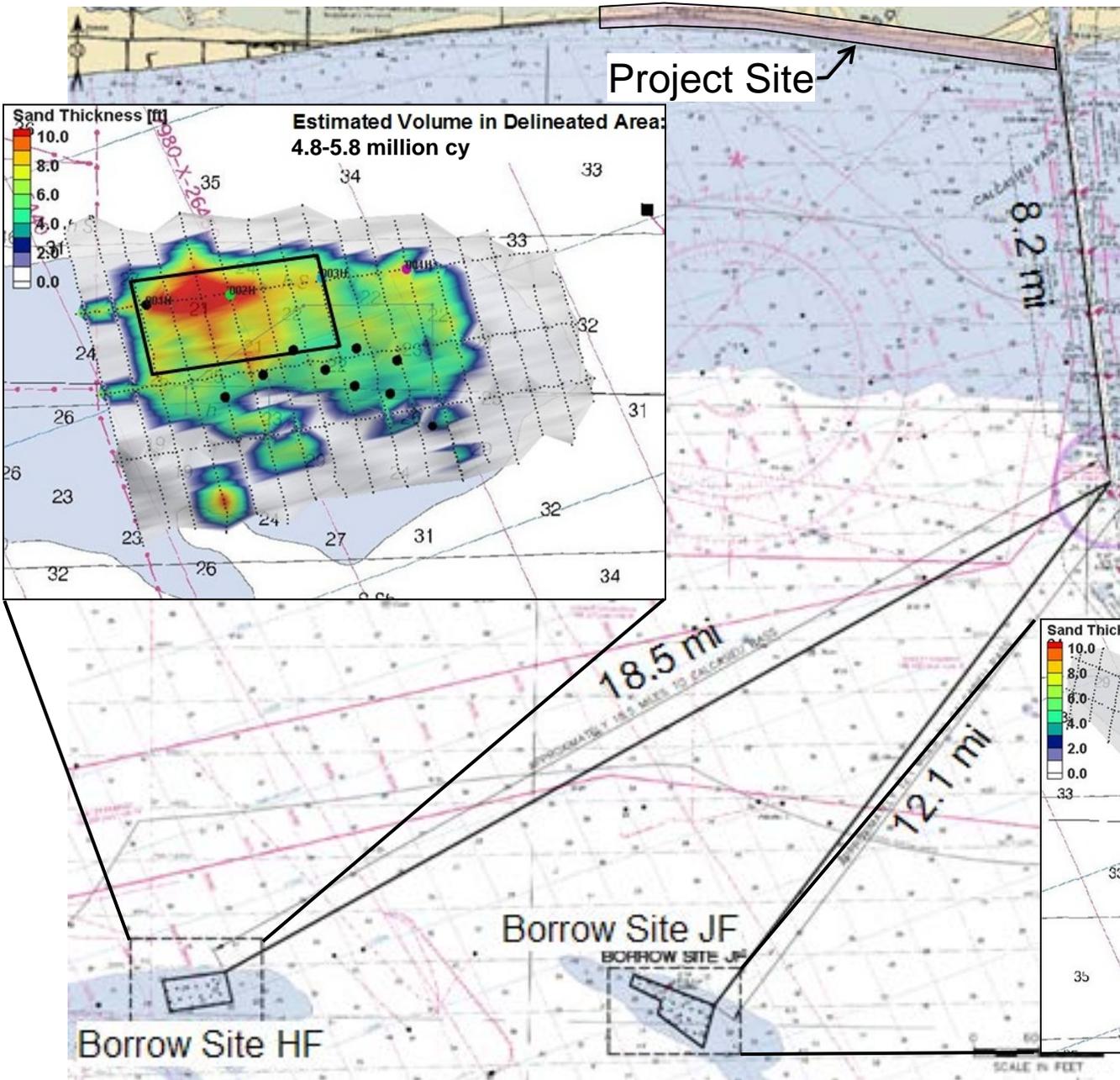


Cameron Parish Shoreline – Project Parameters

- **Fill Volume:** \$1.93 MCY
- **Length of Fill:** 25,500 LF
- **Contract Cost:** \$40,495,691
- **Base Bid:** Beach Fill Only
- **Additive Bid:** Dune Fill (not awarded)

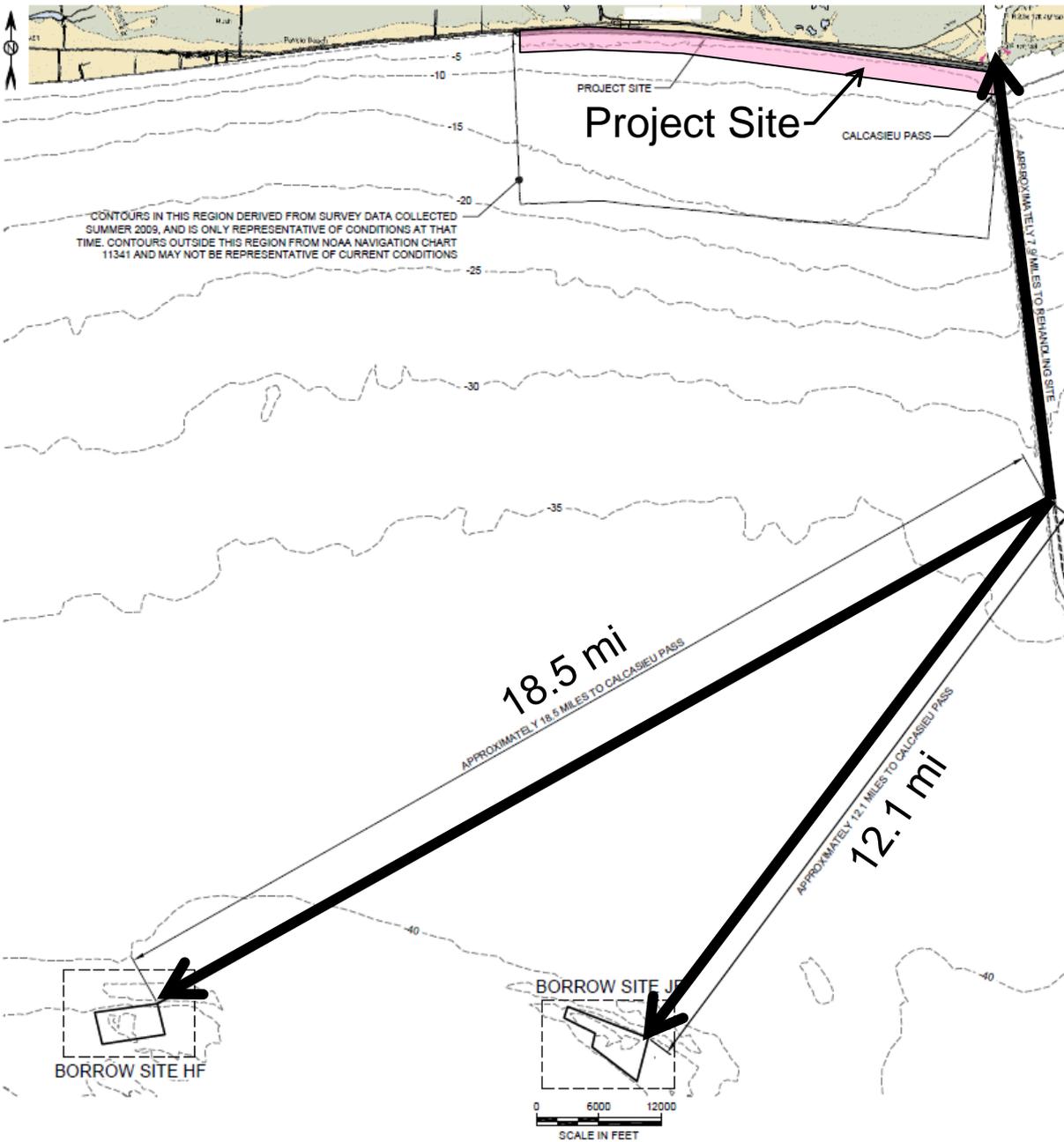


Cameron Parish Shoreline - Sabine Banks



- **Fine to Medium Sand**
- **Grain Size:**
0.22 > D50 > 0.25
- **Silt/Clay Percent:**
Content < 2%

Cameron Parish Shoreline - Sabine Banks



- Five Delivery Options:
1. Dredge and Direct Pump
 2. Offshore Pumpout
 3. Offshore Rehandling
 4. **Calcasieu Pass Pumpout**
 5. **Calcasieu Pass Rehandling**

4. Calcasieu Pass Pumpout method



5. Calcasieu Pass Rehandling method



Weeks Marine Hopper Dredges



R.N. Weeks



B.E. Lindholm

Offshore Dredging Operations



Pump-Out Operations



Beach Fill Progress



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PHOTOGRAPHY

Beach Fill Progress



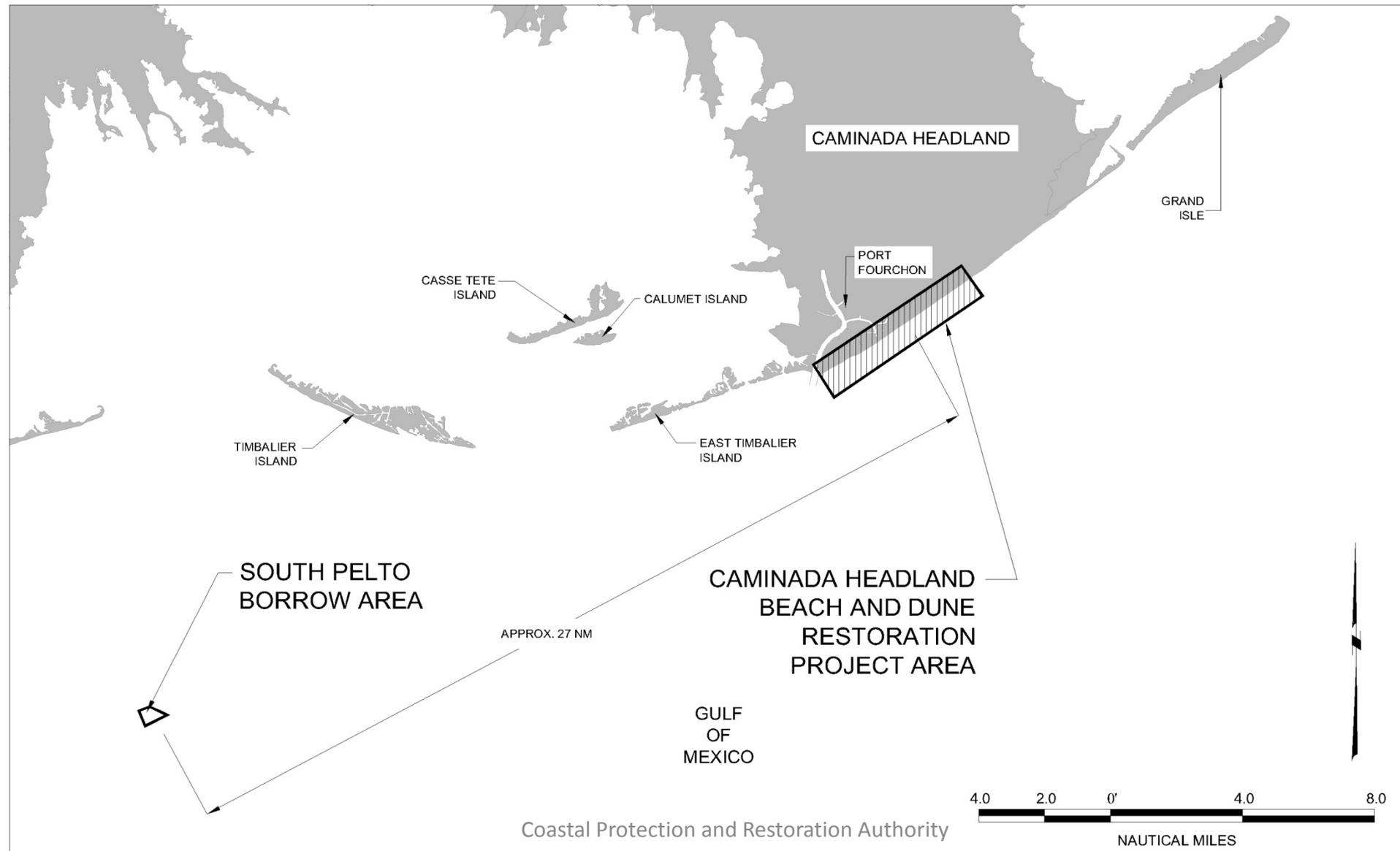
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Beach Fill Progress

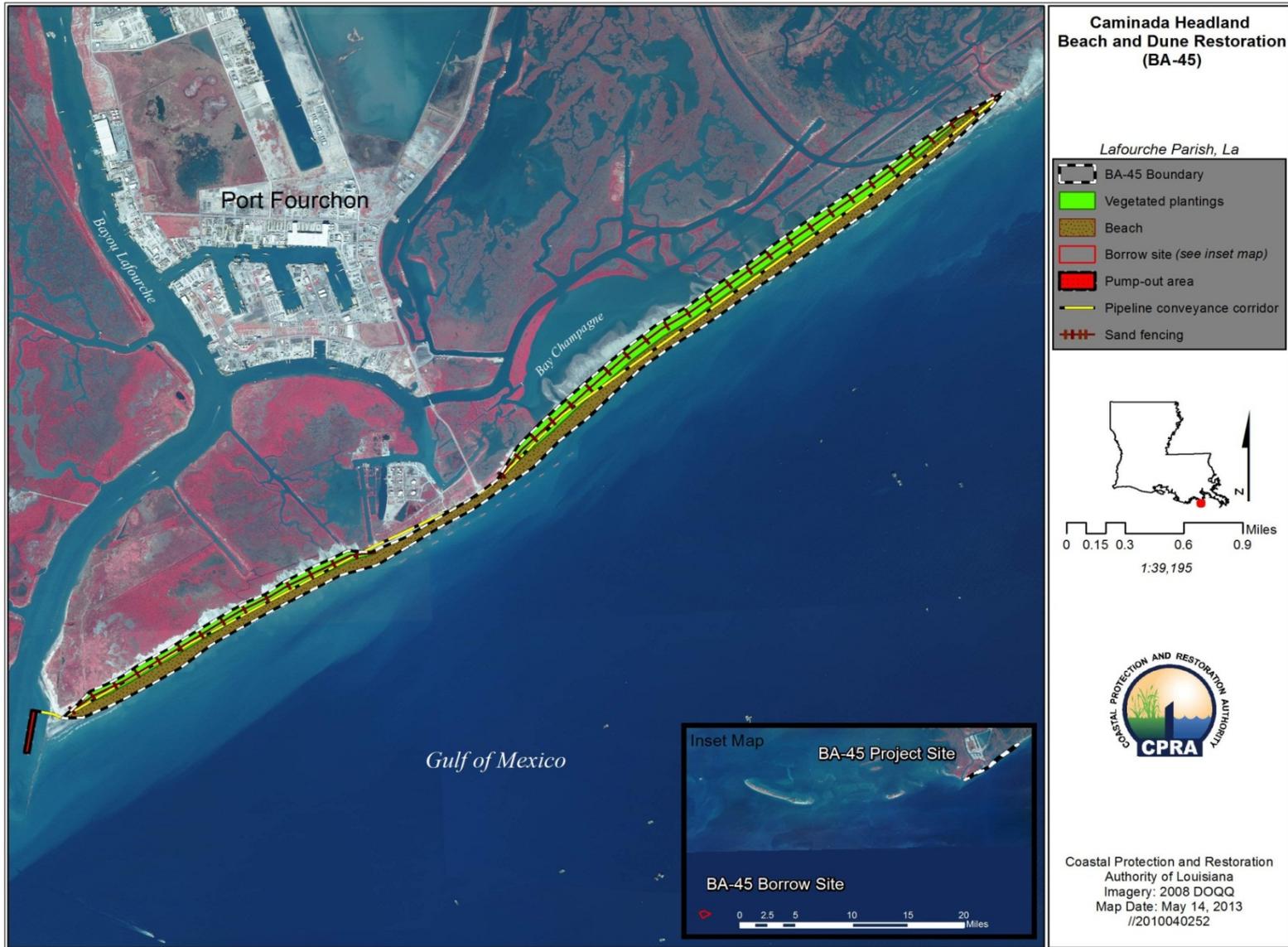


Caminada Headland Beach and Dune Restoration

South Pelto Borrow Area



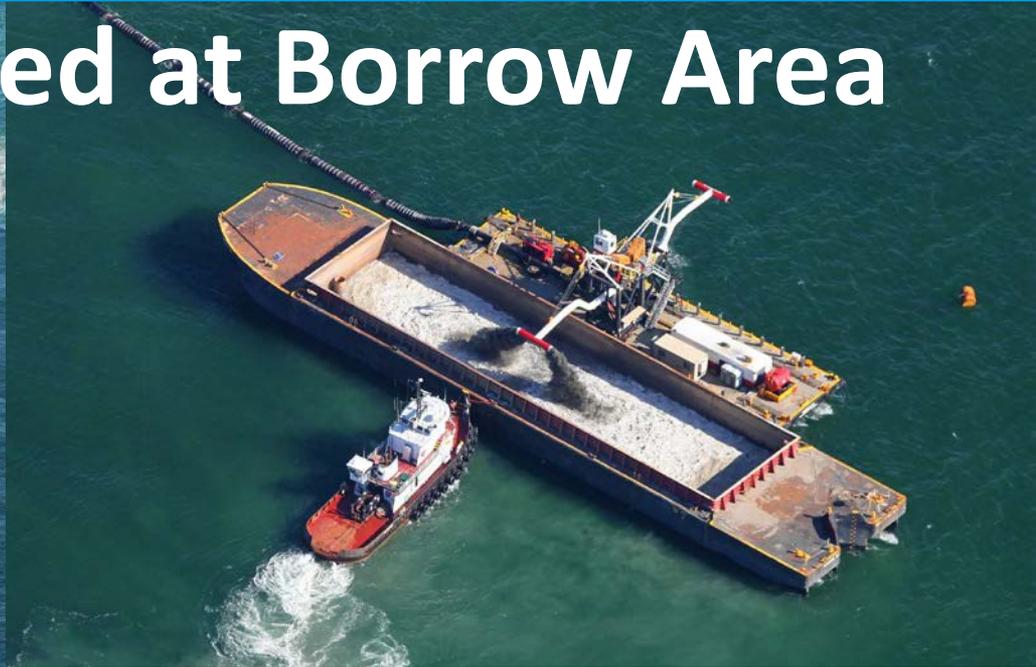
Restoration Template



Headland Template Design Details

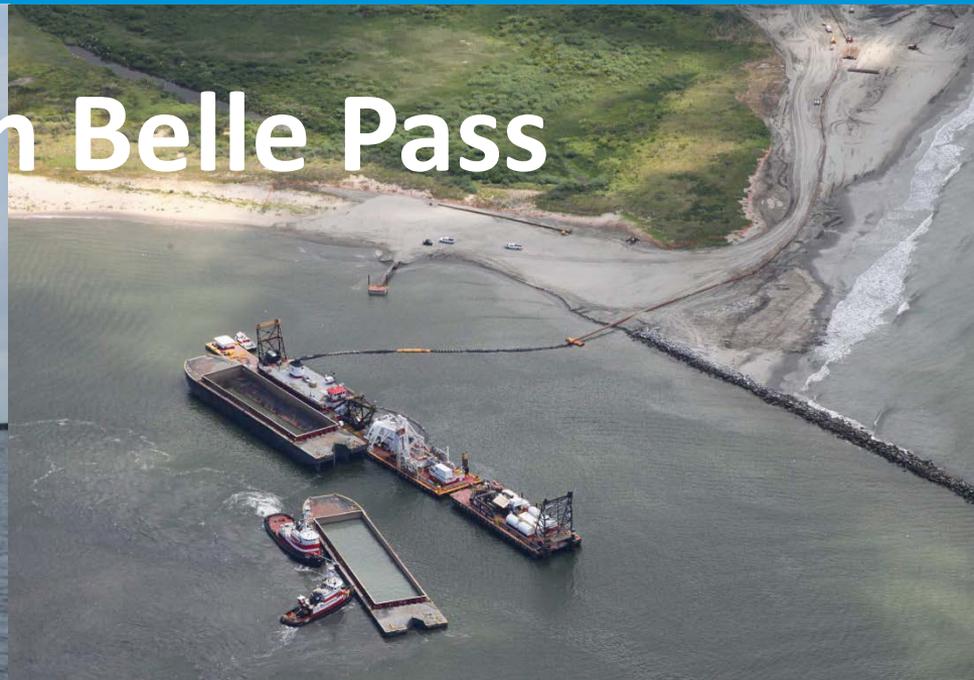
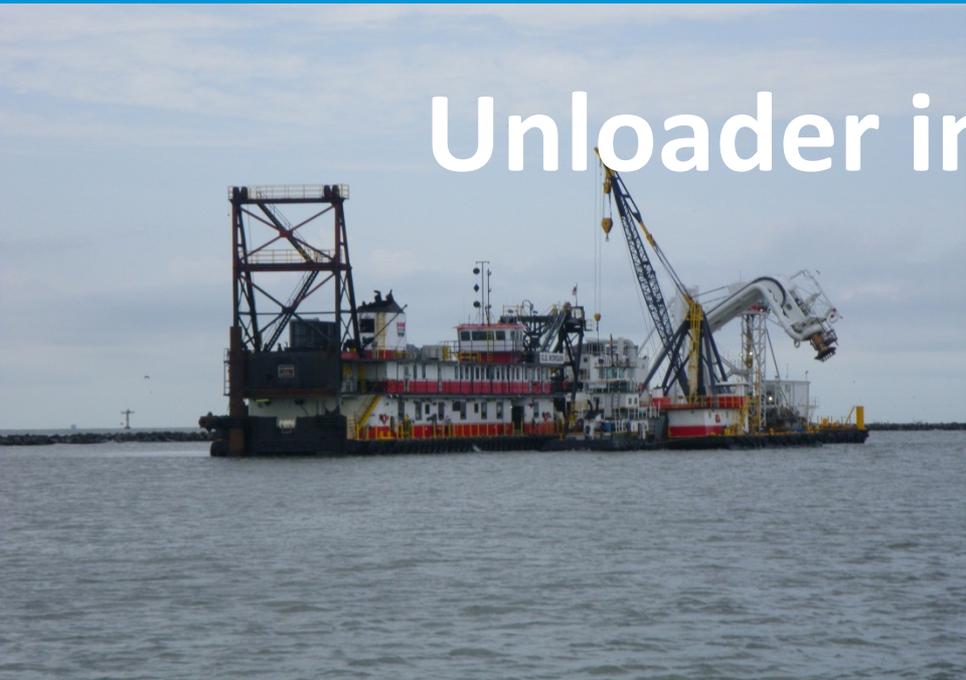
Beach Elev.	+4.5	Ft. NAVD88
Beach Width	65	Average Ft.
Beach Slope	1V:20H	
Dune Elev.	+7.0	Ft. NAVD88
Dune Crest Width	290	Average Ft.
Dune Slope	1V:20H	
Surface Area	303	Acres
Total Fill Volume	3,310,000	Cubic Yards
Total Length of Project	31,000	Linear Feet
Sediment Grain Size	0.19 (mean)	Millimeters

Barge Being Filled at Borrow Area



Barge in Transit

Unloader in Belle Pass



Sediment Being Re-suspended and Pumped



Headland Looking East

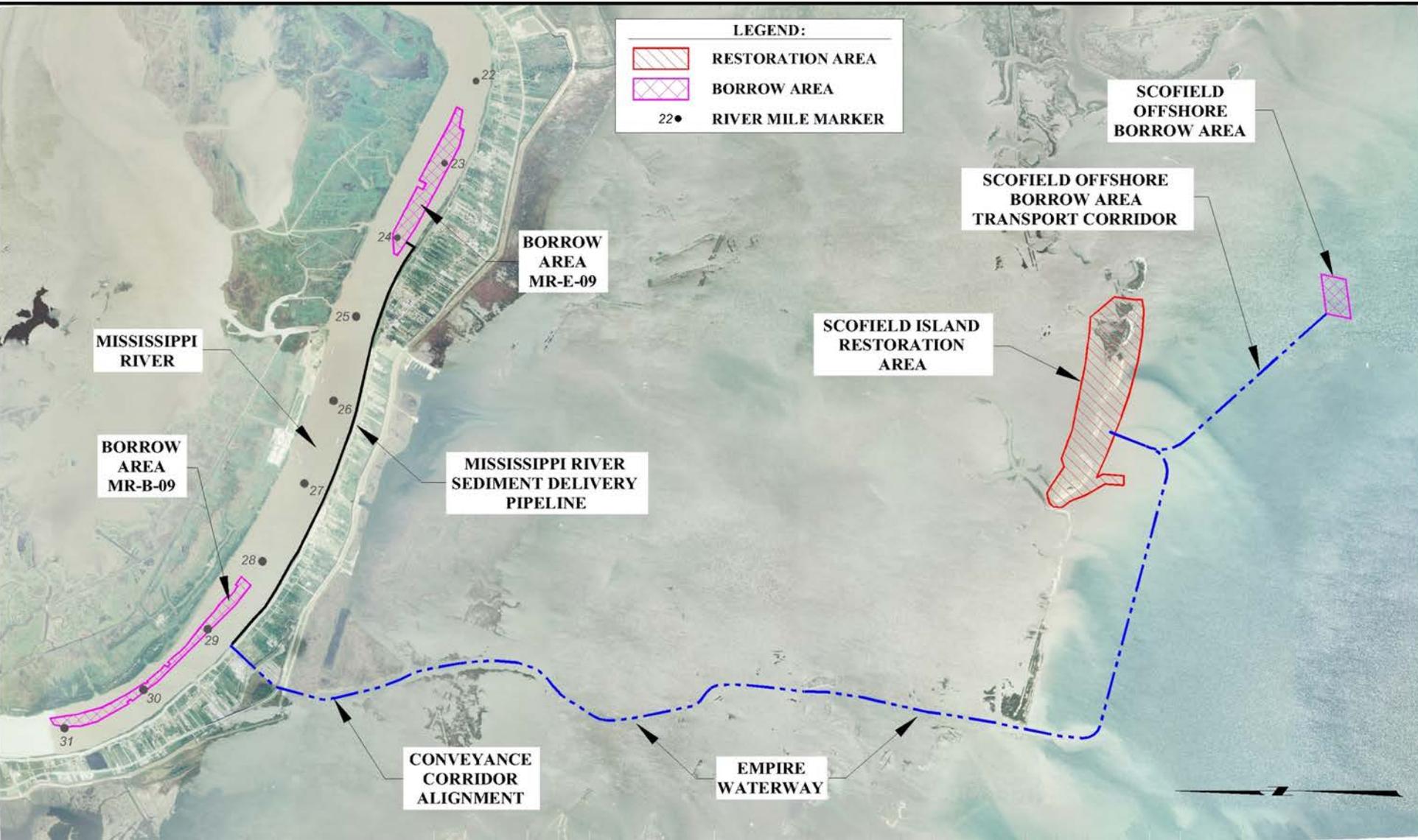


Scofield Island Restoration

Scofield - Project Unique Aspects

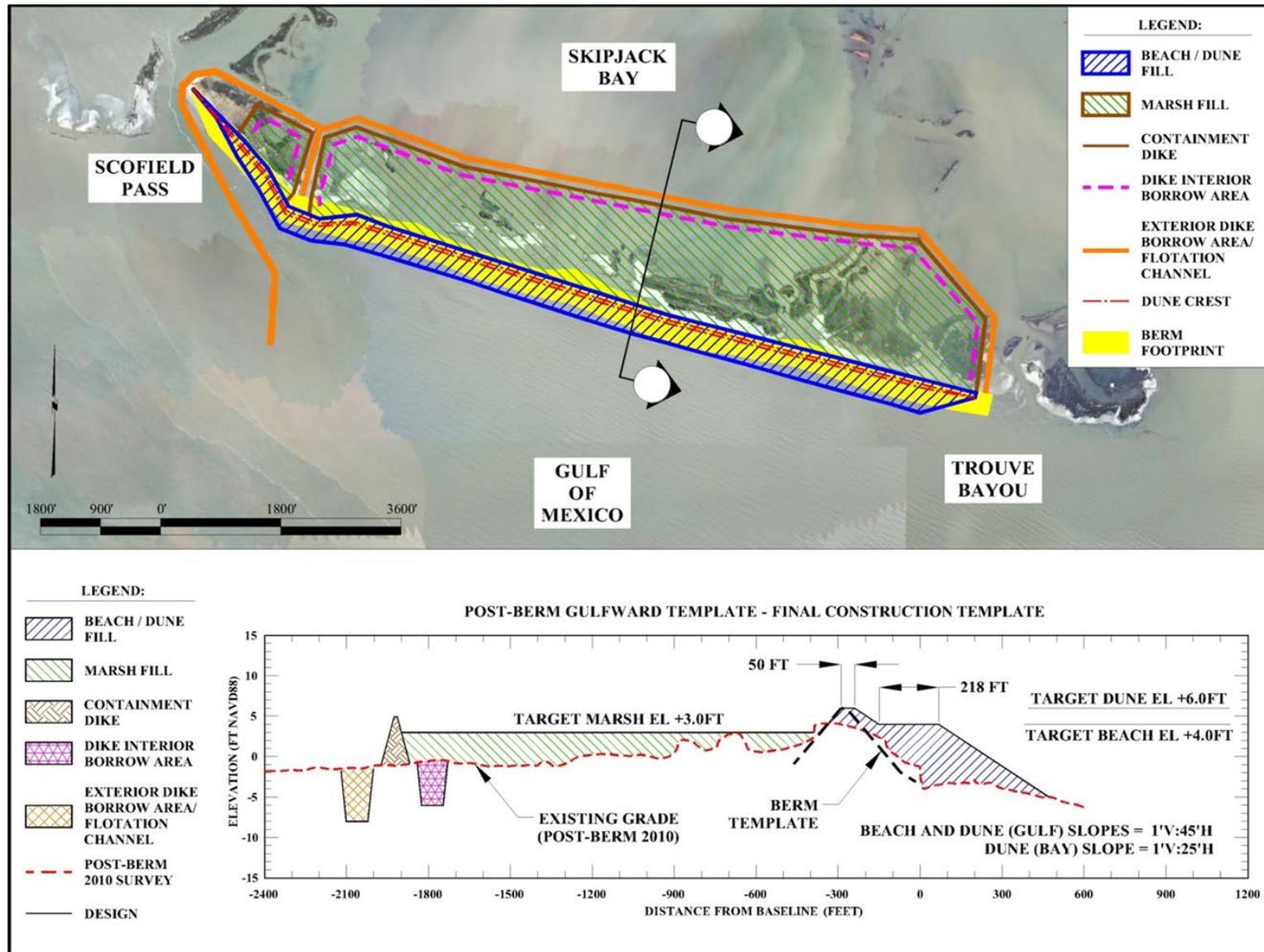
- Excavation of riverine sediments in one of the nations busiest navigational waterways
- Delivery of riverine sediments over 22 miles
- Conveyance corridor that requires:
 - Casing pipe installation under two highways
 - Crossing of 2 levees and a harbor canal
 - Pipeline installation along 16 miles of Empire Waterway
 - Providing 6 navigational crossings for commercial and recreational use over the sediment pipeline

Scofield - Project Design



11/5/2013

Scofield - Project Fill Template Design



11/5/2013

Scofield - Project Fill Template Design Details

- Beach Elevation: +4.0ft NAVD88
- Beach Width: Avg. 225ft (dune toe to beach crest)
- Dune Elevation: +6.0ft NAVD88
- Dune Width: 215ft (toe to toe)
- Gulf / Bay Slopes: 1ft V:45ft H / 1ft V: 25ft H
- Beach/Dune Volume / Acres: 1.90MCY / 238 acres
- River Borrow Area Sediment Grain Size: 0.19mm
- Marsh Elevation: +3.0ft NAVD88
- Marsh Width: Greater than 1,000ft
- Marsh Volume / Acres: 1.63 MCY / 370 acres

California in Borrow Area MR-E-09



**Dredge Alaska and Booster Jack
in Temporary Mooring Area**



Mississippi River Levee Crossing



Highway 11 Crossing



Highway 23 Crossing



Hurricane Protection Levee Crossing



Empire Marsh Crossing



Pre-Construction



727.520.8181
www.aerophoto.com

Scofield Island

Image # 120702 6240
Date 07.02.12

Post Construction



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www.aerophoto.com

Scofield Island

Image # 130801 6301
Date 08.01.13

Questions and Discussion