

WEDA GULF COAST CHAPTER ANNUAL MEETING

What's Going on in the Mobile District Dredging World

8 NOVEMBER 2022

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**US Army Corps
of Engineers®**



Mobile Harbor, AL



What's Going on in the Mobile District Dredging World Outline



MOBILE HARBOR DEEPENING & WIDENING

- Plan and Schedule
- Pipeline Challenges
- Beneficial Use Placement

MISSISSIPPI COASTAL IMPROVMENTS PROGRAM (MsCIP)

- Overview of MsCIP
- Projects Included within the Bipartisan Infrastructure Law
- Coast-wide Beach and Dune Ecosystem Restoration Projects
 - Potential Borrow Source and Placement Challenges
- Deer Island Ecosystem Restoration Project

FEEDBACK



Mobile Harbor Approved Plan



- ❑ Channel Deepening: 50 feet Bay/ 52 feet Bar
- ❑ Channel Widening: 3 mi. long, 100 ft wide* **A**
- ❑ Turning Basin Modification **B**
- ❑ Bar Channel Bend Easing **C**



CONSTRUCTION STATUS

- Project Partnership Agreement (PPA): 17 Jun 2020
- First Contract (Phase 1) Awarded: 28 Sep 2020
- Second Contract (Phase 3) Awarded: 21 Apr 2021
- Third Contract (Phase 4) Awarded: 11 Jul 2022

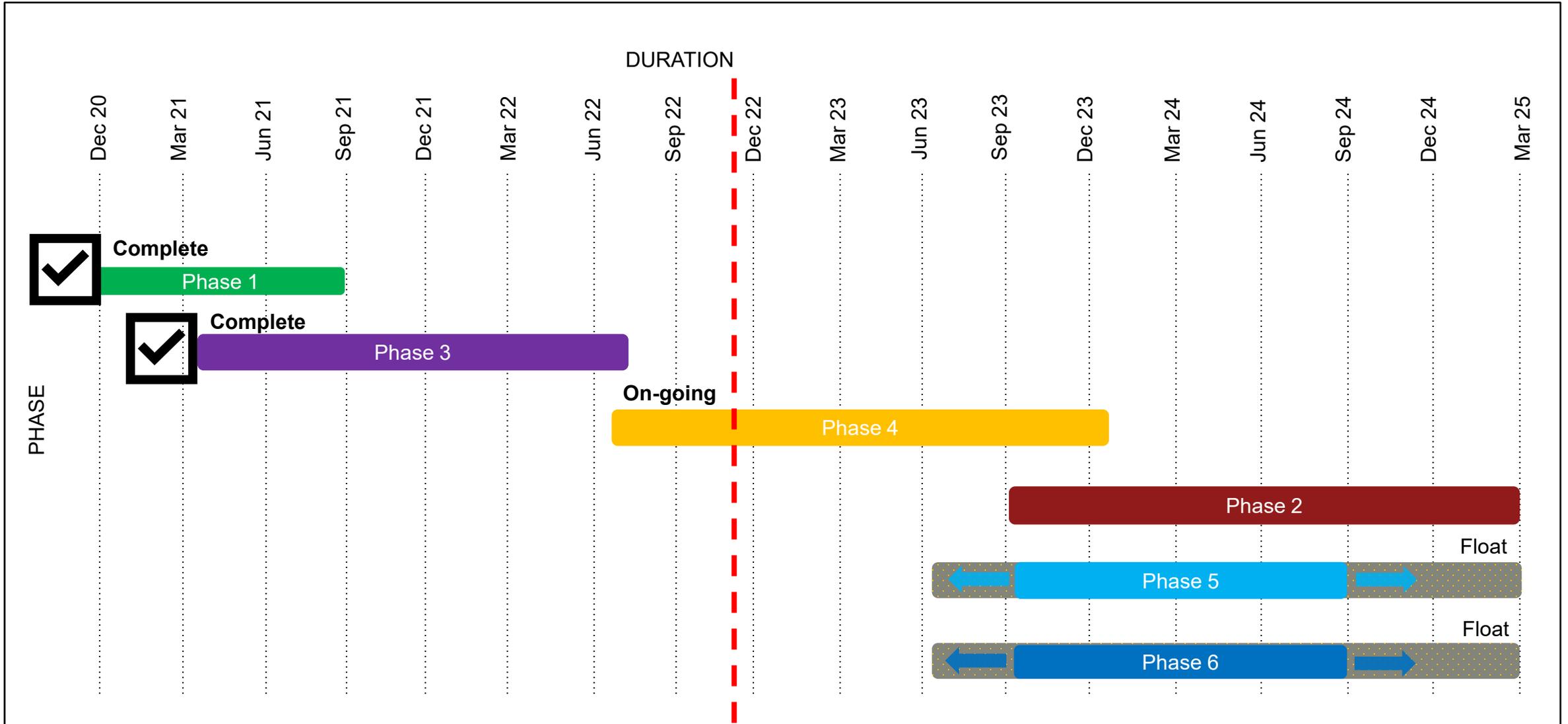


CONSTRUCTION PHASING	
Phase 1: Bar Channel Deepening (Complete)	2.6 MCY
Phase 2: Bar Channel & Bend Easings to 52' plus Widener	6.4 MCY
Phase 3: Deepening Lower Bay Channel (Complete)	6.4 MCY
Phase 4: Deepening remainder of Lower Bay Channel and portion of Upper Bay Channel (Ongoing)	6.4 MCY
Phase 5: Deepen Upper Bay Channel (Relic Shell)	4.3 MCY
Phase 6: Turning Basin	1.5 MCY

TARGET CONSTRUCTION SCHEDULE		
Phase 1	FY20 (Sep 2020)	6-9 month effort
Phase 2	FY23 (3 rd quarter)	12-18 month effort
Phase 3	FY21 (3 rd quarter)	12-18 month effort
Phase 4	FY22 (3 rd quarter)	12-18 month effort
Phase 5&6	FY23-FY24	10-12 month effort



Mobile Harbor Construction Schedule



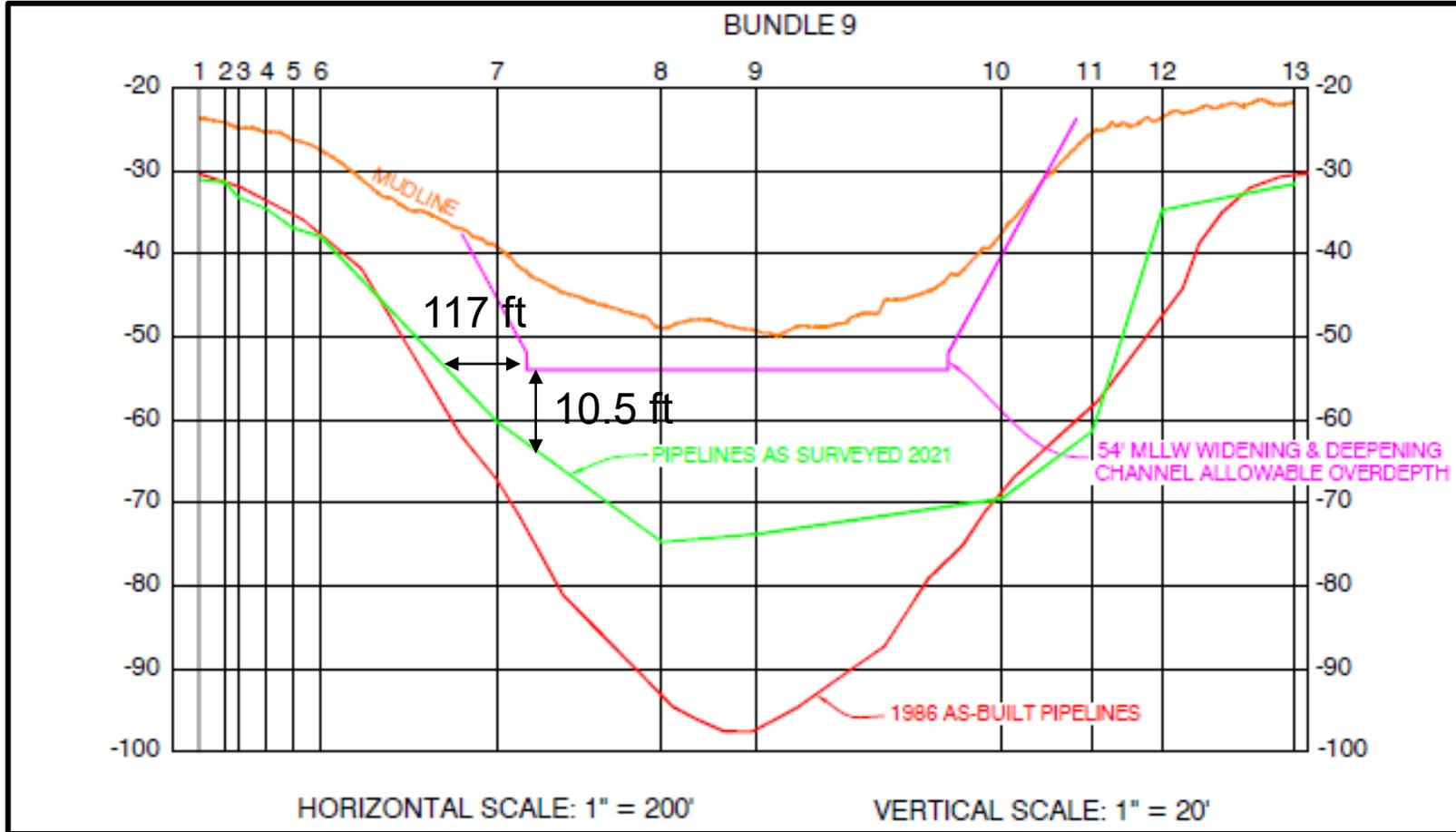


Mobile Harbor Pipeline Crossings





Mobile Harbor Pipeline Crossings – Bundle 9



Description/Function

- Fuel/Production Gas Pipelines for Offshore Gathering System
- Located in Widener of Phase 2

Survey Comments

- Concern Area: Bottom corner of dredging template on west side, per W&T Offshore Survey

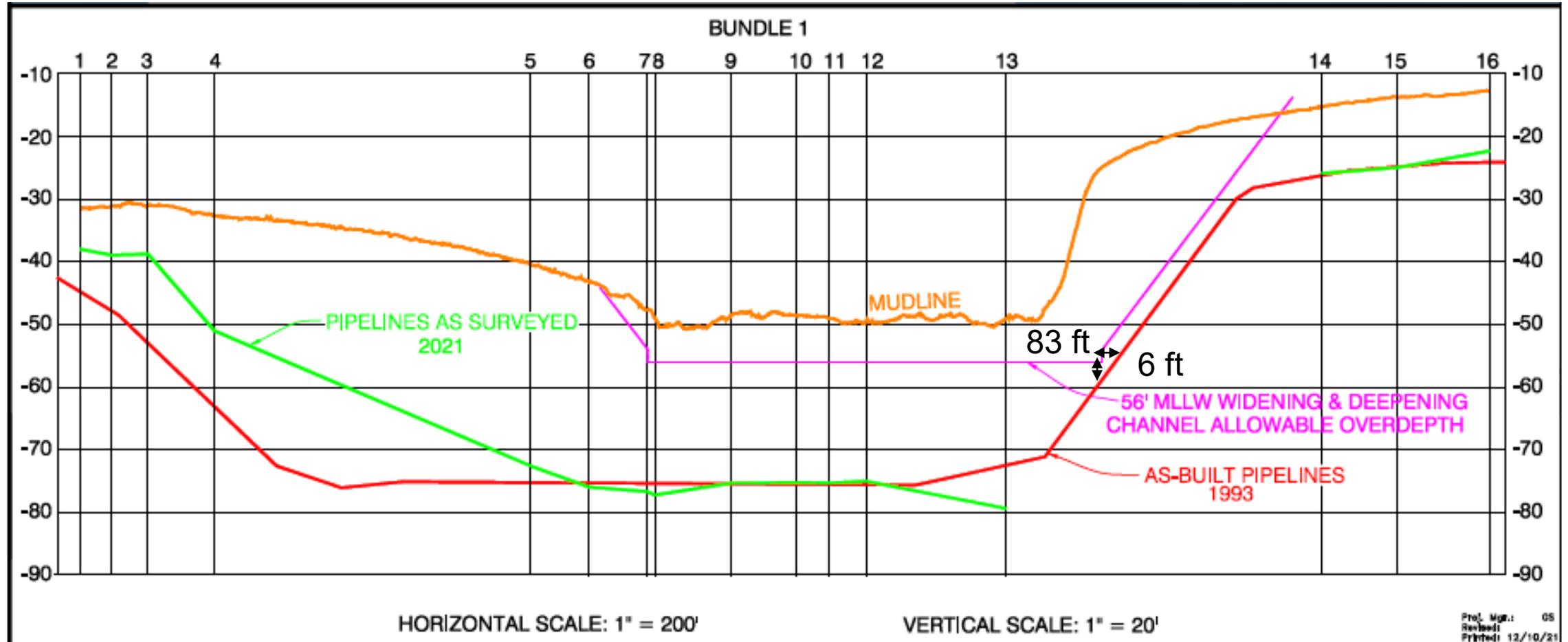
V = 10.5 ft

H = 117 ft

Orange = Mudline
Pink = Dredge Template
Green = 2021 Survey
Red = As-built Survey



Mobile Harbor Pipeline Crossings – Bundle 1



Description/Function

- Gas/Water Pipelines for Offshore Gathering System
- Located in Bar Channel of Phase 2

Survey Comments

- Concern Area: east side of dredging template, per As-built Survey

V = 6 ft
H = 83 ft

Orange = Mudline
Pink = Dredge Template
Green = 2021 Survey
Red = As-built Survey

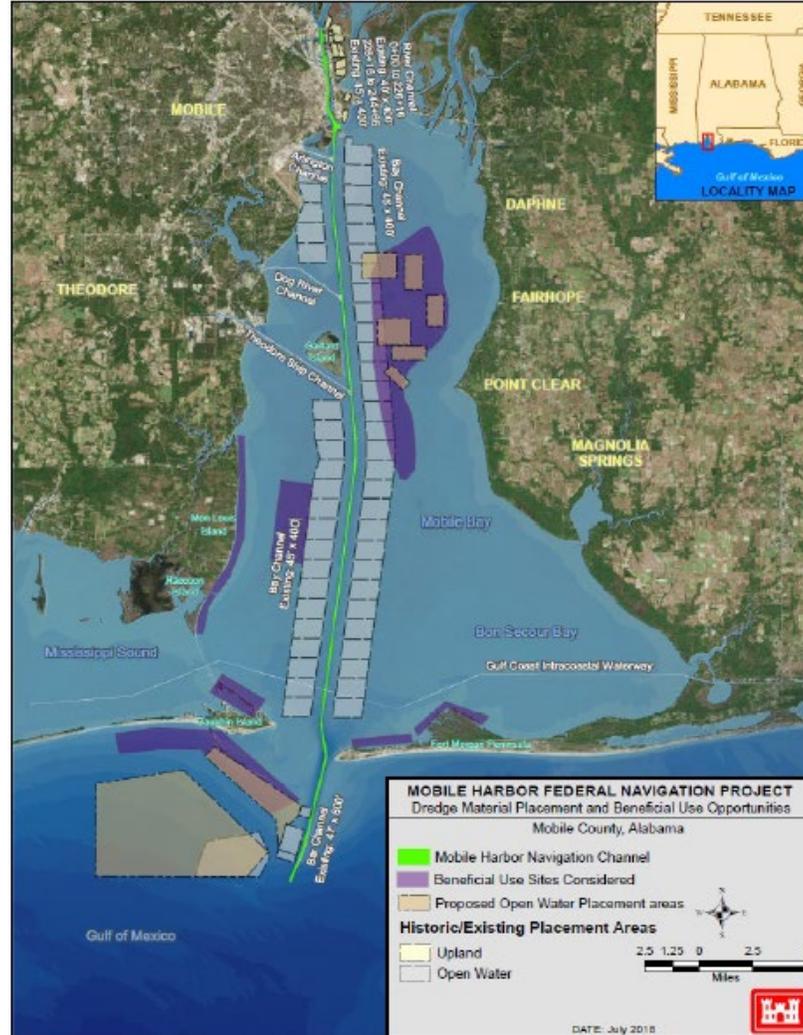


Mobile Harbor Dredged Material Placement

New Work Placement Sites



Beneficial Use Opportunities



- Proposed Placement for New Work Material:**
- Formerly mined relic shell area (~5MCY)
 - ODMDS (~20MCY)
 - Beneficial Use Sites (~1.5MCY)

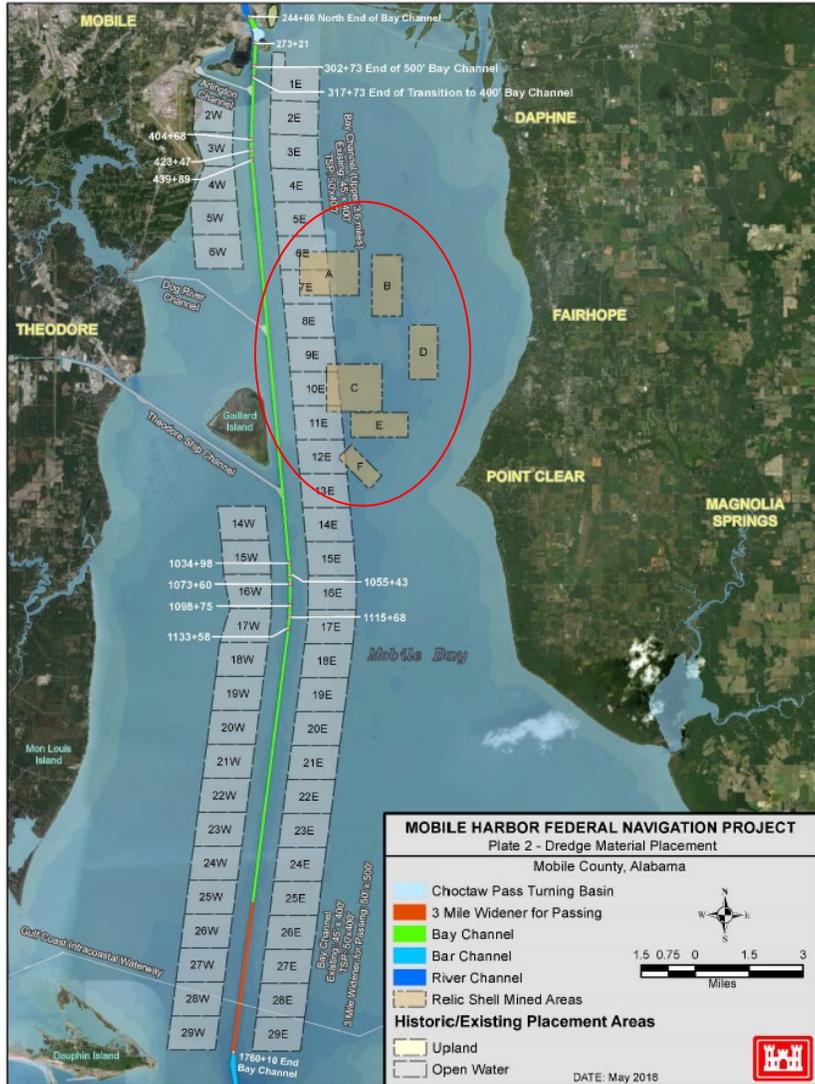
- Environmental Requirements:**
- All environmental requirements have been satisfied to date.
 - Required for Compliance: Turbidity Monitoring
 - Required for Information: Collection of Non-Compliance Data (DO, salinity, temp., etc)





Mobile Harbor Beneficial Use Relic Shell Mined Areas

Placement Areas



Relic Shell Placement (Phase 5):

- ❑ 5 placement areas
- ❑ Water depths shallow (~ 9 to 14 ft deep)
- ❑ Target lift thickness 1.5ft (not to exceed 3ft)
- ❑ Material from Upper Bay Channel:
 - Primarily poorly graded fine to coarse sands with varying amounts of silt, clay, and gravel (SP, SW, SM, SC) with occasional clay lenses

	Area (acres)	Estimated Site Placement Capacity (CY)	Estimated New Work Dredged Volume (CY)	Approximate Distance (ft)
A ¹			0	10,000
B	920	2,226,000	1,237,000	18,000
C	1306	3,161,000	1,756,000	12,000
D	770	1,863,000	1,035,000	22,000
E	702	1,699,000	944,000	16,000
F	403	975,000	542,000	12,000
Total	4101	9,924,000	5,514,000	

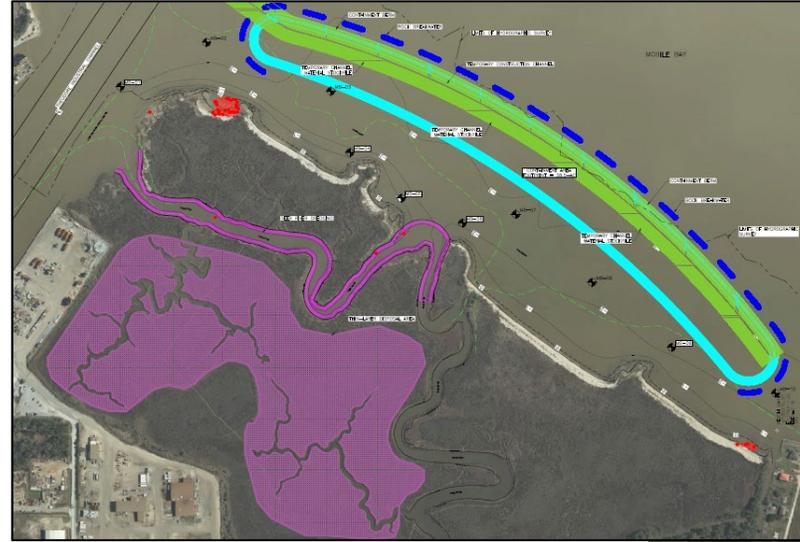
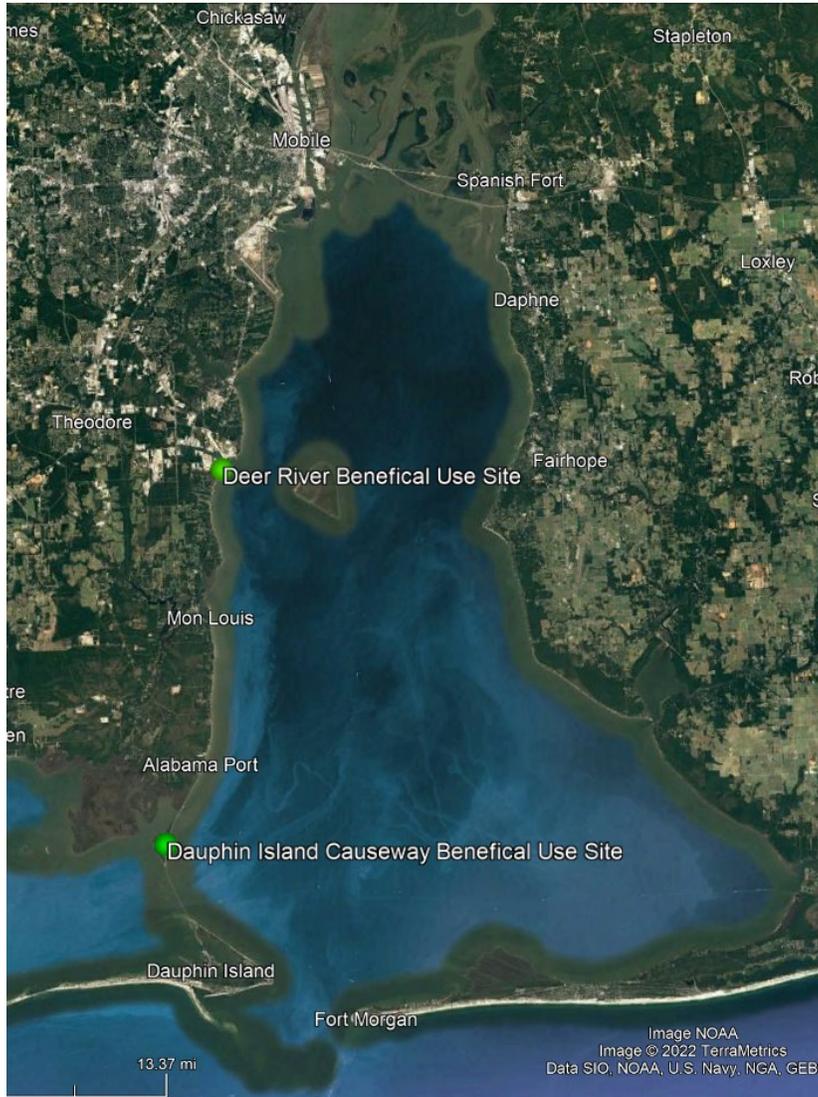
Notes:

- 1) Area A is located within the bounds of existing open water placement sites used for operation and maintenance material and was therefore not considered here for new work.
- 2) The volumes are computed based on a relative difference in surface area. These placement volumes do not reflect the available capacity based on the 3 foot tolerance.

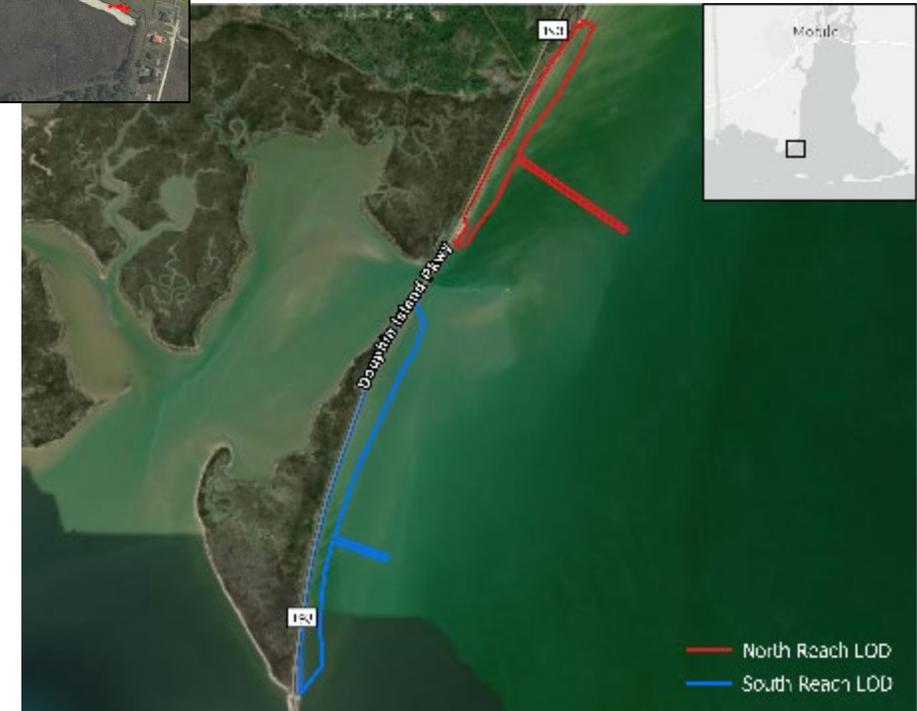


Mobile Harbor Beneficial Use through NFWF and RESTORE Projects

Site Locations



Deer River (Mobile Bay National Estuary Program)



Dauphin Island Causeway Site (Mobile County)



moffatt & nichol



Mobile Harbor



Beneficial Use Dauphin Island Causeway Project



SOURCE: MICROSOFT BING MAPS, 2020

Dauphin Island Causeway (Phase 6):

- ❑ Objective is to get material to the site
- ❑ 2 placement areas – North and South of Jemison's
- ❑ Oyster Habitat nearby
- ❑ Water depths shallow (~ 2 to 10 ft deep)
- ❑ Distance from turning basin down the channel ~ 25 miles
- ❑ Channel to the placement areas ~6 miles
- ❑ Material from Turning Basin:
 - Historical predominantly sandy/coarse grained materials (SP, SW, SP-SM, SM)
 - Cores available for viewing

Environmental:

- ❑ Pre/Post Surveys
- ❑ Turbidity Monitoring



Mobile Harbor General Discussion



■ PIPELINE CROSSINGS CONSTRUCTIBILITY

- Tolerance Zones – Horizontal & Vertical Offset
- Limitations/Constraints
- Industry Standards

■ BENEFICIAL USE CONSTRUCTIBILITY

- Relic Shell Mined Area Lift Thickness
- Dauphin Island Causeway (Beneficial Use)
- Bid Schedule
- Limitations/Constraints
- Other

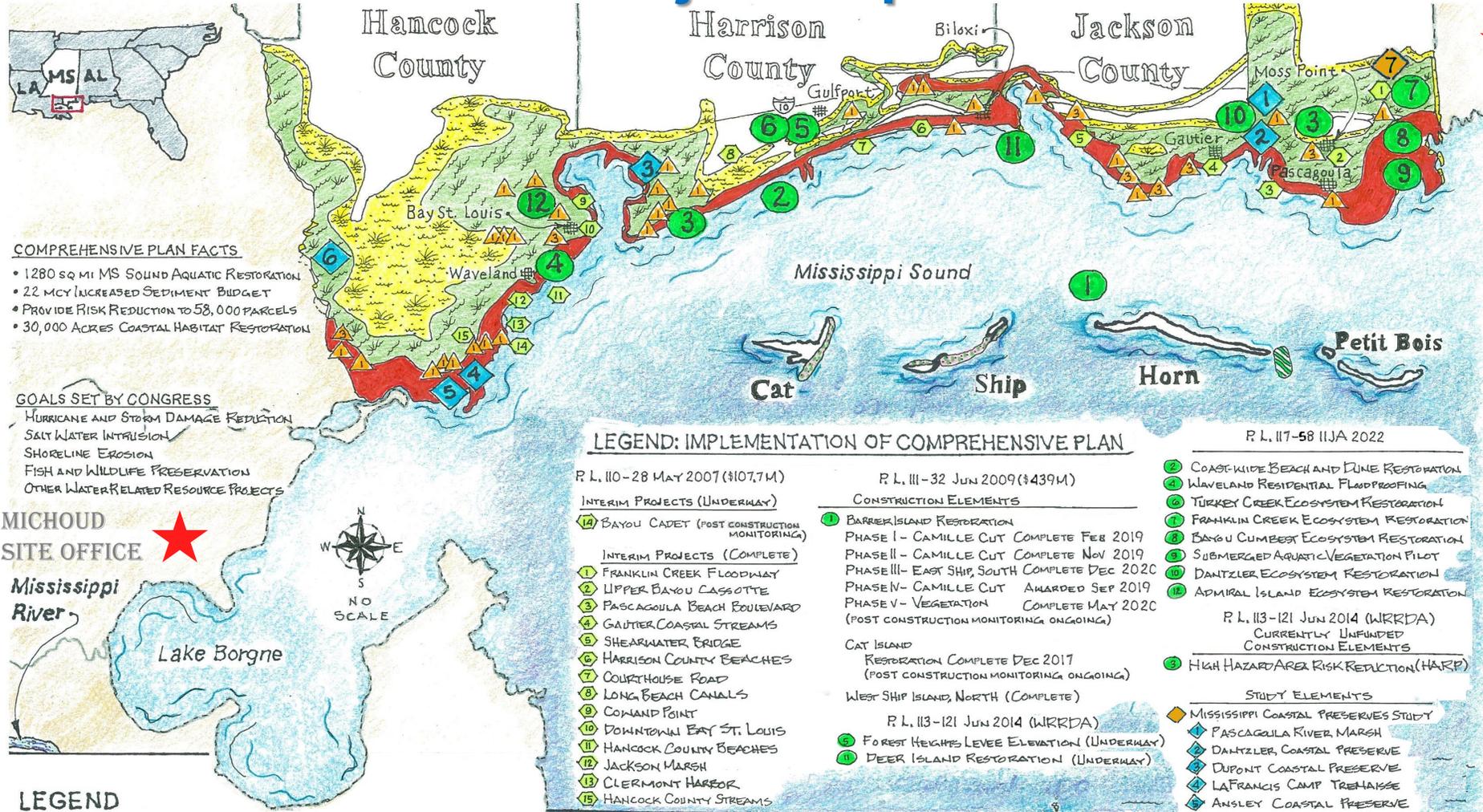
■ PHASING ADJUSTMENTS

■ GENERAL INDUSTRY CONCERNS





MsCIP Project Map



★ IRVINGTON SITE OFFICE

COMPREHENSIVE PLAN FACTS

- 1280 sq mi MS SOUND AQUATIC RESTORATION
- 22 MCY INCREASED SEDIMENT BUDGET
- PROVIDE RISK REDUCTION TO 58,000 PARCELS
- 30,000 ACRES COASTAL HABITAT RESTORATION

GOALS SET BY CONGRESS

- HURRICANE AND STORM DAMAGE REDUCTION
- SALT WATER INTRUSION
- SHORELINE EROSION
- FISH AND WILDLIFE PRESERVATION
- OTHER WATER RELATED RESOURCE PROJECTS

MICHOUD SITE OFFICE ★

Mississippi River
Lake Borgne



LEGEND

- O & M BENEFICIAL USE PLACEMENT
- DIRECT PLACEMENT OF SAND
- 100-YEAR FLOOD PLAIN
- HIGH HAZARD AREA RISK REDUCTION
- HURRICANE KATRINA INUNDATION LIMITS



LEGEND: IMPLEMENTATION OF COMPREHENSIVE PLAN

R. L. 110-28 MAY 2007 (\$107.7M)

INTERIM PROJECTS (UNDERWAY)

- BAYOU CADET (POST CONSTRUCTION MONITORING)

INTERIM PROJECTS (COMPLETE)

- FRANKLIN CREEK FLOODWAY
- UPPER BAYOU CASSOTTE
- PASCAGOULA BEACH BOULEVARD
- GAUTIER COASTAL STREAMS
- SHEARWATER BRIDGE
- HARRISON COUNTY BEACHES
- COURTHOUSE ROAD
- LONG BEACH CANALS
- COMMAND POINT
- DOWNTOWN BAY ST. LOUIS
- HANCOCK COUNTY BEACHES
- JACKSON MARSH
- CLERMONT HARBOR
- HANCOCK COUNTY STREAMS

R. L. 111-32 JUN 2009 (\$439M)

CONSTRUCTION ELEMENTS

- BARRIER ISLAND RESTORATION
 - PHASE I - CAMILLE CUT COMPLETE FEB 2019
 - PHASE II - CAMILLE CUT COMPLETE NOV 2019
 - PHASE III - EAST SHIP, SOUTH COMPLETE DEC 2020
 - PHASE IV - CAMILLE CUT AWARDED SEP 2019
 - PHASE V - VEGETATION COMPLETE MAY 2020 (POST CONSTRUCTION MONITORING ONGOING)
- CAT ISLAND RESTORATION COMPLETE DEC 2017 (POST CONSTRUCTION MONITORING ONGOING)
- WEST SHIP ISLAND, NORTH (COMPLETE)
- R. L. 113-121 JUN 2014 (WRRDA)
 - FOREST HEIGHTS LEVEE ELEVATION (UNDERWAY)
 - DEER ISLAND RESTORATION (UNDERWAY)

R. L. 117-58 11/14/2022

- COAST-WIDE BEACH AND DUNE RESTORATION
- WAVELAND RESIDENTIAL FLOODPROOFING
- TURKEY CREEK ECOSYSTEM RESTORATION
- FRANKLIN CREEK ECOSYSTEM RESTORATION
- BAYOU CUMBERT ECOSYSTEM RESTORATION
- SUBMERGED AQUATIC VEGETATION PILOT
- DANTZLER ECOSYSTEM RESTORATION
- ADMIRAL ISLAND ECOSYSTEM RESTORATION

R. L. 113-121 JUN 2014 (WRRDA) CURRENTLY UNFUNDED CONSTRUCTION ELEMENTS

- HIGH HAZARD AREA RISK REDUCTION (HARP)

STUDY ELEMENTS

- MISSISSIPPI COASTAL PRESERVES STUDY
- PASCAGOULA RIVER MARSH
- DANTZLER COASTAL PRESERVE
- DUPONT COASTAL PRESERVE
- LA FRANCIS CAMP TREHAISE
- ANSLEY COASTAL PRESERVE
- WACHOVIA COASTAL PRESERVE
- ESCATANIPA RIVER DIVERSION STUDY

FUTURE STUDIES

- 32 ENVIRONMENTAL RESTORATION AREAS
- LONG-TERM HIGH HAZARD AREA RISK REDUCTION
- STRUCTURAL RISK REDUCTION

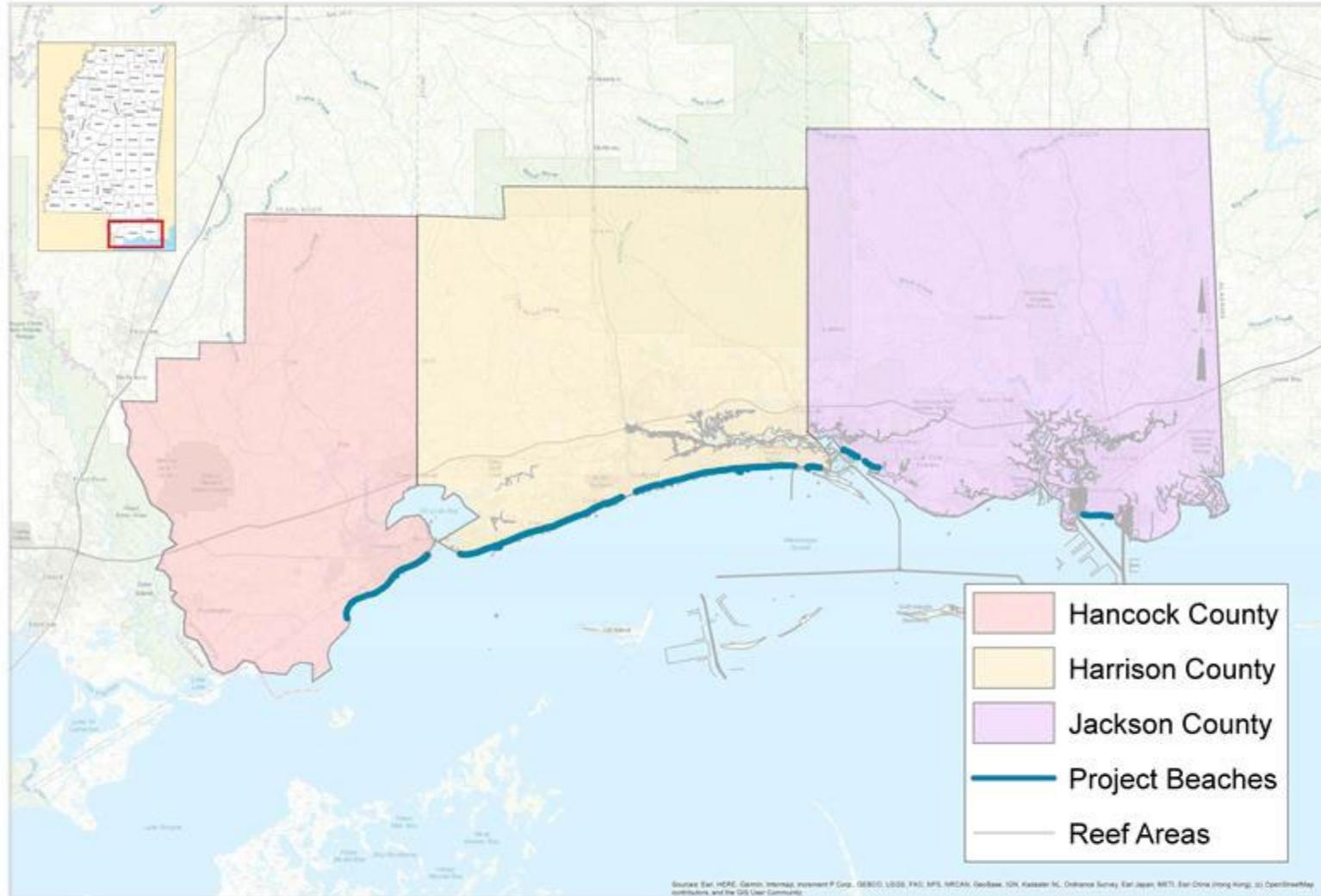
Comprehensive Plan Elements

Mississippi Coastal Improvements Program



MsCIP

Coast-wide Beach and Dune Ecosystem Restoration



Coast-wide Beach and Dune Ecosystem Restoration

Mississippi Coastal Improvements Program
Hancock, Harrison, and Jackson Counties, MS

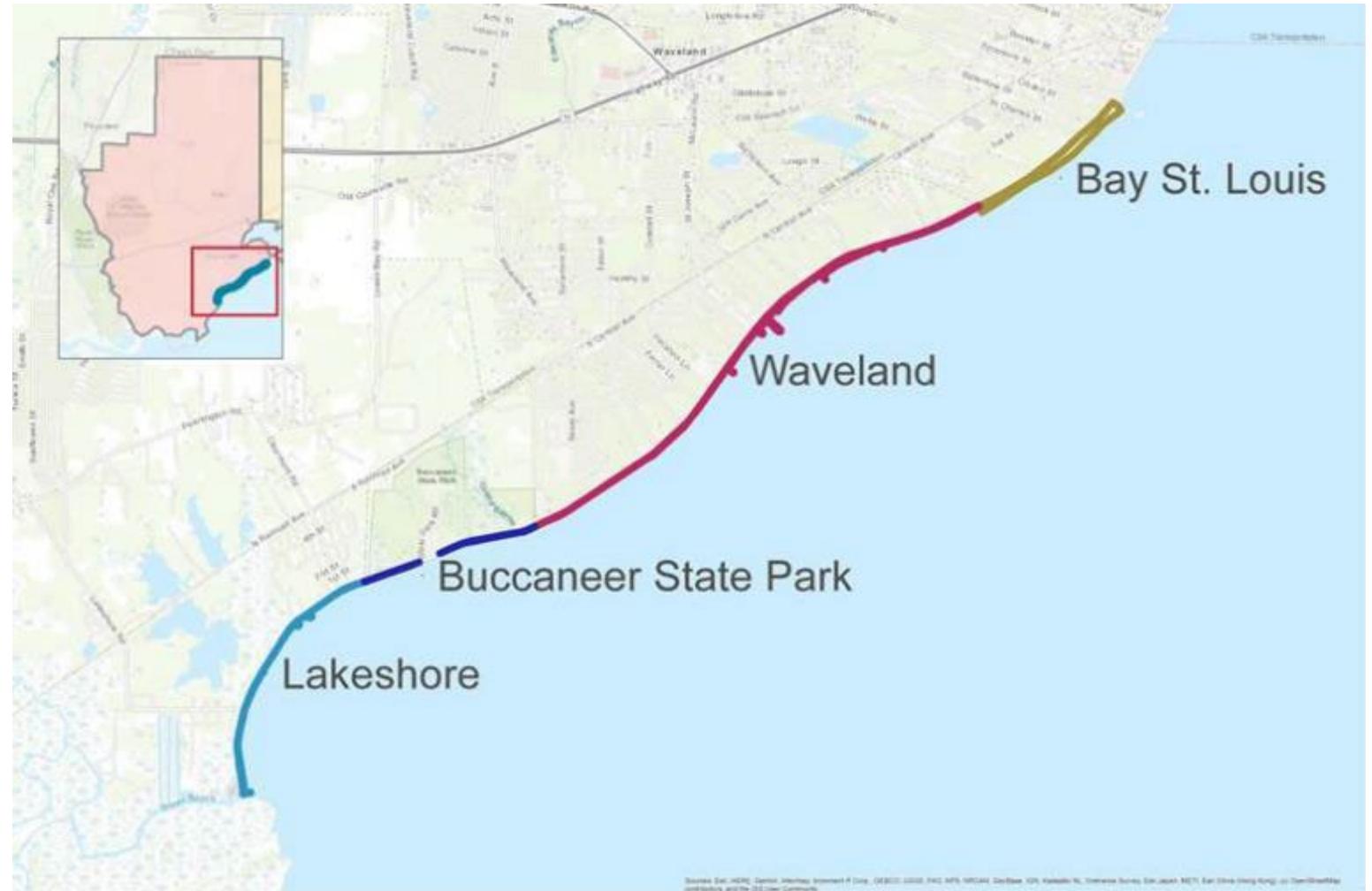


Coast-wide Beach and Dune Ecosystem Restoration Hancock County, MS



Description/Scope:

- 8 miles of beach and dune enhancement, including vegetation
- Dune height = 2 ft
- Dune width = 60 ft.
- Total Quantity = 700,00 CY



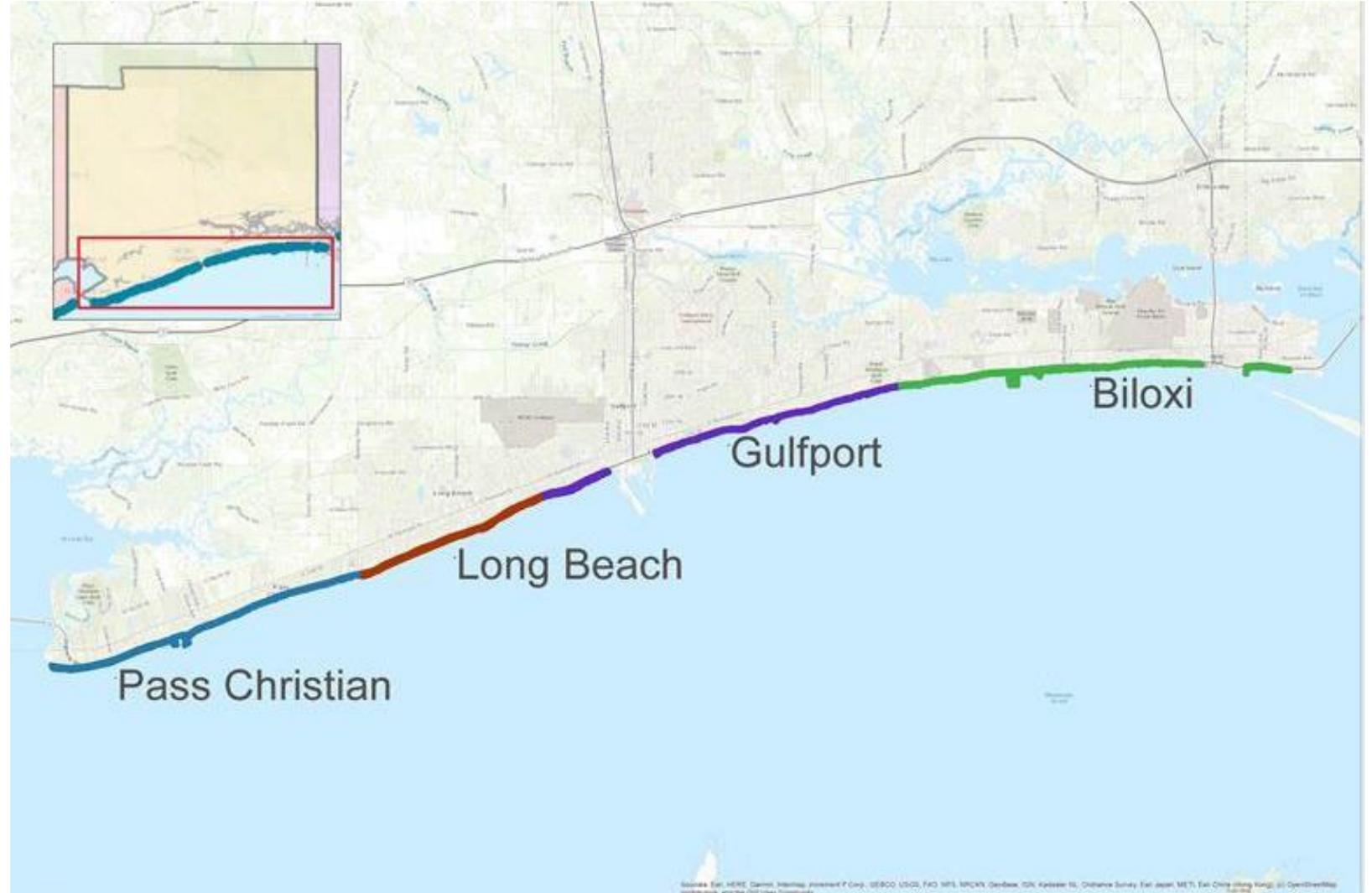


Coast-wide Beach and Dune Ecosystem Restoration Harrison County, MS



Description/Scope:

- 27 miles of beach and dune enhancement, including vegetation
- Dune height = 2 ft
- Dune width = 60 ft.
- Total Quantity = 1,500,000 CY





Coast-wide Beach and Dune Ecosystem Restoration Jackson County, MS



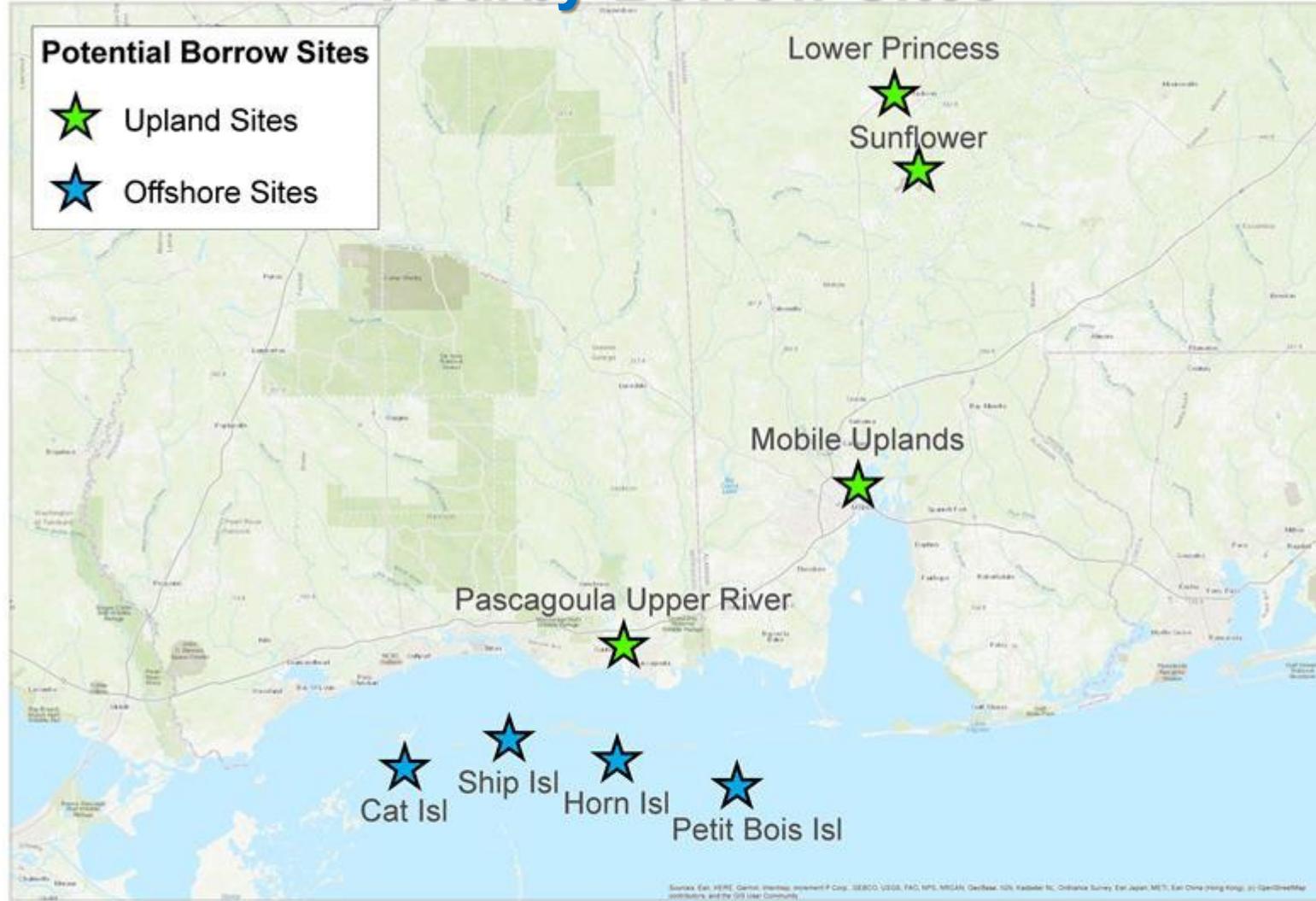
Description/Scope:

- 27 miles of beach and dune enhancement, including vegetation
- Dune height = 2 ft
- Dune width = 60 ft.
- Total Quantity = 500,000 CY





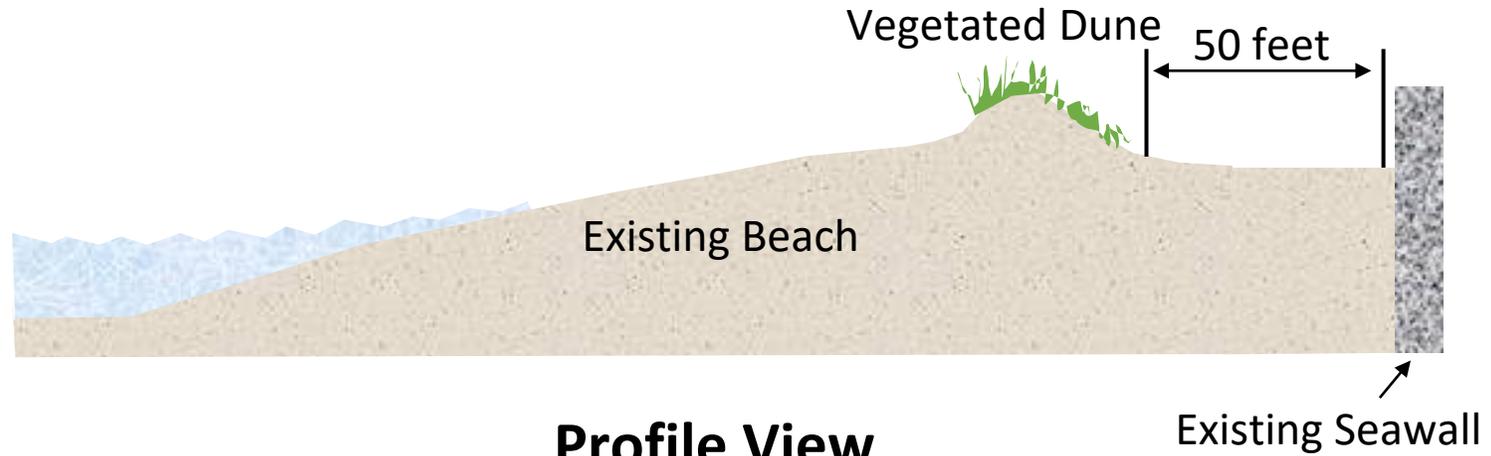
Coast-wide Beach and Dune Ecosystem Restoration Nearby Borrow Sites



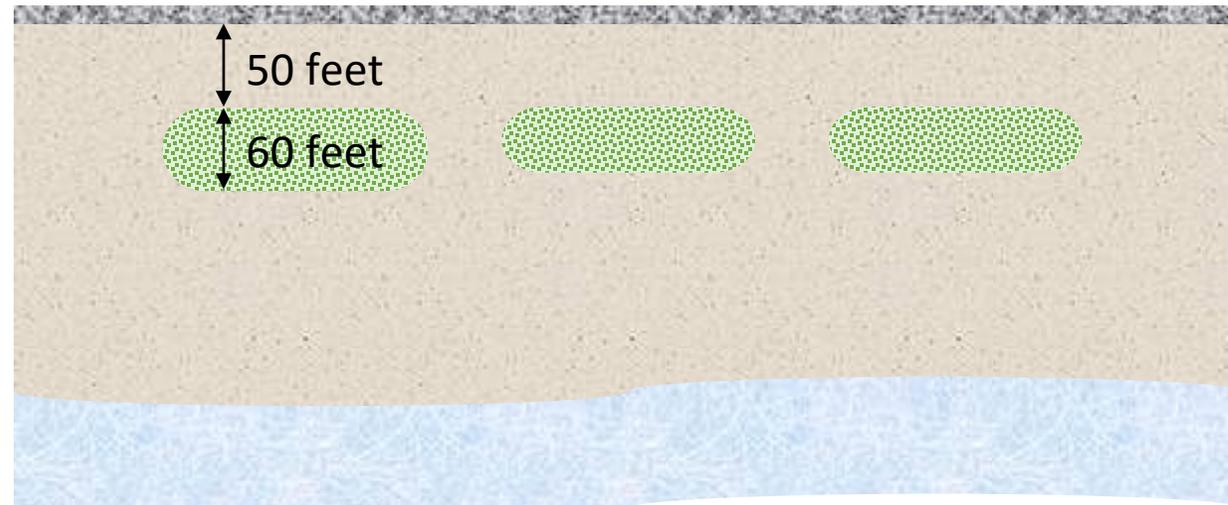
Coast-wide Beach and Dune Ecosystem Restoration
Mississippi Coastal Improvements Program (MsCIP)
Hancock, Harrison, and Jackson Counties, MS



Coast-wide Beach and Dune Ecosystem Restoration Profile and Plan Views



Profile View



Plan View



Deer Island Ecosystem Restoration



Description/Scope:

- 400 acres of beach/dune, wetland, and maritime forrest habitat creation
- 1 mile of offshore breakwater
- Total quantity = 2,500,000 CY





OPPORTUNITIES TO INFLUENCE?