

Texas Dredged Material Planning for Wetland Restoration

BU Conceptual Framework

Texas Deepwater Horizon Natural Resource Damage
Assessment Trustee Implementation Group (Texas TIG)

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Texas Gulf Coast (Central Flyway)

10+ million migrating/wintering waterfowl

20-25% of Central Flyway waterfowl popn

>75% gadwall, green-winged teal, & redheads

40% lesser scaup & 25% of pintails, shovelers, blue-winged teal, and wigeon

Supports 25% of the Gulf Coast mottled duck population



Waterfowl Migration Flyways



Healthy Coastal Marshes

- = Waterfowl Habitat
- = Estuarine nurseries
- = Coastal resiliency
- = Commerce
- = Recreation
- = Water quality



The Texas Coast: A Reason for Concern and an Opportunity

Texas is losing coastal marshes due to numerous factors:

- **Degraded/Altered Hydrology**
- **Salt Water Intrusion**
 - **& Land Subsidence**
- Development Pressures
- **Sea Level Rise**
- Increased Water Demands
- More and more people!
- **Coastal Erosion**



The Texas Coast: A Reason for Concern and an Opportunity

The Opportunity

- USACE contracts 30+ MCY of dredging
- Private entities / Ports additional dredging needs
- Placement areas (PA's) provide few habitat benefits, are nearing capacity, or need remediation and repairs
- Future new work dredging (bigger vessels and deeper channels) will produce significant dredged material quantities
- Maintenance and emergency dredging provides significant opportunities





Texas GLO 2017 Texas Coastal Resiliency Master Plan –“A sediment management plan for the entire Texas coast is necessary to allow for coastwide coordination in sediment resources. The ultimate goal is a full-fledged program to coordinate the beneficial use of dredged material with the U.S. Army Corps of Engineers and other identified partners.”

- **Successful BU projects require –LOGISTICS**

- A source of sediment
- A degrading resource and opportunity for enhancement
- Scheduling coordination
- Permits
- Funds
- Collaboration
- Time



A Solution

- Programmatic Plan for Beneficial Use of Dredged Sediments
 - Coordinate efforts
 - Identify opportunities and efficiencies
 - Build consensus
 - Identify and prioritize sites
 - Produce plans / guidelines to reduce costs and accelerate projects
 - **Programmatic implementation to identify and tee up sites, to get in front of the dredge, rather than being behind it.**



Bessie Heights Marsh

1930's



1990's

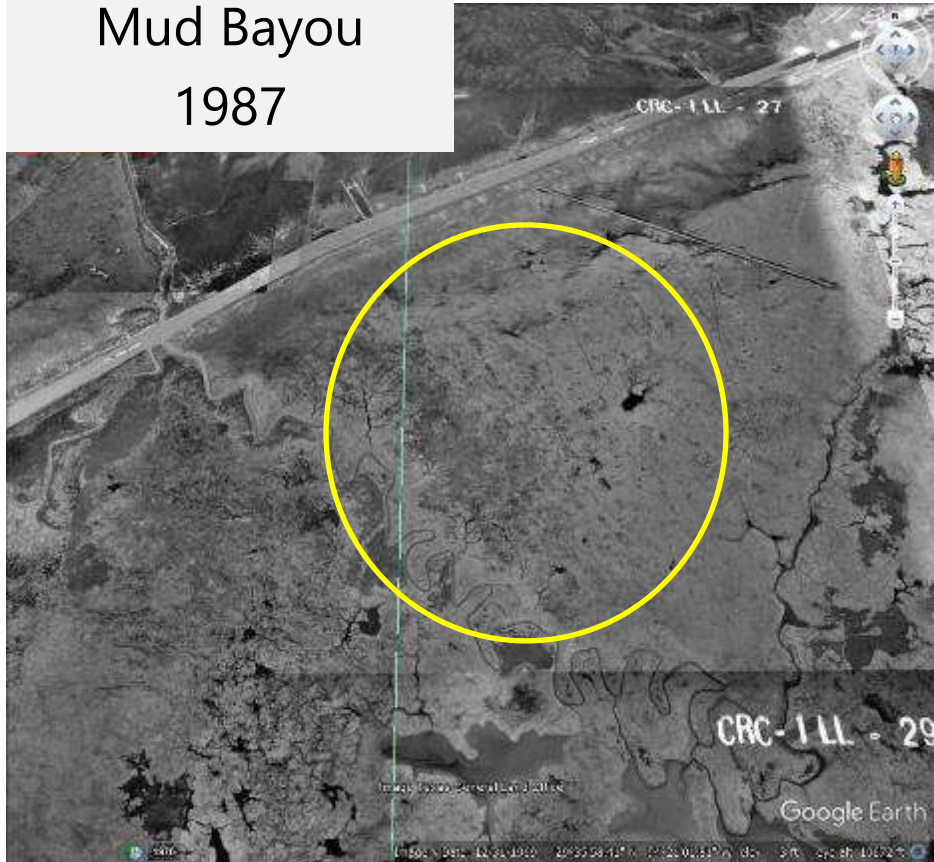


Over 5,000 acres of emergent marsh loss

DU working on BU compartment design with TPWD

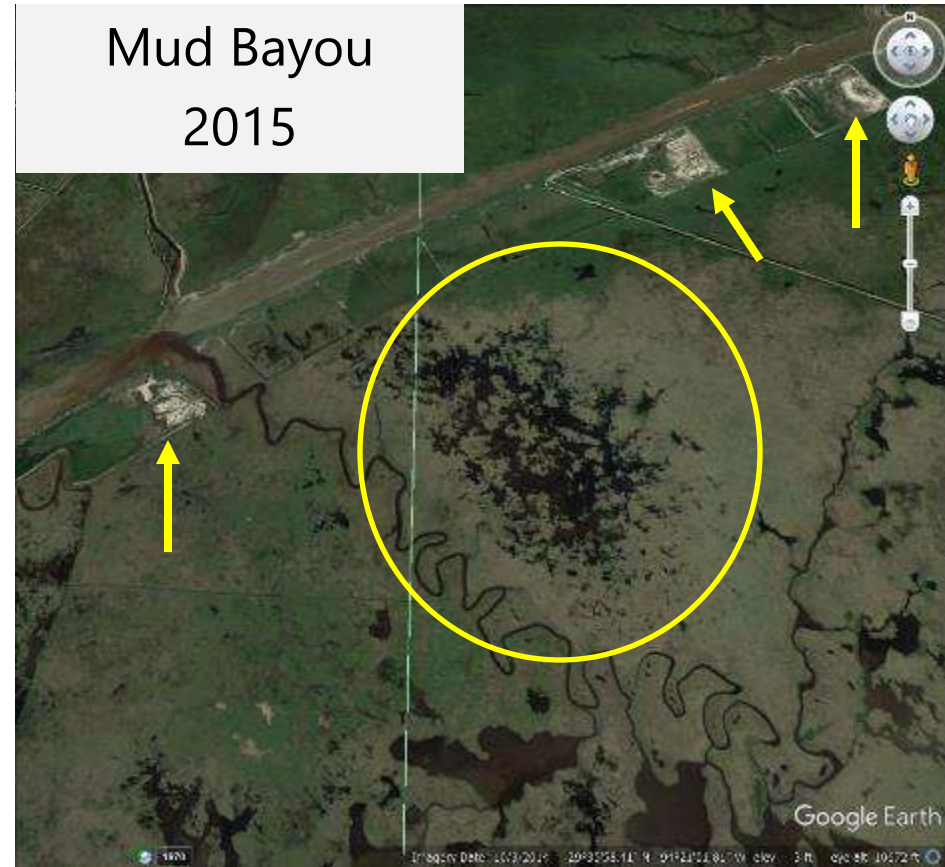
Magnetometer survey

Mud Bayou
1987

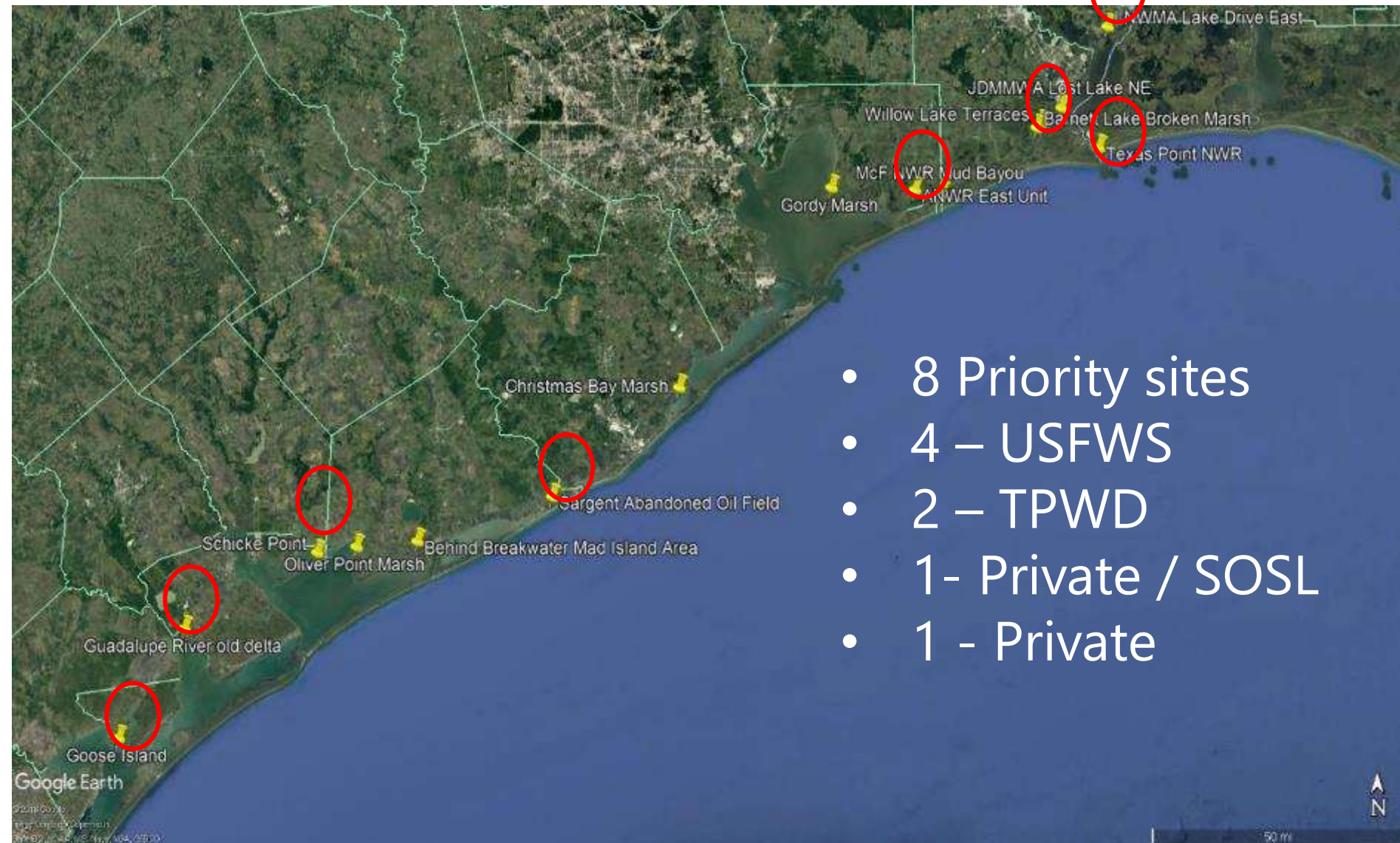


Anahuac NWR Jefferson County

Mud Bayou
2015



- Stakeholders initially identified over 150 sites;
- Project team winnowed to 15 sites
- NRDA selected 8 priority sites



- 8 Priority sites
- 4 – USFWS
- 2 – TPWD
- 1- Private / SOSL
- 1 - Private

1. Viable source material
2. Long-term sustainability
3. Ownership: public vs private
4. Ownership: how many owners
5. Previous interest
6. Competing projects
7. Regulatory constraints
8. Related Tier 1 project in GLO CRMP

Each site was scored either 0 (bad) or 1 (good) according to each of these characteristics

Maximum site score of 8

These scores were used to inform, but not control, identification of high-priority sites

Factors Used in Prioritization Process

Anahuac NWR – Roberts Mueller



BENEFITS

- 4 cells
- 550 acres / 640,000 CY
- Approximately 300,000 cy dredged every other year from GIWW

CHALLENGES

- Equipment access and staging
- Avoidance of active oil field

Guadalupe River – Old Delta



BENEFITS

- 4 cells
- 1,100 acres / 1.9 M CY

CHALLENGES

- Some portions may need shoreline protection
- Privately owned

Project Tasks and Status

- Initially identified over 150 sites; Winnowed to 15 sites
- Selection of 8 priority sites in consult with NRDA (completed)
- Topo / bathymetric surveying & field work (completed)
- Preparation of 30% E&D plans (completed)
- Preparation of 60% E&D plans (completed)
- Preparation of permit packages (completed)
- *Final report on all eight sites (summer 2022)*

Current status, plans, outcomes

- Completion of final report and project documents (summer 2022)
- Interest by USACE CAP to select 1 site
- USFWS to carry one of the NWR sites to final design, complete permitting, construct containment
- Consideration of 7 sites for the 2023 Texas GLO Coastal Resiliency Master Plan
- Data sharing with GLO and USACE on BU opportunities

Current status, plans, outcomes

- Pursue funds to complete E@D, permitting and incremental costs
- Living document to continue to identify and move sites along the process



Questions/Follow up
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