


Beneficial Use of Sediment: a GLO Perspective

USACE Sustainable Sediment
Management and Dredging Seminar
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The Texas General Land Office and the Coast

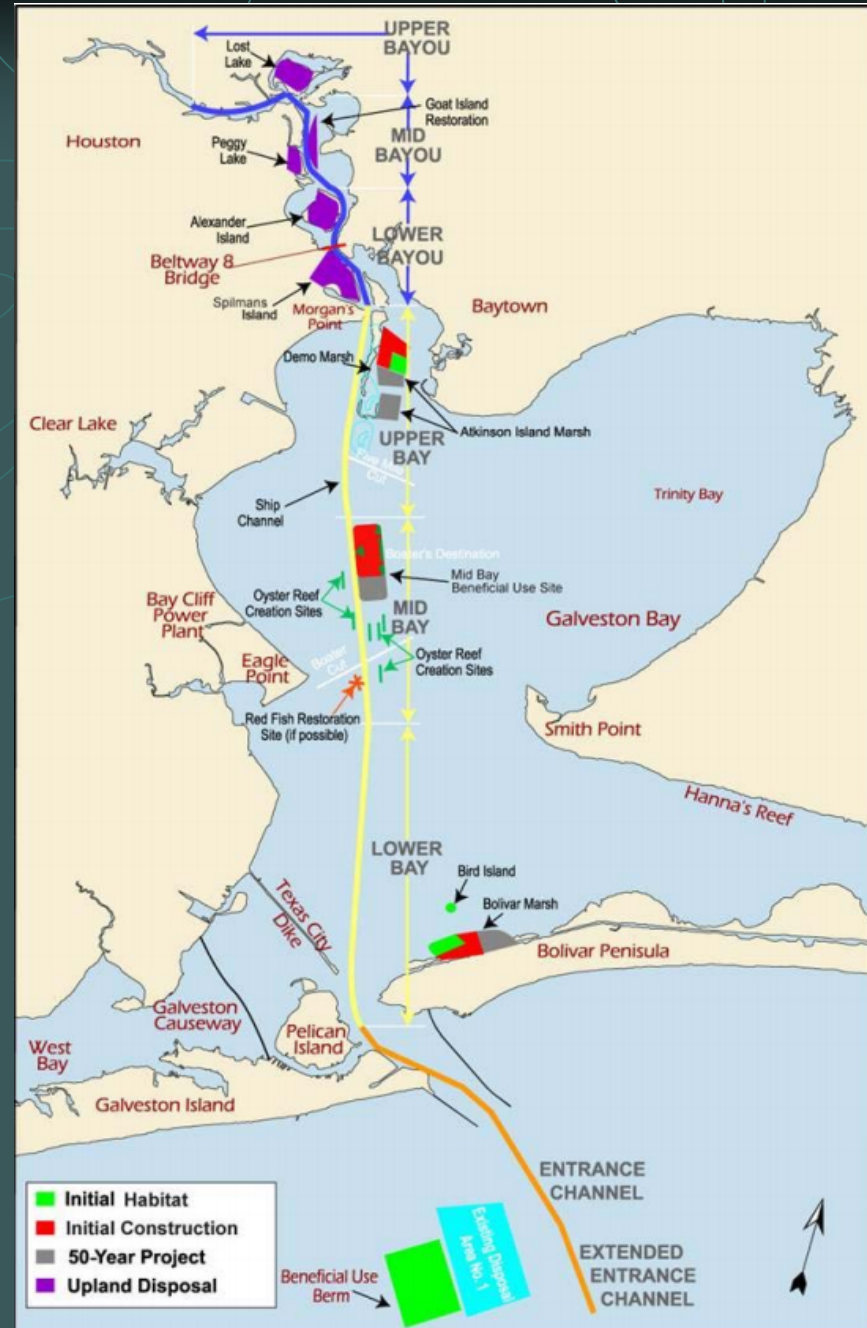
- Since 1836 - Manager of Tidally-Influenced State-Owned Submerged Lands.
- Lead State Agency Responsible for:
 - Coastal Management Program;
 - Beach and Dune Protection;
 - Disaster Recovery Program;
 - Coastal Oil Spill Response;
 - State Coastal Erosion Program.



- 367 miles of Gulf shoreline;
- more than 3,300 miles of bay shoreline;
- 18 coastal counties (26% of State population).

Early BUDM Efforts in Texas:

- South Padre Island – 1988, Nearshore Placement;
- Houston Ship Channel Improvements – 1996 Beneficial Use Plan;
- South Padre Island – 1997, First Beach Placement;
- GIWW Rollover Bay Reach – 1999, First Beach Placement.





State of Texas Programs Funding BUDM Efforts:

- Coastal Erosion Planning and Response Act (CEPRA);
- Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States (RESTORE) Act;
- Natural Resource Damage Assessment (NRDA),
- Deepwater Horizon (DWH) NRDA Settlement;
- Gulf of Mexico Energy Security Act (GOMESA).

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Coastal Erosion Planning and Response Act (CEPRA)

- Texas Legislature passed CEPRA in 1999;
- Currently in 10th 2-year funding cycle;
- Cycle 10 extends through 8-31-2019;
- Goal is to protect the natural resources and economic future of the Texas Gulf Coast;
- Partnerships with local, state, federal, and non-governmental entities to leverage resources.



USACE-GLO BUDM Memorandum of Agreement

- Executed in 2001;
- Covers all USACE Galveston District Maintenance Dredging Projects;
- Streamlined Contracting Process;
- Established 2-Page Support Agreement;
- Avoided Contested Language in Standard USACE Agreements;
- Over 2 Dozen BUDM Projects Executed.

GLO CEPRA BUDM Projects:

- Brownsville Ship Channel - South Padre Island;
- GIWW - Rollover Bay Reach;
- Houston Ship Channel – Galveston Babe's Beach;
- Texas Point NWR.







Texas RESTORE Projects

- Texas BUDM Masterplan:
 - Ducks Unlimited, Anchor QEA, and TxDOT;
 - RESTORE is Funding Planning and Outreach;
 - Establish 4 Regional Beneficial Use Groups.
- Engineering Design and Permitting for Marsh Restoration at Three Sites:
 - TPWD JD Murphree Wildlife Mgt. Area;
 - Pierce Marsh – West Galveston Bay;
 - Greens Lake – West Galveston Bay.

Texas Master Plan for BUDM

Texas Master Plan for Beneficial Use of Dredged Material



A Reason For Concern

From 2010 to 2015, the U.S. Army Corps of Engineers (USACE) Galveston District contracted for an average of 20 million cubic yards per year of dredging (USACE website). This dredging, plus additional privately dredged channels and berths, is critical to maintaining Texas' maritime commerce, which currently ranks second in the nation (Frabotta 2015). Most of this dredged material went to either confined or open bay Placement Areas (PAs; TxDOT 2014), many of which are nearing capacity and provide little environmental benefit. Acquiring PAs or expanding existing ones is costly, difficult, and may require use of eminent domain.

This common method of disposal of dredged material is an unfortunate, lost opportunity for our coastal wetlands and other coastal assets. Texas is losing coastal wetlands at a rate of more than 5,700 acres annually (Moulton et al. 1997). A major cause of this loss is insufficient sediment supply (Tweel and Turner 2012; Ravens et al. 2009).

"Limited capacities of some of the existing confined placement areas, together with expected impediments to future use of open water placement areas, will require development of new placement areas or alternatives in the near future. The scarcity of available upland sites and typically long pumping distances to such areas illustrate the urgent need to explore beneficial uses of dredged material."

USACE High Island to Brazos River Dredged Material Management Plan, Final Preliminary Assessment, March 2012

Meeting the Texas Trustee Implementation Group's Current Restoration Planning Priorities

Restore and Conserve Wetland, Coastal, and Nearshore Habitats

- Create habitat, including for threatened and endangered species
- Reduce erosion
- Retain freshwater
- Attenuate flooding
- Enhance coastal resiliency

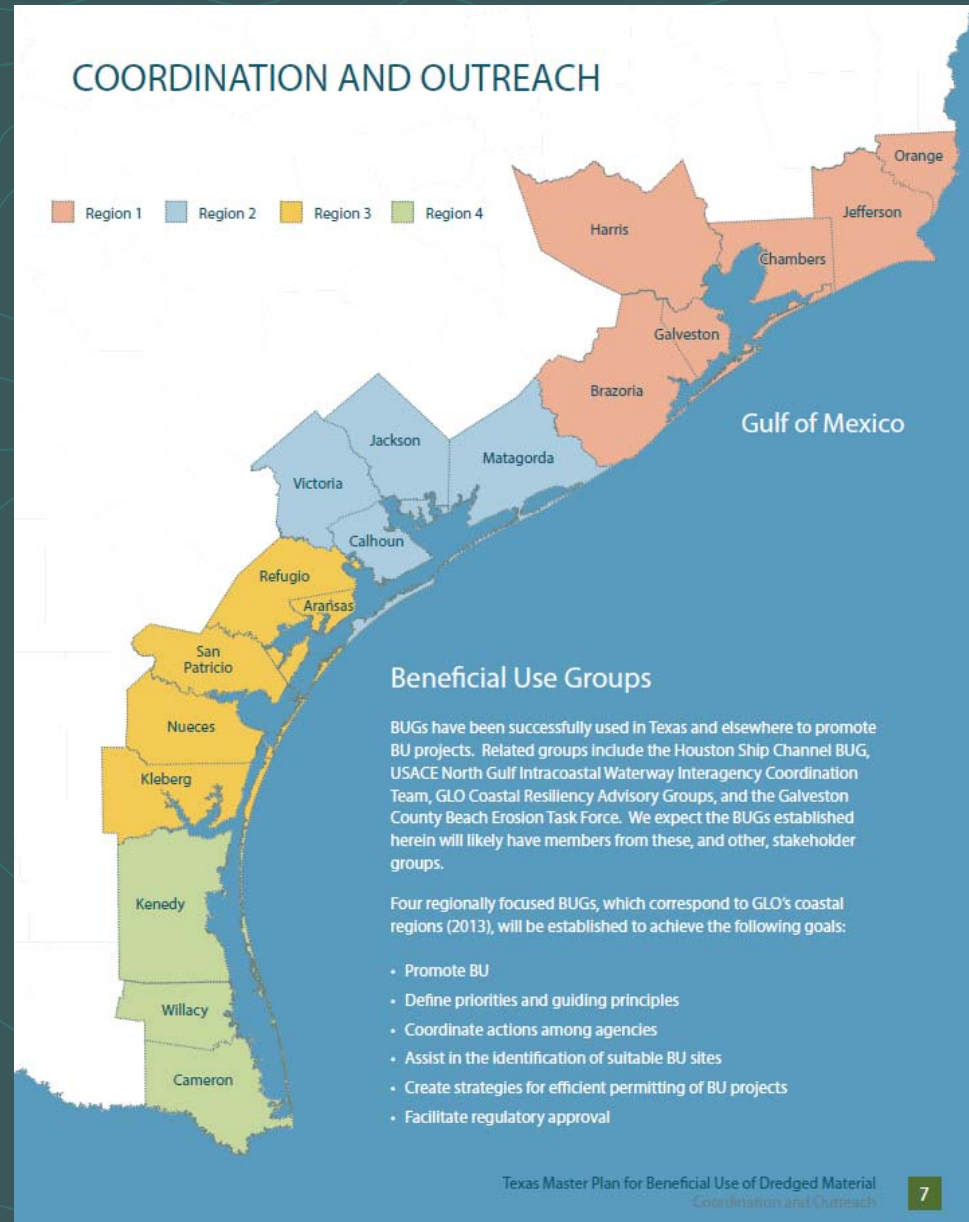
Restore Water Quality through Nutrient Reduction (Nonpoint Source)

- Create wetlands that transfer nutrients from water to sediment, aquatic plants, and the atmosphere

Replenish and Protect Oysters

- Reduce incidental burial of oyster reefs by placing dredged material in Beneficial Use sites

Texas Master Plan for BUDM



Engineering Design and Permitting for Marsh Restoration at Three Sites



Pierce Marsh BUDM





Deepwater Horizon NRDA Trustees

- Coordinated by NRDA Trustee Agencies:

Texas General Land Office;
Texas Parks and Wildlife Dept.;
Texas Commission on Environmental Quality;
National Marine Fisheries Service;
U.S. Fish and Wildlife Service;
U.S. Environmental Protection Agency; and
U.S. Dept. of Agriculture.

- DWH Oil Spill on April 20, 2010;
- DWH NRDA Settlement Consent Decree – April 4, 2016.

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DWH NRDA BUDM Projects

- Texas Bird Rookery Island Project - Restore Four Islands:
 - Dickinson Bay;
 - Dressing Point;
 - Rollover Bay; and
 - Smith Point.
- Dredged Material Planning for Wetland Restoration, E&D and Permitting for 8 Sites;
- Pierce Marsh BUDM Implementation;
- Bessie Heights Marsh BUDM Implementation.

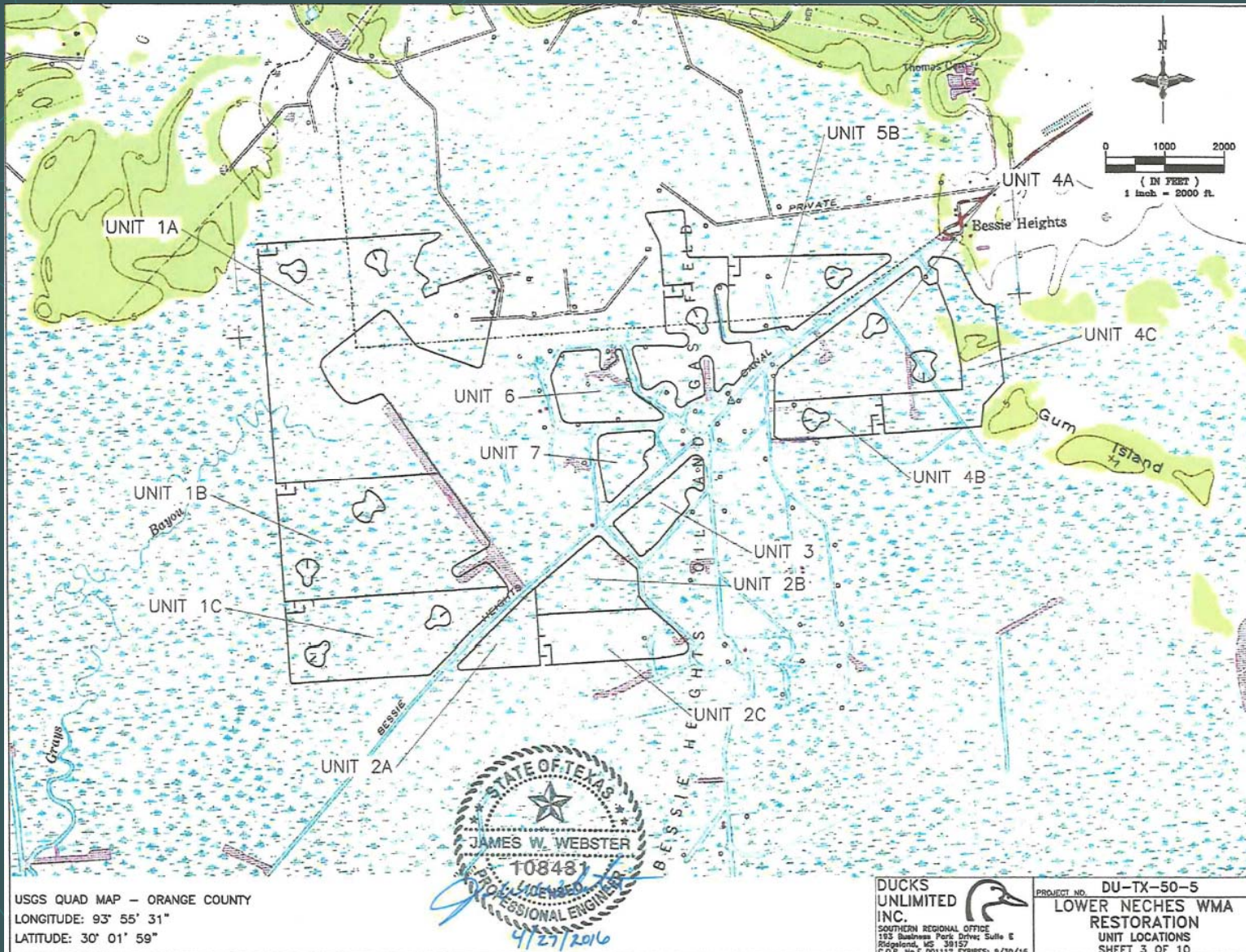
DWH NRDA BUDM Projects: Texas Bird Rookery Island Project



DWH NRDA BUDM Projects: Bessie Heights BUDM Implementation



DWH NRDA BUDM Projects: Bessie Heights BUDM Implementation



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Planning Steps

- Identify desired BUDM location;
- Establish site ownership;
- Determine Corps dredging schedule in vicinity of BUDM site;
- Coordinate environmental compliance;
- Execute 2-Page Support Agreement;
- Pay the Corps;
- Dredge and Place Material.

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Looking Forward

- Good funding opportunities for BUDM design and permitting;
- Concerns about capacity in existing DMPAs;
- Still a great need for habitat restoration;
- Agencies looking to partner with industry;
- Better regional coordination needed;
- Some projects already moving forward.

For More Information:

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