



Beneficial Use Bank

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Nature Conservancy Project Goal

- Determine if a loan to non-federal sponsors would facilitate the beneficial use of federal dredged material
- Evaluate three case studies where federal dredged material could be beneficially used

Key Project Terms

- Non-Federal Sponsor- State or Local Government
- Federal dredged material - Spoil material from navigation channels
- Beneficial Use – Obtaining environmental benefit from placement of dredged material
- Federal Standard – Least cost environmentally acceptable method of material disposal
- Incremental Cost – Cost to Sponsor

Impediments to Beneficial Use

- USACE
 - Federal Standard
 - Waterway maintenance schedule - shoaling
 - Limited budget for continuing authority programs
- Non-Federal sponsor
 - Funding responsibilities
 - Management and real estate responsibilities

Three Case Studies

- Pierce Marsh, Galveston Bay, Tx
 - Gulf Intracoastal Waterway – Source
 - Texas General Land Office - Sponsor
- West Bay / Tiger Pass, Venice, LA
 - Head of Passes, Mississippi River –Source
 - Plaquemines Parish Government - Sponsor
- Jamaica Bay, Queens, NY
 - Port of New York and New Jersey - Source
 - New York City Parks Department - Sponsor

Pierce Marsh, Galveston Bay, TX



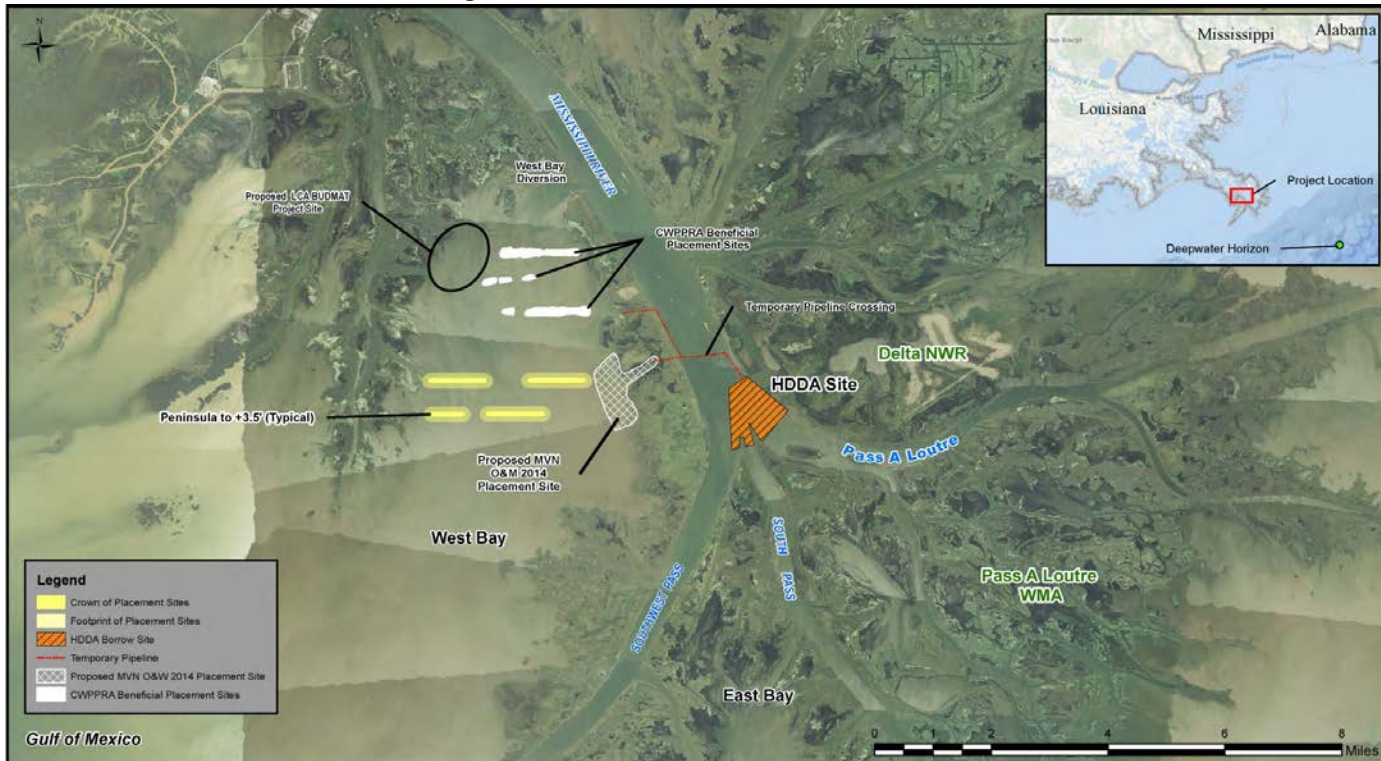
Pierce Marsh, Galveston Bay, TX



Common Project Features

- Degraded Marshes
 - Caused by Subsidence and Erosion
- Dedicated Non-Federal Sponsors
- Approved Long Term Restoration Plans
- Federal Funding thru Continuing Authorities
- Nearby Source of Federal Dredged Material
 - Federal Navigation Channels

West Bay, River Mile 5, LA

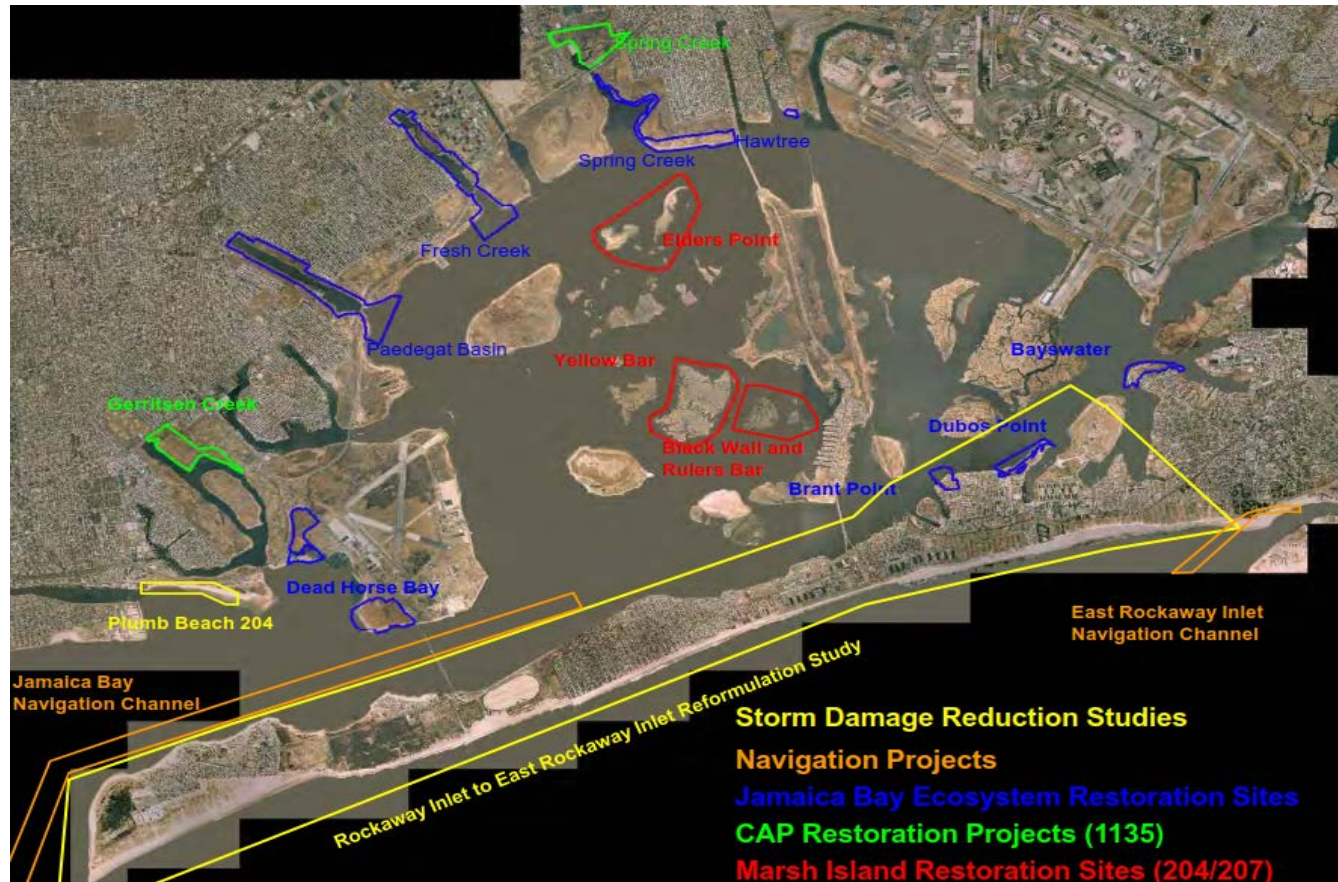


SITE MAP OF WETLAND CREATION IN WEST BAY, LOUISIANA, USING DREDGE MATERIAL FROM HDDA

Project Steps – Continuing Authorities

- Project Agreement (Feasibility Study, Project)
 - Non-federal payment to USACE for Study
 - 50% of study cost less Work-in-Kind
- Federal Approval of Feasibility Study
- Construction of Project - USACE
- Monitor / Adaptive Management - Local

Jamaica Bay, Queens, NY



Jamaica Bay Marsh Islands Restoration



BUILDING STRONG®

Transitioning: East to West



Completing Elders East (2006)

Starting Elders West (2009)



Building the Island – Sand Delivery



Building the Island – Containment



Texas – Gulf Intracoastal Waterway Pierce Marsh Dredged Material Placements

Year	Acres	Quantity (cubic yards)	Source and Distance
1999	53	unknown	Internal
2001	45	Terracing only	Internal
2003	25	Terracing only	Internal
2008	280	unknown	Bayou Vista Subdivision
2015	84	144,000	GIWW
2018	150	TBD	GIWW

**Texas – GIWW to Pierce Marsh
1997 Cost of Dredged Material (Federal and Non-Federal*)**

Source	Destination	Mode	Cost (\$) per c.y.-mile	Distance (miles)	Cost per c.y.
GIWW	Containment	Hopper	1.24 – 1.86	.5	.77
GIWW	Pierce Marsh	Pipeline	0.93 – 1.73	4	5.32
Galv. Bay*	Pierce Marsh	Barge	0.93 – 1.73	14	21.56
Upland*	Pierce Marsh	Truck	6.99- 10.49	10	87.50

HDDA to Tiger Pass/West Bay 1997 Cost of Dredged Material (Federal and Non-Federal*)

Source	Destination	Mode	Cost (\$) per cubic yard (c.y.)-mile	Distance (miles)	Cost per c.y.
HDDA	Ocean Disposal	Barge	-	22	-
HDDA	Tiger Pass	Pipeline	.30	10	3.03
HDDA	West Bay	Pipeline	.60	5	3.03
Barataria*	West Bay	Pipeline	6.84	45	307.80

Louisiana - Queen Bess Island – Barataria Bay Source Cost of Obtaining Dredged Material (Non-Federal)

Source Distance (miles)	Acres	Cubic Yards	Year	Cost (\$) per cy-mile
1.4	8	82,000	1990	6.84
1.0	9.6	52,950	1996	18.20

Cost of Transporting Dredged Material (Federal)

Mode	Disposal Method	Year	Cost (\$) per cy
Dredge Vessel to Historic Area Remediation Site (HARS)	Open Water	2017	12.00
Barge to Jamaica Bay Islands	Thin Layer Placement	2017	30.00

Conclusions

- Incremental Cost Share is Significant
 - Dependent upon Distance
 - Federal Continuing Authorities Reduce NFS Cost
- Federal Channels Dredged Only DM Source
- Funding Problems Result in Delays
- Loan to NFS Might be Beneficial
 - But Many Other Issues

Potential Next Steps

- Quantify Beneficial Use Potential
 - Distance and Dredged Material Type
- TNC assistance with Feasibility Studies
 - Assist Agreements between USACE & NFS
- Study Beach Nourishment Project
 - Galveston Island Precedent
 - Different constraints (schedule, material)