Jesuit Bend Mitigation Bank
Louisiana’s only river-dredged mitigation bank

Worth Creech-VP Southeast
Restoration Systems

Gregg Fell- Senior Permitting Analyst
Natural Resource Professionals
Compensatory Mitigation

- Required for Federal Wetland Permits (§404)
- No-Net Loss of Wetlands
- In-Kind and In-Watershed Replacement of unavoidable impacts
- Restoration, Enhancement, Preservation
- Mitigation Banks, Permittee-Responsible, ILF
- Allows for sustainable development and restoration of aquatic resources
Mitigation Banking to Restore Coastal Louisiana?

Industrial Impacts

Levee Construction
Jesuit Bend Project Features

- Marsh Re-establishment: 234.8 Acres
- Existing Cypress Swamp: 42.5 Acres
- Marsh Enhancement: 28.7 Acres
- Marsh Rehabilitation: 8.3 Acres
Serious permitting!

1. **Jurisdictional Determination:** MVN-2011-01335-SE  July 2011
2. **LA DEQ WQC:** 110725-02/AI #17747  January 2012
3. **MNSA/USCG:** Letter of No Objection  August 2014
4. **NOGC:** Railroad Permit PL-RS-112014  November 2014
5. **Office of Coastal Management:** Coastal Use Permit CUP20110858  May 2015
6. **CPRA:** Letter of No Objection  May 2015
7. **Plaquemines Parish Gov’t:** Construction/Gas Permit 2015-474  June 2015
8. **USACE:** Section 10/ Section 404 MVN-2011-2690-MR  August 2015
9. **LDEQ:** LPDES LAR10K994  August 2015
10. **LA Wildlife and Fisheries:** Dredge Permit WCF-201548  September 2015
11. **DOTD:** Utility Permit 2015225  September 2015
12. **Bank Approval:** April 15, 2016
Interagency Review Team

- US Army Corps of Engineers
- US Environmental Protection Agency
- National Marine Fisheries Service
- US Fish and Wildlife Service
- LA Department of Natural Resources
- LA Department of Wildlife and Fisheries
It takes a team!
Jesuit Bend Facts

• 1.3 Million+ Cubic Yards of Sediment dredged from -90 feet and pumped 5 miles
• 211,000 Plants installed by hand
  – *Spartina patens* (cordgrass)
  – *Panicum hemitomonon* (maidencane)
  – *Paspalum vaginatum* (seashore paspalum)
  – *Schoenoplectus californicus* (bullwhip)
• 11,000 linear feet of waterways constructed
• Conservation Servitude held by Mississippi River Trust
Jack and Bore Operation Under LA 23 and Railroad
Fill Operations begin
Fill Operations
Grading
Project Challenges
“Instant marsh” required for credits
Target Elevation

• Target Elevation Factors
  – Adjacent Marsh and Swamp Elevations
  – Geotechnical Data, Subsidence, Sea-Level Rise, and Accretion
  – Developed with Andy Nyman, PhD

• Target Elevation
  – Target Construction Elevation: 0.8’ NAVD 88
  – Target Settled Elevation: 0.4’ NAVD 88
  – Target Future Elevation: ~0.0’ NAVD 88
High Water from Tropical Low Patricia
High water planting conditions
Other Challenges

- High Mississippi River delayed start of dredging
- Bald Eagle Nesting Season (November – April)
- Colonial Bird Nesting Season (March – April)
- Impending NOV/NFL Levee construction along discharge pipe route.
- Planting Deadlines
- Mitigation Banking Instrument approval delayed. We took the risk and started construction
First Year Monitoring Event-December 2016

- 110 Permanent Monitoring Plots
- Surveyed Elevations:
  - 0.62’ NAVD 88 (Average)
- 30+ Plant Species
- Wildlife Utilization
- Tidal Influence

December 7, 2016
Mitigation Banking Model
Credits released for sale over time

- **Q2 - 2016 Credits Released**
  - Construction completed;
  - 123.8 Acres Available

- **2018**
  - Yr. 3 Monitoring Approval;
  - 74.22 Acres Made Available

- **2023**
  - Yr. 7 Monitoring Approval;
  - 49.48 Acres Made Available

- **2024 and Beyond**
  - Long-Term Stewardship
Current Challenges and Problems

• The New Orleans USACE is using the interim Louisiana Wetland Rapid Assessment Method (LRAM) assessment protocol that does not give additional credit for marsh restoration using beneficial use of dredge material.

• The New Orleans USACE service area for Jesuit Bend changed post approval. We now compete directly with other Banks outside of the Barataria Estuary that did not use dredge material from the Mississippi River.

This needs to change and we would appreciate your help on this when the USACE LRAM comment period opens in February 2017.
Lessons Learned... We can do this again! Questions?