BOEM

Bureau of Ocean Energy Management

SEDIMENT DATA COLLECTION OFF THE COAST OF TEXAS

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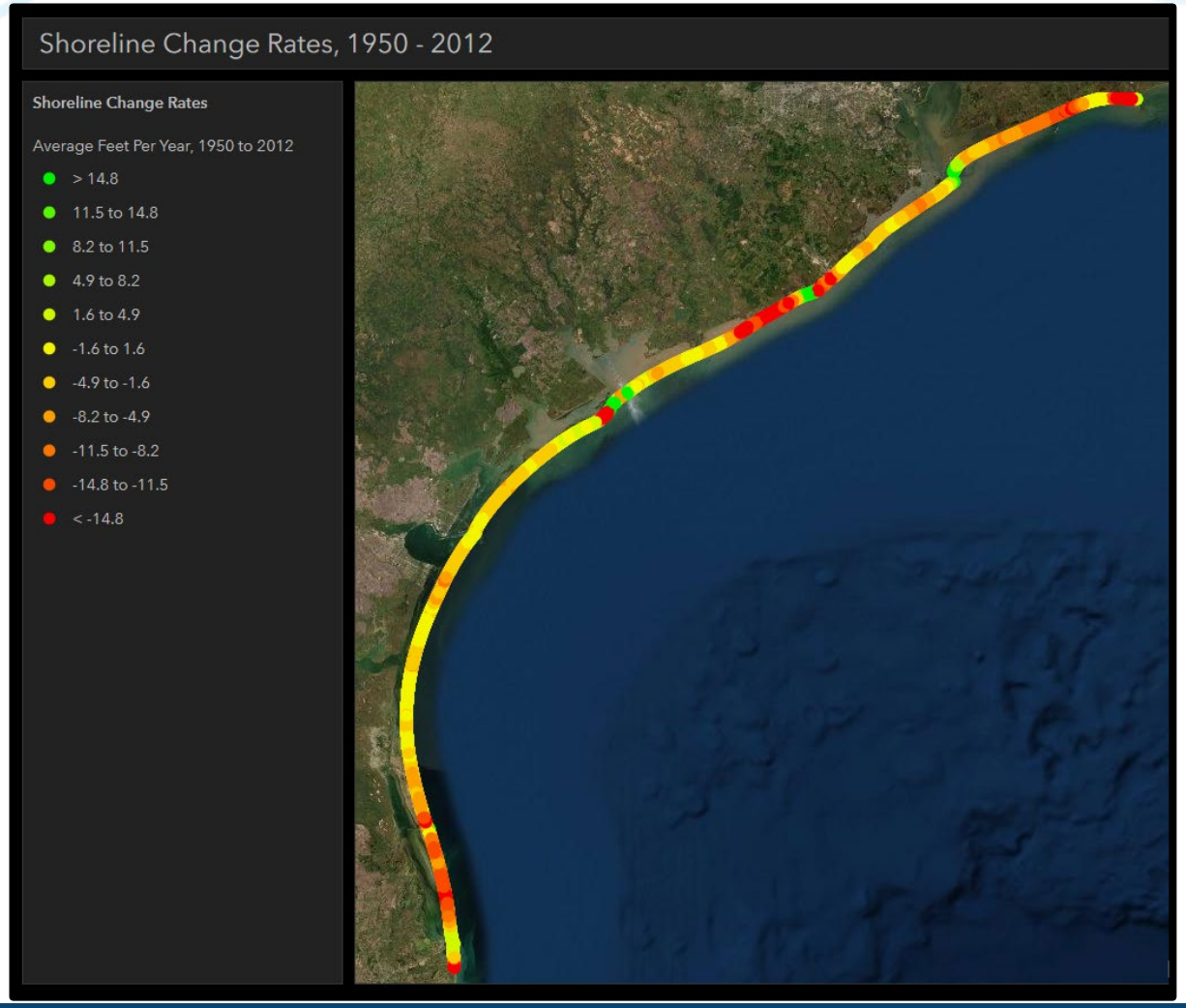
MOU to Coordinate Texas Sediment Source Identification

BOEM, USACE-Galveston, and Texas GLO are addressing coastal restoration in Texas by streamlining and synchronizing sediment resource identification for Texas coastal protection and restoration projects and plans.

- Leverage investments
- Locate sand resources
- Reduce duplication of effort
- Execute research
- Exchange information

Coastal Resilience Planning



- The need for coastal resilience planning increases following major storm events.
- Coastal Resilience planning:
  - can help maintain local economies,
  - protect valuable ecosystems,
  - protect marine infrastructure,
  - and ensures compliance with Texas laws.

Near Term Regional Needs

- **Coastal Texas**
  - Approximately 60 million cubic yards of sediment is needed to construct the berm and dune system along Bolivar Peninsula.
  - Potential borrow sites are tentatively located in the Sabine and Heald Banks.

Near Term Regional Needs

- **South Padre Island**
  - South Padre Island is experiencing erosion of greater than 14 ft per year in certain areas.

Long Term Regional Needs

- **Corpus Christi**
  - Identified need due to the rate of erosion, the local economy, and the Texas Open Beaches Act.
- **Sargent Beach**
  - The shoreline's proximity to the GIWW coupled with the rapid rate of erosion (14.8 ft per year) and subsidence in the region suggests revetment and Seawall should be revisited.

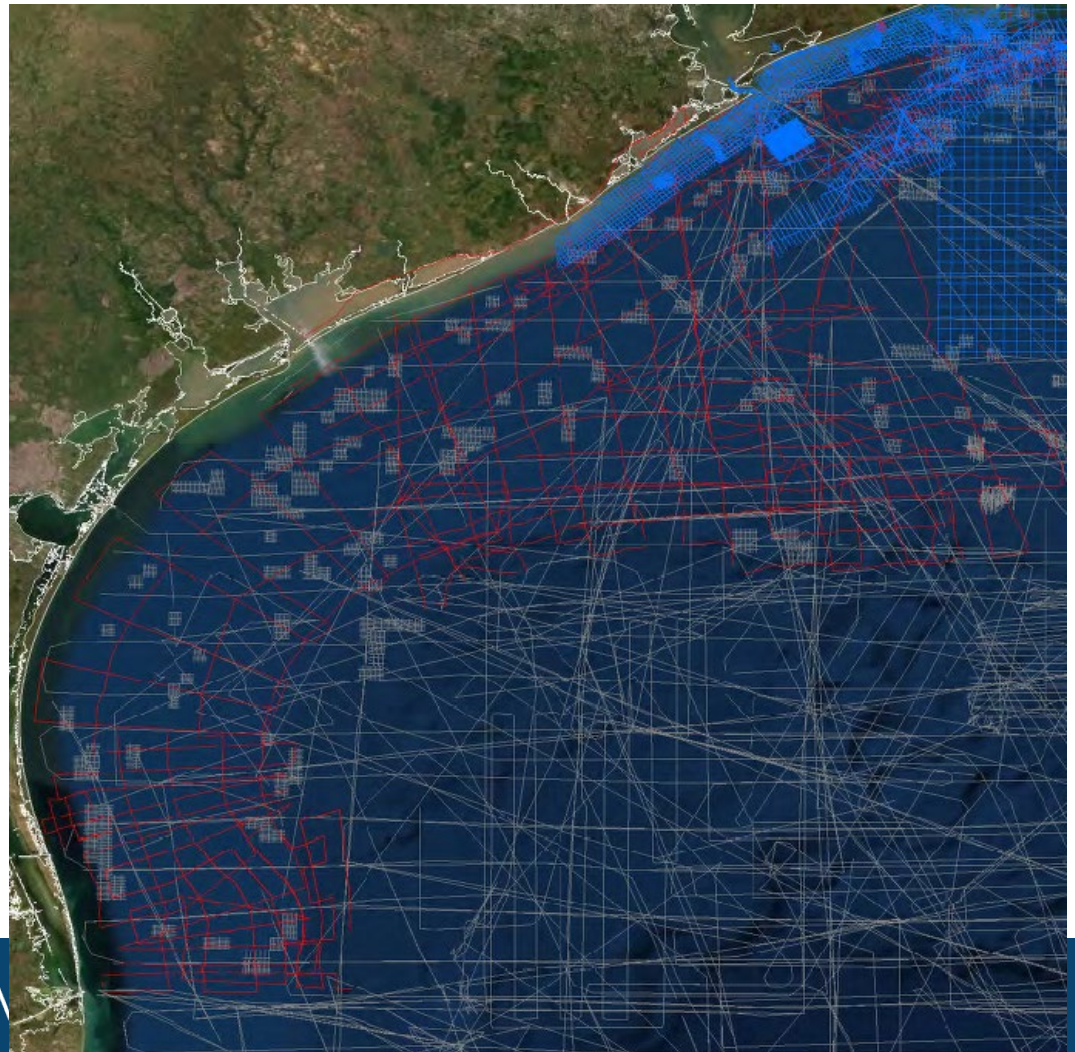
WEDA's Future Involvement

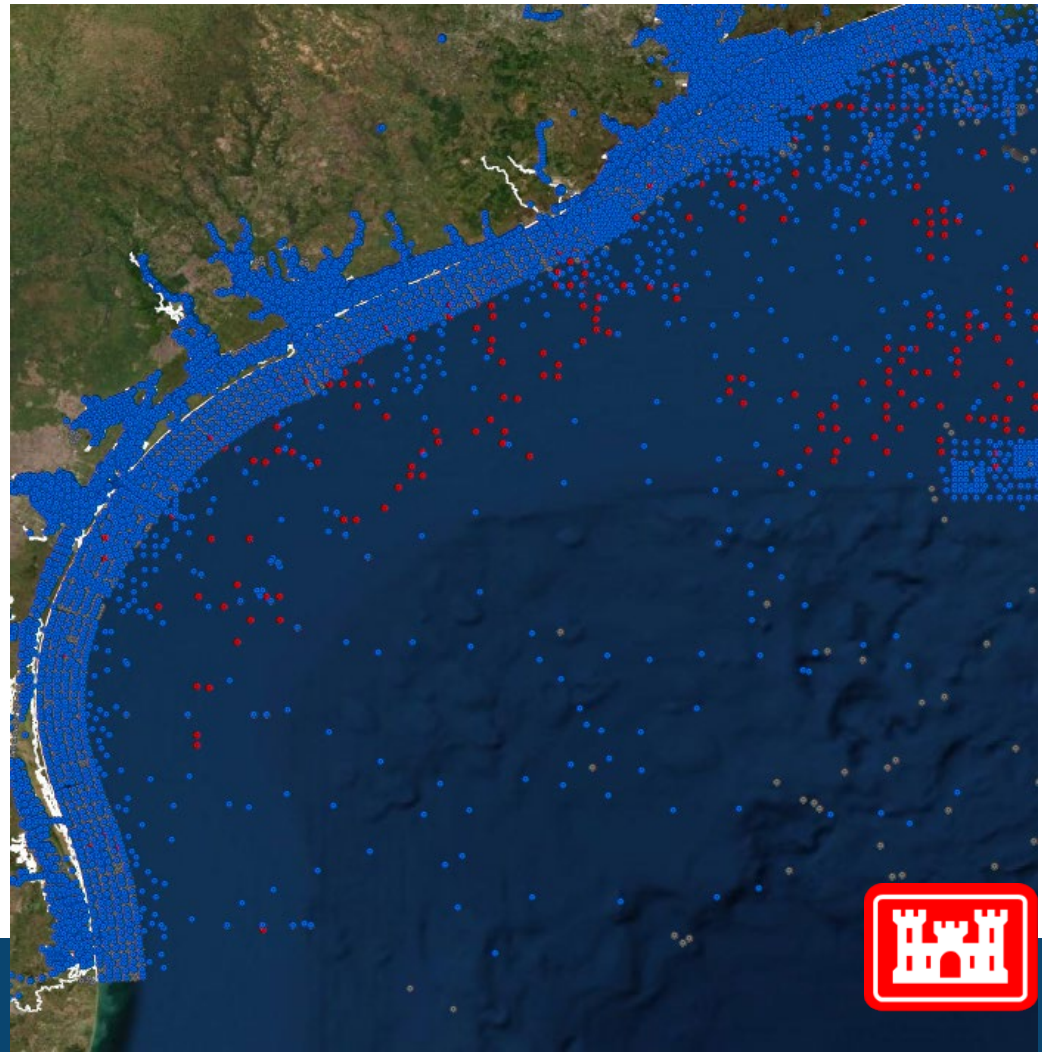
- There is a large and immediate need for sediment along our coastline and the demand far exceeds what is available or economically viable for upland sources.

- USACE and GLO, with BOEM's guidance, will be looking to the dredging industry to be valuable partners in helping maintain our shoreline for the future of the Texas Coast.

Where is there data for Texas?

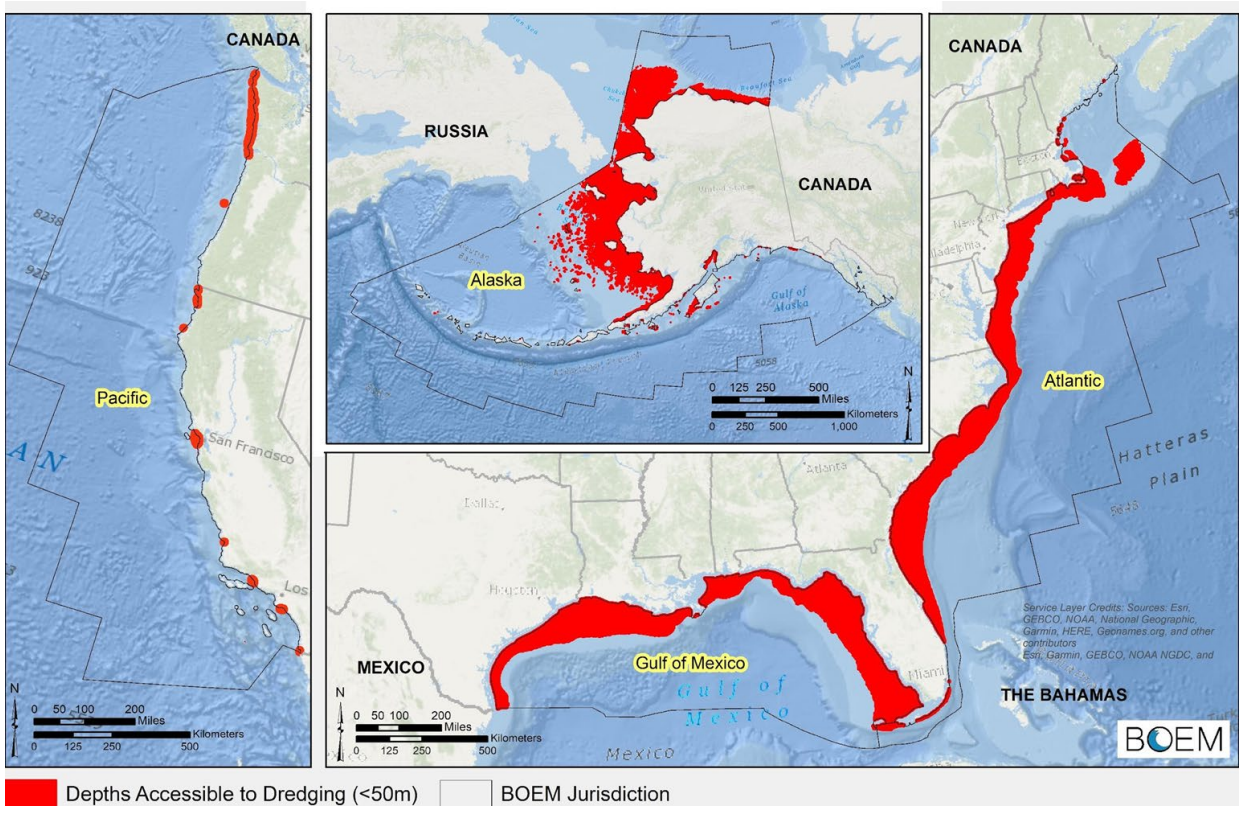
- Major portions of Texas OCS Shelf lacking data. (NGSAAP 2021)





Noncompetitive OCS Sand and Sediment

- **Leasing authority - Section 8(k) of the Outer Continental Shelf Lands Act (OCSLA)**
- **Negotiate agreements with federal partners (e.g., U.S. Army Corps of Engineers) and localities (e.g., counties)**



60 negotiated agreements executed

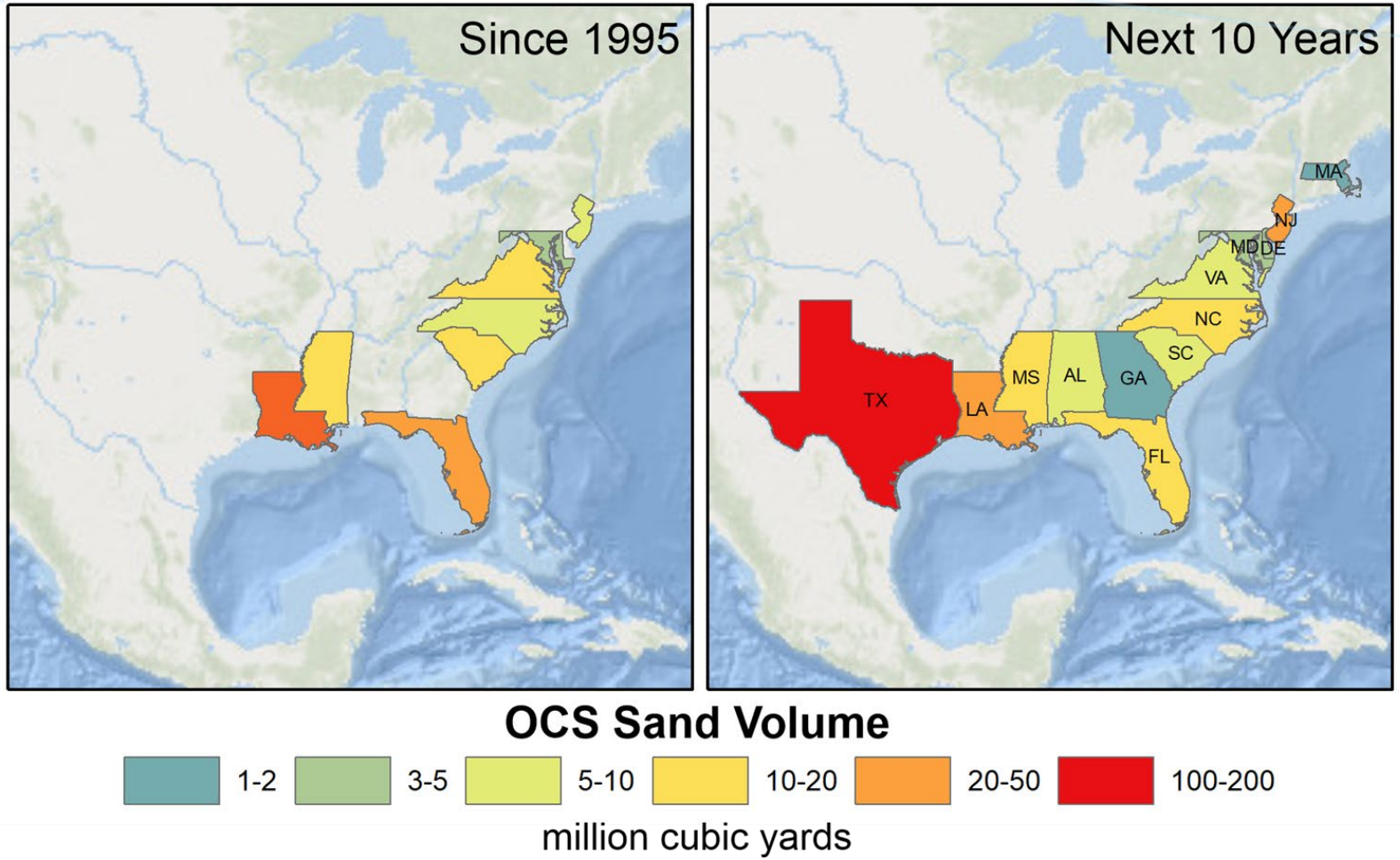
47 coastal restoration projects completed

Nearly **167** million cubic yards of material authorized

Nearly **384** miles of shoreline restored in 8 states

Effective Nov. 2020

National Offshore Sand Inventory (NOSI)



- **Identify location and character of OCS sand resources**
- **Respond quickly to emergencies**
- **Coordinate with local and federal partners to fill data gaps**
- **Support stewardship role and coastal resilience**

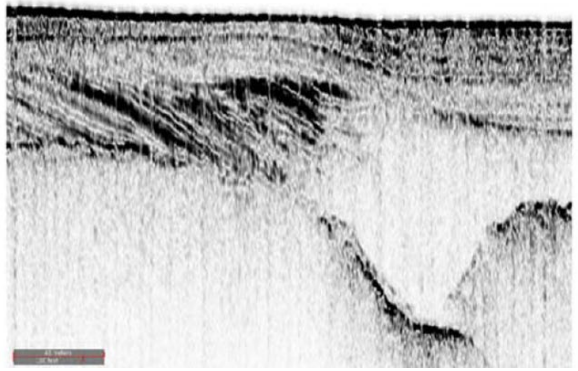
Investments in NOSI **protect billions** in national resources and **reduce** emergency response time.

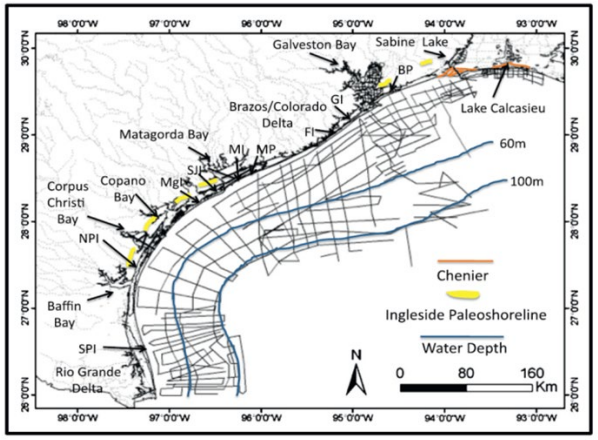
Texas-BOEM Cooperative Agreement

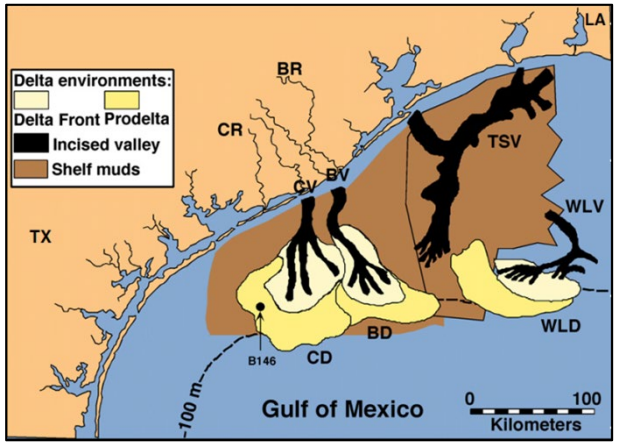
Texas Offshore Sediment Resources Inventory: Development and Application of Geophysical Processing Workflows for Sand Resources Evaluation

Dr. John Goff and Dr. Sean Gulick, University of Texas, Institute of Geophysics

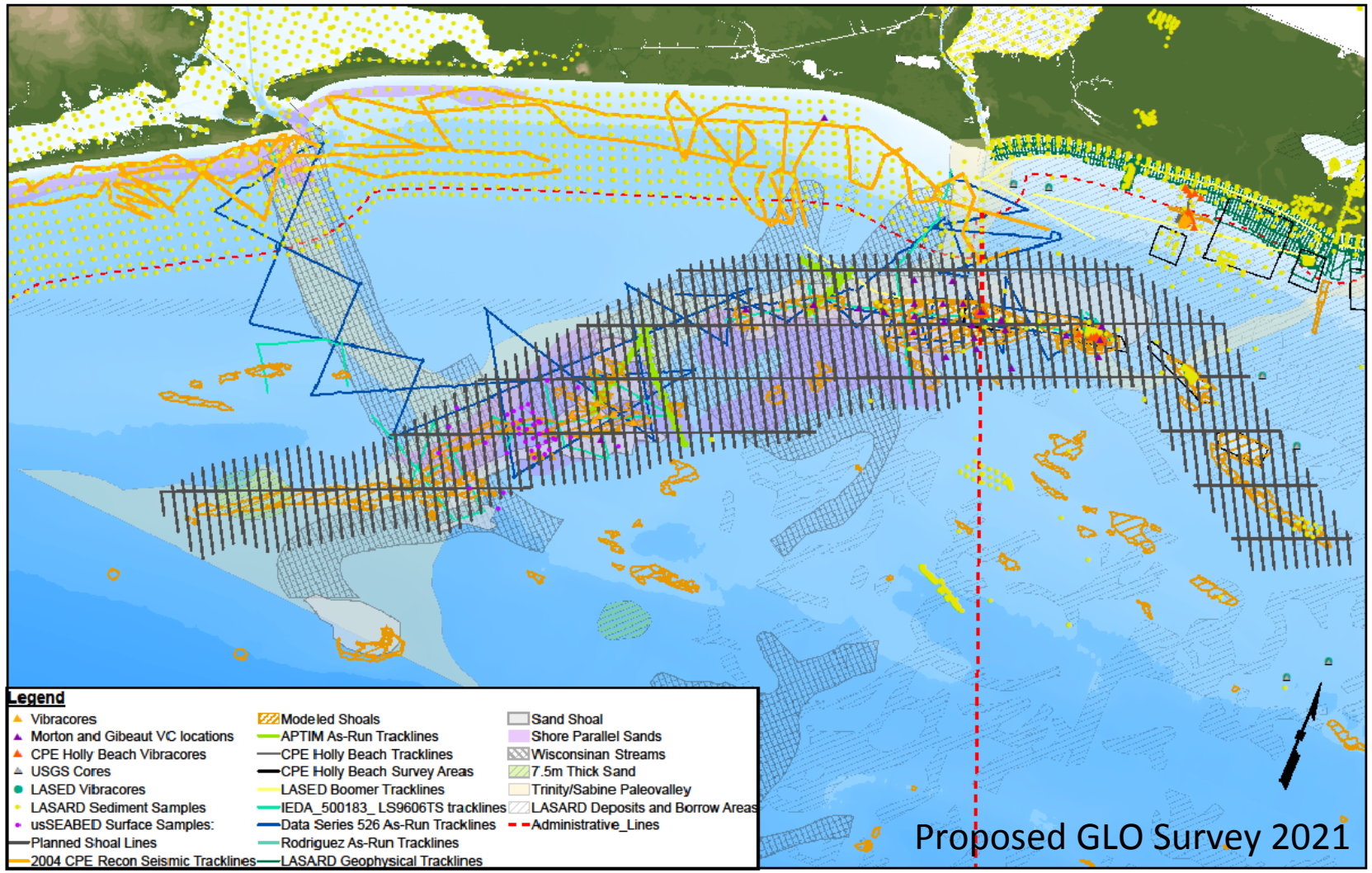
- Developed geophysical data post-processing workflow to improve interpretive capability
- Digitization of legacy data and incorporation into database
- Collection of new data in targeted areas for increased resolution of sand bodies within paleo-valleys and links to shelf shoals







GLO Surveys of Upper Coast of Texas



- **Texas GLO Cooperative Agreement (2021)**
  - Over 1,000 line-miles of geophysical data collected on Sabine Bank
  - Provides reconnaissance level detail of the upper coast of Texas.
  - Data supports adjacent USFWS Texas Point project as well as projects outlined in Texas Coastal Plans.

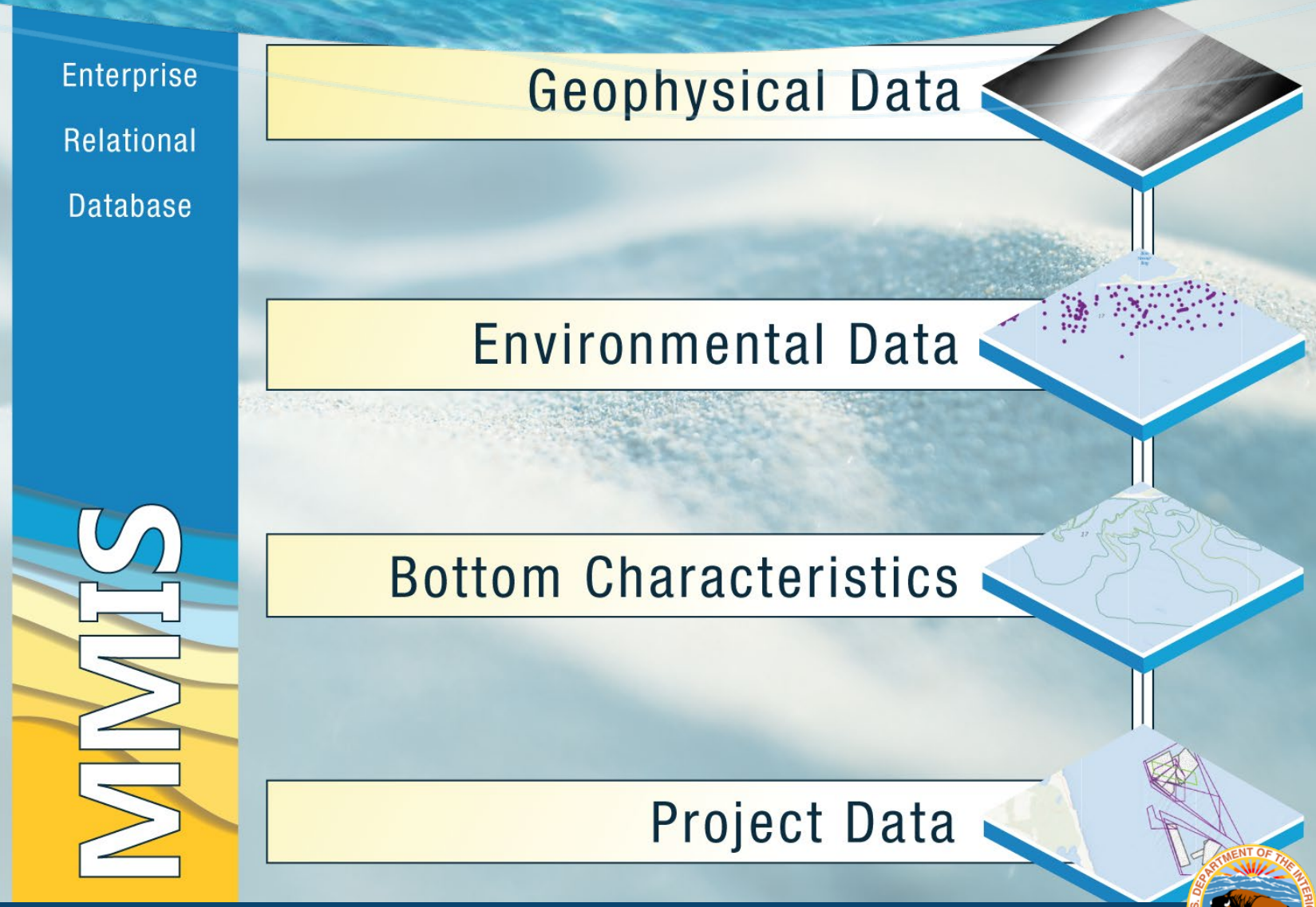
Long-term Federal and State Agency Agreements

- **Other coordination opportunities anticipated in upcoming years:**

- 3rd Party Data Digitization (2021)
  - Digitizing industry data in targeted areas.
- Texas GLO Cooperative Agreement (2021)
  - Geophysical data at reconnaissance level detail of Middle Texas Coast.
- BOEM MMP to allocate funds in FY 2022 towards data collection efforts in coordination with GLO and USACE.
  - Targeting areas with shared renewables interest.
  - Geotechnical ground-truthing.

Marine Minerals Information System (MMIS)

- Develop and compile data
- Discover and share data with partners
- Use for regional or site-specific analysis
- Supports decision-making
- Public geospatial viewer



Facing the Future

- **Efficient and responsible use of OCS sand resources** to meet increasing demand in Texas
- **Manage current and future resources**
- **Compile new geophysical, geological, and project data**
- Share data via the **Marine Minerals Information System**

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