FY21 RSM IPR

SAM and ERDC, Synthesis of Sediment Budget Assessments along the Northern Gulf of Mexico, Elizabeth Godsey and Charlene Sylvester

BLUF: Multiple funding streams have provided a means by which numerous sediment transport/budget analysis have been conducted across much of the northern Gulf of Mexico. This provides a unique opportunity to **work with** a set of **diverse stakeholders** to **synthesize** a large body of knowledge **across the region**.

Challenge/Objectives

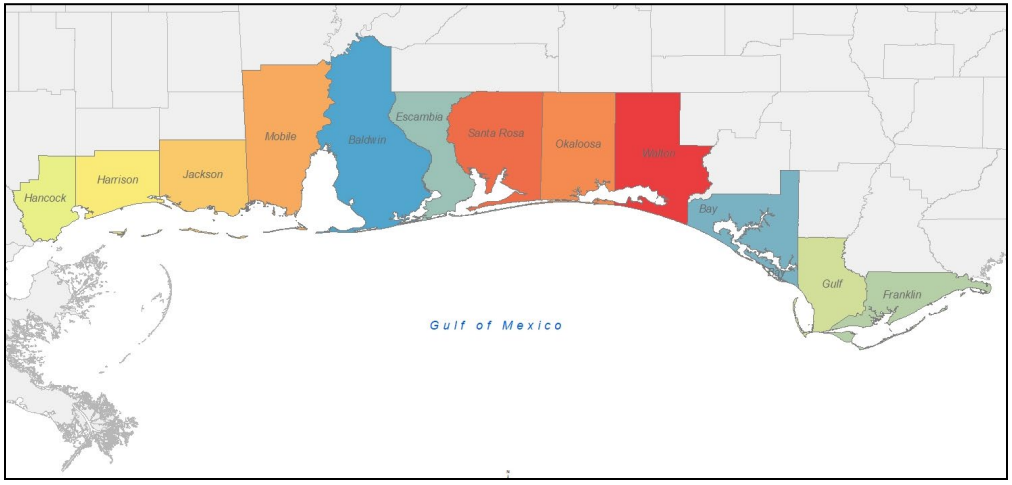
- Highlight existing tools and technologies
- Synthesize available sediment budgets
- Identify existing methods and gaps (spatial areas with limited and/or outdated coverage)
- Identify opportunities across multiple management entities

Approach

Compile and format data input into a single repository and database that can be spatially referenced

Highlight existing tools and technologies to include:

- ArcGIS Pro Sediment Budget Analysis System
- ArcGIS Online Dashboards and Hubs



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District/Other USACE PDT Members

Charlene Sylvester, ERDC-CHL
Sean McGill, ERDC-CHL
Rose Dopsovic, Mobile District
Elizabeth Godsey, Mobile District
Mark Byrnes, Applied Coastal
Rob Hollis, Applied Coastal
Soupy Dalyander, The Water Institute of the Gulf
Eve Eisemann, former ERDC employee

Stakeholders/Partners

Florida Department of Environmental Protection (FDEP)
Alabama Geological Survey (GSA)
Mississippi Department of Marine Resources (MDMR)
National Park Service (NPS)
United States Geological Survey (USGS)
Gulf Water Institute of Science (GWIS)
National Fish and Wildlife Foundation (NFWF)

Leveraging/Collaborative Opportunities

Data and resources from the multiple entities and efforts :

RSM program initiative to create regional sediment budget viewer
JALBTCX Volumetric Change Tool
Channel Shoaling Analysis Tool
MsCIP Monitoring and Adaptive Management
South Atlantic Coastal Study
National Shoreline Mapping Study
Gulf Island National Seashore Sediment Budget
Northern Gulf Sediment Availability and Allocation Program
Gulf of Mexico Alliance Regional Sediment Management Master Plan
MDMR Beneficial Use Program
FDEP Strategic Beach and inlet management plans.

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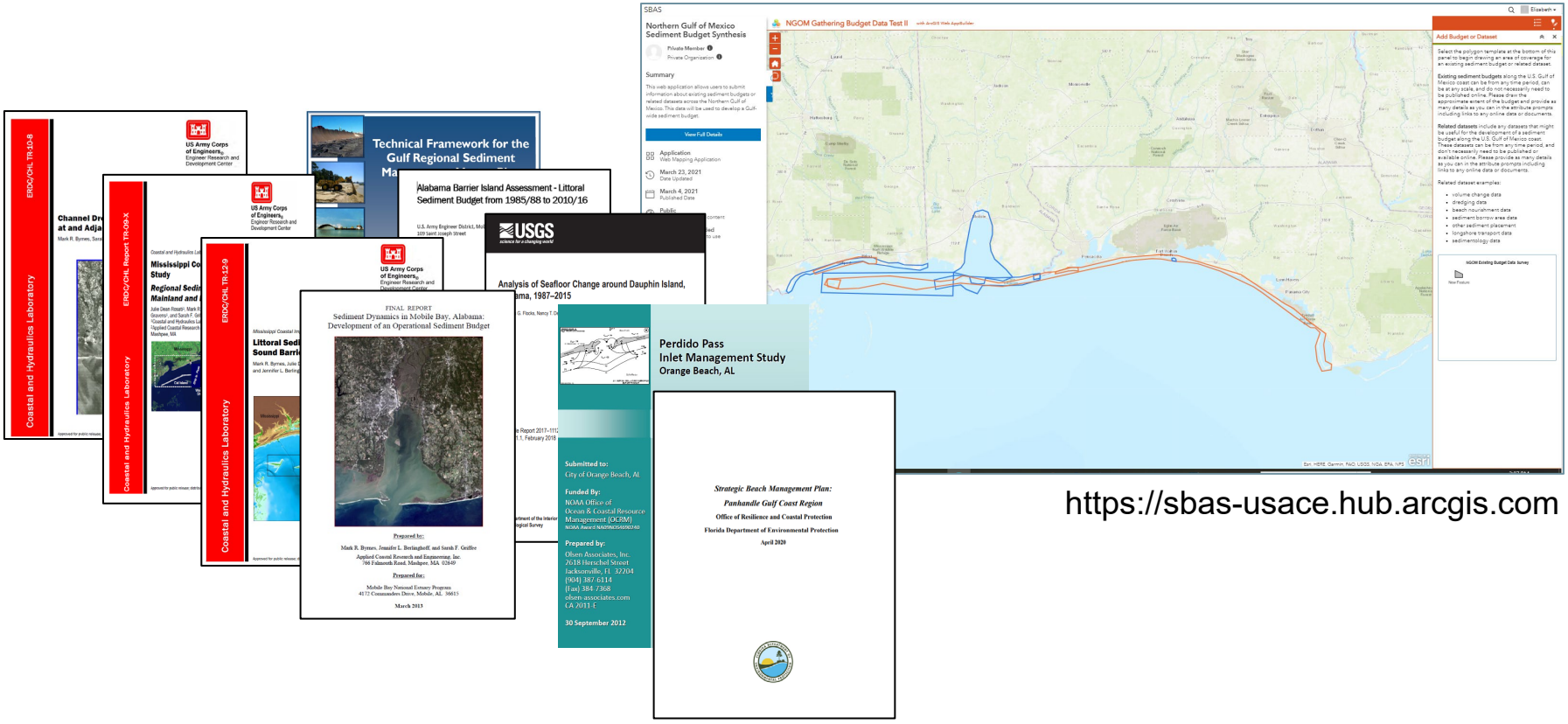
SAM and ERDC, Synthesis of Sediment Budget Assessments along the Northern Gulf of Mexico

Accomplishments/Deliverables

Stakeholder Outreach and Engagement

Data Compilation (Reports and Sediment Budget Data Sets)

ArcGIS Web Application Developed for Data Gathering



https://sbas-usace.hub.arcgis.com

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SAM and ERDC, Synthesis of Sediment Budget Assessments along the Northern Gulf of Mexico

Challenges Faced

Covid 19 impacts, current workloads and adverse market conditions affecting contracting.

Path Forward

Hold workshops to:

- Review and refine the database of existing data and tools for use in RSM
- Development of the conceptual framework of an information hub for synthesis and dissemination of RSM-relevant data and information
- Identification of priority gaps in existing data/analyses and opportunities for interagency collaboration

Lessons Learned

Contracting can be a lengthy process.

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SAM and ERDC, Synthesis of Sediment Budget Assessments along the Northern Gulf of Mexico

Over 21.7 million cubic yards of sediment have been moved along the Northern Gulf of Mexico within the Mobile District through RSM implementation to include those of the 1999 Regional Sediment Management Northern Gulf of Mexico Demonstration Project that looked at the Northern Gulf of Mexico as a system.

Past efforts conducted as part of the 1999 Regional Sediment Management Northern Gulf of Mexico Demonstration Project has led to regional sediment management benefits of over $2 million a year as documented in the 2020 South Atlantic Division Regional Sediment Management Optimization Update. These benefits are primarily the economic value demonstrated in the integration of Navigation (NAV) and Coastal Storm Risk Management (CSRM)

Relationship building, knowledge and tool sharing, better system understanding, and collaboration leads to long term RSM benefits.