DREDGE MATERIAL MANAGEMENT PLANS
5-YEAR, 20-YEAR, AND BEYOND

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RSM RCX

DREDGE MATERIAL MANAGEMENT PLANS (DMMPS)

Each Federal navigation project must develop and maintain a Dredged Material Management Plan (DMMP) to demonstrate sufficient dredged material disposal capacity **for a minimum of 20 years**.

Key Components of the DMMP

- Evaluate and select dredging equipment for various materials to be dredged.
- Plan, design, construct, O&M open-water and confined placement areas
- Plan, design, develop, and manage dredged material for beneficial uses

DMMP DECISION DOCUMENTS

- **Must establish the Federal Standard/Base Plan**
- **Must Evaluate Alternative Plans**

Each alternative plan is to be formulated in consideration of four criteria described in the USACE Planning and Guidance Notebook: completeness, efficiency, effectiveness, and acceptability

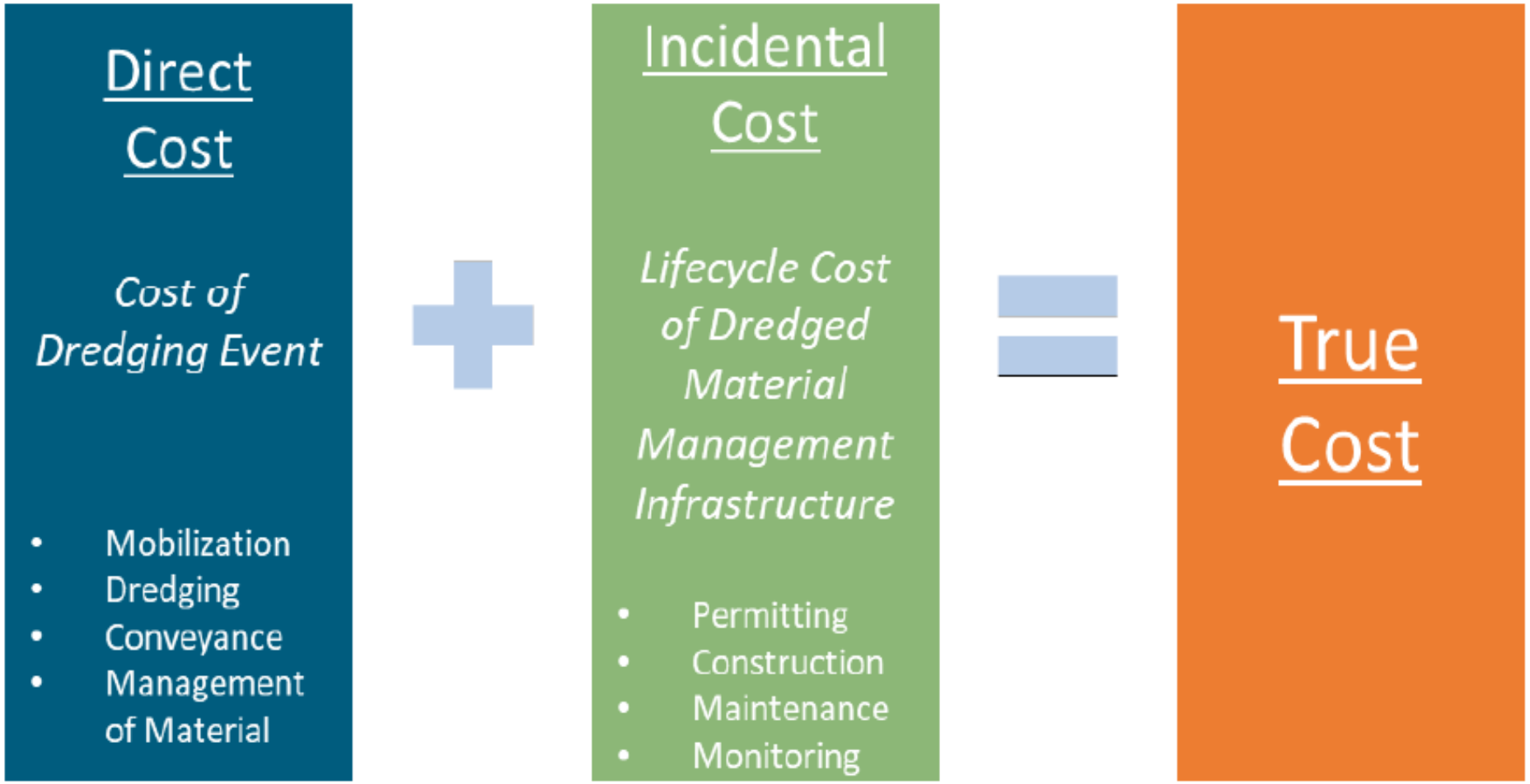
Evaluate Alternatives using the four accounts in the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G)(1983):

1. National Economic Development NED) $cost & benefits
2. Regional Economic Development (RED)
3. Other Social Effects (OSE)
4. Environmental Quality (EQ)

The term "Federal Standard" comes from the Corps' Operation and Maintenance regulations of 26 April 1988 -33 CFR 209, 335, 336, 337, and 338.

➢"Federal standard" means the dredged material disposal alternative or alternatives identified by the Corps which represent the least costly alternatives consistent with sound engineering practices and meeting the environmental standards established by the 404(b)(1) evaluation process or ocean dumping criteria. (33 C.F.R. 335.7)

LIFECYCLE COST DEVELOPMENT



(Summa et al., 2017; Taylor Engineering 2021)

EXAMPLE COSTS OF ALTERNATIVE PLANS

Plan Element			True Costs
Plan Element #	Description	Lifecycle Capacity (CY)	True Unit Cost ($/cy)
1	New DMMA (4.1MCY @ $200k/acre)	4,100,000	$29.56
2	Buck Island Cell A Subdivide	1,154,600	$21.73
3	Bartram Cell C Dike Raising	1,224,000	$28.23
4	RSM Nearshore placement	842,388	$24.20
5	RSM Mayport Beach	842,388	$30.38
6	RSM Huguenot Park	505,433	$50.99
7	Bartram Cell B Capping	604,000	$29.83
8	FIND Site DU-6A / DU-6B	982,100	$43.62
9	Bartram Island Expansion	6,231,100	$22.75
10	Bartram Cell F Dike Raising	982,250	$45.62
11.1	Expanded Use of ODMDS (Cut 3-13)	609,306	$15.38
11.2	Expanded Use of ODMDS (Cut 14-42)	609,306	$21.30
11.3	Expanded Use of ODMDS (Cut 43-49)	609,306	$28.92

BENEFITS MONETIZED

- Lifecycle cost savings of capacity gained by the placement alternatives (deferred or eliminated costs of securing a new DMMA as an example).

- Capturing the cost savings to navigation (e.g. reduced shoaling) by maintaining natural or nature-based systems that help provide save navigation and would otherwise degrade without beneficial use.

Texas Study found that loss of an in-bay protective barrier island increased siltation by **500%** along the GIWW.

- Cost savings across business lines (avoided costs)

Example 1 - **Coastal Storm Risk Management**. One dredge mobilization vs. two mobilizations. The sand dredged for navigation purposes would be disposed of offshore, upland, or at another site, which could require development, design, and permitting x 2.

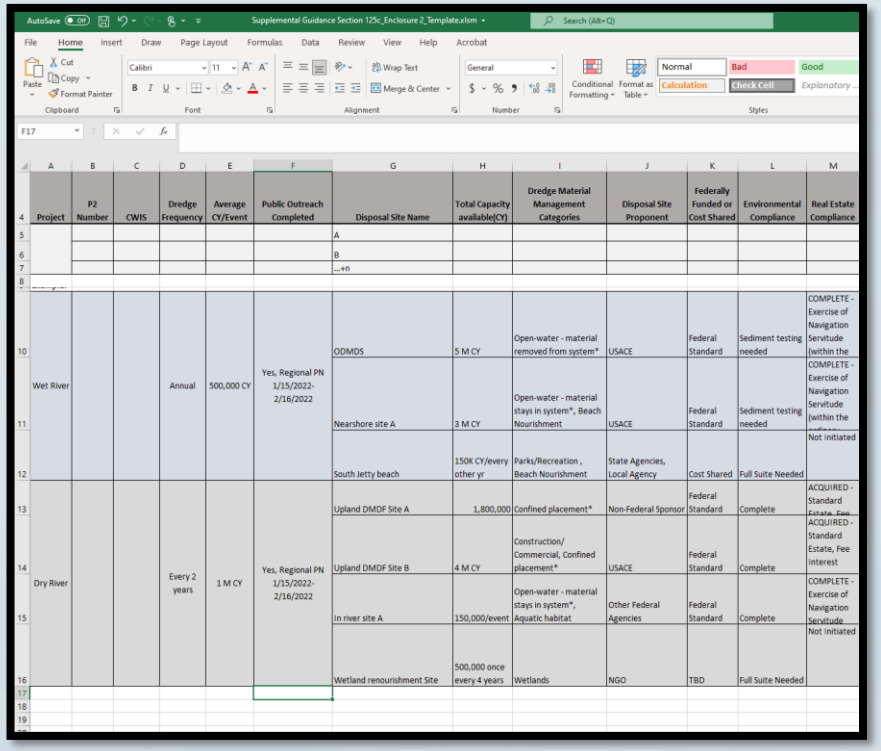
Example 2 – **Ecosystem Restoration**. Habitat restoration efforts, stream bank erosion, and other challenges incurred due to blocked sediment transport could be captured to highlight the life-cycle cost of not implementing regional sediment management and BUDM.

REGIONAL 5-YR DREDGE MATERIAL MANAGEMENT PLANS

New Requirement per WRDA 2020 Section 125

- 100% Federally funded with Operations and Maintenance funds
- MSC (SAD) approval authority
- Must demonstrate Project's Federal Standard Base Plan
- Updated on an annual basis following initial preparation
- Must have a dredge material budget for each watershed or littoral system
- Shall include an evaluation of the economic and environmental benefits, efficiencies, and impacts of beneficial use of dredge material (BUDM)

Section 125(c), WRDA 2020, directs the ASA(CW) to develop five-year regional dredged material management plans



Project	P2 Number	CWIS	Dredge Frequency	Average CY/Event	Public Outreach Completed	Disposal Site Name	Total Capacity available(CY)	Dredge Material Management Categories	Disposal Site Proponent	Federally Funded or Cost Shared	Environmental Compliance	Real Estate Compliance
						A						
						B						
						...+n						
Wet River			Annual	500,000 CY	Yes, Regional PN 1/15/2022-2/16/2022	ODMDS	5 M CY	Open-water - material removed from system*	USACE	Federal Standard	Sediment testing needed	COMPLETE - Exercise of Navigation Servitude (within the
						Nearshore site A	3 M CY	Open-water - material stays in system*, Beach Nourishment	USACE	Federal Standard	Sediment testing needed	COMPLETE - Exercise of Navigation Servitude (within the
						South Jetty beach	150K CY/every other yr	Parks/Recreation , Beach Nourishment	State Agencies, Local Agency	Cost Shared	Full Suite Needed	Not initiated
Dry River			Every 2 years	1 M CY	Yes, Regional PN 1/15/2022-2/16/2022	Upland DMDF Site A	1,800,000	Confined placement*	Non-Federal Sponsor	Federal Standard	Complete	ACQUIRED - Standard Estate, Fee
						Upland DMDF Site B	4 M CY	Construction/ Commercial, Confined placement*	USACE	Federal Standard	Complete	ACQUIRED - Standard Estate, Fee interest
						In river site A	150,000/event	Open-water - material stays in system*, Aquatic habitat	Other Federal Agencies	Federal Standard	Complete	COMPLETE - Exercise of Navigation Servitude
						Wetland renourishment Site	500,000 once every 4 years	Wetlands	NGO	TBD	Full Suite Needed	Not initiated

DREDGE MATERIAL MANAGEMENT PLANS

Updated Annually with Public Notice for 30 days

5YR Regional DMMP

If stakeholder engagement identifies an alternative that is equal to or less than the Federal standard or identifies financial support for alternatives above the Federal standard and retains capacity or has greater benefit, it can be used for placement of dredged material.

Can update Federal Standard/Base Plan of 20yr DMMP

BUDDI

Beneficial Use Decision Document Integration (BUDDI)

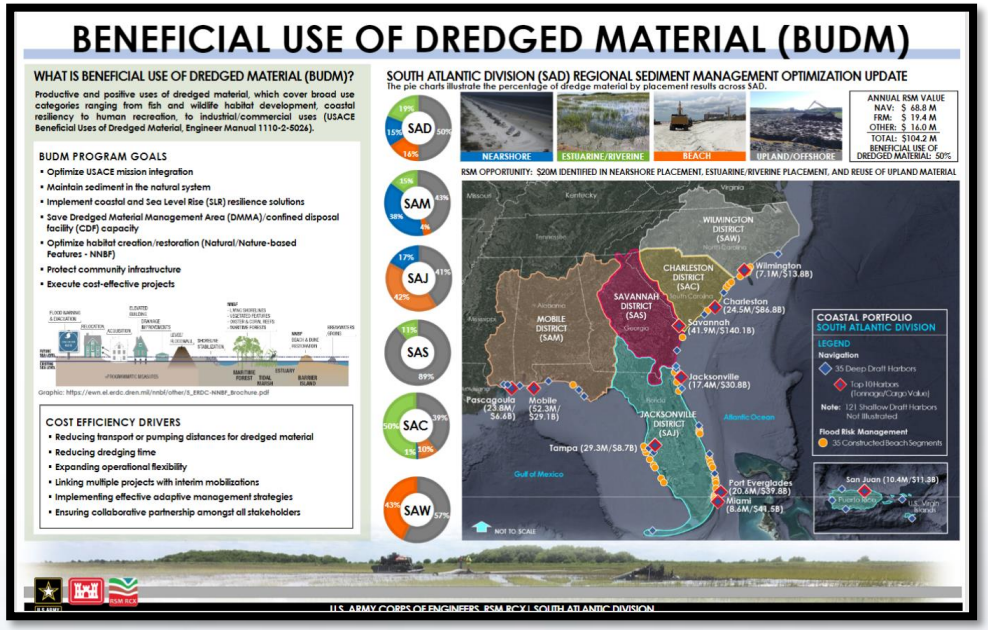
20 YR DMMP

Updated only when significant **changes**

Example Changes:

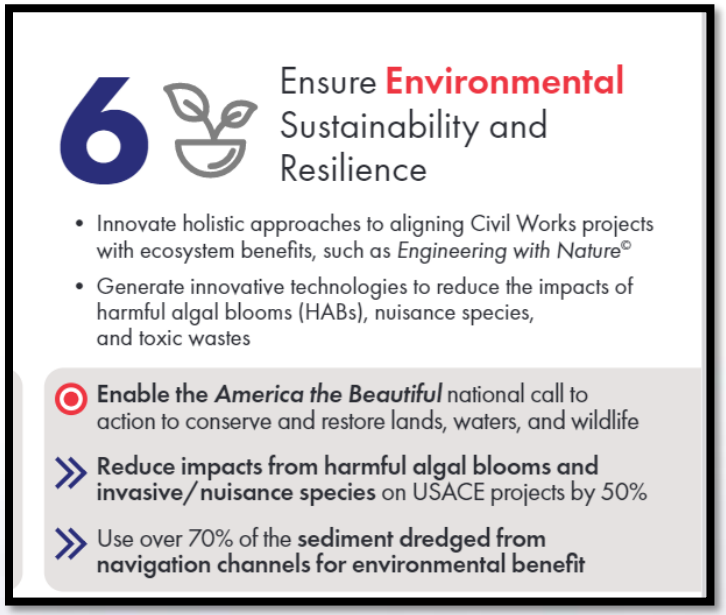
- Deepening or widening of Federal Channel.
- Increased shoaling or significant changes in dredge volume projections.
- Significant disposal area capacity changes.

BENEFICIAL USE – USACE AGENCY GOAL



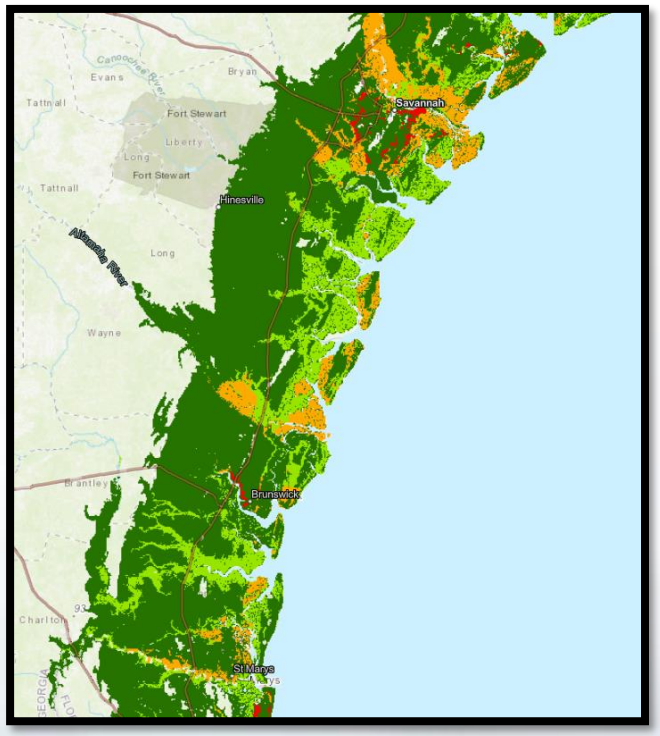
Evaluation of current practices using historical data. What are we doing with the sediment now?

Optimize RSM and BUDM opportunities and identify plans to get there



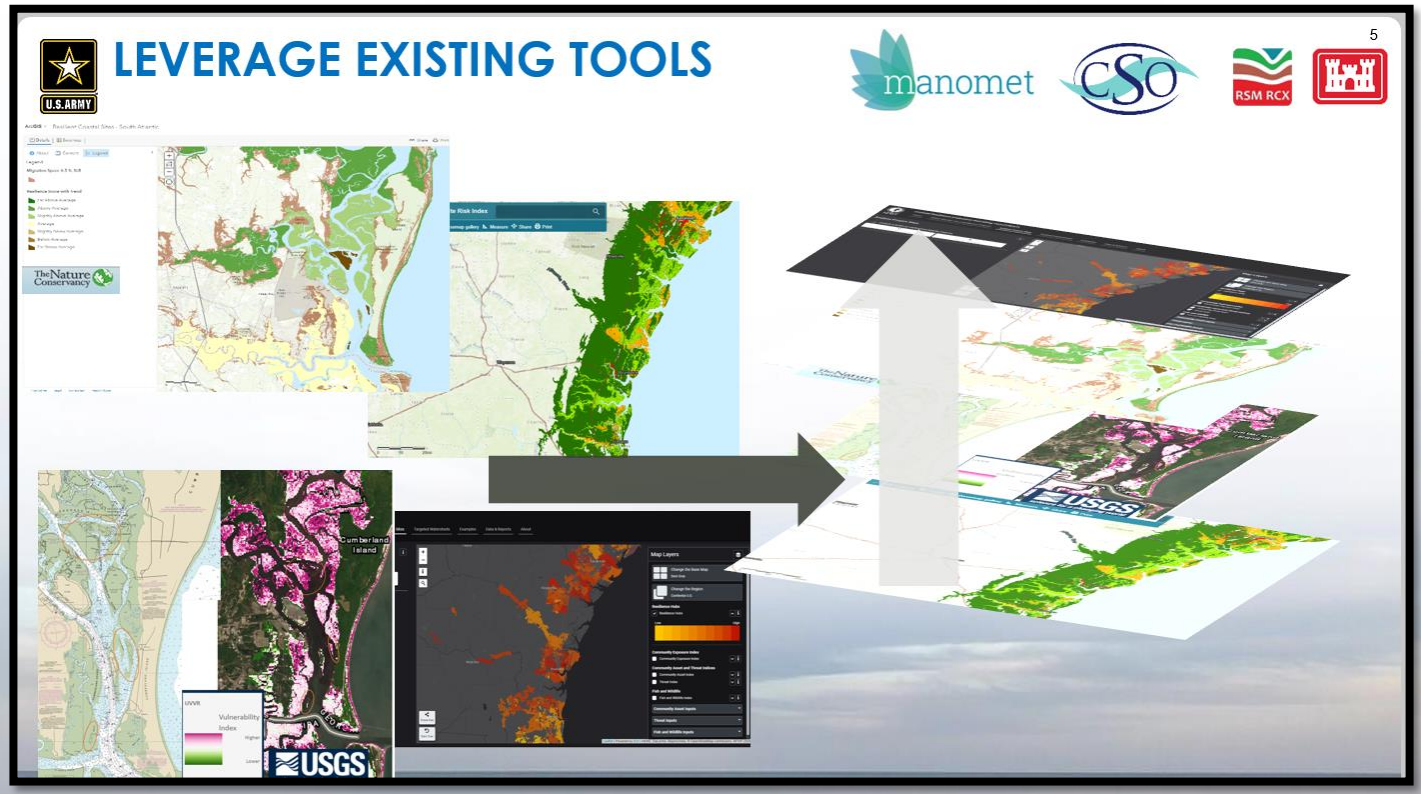
70% BUDM by 2030 Agency-wide Goal

ALIGNING USACE BENEFICIAL USE GOALS WITH STATE, COUNTY, CITY GOALS

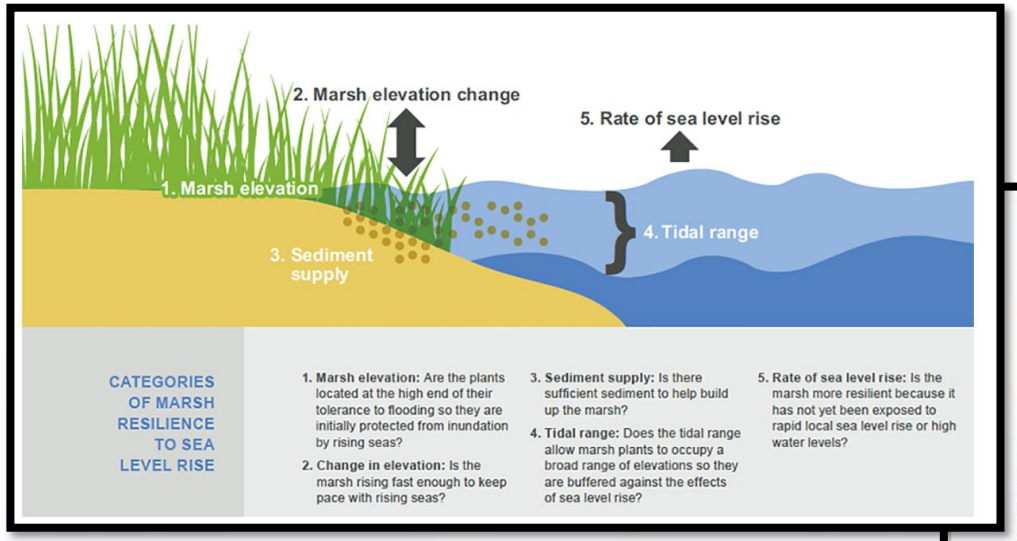


South Atlantic Coastal Study (SACS) – coastal storm risk identification and resilience planning

Synthesizing tool inputs/outputs provides a geographic approach to get to decision making, we can align priorities, funding, and get to implementation.

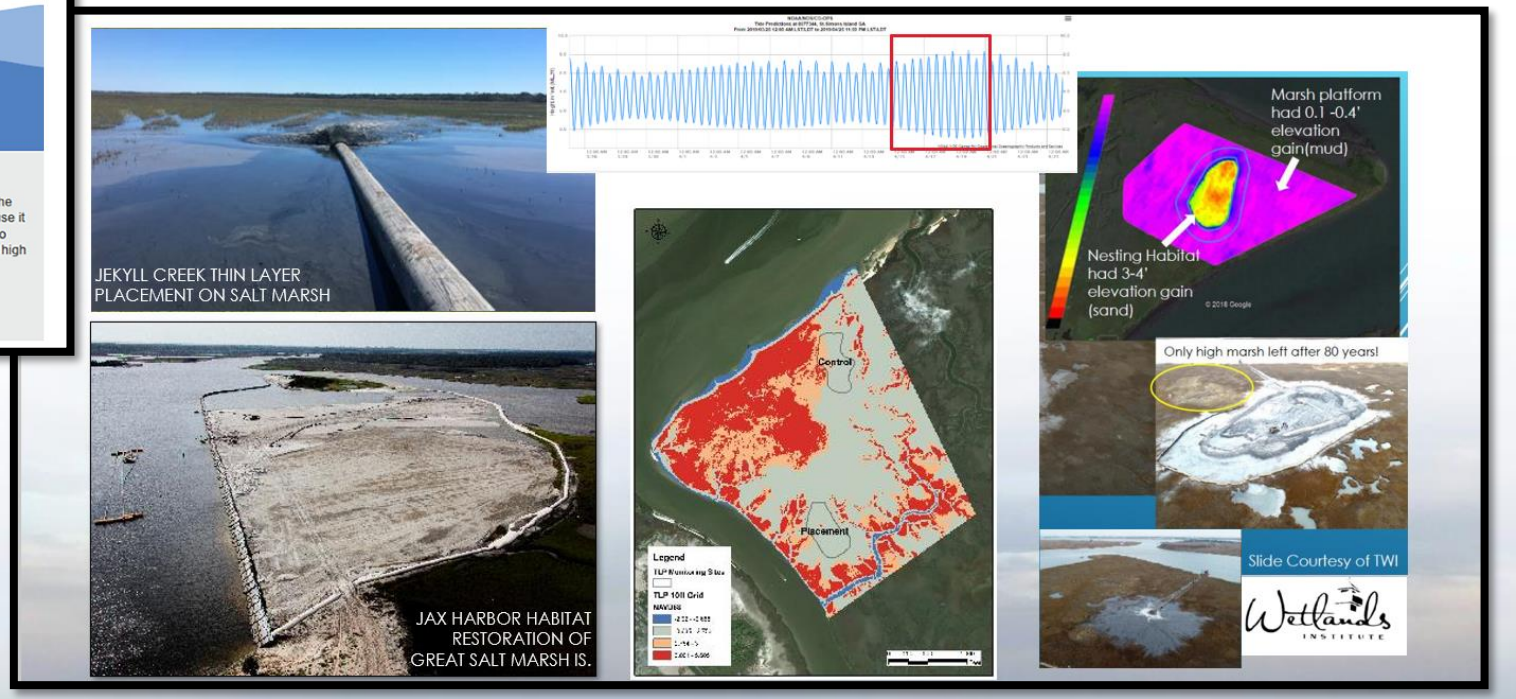


IMPLEMENTATION OF BENEFICIAL USE PROJECTS



Stakeholder agreement on design, construction methods, and monitoring metrics for success.

Apply lessons learned and existing research



STATE ENGAGEMENT OPPORTUNITIES

1. Anytime coordinate BUDM opportunities – can be added to DMMPs via BUDDI (one time or multi-use placement)

2. Section 125 WRDA 2020 Public comment on DMMPs; annually on the 5yr DMMPs.

3. Section 1122 WRDA 16 – pilot project for BUDM (https://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Legislative-Links/wrda2016/sec1122_proposals/)

4. Section 204 WRDA 1992 CAP and Section 204(d) – Beneficial Use of Dredge Material

5. Section 22 WRDA'74; Sec 3015 WRDA 14; Planning Assistance to States