BENEFICIAL USES OF DREDGED MATERIAL

*The views, opinions and findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation.*
OVERVIEW

- Chief of Engineers Memo
- WRDA’20, Section 125
  - Previous guidance
- Program development and management
- Project development
USACE historically uses 30-40% of the sediments derived from the Navigation mission for beneficial purposes. I have established a goal for USACE to advance the practice of BUDM to 70% by the year 2030 ("70/30 Goal").

...you are being called to generate productive and positive uses of dredged material... and ensure ultimate success of the BUDM program.

If there is a need for USACE to dredge an authorized channel, the operational strategy should inherently include beneficial use placement options.

Equally, if there is a need for sediment, gravel, or rock material to implement a project, beneficial use from dredging operations within authorized channels should be considered as a source in the planning and execution strategy.
U.S. Army Corps of Engineers
Beneficial Use of Dredged Material
Program Vision

Dredge Material is a valuable resource
- Increased dredging investments create beneficial use of dredge material management opportunities
- Benefits the ecosystem, economy, and can effectively and efficiently deliver the USACE mission.

There are opportunities to expand beneficial use within the Federal Standard
- Operational strategy should inherently include beneficial use placement options.
- If material is needed to implement a project, beneficial use from dredging operations should be considered as an option in the planning and execution strategy.

Partner collaboration is key to our success
- Innovative pursuit, both internally and externally, with partners and stakeholders will:
  - Maximize available solutions, strategies, and tools.
  - Develop and apply new approaches and technologies.

Over the next 3-5 years the Corps will expand the beneficial use of dredged material program. Achieving this vision will require all of us to be innovative and work alongside our partners, both internally and externally, to ensure we are finding the best use of sediments derived from our Navigation mission.

National Policy for Beneficial Use of Dredged Material
Congressionally established by section 125 of WRDA 2020 in doing so, Congress has underscored the importance of the Beneficial Use of Dredged Material Program.

Dredged material is valued as a resource not to be wasted but used for benefits to the ecosystem, economy, and project delivery.
SEC. 125. BENEFICIAL REUSE OF DREDGED MATERIAL; DREDGED MATERIAL MANAGEMENT PLANS

(a) National Policy On The Beneficial Reuse Of Dredged Material

– (1) IN GENERAL.—It is the policy of the United States for the Corps of Engineers to maximize the beneficial reuse, in an environmentally acceptable manner, of suitable dredged material obtained from the construction or operation and maintenance of water resources development projects.

(b) Beneficial Use Of Dredged Material

– (1) PILOT PROGRAM PROJECTS

(c) Five-Year Regional Dredged Material Management Plans
Planning Guidance Notebook (ER 1105-2-100): It is the policy of the Corps that all dredged material management studies include an assessment of potential beneficial uses for environmental purposes including fish and wildlife habitat creation, ecosystem restoration and enhancement and/or hurricane and storm damage reduction.

Dredging Regulation (33 CFR 337.9): Full consideration should be given to all practicable alternatives including upland, open water, beach nourishment, within banks disposal, ocean disposal, etc. Within existing policy, district engineers should also explore beneficial uses of dredged material, such as marsh establishment and dewatering techniques, in order to extend the useful life of existing disposal areas.
WRDA’20 SECTION 125(a)

- Authorizes the Corps to use construction or operation and maintenance funds when selecting a disposal method that is not the least cost option.

- The Corps will evaluate and advance all opportunities to beneficially place dredged material during preparation or reevaluation of Dredged Material Management Plans (DMMP).

- The Corps will evaluate and advance all requests from a non-Federal interest to consider specific beneficial placement opportunities for the Federal project.

- Placement of dredged material:
  - May include a single or periodic application and
  - Shall not require operation and maintenance.

- Multiple placements may be considered for the same site over several years:
  - Must be justified each time.
The incremental costs of BU placement must be reasonable in relation to the benefits (environmental, hurricane and storm, or flood risk reduction).

Incremental costs are considered reasonable without detailed analysis when the Federal share of the placement does not exceed 25% of total Federal Standard Base Plan cost.

Aquatic ecosystem restoration (AER) or beach renourishment project funds may be used to fund the Federal costs in excess of the navigation project disposal costs when an authorized AER or beach renourishment project has capacity for the dredged material.

A Federal agency may request the placement of material on Federal land under their jurisdiction if they pay all costs for the placement that exceed the Base Plan.
For projects without a DMMP, the Corps will evaluate and advance all requests from a non-Federal interest to consider specific beneficial placement opportunities for the project.

– The evaluation of such requests will be funded from O&M funds for the Federal navigation project.

– The evaluation of all Section 204(d) placement opportunities will be documented in a Letter Report to be approved by the District Commander.

– The letter report will include documentation and evaluation of all beneficial use of dredged material opportunities and the reason the opportunity was selected or not.
A non-Federal interest must agree to fund 35 percent of the incremental costs of a Section 204(d) placement that exceed the Federal standard base plan costs for dredging and disposal of the Federal navigation project.

Complete life cycle costs shall be used in calculating the Federal standard.
WHAT ARE WE GOING TO DO WITH ALL THIS STUFF?
BEACH NOURISHMENT
SALT MARSH RESTORATION/CREATION

Salt Marsh Creation at Sandy Point, West Haven, CT
~70 acres, ~ 840,000 cy of Dredged Material
THIN LAYER PLACEMENT
DISPOSAL SITE CAPPING

Massachusetts Bay Industrial Waste Site Restoration: Beneficial Use of Boston Harbor Dredged Material

Backgrounds

The Massachusetts Bay Industrial Waste Site is a 16-acre waste management area designated in the U.S. as a Superfund site. The site is located 33 km (21 miles) from Boston Harbor in about 30 meters of water. The site has a long history of industrial activity and has been impacted by various contaminants. The site was designated as a Superfund site in 1989.

Approach

- USEPA Region 1 partnered with the Massachusetts Department of Environmental Protection (MassDEP) to develop a plan for the disposal of contaminated materials.
- The approach involved the collection of site-specific data to determine the nature and extent of contamination.
- The plan was developed in consultation with local communities and stakeholders to ensure compliance with environmental regulations.

Results

- The project was completed in 2020, and the waste was successfully disposed of in an environmentally sustainable manner.
- This project exemplifies the use of innovative and cost-effective solutions for waste management.
- The success of the project was recognized with multiple awards and commendations.
OTHER IDEAS

• Cobble sturgeon habitat

• Upland construction uses…
NEW ENGLAND DISTRICT ACTIONS

- Program-level meetings with Federal & State Partners
- Share program/project information with regional dredge teams and environmental partners (e.g., NROC, NEFP)
- DAMOS BU opportunities and expertise tracking
- Early consideration of BU and involvement of environmental agencies
# Five-Year Dredging Plan with Quantities

<table>
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<tr>
<th>Project Name</th>
<th>Current Estimated Dredge Start Date</th>
<th>Note</th>
<th>Quantity Estimates Notes</th>
<th>Approximate Cubic Yards to Be Dredged</th>
<th>Approximate Cubic Yards of Rock</th>
<th>Placement Site</th>
<th>Notes</th>
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<td>30-May-2023</td>
<td>GOV Dredge</td>
<td>Estimate</td>
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<td>Nearshore</td>
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<td>Survey Vol - Nov 22</td>
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<tr>
<th>Approximate Cubic Yards of Sand</th>
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<th>Approximate Cubic Yards of Silt (clean)</th>
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<td>40,000</td>
<td>NA</td>
<td>NA</td>
<td>Nearshore</td>
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<tr>
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<td>16,238</td>
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<td>4,000</td>
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<td>Sand/silt breakdown estimated</td>
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<td>Sand/silt breakdown from civil</td>
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<td>Nearshore and CLDS</td>
<td>Need a volume for sand in entrance</td>
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Catalogue potential source material from the NAE
Navigation plan and NAE
Regulatory permits

- Project location
- Material type, quantity, and characteristics
- Anticipated dredging schedule

Inventory potential beneficial use sites from federal agencies, state
dredging coordinators, and stakeholders

- Project location
- Material needs
- Placement method
- Contact organization

Develop a database tool for project planning

- Support alternatives analysis
- Match available material with needs
- Public access through DAMOS website?
- Map viewer interface?
EARLY STAKEHOLDER INVOLVEMENT

- Hold an early agency coordination meeting to describe dredged material and request suggestions
- Use the databases to identify opportunities
- Provide information to make it easy for agencies to plan
- Provide Section 204 information and assist agencies in identifying funding
Planning-Level ROM Costs

- Transportation – ocean disposal cost per mi
  $X/MI

- Transportation cost – nearshore/pump-off scow $X/MI

- Pump off Cost $X/cy

- Upland transportation costs - $X/MI
HOW TO START A PROJECT
HOW TO START A BENEFICIAL USE STUDY

Ask the project manager or environmental team member or someone you know in the Corps of Engineers
QUESTIONS/ DISCUSSION