Determining the Base Plan (Federal Standard) & Cost-Sharing Policy for Beneficial Use of Dredged Material
Portland, Oregon
October 11-12, 2006
To provide safe, reliable, efficient, and environmentally sustainable waterborne transportation systems (channels, harbors, & waterways) for movement of commerce, national security needs, and recreation."
Dredged Material Management Plans

- U.S. Army Corps of Engineers Engineering Regulation 1105-2-100, requires Dredged Material Management Plans (DMMP) for all navigation projects that do not have at least 20 years of placement capacity.

- In developing long term sites, DMMPs must:
  - Assess the potential for beneficial use of dredged material.
  - Establish the Federal standard or base plan.
  - Demonstrate that continued maintenance is economically warranted.
  - Evaluate expansion of existing sites.
Federal Standard or Base Plan

- Defined in 33 CFR, Part 335, Section 335.7, Definitions – “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.”
Why Establish a Federal Standard?

- Protects the Federal investment in projects.
- Conserves scarce Federal funding to meet navigation mission.
- Provides consistent approach across projects.
- Non-Federal sponsors pay for additional requirements above and beyond the Federal Standard.
Other Federal Standard Considerations

- Federal budgets are constrained. Funding placement options that are more costly than the Federal Standard may result in insufficient funds being available to perform the necessary dredging for the project.
- Performance Measures. For budgeting purposes, projects are ranked based on Performance Measures. More costly projects on a per ton or per cubic yard measure will be ranked lower, jeopardizing funding.
- Economic Justification. More costly placement sites may make projects economically unwarranted.
Beneficial Use of Dredged Material

- Habitat – aquatic, oyster bar, submerged aquatic vegetation, wetland, island, upland
- Beach Nourishment
- Shoreline Stabilization & Erosion Control
- Aquaculture
- Parks & Recreation
- Agriculture
- Construction and industrial applications
- Mine Reclamation
- Innovative Uses
FACTORS TO BE CONSIDERED

- Dredged Material Type
- Location
- Habitat to be Provided
- Habitat Trade-offs
- Similar Habitat in Vicinity
- Dredge Type
- Hydrodynamics
- Containment Structures
- Elevation
- Plants
- Partnerships
- Monitoring
Wetland Creation
Use of Volunteers to Plant
Oyster Bar Creation
Oyster Bar Creation
Beach Nourishment
Ecosystem Protection and Restoration Using Dredged Material

• Section 204 of Water Resources Development Act (WRDA) of 1992 – Beneficial Use of Dredged Material

• Authorizes the Secretary of the Army to construct projects for protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, in connection with dredging for construction, operations or maintenance dredging of an authorized project.

• Monetary and non-monetary benefits must justify costs.

• Annual Appropriation limit of $15 million nation-wide.
Ecosystem Restoration Using Dredged Material

- **Section 204 Cost-Sharing**
  - Cost-share the incremental cost above the Federal Standard
  - Feasibility study is initially 100% Federal. Cost-shared as part of total project costs if constructed.
  - Sponsors pay 25% of project costs and all lands, easements, rights-of-way, relocations, disposal and borrow areas (LERRD). LERRDs count towards 25% share.
  - Federal Government will pay for LERRDs in excess of 25%.
  - Sponsor cannot receive credit for work in-kind services.
  - Sponsor responsible for 100% of Operation, Maintenance, Repair, Replacement, and rehabilitation (OMRR&R).
Ecosystem Restoration Using Dredged Material

- Section 204 was amended by Section 207 of WRDA 1996 to accommodate larger projects.
- Specific Congressional Authorization.
- Use of dredged material in conjunction with Section 1135 (WRDA 1986), Section 206 (WRDA 1996), and Section 210 (WRDA 1996).
- Uses not meeting requirements for cost-sharing must be funded 100% by the non-Federal sponsor.
Beach Nourishment Using Dredged Material

• Section 145 of WRDA 1976 as amended by Section 933 of WRDA 1986

• Authorizes the Secretary of the Army to place sand on beaches in connection with dredging for construction, operations or maintenance dredging of an authorized project.

• Hurricane and storm damage protection benefits must justify incremental costs.
Ecosystem Restoration Using Dredged Material

- Section 933 Cost-Sharing as amended by Section 217(a) of WRDA 1999.
  - Cost-share the incremental cost above the Federal Standard.
  - Feasibility study is initially 100% Federal. Cost-shared as part of total project costs if constructed.
  - Sponsors pay 35% of project costs and all lands, easements, rights-of way, relocations, disposal and borrow areas (LERRD).
  - Sponsor responsible for 100% of Operation, Maintenance, Repair, Replacement, and rehabilitation (OMRR&R).
  - Sponsor must ensure that beaches are open to the public and provide public access to the beaches.
Economic Impact of the Port of Baltimore

- $2.4 billion/year in wages and salaries
- $2 billion/year in business revenues
- 42,000 Maryland jobs, of whom 19,000 are directly employed in port jobs.
- Generates $278 million in state and local taxes annually.
- Generates $507 million in U.S. Customs receipts.
- Commerce in 2004: 47.4 mil tons (31.8 mil tons foreign commerce valued at $31.2 billion).
Need for Dredged Material Placement Sites

- ~5 mcy dredged annually.
- Federal Dredged Material Management Plan (DMMP) identified a 56-mcy dredged material capacity shortfall over 21 years.
- Current placement capacity for the Upper Chesapeake Bay approach channels will become limited in 2010.
Existing Placement Sites in Virginia

Existing Sites for Chesapeake Bay Approach Channels (VA)
Existing Placement Sites in Maryland

Existing Sites for Chesapeake Bay Approach Channels (MD)
Federal Standards for Baltimore Harbor & Channels

- Existing open water placement sites in Virginia
- Open water placement for Chesapeake Bay approach channels in Maryland
- Expansion of Hart-Miller Island for Harbor Channels
State of Maryland Constraints for Dredged Material Placement

• Maryland State Laws
  ➢ North Point/Rock Point Line
  ➢ Hart-Miller Island must close in 2009
  ➢ Pooles Island sites must close in 2010
  ➢ Prohibits open water placement
  ➢ 5-mile radius around Pleasure, Hart-Miller Island

• Socio-Political Constraints
  ➢ Prohibit artificial island creation
DMMP – Recommended Plan

- Final Report Issued in December 2005
  - Optimize Existing Maryland Sites – Pooles Island, Poplar Island, Hart-Miller Island, and Cox Creek CDF
  - Optimize Existing Open Water Placement Sites in VA
  - Multiple Confined Placement Facilities along Patapsco River
  - Poplar Island Expansion
  - Large Island Restoration – Mid-Chesapeake Bay
  - Wetland Restoration - Dorchester County
  - Pursue Innovative Use of Dredged Material
Poplar Island
Site Map and Project Location
Poplar Island Environmental Restoration Project

- Cost $387 mil (Oct 2005 Price level)
  ➢ $290 Fed/$97 State of MD
- 1,140 acres
- 50% wetland habitat
- 50% upland habitat
- Capacity: 40 mcy
- Projected site life: 2015 (for dm placement)
Poplar Island Cell 3D Time Sequence (Looking East)
Poplar Island Expansion
Recommended Plan

1. 575-acre lateral expansion with open-water embayment
2. A 5-ft vertical expansion of the existing upland cells
3. Incorporate actions required to complete the existing project
4. Accepting dredged material from southern approach channels to the C&D Canal
5. Development of recreational and educational components
6. Cost - $256.7 mil ($192.5 mil Fed/$64.2 State)
**Existing Conditions**

**James Island**

- **NORTHERN REMNANT**
  - High marsh and freshwater marsh complex

- **MIDDLE REMNANT**
  - High marsh/low marsh complex
  - Low Marsh and Sand Beach-spit

- **SOUTHERN REMNANT**
  - High marsh/low marsh complex
  - Remnant of High Marsh

- **High Marsh**

---

**SAV presence:**
- 1999-2003 average = 10 acres
- no beds between 1994-1998

---

*estimates from sources: State of Maryland, 1949; Kearney and Stevenson, 1991; and Wray et al., 1995.*
Existing Conditions
Barren Island

> SAV presence:
> - 1999-2003 average = 695 acres
> - 1994-1998 average = 1.3 acres

<table>
<thead>
<tr>
<th>year</th>
<th>acreage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1848</td>
<td>754</td>
</tr>
<tr>
<td>1900</td>
<td>539</td>
</tr>
<tr>
<td>1930</td>
<td>433</td>
</tr>
<tr>
<td>1942</td>
<td>371</td>
</tr>
<tr>
<td>1960</td>
<td>260</td>
</tr>
<tr>
<td>2004</td>
<td>197</td>
</tr>
</tbody>
</table>
James Island Recommended Plan

2072 acre island, 45% uplands and 55% wetlands, 20 ft high uplands
Barren Island Recommended Plan

Island Restoration & Protection of existing resources
AAPA Quality Partnership Initiative
Project Managers Workshop

• Contact Information:
Jeffrey McKee
U.S. Army Corps of Engineers, Baltimore District
jeffrey.a.mckee@usace.army.mil
410-962-5657