Maryland’s Dredged Material Management Program

Presentation to:
EMEC Conference
August 30, 2011

Maryland Port Administration
Overview

• Port of Baltimore - importance of viable dredging, Dredged Material Management Program (DMMP)

• Implementing a sustainable management process

• Sustainable result - Masonville Project
The Majority of U.S. Overseas Trade Travels by Ocean-Going Ships

• Port activity accounts for:
  – 99.4% of U.S. overseas trade by weight
  – 64% of U.S. overseas trade by value
  (Data Source: U.S. Census Bureau, AAPA Fact Sheet)

• The volume of cargo moving through U.S. ports is projected to increase by 50% over 2001 levels by 2020
  (Data Source: USDOT, AAPA Fact Sheet)
## Annual Dredging Required

<table>
<thead>
<tr>
<th>Region</th>
<th>Dredging Requirement (Mcy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C&amp;D Canal</td>
<td>0.04</td>
</tr>
<tr>
<td>C&amp;D Approach</td>
<td>1.20</td>
</tr>
<tr>
<td>MD Bay</td>
<td>2.00</td>
</tr>
<tr>
<td>POB Harbor</td>
<td>1.50</td>
</tr>
<tr>
<td>VA</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5.24</strong></td>
</tr>
</tbody>
</table>
A Defining influence - Dredged Material Management Act 2001

- Closed HMI December 31, 2009, HMI received dredged material from Bay Channels, Baltimore Harbor, and Baltimore County dredging
  - Material from the Harbor may not be placed in open water of the Chesapeake Bay or tidal tributaries and must be contained in an approved site
2001 Act closes HMI 2009 – new site needed by 2010

Annual Harbor Dredging

<table>
<thead>
<tr>
<th>Owner</th>
<th>Mcy/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fed</td>
<td>0.6</td>
</tr>
<tr>
<td>State</td>
<td>0.7</td>
</tr>
<tr>
<td>Private</td>
<td>0.2</td>
</tr>
</tbody>
</table>
DMMA Priority Order of Options

• Beneficial Use and Innovative Reuse
• Upland Sites and Other Environmentally Sound Confined Capacity
• Expansion of Existing Facilities
• Other Options to Meet Long-Term Placement Needs (Excluding Redeposition in an Unconfined Manner)
Harbor Options Selection Process

- Maryland changed its approach after the Dredged Material Management Act of 2001

- **Partnership, The Harbor Team (Created 2003*)** - Members represent local communities, community activists, local jurisdictions, maritime industry, NGOs, and other stakeholder organizations
  - Stakeholders participate beginning with problem I.D. and option selection; provide options/ideas, community enhancement
  - MPA professional team provides technical support
  - Stakeholder involvement continues throughout option development, operation and closure

* *Partnership approach was suggested by Baltimore County Executive Jim Smith*
Charge to Harbor Team 2003

- Identify placement options to satisfy Harbor dredged material placement needs for next 20 years, at 1.5 mcy/yr
- Participate in developing these options into projects that will also further their land use visions for “their community shorelines”
Harbor Dredging Recommendations

Annual Harbor Dredging

<table>
<thead>
<tr>
<th>Owner</th>
<th>Mcy/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fed</td>
<td>0.6</td>
</tr>
<tr>
<td>State</td>
<td>0.7</td>
</tr>
<tr>
<td>Private</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Innovative Reuse

0.5 Mcy/yr Harbor Dredging
Former Shipyard, Ship Breaking Area

- Whirly Crane
- Tug (Catherine), sunken
- Steel Dry Dock
- Timber hull, sunken
- 5 Timber Barges
- Timber Dry Dock
- sailboat, sunken
- 1 Crane Barge
- Ferry
- Barges #1 & #2
- Timber float
- Timber Barge, sunken
Conditions at Shipyard before Cleanup Began
MAISONVILLE PROJECT
(CONTIGUOUS)

Legend
- Demo Pier 1 & 3
- Storm Drain PH 1
- Derelict Vessel
- Pre-Dredging
- Cofferdam/Waterline
- Dike
- Storm Drain PH 2

- Masonville DMCF
- Fringe Marsh
- Reef
- Masonville Cove
- Non-Tidal Wetland
- Wetland
- Substrate
- Bird Sanctuary
- Pier
- Environmental Education Center
- MASONVILLE PROJECT (CONTIGUOUS)
- FERRY BAR CHANNEL
- ATC
- KIM
- Mercedes-Benz Phase 2
- FERRY BAR CHANNEL
- Existing Waterline
Urban Wilderness Conservation Area
Phased Environmental Restoration
(Cap, Contain, Preserve, Restore)

Masonville Cove
Community Benefits

Brooklyn/Curtis Bay communities gain first access to the water in 70 years.

Masonville Cove restored with over 50 acres of upland habitat and 100 acres of tidal/non-tidal wetlands.

Environmental and Community Center (near net zero energy green building).

Community held conservation easement for Cove, ensures access, wilderness area.

Educational programs for local schools (by Living Classrooms & National Aquarium).

Empowered communities, organizing to ensure local benefits from other projects.
Environmental Benefits

Brownfield clean up: over 61,000 tons of trash removed, remediation/removal of 27 derelict vessels

Over 50 acres of contaminated uplands capped, contained, and restored

Conservation easement ensures Cove continuation as urban wilderness area

Over 130 acres of seriously contaminated river bottom capped and contained

Over 100 acres of tidal and non-tidal wetlands restored or created

5 trash interceptors, 2 major stream restoration projects, and 3 fish ladders implemented in Patapsco River watershed
Economic Benefits

Two public hearings, no project opposition, enabled the following:

Operational site in approximately 6 years, by 2010 (HMI closure 12/31/09)

Able to maintain Port’s underwater infrastructure without interruption

Enhanced community relationships

Seagirt; 50-ft access to Berth 4, 45-ft access to Berths 1, 2, 3; cofferdam foundation for pier 3 Fairfield

Future marine terminal