



# AAPA Quality Partnership Initiative Project Managers Workshop

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**Determining the Base Plan (Federal Standard) &  
Cost-Sharing Policy for Beneficial Use of Dredged Material  
Portland, Oregon  
October 11-12, 2006**



# NAVIGATION MISSION

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- “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

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- 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

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- 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?

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- 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

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- 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

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- 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

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- Dredged Material Type
- Location
- Habitat to be Provided
- Habitat Trade-offs
- Similar Habitat in Vicinity
- Dredge Type
- Hydrodynamics
- Containment Structures
- Elevation
- Plants
- Partnerships
- Monitoring

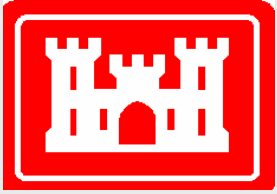


# Wetland Creation

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5.10.2001



# Use of Volunteers to Plant

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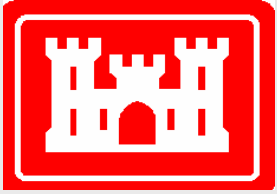




# Oyster Bar Creation

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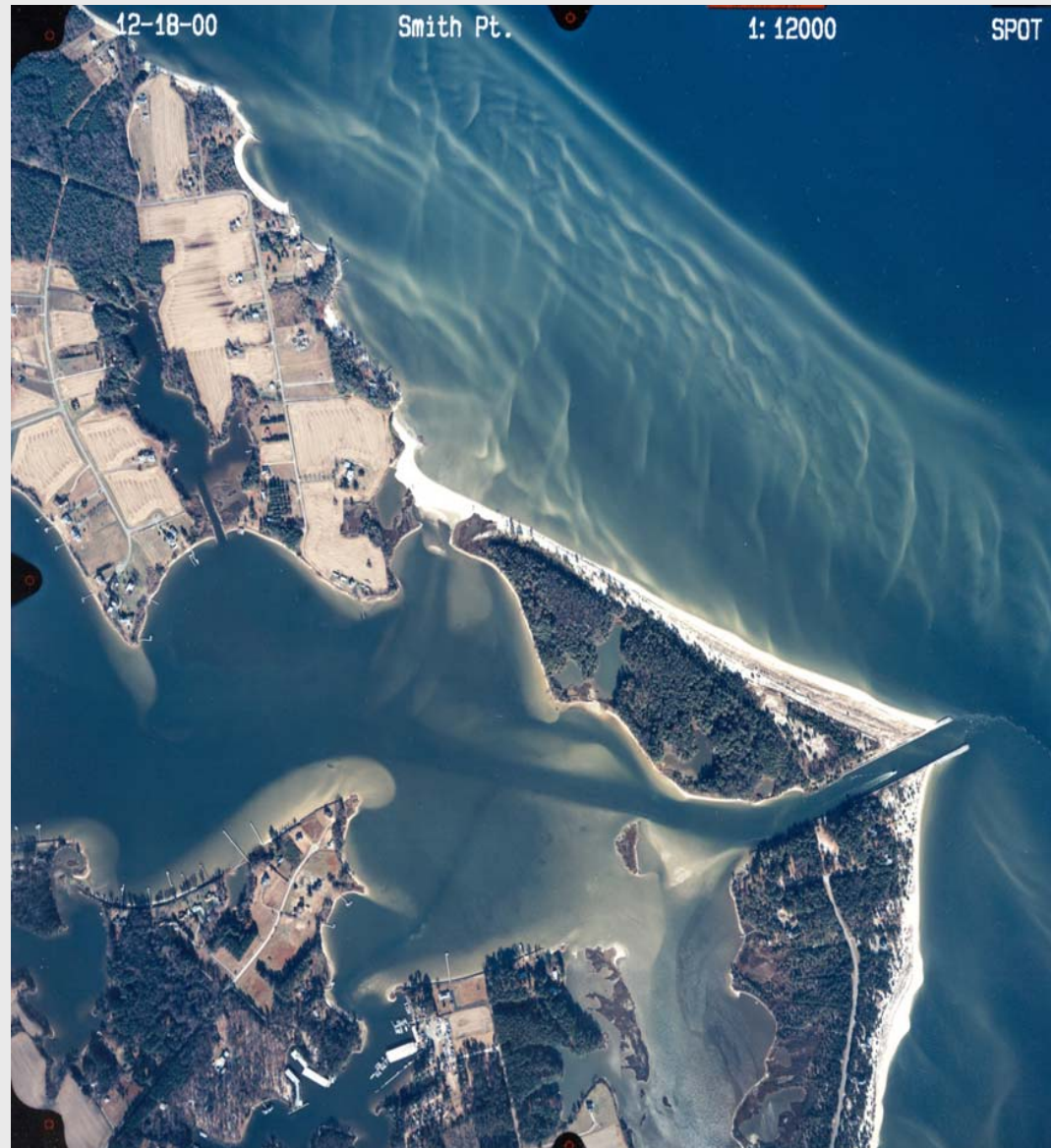
# Oyster Bar Creation

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# Beach Nourishment





## Ecosystem Protection and Restoration Using Dredged Material

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- 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

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- 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

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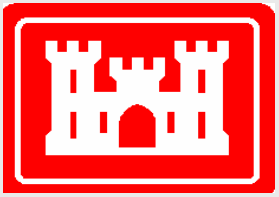
- Section 204 was amended by Section 207 of WRDA 1996 to accommodate larger projects.
- Specific Congressional Authorization.
- Use of dredged material in conjunction with Section 1135 (WRDA 1986), Section 206 (WRDA 1996), and Section 210 (WRDA 1996).
- Uses not meeting requirements for cost-sharing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



## Beach Nourishment Using Dredged Material

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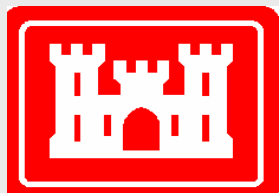
- Section 145 of WRDA 1976 as amended by Section 933 of WRDA 1986
- Authorizes the Secretary of the Army to place sand on beaches in connection with dredging for construction, operations or maintenance dredging of an authorized project.
- Hurricane and storm damage protection benefits must justify incremental costs.



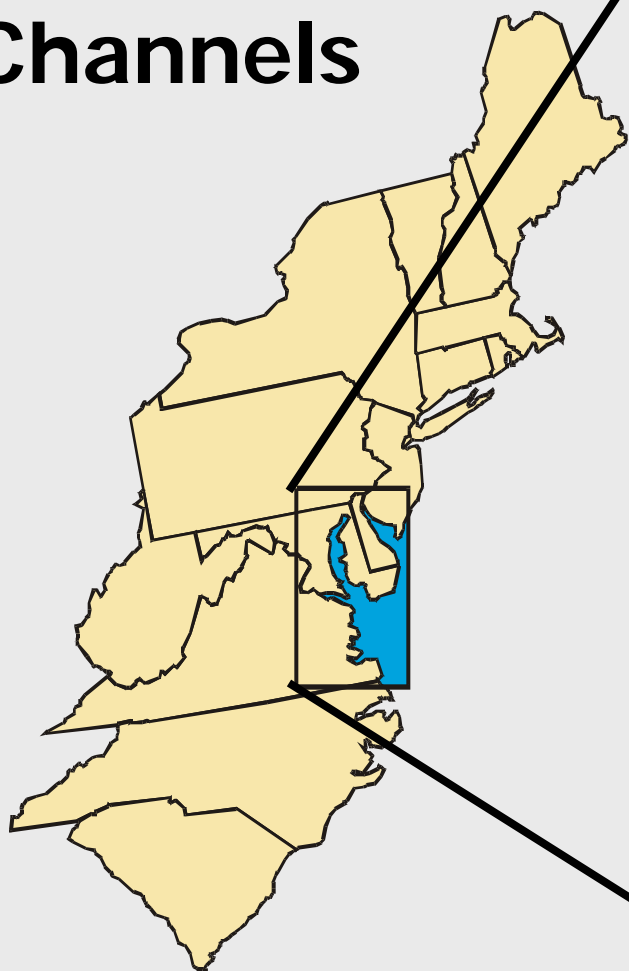
## Ecosystem Restoration Using Dredged Material

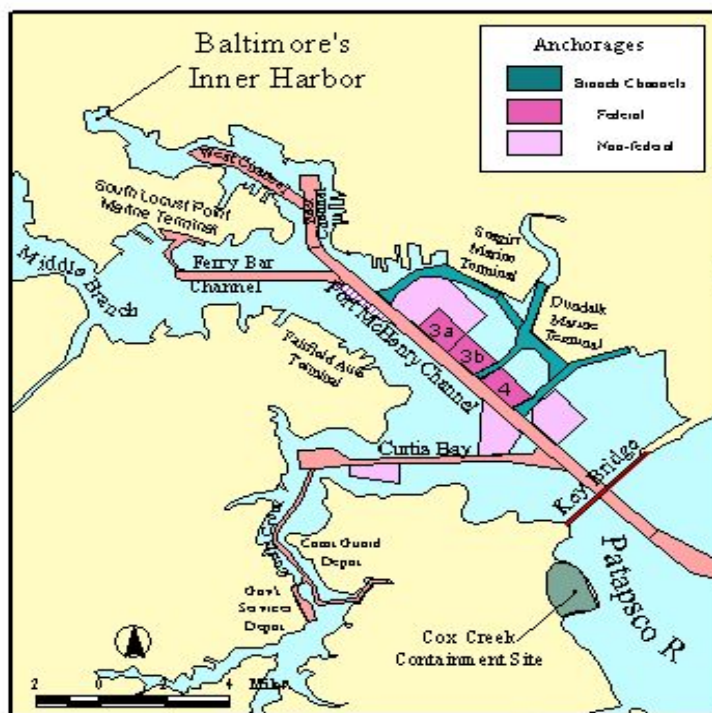
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- Section 933 Cost-Sharing as amended by Section 217(a) of WRDA 1999.
  - Cost-share the incremental cost above the Federal Standard.
  - Feasibility study is initially 100% Federal. Cost-shared as part of total project costs if constructed.
  - Sponsors 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.

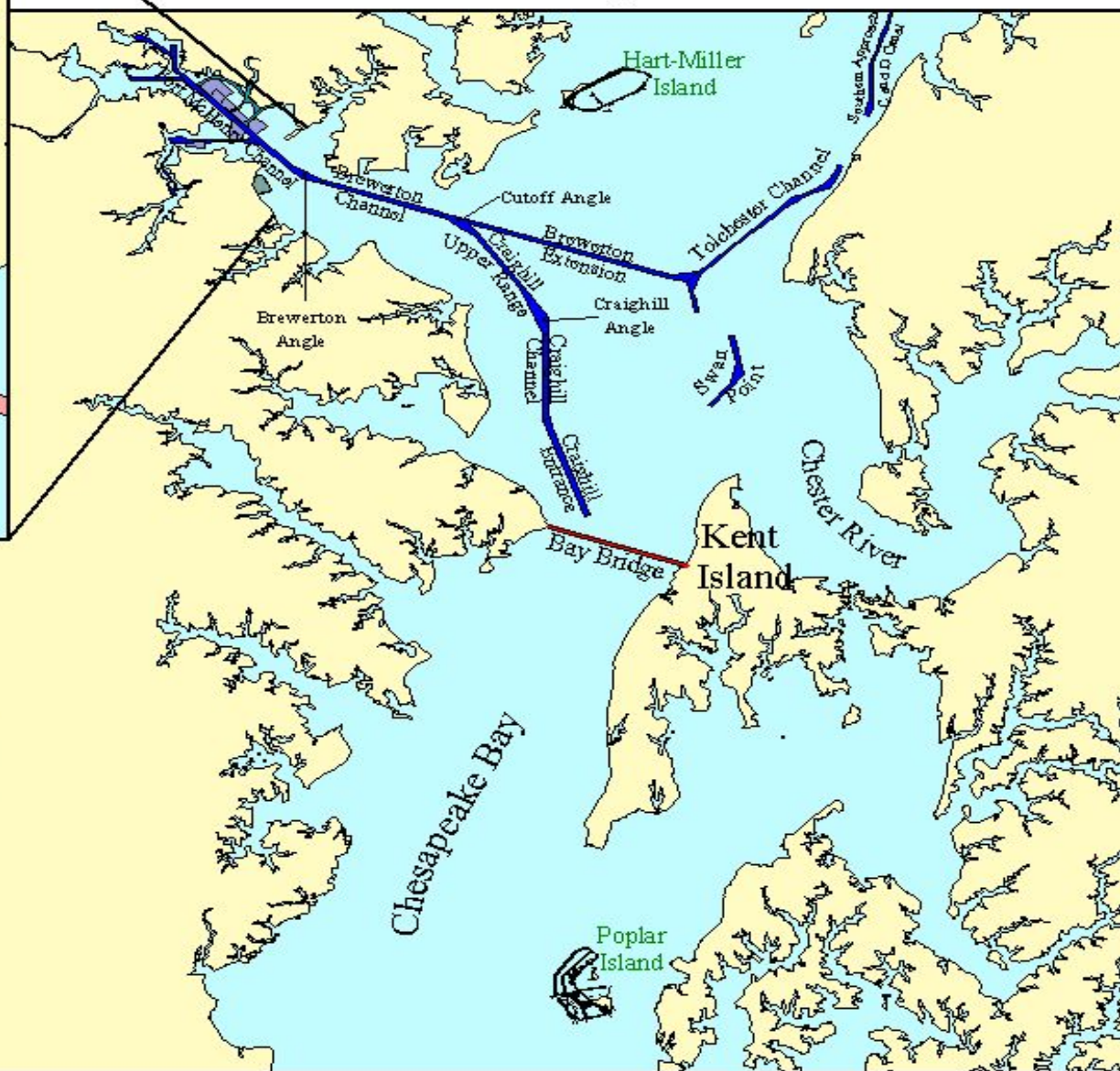


# Baltimore Harbor & Channels





## Port of Baltimore Approach Channels And Anchorages



US Army Corps  
of Engineers  
Baltimore District



# Port of Baltimore

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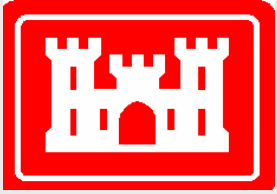




## Economic Impact of the Port of Baltimore

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- \$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



US Army Corps of Engineers  
Baltimore District

## Baltimore Harbor and Channels (MD and VA) Dredged Material Management Plan and Final Tiered Environmental Impact Statement

Volume I – Text



DECEMBER 2005

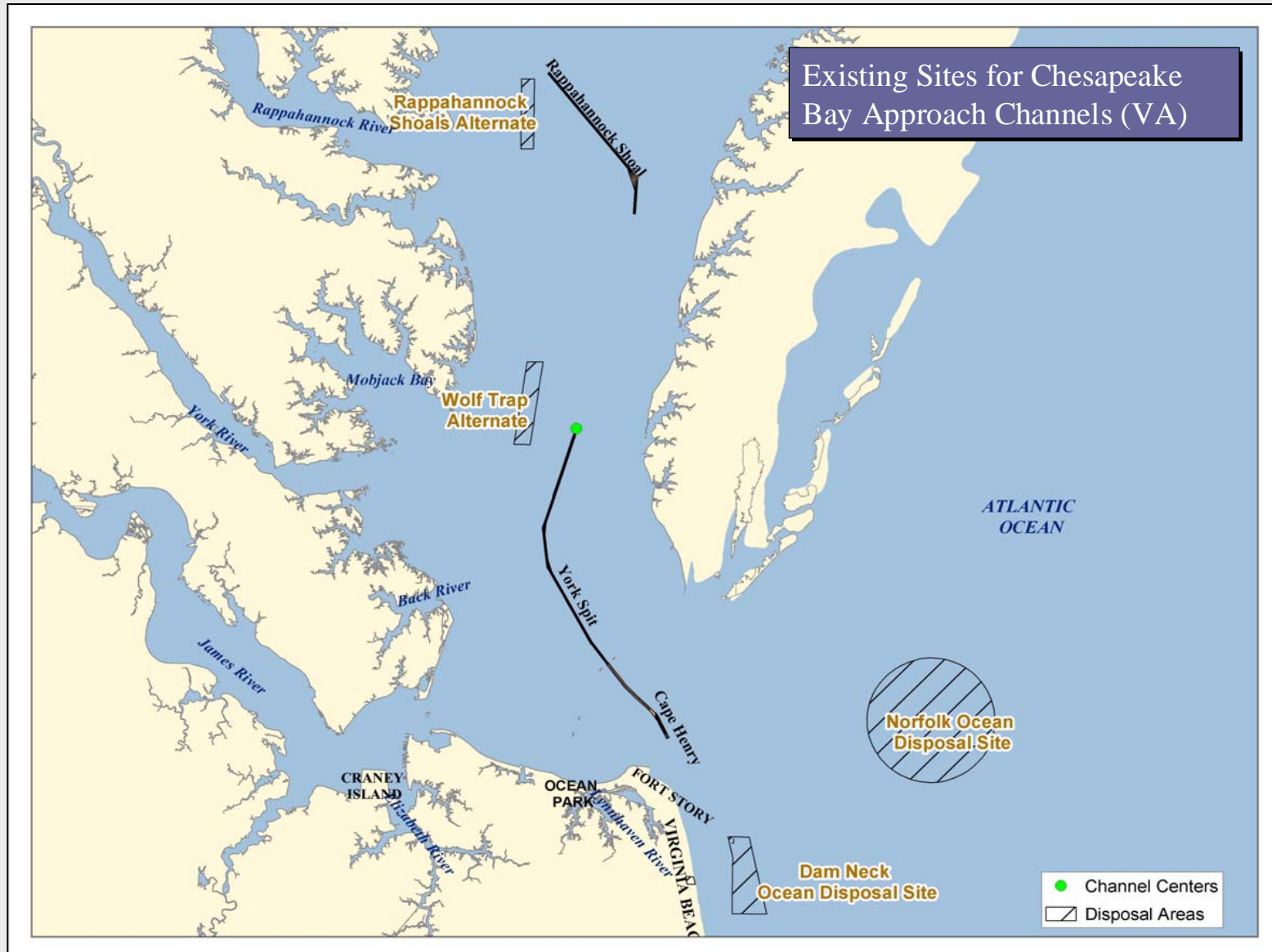
Prepared by:  
Weston Solutions, Inc.  
West Chester, PA



- ~ 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.**

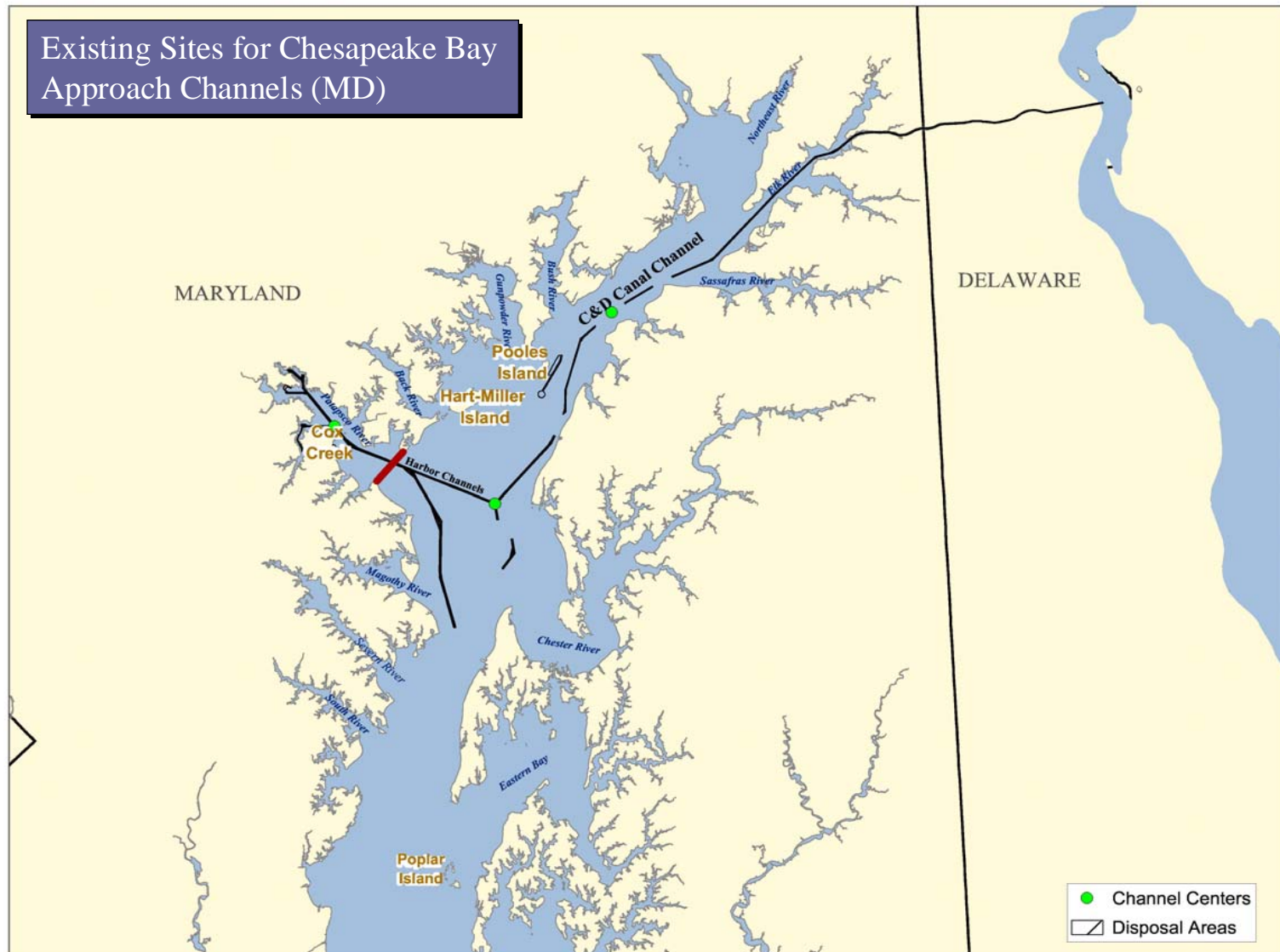


# Existing Placement Sites in Virginia





# Existing Placement Sites in Maryland





## Federal Standards for Baltimore Harbor & Channels

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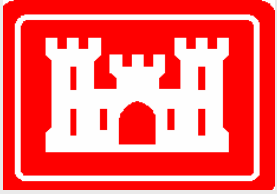
- Existing open water placement sites in Virginia
- Open water placement for Chesapeake Bay approach channels in Maryland
- Expansion of Hart-Miller Island for Harbor Channels



# State of Maryland Constraints for Dredged Material Placement

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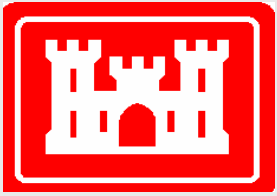
- **Maryland State Laws**
  - **North Point/Rock Point Line**
  - **Hart-Miller Island must close in 2009**
  - **Pooles Island sites must close in 2010**
  - **Prohibits open water placement**
  - **5-mile radius around Pleasure, Hart-Miller Island**
- **Socio-Political Constraints**
  - **Prohibit artificial island creation**



## DMMP –Recommended Plan

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- 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

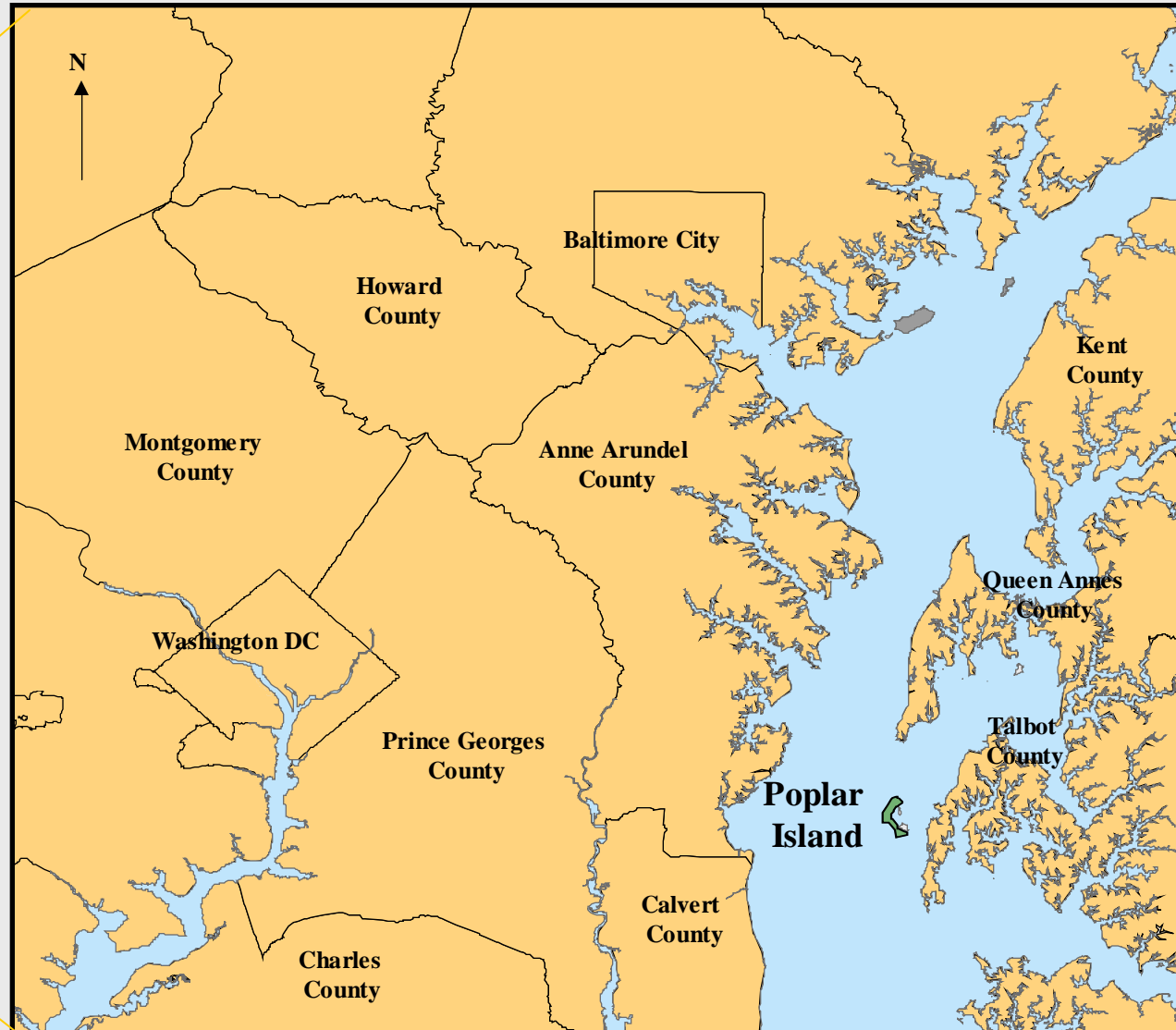


# Poplar Island

## Site Map and Project Location



Poplar Island Site Location Map



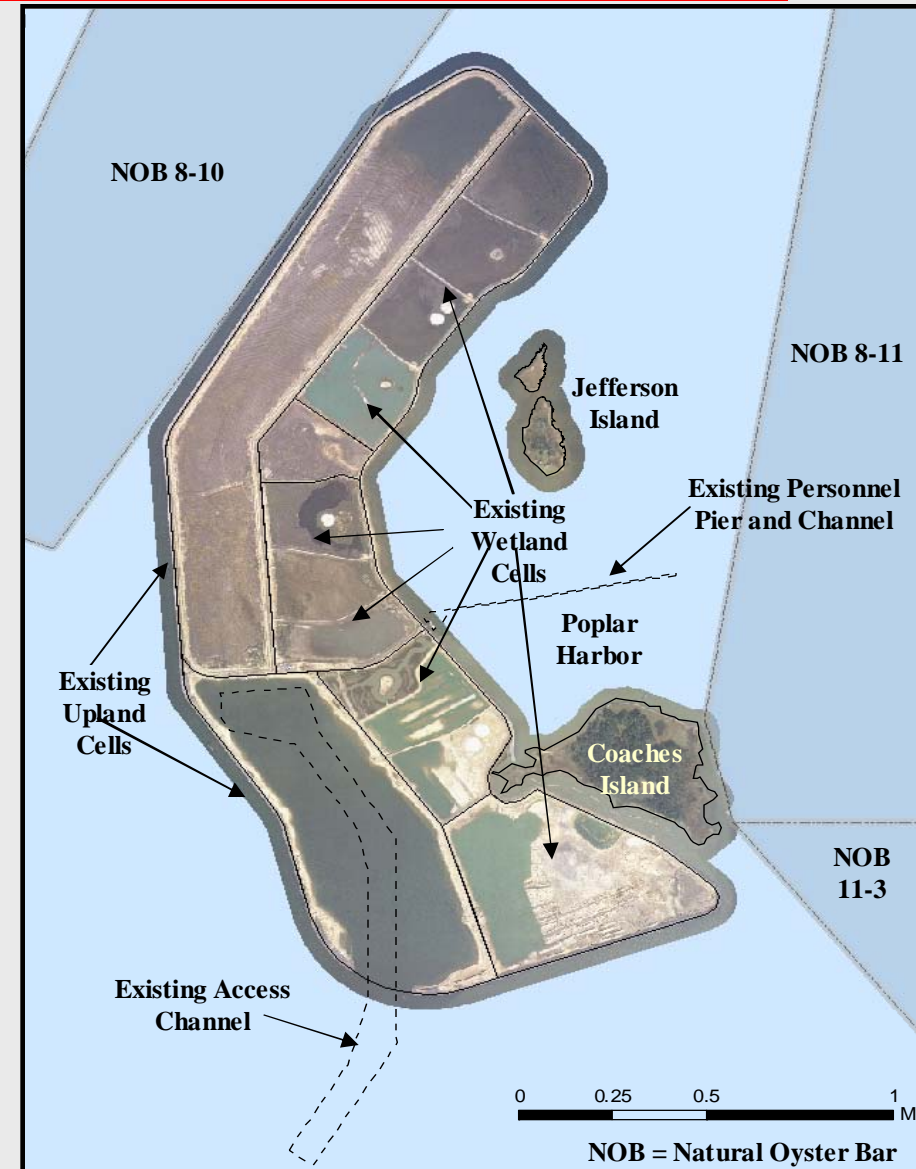


**Poplar Island - Existing Project  
September 2004**



# 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)





June 2005

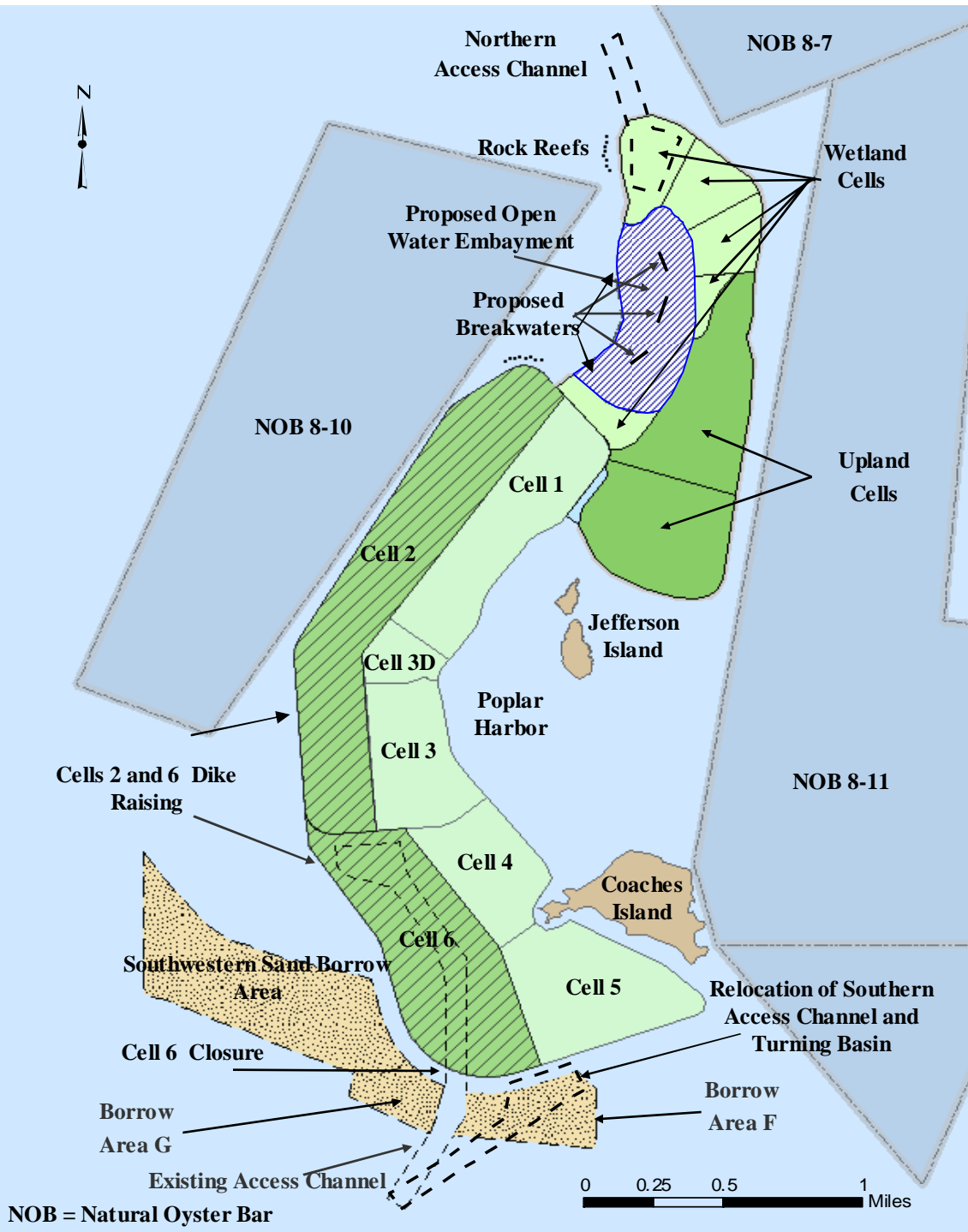


August 2005



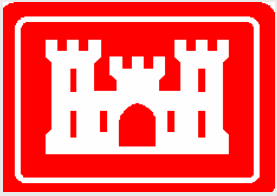
June 2006

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)



# Mid-Bay Island



# Existing Conditions James Island



year	acreage*
1680	1350
1847	978
1900	568
1910	490
1942	336
1960	235
1987	104
2004	79

- 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

year	acreage*
1848	754
1900	539
1930	433
1942	371
1960	260
2004	197

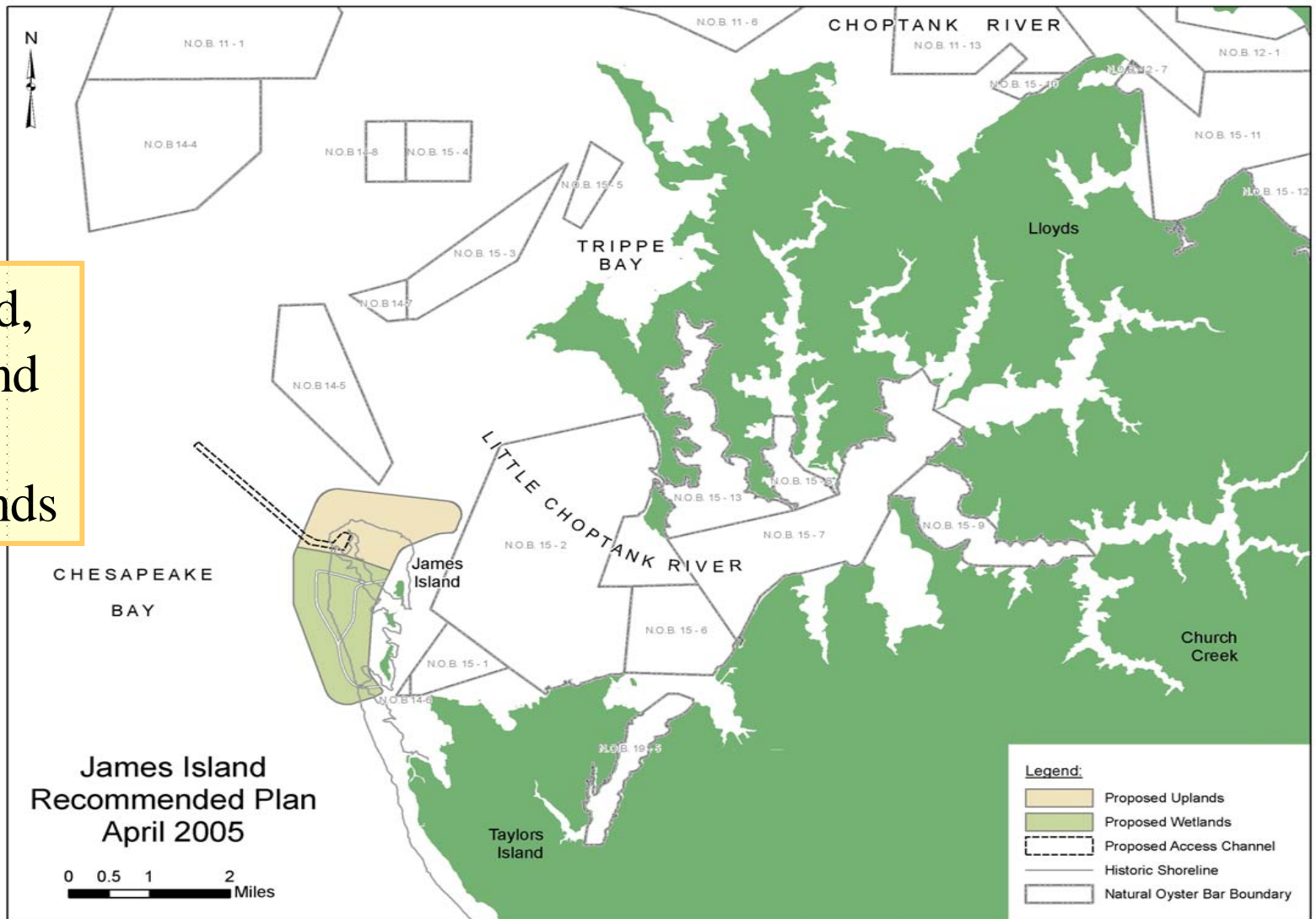
- SAV presence:
  - 1999-2003 average = 695 acres
  - 1994-1998 average = 1.3 acres

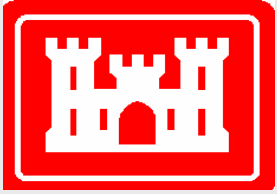




# James Island Recommended Plan

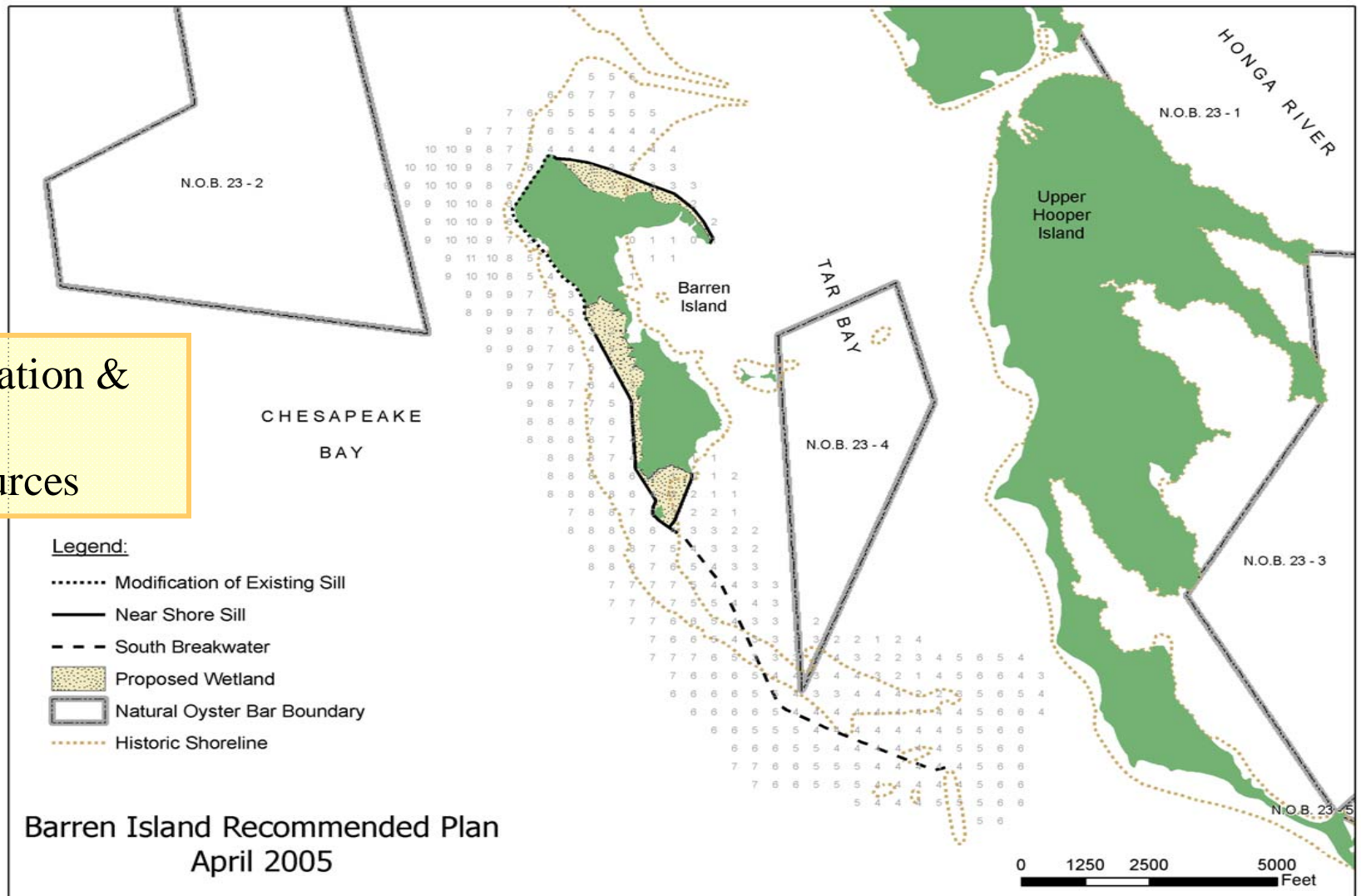
2072 acre island,  
45% uplands and  
55% wetlands,  
20 ft high uplands



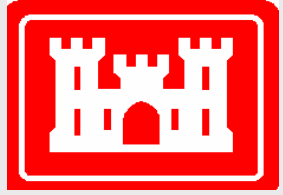


# Barren Island Recommended Plan

Island Restoration &  
Protection of  
existing resources







# AAPA Quality Partnership Initiative Project Managers Workshop

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