Maryland's Dredged Material Management Program

AAPA Charleston

Social Responsibility Panel

May 4, 2010

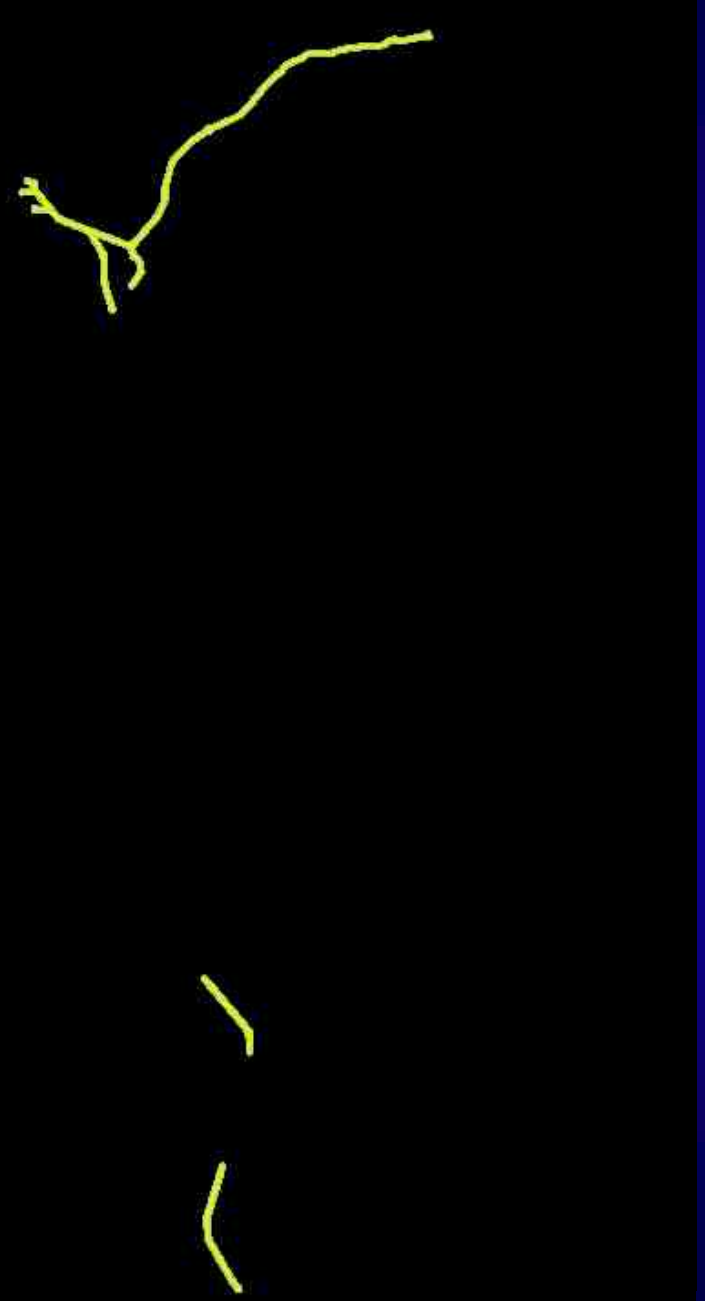
Maryland Port Administration

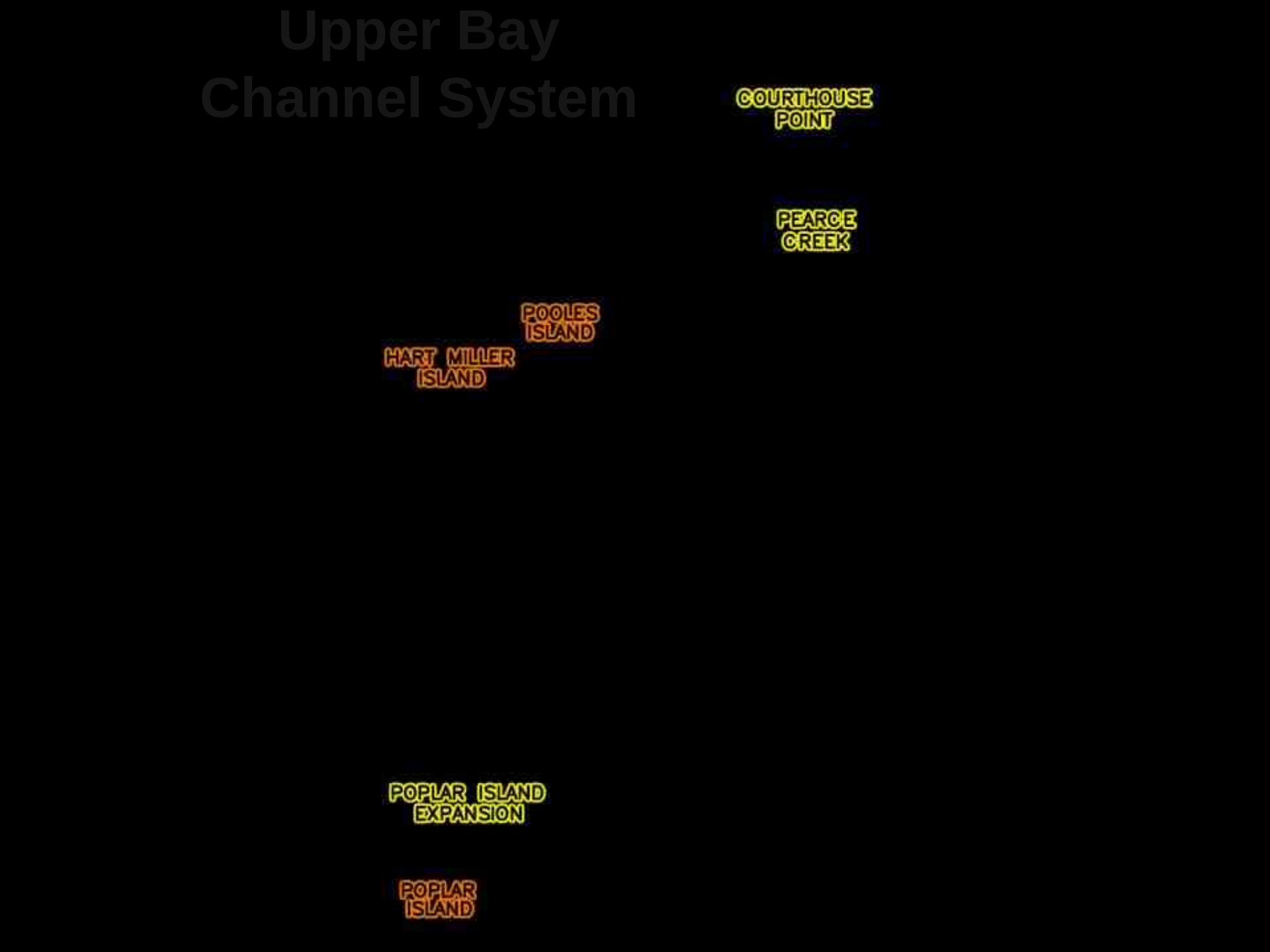
Overview

- Dredged Material Management Options needed to maintain and improve POB channels
- Dredged Material Management Program (DMMP) involves stakeholders as partners
- The Masonville Project, involvement of and benefits to local communities, other stakeholders and the environment
- Sustainability approach provides benefits to local communities and an efficient path to DMMP option implementation

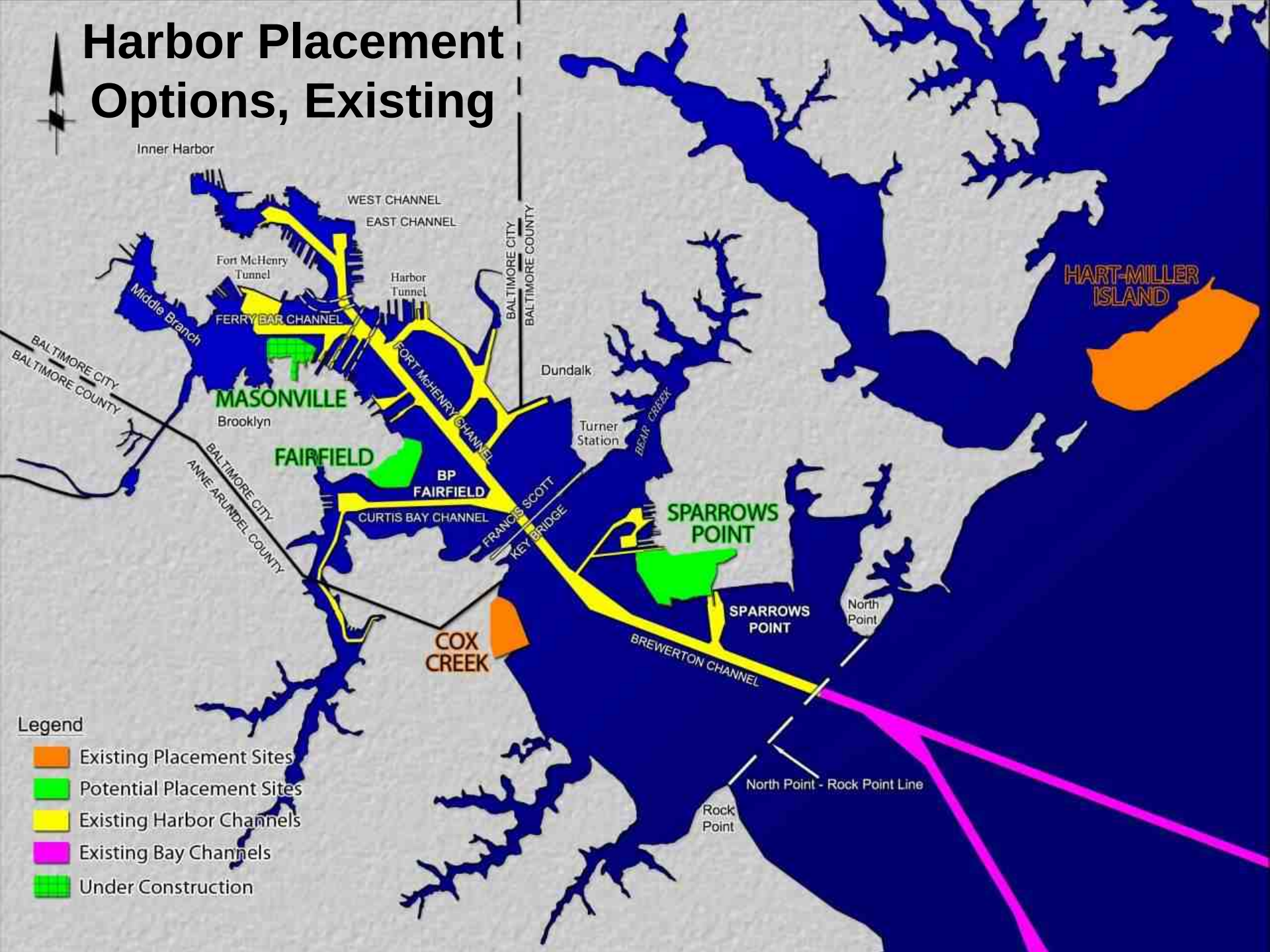
Channels

Port of Baltimore Channel System



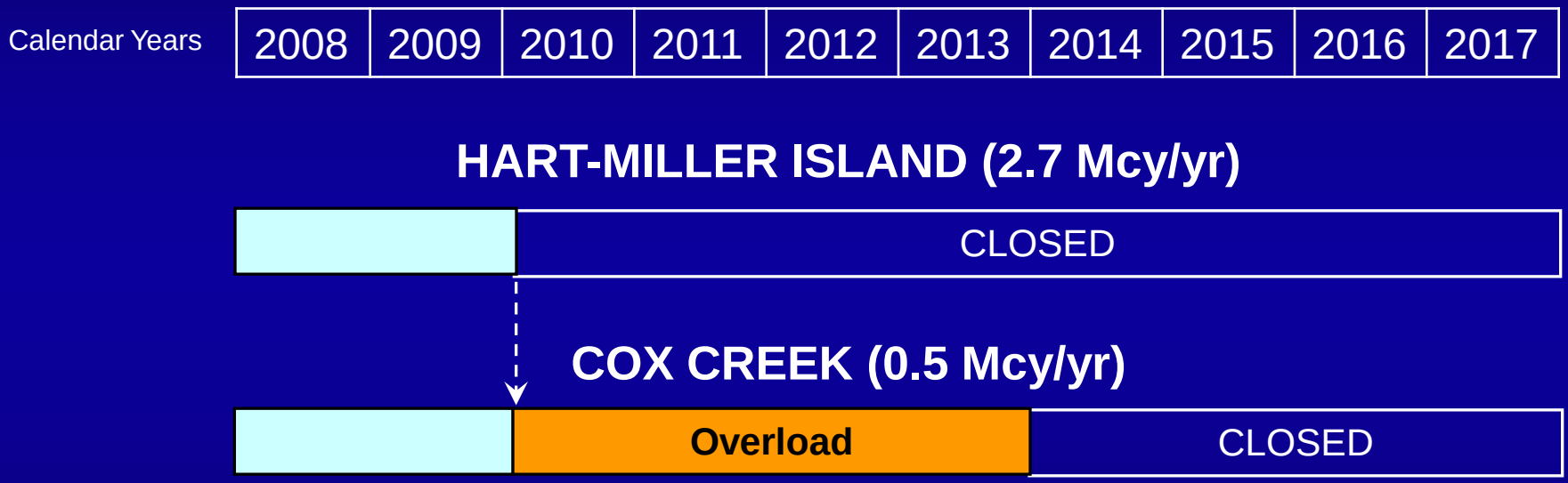

Upper Bay
Channel System
COURTHOUSE
POINT
PEARCE
CREEK
POOLES
ISLAND
HART MILLER
ISLAND
POPLAR ISLAND
EXPANSION
POPLAR
ISLAND

Harbor Placement Options, Existing



Harbor Channels
Dredged Material Placement Options

(1.5 Mcy/yr Dredging Need)



Harbor needs are not met starting in 2014.

Basis for Management Program

Dredge Material Management Act of 2001

- Mandated 20-yr Dredged Material Management Program (DMMP)
- Prioritized Placement Options in the Following Hierarchy
  - 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)

Maryland's DMMP Structure

Governor of Maryland

Executive Committee

Management Committee

Citizens' Advisory Committee

Harbor Team

Innovative Reuse Committee

Hart-Miller Island Citizens Oversight Committee

Cox Creek Citizens Oversight Committee

Masonville Citizens Advisory Committee

Bay Enhancement Working Group (BEWG) And Scientific and Technical Advisors

Harbor Options Selection Process

- Maryland changed its approach after the Dredged Material Management Act of 2001
- How we did it then
  - MPA generates proposed placement options
  - Formal public comment on proposed options
  - Most frequent public response – no, no, most definitely NO!
- How we do it now – Partnership, the Harbor Team
  - 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
- Harbor Team (Created 2003) - Members represent local communities, community activists, local jurisdictions, maritime industry, NGOs, and other stakeholder organizations

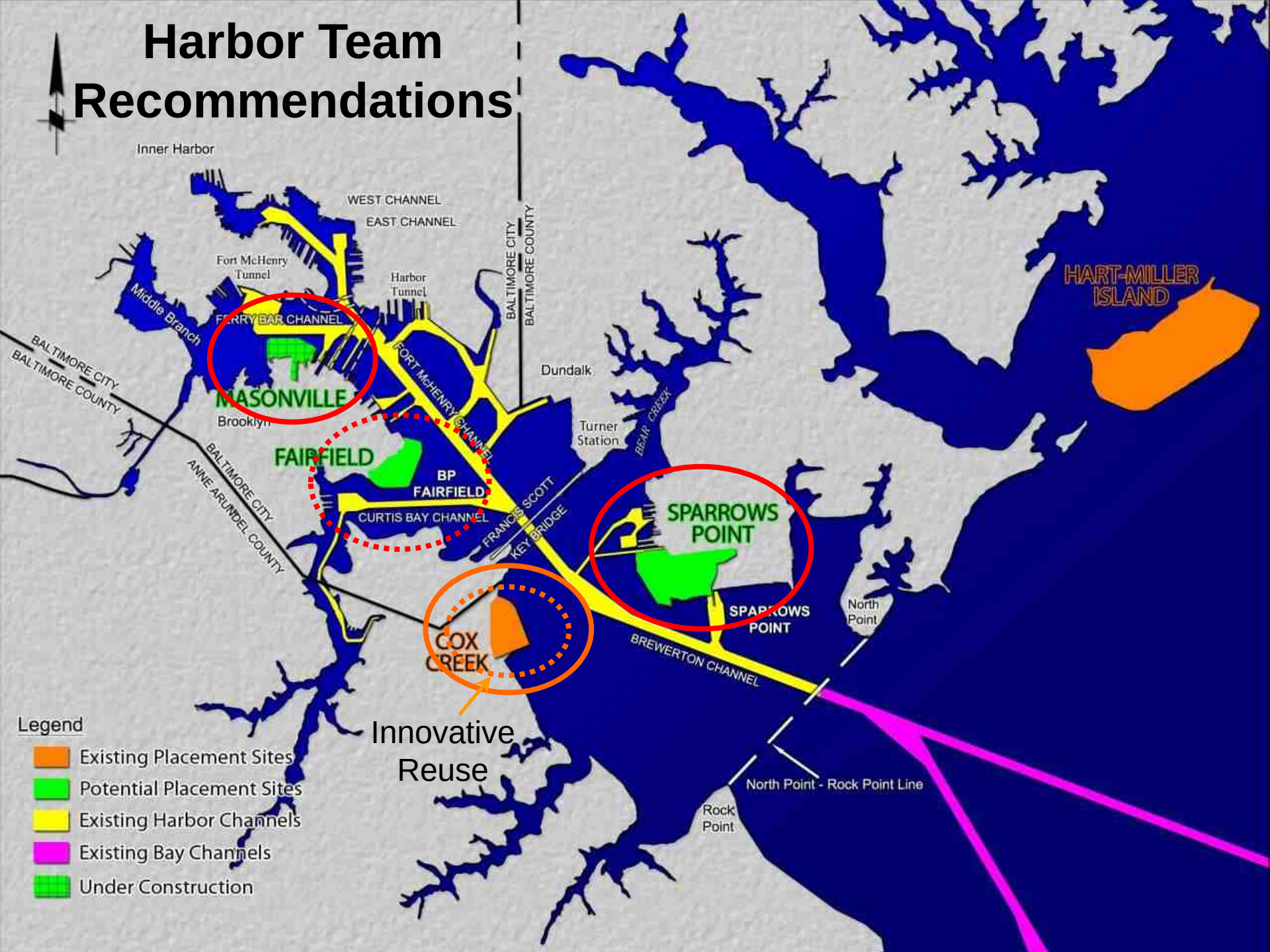
Charge to Harbor Team

- 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 Options
Harbor Team Recommendations for Harbor Material, October 2003

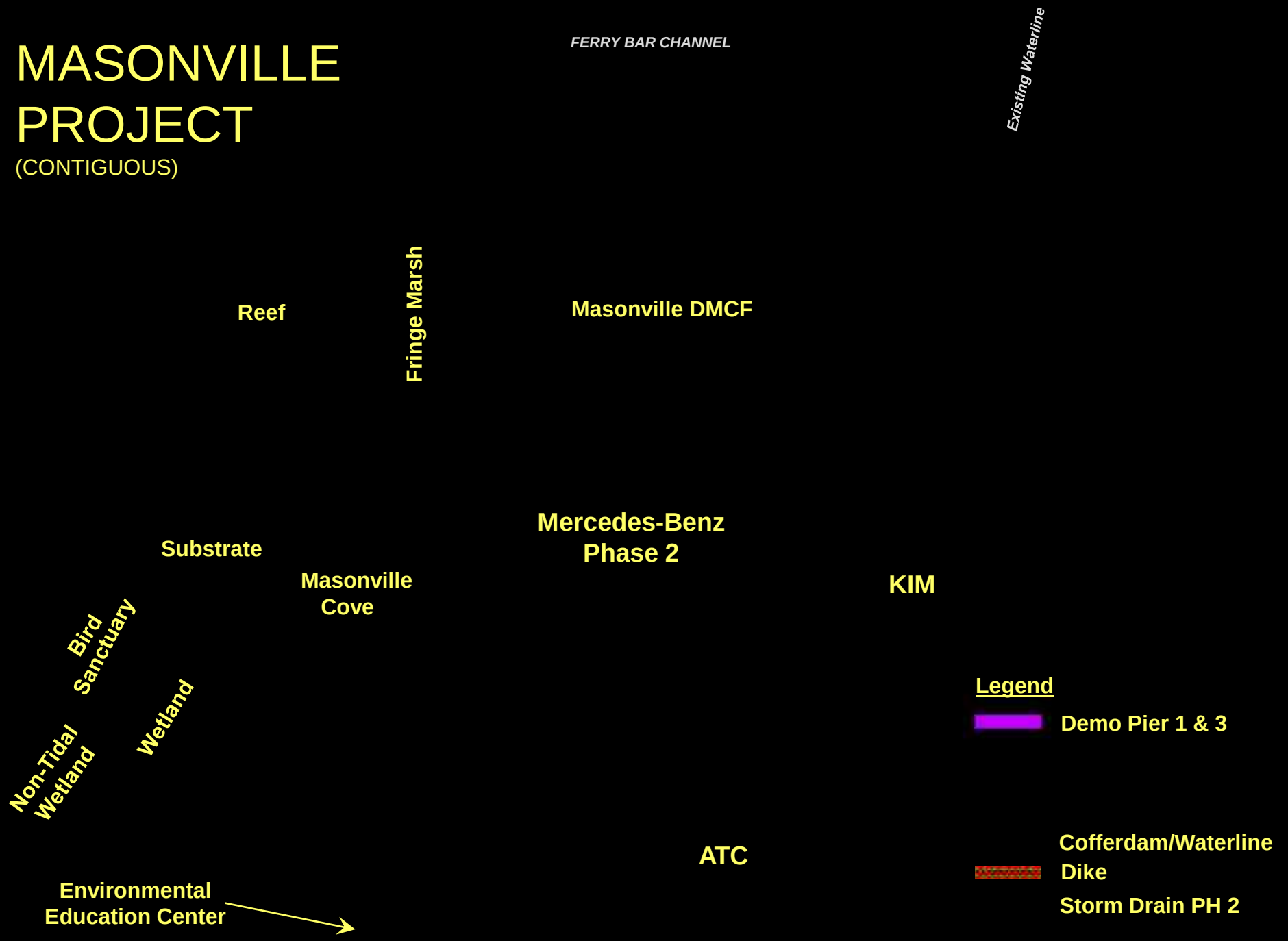
- Renovation and Operation of Cox Creek *(Done)*
- Further Studies:
  - Masonville: subsequently recommended as 1st option *(Under construction)*
  - Sparrows Point, BP Fairfield *(Feasibility Study)*
- Community Enhancements Included *(All Sites)*
- Legislative Modification for Sparrows Point *(2011)*
- Innovative Reuse of Dredged Material *(Three demonstration projects underway)*

Harbor Team Recommendations




Baltimore
Inner Harbor
Masonville Project Area

MASONVILLE PROJECT
(CONTIGUOUS)



Sustainability Works

Masonville Example

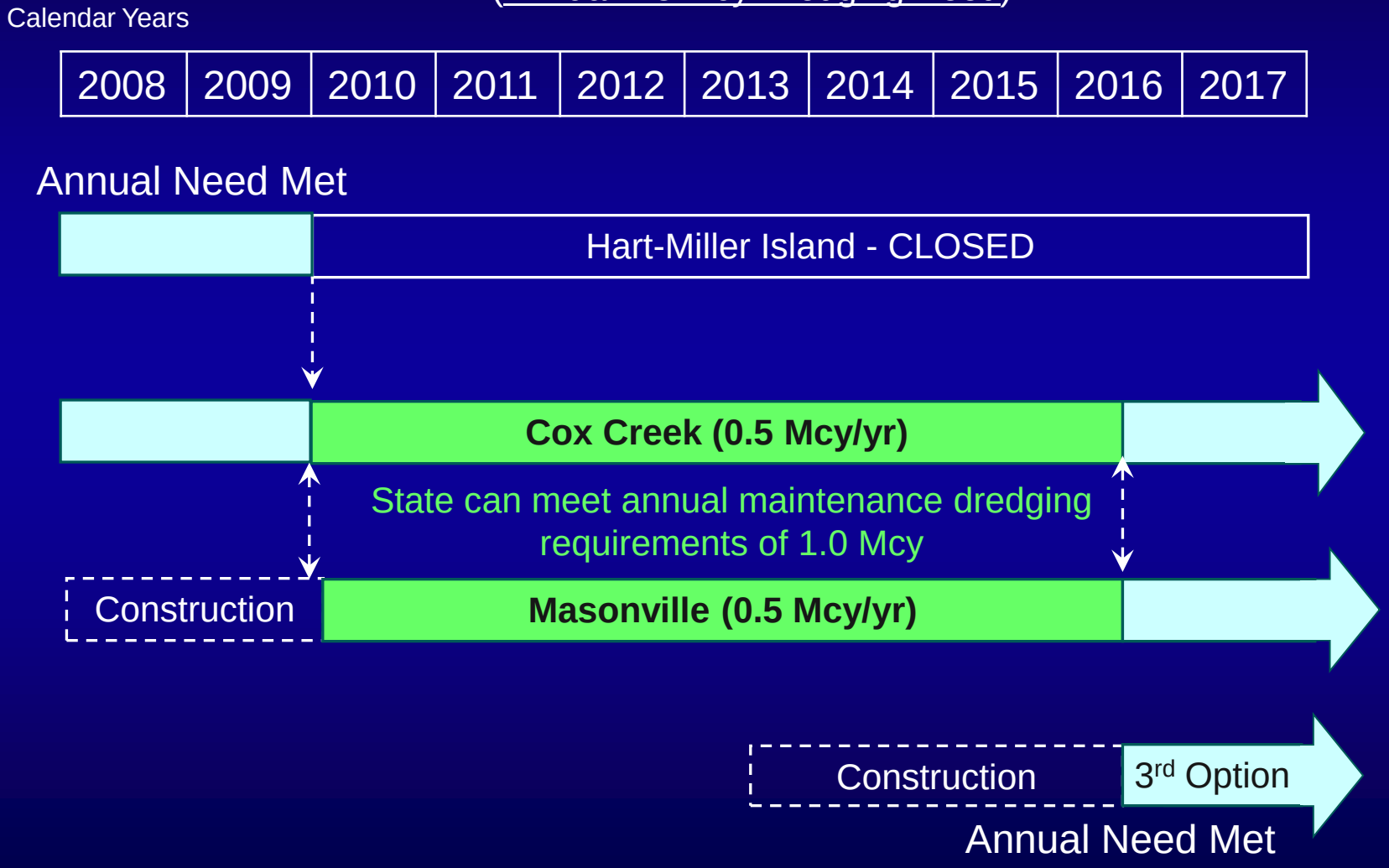
Economic Benefits

- *The Harbor Team process has resulted in two public hearings with no testimony against the project, and community representatives and elected officials testifying in support of the project
- The Team produced an operational site in approximately 6 years with no litigation, compared to more than 14 years with litigation to the U.S. Supreme Court level for the previous containment project
- Masonville is operational when needed to replace Hart-Miller Island (closed 12/31/09); the previous process would have taken approximately 9 years longer during which time the Harbor could not have been adequately maintained
- The Port is subsequently able to maintain its underwater infrastructure without interruption, along with its ability to compete in the international maritime marketplace
- Ancillary benefits include a 50-ft access channel for Seagirt Marine Terminal Berth 4, a 45-ft access channel for Seagirt Marine Terminal Berths 1,2 and 3, and a cofferdam foundation for a new automobile pier 3 at Fairfield Marine Terminal
- Enhanced community relationships benefit and support the Port of Baltimore
- Masonville will become a marine terminal when filled to capacity

* A presentation to the National Environmental Justice Advisory Council resulted in compliments to the State of Maryland for involving potentially impacted communities in identification, selection, design, construction, operation and benefits of the Masonville Project

Masonville Enables Full Maintenance of Harbor Channels

(Annual 1.5 Mcy Dredging Need)



Note: 3rd option (Sparrows Point proposed, 1.0+ Mcy/yr)

Future Terminal at Masonville

Community Recognition of Port's Role in Creating Masonville Cove

Sustainability Works

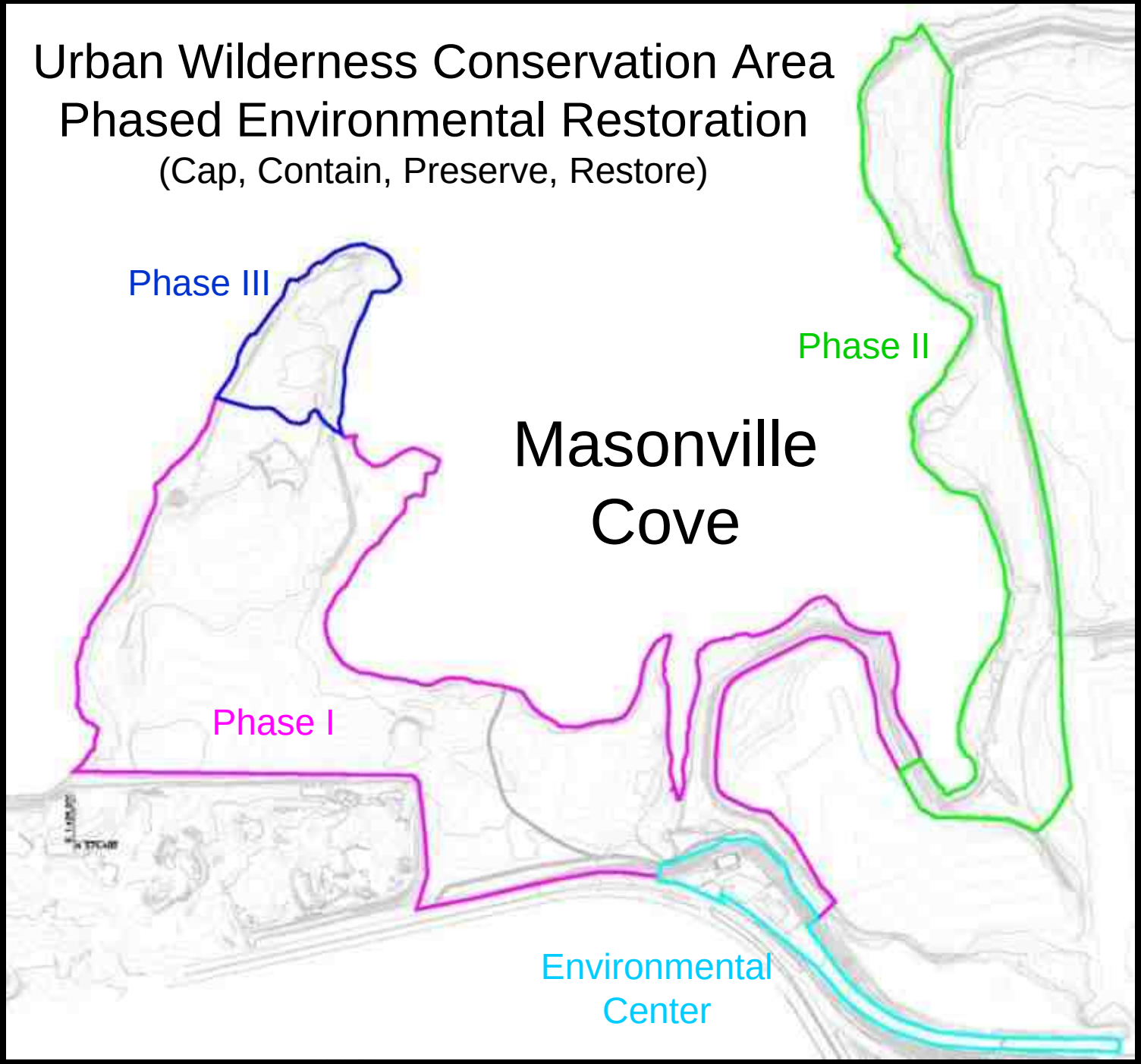
Masonville Example

Community Benefits

- The communities are gaining access to the water for the first time in 70 years, with traffic improvements and pedestrian access enabling residents to enjoy an urban wilderness area
- An environmental and community center in a near net zero energy green building, providing for educational opportunities and community activities
- Educational programs by Living Classrooms and the National Aquarium for local schools, with an emphasis on environment and the Chesapeake Bay
- Masonville Cove with over 50 acres of upland habitat and over 100 acres of tidal/non-tidal wetlands connected to and part of the local park system, expanding Masonville's impact to community education and recreation
- Control over Masonville Cove Urban Wilderness Conservation Area through a community held conservation easement, ensuring continuity of community benefits into the foreseeable future
- Community leaders state that the Masonville model is enabling local communities to benefit from other proposed projects in and adjacent to their communities through negotiation of MOUs with potential developers

Masonville Cove Environmental Education Center

Urban Wilderness Conservation Area
Phased Environmental Restoration
(Cap, Contain, Preserve, Restore)



Sustainability Works

Masonville Example

Environmental Benefits

- Cleaning up and restoring one of the worst brownfields in Baltimore Harbor, including removal of over 61,000 tons of trash and rubble and remediation/removal of 27 derelict vessels, some with hazardous materials on board
- Over 130 acres of seriously contaminated river bottom are capped and contained within the DMCF footprint
- Over 50 acres of contaminated uplands are being capped, contained, and restored to beneficial biological productivity within Masonville Cove
- Over 100 acres of tidal and non-tidal wetlands are being restored or created in Masonville Cove
- A conservation easement on Masonville Cove held by a community trust to ensure that its function in support of wildlife and community access will not change
- Additionally, 5 trash interceptors, 2 major stream restoration projects, and 3 fish ladders are being implemented, monitored, and maintained in and around Baltimore Harbor and the Patapsco River watershed

Former Shipyard, Ship Breaking Area

Conditions at Shipyard before Cleanup Began

Masonville Cove Cleanup Underway

How It Works

Maryland's Communities

Maryland's Environment

Maryland's Economy

How It Works

Maryland's Communities

Maryland's Environment

Maryland's Economy

How It Works

Maryland's Economy

Maryland's Communities

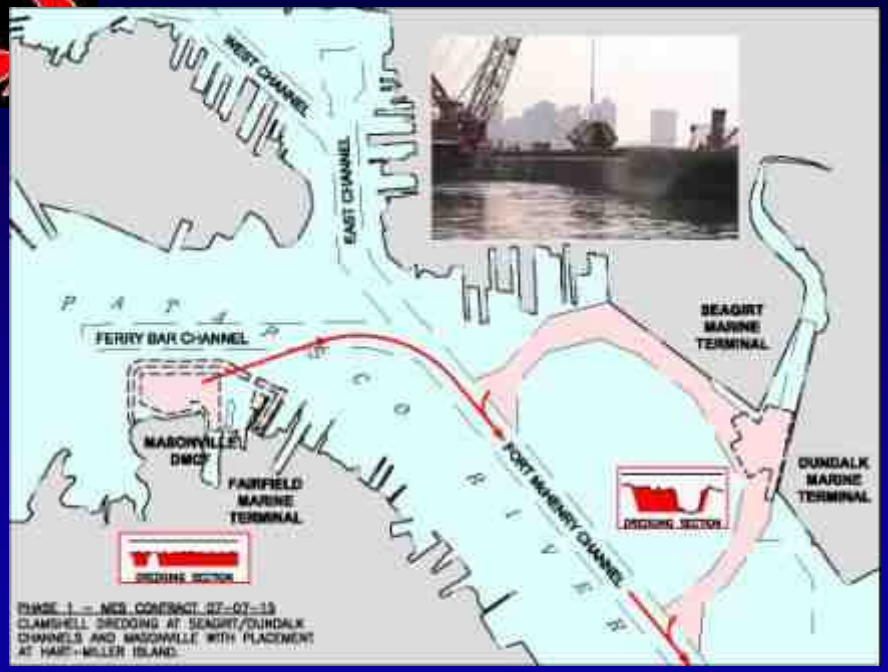
Maryland's Environment

What the Community Gets from This Project

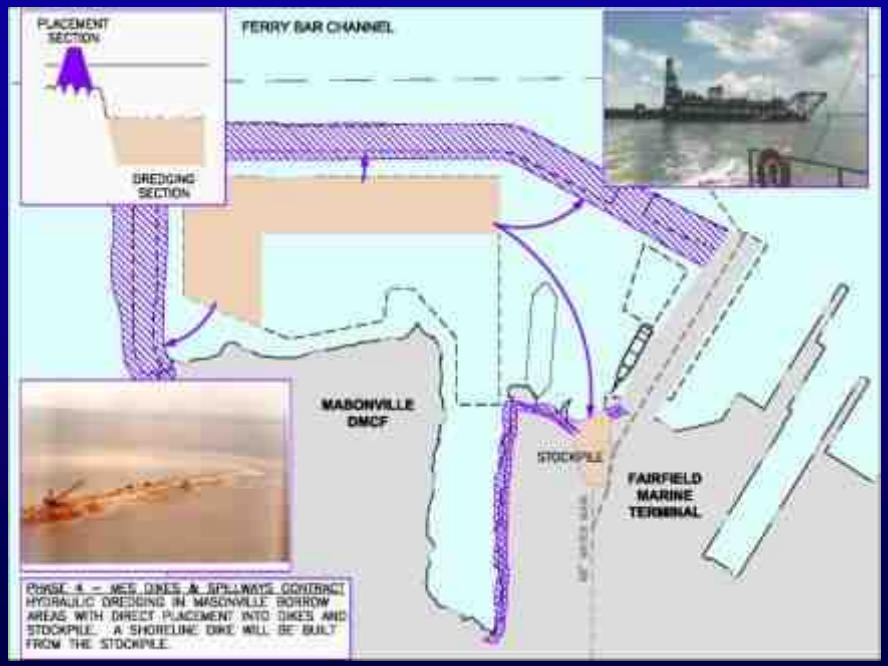
- Habitat restoration and urban environmental education experience (Living Classrooms)
- Conservation easement on restored Cove held by Shores of Baltimore Land Trust (Community Trust)
- Community access to the shoreline and water, first access to the water since 1940's
- Center for community meetings, environmental education classrooms in a green (net zero energy) building
- Traffic improvements to provide community, pedestrian access to the environmental center and shoreline
- Connection to other park areas, Gwynns Falls Trail extended to Cove natural area
- Cleanup of neighborhood Brownfield area

What the Community Gets

- Masonville communities are now engaging companies seeking local projects, using the Masonville model
- Community leaders attribute this to increased confidence in ability to take action to improve community, gained from Masonville project
- Developing MOU's with the companies to include: Agreements to hire locally, committed funding for improvements to community parks, scholarship program for community members, etc.



Masonville Construction Sequence – Ancillary Benefits

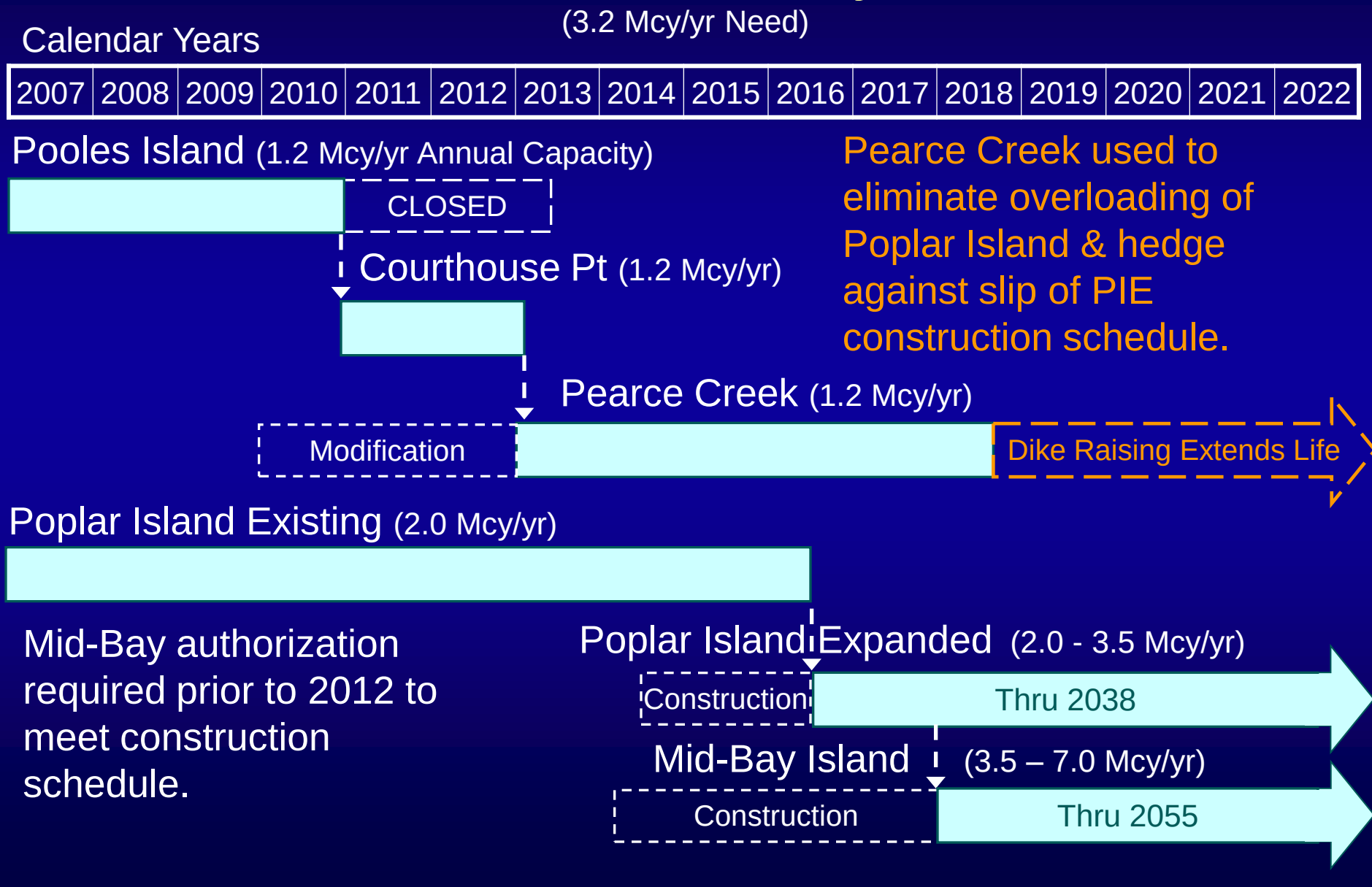


Continued Dredging Need, Need for Management Options

- Enhanced Panama Canal (2014); an opportunity for PoB, requires maintaining and improving 50’ channel
- Rapid implementation of management options needed to address closure of major management options
- Typical Civil Works timeline for implementation is 14 years
- Masonville implemented in 6 years under DMMP’s socially responsible approach

What the Port Gets from This Process – Bay Channels

(3.2 Mcy/yr Need)



Pearce Creek used to eliminate overloading of Poplar Island & hedge against slip of PIE construction schedule.

Mid-Bay authorization required prior to 2012 to meet construction schedule.

What the Port Gets – Poplar Island Environmental Restoration Project

- Size: 1,140 acres
- Perimeter dike: 40,000 ft
- Capacity: 42 mcy
- Cost: $407 million
- Uplands: 570 acres
  - 50% forest
  - 20% shrub/scrub
  - 20% meadow
  - 10% freshwater wetlands
- Tidal marsh: 570 acres
  - 80% low marsh
  - 20% high marsh

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Harbor Team Member Organizations

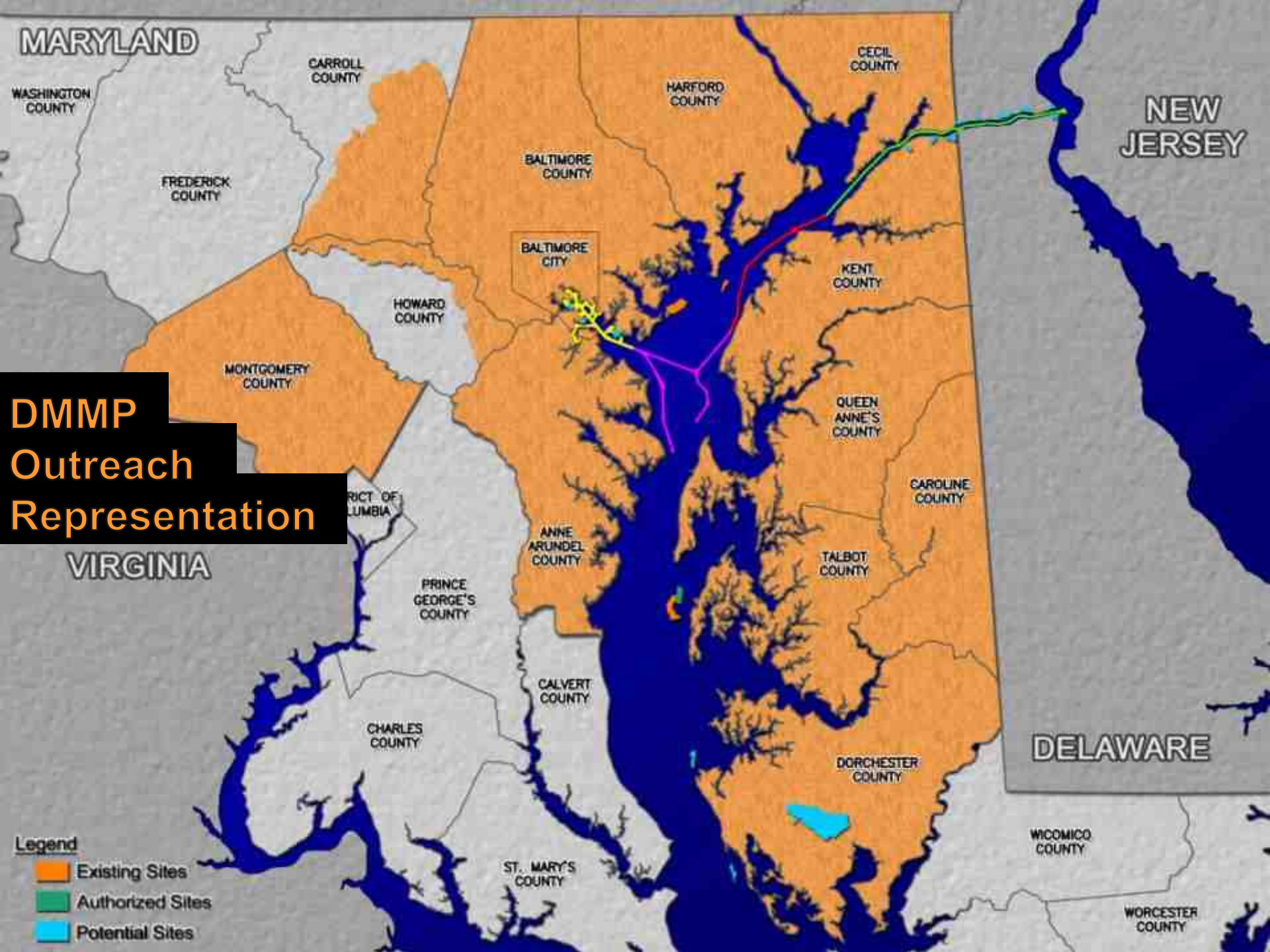
- Anne Arundel County Government
- Baltimore City Government
- Baltimore County Government
- Baltimore Harbor Watershed Association
- Mittal Steel
- Brooklyn and Curtis Bay Coalition
- Chesapeake Center for Youth Development
- Citizens for a Better Brooklyn
- Domino/The American Sugar Refining Company
- Dundalk Citizen
- Dundalk Renaissance Corporation
- Greater Dundalk Alliance
- Greater Dundalk Community Council
- Living Classrooms Foundation
- Locust Point Civic Association
- Maryland Pilots Association
- National Aquarium in Baltimore
- North County Land Trust
- North Point Peninsula Community Council
- Patapsco Back Rivers Tributary Team
- Rukert Terminal
- Turner Station Community
- W. R. Grace & Co.

Upper Bay Channels
Dredged Material Placement Options
(3.2 Mcy/yr Need, MPA Estimated Schedule)

Poplar overload condition starts 2011

(Material requires time for consolidation, overloading results in near-term loss of capacity).

Bay Needs cannot be met starting in 2017.


MARYLAND
WASHINGTON COUNTY
CARROLL COUNTY
FREDERICK COUNTY
HARFORD COUNTY
CECIL COUNTY
NEW JERSEY
BALTIMORE COUNTY
BALTIMORE CITY
KENT COUNTY
HOWARD COUNTY
MONTGOMERY COUNTY
QUEEN ANNE'S COUNTY
CAROLINE COUNTY
ANNE ARUNDEL COUNTY
TALBOT COUNTY
PRINCE GEORGE'S COUNTY
CALVERT COUNTY
CHARLES COUNTY
DORCHESTER COUNTY
DELAWARE
WICOMICO COUNTY
ST. MARY'S COUNTY
WORCESTER COUNTY
VIRGINIA
DMMP
Outreach
Representation
Legend
Existing Sites
Authorized Sites
Potential Sites