



Maryland  
Department of  
the Environment



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**CHANNELING INNOVATION**

**Western Dredging Association (WEDA)-  
Eastern Chapter – October 11, 2017**

# Overview – Innovative Reuse in Maryland



- Background
- Obstacles and Challenges
- Renewed Look at IR
- Regulatory Certainty
- Moving Forward

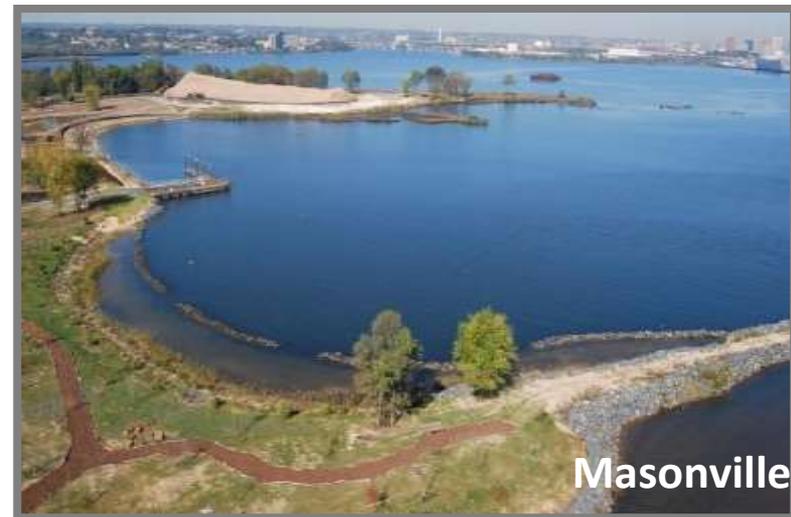
Hart Miller Island



Cox Creek

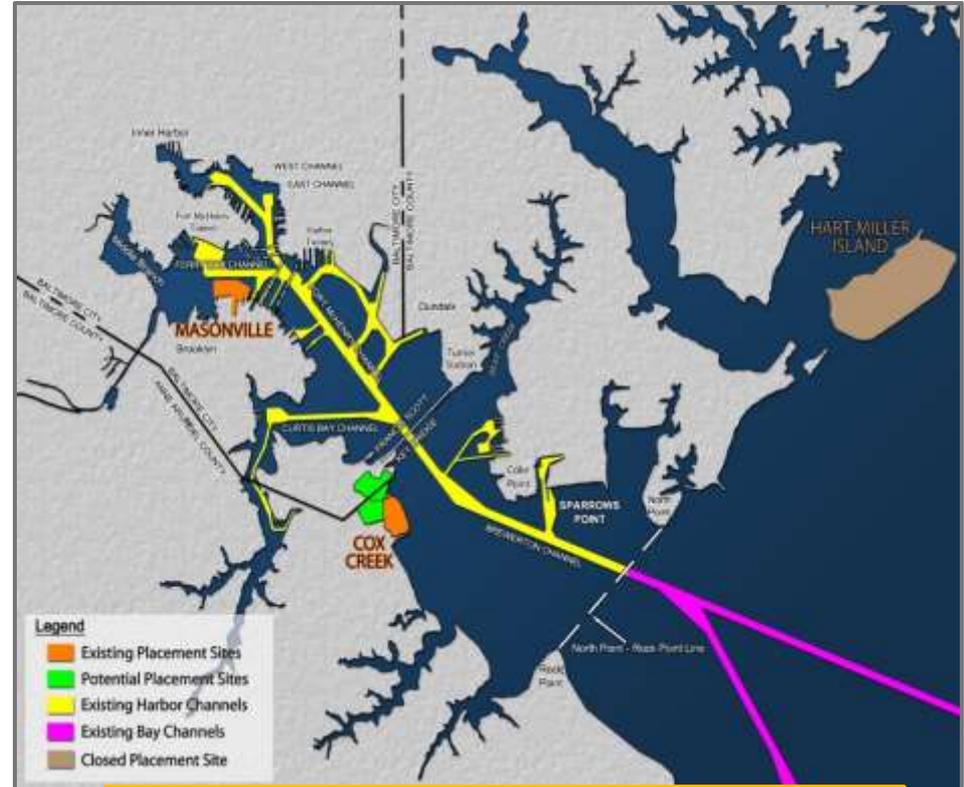
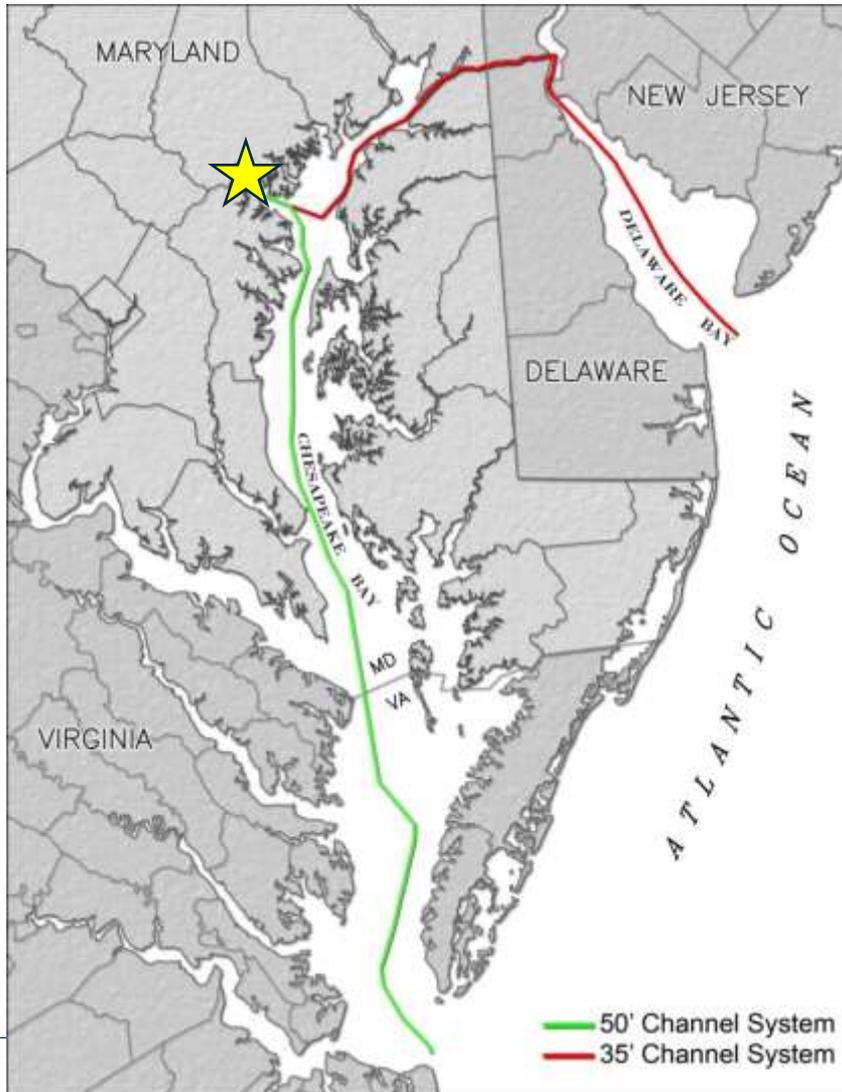


Masonville



# Dredged Material Management

Harbor Channel Material - Where do we go next?



**MPA Long-Term Innovative Reuse Goal:**  
Recycle **500,000 cy/year** of Harbor Channel Sediment



# Dredged Material in Maryland: The Early Years

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- **1975:** SB 28, Ch. 22, Acts of 1975: *Chesapeake Bay – Dumping Spoil from Dredging Operations within the Baltimore Harbor.*
  - **Legislative Declaration:** *The General Assembly declares that the Chesapeake Bay and its tributaries (within the tidewater portions thereof) are a great natural asset and resource to the state and its counties. Portions of these areas are **threatened with inundation by the unconfined dumping of vast quantities of spoil from dredging operations within Baltimore Harbor.** This inundation and unconfined dumping will pollute and despoil valuable portions of the bottomland in the Chesapeake Bay and its tidewater tributaries and be **grossly harmful to fish and marine life in these and adjacent waters,** to use for recreation, and to the economic and social life of the people of this state.*
- **1975:** SB 28, Ch. 22, Acts of 1975: *Chesapeake Bay – Dumping Spoil from Dredging Operations within the Baltimore Harbor.*
  - **Defined Baltimore Harbor:** *Baltimore Harbor: consists of the tidal portions of the Patapsco River and its tributaries lying westward of a line extending from Rock Point in Anne Arundel County to North Point in Baltimore County.*
  - **Dumping Prohibited:** *A person may not redeposit in an unconfined manner dredged material from Baltimore Harbor into or onto any portion of the water or bottomland of the Chesapeake Bay or of the tidewater portions of any of the Chesapeake Bay's tributaries outside of Baltimore Harbor. However, the dredged material may be redeposited in contained areas approved by the Department.*
- Md. ENVIRONMENT Code Ann. § 5-1102



# Maryland's Dredged Material Management Program (DMMP)

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## Guiding Legislation: The Dredged Material Management Act of 2001

**Prioritized placement options** in the following hierarchy:

- ★ **Innovative Reuse and Beneficial Use**
2. Upland Sites and Other Environmentally Sound Confined Capacity
3. Expansion of Existing Facilities
4. Other Options to Meet Long-Term Placement Needs (excluding re-deposition in an unconfined manner)



# The DMMA, cont'd

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## Statutory Definitions:

### ***Innovative Reuse:***

“includes the use of dredged material in the development or manufacturing of commercial, industrial, horticultural, agricultural or other products.”

### ***Beneficial Use:***

“Means any of the following uses of dredged material from the Chesapeake Bay and its tributary waters placed into waters or onto bottomland of the Chesapeake Bay or its tidal tributaries, **including Baltimore Harbor:**

- (i) The restoration of underwater grasses;
- (ii) The restoration of islands;
- (iii) The stabilization of eroding shorelines;
- (iv) The creation or restoration of wetlands; and
- (v) The creation, restoration, or enhancement of fish or shellfish habitats.”



# Pilot Projects Phase & Lessons Learned

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## *Pilot Projects Explored:*

- Engineered Fill Blends
- Lightweight Aggregate Processing
- Manufactured Topsoil Processing
- Agricultural Amendments



## *KEY Barriers Identified:*

- Regulatory Uncertainty
- Strongly held negative public perception
- Focus on “Product” – Rather than “End Use”



# Renewed Look at Maryland's Innovative Reuse



**June 2014**

## MPA's Revised Innovative Reuse & Beneficial Use Strategy

Identified 9 Strategic Action Items

### **Action Item #1**

## Convene Regulatory Interagency Workgroup

**Workgroup formed July 2015**

### **Workgroup Members**

- US Army Corps of Engineers, Baltimore District
- EPA, Region 3
- MD Department of Environment
- MD Department of Natural Resources
- MD Geological Survey
- MD State Highway Administration
- MD Environmental Service
- MD Port Administration
- MD Department of Agriculture

1. Reviewed best practices from 9 states and 2 MDE programs
2. Identified 7 Key Findings
3. June 2016: Issued 5 Policy Recommendations



# Regulatory Workgroup – Final Report

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## Final Report & Recommendations – June 2016

- 1. Develop Technical Screening Criteria & Guidance Document**
2. Evaluate Feasibility of Existing MDE Authority (NPDES/WQC) to Facilitate Innovative Reuses.
3. Call on State Agencies to be a Leader in the Reuse of Dredged Material.
- 4. Build Public Awareness /Support for Reuse – Develop Tagline, Video, Infographic, Social Media Presence.**
5. Review and Recommend Need for COMAR or Statute changes.



# Delivering on the Workgroup's Recommendation:

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## ***MDE GUIDANCE DOCUMENT PROVIDES:***

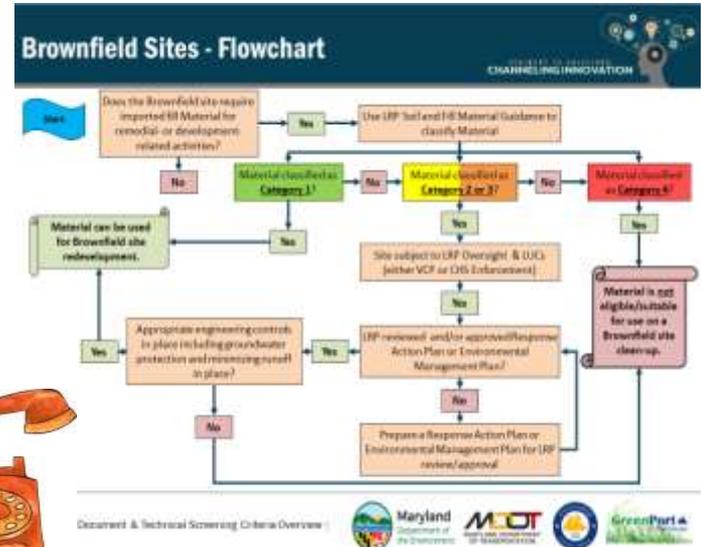
- **Transparency**
  - *In the MDE approval process.*
- **Regulatory Certainty**
  - *Clear criteria and step-by-step guidance*
- **Protects Human Health & the Environment**
  - *Risk-based screening standards that account for long-term exposure risks.*
- **Recycling & Resource Recovery**
  - *Opportunities for dredged material, a resource with economic value, to be a useful product.*



# MDE - Streamlined Regulatory Certainty



- **Clarifies** the MDE Regulations and Approvals for Dredged Material Reuse
- Provides **Detailed Flow Charts** Specific to Innovative/Beneficial Uses
- Identifies MDE **Points of Contact** for Each Use and Environmental Media (*Who to call in Air, Land or Water*)
- Provides Guidance on Representative **Dredged Material Sampling** (*What samples, how many, how often?*)
- Gives **Risk-Based Sediment Benchmarks** Used for MDE Approvals



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# MDE Guidance Document & Technical Screening Criteria

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## Existing MDE Policies

- Dredging, Dredged Material Management: Regulations/Permits
- Beneficial Uses (Water Management)
  - Aquatic Habitat Restoration projects
    - Organized/consolidated policies in one place
    - Provides opportunity to implement beneficial use projects inside the Harbor utilizing Baltimore Harbor channel material subject to sediment characterization.
- Other Programs (Land Management)
  - Brownfield reclamation
  - Engineered fill and manufactured soil or amendments.
  - Landfill Cover (Daily, Intermediate, Final)

## NEW MDE Policy & Guidance

- New Fill Material & Soil Management Policy
  - *Includes Innovative Reuses for Dredged Material as fill/soil on land.*
- Establishes **4 categories** for management (including dredged material) of engineered fill or soil, including as a soil amendment:
  - **Category 1 – Residential, Unrestricted**
  - **Category 2 – Non-Residential, Restricted Use**
  - **Category 3 – Restricted Use, Cap Required**
  - **Category 4 – Ineligible for Reuse**

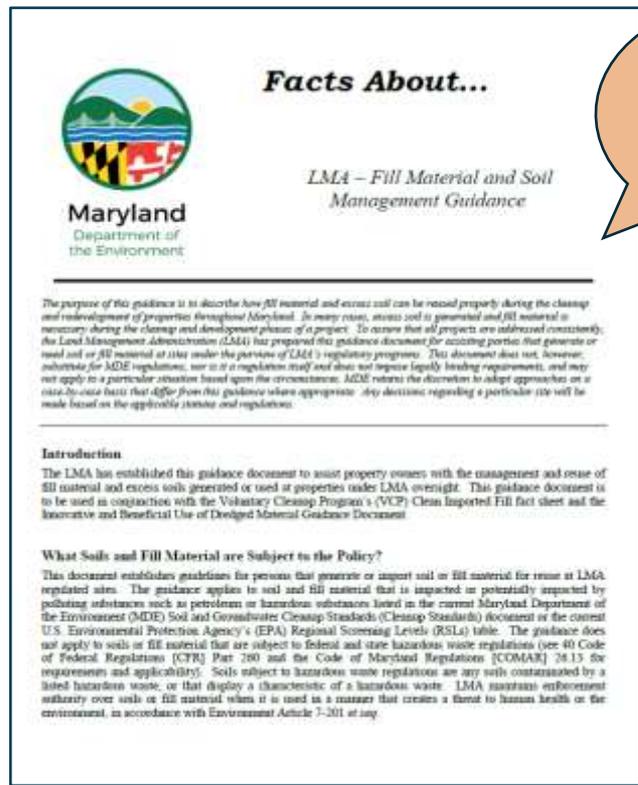


# 2017 MDE Criteria & Guidance: Reuse of Dredged Material & Fill Material/Soil Management

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List of **FAQs** posted



5 **Example Scenarios** posted

**Fill Material (construction)** means soil or dewatered dredged material used as foundation material for construction of a structure, such as roads and buildings, or to reclaim land lost to erosion, such as gullies or to reclaim mines. Final use of fill material is dependent upon the screening category of the material as found in this document (Facts About LMA...).



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## Marylander

- > [Citizen Participation](#)
- > [MDE Outreach](#)
- > [Public Health](#)
- > [Community Right-to-Know](#)
- > [Public Information Act](#)

## Dredging and Dredged Material Management

On an annual basis, approximately 5 million cubic yards of sediments are dredged in Maryland's portion of Chesapeake Bay. Finding environmentally responsible solutions for managing this material is a priority for the State of Maryland. MDE published guidance with public involvement to facilitate dredged material reuse in a manner protective of public health and the environment:



### Innovative Reuse and Beneficial Use of Dredged Material Guidance Document

- [Guidance Document – August 2017 Version](#)
- [Response to Public Comments on the Guidance Document and the Facts About Fill](#)
- [Frequently Asked Questions about the Guidance Document](#)
- [Fill Material and Soil Management Fact Sheet](#)
- [Soil and Fill Material Example Scenarios](#)

### Innovative Reuse and Beneficial Uses

Most dredged material from Chesapeake Bay, including Baltimore Harbor's navigation channels, is comprised of clean sediments that can be used on the land as soil amendments or engineered fill or in the water to create aquatic habitat and help improve water quality. Through existing regulatory authority, MDE has developed [guidance](#) to assist scientists, engineers, and other technical professionals seeking approvals to innovatively or beneficially use dredged material in how the Department makes related determinations. In so doing, applicants will better understand what information is required leading to increased transparency and efficiency in the permitting and approval process.



# Actively Conducting Stakeholder Outreach & Education



Port of Baltimore: Sediment to Solutions



- Infographic & Video posted to all social media platforms: as of May 2017 had been viewed over 650 times
- More than 2,000 hard copies shared
- Winner: 3 AAPA Communications Awards



# Moving Forward / Collaborative Partnerships

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- **Governor Hogan issued Waste Reduction/Resource Recovery Executive Order**
  - June 2017 - Recognizes dredged material as a resource, calls on state agencies to be leaders in reuse
- **Positive Response to Guidance/Screening Criteria from Industry**
- **Robust Outreach and Education Continues**
- **MPA Completing Studies: Testing Topsoil & Fill Material Blends**
  - Geo-technical and environmental tests underway
- **Partnering with Maryland State Highway Administration (SHA)**
  - Add Dredged Material to SHA Recycled Materials Specification
  - Revise SHA Furnished Topsoil Specification
    - Remove prohibition on use of “dredge spoil”
- **Conduct Field Demonstrations / Functional Small Scale projects**
- **Exploring Business Plans for Large Scale Volume of IR**



# Additional Resources...

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- **MDE Dredging/Dredged Material Management website:**  
<http://mde.maryland.gov/programs/Marylander/Pages/dredging.aspx>
- **MPA GreenPort Dredging website:**  
<http://www.mpa.maryland.gov/greenport/Pages/dmmp.aspx>
- **MES Dredging website:**  
<https://www.menv.com/pages/dredging/dredging.html>
- **Port of Baltimore: Sediment to Solutions Video:**  
<https://www.youtube.com/watch?v=yiVhs5P0Zjg&t=5s>
- **Regulatory Workgroup Final Report:**  
[http://www.mpa.maryland.gov/greenport/Documents/FINAL\\_REPORT\\_IBR\\_WORKGROUP.pdf](http://www.mpa.maryland.gov/greenport/Documents/FINAL_REPORT_IBR_WORKGROUP.pdf)





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*Questions?  
Thank You for Your  
Attention!*

