

FINAL
SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM
INNOVATIVE REUSE COMMITTEE MEETING

February 27, 2018, 5:30 PM
2200 Broening Highway
Baltimore, Maryland 21224

Attendees:

Innovative Reuse Committee (IRC) Members:

Anne Arundel County Department of Public Works: Chris Phipps
Baltimore County Department of Environmental Protection and Sustainability (EPS): David Riter
Baltimore Development Corporation (BDC): Patrick Terranova
Baltimore Port Alliance (BPA): Rupert Denney
Blue Water Baltimore: Barbara Johnson
Chesapeake Bay Foundation (CBF): Doug Myers
Cox Creek Citizens Oversight Committee: Allan Straughan
Maryland Department of the Environment (MDE): Matthew Rowe
Maryland Department of Natural Resources (DNR): Paul Petzrick
Northeast Maryland Waste Disposal Authority (NMWDA): Andrew Kays
Turner Station Conservation Team (TSCT): Larry Bannerman
United States Army Corps of Engineers (USACE): Danielle Szimanski
Stancills, Incorporated: Terry Stancill

IRC Support Staff and Observers:

Facilitator: Steve Pattison
Harvest Power: Sladjana Prozo
Maryland Department of Transportation Maryland Port Administration (MDOT MPA): Chris Correale, Bertrand Djiki, Kristen Fidler, Holly Miller, Kristen Keene
Maryland Environmental Service (MES): Lauren Mentzer, Dallas Henson
Northgate Environmental (NGE): Nancy Leitner
Stancills, Inc.: Chris Siciliano
Tradeport Atlantic: Pete Haid
University of Maryland Center for Environmental Science (UMCES): Elizabeth Price

Action Items:

1. Mr. Kays will contact Ms. Kaley Laleker of Maryland Department of the Environment (MDE) in regards to Maryland Department of Transportation Maryland Port Administration (MDOT MPA) conducting a presentation on dredged material blending at a future House Bill (HB) 171 meeting. (*Update: MDOT MPA coordinated with Ms. Laleker regarding participation in HB 171 meetings.*)

Welcome & Introductions

Steve Pattison, Facilitator

Mr. Pattison welcomed the meeting attendees and the attendees introduced themselves. Mr. Pattison stated that no comments were received on the November 28, 2017, Dredged Material Management Plan (DMMP) Innovative Reuse Committee (IRC) meeting summary and asked for any comments from the attendees. No comments were shared and the Committee accepted the November 28, 2017 summary as final.

Mr. Bannerman thanked Ms. Correale and Mr. Haid for discussing the dredging process at the February 26, 2018, Turner Station community meeting.

Innovative and Beneficial Reuse Progress Report

Kristen Keene, MDOT MPA

Mr. Pattison stated that Ms. Keene will be providing an update from MDOT MPA regarding the innovative reuse and beneficial use of dredged material. Ms. Keene stated that MDOT MPA has been in coordination with multiple partners in order to develop demonstration projects that will help further the innovative reuse program. MDOT MPA is currently evaluating projects using dried dredged material removed from the Cox Creek Dredged Material Containment Facility (DMCF) for Alternative Daily Cover (ADC), engineered fill, and an on-site test nursery.

The Quarantine Road Landfill demonstration project with the Baltimore City Department of Public Works (DPW) will use dried dredged material approved by the Maryland Department of the Environment (MDE) as ADC. MDE's approval letter includes the use of 'Stockpile A' material, currently located on-site at Cox Creek DMCF, as ADC and outlines reporting requirements for the site operator, which include: 1) The performance/workability of the dredged material as ADC; 2) Description of any operational issues encountered; 3) Photographic documentation illustrating the field manipulation and handling of the ADC; and 4) A description of any modification to the landfill's standard operating procedure (SOP) required in using dredged material as ADC. MDE's approval also includes a condition based on the results from the reporting requirements of the demonstration project; if results are favorable, MDE may consider dredged material as ADC for an extended period of time. At that time, Baltimore City DPW will be required to amend the landfill's operations and maintenance manual to reflect the use of dredged material as ADC. MDOT MPA and Baltimore City DPW are currently working on logistics for the demonstration project and are developing a Memorandum of Understanding (MOU). Baltimore DPW has estimated that 7,000 cubic yards (cy) of dried dredged material will be needed for the demonstration. As 'Stockpile A' contains approximately 1,000 cy of dried dredged material, DPW is coordinating with MDE for the approval of 'Stockpile B1' and 'Stockpile B2' from Cox Creek DMCF, which is a combined total of approximately 5,000 cy.

The Hawkins Point demonstration project, in coordination with Maryland Environmental Service (MES), will use dried dredged material as engineered fill for the closure of the Hawkins Point DMCF's South Cell. The North Cell of Hawkins Point was closed in 2012, vegetated, and currently serves as a mitigation bank for MDOT MPA Critical Area projects. MDOT MPA is in the planning stage of designing an algal flow-way (AFW), which will be located in the South Cell. Once the South Cell has been filled and graded, construction of the AFW can begin. Approximately 19,000 cubic yards of material is required to fill and grade the South Cell, and both dried dredged material from Cox Creek DMCF and on-site berm material will be used. Current efforts are focused on dewatering and crust management activities to further dry and consolidate the South Cell material.

The on-site test nursery demonstration project at Cox Creek DMCF was developed to determine the ability of dredged material to support the growth of grass seed. An 8 foot x 16 foot area was divided into eight separate nursery plots, each with varying ratios of dried dredged material, Leafgro®, and lime, as well as a control plot of store brand topsoil. Each plot was planted with the same grass seed mix in early October, and weekly observations have been documented along with photos. Observations will continue to be documented until late summer in order to capture one full growing season. The 100% dredged material and lime plot currently has the highest percent vegetation coverage of all the plots, and the 100% dredged material plot without lime has the second highest percent vegetation coverage.

Ms. Keene provided an overview for the Innovative Reuse of Dredged Material and Capacity Recovery at the Cox Creek DMCF Request for Proposals (IR RFP). The objective of the IR RFP is to recover dredged material placement capacity within the Cox Creek DMCF. The successful offeror must excavate, dewater, characterize, and transport off-site a total of 500,000cy of dredged material for innovative reuse projects within the five-year contract term. The RFP was advertised by MES, on behalf of MDOT MPA, on December 29, 2017. Proposals are due to MES on March 20, 2018. The contract is expected to be awarded in early May, and the notice to proceed in June. The IR RFP consists of two stages: Stage I, the successful offeror must excavate, dewater and transport a minimum of 100,000 cy of dredged material off-site for an innovative reuse project(s) within the initial two years of the five-year term; Stage II, the successful offeror must excavate, dewater, and transport 400,000 cy of dredged material off-site for innovative reuse by the end of the five-year contract term.

Ms. Keene reviewed the outline of components within the IR RFP, which include: 1) Installation and maintenance of sediment and erosion control measures; 2) Preparation of the designated on-site Staging Area and roadways; 3) Excavation of 500,000 cy of material from the DMCF; 4) Dewatering, handling, and stockpiling the material within a designated on-site Staging Area; 5) Characterization of material in accordance with the most recent version of the MDE Guidance Document; 6) Accept ownership of the material, and transport the material to and process the material, if needed, at an off-site location for innovative reuse of the dredged material, in compliance with all applicable laws and regulatory guidance; and 7) Restoration of the on-site Staging Area. Ms. Keene provided the Committee with an image of the on-site Staging Area, as well as the IR RFP excavation area within the DMCF. Ms. Keene noted that under the IR RFP: the material may be used in more than one innovative reuse project, the location of the innovative reuse project(s) will be at the discretion of the contractor and must be approved by MES and MDOT MPA all of the material will be characterized based on the sampling procedures outlined in MDE's Guidance Document, and only material innovatively reused in Maryland will need to adhere to the regulatory parameters described in MDE's Guidance Document. Ms. Keene stated that previous sampling datasets from the Cox Creek DMCF material were provided to the potential bidders as a component of the advertisement for the RFP, and that the majority of material samples meet Category 2 – Non-Residential Restricted Use Soil and Fill Material when compared to MDE's screening criteria.

Mr. Myers asked if a cost estimate for sampling was conducted. Ms. Keene responded that a cost estimate for sampling was not conducted, but the IR RFP should provide cost estimates for sampling, large scale dewatering operations, and innovative reuse applications. Mr. Phipps asked what the selection process for the IR RFP will entail. Ms. Keene responded that the proposals will be evaluated on the following criteria: total cost, methodology, background, experience, references, Minority Business Enterprise (MBE) participation, and schedule. Mr. Phipps asked if the successful offeror will be guaranteed a specific soil liquid content for the dredged material. Ms. Keene responded that the IR RFP only guarantees the quantity of 500,000cy of material available for removal, not the condition of the material upon excavation. The RFP also informed the potential offerors that MES will continue to inflow, remove, and dry material from the DMCF for demonstration projects or as dredging projects occur. Mr. Haid asked if Cox Creek DMCF will remain active. Ms. Keene responded that Cox Creek DMCF will remain active, which includes inflow events to the DMCF and construction of the base dike widening.

**The United States Army Corps of Engineers
North Atlantic Baltimore District (CENAB)
Beneficial Use Projects**

Danielle Szimanski, USACE

At the August 22, 2017 IRC meeting, Ms. Szimanski provided updates for the Wicomico River thin layer placement (TLP) project and future Smith Island TLP projects. The current presentation provides updates on the United States Army Corps of Engineers (USACE)'s Twitch Cove and Big Thorofare project at Smith Island, Rhodes Point navigation improvement project, and the new Beneficial Use of Dredged Material Pilot Program.

Twitch Cove, a channel on the eastern side of Smith Island, and Big Thorofare, the main channel through Smith Island, will be dredged of approximately 85,000 cy of material, which will be used for the creation of high and low marsh and the restoration of natural breakwaters to protect the Town of Ewell. Presence of submerged aquatic vegetation (SAV) prevented the United States Fish and Wildlife Service (USFWS) from creating segmented breakwaters around Smith Island, and in these areas, the USACE will use armored protection units (A-Jax) for shoreline protection and habitat enhancement.

The Rhodes Point restoration project began as the USACE's Continuing Authorities Program (CAP) Section 204 project and was awarded in September 2017. The objective of the project is to dredge and realign the Sheep Pen Gut channel and to create a northern and southern jetty to maintain clearance of the federal channel. The material dredged will be beneficially used for the creation of high and low marsh areas that will be planted in summer 2018.

Section 1122 of the Water Resources Development Act (WRDA) of 2016, Beneficial Use of Dredged Material Pilot Program, was announced on February 9, 2018, and requires the USACE to establish a pilot program to carry out 10 projects throughout the United States for the beneficial use of dredged material. Ms. Szimanski discussed and provided a link to the USACE's website for additional information: http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Legislative-Links/wrda2016/wrda2016_impguide/. "The Secretary shall carry out the pilot program in a manner that: (1) maximizes the beneficial placement of dredged material from Federal and non-Federal navigation channels; (2) incorporates, to the maximum extent practicable, 2 or more Federal navigation, flood control, storm damage reduction, or environmental restoration projects; (3) coordinates the mobilization of dredges and related equipment, including through the use of such efficiencies in contracting and environmental permitting as can be implemented under existing laws and regulations; (4) fosters Federal, State, and local collaboration; (5) implements best practices to maximize the beneficial use of dredged sand and other sediments; and (6) ensures that the use of dredged material is consistent with all applicable environmental laws." Ms. Szimanski added that the Beneficial Use of Dredged Material Pilot Program will incorporate Federal and non-Federal sponsors and that the proposal must be submitted solely by non-Federal sponsors. "Projects carried out under this section shall be subject to the cost-sharing requirements applicable to projects carried out under section 204 of the Water Resources Development Act of 1992 (33 U.S.C. 2326)." Costs for dredging additional material from a non-Federal navigation project or for additional activities must be cost-shared. USACE Headquarters (HQUSACE), in consultation with the Assistant Secretary of the Army for Civil Works (ASA), will recommend funding sources for planning and implementation of each pilot project. Ms. Szimanski added that the funding awarded by the Federal sponsor will not include funding for studies as all necessary studies and information should be submitted with the proposal. The pilot project was established in order to "carry out projects for the beneficial use of dredged material, including projects for the purposes of: (1) reducing storm damage to property and infrastructure; (2) promoting public safety; (3) protecting, restoring, and creating aquatic ecosystem habitats; (4) stabilizing stream systems and enhancing shorelines; (5) promoting recreation; (6) supporting risk management adaptation strategies; and (7) reducing the costs of dredging and dredged material placement or disposal, such as projects that use dredged material for: (A) construction or fill material; (B) civic improvement objectives; and (C) other

innovative uses and placement alternatives that produce public economic or environmental benefits.” HQUSACE will select 10 pilot projects based on the environmental, economic, and social benefits of the projects, including monetary and non-monetary benefits, and the need for diversity of project types and geographical project locations. Ms. Szimanski reviewed the pilot project selection process timeline: The Federal Register Notice 30-day submission period began on February 9, non-Federal proponents will submit pilot project proposals by March 12, USACE regional teams will evaluate the proposals in April, HQUSACE will develop a national evaluation in May, and HQUSACE will recommend 10 pilot projects to the ASA in June 2018. Ms. Szimanski suggested that proposals be submitted via email as Congressional and Senate mail review could hold print submittals past the acceptance period. The proposals should include: 1) Name and location of the proposed project; 2) Purpose of the proposed project; 3) Description of the proposed project, including more detail on how material will be used beneficially to meet project purposes identified in 2 above; 4) The name of all non-Federal interests planning to act as the sponsor, including any non-Federal interest that has contributed to or is expected to contribute toward the non-Federal share of the proposed beneficial use project; 5) List the authorized USACE water resources development project(s) that the proposed beneficial use project is associated with; 6) Provide an estimate, to the extent practicable, of the total beneficial use project cost, and the Federal and non-Federal share of those costs; 7) Describe, to the extent practicable, an estimate of the anticipated monetary and non-monetary benefits of the proposed beneficial use project with regard to the environmental, economic, and social benefits of the project; 8) Describe if local support exists for the proposal; and 9) Statement of the non-Federal interest's financial ability to provide a share of the project costs. Ms. Szimanski provided an email to submit question, comments, and proposals: Section-1122-Beneficial-Use-of-Dredged-Material@usace.army.mil. Ms. Szimanski added that HQUSACE is looking for non-traditional stakeholders and ideas for beneficial use projects and that the cost-sharing cap established in Section 204 will remain at 65% Federal and 35% non-Federal.

Mr. Straughan asked how the USACE is legally allowed to fill wetlands with dredged material. Ms. Szimanski responded that USACE coordinates with the USFWS and the Environmental Protection Agency (EPA) to restore wetlands to historic areas and added that TLP of dredged material between 6 and 24 inches will not prevent wetland flora from returning. Mr. Terranova asked if MDOT MPA is required to sponsor the pilot projects that are submitted. Ms. Szimanski responded that the USACE will fully sponsor pilot projects that will occur within the Baltimore channel or Federal channels and that MDOT MPA approval of the project would not be necessary. Mr. Denney asked what the USACE means by non-traditional partners. Ms. Szimanski responded that a non-traditional partner could be a small community that needs shoreline restoration. Mr. Bannerman asked if a local business would count as a non-traditional partner. Ms. Szimanski responded that local business would count as a non-traditional partner. Mr. Denney asked what is meant by clean dredged material. Ms. Szimanski responded that the dredged material used in TLP projects consists of 70% sand and 30% silt. Mr. Pattison asked how the USACE is advertising the pilot project program. Ms. Szimanski responded that the USACE's public affairs office released news clips and information to local governments, agencies, and social media. Mr. Pattison asked if there is a minimum amount of dredged material that must be beneficially used in the pilot projects. Ms. Szimanski responded that the USACE has not set a minimum or maximum amount of material that can be beneficially used. Ms. Fidler asked if the USACE has a maximum monetary amount for the pilot projects. Ms. Szimanski responded that the USACE has not set a maximum amount of funding for the projects. Ms. Correale stated that due to the type of funding that will be awarded, only low cost projects are expected to be submitted.

Mr. Pattison stated that MDOT MPA likes to offer an opportunity for Committee members to provide updates from the organizations they represent. Therefore, Mr. Kays will provide an overview of work performed by the Northeast Maryland Waste Disposal Authority (NMWDA) and their role/interest in the innovative reuse of dredged material.

Mr. Kays stated that NMWDA was founded in 1980 as a membership-funded Regional Governmental Agency, and is governed by a Board of Directors with members from each participating jurisdiction. The original NMWDA districts included Anne Arundel County, Baltimore City, Baltimore County, and Harford County, and now include Carroll County, Frederick County, Howard County, and Montgomery County. Additional counties can join NMWDA after the NMWDA law is amended and approval is obtained by the joining county's legislature. The directors are appointed by name, but are typically the DPW directors from each county. The director of MES is an ex officio member of NMWDA. Membership with NMWDA provides solid waste and recycling expertise (leverage knowledgebase learned from all members), procurement development, ability to provide tax-exempt financing, contract management, on-call engineering services, on-call legal services, regional solid waste system planning, and monitoring of legislative and regulatory matters. Mr. Kays added that NMWDA has 10.5 staff and that the NMWDA procurement process was developed differently than State procurement. Current projects provided to members include: regional projects - eCycling, maintaining statewide recycling business-to-business website, waste transfer, and aerial photographic services for volumetric analysis; facility development/long term contracts – two solar projects, three active landfill gas to energy projects as one recently closed, one biosolids composting facility, and two waste-to-energy facilities; energy management services; recyclables transportation and processing contracts; and engineering efforts through on-call engineers – solid waste planning, compost facility design in Howard County, landfill corrective measures design/implementation, statewide waste sort, and landfill environmental monitoring. Past projects include: landfill redesign, developed 'buy recycled' program and provided training, developed commercial recycling program and training, collection routing study, full cost accounting study, technology and practices surveys waste composition studies, 10-year solid waste management plan updates, transfer station renovation, landfill gas collection system improvements, truck wash facility, household hazardous waste drop-off center, landfill scales, and stormwater management improvements at landfill.

NMWDA was introduced to the IRC at the request of two member jurisdictions in order to expand NMWDA's understanding of dredged material and innovative reuse and beneficial use projects to prevent the material from being placed in landfills. Since joining, NMWDA has been a part of multiple discussions regarding composting operations and soil blending opportunities in order to create a market demand for composted products. Mr. Kays stated that we need to think of these materials not as "waste" but as a resource.

Mr. Myers stated that House Bill (HB) 171 Session 2017: Department of the Environment – Yard Waste, Food Residuals, and Other Organic Materials Diversion and Infrastructure – Study (HB 171) should consider blends with dredged material and stated that dredged material should have a representative. Mr. Kays responded that while NMWDA is not named organization to be consulted under HB 171, he will bring the blending idea back to Mr. Christopher Skaggs, Executive Director of NMWDA, who attends the HB 171 Committee meetings. Ms. Correale asked if a presentation regarding dredged material blending could be presented at a future HB 171 meeting. Mr. Rowe suggested that Mr. Kays reach out to Ms. Kaley Laleker, MDE, as she is leading HB 171. Mr. Kays will contact Ms. Laleker in regards to MDOT MPA conducting a presentation on dredged material blending at a future HB 171 meeting. Mr. Pattison asked what HB 171 directly studies, as many of the IRC members present will likely appreciate further clarification. Mr. Myers responded that in 2017, HB 171 was proposed by Maryland State Delegate Shane Robinson and signed by

the Governor. It “requires MDE, in consultation with certain persons, to study, review, explore, identify, and make recommendations regarding certain matters that relate to the diversion of yard waste, food residuals, and other organic materials from refuse disposal facilities, including certain infrastructure; requires MDE to report its interim and final findings and recommendations to the Governor and the General Assembly on or before certain dates; and generally relating to yard waste, food residuals, and other organic materials diversion and infrastructure.”

Mr. Stancill asked if NMWDA has staff that specializes in marketing. Mr. Kays responded that NMWDA does not have a recycled materials marketing staff member. Mr. Stancill stated that in order to keep the idea alive a market for the product is needed. Mr. Kays responded that NMWDA typically researches existing markets for traditional recyclers and stated that NMWDA previously put marketing risk on the vendor in the contract. Mr. Straughan asked if NMWDA has previously worked with oil recycling programs. Mr. Kays responded that NMWDA has not worked with oil recycling and stated that if NMWDA began working with an oil recycling program they would obtain a subcontractor. Mr. Denney asked if any other states or countries have a better public perception of recycling wastes than Maryland. Mr. Kays responded that England, as a member of the European Union (EU), had a countrywide landfill tax to incentivize alternative end uses for waste products. Germany, as a member of the EU, directed the federal government to incentivize local governments to divert waste products from landfills. Mr. Kays informed the Committee of an extended producer responsibility (EPR) regime in the EU that is applied to the sale price of an item that will pay for the items collection, handling, and recycling. Ms. Prozo asked if MES, as an ex officio member of NMWDA's board of directors, has access to upcoming projects before other non-board member organizations/companies. Mr. Kays responded that MES has not participated in any projects. Ms. Prozo asked if MES could bid on any projects. As intended by the General Assembly MES “may not participate in competitive bidding with the private sector to provide it services (update per Maryland Code Natural Resources Title 3 - Environmental Programs).”

Group Discussion

All

Mr. Stancill stated that due to recent hurricanes stripping topsoil from islands, a market could have opened for the innovative and beneficial use of dredged and organic materials. Mr. Stancill suggested that dredged material and/or organic material could be barged directly to the islands to restore their lost material. Mr. Stancill stated that it is important to think of concepts that are perhaps perceived as non-mainstream thinking in order to advance the innovative reuse of dredged material.

Mr. Petzrick stated that due to the marketing of coal combustion fly ash, perception was changed and it became a resource. Mr. Phipps asked if fly ash from non-coal powered plants, such as waste energy plants, could be reused in the same way. Mr. Petzrick responded that if the waste combustion fly ash had the correct chemistry then it could be reused in the same way as coal combustion fly ash.

Mr. Denney reminded the Committee of Mr. Stancill's suggestion that dewatering plants should be located close to a barge or railway system due to increasing truck hauling costs. Ms. Correale stated that while the suggestion can be extremely valuable down the road, the dike raising at Cox Creek will not allow for barge access near the water.

Upcoming Meetings

Steve Pattison, Facilitator

Mr. Pattison informed the Committee of the 2018 IRC meeting schedule: May 22, August 28, and November 27.

Meeting adjourned at 6:50pm