

FINAL
SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM
MANAGEMENT COMMITTEE MEETING
June 22, 2022, 10:00 AM
Virtual Meeting

Attendees:

Anchor QEA: Karin Olsen
Association of Maryland Ports (AMP): Eric Nielsen
Audubon Maryland-DC: David Curson
Baltimore Port Alliance (BPA): Rupert Denney
Citizens Advisory Committee (CAC): Adam Lindquist (Chair)
Maryland Environmental Service (MES): Jeff Halka, Kenna Oseroff, Danielle Wilson
Maryland Department of Nature Resources: Richard Ort
Maryland Department of the Environment (MDE): Matt Rowe
Maryland Department of Transportation (MDOT): John Denniston
Maryland Department of Transportation Maryland Port Administration (MDOT MPA): Bertrand Djiki, Kristen Fidler, Jennifer Guthrie, Katrina Jones, Kristen Keene, Holly Miller, Amanda Peñafiel, Joe Ross
National Oceanic and Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS): Johnathan Watson
University of Maryland Center for Environmental Science (UMCES): Dr. Peter Goodwin, Dave Nemazie
US Army Corps of Engineers, Baltimore District (CENAB): Trevor Cyran, Christine Danaher, Graham McAllister, Katie Perkins
US Army Corps of Engineers, Philadelphia District (CENAP): Mike Hart

Action Items:

1. The Committee will provide feedback on the 2022 Dredged Material Management Program (DMMP) mid-year report to MDOT MPA.

1.0 Convene and Welcome

Ms. Kristen Fidler, MDOT MPA

Meeting materials can be found at the following link: [6/22 DMMP Management Committee Meeting](#)

Ms. Fidler welcomed attendees and called the meeting to order.

2.0 DMMP Mid-Year Report

Kristen Fidler, MDOT MPA

The 2022 DMMP Mid-Year Report was shared with the Committee. The report summarizes the mid-year progress towards the 2021 Annual Report DMMP recommendations, and highlights milestones expected to be accomplished during the remainder of 2022. Ms. Fidler requested the Committee review and provide feedback regarding the Mid-Year Report to MDOT MPA.

3.0 Confined Aquatic Disposal (CAD)

Holly Miller, MDOT MPA

The pilot CAD project was conducted in 2016 and included extensive pre- and post-project monitoring. Key project takeaways include successful permit, construction, and placement of material within the CAD site; low turbidity throughout the placement period; nutrient concentrations consistent with baseline conditions; and CAD is an effective method for dredged material containment with proper planning and oversight. Planning goals for the next CAD project were developed using the pilot project results and include assessing project sites with more capacity and differing site conditions and assessing feasibility of CAD as a dredged material management option for the DMMP.

MDOT MPA conducted a preliminary site selection in 2018 and from 2019 and 2020 narrowed the options by conducting an environmental assessment, hydrodynamic modeling, and a geotechnical investigation. Two regions were selected for additional evaluation; Dundalk Marine Terminal (DMT) anchorages and an open water region southeast of the Cox Creek dredged material containment facility (DMCF). The DMT region contains sand at deep depths with large overburden that would need to be managed. The open water region near Cox Creek DMCF has a large volume of shallow sand with limited overburden, allows for flexible CAD sizing, and has sufficient volume for various CAD options, such as multiple cells. MDOT MPA are conducting further investigations at the open water region, including: 1) additional geotechnical sampling to refine the sand extent and provide preliminary information to use in CAD cell design, 2) bathymetric surveys and water current measurements to refine the hydrodynamic model. The geotechnical sampling is currently ongoing, and the next steps will be to prepare a preliminary design to establish a CAD footprint and capacity details, conduct fill material sampling, and implement focused outreach efforts. The final design is expected to be completed in January 2023.

Mr. Denney stated that the use of anchorages as future CAD projects should be coordinated with the Coast Guard and pilots as these sites are important for shipping. Mr. Denney asked if CAD cells are still required to be within the North Point – Rock Point line and if this restriction could potentially be removed from the Code of Maryland Regulations. Ms. Miller responded that the CAD placement requirement still exists and stated that the removal of the regulation could potentially be achieved. Mr. Watson inquired about the capacity for the new CAD cell. Ms. Miller responded that MDOT MPA is currently evaluating the size and capacity of the new cell and added that the capacity of the pilot CAD cell was approximately 120,000 cubic yards (cy). The ideal CAD cell would have capacity of approximately 500,000cy but size will be determined by the sand quantity available. Mr. Rowe suggested that capping opportunities for sites with historic contaminants that would be unfeasible for a CAD cell be considered as a placement option. Ms. Perkins asked if CAD cells are required to be capped. Ms. Miller responded that the pilot CAD cell was not capped as it was in a sheltered area. Capping for the new CAD cell will be determined during the design process based on the hydrodynamics of the area. Mr. Goodwin asked what concerns the hydrodynamic model will address. Ms. Miller responded that the model would analyze wind, storms, and water currents to determine how a CAD cell would react in various conditions to ensure the material will remain in place.

4.0 Innovative Reuse Research & Development Project Updates

Kristen Keene, MDOT MPA

Six contracts have been approved by the Board of Public Works (BPW) under MDOT MPA's Research and Development Request for Proposal (RFP) for Innovative Reuse and Beneficial Use projects:

1. Belden Eco Products - Awarded a contract for the production of six blending recipes for ceramic bricks/permeable pavers using dredged material which could serve as a stormwater management solution for the Chesapeake Bay watershed. Product study has been completed with results indicating that the preferred blend contained 100% dredged material, based on successful American Society of the International Association for Testing and Materials (ASTM) performance testing, Maryland Department of the Environment (MDE) Guidance Document testing, and high iron content that resulted in naturally red bricks. Results also indicate dredged material is a suitable feedstock for commercial scale brick/paver manufacturing and provides a significant reduction in environmental impacts when compared to standard brick-making operations. Belden projects they could produce a competitively priced paver.

2. Northgate Environmental - Awarded a contract for creation of coastal stabilization structures using 3-dimensional printing and the creation of transportation structures. Study results for the coastal stabilization structures were successful as they met all testing requirements. The transportation structures did not meet the Maryland Department of Transportation State Highway Administration (MDOT SHA) strength test, but the material may have other potential uses such as curbs and sidewalks.

Mr. Rowe asked if MDOT MPA would be implementing a deployment study for the coastal stabilization structures. Ms. Keene responded that a field study could potentially be awarded at a future date after the current studies and final reports have concluded. Mr. Watson stated that reef balls require a specific pH for oyster to attach and asked if the study investigated the stability/longevity of the coastal stabilization structures. Ms. Keene stated that MDOT MPA's previously deployed artificial reef structures were implemented primarily to create juvenile fish habitat. Northgate's structure study included material leachability and structural testing to determine if the structures could withstand deployment. The long-term stability of the structures could potentially be investigated through a future field pilot study.

3. FasTrak Express - Awarded a contract to develop a preferred formulation for a sod growth medium using dredged material and mushroom compost. This formulation could be used in the development of re-engineered soil and thereby produce an agricultural commodity. The two test plots and one control plot are currently undergoing visual observations during the growth phase. Both test plot blends contain equal amounts of dredged material but were applied differently; one was placed atop the base soil while the other was tilled into the base soil.
4. Harford Industrial Minerals - Awarded a contract for the production of lightweight aggregate using dredged material by means of dry and wet casting methods. This product could serve as a local and sustainable alternative to virgin aggregate material generated from quarries. The study is currently in the performance testing phase to identify the best blend.
5. Susquehanna Concrete Products - Awarded a contract to develop general use concrete products with dredged material such as retaining walls and low compression strength blocks. This study is currently in the performance testing phase to identify the best blend.
6. CSI Environmental - Awarded a contract to develop upland and shoreline berms at the Baltimore Gas and Electric Spring Gardens facility using geotextile tubes filled with wet dredged material from Masonville DMCF. A small-scale pilot study was conducted at Masonville to identify the polymer formulation for use during the full pilot project which is expected to occur during the Fall 2022 inflow at Masonville DMCF.

Mr. Denney asked if the RFP includes the awardees calculating dredged material volumes for full-scale operations of their respective products. Ms. Keene responded that the technical reports for the products will include scalability and annual dredged material requirements for a full-scale production.

5.0 US Army Corps of Engineers

Mike Hart, CENAP
Graham McAllister, CENAB
Katie Perkins, CENAB
Trevor Cyran, CENAB

CENAP Updates

The United States Army Corps for Engineers (USACE) North Atlantic Philadelphia District (CENAP) dredging project, with placement at Pearce Creek DMCF as discussed at the March 2022 meeting, was not completed and has resulted in significant shoaling and a draft restriction. The contractor is obligated to continue dredging once the environmental restrictions have been cleared on October 1, 2022. CENAP is currently in the process of obtaining emergency relief from the environmental restrictions as well as an emergency water quality certification to dredge the area earlier. Once the dredging recommences the contractor will be liable for liquidated damages as the project was not completed in accordance with the term laid out in the contract. Additional dredging work is expected to be added to the contract.

CENAB Updates

Mr. McAllister stated that the \$14.9 million Cape Henry Channel dredging contract was completed by the Dutra Group in May 2022. Approximately 2.3 million cubic yards (mcy) was dredged and placed at the Dam Neck open water placement site with two turtle takes in December 2021.

The Maryland approach channel dredging projects are ongoing. The Craighill Entrance and Angle dredging was completed and approximately 1mcy of material was placed at Poplar Island. The Fort McHenry channel dredging is ongoing with an expected July 2022 completion, and approximately 0.5mcy will be placed at Cox Creek DMCF. The contractor has also begun dragging the East Channel of the Northwest Branch to a targeted depth of 47'.

USACE North Atlantic Baltimore District (CENAB) is developing the winter 2022/2023 maintenance dredging contract with solicitation planned for July 2022 and award in September 2022. The contract includes dredging approximately 400,000cy from the Brewerton Angle and approximately 100,000cy from Curtis Bay and Curtis Creek with material placed at the Cox Creek DMCF. The contract also includes dredging approximately 2mcy from the Brewerton Extension and Tolchester Channel with material placed at Poplar Island.

Ms. Perkins stated that the winter 2021/2022 1mcy inflow and 200,000cy salvage dredging was completed in May 2022 and placed in Poplar Island Cells 8 and 11. The total remaining Poplar Island capacity is currently at 40%. The 2022/2023 inflow is planned to be placed in Cells 9, 10, and 11. The sand stockpiles in Cells 4, 1D, and 7 will be consolidated to prepare for future inflows. The 2023/2024 inflow will be placed in Cells 4 and 5.

Mr. Cyran stated that the water quality certification permit for the Barren Island portion of the Mid-Bay project was received in April 2022. The Phase 1 construction package has been completed and is ready for solicitation once the Project Partnership Agreement (PPA) between the State of Maryland and the USACE has been executed, which is expected in the fourth quarter of 2022. Construction of Barren Island is slated to begin in fall 2022. Ms. Fidler added that MDOT MPA is prepared to take the PPA before the Board of Public Works at the July 6, 2022 meeting for approval.

Mr. Cyran stated that the Tentatively Selected Plan for the Seagirt Loop was a 47' deep channel and after extensive coordination was increased to a 50' deep channel. CENAB is currently working on the Agency Decision Milestone which is slated for completion on July 20, 2022.

Mr. McAllister discussed the Assistant Secretary of the Army for Civil Works implementation document issued on March 15, 2022 in association with Presidential Executive Order 14008 for Tackling the Climate Crisis at Home and Abroad. The implementation document requires Civil Works programs to

consider environmental justice and disproportionate impacts to disadvantaged communities through the improvement of outreach and access to USACE civil works information and resources, improving access to USACE civil works technical service programs, and to ensure updates to any USACE civil works policies and guidance will not result in disproportionate impacts on disadvantaged communities. Priority action areas highlighted in the implementation document include the Justice40 Initiative, Tribal Partnership Program, Planning Assistance to States, and Floodplain Management Services. Mr. McAllister provided two screening tools currently available online: The Biden/Harris Administration’s Climate and Economic Justice Screening Tool (<https://screeningtool.geoplatform.gov/en>) and the Environmental Protection Agency’s Environmental Justice Screening and Mapping Tool (<https://www.epa.gov/ejscreen>).

6.0 Committee Reports

Committee Members

Citizens Advisory Committee (CAC)

Mr. Lindquist stated that an innovative reuse show and tell was held at Cox Creek DMCF and van tours were conducted for the Masonville and Cox Creek Citizen Committees. In response to the MDOT MPA 2021 Annual report which recommends equitable access; community outreach; and Science, Technology, Engineering, and Math (STEM) careers at Port facilities, MDOT MPA is hosting an Urban Birding Youth Week at Masonville Cove, located near historically underserved communities.

Mid-Bay Resiliency Workgroup

Ms. Olsen stated that the Mid-Bay workgroup has expanded to include representatives from the United States Fish and Wildlife Service, National Oceanic and Atmospheric Administration National Marine Fisheries Service, the National Estuarine Research Reserve, and other internal USACE personnel. These new members have enhanced the workgroup’s ability to respond to questions and provide detailed conversations. The workgroup attended a Poplar Island tour to learn and discuss the island’s development and continued management. The workgroup has been focusing on scientific data and technical information used by the USACE to develop the sill and breakwater design for the Barren Island portion of the Mid-Bay project. Future conversations within the workgroup are expected to focus on the bird habitat island components and wetland design as those elements progress. The USACE has engaged with the modelers regarding initial conversations associated with optimizing the exterior dike design within the footprint of the James Island portion of the Mid-Bay project. The supplemental National Environmental Policy Act (NEPA) process associated with James Island will begin in late 2022.

7.0 Closing Remarks and Adjourn

Kristen Fidler, MDOT MPA

The next DMMP Management Committee meeting is scheduled for September 28, 2022. The DMMP annual field trip will be held on August 19 (August 26 as a rain date) at Hart-Miller Island, pre-registration is required. The DMMP Annual meeting is scheduled for December 9, 2022.