

Management Committee Meeting- June 21, 2017

FINAL DRAFT
SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM
MANAGEMENT COMMITTEE MEETING
June 21, 2017, 10:00 AM
Sollers Point Multi-Purpose Center
323 Sollers Point Road
Dundalk, Maryland

Attendees:

Angie Ashley Consulting (AAC): Angie Ashley
Association of Maryland Pilots (AMP): Eric Nielson
Baltimore Port Alliance (BPA): Rupert Denney
C. Steinweg Group: Aleksandra Masiuk
Chesapeake Bay Foundation (CBF): Sam Dewitt, Doug Myers
Citizens' Advisory Committee (CAC): Fran Taylor
Ecologix Group: Steve Pattison
Maryland Department of Natural Resources (DNR): Bruce Michael
Maryland Department of the Environment (MDE): Matt Rowe
Maryland Environmental Service (MES): Cece Donovan, Jeff Halka, Alyssa Herold, Melissa Slatnick
Maryland Department of Transportation Maryland Port Administration (MDOT MPA): Chris Correale, Kristen Fidler, Margi Hamby, Katrina Jones, Shawn Kiernan, Bill Lear, Holly Miller, John Vasina
National Marine Fisheries Service (NMFS): Kristy Beard
Ruckert Terminals: Steve Landess
University of Maryland Center for Environmental Science (UMCES): Don Boesch, Dave Nemazie, Lisa Wainger
US Army Corps of Engineers, Baltimore District (CENAB): Kevin Brennan, Tiffany Burroughs, Graham McAllister
US Army Corps of Engineers, Philadelphia District (CENAP): Gavin Kaiser
US Fish and Wildlife Service (FWS): Chris Guy

Action Items:

1. None

Statements for the Record:

1. None

1.0 Introductions, Approval of Meeting Summary

Ms. Chris Correale, MDOT MPA

Ms. Correale welcomed the attendees and called the meeting to order. Attendees were asked to introduce themselves and state whom they represent. Ms. Correale requested comments on or changes to the summary from the March 15, 2017 Dredged Material Management Program (DMMP) Management Committee meeting. Mr. Taylor made a motion to accept the meeting summary. Mr. Landess seconded the motion, and the motion passed unanimously. Ms. Correale thanked attendees for the change of location from the World Trade Center in Baltimore to Sollers Point Multi-Purpose Center.

2.0 Corps of Engineers, North Atlantic, Baltimore (CENAB)

Mr. Fred Kimble,

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**Ms. Tiffany Burroughs,
CENAB**

Virginia Dredging Plans

Ms. Burroughs stated that CENAB will begin advertising in July for its upcoming project to dredge the Cape Henry Channel in Virginia. Approximately 1.8 million cubic yards (mcy) will be dredged in the base contract and a total of 2.5 mcy in the entire contract. Mr. Meyers asked where dredge material from the Cape Henry Channel would be placed. Ms. Sydney replied that the placement location was the Dam Neck Open Water Placement site.

Masonville Tipping Fee Study

CENAB has received comments from the US Army Corps of Engineers Headquarters (USACE HQ) on the decision document to place material at the Masonville dredged material containment facility (DMCF). CENAB is currently working to resolve the comments internally. The USACE HQ review is anticipated to be completed by July 12. The document is scheduled to be finalized and signed on July 27.

Poplar Island Expansion

Mr. Kimble stated that 31 mcy of dredged material have been placed, and 289 acres of wetlands have been created at Poplar Island through 2016. Three expansion related contracts were awarded for work to be conducted in 2017. One of the three 2017 expansion related contracts was awarded to Norfolk Dredging which entailed mining and stockpiling sand for the vertical and lateral expansions; this work was completed in April 2017. The second contract was related to work needed for the modification of Spillway 1 (Cell 2). Marine Technologies was awarded this contract to complete spillway modifications by upgrading the spillway infrastructure to allow for the dike raising related to the vertical expansion; the contract work was completed in April 2017. Lateral Expansion Contract 1 is being executed by Precon Marine for the construction of the first expansion wetland cell perimeter dikes and dredging of the northern access channel; they are expected to complete their work in December 2017. Lateral Expansion Contract 2 will be awarded in the near future for the embayment and remaining three wetland cells. All expansion contract work is scheduled to be complete in late 2019 or early 2020. The expansion projects will allow for placement at Poplar through 2029/2030. The Federal DMMP update is still on track to be approved in September 2017; the plan reaffirms the need for Poplar Island and Mid-Bay. The DMMP updates are on the last internal review before submission.

Mid-Bay Islands

CENAB is required by the Secretary of the Army to submit a reevaluation for the need for Mid-Bay, which is addressed in the Federal DMMP. In August, CENAB plans to submit the Federal DMMP to USACE HQ along with a memorandum for record that shows that CENAB has internally evaluated the need for Mid-Bay. CENAB would like to receive construction funding for the design starting October 2018, which will be the beginning of fiscal year 2019. CENAB must obligate construction funds by fiscal year 2020/2021 or authorization expires.

50-Foot Widening

Mr. Kimble stated that CENAB has the funding for a cultural resources study in Virginia waters and is working on its programming. Public comment for the 50-foot widening is scheduled for August 2017. CENAB is working with Virginia regulatory agencies and MDOT MPA to address concerns with using the Wolf Trap Alternate Open Water Disposal Site. Mr. Kimble stated there could be a delay while working to resolve concerns. Mr. Rowe asked if the material from the 50-foot widening project was incorporated into the Poplar Island expansion total life span. Mr. Kimble responded that he believes

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material associated with the 50-foot widening project was included in project estimates for both Poplar Island expansion and Mid-Bay; CENAB estimated that approximately 2 mcy per year of material would be dredged by widening and general channel maintenance. Mr. Kimble stated that CENAB seeks to make Mid-Bay fully online and operational by 2027.

Mr. Denny praised progress of innovative reuse by all collaborators. He commented about his prior attendance of the DMMP Executive Committee meeting and about a comment made at the meeting by a representative of CENAB regarding innovative reuse. Mr. Denny expressed concern that the representative's remark on innovative reuse may be misinterpreted. Mr. Brennan reassured Mr. Denny on CENAB's position of support of MDOT MPA's efforts regarding innovative reuse. Dr. Boesch stated that it is important to consider the challenges of surrounding Mid-Bay: funding issues, congressional deadlines, as well as the positive outcome of environmental restoration to occur on the Mid-Bay habitat. Mr. Taylor stated that it is important for citizens to understand that any use of innovative reuse material will be tested and proven that it is safe. Ms. Fidler emphasized the importance to be careful and clear on the presentation of information.

3.0 Citizens Advisory Committee Report

Mr. Fran Taylor, CAC

Mr. Taylor stated that the CAC has been very active and meeting regularly. The CAC had a meeting in May 2017, which included a presentation on innovative reuse and beneficial use, the Port to Point Traffic Study, Poplar Island Expansion, and discussions on Mid-Bay.

The CAC, Mr. Denny, and MDOT MPA worked with graduate students on the Design with Dredge program, which addresses the repurposing and resourcing of dredge material in creating public landscapes, living shorelines, and urban development in Baltimore Harbor to improve ecosystem resilience, public health, and economic stability. Mr. Taylor thanked Mr. Denny and MDOT MPA for being part of the Design with Dredge program and looks forward to seeing the report generated from the program.

Mr. Taylor stated that Hart-Miller Island (HMI) State Park is open to the public. The five-mile loop trail is open for biking and hiking. A key issue with the HMI North Cell (not open to the public) is the pH and the concentrations of ammonia and nickel. MDOT MPA has been using quicklime to mitigate the issue, which continues to be an ongoing project, along with the redevelopment of the North and South Cells.

The HMI Citizens Oversight Committee (COC) is considering transitioning from an oversight committee to a friends group. At the request of the HMI COC, DNR plans to take surveys from visitors on the island to evaluate if there is an interest from the public to be part of a friends group. If there is interest, DNR will model the HMI friends group from other, existing friends groups. The Friends of Maryland State Parks plans to hold a 5k run/walk at HMI in the fall of 2018. However, there is currently no mode of public transportation to HMI.

Through correspondence with MDE, the CAC has supported the Innovative Reuse and Beneficial Use of Dredged Material Guidance Document. Regarding support for Mid-Bay, the CAC sent letters to the congressional delegation affirming the importance and priority the CAC places on support of appropriations.

Mr. Taylor asked if there were any questions or comments. Dr. Boesch asked about establishing a public ferry to the island. Mr. Taylor stated that the HMI COC and the CAC have had discussions about getting

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a public ferry or a kayak rental concession. However, the concern is whether there would be a private constituent who wants to take on that enterprise. DNR would be the authority on the matter.

Mr. Michael commented that since the park opened, DNR and the Park Service wanted to determine the level of interest and usage of the park. DNR found out there was tremendous interest in the park. Mr. Michael emphasized that DNR will to continue explore opportunities, including those for a private partnership.

4.0 2017 DMMP Mid-Year Report

Ms. Correale, MDOT MPA

Ms. Correale explained to attendees that the 2017 DMMP Mid-Year Report holds MDOT MPA accountable for addressing recommendations that were approved by the Executive Committee in 2016. A summary for each of those recommendations are present in the report. Ms. Correale added that progress is being made on most of the recommendations. Ms. Correale asked for a motion to approve the report. Mr. Landess made a motion to accept the 2017 DMMP Mid-Year Report. Mr. Taylor seconded the motion, and the motion passed unanimously.

5.0 The Value of Reclaimed Capacity

Dr. Lisa Wainger, UMCES

Overview

Dr. Wainger stated that there is a scarcity of places to put dredged material in the Harbor. UMCES conducted an analysis, which relied on Systems Thinking, Experimental Learning Laboratory with Animation (STELLA), a simulation modeling software, to run the different scenarios and to test for the effects of assumptions. UMCES wanted to determine if innovative reuse could serve as a possible solution along with identifying the risks associated with relying on IR as an alternative DMCF.

From the Updated Innovative and Beneficial Use Strategy (2014), there was a need to develop an analysis of the economic value of regained placement capacity. Capacity is reclaimed when dredged material is removed or diverted from a DMCF for innovative reuse. UMCES wanted to observe if innovative reuse increases the life expectancy of a DMCF or whether the placement of dredged material into a DMCF should be avoided altogether. Cost savings or cost avoidance is how the value of reclaimed capacity is defined. Cost avoidance depends on the amount spent on innovative reuse per cy as well as how the capacity is otherwise created. Comparisons in the analysis are made based on actions taken with innovative reuse and actions taken without innovative reuse.

The analysis used likely scenarios to serve as a model for what an innovative reuse project would look like and incorporates the total cost for MDOT MPA over a 40-year planning period. In addition, the analysis would determine placement capacity at the end of a 40-year planning period for likely scenarios as well as calculate costs avoided from future scenarios by comparing to a baseline scenario of projects. The analysis incorporates a defined point at which remaining DMCF capacity at the current and planned sites reach a critical point that would trigger the need for immediate construction of DMCF. The new DMCF is different (smaller) than Coke Point, which is the based DMCF from the Major DMCF scenario.

Model Scenarios

The first scenario of the analysis included the current and planned sites: existing Cox Creek, Cox Creek Expansion onto MDOT MPA property, Masonville, and Cox Creek Cristal. The second scenario modeled the production of Light Weight Aggregate (LWA) with the assumption that MDOT MPA pays 100% of capital costs and a \$40 vendor fee per cy. There were two LWA models: a full scale model observed 500,000 cy of material per year going to innovative reuse. A fifty percent model observed 250,000 cy of material per year going into innovative reuse, to portray what market fluctuation or

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variability of input material. The third scenario presented was construction of a future major DMCF. MDOT MPA has a 20-year plan in which the Current and Planned Sites scenario meets MDOT MPA's needs over 20 years, but not over 40-year planning period used in the analysis. UMCES included a Future Major DMCF scenario to represent a continuation of a long-term baseline.

Model Details

Dr. Wainger stated the model used data from the Gahagan & Bryant Associates, Inc. (GBA), MDOT MPA, and the Environ analysis of LWA. The setup for all scenarios includes:

- Maintenance and new work dredged material quantities (estimates from GBA)
- Costs – fixed and variable (from MDOT MPA & Environ)
- New DMCF is “triggered” when capacity gets low
 - LWA scenarios - smaller DMCF than Future Major DMCF scenario
- LWA scenarios
 - 50% and 100% capacity scenarios represent variability in markets & material suitability
 - Fixed Costs – planning, design, land acquisition (where applicable), construction, operation and maintenance, capital costs for LWA
 - Variable Costs – per cubic yard costs (dredging, transport, and placement costs, tipping fee, vendor fee)

Results of the Model

Dr. Wainger presented the models that showed the total present value versus the cost of completing each of the four scenarios (Current and Planned Sites, 100% LWA, 50% LWA, and Future Major DMCF). They were compared based on total present value costs, the amount of dredged material that would be diverted to innovative reuse, and remaining capacity. The current and planned sites have no remaining capacity in the model. The 100% LWA demonstrated that there was no need for a new DMCF within a 40-year period. In the 50% LWA, there was a need for a new DMCF in year 28. However, the 50% LWA is very close in cost to the 100% LWA scenario. A new DMCF is cheaper than LWA in these scenarios because of the vendor fee and capital costs.

Key Takeaways

The value for reclaimed capacity is negative for the analysis scenarios of innovative reuse. It is more expensive to do these particular innovative reuse scenarios compared to constructing a future major DMCF. The costs incurred for the LWAs were more because of the per cy fee. Dr. Wainger added that if the ability of innovative reuse to accept material fluctuates, there is a possibility of the overloading of sites and incurred new costs on a short notice to find other placement, reemphasizing the risks associated with innovative reuse. If 500,000 cy went to innovative reuse annually, MPA could manage maintenance material without the need to build a new DMCF. However, new work projects that require large amounts of capacity are not easily accommodated by innovative reuse. In the future, only the expanded Cox Creek DMCF could have capacity to accept new work for a short period of time. Dr. Wainger stated the model analysis presents one particular instance of innovative reuse that was comparable to the construction of a major DMCF. There is a possibility of change in the analysis if technology or the cost to construct a major DMCF were to change.

Dr. Boesch stated that there are other factors that might be costly, like the time to develop and construct a new DMCF, and that those costs are not represented in the analysis. Dr. Wainger agreed that the additional factors would change the analysis. Ms. Beard asked about incorporating the value of loss of habitat into the cost analysis for a new DMCF. Dr. Wainger responded that efforts are taken to not harm sensitive or high quality habitats. Dr. Wainger also added that habitat loss is something the analysis

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should look into. Mr. Taylor stated that resource economics is embedded in habitat loss. Mr. Taylor asked if the model for the DMCF included monitoring and maintenance. Dr. Wainger stated that it is included in the 40-year period; it is hard to project beyond the 40-year period. Dr. Boesch asked if the cost of mitigation is included. Dr. Wainger responded that the cost of mitigation is included. Mr. Rowe asked if it was possible to include different options and costs in the model to determine cost effectiveness. Ms. Correale stated that the model is now set up and allows for fluidity in evaluating different alternatives. The model allows for comparisons, and that MDOT MPA looks for diversity through innovative reuse. Mr. Nemazie commented that innovative reuse of today has the capacity to change and cost less in the future. Mr. Meyers added that sea level rise and land loss costs need to be considered. Ms. Correale stated that Dr. Wainger is going to address these issues for Mid-Bay in the next few weeks.

Dr. Boesch commented that there is an inevitability of land scarcity and needing another placement site. Ms. Correale stated that a Coke Point type of site was used for costs in the analysis and provided a type of scale that is rather ideal, but is realistically hard to obtain for a new site. Ms. Correale added they are seeing more 100-acre sites than 300-acre sites. Dr. Wainger expressed concern about scarce real estate opportunities around the harbor and finding a site. Ms. Fidler stated that much has changed in the last two years and that the MDE guidance document is allowing opportunities for dredge material to be repurposed in a low maintenance manner. Additionally, major capital costs, vendor fees, and processing might not be included as part of the innovation in innovative reuse. Ms. Fidler added there is real optimistic potential for dewatered harbor channel material to be used as fill at industrial and commercial sites with engineering controls in large quantities around the Harbor area. This potential could be used in Dr. Wainger's model once they have acquired more data.

6.0 Innovative Reuse Regulatory Workgroup

**Ms. Kristen Fidler, MDOT MPA
Mr. Matt Rowe, MDE**

Ms. Fidler stated that MDE launched the Innovative Reuse and Beneficial Use of Dredged Material Guidance Document and technical screening criteria in March 2017. The public comment period closed in May 2017. MDE has received 10 official sets of comments. The main commentators were Harbor Rock, Harvest Power, Fran Taylor, University of Maryland Department of Environmental Science and Technology, Clean Earth, Soil Safe, State Highway Administration and the Nature Conservancy.

The main themes of the comments from the public comment period included:

1. Refine or add to definitions in the glossary of terms
2. Address the storm water/pond maintenance dredging
3. Clarify the sampling requirements
4. Clarify petroleum issues
5. Address if category 4 material could be used in any circumstance
6. More discussion on why dredge material is not solid waste or hazardous waste
7. Address the acid sulfurization of the dredge material in more detail
8. Add manufactured products to the list of authorized uses and provide detailed guidance of manufactured products
9. Clearly delineate MDE regulatory authority

Mr. Rowe stated that MPA and their subcontractors have been working to compile comments on the guidance document. Comments requiring MDE attention are being flagged for further MDE review. Mr. Rowe plans for the responses to the commentators to be completed in July 2017. Mr. Myers asked if Mr. Rowe envisioned that the storm water management pond dredging to be incorporated in the document. Mr. Rowe responded that although stormwater management ponds are not specifically listed

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in the guidance document, MDE often authorizes these types of projects. Ms. Fidler added that the Maryland Department of Transportation's State Highway Administration (MDOT SHA) also placed emphasis on clarifying the stormwater pond maintenance dredging. Stormwater pond maintenance dredging can be excluded from the program if the amount dredged is 500 cy or less. Ms. Fidler stated that the minimum requirement is not really addressed in the document and this should be updated.

Ms. Fidler stated the Innovative and Beneficial Use Regulatory Workgroup (Workgroup) will be submitting a letter to the Executive Committee that summarizes the implementation of the five recommendations. The letter also acknowledges the guidance document as a living document and that the Workgroup is not currently recommending a change in statute to further innovative and beneficial use of dredged material. However, should the need arise for a change in statute, at the direction of the Executive Committee; the Workgroup can reconvene to reassess this recommendation.

7.0 Corps of Engineers, North Atlantic, Philadelphia (CENAP) Mr. Gavin Kaiser, CENAP *Pearce Creek*

Mr. Kaiser stated that the liner for the Pearce Creek project has been installed and passed inspection. CENAP will perform another inspection and complete closing items, in fall 2017. Additional ongoing work at Pearce Creek includes the drilling of monitoring wells, along with testing of those wells. The new monitoring wells double the amount of wells onsite; installation will be completed at the end of June 2017. Monitoring of the wells will be conducted after installation. Mr. Kaiser anticipates dredging will occur in November 2017; placement will be at Pearce Creek. Mr. Kaiser stated that Great Lakes Dredge and Dock Co. (GLDD) had completed a recent dredging project in the upper Chesapeake Bay that went to Poplar Island. The project was completed on March 31, 2017.

Ms. Fidler stated that Pearce Creek recently held their bi-monthly Pearce Creek Implementation Committee meeting; three issues were of great interest to citizens and elected officials. The first is that there is concern over the scheduling of on-lot hook ups for homes in the area. MDOT MPA had planned for the hook ups to occur in May 2017. No homes have been hooked up yet due to county permits required for the actual plumbing work. MDOT MPA has been working to resolve the permit issue regarding on-lot hookups. The second issue is regarding citizens who would like to keep their existing water treatment system because they are on well water. MDOT MPA has been committed to evaluating the issue and found that they are not able to accommodate this request. All citizens will be connected to the Town of Cecilton water, which will meet all federal and state water quality standards. However, citizens are able to reconnect their water systems themselves at their own cost. The final area of concern is the roads of the following communities: Sunset Pointe, West View Shores, and Bay View Estates. MDOT MPA had a commitment to restore all the roads of these communities to preconstruction status. MDOT MPA found that restoration of the roads of Bay View Estates to preconstruction conditions not applicable due to the poor preconstruction conditions. MDOT MPA has improved the roads to the dissatisfaction of some of the owners. MDOT MPA will have a separate meeting for Bay View Estate Citizens, elected officials, and the constructions contractor to address concerns.

8.0 Harbor Development Update Ms. Chris Correale, MDOT MPA

Ms. Correale stated Justin Callahan won the USACE Baltimore District award for project manager of the year. Justin Callahan serves as the Polar Island project manager for CENAB.

Mid-Bay

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MDOT MPA has been working to acquire funding for project design. Design must occur first before obligating construction funds. MDOT MPA holds optimism that funding will be acquired soon. The objective is fiscal year 2019.

Masonville

Dike raising is underway at Masonville. The dikes will be raised to +18' mean lower low water (MLLW). The total dike elevation will be +42' MLLW by the end of the project.

Cox Creek Expansion

Ms. Correale stated that the slight delay with the Cox Creek Expansion is due to the high concentration of polychlorinated biphenyls (PCBs) in Building 201; sampling is underway. MDOT MPA anticipates having a demolition plan in place by winter 2017.

Confined Aquatic Disposal (CAD) Pilot Project

Ms. Correale stated that MDOT MPA continues monitoring of the CAD cell. Once the monitoring is complete, MDOT MPA will have a report discussing whether or not CAD can be used as a tool for dredged material management.

9.0 Round Table Discussion: Activities and Issues of Significance

Oyster Restoration at Fort Carroll

Mr. Myers stated that Chesapeake Bay Foundation (CBF), MES, and others are participating in an oyster restoration project at Fort Carroll using oyster gardening terminals and stone substrate as a spat shell reef. Mr. Myers stated the project is also a way to engage citizens in oyster reef restoration in the harbor. Ms. Correale asked if CBF has an underwater camera. Mr. Myers stated that CBF does have such a camera and it is called a Clear Water Box, which is a device that acquires imagery from very cloudy, turbid places. CBF has initial images of the stone placement and plans to receive more images as the restoration project develops. Ms. Correale stated that MDOT MPA has made significant monetary contributions to the project as well.

Maryland Commission on Climate Change

Dr. Boesch stated he will be attending a meeting with the Maryland Commission on Climate Change (MCCC). Maryland currently has a law requiring a reduction of emissions by 40% by 2030. MCCC is working on ways for the state to meet those goals. MDE is charged with the development of an action plan, which will be drafted between 2017 and 2018. The plan will first be open to the public before it is finalized in 2019. Estimated present net emissions are offset by 12-13% of the total emissions through sequestration. A key goal is to integrate that knowledge for better estimations. One of the strategies of the action plan is to increase emission sequestration. There is a need to better understand the net emissions produced. Dr. Boesch added he hopes attendees will also think about ways to reduce emissions from this discussion. Mr. Kiernan asked about who is consolidator of the plan. Dr. Boesch stated that MDE is responsible for developing the plan.

Ms. Jones reminded attendees that the Masonville Cove Bioblitz will be held June 24, 2017 from 10am-2pm. Ms. Correale asked attendees for recommendations for further development that MDOT MPA can pursue through the DMMP Committee process.

9.0 Closing Comments and Adjourn

Ms. Chris Correale, MDOT MPA

The next DMMP Management Committee meeting will be held September 11, 2017. Ms. Correale stated the DMMP Annual meeting will be held November 3, 2017 at the Sollers Point Multi-Purpose Center.

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The DMMP Executive Committee meeting will be held on November 17, 2017. There were no additional comments; Ms. Correale thanked everyone for their attendance and the meeting was adjourned.