

DRAFT
SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM
EXECUTIVE COMMITTEE MEETING
June 3, 2019 9:30 AM
MDOT Headquarters, 4th Floor Boardroom
7201 Corporate Center Drive
Hanover, Maryland

Members Attending:

Chesapeake Bay Foundation (CBF): Alison Prost
DMMP Citizens' Advisory Committee (CAC) Liaison: Adam Lindquist
Maryland Department of the Environment (MDE): Secretary Ben Grumbles
Maryland Department of Natural Resources (DNR): Secretary Jeannie Haddaway-Riccio
Maryland Department of Transportation (MDOT): Secretary Pete Rahn
US Army Corps of Engineers, Baltimore District (USACE): Colonel John Litz
US Army Corps of Engineers, Philadelphia District (USACE): Tim Kelly
University of Maryland Center for Environmental Science (UMCES), Management Committee Liaison:
Dr. Peter Goodwin

Others Attending:

Angie Ashley Consulting: Angie Ashley
Chesapeake Bay Foundation: Doug Myers
Department of Legislative Services: Matthew Mickler
EcoLogix Group: Steve Pattison
Maryland Department of the Environment: Matt Rowe
Maryland Department of Natural Resources (DNR): Bruce Michael, Richard Ort, Jackie Specht
Maryland Department of Transportation: Jeff Stockdale
Maryland Department of Transportation The Secretary's Office (MDOT TSO): Sandy Hertz, Eddie Lukemire, Dorothy Morrison
Maryland Department of Transportation Maryland Port Administration (MDOT MPA): Dave Blazer, Kristen Fidler, Jennifer Guthrie, Kristen Keene, Holly Miller, Jim White
Maryland Environmental Service (MES): Tammy Banta, Olivia Gullede, Jeff Halka, Roy McGrath
US Army Corps of Engineers, Baltimore District: Kevin Brennan
US Army Corps of Engineers, Philadelphia District: Jeff May

Statements for the Record:

1. None.

1.0 Welcome and Introductions

Secretary Pete Rahn, MDOT

Secretary Rahn convened the June 3, 2019 Dredged Material Management Program (DMMP) Executive Committee meeting and welcomed Col. Litz. Secretary Haddaway-Riccio stated that it was her first attendance of the DMMP Executive Meeting and that the Maryland Department of Natural Resources (DNR) is glad for the partnership with the Maryland Department of Transportation (MDOT) as well as the other agencies and looks forward to working together. Everyone in the room introduced themselves and their affiliations.

Secretary Rahn asked for a motion to be put forth to accept the November 28, 2018 Executive Committee meeting summary as written. Members motioned to accept the November 28, 2018 meeting summary, the Committee agreed, and the summary was accepted.

2.0 Comments from the Citizens Advisory Committee (CAC) Adam Lindquist, CAC

On behalf of the citizens of Maryland, Mr. Lindquist congratulated Kristen Fidler in her new role as the director of MDOT Maryland Port Administration (MPA) Harbor Development and thanked her for her dedication to engaging the people of Maryland in the process of dredged material management.

The Citizens Advisory Committee (CAC) remains supportive of the 2018 DMMP Annual Report recommendations and looks forward to continued progress updates in meeting those recommendations. The CAC is also supportive of ongoing MDOT MPA projects such as the Poplar Island Expansion Project, the Mid-Bay Project, and the Innovative and Beneficial Reuse Program. Citizens have remained active in the committees by attending DMMP meetings, tours, and events. On March 18, 2019, 18 participants visited the Masonville Dredged Material Containment Facility (DMCF) for a site tour, which included an opportunity to view dredged material inflow. A Cox Creek DMCF site tour occurred in April, which included an opportunity to observe the Cox Creek DMCF expansion progress. Mr. Lindquist stated that the Masonville Cove is celebrating its 10-year anniversary with a Decade of Dedication series of public events throughout 2019. The BioBlitz event is occurring onsite at Masonville Cove on June 8, 2019, hosted by MDOT MPA partner, the National Aquarium in Baltimore.

Cox Creek Citizens Oversight Committee (Cox Creek COC)

The Cox Creek COC has worked with MDOT MPA to identify the recommended prioritized mitigation and community enhancement efforts for the Cox Creek DMCF expansion project. After 18 months of research, data collection, information sharing, and discussion, at the April 10, 2019 meeting the Cox Creek COC was able to provide a prioritized list of recommendations that they would like MDOT MPA to consider once the required mitigation for the Cox Creek DMCF expansion is complete.

Hart-Miller Island Citizens Oversight Committee (HMI COC)

A Facebook page has been created for Friends of HMI State Park, which is regularly updated with events and activities and has over 360 individuals following the page. One comment on the page expressed interest in having MDOT MPA restore more islands. Several tours are planned for this spring and outreach will continue to other groups, with the goal is to spur interest in the proposed HMI Friends Group and help make the island more accessible to the public.

Ongoing and Upcoming

The CAC submitted a letter of support for a grant application to the US Department of Transportation as part of a second round of Infrastructure for Rebuilding America (INFRA) grant funding for federal funding towards the Howard Street Tunnel project.

On August 7, 2019 a joint meeting will be held between the Harbor Team and the DMMP CAC. The meeting will be held at MedStar Harbor Hospital, which has recently installed some green infrastructure by Blue Water Baltimore. There is continued need for the CAC to maximize the engagement of Maryland residents in the DMMP process. Secretary Rahn thanked Mr. Lindquist for stepping into the role as CAC chair with the retirement of Fran Taylor.

3.0 Comments from DMMP Management Committee Dr. Peter Goodwin, UMCES

Dr. Goodwin welcomed Ms. Lindquist as CAC chair, and congratulated Ms. Fidler on her promotion to

Director of MDOT MPA Harbor Development. Dr. Goodwin gave a brief overview of the purpose of the DMMP Management Committee, whose membership represents a broad range of state and federal agencies and private sector interests, including the Baltimore Port Alliance, the Association of Maryland Pilots, the Chesapeake Bay Foundation (CBF), and citizens.

Dr. Goodwin stated that the Management Committee last met on March 27, 2019. The DMMP Management Committee meeting included an update on MDOT MPA's implementation of the Innovative and Beneficial Use strategy, which has been successful with the leadership-stakeholder engagement and interagency coordination. The Executive Committee will hear an update on the Innovative and Beneficial Use strategy at today's meeting, along with the DNR initiative for development of a beneficial use strategy.

On January 23 and 24, 2019 the Use of Dredged Material to Protect Low-Lying Areas of the Chesapeake Bay workshop was held in Annapolis. The workshop comprised of over 40 stakeholders representing various MDOT MPA committees, other agencies, and outside experts from the Netherlands, Louisiana, Cornell University, etc. The workshop topics covered the anticipated future issues associated with inundation, sea-level rise, and areas of vulnerability in the Chesapeake Bay, close engagement between community leadership and other entities, and the commitment of MDOT MPA to innovation and science-based management actions. The draft report from the workshop is currently under review and the final report should be out in July. One suggestion from the workshop included creating a standing workgroup to follow up and implement the workshop recommendations. The workshop recommendations were to develop a web-based public information sharing platform to promote collaboration and engagement regarding the use of dredged material to protect low-lying areas of the Chesapeake Bay, to identify and implement near-term pilot projects using existing tools to garner project support/funding, and a final recommendation to consider developing a regional sediment strategy since many issues and applications are being experienced outside of the Port of Baltimore (POB).

The DMMP Management Committee was briefed on the Seagirt Berth & Loop dredging project which is important for the large Post-Panamax container ships, and the anticipated increase in ship volume. On May 24, the Triton, an Evergreen container ship, arrived at Seagirt Marine Terminal (SMT). The Triton has a capacity of over 14,000 20-foot containers, which is the largest ship ever to enter the POB.

The next DMMP Management Committee meeting is scheduled for June 26, 2019 and will include a presentation and discussion on the Mid-Year Report focusing on progress on the 2018 DMMP Annual Report recommendations. Dr. Goodwin asked the Executive Committee members who would be attending the DMMP Management Committee meeting to be prepared to discuss suggestions for the 2019 Annual Report recommendations. The 2019 Annual Report will be presented at the December 5th Annual meeting.

Secretary Grumbles stated that the Executive Committee was hoping to have a briefing on MDOT MPA activities regarding climate change resiliency. Ms. Fidler replied that climate change resiliency will be discussed at the meeting today and the Executive Committee will be updated on MDOT MPA's efforts to include climate change resiliency, adaptation, and mitigation in MDOT MPA's long-term planning for dredged material management and for Port infrastructure.

4.0 Philadelphia District Corps of Engineers Report

**Tim Kelly,
USACE Philadelphia District**

Dredging Plans for 2019/2020

For the Chesapeake & Delaware (C&D) Canal, a dredging contract is scheduled to be awarded in September and performed during the winter. The dredging contract includes approximately 400,000 - 500,000 cubic yards of dredged material that will be sent to Pearce Creek DMCF and Reedy Point South. The sand waves in the C&D Canal and shoaling areas in the approach channels will be dredged.

Pearce Creek DMCF Update

Mr. Kelly stated that USACE Philadelphia District (CENAP) has received the Water Quality Certification from the Maryland Department of the Environment (MDE) for the 2019 dredging season and placement at Pearce Creek DMCF. CENAP will continue to monitor the groundwater aquifers biannually and the surface water when discharge from the Pearce Creek DMCF occurs and report the results to MDE. Two dredging inflow events have occurred at Pearce Creek DMCF since the liner was installed. The capacity at current dike elevation +50 ft is 3.5 million cubic yards. CENAP continues to participate in the Pearce Creek Implementation Committee meeting, as well as hold site tours.

Mr. Kelly announced that Jeff May is temporarily at CENAP from the Baltimore District until July 7, 2019. Gavin Kaiser will be returning to CENAP in August. Lt. Col. Dahle will be leaving July 12, 2019 and Lt. Col. Park will be taking command of CENAP.

Mr. White asked if there was an update on Courthouse Point or if Pearce Creek DMCF was currently the only option for C&D dredged material placement. Ms. Kelly replied there was no update on Courthouse Point and that Pearce Creek DMCF is designed to be increased to elevation +70 ft; currently the elevation is at +50 ft. If the dike raising continues as planned, the facility has placement capacity for 20 years.

5.0 Baltimore District Corps of Engineers Report Col. John Litz, USACE Baltimore District Federal Budget Outlook

Col. Litz stated that the USACE Baltimore District (CENAB) is funded for federal fiscal year (FFY) 20 with approximately \$20.4 million in funding available for Baltimore Harbor and approach channels. The FFY20 Workplan comes out in the first quarter of 2020. Key items for the FFY20 budgets are the dredging contract for the York Spit and Maryland approach and Baltimore Harbor channels.

Dredging Plans for 2019/2020

Col. Litz stated that while 2019 was a year for heavy siltation in Maryland due to the increased amounts of rainfall, normal volumes have been dredged for the Maryland approach channels. Approximately 2.6 million cubic yards from the Maryland approach channels was removed and placed at Poplar Island. The next dredging contract will be awarded in October which will focus on Brewerton and Tolchester in the east channel and the York Spit channel, which will have an increased volume of material due to not being dredged the previous year.

Virginia Dredging Plans

At the request of the Virginia Marine Resources Commission (VMRC), an Environmental Assessment needs to occur to be able to use a northern expansion section of the Wolf Trap Alternate Placement Site (Wolf Trap) due to concerns related to effects of dredged material placement on crab overwintering populations. The Environmental Assessment is a high priority, and the cultural study is currently being completed. Col. Litz stated he is in close contact with VMRC Commissioner Steve Bowman and will keep the DMMP Executive Committee updated on the Environmental Assessment progress. The

northern expansion of Wolf Trap is where CENAB intends to place the York Spit material. Mr. White asked if the placement of material at Wolf Trap will be done for the next two years. Col. Litz stated that material will be placed this fall at Wolf Trap and that heavy coordination will occur if the schedule is in jeopardy for placement in the northern expansion.

Mr. White stated that MDOT MPA has heard from the coal shipping community that the York Spit may be reducing the draft of the ships leaving the Port and will be holding a meeting with this community. MDOT MPA has not heard any information or pilot reports concerning grounding of any ships in that area. Mr. Brennan stated that CENAB had not received any grounding reports, however, a recent survey of the channel shows material is making the channel narrower. In case the Wolf Trap northern expansion area could not be used for placement in the accepted timeframe, Col. Litz stated that CENAB investigated the York Spit to determine if only the high points could be dredged rather than the whole channel. This option was not feasible, and the entire area needs to be dredged since the previous dredging cycle was skipped.

Masonville Tipping Fee Study

The Masonville tipping fee of \$5 million was waved in FFY19. CENAB intends to pay the tipping fee in FFY20, but an agreement is still needed. The USACE National Headquarters is currently working on the agreement.

Poplar Island Expansion

CENAB is executing the final dike construction contract for Poplar Island Expansion. The expansion construction work will be completed in July 2020 and will allow for placement of material through 2032. CENAB is on schedule for the dredging cycle in 2020/2021 to begin placing material in the new expansion.

Mid-Bay

CENAB received approximately \$4.9 million in funding to move forward with the design for James and Barren Islands. A Record of Decision (ROD) for the Environmental Impact Survey is required in order to execute the Design Agreement. The goal is to have the Design Agreement in place by August 2019. Development of Barren Island will take approximately 27 months to complete while James Island is anticipated to take 47 months to complete.

Thin-layer Placement Projects/WRDA Section 1122 Beneficial Use Pilot Project

Col. Litz briefly mentioned the 10 beneficial use pilot projects which were selected by the USACE and approved by the Office of the Assistant Secretary of the Army for Civil Works. None of the 10 projects selected were from CENAB, which had three beneficial use project proposals nominated (Fleming Park, Sparrows Point, and Smith Island). The pilot program began in Water Resource and Development Act (WRDA) 2016 and in WRDA 2018, 10 additional projects were authorized. The additional projects have not been determined and no funding source for the pilot projects has been identified. Mr. White asked about the cost share for the pilot projects. Col. Litz stated that the pilot projects were 100% federal funded.

6.0 Seagirt Berth & Loop Dredging Project

Holly Miller, MDOT MPA

Ms. Miller stated that SMT is 284 acres and is owned by MDOT MPA and operated by Ports America Chesapeake through a Public-Private Partnership (P3) Agreement. SMT is the POB's dedicated container terminal and handles more than 97% of the POB's container volume. SMT has four berths and is supported by 11 ship to shore cranes. Berth 4 is currently the only 50-ft draft berth at SMT.

SMT has the highest vessel productivity in the country, with impressive loading and unloading rates. Secretary Grumbles asked if the productivity statistic has fluctuated. Mr. White stated that this year the POB is trending downward due to increased volume moving through the terminal. Due to challenges from increased business and volume, there have been some management labor issues and while the POB will not be the most productive this year, the POB is not expected to fall significantly. Ms. Miller stated, because SMT was the leader in productivity, it helped to drive significant increases in business. With only one 50-ft draft berth, SMT currently lacks the capacity to accommodate the increasing number of Ultra Large Container Vessels (ULCV) that are calling on the POB. The Loop and Berth 3 improvement project would help to provide additional capacity and cargo handling while also providing efficient and safe navigation. These improvements are needed if the SMT is going to keep pace with the growing population and accompanying cargo volumes and remain competitive with other ports.

Navigation improvements to the SMT Berth 3 include deepening the existing berth from 45-ft to 50-ft. Portions of the Seagirt-Dundalk Connecting Channel and Turning Basin will also be widened to provide safety clearance for the large vessels going to and from SMT. The estimated volume of material to be dredged for this portion of the project is 450,000 cubic yards, which has been included in the POB's Long-range Capacity Planning Report for the Harbor. Navigation improvements also include deepening and widening of the remainder of the Seagirt Loop to provide safety clearances for the vessels. This portion of the project is an estimated 1.5 million cubic yards of dredged material. MDOT MPA has requested that CENAB conduct a feasibility study for this portion of the project which is pending availability of funding.

In spring 2018, MDOT MPA conducted a ship simulation study to determine if UCLVs could safely travel to and from the terminal with the proposed channel improvements. The study was conducted at the Maritime Institute of Technology and Graduate Studies with the ship handling expertise from the Association of Maryland Pilots. Geotechnical investigations and chemical analyses of the sediments were also conducted to help inform the dredging design for Berth 3 and the Loop and determine the suitability for dredged material placement at a DMCF. The sampling occurred December 2018 to mid-January 2019. There were 17 sample locations at SMT Berth 3 and 39 sample locations for the Seagirt West Loop.

With the navigation improvements, infrastructure improvements and cargo handling equipment upgrades are needed to further accommodate the ULCVs. Ports America Chesapeake will be responsible for the infrastructure upgrades. The upgrades will include toe wall installation to accommodate a deeper dredging depth, repairs to the existing Berth 3 wharf structure and pavement replacement, hardware installation to support new large ship to shore cranes that service ULCVs, and extending the concrete runways in the container yard for new, efficient Rubber Tire Gantry (RTG) cranes. The equipment upgrades also help support the POB's initiative to reduce air emissions. In December 2018, MDOT MPA was awarded a \$6.6 million US Department of Transportation Better Utilizing Investment to Leverage Development (BUILD) Grant, which will help to significantly offset the costs of the project.

MDOT MPA has completed the preliminary planning, ship simulation study, and geotechnical investigations and chemical analysis studies. Permitting for the project, Berth 3 infrastructure design, and dredging design are currently all in progress.

Ms. Fidler asked for further explanation of the efficiencies the project provides related to emissions and pollutants and climate change. Ms. Miller stated that the equipment upgrades will include new electric-powered equipment, which will help reduce emissions and the ULCVs bring more cargo on more

efficient ships, which means less ships calling on the POB, thus reducing emissions. MDOT MPA also has a robust dray truck replacement program with over 200 dray trucks replaced by efficient trucks to date. From 2012 - 2016 there was a 10% growth in cargo and a 19% decrease in overall emissions. Secretary Grumbles asked for the total cost of the Seagirt project. Ms. Miller stated that the total cost of the Berth 3 portion including the dredging and infrastructure improvements cost approximately \$33 million. Mr. White stated that the total cost for the Loop portion of the project was approximately \$43 million; the first phase is approximately \$9 million, and the second phase is approximately \$34 million. Secretary Grumbles asked if the funding was in the Consolidated Transportation Program. Ms. Fidler stated that the project is partially funded.

7.0 Innovative and Beneficial Reuse

Kristen Keene, MDOT MPA

Ms. Keene stated that, in coordination with partners and with help and support from the regulatory community, dredged material has been recovered from the Cox Creek DMCF, dewatered and stockpiled, transported off-site, and is being reused in a positive and environmentally responsible way. Approximately 10,500 cubic yards of dredged material has been removed from the Cox Creek DMCF for demonstration projects: 4,500 cubic yards for engineered fill at Hawkins Point and 6,000 cubic yards for alternative daily cover at the Quarantine Road Landfill. Ms. Keene noted that the 10,500 cubic yards refers to the volume of the dewatered material and in terms of capacity recovery within the facility, approximately double the dewatered volume has been recovered.

HMI North Cell Habitat Development Pilot Project

Ms. Keene provided an update on the HMI North Cell Habitat Development Pilot project, which was initially the conceptual idea created from the collaborative design research program in which the MDOT MPA partnered with a local landscape architecture firm, Mahan Rykiel Associates, to explore potential ways that dredged material could be used innovatively and beneficially in landscape architecture in the Baltimore area. The pilot project involves creating different habitat structures out of existing onsite dredged material, each with a series of goals. The goals of this project are to engage and educate stakeholders, optimize overall operation and maintenance costs for the HMI North Cell, and create a diverse habitat. MDOT MPA has been working with DNR to develop the habitat plans in the HMI North Cell, and if the pilot project is successful there could be an opportunity to expand the design to other areas within the north cell. The pilot project is split into four phases: concept design, design development, construction, and adaptive management. The project is currently in the design development phase, which is expected to be complete by the end of summer 2019. The construction phase is expected to begin late fall 2019, followed by three years of adaptive management and monitoring.

Ridgely's Cove Demonstration Project

Another MDOT MPA innovative reuse demonstration project is the Ridgely's Cove Remedial Capping Project. Ridgely's Cove is located adjacent to the Middle Branch of the Patapsco River, behind the Horseshoe Casino parking garage. This parcel has both off-shore and on-land remediation requirements. Remediation of the Ridgely's Cove area is part of the MDE mitigation package associated with the Top Golf development. MDOT MPA has recently partnered with the Baltimore Development Corporation and their partners to contribute about 23,000 cubic yards of blended dredged material to serve as the remedial cap for the on-land portion of the project. MDOT MPA has met with MDE to coordinate and discuss this project as it demonstrates another end use for dredged material. Secretary Grumbles asked for the timing of the remedial capping for the project. Ms. Keene replied that the in-water remediation will be completed first, which should be accomplished by fall 2019. MDOT MPA should be delivering the dried dredged material to the site in winter 2019/2020, before the growing season begins in 2020.

The Ridgely's Cove project will correspond with the schedule for Top Golf development, therefore if there are any delays with the Top Golf development, the demonstration project will be delayed as well.

Sustainable Materials Management Maryland (SM³)

Ms. Keene reminded the Executive Committee about Governor Hogan's Waste Reduction and Resource Recovery Executive Order. The Executive Order recognizes dredged material as a valuable resource with vast reuse potential and calls on state agencies to be leaders in the reuse of dredged material when economically feasible to do so. It has prompted the creation of the Sustainable Materials Management Maryland (SM³) workgroup. The mission of SM³ is to design and implement material management initiatives and projects for Maryland that will:

1. Foster new materials management businesses in Maryland;
2. Conserve natural resources;
3. Meet climate change goals for 2030 and beyond; and
4. Embrace new and more effective measures of success.

MDOT, MDE, Maryland Energy Administration, Maryland Department of Agriculture, and the Maryland Department of Commerce are the five agencies which were called out in the Executive Order. Ms. Keene stated that MDE has been an excellent leader for the group and has brought together a robust set of public and private sector representatives to work towards meeting the goals of the Executive Order. The SM³ workgroup provides an excellent forum to investigate the waste streams throughout Maryland as resources and to better understand how to manage the resources in ways that are more sustainable and environmentally friendly. The SM³ workgroup also provides enhanced private sector engagement, which provides an opportunity to establish relationships to learn about new emerging technology and innovations. Finally, the SM³ workgroup is using research and development to determine a path forward and is actively developing a strategic plan. Secretary Grumbles stated that the collaboration is not limited to the five agencies mentioned, and the SM³ workgroup is looking to broaden the agencies included. Ms. Keene mentioned that MDOT MPA falls under MDOT, and dredged material will play a significant role in the strategic plan, among other waste streams that are being investigated.

Recent and Upcoming Meetings

On May 28th, MDOT MPA held the Innovative Reuse Committee meeting. There was a strong focus on the beneficial use of in-water applications for dredged material. On May 29th, MDOT MPA presented on the POB's Innovative Reuse Program at the Society of Wetland Scientists Annual Conference. June 4 - 7 is the Western Dredging Association (WEDA) Conference, where the POB has an active role in the WEDA Beneficial Use workgroup. The workgroup is charged with developing international guidance on the reuse of dredged material. On August 15th, the SM³ workgroup will be holding a meeting at the Maryland Association of Counties. On August 27th, the next Innovative Reuse Committee meeting will be held.

Ms. Keene noted that other states are recognizing Maryland as a leader in dredged material reuse and are coming to Maryland for lessons learned on a successful program. The bottom line is to keep the channels open to maintain and increase the success of the POB.

Secretary Rahn commented that it has been exciting to see how far the programs have come in the last several years and it is encouraging to see the multiple ways Maryland is looking at beneficial reuse. Ms. Fidler thanked everyone for their support. Secretary Rahn asked if MDOT SHA was a partner and using dredged material. Ms. Fidler replied that MDOT SHA has not started using material yet, but they have

begun working with MDOT MPA on research and studies on topsoil blends as well as engineered fill, both of which will inform the path forward. MDOT MPA will have an update on MDOT SHA's use of dredged material at the next Executive Committee meeting.

8.0 DNR Beneficial Use of Dredged Material Guidance

Jackie Specht, DNR

Ms. Specht introduced herself as a National Oceanic and Atmospheric Administration (NOAA) Coastal Management Fellow working with DNR Chesapeake and Coastal Services, focusing on the beneficial use of dredged material. The Chesapeake and Coastal Services unit serves to focus on ecosystem and restoration protection, climate adaptation and risk reduction, and growing and strengthening resource-based economies. Within the unit there are focuses on dredging, restoration, and planning, and Ms. Specht's role is to enhance coordination among these various focuses and initiate the conversations regarding beneficial reuse. The inherent problem in Maryland is that upland capacity for dredged material placement is limited and Maryland coasts are at risk, therefore there is an opportunity to use dredged material as a resource. The challenge is connecting the dredging projects to the restoration projects to build resilience and additional protection to Maryland coasts.

Beneficial use at DNR is focused on living shorelines and marsh creation, beach nourishment, thin-layer placement (TLP), and island restoration. The Ferry Point project in the Kent Narrows region was inspiration for the DNR's efforts to build coastal resiliency with dredged material. The Ferry Point project dredged sandy material from the Kent Narrows channel and placed the material directly on the Ferry Point Park shoreline. DNR created living shoreline, improved public access and coastal resilience, and saved \$1.4 million through reduced transportation and fill costs. From this project, DNR learned key lessons including consideration on how dredged material is used, coordination is required between two existing projects, and DNR must be proactive and identify available projects.

DNR's four stage plan for the beneficial use of dredged material includes the following:

- 1) Understand and protect: DNR is participating in a National Estuarine Research Reserve Science Collaborative project that aims to understand the impacts of TLP depth and quality on marsh recovery. It is a three-year project occurring at eight estuarine reserves across the country. Currently the project has been active for a year and a half. There are a series of 0.7x0.7-meter plots with differing depths of material that are being monitored to determine the ability of the vegetation to recover. Changing the quality of the material and determining the response from the vegetation is also investigated in the lab.

To further inform TLP practices, DNR began developing a Marsh Elevation Enhancement Planning Considerations document that will provide an implementation checklist and lessons-learned from TLP projects across the country. DNR is also working on finalizing a regulatory policy regarding dredged material placement on state lands and a complementary process document that clearly identifies the necessary steps, from the dredging, restoration, and reviewing perspectives, to implement successful and environmentally friendly beneficial use projects.

- 2) Identify: DNR is developing the Beneficial Use – Identifying Locations for Dredge (BUILD) online mapping tool. The BUILD tool will be populated with potential dredging and restoration projects to assist planners with spatial identification of potential beneficial use opportunities. Along with spatial data, the BUILD tool incorporates temporal information, physical characteristics of the dredged material, and associated MDE Wetlands and Waterways permits. BUILD is expected to be incorporated into the Maryland Coastal Atlas in June 2019. DNR also partnered with Mahan Rykiel

Associates to develop a beneficial use site suitability model for the Lower Wicomico and Kent Narrows areas.

- 3) Restore: DNR provided funding for two beneficial use projects through the Community Resilience Grant Program. This program funds projects that use natural and nature-based features to enhance community resilience to climate change impacts. The first is the Hurst Creek Shoreline project in Dorchester County, currently in the permitting phase, which involves restoring a barrier shoreline using dredged material from the adjacent channel. The second is the Selsey Road Resiliency project in Worcester County, currently in the design phase, which involves reestablishing a beach and marsh habitat using dredged material from the Ocean City area.

This year, DNR received 20 project proposals, three of which proposed the beneficial use of dredged material. This is significant since in the previous two years of the grant program, DNR had only received two project proposals for the beneficial use of dredged material; Hurst Creek Shoreline and Selsey Road Resiliency.

- 4) Communicate: To further communication initiatives, DNR developed a webpage and story maps that include information for the public about DNR's current beneficial use of dredged material demonstration projects and the BUILD tool.

Regional Sediment Management Plan

Ms. Specht informed the Committee of DNR's new initiative to develop a Regional Sediment Management (RSM) Plan. DNR is currently seeking support to develop the RSM Plan through the USACE's Continuing Authorities Program (CAP) 204e: State and RSM Plans. CAP 204e states that the USACE "may cooperate with any State or group of States in the preparation of a comprehensive State or regional sediment management plan within the boundaries of the State or among States". The focus would be on the shallow-draft, recreation channels that are supported by DNR's Waterway Improvement Program. Part I of DNR's RSM Plan will involve the collection and synthesis of information such as depth and sediment surveys, sediment budget models, elevation analysis, and geographical scope identification. Local government and interagency coordination will be integral in gathering this information. Part II of the RSM plan will involve the identification of stream restoration projects, beneficial use projects, and community resilience projects.

Potential Lower Wicomico River TLP Project

DNR is assisting the USACE with identifying a potential TLP project using dredged material from the upcoming Lower Wicomico River dredging project. DNR is coordinating with the Audubon Society, USACE, and US Fish and Wildlife Service to locate potential wetlands in that area that TLP could restore. DNR is continuing to proactively identify beneficial use opportunities.

9.0 Harbor Development

Kristen Fidler, MDOT MPA

Cox Creek Expanded Project

Ms. Fidler stated that successful coordination between MDOT MPA, US Environmental Protection Agency (EPA) and MDE occurred for Building 201 demolition and removal and disposal of structural materials containing polychlorinated biphenyls. The removal of Building 201 allows MDOT MPA to fully excavate the borrow material in the Cox Creek Upland which will continue to be used for the Cox Creek DMCF base dike widening.

The Cox Creek DMCF base dike widening project has been divided into eight segments around the perimeter of the existing cell for progress tracking purposes. The base dike widening construction has occurred in the first four segments and has begun in a fifth segment.

The Operations & Maintenance complex is almost completed. There will be a space for a laboratory, conference room, offices, maintenance garage, biofiltration stormwater systems, etc. There is an opportunity to host the Executive Committee at the site in the future. The building is anticipated to be open by September 2019.

Masonville DMCF

While Cox Creek DMCF is closed to dredged material inflow during construction, Masonville DMCF is still actively receiving dredged material. The Masonville DMCF dikes are currently being raised to +18ft MLLW which will increase site capacity to 6.1 million cubic yards. The dikes will eventually be raised incrementally to +42 ft. and once the Masonville DMCF has reached capacity in approximately 20 years it will be closed and paved for terminal cargo parking. Secretary Rahn asked why Masonville was receiving material inflow during dike raising while Cox Creek was not. Ms. Fidler replied that at Masonville the existing dike is being raised while at Cox Creek, the current dike needs to be widened to form a base dike to then raise the dike as well as dike construction on the upland portion of the site. Ms. Fidler stated that Cox Creek DMCF will reopen to receive inflow in a year or two when the base dike widening is complete and stabilized.

Pearce Creek

The Pearce Creek waterline construction project is nearing completion. There are a few remaining homes which have yet to be connected to the public water system, with four property owners refusing connection and several homes that have extenuating circumstances which MDOT MPA is working through with the homeowners. The wells have been abandoned, and an effort is underway to perform an expansion tank adjustment in all the connected homes to align the expansion tank equipment settings with the product warranty. A Pearce Creek Implementation Committee meeting was held on May 17th and no citizens showed up outside of the community association leaders who are members of the committee. Secretary Rahn asked why homeowners refused being connected to the water system. Ms. Fidler stated that there are a range of reasons such as distrust of the government, not wanting a water bill, believing the well water was fine, etc. The homeowners who have refused to connect understand that they will have to connect to the waterline if they want to sell their property, and the connection will be at their own expense. MDOT MPA facilitated major road restorations for the waterline construction and the final punch list items are being completed. Community outreach is ongoing and will continue quarterly through the Pearce Creek Implementation Committee for as long as the citizens feel it is necessary.

Mid-Bay

The USACE has received funds in FFY18 and FFY19 for \$4.903 million to perform preconstruction and engineering design for the Mid-Chesapeake Bay Island Ecosystem Restoration (Mid-Bay). The funding cannot be spent until the ROD is signed by the Office of Assistant Secretary of the Army (Civil Works) (ASA), who is supportive of the project. In October 2018 the ASA sent the USACE Office of Management and Budget (OMB) a report with the recommendation to advance the Mid-Bay project. The last hurdle is for OMB to clear the project in order for the ASA to sign the ROD. Once the ROD is signed, Col. Litz and Secretary Rahn can sign the Design Agreement and execute preconstruction and engineering design work to begin. MDOT MPA is working with congressional and federal partners to

move the clearance from OMB forward. In partnership with MDE, MDOT MPA submitted a permit application to perform the geotechnical borings around Barren and James Island (the Mid-Bay Islands). MDE sent the comments and questions received from the permit application public notice and MDOT MPA has responded to the comments.

Climate Change Resiliency

The Mid-Bay Islands are an example of climate change resiliency and preparedness projects and once complete, will provide over 1,200 acres of wetlands in the Chesapeake Bay. It will also provide shoreline protection for the property owners along the coast in Dorchester County. MDOT MPA has been increasing focus on innovative reuse to support climate change preparedness. Action Item 4 of the MDOT MPA innovative reuse strategy discusses demonstrating as many projects as possible where economical. Item (e) states for MDOT MPA to “Seek demonstration areas in the harbor to restore or create wetlands as well as to restore eroded shorelines using Harbor material and engage with DNR and MDE about implementation of such projects.” Item (g) states to “Identify projects where Harbor dredged material could be innovatively or beneficially used to enhance climate change resilience.” There are two projects which speak to those efforts; the Fleming Park shoreline restoration project and the Ridgely's Cove remedial capping project. The Fleming Park shoreline restoration project is a beneficial use project that has been submitted by the Chesapeake Bay Foundation and the Turner Station Community for federal funding. The effort came from the MDOT MPA 2017 Design with Dredge summer research internship; MDOT MPA is investigating ways to partner with the Fleming Park project in a more meaningful way. The Fleming Park project embodies the type of shoreline restoration and climate change resilience that could possibly be replicated elsewhere throughout the Harbor if successful. The Ridgely's Cove project, discussed by Ms. Keene early in the meeting, demonstrates the on-land use of dredged material in shoreline restoration with a recreational aspect.

As mentioned by Dr. Goodwin, a workshop regarding the “Use of Dredged Material to Protect Low-Lying Areas of the Chesapeake Bay” was held in January and is part of the future for MDOT MPA sustainable planning of dredged material management and solutions. MDOT MPA will be thinking proactively about the dredging projects, the resource available and the need for the material for projects such as elevating land, restoring wetlands, etc. The workshop was the beginning of the next phase of long-term planning. The next steps include finalization of the workshop report which is anticipated in June 2019 and implementing some of the near-term recommendations from the workshop. It is anticipated that the Executive Committee will be briefed more fully by UMCES on the outcome of the report, workshop and next steps at the December meeting.

The POB infrastructure is built on, in, and near the water and the POB rely on the integrity of those structures for continued operational success. Currently MDOT is working on advancing the CENAB Baltimore Metropolitan Water Resource Coastal Resilience Study which is a cost share between the USACE, DNR and MDOT. Currently the agreement and scope of work is being determined. The study would investigate the infrastructure in and around the POB to determine how to preserve it. Additionally, MDOT MPA is an active participant in the Maryland Climate Change Commission and the Coast Smart Council.

MDOT MPA recognizes that the infrastructure could be at risk due to climate change conditions. The MDOT MPA conducted a vulnerability assessment in 2010 and have recently adopted a three-prong approach to future actions. The three-pronged approach includes Migrate, Elevate, and Mitigate. Migrate will move terminal functions out of the flood plain, whenever feasible. If migration is not possible, Elevate by designing all new MDOT MPA facilities or structures that must remain on the terminals to

be 2 feet above the 100-year flood elevation, if operationally feasible. Facilities or structures that cannot be migrated or elevated, fall under Mitigate and will be reinforced or strengthened whenever significant maintenance is required or major capital investments are being made. One example of this approach being implemented is the Fairfield Marine Terminal wet basin filling using Transportation Investment Generating Economic Recovery (TIGER) Grant funding. A large underground stormwater management system was installed to reduce severe rain event flooding. In addition, once redeveloped for cargo storage the former wet basin will be elevated.

10.0 Comments from around the table

Secretary Belton, MDOT

- None

11.0 Adjourn

Secretary Rahn stated that the Executive Committee will most likely meet on December 5, 2019 at the Cox Creek DMCF for the next meeting.