

FINAL DRAFT
SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM
MANAGEMENT COMMITTEE MEETING

June 26, 2019, 10:00 AM
World Trade Center
20th Floor, Stanton Room
Baltimore, Maryland

Attendees:

Association of Maryland Pilots (AMP): Eric Nielsen
Baltimore Port Alliance (BPA): Rupert Denney
Citizens Advisory Committee (Chair): Adam Lindquist
Ecologix Group: Steve Pattison
Maryland Department of Natural Resources (DNR): Bruce Michael
Maryland Department of the Environment (MDE): Matt Rowe
Maryland Geological Survey: Richard Ortt
Maryland Environmental Service (MES): Olivia Gullede, Jeff Halka, Melissa Slatnick
Maryland Department of Transportation: Eddie Lukemire
Maryland Department of Transportation Maryland Port Administration (MDOT MPA): Sergio Adantor, Bertrand Djiki, Kristen Fidler, Jennifer Guthrie, Katrina Jones, Kristen Keene, Holly Miller, Amanda Peñafiel, Gannon Price
NOAA; National Marine Fisheries Service (NMFS): Kristy Beard
Rukert Terminals: Steve Landess
University of Maryland Center for Environmental Science (UMCES): Dr. Peter Goodwin
US Army Corps of Engineers, Baltimore District (CENAB): Kevin Brennan, Thomas Laczko, Graham McAllister, Alexander Panaccione, Jeremiah Spiga, Ray Tracy
US Fish and Wildlife Service: Chris Guy

Action Items:

1. Revised Mid-Year report will be sent to Management Committee.

Statements for the Record:

None

1.0 Introductions, Approval of Meeting Summary

Ms. Kristen Fidler, MDOT MPA

Ms. Fidler welcomed the attendees and called the meeting to order. Attendees were asked to introduce themselves and state whom they represent. Ms. Fidler requested comments on or changes to the summary from the March 27, 2019 Dredged Material Management Program (DMMP) Management Committee meeting. A motion to accept the meeting summary passed unanimously.

2.0 Citizens Advisory Committee Report

Mr. Adam Lindquist, CAC Chair

Mr. Lindquist stated that on June 26, 100 new members will be inducted into the Secret Trash Wheel Society referred to as ‘The Order of the Wheel’.

Mr. Lindquist praised the DMMP Mid-Year report. He stated that stakeholder engagement and ensuring community members have accurate information and data regarding dredging projects is essential. He pointed out the success of Recommendation 8 - Continue to increase the public's engagement, understanding, and support of Maryland's DMMP through strategic outreach and education to the communities, government agencies, non-government organizations, businesses, and schools near project sites. He stated that the record number of outreach and education events in the past year is impressive.

Mr. Lindquist stated that the Cox Creek Citizens Oversight Committee (COC) has worked with Maryland Department of Transportation Maryland Port Administration (MDOT MPA) to identify and create a list of potential mitigation and community enhancement projects for the Cox Creek Dredged Material Containment Facility (DMCF) expansion. After 18 months of research, data collection, information sharing, and discussion, the COC was able to provide a prioritized list of recommendations that the committee would like MDOT MPA to consider after the required mitigation for the Cox Creek DMCF expansion is complete. The next Cox Creek COC meeting is scheduled for July 10.

The DMMP Citizens' Advisory Committee (CAC) and Harbor Team will hold a joint meeting August 7 at MedStar Harbor Hospital. Blue Water Baltimore has installed green infrastructures on the hospital grounds and will be presenting at the meeting.

Masonville Cove is celebrating its 10-year anniversary with a Decade of Dedication series of public events throughout 2019 that focus on public access initiatives.

3.0 Innovative & Beneficial Reuse Progress Report

Ms. 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 (cy) of dredged material has been removed from the Cox Creek DMCF for demonstration projects: 4,500 cy for engineered fill at Hawkins Point and 6,000 cy for alternative daily cover (ADC) at the Quarantine Road Landfill (QRL). QRL has been actively using the material for ADC and have reported positive results. Ms. Keene noted that the 10,500 cy 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.

Hart-Miller Island (HMI) North Cell Habitat Development Pilot Project

Ms. Keene provided an update on the HMI North Cell Habitat Development Pilot project, which was proposed as a conceptual idea during the *Design with Dredge* collaborative design research program in partnership with Mahan Rykiel Associates. The HMI pilot project involves creating different habitat structures with the existing onsite dredged material in a designated area of the north cell. 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 the Department of Natural Resources (DNR) to develop the comprehensive habitat plan for 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: conceptual design, design development, construction, and adaptive management. The project is currently in the design development phase, and the construction phase is expected to begin late fall 2019, followed by three years of adaptive management and monitoring.

Ridgely's Cove

MDOT MPA is contributing blended dredged material for the Ridgely's Cove Remedial Capping Project as another innovative reuse demonstration project. Ridgely's Cove is located adjacent to the Middle Branch of the Patapsco River, behind the Horseshoe Casino parking garage and has areas that require both off-shore and on-land remediation. Remediation of the Ridgely's Cove area is part of the mitigation package associated with the Top Golf development in Baltimore. MDOT MPA has recently partnered with the Baltimore Development Corporation and their partners to offer approximately 23,000 cy of blended dredged material to serve as the remedial cap and vegetative substrate for the on-land portion of the project. MDOT MPA has met with Maryland Department of the Environment (MDE) to discuss this project as it demonstrates another end use for dredged material. The Ridgely's Cove remediation project is currently in the permitting phase and will correspond with the Top Golf development schedule.

Mr. Guy asked if the Port of Baltimore (POB) is involved in the vegetation selection of the Ridgely's Cove project. Ms. Keene replied that the vegetation plan for the project area was developed by Top Golf's consultants. Mr. Guy stated that Ridgely's Cove is ideal for forest interior dwelling species (FIDS) habitat for birds, however there are also a lot of invasive vegetation. US Fish and Wildlife Service (FWS) is interested in controlling the invasive vegetation and promoting the natives. The US Army Corps of Engineers (USACE) did a bank stabilization project in the Cove in the past, but the area is now covered in *Phragmites australis*. Ms. Fidler reiterated that the Ridgely's Cove project is not MDOT MPA's project and MDOT MPA is not involved in the long-term maintenance or vegetation success. MDOT MPA is strictly the provider of a source material for the project.

Recent and Upcoming Meetings

In late May, MDOT MPA held the Innovative Reuse Committee (IRC) meeting and presented on the POB's Innovative Reuse Program at the Society of Wetland Scientists Annual Conference. In early June, MDOT MPA attended the Western Dredging Association (WEDA) Conference, where the POB has an active role in the WEDA Beneficial Use workgroup, which is charged with developing international guidance on the reuse of dredged material. On August 15, the Sustainable Material Management Maryland (SM³) workgroup will be holding a meeting at the Maryland Association of Counties. On August 27, the next IRC meeting will be held.

Ms. Keene stated that the POB is interested in continuing to foster partnerships and establish new partnerships. With each new group that the POB speaks to about dredged material reuse and the advancements that have been made, it aids in furthering the Innovative Reuse Program, helps build support within the communities, and allows the POB to identify potential reuse opportunities.

Dr. Goodwin asked how the dredged material presentation was received at the Society of Wetland Scientists Annual Conference. Ms. Keene replied that the audience was knowledgeable about the Chesapeake Bay, however, many did not know that dredged material could be reused and was available as a resource for wetlands. The attendees were interested in the results of the test nursery and demonstration projects.

4.0 Corps of Engineers, North Atlantic, Baltimore (CENAB) Mr. Kevin Brennan, CENAB Mr. Graham McAllister, CENAB

Mr. Brennan mentioned that Mr. Laczo is temporarily filling in for Justin Callahan, who is taking a developmental opportunity for the next three months and that Mr. Tracy is a CENAB new project manager.

Mr. McAllister stated that the President's FY20 budget proposal included \$20.4 million for Baltimore Harbor and approach channels project. Mr. Guy asked how the budget compares to past budgets. Mr. McAllister replied that compared to the FY19 budget, FY20 is slightly lower, but is higher than the FY18 budget. Mr. Guy asked if there is a separate budget for the Mid-Chesapeake Bay Island expansion project (Mid-Bay). Mr. McAllister replied that there is not a separate budget in the President's FY20 budget for Mid-Bay, but there is a separate budget for the Poplar Island expansion project.

Within the FY19 CENAB workplan, the POB received \$4.95 million for Energy Transfer Port funding.

Maryland Channels

Mr. McAllister stated that Norfolk Dredging dredged approximately 2.2 million cy of material from the Maryland approach channels between the Craighill Entrance to the Cutoff Angle from December 2018 through the end of February 2019. All of the material was placed at Poplar Island. Approximately 475,000 cy of material was dredged from the Curtis Bay channel and placed at the Masonville DMCF.

Within the next week, CENAB will be soliciting for a sub-contractor to dredge the Maryland approach and Baltimore Harbor channels. The dredging solicitation will be for approximately 635,000 cy from the Brewerton Channel, Brewerton Angle, and the east channel of the northwest branch in the Baltimore Harbor, which will be placed at the Masonville DMCF, and approximately 2.15 million cy from Tolchester and the Brewerton Eastern Extension, which will be placed at Poplar Island.

Virginia Channels

CENAB is in the process of developing a solicitation to dredge the Virginia York Spit Channel. The contract is expected to be awarded in October 2019 for approximately 2.5 million cy.

An Environmental Assessment (EA) is ongoing to provide a northern expansion to the Wolf Trap Alternate Placement Site (Wolf Trap). In May, CENAB completed a cultural survey regarding the northern extension area, which will be added to the EA. Comments from National Marine Fisheries Service (NMFS) have been received and incorporated. Currently CENAB is working on the water quality certification and coastal zone management concurrence package that will be submitted to Virginia Department of Environmental Quality.

Ms. Fidler asked when the EA is expected for public review. Mr. McAllister replied that the timeline is dependent on other items, but is likely to go out for public review by the end of July 2019.

Poplar Island Expansion Project

To date, CENAB has placed a total of 34.3 million cy of material at Poplar Island and has created 372 acres of wetland habitat. The final dike construction for the expansion is underway and on schedule. The construction contract for the two drainage structures will be awarded by the end of August 2019. All expansion construction is expected to be complete by July 2020 and initial dredged material placement in the expansion is expected in the 2020-2021 dredging cycle. The expansion should be able to accommodate material through the 2033 dredging cycle.

Mid-Chesapeake Bay Island Expansion

CENAB has received approximately \$4.9 million to complete the design phase of the project. Now that the Record of Decision (ROD) has been signed by the Office of the Assistant Secretary of the Army (ASA), the Design Agreement can be executed, which must be completed before design work can begin.

CENAB is waiting for a memorandum signature from the North Atlantic Division (NAD) that authorizes CENAB to move forward with design.

Design of Barren Island is expected to take 27 months and should be complete in 2022, while the design of James Island is expected to take 47 months. Mr. Nielsen asked if dredged material will be placed at Barren Island. Ms. Fidler replied local material from the Honga River will be utilized to restore Barren Island.

5.0 Corps of Engineers, North Atlantic, Philadelphia (CENAP) Mr. Kevin Brennan, CENAP
Mr. Brennan stated that CENAP is planning to dredge sand waves in the Chesapeake & Delaware (C&D) Canal and the material will be placed at Reedy Point. The contract will be awarded before the end of September.

Currently a contract package is out for solicitation for the Southern approach channels and the C&D Canal, which will include approximately 400,000 cy of material that will be placed at the Pearce Creek DMCF.

6.0 2019 Mid-Year Report/Recommendations Update Ms. Kristen Fidler, MDOT MPA
Ms. Fidler stated that the 2018 Annual Report provided recommendations for MDOT MPA to follow in the 2019 calendar year. The Mid-Year report is an update on the implementation of the recommendations to date and Ms. Fidler provided a summary.

Recommendation 1: Continue HMI North Cell Development

As water is discharged from the HMI North Cell the newly exposed sediment is being limed to control pH levels. Construction of the deep pool is ongoing as weather permits. Vegetation test strips, including woody vegetation species, were planted in the north cell in 2017 and 2018 and are being monitored to identify which species are most successful in the HMI North Cell environment.

MDOT MPA continues to work with DNR regarding the HMI North Cell Pilot project as well as for long-term habitat development plans for the north cell, designing and creating a feasible low-maintenance, low-cost, highly diverse habitat that will be engaging for visitors. Mr. Michael stated that a meeting between MDOT MPA and DNR has been discussed for September.

Recommendation 2: Work with the Federal Government to Emphasize the Necessary Federal Funding for Poplar Island Expansion & Mid-Chesapeake Bay Island Design

Funding for the Poplar Island expansion was received, and the project is expected to be complete by July 2020. Design funds of \$4.9 million were received for the Mid-Bay project and the Design Agreement will be able to be executed shortly.

Recommendation 3: Work with the USACE to Ensure the Implementation of the Water Resources Developmental Act (WRDA) is In Line with the POB's Activities

MDOT MPA is involved with American Association of Port Authorities (AAPA) through involvement in the Government Affairs Committee, attendance at the Spring Conference Government Relations Fly-in, and participation in the AAPA's Harbors & Navigation Committee and the Environment Committee. MDOT MPA will be hosting AAPA's fall Harbors & Navigation Committee meeting.

Since the POB qualifies as an Energy Transfer Port, it receives funding each year for a specific set of projects such as berth maintenance and some environment remediation. MDOT MPA is working with AAPA to ensure that the funding is utilized correctly on prioritized projects.

Recommendation 4: Work Closely with the Corps Districts to Implement Updated Dredged Material Management Plans

The last USACE Dredged Material Management Plan update was in 2017. MDOT MPA works closely with both CENAB and CENAP to ensure the POB's long-term planning for dredging needs and capacity estimates are on track. MDOT MPA and USACE are forming a team to update the plan to include dredging from the Virginia channels, which will further evaluate feasibility of potential dredged material management alternatives including beneficial use. The CENAB Dredged Material Management Plan includes dredging from the Southern Approach channels of the C&D Canal.

Mr. Denney stated that at the March 27 Management Committee meeting, the committee discussed updating the planning numbers to accommodate for climate change. Ms. Fidler replied that the planning numbers displayed only accommodate existing information. She encouraged Mr. Denney to discuss the climate change accommodations further during the next agenda item for the Year 2020 Recommendations.

Recommendation 5: Work with the Corps and Virginia Agencies to Address Questions Related to Overwintering Female Crabs and the Virginia Channels Dredged Material Placement Sites

The Corps is working to advance all necessary environmental reviews, permitting and public notice requirements as expeditiously as possible, so that the Northern Expansion could be available as a temporary dredged material placement from the York Spit Channel this winter.

Recommendation 6: Planning Beyond 20-Year Timeframe

MDOT MPA has a new Dredged Material Placement Right of Entry Application and process related to sediment sampling, laboratory testing, and screening for non-MDOT MPA dredging projects. This new process helps MDOT MPA gain a better idea of the quality of the material that is placed at the DMCFs to identify potential reuse of the material, which is related to capacity, recovery, and long-term planning. The new application is posted on MDOT MPA's website and will include a narrated PowerPoint to walkthrough all the background information.

Mr. Denney asked if the new application makes it harder for private terminals to place their material in MDOT MPA DMCFs. Ms. Fidler replied that the new process is not vastly different than the previous process. The sediment sampling, laboratory testing, and screening is now better organized, and applicants and MDOT MPA are operating from the same formal document and implementing procedures the same way.

Mr. Halka asked if some material could be considered too contaminated to be accepted in the DMCFs. Ms. Fidler replied that some material could be. Mr. Halka stated that the new application process including the sampling, testing, and screening process could provide additional comfort to citizens because they know material will go through the process before adding it to a placement site and its potential removal for reuse.

Mr. Landess asked if MDOT MPA DMCFs are open for new work dredging. Ms. Fidler replied that the State of Maryland new work material is currently being accepted, but the DMCFs are not open to private new work at the moment. Mr. Landess asked if Rukert Terminals had new work material that they wanted to place in a MDOT MPA DMCF, would they be given the same consideration as MDOT MPA

new work. Ms. Fidler replied that Rukert Terminal new work would fall under the category of private new work. Ms. Fidler stated that MDOT MPA currently has a constrained capacity plan, and their priority is on the 50-foot channel. Mr. Landess asked if the constrained capacity plan will limit private terminals from performing maintenance dredging. Ms. Miller replied that maintenance dredging is included in the MDOT MPA Long-Term Capacity Plan and will not affect private terminal maintenance dredging. Mr. Denney stated that with climate change causing more dredging, there will most likely be a need for more private terminal maintenance dredging placement. With the restriction on new work material placement, the POB may reach a plateau in regard to expansion and capacity of cargo ship movement.

MDOT MPA updates placement capacity needs annually, which allows site reassessments. MDOT MPA has created Operations and Management manuals to optimize the efficiency and capacity as the Masonville and Cox Creek DMCF dikes are raised, and these manuals will be reviewed and updated as needed.

In January 2019, MDOT MPA and University of Maryland Center for Environmental Studies (UMCES) hosted a workshop, “The Use of Dredged Material to Protect Low-Lying Areas of the Chesapeake Bay” which addressed impacts from climate change and focused on larger regional sediment management opportunities. The final report from the workshop will be available within the next few days, and MDOT MPA will be working on related next steps.

The Mid-Bay project is an example of how MDOT MPA is looking beyond the 20-year timeframe for placement. Additionally, the project will create over 1,000 acres of wetlands in the Bay and provide much needed shoreline protection in Dorchester County.

Recommendation 7: Advance 2011 Harbor Team Recommendations

- Cox Creek Expansion, Stage 1 & Pursue Acquisition of the Cristal USA Property for Cox Creek Expanded Stage 2

The vertical and upland expansion of Cox Creek is on schedule. Base dike widening is underway at Cox Creek and is expected to be complete by 2021. The final dike designs for +60 feet mean lower low water will be complete summer 2019. Building 201 demolition is nearing completion with the material being sent to the proper disposal facilities.

Cristal USA was acquired by Tronox, an international titanium mining firm, in April 2019. MDOT MPA met with senior leaders of Tronox twice in June 2019 regarding the purchase of over 100 acres adjacent to Cox Creek that was formerly owned by Cristal USA. MDOT MPA expressed their interest in the property and the value it would add to the community and the expansion of the POB.

- Confined Aquatic Disposal (CAD) Pilot Project & Post-Placement Monitoring

The first CAD pilot project, which was located by the Masonville DMCF, was a success. MDOT MPA has received positive feedback from the USACE, MDE, and the Chesapeake Bay Foundation for the project, which has aided in future planning.

MDOT MPA is actively narrowing down the next CAD project location. The goal is to have a prioritized list by December 2019. Ms. Beard asked what information MDOT MPA is considering when identifying a possible CAD site. Ms. Miller replied that MDOT MPA is looking at three main categories: geotechnical information, utility crossings, and environmental factors (oyster beds, SAV, fish habitat, etc.).

- Assess Innovative Reuses with a Goal of Innovatively Recycling at least 500,000cy/year by 2023

Dredged material is being used as ADC at a landfill, as engineered fill at the Hawkins Point development project, and as a blended material for an environmental remedial cap at the Ridgely's Cove shoreline restoration project. MDOT MPA is assessing the reuse potential with a focus on operational efficiency, specifically in recovering and drying material at Cox Creek.

- Advance Innovative Reuse and Beneficial Use Through the Implementation of 2014 Strategy

Successes that MDOT MPA has reached regarding implementing the 2014 strategy items include: the Design with Dredge project at HMI, MDOT MPA's participation in the MDE-led private sector group SM³, the University of Maryland studies related to topsoil and engineered fill blends and updating the State Highway Association (SHA) topsoil specification. MDOT MPA has implemented an internal feasibility study led by the Capacity Recovery Team (CRT). The CRT has identified operational efficiencies at Cox Creek in regard to facilitating large volume, long-term innovative reuse of material, as well as other general capacity recovery processes at the site. The final feasibility study will be complete by the end of June 2019. Mr. Landess asked if MDOT MPA is using dewatering points. Ms. Keene replied that dewatering is done by evaporation and tilling, however, MDOT MPA is exploring other methods, technologies, and equipment to aid in efficiency and accelerating the dewatering efforts.

Recommendation 8: Stakeholder Engagement & Feedback in the DMMP Process, Strategic Outreach & Education, Build Awareness and to Attract Younger Audience

MDOT MPA has been able to host new events at Masonville Cove due to the Decade of Dedication event series and MDOT MPA has used different tools to advertise for the events. For example, using bilingual flyers, offering free shuttle transportation, and utilizing social media through Captain Trash Wheel's presence on Twitter, Instagram, and Facebook. MDOT MPA hosted an inflow tour in March 2019, which was well attended by stakeholders. This past year, MDOT MPA has presented at many professional conferences for the first time including Maryland's Quality Initiatives, American Society of Wetland Scientists, and WEDA, as well as participation in the Dundalk Chamber of Commerce Business showcase, the B'More Wild festival, Pasadena Shop Local event, the Curtis Bay Community festival, and the Baltimore chapter of the American Institute of Architects Lunch and Learn series.

Mr. Rowe asked for clarification on the future funding of Masonville Cove. Ms. Fidler replied that when Masonville Cove was opened, MDOT MPA's partners, Living Classrooms Foundation (LCF) and the National Aquarium (NA) received a total of approximately \$2 million of grant funding from the MDOT MPA that LCF and NA were able to match for an additional \$4 million. The funds are ending, and the partners are identifying ways to continue to work together to ensure LCF can thrive at Masonville Cove, however the funding plan is not yet determined. Mr. Denney asked if there is a possibility for a private enterprise to make a contribution as a mitigation offset. Mr. Denney stated that the stormwater remediation has become a struggle in Baltimore City because there is not enough land to provide mitigation. Ms. Fidler stated that there have been similar conversations between MDE and state agencies with permit requirements. It is a new approach and MDOT MPA will keep the committee updated.

7.0 Facilitated Discussion/Development of 2019 DMMP Annual Report 2020 Recommendations

**Dr. Peter Goodwin, UMCES
Steve Pattison, Facilitator**

Dr. Goodwin reminded the committee of the Annual Report process. The Management Committee will review a draft of the Annual Report in November, which will include recommendations for the upcoming calendar year. The report will be modified based off any comments and feedback from the Management

Committee and the revised Annual Report will go to the Executive Committee in December for final approval. Last year, the Executive Committee complimented the updated concise format of the report. Additionally, the Executive Committee recommended that MDOT MPA explicitly state how climate change factors into each of the Annual Report recommendations. Dr. Goodwin stated the purpose of the open discussion was to gather ideas or issues from the committee to be considered in the 2020 recommendations, and if there are suggested changes to enhance the Annual Report as a continued communication tool.

Mr. Pattison reminded the committee that some recommendations look similar to previous years because the referenced projects have long lead times. The recommendations should be focused on key milestones that are expected to happen throughout the upcoming 2020 calendar year. Mr. Halka asked who the audience is for the recommendations. Ms. Fidler stated that the audience is the DMMP Executive Committee and the Governor's Office. The recommendations are posted on MDOT MPA's website as well for general public, and MDOT MPA uses the Mid-Year Report as discussion points in briefings and communications with the General Assembly committees.

Mr. Pattison observed that, based on the preceding discussion, two points for consideration for the 2020 recommendations is to better educate the audience on the benefits of using dredged material in addressing climate change and use in coastal resiliency projects, and highlight how MDOT MPA factors climate change into their capacity planning.

Mr. Ortt stated that more in line with overall POB benefits, emphasizing the carbon benefits of using shipping instead of trucking or aircraft to transport goods should be included within the recommendations. Highlighting that MDOT MPA is currently using electric vehicles to reduce carbon footprint should also be included. Mr. Pattison summarized that the report should include a link between the value of dredging and reduced carbon footprint due to related POB activities. Mr. Guy suggested adding a separate recommendation to include this information. Mr. Pattison asked Dr. Goodwin to speak more to blue carbon and if that would be worth adding into the report. Dr. Goodwin stated that blue carbon is using wetland creation for carbon sequestration. Utilizing dredged material to accelerate the full function of intertidal wetland habitat is now recognized as a mitigation offset by the Climate Change Commission.

Mr. Guy stated that there are limitations with using dredged material for beneficial use and innovative reuse, such as contamination, grain size, the volume of material, and the cost difference between traditional and beneficial placement. These limitations should be acknowledged and addressed within the recommendations. Ms. Beard added that NOAA-NMFS would like to see the determinations of the sites where dredged material is used for restoration or shoreline stabilization be driven by the needs of the site and not by the need to place material.

Mr. Halka suggested adding a one-page factsheet to highlight the state's issues with climate change and coastal resiliency and how beneficial use and innovative reuse of dredged material can be part of the solution. This would allow the report to stay concise while noting the issues important with the current legislation. Dr. Goodwin agreed that including additional measures that the state is conducting on climate change through the Climate Change Commission and other programs and relating them to the DMMP.

Mr. Michael stated that another item to highlight is that mitigation such as wetland creation can go towards credits for total maximum daily load (TMDL), and there is a focus on projects that have co-

benefits (TMDL credit, mitigation, climate change resiliency, carbon sequestration, etc.). Mr. Lukemire recommended, in regard to climate change policy, broadening the idea of the MDOT MPA climate change efforts and tying those into the DMMP to assist in policy discussions. If there is a method to quantify the results of those efforts (acre restored, reduction in greenhouse gases, etc.) in relation to those policies, it is easier to communicate with legislators and general audience. Mr. Rowe suggested including potential climate change impacts that could affect POB operations, such as Mr. Denney's earlier statement regarding increased maintenance dredging. Mr. Rowe mentioned that one recommendation could be the formation of a workgroup to specifically study how dredged material can assist with coastal resiliency projects. Ms. Fidler stated that MDOT MPA's Planning Office is doing an assessment of flooding and sea level rise on all of the MPA transportation infrastructure that could be impacted.

Mr. Rowe suggested setting goals for beneficial use and innovative reuse of dredged material and potential partnerships with Virginia. Mr. Pattison reminded the committee that there is a strategy for beneficial and innovative reuse that was reviewed by the DMMP Management Committee and subsequently approved in June 2014 by the DMMP Executive Committee. At an earlier IRC meeting this year, the IRC discussed updating the strategy in 2020. Updating the strategy with new goals could be part of the 2020 recommendations. Ms. Fidler summarized that the committee felt a need for a standalone climate change-related recommendation, with a further determination of details of the various associated tracks.

Mr. Pattison stated that MDOT MPA Harbor Development has a strong outreach and education program and asked committee members if they had recommendations for the program. Mr. Guy stated that there is more need for education and outreach especially on sediment quality. Additionally, tying habitat into the beneficial use projects increases community awareness and buy-in and can also be used as an educational and outreach tool. Mr. Lindquist complimented Harbor Development on the addition of photos and streamlining the of the Annual Report in the past year. He suggested, that if MDOT MPA is looking to gain a younger audience and utilize the citizens as the audience, then possibly putting the Annual Report through a graphic design process that is mobile-compatible. This is a potential recommendation for increased messaging across media and using the Annual Report as a communication tool.

Mr. Ortt stated that while Harbor Development has a strong outreach and education program, the program seems to only reach the communities surrounding the POB, facilities, and sites and he suggested reaching out to communities throughout the Chesapeake Bay watershed since sediment issues are Bay-wide. Mr. Ortt also suggested continued professional outreach, similar to what the IR program has carried out with Society of Wetland Scientists, SM³, etc.

Mr. Denney suggested Harbor Development start outreach to companies and audiences who will invest in the infrastructure of the POB. There should be three audiences when it comes to outreach; commerce coming into the POB, companies that will invest in the POB infrastructure, and communities/citizens.

8.0 Round table Discussion: Activities and Issues of Significance

Ms. Kristen Fidler, MDOT MPA

Dr. Goodwin stated that at the upcoming Maryland Environmental Service - Environmental Business Leadership Conference, UMCES is running an open panel discussion session regarding Maryland's university system educating graduates for the professional environmental workforce. The panel is discussing if universities are meeting the mark when it comes to internships or educational activities.

Ms. Fidler stated that the Fleming Park shoreline restoration project design that was a part of the Design with Dredge internship was awarded a DNR Coastal Resiliency Grant for further design.

Mr. Michael stated that a significantly worse than average Chesapeake Bay dead zone for summer 2019 was predicted due to the increase rainfall in 2018 and through May 2019. The June monitoring tests showed that while the dead zone was worse than the long-term average, it was only slightly worse and is very comparable to 2017 and 2018. Monthly monitoring and reporting will continue.

The next DMMP Management Committee meeting will be held on September 25. The DMMP Annual meeting will be held November 8 at the Sollers Point Multi-Purpose Center. The DMMP Executive Committee meeting will be held on December 5. Ms. Fidler thanked everyone for their attendance and the meeting was adjourned.