

FINAL DRAFT
SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM
CITIZENS' ADVISORY COMMITTEE MEETING

August 9, 2017 6:00 PM
2200 Broening Highway
Baltimore, Maryland

Attendees:

Angie Ashley Consulting: Angie Ashley

Blue Water Baltimore: Bob Johnson

Cornell University: Brian Davis

Cox Creek Citizens Oversight Committee (COC)/ South Baltimore Business Alliance (SBBA): Vince
Glorioso

EcoLogix Group: Steve Pattison

Fort Howard Community Association: Kathy Labuda

Kent County Watermen: Doug West

Mahan Rykiel Associates: Isaac Hametz

Maryland Environmental Service (MES): Jeff Halka, Rachael Gilde

Maryland Department of Transportation Maryland Port Administration (MDOT MPA): Sergio
Adantor, Dave Bibo, Chris Correale, Bertrand Djiki, Kristen Fidler, John Vasina

North Point Peninsula Coordinating Council: Fran Taylor

Patapsco Back River Tributary Team: Stuart Stainman

SouthEast Communities Against Pollution: Russell Donnelly

Turner Station Conservation Teams: Gloria Nelson, Larry Bannerman

University of Maryland Center for Environmental Sciences: Lisa Wainger

US Army Corps of Engineers (USACE), Baltimore District: Fred Kimble

Waterfront Partnership: Adam Lindquist

Action Items:

- 1) Ms. Correale will look into public access to the 2010 report regarding sea level rise as it relates to Port planning.
- 2) Committee members will sign up for the remaining six or seven spaces on the boat for the September 14 field trip to Poplar Island if available.

Statements for the Record:

1. None.

1.0 Welcome & Introductions

Mr. Fran Taylor

Mr. Taylor convened the meeting at 6:30 pm and welcomed all of the committee members. All in attendance introduced themselves and their affiliated organizations. The summary of the May 10, 2017 meeting was approved.

2.0 Pearce Creek Progress Update

Ms. Kristen Weiss Fidler, MDOT MPA

Ms. Fidler explained that the Pearce Creek project is making significant progress through a collaboration between MDOT MPA and the USACE Philadelphia District (CENAP), as well as local residents who participate in the Pearce Creek Implementation Committee (PCIC).

The Pearce Creek Dredged Material Containment Facility (DMCF) will be ready to receive inflow of dredged material, which is anticipated as early as November 2017. The construction of a geomembrane liner at the site has been completed and CENAP is working through final approval measures with Maryland Department of the Environment regarding the groundwater and discharge monitoring plans, which are required per the conditions of the Water Quality Certification.

Ms. Fidler stated that a large component of the DMCF reactivation process involves the construction of the community drinking water system from the Town of Cecilton to residents located in the Pearce Creek Service Area; according to the current schedule, MDOT MPA anticipates that all homes will be hooked up to the public water supply by May 2018. All construction schedules are on track and the project is moving forward as anticipated.

In July a well-attended public meeting was held, which focused on road restoration efforts in the Bay View Estates community. Due to the pipeline installation activities, 14-15 miles of road had been impacted and subsequently restored. During construction, the contractor shared that the project was in the phase of substantial completion, and community members did not understand the terminology, especially in reference to expectations of the final state of the roads at the end of this process. For instance, community members were unsure about whether their yards would be dug up for pipeline installation and were concerned about the impacts of truck traffic on the local roads. MDOT MPA came to the conclusion that community members needed more frequent and effective communication with MDOT MPA to clarify the details of the process they were undergoing. Mr. Haines, one of the community leaders, was instrumental in bringing these issues to light with MDOT MPA. The public meeting helped to explain the vernacular of terms that the contractor used when describing the project progress, such as "substantial completion," and how community members would go about submitting items for review for possible inclusion on the contractor's punch list.

The contractor is now assessing the integrity of the road base via the collection of core samples to conduct strength testing of the road materials. Additionally, the contractor is installing crowns in the road in response to community concerns associated with stormwater management. MDOT MPA now provides weekly emails and newsletters to community members for more timely and understandable information.

The distribution system pipelines are currently undergoing potability testing; there is still an issue with chlorine content in the water, preventing the water from passing potability tests. Once potability tests are passed, the remaining road restoration issues will be addressed and in-home connections can begin. In an effort to maintain the project schedule, the contractors are working to complete the external on-lot work until potability tests have been passed.

The current schedule for on-lot connections is as follows: Bay View Estates from July to September; West View Shores from September to January; and Sunset Point, as well as a few homes along Pond Neck Road, from January to May (please note that the schedule is subject to change). Access

agreements were required for the contractor to conduct work on private properties and of the 235 signatures needed, 208 have been acquired. It is possible that a portion of the remaining required residents are only part-time residents and will be able to grant permission when they return to their property.

The next PCIC meeting regarding the Pearce Creek DMCF and related construction activities will be August 18, 2017; the following meeting will be held October 20, 2017.

Ms. Fidler asked that any concerns voiced by Pearce Creek community members should be relayed to MDOT MPA in order to ensure support for the impacted communities. Mr. Taylor stated that he recently heard from Mr. Haines, who communicated that he greatly appreciated MDOT MPA leadership, and asserted that the issues that had arisen were a result of misunderstandings between the community and the contractor. Ms. Fidler stated that MDOT MPA recognized the need to communicate more frequently and was happy to hear that Mr. Haines was pleased with the input of MDOT MPA.

3.0 Innovative and Beneficial Use

Ms. Kristen Weiss Fidler, MDOT MPA

Ms. Fidler stated that there were several updates on the Innovative and Beneficial Reuse (IBR) program following the initial release of the Maryland Department of the Environment (MDE) Draft Guidance Document & Technical Screening Criteria document (Guidance Document).

The Guidance Document is being finalized and will be posted on the MDE website in August. MDOT MPA will notify committees when it is posted; a comment and response matrix will be incorporated in the document.

Governor Hogan issued a Waste Reduction and Resource Recovery Plan Executive Order, calling for strategic partnerships between state agencies, notably between MDE and MDOT MPA, to develop guidelines for reuse of dredged material, and to make it possible to use dredged material in a variety of ways within all state entities when economically reasonable to do so. Use of material must be in accordance with environmental laws, standards, and requirements. The priority placed on state entities using dredged material as a valuable resource with vast opportunities for reuse was a strong and exciting signal for the future of innovative and beneficial reuse of dredged material.

She updated the committee on the photo contest that ran from Earth Day to Memorial Day. The winning photos represented the Port and the different facets of life around the Port. The top three winning photos will be displayed in the August *Port of Baltimore* magazine. All winning entries were citizen stakeholders who were birding or visiting DMCF sites.

The MDOT MPA IBR infographic, video and overall outreach campaign were entered in the American Association of Port Authorities (AAPA) 2017 Communications Awards Program and received 3 awards. The video received the Award of Excellence, the infographic received the Award of Distinction, and the video and infographic together as a campaign received the Award of Distinction.

Next steps within the IBR program will involve small-volume demonstration partnership projects in 2017. Uses for stockpiled fill material at Cox Creek are currently being evaluated; an example is for

daily landfill cover, which may be a pilot project in the near future. MDOT MPA is also preparing for long-term, large-volume Innovative Reuse opportunities. Logistics and timing of those next steps, such as discussions of business plans and the possibility to use material for structural fill, are currently being reviewed internally.

Finally, the Design with Dredge research collaborative and summer internship is focusing on ways to use dredged material in specific projects, with the intention of projects to be mid-sized and replicable at many other sites, including local sites that were toured during the internship. Emphasis was placed on sites that offered opportunity for wetland restoration, reduction of flood risk and damage, and supporting recreation. The result of the collaborative will be a conceptual design, which will be revealed at the November Annual Meeting. Ms. Fidler reinforced thanks for all those who volunteered their time, several of whom were DMMP CAC members, hosting tours and being actively involved.

Mr. Stainman inquired about whether the public comments resulting from the draft Guidance Document were generally positive or negative. Ms. Fidler stated that comments were generally positive, and were mostly requests for clarifying the dredged material user's responsibilities when using dredged material. She mentioned that the feedback was very instructive, and the resulting comment and response matrix became a useful tool.

4.0 Design with Dredge Research Collaborative

Isaac Hametz, Mahan Rykiel

Mr. Hametz began by acknowledging the substantial contribution of MDOT MPA, MES, Maryland Geological Survey (MGS), USACE, and the stakeholders that helped interns to understand the sites relevant to the Design with Dredge program at a community-level. He also acknowledged Mr. Davis of Cornell University for his hard work in addition to the great amount of travelling he did from Ithaca, NY to be an active part of the program, as well as the interns who worked so hard on the project.

He explained that the program explored dredged material as part of a system and how it fits into the broader estuarine landscape. Participants studied specific sites that could be considered for IBR and dredged material placement, as well as the resulting social, ecological, and environmental benefits, and ultimately aimed to create an installation-scale deliverable design. In this presentation he would elaborate on the system level findings and the site level analysis.

Major components of the work done in the program were looking into how dredged material processing could be more adaptable and resilient, as well as how dredged material could contribute to a more adaptable environment. The team of interns looked at the volume of 1.5 million cubic yards (CY) of material in need of placement each year from dredging harbor channels, where placement might occur, and the timeframe in which potential placement sites would be able to accommodate dredged material of Baltimore Harbor.

Acknowledging that the existing sites have a limited lifespan (roughly 16-17 more years of placement capacity), participants in the internship program began to look for shoreline locations that would potentially be impacted by sea level rise and could benefit from dredged material placement. They then explored upland locations where dredged material could be used, such as capping on a brownfield, areas with vacant structures (to be replaced with a park or other use), landfills for daily cover, or quarries. In assessing these upland locations, they found that the capacity for placing dredged material increased by 40 years, coming to the conclusion that processing dredged material for IBR will become

an important part of the system. They then turned their attention to looking for avenues for resiliency, such as building positive perceptions of social and ecological value. The end goal would be to promote awareness and appreciation by the general public for living and operating with dredged material within our local estuary.

When learning about the current methods of processing dredged material, the team was taught that there was a need to meet threshold conditions in environmental quality prior to moving it through to an end use. MDOT MPA and MES use a limited number of strategies, and the team posited that by using more strategies, the dredged material, which can be difficult to work with since it is poorly graded and is mostly silt and clay, could be considered for IBR projects sooner. The strategies suggested fit into four categories including water quality, moisture reduction, soil quality, and climate considerations. To attain threshold conditions for water quality, MDOT MPA could add to their efforts by using bioremediation, chemical filtration, tidal exchange, phytoremediation, oxygenation, mechanical filtration, algae filtration, and flocculent additives. To attain threshold conditions for soil moisture, MDOT MPA could add to their efforts by using smaller cells, employing a soil to dike method, doing thin layer placement, using sludge treatment reed beds, performing crust mixing, expanding surface area, performing electro-osmotic dewatering, using a filter press, and using a geotextile tube. To attain threshold conditions for soil quality, MDOT MPA could add to their efforts by using microbial inoculants, bioremediation, sediment washing, thermal treatments, land farming, aerations, and rotational grazing. Finally, to attain threshold conditions for climate, MDOT MPA could add to their efforts by using a geotextile tube, a spine system, sediment cover, and a natural windbreak. All of these methods are employed for similar purposes worldwide.

The team suggested that Hart-Miller Island would be an ideal field lab to test out some of these new methods that would aid in dredged material processing efficiency. Hart-Miller Island is no longer accepting material but is still processing it, so placement needs would not be impacted by field lab activity.

Additional strategies on Hart-Miller Island could include creating smaller cells to refine how water and soil quality and quantity change to meet thresholds, and new planting strategies could be explored. A dike structure could crisscross and cut through the site making smaller management units as well as serving as a pedestrian area for recreation.

After developing these tools to process the dredged materials, the team set out to find places to use it. The Port has been doing a lot of work on soil blends for purposes including structural fill and potential restoration. Dredged material may be able to be used in road construction, bricks, or seed balls. The program identified end uses and potential final places for the products of dredged materials in IBR.

Program participants found that, in general, existing DMCFs are far from the public, and therefore do not nurture a special connection with the general public. Initially, the team considered Masonville Cove DMCF as a subject to design a dynamic project to showcase IBR. It was an ideal location because it was near communities, and adjacent to Port facilities. One idea presented was to combine thin layer placement with a recreational boardwalk, bringing a sense of being in a special place that is directly impacted by IBR. Unfortunately, the team learned that it was not possible to enhance the landscape of Masonville Cove any further due to permit mitigation requirements already in place. However, the team found that the Turner Station community offered an excellent alternative because it has soft shorelines, is near Port facilities, and it is adjacent to Sparrows Point and other Port terminals.

It also has a history of pollution and could benefit from ecological restoration. Fleming Park became a focus of the project due to its recreational amenities as a park as well as hosting a community center, and it offered access to the water's edge. Characteristics that could be improved include the current exposure to wind, sun, and the elements, in the sense that there is very limited shade and very few different landscape types. There are a wide variety of edge conditions, such as gentle slopes up to the park and an intertidal bathymetry along the water. This diversity of edge conditions offers opportunities for potential thin layer placement. The concept included working with existing structures to combine recreation with ecological restoration.

Mr. Donnelly inquired about the volume of dredged material that would potentially be accommodated in a Turner Station community project. Mr. Hametz stated that roughly 8,000 CY could be used for thin layer placement in a project like this and that this figure aligned with smaller scale thin layer placement projects done by USACE.

Ms. Fidler interjected about a question that Mr. Donnelly asked at a previous Harbor Team meeting regarding the potential to use dredged material for IBR in an in-water use. She clarified that, contrary to her answer at the time, beneficial use is designated for in-water use and the categories used for innovative reuse (IR), which is solely on land (fill and soil management), were not considered when assessing suitability for in-water projects. A different set of screening criteria and standards is used for beneficial use projects.

Mr. Stainman asked for clarification about the term "resiliency" regarding soils. Mr. Hametz replied that processing dredged material relies on a small number of strategies where a failure to meet threshold conditions in one of the strategies halts the progress of the processing system. His use of the term resiliency applied to increasing the number of tools employed by MDOT MPA to process dredged material, avoiding interruptions in processing material.

Mr. Stainman asked whether there were numerous additional public sites where IR can be used on land in the fashion that Mr. Hametz described in his presentation. Mr. Hametz stated that there were many other sites in the Baltimore Harbor region that could accommodate dredged material in the way they designed the Turner Station site that could also meet the criteria that the team identified for ideal sites, including proximity to residential areas and Port facilities, as well as having soft shorelines.

Mr. Johnson asked about the degree of importance in transportation costs, comparing transportation on water to transportation on land, when moving dredged material to sites for IBR. Mr. Hametz explained that though the need for transportation was acknowledged in their design, they did not specifically address this need in the design within the timeframe of the internship. Mr. Davis stated that the participants used a basic rule of keeping considered projects within a couple miles of the Port.

Mr. Johnson asked whether transporting dredged material by truck or rail was prohibitively expensive when compared to transport by water. Ms. Correale stated that generalities are difficult to make without a specific project in mind and soliciting the market for costs. It is possible that on-land transportation could be cost prohibitive, but it is unclear until bids are requested.

Mr. Stainman asked whether there were geographical boundaries when using dredged material for IR on land. Ms. Fidler explained that on-land IR use of dredged material is not subject to geographic

boundaries, but it is subject to soil quality screening before its use, as outlined in the MDE Guidance Document.

Mr. Stainman asked about the feasibility of a scenario where dredged material could be blended with another sediment and used for IR to aid with the loss of wetlands at Blackwater National Wildlife Refuge (NWR). Ms. Correale stated that Blackwater NWR was considered as a location for dredged material placement for IR because of the impending loss of wetlands. Unfortunately due to its distant location, needs for staging area, environmental sensitivity, and limited capacity, it was not as economically feasible as a large-scale project like the Mid-Bay project.

5.0 The Value of Reclaimed Capacity

Lisa Wainger, UMCES

Dr. Wainger explained that she and her colleague Elizabeth Price were asked to create an economic model assessing the financial viability of IR. This project was in light of the existing challenge of finding enough suitable space to store dredged material in the midst of a constant need to remove dredged material to keep the channels clear.

Dr. Wainger stated that the goal of the UMCES' model was to develop an analysis of the economic values of regained placement capacity and environmental benefits of innovatively or beneficially using dredged material, in order to create more realistic cost/benefit analyses. She explained that there are several challenges in the process of dredged material management. Placement capacity for Baltimore Harbor dredged material is limited, as are future opportunities for DMCF construction. There are few tracts of land of suitable size and distance from dredging areas with public and political acceptance for dredged material placement, and IR has the potential to postpone or reduce the need for new DMCFs. However, uncertainty about IR (e.g., market fluctuations) must be taken into account during planning.

Dr. Wainger began by defining elements of the model, the first term being "reclaimed capacity." Capacity is reclaimed when dredged material is removed or diverted from a DMCF for IR. Creating that capacity means that new capacity does not need to be created elsewhere (e.g., in a DMCF). The value of that reclaimed capacity in this model is considered "costs avoided." Costs avoided depend on how much was spent to reclaim each CY of capacity, and what it costs to create the capacity in a different way. The value of reclaimed capacity is estimated by comparing costs of IR options to a non-IR baseline (i.e., DMCF construction). The aim of the analysis was to determine the value of reclaimed capacity.

When exploring costs avoided, it is important to understand that costs avoided can be positive (cost savings) or negative (incurred costs). If IR delays construction of new DMCFs, then there may be savings due to fewer years of operation and maintenance in a new DMCF in the planning period, or reduction in present value of dredged material management costs because future costs are discounted. However, cost savings may not be realized if real estate prices are rising faster than inflation, land for placement becomes unavailable, or IR is unable to meet capacity needs, leading to unplanned costs.

Dr. Wainger described another element of the model, "present value." Present value is a common way to compare current and future values. It relies on a discount rate, which is similar to an interest rate, but is used to reduce future values to their present value. For example, if you are owed \$100 but you are not paid for a year, you would lose the interest that the money could have earned. To account for the lost interest and your preference not to wait a year to receive money, \$100 a year from now is only worth \$97.28 in present value, with a discount rate of 2.8%. The discounted rate reflects two main

factors. The first is time preference, meaning it is preferable to receive money sooner rather than later. The second is opportunity cost. Money invested in one project is not available for an alternative investment that may generate higher returns.

In order to assess the likely financial situation that would result from depending on IR as a method to dispose of dredged material, Dr. Wainger defined possible future scenarios for dredged material management with and without IR. In IR scenarios, Lightweight Aggregate (LWA) is used to represent any potential IR. She estimated and compared scenarios using the total costs to MPA over a 40-year planning period in present value (2017 dollars), and placement capacity at the end of the planning period. The model then calculated costs avoided from future scenarios by comparing them to a baseline scenario of expected projects.

She explained three scenarios to explore the economic feasibility of IR versus DMCFs. The first was using current and planned sites (existing Cox Creek, Masonville, Cox Creek Expansion onto MPA Property, and Cox Creek Cristal). The second was a full- or partial-scale IR production (100% IR production at 500,000 CY per year as well as 50% of full scale IR production at 250,000 CY per year). The third was a scenario involving a new major DMCF where current and planned sites would be filled first, then an additional DMCF would be created. This would represent a continuation of the current approach.

Dr. Wainger then shared the results of the scenarios run through the model. The scenario with a future major DMCF is the most cost-effective, where cost per CY of additional capacity averaged \$15.57. In the scenario with 50% of dredged material being used as LWA (where the additional dredged material is going into a DMCF), the cost per CY of additional capacity averaged \$36.67 and a new DMCF would be triggered by Year 28. In the scenario with 100% of dredged material being used as LWA, the cost per CY of additional capacity averaged \$41.43, and a new DMCF is not triggered within the 40-year analysis.

Dr. Wainger explained that the results of the economic model demonstrated that costs were incurred for LWA scenarios, and each CY of reclaimed capacity created a substantial cost to MDOT MPA that is greater than the cost of building a large DMCF.

Dr. Wainger stated that characterizing the value of reclaimed capacity is dependent on many factors. The value of reclaimed capacity was defined as costs avoided, but it may cost a substantial amount to create that capacity. There could be other ways to create capacity as well. The models were based on the best available information, but costs avoided would change with alternative assumptions including specifications of a new DMCF, the LWA market, new DMCF trigger conditions, etc.

When considering the risk of relying solely on IR as a strategy to dispose of dredged material, Dr. Wainger found that if IR production slowed down due to market conditions, there would be less reclaimed capacity, less remaining placement capacity, and increased risk to Port operations. Relying solely on IR could force the Port to overload sites and/or require alternative dredged material placement options on short notice. Under current estimates, if the IR option does not operate at full capacity, a new DMCF will be needed within the planning period.

From her model, Dr. Wainger concluded that using current cost estimates and approaches, the most cost-effective way to build capacity is a new, large DMCF. However, limited land availability and

public/political acceptance of future DMCFs remain obstacles. New technologies or low-cost environmental placement opportunities could change findings. Higher costs could be offset by additional environmental and economic benefits, and a variety of investments (including IR) promote the long-term sustainability of the Port.

Ms. Correale stated that this work began in 2015 and data and costs were supplied to Dr. Wainger and Ms. Price at that time. Since that time, the LWA project has changed substantially. Potential LWA producers are now interested in paying 100% of the capital costs and charging a tipping fee, though the cost of the tipping fee is still unknown. In order to get a true idea of the cost of IR it will be necessary to go through a competitive procurement process rather than making estimates. The value of this model is that it is a framework to evaluate different kinds of IR as more possibilities arise. For example, one may have a better market (which is currently unknown). This model will be valuable in future inquiries as more possibilities are explored.

Ms. Labuda inquired about how the costs represented in the model would impact taxes imposed on residents. She expressed concerns about the tax payer receiving a direct benefit as a result of their monies contributing to an IR scenario. She inquired about the purpose of the work, the beneficiary of the work, and what the bottom line cost to the taxpayer would be, as well as what the return on taxpayer investment would be.

Ms. Fidler expressed that the purpose of the work was to keep Port channels operational for economic activity, which in turn provides jobs to residents.

Ms. Correale interjected that there are many financial benefits that accompany Port operations, including \$2.9 billion in economic activity and a variety of job opportunities, including those for truck drivers, scientists, engineers, business people, and longshoremen. All of these facets of Port operations financially benefit the entire state of Maryland.

Mr. West asked if a value of an end product from IR was assessed in Dr. Wainger's work. She explained that it was not included in the analysis and that any earnings would become the IR company's private earnings. It is likely that the Port would have to pay to have the dredged material removed even for IR, based on data used in the model.

Mr. Bannerman expressed disbelief that a new DMCF at Coke Point would in reality be less expensive because of the legacy contamination that would need to be addressed before it was used as a DMCF. He stated that there are no DMCF sites available. Dr. Wainger explained that costs for the model were based on data that engineers supplied in light of potential work at Coke Point, but that Coke Point was not necessarily being considered as a potential DMCF. Addressing contamination would, as Mr. Bannerman stated, increase the cost of using such a site for a DMCF. Ms. Correale stated that a new DMCF would never be as inexpensive as the existing ones at Cox Creek and Masonville, and that it was most likely that a site that was large enough would have legacy contamination, increasing the price.

Mr. Donnelly asked what information was used to derive the cost of the LWA. Dr. Wainger explained that many considerations went into the numbers, including dredged material capacity every year; cost of operations estimated by an Environ review of HarborRock's cost estimates, expected capital costs, and tipping fee. Dr. Wainger clarified that dredged material for IR was not being considered as a

marketable product in the model, and that the costs may change if there was an entity that would remove the dredged material for free, for example, MDOT MPA may still incur costs in that scenario for storing the materials, or putting it on a barge. The model was focused specifically on LWA, even though there are many other ways that material could be used for IR, because the most available and accurate data was available for this end use.

Mr. Stainman asked about the elasticity of the \$40 per CY cost for LWA, and whether it would be possible to break even financially by requiring vendors to pay to take fill from dredged material IR projects. Dr. Wainger stated that there had been analysis into that possibility and that in order for IR to be used in the form of LWA, the net cost for the Port would need to be in the range of \$15- \$20.

6.0 U.S. Army Corps of Engineers Report

Mr. Fred Kimble, USACE

Mr. Kimble stated that he would provide a brief update on current U.S. Army Corps of Engineers (USACE) projects. The Navigation Branch plans to award a contract to dredge the Cape Henry Channel in Virginia in late August/early September. The contract includes 1.8 million CY in the base contract and two options to dredge another 400,000 CY, for a total of 2.2 million CY. Dredging is expected to take place in the upcoming winter and spring of 2017/2018.

The Masonville tipping fee study is undergoing final review and back-checking at the North Atlantic Division (NAD) level. The Baltimore District received comments from headquarters, formulated responses, and revised the document. NAD is reviewing the responses before sending the study back to Corps Headquarters. The tipping fee agreement is intended to be in place for fiscal year (FY) 2019.

Regarding Poplar Island, Mr. Kimble stated that 31.0 million CY of dredged material has been placed on the site and 289 acres of wetland have been created as of the year 2016. Three expansion contracts were awarded in FY 2016 and are either completed or are well underway. Sand borrowing and stockpiling by Norfolk Dredging for vertical and lateral expansion were completed in April 2017. Marine Technologies completed upgrading spillways for vertical expansion in April 2017. Precon Marine is currently constructing perimeter dikes for the first expansion of the wetland cell and dredging of the northern access channel. Their work is scheduled to be completed mid-December 2017.

Mr. Kimble explained that awarding the second lateral expansion contract, for the completion of the embayment and remaining three wetland cells, has been scheduled for September 2017. The bid opening is scheduled for August 17, 2017. Expansion construction is expected to be completed in mid-2020. The expanded site will allow placement through the 2029/2030 dredging cycle. Contracts for construction of tidal inlets and wetland planting in cell 5A-B are scheduled to be awarded in September 2017.

Mr. Bibo added that awarding the second lateral expansion contract may be delayed by a week as a result of the existing contractor having difficulty with a bond.

Mr. Kimble then updated the committee on the Federal Dredged Material Management Plan. A report will be submitted to headquarters by August 25, 2017 for final approval. The report reconfirms Poplar Expansion and Mid-Bay as a recommended plan for Maryland Bay Channel material placement. It also

recommends the use of Cox Creek and Masonville placement sites, Cox Creek Expanded, and Confined Aquatic Disposal for harbor material disposal.

Regarding the 50-foot channel widening project, Mr. Kimble stated that USACE is currently resolving issues and concerns with open water placement at Wolf Trap. Environmental Assessment documents, including the Essential Fish Habitat and Endangered Species Act documents, are being updated to address comments and include a mitigation strategy for avoiding impacts on overwintering female blue crabs by using mechanical dredging instead of hopper dredging. Mechanical dredging would allow dredging to occur in months with warmer water temperatures, thus avoiding placement in the Wolf Trap site when overwintering female blue crabs are present. Mechanical dredging is also more cost effective than hopper dredging. USACE has been meeting with National Marine Fisheries Service, Virginia Institute of Marine Sciences, and Virginia Marine Resources Commission to discuss remaining issues and concerns. A report is being prepared for public review, which is scheduled for completion on November 17, 2017. If there are still concerns within the regulatory agencies, the widening plan may need to be adjusted.

Mr. Kimble's final updates were regarding the Mid-Bay Project. A meeting was held on July 27, 2017 on Poplar Island with key decision makers from USACE and the Office of the Assistant Secretary of the Army for Civil Works. Poplar was an ideal location to demonstrate large island restoration to the group. He reported good discussion about next steps forward for funding the Mid-Bay project, and that a follow up conference call is scheduled for August 10, 2017 to reaffirm the need for Mid-Bay.

Ms. Correale reiterated that the USACE Baltimore District and North Atlantic Division have been very supportive of moving Mid-Bay forward despite the existence of issues that need to be worked through. The usefulness of the site for dredged material placement and the resulting restoration of the Bay are strong arguments in support of the project. Ms. Correale noted that Dr. Wainger and her colleague Ms. Price drafted a report that updated the beneficial economic impacts of the restoration project, and monetized the environmental benefits of the project. UMCES and maritime consultants demonstrated what would happen without the Mid-Bay project, showing how fast the channel would fill up, and the economic impacts that would be incurred as a result of impeded shipping traffic.

Dr. Wainger further explained that the Mid-Bay project offers benefits throughout the system through restoration of the Chesapeake Bay. Ms. Correale stated that the progress of the Mid-Bay project will require help in the form of public support, and mentioned that Bruce Coulson of Dorchester County is one of the supporters who is poised to energize Dorchester County residents in support of the project. He is following the progress of the Federal Dredged Material Management Plan, and looks forward to its approval.

Mr. Stainman asked whether UMCES or USACE used the US Environmental Protection Agency Total Maximum Daily Load program cost benefit analysis in their assessments of environmental enhancements in the Bay. Dr. Wainger replied that UMCES has looked at it, transferring everything applicable to this study.

Ms. Fidler added that not only does this work reaffirm Mid-Bay, it revalidates the need for it.

7.0 Committee Administration & Open Discussion

Angie Ashley

In closing, Mr. Taylor reminded the committee about the field trip to Poplar Island and requested that any members that wanted to reserve one of the remaining six or seven spots available on the boat do so as soon as possible. Ms. Ashley reminded the committee that the trip will leave from Sandy Point State park at 9:30 AM and will return at 2:30 PM; lunch will be provided. Mr. Taylor stated that the annual meeting will be held November 3, 2017 at 10 AM.

Mr. Taylor reiterated the committee's appreciation for presenters that have come to speak with the committee over the years, and that as a committee has never questioned the presenter's integrity. They appreciate the expertise that presenters offer to community members who do not share the same educational background and that trust is essential when being part of this group.

Ms. Labuda expressed concern about the lack of discussion with this committee in the past about sea level rise, citing a report that identifies Maryland as the third most vulnerable state in the country to sea level rise, especially as it relates to dredged material placement sites such as Poplar Island and Hart-Miller Island. Ms. Correale stated that sea level rise is currently a factor in future plans to raise Port facilities. Dredged material placement sites are protected by armor stone and are therefore protected from the impacts of sea level rise for the foreseeable future. Ms. Labuda requested access to reports that were available to the public describing prior planning regarding sea level rise. Ms. Correale said that a study about sea level rise was done for the Port in 2010 and that she will look into where that report is available for public access. Ms. Ashley stated that sea level rise is a concern in projects and that, in a future meeting, MDOT MPA will host a presenter to explain Port planning and actions to reduce risks to Port facilities from sea level rise.