

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

**May 9, 2018 6:30 PM**  
**Point Breeze Maritime Center**  
**2200 Broening Highway**  
**Baltimore, Maryland**

***Attendees:***

*Angie Ashley Consulting:* Angie Ashley  
*Audubon Maryland–DC:* David Curson  
*Baltimore County Department of Environmental Protection and Sustainability (DEPS):* David Riter  
*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 Waterman:* Doug West  
*Maryland Environmental Service (MES):* Jeff Halka, Stephanie Peters, Chris Williams  
*Maryland Department of Transportation Maryland Port Administration (MDOT MPA):* Dave Bibo, Chris Correale, Bertrand Djiki, Kristen Fidler, Jennifer Guthrie, Katrina Jones, Kristen Keene, Shawn Kiernan, Holly Miller, John Vasina  
*National Aquarium:* Curtis Bennett  
*North Point Peninsula Coordinating Council:* Fran Taylor  
*Patapsco/Back River Tributary Team:* Stuart Stainman  
*Turner Station Conservation Teams:* Gloria Nelson  
*US Army Corps of Engineers (USACE), Baltimore District:* Graham McAllister  
*Waterfront Partnership:* Adam Lindquist  
*US Fish & Wildlife Service/Greater Baltimore Wilderness Coalition:* Karen Mullin

**Action Items:**

1. Mr. Bennett will investigate US Environmental Protection Agency (EPA) Justice Fund Grants on behalf of the Committee.
2. MDOT MPA will follow up with the Committee regarding which Baltimore City Council members and State Legislators who have expressed interest in or are involved in the Masonville Multi-Modal Transportation Feasibility Study.
3. MDOT MPA will follow up regarding the estimated cost for the Algal Flow-way (AFW) project at Hawkins Point.

**Statements for the Record:**

1. Ms. Correale introduced new MDOT MPA Legislative Manager Jennifer Guthrie to the Committee.
2. Mr. Taylor announced that he has decided to not seek reappointment as the Citizens Advisory Committee Chair past 2018.
3. Mr. Stainman commented that he recently visited Middle Branch Rowing Center and the amount of trash along the shore line is enormous. Mr. Stainman was one of four canoers that spent 1.5 hours cleaning up the trash, which barely made a dent in the amount of trash still there. Mr. Stainman suggested if there are MDOT MPA mitigation funds available for a project, a trash wheel at Gwynn

Falls is a worthy project in his opinion.

4. Mr. Lindquist stated that Waterfront Partnership has been raising funds to build a Gwynn Falls Trash Wheel. It is believed that about 80% of the trash coming into the Middle Branch comes out of the Gwynn Falls. BRESKO recently approached Waterfront Partnership about the project.
5. Mr. McAllister announced that, by the next DMMP CAC meeting, USACE Baltimore District will have a new District Engineer and Commander. Colonel Chamberlayne's change of command ceremony is July 13, 2018. Colonel John Litz will be new Commander.
6. Mr. Lindquist provided updates on Waterfront Partnership projects and events related to MDOT MPA:
  - a. The 2,000 square feet of floating wetlands in front of the World Trade Center are doing okay. May 18 is maintenance day, where the wetlands will be reduced to 1,000 square feet. Mr. Lindquist thanked MDOT MPA for right of entry for the wetlands and the use of a drone to video the wetlands.
  - b. Mr. Trash Wheel had its largest collection a few weeks ago when the region received three inches of rain. Seventy tons of trash were removed from the water, requiring 17 dumpsters and 2 days for removal.
  - c. On May 29, the Healthy Harbor Initiative will be issuing its latest report card on water quality and restoration projects throughout Baltimore Harbor. An event is associated with the release of the newest report card at 10:00 am on Bond Street Wharf in Fells Point. All are welcome and invited to attend. The report, The Harbor Heart Beat Report – Tracking the Vitals for a Healthy Harbor, lists seven indicators of Baltimore Harbor health.
  - d. The Baltimore Floatilla will be held on June 9, 2018. It is a paddling rally for clean water that takes place in the Inner Harbor.
  - e. Professor Trash Wheel now has her own beer called, "She Blinded Me Wit Science."

## 1.0 Welcome & Introductions

*Mr. Fran Taylor, Chair*

Mr. Taylor convened the meeting and welcomed all the committee members. All in attendance introduced themselves and their affiliated organizations. Mr. Taylor announced that he has decided to not seek reappointment as the Citizens Advisory Committee Chair past 2018. Ms. Correale said a search would take place to find a replacement. The entire Committee thanked Mr. Taylor for his service. Ms. Ashley reviewed the three action items from the February 7, 2018 meeting summary. Mr. Taylor asked for a motion to approve the meeting summary from the February 7, 2018 meeting. The meeting summary of the February 7, 2018 meeting was approved.

Ms. Labuda asked how the hatchery fish and the wild fish are being separated in the 5-year sampling of the Shad and Herring Restoration (a Masonville mitigation project). Ms. Miller replied that the larvae are tagged. Ms. Miller also confirmed that there has been an increase in the wild fish population.

## 2.0 Pearce Creek Update

*Ms. Kristen Keene, MDOT MPA*

### Waterline Connections

There are 232 properties eligible for connection to the public water supply in the Pearce Creek Service Area, which includes the communities of West View Shores, Bay View Estates, and Sunset Pointe. Of those homes, 224 properties have had exterior installations completed, 208 in-home connections have been completed, and 154 well abandonments have been completed. MDOT MPA is still on track to have all in-home connections completed by the end of May.

### DMCF Operations

The USACE placed approximately 700,000 cubic yards (CY) of dredged material from the Elk River range (authorized to a depth of -35 feet) at Pearce Creek DMCF. The Maryland Department of the Environment (MDE) issued a 1-year extension of the Water Quality Certification (WQC); the new expiration date is March 31, 2019. After the next dredging cycle, MDE will reevaluate the quantity of dredged material that has been placed at the Pearce Creek DMCF in relation to the authorized quantity (1.3MCY) in the WQC to determine if the WQC can be extended for an additional year.

USACE completed a period of surface water discharge and is currently allowing the site to passively dewater. The Pearce Creek DMCF will remain closed to the public due to safety concerns, as well as protection of the site and DMCF liner. There will be public access to USACE-owned Pearce Creek Lake for recreational activities.

### Environmental Monitoring

Monthly discharge monitoring and annual ground water monitoring results have been submitted to MDE; both are required by the WQC. Discharge monitoring occurs any time surface water is being discharged from the site. USACE has 36 ground water monitoring wells (data collected twice per year) and five piezometers (data collected four times per year) located within the DMCF area extending outward in a ½ mile radius. Exterior monitoring is being voluntarily completed on behalf of MDOT MPA to evaluate any changes in water and sediment quality, sediment toxicity, and benthic community structure. There are ten monitoring stations (seven in Pearce Creek Lake and three in the Elk River) included in the exterior monitoring program.

### Public Outreach

Every two months MDOT MPA holds a Pearce Creek Implementation Committee meeting, which is well-attended by Pearce Creek residents, agency officials, and other interested stakeholders. USACE regularly leads DMCF tours of the site for residents and elected officials. Additionally, MDOT MPA distributes Pearce Creek Connection email updates every two weeks to local community leaders. The outreach website and electronic newsletter can be viewed at [www.pearcecreekoutreach.com](http://www.pearcecreekoutreach.com). Mr. Taylor was complimentary of the Pearce Creek project and progress, noting it is an example of a good partnership project and expressed gratitude to the citizens for their patience.

### **3.0 Confined Aquatic Disposal (CAD) Progress Report**

*Ms. Holly Miller, MDOT MPA*

MDOT MPA conducted a CAD cell pilot project in the Baltimore Harbor as a Harbor Team recommendation. The pilot project was a major collaborative effort done in partnership with the USACE and in close coordination with regulatory agencies, MPA terminal operations, the Maryland Pilots, and all stakeholders. Ms. Miller extended gratitude to everyone who has been involved in the planning and implementation of this project. The CAD cell pilot project was constructed between Pier 3 and Pier 4, directly adjacent to the Masonville DMCF. Construction of the pilot project began in September 2016 and was completed in October 2016. The 250 foot by 800 foot cell was dredged to an average depth of -65 feet mean lower low water (MLLW). Approximately 130,000 CY of sand and gravel were excavated and then deposited into the Kurt Iron Slip (KIS) in the Masonville DMCF. Approximately 62,000 CY of maintenance material from the Ferry Bar channel was placed into the CAD cell over a seven-day period in February 2017.

A multi-phased monitoring plan was developed and implemented during the CAD activities. All four phases are complete. Phase I and Phase II were completed prior to constructing the CAD cell. Phase III was completed during dredged material placement into the CAD cell. Phase IV was completed one year after the CAD cell was filled (February 2017 – February 2018).

Phase IV dealt with post-placement monitoring. MDOT MPA conducted hydrographic surveys over a 12-month period at various intervals: two weeks, 1 month, 2 months, 3 months, 6 months, 9 months and 12 months post-placement. The purpose of the surveys was to document the rates of sediment elevation changes in the CAD cell. MDOT MPA added two surveys to the monitoring that were not originally planned. One survey was added at 2 months post-placement to better monitor consolidation early in the monitoring, as this is where most of the consolidation happened and at a quicker rate. Another survey was added at the 11-month mark because the development of a scour area was observed and MDOT MPA wanted a better understanding of this scour.

Overall, MDOT MPA saw 5-7 feet of consolidation in the CAD cell. There was little variation in some areas due to slight differences in sediment types, starting bottom elevations, and initial thickness of placement. There was a slight over filling of the CAD cell during placement; the area where that overfilled material was placed has returned to original levels and has consolidated. In addition, a scour hole was observed at the 9-month survey (November 2017). On this survey there is an increase in the lines and circles that indicate changes in elevations, showing a deepening of the area. At the 11-month survey the scour hole appeared to have widened and lengthened, yet remained similar in depth. MDOT MPA looked at operational information to try and pinpoint an actual cause for the scouring. At the 12-month survey, the scour hole appeared to have stabilized, but MDOT MPA will continue with quarterly monitoring to confirm stabilization.

Ms. Labuda asked if scouring meant the same as sinking/spreading. Ms. Miller replied that MDOT MPA believes that the placed material is shifting due to propeller wash from the ships coming and going in the berth, churning up the material.

In summary, the CAD cell pilot project findings include:

1. Construction of CAD cell and placement of material were successful.
2. Nutrient monitoring was successful – numbers were within baseline tolerances.
3. Turbidity monitoring was successful – never exceeded COMAR standards.
4. Primary storage of CAD cell is effective.
5. Limited scour event was observed, but appears to have stabilized – additional surveys will continue to confirm this.

The CAD cell pilot project key takeaways include:

1. Locations with high ship traffic are challenging for design and implementation, as they lead to potential for increased sediment movement and require a great deal of logistics coordination.
2. Onsite project oversight of construction and placement operations are necessary.
3. Close coordination with multiple stakeholders is critical.
4. Lessons learned throughout design, construction, and post-placement monitoring will be applied to future work.
5. CAD cell is effective with proper planning and oversight.

#### CAD Next Steps:

1. Continue to monitor the CAD cell quarterly to ensure scour area has stabilized.
2. Update other DMMP Committees and project stakeholders on the pilot project results.
3. Evaluate lessons learned to determine if CAD is feasible at other locations within the Baltimore Harbor.
4. Begin agency and stakeholder coordination to evaluate future CAD cells in the Baltimore Harbor.

Mr. Stainman asked how much ship traffic is going in and out of the location of the CAD Pilot Project. Ms. Miller responded that ships move in and out of the location every day; it is the busiest berth in the harbor. Mr. Lindquist asked if the ships were cruise ships. Ms. Miller replied that roll-on-roll-off ships holding cars use these berths.

#### **4.0 Masonville Access Study**

*Mr. Shawn Kiernan, MDOT MPA*

The Masonville Multi-Modal Transportation Feasibility Study looked at multi-modal options, which are different ways that accessibility could be enhanced, including vehicles, pedestrian and bicycle options, transit, and water access. The study was developed using funds available through the Federal Lands Access Program grant, administered through the Federal Highway Administration.

The primary mission of MDOT MPA's work in the Masonville area is to ensure the operation and management of the Masonville DMCF for dredged material placement. The Masonville DMCF is a vital part of the long-term dredging program for the Port of Baltimore because it is one of only two sites that can accept dredged material from the Harbor navigation channels. The site opened in 2010 and in any given year, around 500,000 CY of dredged material are placed in the Masonville DMCF. MDOT MPA is currently working to raise the dikes at the site to increase capacity.

Out of the Masonville DMCF project, some important projects were able to be implemented at Masonville Cove. As part of the mitigation, the Masonville Cove uplands were capped and remediated; over 14,000 tons of trash and debris was cleared; and tidal and non-tidal wetlands and upland habitat were created, restored or enhanced. Additional trees were planted, pathways were created, and a pier was built. MDOT MPA did extensive restoration on the waterside of Masonville Cove, as well. Masonville Cove is also home to the Masonville Cove Environmental Education Center (MCEEC) with many environmental education opportunities offered by the Masonville Partners, Living Classrooms Foundation and the National Aquarium. All of remediation work that was completed on the site requires MDOT MPA to enforce several important rules about visiting the site, including a requirement that all visitors check in to the Education Center. There are also restrictions on what can happen on the site, including a prohibition on picnicking, swimming, or certain recreational activities. Masonville Cove and the MCEEC were developed to function as mitigation and education areas. These are important things to keep in mind about the site and how it can be used by the public.

Masonville Cove has many partners: MDOT MPA, US Fish & Wildlife Service (USFWS), Living Classrooms, and the National Aquarium. In September 2013, Masonville Cove was the nation's first site to be designated as an Urban Wildlife Refuge Partnership by the USFWS. This designation allowed MDOT MPA to apply for and be approved to receive funds from the Federal Highway Administration under the Federal Lands Access Program (FLAP). FLAP funding is available for projects to study and improve transportation facilities that are located on, adjacent to, or provide access to federally designated lands. MDOT MPA and USFWS partnered to undertake this feasibility study.

Masonville Cove is a community resource, and currently Frankfurst Avenue does not allow for safe pedestrian/bike access. Past surveys and stakeholder coordination have indicated that the community wants better access to Masonville Cove. This Multi-Modal Transportation Feasibility Study was developed to look at several motorized and non-motorized options, including those that may not have existed in the past, that could potentially increase the ability for the public to safely access Masonville Cove.

The purpose of the Feasibility Study was to identify feasible multi-modal options that could provide enhanced and safer access to the site from the local communities, as well as the greater Baltimore region. Over the past year, the project team identified and investigated several multi-modal options that could improve or enhance the safe access to Masonville Cove. The project team focused on identifying safe ways to get to the site that did not require a personal vehicle. MDOT MPA hosted two public meetings to solicit public comments and input, and present the results of the analysis, as well as holding several meetings with representatives of the community and stakeholders.

The project team investigated several new ideas for getting more people from the community to be able to regularly visit Masonville Cove. This included looking at several new, potentially inexpensive and flexible options, including things like contracting with existing private shuttle providers, renting vans when necessary, or even purchasing a shuttle or bus. Other options included contracting with Uber and/or Lyft to establish an account that could be funded for users to attend programs or visit Masonville Cove at no cost to them. Several of these options appear to provide low-cost, readily implementable opportunities.

The project team looked at various options to promote safe pedestrian and bicycle access and identified intersection and access improvements that would be necessary for such a path along Frankfurst Avenue. Any path would require improvements to the intersection of Frankfurt Avenue and South Hanover Street; making sure that the public could cross the streets and use the pathway safely would be a paramount concern. Any proposed pathway must be designed to ensure that it did not adversely impact truck traffic using Frankfurst Avenue and South Hanover Street, or adjacent landowners and businesses.

Two different approaches that were investigated include:

- 1) Sharrows/Bike Box: A sharrow is a road marking showing a bicycle with two chevrons, reminding drivers and cyclists to share the road. A bike box is used at intersections to designate a space for cyclists to wait at a red light.
- 2) Cycle track: A cycle track is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk.

The project team also considered water access and determined that the current relationship with Canton Kayak Club, which teaches its members how to safely and responsibly launch at sites, is a reasonable type of marine access to promote. The project team investigated the option of establishing a water taxi stop; however, due to the importance of protecting the pier, the in-water mitigation, and the overall use of the site, this option was dropped from consideration at this time.

MDOT Maryland Transit Administration (MTA) reassessed the bus service in the area while the Study was underway, and neither a new bus stop nor route was included along Frankfurst Avenue. However,

there may be options for last mile transit for local residents that can be further explored, and funding may be available for Mobility on Demand grant funds through the Federal Transit Administration.

As a result of the analysis, a number of options were removed from consideration for the following reasons:

1. Bike box/sharrow intersection improvements would not separate bicyclists from the road and would not provide adequate safety for users.
2. A contracted shuttle or attempting to establish a local partnership agreement with existing entities that provide transportation would be costly or logistically challenging.
3. Creating a stop for a water taxi was not consistent with the existing mitigation responsibilities of the Port of Baltimore and may require pier improvements that are not under consideration at this time.

Based on the information collected and input received, the project team identified the short-term options to be:

1. Promoting ridesharing through Uber and/or Lyft, particularly through development and funding of a contract to enable local residents to call for rides to and from Masonville Cove at no cost to them. These types of programs may also be eligible for funding through Mobility on Demand grant funds.
2. Continuing to promote responsible kayaking through informal partnerships with clubs like Canton Kayak Club, who encourage their members to be responsible and respectful of the rules and regulations governing the sites and Masonville Cove itself.

Some possible longer-term options that were identified include:

1. Rental or purchase of a shuttle by an entity to provide regular access from the communities to Masonville Cove.
2. The possible design and development of a multi-modal pathway, coupled with necessary intersection improvements and safety analysis and engineering, along the westbound side of Frankfur Avenue.
3. Continued investigation of the MDOT MTA transit options, including last mile options as they develop.

Next steps:

1. Based on the analysis, the project team will formulate a process to move forward on public access.
2. The project team will continue to seek community member and stakeholders input.

Mr. Stainman commented on the project team's concern for trucks, yet the study shows that truck traffic is less than 20% of the counted vehicle traffic, which he felt was surprising. Mr. Kiernan replied that the numbers used in the study were from a 2-day study of traffic flow. Mr. Djiki responded that if the numbers are broken down it is still one truck for every five cars; which is still a high number for this road. Mr. Stainman asked for a timeframe for formulating the process. Mr. Kiernan responded at this time there is no set timeframe set for formulating the process. Mr. Stainman asked if there are any grants available from Federal Highway Administration, Federal Transit Administration, and the US Department of the Interior to implement recommendations from the feasibility study. Mr. Kiernan replied that those options are being explored. FLAP funding might be an option. Mr. Stainman asked which city council and state legislators have expressed interest and/or involved and who is taking the lead on this project. Mr. Kiernan responded that information on local elected official(s) involvement is unknown, but MDOT MPA will investigate

this and shared that with the Committee. MDOT MPA is taking the lead on this project. Mr. Taylor asked if there is bus service on Frankfurst Avenue, even though MDOT MTA did not add a new bus stop and inquired about the process for adding a bus stop. Mr. Kiernan responded that there is not currently bus service on Frankfurst Avenue, but it is something that can be reviewed in the future. Ms. Ashley stated there has been previous discussion with MTA about bus service to Masonville. Mr. Taylor suggested creating a partnership with the businesses in the community to support a bus stop for their employees to get to work.

Mr. Stainman asked when the MCEEC is open. Ms. Miller responded that it is open six days a week, Monday – Saturday, closed on Sunday. Mr. Stainman asked how much the cycle track would cost. Mr. Kiernan replied that the cost is estimated to be \$1.5-2 million, before preliminary engineering.

Ms. Mullin stated that the USFWS is interested in this study's results because it could help increase the attendance at the Masonville Cove site. USFWS recognizes that receiving funds from the FLAP grant could assist in getting additional funds to help turn the findings of the feasibility study into a reality. USFWS has been talking to bike advocate groups about connecting existing trails to this site, opening up Masonville Cove to more residents. Mr. Stainman commented that not far away is the Baltimore Rowing Club and the Gwynn Falls Bike Trail. Ms. Ashley noted that the Hanover Street Bridge is under consideration for infrastructure improvements and several bike and community groups are requesting that the bridge be more pedestrian and bike friendly.

Mr. Stainman asked if MDOT MPA has looked at US Environmental Protection Agency (EPA) environmental justice funds. Mr. Kiernan stated that MDOT MPA has not looked into EPA grants; this was not identified as part of the study. Mr. Bennett stated that is something that the National Aquarium can investigate and make connections on behalf of the Committee (as the NA is currently working through an EPA environmental justice grant). Mr. Bennett added that the feasibility study process has been beneficial to the community, the site, and a wide range of stakeholders.

Mr. Stainman asked that the Committee keep getting updates. Ms. Correale stated that updates would be provided.

## **5.0 Innovative Reuse Progress Report**

*Ms. Kristen Keene, MDOT MPA*

### **Innovative Reuse of Dredged Material and Capacity Recovery at the Cox Creek DMCF Request for Proposals (RFP)**

Ms. Keene stated that the objective of the RFP is to recover placement capacity at the Cox Creek DMCF. The RFP involves a successful offeror excavating, dewatering, characterizing, and transporting off-site a total of 500,000 CY of material for innovative reuse projects. The contract duration is 5 years. The RFP was issued by MES on behalf of MDOT MPA on December 29, 2017; proposals were due on March 20, 2018. Contract award is anticipated in May 2018 with Notice to Proceed in June 2018. Currently, the technical evaluation committee is reviewing the proposals submitted.

### **Alternative Daily Cover (ADC)**

MDE approved the use of dried dredged material from the Cox Creek DMCF as ADC at the Quarantine Road Sanitary Landfill; the project is for one year. MDE sent a letter of approval to Baltimore City Department of Public Works (DPW) approving the use of the material for this demonstration project, and outlining reporting requirements for the landfill. They are required to: assess performance of the dredged

material as ADC, describe any operational issues encountered, obtain photographic documentation of the field manipulation and handling of the ADC, and describe any modification to the landfill's standard operating procedures required in using dredged material as ADC. MDOT MPA is working with the DPW to finalize an agreement for the hauling of the material from the Cox Creek DMCF drying area to the Quarantine Road Sanitary Landfill.

If MDE approves dredged material for extended use, DPW would be required to amend the landfill's Operations & Maintenance manual to reflect the use of dredged material as ADC. Material from Cox Creek Stockpiles A, B1 and B2 have been approved for use (a combined total of 6,000 CY). MDE approval will be sought if any additional material is needed for the demonstration. For this demonstration project, dredged material will only be used for daily cover, not intermediate or final cover.

#### Test Nursery at Cox Creek DMCF

The test nursery was initiated in October 2017 and will continue to be observed until October 2018. The objective for the test nursery is to determine the ability of Cox Creek DMCF dredged material to sustain grass seed growth. The nursery (8 feet x 16 feet) was divided into eight separate plots (approx. 5 inches of material planted with native grass seed), each with a unique treatment using dried dredged material, Leafgro®, and lime, with one control plot of commercial topsoil. The plots were planted with a grass seed mix and visually observed weekly.

Currently, the 100% dredged material and lime plot has the highest percent coverage of all the plots, with the 100% dredged material plot having the second highest percent coverage. The dried dredged material used in the study was previously tested for pH, metals, and nutrients and will be tested again after completion of the observations in late fall 2018. Final results will be presented to the committee when available.

#### Hart-Miller Island (HMI) North Cell Pilot Project

In summer 2017, MDOT MPA partnered with Mahan Rykiel Associates in a collaborative design research program, known as Design with Dredge (DWD), to explore ways in which dredged material could be used innovatively and beneficially in landscape architecture in the Baltimore area. The DWD Program aimed to reuse and reimage harbor channel material in applications that promoted economic sustainability and resilient landscape features, with a shared goal of furthering the Innovative Reuse Program. Through the DWD process, the team reviewed and synthesized sediment quality data, environmental regulations, DMCF operations, DMMP goals, coastal resiliency studies, vegetation reports, stakeholder input, and the challenges of maintaining a 20-year rolling plan for placement capacity. This detailed and thorough investigation supported the development of conceptual-level designs for innovative and beneficial use solutions in the Harbor. At this time, MDOT MPA is in the early stages of advancing one of the conceptual-level pilot projects at HMI that originated from the DWD Program.

The proposed plan is to create micro-landforms that will support a fluctuating hydrologic regime and diverse vegetation structure, thereby resulting in improved soil and water quality conditions. The current objective is to develop a preliminary design scenario that can be used to further evaluate project phases and implementation. The goals of this project are to create a diverse habitat, optimize project costs, and engage and educate stakeholders.

The pilot project will be located in a part of the North Cell that has been consistently dry (the upper northwest corner). This location will be readily accessible by people who already visit HMI (near the beach on the northern edge of the outer dike). This area will be large enough to study and create a viable habitat but small enough to manage (approximately 20 acres).

*Engineered Fill at Hawkins Point South Cell Development*

MDOT MPA is planning to officially close the South Cell of the Hawkins Point DMCF to construct an Algal Flow-way (AFW). Currently, the South Cell site is undergoing dewatering activities. The perimeter and interior trenches have been completed to help facilitate water movement out of the site.

As part of the geotechnical investigations, MDOT MPA collected four borings on site from the South Cell of Hawkins Point DMCF. This material was categorized as very soft (silt with some clay, organics and some debris). One of the borings reached native material (pre-DMCF material). Based on these findings, the thickness of DMCF material in the South Cell is about 20 feet. Currently, MDOT MPA is running consolidation and strength calculations to determine ground improvement design. Approximately 4,000 CY of innovative reuse material from Cox Creek DMCF (Stockpile D), in combination with on-site berm material, will be used as engineered fill in the South Cell. The innovative reuse material was tested in accordance with the MDE Guidance Document and it meets Category 2 criteria, meaning it is suitable for commercial or industrial uses. The grading design will include cutting high areas and placing in low areas to flatten out the elevations. Material in the South Cell will be consolidated and graded to a 1% slope for the Algal Flow-way (AFW) construction and installation.

An AFW is a culture unit that promotes the growth of naturally occurring algae on a screen where it can be easily removed. The algae continuously remove nitrogen, phosphorus, and sediment from the water. The algae is regularly recovered and can be processed into sustainable energy. AFW technology has been used in other areas for Total Maximum Daily Load (TMDL) management for nutrients. The Chesapeake Bay Program Expert Panel has issued guidance for using AFW technology for nutrient reduction credit. MDOT MPA is using information from the AFW pilot at the Dundalk Marine Terminal to aid the 30% design of the AFW construction at the Hawkins Point DMCF. The conceptual layout of the AFW will be approximately 450 feet long and 115 feet wide.

Some of the benefits of the AFW include:

1. Operates around the clock providing constant removal of nutrients and sediments, not just during rain events.
2. Delivers increased dissolved oxygen to the water body, which improves aquatic habitat.
3. Provides a very effective Best Management Practice for properties similar to the Port.
4. Could be used by other MDOT facilities or other Municipal Separate Storm Sewer System (MS4) permit holders with water access.

MDOT MPA anticipates construction will begin in 2021 and should take less than a year to complete. This project is a collaboration between the Harbor Development Office and the Safety, Environmental, and Risk Management Office (SERM).

Mr. Curson asked how fast water flows down the AFW. Ms. Keene replied that she was not certain of the speed of the water, but it is expected that about three million gallons of water will make its way through the AFW per day. Mr. Stainman asked for confirmation that the algae collected can be used for energy.

Mr. Keene responded that the algae can be used for energy and gave an example from the Dundalk Marine Terminal. The algae was harvested and then put into a digester, where the algae is turned into biogas, which is then used to power a fuel cell that powers two outdoor lights. Ms. Keene reminded the Committee that the Hawkins Point AFW project is at 30% design and the goal is to receive TMDL credits from its use. Mr. Stainman asked what the estimated cost for this project is and the quantity of nutrients it will remove. Ms. Keene stated that estimated cost information is not known right now but more information can be provided as the design progresses. The amount of algae produced will vary depending on the season and the incline of the AFW. Mr. Kiernan stated that the Cox Creek AFW produced about 300 pounds of algae per week in the height of the growing season.

Ms. Labuda asked what the payback is of the AFW in relation to a point that Ms. Keene made noting the AFW generated power is being used to power two lights. Ms. Ashley responded that MDOT MPA is required to remove a certain amount of nitrogen and phosphorus from the water in relation to TMDLs, so the benefit is larger than powering two outdoor lights. Ms. Miller added that the reason for the project is for improved water quality and permits related to the TMDL credits. Mr. Stainman stated that to achieve the required reduction of nutrients, this is a cost effective best management practice. Ms. Fidler concluded that the SERM Office was planning to fill in the Hawkins Point South Cell. It became clear that Harbor Development and SERM could work together to provide each other assistance, by providing a placement site for innovative reuse material without the cost of having to purchase any fill material. This project will be a first for using dredged material as fill material.

## **6.0 Harbor Development Outreach**

*Katrina Jones, MDOT MPA*

The MDOT MPA team has recently presented to five community organizations informing them about the dredging program and the activities at MDOT MPA sites. Those five community organizations are: Turner Station, Poplar Ridge, Brooklyn Heights, Bar Harbor, and Riviera Beach.

MDOT MPA participated in the BenFest 2018, Arlington Echo 50<sup>th</sup> Anniversary, Tree Planting with Blue Water Baltimore, and the Earth Day event at CCBC – Essex. Lakeland Elementary Middle School students attended the Captain Trash Wheel reveal event at Masonville Cove, as they were the school who nominated the winning name.

Upcoming Community Events with MDOT MPA involvement:

- GreenSpace event - May 19, 2018
- National Maritime Day - May 20, 2018
- Maryland Green School Youth Summit - May 31, 2018
- Point Pleasant Community Festival – June 2018
- Masonville Cove Festival - June 4 through June 7, 2018
- Curtis Bay Community Festival - June 9, 2018
- Pasadena Business Association – Shop Local event – June 16, 2018
- 5-Mile Run at Hart Miller Island – June 16, 2018
- Masonville Cove BioBlitz and Open House – June 16, 2018
- Masonville Cove Latino Conservation Day - June 24, 2018

## **7.0 Corps of Engineers Report**

*Mr. Graham McAllister, USACE-Baltimore*

Mr. McAllister announced that by the next DMMP CAC meeting USACE Baltimore will have a new District Engineer and Commander for the Baltimore District. Colonel Chamberlayne's change of command ceremony is July 13, 2018. Colonel John Litz will be the new Commander.

### Dredging Plans

The Baltimore Harbor federal fiscal year (FFY) 2017 operations and maintenance contract was awarded to Great Lakes Dredging & Dock Company (GLDD). The dredging of 2.2 – 2.5 MCY in the Cape Henry Channel is in progress, commencing in April 2018. That material is being placed at the Dam Neck Open Water Placement site. This summer, USACE Baltimore intends to solicit two separate dredging contracts for FFY18. The York Spit Channel (just north of Cape Henry) in Virginia will be one contract to dredge 1.4 MCY, with material placed at Wolf Trap Alternate Placement Site. The Maryland Approach Channels (Craig Hill Entrance, Craig Hill Channel, Craig Hill Angle, Upper Range, and the Cut Off Angle in Maryland) will be one of the contracts to dredge 1.5 MCY, with material to be placed at Poplar Island. In addition, 400,000 CY of material dredged from Curtis Bay will be placed at the Masonville DMCF.

### Masonville Tipping Fee Study

The Masonville decision document was approved by USACE Headquarters on January 22, 2018. The decision document allows the USACE Baltimore to enter into an agreement with MDOT MPA so that material dredged from federal channels can be placed at Masonville DMCF. The Memorandum of Understanding (MOU) is going through the proper channels for review and approval.

### Poplar Island/Expansion

Lateral Expansion Contract 1, which includes construction of perimeter dikes for the first expansion wetland cells, dredging of the northern access channel, and preparation for future lateral expansion, was completed in early December 2017. Lateral Expansion Contract 2 is in progress and includes construction of embayment breakwaters and containment dikes for wetland cell 8, cell 9, and cell 10. The contract was awarded in mid-September 2017 to the Wesson Group. The work is scheduled for completion by June 2019. The 2018 Sand Stockpile contract, awarded in February 2018 to Cottrell Contracting, is currently in progress. Cottrell Contracting is dredging 2.3 million cubic yards of sand from the northern borrow area for stockpiling in cell 1-D and cell 7, which will be used for expansion of dike construction. Lateral Expansion Contract 3 is construction of the containment dike for upland cell 11; the plans and specifications package is currently in development. However, there is no money in the FFY19 President's Budget. The expansion and construction are planned to be completed by mid-2020 contingent on operation funding. If the expanded site is constructed to its full design, it will allow for placement through 2032-2033 dredging cycle. Wetland planting in cell 5A-B is underway, scheduled for completion in June 2018. Once complete, the total area of restored wetlands will be 372 acres.

### Mid-Bay

The project is in a holding pattern for the design agreement process. The Mid-Bay project will be 2,144 acres and have 95 MCY of capacity for material (with James and Barren Islands restored).

### Baltimore Harbor 50' Channel Widening Project

USACE Baltimore is responding to comments from the National Marine Fisheries, Virginia Institute of Marine Sciences, and Virginia Marine Resources Commission on essential fish habitat and the Endangered Species Act document. Based on USACE Baltimore comments being approved and accepted a decision can be made as early as fall 2018.

Mr. Stainman asked how long after the dredging of the Maryland Channels will it be until the area will need to be dredged again. Mr. McAllister responded that USACE Baltimore tracks sedimentation and looks to historical data knowing that all the information is subject to change. Each segment that is dredged is different; for instance, Curtis Bay can have a gap of over ten years while the Craig Hill Angle fills in quickly. Cape Henry is dredged typically every four years and the Maryland Approach Channels are dredged typically every 2-3 years. Each channel is unique; the channels are surveyed yearly and updates/priorities are provided from MDOT MPA and Association of Maryland Pilots.

## **8.0 Harbor Development Update**

*Ms. Chris Correale, MDOT MPA*

Ms. Correale stated that Bruce Coulson from the Dorchester Shoreline Erosion Group was not able to attend today's Committee meeting; she has briefed him on items to be covered at this meeting.

### Mid-Bay

On May 8, 2018 the US Senate Committee on Environment and Public Works submitted the Water Resource Development Act of 2018 (known as America's Water Infrastructure Act of 2018). The US House of Representatives will submit their bill on May 18, 2018. The 2014 Mid-Bay authorization will expire in 2021. If this bill is passed into law, and the language stays as it is, the Mid-Bay authorization will be extended until 2024. The extension in time will allow time for the funding to be put in place, designs of the facility to be approved, and the construction to begin. In some cases, non-federal sponsors of USACE projects advance funds for a project without a guarantee that full reimbursement will occur. Before the Water Resource Development Act of 2018, an agency could advance funds only for certain projects; now a broader scope of USACE projects qualify for advance funds. This change gives MDOT MPA an opportunity to advance the funds on the Mid-Bay project, as a last resort before a potential deauthorization.

When the USACE issued its FFY19 Budget, Poplar Island was under the Navigation Business budget line item, but it has historically been under the Environmental Business budget line item. No reason has been given for the change. Navigation Business Line items require benefit-to-cost ratios; however, Environmental Business Line items do not require benefit-to-cost ratios. The language in the current bill states that if you change from one business line to another, the requirements of the original authorization cannot change. This language should protect Poplar Island, its funding, and the requirements. The Maryland Congressional Delegation, particularly the two Maryland US Senators, have been instrumental in this process.

### Cox Creek DMCF Base Dike Widening

MDOT MPA advertised this project; the bids were due last week. The contract will be awarded soon. MDOT MPA is working on the 60' dike raising once the base dike is in place; the concept plan is under review. The Upland remediation Phase 1 study is complete. MDOT MPA expects to get EPA approval sometime this month on the remedial action plan for Building 201 so a contract can be advertised for its demolition. Maryland Environmental Service (MES) issued a Notice to Proceed (NTP) on the Operations and Maintenance (O&M) Building construction.

### Masonville Dike Raising

MDOT MPA continues to work on constructing the dike adjacent to the cofferdam. MDOT MPA expects to complete the dike to elevation +18 MLLW in spring 2019. The Kurt Iron Slip cross dike has already been completed.

Updated Planning Numbers – Dredging Demand and Placement Capacity Supply

Ms. Correale stated that in the interest of time the presentation will be presented and discussed at the committee's next meeting.

**9.0 Committee Administration & Open Discussion**

Ms. Ashley announced the next meeting is August 8, 2018. The Annual Meeting is scheduled for November 2, 2018 at the Sollers Point Multi-Purpose Center. MDOT MPA is asking all Committee members to complete the survey card related to customer service. Please complete the survey anonymously, online, or turn the survey card in to an MDOT MPA employee.