FINAL DRAFT
SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM
MANAGEMENT COMMITTEE MEETING
September 11, 2017, 10:00 AM
World Trade Center
20th Floor, Stanton Room
Baltimore, Maryland

Attendees:

Anchor QEA: Mark Reemts, Karin Olsen
Angie Ashley Consulting (AAC): Angie Ashley
Citizens' Advisory Committee (CAC): Fran Taylor
Ecologix Group: Steve Pattison
Maryland Department of Natural Resources (DNR): Bruce Michael
Maryland Department of Transportation Maryland Port Administration (MDOT MPA): Chris Correale, Katrina Jones, Bertrand Djiki, Shawn Kiernan, Holly Miller, John Vasina, Alex Shull
Maryland Environmental Service (MES): Cece Donovan, Tammy Banta, Jeff Halka, Lauren Mentzer, Benjamin Langer
Maryland Geological Survey (MGS): Stephen Van Ryswick
National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries): Kristy Beard
Rukert Terminals: Steve Landess
University of Maryland Center for Environmental Science (UMCES): Dave Nemazie
US Army Corps of Engineers, Baltimore District (CENAB): Kevin Brennan, Graham McAllister, Fred Kimble
US Army Corps of Engineers, Philadelphia District (CENAP): Gavin Kaiser
US Fish and Wildlife Service (FWS): Chris Guy

Action Items:

- Mr. Guy will provide the Baltimore Rivers to Harbor Urban Wildlife Refuge Partnership business plan to Mr. Fran Taylor.
- Mr. Brennan will investigate to whom the response was sent at NOAA Fisheries regarding their concerns for the 50-foot Widening project Wolf Trap Alternate Open Water Disposal Site.

Statements for the Record:

1. None

1.0 Introductions, Approval of Meeting Summary Ms. Chris Correale, MDOT MPA

Ms. Correale welcomed the attendees and called the meeting to order. Mr. Taylor led the Pledge of Allegiance in observance of September 11th National Day of Service and Remembrance. Attendees were asked to introduce themselves and state whom they represent. Ms. Correale requested comments on or changes to the summary from the June 21, 2017 Dredged Material Management Program (DMMP) Management Committee meeting. Mr. Taylor made a motion to accept the meeting summary. Mr. Landess seconded the motion, and the motion passed unanimously.

2.0 Citizens Advisory Committee Report Mr. Fran Taylor, CAC

Mr. Taylor stated that the Citizens Advisory Committee (CAC) has been very active and meeting regularly. Maryland Department of Transportation Maryland Port Administration (MDOT MPA) held

a citizens meeting for the Pearce Creek community to address concerns raised by Mr. Bill Haines, a vocal citizen. Mr. Haines praised MDOT MPA for their leadership and the United States Army Corps of Engineers (USACE) for their work to address citizens' concerns.

The CAC held multiple presentations on innovative reuse and beneficial use in the State of Maryland. Several members provided comments on Maryland Department of the Environment (MDE)'s Innovative Reuse and Beneficial Use of Dredged Material Guidance Document (Guidance Document). The CAC is looking forward to the development and implementation of pilot and demonstration projects.

The Design with Dredge interns presented a concept design to the CAC and the Hart-Miller Island (HMI) Citizens Oversight Committee (COC) for the closure of North Cell. The concept design will be discussed at the next HMI COC meeting. Ms. Lisa Wainger of the University of Maryland Center for Environmental Science (UMCES) presented the UMCES study on the value of reclaimed capacity at dredged material containment facilities (DMCFs) through the innovative and beneficial use of dredged material. Mr. Taylor informed the Committee that the study found that the innovative reuse and beneficial use of dredged material would be expensive and that it would be more cost effective to create a new large capacity DMCF. The CAC members will be attending a tour of the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island (Poplar Island). Mr. Taylor informed the Committee of several questions raised at the August CAC meeting. These questions included how dredging would affect the communities of private citizens and how sea level rise would impact the Port's infrastructure. These questions will be discussed in greater detail at the next CAC meeting, and therefore Mr. Taylor asked the Committee members to invite those who would benefit from a presentation regarding these questions. Mr. Taylor discussed the importance of continued outreach to increase citizen involvement and approval.

3.0 Baltimore Rivers to Harbor Urban Wildlife Refuge Partnership — Christopher Guy, USFWS

Mr. Guy presented on the United States Fish and Wildlife Service (USFWS) Baltimore Rivers to Harbor Urban Wildlife Refuge Partnership the at the Masonville Cove Environmental Education Center (MCEEC). In 2011, USFWS created an urban refuge initiative that defines excellence in their existing urban refuges, establishes the framework for creating new urban refuge partnerships, and implements a refuge presence in the community. On September 26, 2013 Masonville Cove was designated as the nation's first Urban Wildlife Refuge Partnership based on MCEEC's central location to and engagement with the community. Mr. Guy discussed the USFWS standards of excellence and stated that building partnerships and leveraging funds are important for new and additional programs. Non-government organizations in Baltimore were inspired by MCEEC and established the Greater Baltimore Wilderness Coalition in order to connect people to green spaces on a larger scale through their four pillars: Equity, Discovery, Biodiversity, and Resilience. A map of the Baltimore Rivers to Harbor Urban Wildlife Refuge Partnership focus area was displayed for the Committee. The focus area encompasses the Patapsco River, Jones Falls, and Gwynns Falls watersheds.

In 2016, the Stakeholders held a meeting to develop the Baltimore Rivers to Harbor Urban Wildlife Refuge Partnership business plan, including the future steps for the next 1, 3, and 10 years, and discussed the need for more connectivity between green spaces and the community within the focus area, in conjunction with the Federal Lands Access Program. The Wildlife Management Plan, which promotes the creation of high quality habitat, was initially created for Masonville Cove and is now used as a model for other sites and partners. The USFWS provides over $200,000 in direct funding

support to Urban Wildlife Refuge Partnerships through grants. In addition to the direct financial support, the USFWS provides direct and indirect in-kind services.

Mr. Guy informed the Committee of several other USFWS partnerships/programs. The USFWS provides a vehicle and a portion funding for the Urban Internship Volunteers Program with additional funding provided by MDOT MPA and Living Classrooms Foundation. The Hispanic Access Foundation's Latino Heritage Internship Program dedicated two interns to the Baltimore area, including the Patuxent Research Refuge and Masonville Cove. This was in response to the USFWS's request for volunteers in those areas. In partnership with the Chesapeake Conservation Corps, an intern working with Mr. Guy installed an osprey camera at Masonville Cove.

Additionally, MDOT MPA, Maryland Environmental Service (MES), and the USFWS Chesapeake Bay Field Office purchased three transmitters to track osprey migratory patterns. In 2016, the first two transmitters were attached to osprey from Poplar Island. The first osprey flew to Virginia and is presumed dead. The second osprey flew to the coast of Venezuela where it was swept into the Caribbean Sea by a hurricane and is presumed dead. In 2017 a third transmitter was attached to an osprey called Harriet, at Masonville Cove. An image of Baltimore Harbor with Harriet's tracked positions was shown. On September 7, 2017 Harriet began migrating south and, as of September 10, is currently in Savannah, Georgia. Mr. Guy stated that tracking data can only be obtained every three days.

Mr. Taylor asked if the Baltimore Rivers to Harbor Urban Wildlife Refuge Partnership business plan is available online (https://www.fws.gov/chesapeakebay/pdf/BaltimoreBusinessPlan.pdf). Mr. Guy responded that he would send the Baltimore Rivers to Harbor Urban Wildlife Refuge Partnership business plan to Mr. Taylor.

4.0 Innovative and Beneficial Reuse Regulatory Interagency Workgroup Lauren Mentzer, MES

Ms. Mentzer informed the Committee that Governor Hogan signed the Waste Reduction and Resource Recovery Plan for Maryland, Executive Order 01.01.2017.13, in June 2017. This completes recommendation 3 of the Innovative and Beneficial Reuse Regulatory Interagency Workgroup (Workgroup). The Executive Order recognizes dredged material as a resource with vast opportunities for reuse and calls on state agencies to be leaders in the reuse of dredged material where economically reasonable to do so.

MDE posted the finalized Guidance Document and a comments/response document to MDE's website on August 31, 2017.

Ms. Mentzer stated that the Workgroup will be submitting a letter to the DMMP Executive Committee that summarizes the implementation of the five recommendations and awards received on outreach materials. The letter also acknowledges the Guidance Document as a living document and that the Workgroup is not currently recommending a change in statute to further innovative reuse and beneficial use of dredged material. However, should the need arise for a change in statute, the Workgroup can reconvene at the direction of the DMMP Executive Committee to reassess this recommendation.

On April 1, 2017 MDOT MPA submitted the newly created Sediment to Solutions video, infographic, and video and infographic together as an overall campaign to the American Association of Port

Authorities (AAPA) 2017 Communications Awards Program. The entries were judged by public relations professions around the country who may not have any knowledge of port operations. The entries were judged on communication challenges and opportunities, how the communication complements the Port's overall mission, communication goals and objectives, target audience, and outcomes and evaluation methods. The video won an Award of Excellence and the infographic and the overall campaign won Awards of Distinction. MDOT MPA will be recognized for their awards at the AAPA Annual Convention in Long Beach, California, from October 1 - 4, 2017.

Ms. Mentzer provided an update regarding the Workgroup's Outreach subcommittee's 2017 photo contest. The contest ran from Earth Day to Memorial Day and received over 60 public photo submissions over social media that represent the Port. The top three entries will be printed in the November edition of the Port of Baltimore Magazine. The winning photo will also be posted on social media.

Ms. Mentzer discussed the Design with Dredge Research Partnership that occurred from June to August 2017. MDOT MPA partnered with Mahan Rykiel Associates a local architecture firm, Professor Brian Davis from Cornell University, Anchor QEA, MES, and four graduate design interns to determine how to envision and better address how dredged material can be repurposed as a resource for creating public landscapes, living shorelines, and urban developments to improve ecosystem resilience, public health, and economic sustainability in the Baltimore Harbor. Ms. Mentzer thanked the USACE, Maryland Geological Survey (MGS), Mr. Taylor, Baltimore County, Anne Arundel County, Baltimore City, Mr. Rupert Denney and Steinweg for taking time out of their busy schedules to meet with and provide tours for the interns. The results of the Design with Dredge Research Partnership were three concept designs for small-, medium-, and large-scale reuse demonstration projects. These projects will engage the public in understanding dredging, dredged material, and sediment management opportunities that provide multiple social benefits and purposes, and recover placement capacity.

The small-scale demonstration would be an exhibit, installation, or workshop-size opportunity to engage with the public in a meaningful way and teach them about reusing dredged material to make productive or artistic tangible objects, such as bricks, that connect the individual to the Port and dredged material. The medium-scale design concept would be a wetland restoration project via thin layer placement with a boardwalk that functions as a perimeter for dredged material as well as increases public access and engagement with the site. The large/operations-scale project would involve MDOT MPA incorporating landscape architecture and a human interaction element to the way that they operate and manage a DMCF using its dredged material and water. These design concepts will be presented at the November 3, 2017 DMMP Annual Meeting.

Ms. Mentzer discussed the next steps and upcoming opportunities for innovative reuse and beneficial use of dredged material. MDOT MPA currently has stockpiles of dried dredged material at Cox Creek DMCF and is looking internally and externally for opportunities to implement demonstration projects using this material. MDOT MPA is preparing for long-term, large-scale innovative reuse projects by internally investigating business plans and logistics.

Mr. Nemazie asked if Harbor Development will use the Sediment to Solutions tagline on public documents. Ms. Correale responded that Harbor Development will use the Sediment to Solutions tagline for items related to innovative reuse and beneficial use of dredged material.

Ms. Correale asked the Committee members to inform their Principals on the Executive Committee about the Workgroup close-out letter prior to the next Executive Committee meeting on November 17, 2017. Ms. Correale thanked those involved with the effort towards the development of a product that uses what was once considered a waste material, helping the Port and private industries continue operating.

5.0 Conowingo Sediment Update **Cecelia Donovan, MES**

Ms. Donovan discussed the Conowingo Capacity Recovery and Innovative Reuse and Beneficial Use Pilot Project, which was requested by the current administration in response to the USACE's Lower Susquehanna River Watershed Assessment (LSRWA) finding that the influence of nutrients entering the Chesapeake Bay from above the Conowingo Dam was greater than expected. MES was tasked with developing a pilot project due to the pool behind the Conowingo Dam being in a state of dynamic equilibrium of nutrients and sediment. Originally, capacity was thought to still exist behind the Conowingo Dam, but it was found that there was little remaining capacity and the sediment was flowing over the dam. The purpose of the project is to evaluate the feasibility of a scalable project to dredge accumulated sediments and innovatively reuse or beneficially use them within the new Maryland guidance framework and minimize sediment releases over the Conowingo Dam.

MES issued a Request for Proposal (RFP) on August 31, 2017 for a pilot-scale dredging project and an innovative reuse and/or beneficial use project using 25,000 cubic yards (cy) of sediment in the Maryland portion of the Susquehanna River upstream of the Conowingo Dam. The notice to contractors can be found at the eMaryland Marketplace (https://emaryland.buyspeed.com) and the solicitation can be found on the MES website (www.menv.com). (Please note: The solicitation is the sole official source of information regarding the RFP and any questions regarding the RFP should be submitted to the MES Procurement Officer.) Ms. Donovan added that the project will not extend into the Pennsylvania portion of the Susquehanna River.

The most recent version of the IRBU Guidance Document was used to determine the analysis that will be conducted on the material collected from the proposed dredging site. MES is seeking a firm that can accommodate all components of the proposed pilot project including: 1) preparation of staging areas and roadways; 2) hydraulically dredging roughly 25,000 cy of material; 3) pumping a slurry of sediment and water from the dredging location to a landside staging area; 4) dewatering, handling, and stockpiling the material at a staging location; 5) processing the material, if needed, at an interim staging location; 6) beneficially using and/or innovatively reusing all the dredged material within Maryland in accordance with the Guidance Document; and 7) restoring areas disturbed by the project. Ms. Donovan informed the Committee that hydraulic dredging will be used to dredge the 25,000 cy of material as it is the most feasible option. MES intends to obtain construction services under the RFP with the selected Offeror and to make a single award as a result of the RFP.

Variables for potential Offerors include: 1) the US Environmental Protection Agency (EPA)'s Clean Water Act (CWA) Section 404 permit has not yet been issued; 2) the Federal Energy Regulatory Commission (FERC) has not yet made a determination on the project (Ms. Donovan added that FERC has agreed to combine their permitting process with the EPA's CWA Section 404 permitting process to streamline public hearings, notifications, and coordination); 3) the selection of the staging area is currently ongoing: the area described in the RFP and drawings is conceptual for planning purposes only and MES may designate an alternative property to be used for staging if necessary; 4) analyses of the current dredging area is currently ongoing and all potential offerors, contractors, and subcontractors are strictly prohibited from performing any site visits, sampling, or investigating in the

proposed dredging area or any areas in the Conowingo pond until further notice; 5) applicable access agreements are being identified and developed; 6) the USFWS Section 7 Consultation is ongoing; and 7) potential underwater hazards are being investigated. The RFP evaluation criteria will include: the Offeror's background and experience, proposed schedule, minority business enterprise participation, references, quality of proposal, pricing, and methodology. Higher consideration will be given based on demonstrated potential scalability, longevity, project feasibility, and innovation for the proposed innovative or beneficial end-use.

Ms. Donovan reviewed the proposed schedule for the project:

- August 31, 2017 –RFP was issued.
- September 14, 2017 –Pre-Proposal Conference will be held.
- September 21, 2017 – Questions are due in writing to the MES Procurement Officer by 2:00 pm.
- September 27, 2017 –Last day for the Issuance of Addendums.
- October 5, 2017 –RFP is due to MES by 2:00 pm.
- October 2017 – Oral Presentations Notifications are due, if required.
- October 2017 – Interviews will be held, if required.
- November 6, 2017 –Final Recommendation will be made.
- November 22, 2017 –Contract will be awarded.
- December 1, 2017 –Notice to Proceed will be issued.

Mr. Brennan asked if MDE helped with the coordination between the federal and state agencies. Ms. Donavan responded that MDE is one of the state agencies, along with the Maryland Department of Natural Resources (DNR) that participated in the Conowingo Dam Workgroup, which was created for the Request for Information (RFI) process. MDE and DNR continue to provide assistance associated with the RFP, in addition to the USACE and Susquehanna River Basin Commission. All agencies have been accommodating in an effort to meet the schedule needs considering the importance of the project to the State. Mr. Michael commented that all those involved want the project to succeed but they also understand that the proper regulations and permits must be followed.

Mr. Guy asked if there is a long-term plan to continue dredging since the LSRWA found that "Increasing or recovering storage volume of reservoirs via dredging or other methods is possible, but the Chesapeake Bay ecosystem benefits are minimal and short-lived." Ms. Donovan responded that the frequency of dredging has yet to be determined, but the expectation is that enough material will be regularly removed to ensure that the material will not flow over the Conowingo Dam, thereby impacting the total maximum daily load (TMDL) input to the Chesapeake Bay. Mr. Michael added that the Chesapeake Bay TMDL 2017 Mid-point Assessment required the watershed model to be updated to the new draft Phase 6 model, which is based on better land use information, best management practice (BMP) efficiency, and monitoring information from the entire Conowingo watershed. Since the Conowingo Dam has reached a dynamic equilibrium, the Phase 6 Model must be revised in order to handle the Conowingo Dam's 1.7 million pounds (lbs) of phosphorus and determine how it will be distributed between jurisdictions. The Principals' Staff Committee (PSC) is responsible for this determination and will decide if only the Susquehanna River Watershed states, the Susquehanna plus an additional load for Maryland and Virginia, or all the Chesapeake Bay Watershed states will have to contribute to reducing this additional load. Mr. Michael commented that not all of the sediment will be dredged from behind the Conowingo Dam and that dredging is one of many potential strategies to reverse the dynamic equilibrium.

Mr. Guy asked how a determination will be made regarding the best potential strategy and if dredging will definitely be incorporated. Mr. Michael responded that how much capacity is returned behind the dam could lessen the amount of BMPs needed throughout the entire watershed in an effort to meet the State's TMDL goals. A cost efficiency analysis conducted on the BMPs found that the cost of BMP implementation is much higher than what was originally anticipated and could be comparable to the cost of annual dredging. Mr. Guy suggested that outreach be conducted for these alternatives. Mr. Michael informed the Committee that the final determination regarding the amount of nutrients trapped behind the Conowingo Dam will be finalized by October 2017.

Mr. Michael discussed a meeting that the Chesapeake Bay Commission (CBC) attended with representatives from the six states in the Chesapeake Bay Watershed and the District of Columbia, EPA, and the PSC regarding how the additional TMDL inputs will be allocated. The United States Geological Survey (USGS), with funding from Exelon, was able to produce enhanced monitoring and modeling over several years with help from Johns Hopkins and the University of Maryland, which enabled a better understanding of the Conowingo Dam and its impact on meeting the Chesapeake Bay's water quality standards. Mr. Michael stated that how the material will be removed, who will be awarded the contract to remove the material, and when the project will begin still must be determined. Mr. Michael questioned if the additional 1.7 million lbs of nutrients should be addressed in the 2017 TMDL by 2025, in accordance with the 2010 TMDL timeline that all BMPs would be in place by 2025, or if the project should proceed without addressing the additional load until 2025. Ms. Donovan added that the 25,000 cy pilot project is a new initiative that can be learned from in order to determine how a larger scale program could be implemented. Ms. Donovan thanked Anchor QEA for their work on the project. Mr. Michael stated that innovative reuse and beneficial use is a key component to the project that could reduce the overall costs; the LSRWA looked at the cost of dredging without reuse of the material. Once the TMDL is completed in October 2017 there will be one year of public outreach with local governments on how the TMDL will be addressed. Mr. Michael stated that the final Phase 2 Watershed Implementation Plan (WIP) is due in 2019.

6.0 Confined Aquatic Disposal (CAD) Holly Miller, MDOT MPA

Ms. Miller provided an update for the Confined Aquatic Disposal (CAD) pilot project, including a review of the CAD cell construction, preliminary water quality and consolidation monitoring results, and the next steps for the project.

The CAD cell was constructed in the vessel berth adjacent to Masonville DMCF between Piers 3 and 4, over a four-week period from September to October 2016. Due to the high level of Port activity within the berth, extensive coordination between MDOT MPA Operations, Maryland Pilots, and the dredging contractor was necessary. Approximately 130,000 cy of sand and gravel were dredged during construction and placed into the Kurt Iron Slip (KIS) at Masonville DMCF. Ms. Miller stated that there was a scour hole (most likely created by the cargo ships' stern propellers activating when leaving the berth) located near Pier 4; the footprint of the CAD cell was reduced by 50 feet (ft) to avoid this area. The CAD cell is 250 ft x 800 ft, with a depth of -65 ft mean lower low water (MLLW).

Approximately 62,000 cy of in situ fine grained maintenance material dredged from the Ferry Bar Channel was placed into the CAD cell over nine days in February. Ms. Miller reviewed the multi-phased monitoring plan. Phase I characterized the navigational channel and CAD cell sediments to understand the potential release of nutrients, metals, and other constituents during CAD operations. Phase II included baseline monitoring that examined nutrient and total suspended solids (TSS) concentrations in the environment surrounding the CAD cell. Data collected during Phase II of

monitoring was utilized to understand nutrient concentration during placement, which was examined under Phase III. Phase III examined nutrient, TSS, and turbidity concentrations during placement operations. Phase IV is underway and includes post-placement consolidation monitoring.

Placement monitoring (Phase III) occurred during seven out of the nine days of placement; monitoring did not occur for two days due to high winds. Samples were collected at seven sites, which included near field and far field locations as well as a background location. Nutrient samples were collected at surface and mid-depths and turbidity samples were collected at five-foot increments through the water column. Turbidity was compared to the Code of Maryland Regulations (COMAR) standards, which state that turbidity should not exceed 150 Nephelometric Turbidity Units (NTU) at any one time or 50 NTU as a monthly average. The turbidity results were low, ranging mostly between 7 and 15 NTU with an overall project average of 11 NTU and a maximum of 68 NTU. The nutrient results were indistinguishable from typical Baltimore Harbor conditions; placement of dredged material at the CAD site did not result in a measurable increase of total nitrogen or total phosphorus.

Post-placement consolidation monitoring (Phase IV) will occur for one year after placement. Survey were/will be taken at the following intervals of 2 weeks, 1, 2, 3, 6, 9, and 12 months. Surveys will look at elevation rate of change over time within the cell, regional changes, failures, prop wash holes, and other impacts. The 6-month post-placement survey was completed on 8/31/17; however, data is currently still under evaluation. The next survey (9 months post-placement) will occur in November 2018.

Ms. Miller discussed the changes in elevation of pre-placement to post-placement. She noted between 15 and 18 ft of material was placed in the CAD cell. The cell had a consistent elevation across the top due to the self-leveling effect of soft sediments. Although some sloughing of the upper side slopes occurred prior to or during filling operations, multiple surveys performed post-placement show that the side slopes are holding. The surveys also showed consolidating of the placed material over time, with no evidence of prop wash effects or other scour holes. The elevation baseline compared to the post-filling elevation shows total consolidation is between 3 and 4 ft, and the side slopes are established.

In summary, the turbidity results were low for the project, nutrient results were low and within target ranges observed in the baseline monitoring program, primary storage capability of the CAD site appears to be effective, and close coordination with multiple stakeholders was key to a successful project. The next steps are to finalize and distribute the nutrient monitoring report, complete the post-placement consolidation monitoring (Phase IV), update the project stakeholders, and evaluate lessons learned from the pilot project and how they can be applied to using CAD as a dredged material management tool in the future.

Mr. Nemazie asked if any core samples were taken to monitor grain size. Ms. Miller responded that no sediment core samples were collected due to the soft nature of the material. Mr. Nemazie asked if there is a layer of sand capping the CAD cell. Ms. Miller responded that the CAD cell is not capped. Mr. Nemazie asked if there is a plan to cap the cell. Ms. Miller responded that a cap will not be placed unless the material moves from its intended area. She reminded the Committee that this is a pilot project to determine how the relocated material will act in this environment.

Mr. Brennan commented that since 62,000 cy were placed after 130,000cy were removed from the site, the project has a 2:1 ratio and asked if future CAD projects would be similar. Ms. Miller responded that the 62,000 cy is in situ. In future CAD projects, the determination of the bulking factor would be

an important step to determine the placement volume. Mr. Brennan commented that Boston, MA has performed some CAD projects and wondered what their bulking factors were based on their material. Ms. Miller added that Baltimore's bulking factor ranges from 1.3-1.8 and that the material dredged from the Ferry Bar Channel was around 1.8. Mr. Reemts commented that the Boston project used new work material, which would have a different bulking factor than maintenance material. Ms. Olsen added that due to the questions surrounding bulking factors, Anchor QEA researched many different studies to better understand the process.

7.0 Corps of Engineers, North Atlantic, Baltimore (CENAB) Mr. Fred Kimble, CENAB
Mr. Graham McAllister, CENAB

Mr. Kimble informed the Committee that he would be speaking in place of Mr. Justin Callahan.

Poplar Island Expansion

Mr. Kimble stated that the Poplar Island Expansion is going well and that the project is on schedule. The nearly $56 million contract received good bids and will be awarded on September 29, 2017. The contract for wetland planting and tidal inlets was awarded on August 23, 2017. The Federal DMMP update was submitted to the North Atlantic Division (NAD) for approval on August 25, 2017 prior to USACE Headquarters (USACE HQ) submittal. No feedback from NAD has been received at this time.

Mid-Chesapeake Bay Island Ecosystem Restoration Project

The Mid-Chesapeake Bay Island Ecosystem Restoration Project (Mid-Bay) is currently considered inactive and will remain so until the Federal DMMP is approved by USACE HQ. The Corps of Engineers, North Atlantic, Baltimore District (CENAB) plans to submit the Federal DMMP, after NAD approval, along with a memorandum (memo) for record that shows that CENAB has internally evaluated the need for the Mid-Bay project. In 2011 CENAB received a memo from the Assistant Secretary of the Army for Civil Works (ASA) requesting additional information and a revalidation for the need of Mid-Bay. CENAB determined that the ASA's concerns would be addressed in the Federal DMMP instead of a complete revalidation study and were informed by USACE HQ that Mid-Bay would remain inactive until these concerns were fully addressed. Mr. Kimble stated that CENAB and MDOT MPA are doing their best to get Mid-Bay reactivated and that Ms. Correale will add more information later in the meeting.

50-Foot Widening

Concerns expressed by the Virginia Marine Resources Commission, Virginia Institute of Marine Science, and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) regarding initial environmental documents for the Wolf Trap Alternate Open Water Disposal Site were addressed and sent to each agency on September 1, 2017. One of the primary concerns addressed changing the method of dredging from hopper to mechanical dredging in order to avoid overwintering crabs. A meeting between these agencies, CENAB, and MDOT MPA will be held in late September to move forward with the project or, if concerns persist, discuss alternative placement options. Mr. Kimble stated the project is on hold until these concerns have been resolved.

Ms. Beard asked to whom the response was sent to at NOAA Fisheries. Mr. Kimble responded that he was unsure and that the responses were sent by the USACE Project Planning Department. Mr. Brennan added that the response would have been sent to the person who submitted the comment originally. Ms. Beard stated that she could look internally and informed the Committee that she and Mr. David O'Brian would review the response prior the meeting in late September. Mr. Kimble added that Ms. Christina Sale, in the USACE Planning Department, would know to whom the response was sent. Ms.

Beard stated that she would reach out to Ms. Sale. Mr. Brennan stated that he would investigate this as well.

Dredging Projects Conducted by Great Lakes

Mr. McAllister discussed the dredging projects conducted by Great Lakes Dredge and Dock Company (Great Lakes) in 2017. Great Lakes dredged the 62,000 cy of material from the Ferry Bar Channel used in the CAD pilot project and then later performed work for the Corps of Engineers, North Atlantic, Philadelphia (CENAP), to be discussed later in the meeting. In the spring, Great Lakes performed two dredging projects: 1) 495,000 cy of material was dredged by from the Brewerton Angle and placed at Cox Creek DMCF; 2) 660,000 cy of material was dredged from Craig Hill Angle was placed at Poplar Island. The Cape Henry maintenance dredging contract was awarded to the lowest bidder on September 8, 2017 for $14.5 million and involves the dredging and placement of 2.2 million cy of material at the Dam Neck Open Water Placement Site.

The Masonville Section 217 Decision Document has three outstanding comments that are currently being addressed; the document is expected to be sent to CENAB's Division Headquarters in New York the week of September 11, 2017. Ms. Correale asked about the significance of the comments. Mr. McAllister responded that the comments were on the National Environmental Policy Act (NEPA) documentation for Masonville, the creation of a table listing the economics for channels and anchorages, and a sentence referring to a sensitivity analysis for the tipping fee should any federal dredging be delayed.

8.0 Corps of Engineers, North Atlantic, Philadelphia (CENAP) Mr. Gavin Kaiser, CENAP

Mr. Kaiser introduced himself as the Corps of Engineers, North Atlantic, Philadelphia District (CENAP) Project Manager for the Chesapeake and Delaware (C&D) Canal.

Chesapeake City Basin and Canal Dredging

CENAP will be working with a contractor from the 8(a) Business Development Program, which is a business assistance program helping small socially and economically disadvantaged businesses and entrepreneurs gain access to the economic mainstream of American society and gain a foothold in government contracting. CENAP is in negations with the contractor due to the current proposal being significantly higher than the Independent Government Estimate and CENAP's available funding. The contract encompasses two dredging projects: 60,000 cy of Chesapeake City Basin material and 15,000 cy of C&D Canal material, which will be placed at the Bethel Disposal Area located directly east of the Basin.

Future Upper Chesapeake Bay Dredging

The contract is currently open for bids with a pre-bid site visit held in early September 2017. The project consists of dredging 300,000 cy in the base 36+1 ft in the Pooles Island range and three options just north of the Sassafras River in the Elk River range, totaling an additional 300,000 cy. If the project is fully awarded, up to 600,000 cy of material could be dredged, depending on the options chosen for the Elk River range. Mr. Kaiser stated that the material will be placed in the Pearce Creek DMCF, and added that he appreciated all the help and effort put into reactivation of Pearce Creek, and hopes this reactivation brings CENAP major cost savings. Dredging is expected to begin soon after the completion of the Pearce Creek reactivation.

Pearce Creek

DMCF

Mr. Kaiser stated that the liner for the Pearce Creek project has been installed; CENAP is working on final items associated with the project. These items are set to be completed by mid-October 2017. Placement of material is expected soon after the reactivation of the site and in coordination with the Upper Chesapeake Bay dredging project once the contract is awarded.

Recreation

CENAP has received questions from local residents and performed outreach regarding recreation, particularity hunting and when it will be allowed, in and around the Pearce Creek DMCF and lake area, owned by the USACE. Mr. Kaiser stated that the earliest the site could open would be late spring 2018. Concerns for reopening the site for public recreation include the lack of monitoring by park rangers, the distant proximity from the field office, and potential damages to the site, which could impact the significant financial investment that the USACE put into the site.

Wells

Additional testing of the monitoring wells will take place the first and second week of October 2017.

Mr. Taylor asked if CENAP performs any pre-placement inspections to determine if any vandalism has occurred to the liner. Mr. Kaiser responded that once the liner is placed it is air tested, surveyed, and layered with cover material. The site is studied prior to inflow to determine if any vandalism or trespassing had occurred. Mr. Kaiser stated that there have been a few break-ins at the site, but no damage had been identified. However, some equipment was stolen from the construction area (associated with the installation of the monitoring wells) and trespassing has been observed. Ms. Correale asked when CENAP expects the dredging contract to be awarded. Mr. Kaiser responded that the Upper Chesapeake Bay dredging contract is expected to be awarded by late September 2017 and that the Chesapeake City contract will be a negotiation process. Ms. Correale asked when dredging will begin. Mr. Kaiser responded that the Upper Chesapeake Bay Dredging will potentially begin by mid-November but that it will depend on the schedules and submittals from the contractor. Ms. Correale asked if the dredging needs to be completed by the end of March 2018. Mr. Kaiser responded that the dredging window for the Upper Chesapeake Bay project is from October 1, 2017 to March 31, 2018.

Mr. Guy stated that the USFWS has developed hunting programs at several Maryland Refuges that do not have issues with vandalism or trespassing and that the USFWS could develop a program for Pearce Creek to address these issues and keep the deer population under control. Mr. Kaiser stated that hunting at Pearce Creek is predominantly for duck; CENAP had previously coordinated with the USFWS to halt the issuance of hunting permits in the area until further notice.

9.0 Harbor Development Update — Ms. Chris Correale, MDOT MPA

Cox Creek Expansion

Ms. Correale stated that the demolition portion of the project is 90% complete with only Building 201 remaining due to the high concentration of polychlorinated biphenyls (PCBs). This issue is expected to be resolved by January 2018. Two test dikes were created in the upland portion of Cox Creek to analyze the geotechnical conditions. The results showed that additional fill material will be required to construct the dikes due to a higher than anticipated mud content. Remediation of the hotspots in the borrow area is currently in progress. The plans for the base dike widening are 99% complete. Ms.

Correale stated that there is currently no construction start date for the expansion in order to resolve the PCB issue in Building 201 and to research the presence of groundwater in the borrow area.

Masonville

The Masonville dike raising has commenced with material being placed along the cofferdam on the east side of the facility. Significant progress has been made toward the completion of the required on-site and off-site mitigation projects. Baltimore City has faced difficulties with real estate related to the Biddison Run stream restoration project. Therefore, MDOT MPA will determine whether or not to continue supporting the mitigation project or to suggest an alternative. The cross dike separating the Masonville DMCF from the KIS has been completed; the KIS will be filled and turned into parking space for the terminal. Plans for the relocation of the Operation and Maintenance Facility are in development.

Pearce Creek Water Line

MDE accepted the Transmission Main and Distribution System potability testing results on September 8, 2017. The water line is now considered to be "in service" and the first home is expected to be connected on September 14, 2017. MES will be sending a certified letter, with return receipt requested, to residents whom have yet to complete a free home inspection associated with the connection work. The residents will also be reminded that to receive MDOT MPA funding they must abandon their wells and connect their homes within one year starting from the date the water system is put into service. The community leaders have been helpful in coordinating with the residents and disseminating information. A public meeting was held in July 2017 to respond/address/listen to residents' concerns regarding road restoration efforts in Bay View Estates. MDOT MPA believes that all concerns have been addressed and no recent comments have been made. The next Pearce Creek Implementation Committee meeting is scheduled for October 20, 2017.

Mr. Taylor asked if there will be any follow-up to letters that get returned to ensure that the homeowners are informed of the situation. Ms. Correale responded that the town's contractor, AECOM, has been working very hard to contact homeowners and that this will be the second letter sent out this year in addition to emails and word-of-mouth. Mr. Nemazie asked how many homeowners have yet to respond. Ms. Correale responded that, of the 235 homes, 24 properties still need an inspection and/or signed access agreements.

Mid-Chesapeake Bay Islands Ecosystem Restoration Project

Ms. Correale informed the Committee of CENAB and NAD's complete support for the Mid-Bay project and noted how very hard the two agencies have worked to move the project along. MDOT MPA is currently uncertain of where the project has paused in progress. There are three possibilities of where this may have occurred: USACE HQ, ASA, or the Federal Office of Management and Budget (OMB). MDOT MPA conducted a site visit and meeting with Mr. Tad Brown (USACE Chief of Planning and Policy) and Mr. Doug Lamont (Acting ASA) at Poplar Island on July 27, 2017. Mr. Brown informed the CENAB that a revalidation study would be required for Mid-Bay. This was new information for the team. Ms. Correale stated that due to the long timeframe for approvals by federal agencies and the importance of the project, the issue of funding is a major concern. The project was authorized in the Water Resources and Reform Development Act (WRRDA) 2014 and will be de-authorized in June 2021 unless an obligation of construction funding has been received.

Since the July 2017 site visit, Ms. Correale met with a trusted member of the Port industry who frequently interfaces with USACE HQ. Unofficial reports state that USACE HQ has developed a

strategy to permanently halt the Mid-Bay project. MDOT MPA has created and begun implementation of a strategy to approach the issue in a different manner through the Executive Branch, of which USACE, USACE HQ, ASA, and OMB are members, as well as the Legislative Branch. Due to the project's importance, MDOT MPA will continue to work within the Executive and Legislative Branches to keep the project moving forward. MDOT MPA's position is that there is not a need for additional study as Mid-Bay was at the top of the USACE's 2005 DMMP, recommended in a 2008 Environmental Impact Study resulting in a Chief of Engineers report in 2009, authorized in WRRDA 2014, and is at the top of the current DMMP update for 2017. Ms. Correale will keep the Committee posted on MDOT MPA's efforts and expressed gratitude in all the support that CENAB and NAD have given the project.

Mr. Taylor asked if the lack of project progress is related to its cost. Ms. Correale responded that, in her opinion, the lack of project progress is due to its cost. When dredging occurs for a federal project, the Federal Standard requires the use of the least costly and environmentally acceptable placement method consistent with engineering requirements for the project and the Section 404(b)(1) of the CWA. The Federal Standard for the placement of material in MD is the deep trough; however, this is prohibited by state law.

Under normal circumstances, if a non-federal sponsor, such as MDOT MPA, chooses to use a different placement method then 100% of the additional costs to transport the material from the deep trough to the alternative placement site must be paid by the non-federal sponsor, based on a USACE Policy established in the 1970s. An alternative method that could be utilized that is more favorable to a non-federal sponsor is to construct an environmental restoration project. Under the WRDA 1993 Section 210, the cost sharing for an environmental restoration would be 65% Federal and 35% non-federal. MDOT MPA is attempting to construct a project using dredged material as a resource that not only benefits the navigation project but also benefits the environment. The authorized cost in WRRDA 2014 for a restoration project is $1.9 billion. Once the perimeter dike is constructed, the average appropriation requirement is less than $30 million per year. The project is expected to take 30 years to complete.

Aside
Mr. Guy discussed a news article regarding the President of the United States of America promising the Mayor of Tangier Island, VA, that Tangier would be the next Poplar Island. Ms. Correale stated that the Committee had heard of their discussion but not that Tangier would be the next Poplar Island. Mr. Landess agreed with Ms. Correale.

9.0 Round Table Discussion: Activities and Issues of Significance

Mr. Brennan asked if the State had a maximum dollar amount for the Conowingo Dredging project or if they plan to proceed regardless of price, in order to determine what the reasonable costs would be since there are no defined methods for how the material will be innovatively or beneficially reused, similar to the Chesapeake City Basin project prices exceeding expectations. Ms. Donovan responded that a funding source has yet to be identified and that the State is working on plans and ideas for funding, but the proposals received may determine the funding's source. MES has an engineer's estimate for the project and recognizes that there are no economies of scale for the inclusion of innovative reuse, the area has relatively shallow water, and there is no navigation channel that is regularly maintained. After proposals are received, decisions within the State government will determine the location of funding and if the cost is worth the effort.

Mr. Kiernan asked CENAP and CENAB if they were seeing any changes in engineer's estimates and bids regionally for standard projects. Mr. Kaiser responded that the lowest bids for a standard project come in close to the engineer's estimates that the only anomalies in costs were with the Chesapeake City Basin project due to its small size and use of the 8(a) program, to support one of the USACE's pillars, which is slightly more expensive. Mr. Brennan responded that only this year's annual Wicomico River dredging, which historically uses an upland placement site, experienced higher than normal unit prices due to beneficially using the material for a shoreline restoration in Ellis Bay.

Mr. Taylor informed the Committee of future Tradepoint Atlantic (TPA) projects discussed at the last Harbor Team meeting and at a recent community meeting. Tradepoint will be performing mostly maintenance dredging, with some new work, of 1 million cy of material to deepen preexisting facilities. Placement options include some public sites and TPA's containment facility, which would need to be reactivated. Environmental groups have concerns regarding new work dredging with its historical contaminants.

Mr. Kaiser asked if 3 million cy of material will be dredged from behind the Conowingo Dam. Ms. Donovan responded that the dredging of 3 million cy of material annually was an estimate calculated to maintain a pool behind the Conowingo Dam that can trap sediment and nutrients. Mr. Nemazie stated that the initial dredging would have to be greater than the annual 3 million cy in order to regain capacity. Mr. Michael added that 35 to 40 million cy of material would have to be dredged in order to restore the capacity of the Conowingo Dam to its mid-1980s/90s condition, which is not economically feasible; after the initial dredging to restore the trapping capacity, annual dredging would need to be performed to maintain it.

10.0 Closing Comments and Adjournment Ms. Chris Correale, MDOT MPA

The next DMMP Management Committee meeting will be held in conjunction with the DMMP Annual Meeting on November 3, 2017 at the Sollers Point Multi-Purpose Center. The Keynote speaker will be Colonel Chamberlayne, the winner of the innovative reuse photo contest will be announced, and the full Design with Dredge presentation will be presented. Ms. Jones added that the winner of the naming contest for the Masonville Trash Wheel will be announced at the Annual meeting. Mr. Kiernan stated that the trash Wheel is under construction. Ms. Correale added that the Trash Wheel is a part of Masonville DMCF's mitigation requirements.

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