

**Dredged Material Management Program
Bay Enhancement Working Group
Meeting Summary
August 30, 2012
10:00 A.M., Maryland Environmental Service**

ATTENDEES:

Department of Natural Resources (DNR): Roland Limpert
EA Engineering, Science, and Technology (EA): Peggy Derrick
Gahagan & Bryant Associates (GBA): Carter Stinchcomb, Kim Sohacki
Maryland Board of Public Works (BPW): Doldon Moore
Maryland Department of the Environment (MDE): Robert Cuthbertson, Robert Rushlow, Matthew Stover
Maryland Environmental Service (MES): Melissa Slatnick, Megan Simon, Stephanie Peters, Dave Peters, Maura Morris, Josh Chapman
Maryland Geological Survey (MGS): Jeff Halka
Maryland Port Administration (MPA): Nathaniel Brown, Katrina Jones
Moffatt & Nichol (MN): Pete Kotulak, Eric Smith
National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA/NMFS): John Nichols
Phoenix Engineering, Inc. (Phoenix): George Harman
University of Maryland, CES (UMCES): Court Stevenson, Elizabeth Price
U.S. Army Corps of Engineers, Baltimore District (USACE): Mark Mendelsohn, Joseph DaVia
U.S. Environmental Protection Agency, Region III (USEPA): Renee Searfoss
U.S. Fish and Wildlife Service (USFWS): Bob Zepp
Upper Chesapeake Bay Coastal Conservation Association (UBCCA): Russell Green

Action Items:

- The BEWG will review the Coke Point sampling and analysis plan and return comments to MES by September 14th. MES will incorporate these comments, as well as comments made during the meeting.
- MES will send the results of initial Coke Point offshore sediment sampling and analysis to the BEWG once they are received.
- EA will contact MDE about the procedure to obtain a permit for sediment sampling in the Baltimore Harbor.

Welcome and Introductions

Maura Morris, MES

Meeting Goals

Ms. Morris welcomed the group, noting that the Bay Enhancement Work Group (BEWG) had not met since April 2011; however, the Maryland Environmental Service (MES) and Maryland Port Administration (MPA) wish to obtain feedback from the BEWG on recent developments in the Coke Point project. In addition, updates on the Confined Aquatic Disposal (CAD), Cox

Creek Millennium expansion, and Masonville Dredged Material Containment Facility (DMCF) projects will be given.

Review of April 26, 2011 Meeting

Ms. Morris stated the purposed of the last meeting was to score the remaining Harbor Options. Since the last meeting the Harbor Team has created the report recommending further study on Coke Point and additional options including Innovative Reuse, Confined Aquatic Disposal (CAD), Cox Creek, Millennium, and Cox Creek and Millennium combination.

Review of Events Within the Past Year

Mr. Mendelsohn noted that the U.S. Army Corps of Engineers (USACE), Baltimore District (CENAB) is updating their Dredged Material Management Plan (DMMP); the process will take about two years. New dredged material management alternatives considered in the plan will be presented to the BEWG before inclusion in the DMMP. Ms. Slatnick asked when the new DMMP would be completed. Mr. Mendelsohn noted that funding for the DMMP update was approved recently; therefore, the DMMP update would be completed approximately two years from now. Ms. Derrick asked if the DMMP update would result in an update of the tiered Environmental Impact Statement (EIS). Mr. Mendelsohn responded that no EIS would be produced as part of the DMMP update. National Environmental Policy Act (NEPA) documentation is needed for new dredged material management projects, but not the updated DMMP. Mr. Harman noted that Poplar Island placement was now an alternative for Chesapeake and Delaware (C&D) Canal Approach Channel material, and asked if coordination with USACE, Philadelphia District (CENAP) on this matter would be completed during the DMMP update. Mr. Mendelsohn responded that this coordination had already taken place, since the Poplar Island expansion EIS addressed the possibility of inflow from C&D Approach Channel maintenance material; this report has been reviewed by the BEWG. Ms. Derrick clarified that dredged material from the C&D Canal Approach Channels, rather than the Canal itself, is being considered for placement at Poplar Island. Mr. Harman asked if this included Northern and Southern Approach Channels. Ms. Derrick replied only the Southern Approach Channels are included.

Update on Coke Point Study

Megan Simon, MES

Ms. Simon noted that construction of a DMCF at Coke Point has been identified as the preferred option in the 2011 Harbor Team report, which has been approved by the Executive Committee. Significant interest in innovative reuse, CAD, and the Millennium expansion at the Cox Creek DMCF was also expressed by the Harbor Team.

Coke Point is located at the southwest corner of the Sparrows Point property. Currently, no active steelmaking operations are located on Coke Point; the eponymous coking operations were demolished in the 1990s. A small, private DMCF remains on Coke Point, along with a landfill containing brick, concrete, and slag; and there are stockpiles of steel slag on site; none are currently being used by the site owner. The Sparrows Point property was recently sold to Hilco Trading and Environmental Liability Transfer, and MPA is pursuing acquisition of the Coke Point portion of the property.

There are two main source areas of contamination on Coke Point– the former Benzol Processing Area (BPA) in the northwest corner of the site, and the former Coal Tar Storage Area (CTSA) on the eastern side of the site. Groundwater in the BPA is contaminated with benzene in the form of light non-aqueous phase liquid (LNAPL), resulting in a benzene plume off the western half of the site; groundwater in the CTSA is contaminated with naphthalene in the form of dense non-aqueous phase liquid (DNAPL) resulting in a naphthalene plume off the southeastern portion of the site. Elevated levels of each have been found in surface water and offshore sediment, along with elevated levels of metals.

A draft concept for cleanup of the upland area of Coke Point has been developed. Multi-phase extraction and surfactant-enhanced recovery enhanced with chemical oxidant polish is planned to be completed in the BPA, and surfactant-enhanced recovery and chemical oxidation is planned to be completed in the CTSA. The concept may be refined following the completion of the formal Corrective Measures Study.

An offshore risk assessment has also been completed; the study found that the risk to benthos and aquatic organisms to be three orders of magnitude higher than the limit for remediation, and 7.5 times higher than background concentrations. The western offshore area contributes heavily to the risk associated with the site; about 80% of the human health risk, 75% of the risk to benthos, and 20% of the risk to wildlife; remediation in this area will significantly reduce risk associated with legacy contamination on Coke Point.

MPA hopes to construct a DMCF at Coke Point with an operating life of 20 years; the end-use of the site will be a terminal capable of supporting new Panamax vessels. Additional sampling is required prior to the initiation of construction or remediation activities; although a significant number of samples have been collected thus far, there is a need for sampling specifically for the purposes of remediation and construction. For example, sediment quality characterization at depth must be completed to determine the most feasible type of remediation and to determine operational and engineering controls which may be needed during construction to minimize the resuspension of contaminants in impacted sediment. Reconnaissance borings have been completed in order to inform the work plan; unfortunately, results have been delayed due to an issue at the laboratory. This data will be sent to the BEWG once available. Ms. Simon presented a map of proposed sampling locations, and noted that feedback from the BEWG on the sampling plan would be appreciated.

Mr. Rushlow noted that a tidal wetland permit would be necessary for sampling offshore at Coke Point. Ms. Derrick noted that EA was not required to obtain a permit for past sampling. Mr. Rushlow noted that the requirement has been in place for some time, and added that a USACE permit for sampling in navigable waters may also be necessary. Mr. DaVia clarified that the Maryland Department of the Environment (MDE) could most likely issue the USACE permit concurrently with the tidal wetland permit on behalf of the USACE, depending on what the sampling entails. Ms. Derrick asked how much time the permitting process typically required. Mr. Rushlow noted that the process was relatively quick, and asked that EA contact him to begin the process. Mr. Rushlow asked if Ms. Barbara Brown, MDE, was asked to attend the meeting. Ms. Correale noted that Ms. Brown was not a member of the BEWG, as her work mainly

concerned the Sparrows Point consent decree, although her participation could be sought. Mr. Rushlow noted that this would improve coordination within MDE.

Coke Point Straw-Man Sampling and Analysis Work Plan

Group

Ms. Morris presented a map overlaying proposed sampling locations with the locations of previous samples, and noted that the additional sampling is intended to produce a data set sufficiently robust to determine the best management practices (BMPs) needed for construction and remediation. MES welcomed any comments from the BEWG on the appropriateness of the current sampling plan to achieve these ends.

Mr. Halka asked if previous samples had been core samples or surficial samples. Ms. Morris responded that there had been some sampling at depth, to -50 ft mean lower low water (MLLW) off the southeast corner of the site during the pre-pilot study, but noted the remainder of the sampling sites were a mixture of surficial samples and shallower cores.

Mr. Halka asked what the “proposed mitigation area” depicted on the map was intended to represent. Ms. Morris replied that this would be the area in which dredging or capping could be completed to cut off the source of contamination; the footprint of the proposed offshore DMCF would eliminate the source of contamination to the west.

Ms. Morris noted that borings taken to the west of the proposed DMCF will be sampled to a depth of -52 ft MLLW (this includes the four preliminary samples taken in August). Samples were/will be composited in five-foot intervals and analyzed. A surface grab was/will be collected and analyzed at all of the western sampling sites. In addition to bulk sediment analysis, modified elutriates will be analyzed in samples to determine if dredging in these areas would release contaminants into the water column (elutriate analysis was not done in the August sampling event).

Ms. Morris noted that proposed sampling off the southeastern corner of the site would go to a depth of -35 ft MLLW, since pre-pilot sampling in this area indicated no contamination of concern below this depth. These samples will also be composited and analyzed in five-foot intervals, and will undergo elutriate testing. A few surficial samples are also planned; in addition to chemical analysis of the sediment and elutriate, bulk density analysis will be performed on these samples, data from which will be used to design the cap in this area. The suite of bulk sediment analyses planned for future sampling was presented; the list is based on the inland testing manual (ITM) parameter list, with a few modifications based on current knowledge of the site’s contamination issues. Ms. Morris noted that MES would welcome comments on the parameter list.

Mr. Cuthbertson asked what equipment was used to collect the reconnaissance samples. Ms. Morris responded that a 3 inch split-spoon sampler was used. Mr. Cuthbertson asked if split-spoon sampling was used to sample to depth. Ms. Morris confirmed this, noting that incremental sampling had been performed, and added that future sampling would use borings to obtain the volume of material required for both sediment and elutriate testing.

Mr. Green noted that oyster shell deposits were located in the area proposed to be dredged for the turning basin, and suggested that these be recovered for use in oyster restoration before they are lost to dredging. Ms. Simon noted habitat enhancements such as reef ball planting were proposed for the southeast offshore area, if selected as a mitigation area.

Ms. Searfoss noted that the U.S. Environmental Protection Agency (USEPA) was pleased to see many of their concerns addressed in the potential southeast mitigation area, and noted that the USEPA would also prefer an additional sample near sample SP12-38, which USEPA feels is insufficient to characterize the entire nearshore area in the cove on the south side of the site. Ms. Morris asked if USEPA would prefer the additional sample to be a surficial or core sample. Ms. Searfoss responded that she was unsure, but a core sample is most likely the preferred option; Ms. Searfoss will check with USEPA to confirm this.

Mr. Halka asked if other mitigation options besides capping were being considered in the southeast offshore area. Ms. Simon responded that capping was anticipated as the preferred option since it keeps the water column open and involves the least sediment disturbance, but dredging was also being considered. Ms. Correale noted that sampling to depth was necessary to evaluate the feasibility of dredging. Mr. Stover asked how deep dredging would be, if pursued. Ms. Correale noted that this depended on the results of future sampling. Dr. Stevenson asked if water column sampling would be completed as well. Ms. Slatnick stated that water column sampling was performed in the site assessment and offshore delineation studies. Ms. Morris noted that the elutriate analysis would be completed using site water, but no specific water column testing. Ms. Simon added that direct treatment of the water column is less feasible than dredging or capping; therefore, the sampling plan is designed to focus on these options.

Dr. Stevenson asked if pyrites were part of the planned sediment analysis. Ms. Derrick responded that they were not, but could be added. Ms. Simon asked if Dr. Stevenson was referring to water or sediment sampling. Dr. Stevenson clarified that analysis of pyrites in sediment would determine the potential for dredged material to acidify after placement.

Mr. Halka asked if the upland DMCF would require a liner. Ms. Correale responded that she was unsure of the requirements for upland DMCF construction in the area; requirements have been variable in the past.

Ms. Derrick asked if the planned sampling provided adequate coverage of the project area, and what the total volume of dredged material to be removed on the west side of Coke Point for in-water dike construction and terminal access would be. Mr. Stinchcomb responded that eight million cubic yards (mcy) would be dredged; of this, the undercut for dike construction would comprise of one mcy. It may be necessary to remove an additional one mcy to successfully construct the dike.

Dr. Stevenson noted that the sampling plan lacked sufficient sampling in the area near the Brewerton Channel. Ms. Derrick noted that this area had not been of great concern, since sampling has previously been completed in the area, and its distance from the Coke Point peninsula made significant contamination less likely. Ms. Slatnick noted that reconnaissance sampling was completed in this area; the sampling plan could be revised to include additional

sampling in the area should significant contamination be found in the results from the analysis. Dr. Stevenson agreed.

Mr. Cuthbertson noted that the turn to approach Seagirt Marine Terminal had recently been revised to accommodate larger Panamax ships, and suggested revising the dredging plan for Coke Point terminal access for the same reason. Mr. Smith noted that the turn to approach Coke Point as currently planned provided more maneuvering room than the Seagirt channel, as the Coke Point approach is able to utilize a nearby bend in the Brewerton Channel to provide additional room for maneuverability. Ms. Correale noted that the terminal would not be built until the offshore DMCF is filled to capacity. A new terminal is estimated to be needed between 2026 and 2031; dredging for the approach would not occur until this time. Mr. Halka asked if the cut for the offshore dike would reach firm substrate. Ms. Correale confirmed this. Mr. Mendelsohn asked where material dredged for the offshore dike would be placed. Ms. Correale noted that this material would be placed in the Coke Point DMCF.

Mr. DaVia noted that there appeared to be few sampling points north of the turning basin center, adding that sampling for the proposed liquefied natural gas (LNG) terminal at Sparrows Point was significantly more robust. Ms. Simon asked how many additional sampling points were needed to adequately increase the robustness of the sampling set. Mr. DaVia responded that he had no specific proposals for additional sampling, but asked that the size of the sample set for the LNG terminal project be noted for comparison. Mr. Harman asked if significant sampling in the area to be dredged for the terminal approach was necessary, since dredging would not occur for at least 20 years. Ms. Searfoss responded that that the Risk Assessment model would be strengthened by additional sampling points. Mr. DaVia added that any NEPA documentation for the project would be required to evaluate all potential future impacts associated with the project.

Mr. Nichols asked if fish sampling using both spatial and temporal parameters had been completed. Ms. Derrick noted that fish sampling was performed in the summer and fall. Mr. Nichols added that he would be interested in seeing the analysis of potential alternatives, adding that in his opinion an upland-only option was preferable. Ms. Correale noted that the alternatives analysis will be released as part of the NEPA documentation for the project. Ms. Correale added that the Harbor Team had considered 23 upland and in-water sites in the Baltimore Harbor and ultimately chose Coke Point as the preferred option, due to its ability to support a large-capacity DMCF as well as a terminal end-use. Mr. Nichols asked if it would be possible to convert an upland DMCF to a terminal end-use. Ms. Correale noted that the only other site that would provide a terminal end-use would be Cox Creek. However, creating a terminal at this location would require greater ecological impacts, especially since the project requires significantly more dredging when compared to the Coke Point proposal. Mr. Nichols asked if a combination option, utilizing an upland-only option at Coke Point with a terminal end-use in addition to the Cox Creek/Millennium expansion, had been investigated. Ms. Correale noted that this option had not been considered previously, but could be investigated. Mr. Nichols reiterated his concern that it be recognized that Sparrows Point is a desirable fish habitat regardless of environmental conditions. Ms. Simon noted that the Coke Point proposal has moved the offshore DMCF inland from the original Sparrows Point proposal, which was a wetland concept, to minimize open water placement. In addition, the original terminal footprint of the Coke Point site was moved inward atop the landfill area in order to limit the offshore footprint. The

industrial turning basin to the east of the site was also removed from the concept, further limiting project-related open water placement. In short, agencies should rest assured that MPA is hearing agency concerns of project-related open water placement and its contractors are adapting project designs in response, when practicable.

Update on Confined Aquatic Disposal

Pete Kotulak, MN

Mr. Kotulak presented an update on CAD technology. MDE had noted at a recent meeting that Maryland's ban on open water placement would not preclude CAD in the Baltimore Harbor, which for the purposes of the legislation is considered a separate body of water from the Chesapeake Bay. Open-water placement in the Harbor has occurred in recent years most notably, during the construction of the Masonville DMCF, which used new work dredged material from the Seagirt Marine Terminal for dike construction.

Mr. Kotulak noted that CAD would mine clean sand gravel, which can be found beginning at a depth of -50 MLLW, to create a DMCF cell. This area would be filled in with dredged material and capped if necessary. CAD cells can be constructed quickly, as-needed, and at a low cost, since transportation costs are low and there are additional mobilization costs for the dredging contractor. The sand and gravel dredged during the process is clean and can be reused for other projects. Although some unsuitable sediment may be deposited on top of the clean material, nearby DMCFs are able to take this material. In addition, low tidal current velocities made CAD feasible in much of the Baltimore Harbor. CAD would be used for maintenance dredging only, since maintenance material is cleaner than most new work material. Mechanical and hydraulic dredging options for CAD are each being considered.

Currently, there are 2,900 acres of the Baltimore Harbor suitable for CAD; assuming CAD cells 30 feet in depth, CAD could provide a maximum of 140 mcy of placement capacity. Geologically, the top layer of sand that would be mined in CAD is part of the Patapsco formation, which reaches the surface in the area directly surrounding the Baltimore Harbor only. Underneath this formation is the Arundel clay layer, which would protect the underlying Patuxent formation, which rises to the surface near the fall line, from any potential leaching from CAD cells. Groundwater wells in the Patuxent formation would therefore be unaffected. Although some groundwater wells in northern Anne Arundel County are in the Patapsco formation, the Masonville EIS found that migration of contaminants from the Harbor into these wells, located several miles from the Harbor, was not occurring. The Patapsco formation begins at depths of approximately -30 ft to -60 ft MLLW, and ends at depths from -60 ft to -100 ft MLLW. The Arundel clay layer is 50-100 ft. in thickness.

A demonstration project for CAD is underway for material produced from dredging for a new vessel berth at the Fairfield Marine Terminal, adjacent to the Masonville DMCF. The CAD cell will be constructed to the north of the adjacent pier. The cell will be 800 ft long by 300 ft wide and will provide about 200,000 cy of placement capacity. Placement in the cell will test the viability of both mechanical and hydraulic placement of material. Any surficial deposits unsuitable for construction reuse will be placed in the Masonville DMCF. Both hydraulic and mechanical placement would be completed, so that the effects of each can be observed. Monitoring of the site will be conducted following placement, and a turbidity curtain will be

placed to the north of the site, which along with the surrounding bulkheads will stop any potential increase in turbidity from entering the Harbor. Anoxia may be a concern in the CAD cell; however, the short-term nature of the project minimizes these impacts, and dissolved oxygen in the CAD area will be monitored as part of the project. In addition, sampling to confirm the presence of Arundel clay formation beneath the CAD cell will be completed and the velocity of suspended sediment in the CAD area will be monitored.

Mr. Nichols asked what the sand/gravel material mined during construction of the CAD cell would be used for. Mr. Kotulak replied that the material would be used for various construction or capping projects. Mr. Nichols asked if the demonstration cell would be capped. Mr. Kotulak responded that it had not yet been determined if a cap would be necessary. Mr. Halka asked if a monitoring plan was required as part of the permit request for CAD. Mr. Kotulak confirmed this. Mr. Halka suggested that monitoring reports highlight the distinction between hydrostratigraphy and geostratigraphy, which is often unclear. For example, a soil formation may be defined based on physical properties for hydrologic purposes, but from a geological perspective, the same formation may be considered several different formations, due to the soil's historic properties.

Dr. Stevenson asked how the dredge operators could be sure that construction would not cut into the Arundel clay layer. Mr. Kotulak noted that clay material is of visibly different consistency when dredged; in addition, the operator may detect a difference in the dredge when clay is reached. Ms. Correale added that geotechnical analysis of the area would be completed prior to dredging of the CAD cell. Dr. Stevenson asked if monitoring would be completed outside of the cell. Mr. Kotulak confirmed this. Mr. Moore asked who the MDE contact for the project was. Mr. Kotulak responded that the project team has met with Mr. Gary Setzer and Mr. Elder Ghigiarelli. Mr. Harman noted that a meeting was being set up with MDE drinking water regulators; it is anticipated that the permit application for CAD will take six to eight months. Mr. DaVia asked if the project would be presented to the Joint Evaluation committee as well. Mr. Harman confirmed this.

Mr. Stover noted that monitoring of the project would be important, especially given the unknown effects of in-water hydraulic placement of dredged material and the ideal location of the demonstration, adding that few locations would contain a turbidity plume to the extent that the demonstration area is able to. Mr. Nichols suggested that to minimize nutrient flux into the water, mechanical, rather than hydraulic placement should be used in CAD operations and that cells should be capped after placement. Dr. Stevenson suggested that an Acoustic Doppler Current Profiler (ADCP) be used to measure velocity, and that continuous nitrogen measurement be completed during monitoring. Mr. Kotulak replied that an ADCP was planned to be used.

Update on Cox Creek/Millennium

Dave Peters, MES

Mr. Peters noted that the property directly north of the Cox Creek DMCF, currently owned by Millennium Chemical, was up for sale, although 10 ac of the property is owned by a private company (Kemira). MES and MPA are investigating the feasibility of acquiring both properties to expand the Cox Creek DMCF. Millennium is conducting Phase I sampling on their property. MPA is completing a separate environmental study on the upland area west of the Cox Creek

DMCF. Mr. Peters presented a possible footprint for an expanded Cox Creek DMCF utilizing the existing DMCF, the upland area west of the DMCF, and the Millennium property. A portion of the site will remain unused to provide space for MES on-site personnel and potential innovative reuse operations. Mr. Peters presented a draft layout for geotechnical borings in the upland area to determine the suitability of the site for DMCF construction, which will be completed this fall. Millennium will complete a similar study on their property.

Assuming a dike height of 60 ft, the portion of the expanded DMCF on the Millennium property could provide 7 mcy of capacity, the portion on the western upland portion of the Cox Creek site could provide 3 mcy of capacity, and the existing Cox Creek DMCF (after raising dikes from 60 ft from the current height of 36 ft) could provide 5 mcy of additional capacity, for a total of 15 mcy additional capacity. Mr. Peters noted that the geotechnical data should be available before the end of September, with the Reconnaissance report, including boring data and potential dike layouts, ready by December. The scope of the second phase of the project will be determined at this time.

Mr. Mendelsohn asked what the cost of the Millennium property was. Mr. Peters responded that he is not sure of the cost. Mr. DaVia asked if the expanded Cox Creek site was being considered chiefly as an upland alternative to Coke Point expansion. Mr. Peters confirmed this. Ms. Correale noted that the Cox Creek site is also being considered as a potential future terminal location, although the terminal would require significantly more dredging than a terminal at Coke Point, given the distance of the Cox Creek from existing navigational channels. Mr. Nichols reiterated his preference for upland DMCF sites, such as the expanded Cox Creek/Millennium site, noting that the site could be used in conjunction with an upland-only option at Coke Point without sacrificing a terminal end-use.

Update on Masonville

Stephanie Peters, MES

Ms. Peters gave a brief update on the Masonville DMCF. Construction of the DMCF has been completed. The first inflow was in 2010 to accommodate South Locust Point dredging; inflow began again in July 2012 for the Masonville vessel berth. There was one discharge event in 2010; the next discharge event will be this fall.

In 2010, MPA entered into a Consent Order with MDE due to soil contaminants in the upland areas. MES will continue implementing the preferred remedial alternative, which will cap at least 28 acres of uplands in Masonville Cove. In addition, there are approximately 20 mitigation/community enhancement projects being completed as recommended by the Masonville EIS and required by project permits. Six have been completed to date, but all have been at least initiated. The Consent Order has affected the tidal and non-tidal wetland creation projects, as well as the terrestrial habitat enhancement project.

Ms. Peters gave a brief update on the progress of mitigation and community enhancement work. Tidal wetland creation and enhancement is being completed along the shorelines of Masonville Cove; about a half-acre of living shoreline has been created and planted to date, with help from Baltimore City students during the Masonville Cove Environmental Education Festival. Non-tidal wetlands have been constructed in the upland area; however, water levels must stabilize in

the created wetlands before planting can occur. Over 1,500 reef balls have been produced for placement in the Masonville Cove. To date, 635 reef balls have been placed in Masonville Cove; the rest are being stored at Cox Creek until they can be placed. Clean sand must be placed on the Masonville Cove bottom prior to reef ball placement. The fringe wetland along the western side of the DMCF has been completely planted, with help from over 200 volunteers; MES is currently conducting post-construction monitoring of the fringe wetland.

A water quality monitoring station has been installed in Masonville Cove by the Maryland Department of Natural Resources (MD DNR). Data collected from the monitoring station is fed to a display in the education center on site, and is available online at www.eyesonthebay.net. Landside cleanup is ongoing; in total, nearly 9,000 tons of waste has been removed from the area, including timbers, scrap metal, concrete, tires, and other wastes. Terrestrial habitat enhancement is also ongoing. A significant number of trees were removed to implement the remedial cap. The site has numerous non-native or unhealthy trees that must be removed as well; an arborist has been consulted to determine which trees on site can be preserved. However, over 200 new native trees and shrubs have been planted on-site to date. The upland area of the site will be placed in a conservation easement once remediation is complete.

Construction of the Masonville Cove Environmental Education Center was completed in 2009. The building has been used for education programs by the Living Classrooms Foundation, the Brooklyn and Curtis Bay Coalition, and the National Aquarium. In addition, a public floating dock has been built in the Masonville Cove, as well as a fixed pier which will service Living Classrooms' boats, which transport students from other local facilities to Masonville. About 7,600 students have participated in programs at the facility to date.

Encapsulation of contaminated sediments was completed; the DMCF footprint itself serves to contain contaminated sediments, and placement of dredged channel maintenance sediment will further encapsulate on-site sediments. In 2007, twenty-five derelict vessels were removed from the eastern portion of the Masonville site.

Offsite mitigation projects are also being completed as part of the Masonville project. MPA had originally agreed to fund construction of eel passageway systems for three dams in the Patapsco River; however, one of these dams has been removed, and another dam is scheduled for removal in the near future. An alternative plan is therefore being developed, perhaps including providing funding for eel stocking and population monitoring. Mr. Nichols noted that eel passage may still be needed on Daniels Dam, which is not scheduled for removal.

MPA is also funding an MD DNR fish stocking project, which includes upgrades to the Cedarville Manning fish hatchery. The first phase of upgrades is complete; the second phase, which is the installation of new pond liners at the hatchery, will be completed this year. Shad and herring production and stocking will begin in spring 2013; monitoring of shad and herring populations will continue for three years.

MPA is also working to install five trash interceptors in/near Baltimore Harbor; currently, interceptor placement is planned in Carroll Park, Smith Cove, Jones Falls, Masonville Cove (doubling as an educational tool at this location) and Dundalk Marine Terminal. Ms. Searfoss

asked when the interceptors would be in place, noting that the Virginia Dept. of Environmental Quality (VA DEQ) would be holding a conference on marine debris in February 2013. Ms. Peters responded that each interceptor project was in different stages of completion; interceptors at Carroll Park or Masonville Cove will likely be completed first. Ms. Searfoss asked if the VA DEQ could be given a point of contact should they desire to include a presentation on these projects in the conference. Mr. Brown will be the point of contact.

Stream restoration is being completed in Biddison Stream and Western Run. The design phase for the Biddison stream restoration project is nearly complete. Emergency road repair at Moravia Rd, which contains some elements of Biddison Run stream restoration, will begin in October. Construction to restore Western Run began in June 2010, and was substantially completed in March 2011.

Other Updates & Next Meeting

Maura Morris, MES

Ms. Morris asked the BEWG to send any edits to the Coke Point sampling and analysis plan to MES by September 14th. MES will then finalize the sampling locations and distribute data from samples taken to date once available. The date of the next BEWG meeting is TBD; BEWG members will be contacted about another meeting when one is needed.