

**SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM
INNOVATIVE REUSE COMMITTEE (IRC) MEETING
August 27, 2024, 5:30 PM In-Person and Virtual Meeting**

Attendees:

Alliance for the Chesapeake City Bay: Laura Todd*
Anchor QEA: Walter Dinicola*, Billie-Jo Gauley*, Ram Mohan*
Arcadis: Bert Buell
Baltimore Port Alliance: Rupert Denney
Baltimore County DEPS: David Riter
Chesapeake Bay Foundation (CBF): Gussie Maguire*
EA Engineering, Science, and Technology (EA, Engineering): Frank Barranco
EcoLogix Group: Steve Pattison*
GEI Consultants: Nancy Straub
HarborRock: Jeffrey Otto
Maryland Department of Natural Resources (DNR): Maggie Cavey*
Maryland Department of Transportation (MDOT TSO): John Denniston*
Maryland Environmental Service (MES): Dallas Henson, Saeka Foreman
Maryland Port Administration (MPA): Katrina Jones, Joe Ross, Darren Swift
National Oceanic and Atmospheric Administration (NOAA) Fisheries: Jonathan Watson*
Northeast Maryland Waste Disposal Authority (NMWDA): Andrew Kays*
Northgate Environmental Management: Sam Merrill*
Remline: Michelle Puszcz*
Repurpose Aggregates: Miguel Lambert*, Eric Baker*
Rock Creek: Greg Sliviak, Ruth Sliviak
Rummel, Klepper and Kahl (RK&K): Sari Rothrock, Ed Tinney
Stancills Inc: Chris Siciliano
Stoney Beach Community: John Garofolo
The Nature Conservancy: Austin Bamford*, Isaac Hametz*
The Terrapin Institute: Marguerite Whilden*
Tradepoint Atlantic: Peter Haid
University of Maryland Center for Environmental Science (UMCES): Elizabeth Price*
US Army Corps of Engineers: Katie Brutsché*

*Denotes attendees that participated virtually

1.0 Welcome and Introductions

Sari Rothrock and Ed Tinney, RKK

Ms. Rothrock and Mr. Tinney welcomed attendees and called the meeting to order. Mr. Tinney briefed participants on the agenda for the evening. Mr. Tinney led introductions for in-person attendees. Ms. Rothrock introduced virtual attendees. Ms. Rothrock announced the passing of two IRC members, Paul Petzrick and Doug Myers, holding a moment of silence.

2.0 IRC Comments and Updates

Katrina Jones, Darren Swift, and Joe Ross, MPA

Mr. Ross provided an update on the Innovative Reuse R&D projects.

- The CSI-E project, an upland and shoreline application of vegetated geotubes at the BGE Spring Garden Facility installed in Spring 2024, was mulched in the summer of 2024. CSI-E is wrapping up their work and has begun their final report.
- The eighth R&D award has been given to the Northgate Environmental Team for studying the use of material from the Cox Creek dredged material containment facility (DMCF) as cement clinker and as a supplementary cementitious material. The project is anticipated to be complete within a year.
- A ninth R&D award is anticipated to be announced at the November 12th IRC meeting.
- The University of Maryland vegetated earth berm effort is still moving forward. The project is expected to wrap up in August 2025.

Question	Answer (from Mr. Swift)
Mr. Denney: Is the RFP still open?	Submissions for the RFP have been closed since last October.
Mr. Denney: When will the products move forward into marketing and sales?	It is expected that within the next two years, the first part of the Cox Creek Sediment Technology and Reuse (STAR) facility in the upland area will be ready for development after MDE remediation requirements have been satisfied. It is expected that, after remediation, it will take another 2-5 years to ramp up production. MPA is hoping to advertise a Request for Information (RFI) to collect information from prospective developers. The goal is to have two or more production facilities on the Cox Creek STAR facility under long term leases.
Mr. Denney: Will there be an opportunity for reclaimed dredged material to get to the market before the Cox Creek STAR facility is completed?	While work on the Cox Creek STAR facility is underway, geotube fields will be established in the meantime, and There may be a need for fill material for various projects, like the Key Bridge rebuild.

Mr. Swift introduced Beneficial Use (BU) as the theme of the meeting. He announced that the Bay Enhancement Working Group (BEWG), which was recently reconvened to work on CAD, will form another subcommittee in January 2025 to focus on the MDE Guidance document's Beneficial Use section. There has been increased interest in BU, and projects in the Middle Branch Patapsco to create wetlands have already requested material equating to that of a little over 100,000 cubic yards.

Ms. Jones announced an annual open house occurring on October 19th on the campus of the Cox Creek DMCF, and Urban Wildlife Conservation Day being held on September 14th at Masonville Cove.

3.0 Increasing Beneficial Use of Dredged Material in USACE

Katie Brutsché, USACE HQ

Ms. Rothrock introduced Katie Brutsché, Beneficial Use Program Manager at the US Army Corps of Engineers Headquarters. Ms. Brutsché spoke about the USACE BU program, stating that the Corps has set a goal to increase BU of dredged material to 70% by 2030. Currently the USACE is utilizing about 30-40% of its dredged material. To achieve the goal, the USACE is working to make BU of dredged material a standard procedure. Ms. Brutsché then shared the database that showcases USACE progress towards the 70% goal, which is located at <https://rsm.usace.army.mil/budb>. The database

updates daily with new information. As of two days prior to this meeting the beneficial use rate was at 59%.

Ms. Brutsché then discussed several promising BU case studies:

- **Deer Island Lagoon, Mississippi:** Material was taken from a nearby Federal navigation channel to restore marsh habitat, coastal maritime forest, beach habitat, and dune habitat. In 2019, Deer Island Lagoon was nourished through the section 1122 program. The site was studied before and after placement and the restoration efforts were successful.
- **Mobile Bay, Alabama:** Due to the Water Resources Development Act (WRDA) of 1986 sediment was removed from the Bay and disposed of, which led to the degradation of the habitat. In 2012, Mobile Bay was given a one-time emergency authority to place material within the Bay to see how the sediment transport would occur. It resulted in positive outcomes for the Bay, and they were able to reverse the WRDA in 2014 and begin placing material within the Bay once again. This reduced the cost of dredging and enabled a savings of \$6 million annually. Mobile Bay has identified more opportunities for placement including strategic placement for wetlands, restoring bay elevations in relic shell mining areas, and placing material along nearshore shoal systems.
- **San Francisco Bay Strategic Placement project, California:** Strategic placement of 90,000 cubic yards of dredged material in the bay was undertaken last December. The team used particle tracking and hydrodynamic models, placing tracers and studying where the material goes. The project increased their beneficial use from 40% to 80%. Rather than placing the material on the marsh itself, the material was placed adjacent to it to allow natural processes to move the material. The results of the Bay study will be out by the end of this calendar year.
- **Barnegat Inlet, New Jersey:** In 2020, the Inlet was dredged and some of the finer sediments were placed in the back bay for bird islands. The nearshore placement of dredged material was studied just offshore of Harvey Cedars Beach, which is nourished regularly and erodes regularly. The goal was to determine if material that is placed just offshore would protect the shoreline like a submerged breakwater. Placement was evaluated through CoastSat and occasional surveys. It was determined that the placement had provided some level of protection- the nearshore placement migrated onshore and the shoreline accreted.
- **Seven Mile Island Innovation Lab, New Jersey:** USACE is working with NJ Department of Environmental Protection and the Wetlands Institute to identify a back bay area as a living laboratory and place dredged material in innovative ways in order to study the result. The team has tried thin-layer placement, island creation, sediment distribution via pipe for marsh edge restoration, and unconfined placement.

Other current USACE efforts include:

- Implementation of WRDA 2020 section 125, which directs USACE to incorporate benefits when considering the federal standard (the least cost option). USACE is working on how to incorporate benefits that cannot be monetized.
- Continuing to implement the Section 1122 projects: 25 additional projects were authorized after the original ten under WRDA 2016.
- A new guidance memo was released called “Expanding Beneficial Use of Dredged Material in the USACE,” which standardized beneficial use definitions.
- Several reports were written recently, including one about hurdles to beneficial use, which summarizes information from a series of case studies and surveys.

Ms. Brutsché then discussed the importance of communication and teamwork. There is also a website for people to visit to learn more about beneficial use (<https://www.usace.army.mil/Missions/Civil-Works/Beneficial-Use-Program/>) that provides regional links and news stories.

Ms. Brutsché ended her talk by discussing updates to WRDA 2020 Section 125. WRDA 2020 Section 125 is the most recent form of authority on beneficial use. They are working to get implementation guidance out.

- Section 125(a)(2)(c) enables the use of O&M dollars for beneficial use rather than CAP funds or construction funds.
- Section 125c provides guidance on 5-year regional Dredged Material Management Programs (DMMP) and Beneficial Use Decision Document Integrator to incorporate BU into existing DMMPs without having to reopen the DMMP process.

Question	Answer (from Ms. Brutsché)
Mr. Denney: On the Mobile Bay slide, are the two gray lines down the middle the shipping channels? What is the yellow ellipse to the right of the gray line? Were dikes used to hold the material in place?	The shipping channel is between the gray areas. The gray areas might be where they identified areas for thin-layer placement adjacent to the channel. I believe the red pieces are areas inside the shape where material was placed. The yellow area is the area within which they wanted the material to stay. I do not think dikes were used. In some cases they were trying to raise the elevation of the Bay where there were holes with anoxic conditions.
Mr. Haid: What is the balance of beneficially using material with taking essential fish habitat?	That is a challenge. One of the biggest challenges at the USACE is trying to balance different species that have different environmental requirements. For the placement areas in Mobile Bay, they may not have been designated EFH and if they were they probably worked with other agencies to try to mitigate potential impacts. A big key to success in beneficial use is communication. Communication with agencies is crucial to coming up with solutions to be the least detrimental habitats while utilizing materials beneficially.
Ms. Rothrock: Can you speak further on the robust interagency group associated with Beneficial Use in Mobile Bay?	All the agencies listed on this slide are on the interagency team. When they do projects in Mobile, they get the entire group together and discuss the plan. Another example would be the mouth of the Columbia River in the Pacific Northwest, the Lower Columbia River Solutions Group, in 2003 made the decision to place more material beneficially.
Ms. Whilden: Is there a certain standard or quality for material used in these projects?	Each project has individual standards based on regulations of the state, nothing is contaminated (wouldn't be able to get a Clean Water permit). There are various thresholds for use of fine sediment.

During the transition between Ms. Brutsché's presentation and the next agenda item, participants asked more questions about the CSI-E project (upland application of vegetated geotubes).

Question	Answer
Ms. Straub: Was there a hole in the top or bottom of the geotube so that the plants could establish roots? Did you dig out the plants that died to see what happened?	Mr. Ross answered that they were planted on the top. Mr. Swift responded that the plantings were trial and error and that the team planted different species. Some of the species were more tolerant than others to the dredged material in the geotubes.
Mr. Sliviak: what is the geotube life expectancy after it is used for planting?	Mr. Ross: It depends on the environment, but they can remain for years. Mr Swift added that the UV rays from the sun break the material down, and that the geotubes were covered in mulch to offer additional protection. The lining is woven polypropylene and the average size is 5 feet in diameter, 15 feet long for the planting operation. Larger tubes are typically used for dewatering.

4.0 Beneficial Use Discussion

Darren Swift, MPA, Sari Rothrock and Ed Tinney, RK&K

Mr. Swift introduced the next exercise, stating that MPA has received feedback from stakeholders regarding the vagueness of the BU section of the MDE guidance document. The outcomes of this small group discussion will be used to help identify topics to discuss in the BEWG BU subcommittee to help improve the MDE guidance document.

Ms. Rothrock and Mr. Tinney divided attendees into four teams. Each team received their own BU project and was asked to use the BU guidance to usher their project through preliminary planning in the allotted time. Each team was provided with a facilitator and a worksheet to help them move through each of the steps in the guidance. At the end of the activity, each team reported out on any difficulties they encountered during their preliminary planning.

	Project	Difficulties with Preliminary Planning
Team #1	The shellfish habitat enhancement team is planning to use 10,000 cubic yards of dredged material to enhance oyster reefs in the Bay. The dredged material would be used instead of oyster shells at the core, but shells would still be used to cap the new reef to encourage spat attraction and attachment.	• Hung up on permitting • Uncertain about parameters for monitoring aquatic life • Nothing about a sampling permit • Who is the audience for the permits? Who needs to be in the room? • Sample formula is confusing, why is there wiggle room?
Team #2	The beach nourishment team wants to use 50,000 cubic yards of dredged material to counteract erosion at an Ocean City beach. The dredged material will be brought to the beach by split-hull hopper dredge or hydraulic pipeline. The material being used must closely match that of the eroding beach.	• Permitting confusion, not a lot of specificity as to what applies and when • Confusion about which permits are State permits and which are federal • Sampling formula vague • Monitoring and maintenance unclear (e.g. baseline)

	Project	Difficulties with Preliminary Planning
Team #3	The wetland restoration and creation team wants to use 105,000 cubic yards of dredged material to raise the elevation of sinking marshes and bolster deteriorating wetlands at a specific location in the Chesapeake Bay. They're hoping that the dredged material will help native grasses to better stabilize the eroding wetlands and counteract subsidence.	• Lots of ambiguity in regard to permits • Does not explain where the sampling process should occur • Needs more specificity about dredged material
Team #4 (Virtual Team)	The ambitious shoreline stabilization team is looking to use 300,000 cubic yards of dredged material in a variety of ways, including by incorporating it into breakwaters and geotubes and by placing it in the nearshore to create a parallel bar along a stretch of beach that is the front edge of a severely eroding marsh system in the Chesapeake Bay. The nearshore placement is experimental but the team is optimistic.	• Monitoring plan section would benefit from more examples and additional clarity • Sampling table thresholds require more clarity (some numbers span two categories)

5.0 Announcements and Adjourn

Ms. Rothrock informed the group that DNR is having an informational webinar about grants on September 6th from 11-1 PM.

Ms. Rothrock stated that the meeting notes from the May 28, 2024 IRC meeting will be officially approved at a later date. The next meeting is November 12, 2024.

Mr. Garofolo announced that the Stoney Creek Beneficial Use Project officially started this week. Meeting adjourned at 7:04 pm.