

**DRAFT**  
**SUMMARY OF THE DREDGED MATERIAL MANAGEMENT PROGRAM**  
**INNOVATIVE REUSE COMMITTEE MEETING**

**May 22, 2018, 5:30 PM**  
**2200 Broening Highway**  
**Baltimore, Maryland 21224**

***Attendees:***

***Innovative Reuse Committee (IRC) Members:***

*Baltimore Development Corporation (BDC):* Patrick Terranova  
*Blue Water Baltimore:* Barbara Johnson  
*Chesapeake Bay Foundation (CBF):* Doug Myers  
*Maryland Department of the Environment (MDE):* Matthew Rowe  
*Maryland Department of Natural Resources (DNR):* Paul Petzrick  
*Turner Station Conservation Team (TSCT):* Larry Bannerman  
*Stancills, Incorporated:* Chris Siciliano  
*United States Army Corps of Engineers (USACE):* Kevin Brennan

***IRC Support Staff and Observers:***

*Baltimore City Department of Public Works (DPW):* Kristyn Oldendorf, Joana Pei  
*Belden-Eco Products (BEP):* Ryan Andre, Robert Belden, Robert Ittmann  
*EcoLogix:* Steve Pattison  
*Furbish:* Michael Furbish  
*Harvest Power:* Sladjana Prozo  
*Manhan Rykiel Associates:* Isaac Hametz  
*Maryland Department of Natural Resources (DNR):* David Tancabel  
*Maryland Department of Transportation Maryland Port Administration (MDOT MPA):* Bertrand Djiki, Kristen Fidler, Katrina Jones, Holly Miller, Kristen Keene  
*Maryland Environmental Service (MES):* Lauren Mentzer, Dallas Henson  
*Northgate Environmental (NGE):* Nancy Leitner  
*Terracon:* Nancy Straub  
*The Blue Stone Group:* C. John Kline  
*Tradepoint Atlantic:* Pete Haid  
*University of Maryland Center of Environmental Science (UMCES):* Elizabeth Price

**Action Items:**

No action items to report.

**Welcome & Introductions**

**Steve Pattison, Facilitator**

Mr. Pattison welcomed the meeting attendees and the attendees introduced themselves. Mr. Pattison informed the Committee that the action item from the February 27, 2018 summary was addressed. Mr. Myers commented that the summarization of House Bill (HB) 171 was well done. No further comments were shared, and the Committee accepted the February 27, 2018 summary as final.

## **Innovative Reuse and Beneficial Use Progress Report**

**Kristen Keene, MDOT MPA**

Ms. Keene provided an update regarding the innovative reuse and beneficial use of dredged material. Ms. Keene stated that Maryland Department of Transportation Maryland Port Administration (MDOT MPA) has been in coordination with multiple partners to develop demonstration projects that will help further the innovative reuse program. These projects will use dried dredged material removed from the Cox Creek Dredged Material Containment Facility (DMCF) for Alternative Daily Cover (ADC), engineered fill, and an on-site test nursery. Dredged material at Hart-Miller Island (HMI) will be used for a pilot project for the North Cell habitat development.

For the Quarantine Road Landfill demonstration project with the Baltimore City Department of Public Works (DPW), MDOT MPA and Baltimore City are finalizing a Memorandum of Understanding (MOU) to begin using the dried dredged material from Cox Creek DMCF as ADC.

The test nursery demonstration project at Cox Creek DMCF was developed to determine the fertility of dredged material. An 8-foot x 16-foot area was divided into eight separate nursery plots, each with varying ratios of dried dredged material, Leafgro®, and lime, as well as a control plot of store brand topsoil. Each plot was planted with the same grass seed mix and weekly photographs began on October 2, 2017. Observations will continue to be documented until October 2018 to capture one full growing season. The 100% dredged material with lime plot currently has the highest percent vegetation coverage of all the plots, and the 100% dredged material plot has the second highest percent vegetation coverage. The control plot has the lowest percent vegetation coverage.

The HMI North Cell habitat development pilot project originated from the 2017 Design with Dredge (DwD) collaborative research program between MDOT MPA and Mahan Rykiel Associates (MRA). The DwD program captured ways that dredged material can be innovatively reused in the Baltimore area to promote economic stability and incorporate resilient landscape features with a shared goal of furthering the innovative reuse program. Through the DwD program, several conceptual level design scenarios using dredged material were developed; one of which was the HMI North Cell habitat development pilot project. Though the DwD program has ended, MDOT MPA continues to advance on this idea. The proposed concept plan is to create micro-landforms that will support a fluctuating hydrologic regime and a diverse vegetation structure, thereby resulting in improved soil and water quality conditions. Preliminary design scenarios are currently being developed to further evaluate project phasing and implementation. The goals of the pilot project are to: 1) create a diverse habitat, 2) optimize project costs, and 3) engage and educate stakeholders. The pilot project will occur in the western corner of HMI's North Cell as this area has been consistently dry and is readily accessible by visitors to the site via the Maryland Department of Natural Resources (DNR) park area. This pilot area will be both large enough to create a viable habitat and small enough to remain manageable, approximately 20 acres. Mr. Myers asked if the areas of elevation will all remain above high tide or if the area will be connected to tidal zones. Ms. Keene stated that the pilot area is located in the HMI North Cell, which is 40 feet (ft) above sea level and will remain unconnected to tidal zones; the fluctuating hydrologic regime will be due to evaporation and precipitation events at the site.

The Hawkins Point (HP) DMCF South Cell development is a collaborative project between MDOT MPA's Harbor Development and Safety, Environmental, and Risk Management (SERM) Offices and in coordination with MDE, using the Innovative Reuse and Beneficial Use of Dredged Material Guidance Document. Dried dredged material from Cox Creek DMCF will be used as engineered fill for the closure of the HP DMCF's South Cell. At this time, the South Cell is being dewatered via a temporary pump installed at the site as well as perimeter and cross trenches. Geotechnical investigations conducted consist

of two composite samples collected from Stockpile D at Cox Creek DMCF and four borings from HP DMCF's South Cell. After analysis, Stockpile D was categorized as Category 2 material, suitable for commercial or industrial use, and found to be silty sand with gravel. With proper compaction minimal consolidation will occur. The HP South Cell borings were very soft and contained silt with some clays and organics. Material consolidation and strength calculations are being used to determine ground improvements. A grading and filling plan is also being developed for the South Cell; approximately 4,000 cy of innovative reuse material from Stockpile D at Cox Creek DMCF and existing on-site berm material will be used in the South Cell development. The grading design will include cutting from high areas of the cell and placing in low areas to level-out the cell with a final grade at a 1% slope for the installation of the algal flow-way (AFW) at the site.

Ms. Keene stated that MDOT MPA SERM will develop and construct the AFW on the final graded cell. An AFW is a culture unit that promotes the growth of naturally occurring algae on a screen where it can be easily removed and processed for sustainable energy and will continuously recover. AFW technology has been used in areas for total maximum daily load (TMDL) management for nutrients. The Chesapeake Bay Program (CBP) expert panel issued guidance for using AFW technology for nutrient reduction credit. MDOT MPA is using the information from the AFW pilot installation at Dundalk Marine Terminal to aid the 30% design. AFWs operate 24/7 providing constant removal of nutrients and sediments even during non-rain events. Additionally, AFWs deliver increased dissolved oxygen to the waterbody, which improves aquatic habitat, and is an effective Best Management Practice (BMP) for similar properties, e.g. on-site and property boundary constraints. This technology could be used by other MDOT facilities or other municipal separate storm sewer system (MS4) permit holders with water access. Ms. Keene provided a conceptual layout for the AFW and emphasized that MDOT MPA is at the 30% design mark. The structure will be 450 ft x 115 ft and will intake water via a pipeline to the northern end of the flow-way and discharge via pipeline at the southern end of the flow-way. The design includes a potential future expansion of the AFW along its eastern edge. Construction is expected to begin by 2021 and should be completed within one year. The estimated throughput is 3 million gallons of water per day.

Ms. Keene stated that MDOT MPA will continue the advancement of demonstration projects to further the innovative reuse program. Mr. Myers asked if a market for algae production exists. Ms. Keene stated that she is not aware of any market for algae production.

**The United States Army Corps of Engineers  
North Atlantic, Baltimore District (CENAB)**

**Kevin Brennan, USACE**

**Section 1122 Water Resources Development Act (WRDA)**

Mr. Brennan discussed the Water Resources Development Act (WRDA) of 2016, the authorizing mechanism for the United States Army Corps of Engineers (USACE), Section (§) 1122, Beneficial Use of Dredged Material Pilot Program, which requires the USACE to establish a pilot program to carry out 10 projects throughout the United States for the beneficial use of dredged material for certain purpose(s) (e.g. reduces storm damage to property and infrastructure, promotes public safety, protects, restores or creates aquatic ecosystem habitats, stabilizes stream systems, enhances shorelines, promotes recreation, supports risk management and adaption strategies, or reduces the cost of dredging or dredged material placement). The proposals may incorporate one or any variation of these purposes. Nationwide, just under a hundred proposals were received. USACE Headquarters (HQUSACE) divided these proposals between the districts. Proposals for projects within the USACE North Atlantic Baltimore District (CENAB) were sent to and evaluated by CENAB using a checklist developed by HQUSACE. CENAB has returned the proposals to HQUSACE for final review and decision making. Mr. Brennan stated that the three proposals submitted

for projects within CENAB's Chesapeake Bay jurisdiction included the Fleming Park restoration at Turner Station, Sparrows Point in-water capping of contaminated material, and a large Smith Island beneficial use project. Additionally, two proposals were submitted for channel projects in Virginia waters that are associated with Baltimore Harbor and Channel projects, Cape Henry and York Spit. CENAB is awaiting review of these proposals by HQUSACE.

Mr. Pattison asked if a general timeframe existed for when a decision on the proposals will be made. Mr. Brennan stated that he does not know when HQUSACE will make their decision. Mr. Myers asked if the Cape Henry and York Spit Channels currently perform beneficial use projects as a part of their normal operations. Mr. Brennan responded that the Cape Henry and York Spit Channels are not currently performing beneficial use projects and stated that the Cape Henry and York Spit proposals were vague as to project specifics that HQUSACE requested, such as: estimated costs, amount of material beneficially used, one-time or reoccurring with associated costs, nonfederal partners. Mr. Pattison asked if HQUSACE will make their decision before the next IRC meeting in August. Mr. Brennan replied that he expects that a decision should be made prior to the next IRC meeting.

### **Potential Innovative Use Application - Brick Manufacture**

**Robert Ittmann, BEP**

Ms. Fidler introduced and thanked Mr. Ryan Andre, Mr. Robert Belden, and Mr. Robert Ittmann, Belden-Eco Products (BEP) for attending and presenting at the IRC. Ms. Fidler stated that she is excited about this opportunity for information sharing and stated that MDOT MPA hopes this presentation will open further discussions. Ms. Fidler thanked Mr. Paul Petzrick, a long serving IRC member, who is always thinking of ways to reuse fly-ash and dredged material. Ms. Fidler also thanked the IRC members for networking on behalf of MDOT MPA, keeping MDOT MPA informed of opportunities, technologies, and processes, and generating ideas to advance the IRC's efforts.

Mr. Ittmann commented that BEP strives for product ingenuity and finding new solutions to problems within the industry. BEP analyzed samples of Cox Creek dredged material to determine its chemical constituents and created "cookies" using 100% dredged material to simulate a 100% dredged material brick. Mr. Ittmann provided examples of "cookies" to the IRC made from 100% Cox Creek dredged material, as well as a brick made from 70% Possum Point fly-ash and 30% Belden shale. Approximately 95% to 98% of all bricks created in the United States are made from shale. Belden shale has a concentration of iron oxide which, when heated, turns the bricks permanently red. These bricks can be used in a permeable surface infrastructure to reduce stormwater runoff. New paving technologies from Holland can provide stormwater solutions at scale. Mr. Ittmann commented that a lot of BEP technology originated in Holland and stated that Holland's dredged material from rivers and canals consist mostly of silts and clays, which can produce permeable bricks. Mr. Ittmann informed the committee that Cox Creek dredged material is very similar to Holland's material but stated that a demonstration project would be needed to determine the percentage of Cox Creek material in the recipe. The preliminary analysis indicates that a 40 percent or more makeup could be possible.

BEP's parent company, The Belden Brick Company (Belden) was founded in 1885 and is currently the fifth largest brick manufacturer in the United States. Belden is owned and managed by the fourth and fifth generations of the Belden family. Belden has 12 brick plants, with over 80 acres of manufacturing space under roof, an annual capacity of 520 million brick-equivalents (SBE), and distribution through a network of 300 independent dealerships. BEP received a United States patent in August 2017 (Patent No. 9,776,921 B2) for their variable firing tray (VFT) brick manufacturing process, which allows production of bricks and pavers with a higher content of fly-ash and residual carbon than previous brick-making methods and other

products such as concrete. Mr. Ittmann stated that BEP plants utilize the press mold brick process, rather than the extruded method that is utilized by most brick manufacturers. Mr. Ittmann commented that press mold bricks are equal to or greater than extruded bricks as they are unpolished and have a higher tensile and compressive strength than extruded brick. Molded bricks can also be produced in a larger variety of shapes and sizes and are ideal for permeable paving applications. Mr. Ittmann stated that sintering bricks at approximately 2,000 degrees Fahrenheit changes the structure of the product and renders constituents (*i.e.*, dredged material and/or fly ash) permanently inert. Toxicity characteristic leachate procedure (TCLP) and synthetic precipitation leaching procedure (SPLP) tests were conducted and that all leachate was found to be within the Environmental Protection Agency (EPA)'s allowable limits of specification. Economic drivers of a new plant are: direct jobs – up to 80 employees and four to five salaried managers; indirect jobs – 50,000+ man hours for construction jobs; locally sourced construction materials from local manufacturer; and the economic multiplier would be \$4 to \$6 million of civil work for the building and equipment, and approximately \$7 to \$10 million for building construction.

Mr. Ittmann stated that the United States market for pavers is 3.5 billion, 2.7 billion of which is east of the Mississippi River; BEP would occupy 4.3% of this market. The proposed product could be sold at or below market value to incentivize “green” pavers. Mr. Ittmann informed the committee that 5.5 million pavers would be needed to repave Camden Yards and Ravens Stadium parking lots and would create 30 acres of avoided runoff. “Green” pavers are also eligible for United States Greenbuild Leadership in Energy and Environmental Design (LEED) credits as they are a sustainable recycled product and can be made with locally sourced materials within 500 miles of the generating station. Mr. Ittmann added that standard Belden bricks were used to construct these two stadiums.

Environmental benefits associated with BEP products include: the loss of ignition (LOI) of the residual 5 to 15% organic carbon content found in Class F fly-ash adding inherent energy to the kiln thereby decreasing energy consumption, 600 British thermal units per pound (BTU/lb) compared to 1,200 BTU/lb for conventional brick plants; conservation of clay and shale resources; and alleviation of pressures for land storage of dredged material and fly-ash. BEP products are analyzed via TCLP and SPLP and are compared to the EPA's allowable limits; bricks made with 70:30 fly-ash/clay and 70:30 fly-ash/shale meet these requirements. Mr. Ittmann stated that a chemical analysis, particle distribution, and LOI table comparing Rocky Ridge Shale, Cushwa Shale, Possum Point fly-ash, and Cox Creek dredged material is provided in the handouts. BEP currently produces “cookies” through the addition of 15% water to the dry constituent materials and stated that BEP's engineer determined that Cox Creek material, though containing 20% water, could also be used with minimal drying. Due to the sulfur content of the material, emissions will require scrubbing, though the majority of BEP plants are already equipped with sulfur scrubbers.

Mr. Ittmann stated that Sparrows Point was identified as a potential location for a BEP plant due to easy access to dredged material and potential carbon footprint reduction by shipping through rail, barge, or ship. The new building will be equipped with state-of-the-art environmental controls and a testing kiln to determine workability and emissions.

Matt Rowe asked if BEP is capturing the heat produced from organics emissions to further run the process. Mr. Ittmann stated BEP captures the heat produced from combustion of the organic carbon for use in the tunnel kiln (*i.e.*, firing process). Mr. Petzrick asked if there are any brick-laying machines in the United States. Mr. Ittmann responded that there are some in the United States but stated that the state-of-the-art machines can only be found in Holland as their legislation dictates that, to prevent workplace injuries, only a certain meter of bricks can be laid horizontally by hand. Mr. Haid asked if there is a commercial

application for “green” bricks. Mr. Ittmann responded that “green” bricks are not being produced commercially despite multiple attempts to do so with various utilities. Ms. Prozo asked if BEP is working on building this new plant for dredged material or if dredged material can be incorporated at existing plants. Mr. Ittmann responded that, due to high LOI, dredged material would substantially slow existing plants and therefore incorporating dredged material in existing plants would be uneconomical. The new plant would be able to handle the LOI of the Cox Creek dredged material to produce an economical brick because of the patented VFT technology. Ms. Pei asked if BEP factories allow tours for educational purposes and asked where the nearest plant is located. Mr. Ittmann responded that BEP plants provide tours and the nearest factory is in Williamsport, MD. Mr. Myers asked if the LOI can be cogenerated. Mr. Ittmann responded that he is unable to answer at this time. Mr. Myers asked if a generator could be used to reduce lost energy. Mr. Ittmann responded that BEP does not use all the energy. Mr. Myers stated that BEP is already displacing half the gases and thereby displacing gas consumption. Mr. Ittmann added that BEP uses the heat from the kiln to heat the drying room where the bricks must be dried prior to firing.

Mr. Rowe asked if BEP can produce bricks with 100% dredged material. Mr. Ittmann responded that further study is needed to determine if a 100% dredged material brick can be produced. Mr. Ittmann reiterated it would not be economical to put dredged material into a conventional brick plant. If BEP uses their patented design of a variable firing tray, BEP will be able to utilize the LOI of the dredged material. Mr. Furbish asked if the IRC should help to further the permeable brick market as Maryland mandates that stormwater runoff be decreased. Mr. Ittmann responded that while the vertical brick business is still recovering from the 2008 economic recession, the paving business is at 10 to 12% growth per year. Mr. Furbish asked why the vertical brick market is not growing. Mr. Ittmann responded that the housing market has not recovered in terms of brick and stated that Belden is primarily an industrial company. Ms. Leitner for an estimated volume of dredged material needed to produce 150 million bricks per year. Mr. Ittmann responded that roughly 300,000 tons of material per year would be needed from any one source or a mixture. Mr. Ittmann stated that he can imagine a brick plant with 100,000 tons from each source (*i.e.*, dredged material, and fly ash).

Mr. Furbish asked if Mr. Ittmann could describe the standard extruded brick process. Mr. Ittmann stated that the BEP product is press molded. Mr. Furbish asked if bricks are extruded in commercial brick productions. The response was that about 95% of the market is extruded, therefore 5% is molded. Mr. Furbish asked if all of Belden's bricks are press molded. The response was that not all of Belden's bricks are press molded. Mr. Furbish asked if a shape other than a brick could be made, and the response was that it is possible. Mr. Furbish asked for a comparison between press molded and extruded bricks. Mr. Ittmann explained that pressed molded bricks meet all American Society for Testing and Materials (ASTM) specifications. Mr. Furbish asked if bricks made from dredged material would be molded or extruded. The response was that it is too soon to say. Mr. Ittmann added that dredged material had 24% clay and Holland only uses press molds due to the material's grain size. Clarification was requested on how extruded bricks and press molded bricks are different. Belden responded that the older method of brick creation is press molds and can be more expensive to make while extruded bricks are made faster, and the main difference is aesthetic.

Ms. Oldendorf asked what the next steps are for a brick pilot project using dredged material. Mr. Ittmann replied that funding is needed to ship 2 pallets of four 50-gallon drums of Cox Creek dredged material and Maryland fly-ash to the testing kiln for industrial-scale testing in Dijon, France. The pilot project would then make 250 bricks using a variety of dredged material, shale, and fly-ash mixes.

Ms. Pei asked if BEP has tried waste-to-energy ash to make bricks. Mr. Ittmann responded that BEP has not used waste-to-energy ash and stated that the material chemistry would need to be analyzed. Mr. Myers asked for an estimated cost for a pilot. Mr. Ittmann responded that industrial-scale testing would not exceed \$250,000. Mr. Pattison asked if a permeable paver made with dredged material would need to go through a certification process. Mr. Ittmann responded that Belden can certify pavers and stated that pavers must be fired (at circa 2000 degrees Fahrenheit) as they cannot set in ambient air like concrete. Once dried, the test bricks/pavers would be sent to a lab to be tested. The permeable paver itself is not permeable, but rather the pavers are lugged on four sides allowing them to be placed in such a fashion as to allow water to seep between the bricks.

Mr. Myers asked if Mr. Ittmann was aware of the Maryland Industrial Partnerships (MIPS) program for advancing new industrial processes. Mr. Ittmann responded that he had not as BEP is in its early stages. Ms. Fidler asked that the MIPS be discussed further. Mr. Myers responded that MIPS promotes the development and commercialization of products and processes through industry/university research partnerships. MIPS provides matching funds to help Maryland companies pay for the university research. Projects are initiated by the companies to meet their own research and development goals. Mr. Myers suggested that that the pilot project concentrate on making pavers in Maryland that will help jurisdictions meet stormwater standards. Mr. Rowe asked for the lifespan of permeable pavers as it pertains to permeability. Mr. Ittmann responded that the Dutch will remove the bricks and reset them once the sub-grade is regraded. Generally, this occurs once every 7 years. Additionally, the pavers are meant to be cleaned.

#### **Baltimore Development Corporation (BDC) and Innovative Use**

**Patrick Terranova, BDC**

Mr. Pattison stated that MDOT MPA likes to offer an opportunity for Committee members to provide updates from the organizations they represent. Therefore, Mr. Patrick Terranova will provide an overview of work performed by the Baltimore Development Corporation (BDC) and their role/interest in the innovative reuse of dredged material.

Mr. Terranova stated that BDC is a 501(c)(3) non-profit quasi-government organization that serves as the economic development agency for the City of Baltimore. Its core mission is to: 1) retain existing businesses and assist in job expansion, 2) attract new business opportunities, 3) increase job opportunities for city residents, 4) support cultural resources, and 5) expand the tax base. The core functions of the BDC are commercial and retail development; business retention, expansion and attraction; financial assistance; incentives and tax credits; and real estate disposition, asset management, and major projects.

Financial assistance provided by BDC includes loan programs and Façade Improvement Grants (FIGs). BDC manages loan funds that can be used for business expansion, equipment, working capital, and a variety of other uses; micro loans up to \$30,000 and larger loans up to approximately \$500,000. BDC also administers a multi-tiered façade grant program to help fund lighting, awnings, signage, and other exterior improvements: up to \$7,500 for city-wide grants, \$10,000 for Main Street Baltimore businesses and property owners, and \$15,000 for industrial properties. Since 2000, BDC has funded more than 1,000 façade projects and has awarded approximately \$4 million in grants. Mr. Terranova discussed a recently completed project using FIG at Irvin H. Hahn, a national manufacturer of police and fire department badges for over 100 years.

BDC provides incentives and tax credits via their Tax Increment Financing (TIF), Enterprise Zone and Focus Areas, Brownfields, and Foreign Trade Zone (FTZ) #74. Projects funded through TIF include Mondawmin Mall, West Baltimore, Clipper Mill, Harborview, Frankford Estates, Locust Point, Charles

Village, Belvedere Square, Westport, Harbor Point, Wexford/UMD BIOPark, and Port Covington. Mr. Terranova added that these projects are funded through State-issued bonds on the City's behalf and are primarily for infrastructure opportunities. Mr. Terranova stated that Port Covington is a recently approved 25-year investment project to develop an area equivalent to 45 city blocks. The BDC has connected MDOT MPA with Weller Development for possible opportunities for the innovative reuse of dredged material at Port Covington. Enterprise Zones and Focus Area tax credits encourage investment in targeted areas by aiding businesses to reduce real property and income tax bills. Businesses in Focus Areas also receive personal property tax credits. The BDC manages Maryland's Enterprise Zone program on behalf of the City of Baltimore. BDC manages the Brownfields grant program as well as the Brownfields Revolving Loan Fund. These funds assist businesses considering brownfield sites to overcome impediments to redevelopment. Eligible sites for Maryland's Voluntary Cleanup Program (VCP) can receive a 5 year-tax credit of 50 to 70% on the increase in city property tax following the completion of a redevelopment project. Since 1996, more than 40 Brownfields projects have been completed in Baltimore City, which have retained or created more than 7,000 jobs and leveraged more than \$500 million in new investment. Examples of Brownfields projects include Stadium Square, Clipper Mill, Union Wharf, and Canton Crossing. BDC also serves as the administrator of FTZ #74. An FTZ is a federally designated area located within the United States but considered "outside" of the United States Custom's territory for assessing and collecting import duties and taxes. FTZs provide economic incentives to companies importing or exporting international goods. FTZ #74's service area consists of more than 1,230 acres of designated non-contiguous industrial and warehouse space in Baltimore City and Anne Arundel, Baltimore, Harford, and Cecil Counties. Mr. Terranova added that discussions have been held to discuss Howard County's inclusion in FTZ #74.

Mr. Terranova stated that he works on Land Disposition, Asset Management, and major projects for the BDC. The BDC manages Requests for Proposals (RFPs) for lease or sale of city properties as well as contracts for various civic services. The RFP process is as follows: 1) Draft and issue the RFP with specific guidelines and criteria, 2) Conduct a detailed analysis of the proposals, 3) Present projects to BDC's Project Review and Oversight Committee, 4) Conduct further analysis or obtain more information as needed, 5) Present project to BDC's full Board of Directors for recommendation to the Mayor, 6) Negotiate final contract after approval from the Mayor, 7) Assist developers with moving the project forward. Most projects are new construction or redevelopment, which could both incorporate dredged material as fill. BDC provides common area maintenance, city agency coordinated services, and some leases of city property in industrial parks: Seton Business Park, Holabird Business Park, Carroll-Camden Industrial Area, Park Circle Business Park, and Crossroads Industrial Park. Major long-term projects currently being studied include the Municipal Broadband Authority, Baltimore Convention Center Expansion, Baltimore Arena Renovation or Relocation, and Pimlico Racetrack Renovation.

Mr. Terranova discussed BDC connection to the IRC. Dredging supports the Port of Baltimore, which is a critical employer in the City. Port users and surrounding industrial employers utilize BDC assistance, as do those that depend on their activity. The business community can help provide potential solutions for dredged material management and innovative reuse. City properties, major projects, and infrastructure investments present opportunities.

Ms. Fidler thanked Mr. Petzrick and Mr. Terranova for their efforts in connecting the IRC to projects that can further the innovative reuse of dredged material.

## **Group Discussion**

**All**



Mr. Furbish stated that according to the Internal Revenue Code, an organization that utilizes large quantities of waste materials can be issued tax exempt bonds for up to 25 years. Mr. Haid asked for an update on the RFP for the innovative reuse of Cox Creek dredged material. Ms. Keene responded that the proposals are currently being reviewed.

**Upcoming Meetings**

**Steve Pattison, Facilitator**

Mr. Pattison informed the Committee that the next IRC meeting will be held on August 28, 2018.

*Meeting adjourned at 6:50pm*