



Annual Review 2022

THE NEXT FRONTIER

In 2022, the Maryland Port Administration (MPA) focused on novel technologies for a more sustainable Port, while engaging stakeholders and local communities to ensure mutually beneficial outcomes for all Marylanders. The goals and actions derive from MPA's mission to stimulate waterborne commerce through the ports in Maryland with enhanced stewardship of our natural resources and the health and well-being of the Chesapeake Bay watershed and its communities.

The Port of Baltimore (Port) is one of only four East Coast ports with 50-foot channels. The Dredged Material Management Program (DMMP) allowed for improvements that added a second 50-foot berth to comport two of the world's largest vessels to be serviced simultaneously. This effort, combined with additional land-based improvements, will increase annual container capacity handling from the current 9,000 to 14,000 TEUs (twenty-foot equivalent units) by 2027. As a result, several shipping companies have announced new services to Baltimore.

The Mid-Chesapeake Bay Ecosystem Restoration Project, also known as Mid-Bay Project, received \$84 million in federal construction funding on behalf of the US Army Corps of Engineers (USACE) for Infrastructure Investment and Jobs Act supplemental work plans to advance the project. Additionally, seven Research and Development Innovative Reuse (IR) projects are underway to allow MPA to identify high-volume, sustainable reuse applications that can support long-term strategic planning and facilitate making large-scale innovative reuse a reality. The Maryland Board of Public Works (BPW) recently approved MPA's acquisition of the property adjacent to the Cox Creek DMCF (Dredge Material Containment Facility) for future capacity recovery and IR (Innovative Reuse) projects.

With the aim of decreasing its greenhouse gas (GHG) emissions, the Port started utilizing four additional Neo-Panamax container cranes to serve the new second deep-water berth. The supersized, fully electric cranes avoid the equivalent of 985 metric tons of CO₂ per year, which is comparable to 96,758 gallons of diesel consumed or over 1 million pounds of coal burned. The equipment upgrade effort is part of a \$166 million investment made by Ports America Chesapeake (PAC) at the Seagirt Marine Terminal.

As a major economic force in Maryland, the Port is responsible for about 15,300 direct jobs, nearly 22,000 induced and indirect jobs, and almost 102,000 related jobs to Port's cargo, totaling just about 140,000 indirect jobs linked to Port activities. The Port is responsible for nearly \$3.3 billion in personal income to Marylanders, \$2.6 billion in Maryland business revenues, and \$395 million in state and local tax revenues.



Mid-Chesapeake Bay Island Ecosystem Restoration Project



ECO Port 2022, published by the Maryland Port Administration (MPA), describes the projects and programs that took place in 2022 to support a thriving economy, environmental stewardship, and community partnerships. We thank the many private sector businesses, government leaders, communities and individual citizens who have helped make these achievements a reality. www.marylandports.com/ecoport

Dredged Material Management

The Dredged Material Management Program (DMMP) continues to provide innovative solutions while delivering on the mission to maintain the Port's 50-foot-deep channel system. Capitalizing on the substantial investments made over the past several years, numerous multi-year planning efforts have shown substantial progress in 2022.

The USACE Baltimore District and MDOT signed a Project Partnership Agreement for the \$4 billion Mid-Chesapeake Bay Ecosystem



Base Dike Widening at Cox Creek DMCF. Photo by MPA

Restoration Project (Mid-Bay Project), for the restoration of James Island and Barren Island, beneficially re-using material dredged from the Port of Baltimore. "The Mid-Bay Project is the next frontier for coastal and island restoration. It will give us dredged sediment placement capacity for 30 years and strengthen the shoreline of Dorchester County," said Acting Director of Harbor Development Holly Miller. The USACE also awarded the first contract for construction at Barren Island as part of the Mid-Bay Project. Barren Island Phase 1 is anticipated to begin in 2023 and includes the construction of a majority of the sills and breakwaters around the island.

Regarding improvements to Dredged Material Containment Facilities (DMCF) that happened in 2022, the base dike widening began at the Masonville DMCF. Eventually, MPA plans to raise the dike to +42'. Also, construction of the waterside dike to elevation +44' was completed at the Cox Creek DMCF in order to continue receiving dredged material as the expansion to +60' is underway.

Wildlife

The use of dredged material in the creation of habitat is especially beneficial for birds, as well as other wildlife. For instance, the Cox Creek DMCF briefly hosted the first slaty-backed gull ever confirmed in Maryland, a foreign visitor native to Northern Pacific regions. It was later spotted nearby at the Quarantine Road Landfill and at the Curtis Creek Drawbridge. The MPA's dredged material sites hosted many rare birds this year, such as a Buff-breasted Sandpiper at Masonville and a Franklin's Gull at Cox Creek, while the restored habitat at the sites hosted rarities like Nelson's Sparrows in the Swan Creek Wetlands at Cox Creek and the Upland Trail at Masonville.

A colony of estimated 40-50 pairs of common terns, a state-endangered breeding species, nested on the offshore barge at Masonville Cove for the past several years and represents the only known nesting colony in Maryland north of the Chesapeake Bay Bridge. A Barn Owl's nest was also found, celebrated, and observed at Poplar Island, as the species has a declining population.

The 2022 Masonville Cove BioBlitz was particularly successful. The annual event, conducted since 2014, has revealed that there is a large number of aquatic turtles living in the cove and a fairly diverse number of species. An adult, female red-eared slider (*Trachemys scripta elegans*), was one of 25 specimens found during the BioBlitz. This non-native, central US species were widely sold in "dime stores" in the 60s and is now considered naturalized. An eastern worm snake was also recorded at Masonville Cove for the first time.



*Barn owl
Photo by Maryland Park Service*

Diesel & Greenhouse Gas Emission Reduction & Rail Modernization

The Port was awarded a \$1.8 million grant from the U.S. Environmental Protection Agency (EPA) for their Diesel Equipment Upgrade Program. The grant will help MPA replace older cargo-handling equipment and dray trucks with more efficient models. The funds from the Diesel Emission Reduction Act (DERA) will replace seven cargo handling units, one mobile welding unit and three heavy-duty dray trucks, which will be the first zero-emission (ZE) dray trucks to serve the Port on a regular basis.

In collaboration with RoadOne and IKEA, the Port launched a one-month test of a Nikola Motor ZE dray truck to transport containers between the Port and the IKEA distribution facility in Perryville, MD. With support from the aforementioned DERA award, RoadOne will be purchasing two new ZE dray trucks in 2023 for dedicated haulage of containerized cargo shipments on behalf of IKEA.

Keen Transportation, a subsidiary of Wallenius Wilhelmsen, is purchasing the other ZE dry truck which is also expected to be delivered in 2023.

The expansion of Baltimore's Howard Street tunnel will provide seamless double-stack capacity from Maine to Florida while sponsoring reductions in greenhouse gas emissions in the region. Once completed, the tunnel expansion will allow for the transit of double-stacked container rail cars out of the Port, which will reduce fuel consumption by about 137 million gallons and alleviate congestion along the I-95 corridor. The project is also expected to generate approximately 14,000 new jobs in the Baltimore region.

The Port was awarded a grant totaling \$15.6 million from the Federal Railroad Administration Consolidated Rail and Infrastructure Safety Improvements (CRISI) Program for a Rail Capacity Modernization Project. The funds will be used to build four new rail tracks adding 17,670 track feet and two crane rail beams, totaling 7,000 linear feet within the Seagirt Marine Terminal. The project will boost job creation while significantly improving air quality in areas around the Port.



*Nikola Motor ZE dry truck pilot test.
Photo by Bill McAllen, Bill McAllen Photography*

Furthering Sustainability

MPA has been awarded a \$150,000 Federal Emergency Management Administration (FEMA) grant under its Building Resilient Infrastructure and Communities Program to develop a comprehensive flood and storm vulnerability assessment and improve overall coastal resiliency at its marine terminals. The study will also encompass the communities adjacent to Port terminals.

A major step in protecting Masonville Cove was achieved with the approval of the Masonville Cove Conservation Easement by the BPW in April 2022.

The easement, entered by MPA with the Maryland Environmental Trust and the non-profit organization Baltimore Green Space, is intended to prevent Masonville Cove from being used for any purposes except for environmental education, preservation of open space and the protection of natural habitat.



*Masonville Cove
Photo by Tim Carney/Maryland Environmental Service*

Awards

- The American Association of Port of Authorities recognized the Port of Baltimore for its Environmental Education E-learning (E3) portal, an environmental education and outreach tool that has successfully brought the Port closer to local communities, while inspiring the next generations of scientists and environmentalists.

Developed by the Port's Environmental Education Team for lessons, programs, and making activities more accessible to the community, the E3 portal also informs on the Port's activities, its mitigation and habitat restoration projects, and the benefits of innovative use of dredged material.

- MDOT honored MPA's Program Manager for Education & Stakeholder Engagement Katrina Jones with the Environmental Hero Award, for her efforts and lasting contributions to environmental stewardship, leadership, vision, and motivation directing community engagement and environmental education programs.

Sponsoring Education

The Port's Environmental Education Team provided the first classroom outreach program in both English and Spanish. The team adapted the "Diamonds in the Bay" initiative which aims to increase accessibility within the environmental field, ensuring that every student has access to important science education.

The Maryland Association of Outdoor and Environmental Education (MAEOE) held the annual Maryland Green Schools Youth Summit at Sandy Point State Park, where nearly 600 students participated in leadership activities, learned about the range of green careers offered through MPA, and the terrapin habitat at Poplar Island through the Diamond in the Sand activity on the beach.

Masonville Cove was honored to be one of the host sites for the 2022 "National Celebrate Trails Day", an annual spring celebration of America's trails created by Rails-to-Trails Conservancy in 2013. This national event is intended to raise awareness and encourage people across the country to enjoy our nation's beautiful trails and trail systems. There are approximately three miles of trails at Masonville Cove, a free and fulfilling family-friendly experience.

The Masonville Cove Environmental Education Campus, managed by the Living Classrooms Foundation (LCF), provides under-resourced communities with environmental education, stewardship activities, and academic enrichment. With the support of external donors, the 2022 LCF BEESMART Summer Program (Baltimore Environmental Education Summer Math and Reading Trailblazers) was a major success. Serving 3rd through 5th graders, the program uses STEM (Science, Technology, Engineering, and Math) subjects to increase reading levels, ultimately preventing summer learning loss.

Ten lucky youths from around the Baltimore area spent a week learning the basics of birding and Maryland's unique habitats created at the dredged material containment sites during the Port's first Youth Birding Week. The seven- to 10-year-olds learned how to use binoculars, birding guides, and about the different habitats needed for specific birds.



*Ten youths participate in the first POB Youth Birding Week.
Photo by Katrina Jones/MPA*

Enabling Connections & Recreation

The 3rd Annual Hart-Miller Island Run took place in October 2022, with approximately 200 visitors and 109 race competitors. The event was possible thanks to partnerships with the Maryland Environmental Service (MES), the Maryland Park Service, Charm City Run, MPA, Friends of Hart-Miller Island, Friends of Maryland State Parks, and awesome volunteers from the North Point - Edgemere Volunteer Fire Department.



*The weather and boating conditions were perfect, which was a major factor in the success of the event.
Photo by Robin L. Reed/MD-DNR*

Although Masonville Cove is the first Urban Wildlife Refuge Partnership, as well as an educational and recreational community hub, access to the site can be challenging. In order to mitigate the issue, a Memorandum of Agreement for the Masonville Cove Connector was signed by MPA, Federal Highway Administration Eastern Federal Lands Highway Division, National Park Service, and the U.S. Fish and Wildlife Service (USFWS) in July of 2022. The Connector is intended to link local communities to the beautiful Masonville Cove. Walkers, joggers, and bicyclists will benefit from the effort, and the project will help fulfill MPA's commitment to South Baltimore communities to restore safe and equitable access to the waterfront as part of the construction of the Masonville DMCF.

The Baltimore Port Alliance (BPA) Environmental Committee united forces with the New Broadway East Community Association and community volunteers to clean out the raised vegetable beds of the Duncan Street Miracle Garden. Located in East Baltimore, the Duncan Street Miracle Garden is used by gardeners from various Baltimore neighborhoods. Picnic tables, painted birdhouses and colorful flowers also make this garden a beautiful place for relaxation, recreation, work, and community gatherings. The food produced there is often donated to churches and soup kitchens.



*Members of the Baltimore Port Alliance and the New Broadway East Community Association volunteered at the Duncan Street Community Garden.
Photo by Dan Spack, EcoLogix Group*

Sharing Is Caring

Wharf logs, used at marine terminals as curb stops to increase safety for cargo handling equipment moving around the water's edge, must be replaced over time. Instead of disposal, the State of Maryland donated the wharf logs to the Baltimore Port Alliance, who worked with community organizations that have need for such materials. The Greater Baybrook Alliance (GBA) had an interest in reducing illegal dumping at Farring-Baybrook Park in Brooklyn & Curtis Bay and determined the wharf logs would be ideal as a deterrent.



*Used wharf logs installed along the park's edge.
Photo by Dan Spack/EcoLogix Group*

Engaging with Stakeholders & Sharing Information

The BPA hosted another successful Hiring & Career Expo at the Community College of Baltimore County Dundalk Campus, featuring exhibitors from both public and private sectors. The job seekers who joined the event had the chance to learn about available maritime, transportation, and logistics careers in the Baltimore area. The event was a great opportunity for companies to showcase their brand and culture within the industry, while attracting talent looking for meaningful job opportunities.



A group of Baltimore City high school seniors who have been trained in relevant trades through career readiness pathways attended the event. Photo by BPA

The May 2022 meeting of the Cox Creek Citizens Oversight Committee (CC COC) included a site visit to the Cox Creek DMCF, where attendees toured the DMCF complex and the Cox Creek expansion project, which raised the dikes from an elevation of 36 feet to 60 feet. The CC COC oversees the implementation of the DMCF project and provides advice to MPA on the expansion and operation of the facility and the potential impacts on nearby communities. The Cox Creek DMCF also hosted an Open House in October, where 120 attendees could visit 15 informational and interactive stations from partner organizations. The interactive stations included fish, terrapins, van tours of the expanding Cox Creek DMCF site, and both guided and self-guided birding.

The Turner Station Conservation Team, MPA and Chesapeake Bay Foundation hosted an open house for the Fleming Park Restoration Project at the Fleming Senior Center in the historic neighborhood of Turner Station. The event provided an update on the preliminary design of dredged material reuse for wetland creation and shoreline restoration planned to enhance the park's resiliency and ecologic benefits, as well as improve public access.

Noteworthy Visits

Department of the Interior Secretary Deb Haaland visited Masonville Cove as part of her Northeast tour to discuss investments in infrastructure resilience and ecosystem restoration. During the visit, Secretary Haaland and Baltimore Mayor Brandon Scott met Benjamin Franklin High School at Masonville Cove students and participated in water testing and shoreline cleanup.

Community members gathered at Masonville Cove in September 2022 to celebrate the National Public Lands Day with a visit from U.S. Fish and Wildlife Service (USFWS) Director Martha Williams.

Families had the opportunity to recreate at the site, which includes 70 acres of water and 54 acres of restored wetlands and nature trails in the heart of Baltimore City. The attendees engaged in fun activities such as kayaking, bird banding, monarch butterfly tagging, and tours to the Masonville DMCF. "With 80 percent of Americans living in cities, these programs and places encourage new generations to connect to the land, water, and wildlife. Building connections to nature and wildlife also enhances the social and economic vitality of urban communities," said USFWS Director Martha Williams.



USFWS Director Martha Williams engages with stakeholders during a visit to Masonville Cove.

Photo by Katrina Jones/MPA



Among the 120 total attendees at the Open House, 35 were birders who attended the morning guided birding tour, 21 were children under the age of 18, and 44 were first-time visitors! Photo by Dallas Henson/MES & Danielle Fisher/MPA

For more information, visit the MPA website at mpa.maryland.gov, where you can sign up for free subscriptions to the ECO Port Newsletter and the Port of Baltimore Magazine.

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