

**Maryland Port Commission Annual Report
FY 2023
(Transportation Article § 6-201.2(c))**

A Report to the Maryland General Assembly

**Maryland Department of Transportation
Maryland Port Administration**

**MSAR# 10431
January 2024**

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND PORT ADMINISTRATION

Report to the Maryland General Assembly



Maryland Port Commission
Annual Report for Fiscal Year 2023
(Transportation Article, §6-201.2 (c))

January 2024

Purpose

The Maryland Port Commission Annual Report for Fiscal Year 2023 was prepared in response to Transportation Article, §6-201.2 (c), which requires:

- “(c)(1) Subject to § 2-1257 of the State Government Article, the Commission shall report by January 15 of each year to the General Assembly on the activities of the Port Commission during the previous year.*
- (2) The report shall include a review of the port’s competitive position during the previous year and any recommendations of the Commission for future changes in legislation, capital funding, or operational flexibility for consideration by the General Assembly.*
- (3) The report shall also include any substantive changes in its regulations for procurement and personnel.”*
- (4) (i) The report shall also describe the vulnerability assessment information concerning public terminals submitted by the Administration to the United States Coast Guard under the federal Maritime Transportation Security Act of 2002.*

(ii) With respect to any vulnerability concerns reported by the Administration to the United States Coast Guard, the information reported under this paragraph:

- 1. Shall provide an estimate of the cost of addressing the vulnerability concerns;*
- 2. Shall state the amount of any grants or other federal funds received or requested by the Administration to address the vulnerability concerns and shall include information on the status of any pending requests for federal funds; and*
- 3. May not include the specific details of any vulnerability concerns, the disclosure of which could compromise, in any way, transportation security.*

Maryland Port Commission

Paul J. Wiedefeld, Transportation Secretary

Maryland Department of Transportation
Chair of the Maryland Port Commission



Ms. Brenda Dandy



Ms. Karenthia Barber



Mr. M. Scott Webb



Mr. Sandy Roberts



Mr. David Richardson



Mr. Edward McDonald



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Executive Summary

The Helen Delich Bentley Port of Baltimore remains a strong economic driver for the State of Maryland. Despite the myriad of challenges caused by the supply chain crisis and changes to national and global economies and to the maritime industry, the Maryland Port Commission (MPC) is proud to report that Maryland's Port of Baltimore is strong. The MPC expresses its sincere appreciation for the hard work, perseverance, and professionalism of those who lead and work at the Maryland Port Administration (MPA), as well as the many important private stakeholders and governmental partners who we continue to work with in the changing landscape.

MPA saw a record amount of general cargo move through its State-owned terminals in fiscal year (FY) 2023. The 11.6 million tons of general cargo was 7% higher than FY 2022. In calendar year (CY) 2022¹, the public and private terminals of the Port handled a combined 43.3 million tons of foreign cargo with a total value of \$74.3 billion, our best year ever in terms of total value. The Port continues to be ranked 1st in the nation for automobiles, roll-on/roll-off (RoRo) equipment, and imported gypsum. While total general cargo numbers for the Port of Baltimore's terminals, both public and private, were up, bulk cargos such as salt, slag, and coal decreased. Coal export volumes were affected by the temporary shutdown of the CSX coal pier in 2022. Bulk cargos are not handled at the MPA state-owned terminals, but they typically comprise approximately 60% of the total foreign cargo that moves through the entire Port of Baltimore.

Baltimore continues to be well-positioned to attract new business in Maryland. As global trade and logistics patterns continue to evolve, the MPA is ready to take advantage of ever-changing market dynamics and is aggressively promoting the Maryland Port of Baltimore's many strategic advantages.

The MPA continues to collaborate with public sector partners and stakeholders at the federal, State, and local levels on a variety of topics, including expanded rail capacity, dredging, dredged material management, harbor safety, security, transportation policies, climate resilience, and inland transportation systems. Community outreach activities are also a continued focus of the MPA, such as presentations to community organizations, Port tours, partnerships for environmental mitigation, and educational opportunities for nearby communities, students, and educators.

While the Port's strategic advantages are many, the MPC acknowledges several ongoing challenges and long-term uncertainties that could impact the Port's business opportunities and competitiveness.

- The war in Ukraine continues to weigh down the global economy – especially in Europe. Energy prices are increasing as Europe looks to source its energy needs away from Russia.
- The overall state of the United States economy has been showing mixed signs. There are indications that consumer demand is waning due to higher interest rates and inflation.
- While the global shortage of microchips has abated, there are still some supply-chain issues within the automotive industry. In addition, higher interest rates along with higher prices for automobiles have dampened new auto sales.

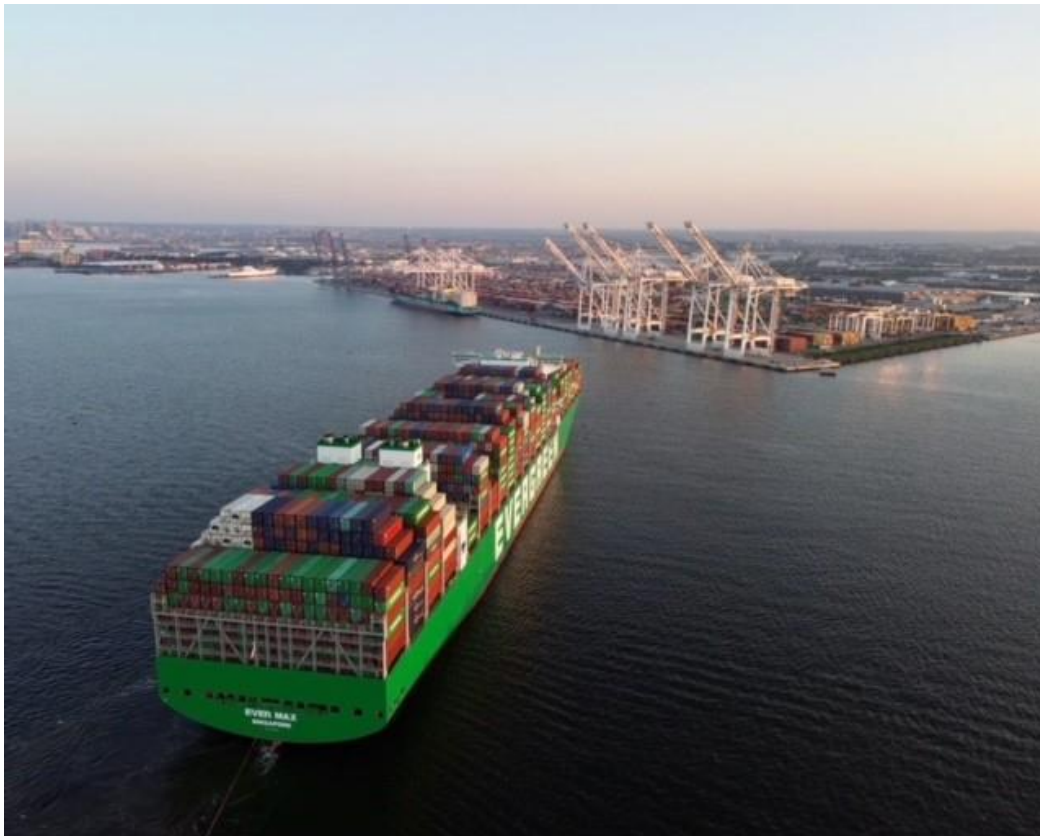
¹ Information for MPA's public terminals is provided by fiscal year, but POB information is reported using the latest full calendar year because POB statistics combine data for the public and private marine terminals that use different reporting timeframes.

- Of particular note, there is a nationwide shortage of truck drivers that has exacerbated supply chain challenges and impacted the transportation of materials, supplies, and equipment by truck within the United States.

The MPC also recognizes several long-term issues that include:

- Continued capital funding investments in system preservation and berth reconstruction projects that are vital to the Port's long-term growth, competitiveness, and sustainability, while also increasing facility resilience to cope with a changing climate.
- Ensuring the successful growth of the Port's dredged material management program.
- Supporting key infrastructure projects critical to the Port's long-term competitiveness, including partnerships to add high-cube double-stack rail capacity via the Howard Street Tunnel, additional 50-foot-deep berth spaces, an enhanced loop channel at Seagirt Marine Terminal, and the Mid-Chesapeake Bay Island Ecosystem Restoration Project.
- Operating the MPA terminals and facilities in an environmentally responsible manner that supports neighbors, customers, and port business.

The MPC is confident in the commitment and ability of the MPA to continue working diligently with all its partners and stakeholders to address and overcome these challenges, many of which remain tied directly to the competitiveness of the Port within a rapidly changing global environment.



**Seagirt Marine Terminal welcomes the Evergreen Ever Max on August 19, 2023.
The Ever Max is the largest container vessel to ever call the Port of Baltimore.**

Major Accomplishments in FY 2023

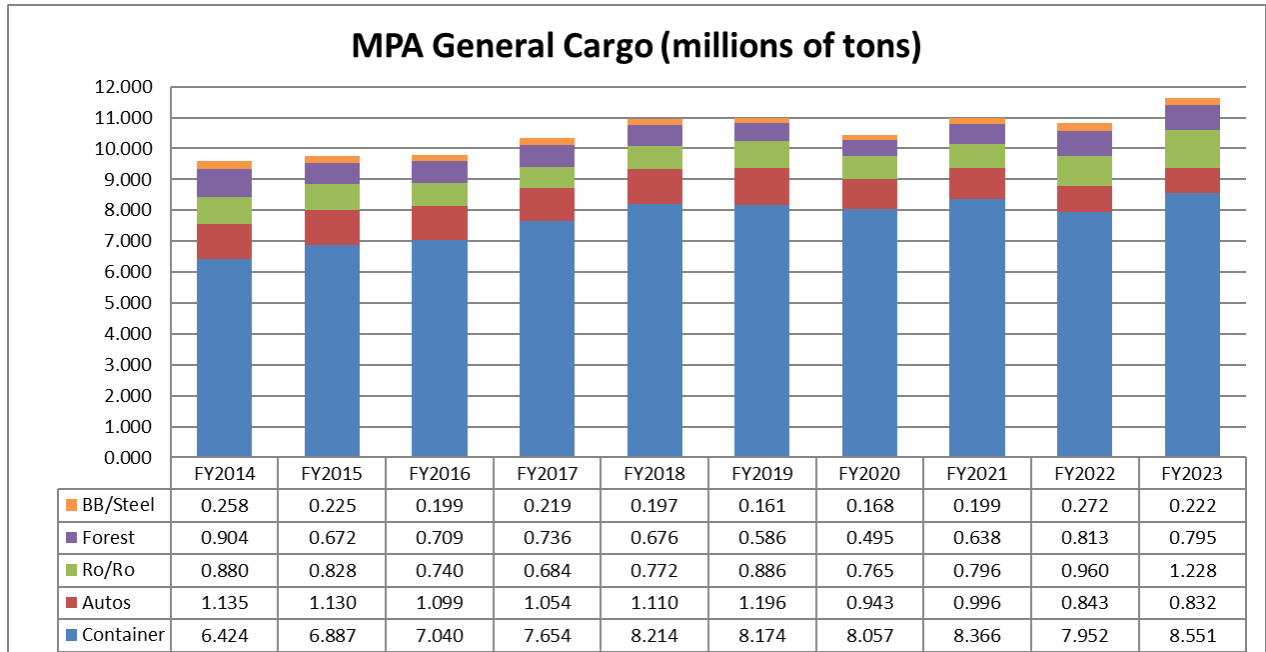
- **A Record Year** – The Port of Baltimore handled a record \$74.3 billion worth of foreign cargo in 2022 and established other new marks despite lingering worldwide supply chain issues and pandemic impacts to the international maritime shipping industry. The Port’s state-owned public marine terminals managed by the MPA, along with its private terminals, handled a total of 43.3 million tons of cargo last year, nearly reaching the record of 44.2 million tons in 2019. Other strong figures in 2022 included: 11.6 million general cargo tons through MPA terminals; 793,695 imported paper tons; 765,019 imported Roll on/Roll off (farm and construction machinery) tons; and 537,103 imported Twenty-foot Equivalent Unit (TEU) containers. The Port’s public and private terminals also handled 750,163 cars and light trucks in 2022. Baltimore has handled more cars and light trucks than any other U.S. port for 12 consecutive years.
- **Construction continues on the Howard Street Tunnel Project** – After breaking ground on the long-awaited Howard Street Tunnel expansion project in November 2021, CSX continued to advance construction activities throughout FY2023. Four of the ten construction packages were in active construction during FY2023. Design and permitting for the other 6 packages continued in FY2023 so that construction may begin on those packages in FY2024. Construction is scheduled to be completed in CY 2026.
- **ZIM Increases Service to Baltimore** – Governor Moore announced that ZIM Shipping Lines, one of the top ocean carrier container companies in the world and major container shipping customer at Maryland’s Port of Baltimore, would double its service to the state, increasing its e-commerce Baltimore Express service frequency from bi-weekly to weekly. ZIM also increased the size of its ships coming into the Port by nearly 50 percent—first utilizing 6,000 twenty-foot equivalent unit container vessels, and eventually 8,000 twenty-foot equivalent unit container ships.
- **#1 RoRo Port in the U.S. Completes New Berth Project** – Dundalk Marine Terminal Berth 3 was reconstructed with a wider deck to better accommodate the larger and heavier pieces of farm and construction machinery cargo such as combines, harvesters, and other types of heavy equipment that Baltimore regularly handles. Other Dundalk berths will also be similarly reconstructed. The berth reconstruction also addresses predicted climate change impacts by including storm drain improvements and the first sea curb constructed at Dundalk. The sea curb is a short seawall that protects against sea level rise and storm surge. Temporary sea curbs will be added to the other berths and will be replaced with permanent ones when each berth is reconstructed. The Port of Baltimore handles more farm and construction machinery than any other U.S. port.
- **Seagirt Loop Deepening Feasibility Study Completed** – The Seagirt Loop Feasibility Study, a 3-year feasibility study between the MPA and the U.S. Army Corps of Engineers (USACE), concluded in June 2023, three months ahead of schedule, with the signing of a Chief’s Report by the USACE Commanding General and Chief of Engineers. The report recommended improvements to the Seagirt Loop Channel that included deepening to 50-feet and widening channel bends. These improvements, once constructed, will improve navigational efficiencies to help meet demand for future capacity including efficient handling of increased container volume at Seagirt Marine Terminal as well as faster and safer movement of vessels transiting the channel.

- **Norwegian Cruise Line Returns to Baltimore** – Norwegian Cruise Line announced they would begin a fall and winter schedule in 2023 from the Port of Baltimore. Sailings will travel to New England/Canada and the Bahamas and Dominican Republic. Norwegian has also committed to return to the Port of Baltimore in 2024 in the fall. Norwegian is one of the top cruise lines in the world and joins other world-renown cruise lines Royal Caribbean and Carnival in offering sailings from Baltimore.
- **Top Security Grade 14 Consecutive Years and Running** – The U.S. Coast Guard awarded the MPA a top security assessment for the 14th consecutive year. The Coast Guard’s annual inspection of the state-owned, public marine terminal facilities included a detailed review of all security protocols and procedures with a specific focus on cyber security. With concerns about cyber security becoming more prevalent around the world, the review focused on cyber safety and measures to prevent cyber issues. The MPA has implemented strong cyber security initiatives and utilizes closed-circuit television and heightened access control technologies at the public terminals.
- **Additional Port Security Grant Funding** – In July 2022, the MPA was awarded a \$553,000 grant under the Federal Emergency Management Agency’s Port Security Grant Program. The funding is going towards the purchase of mobile TWIC readers, a comprehensive facility security assessment and security plan, software cybersecurity remediation and assessment services.
- **Mid-Bay Underway** – The \$4.4 billion Mid-Chesapeake Bay Ecosystem Restoration Project (Mid-Bay), a top priority for the Port and Maryland’s Congressional Delegation, achieved several major milestones in FY 2023 that included execution of a Project Partnership Agreement between MPA and USACE, award of the first construction contract, and initiation of construction activities for the restoration at Barren Island. Barren Island will restore approximately 72 acres of wetlands. James Island is expected to begin construction in 2025 and will restore 2072 acres of remote island habitat and accommodate an estimated 90 million to 95 million cubic yards of dredged sediment, providing at least 30 years of capacity.
- **FEMA Grant to Study Resilient Infrastructure** – The MPA received a \$150,000 Federal Emergency Management Administration (FEMA) grant under its Building Resilient Infrastructure and Communities Program to develop a thorough flood and storm vulnerability assessment and improve overall coastal resiliencies at the six, state-owned, public marine terminals of Port of Baltimore. The assessment also includes the World Trade Center Baltimore which houses the MPA’s executive offices as well as adjacent communities to the public terminals in Baltimore City and Baltimore and Anne Arundel counties. The study includes detailed reviews of all buildings and structures at the state-owned terminals; piers, berths, and cranes; roadways and rail; storm drains and stormwater infrastructure; wastewater and waste management infrastructure; telecommunications, electrical, lighting, and security systems.
- **Innovative Reuse of Dredged Material Makes Major Strides** – Implementation of the 2020 Innovative Reuse and Beneficial Use Strategy is well underway. Five of the seven awarded Research and Development Innovative Reuse projects have been completed. These projects will allow the MPA to identify high-volume, sustainable reuse applications to support long-term strategic planning and identify the critical steps to making large-scale innovative reuse a reality at Maryland’s Port of Baltimore. Additionally, in December 2022 the MPA acquired the property adjacent to the Cox Creek Dredged Material Containment Facility, which is a key component in advancing large-scale innovative reuse.

- **Continuing to Engage Port Communities and Grow Meaningful Partnerships** – The MPA Stakeholder Engagement, Education and Community Outreach efforts continue to reach new partners and support the Port’s neighboring communities. MPA continued to demonstrate swift adaptability and flexibility during the phased re-opening of sites and facilities following the COVID-19 pandemic by continuing to offer virtual or hybrid engagement opportunities and outside activities. Maintaining strong connections with stakeholders, citizens, and partners remained a top priority throughout FY 2023. MPA’s outreach and education programs provide widespread community engagement through meetings, project site tours, exhibits at community events, and onsite, in-classroom, and virtual environmental education. Staff continued to adapt in-person lessons for virtual settings to provide innovative, dynamic educational opportunities, and new virtual resources were developed to enhance the education portal, which houses a library of digital educational materials.
- **Bald Eagles Return** – The pair of bald eagles that have created a home at the MPA’s Masonville Cove Environmental Education campus in Baltimore returned and became parents of three new eaglets. 2023 was the fifth consecutive year that the eagles returned to nest at Masonville and the fourth year since 2019 that the eagle pair has successfully hatched young. Masonville Cove is one of Maryland’s great environment restoration stories. Formerly the home of a shipbreaking operation, the MPA led an effort that removed more than 61,000 tons of trash and debris that dated back to the Great Baltimore Fire of 1904. Today Masonville is home to birdwatching, walking trails, a non-motorized boat ramp, and an education center that hosts more than 2,000 students and adults annually.
- **Urban Wildlife Refuge Partnership Continues** – On September 24, 2022, the U.S. Fish and Wildlife Service Director Martha Williams visited Masonville Cove to celebrate National Public Lands Day hosted by the Masonville Cove partnership where community members also had the opportunity to explore the site and engage in outdoor recreational activities.
- **Building Human Resources Autonomy Within MPA** – In 2017, MPA’s Office of Human Resources was transferred to MDOT as part of a pilot evaluating whether all MDOT modal human resource departments should be consolidated at MDOT. Unfortunately, this pilot was found to be not conducive to the needs of the agency and later. In 2022, MPA’s request to reestablish the office was approved. MPA has established a new organizational structure for the Office of Human Resources with a strong focus on cross functionality, management collaboration, and organizational development.

MPA Cargo Activity in FY 2023

The MPA terminals handled 11.6 million tons of general cargo in FY 2023, a 7.1% increase over FY 2022. In FY 2023, the MPA continued to see mixed results within strategic commodities. Container volumes set a record with 1.1 million TEUs handled at MPA facilities. Roll-on/Roll-off cargo also set a record with 1.2 million tons. Both automobiles and forest products saw minor decreases.

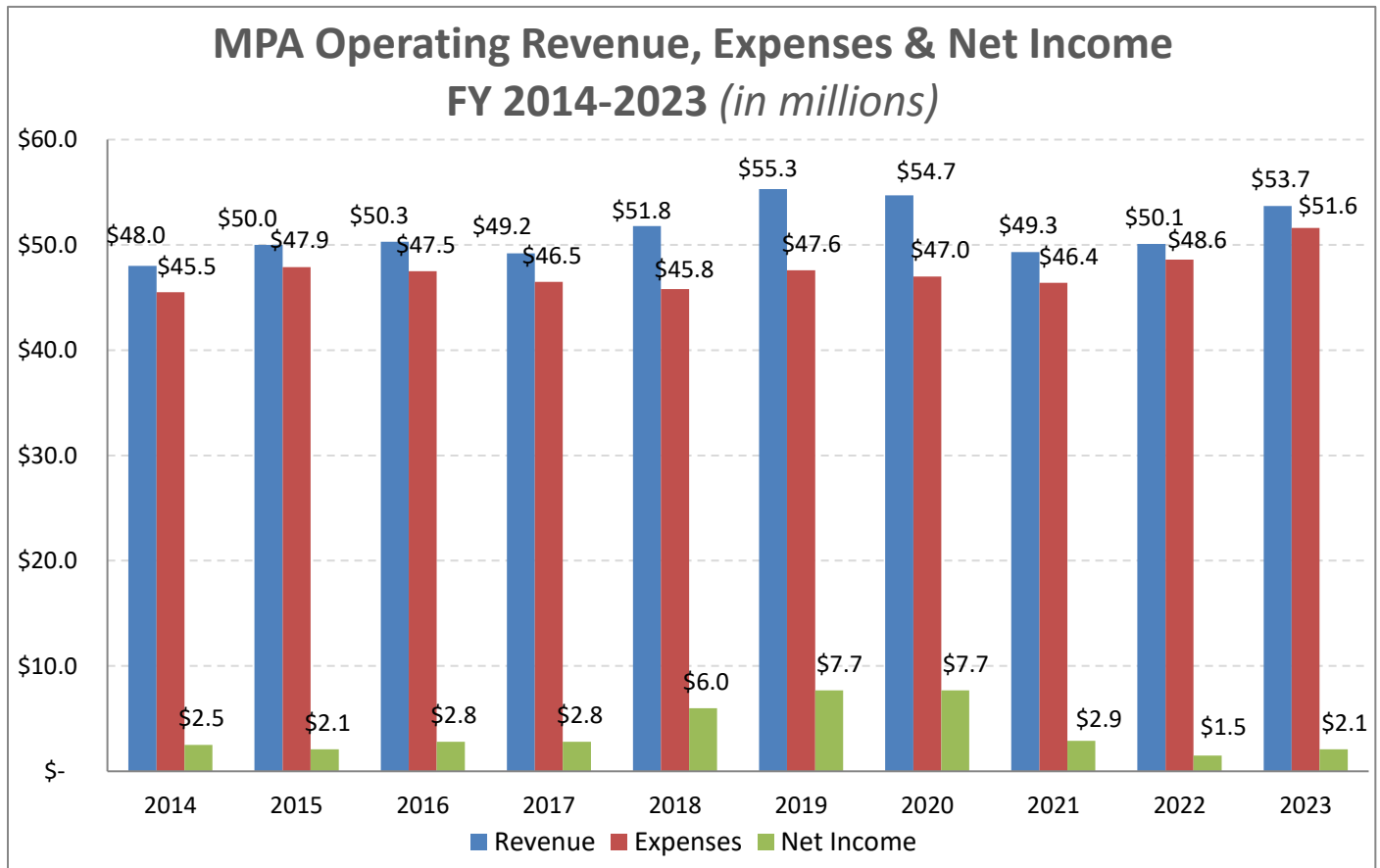


Internal MPA Data

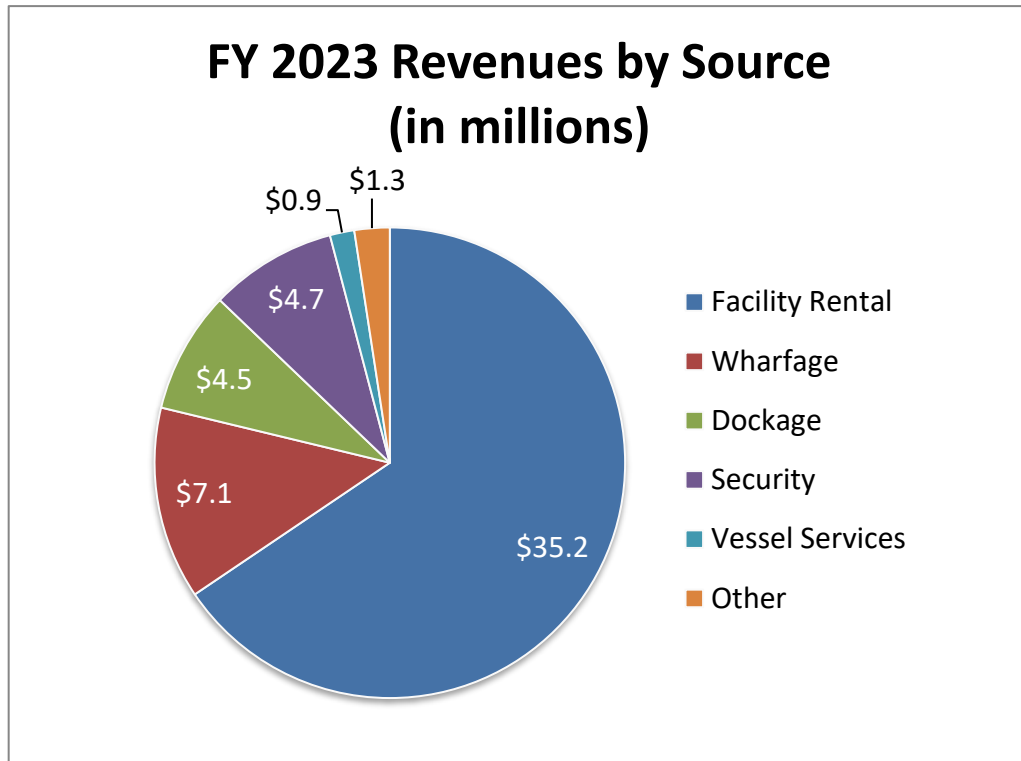
Operating Results for FY 2023

The MDOT MPA generates significant economic benefits for Baltimore City, the State, and the region, including operating revenues. The MDOT MPA’s terminals continue to generate positive net operating income that can be reinvested into future Port enhancements. The public-private partnership agreement with Ports America Chesapeake helps keep expenses low at Seagirt while generating a relatively steady revenue stream. The MDOT MPA also has several long-term agreements in place, providing predictability and sustainability.

Both cruise lines continued operations in Baltimore with a full schedule throughout the year. Roll-on/Roll-off cargo and container activity continues to grow, increasing since last year. Automobiles have still not fully recovered from pandemic lows. Lease agreement revenues have helped shield the MPA from the fluctuations and uncertainties in other areas. Total operating revenues for FY 2023 were \$53.7 million. Net operating income in FY 2023 from the MPA terminal operations was \$2.1 million. The MPA continues to experience some increases in utility costs, security, materials and supplies, and investments necessary to keep the MPA’s terminals operating safely and efficiently.



Internal MPA Data



Internal MPA Data

Sustainability Activities

The MPA continues to work to closely align its statutory mission to increase waterborne commerce through the ports in Maryland with stewardship of Maryland's natural resources, and the health and well-being of the environment and our neighboring communities. Along these lines, the MPA continues to advance sustainability through its Environmental Management System (EMS), which was re-certified in 2023 under the International Organization for Standardization's (ISO) 14001:2015, the fourth time since the initial certification in 2011. The MPA's EMS is a structured system designed to help manage MPA's environmental impacts and improve environmental performance related to operations and activities. The EMS provides an important framework for environmental management at the MPA and covers areas such as training, record management, inspections, objectives, and policies. It also helps guide the MPA's voluntary environmental initiatives and expanded communication with port stakeholders and nearby communities. The MPA's continued recertification is indicative of the commitment to conform to the highest international standards for environmental stewardship, sustainability, and continual improvement.

The MPA sustainability accomplishments in FY 2023 include the following:

- **Port Air Quality Partnership Continues** – The MPA completed the seventh successful year working with the Maryland Department of the Environment (MDE) to implement air quality improvement projects under the Voluntary Air Agreement. Originally signed in 2015 and updated in 2021, the agreement commits MDOT, MPA, MDE, and the Maryland Energy Administration to develop and implement projects that reduce air emissions or increase energy efficiency at the Port, while recognizing the importance of climate change and providing a greater focus on stakeholder engagement with underserved and overburdened communities.
- **Diesel Emissions Reduction Act (DERA) 2021 Grant Progress** – In collaboration with RoadOne and IKEA, the MPA launched a one-month test of a Nikola Motor zero emission (ZE) dray truck to transport containers between the MPA and the IKEA distribution facility in Perryville, MD. With support from the above-mentioned DERA award, RoadOne purchased 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, purchased the other ZE dray truck which is also expected to be delivered in 2023.
- **Additional Emission Reduction Initiatives** – The MPA 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.
- **Coastal Resilience and Climate Change Vulnerability Assessment** – The MPA was 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.

- **LED Lighting Upgrades** – The MPA continued installation of new interior and exterior LED lighting in several areas throughout the Dundalk and South Locust Point Marine Terminals. The LED upgrades reduce electricity usage, increase worker safety, and help to lower greenhouse gas emissions.
- **Stormwater Management Improvements** – The MPA continued its implementation of stormwater management and total maximum daily load (TMDL) improvements to reduce pollution entering local waterways and ultimately the Chesapeake Bay.
- **Water Quality Trading Program** – The MPA worked collaboratively with the MDE to refine the application process and register the first credits for stormwater projects under Maryland's Water Quality Trading Program (WQT) in 2019. The WQT is part of Maryland's Chesapeake Bay restoration effort that helps Maryland businesses and organizations more cost-effectively meet federal Clean Water Act TMDL requirements. The WQT creates a public marketplace for verified nitrogen, phosphorus, and sediment reduction credits to enhance the restoration and protection of the Chesapeake Bay. For the fifth consecutive year, the MPA listed available credits for 2022 on the WQT and worked with prospective purchasers to finalize sales of the credits.
- **Awards** – The MPA's sustainability and safety activities were recognized with four different awards this year:
 - MDOT honored MPA's Program Manager for Education & Stakeholder Engagement, Katrina Jones, with the MDOT Environmental Excellence - Environmental Hero Award for her efforts and lasting contributions to environmental stewardship, leadership, vision, and motivation directing community engagement and environmental education programs.
 - MDOT recognized MPA's Manager, Safety and Risk Management, Andrea Williams, with the MDOT Safety Award – Safety Leader for her contributions to the successful execution and enhancement of MDOT's mission, goals, and objectives, promotion of safety awareness, and the evaluation and development of a Safety Management System program.
 - The State Employee Risk Management Administration (SERMA) awarded MPA's Manager, Safety and Risk Management, Andrea Williams, with the SERMA Award for Individual Achievement for demonstrating significant improvements over the previous conditions with safety and health in the workplace, increasing employee safety awareness, and directly contributing to the safety on the terminals.
 - The MPA Maintenance team was awarded an MDOT Safety and SERMA award for its inaugural Snowplow Rodeo. The safe movement of cargo and people are a top priority at the Port of Baltimore. The Snowplow Rodeo helped train our personnel on snow removal equipment through a series of drills designed to simulate winter obstacles and conditions.
- **Stakeholder Engagement** – The MPA is committed to being a responsible neighbor and building partnerships with stakeholders. Throughout FY 2023, the MPA outreach team members participated in events such as the Baltimore Port Alliance Environmental Committee "Air Tour"; Port Safety & Environmental Committee Annual Meeting; Duncan Street Miracle Garden community volunteer event; St. Helena Earth Day cleanup; and the American Council of Engineering Companies - MD Environmental Spring Forum.

Dredged Material Management Program (DMMP)

Each year, between four and five million cubic yards (mcy) of sediment accumulate and must be removed from Maryland's shipping channels to maintain the Port's continued viability. The State's DMMP operates under a 20-year plan for developing, operating, and maintaining placement options or alternative solutions for the management of the dredged sediment from both annual maintenance and new dredging projects. Citizen and stakeholder involvement is emphasized throughout the process.

In FY 2023, the MPA was responsible for operating three active DMMP sites, including the Masonville Dredged Material Containment Facility (DMCF), Cox Creek DMCF, and the Poplar Island Aquatic Ecosystem Restoration Project. Progress continued this year to develop solutions for adding long-term capacity for both Bay and Harbor channel material.

The MPA continues to expand traditional placement options, such as the vertical and upland expansions of the Cox Creek and Masonville DMCFs, as well as beneficial use solutions, such as the Mid-Chesapeake Bay Island aquatic ecosystem restoration project and other innovative reuse projects.

Cox Creek Expansion achieved a significant milestone in FY 2023, as construction of the +60-foot dike raising and lateral expansion onto the adjacent upland area was substantially completed. The expansion to +60 feet will provide 8.8 mcy of additional capacity for the Cox Creek DMCF for a total of 15.3 mcy.

Masonville DMCF expansion is underway and construction of the base dike widening that will serve as the foundation for future phases of dike raising first to +30 feet, then to a final elevation of +42 feet was completed in May 2023. The next phase of dike raising to +30 feet is anticipated to commence in the fall 2023. The expansion will result in the site gaining approximately 4 mcy of capacity.

The MPA continues to explore new solutions for Harbor channel placement capacity including the use of Confined Aquatic Disposal (CAD) cells. Preliminary site analysis included an environmental assessment, hydrodynamic modeling, and geotechnical investigations, the results of which recommended a location in the open water region southeast of the Cox Creek DMCF for a second CAD pilot project. A second pilot project will provide an opportunity to study the CAD concept under different environmental conditions and refine dredged material placement and monitoring techniques when compared to the original pilot project. Further coordination with the regulatory and resource agencies and community stakeholders is needed before proceeding with the project.

The Seagirt Loop Feasibility Study, a 3-year feasibility study between the MDOT MPA and the USACE, concluded in June 2023, three months ahead of schedule, with the signing of a Chief's Report by the USACE Commanding General and Chief of Engineers. The report recommended improvements to the West Seagirt Branch Channel that included deepening to an authorized depth of -50 feet mean lower low water and an authorized average width of 760 feet with widening at bends as necessary for the safe handling of vessels. These improvements, once constructed, will improve navigational efficiencies to help meet demand for future capacity including efficient handling of increased container volume at Seagirt Martine Terminal as well as faster and safer movement of vessels transiting the channel. The next phase of the project, Preconstruction Engineering and Design (PED) is anticipated to begin in the fall of 2023.

The Mid-Chesapeake Bay Island Ecosystem Restoration Project is a top priority for the Port and Maryland's Congressional Delegation. The project achieved several major milestones in FY 2023 that included execution of a Project Partnership Agreement between MDOT and USACE, award of the first construction contract, and initiation of construction activities for the restoration at Barren Island.

James Island design has begun, and extensive agency coordination is underway to optimize the resiliency and ecological benefits for the project. The MPA and the USACE continue to host Mid-Bay public outreach and stakeholder engagement efforts including tours of Poplar Island, informational Open House meetings, distribution of updates via newsletters and email, and regular habitat development workgroup and NEPA collaboration meeting.

Significant Innovative Reuse of dredged material activities and developments continued to advance in FY 2023. Seven (7) contracts have been awarded under the Innovative Reuse Research & Development Request for Proposals to study feasibility of dredged sediment for a variety of end uses and marketable products including permeable bricks and pavers, topsoil, sod, concrete alternative products, and lightweight aggregate and vegetated berms to support ecological health in urban wetlands. Five (5) of the awarded contracts have been completed and all show promising results for implementation on a large scale.

In FY 2023, the MPA acquired the property adjacent to the Cox Creek DMCF formerly owned by Tronox. This property will undergo phased remediation but will ultimately be used for expanded innovative reuse operations, supporting long-term, large-scale capacity recovery at the Cox Creek DMCF.



National Aquarium, MPA Deputy Executive Director Robert Munroe, USFWS Director Martha Williams, and USFWS Conservation Program Manager, Angelina Yost



Families learning how Captain Trash Wheel at Masonville Cove stops trash from reaching the ocean.

In FY 2023 the MPA, the USACE, and Virginia Marine Resources Commission continued to convene the “Virginia Bay Enhancement Working Group” to develop, recommend and rank alternative placement solutions, including beneficial use opportunities, to accommodate the maintenance dredged material removed from the York Spit channel in Virginia waters of the Chesapeake Bay. A Final Report for this first phase of the process was released in Summer 2022 and the following phase, a technical analysis to further refine and narrow the recommended alternatives, commenced Winter 2023, and is ongoing. As the analysis progresses, updates will be brought to the Virginia Bay Enhancement Working Group for input.

The MPA’s active outreach, education, and partnership programs continued to reach new stakeholders and amplify the Port’s impact with neighboring communities in FY 2023. In September 2022, the Masonville Cove Partnership hosted U.S. Fish and Wildlife Service Director Martha Williams at Masonville Cove, to celebrate National Public Lands Day. The celebration was open to community members and included opportunities to explore Masonville Cove and engage in recreational activities such as kayaking and bird-banding.

In October 2022 and May 2023, the Baltimore Port Alliance hosted its third Hiring & Career Expo, bringing together over 35 employers in the maritime industry and hundreds of individuals seeking employment in the industry at all levels ranging from high school seniors to seasoned professionals, thus strengthening Maryland's Port of Baltimore by growing the workforce. These programs offered numerous opportunities for the public to become even more engaged and knowledgeable about the MDOT MPA's various port and dredging projects, community partnerships and environmental initiatives.

MPA continues assessing and developing approaches to prioritize issues with potential impacts to the DMMP and are working on strategies to maintain the competitive position of the Port. Key national issues include climate change, sea level rise and coastal resiliency, comprehensive benefits of civil works projects and the beneficial use of dredged material, and regional sediment management pilot projects.



Dredging operations in the federal channels leading to the Port of Baltimore.

Seaport Security

The MPA's maritime security continues to be recognized as one of the top programs in the nation. For 14 consecutive years, the MPA achieved perfect U.S. Coast Guard annual security inspection ratings. The MPA Office of Security incorporates a highly experienced staff and an unprecedented level of cooperation with other entities and relevant local, State, and federal partners. Significant partnerships have been established with the Maryland Transportation Authority Police, Maryland Natural Resources Police, Baltimore County Police, Baltimore City Police, Maryland State Police, State Fire Marshal's Office, Maryland Emergency Management Agency, Maryland Coordination and Analysis Center, U.S. Coast Guard, U.S. Customs and Border Protection, U.S. Homeland Security Investigations, Transportation Security Administration, Federal Bureau of Investigation, and the U.S. Department of Agriculture.

The MPA engages in a continuous and dynamic assessment process to meaningfully enhance the security of its terminals and headquarters at the World Trade Center. The MPA utilizes the Federal Emergency Management Agency's Port Security Grant program to protect transportation, critical infrastructure, and security initiatives. These funds have been utilized to enhance and maintain a sophisticated Closed-Circuit Television system, access control processes, install anti-vehicle borne Improvised Explosive Device barriers and develop and implement a sound cyber security annex to the MPA's Facility Security Plan and program.

Cybersecurity

The MPA has consistently worked towards building and implementing a strong cybersecurity defense strategy closely aligned with the policies and guidelines of the MDOT Enterprise. The MPA, with its domain expertise in the field of maritime transportation, has played a significant role in the adaptation of cybersecurity resilience and risk management approaches. The MPA has also played a liaison role in applying cybersecurity technology and strategies in a maritime business environment, meeting the essential requirements mandated by the federal agencies such as the U.S. Department of Homeland Security, the Transportation Security Administration, and the U.S. Coast Guard.

The MPA continues to enhance its cybersecurity program and address necessary improvements. Cybersecurity projects recently completed include:

- Cybersecurity Automated Remediation - Phase I: Microsoft Products
- Enhancing Cybersecurity of the Network Backbone by Replacing End-of-Life Network Switches
- Replacement and Hardening of Surveillance Cameras with Critical Vulnerabilities
- Implementation of Critical Cybersecurity Procedures Requiring System and Network Changes
- Enhancing Cybersecurity of Port-Wide Wireless Links by Replacing Legacy Wireless Links
- Design and Approval of a Cybersecurity Annex to the MDOT MPA's Facility Security Plan

Cruise Maryland

Cruising is a tremendous economic engine for the State of Maryland, generating nearly 400 jobs and \$63 million in annual revenues for local business. The Port of Baltimore has offered year-round cruising since 2009 and is currently served by Royal Caribbean, Carnival, and Norwegian Cruise Line. Prior to the pandemic in 2019, the Port averaged more than 200,000 passengers annually. Following a cruise industry-wide pause during the pandemic, Baltimore's passenger counts have strongly rebounded, with its ships currently sailing at full capacity.

The Port's location, at the heart of the Baltimore-Washington-Northern Virginia corridor combined statistical area, serves the nation's third most affluent consumer market and its fourth most populous region. Having a facility dedicated solely to cruising, in addition to the Maryland Port of Baltimore's enviable location immediately off Interstate 95, makes it extremely marketable and provides marquee visibility for cruise ships while in port.

In May 2023, the Port of Baltimore welcomed Royal Caribbean's latest cruise ship *Vision of the Seas*, which offers year-round cruises from Maryland to the Bahamas, Bermuda, Caribbean, and New England/Canada.



Norwegian Cruise Line arrives in September 2023

In September 2023, the Port of Baltimore welcomed the return of Norwegian Cruise Line to Maryland to begin a fall and winter sailing schedule. For the first time in the company's history, Norwegian will have two ships homeporting from Maryland: *Norwegian Sky* and *Norwegian Sun*. The ships will offer cruises from Baltimore to New England and Canada, Bermuda, and the Caribbean.



Port of Baltimore's Cruise Maryland Terminal



Inside the Cruise Maryland Terminal

Rail Operations

Railroads handle containers, project cargo, military cargo, forest products, autos, grain, cement, coal, and liquid bulk cargo moving through Maryland's Port of Baltimore. The MPA facilities are serviced by both Class I railroads operating in the eastern United States: Norfolk Southern handles freight at the Dundalk Marine Terminal and CSX operates in Seagirt, North Locust Point, South Locust Point, Hawkins Point, and Fairfield/Masonville Marine Terminals.

The Seagirt Marine Terminal is the Port's only dedicated container terminal with track rights belonging to the Canton Railroad, a short-line rail carrier owned by the Maryland Transportation Authority. Ports America Chesapeake has direct operational control of the Intermodal Container Transfer Facility (ICTF) at Seagirt which allows rail access for CSX and Norfolk Southern through their agreement with the Canton Railroad. CSX currently provides daily international and domestic service to Chicago.

For years, double-stack container access has been the limiting factor of Baltimore when compared to competing ports. A successful application to the USDOT under the Infrastructure for Rebuilding America (INFRA) program completed the necessary funding components of the \$466 million Howard Street Tunnel project.



Port of Baltimore's Intermodal Container Transfer Facility

Operations at Seagirt Marine Terminal

Ports America Chesapeake has successfully managed Seagirt Marine Terminal since the landmark 50-year, public-private partnership was finalized in January 2010. Since then, the partnership continues to be a benefit to the Port community, and Ports America Chesapeake continues to deliver on its promises. Seagirt's key performance indicators – cargo growth, operational efficiency, job creation, etc. – have all been positive and container volumes continue to increase overall.

Since taking operational control of Seagirt, Ports America Chesapeake has invested millions of dollars in capital improvements. Those improvements include new cargo handling equipment, paving, a new back gate, and 21 new Rubber Tired Gantry (RTG) cranes for more efficient cargo movement on the terminal.



To accommodate the increasing number of ultra-large container vessels calling on the Port, Ports America Chesapeake and the MPA completed Seagirt Berth 3 Modernization P3 project in August 2023; adding a second 50-foot-deep berth and installing four new Neo-Panamax container cranes, additional yard equipment and dredging to widen the entrance channel and turning basin. Upgrades to the terminal infrastructure, hardware, and cargo handling equipment are also planned to service the larger vessels. The Berth 3 Modernization project was made possible in part by a \$6.6 million grant from the USDOT Better Utilizing Investments to Leverage Development (BUILD) Grant program.

In the past year, Ports America Chesapeake has added 15 new RTG's into service, resulting in a 3-minute reduction of transaction times since June 2023, and helping achieve an average import delivery rate of 1,370 per day as compared to 1,253 a day previously. They have also completed improvements to their inbound lanes on Broening Highway, increasing their available lanes by 40 percent; improving efficiencies and allowing for single stop transactions.

Ports America Chesapeake and the MPA remain focused on accommodating current and future cargo demands at Seagirt Marine Terminal. Significant progress has been made on infrastructure projects to improve efficiency, capacity and turn times at Seagirt Marine Terminal.

Other future projects in the works for the Seagirt Marine Terminal include:

- Redevelopment of the 37-acre Point Breeze Business Center property to allow for expanded capacity;
- Installation of radiation monitors and U.S. Customs and Border Protection workstations are projected to be operational in October 2023, allowing inbound and outbound access for trucks with loaded containers;
- A reconfiguration of outbound lanes to add capacity, increase safety and add speed has been designed and expected to begin construction by Q1 2024;
- The MDOT MPA and Ports America Chesapeake have applied for additional federal funding from the Port Infrastructure Development Grant program to allow for further electrification of the terminal, increase densification, and develop a living shoreline along Colgate Creek
- A new Vail Street outbound gate will be opening in late Fall 2023. This gate will increase capacity by 50 percent and improve departure time from the terminal;
- An ICTF modernization project to double throughput capacity is in the design and permitting phase, targeting a completion in Q2 of 2026; and

- An empty depot at 2501 Broening Highway is currently in the design and permitting phase, with expected completion in the summer of 2025. This depot will reduce Seagirt Terminal traffic and allow for quick turnaround of empty containers.

MPA Major Projects Update

BUILD Grant Project at Seagirt Marine Terminal:

In FY 2019, the MPA secured a \$6.6 million BUILD grant from the USDOT for the Seagirt Marine Terminal Berth 3 Modernization project. The project added a second 50-foot-deep berth at Seagirt capable of serving ultra large container vessels (ULCVs).



The project components include:

- Upgrading the existing Berth 3 wharf structures to accommodate a deeper dredge depth;
- Dredging of the berth pocket at Berth 3 and the access channel;
- Widening the turning basin to provide better safety clearances for Ultra Large Container Vessels (ULCV);
- Installing new hardware to support the installation of ship-to-shore cranes to service ULCVs;
- Repairing the existing Berth 3 wharf substructure, superstructure, and paving; and
- Installing concrete runways in the container yard for new, efficient RTG cranes to provide additional capacity and better cargo velocity.

The BUILD grant's current total project cost is \$32.8 million with the MDOT MPA contributing \$7.8 million and Ports America Chesapeake committing \$18.4 million, in addition to the \$6.6 million in grant funds.

The project was completed in August 2023.

Howard Street Tunnel Project

Double-stack capability on CSX's rail network has long been a priority for the MPA. The primary obstacle to achieving that goal has been CSX's Howard Street Tunnel (HST), a 128-year-old, 1.7-mile-long railroad tunnel through the heart of Baltimore City that is approximately 18 inches too short to safely accommodate double-stack intermodal trains. For years, it was thought that improvements to the existing tunnel would cost billions of dollars and be highly disruptive to the surrounding communities.

Using advances in engineering technology, the MPA and CSX have developed a solution that can be delivered at a fraction of the original cost estimate with limited impact to the public.

The HST Project is estimated to cost \$466 million and consists of vertical clearance improvements to the HST and 21 bridges located between Baltimore, Maryland and Philadelphia, Pennsylvania. The tunnel itself will be reconstructed within the existing envelope to provide the additional 18 inches of clearance needed for double-stack trains. For the bridges, most will only require track lowering beneath the bridge. There are three bridges in Baltimore City that require more extensive work to their superstructure: North Avenue over CSX, which will have a portion of its superstructure modified and rebuilt, along with Guilford Avenue over CSX and Harford Road over CSX, which will both be fully replaced with new structures. Once complete, the project will provide double-stack access to the Port's Seagirt Marine Terminal and connect the Port to 100 percent of CSX's primary intermodal network.



CSX Train entering the Howard Street Tunnel

In July 2019, the State of Maryland was awarded a \$125 million INFRA grant from the USDOT for the HST Project. The remaining funding for the project will come from the State of Maryland, CSX, and Pennsylvania Department of Transportation. The Federal Railroad Administration issued final National Environmental Policy Act approval for the HST Project in June 2021. Project agreements were signed in November 2021. Construction is ongoing and is expected to be complete in CY 2026.

Once complete, the project will generate an additional 160,000 containers per year through Maryland's Port of Baltimore, 6,550 construction jobs, and an additional 7,300 jobs coming from increased business. In turn, the long-term jobs generate over \$1 billion annually in personal income, re-spending/local consumption, and business revenues, and an additional \$65 million annually in State and local revenue.

Planning for Climate Resilience

Serving along the water's edge, the MPA is susceptible to the impacts of climate change. Marine terminals may be subject to flooding and tidal inundation from projected sea level rise and severe weather events, and as marine terminals cannot be relocated, they must adapt in place. The MPA continuously works to ensure its engineering, facility, and operations personnel, as well as private-sector partners, are aware of potential climate change impacts, and are working to become more resilient.

Recognizing that Port operations may be threatened by changing climate conditions, the MPA has adopted a three-pronged model to assess future actions, as follows:

MIGRATE:

Move terminal functions out of the flood plain, when feasible. Many terminal functions must be in proximity to the water, making this difficult to execute. The MPA may, however, move activities out of the flood plain if they are not directly related to cargo operations, including administrative activities.

ELEVATE:

All new MPA facilities or structures sensitive to damage that must remain on the terminals will be designed to be 2 feet above the 100-year flood elevation if operationally feasible.

MITIGATE:

Those facilities or structures that cannot be migrated or elevated will be reinforced or strengthened with non-corrosive materials that can handle inundation or limit potential weather damage, whenever significant maintenance is required, or capital investments are being made.

The MPA will continue to work with local, State, and federal partners to research, plan for, and when possible, implement sound climate resilience and adaptation policies and projects in the future. Additionally, MPA will be updating its Coastal Resilience and Climate Change Vulnerability Assessment in FY 2024.

Dundalk Marine Terminal Climate Resilience Project Update:

Partially funded with a \$10 million FY2021 USDOT BUILD Grant, in CY 2023, the MPA will begin construction of the first three of its Dundalk Marine Terminal resiliency and flood mitigation improvements. With a total construction cost of \$42 million, these three improvements are: a 2,300 linear foot box culvert with a pump for extreme rain events; 14-tidal gates (aka "backflow preventers,"); and a perimeter barrier to prevent storm surge from overtopping the berths.

Storm surges are costly events that could flood up to 318 acres or 72 percent of Dundalk's open storage area, damaging high-value cargo. The project improvements will reduce the chance of catastrophic flood damage by 70 percent and avoid flooding that is currently experienced in some locations. The box culvert will also help reduce sediment discharge into the Patapsco River.

The project has completed National Environmental Policy Act requirements with a Finding of No Significant Impact. Construction is expected to begin in December 2023.

Maryland's Port of Baltimore - Economic Impacts

Maryland's Port of Baltimore remains the economic heart of the greater Baltimore region and the State of Maryland by providing jobs, business activity, and revenues. In addition, the Port provides Maryland's manufacturers, shippers, wholesalers, and retailers a competitive means of exporting and importing goods within the global marketplace efficiently and cost effectively.

In 1956, when the Maryland General Assembly created the Maryland Port Authority, and later the Maryland Port Administration, it placed state-wide economic benefits at the core of its mission to "increase the flow of waterborne commerce through the State of Maryland in a manner that provides benefits to the citizens of the State."

The MDOT MPA has been successful in achieving this mission of creating substantial economic impact by generating 37,300 jobs in Maryland²:

- 15,330 Direct Jobs in Maryland
- 21,970 Induced and Indirect Jobs in Maryland
- \$3.3 Billion in Personal Wage and Salary Income
- \$2.6 Billion in Business Revenues
- \$395 Million in State and Local Revenues
- 101,880 Related Jobs³, and
- Over 139,170 Total Jobs Linked to Port Activity

The Port, with over 300 years of longevity, provides employment opportunities for people with a wide range of skill levels and provides an average annual salary of \$62,700 for each direct job generated – an average annual wage which is 9.5 percent higher than the average annual wage for every job in the State of Maryland, which is just under \$57,270.

² From the most recent data available: "The Economic Impacts of the Port of Baltimore" October 15, 2018, prepared by Martin Associates.

³ Related jobs are those jobs with companies importing and exporting cargo through Maryland's Port of Baltimore, that have the option of shipping their products or supplies (for example, containerized items or steel products for construction) through other ports. These companies benefit from having a healthy port nearby in Baltimore to assist their logistics. If Maryland's Port of Baltimore was not available to them, these employers might suffer an economic penalty, but would likely survive by shipping through another port.

Challenges: FY 2023 and Beyond

There are a variety of challenges on the horizon for the MPA and Maryland's Port of Baltimore. In addition to aggressive competition for port business and a slowing global economy, the challenges being faced include:

- **An increasingly competitive environment**– The competitive environment among East and Gulf Coast ports has increased in recent years. Global logistics patterns have been shifting in response to changing trade patterns and increased options for the global movement of freight. The MPA must remain competitive in the future through strategic partnerships, capital investments, aggressive rates, outstanding quality programs, and exceptional customer relationships and services to maintain its competitive position relative to other ports.
- **Terminal system preservation needs**– Continued system preservation funding is critical to adequately maintain vital waterfront facilities in an increasingly harsh marine environment. The MPA completed an Asset Management Five-Year Berth Inspection Program that included two years of inspections that identified \$455.2 million of critical infrastructure preservation and reconstruction needs during the next six-years to ensure safety and operational integrity of the MPA's terminal berths and related infrastructure.
- **Sustainability of dredging and dredged material placement solutions** – Constraints on dredged material management solutions, the cost of dredging, and federal funding for ongoing maintenance dredging and dredged material management continues to be a focus of the MPA. Current capacity is inadequate to perform both maintenance dredging and new work private sector dredging projects without overloading the Harbor dredged material placement sites. The need remains to activate additional dredged material management solutions, such as large-scale Innovative Reuse, for the safe, long-term, and environmentally appropriate management of dredged material. Maintaining a sustainable, cost-effective, environmentally sensitive, and community-supported dredging program remains a considerable long-term challenge.
- **Continuing "ECO Port" and community initiatives** – The MPA has been an active partner in the protection and enhancement of the Chesapeake Bay, the communities surrounding the Port's facilities and the health of Maryland's citizens by supporting and advancing efforts to improve air and water quality. The MPA prioritizes its commitments to community engagement and partnerships as essential to its long-term sustainability, success, and growth. To ensure future growth at the terminals, the MPA must continue to seek innovative solutions to air emission issues, particularly reductions in the use of diesel fuel. Diesel emissions remain the most significant source of emissions for the Port. Future solutions could include electrification or alternative, low-carbon fuels for cargo handling equipment.
- **Double-stack capability** – While construction is underway to address the double-stack bottleneck at HST, the improvements are still several years away from completion. The MPA will need to continue to engage with ocean carriers and beneficial cargo owners to attract as many containers as possible until the permanent double-stack solution is in place. The potential for double stacking from Baltimore will allow Maryland's Port of Baltimore to better compete for discretionary containerized cargo.

Appendix

Contracts and Leases Approved by the Maryland Port Commission for FY 2023 (July 1, 2022 – June 30, 2023)

July 2022

There were no contracts requiring Maryland Port Commission approval.

August 2022

No meeting was held in the month of August.

September 2022

There were no contracts requiring Maryland Port Commission approval.

October 2022

There were no contracts requiring Maryland Port Commission approval.

November 2022

There were no contracts requiring Maryland Port Commission approval.

December 2022

1. Contracts #222012A-IT and #222012B-IT, Geographic Information Systems Services, Johnson, Mirmiran & Thompson, Inc., Sparks, Maryland (#222012A-IT), and KCI Technologies, Inc., Baltimore, Maryland (#222012B-IT); \$1,000,000 each; Term: January 8, 2023 – January 7, 2026 (Three Years with Two (2) Two-Year Renewal Options).
2. Contract #222020-IT, Wi-Fi Installation at Maryland Department of Transportation Maryland Port Administration (MDOT MPA) Public Marine Terminals, Brown's Enterprises, Inc. dba Brown's Communications, Inc., Hunt Valley, Maryland; \$383,897; Term: January 5, 2023 – July 4, 2024 (Initial Term with Two One-Year Renewal Options).

January 2023

There were no contracts requiring Maryland Port Commission approval.

February 2023

1. Contract #519802, Modification No. 2, Comprehensive Paving Agency Wide at 2001 Broening Highway, Baltimore, Maryland; P. Flanigan & Sons Inc., Baltimore, Maryland; \$1,100,000; Modification Term: May 1, 2023 – July 31, 2023.

March 2023

There were no contracts requiring Maryland Port Commission approval.

April 2023

1. Modification No. 2, Contract #218035-IT – Information Technology (IT) Database Management Support, Client Network Services, LLC, Rockville, MD; \$118,968; Modification Term: May 21, 2023 – January 2, 2024.

May 2023

1. Renewal No. 2, Modification No. 12, Contract #219001-S – Building Operations and Management, World Trade Center Baltimore, AAA Complete Building Services, Inc.; \$17,911,630; Modification Term: November 1, 2024 – October 31, 2027 (Three Years).

June 2023

1. Contract #223008-IT – Installation/Replacement/Removal of Power over Ethernet (PoE) Powered Devices at various Maryland Department of Transportation Maryland Port Administration (MDOT MPA) Locations, Starlight Security, Inc., Beltsville, Maryland; Total Contract Amount – \$900,000 (Initial Amount – \$450,000); Term: July 6, 2023 – July 5, 2026 (Three Years with Three (3) One-Year Renewal Options).
2. Contract #521105 – Pier 4 Replacement at Fairfield Marine Terminal; McLean Contracting Company, Glen Burnie, Maryland; \$16,520,778; Term: July 6, 2023* – July 31, 2025 (**or earlier upon BPW approval*).
3. Contract #521058 – Agency-Wide Paving at Facilities of the Maryland Department of Transportation Maryland Port Administration (MDOT MPA); P. Flanigan & Sons, Inc; \$10,000,000; Term: July 6, 2023* – June 30, 2026 (**or earlier upon BPW approval*).