



Maryland Port Administration Dredged Material Management Program

Annual Report 2025



**STEWARDSHIP
FUELED
BY SCIENCE**

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DREDGED
MATERIAL
MANAGEMENT
PROGRAM

2025 DMMP ANNUAL REPORT OVERVIEW

The Dredged Material Management Program (DMMP), administered by the Maryland Port Administration (MPA) through its Office of Navigation, Innovation, and Stewardship (NIS), is guided by a 20-year rolling plan for dredged material management. The program supports safe, navigable shipping channels vital to the Port of Baltimore's operations, while ensuring long-term environmental stewardship, economic competitiveness, and community partnership. This report showcases Stewardship Fueled by Science in 2025, including progress and achievements across funding, policy, planning, operations, innovation, and stewardship.

» Funding & Policy

NIS continued to work with state, federal, and local partners to advance funding and policy that supports critical infrastructure and restoration projects.

- Secured \$71.9 million in federal funding for Mid-Chesapeake Bay Island Ecosystem Restoration Project (Mid-Bay Project).
- Supported Water Resources Development Act (WRDA) 2024 passage, which included key provisions to advance the Mid-Bay Project and the Modification of the Seagirt Loop Channel.
- Engaged political partners through site tours, briefings, and advocacy for sustained federal investment in dredged material management.
- Raised \$350,000 in grants and donations through the Masonville Cove Partnership to support environmental education and community programs.

» NAVIGATION: Planning & Operations

NIS advanced multiple infrastructure initiatives to support safe navigation and long-term dredged material placement needs.

- Advanced expansions of the Cox Creek and Masonville Dredged Material Containment Facilities (DMCFs), increasing critical placement capacity for Baltimore Harbor dredged material.
- Continued development of the Mid-Bay Project, with Phase II construction at Barren Island underway and James Island Phase I design complete.
- Advanced planning and permitting for the Seagirt Loop Channel modification.
- Projected sufficient dredged material placement capacity through State Fiscal Year 2045, with Innovative Reuse and Beneficial Use (IR and BU) identified as critical tools to address both near-term Baltimore Harbor capacity pinch points and long-term capacity needs.
- Completed design of the Swan Creek Nature Trail, adjacent to the Cox Creek DMCF, a nearly two-mile loop through the forested conservation easement area, providing enhanced access and offering opportunities for outdoor recreation.
- Completed a comprehensive Coastal Resiliency and Climate Change Vulnerability Assessment across the DMMP sites.

» INNOVATION: Innovative Reuse & Beneficial Use

MPA advanced its IR and BU strategy, with significant progress toward full-scale implementation.

- Released an updated IR and BU strategy incorporating lessons from more than a decade of pilot projects.
- Issued a Request for Information for large-scale IR operations at the Cox Creek Sediment Technology and Reuse (STAR) Facility.
- Initiated permitting for a geotube drying field to reclaim approximately 50,000 cy of material from the Cox Creek DMCF in 2026.
- Expanded IR and BU of dredged material for on-site and community applications, including DMCF road improvements and a shoreline restoration at Stoney Beach.
- Partnered with the State Highway Administration to further integrate dredged material into construction practices, including approval of specifications for dredged material to be added to the 2026 Standard Specifications for Construction and Materials.

» STEWARDSHIP: Engagement & Education

Stakeholder engagement remained a cornerstone of the DMMP, supporting inclusive participation and public benefit.

- Welcomed over 14,000 community engagements across 480 events, including committee meetings, shoreline cleanups, and site tours.
- Launched the next 5-year strategic plan for the Masonville Cove Partnership, co-developed with the community and Friends of Masonville Cove volunteer group.
- Facilitated educational programs reaching over 12,000 students, and hosted immersive summer programs including Youth Birding Camp and the Masonville Cove Links WildSTEM Internship.
- Designated Masonville Cove as a Chesapeake Gateways Network site, enhancing national recognition and improving access.
- Grew "Friends of" volunteer groups at Masonville Cove and Hart-Miller Island, including pursuit of collaborative opportunities and shared resources for the groups.

► Progress in 2025: Stewardship Fueled By Science



Message from the Executive Director of the Maryland Port Administration

Jonathan Daniels

As Maryland's gateway to global commerce, the Port of Baltimore stands as a beacon of economic and environmental vitality. In 2025, we witnessed a remarkable recovery and growth in all our targeted commodities, including roll-on/roll-off autos, farm and construction machinery, paper, and breakbulk. These volumes have not only surpassed last year's figures but have also exceeded the record set in 2023. Our strategic location on the Patapsco River, near the Chesapeake Bay, provides shippers with easy access to major East Coast and Midwestern markets, effectively connecting Baltimore to the world.

This connection is made possible by the shipping channels we maintain through the Chesapeake Bay into the Port of Baltimore through the DMMP operated by the MPA. This program not only connects us to shippers in our trading partners' countries, but it also connects us with communities closer to home and the ecosystems in the Chesapeake Bay.

Dredging and environmentally conscious, community-informed dredged material management strategies are integral to the Port of Baltimore's dynamic operation, driving the economic engine of the Port, which supports over 270,000 jobs in the region. Our holistic approach to achieving our mission aligns with Governor Moore's position that building a competitive and sustainable state is not mutually exclusive and does not require a choice. The MPA demonstrates this every day in its approach to its foundational mission of maintaining our port's channels and facilitating the kind of growth we are driving today.

Our commitment to sustainability is unwavering. We will continue to pursue and implement strategic solutions that not only benefit our economy and communities but also uphold our environmental responsibilities. These efforts are not just for today, but for the future, ensuring a better tomorrow for all Marylanders.



Message from the Director of the Office of Navigation, Innovation, and Stewardship

Holly Miller

NIS's role within MPA centers on ensuring that channels remain sufficiently deep and wide for the world's largest commercial vessels to navigate safely to the Port of Baltimore. Our office works to achieve this objective by ensuring the maintenance of navigation channels serving the Port of Baltimore, providing a rolling 20-year dredged material capacity plan, promoting environmental stewardship to benefit the Chesapeake Bay, and actively engaging and partnering with citizens and other stakeholders to achieve mutually beneficial economic, environmental, and social outcomes.

Our cornerstone program, the DMMP, plans and implements sustainable, climate-resilient solutions to meet our mission. For the last 24 years, it has been a collaborative journey with communities, tackling challenges, solving problems, and reaping the mutual benefits of our shared investments in our Port and our communities. This approach ensures that all stakeholders are included in our initiatives and their input is valued.

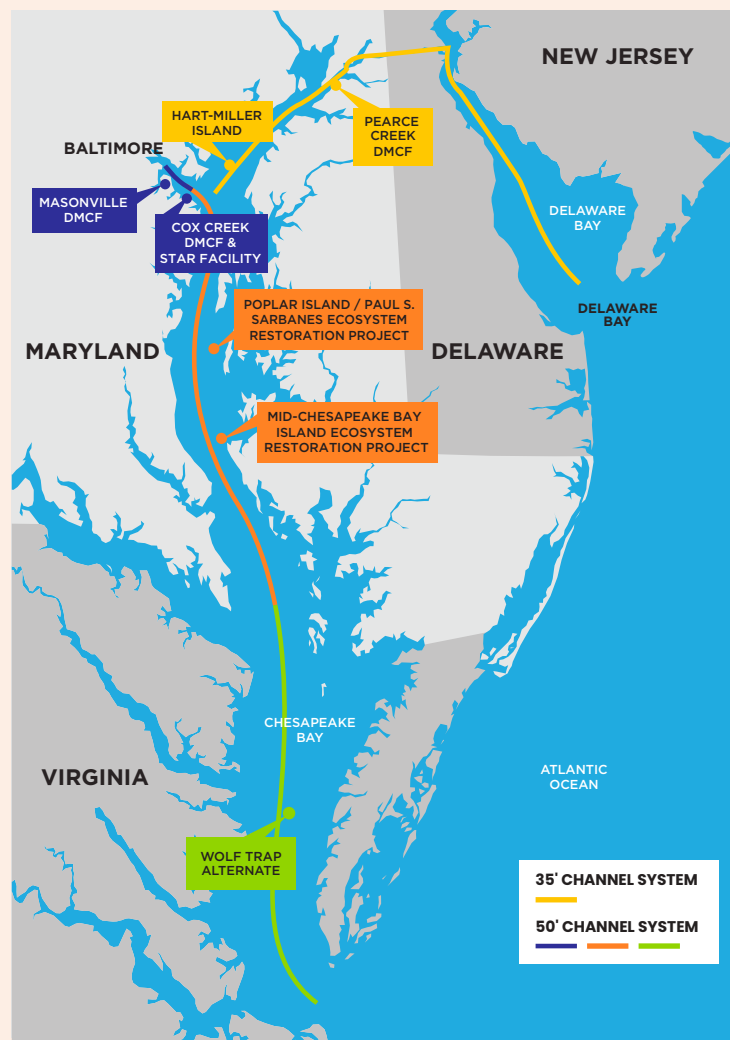
This year, NIS has made significant strides in executing our plan for today and planning for tomorrow. The expansion of the Cox Creek and Masonville DMCFs are affording additional capacity and were completed at or ahead of schedule. Construction of the Mid-Bay Project proceeds apace, and we continue to make progress as we move towards implementing full-scale reclamation of dredged material for IR and BU at the Cox Creek STAR Facility.

All of this progress has been made in concert with communities at every turn. NIS works tirelessly to prioritize meaningful involvement, diverse representation reflecting the communities we serve, and raise awareness about the Port. Our outreach efforts throughout the year support students, teachers, scientists, businesses, and local communities in conversations about dredged material placement projects.

MPA has been working with stakeholders for more than two decades to develop cost-effective, innovative, and environmentally sound long-term placement and capacity solutions, spearheading *stewardship fueled by science*. We've met expected and unexpected challenges and remain steadfast in our commitments to Maryland's communities, our economy, and our environment. Looking forward, we are confident that our strategy, team, and partnerships will lead to solutions that benefit our stakeholders and ensure the continued success and growth of the Port of Baltimore.

» Maryland Port Administration's Mission

Waterborne commerce is at the heart of Maryland's tradition, as are strong maritime communities and healthy aquatic resources. MPA is committed to carrying out its statutory mission to increase waterborne commerce through the state's ports, and to improving its stewardship of Maryland's natural resources and the health of the Chesapeake Bay using collaborative, science-based, forward-looking ideas and methods. Doing so requires significant dredging and maintenance of over 130 miles of navigation channels. This work is a fundamental responsibility of NIS, and is executed in accordance with DMMP's rolling 20-year plan that outlines projected dredging demands, identifies adequate placement capacity and alternative management solutions for dredged material, and proposes research and partnerships to meet tomorrow's needs. For more than two decades, MPA has been working with stakeholders to develop long-term placement and capacity solutions that are cost effective, innovative, and environmentally sound. As a result, the Port's programs are having positive impacts in and around the Chesapeake Bay, improving habitat for native plants and animals while also positively impacting the lives of Marylanders.



Maryland's Dredging Imperative

Enabling the smooth and continuous operation of the Port of Baltimore while protecting the health of the Chesapeake Bay is essential to Maryland's economy. Baltimore is one of only four East Coast ports with a 50-foot-deep channel and, in 2024, the Port added a second 50-foot terminal berth to accommodate more of the world's largest container vessels. These enhancements, along with infrastructure investments such as the expansion of the Seagirt loop and the Howard Street Tunnel expansion, are expected to increase container capacity from 900,000 to 1.4 million twenty-foot equivalent units, or standard cargo containers, by 2027.

To facilitate this vital economic contribution, MPA maintains a long-range capacity planning process that forecasts future dredging needs, evaluates placement site capacity, and identifies strategies to extend the life of existing sites. These efforts help the DMMP keep pace with and plan for growth while navigating an evolving set of economic, environmental, and regulatory conditions.

PORT OF BALTIMORE ECONOMIC IMPACT IN MARYLAND



273,000 JOBS SUPPORTED ANNUALLY

20,300 DIRECT JOBS



OVER 60% OF DIRECT JOBS BELONG TO BALTIMORE CITY AND BALTIMORE COUNTY RESIDENTS.



44% OF THE TAXES GENERATED GO DIRECTLY TO COUNTY AND LOCAL GOVERNMENTS.

\$3.9 BILLION IN MARYLAND BUSINESS REVENUES

\$5.3 BILLION IN PERSONAL INCOME TO MARYLANDERS

\$51 BILLION
IN TOTAL ECONOMIC IMPACT ANNUALLY

Based on 2023 economic data.

» DMMP Overview

The DMMP is a long-term, science-informed initiative housed within NIS at MPA. MPA's mission is to stimulate the flow of waterborne commerce through the ports in the State of Maryland in a manner that provides economic benefit to the citizens of the state.

The DMMP exists to manage sediment dredged from the Port's navigation channels in an economically and environmentally responsible manner, while maintaining the critical 50-foot channel system. Guided by a 20-year rolling capacity plan, the program ensures dredging operations support the Port's growth, environmental stewardship, infrastructure resilience, and engagement with the community.

This annual report provides an overview of the DMMP's priorities, key accomplishments, and strategic direction, highlighting progress made through infrastructure upgrades, dredged material reuse initiatives, and collaborative partnerships that exemplify Stewardship Fueled by Science. The report concludes with forward-looking recommendations for 2026, designed to ensure that the DMMP remains adaptive, fiscally responsible, and aligned with Maryland's long-term goals for sustainable port operations and environmental stewardship.

Strategic Priorities

With the DMMP as its flagship program, NIS oversees a multi-faceted effort to maintain navigation channels, enable port growth, invest in future-facing solutions that align with Maryland's environmental and economic goals, and strengthen MPA's community relationships. The DMMP's work is grounded in a balance of commerce, conservation, and engagement. This ensures dredging operations not only meet operational needs and enable global trade through the Port, but also mitigate environmental impacts and deliver benefits to nearby communities and the Chesapeake Bay ecosystem.

Toward these ends, current NIS priorities include:

- Advancing the Mid-Bay Project, building on the success of the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island (Poplar Island), to manage dredged material from the Maryland Chesapeake Bay Approach Channels
- Expanding the Cox Creek and Masonville DMCFs to increase capacity for Harbor Channel material
- Developing the Cox Creek STAR Facility as a hub for Innovative Reuse (IR) and Beneficial Use (BU) of dredged material
- Improving navigation efficiency through the modification of the Seagirt Loop Channel

These projects are supported by proactive, sustained stakeholder engagement—a core principle of the DMMP. MPA collaborates closely with state and federal agencies, community groups, and industry partners to ensure that dredged material management delivers mutually beneficial outcomes for Marylanders, the environment, and the economy.

Navigating Challenges While Charting a Sustainable Course

Despite progress, the DMMP faces mounting challenges. Funding across the state is constrained in ways not seen since the pandemic, and there is limited availability of federal grants that once supported outreach and non-mission-critical initiatives. These constraints necessitate a challenging prioritization of projects and underscore the need for adaptive, resource-efficient strategies.

At the same time, placement capacity is not sufficient to handle both ongoing maintenance dredging and new private-sector work without straining Harbor placement sites. These conditions underscore the importance of developing long-term solutions, such as large-scale IR and BU initiatives, while maintaining transparency and engagement with communities.

As MPA looks ahead, it remains focused on securing long-term capacity, aligning with major infrastructure efforts such as the Howard Street Tunnel expansion project, and ensuring that the DMMP continues to serve as a model of responsible, science-based, and community-informed management of dredged material.

► Funding and Policy

MPA continually engages with federal and state partners to secure favorable legislation, sufficient funding, and ongoing support to fulfill the DMMP's mission. Working with the United States Army Corps of Engineers (USACE), MPA identifies federal priorities and submits funding requests to the Maryland congressional delegation, which is crucial in securing federal funding and authorization for critical infrastructure and ecosystem restoration projects.

Maryland Department of Transportation, and by extension MPA, faces significant budgetary challenges due to increased cost of materials and labor, high levels of inflation, the reduced effectiveness of the gas tax, and changes in travel behavior. These structural issues have become more apparent as federal funds from the COVID era wind down. Hence, the MPA requires sustained congressional delegation support, given the increasing pressures and funding constraints.

The Water Resources Development Act (WRDA) of 2024 was signed into law in January of 2025 authorizing flood control, navigation, and ecosystem restoration projects for USACE. This legislation included three critical provisions for the MPA:

- Authorization of construction on the Baltimore Harbor Anchorages and Channels Modification of the Seagirt Loop Channel.
- Direction to the Secretary of the Army to examine the West Dundalk Branch Channel and Dundalk-Seagirt Connecting Channel, Baltimore Harbor Anchorages and Channels projects to determine if Federal assumption of maintenance is merited.
- Direction to the Secretary, to the maximum extent practical, to expedite the completion of the Mid-Bay Project.

The Mid-Bay Project is a 30-year initiative and remains the Port of Baltimore's top priority when engaging the Maryland congressional delegation, USACE, and federal agencies. In the mid-2030s, once Poplar Island is no longer able to accept the entirety of the annual maintenance material dredged from the Maryland Chesapeake Bay Approach Channels, the Mid-Bay Project will provide the needed capacity. Sustained support for both the Mid-Bay Project and Poplar Island is essential as USACE and MPA continue to advocate for long-term funding. Notably, the USACE Federal Fiscal Year 2025 Budget and Work Plan includes \$71.9 million in federal appropriations to fund Mid-Bay Project construction.

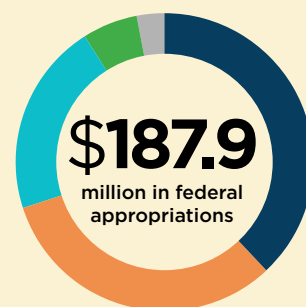
» Collaborative Engagement Fuels Support

MPA continues its proactive engagement with congressional delegations and partners to advance favorable legislation and support for DMMP initiatives. Key efforts in 2025 included:

- Hosting congressional tours of critical DMMP sites, including the Poplar Island and Mid-Bay Projects.
- Conducting a dredging and restoration education tour of Port facilities for members of the Chesapeake Bay Commission.
- Sharing MPA's successful BU strategies for dredged material with delegation from the Netherlands.
- Coordinating VIP helicopter tours for Congressman Andy Harris and staffers representing Senators Angela Alsobrooks and Chris Van Hollen.
- Touring Poplar Island with USACE and the Assistant Secretary of the Army for Civil Works to showcase successful BU and advocate for construction funds for the Mid-Bay Project.

The USACE Federal Fiscal Year 2025 Budget and Work Plan included over \$187.9 million in federal appropriations for annual channel dredging and associated activities, including:

- **\$71.9 million** for James Island Phase I Construction
- **\$61.1 million** for the operations and maintenance of Baltimore Harbor and Channels, which included Energy Transfer Port activities
- **\$38.9 million** in operations and maintenance for the Chesapeake and Delaware Canal and bridge work
- **\$10 million** in construction funds for Poplar Island



Additionally, fundraising efforts by the Masonville Cove Partnership—which includes MPA, Living Classrooms Foundation, National Aquarium, and the United States Fish and Wildlife Service (USFWS)—have more than doubled MPA's initial seed funding, resulting in over \$5.45 million in grants and donations since 2006, with over \$450,000 raised in 2025.

► NAVIGATION: Planning & Operations

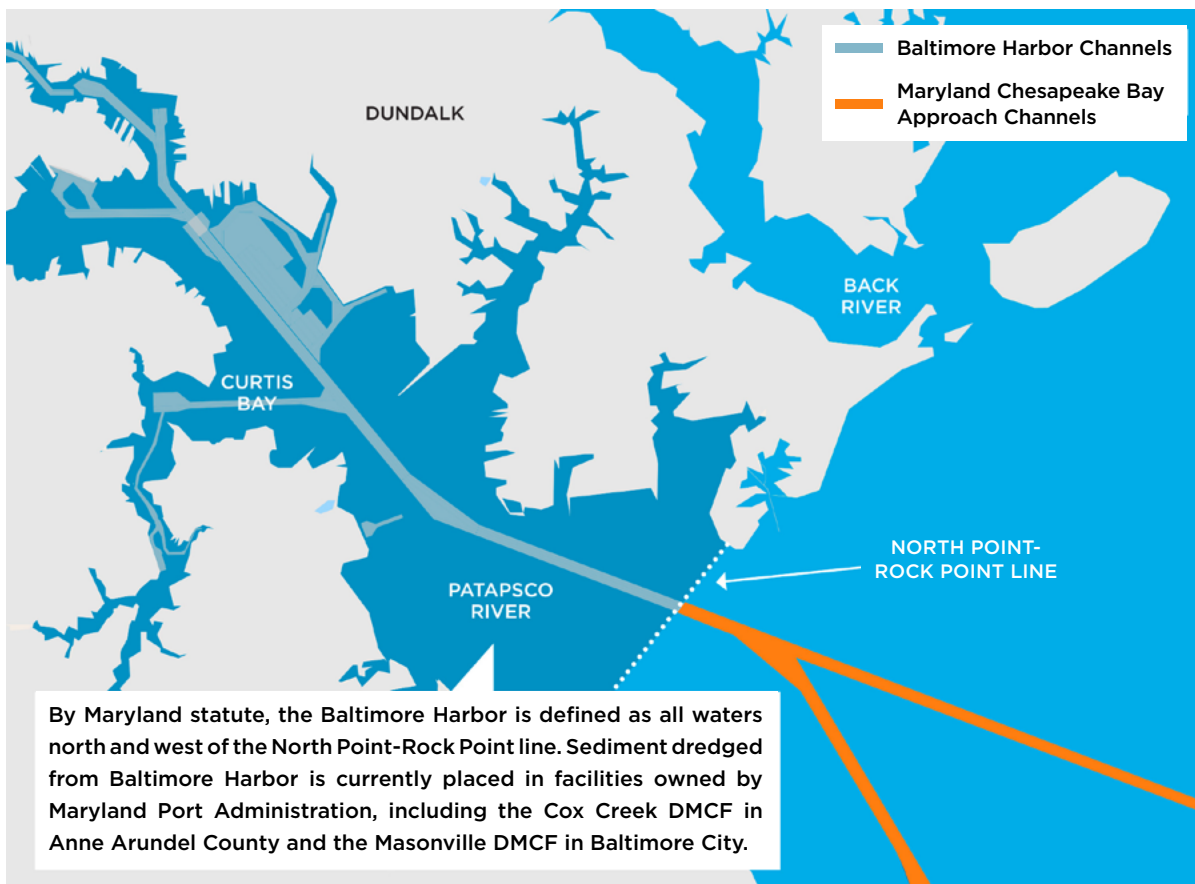
Overview

Guided by its 20-year rolling capacity plan, MPA continues to implement strategic operational initiatives, including expanding DMCFs, optimizing capacity, and exploring innovative and sustainable climate-resilient alternative dredged material management solutions.

Long-Range Capacity Planning

A range of factors influences dredging needs and placement site capacity—some grounded in engineering and environmental science, and others shaped by federal and state budgets, policy decisions, legislative priorities, and the evolving regulatory environment. Through robust and adaptive planning, MPA has projected sufficient placement capacity to meet dredging needs through state fiscal year (SFY) 2045. However, continued planning and site identification will be essential to ensure capacity beyond that timeframe. Effective management of existing facilities remains critical, including adhering to construction schedules, implementing drying and capacity recovery techniques, and optimizing site operations to preserve available space.

In Maryland, state law mandates that sediment dredged from Baltimore Harbor must be placed in a confined manner. That same Maryland statute also defines the Baltimore Harbor as all waters north and west of the North Point-Rock Point line. While the source location of dredged material is the only factor distinguishing Harbor material from Bay material, this placement mandate presents an ongoing challenge to MPA, as the placement capacity for Harbor material in the urbanized and heavily developed Baltimore Harbor is severely limited.



Strategic long-range planning is a cornerstone of the DMMP, ensuring that dredging needs are met without disruption. Current projections highlight the importance of IR and BU in maximizing placement site capacity and will play a key role in meeting channel dredging needs throughout the 20-year planning period.

20-YEAR DREDGING DEMAND AND THE AVAILABLE CAPACITIES OF THEIR RESPECTIVE PLACEMENT SITES AS OF JUNE 30, 2025 IN MILLION CUBIC YARDS (mcy)

Channel Segments	Need	Remaining Placement Capacity
Baltimore Harbor Channels (channels west of the North Point-Rock Point line established at the mouth of the Patapsco River)	23.1 mcy	28.6 -30.4* mcy (Cox Creek DMCF expanded, Masonville DMCF, IR and BU)
Maryland Chesapeake Bay Approach Channels (channels outside the Baltimore Harbor, east and south to the Maryland/Virginia border)	40.0 mcy	>100 mcy (Poplar Island and Mid-Bay Project)
Virginia Chesapeake Bay Approach Channels (channels from the Maryland/Virginia border to the Atlantic Ocean)	24.8 mcy	>1,000 mcy
C&D Canal and Approach Channels (channels north of the Tolchester Channel to the Maryland/Delaware border)	12.4 mcy	14.8 mcy (Pearce Creek with dike raising)

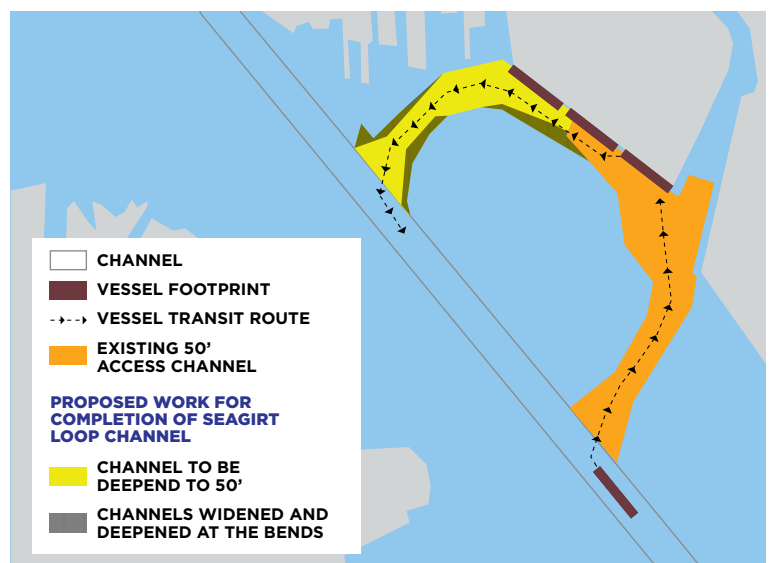
*Baltimore Harbor Channels remaining placement capacity is presented as a range in this year's report due to variables associated with the in-development IR and BU program. Current projections show that the IR and BU program will become instrumental in maximizing placement site capacity to ensure MPA can accommodate dredging needs during the 20-year planning period.

Dredged material management is an evolutionary process, and finding suitable sites and solutions for placing dredged material from both operations and maintenance dredging, as well as new work dredging, is a constant challenge. While overall capacity has the potential to accommodate the next 20 years of dredging needs, there are near-term pinch points in the current plan for material dredged from the Baltimore Harbor channel segments, resulting in ongoing evaluation of remaining capacity at the Baltimore Harbor DMCFs.

Implementing a full-scale IR and BU program is essential for sufficient Baltimore Harbor dredged material placement capacity. Maximizing material recovery volume at a rate equal to or exceeding the inflow volume, accelerating material recovery schedules, and developing new or alternative placement sites for Baltimore Harbor dredged material must continue to ensure MPA is prepared for placement through SFY45 and beyond, and to accommodate new and unanticipated challenges.

Seagirt Loop Channel Modification

In collaboration with MPA, USACE completed the Seagirt Loop Feasibility Study in 2023, concluding that deepening the West Seagirt Branch Channel to 50 feet and widening its bends would enhance safety and efficiency for ultra-large container vessels. These improvements enable faster and safer vessel movement, as well as more efficient handling of increased container volumes. The pre-construction engineering and design phase began in 2024 and remains on track for completion by late 2026. On January 2, 2025, the WRDA authorized the construction of the recommended channel modifications, pending the availability of funding. Construction is expected to occur in two phases, with the first phase anticipated between November 2026 and February 2027, followed by the second phase approximately one year later.



Dredged Material Placement Sites

» Mid-Bay Project

The Mid-Bay Project is a new placement site located in Dorchester County near the remnants of the badly eroded Barren and James Islands. As part of the 20-year rolling capacity plan, the Mid-Bay Project is a crucial future placement site for Chesapeake Bay material and integral to maintaining cargo ship passage to and business with the Port of Baltimore, as reinforced by the WRDA's directive to the Secretary of the Army to expedite the completion of the Mid-Bay Project.

Development of the site is progressing, with notable advancements in both the Barren Island construction and James Island design. To date, \$155.8 million in federal funding has been provided to the Mid-Bay Project, which has funded Phases 1 and 2 of Barren Island construction and will fund Construction Contract 1 for James Island. The Mid-Bay Project is being delivered through a federal-state partnership between USACE and MPA, with costs shared at 65% federal and 35% state funding.

» Barren Island

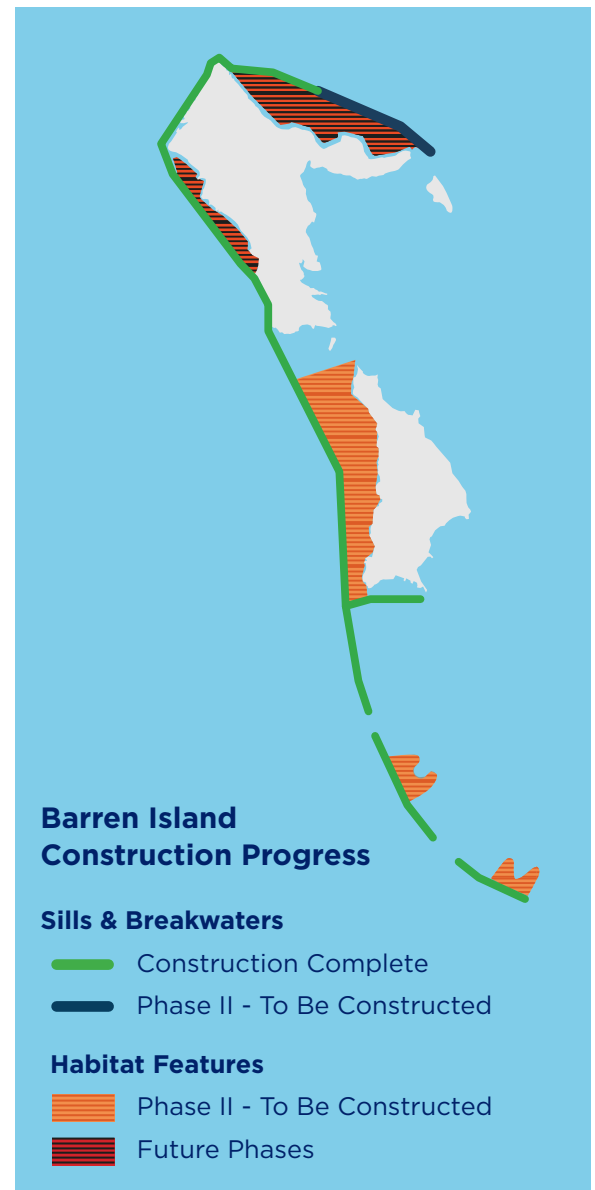
Phase I construction is now complete, which entailed the installation of protective stone sills and breakwaters along the island's western edge to safeguard the remaining portions of Barren Island and the adjacent submerged aquatic vegetation habitat.

Phase II of construction commenced in January and is anticipated to last approximately three years. It includes the preparation of the southern cell for the containment of dredged material, the creation of two bird island habitat features, and improvements to the northeast stone sill. Notably, this phase will include the Mid-Bay Project's first inflow of dredged material to the southwest wetland cell, expected in late 2026–early 2027. Future phases of the project are currently in the planning stages and will unfold over several years and subject to available funding, involving multiple separate dredging projects.

During construction this year, MPA and USACE have worked closely with community members, particularly local watermen, to identify opportunities aiming to minimize the impact of construction on their livelihoods. Targeted outreach and public meetings have helped foster constructive dialogue and maintain open paths of communication, especially as watermen navigated safety zones during fishing and crabbing seasons. Through this engagement, USACE and MPA learned that incorporating dredging of the Honga River into the Barren Island design would restore a vital route for watermen, improving fuel efficiency, travel time, and safety. Not only was this component successfully integrated into the project, but funding was also secured for the dredging, which is scheduled to occur in winter 2026–2027. USACE and the MPA continue to stay in close communication with watermen and the contractor to facilitate solution-oriented conversations as both groups navigate through the project.

When completed, the Mid-Bay Project will restore 2,144 acres of remote island habitat in the Chesapeake Bay, while providing a total dredged material placement capacity of 90-95 mcy over the next 30+ years.

Due to diminishing capacity at Poplar Island beginning in the mid-2030s, the Mid-Bay Project will take over as the primary placement site for the 2-3 mcy of annual maintenance dredged material from the Maryland Chesapeake Bay Approach Channels. Without this capacity, the 50-foot channel segments would shoal to a controlling depth of 45 feet within just two to three years, preventing safe passage for commercial vessels.



30%

reduction in
storm-related erosion

\$1M

in personal property
value benefits

\$1.5M

increased recreational value

8.5

acres of habitat for
ground-nesting birds

72

acres of restored
island habitat

1,300

acres of historic
seagrass habitat

Barren Island Benefits for People and Wildlife

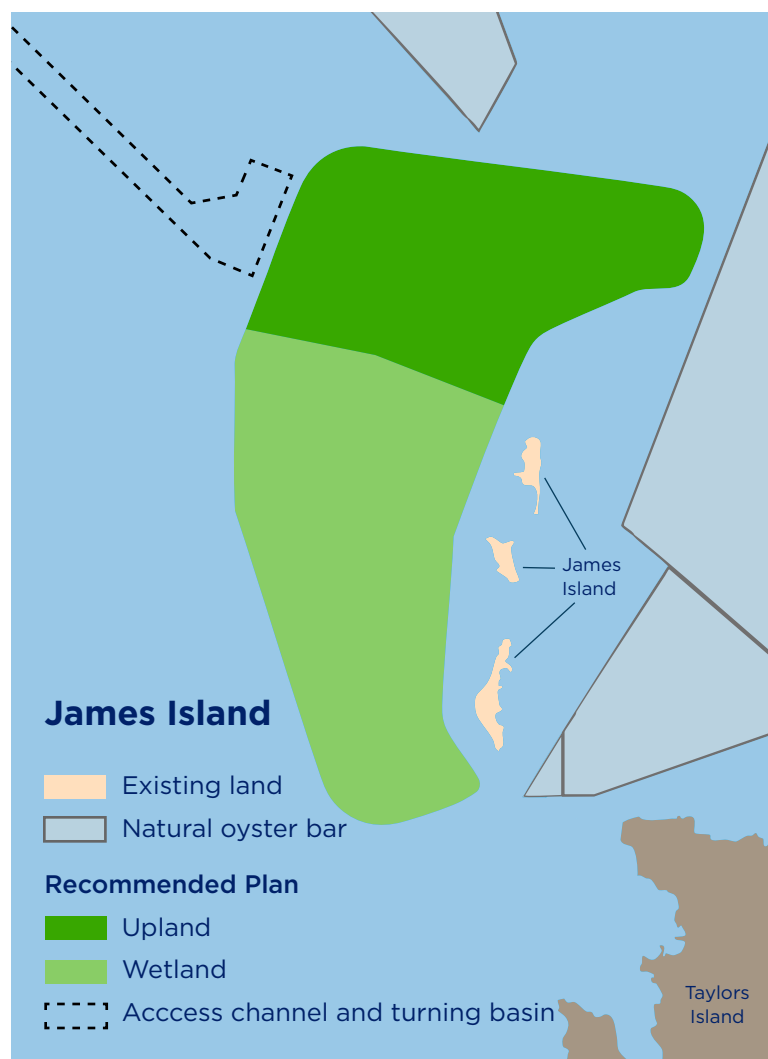
The Barren Island project will produce a wealth of economic, environmental, and community benefits over the next ten years, including:

- **Up to a 30% reduction** in the storm-related shoreline erosion rate on Upper Hoopers Island and the area north of Fishing Creek
- **\$1 million** in personal property value benefits due to reduced wave energy, improved water quality, and the presence of seagrass
- **\$1.5 million** in increased recreational value through boating, fishing, and wildlife watching
- **Two new bird nesting locations** that add **8.5 acres** of remote habitat for protected ground-nesting bird species
- **A minimum of 72 acres** of restored remote island habitat that will support diverse wildlife, including diamondback terrapin and common terns
- **Protection of 1,300 acres** of historic seagrass habitat, as a result of the construction of stone sills and breakwaters surrounding Barren Island

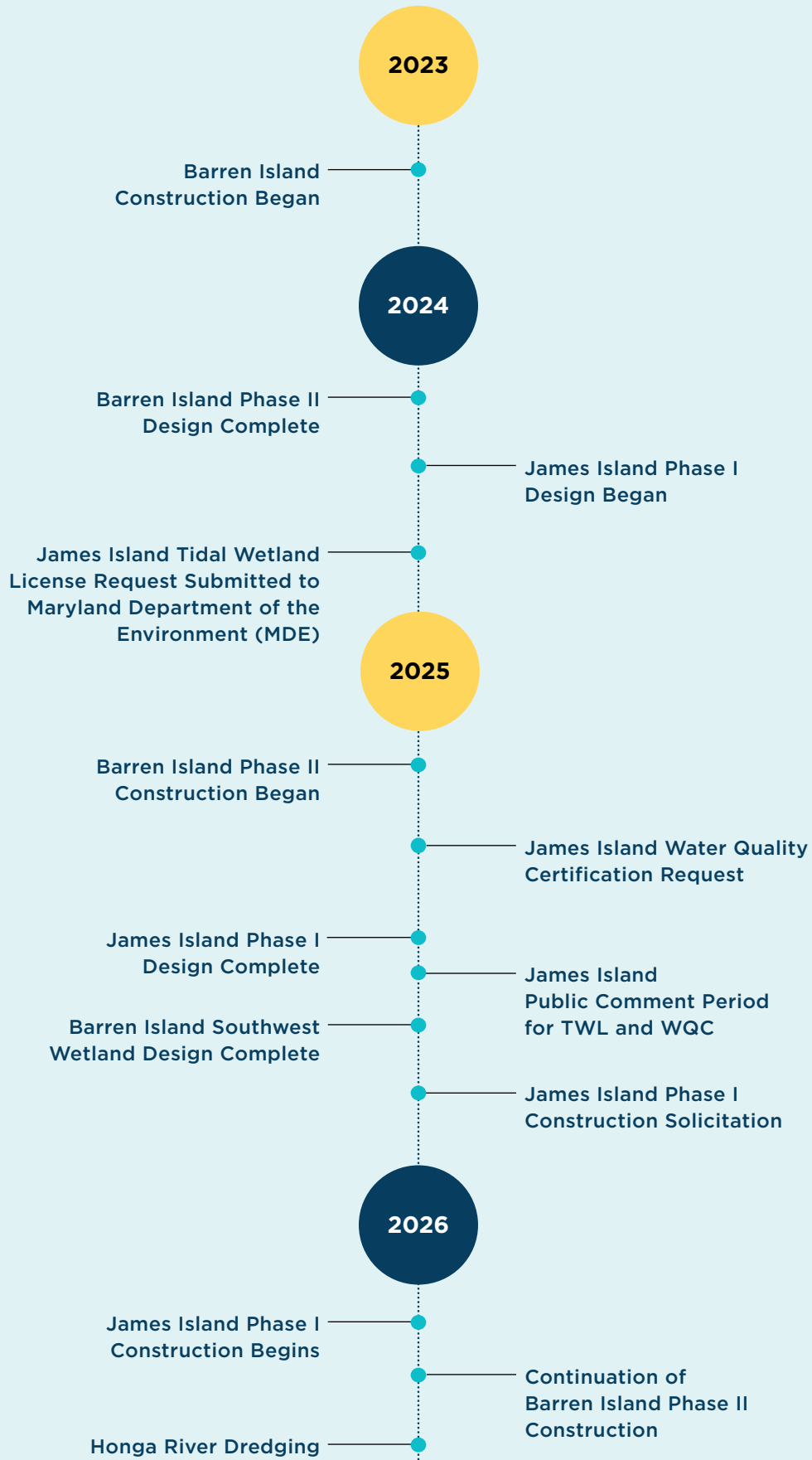
» James Island

The design for Phase I is now complete, utilizing modeling and geotechnical analysis to determine the project's alignment and structural components. Before construction can begin, project partners must secure two key permits: a Tidal Wetlands License (TWL) and a Water Quality Certification (WQC). The application for the TWL was submitted in 2024, followed by the WQC application in spring 2025. A public comment period for both permits took place during the second half of 2025. Assuming permits are approved on schedule, the first construction contract for Phase I, primarily consisting of the creation of a confined sand stockpile to be used for future dike construction, is expected to be awarded in early 2026. Meanwhile, the project team is actively working on the design for Phase II to enable limited placement of dredged material by early 2030.

To enhance the ecological value of the project, MPA and USACE hosted workshops with resource and regulatory agencies to gather input on incorporating Nature-Based Solutions (NBS) into the design of James Island. Based on this feedback, several NBS alternatives were developed and are currently being modeled to assess their feasibility. Viable NBS options could be integrated into the final project design.



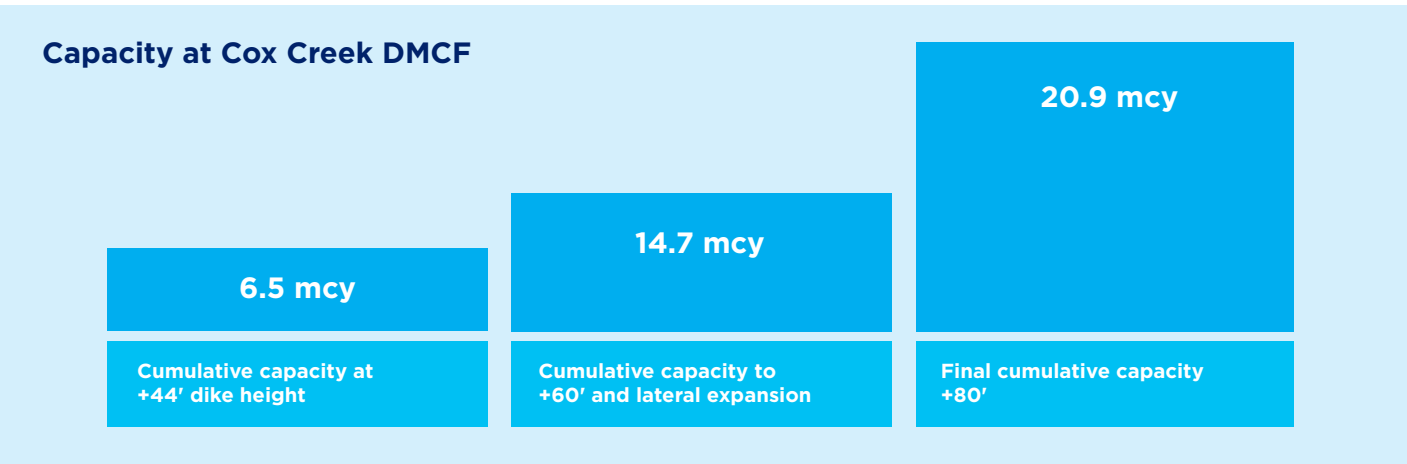
MID-BAY MILESTONES



» Cox Creek DMCF

Operations and Expansion

In 2025, MPA initiated the design process for the next phase of Cox Creek DMCF expansion to +80 feet, which will add approximately 6.2 mcy of placement capacity. Construction for this next phase is projected to begin between 2028 and 2030.



As part of the +60-foot expansion completed in 2024, MPA sourced material directly on-site by utilizing a clay borrow area located in the upland portion of Cox Creek, an approach that generated significant cost savings. The design for additional excavation to harvest more clay for future use has been completed. In 2026, MPA plans to excavate an additional 250,000 to 350,000 cubic yards (cy) of clay, which will deepen the upland area by 6 to 7 feet and further increase site capacity. The excavated clay will be stockpiled at the Cox Creek STAR Facility and remain available for future applications, with a value of up to \$10 million in saved material costs depending on its end use. Ultimately, the clay may be used to cap the same area, support future dike-raising efforts, or be distributed to other end users as IR and BU material.

Several dredged material inflows to Cox Creek DMCF took place in 2025 or are planned for early 2026:

- approximately **27,000 cy** from Baltimore County’s Shallow Creek,
- **265-500 cy** from the pier area adjacent to Hart-Miller Island (HMI),
- an estimated **530,000 cy** from USACE maintenance dredging of federal channels expected in early 2026, and
- in preparation for the Sail 250 Maryland event, an additional **35,000 cy** of dredged material from the Baltimore Harbor, either in late 2025 or early 2026.

Additionally, **163,000 cy** from Colgate Creek will be placed in geotubes within the Cox Creek DMCF upland cell as part of a large-scale demonstration project. Please see “Drying at Scale” on page 23 for more information.

Filtration Fueled by Science

MPA is currently exploring the use of biochar as a water quality treatment method at its DMCFs, with a particular focus on the Cox Creek DMCF. Biochar, a carbon-rich material produced by heating organic matter, has shown promise as a natural filtration medium that can improve water quality. This exploration will include a literature review, a study to identify the most effective biochar blends, and an evaluation of other potential filter amendments. The findings will culminate in a set of recommendations, with a final report expected by the end of the year. This initiative represents a nature-based, carbon-neutral solution that aligns with MPA’s commitment to science-based, environmentally responsible management of its DMCFs.

Community Benefits

Progress has also been made on the Swan Creek Nature Trail (SCNT) adjacent to the Cox Creek DMCF, which included the innovative reuse of 90 cy of dredged material for base material and surface enhancements in a segment of the trail. Developed in close collaboration with the Cox Creek Citizens Oversight Committee (COC) and community stakeholders, this trail will create a nearly two-mile loop through the forested conservation easement area, providing enhanced access for surrounding communities and offering opportunities for outdoor recreation and education. Trail design includes boardwalks, a bridge, outdoor classrooms, and informational and directional signage. According to an official census of the area, 205 bird species have been observed during birding tours and by onsite staff, with 15 species confirmed as breeding on site this year.

The SCNT design is complete, with permitting in progress and construction anticipated to begin in 2026, with an expected opening to the public in late 2026 or early 2027. This work was partially supported by \$179,316 in federal grant funding from the Department of Transportation’s Recreational Trail Program.

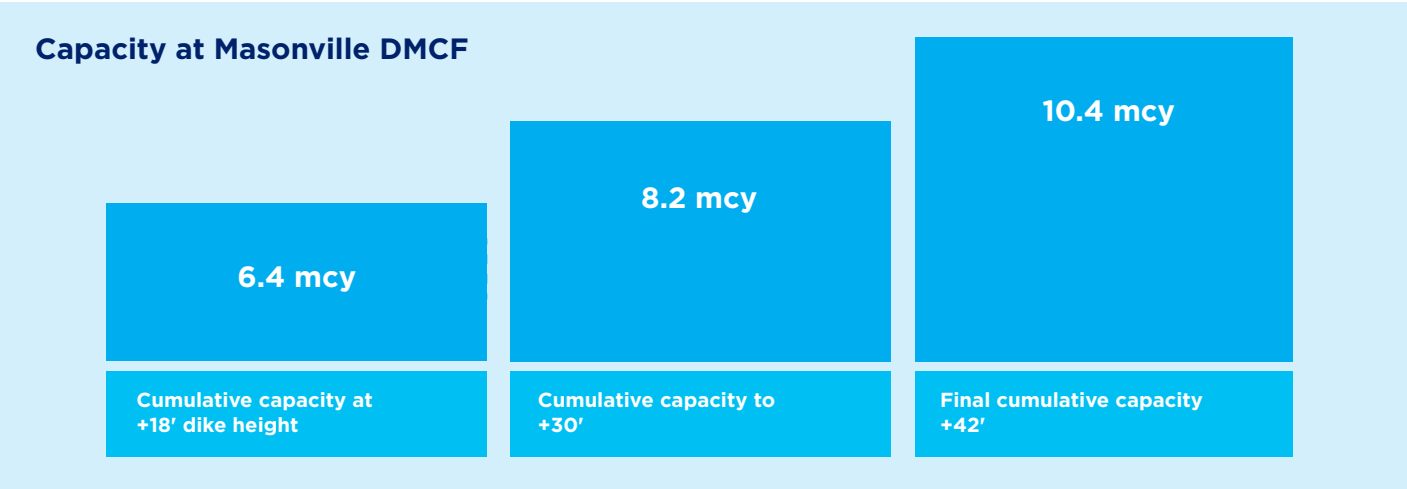
Mitigation Project

The habitat restoration project at Genesee Valley Outdoor Learning Center, a wetland mitigation project related to the Cox Creek DMCF +60-foot dike raising, advanced in 2025. MPA submitted a request to the Board of Public Works to secure the land as a conservation easement, which was approved in July. Final USACE permit approval was received, and construction is expected to begin in late 2025 or early 2026, lasting approximately 7 months. MPA will be responsible for the long-term maintenance and monitoring of the mitigation site.

» Masonville DMCF

Operations and Expansion

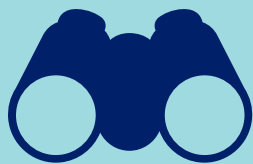
The dike raising at the Masonville DMCF to an elevation of +30 feet will provide additional capacity, a key component of MPA’s 20-year rolling capacity plan, and is slated for completion by late 2025, six months ahead of schedule. The steep slope design of the expanded dikes will maximize storage capacity for dredged material. Design to raise the dike to +42 feet is underway and is expected to be completed by the end of 2025, with the plan to advertise for construction bids in early 2026. The goal is to have a gap of only a few months between construction to +30 feet and initiation of construction to +42 feet. Additionally, an inflow of 350,000 cy is expected in late 2025 from the Sparrows Point Container Terminal project.



Community Benefits

The Masonville facility comprises two sites: an active DMCF and the pioneering Urban Wildlife Refuge Partnership site, which hosts an award-winning Environmental Education Center, named Masonville Cove. The Masonville Cove Campus, originally developed as a community enhancement alongside the DMCF, now serves as an urban wildlife refuge, education center, and public gateway to the waterfront. It reconnects surrounding communities to the water by offering access to shoreline areas, piers, and walking trails. Masonville Cove is operated through an innovative partnership between MPA, National Aquarium, Living Classrooms, and the U.S. Fish and Wildlife Service.

MPA recently commissioned a study to determine the economic value of Masonville Cove as perceived by the community. Economists from Morgan State University and the University of Maryland's Center for Environmental Science (UMCES) examined a range of economic indicators and determined that Masonville Cove has an estimated economic value exceeding \$10 million. This valuation underscores Masonville Cove's role as a vital resource for both residents and the environment.



Birding at Masonville Cove

Masonville Cove stands as a beacon of resilience and community-driven conservation in the heart of Baltimore, and this year, we reached a remarkable milestone: five years of eaglets hatching and 13 eaglets fledged. With additional recorded sightings of over 270 bird species and more than 3,100 birds banded, the site is a wildlife haven.



In 2025, rare species observed at Masonville Cove included the Olive-sided Flycatcher, Alder Flycatcher, Gray-cheeked Thrush, Grasshopper Sparrow, Orange-crowned Warbler, Mourning Warbler, Summer Tanager, and Dickcissel. Finally, the only Common Tern colony in Maryland north of the Bay Bridge nested on the offshore platform again. In all, 202 bird species were sighted this year at Masonville Cove, with 17 confirmed breeding bird species.



Birding at Masonville DMCF

Additionally, there were two significant "firsts" in 2025 at the nearby Masonville DMCF: a Piping Plover, the first ever sighted in Baltimore City, and a pair of breeding Black-necked Stilts bred, a first for the Baltimore City area. The adult stilts successfully raised four young, and the family group departed by mid-September.

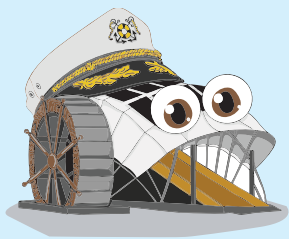
Other unusual and rare species in the DMCF this year include the American Avocet, Red-necked Phalarope, Ruddy Turnstone, and American White Pelican.

Cleaning Our Shores

MPA is committed to growing greener neighborhoods surrounding Masonville Cove. In conjunction with stakeholders, MPA oversees a range of innovative strategies to reduce trash in surrounding neighborhoods and waters through cleanups and debris removal programs. In 2025, over one ton of debris was removed from the campus by volunteers during shoreline cleanup events, bringing the total amount of debris removed since these cleanups began to nearly nine tons. Furthermore, the Adopt-a-Highway program supports the monthly cleaning of five one-mile stretches of roadway near the site. This program removed 164 bags of trash this year and over 1,900 bags of trash since program inception.

Trash wheels are another integral part of keeping the surrounding waterways clean. Captain Trash Wheel, Mr. Trash Wheel, Professor Trash Wheel, and Gwynnda the Good Wheel of the West have all been at least partially funded by MPA to help prevent trash from entering Baltimore Harbor and the Patapsco River, which leads to the Chesapeake Bay. Captain Trash Wheel, located at Masonville Cove and fully funded by MPA, has removed over five tons this year and over 58 tons of debris from the waterway in seven years.

The entire trash wheel family removed nearly 300 tons of debris this year and has prevented more than 3,650 tons of debris from entering Baltimore Harbor and the Patapsco River since their installation. Together, these trash wheels play an important role as environmental education and awareness tools, particularly on social media platforms.



New Award for Masonville Cove's Captain Trashwheel

Captain Trash Wheel recently received a prestigious Best Urban Best Management Practice in the Bay Award, better known as BUBBA, earning top honors in the Education and Outreach category. The popularity of the 40-foot-long, trash-gobbling machine, located at Masonville Cove, has fueled the outreach and education programming led by the Masonville Cove Partnership.

Over the past five years, Captain Trash Wheel's overall impact has generated more than 391,000 social media impressions and engaged over 20,000 students and community members through hands-on education, shoreline cleanups, and tours. Captain has also inspired initiatives such as the "Just One More" campaign, which encourages simple, everyday actions people can take to reduce plastic pollution.

Improving Access: Masonville Cove Connector

Because access to Masonville Cove remains a challenge, MPA and its partners have secured two grants totaling \$2.86 million from the Federal Highway Administration's Federal Lands Access Program and USFWS to restore waterfront access for neighborhoods surrounding the Masonville DMCF. These funds support the design of a shared-use path that will connect Masonville Cove to the Gwynns Falls Trail and nearby communities, significantly improving safe and equitable access. Once completed, the Masonville Cove Connector will become a vital link in a network of over 20 miles of trails, offering walking and biking connections to dozens of neighborhoods, a regional hospital, and wellness facilities.

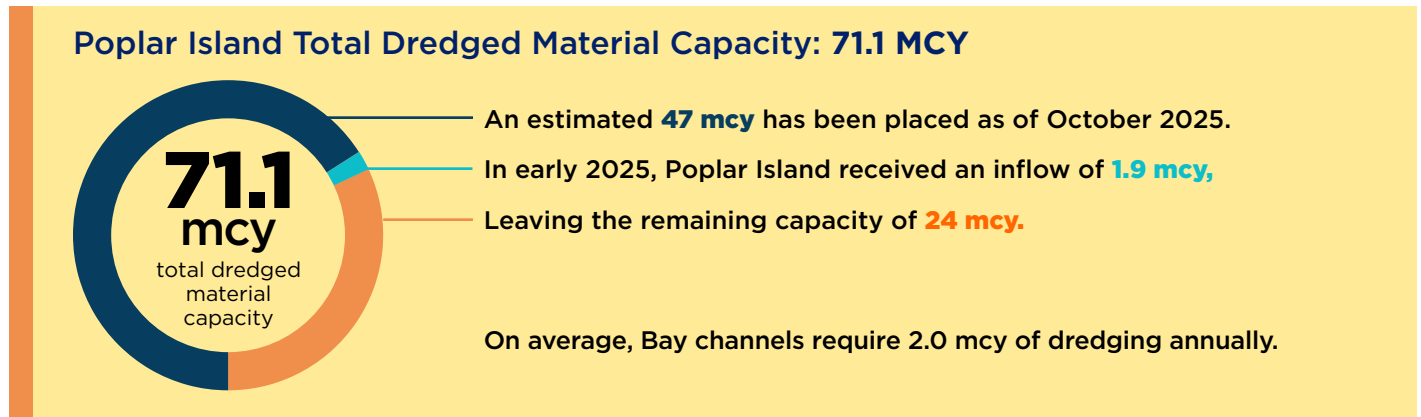
The initial 30% design phase is currently underway, with full design completion expected by mid-2027 and design approval anticipated in early 2028. Throughout the design process, MPA is coordinating closely with Baltimore City Government and Maryland Transportation Authority to align with neighboring infrastructure projects, leverage each other's resources, and minimize disruptions along Frankfurst Avenue. In parallel, MPA is actively pursuing additional funding in collaboration with federal and state partners to support the project's next stages.



» Poplar Island

Operations

Poplar Island is a world-renowned international model for its beneficial use of dredged material to restore remote island habitat with the potential to mitigate the effects of sea level rise (SLR). Lessons learned from this project are already being incorporated into the planning and design of the Mid-Bay Project. Poplar Island, a 30-year project, was recently expanded to extend its placement capacity and operational lifespan.



Upon completion, Poplar Island will have restored 1,715 acres of remote island habitat. This year Poplar Island habitat planning included focus on the site's upland design and explored options to provide a hydraulic connection for the conveyance of sediments and stormwater from the uplands to the adjacent tidal wetlands. Designing the uplands presents numerous engineering and environmental challenges, including ensuring the successful planting of terrestrial plants in dredged material, which often has high salinity and low pH levels.

MPA and the design team have identified a preliminary design for the upland/wetland interface, and they continue to facilitate regular meetings among a team of technical experts to share ideas and identify potential solutions. The approximately 30-acre upland Cell 2AX is being designed as an upland test plot to determine the desired species, and other sites are being examined to gather data on plant species survival.

Community Benefits

In 2025, MPA welcomed 2,572 visitors across 151 hosted tours that showcased the ecological and restoration successes of Poplar Island, a vital stopover for migratory birds. More than 270 bird species have been identified at the site. According to the official 2025 bird censuses, 224 species were recorded, with 31 confirmed as breeding and another 16 considered likely breeders. Notably, a Harlequin Duck was spotted, the first documented sighting of this species at Poplar Island.

Scientific Study and Partnerships

The restored marshes at Poplar Island are demonstrating resilience to SLR, reinforcing recommendations to prioritize nature-based, climate-resilient coastal restoration. The island also serves as a dynamic research station, with studies underway on best practices for wetland restoration, carbon sequestration, nutrient cycling, greenhouse gas emissions, oyster spat viability, native fish utilization, and long-term ecological resilience. These efforts continue to position Poplar Island as a model for sustainable BU restoration projects.

A current study from the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Naval Academy investigates whether juvenile oysters (spat) can naturally settle on stone reefs constructed within the Poplar Island open-water embayment, an alternative to the traditional method of lab-grown spat-on-shell. Early monitoring revealed some natural oyster recruitment; however, the success of the study spat remains undetermined due to limited site access, which led to a pause in monitoring. Recognizing the potential of this nature-based approach, MPA is collaborating with Maryland Environmental Service (MES) staff to develop a new monitoring plan using a remote-controlled underwater drone equipped with a camera to track oyster development.

In parallel, NOAA launched an acoustic telemetry study in 2023 to assess fish habitat use in restored marshes at Poplar Island. Data collection continued through 2024, with a final report delivered in 2025. The study also supported diamondback terrapin research. Poplar Island's diamondback terrapin researchers took advantage of NOAA's array of battery-powered data receivers deployed in the restored marshes and surgically implanted coded transmitters in wild and head-started terrapins as part of the Terrapin Education and Research Partnership (TERP) (more details on this program found below in the Education section).

Preliminary results indicate that head-started terrapins have a different movement pattern and behavior than their wild counterparts. Results also suggest that there may be differences in terrapin movement depending on where they were released in the marsh, including whether they stay on Poplar Island or expand their home range offsite. Similar to NOAA's tagged fish, some terrapins were detected staying close to Poplar Island, while others traveled much farther in the Chesapeake Bay, with one individual terrapin detected 28 km away.

Additionally, UMCES began assessing carbon sequestration in Poplar Island's restored wetlands in 2024 using Blue Carbon Initiative protocols, and this year conducted carbon stock and flux measurements in vegetation and soil by collecting samples from various marshes and co-locating them with long-term Surface Elevation Table data. When completed, the final Blue Carbon Estimate Report will quantify carbon uptake in habitats created with fine-grained dredged material and inform future management decisions. These findings will demonstrate the climate benefits of wetland restoration, including carbon storage and increased marsh resilience to SLR. Unlike nearby reference marshes, Poplar Island's restored marshes are currently keeping pace with SLR.

» Hart-Miller Island

Planning Update

The HMI COC, statutorily created in 1981, is the oldest committee in the DMMP program and has ensured an open dialogue between the communities surrounding the site and MPA, while providing oversight on dredged material inflow and operations. Since dredged material placement ceased at HMI in 2009, the HMI COC has been engaged in developing a closure plan for the site and was instrumental in creating the Friends of Hart-Miller Island volunteer group, with which MPA continues to partner.

MPA and MES continue to explore options for the North Cell Habitat Development of HMI, in collaboration with the Maryland Department of Natural Resources (DNR) and the HMI COC. Throughout all phases of HMI development, MPA has maintained consistent dialogue with the community to facilitate necessary discussions and remains committed to ongoing engagement.

» Community Benefits

This year, public access to the State Park was limited due to budget constraints, but birdwatching continues to thrive at HMI. Official censuses recorded 229 bird species on the island, with 15 confirmed as breeding and another 44 considered probable or possible breeders. Notably, a Mottled Duck was observed for the first time on HMI this year, marking the first documented sighting of this species at any MPA site.

After a multi-year hiatus, the HMI 5-Miler returned on October 4, 2025. Hosted by Maryland DNR and MPA, in coordination with Charm City Run, the footrace welcomed 104 racers and an additional 25 spectators who enjoyed the scenic race and the island's natural beauty.

Raising Poplar Island Awareness

As part of Maryland Public Television's (MPT) Chesapeake Bay week series, the network produced and aired a film to raise awareness of the wetland restoration and climate resilience efforts on Poplar Island. One of the most anticipated films in the series, titled "Resurrecting Poplar Island," premiered on April 20th this year. The film recounts the history of Poplar Island, highlighting its near-total erosion and the use of dredged material to rebuild the island's habitat, as well as the extraordinary collaboration among researchers and state and federal agencies to monitor the island environment year-round. MPT casts the project as "one of the most ambitious environmental engineering projects on the planet." In addition to MPT's support of the series, *Chesapeake Bay Magazine* also promoted it to its 20,000 readers.



» Virginia Channels - Wolf Trap & Northern Extension

Planning Update

The Virginia Channels Bay Enhancement Working Group (VA BEWG) previously developed a shortlist of potential BU projects, sites, and concepts to serve as alternatives to open water placement at the Wolf Trap Alternative Placement Site, and USACE and MPA are currently evaluating the most promising options based on environmental acceptability, cost-effectiveness, and logistical feasibility.

To support this effort, USACE initiated a “Planning Assistance to the State” study to address data gaps related to BU and dredged material management in Virginia. In late 2025, the VA BEWG is being reconvened to refine the original shortlist of potential BU projects and explore any new placement opportunities that have emerged since its initial development.

» Coastal Resiliency and Climate Change Vulnerability Assessment

MPA has completed a comprehensive Coastal Resiliency and Climate Change Vulnerability Assessment across the DMMP sites, including: the Cox Creek DMCF, the Cox Creek STAR Facility, Masonville DMCF, the HMI DMCF and its associated land bases, Poplar Island, the Mid-Bay Project, and mitigation sites such as Masonville Cove and the Swan Creek Mitigated Wetland, including its Forest Conservation Easement. The assessment was designed to inventory, model, and analyze these facilities to evaluate risks associated with varying levels of SLR and storm surge.

Planning is now underway for the next phase of this initiative, which will incorporate hydrodynamic modeling to assess wave action impacts at specific locations and guide the development of site-specific adaptation strategies. Using insights from the assessment, MPA will make scientifically informed decisions on infrastructure and facility improvements to adapt to climate change, enhance the resiliency of its assets, and support long-term growth in waterborne cargo.



IR and BU Overview

INNOVATIVE REUSE

The use of dredged material in the development or manufacturing of commercial, industrial, horticultural, agricultural, or other products and includes upland uses of dredged material.



BENEFICIAL USE

The use of dredged material for the restoration of underwater grasses, island restoration, stabilization of eroding shorelines, the creation or restoration of wetlands, and the creation, restoration, or enhancement of fish or shellfish habitats.



IR and BU of dredged material are transitioning from exploratory and developmental phases into large-scale implementation and are a critical part of MPA's long-term DMMP capacity planning. MPA has released an updated IR and BU strategy, incorporating input from the DMMP Innovative Reuse Committee (IRC), which comprises representatives from industry, engineering, science, environmental organizations, and community groups. This strategy builds on the 2020 strategy, incorporates lessons learned from a decade of research, development, and pilot implementation, and will guide the next five years of implementation.

To date, demonstration projects and research studies have validated the technical viability of IR and BU approaches and laid the groundwork for investment in industrial-scale infrastructure. Most notably, the Cox Creek STAR Facility will serve as a dedicated processing site for dredged material and set the stage for future large-scale IR and BU operations.

» Advancing IR

In partnership with the State Highway Administration (SHA), MPA has made significant progress toward integrating dredged material into construction practices in Maryland. This includes the addition of a dredged material specification to the SHA Standard and Supplemental Specifications for Construction and Materials, which after formal review and joint approval by SHA and the Federal Highway Administration, has occurred. This development marks a major milestone in promoting the innovative reuse of dredged material in the construction industry.

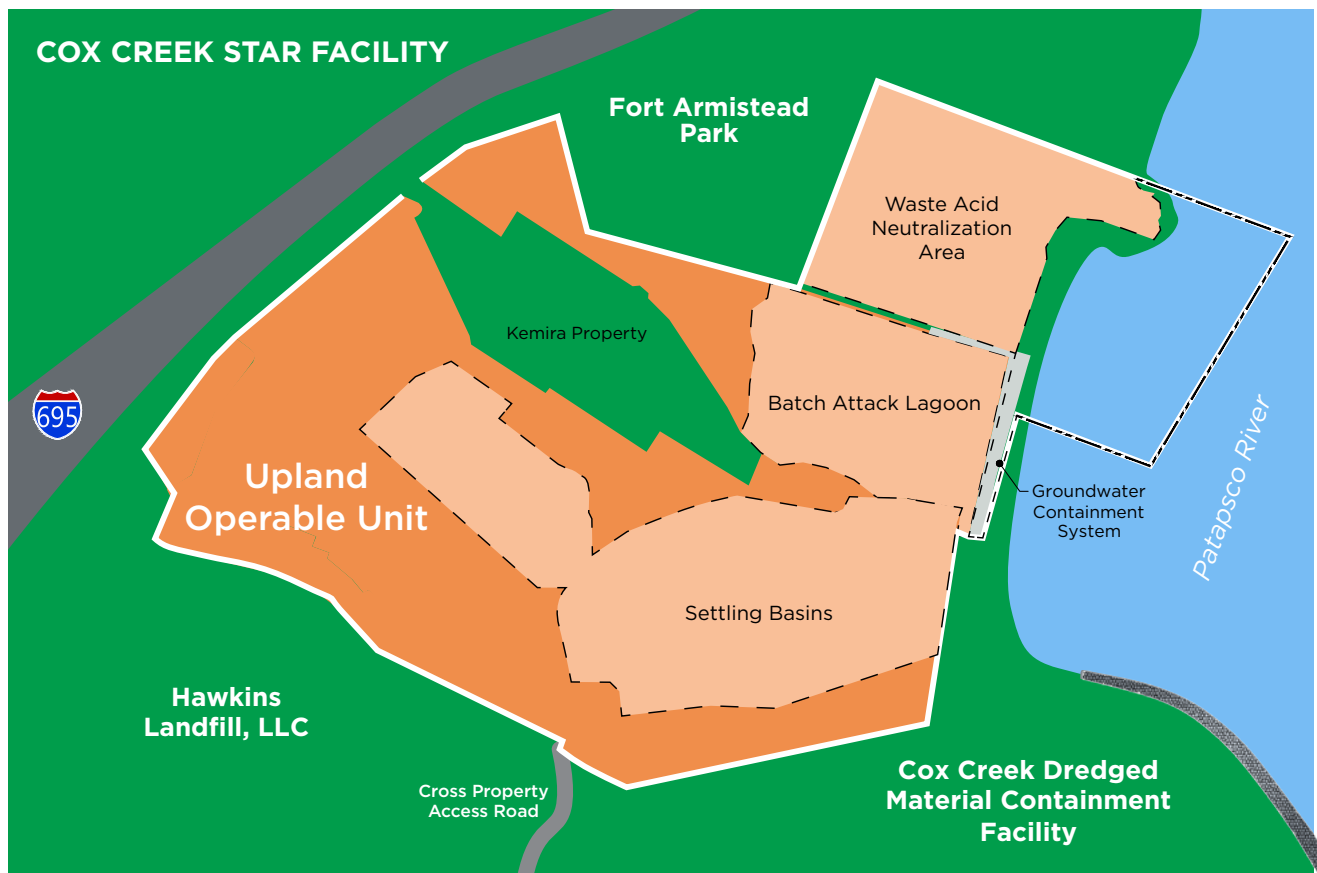
The Cox Creek STAR Facility

» Overview & Facility Update

In 2025, MPA made significant progress toward preparing the Cox Creek STAR Facility for future IR and BU activities. The site, formerly used for heavy industrial activities, requires environmental remediation. MPA purchased the property in 2022 with a settlement that included an administrative consent order with MDE and the previous site owner, providing a road map for remediating the site in phases over ten years. MPA has developed a comprehensive master plan outlining both short-term and long-term strategies for the operation and utilization of the Cox Creek STAR Facility. Once the full remediation is completed, approximately 90% of the entire property will be dedicated to supporting the IR and BU program.

The Upland Operable Unit (OU) is the first parcel that will be remediated and is anticipated to begin hosting IR activities in 2026. A 26-acre parcel within the Upland OU will be available for development first, while the phased remediation continues in the remaining OUs.

To support operations between the Cox Creek DMCF and STAR Facility, MPA has completed construction of a cross property access road directly connecting the two adjacent facilities. This will significantly improve the efficiency of moving dredged material for reuse, while also reducing noise, travel distance, and truck traffic in the surrounding community.



Capacity Gains Offset Remediation Costs

Recovering 1.2 mcy of capacity has a value of approximately \$32.76 million to MPA. The remediation of the Cox Creek STAR Facility is being cost-shared between the previous owners at a ratio of 38% MPA and 62% previous owners. MPA's estimated costs are approximately \$28.5 million, so within the 5-year ramp-up period, MPA will have more than recouped the investment in the value of the capacity.

» Request for Information

In September of this year, MPA issued a Request for Information to gauge market interest and capability to perform large-scale IR and BU of dredged material at the Cox Creek STAR Facility. Respondents were asked to provide detailed proposals outlining operational methods, implementation strategies, production rates, development timelines, cost estimates, and any anticipated environmental impacts or mitigation strategies. MPA will also review market analyses of products and economic impact statements for the immediate area and the state of Maryland, and will determine whether the end products are consistent with the specifications established in the MDE Innovative Reuse and Beneficial Use Guidance Document.

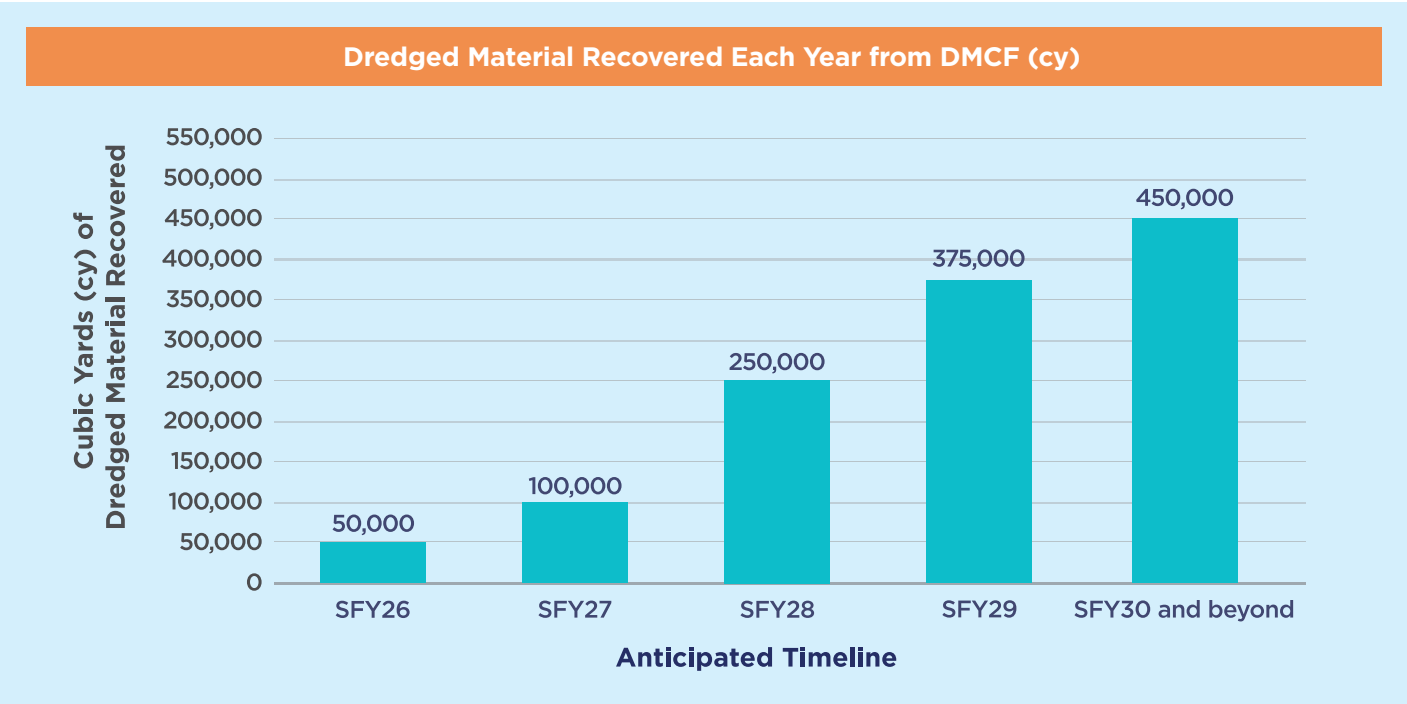
Following review and verification of the submitted information, MPA will begin engaging with prospective developers in 2026. If progress continues as planned, construction activities at the Cox Creek STAR Facility are expected to start within the next two years, marking a significant step toward the full-scale implementation of IR strategies.

Strategic Capacity Recovery

Maximizing capacity recovery through IR and BU is a cornerstone of the DMMP and critical to meeting the 20-year dredging demand, and efforts to recover capacity at DMCFs are showing promise. While an optimal annual recovery rate has yet to be defined, IR and BU are expected to play a vital role in extending the operational lifespan of Baltimore Harbor DMCFs. To ensure long-term viability, reclaiming dredged material from DMCFs at volumes equal to or greater than annual inflows is essential.

This year, MPA initiated permitting for a 7-acre geotube dewatering field within the Upland OU of the Cox Creek STAR Facility, adjacent to the Cox Creek DMCF. This location offers a strategic advantage, allowing dredged material to be hydraulically pumped directly from the DMCF cell into geotubes, eliminating the need for hauling. This has been identified as a potentially more cost-effective method for dewatering dredged material to expedite its availability for IR and BU end-use. Once operational, the geotube field is expected to reclaim 50,000 cy of material from the DMCF in SFY26, which will be stockpiled for future reuse, integral to MPA’s planned scale-up schedule for reclaiming capacity from the Cox Creek DMCF.

MPA anticipates a five-year scale-up period, during which the facility will gradually increase its processing volumes. An estimated 1.2 mcy of dredged material will be recovered over these five years, with the goal of 50,000 cy reclaimed from Cox Creek DMCF in SFY26, the first recovery year.



IR in Action

On the ground, dredged material has been successfully reused to regrade an existing shoreline access road at Cox Creek, which will also serve as a spur off the SCNT. Additionally, surface conditions on the Masonville Cove “claw” road were improved by spot-treating ruts with dredged material. In total, from 2018 to 2025, a total of 35,456 cy of Harbor dredged material has been innovatively reused, demonstrating MPA’s commitment to practical environmental stewardship.

» Drying at Scale

The development of efficient drying techniques is central to the long-term success of IR and BU. MPA is implementing several pilot projects to evaluate the optimal use of geotubes for drying material dredged from Baltimore Harbor, to prepare it for IR and BU applications.

A geotube pilot project initiated in 2024 is now in Phase II, focusing on testing various geotube fabrics and flocculants—substances that promote particle clumping—to identify the most effective combination for accelerating the drying of material removed from Cox Creek DMCF. The results of this evaluation will inform the design and best practices for a full-scale drying program at the Cox Creek STAR Facility.

Geotubes are also being used in a pilot project to facilitate drying of approximately 163,000 cy of material dredged this year from Colgate Creek, located between Seagirt and Dundalk Marine Terminals. This material was placed directly into geotubes at the Cox Creek DMCF Upland Area, conserving space in the DMCF. About 100,000 cy of dried dredged material from this project will be reused at MPA facilities, improving operational efficiency and reducing costs. Planned uses include grading fill for the closeout of the Hawkins Point DMCF South Cell, surcharging the Kurt Iron Slip at Masonville DMCF, and raising dikes at Masonville DMCF.

Additional IR and BU placement opportunities are being explored for the remaining material. These include the Baltimore Peninsula redevelopment project, which could utilize nearly 700,000 cy of material, and the BGE Riverside Generating Station, which could use approximately 20,000 cy.



IR Research and Development Projects

The Board of Public Works has approved nine IR research and development (R&D) contract awards for sustainable reuse applications that support long-term, strategic planning initiatives. Results from six of the projects have been shared, with the remaining results expected by early 2026. The products demonstrate potential for large-scale implementation, including manufactured bricks, soil reengineered for sod growth, dredged material incorporated into concrete mixtures, and the use of dredged material as a lightweight aggregate. MPA is actively evaluating its R&D projects to extract lessons learned, explore adaptive management strategies, and assess scalability to identify ways to recover placement capacity. Together, these studies not only support MPA's environmental goals but also demonstrate the potential for dredged material to play a role in sustainable infrastructure development.

IR Research and Development Projects

The robust pipeline of development projects was a key factor in refining the plans for the Cox Creek STAR Facility adjacent to the Cox Creek DMCF. Development projects include:

PRODUCT AND COMPANY	RESULTS	CURRENT STATUS/FUTURE CONSIDERATIONS
Ceramic bricks and permeable pavers Belden-Eco Products, LLC	Dredged material pavers have the potential to be successful residential and commercial products and could be sold at equal or lower cost than traditional clay/shale pavers and used as green infrastructure to reduce runoff and infiltrate stormwater.	R&D completed in 2022. The successful mixture contained 100% dredged material and met or exceeded ASTM standards for pedestrian and light traffic paving bricks.
Concrete traffic barriers and shoreline protection structures Northgate Environmental Management, Inc.	Dredged material is a cost-effective key ingredient in a new concrete barrier mix for low-stress uses like sidewalks, curbs, and gutters. Another potential use could include modular 3D-printed shoreline protection structures that could be used for wave attenuation and to address coastal stabilization concerns, including erosion from sea level rise and storm surge.	R&D completed in 2022. Modular 3D-printed shoreline protection structures are a potential use with important applications for climate resilience.
Re-engineered soil for growing sod FasTrak Express, Inc.	FasTrak collaborated with local project partners to combine dried dredged material with mushroom compost, developing a formulation for growing sod. Results showed that using up to 50% dredged material in a re-engineered soil with adequate grass growth is possible. Soil components may contain seeds that are not suitable for sod, making it only suitable for #2 grade sod.	R&D completed in 2023. Lessons learned regarding the screening of materials, transport distances, and other factors are being considered for future improvements. In addition to sod, other uses for 50% dredged material re-engineered soil to support grass include capping material, roadside restoration, and sports fields.
Lightweight aggregate Harford Industrial Minerals, Inc.	Dredged material as a lightweight aggregate has the potential to be successful when used in concrete mixtures, green roofs, or behind bridge abutments to relieve pressure on the superstructure.	R&D completed in 2023. Early success is promising, but there is a need to identify a more effective binding agent and an efficient process for creating the sphere shape of the aggregate.
Concrete mixes for general use Susquehanna Concrete Products, Inc. (Suscon Products)	Dredged material as a concrete product has the potential to be commercially successful.	R&D completed in 2023. Together with Harford Industrial Materials, a sister company, Suscon is considering full-scale development of a plant that could process dredged material into aggregates and concrete products.

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PRODUCT AND COMPANY	RESULTS	CURRENT STATUS/FUTURE CONSIDERATIONS
Upland and shoreline berms using geotextile tubes (geotubes) CSI Environmental, LLC	Successfully demonstrated that CSIE's process can fill and dry geotextile tubes with dredged material and then create both shoreline and upland berms.	R&D completed in 2024. MPA evaluated drying practices using mini-geotubes and flocculants to determine the optimal combination for accelerating the dewatering of sediment from the Cox Creek DMCF. Mini-geotubes were then strategically placed in shoreline and upland environments for stabilization and resilience.
Vegetative earth berms University of MD	Baseline testing and data compilation have been completed. Results expected in 2026.	Additional testing on full-scale prototypes is nearing completion. The project is expected to be completed by the end of 2025.
Cement clinker and supplemental cementitious material (SCM) Northgate Environmental	Explores the possibility of using dredged material to produce SCM and cement clinker, both of which are used to make concrete	Project is wrapping up with results, and the final report is expected in late 2025. Supplemental cementitious material and lightweight aggregate
Supplemental cementitious material and lightweight aggregate HarborRock	Studying the feasibility of using dredged material to produce lightweight aggregate and SCM. This work both builds upon and expands prior research conducted by HarborRock on the production of these materials from dredged material obtained from the MPA.	Project underway. If successful and commercially scalable, this effort could provide a locally sourced and produced sustainable alternative to virgin aggregate material typically obtained from quarries. Project results are expected in early 2026.

Additionally, COMUS Sustainable Pozzolan Products is conducting research into the use of Harbor dredged material as a partial replacement for cement in concrete production. Their findings show that this material can serve as a natural pozzolan which when blended with Portland Cement creates a durable “green cement.” Unlike traditional cement production, this process does not rely on fossil fuels, offering a promising solution for reducing greenhouse gas emissions.

Building Climate Resilience with Dredged Material

MPA received a Federal Highway Administration Climate Challenge Grant to study constructing vegetated earth berms from Baltimore Harbor dredged material to help control erosion along Maryland's highways. This involves creating and testing dredged material blends with three specific criteria for a successful blend: (1) appropriate geotechnical properties, (2) acceptable environmental properties, and (3) the ability to rapidly establish vegetation in a berm setting. University of Maryland is leading the vegetated earth berm analysis, while Michigan State University is conducting a comprehensive life-cycle cost analysis to evaluate long-term sustainability. An optimized blend that meets all criteria is undergoing full-scale prototype testing, with an expected project completion date in early 2026.

BU Fueling Action

Poplar Island and the Mid-Bay Project stand as landmark large-scale BU projects using dredged material from Maryland Chesapeake Bay Approach Channels. Building on this BU foundation, MPA is placing increased emphasis on the beneficial use of Harbor dredged material. To that end, MPA is forming a BU Subcommittee under the Bay Enhancement Working Group (BEWG). Further, MPA is actively engaging stakeholders to revisit and refine the MDE Innovative Reuse and Beneficial Use Guidance Document, with a particular focus on the BU sections. The primary goal is to provide recommendations that clarify and streamline the permitting process, ultimately facilitating more widespread BU of Harbor material.

Several BU projects have recently been completed or are in development, showcasing the practical application of dredged material in environmental restoration and remediation efforts. In northern Anne Arundel County, MPA contributed nearly 1,600 cy of dried dredged material to construct a living shoreline at Stoney Beach. The material



“Maryland is leading the way in turning dredged material into a resource, rather than disposing of it as a waste.”

— Kate Charbonneau,
DNR’s Assistant
Secretary for Aquatic
Resources

was hauled from the Hawkins Point DMCF earlier this spring. MPA also provided sampling, laboratory testing, and risk assessment services required for MDE approvals, saving the Stoney Beach community over \$23,000.

In Baltimore City, 500 cy of dried dredged material from Hawkins Point DMCF were used to remediate the Race Street wetland area, a formerly contaminated site undergoing remediation. Additionally, MPA is engaged in discussions with the Middle Branch Resiliency Initiative to explore the potential use of Harbor dredged material for shoreline restoration in Southeast Baltimore, further expanding the reach and impact of BU efforts across the region.

Stewarding IR and BU

Throughout this innovative work, MPA remains committed to engaging stakeholders, ensuring they are not only informed on how dredged material can be a useful resource, but also how they can be engaged in advancing the program, and specifically how they can request dredged material for their own use via an online platform. One example is MPA’s assistance as a subject matter expert in “Is BU4U?,” a workshop in Grasonville, Maryland, hosted by DNR and The Nature Conservancy. This workshop aimed to enhance participant understanding of BU project design and delivery, demonstrate the implementation of real-world BU projects, and provide practical tools and resources to expand and support future BU projects. Ultimately, the gathering empowered planners, engineers, regulators, and nonprofit partners to treat dredged material as an asset rather than a liability.



Board Game Makes Dredging Fun

To make the complex world of dredging and IR and BU more approachable, MPA commissioned a custom board game, called Channeling Innovation, that brings these processes to life. The game transforms real-world dredging scenarios into an interactive experience that encourages learning through play. Loosely inspired by The Game of Life, the board game mirrors the twists and turns of real dredging projects as players navigate the permitting and placement process. Participants gain insight into the coordination, testing, and planning required for material reuse. The game highlights the challenges and decisions stakeholders face, making technical concepts more tangible and memorable. Debuted at an IRC meeting with 29 participants, the game sparked laughter, lively discussion, and meaningful engagement. It was also featured at the “Is BU4U?” workshop, where it continued to generate interest and help demystify BU. MPA is now exploring opportunities to expand the game’s use in future outreach and education efforts.

Engagement

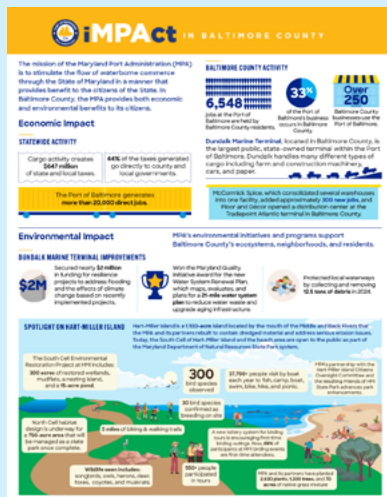
MPA's engagement efforts continue to prioritize environmental justice, promote diverse representation reflective of the communities it serves, and raise public awareness about the Port of Baltimore. Stakeholders play a vital role in shaping the DMMP, particularly when considering new initiatives, and their input has driven efforts to enhance transparency, collaboration, and sustainable outcomes. Through the Office of NIS, MPA fosters meaningful dialogue with a wide range of constituents, including elected officials, public interest organizations, and local communities, to build understanding around the complexities of dredged material management and long-term planning. A series of stakeholder advisory committees further supports DMMP implementation by providing guidance and encouraging ongoing collaboration.

NIS staff are implementing the Environmental Protection Agency Ports Initiative Good Neighbor Roadmap. These roadmaps are designed to lay the groundwork for meaningful, community-focused outreach that addresses the specific needs and interests of stakeholders. Final versions of the roadmaps are expected to be completed by the end of the year, with further development and measurable progress anticipated in 2026.

MPA is also expanding its digital outreach and engagement efforts. Updates to the DMMP website are providing more information on a more timely basis, making the site a central hub for committee resources as well as general engagement. Digital promotion is increasing, with more frequent DMMP-related posts appearing across Port and Port partner social media channels. These efforts are focused on meeting people where they are, delivering relevant and accessible information in ways that resonate with diverse audiences.

2025 Engagement By the Numbers





Educating on iMPAct

NIS is excited to announce the release of the iMPAct Report series, which highlights the county-specific economic, environmental, and community benefits of MPA. Stakeholders can learn about the essential role the Port plays in each community, including jobs created, cost savings, property remediation efforts, environmental improvements, community recreation opportunities, and educational programs offered by MPA. The county reports include Anne Arundel County, Baltimore City, Baltimore County, Talbot County, and Dorchester County.

» Spotlight on Port Activities

Throughout 2025, NIS released a series of informative videos about dredging as part of its Spotlight Series which is available on the website. These videos provide easily accessible information about the work of the DMMP and how it supports the MPA mission. They are designed to be welcoming for new stakeholders with less technical language and shorter, bite-sized lengths. Installments included:



- **Dredged Material in Maryland** provides an overview exploring which dredged material MPA is responsible for and how the area it comes from influences where the material is placed and how it is managed.
- **Innovation** reviews innovative new approaches to dredged material management to meet the capacity needs of the volume of dredged material generated each year to maintain the Port's waterways.
- **Confined Aquatic Disposal (CAD)** shares information about CAD and explains why MPA is investigating it as a potential solution for maintenance material dredging from Baltimore Harbor shipping channels.
- **Evolution of Dredged Material Management** examines the historical and emerging practices in dredged material handling and how the MPA is now utilizing this valuable resource to address challenges in Baltimore and beyond.
- **Community Engagement** showcases MPA's commitment and approach to working with communities, examines an example of recent engagement, and reviews different ways community members can learn about and provide feedback on current NIS activities.

» Stewarding the Mid-Bay Project

Public outreach and stakeholder engagement for the Mid-Bay Project continued as the design and construction of Barren and James Islands progressed. Targeted coordination with local water users has been a key focus, particularly regarding restricted safety zones for Phase II construction at Barren Island.

In 2025, outreach efforts are building on new community relationships forged in 2024 through continued engagement with the Mid-Bay Community Stakeholder Group and repeated participation in community events, including: Groove City Culture Fest in Cambridge, the Nause-Waiwash Native American Festival, Taste of Cambridge, The Dorchester Showcase, Tilghman Island Day, and the Mid-Bay Community Poster Session. These events allowed MPA to engage with nearly 150 community members.

Now in its second year, the Mid-Bay Community Stakeholder Group is generating new ideas and contributing meaningfully to local engagement strategies. MPA is working closely with community leaders to develop outreach approaches tailored to the region's unique perspectives.

» Masonville Cove Engagement

Masonville Cove Urban Wildlife Refuge Partnership welcomed over 5,700 visitors, many visiting from adjacent neighborhoods. This year marks the conclusion of the execution of the most recent five-year strategic plan, and partners have co-designed the next five-year plan alongside community members to ensure equitable participation. Volunteer engagement and community investment have grown significantly, thanks to enhanced programming led by Friends of Masonville Cove and increased involvement from residents. The Friends group played a key role in developing the new strategic plan, and the number of active volunteers has more than doubled—from 10 to 22—demonstrating a strong and growing commitment to the Masonville Cove mission.

The Masonville Citizens Advisory Committee (MCAC), a longstanding DMMP committee, has evolved beyond its original focus on DMCF operations and is now deeply integrated into community-building efforts. Committee members are participating in visioning exercises, learning from guest speakers, and spending more time exploring the campus. This expanded approach is bringing fresh perspectives and renewed energy to the DMMP's critical committee structure.



CHESAPEAKE
GATEWAYS
— Network Site —

Chesapeake Gateways Network Site Designation

This year, Masonville Cove was designated as a Chesapeake Gateways Network site. Through this National Park Service (NPS) program, Masonville Cove joins a network of places that provide visitors with opportunities to enjoy, learn about, and help protect the Chesapeake Bay watershed. Visitors will now be able to discover Masonville Cove when searching for a Chesapeake Gateway by activity, community, or state.

Additionally, Masonville Cove is representing Baltimore in the NPS Chesapeake Gateways Communities Initiative, a collaborative effort that brings together leaders of Chesapeake Gateways Communities to connect nature-based and cultural tourism to economic initiatives. The Baltimore team, led by NIS staff, is a shining example of this collaboration. The team uses valuable technical assistance from NPS to coordinate efforts and intentionally weaves long-term planning of transportation systems, economic uses, and services with the goal of utilizing Masonville Cove to generate recreational and economic benefits that directly benefit local communities.

Bird Banding

MPA facilities provide vital habitat for Baltimore's native and migratory birds, making them ideal locations for bird banding, a scientific process where small, uniquely numbered tags are attached to birds for identification and tracking. Bird banding takes place during spring and fall migrations at Masonville Cove, while researchers also band select species, including bald eagles, on Poplar Island.

Masonville Cove is one of the few urban bird banding stations affiliated with the United States Geological Survey Bird Banding Lab. This year, wildlife conservationists once again welcomed the public to observe the banding process. During each session, scientists collect data such as species, sex, weight, wing and tail length, fat levels, and estimated age, all of which are entered into a national database to help track bird health and migration patterns. These sessions offer a unique opportunity for the public to engage with experts and observe a diverse range of bird species up close. A total of 1,407 birds were banded, with 383 community members participating. This fall, bird banding at Masonville Cove was featured as a field trip during Maryland DNR's Outdoor Recreation Summit, offering outdoor professionals a hands-on learning experience and a showcase of conservation in action.

Latino Conservation Day

This summer, the Masonville Cove Partnership reaffirmed its commitment to the Latino community by hosting the third annual Latino Conservation Day, with an expanded format and tailored activities. The event took place over two days at the National Aquarium. On August 18, the focus was on youth, with 53 participants enjoying Spanish-language programming, food, and free access to the National Aquarium. On September 13, the event opened to families and attendees of all ages with 108 attendees participating, offering a welcoming and inclusive experience at one of Masonville Cove's key partner locations. A special emphasis was placed on ensuring that all participants felt safe and welcomed. Longtime event partners noted a meaningful shift this year, particularly among youth, who were more engaged and open with educators and staff. This growing trust reflects the impact of consistent relationship-building, and MPA remains committed to strengthening these connections in the years ahead.

Urban Wildlife Conservation Day

Urban Wildlife Conservation Day took place on September 20, welcoming 260 visitors and building on annual growth with expanded activities. The event included a Bioblitz, monarch tagging, fishing, bird banding, kayaking, nature crafts, and a VIP program for the Chesapeake Gateways Network Site designation signing. To increase community attendance from neighboring areas, the effort included an expanded shuttle service, targeted marketing, free food, and incorporated local businesses, like Women of Color Outdoors and South Baltimore Community Land Trust.



Connecting with the Community

On October 18, MPA hosted its annual Cox Creek Open House, welcoming nearly 200 attendees, with half visiting for the first time. This popular event has grown from year to year, and this year was no exception. Several community partners participated in outreach, and MPA featured the Cox Creek STAR Facility geotube setup as a new exhibit for attendees. As in years past, the event included fishing, family-friendly activities, and touch-a-truck, among other highlights.

» Confined Aquatic Disposal

Because of the limited space to place dredged material and possible pinchpoints from the 20-year rolling plan for capacity, MPA continues to explore innovative placement options. Alongside land-based containment facilities and innovative and beneficial uses of dredged material, CAD presents another potential solution. CAD is a widely accepted method for managing dredged material, involving the placement of sediment into specially engineered underwater sites designed for safe, long-term containment. A small-scale CAD pilot project was successfully constructed and filled in 2016 and 2017.

MPA created a technical advisory group under the BEWG in 2024, involving experts from state and federal agencies, local governments, NGOs, and community stakeholders, to evaluate and guide the development of a second CAD pilot project in Baltimore Harbor with a focus on site selection, environmental impact, and public benefits. In addition to input from committee members, the CAD Subcommittee conducted a comprehensive outreach campaign to solicit broad community input on the proposed CAD pilot project. The results of the CAD Subcommittee's work have been released in a report that outlines the subcommittee's consensus that current data gaps prevent selecting a specific pilot location. The report has been accepted by the BEWG and DMMP Executive Committee and shared publicly on the Maryland-DMMP.com website.

Senate Bill 168 was introduced during the Maryland General Assembly 2025 session, which would have restricted the MDE from processing CAD-related permit applications between June 1, 2025 and May 31, 2029. This bill was subsequently vetoed by the Governor. Despite the veto, MPA remains committed to the spirit of the legislation. If a second CAD pilot is pursued, MPA will engage with elected officials and interested stakeholders before submitting any permit application.

MPA could begin conducting studies to fill the data gaps identified by the CAD Subcommittee when there is sufficient funding. MPA has other strategic priorities at this time and does not currently have funding to pursue DMMP projects that are not a priority. If there is a change to this status it will be shared through the DMMP committee process.

CAD Engagement

Through partnering with local organizations and participating in community meetings, MPA hosted a series of engagement sessions in areas potentially affected by CAD to build relationships and offer in-depth information about the technique as a dredged material management option. NIS also created a suite of outreach tools and activities this year to raise awareness of and gather feedback on CAD, including: eight issues of the CAD Bulletin e-newsletter, dedicated to providing up-to-date legislative, scientific, and project information; updated CAD factsheet and FAQ documents; enhanced CAD webpages and an online platform where stakeholders could submit feedback and questions; hosted and participated in CAD-specific briefings and workshops that reached over 150 highly interested stakeholders; organized tours for neighboring communities; attended four community events, and leveraged nine DMMP stakeholder oversight and advisory committee meetings to encourage collaboration and maintain transparency.

» Expanding Community Partnerships

The DMMP's foundation of long-standing community partnerships remains central to NIS' engagement strategy. In 2025, MPA strengthened this foundation by welcoming seven newly appointed members to the Cox Creek and HMI Citizen's Oversight Committees and launching a successful onboarding program to support their participation. To further collaboration, MPA initiated biannual meetings among Committee Chairs and NIS staff, creating a space to exchange ideas, share best practices, and build stronger relationships.

In 2021, members of the longstanding HMI COC evolved into the Friends of HMI, and it may have started a trend. Members of the MCAC are working towards establishing the community-led Friends of Masonville Cove and the two groups are supporting each other. MPA continued to invest in the growth of "Friends of" volunteer stewardship groups, facilitating site visits, peer learning, and a joint funding proposal to support coordinators for Masonville Cove and HMI Friends groups.

NIS has strengthened its collaboration with the Anne Arundel Watershed Stewards Academy (WSA), a local organization with longstanding ties to Cox Creek and nearby communities. WSA trains volunteer leaders, known as Master Watershed Stewards, to engage residents in reducing polluted runoff. The organization provides annual support for the Cox Creek Open House, and this year one NIS staff member became a Master Steward, deepening the partnership and expanding opportunities to positively impact the community.



» Chesapeake Watershed Investments for Landscape Defense Partnership

With support from the National Fish and Wildlife Foundation's Chesapeake Watershed Investments for Landscape Defense (WILD) grant program, the National Aquarium partnered with MPA to host several youth camps and two special Girl Scout experiences. These immersive programs engaged 125 participants at the Swan Creek Wetland and on HMI. The grant also funded the Masonville Cove BioBlitz and introduced a new BioBlitz on HMI, both held in the fall.

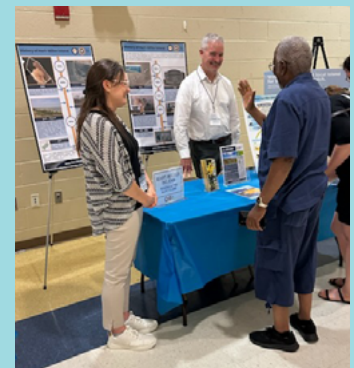
Chesapeake WILD additionally supported Urban Wildlife Conservation Day on September 20, which featured a successful BioBlitz at Masonville Cove. The day welcomed 260 visitors, and community members took part in species identification and data collection, logging 146 observations of 99 different species. The HMI BioBlitz welcomed 28 participants who recorded 65 observations, representing 45 species. These events fostered hands-on learning and strengthened community involvement in local conservation efforts.

“GET THE SCOOP ON DREDGING”

Recently, MPA and its technical partners hosted hands-on dredging open houses for residents in Turner Station and North Point. Interactive learning stations included:

- **HMI: Sediment to Sanctuary**
- **Digging Deeper: Dredge Methods Explained**
- **Waste Not, Create A Lot: Innovative Solutions**
- **The Sediment Lab: Testing & Quality Insights.**

Attendees received behind-the-scenes looks into the science and strategy behind dredging in Maryland. They engaged in one-on-one discussions with dredging experts, asking questions and exploring how dredged material is managed, tested, and reused sustainably. Events like these help build stronger partnerships through transparency, education, and community connection, and represent MPA's evolving approach to community engagement and outreach.



Education and Workforce Development

2025 Education & Workforce Development By the Numbers



36% Title 1 schools
27% Maryland
Association of
Environmental and
Outdoor Education
Green Schools



Terrapins headstarted
in the TERP program

11,203

Students served by
MPA and its partners



3,613

Students engaged in
Masonville Cove Partnership
educational programs



MPA continues to champion environmental education and maritime workforce development through impactful programs that inspire future stewards and industry leaders. With immersive youth initiatives, such as Youth Birding Week and the TERP program, and dynamic summer internships, like Masonville Cove Links WildSTEM, MPA is creating access to hands-on learning that focuses on historically underrepresented communities. These efforts reflect MPA's commitment to equitable access, environmental literacy, economic opportunity, and building a more inclusive and resilient workforce in Maryland.

» Immersive Summer Programs

Masonville Cove Links WildSTEM Internship Program

In partnership with the National Links Foundation, MPA and partners again hosted the Masonville Cove Links WildSTEM Summer Internship, which recruited students from local Historically Black Colleges and Universities and other schools, bringing together four interns to explore conservation careers outside traditional college majors. The program offered hands-on experience and laid a foundation for future leadership in conservation.

Interns learned about various conservation careers across multiple disciplines, along with soft skills such as networking, public speaking, and professional etiquette. Throughout the program, they built meaningful connections and received personalized guidance to help envision their place in the conservation field. Additionally, their feedback helped shape the program in real time, reinforcing its value as a pathway to leadership and impact in the environmental field.

For the first time, this year's interns carried out a "Newsletter Takeover," where they wrote and curated the content for Masonville Cove Partnership's August newsletter edition. The experience culminated with a showcase event on August 9th at Brown Advisory Headquarters with the theme of "The Symbiotic Relationship of the Economy and Conservation." It included networking, intern presentations, and executive roundtable discussions with partners and thought leaders. This year, the program again received recognition for its impact, earning citations from both the Governor and Howard County.

Youth Birding Camp

MPA hosted its fourth annual Youth Birding Camp, welcoming 32 participants across two, week-long sessions. Designed for 8 to 16-year-olds, the free program introduces birding through hands-on science, field trips, art, and outdoor exploration. Each day began at Masonville Cove, with visits to birding hotspots like North Point State Park and sites within the MPA's 2,800 acres of restored habitat, including Cox Creek DMCF, Swan Creek, and Poplar Island. Each student received a birding toolkit, which included binoculars and a field guide, and utilized citizen science tools like eBird to document local bird species and learn about their habitats and conservation. The program concluded with student presentations, a pizza party, and a live raptor visit from the Owl Moon Raptor Center. One enthusiastic participant shared, "I loved my experience. it was one of the best camps I've ever had! It was really cool to learn about birds and be out in nature."

» Poplar Island Education - TERP Program

Since 2002, Poplar Island has supported a thriving population of Diamondback Terrapins, with over 22,600 hatchlings born on site. TERP connects students to conservation through hands-on, cross-curricular learning, showing how Port activities benefit both the environment and economy. More than 79,000 students have participated in TERP outreach and field experiences, and over 3,650 terrapins have been raised by Maryland students since 2005.

Throughout the 2025-26 school year, 182 hatchlings are being given a head start by being placed in classrooms and education centers, where students cared for them and prepared them for release into the wild. Over 1,000 classes have released head-start terrapins on Poplar Island field trips, and more than 440 turtles have been recaptured since 2009, some now second-generation offspring of early program terrapins. This "head start" program provides students with a strong connection to the local environment as they learn about Poplar Island and the Port's restoration efforts.

This year, Harford Glen joined as a new TERP partner center. The program received an American Association of Port Authorities Lighthouse Award, an honor that recognizes programs and projects that stand out as a beacon of excellence across the port industry. TERP was also nominated for the Diamondback Terrapin Working Group's Community Service Award and was recently called the "gold standard" of turtle education and conservation at the Turtle Survival Alliance Meeting in Chattanooga, TN. Led by a consortium of educators, researchers, and administrators, TERP is primarily funded and coordinated by MPA, which ensures broad access, including schools in underserved communities, and supports thousands of student visits to Poplar Island each year.



Baltimore Port Alliance- Creating Career Opportunities

To create pathways to maritime career opportunities, MPA continued its workforce development efforts in collaboration with the Baltimore Port Alliance (BPA). This includes the **BPA's Hiring and Career Expo**. The 7th annual event saw its largest turnout to date, bringing together 43 employers who shared job openings and conducted interviews with over 300 job seekers.

Exit survey responses revealed that 87% of job seekers found opportunities for which they would apply, 60% of employers met candidates they were likely to follow up with for interviews or offers, and 100% of job seekers who completed the exit survey noted that they would recommend this event.

► Our Vision for 2026

The Maryland Port Administration (MPA) remains committed to working in close partnership with Dredged Material Management Program (DMMP) committee members, elected officials, community organizations, business leaders, and other key stakeholders to grow waterborne commerce throughout Maryland, while benefiting the state's communities and ecosystems. In 2026 and beyond, MPA will continue to implement major projects, initiatives, and studies that strengthen long-term environmental stewardship while fostering economic growth, environmental resilience, and equity across the region.

» Funding & Policy Recommendations

1. Ensure **favorable legislation** and **sufficient funding** for priority DMMP projects, the US Army Corps of Engineers navigation program, and projects that benefit and favorably position the Port of Baltimore in new legislation.
2. Strive to **reduce greenhouse gas emissions** to meet the state's target of 60% reduction by 2031 and net zero by 2045, and advocate for adequate funding for implementation.

» Planning & Operations Recommendations

3. Conduct **capacity and dredging demand planning** for sustainable dredged material management options for a rolling 20-year time frame and beyond.
4. Re-engage the Virginia Bay Enhancement Working Group to refine the list of suitable, cost-effective dredged material **placement options for the Virginia Channels**, including beneficial use opportunities.
5. Leveraging the best available science, facilitate the use of **nature-based and climate-resilient solutions** in long-term DMMP project planning.
6. In collaboration with the Bay Enhancement Working Group, develop a set of recommendations for more transparent and predictable guidance to implement **beneficial use of dredged material** in the **Baltimore Harbor**.
7. Continue to implement long-term, sustainable, **large-scale Innovative Reuse** and capacity recovery efforts.
8. Develop a plan for the **Hart-Miller Island (HMI) north cell** habitat development in collaboration with the Maryland Department of Natural Resources and the HMI Citizens Oversight Committee.
9. Leverage adaptive management, **minimize and/or mitigate environmental impacts**, and consider equitable distribution of benefits in dredged material management.

» Engagement & Education Recommendations

10. Increase public **awareness and understanding of the DMMP**, including the importance to Maryland's economy, its challenges, and benefits to Marylanders.
11. Work closely with affected communities and stakeholders to develop and implement strategies that promote fairness and **equity in the DMMP**.
12. **Ensure transparency** is maintained in the DMMP decision-making process and facilitate meaningful and impactful **involvement with stakeholders**.

DMMP ANNUAL REPORT GLOSSARY OF ACRONYMS

Acronym	Definition
BEWG	Bay Enhancement Working Group
BPA	Baltimore Port Alliance
BU	Beneficial Use
CAD	Confined Aquatic Disposal
COC	Citizens Oversight Committee
cy	cubic yards
DMCF	Dredged Material Containment Facility
DMMP	Dredged Material Management Program
HMI	Hart-Miller Island
IR	Innovative Reuse
IRC	Innovative Reuse Committee
MCAC	Masonville Citizens Advisory Committee
mcy	million cubic yards
MDE	Maryland Department of the Environment
MES	Maryland Environmental Service
Mid-Bay Project	Mid-Chesapeake Bay Island Ecosystem Restoration Project
MPA	Maryland Port Administration
MPT	Maryland Public Television
NBS	Nature-Based Solutions
NIS	Office of Navigation, Innovation, and Stewardship

Acronym	Definition
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
OU	Operable Unit
Poplar Island	Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island
R&D	Research and Development
SCM	Supplemental Cementitious Material
SCNT	Swan Creek Nature Trail
SFY	State Fiscal Year
SHA	State Highway Administration
SLR	Sea Level Rise
STAR	Sediment Treatment and Reuse
TERP	Terrapin Education and Research Partnership
TWL	Tidal Wetlands License
UMCES	University of Maryland Center for Environmental Science
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VA BEWG	Virginia Bay Enhancement Working Group
WQC	Water Quality Certification
WRDA	Water Resources Development Act



**DREDGED
MATERIAL
MANAGEMENT
PROGRAM**

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