2024/2025 Milestone Priorities for Maryland's Phase III WIP

Sector	Milestone	Agency	Steps to Achieve MS Goals	Deliverable	End of MS Evaluation
Agriculture	**Agricultural Drainage Management**	MDA	1) Add drainage management BMPs to MACS Program per CBPO expert panel guidelines. Drainage Management BMPs have been added to the MACS Program for financial assistance. 2) Collaborate with Conservation Partners to identify opportunities for implementation. Standing monthly meeting with key Ag Drainage partners to discuss success and barriers to advance projects. 3) Provide appropriate training for drainage management BMP design & installation. Incorporating drainage management BMP training as part of curriculum for new and existing technical field staff. 4) Incorporate practices newly approved by the expert panel as part of cost-share programs. Current CAST model version does not fully credit newly approved BMPs for Ag Drainage Management. Expect updates with the adoption of CAST-23 by the partnership. Working with NGOs on Eastern Shore to increase adoption, in collaboration with SCDs.	**An additional 3,242 acres managed under Agricultural Drainage Management, annually**	
	Pasture and Grazing Management	MDA	1) Identify opportunities for additional stream exclusion fencing. GIS Specialist working to identify additional fencing opportunities, as well as identify practices installed outside of traditional cost-share. 2) Working with NRCS, MDA will conduct grazing management training for field. Incorporating grazing management training as part of curriculum for new and existing technical field staff. 3) Re-engage the Horse Outreach Workgroup to provide technical assistance to equine operations. HOW has been reinstated and attended events such as 5Star, increasing outreach to the equine community. 4) Collaborate with conservation partners in securing additional funding to support pasture/grazing operations management. Further funding opportunities to support pasture and grazing operations continues to be explored. Equine Regional Team consisting of three planners has been formed to increase outreach to equine operations and increase adoption of Conservation Plans as well as Nutrient Management Plans.	**295 additional acres under Horse Pasture Management** **2,433 additional acres managed through Prescribed Grazing** **Working with NRCS and UME to conduct training and field events in order to promote grazing management**	

Agriculture	**Grass & Riparian Buffers**	MDA	1) Incentivize implementation of grass buffers through enrollment in the Conservation Reserve Enhancement Program. 2) Collaborate with Conservation Partners to identify implementation opportunities in conjunction with other practices. 3) Collaborate with sister agencies, across multiple programs, to support shared goals for tree planting initiatives. MDA's Conservation Initiative Buffer Program allows an opportunity for the implementation of buffers with more flexible management conditions and contract lengths - that still provide a water quality benefit.	**Additional 4,295 acres a year, both grass and forest, newly implemented or verified.** **Plan to complete future round(s) of the Conservation Buffer Initiative** **Meet WIP Goal. Working to continue to close gaps in Western MD, above and beyond commitment levels**	
	Increased Technical Assistance	MDA, MDDNR	1) In agreements between the Resource Conservation Program and Soil Conservation Districts, funding distribution has been aligned with demonstrated progress towards WIP goals at the local level. 2) MDA has continued to work with partners to evaluate and expand training curriculum for new hires, to continually address resource concerns with the best tools and knowledge available.	**New onboarding and training tools - planner and technician training workshops. Partnering with MASCD through a NFWF grant.**	
Wastewater	**Increase Performance at Major Wastewater Treatment Plants**	MDE	1) Utilize incentive based programs to improve performance at all significant Municipal wastewater treatment facilities: Maryland Bay Restoration Fund Operations and Maintenance Performance (BRF O&M) Clean Water Commerce Act (CWCA) and WQ Trading Program 2) Return key significant treatment facilities to effluent levels achieved in 2023 and continue to reduce effluent concentrations to a statewide flow weighted average of 2.85 to mitigate nutrient allocations related to climate change by 2025. 3) Complete consent decree to resolve violations at Back River and Patapsco WWTPs.	**Using these incentives, continue to improve performance of MD's significant WWTPs to achieve the Phase III WIP goal of 3.25 mg/L of TN** **Further incentivize MD's significant WWTPs towards achieving 2.85 mg/L TN statewide average by 2025, to address MD's Climate Change allocations** **At the end of the milestones period, assess BRF O&M funding and needs as it relates to WWTP performance to ensure additional reductions are being achieved** **Fully utilize the BRF O&M performance grant and CWCA to maximize funding to meet WIP and climate goals** **At the end of the milestones period, evaluate if additional strategies are needed to achieve goals**	
	Returning Major Wastewater Treatment Plants (WWTPs) to Compliance	MDE	1) Continue to enforce Consent Decrees for the 2 major wastewater treatment plants that were found in significant non-compliance (Back River and Patapsco). 2) Continue work with the Maryland Environmental Service to make improvements at the Back River and Patapsco WWTPs.	**Monthly discharge monitoring reports that verify maintenance improvements at these facilities show compliance with permit conditions and show trends in meeting the State's climate change goals for nitrogen and phosphorus**	
	Continue to Upgrade Non-significant Wastewater Treatment Plants	MDE	1) Modify the permits for proposed facilities (1-2 per year) to allow for upgrade to ENR. 2) Modify the BRF ranking tool to allow for smaller facilities to qualify for State grants. 3) Prioritize upgrades for the largest, most cost efficient plants in this category.	**2-4 of the largest non-significant WWTPs will be upgraded**	

Natural Filters	**Oyster Reef Restoration**	DNR	1) Construct reef base on substrate and seed reefs in the Manokin River Sanctuary. 2) Complete initial restoration in the Manokin River sanctuary (2025). 3) Continue planned second seeding as necessary in the Tred Avon and St. Marys sanctuaries. 4) Continue monitoring and sampling to ensure successful metrics as defined by the Chesapeake Bay Agreement.	**Complete initial restoration of the fifth and final large-scale restoration tributary, Manokin River Sanctuary**	
	Tree Solutions Now Bill	DNR, MDE	1) DNR MFS Tree Specialists positions trained on 5 Million Trees implementation and guidance. 2) MDE Program Coordinator position converted to contractural. 3) 5 Million Trees Initiative Dashboard displays planting progress, location and associated co-benefits of trees (mde.maryland.gov/5MTree). 4) CBT and MDOT grant programs require all grantees to register trees using the new 5 Million Trees Tracking tool (mde.maryland.gov/5MTrack). 5) MDE and DNR develop cohesive communication strategy to maximize use of tree tracking tool by planting partners.	**The state's 5 Million Trees Program supporting ongoing engagement and maintenance activities within urban underserved areas by developing targeted communication strategies, highlighting urban planting projects on the initiative hubsite, and ensuring continued funding and resources for long-term management (mde.maryland.gov/5mTrees)**	
	Land Conservation	DNR	Maryland is recognized as a leader in land conservation and will: 1) Sustain funding for state land conservation and preservation programs to support the expected 2019-2025 forecast. Maryland will continue to support the Maryland Agricultural Land Preservation Foundation, Rural Legacy Program, Forest Legacy Program and Program Open Space State-side. 2) Work with state agencies and local governments to apply state and local land conservation programs as appropriate to maximize bay health restoration opportunities, and mitigate the impacts of climate change to our natural and built infrastructures.	**Sustained levels of state funding for Program Open Space, Rural Legacy, and Maryland Agricultural Land Preservation Foundation** **Pursue federal funding for Forest Legacy Program conservation easements** **Two conservation and restoration Targeted Resilience Area project portfolios** **Incorporate Maryland's updated Green Infrastructure Assessment with resiliency co-benefits in State GreenPrint land conservation mapping application and conservation scorecard** **Develop a strategy for easements with coastal resilience provisions that prioritize parcels for conservation action in partnership with local land trusts and private landowners.**	
Stormwater	**Phase I MS4 permits**	MDE	1) Issue final permit for the Phase I MS4 permits for 4 large and 5 medium jurisdictions. 2) Issue draft permit for Prince George's County Phase I MS4 permit. 3) Issue draft permit for the State Highway Administration's Phase I MS4 permit. 4) Additional impervious acre retrofit requirement of approximately 2 percent per permit year, in aggregate, from the dates when the permits are issued.	**Large permits issued and enforced** **Medium permits issued and enforced** **Report Equivalent Impervious acreage restored**	
	Construction and Industrial SW permits	MDE	MDE will continue to allow operators to get permitted under the updated permits issued in 2023. In addition, outreach focused on EJ areas for unpermitted sites will be a focus of permitting.	**General construction permit issued and enforced** **Industrial stormwater permit issued and enforced**	

Stormwater	**A-StoRM**	MDE	Advancing Stormwater Resiliency in Maryland (A-StoRM) is an initiative mandated by State Bill 227 to make stormwater BMPs more resilient in the face of climate change. 1) Standardize definitions of flooding. 2) Incorporate NOAA Atlas 14 precipitation estimates into Stormwater Design Manual. 3) Update design standards for Environmental Site Design practices for new and redevelopment. 4) Identify frequently flooded areas post 2000. 5) Draft regulations to require comprehensive watershed studies, where funding exists, for flood event areas identified. 6) Create a regulations review stakeholder advisory group to address future needs. Stormwater management regulations and Design Manual updates are ongoing. Maps of frequently flooded areas are being developed. Regulations for comprehensive watershed studies are still in development.	**A-STORM Report** **Updates to the Stormwater Design Manual** **Map of frequently flooded areas (post 2000)** **Draft regulations for requiring comprehensive watershed studies**	
Conowingo	**Conowingo**	All agencies	Lead and champion continued Bay Program partnership progress adopting and implementing innovative best management practices, including natural filters (e.g., freshwater mussels, SAV planting/restoration, tidal wetland creation/restoration) and other innovative practices (e.g., Conowingo dredging), and conservation financing approaches through Conowingo WIP milestone development and implementation.	**Include BMP and financing innovations in the Conowingo WIP milestones and in collaboration with EPA, the Conowingo WIP Steering Committee, and the PSC. Demonstrate continued progress on model implementation and/or development for evaluating dredging as a creditable pollution reduction practice. Advance collaboration on mussel restoration throughout the entire Susquehanna River watershed**	

2024/2025 Milestones for WIP Support

Sector	Milestone	Agency	Steps to Achieve MS Goals	Deliverable	End of MS Evaluation
Funding	**Submit Annual Chesapeake Bay Funding (i.e., JCR) Reports to MD Legislature**	All MD Agencies	Finish annual internal agency review of funding programs for sufficiency and proper targeting, while also looking to achieve important co-benefits like climate mitigation and adaptation. Identify any gaps in funding needed to achieve 2025 Bay Restoration goals.	**Submit reports to MD's Legislature by Dec. 1 of each year**	
	Bay Restoration and Clean Water State Revolving Loan Funds	MDE	1) Continue to market the Bay Restoration Fund (BRF) and Clean Water State Revolving Fund (WQRLF) for stormwater management projects, MS4 implementation, and climate resiliency. 2) Continue to use the Integrated Project Priority System (IPPS) for the BRF and WQRLF to improve the potential for high-benefit septic projects, stormwater management projects, MS4 implementation and climate resiliency. The annual opportunity to apply for funding is announced on MWIFA's website and via an email blast to a contact list of > 1200. New ranking metrics can be found on the web: https://mde.maryland.gov/programs/water/WQFA/Documents/FINAL%20WQ%20IPPS%20Rev%206%20Amend%201.pdf. For SRF funding decisions for the two most recent years, please see the "Water Quality Revolving Loan Fund Intended Use Plan Table 1" documents posted at https://mde.maryland.gov/programs/water/WQFA/Pages/index.aspx. For BRF funding decisions, please see each Fiscal Year's Capital Budget as Enacted at https://dbm.maryland.gov/budget/pages/capbudhome.aspx.	**Report number of projects funded through these grants** **Document the new ranking priority metrics**	
	Clean Water Commerce Act	MDE	1) Re-authorized in 2021 with $20 million dollars/year for 9 years. 2) Purchases cost-effective pollution reduction credits. 3) Credits may be purchased from all sectors. 4) Provides incentive for private capital to perform restoration. 5) Creates an additional incentive for improving Wastewater Treatment Plant performance. MDE will finalize grant agreements with selected FY23 applicants during FY24 which will initiate commencement of project implementation. Environmental outcomes will be paid for after outcomes are verified starting 1 year after project completion. MDE will also run CWCA solicitations in FY24 and FY25 to identify additional projects to be funded. MDE has $20M in both FY24 and FY25 to purchase nitrogen reductions from projects.	**Document results of practices implemented with this fund** **Maximize funds to achieve cost effective reductions**	

Funding	**Chesapeake and Atlantic Coastal Bays Trust Fund**	DNR	1) Cost-Effective Non-point Source Pollution Reduction projects: a) Maintain full funding levels b) Update targeting methodology for project selection to include DEIJ, carbon and resiliency co-benefits c) Build Pay for Success opportunities per CFA guidance d) Prioritize projects that foster healthy ecosystems, communities, and resilient economies 2) Natural Filters Program projects: a) Maintain existing funding levels to implement natural filter BMPs on state and public lands. Natural filters practices improve both water quality and habitat by protecting, enhancing and restoring riparian buffers, wetlands, streams and living shorelines.	**Report number of projects funded, and associated pounds of nutrients and sediment reduced through these grants**	
	Local Watershed Implementation Plan Funding	DNR	1) Continue to update or improve the process and ranking criteria to identify and provide funding to those local communities with the most cost effective projects for Bay restoration as needed. 2) Promote program through outreach to local communities and local jurisdictions. 3) Expand projects to include co-benefit targets, including resilience, local shallow water habitat and DEIJ.	**Sustained levels of state funding to support local watershed implementation planning**	
	MACS	MDA	Increased MACS funding to 100% for critical WIP BMPs, and increased the cost-share ceiling for 34 BMPs from $50,000 to $75,000 per project.	**Will report the number of WIP eligible projects funded, and associated pounds of reduction, for this milestone period**	
	319(h)	MDE	Fund 1-3 restoration projects per year in watershed plan areas within the Chesapeake Bay watershed.	**1-3 completed restoration projects**	
Modeling & Research	**Urban Development Growth and Land Preservation Accounting**	MDP	1) Serve as the state lead on the CBP Land Use Workgroup to ensure CBP land use data, impervious cover change data, and Chesapeake Bay Land Change model forecasts are as accurate as possible and incorporate Maryland's data and knowledge base. 2) Continue, with DNR, to update and maintain Maryland's land preservation datasets to inform CBP modeling tools.	**Participate in all CBP Land Use Workgroup meetings and respond to all requests**	
	Ecological Effects of Sea Level Rise	DNR	1) Coordinate with higher education and other partners to: a) Run hydrodynamic models and cost benefit analyses to evaluate site-level nature-based solutions that address erosion, sea level rise, and flooding. b) Use this information to inform community proposals to National Fish and Wildlife Foundation (NFWF) National Coastal Resilience Fund (NCRF), FEMA's Building Resilient Infrastructure and Communities (BRIC), Safeguarding Tomorrow Revolving Loan Fund, and other federal funding programs for nature-based solutions.	**Provide technical assistance to 1-2 communities**	
	Incorporating Air Emission Reduction Strategies	MDE	1) Continue the effort to convene an action team to help quantify additional water quality impacts of future air emissions reductions strategies. 2) Revise Quality Assurance Project Plans (QAPPs) to account for air emissions reduction BMPs related to the Volkswagen Settlement.	**Continue to investigate creation of an accounting system to track air emission BMPs**	

Modeling & Research	**Chesapeake & Atlantic Coastal Bays Trust Fund Projects**	DNR	1) Strategic & Targeted Monitoring: a) Continue to monitor projects implemented through the Trust Fund for efficacy of implementation such as through site visits, load reduction estimates, and review of as-builts. b) Continue to conduct long-term monitoring and fund research of BMPs to assess performance and alignment with state investment goals. 2) Innovative Technology Fund: a) Develop new non-point source BMPs for nitrogen, phosphorus, and sediment reduction. b) Expand partnerships with other programs that develop emerging technologies. c) Ensure new practices are reviewed by the Chesapeake Bay Partnership, or other appropriate avenues.	**Monitor Trust Fund BMPs to ensure they provide the stated benefit** **Continue investment in the Pooled Monitoring Initiative's Restoration Research Grant** **Annually fund two research and development projects** **One commercial investment**	
	Beneficial Use of Dredge Material	DNR	1) Continue to pilot projects with the application of dredge material. 2) Develop new targeting tools and partnerships. 3) Work with partners to remove hurdles or streamline implementation. 4) Develop and execute a statewide dredging assessment to better understand dredging needs and better pair dredging with BU opportunities. 5) Work with state and federal partners to develop a Regional Sediment Management Plan to provide a holistic understanding of the sediment in our system with a particular focus on the advancement of BU.	**Facilitate the advancement of coastal resiliency projects that incorporate beneficial use as a cost saving restoration strategy**	
Technical Assistance	**Watershed Assistance Collaborative**	DNR	1) Watershed Assistance Collaborative (WAC): a) Continue to provide dedicated staff and funding to support the program. b) Expand the program's ability to serve additional communities and improve outreach.	**Fund and manage two Watershed Specialists' outreach; collaborate with three additional Specialists**	
	Technical Support through Restoration Specialists	DNR	1) Continue to provide technical assistance to local governments, watershed organizations, private landowners and others interested in addressing water quality and natural resource management issues with the latest science and techniques. 2) Advance restoration science, outcomes, and cost-efficiency within the Watershed Assistance Grant, the Trust Fund local solicitation, and the Natural Filters Program.	**Provide continued hands-on landscape level technical assistance to local governments and non-governmental organizations implementing restoration projects**	
	BMP Calculator	DNR	1) Operate and maintain a publically available online application to estimate nutrient and sediment reductions from site level projects. 2) Integrate updates associated with Chesapeake Assessment Scenario Tool. 3) Add new BMPs as they are approved.	**Operate and maintain FieldDoc.com**	
	Septic Connections	MDE, MDP	Provide technical and policy assistance to local governments to facilitate connections of septic tanks to WWTPs.	**Report number of septics connected**	

Technical Assistance	**Stormwater Meetings**	MDE	MDE will meet with stormwater permittees on a quarterly basis to discuss: a) WIP Expectations b) Emerging Pollutants c) Local Impairments	**Quarterly meetings at MDE with Stormwater permittees**	
	Develop Local Watershed Plans	MDE	Our nonpoint program commits to assist with the development, or update, of local TMDL nonpoint source watershed restoration plans that contribute to Chesapeake Bay nutrient and sediment reductions.	**1-2 A-I criteria watershed plans updated/completed**	
	TIPP Tool Maintenance	MDE	The TMDL Implementation Progress and Planning (TIPP) spreadsheet tool is meant to accompany the submission of Stormwater Wasteload Allocation (SW-WLA) Implementation Plans to MDE. It estimates load reductions at various points in the watershed planning process. This tool is used to help guide restoration and accounting efforts for meeting stormwater permit conditions. Additional online TIPP tool is estimated for release by Summer 2024.	**TIPP Tool will undergo updates as needed**	
Developing Partnerships	**Capacity Building Initiative**	DNR	Strengthen a partnership with the Chesapeake Bay Trust on the Capacity Building Organization-Capacity Building Initiative (CBO-CBI). This program identifies historically underengaged community-based organizations that have not previously participated in two grant programs - the Watershed Assistance Grant Program and the Resiliency Through Restoration Initiative - or that have needs for implementing resilient restoration practices. Interested organizations receive the technical assistance needed to develop robust proposals to grant programs. This initiative enhances the state's capacity to achieve Bay restoration and resilience goals and meet regulatory and funding requirements by making the collective body of organizations pursuing restoration projects more inclusive.	**Continue to administer the CBO-CBI**	
	Pursue Circuit Rider in the Choptank River	MDE	As part of the nonpoint source program, continue to work with Envision the Choptank to provide support for the circuit rider that will assist with BMP placement, design, and grant application assistance to implement practices in disenfranchised communities within the Choptank River Watershed on Maryland's Eastern Shore.	**Report projects completed by position**	

Other 2024/2025 WIP Milestones

Sector	Milestone	Agency	Steps to Achieve MS Goals	Deliverable	End of MS Evaluation
Agriculture	**Traditional Cover Crop Implementation**	MDA	1) Continue to work with the agricultural community to ensure strong participation in the Maryland Cover Crop Program. 2) Continue to evaluate and refine program policies in consideration of environmental and economic factors. 3) Develop a Soil Health Program that will also help promote the benefits of cover crops in row crop production. Maintained levels of participation in traditional cover crop program while now offering the Cover Crop Plus program, offering higher incentive payments and other incentive add-ons for farmers planting cover crops and utilizing additional best management practices to improve soil health.	**470,000 acres of traditional cover crop** **Through the Healthy Soils Program, expanding acres enrolled in extended season and multi-species cover crops**	
	Soil Conservation and Water Quality Planning	MDA	1) Continue to work with USDA-NRCS and local Soil Conservation Districts in SCWQP development. 2) Work with the Conservation Partnership to identify and address Technical Assistance gaps. Now that hiring has been completed, onboarding and training of those additional planners continues. Coordinated efforts between MDA and the Conservation Partnership have been made to identify tools available for prioritizing conservation planning.	**1,000,000 acres managed under a Conservation Plan**	
	Tillage Management	MDA	1) Through the Soil Health Program, highlight the co-benefits provided by long-term utilization of tillage management practices. MDA continues to promote the co-benefits of Tillage Management practices through the Soil Health Program as well as through the deliverance of technical assistance in addressing resource concerns for operations looking to implement a SCWQP.	**Work towards 248,000 acres of conservation tillage annually** **643,000 acres of high residue tillage annually**	
	Animal Waste Management Systems	MDA	1) Continue to work with USDA-NRCS and local Soil Conservation Districts to identify and address resource concerns in the area of animal waste management. 2) Continued funding of storage facilities through MACS and EQIP. Effort made to address where gaps remain and reach out to operations such as those in the equine communities where there may be gaps in implementation. Verification of beyond credited practices continues to provide an updated dataset of those practices still being properly utilized across the state.	**Poultry - 100% AU** **Dairy - 90% AU** **Livestock - 50% AU** **These practices are now eligible for up to 100% cost-share through MDA's MACS Program**	

Agriculture	**Increase Conservation Practice Adoption on Leased Land**	MDA	1) Work with conservation partners regarding outreach/education to non-operating landowners. Co-sponsor Leasing Workshops to help landowners navigate leasing language and conservation cost-share programs. ALEI has created a website (https://agleasebuilder.org/)with the purpose of guiding landowners through the process of navigating leases and incorporating conservation language into them.) 2) Explore options to incentivize conservation participation with non-operation landowners. 3) Work with conservation partners to evaluate/combine existing stewardship recognition programs (Certainty, FSCAP, CSP etc).	**Continual collaborative outreach efforts** **Additional 20% landowners reached**	
	Nutrient Management Core Nitrogen	MDA	1) Continue to work with the agricultural community to ensure fertilizers, manure, and other nutrient sources are applied in an effective and environmentally sound manner. Offer trainings and workshops to provide guidance on proper nutrient application. 2) Continue to provide education and training regarding proper nutrient application in adherence with a nutrient management plan and all current regulations. NM Consultants provide a source of guidance across the state, with that team being fully staffed.	**70% compliance rate**	
	Pocomoke and Wicomico River Basins	MDA	Data from 2014 to 2016 showed the Pocomoke and Wicomico Rivers as having some of the highest levels of summer dissolved oxygen open water criteria exceedances in Maryland. EPA's evaluation of Maryland's Phase III WIP recommended that the state, "target implementation in the most impaired segments." Wicomico, Worcester, and Somerset counties, where the Pocomoke and Wicomico river basins are located, have collectively committed to: 1) Working within the Soil Conservation District partnership to address natural resource concerns and provide direct technical assistance, planning an additional 1,800 acres a year. 2) An additional 1,800 acres treated through agricultural drainage management practices by 2023. 3) Continuing to manage 100% of their poultry waste through animal waste management practices, as well as a 10% increase of the amount of livestock waste managed by 2023. 4) Continue to support manure transport to alternative uses, or to other geographical areas with nutrient needs, for these watersheds. Continue to increase Ag Drainage Management Practices, as well as the tonnage transported through the Manure Transport Program. Increase acres managed under a conservation plan with new hires onboarded and trained through the multiple Planner certification levels.	**Regionally** **110,000 acres managed under a conservation plan** **An additional 1,900 acres treated through Ag Drainage Management Practices** **Animal Waste Management Systems:** **Poultry - 100% AU** **Livestock - 50% AU** **4,000 tons transported annually for alternative use**	

Agriculture	**Phosphorus Management Tool**	MDA	1) Continue to fund and support the Manure Transport Program which provides financial assistance to farmers for transportation of manure to a producer or alternative use facility where it can be utilized in accordance with a Nutrient Management Plan. 2) Continue to work with Delmarva Land to Litter Collaborative and other partners, identifying solutions to the challenge of managing litter in order to achieve our water quality goals. 3) Continue to work within Soil Conservation Districts to identify and address resource concerns in the area of animal waste management as well as provide continued funding of storage facilities through MACS and EQIP, as highlighted in our Animal Waste Management System milestones. The PMT is now fully implemented. The Manure Transport Program offers increased rates and a more streamlined application process, seeing increased participation in the program. AWMS are eligible for up to 100% cost-share through our Conservation Grants Program.	**Manure Transport Funding Support** **Animal Waste Management System Milestones**	
	CAFO Permit	MDE	1) Prioritize the registration of the remaining 18 AFOs that were not registered at the end of the 14AF/A General Discharge (GD) Permit and register these facilities under the 19AF GD Permit. 2) Continue the renewal of AFO facilities under the 19AF GD Permit.	**19AF GD Permit registration of AFOs that were not registered under the 14AF/A GD Permit** **# of AFOs currently registered under the 19AF GD Permit**	
Wastewater	**Septic Upgrades to BAT**	MDE	Continue to use the Bay Restoration Fund to upgrade septic systems to Best Available Technology (BAT) within the Critical Area.	**Fund 1800 BAT upgrades in the critical area**	
	Regulations Amendment	MDE	Amend regulations to include loading rate decreases when Best Available Technology (BAT) or Membrane Bioreactor (MBR) technology is utilized for systems that discharge <5,000 gallons per day.	**Regulation Amendment**	
	Bermed Infiltration Pond Removal	MDE	1) Bermed Infiltration Pond Report (Dorchester Co.) released November 2022 https://mde.maryland.gov/Documents/BIP%20REPORT.pdf. 2) MDE continues updating BIP strategies with stakeholders and has seen marked successes in redevelopment of County Government input into modification of Sanitary District operations.	**Priority facilities in Sanitary District No. 7 (Dorchester County) identified in Jan.2019 PFA Exc. Request; McKeil Point No. 1 (failing BIPs which caused shutdown of Shellfish HW) to be connected in Winter/Spring 2024). Continue progress towards connection of all Dist. No. 7 BIPs in coming years but specifically McKeil Point Nos. 2 & 3 by 2024-2025**	

Natural Filters	**Expand Existing Tree Planting Programs**	DNR	1) Work with urban forestry programs to increase tree planting in urban underserved areas. 2) Providing economic incentives through the "Marylanders Plant Trees" program which encourages citizens to plant individual trees on residential properties. 3) Incentivize tree planting and forest buffers through updated Accounting Guidance for fifth-generation MS4 permits. 4) Continuing with the Healthy Forests, Healthy Waters initiative and other tree planting partnerships, prioritize riparian buffer plantings through decision criteria scoring.	**Increase grants to local jurisdictions and organizations for urban forestry and tree planting** **Increase number of vouchers provided in Marylanders Plant Trees program** **400 acres planted via Healthy Forests, Healthy Waters and WM RC&D grants**	
	Maryland Stream ReLeaf	DNR	1) Establish partnerships to identify focus areas and complementary programs that expand forest buffers. 2) Identify riparian forest buffer priority projects in the Lower Susquehanna watershed (Cecil and Harford Counties).	**2 meetings per year to coordinate the partnership** **Develop riparian forest buffer restoration and conservation strategies for the program**	
Stormwater	**Stormwater Goals**	MDE	Before the Phase I permit can be issued, permittees are required to perform a "Maximum Extent Practicable" (MEP) analysis of their programs to determine the BMP implementation level that they could reasonably achieve with available and future funding levels.	**MEP analyses for MDOT-SHA**	
	Implementation of SW Goals	MDE	Review all Phase I MS4 Annual Reports, any new MEP analyses, and fiscal analyses on an annual basis for ensuring MS4 permit compliance.	**Review of milestones from Annual Reports** **Annual Report and FAP Review for all jurisdictions in 2021**	
	Urban Nutrient Management	MDA	Continue to support and expand the management of nutrient applications on urban land.	**285,000 acres managed under urban NM - Commercial Applicator** **466,000 acres managed under urban NM - DIY Applicator**	
	Industrial Stormwater Compliance	MDE	1) Continue to work with industrial sites to bring unpermitted sites into compliance. 2) Continue to focus on areas with requests for residual designation.	**Get 1,100 facilities under the new 20SW industrial Stormwater Permit issued in February 2023**	
	Phase II MS4 Permit Compliance	MDE	1) MDE continues to provide extensive outreach and assistance with Phase II permittees so they understand permit conditions and obligations. 2) Currently there are a total of 89 municipal, State, and federal permittees throughout Maryland which are submitting annual reports which MDE will review. 3) Years 2 through 5 will be used to develop their BMP implementation plans to meet the third generation permit conditions.	**# of annual reports completed and reviewed by MDE** **Report BMP Implementation Progress**	

2024/2025 Climate Mitigation and Resiliency Milestones

	Milestone	Agency	Steps to Achieve MS Goals	Deliverable	End of MS Evaluation
Climate Change	**Minimizing Risks of Climate-Driven Water Changes through Water Program Adaptation**	MDE	Enhance water program permits and approvals, policies and funding programs to incorporate additional flood protection and pollution prevention considerations that reduce water-driven climate risks.	**Annual progress report documenting accomplishments**	
	Coast Smart Construction Criteria	DNR	1) Develop and implement training program to increase competency in the use of the 2020 Coast Smart Construction Program Update. 2) Coast Smart Council and identified partners annually review the Coast Smart Construction Program criteria to ensure it meets the resiliency needs for state and local capital investment.	**1) Training program materials and annual offering** **2) Assessment of criteria assessment included in the Coast Smart Annual report**	
	Next Generation Adaptation Plan	DNR	1) Release the NextGen Adaptation Plan through ARWG and MCCC. 2) Determine priority actions to integrate into annual ARWG workplan. 3) Develop a tracking approach that identifies best metrics/indicators for progress tracking, lead organization or agency, adaptation-mitigation synergies and timeline for implementation of goals, strategies and activities. 4) Implement prioritized actions. 5) Report on progress annually through the ARWG and assess next years priority actions. 6) Periodically review the implementation and tracking plan to identify any additional tracking metrics that need to be identified.	**Report on priority and milestone progress in the Maryland Commission on Climate Change annual report and Adaptation and Resiliency Work Group Workplans**	
	Water Reuse	MDE	Continue implementing one or more water reuse pilot projects with local jurisdictions to address water supply shortages while exploring and accounting for reduced nutrient discharges to the Chesapeake Bay.	**One or more pilot studies under development**	
	Hazard Mitigation Watershed Planning	MDE	1) Continue the process of integrating hazard mitigation planning into local TMDL watershed implementation plans. 2) Work with local officials to find ways to use BMPs to lower Flood Insurance rates for our citizens.	**Two local watershed plans with hazard mitigation incorporated**	

Climate Change	**Water Quality and Climate Change Resiliency Portfolio**	DNR, MDE	1) Advance the implementation of project portfolios developed in partnership with two Targeted Resilience Area communities. 2) Evaluate results in consideration of engaging additional Targeted Resilience Area communities for future work.	**Continue engagement with chosen Targeted Resilience Area communities (Hagerstown and Pocomoke) to disseminate information about project portfolios. Evaluate how pilot project assessment and modeling approach can be applied to future Targeted Resilience Area projects. Work with chosen communities to locate funding for project(s) indicated as high priority in the WQCCRP final report provided by MES**	
	Living Shorelines	MDE, DNR	Shift outreach efforts towards private landowners and explore new cost-share opportunities within the zero-interest loan program to incentivize nature-based living shorelines over in-kind or structural erosion control practices. Streamline funding through the Grants Gateway platform & enhance transparency by responding to & tracking site visits requests through our website.	**1) Report on number of waterfront property owners engaged through technical assistance 2) Report on number of private landowners serviced with a zero-interest loan**	
	Living Shorelines (cont.)	MDE	1) Identify actions and develop tools to assist with improving the timeliness and consistency of state and federal regulatory decision making for living shoreline permits. 2) Complete enhanced shoreline suitability analyses of all tidal counties (13) for using LS practices. 3) Improve data capture and analysis methods to advance the LS goal and its evaluation. 4) Revise the wildlife rapid assessment tool to evaluate installed LS projects. 5) Identify ways to promote climate resilience in proposed shoreline stability designs submitted for MDE approval. 6) Integrate climate consideration into tidal licenses and approvals. 7) Develop and implement a tracking and notification system for marsh maintenance report annual submission.	**Increase the percentage of shoreline stabilization projects that use LS practices and develop ways to evaluate and improve techniques in the face of climate change**	
	SAV Restoration and Climate Research	DNR, MDE	1) Work with TNC to determine a path forward to blue carbon crediting of SAV restoration efforts. 2) Lead the "Protecting Chesapeake Bay Submerged Aquatic Vegetation (SAV) Given Changing Hydrologic Conditions: Priority SAV Area Identification and Solutions Development" Project. 3) Conduct Living Shoreline and Submerged Aquatic Vegetation Compatibility Study. 4) Coordinate Bay-wide SAV Monitoring efforts. 5) Pursue opportunities to Expand SAV Restoration Facilities Infrastructure and Build SAV Restoration Capacity to ensure climate resilience.	**Issue compatibility study; conduct monitoring**	

Climate Change	**Resiliency through Restoration Initiative**	DNR	1) Demonstrate how nature-based features can enhance community resilience to climate change impacts: a) Target projects which reduce climate change risk to our citizens. b) Design and implement nature-based community resiliency projects. c) Provide funding, training and technical assistance that will assist practitioners. d) Monitor projects to evaluate success, MyCoast Restoration Tracker.	**Design nature-based community resilience projects**	
	Advancing Blue Carbon Initiatives	DNR, MDE	1) Synthesis of current blue carbon research and policy in the state 2) Site identification 3) Project implementation	**Implementation of a blue carbon project on state land, as required by the Conservation Finance Act**	
	Ocean Acidification Plan	multiple agencies	Target tidal restoration for carbon sequestration to meet both Chesapeake Bay water quality and Atlantic Ocean acidification goals.	**Status on blue carbon strategies and actions including monitoring**	
	Local Comprehensive Plan Assistance	MDP	To assist local governments with incorporating climate change adaptation into local comprehensive plans, provide technical assistance with the Water Resources Element (WRE) guidance, review draft local comprehensive plans for adaptation efforts, develop guidance on resiliency and adaptation elements of plans, and track incorporation of resiliency in adopted local comprehensive plans.	**Report on progress**	
	Maryland Saltwater Intrusion Plan	MDP	To better prepare and adapt to saltwater intrusion and salinization impacts on all resources and land types in Maryland, lead the state agency saltwater intrusion team, track progress, and update the plan every 5 years (next by the end of 2024).	**Report on progress. Updated plan by the end of 2024**	
	Maryland Wetland Adaptation Strategy	DNR/MDP	To identify priority programs, policies and regulatory changes needed to ensure success, as climate changes, in meeting a quantitative goal for successful wetland migration and for successful resilience of certain wetlands that will stay in place, develop a draft Maryland Wetland Adaptation Strategy, making use of the geographically specific information generated from the EESLR project.	**Draft wetland adaptation strategy**	
	Industrial Stormwater	MDE	As A-StoRM impacts the Design Manual and stormwater standards, MDE will be incorporating these as required into new facilities and considered for future stormwater permits.	**As required under state law, any new industrial site, or redevelopment at existing sites, will be required to incorporate A-StoRM**	

Additional 2024/2025 Milestones for Maryland

Sector	Milestone	Agency	Steps to Achieve MS Goals	Deliverable	End of MS Evaluation
Protection	**Guidance for Protecting Tier II Streams**	MDE	Complete 1st step of analysis through literature review and basic research to identify existing guidance documentation and processes that can support high quality/high value streams.	**Summary report on the status of high quality/high value streams protection guidance** **Guidance reference compendium**	
	Maryland Healthy Watersheds Assessment	MDE	Complete the Maryland Healthy Watersheds Assessment using a $75,000 grant awarded to the Maintaining Healthy Watershed Goal Implementation Team by the Chesapeake Bay Trust. The project seeks to create a relative state watershed health baseline, on the segment-catchment scale, based on metrics known to influence watershed health, as well as identify vulnerability indicators.	**1) Provide MDHWA date to MD IMAP** **2) Geodatabase** **3) Final Report** **4) SOPs/Protocol Documentation**	
	Combined Program Review	MDE, DNR	Pilot integration of the Antidegradation Tier II Environmental Review with the Department of Natural Resource's Power Plant Review Program. (forms, templates, and other documentation completed in the previous MS period).	**SOPs for special condition development and implementation guidance**	
	Improvement of Economic Justification Analysis for Tier II Review Decisionmaking	MDE	Develop SOPs and a sound methodology to help determine the economic benefits of projects with potential impacts to resources that support high quality streams, such as forest cover, stream buffers, stream disturbances, and restoration. Develop guidance for applicants when creating economic justification reports MDE will use to evaluate projects, including key measures and information to include, and instructions as to acceptable economic analysis software and parameters.	**1) Environmental economic decisionmaking SOP/Protocol Documentation** **2) Applicant Guidance for performing environmental economic justification** **3) Threshold recommendations for environmental impact justifications across different activities** **4) SOPs/Protocol Documentation**	
Trading	**Water Quality Trading Program Enhancement**	MDE, MDA	1) Work to include credits from agriculture into the WQ Trading Program. 2) Finalize WQ Trading Registry and online marketplace. 3) Work to increase the quantity of credit buyers in the program through encouragement of participation by non-traditional partners.	**1) Consolidation and update of the Chesapeake Bay Nutrient Trading Registry tool** **2) Certify credits from an agricultural source** **3) Begin development of new online marketplace**	
EJ	**Support the Bay Program's DEIJ Directive**	MDE/DNR/ MDA	Support the Bay Program Partnership's DEIJ strategy and implementation plan in all Bay Program workgroups Maryland agencies lead or participate in.	**Continued attendance and participation**	
	Implement MDE's EJ policy in Compliance Programs	MDE	Prioritize EJ communities to implement enhanced compliance and pollution prevention efforts.	**Implement MDE's EJ Screening Tool to prioritize EJ communities for compliance focus.** **Identify one or more EJ pilot communities for implementation**	
	Develop and Publish DEIJ Plan	DNR	DNR commits to developing a departmental wide DEIJ plan and issuing the plan on their website.	**Complete DNR's plan and disseminate on its website so it is easy to find and navigate**	