State Agency Panel on Chesapeake Bay Restoration

House Environment & Transportation Committee

February 1, 2023

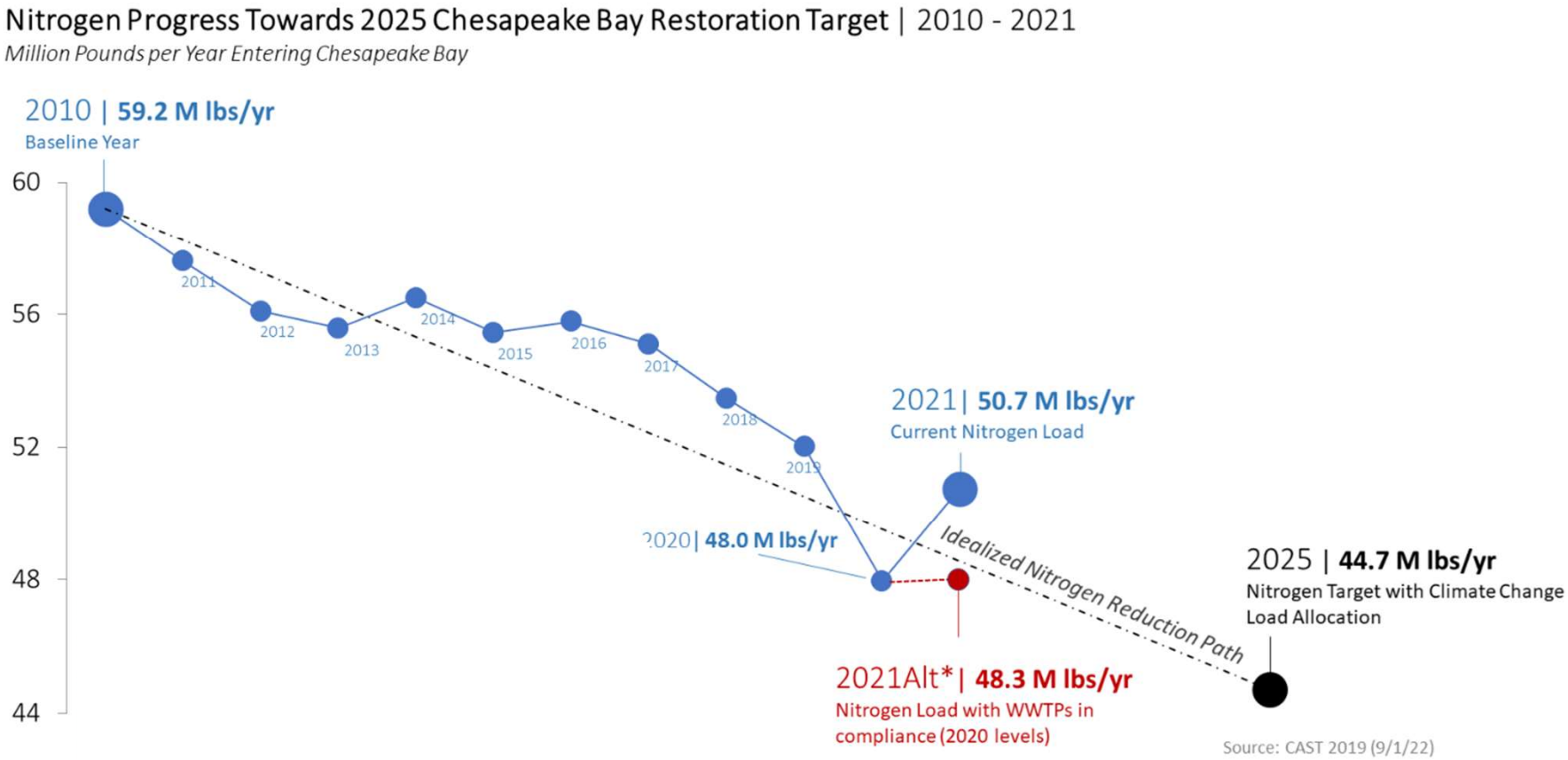
Senate Education, Energy, & the Environment Committee

February 2, 2023

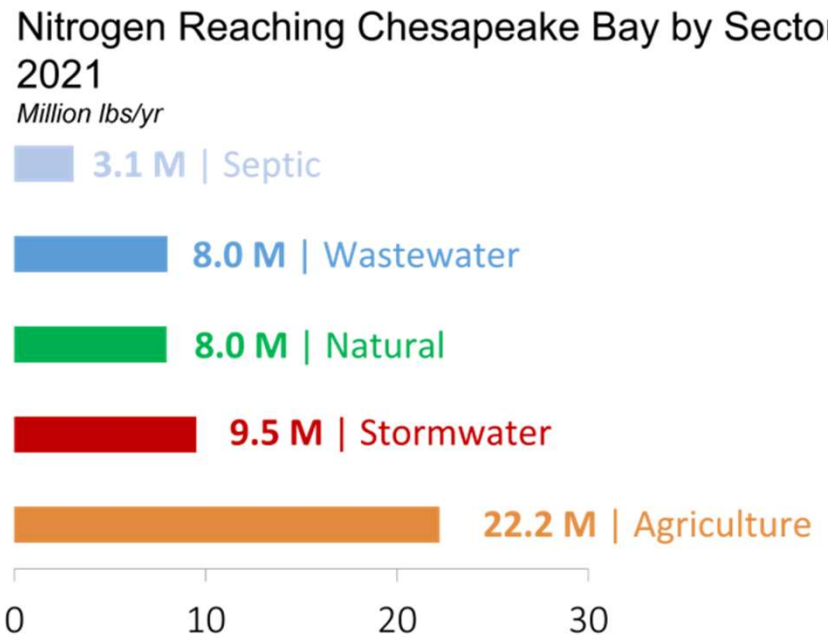
Chesapeake Bay Accountability Framework

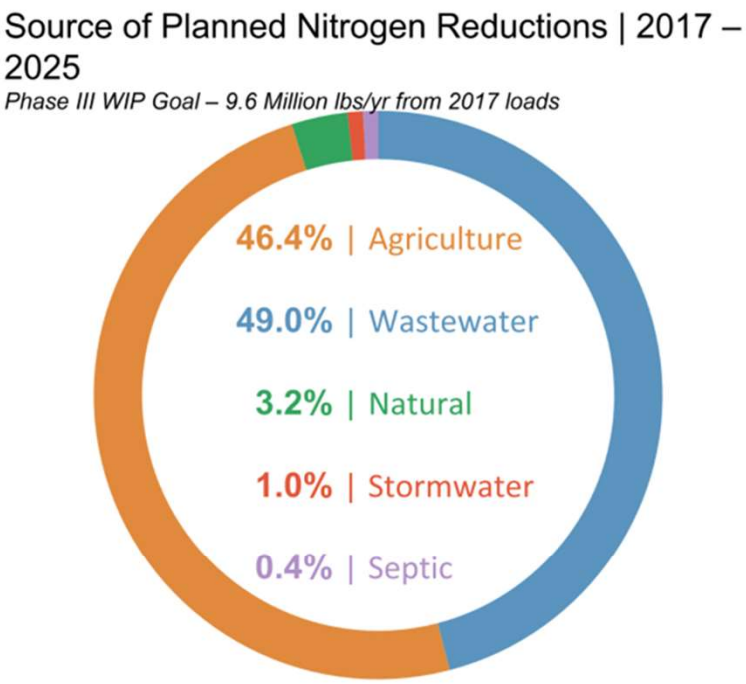
- Chesapeake Bay TMDL
  - Federal Clean Water Act
  - Implemented through each jurisdiction's Watershed Implementation Plan, related two-year milestones, and U.S. EPA's annual evaluations of jurisdiction's milestones and progress.
- Chesapeake Bay Agreement
  - Multi-jurisdictional agreement
  - Includes Bay TMDL Water Quality Goal
  - Goals and strategies are tracked through the CBP's Strategy Review System framework and related progress evaluations.
- Governor's Chesapeake Bay Cabinet
  - Maryland Bay Agencies
  - University of Maryland

Where We Are with Water Quality



Getting to Our 2025 Restoration Goal

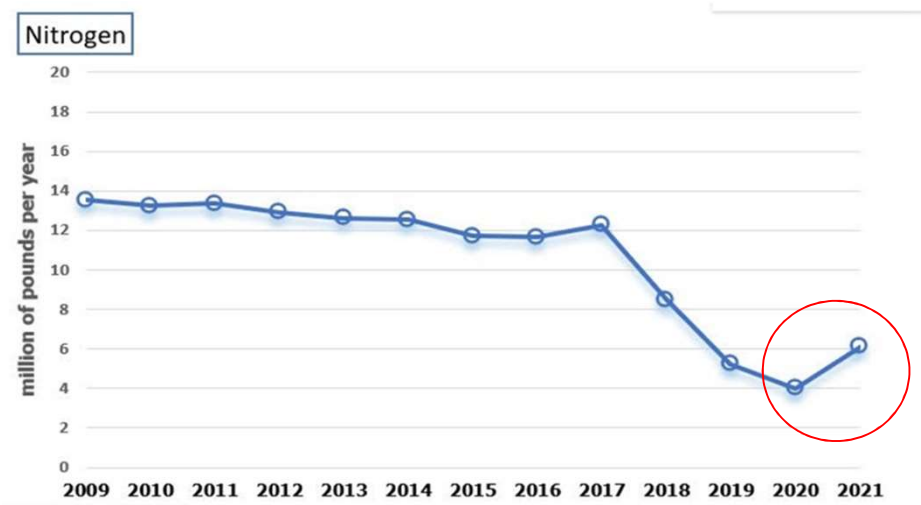


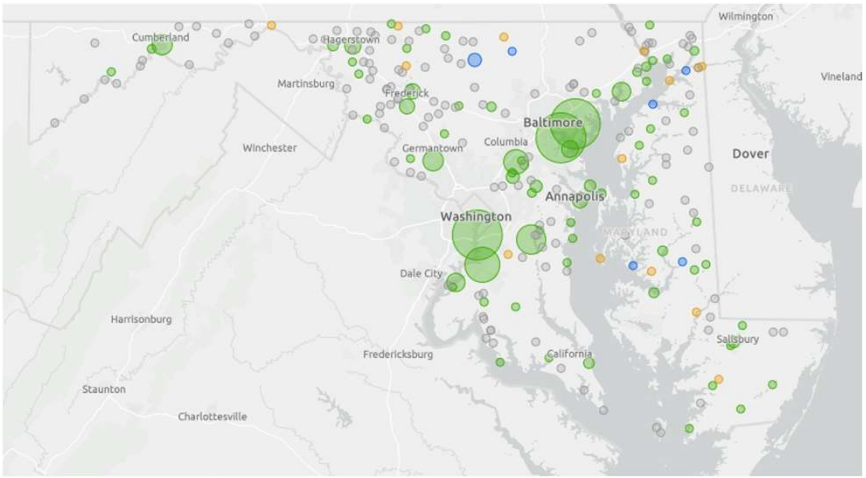


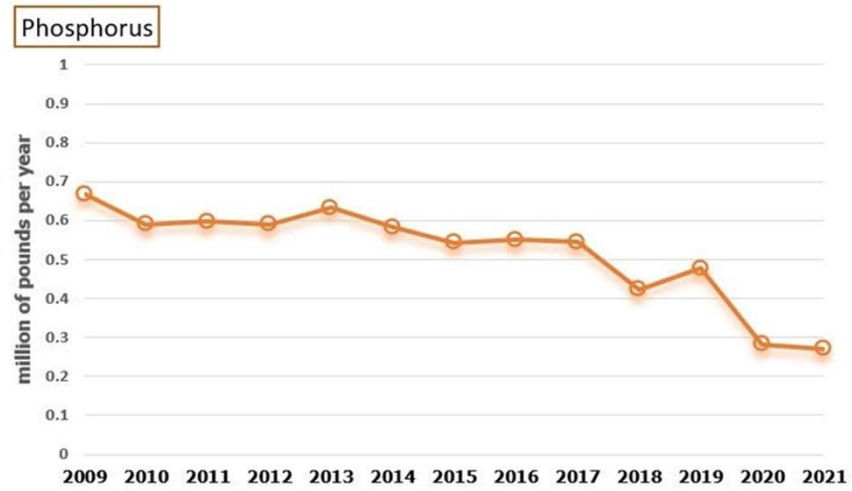
WWTPs

Maryland's investments in wastewater technology have yielded the largest nutrient reductions of any pollution source.

Having invested over $1 Billion in ENR upgrades, the State achieved more than 50% reduction in WWTP Nitrogen loads to the Bay.







MDE Chesapeake Bay Restoration Priorities

✓ <u>Factor in Environmental Justice and Climate Resiliency into all strategies</u>

✓ <u>Wastewater</u>
- Patapsco and Back River WWTPs
- Performance tracking system for all of Maryland's major WWTPs
- 3rd Party Engineering evaluations
- Upgrade large minor WWTPs
- Reducing administratively extended permits
- BRF O&M
- Workforce development
- Sewer rehabilitation
- Septic systems upgrades/connections and Bermed Infiltration Ponds

✓ <u>Stormwater</u>
- Municipal Separate Storm Sewer System (MS4) permits
- Construction Stormwater GP and Industrial SW GP
- Advancing Stormwater Resiliency in Maryland (AStoRM)
- Green and Blue Infrastructure Policy Advisory Commission
- Tree Solutions Now Act

✓ <u>Conowingo</u>
- Water Quality Certification, Settlement Agreement and FERC License
- Conowingo WIP
  - Executed agreement for $25-million Conowingo Pay-for-Success Program
  - Innovative reuse

Maryland
Department of
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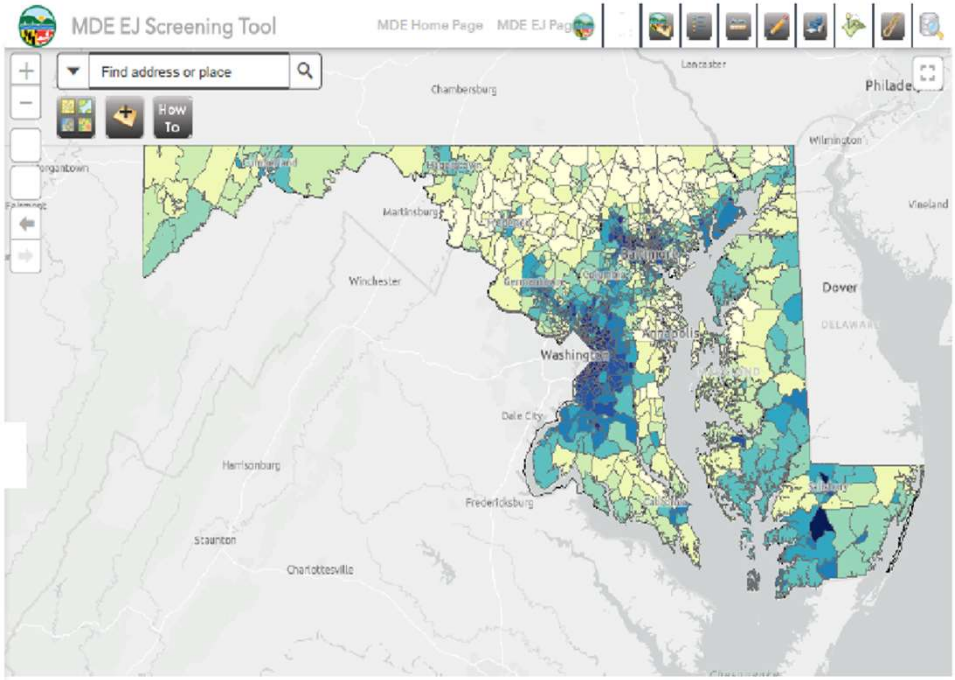
MDE: Bay Restoration Fund - Highlights

- Bay Restoration Fund
  - Since the 2004 program inception, $1.912 billion in BRF fees (wastewater and septic users
    - $1.532 billion in the Maryland Department of the Environment (MDE) WWTP fund,
    - $223 million in the MDE Septic Systems Upgrade fund,
    - $157 million in the Maryland Department of Agriculture (MDA) Cover Crop Program fund
  - Select Accomplishments
    - Upgrades to 67 majors and 35 minor WWTP
    - 14,942 BAT upgrades throughout Maryland, of which 9,205 upgrades were completed within Maryland's Critical Areas.
    - 1,242 homes have been connected to public sewers
    - In FY22, Maryland farmers applied to plant 638,226 acres of cover crops
  - Water Quality Integrated Project Priority System prioritizes:
    - nutrient reductions to help meet requirements under the Bay TMDL, as well as local TMDLs;
    - public health and safety benefits;
    - compliance related efforts for consent orders and permits; and
    - climate, sustainability, environmental justice and other co-benefits.
  - WWTP O&M Funding $11 million (May 2021 regulations)
  - Clean Water Commerce - $20M in funding to purchase environmental outcomes (nitrogen reductions) – after any cost-effective minor WWTP applications
    - 35% ($7M) for agricultural practices, with priority for fixed natural filters and ditch management
    - 20% ($4M) for projects in EJ Communities, including stormwater management and green infrastructure projects
    - 10% ($2M) for nonagricultural landscape restoration projects
  - FY23 requires $15M one time transfer of BRF WW revenues for the Tree Solutions Now Act (CBT, DNR, and MDA) (after any cost-effective minor WWTP applications)

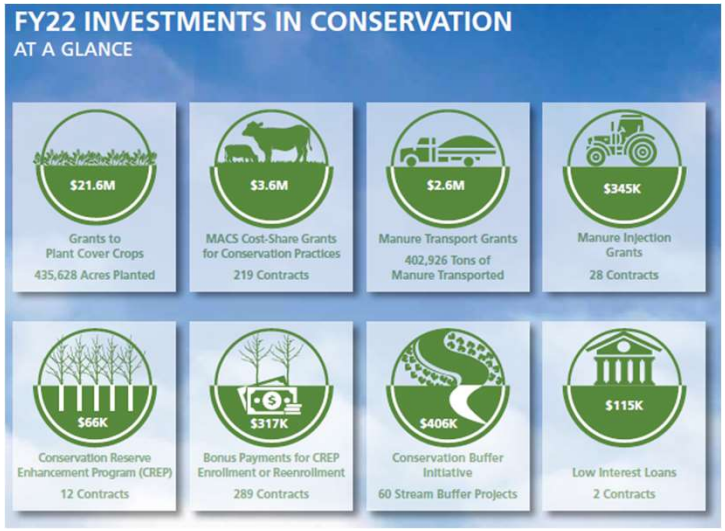
MDE: SRF & Infrastructure Investment and Jobs Act

- Water Quality Revolving Fund (State Revolving Fund)
  - SRFs provide low-interest loans and loan forgiveness to local governments to finance water infrastructure projects. Financing up to 100% of project cost, available to public and some private entities
  - Intended use plan
- Infrastructure Investment and Jobs Act
  - Clean Water SRF – BIL (FY22 and FY23)
    - WQSRF Supplemental = $43M (49% loan forgiveness)
    - WQSRF PFAs/EC = $7M (100% loan forgiveness)
    - Technical Assistance (2% set-aside)



MDA Chesapeake Bay Priorities

- **Financial Assistance:** Continue to support conservation funding programs and initiatives
  - MACS Program
  - Cover Crops
  - Manure Transport
  - Conservation Buffer Initiative
- **Staffing:** 53 technical positions to advance installation of conservation practices
- **Expanding Our Reach:**
  - Integrating 2022 Strategic Plan with 3 key focuses - Chesapeake Bay restoration, Climate Resilience, and Environmental Justice – across all programs
  - Healthy Soils Program to leverage co-benefits
  - New incentives to plant trees in support of the Tree Solutions Now Act
  - Small and Urban Farm program



MDA Chesapeake Bay Priorities

- **Nutrient Management:**
  - Ensuring Nutrient Management compliance
  - PMT Implementation
  - Livestock Exclusion
- **Accounting and Reporting:**
  - Verifying conservation implementation
  - Refining data resources - livestock and equine
- **Comprehensive Approach**:
  - Whole-farm management
  - *Cover Crop Plus* initiative to stack conservation benefits
  - Climate Change / Saltwater Intrusion

MDA Opportunities

- Aligning new federal investment in conservation programs and new Farm Bill within Maryland's conservation partnership
- Increasing public awareness of conservation and stewardship levels among Maryland farmers
  - "Partners in Conservation: Stories from the Field"
- In partnership with UM, assessing the future role of Animal Waste Technology Fund to address nutrients, climate change and EJ principles
- Market uncertainty for growers

DNR Bay Priorities:

Water Quality Monitoring

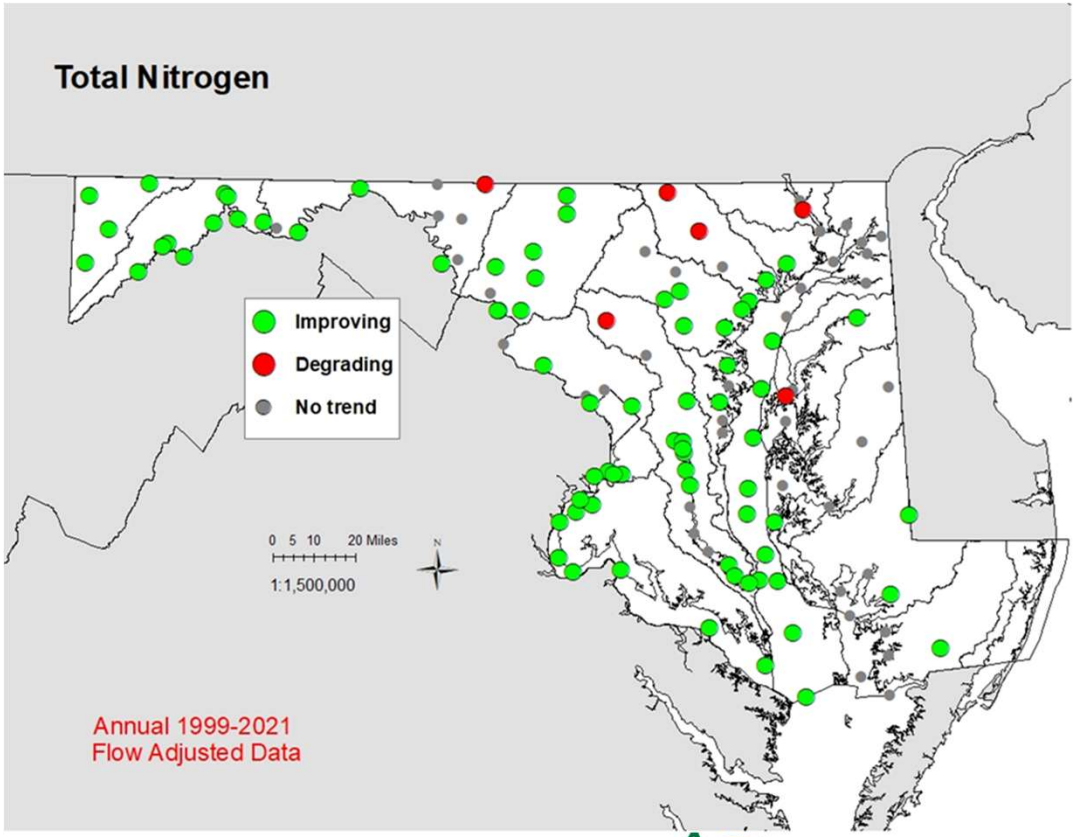
Measuring "real-world" progress at improving the health of Maryland's streams, rivers and bays.

DNR Monitoring Program:

- Scientifically robust program coordinated with Virginia and academic institutions
- 54 Non-tidal stations, 71 Tidal Stations
- Most stations monitored monthly since 1986

Challenge:

- Quality of program has suffered over long-term due to cost increases and budget cuts
- Currently working with partners to identify appropriate resource needs.



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DNR Bay Priorities:

Chesapeake and Atlantic Coastal Bays 2010 Trust Fund

Fund the most cost-effective non-point source nutrient and sediment reduction projects.

Future Directions:

- Greater consideration of “co-benefits” (environmental justice, carbon sequestration, habitat and climate resiliency) in funding decisions
- Creation of Pay for Performance/Success track
- Expanding and commercializing clean energy and other environmental technologies:
    - 46 MD businesses, 56 new technologies, $9.2M invested, $11M private match

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DNR Bay Priorities:

Entire-Government Approach

Maximize and coordinate state, federal, and local resources to improve water quality and Maryland's resilience to climate change.

State

- Chesapeake and Atlantic Coastal Bays 2010 Trust Fund
- Resiliency through Restoration Program: *Fund local projects that enhance communities' resilience to climate change (ex. Living shorelines)*

Federal

- EPA/NOAA Programs: *DNR administered federal program to fund resilient conservation and natural infrastructure projects.*
- Federal Bipartisan Infrastructure Law: *$3.2M to 6 projects in "most effective basins" with DEIJ priority/$150K in capacity building initiatives to increase partnership with under-engaged communities*

Local

- Watershed Assistance Collaborative: *DNR/MDE/CBT program to fund project design and planning for local governments and non-profits.*
- Grants Gateway: *One-Stop-Shop website for access to water quality and resilience grant programs.*

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DNR Bay Priorities:

Climate Solutions - Adaptation and Resilience

Promote natural infrastructure solutions for climate resiliency and broader environmental benefits.

Natural Infrastructure is a Win-Win!

- Forest buffers
- Healthy soils
- Urban tree canopy
- Wetland restoration
- Current and future coastal marsh restoration
- Living shorelines
- Oyster bars

Maryland Commission on Climate Change Adaptation and Resiliency Working Group

- Develops comprehensive cross-agency strategies to reduce Maryland's climate change vulnerability
- Creating Maryland's Next Generation 10 Year Adaptation Plan - climate jobs and training; DEIJ; local capacity building
- ARWG Sector Focus: **Natural Resources and Ecosystems**

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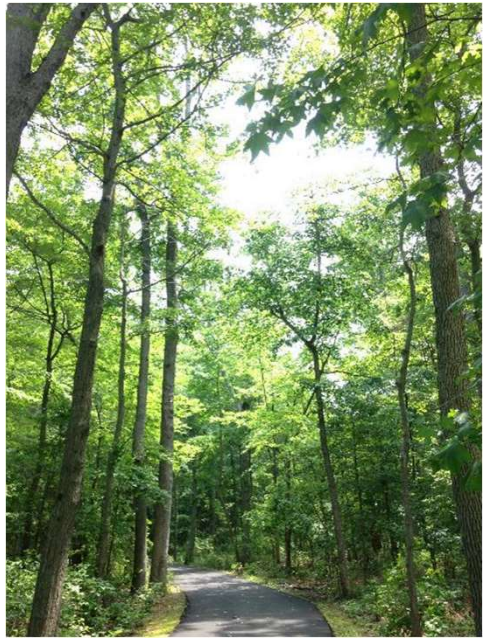
DNR Bay Priorities:

Increasing Maryland's Tree Cover

Tree planting is one of the most beneficial bay restoration strategies.



- 5 Million Trees by 2031 for Climate Resilience
- Additional to tree planting projected in 2019 Greenhouse Gas Reduction Act Draft Plan
- Rural: New Conservation Reserve Enhancement Program signing bonus, up to $1,000/acre for new riparian forest buffers
- Urban: at least 10% to underserved areas; tree canopy cover to address urban heat islands

Funding:

- Chesapeake Bay Trust new Urban Forestry Program ($10 million annually in grants)
- Funded starting July 1, 2022, $15 million/year

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DNR Bay Priorities:

Land Preservation

Protecting land now prevents future degradation.

Program Open Space

- **Stateside**: preserves natural areas for public recreation and watershed and wildlife protection through fee simple and conservation easement acquisitions.
- **Local:** provides funding to local governments for planning, acquisition, and/or development of recreation land or open space areas.

Rural Legacy Program

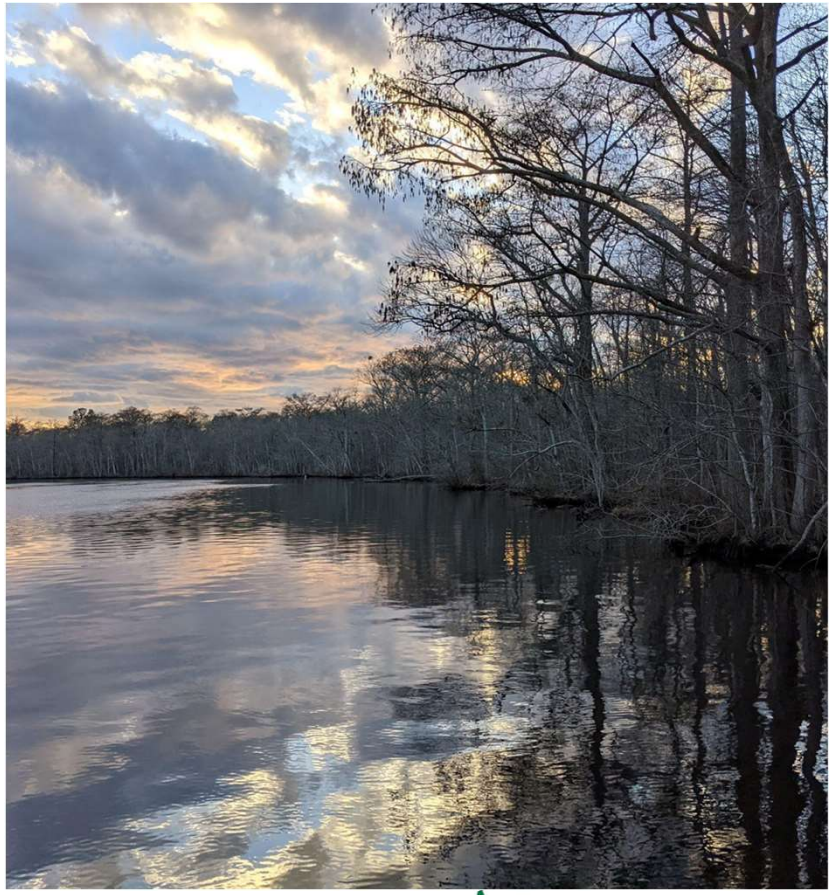
- Provides funds to local governments and land trusts to purchase conservation easements in designated Rural Legacy Areas to protect the State's natural resources, farms, and forests, and while maintaining the viability of resource-based economies.

Maryland Environmental Trust

- Conservation easement donation program for significant rural properties with agricultural, historic, natural, scenic, scientific, open space, or recreational values; and exceptional urban properties, those that would provide public access

State Agricultural Land Preservation Goal

- 2002 - 2030: 1,030,000 acres preserved by state and local preservation programs
- Total Acres Preserved: 868,627 Acres (84.3% of Goal).



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DNR Bay Priorities:

Fisheries and Habitat Restoration

Oysters & Mussels: Natural water filtration systems and mechanism to create economic opportunities

Oysters

- Large-scale restoration projects:
  - Initially restored in 4 tributaries. 5th tributary underway
  - 945 acres restored, 5.9 billion spat planted

Mussels

- Currently scaling up efforts to restore mussel populations in freshwater areas similar to oyster populations in the bay.
- Construction of large-scale mussel hatchery scheduled for completion by early FY26.

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DNR Bay Priorities:

Fisheries Management

Maintaining healthy fisheries for all Maryland citizens

Managing Sustainable Fisheries

- Maryland lands approximately $331.3 million of seafood annually.
- Opportunities exist to improve marketing and open new, emerging fisheries (e.g. blue catfish, shrimp).

Blue Crabs

- Beginning a new Blue Crab Stock Assessment that will guide baywide management for a sustainable fishery.

Striped Bass

- Coast wide management measures have successfully returned fishing rates to sustainable levels.

Addressing Invasive Species

- New Catfish Fishery Management Plan provides authority to DNR to begin pilot fishery programs to reduce impacts of invasive blue and flathead catfish.

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Bay Restoration Opportunities

- Unprecedented Federal Infrastructure funding
- Continued Financing and BMP Innovations to address Conowingo pollution
- Quantifying and Accounting for Co-Benefits of Restoration
- New authorities for greater innovation through the Conservation Finance Act
- Water quality (and economic!) benefits from large-scale oyster restoration and increased aquaculture industry

Bay Restoration Challenges

- Increasing implementation beyond 2025, including addressing climate change, Conowingo and growth impacts.
- State workforce capacity to manage efforts and support implementers.
- Jurisdictional accountability to meeting Bay restoration goals
- Improving our water quality monitoring network
- Adapting to new science that may impact progress and load reductions