Chesapeake Bay Update

Commonwealth of Virginia

Travis Voyles
Secretary of Natural and Historic Resources

Sept. 13, 2023

Natural and Historic Resources
Agriculture and Forestry
Health and Human Resources

Amendments to the Biennial Budget

Accelerating Results for Virginians

"Governor Glenn Youngkin announced his amendments to Virginia's 2022-2023 Biennial Budget, building on his historic first year in office with a plan to accelerate results and get more done.

The Governor's budget includes an additional $1 billion in tax relief for families and businesses, a plan to jumpstart Virginia's economy, and a series of initiatives to accelerate results in education, behavioral health, talent and workforce development, public safety, ***and the environment****."*

Record $700+ Million Funding

Water Quality, Resilience, and Land Conservation

> $290M – Agricultural Best Management Practices and Technical Assistant

- $286M – Natural Resources Commitment Fund for installation of ag conservation practices
- $4.55M – Soil and Water Conservation District Base Technical Assistance in FY24

> $250M – Wastewater/Stormwater Upgrades

- $222M – Enhanced Nutrient Reduction Certainty Program—wastewater treatment plant upgrades
- $30M – Stormwater Local Assistance Fund

$100M – Resilient Virginia Revolving Loan Fund

>$27M – Land Conservation

- $16M – Virginia Land Conservation Foundation
- $11.5M Virginia Battlefield Preservation Fund

DCR
Virginia Department of Conservation & Recreation

STRENGTHEN THE SPIRIT OF VIRGINIA TOGETHER

VDH VIRGINIA DEPARTMENT OF HEALTH

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

VIRGINIA DEPARTMENT OF FORESTRY

VMRC
Virginia Marine Resources Commission

VIRGINIA DWR

Program Overview

- Coordinating agency for VA in the Chesapeake Bay Program (CBP)
- Focus on Bay nutrient and sediment reduction goals
- Manages all Bay data reporting through the DEQ BMP Warehouse
- Represents VA on the federal Chesapeake Bay Program level on various work groups and through reporting to the National Environmental Information Exchange Network (NEIEN)

Virginia Milestones Update

- The Virginia WIP (Phase III) was agreed to and signed by the Northam Administration in 2019.
- 2019 Phase III Watershed Implementation Plan was designed to ensure that all programs and practices needed to fully restore the Bay are in place by 2025 (regulated and unregulated sources, multiple state agencies and secretariats)
- EPA-CBPO and Virginia have recognized that we will not meet all established goals by 2025
- Two-year milestones (programmatic, numeric) - currently working on 2022-23 Closeout and 2024-25 Development

Tracking Virginia's Progress

- Track progress through: (1) WIP III target loadings/goals; (2) Two-year milestones; (3) Trends in water quality
- Tools to Help Us Track:
  - EPA's Chesapeake Assessment Scenario Tool (CAST)
  - Virginia's BMP Warehouse
  - DEQ and Bay Partnership Monitoring Data and Trend Analyses

Where We Stand

Nitrogen (TN)

- Reaching 2025 planning target for TN will be challenging, especially when considered by sector
- Majority of remaining reductions needed in agriculture and developed sectors

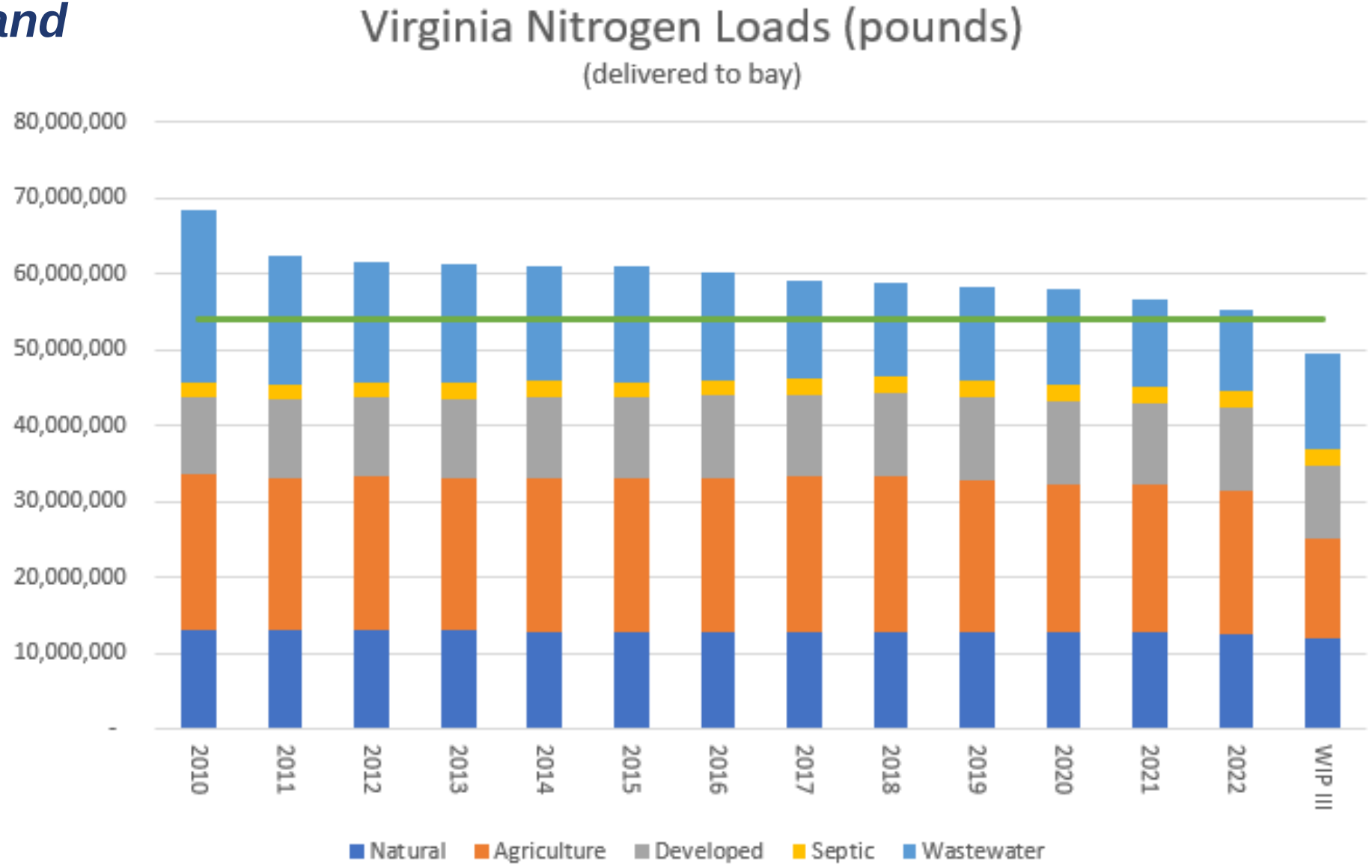
Phosphorus (TP)

- We are on track to achieve TP target reductions by 2025
- While 2022 progress did not quite meet Planning Target goals, adjustments being made to lawn fertilizer reductions in CAST23 should reach target
- Majority of remaining reductions needed in agriculture sector

Sediment

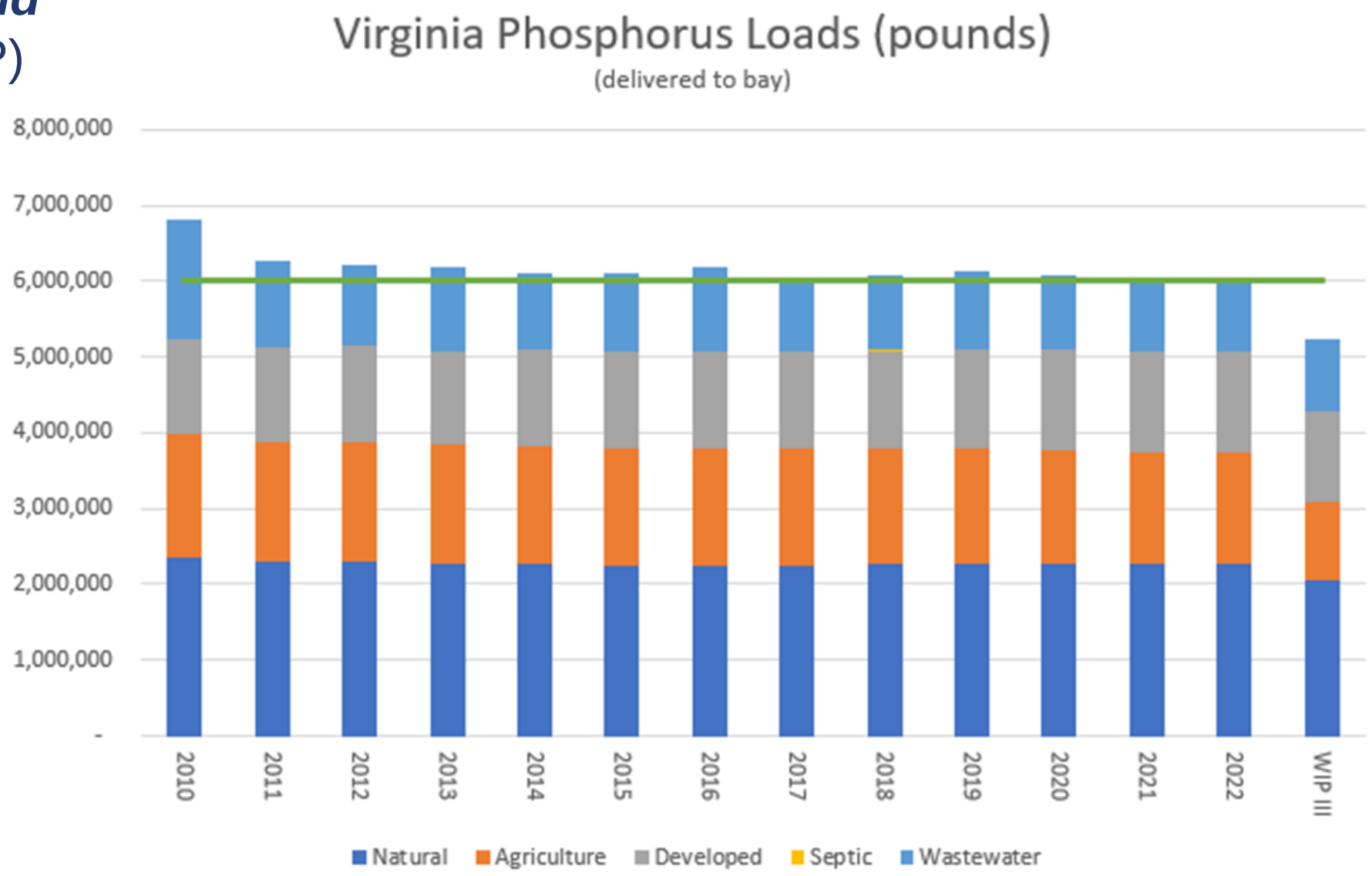
- We are on track/already achieved Sediment target reductions by 2025

Where We Stand
Nitrogen (TN)



Based on CAST-19 numbers and 2018 Planning Target with climate change considerations

Where We Stand
Phosphorus (TP)



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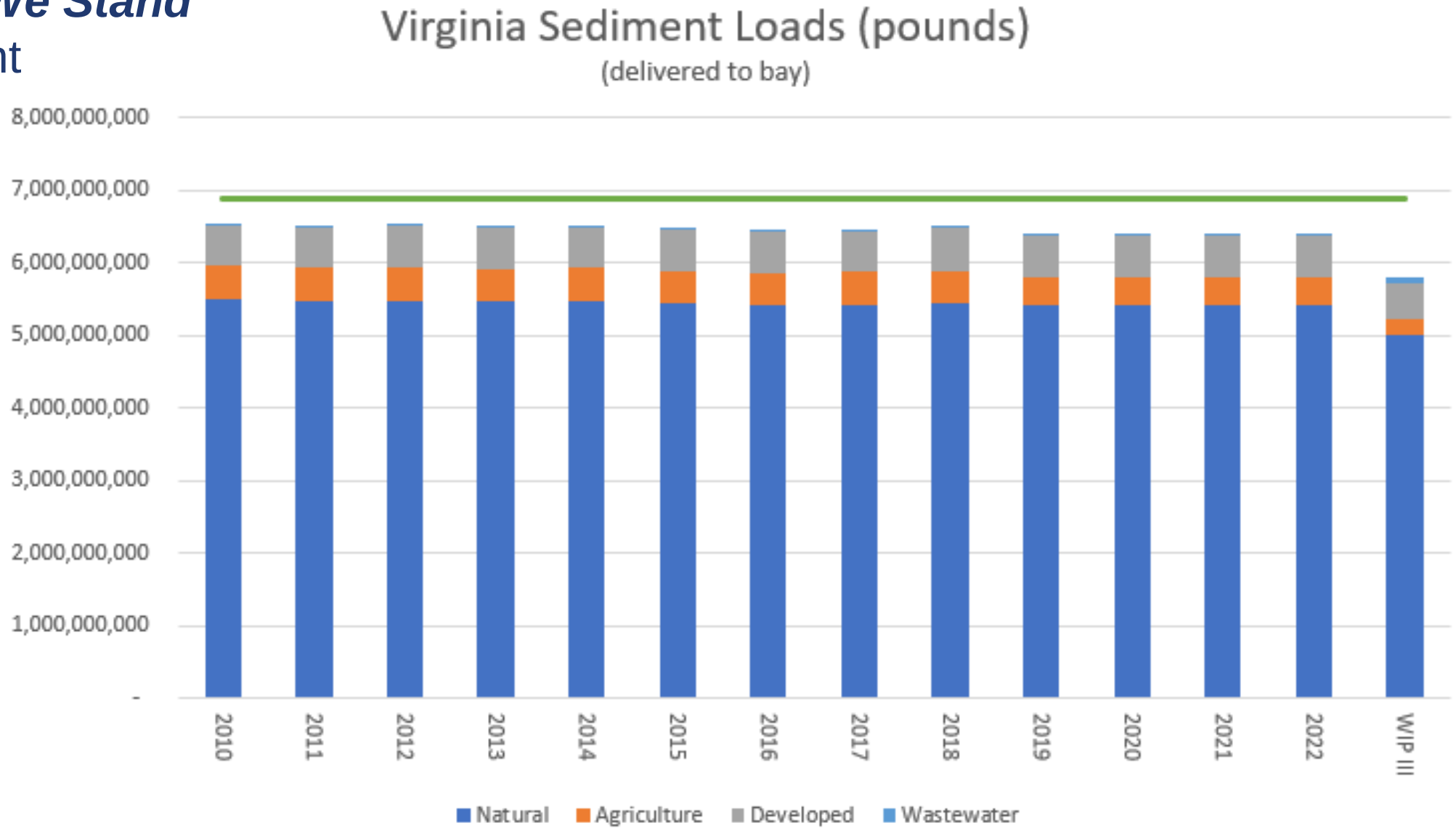
Where We Stand
Sediment



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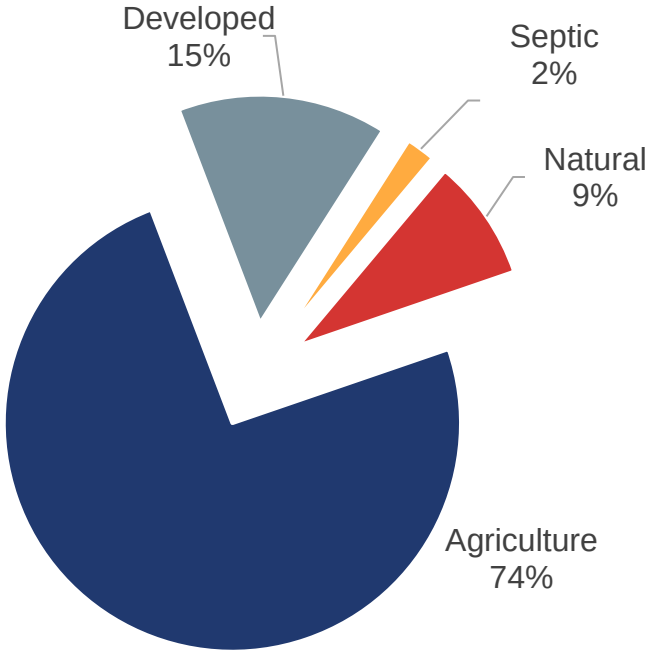
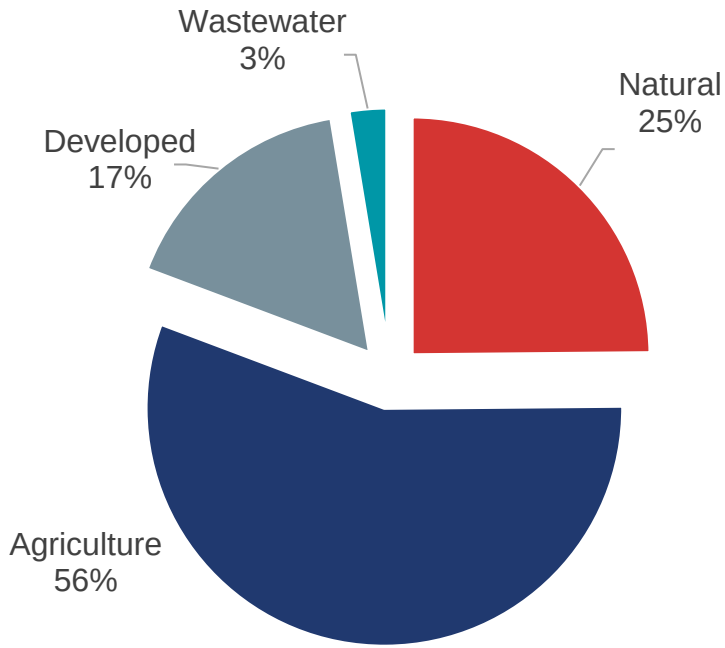
Where We Stand



2021-25 Nitrogen Reductions Needed*

***Percentages assume wastewater sector gains proportionally offset other sector gaps**



2021-25 Phosphorus Reductions Needed

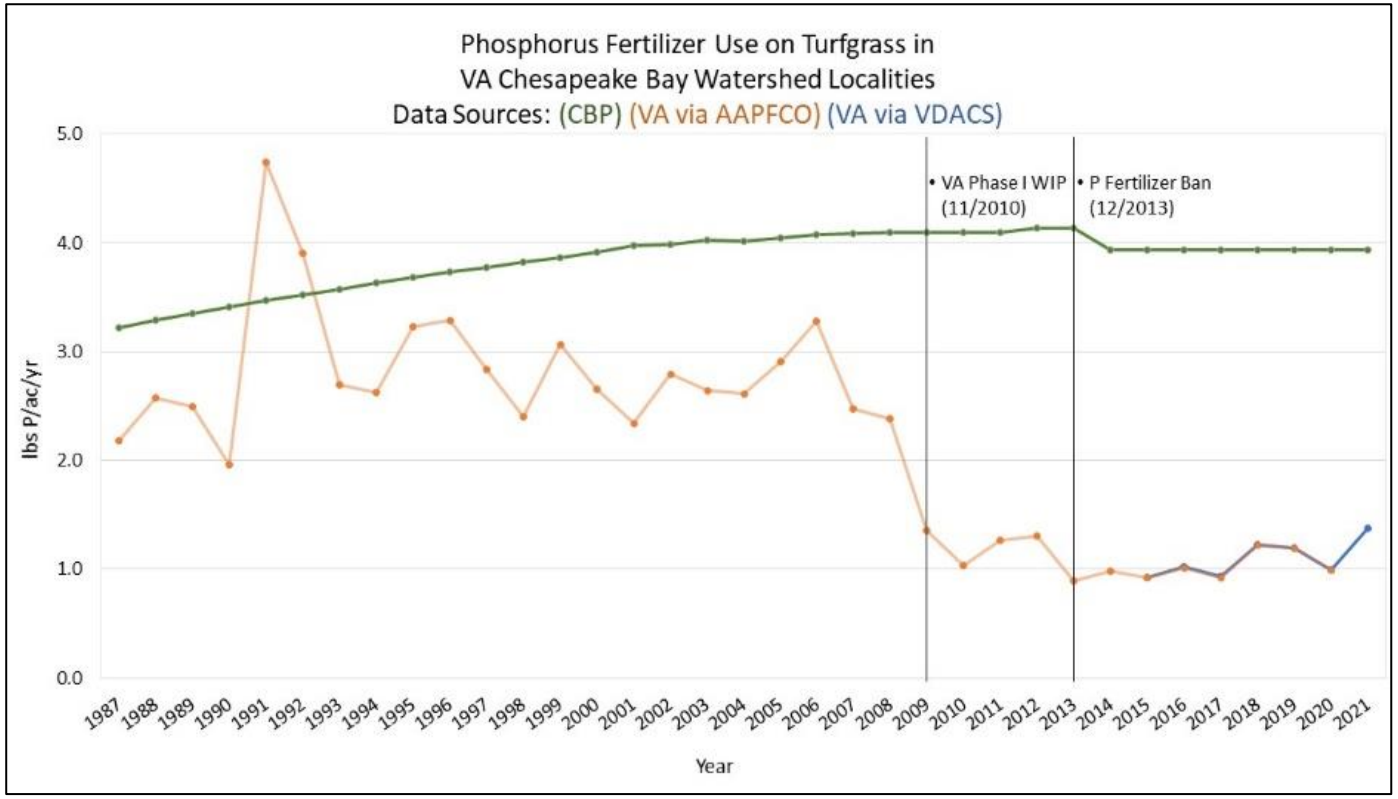
Nitrogen Gap: ~7 million lbs/year
Phosphorus Gap: ~800,000 lbs/year

Where We Stand - Phosphorus

Adjustments being made to lawn fertilizer reductions to Non-Agricultural Lands in CAST23 should reach target

Adjustments to Lawn Fertilizer

- WIP I (2010) and HB1831 (2011) banned most total phosphorus (TP) in lawn fertilizer
- 4 million lbs/yr TP reduction in lawn fertilizer application in VA
- Bay Model and VRRM are being updated to reflect this



Where We Stand - Phosphorus

Adjustments being made to lawn fertilizer reductions to Non-Agricultural Lands in CAST23 should reach target

Adjustments to Non-Agricultural Fertilizer

- As a result of changes to the Virginia fertilizer law in 2020, licensees, contractor-applicators, state agencies, localities, or other governmental entities who apply commercial fertilizer to more than 50 acres of non-agricultural land must employ or retain the services of a Certified Fertilizer Applicator.

- In 2022, 71,473 acres (statewide) were reported to VDACS as under management by Certified Fertilizer Applicators in accordance with Virginia Nutrient Management Standards and Criteria.

Where We Stand - Phosphorus

Area			
	2014	2021	%
Impervious Area (ac)	662,835	672,861	+1.5%
Turf Area (ac)	1,139,556	1,187,709	+4.2%
Total	1,802,391	1,860,570	+3.2%

Total Phosphorous (#s)			
	CAST 2014 w/ BMPs	VRRM 4.0 (Using Special CAST Run)	%
Impervious	529,034	535,739	+1.2%
Turf	1,547,946	785,376	-49.3%
Total	2,076,980	1,321,115	-36.4%

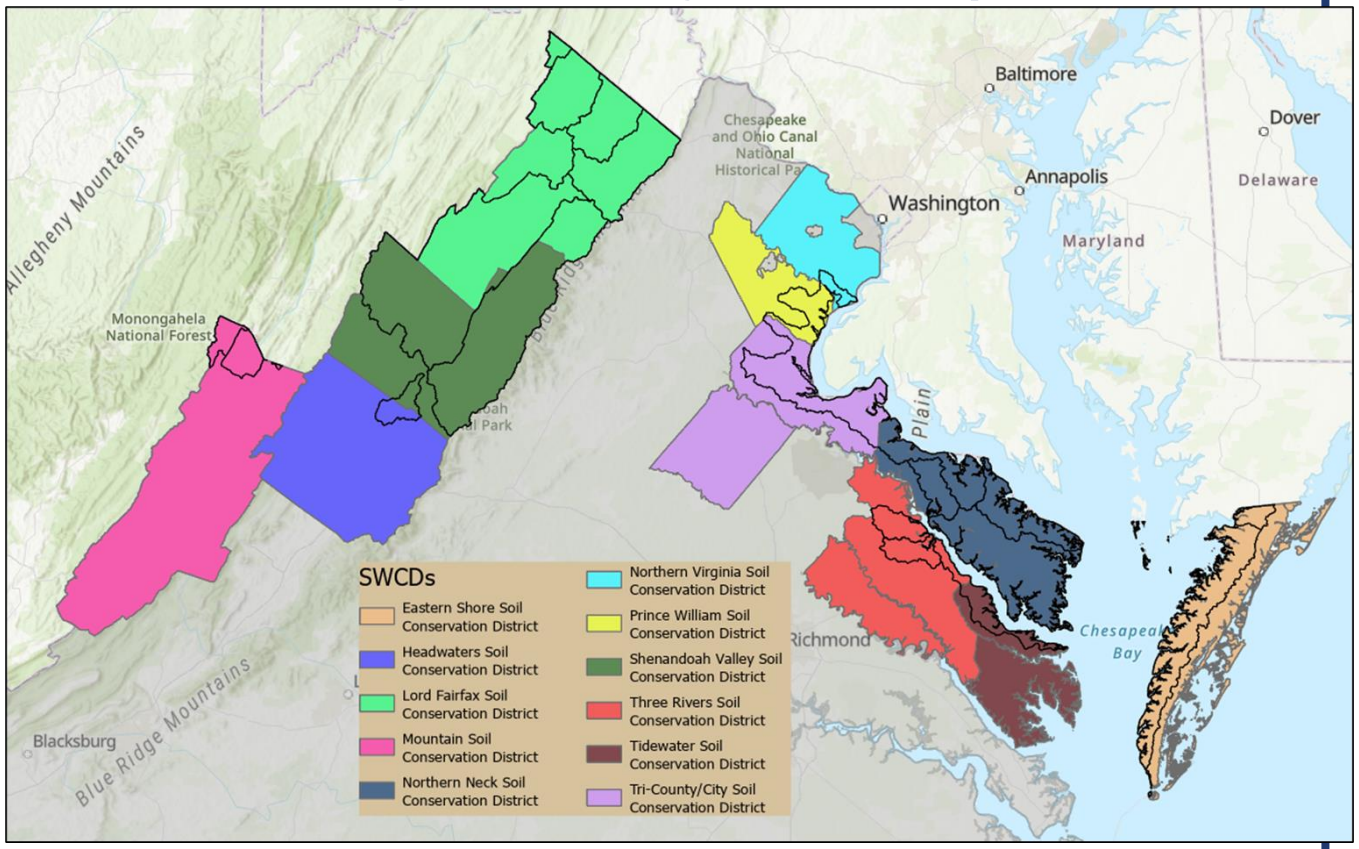
TP Reduction = 755,865 lbs

Almost meets entire TMDL gap for all sectors

Initiatives and Priorities

- **Funds directed toward Most Effective Basins (MEBs)**
  - Agricultural Cost-Share
  - Septic programs
  - Planning District Commission (PDC) BMP implementation and resiliency efforts
- **Urban tree canopy, riparian buffers, wetland restoration**
  - DEQ collaboration DOF/VMRC on forest buffer and wetlands action plans
- **PDCs and Watershed Roundtables implementation efforts focus**
- **Stormwater retrofit program for residential scale projects (VCAP)**
- **Pay for Performance**
- **MEB Expansion**

Virginia Priority – MEB Expansion



Initiatives and Priorities

Virginia Agricultural Cost Share Program

- Officially began on July 1984—Included 68 counties (2/3 of VA) with 6 eligible BMPs (by 1988, entire state)
- Funded and administered by DCR, SWCDs as local program delivery system providing technical assistance to Virginia's farmers—44 VACS Practices, 15 Tax Credit only practices, 11 CREP practices
- Funding levels have gone up and down through time, but the long-term trend has been steeply upwards:
  - 1987 = $1.28M ($3.4M in 2023 dollars)
  - ***Record $256 Million in 2023-2024 Biennial Budget***
  - ***Additional $287 Million in FY24 budget amendments***

Recent Accomplishments

- Increased DCR engineering staffing that is expediting BMP project design and implementation and training to bring new SWCD staff up to speed faster
- Expanded poultry litter transport program to help incentivize improved manure/nutrient balance in high agricultural animal areas.
- Expanded the nutrient management (NM) direct pay initiative which leverages private sector NM planners as a force multiplier to increase the acreage of nutrient management plans.
- Agreement with USDA Natural Resource Conservation Service to begin conducting re-inspections of some federally funded agricultural BMPs within Bay watershed to extend credit reduction duration in the Bay Model

Initiatives and Priorities

Agricultural Stewardship Act (ASA) Program

- ASA Program works with farmers and local Soil and Water Conservation Districts to resolve water pollution complaints reported to VDACS concerning nutrients, sediment, and toxins from agricultural activities.
- In addition to the best management practices implemented on ASA complaint sites that received cost-sharing assistance through the local Soil and Water Conservation Districts, the ASA program has tracked and verified a total of ***104,134 linear feet of stream bank protected through livestock exclusion fencing*** in the Chesapeake Bay Watershed that did not receive financial assistance.

Riparian Forested Buffers

- Along with our continued efforts to get more riparian buffers installed we are also convening RFB stakeholders to develop a state action plan for RFB outreach and implementation and also working with partners to improve reporting on buffer accomplishments by all partners.
- ***$6.6M in USDA Forest Service [IRA funding] for increased tree planting and maintenance***, and heat mitigation projects including asphalt removal (*second funding request to potentially double this amount*)
    - to be used in disadvantaged communities to increase and maintain healthy tree canopy and support flexible riparian buffer installations on public and private property over 4 years

Initiatives and Priorities

Riparian Forest Buffer Implementation

- Strategies to Increase Buffer Implementation:
  - Create Updated Statewide ***Riparian Forest Buffer Action Plan***
  - DOF Watershed Team will; (1) Continue to improve internal and statewide reporting and recording protocols; (2) Offer training to DOF field staff and partners to improve confidence and competence in buffer implementation; (3) Create resources to clarify available cost-share opportunities for landowners; (4) Utilize FEDERAL funding to launch a new statewide flexible-funding buffer program

Calendar Year	Statewide Buffers (Acres)	Chesapeake Bay Only Buffers (Acres)
2019	646	465
2020	656	476
2021	439	282
2022	629	446
2023 (as of Sept 8, 2023)	764	356

Where We Stand

Wetland Restoration and Enhancement Goals – *significantly behind stated targets*

- ***Goal -*** Create or restore 85,000 acres of wetlands by 2025
- DWR is Commonwealth lead, one wetland biologist on staff, added capacity and project funding needed (leveraging BIL and IRA funds)
- Developing an inter-organizational team to increase cross-community collaboration

Riparian and Instream Restoration

- Could be substantially enhanced with additional staff (one biologist now) and project funding.
- Expanded capacity in DWR's Private Lands program can accelerate technical assistance to private landowners.

Recognition that certain types of projects, like dam removals and complex wetlands restoration, take years to permit and implement.

Goals are unrealistic when not tempered with these realities.

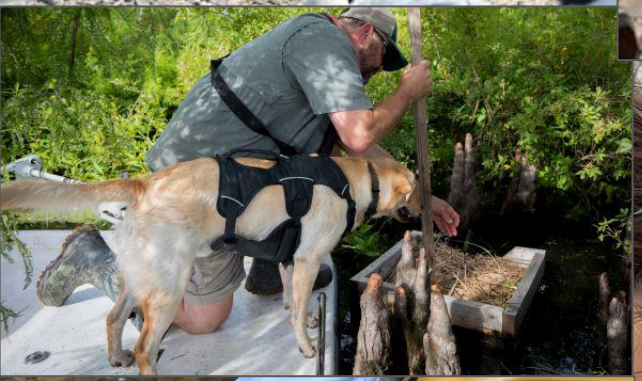
Environmental Literacy & Community Engagement

- Tribal Relations, Live-Streaming Web Cams, Workshops/Events

Initiatives and Priorities

Species Conservation & Management

- ***Blue Catfish***: Tagged 40 fish in the James River; tracked movements, refined population demographics, evaluated responses to commercial low-frequency electrofishing, and provided public outreach opportunities.
- ***HRBT Seabird Colony***: Continued providing temporary nesting habitat for the colony displaced by the HRBT Expansion Project and work with US Army Corps of Engineers on permanent nesting site.
- ***American Black Duck***: Continued participation in flyway-wide productivity study, tracking habitat use on Chesapeake Bay wintering grounds and remote breeding areas.
- ***Invasive Nutria***: Continued surveillance; confirmed presence of nutria at a site on the Chickahominy River; trapped, removed, and eradicated nutria from 2 wetland sites near Busch Gardens.
- ***Wild Brook Trout***: Continued implementation of Wild Trout Management Plan; participated in Bay-wide activities to evaluating needs for passage in wild trout waters.
- ***Bald Eagle***: Completed multi-year study at Langley Air Force Base to reduce bird-air strike hazards.
- ***Freshwater Mussels***: Propagated nearly 500,000 mussels of 9 Bay-watershed species, releasing over 12,000 animals of 7 different species, including 2,500 federal endangered James spinymussel to the James River.

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Initiatives and Priorities

Habitat Conservation & Management

- ***Wetland Restoration and Enhancement***:
  - Worked with Ducks Unlimited to restore & enhance 147 acres of wetlands at Doe Creek WMA for Black Duck and other wetland species, leveraging federal Chesapeake WILD and Virginia Migratory Waterfowl Stamp funding.
  - Enhanced 250 acres of existing saltmarsh habitat at Saxis WMA by controlling Phragmites and initiated testing habitat creation and management strategies on 103 acres at Doe Creek WMA to improve habitat for Eastern Black Rail.
  - Restored Eastern Tiger Salamander breeding site in Westmoreland Co.
- ***Invasive Species Control***:
  - Verified first even known eradication of non-native water chestnut (Trapa bispinosa) by hand harvesting in Pohick Bay
  - Treated 750 acres of DWR lands for emerald ash borer and Phragmites
- ***Aquatic Organism Passage***:
  - Removed Wilson Creek Dam (Upper James watershed); continued work to remove Ashland Mill Dam (South Anna River, re-open 476 upstream functional miles), Rapidan Mill Dam (Rapidan River, re-open 537 upstream functional miles), and Babar Mill Dam (Rock Island Creek, re-open 45 upstream functional miles)
  - Initiated long-term river herring passage assessment at Walkers Dam (Chickahominy River).
- ***Prescribed Fire***: Used fire on ~1700 acres on DWR lands to increase resiliency and improve habitat.
- ***Riparian and Instream Restoration***: Completed work on Christians Creek (South Fork Shenandoah River) and Stony Creek (Shenandoah Co.)

Land Conservation

Acquired 6,900 acres on Virginia's Eastern Shore (Coastal Forest WMA)

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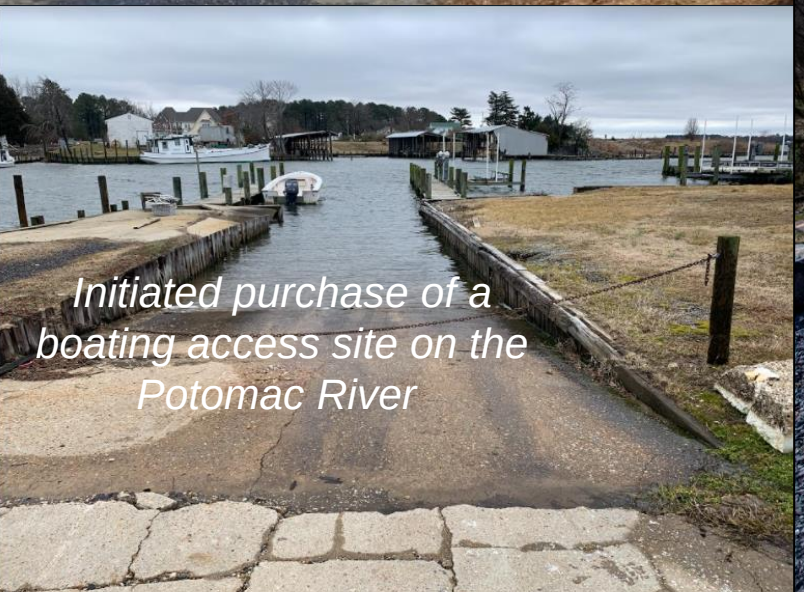
Infrastructure and Public Access

Maintained 105 boating access sites, including 40 exclusive for paddle-craft launch



Initiated purchase of a boating access site on the Potomac River

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Where We Stand

Oyster Restoration Goal – *on track to be achieved by the 2025 deadline*

- Virginias' five tributaries targeted for large scale oyster replenishment

Virginia's oyster restoration program is committed to not only sustaining but also expanding its restoration initiatives to match or exceed the achievements of the previous phase. Success of the oyster restoration effort is being heralded as an example of what can be accomplished through a multifaceted collaborative approach to taking on the challenges of meeting or exceeding ambitious restoration goals that have import economic and ecologic impacts.

Shellfish Management

- Program was established in 1929 and is now the largest program in the Country and world
- Management efforts rely on scientific partnership between VMRC and Virginia Institute of Marine Science (VIMS)
- Unlike finfish, VMRC directly manages, monitors and maintains the oyster fishery, which is the most valuable fishery to the Commonwealth of Virginia
  - Maryland plants 150,000-250,000 MD bushels of material per year through their replenishment program, Virginia Plants 1-1.5 million Virginia bushels (which are ~7% bigger than Maryland's bushel)
- Oyster population at 40 year high – resource is stable or increasing and the fishery is stable or increasing under the current management.

Initiatives and Priorities

Oyster Restoration and Replenishment Projects

- Largest alternative substrate planting (stone) restoration project of the year has now been completed
- Completes the planned restoration work in the York River, which was selected as one of Virginias' five tributaries targeted for large scale oyster restoration
- ***Final tributary targeted for restoration work is the Lynnhaven River – Army Corps is scheduled to complete the final planned construction in this system in 2024.***

Federal Oyster Restoration in the Piankatank River

- The final portion of currently planned oyster restoration construction in the Piankatank River is scheduled to begin on water deployments in the coming weeks.
- VMRC (non-federal sponsor for this project) constructed hundreds of acres of reefs and these projects were able to be used as "in-kind" match for this portion of the federal project.
- Past efforts in this River and other areas are documented in a summary document compiled by out federal partners at the NOAA Chesapeake Bay Office

Oyster Restoration and Replenishment

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