



2017 Virginia Environmental Quality Regulatory Update – Water Resources Planning

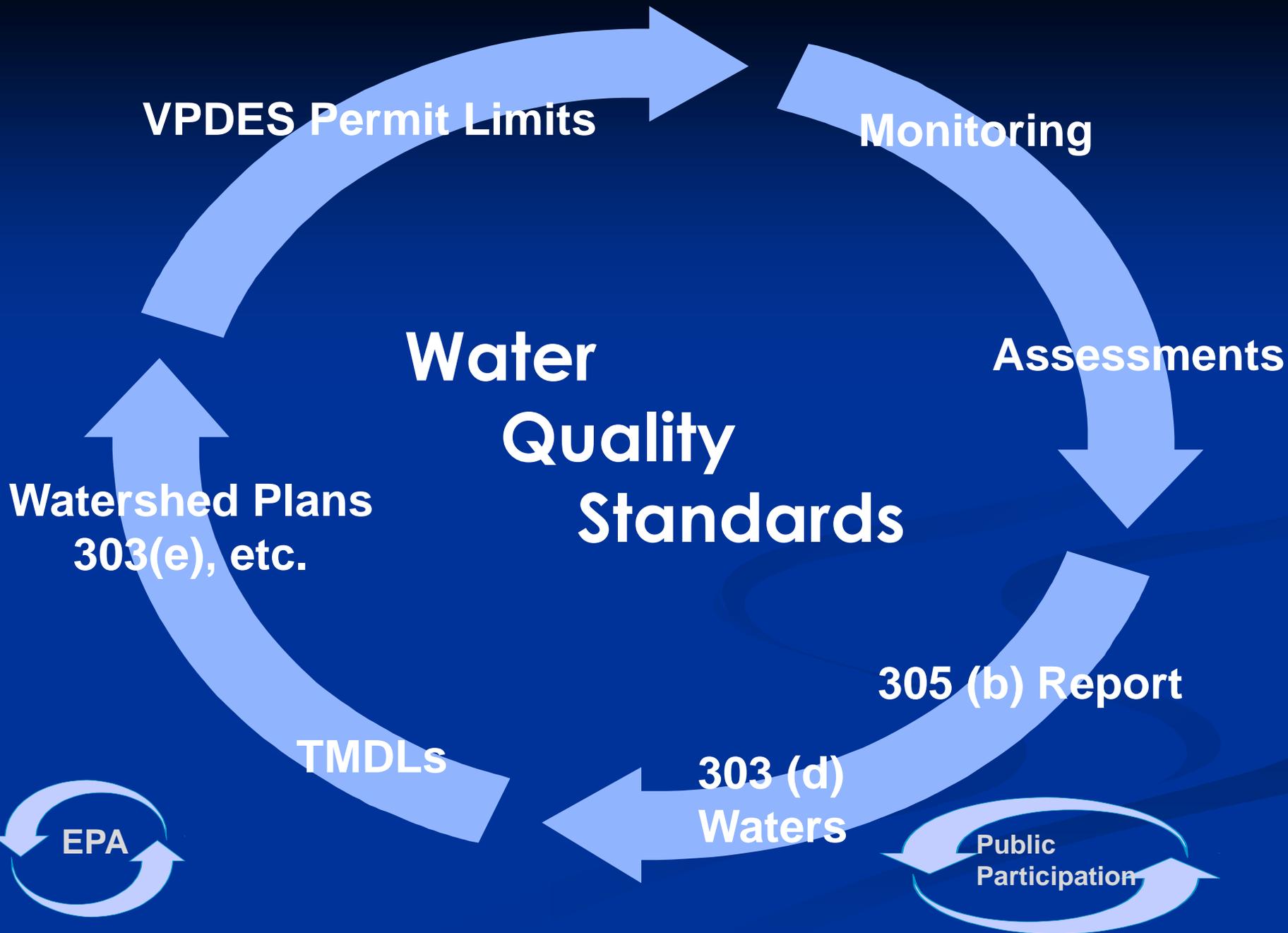
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VRO Water Monitoring and Assessment
Program
December 2017



Water Planning Division Topics

- Water Quality Standards
- Water Quality Assessment
- Total Maximum Daily Load (TMDL) Program
- Chesapeake Bay TMDL
- Chesapeake Bay Preservation Act
- Water Withdrawal Permitting

Water Quality Standards



Water Quality Standards

- Regulation has 3 parts - Criteria (concentrations), Anti-degradation and Designated Uses:
 - Aquatic Life
 - Fish Consumption
 - Shellfish Consumption
 - Swimming/Recreation
 - Public Water Supply
 - Wildlife





Water Quality Standards Regulation

- May be modified in response to petitions
- Current rulemakings:
 - Triennial Review – *recently completed*
 - Triennial Review “Follow-Up”
 - James River Chlorophyll a criteria
 - Exceptional State Waters petition – Laurel Fork



Water Quality Standards Regulation

Triennial Review - the major changes made and approved by EPA in June 2017 include:

- Revisions to Special Standards 'm' (Chickahominy watershed above Walkers Dam); 'ee' and 'ff' (max. temp. for winter-only stocked trout waters)
- Other trout water updates (clarification of segment delineations)
- Reclassifying several waterbodies from Class III (non-tidal waters) to Class VII (swamp waters)
- Delete the Public Water Supply designation for a portion of the lower James River basin



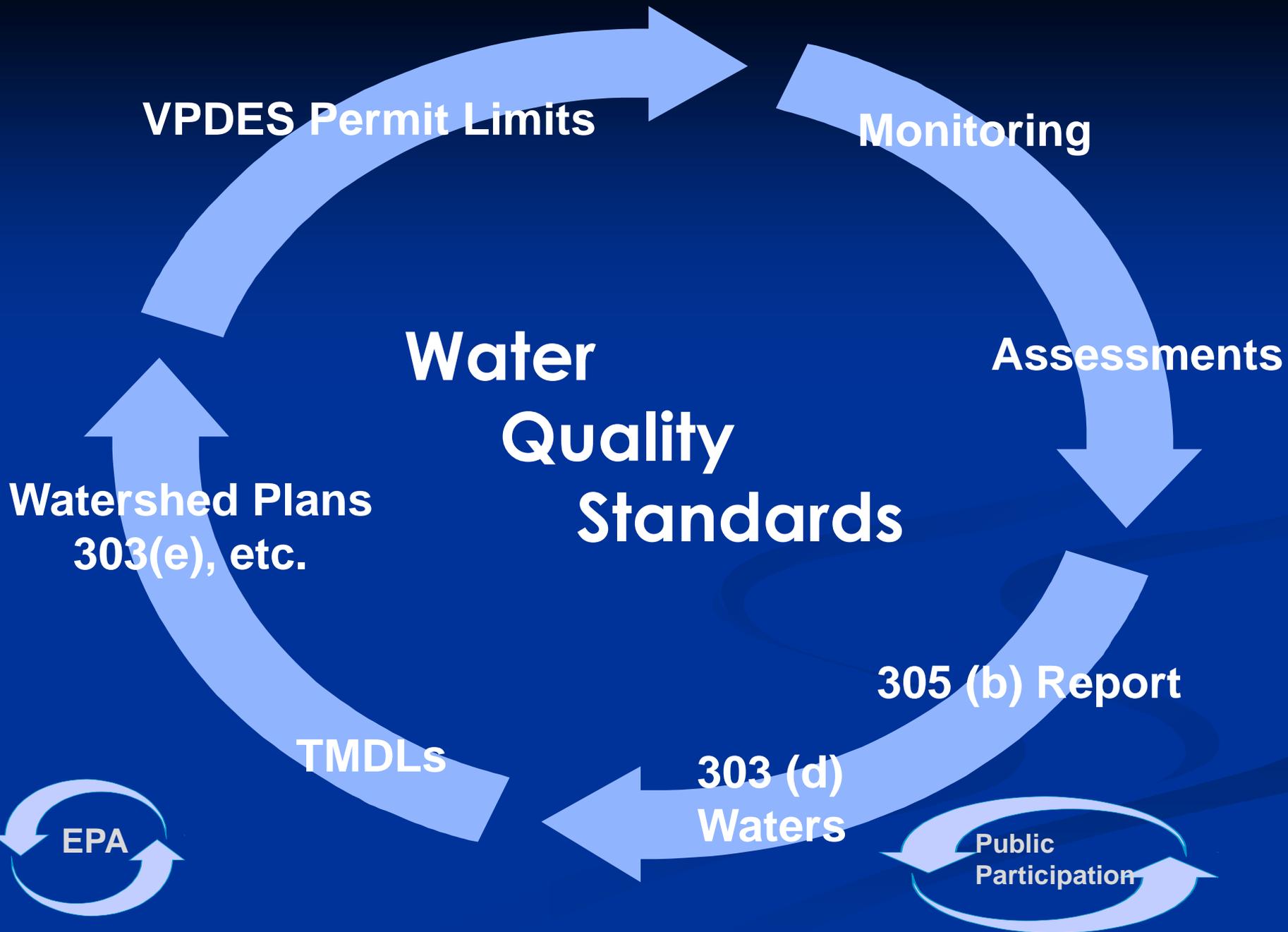
Water Quality Assessment – 2016 IR

Clean Water Act requires states to report water quality conditions every even-numbered year.

The Integrated Report (IR) describes the extensive efforts to monitor, assess, and improve water quality in the waters of the Commonwealth

- Provides descriptions of water quality programs, and summary reports on water quality conditions
- Includes a list of waters that are considered impaired (303(d) list)
- Describes water quality restoration efforts (TMDLs, Implementation, delists)

Water Quality Standards



2016 Assessment Overview

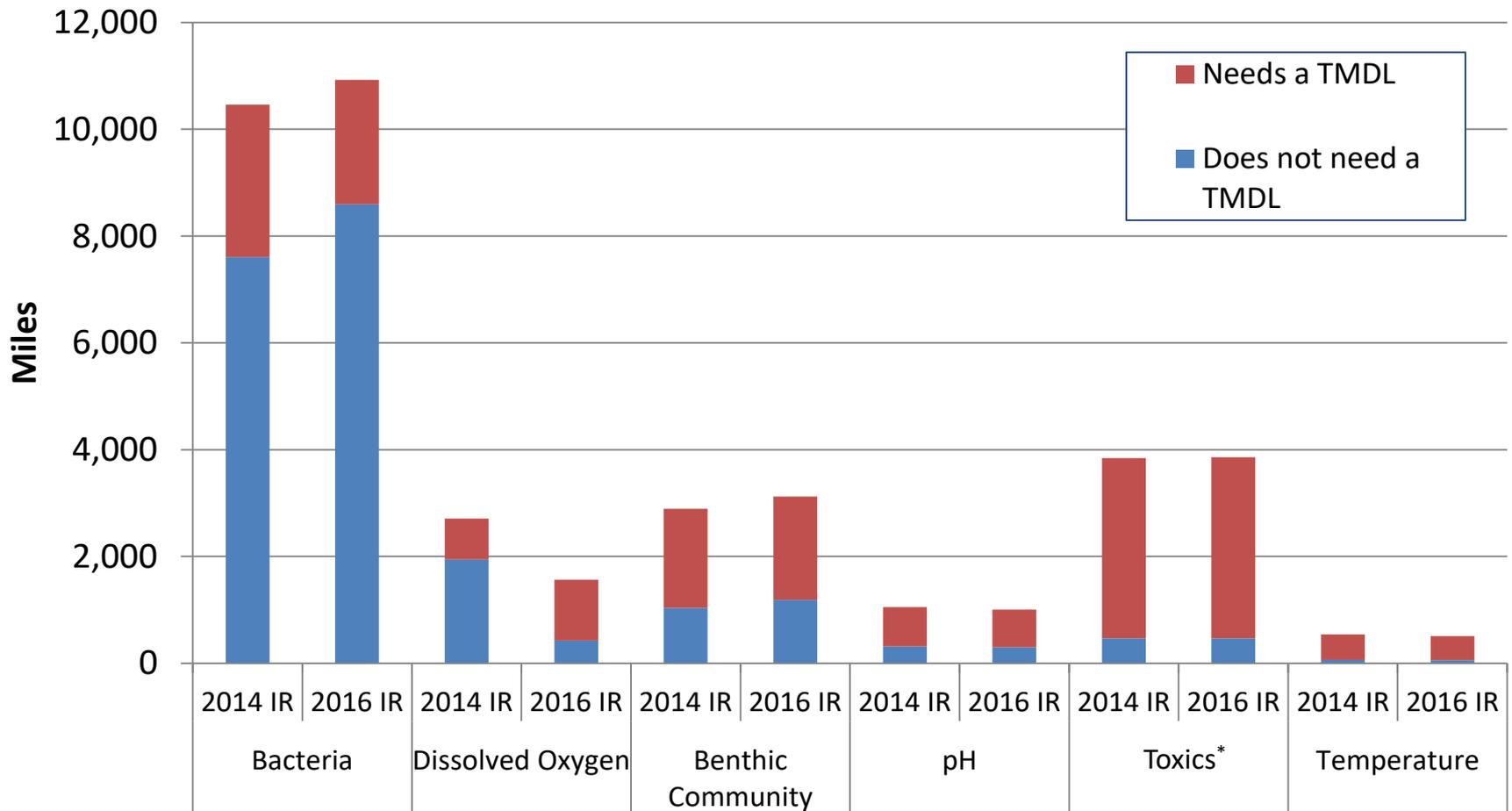
Improvements since the 2014 IR, shown as percent change, are in **green** font

	Rivers (mi)	Lakes (acres)	Estuaries (sq mi)
Impaired (% total)	15,713 (16%)	93,508 (80%)	2,132 (75%)
Percent change from 2014	0.2%	-1.3%	-0.2%
Non-Impaired (% total)	7,177 (7%)	20,318 (17%)	315 (11%)
Percent change from 2014	10.2%	4.2%	1.6%
Not Assessed (% total)	78,086 (77%)	3,373 (3%)	400 (14%)
Percent change from 2014	-0.9%	12.0%*	2.5%
TOTAL	100,976	117,200	2,848

*Includes waterbodies that have been previously assessed but don't have data in the current assessment window. Some of these waters will be reviewed during the 2018 assessment period.



Summary of Impaired Rivers



* The overwhelming majority of toxics impairments in rivers, lakes and estuaries are due to exceedances of thresholds for PCBs and Mercury in fish tissue.



Total Maximum Daily Load (TMDL) Program

Summary of the TMDL process:

- Place Impaired Waters on 303(d) List due to Water Quality Standards violations
- Develop TMDL for each pollutant in Impaired Waters
- After approval by State Water Control Board and EPA, adopt WLAs into Water Quality Management Planning Regulation
- Develop TMDL Implementation Plan
- Implement TMDL Plan
- Remove Waters from 303(d) List when Water Quality Standards achieved

<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/Regulation.aspx>

The Goal



The TMDL Process is the State's formal process to clean up polluted waters

Implementation Plan

The Process



Identifies permit controls or best management practices needed to make necessary pollutant reductions

Monitoring



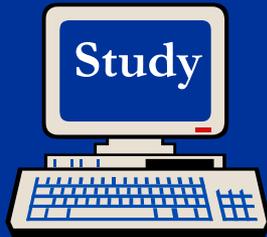
Implementation



Clean

Water quality standards met

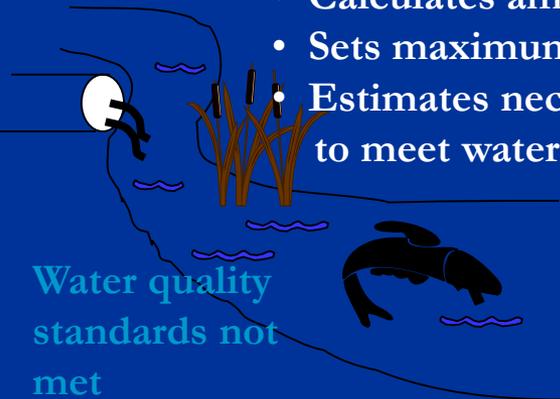
Monitoring



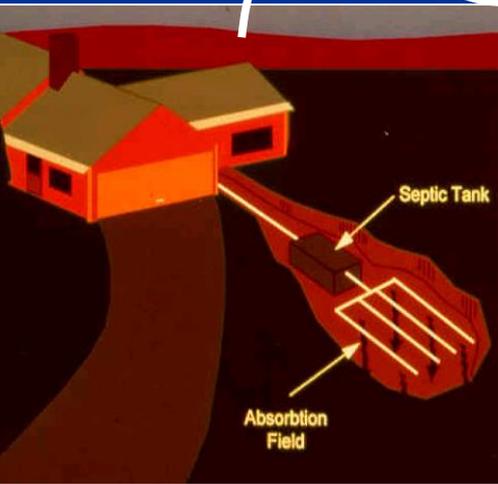
Polluted

- Identifies sources of pollution
- Calculates amounts from each source
- Sets maximum pollutant load
- Estimates necessary pollutant reductions to meet water quality standards

Water quality standards not met



Where does Bacteria come from?



? cfu/yr

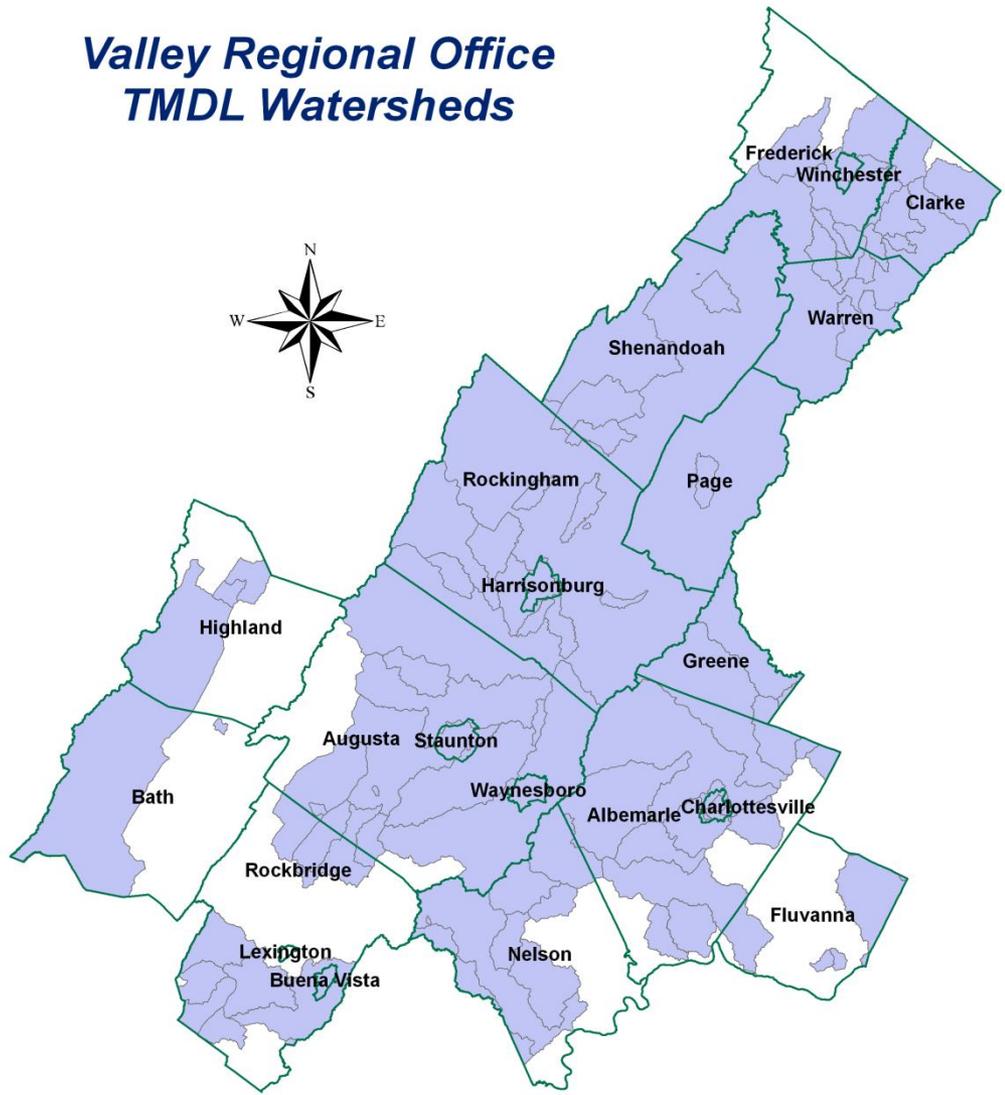
? cfu/yr

? cfu/yr

? cfu/yr

? cfu/yr

Valley Regional Office TMDL Watersheds



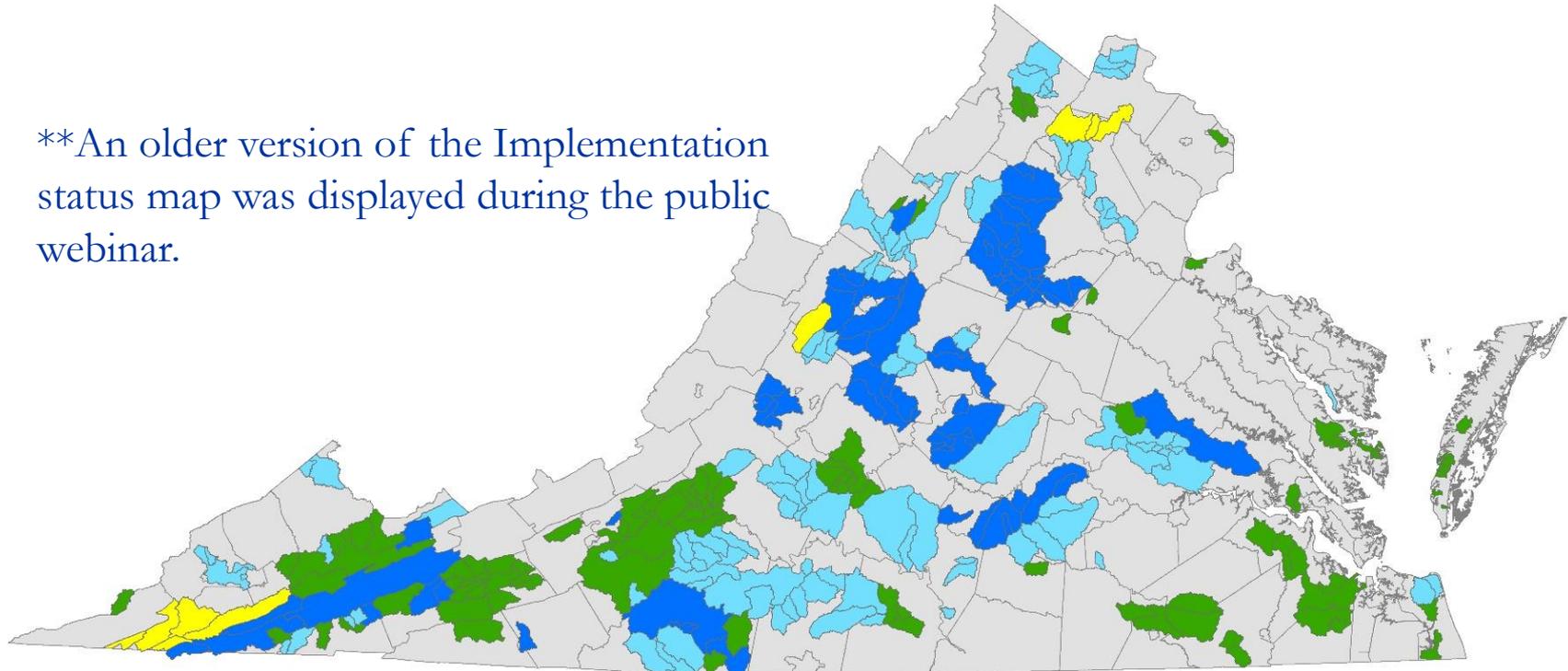
Legend

-  VRO Counties
-  VRO TMDL Watersheds



TMDL Implementation Watersheds

**An older version of the Implementation status map was displayed during the public webinar.



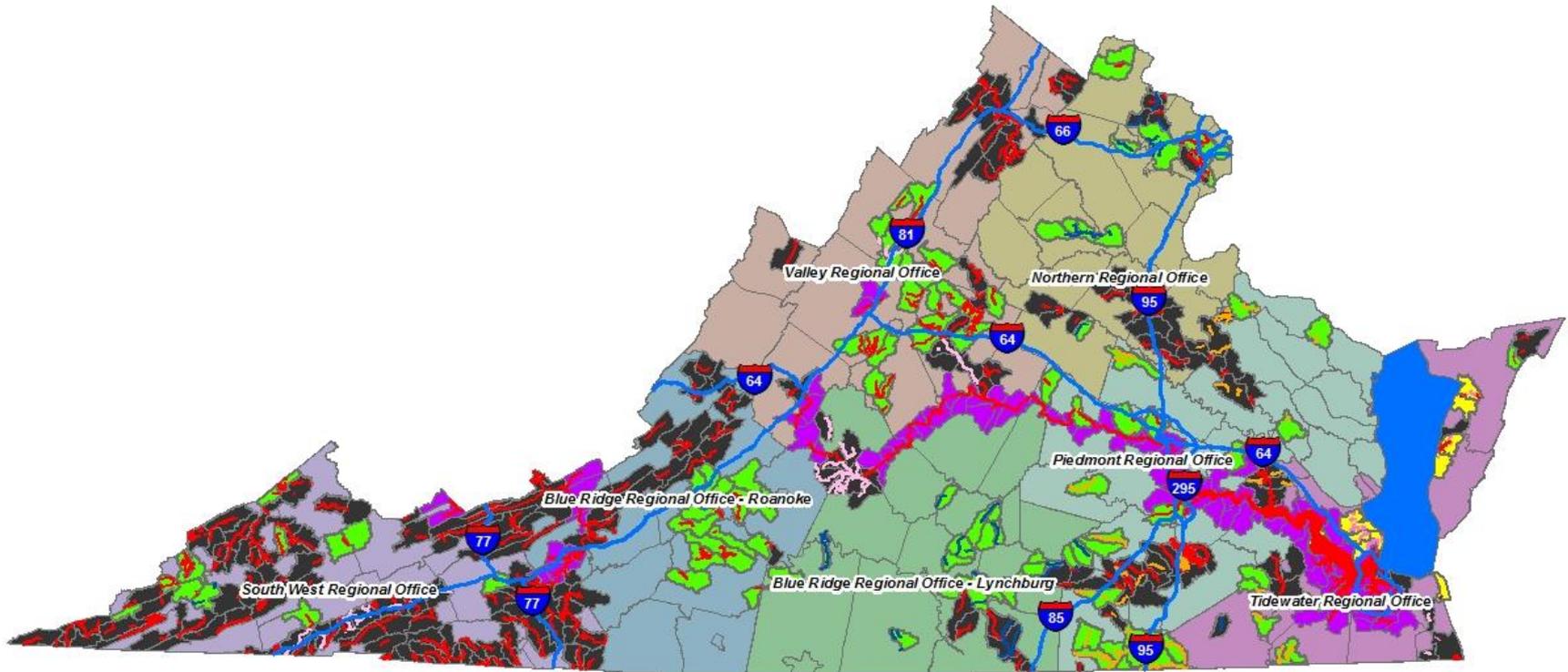
-  Implementation Project Underway
-  Implementation Project Closed - No longer receiving targeted grant funds

-  Implementation Plan Underway
-  Implementation Plan Complete





Map of 2016-2022 Priority Waters and Watersheds*



 VA Interstates

 Shellfishing Use Priority Watersheds - 10

 Recreational Use Priority Watersheds - 239

 Aquatic Life Use Priority Watersheds - 182

 Fish Consumption Use (PCB) Priority Watersheds - 100

Report Type

 Stressor Analysis

 Natural Condition

 TMDL Revision

 TMDL

 TMDL/TMDL-alt



What is the Chesapeake Bay TMDL?

- A pollution “diet” establishing the maximum amount of a pollutant that a water body can accept and meet water quality standards
- Identifies pollution reductions from sources of nitrogen, phosphorus and sediment across the Bay jurisdictions
- In Virginia, it is further subdivided into TMDLs for each of the three pollutants for 39 segmentsheds (sub watersheds)
- Is designed to ensure that all pollution control measures needed to fully restore the Bay are in place by 2025



Chesapeake Bay Program Coordination

DEQ:

- Provides representation on federal-interstate CBP committees and workgroups
- Leads VA's effort in 2017 TMDL Midpoint Assessment and development of Phase III Watershed Implementation Plan
- Administers EPA grants
- Supports OSNR oversight of Virginia's multi-agency CBP
- Consolidates 2-year Bay Agreement milestones
- Collects annual implementation data & reports progress

<http://www.deq.virginia.gov/Programs/Water/ChesapeakeBay.aspx>

Chesapeake Bay Preservation Act

- Enacted by the General Assembly in 1988 as a critical element of VA's non-point source management program
- Chesapeake Bay Preservation Area Designation and Management Regulations originally adopted in 1989
- Designed to improve water quality in the Chesapeake Bay and other waters of the State by requiring effective land management and land use planning
- **Based on concept that land can be used and developed to minimize negative impacts on water quality**





Water Withdrawal Permitting and Compliance Program

- Groundwater Withdrawal Permitting
- Surface Water Withdrawal Permitting

<http://www.deq.virginia.gov/Programs/Water/WaterSupplyWaterQuantity.aspx>



Groundwater Withdrawal Permitting

- Under the Ground Water Management Act of 1992, Virginia manages this resource by regulating withdrawals in certain areas called Groundwater Management Areas (GWMA)
- Currently, there are two GWMA in the state:
 - Eastern Virginia GWMA - all areas east of Interstate 95
 - Eastern Shore GWMA - Accomack & Northampton Cos.
- Any person or entity located within a declared GWMA must obtain a permit to withdraw 300,000 gallons or more of groundwater in any one month

<http://www.deq.virginia.gov/Programs/Water/WaterSupplyWaterQuantity/WaterWithdrawalPermittingandCompliance/CurrentIssuedGroundwaterWithdrawalPermits.aspx>



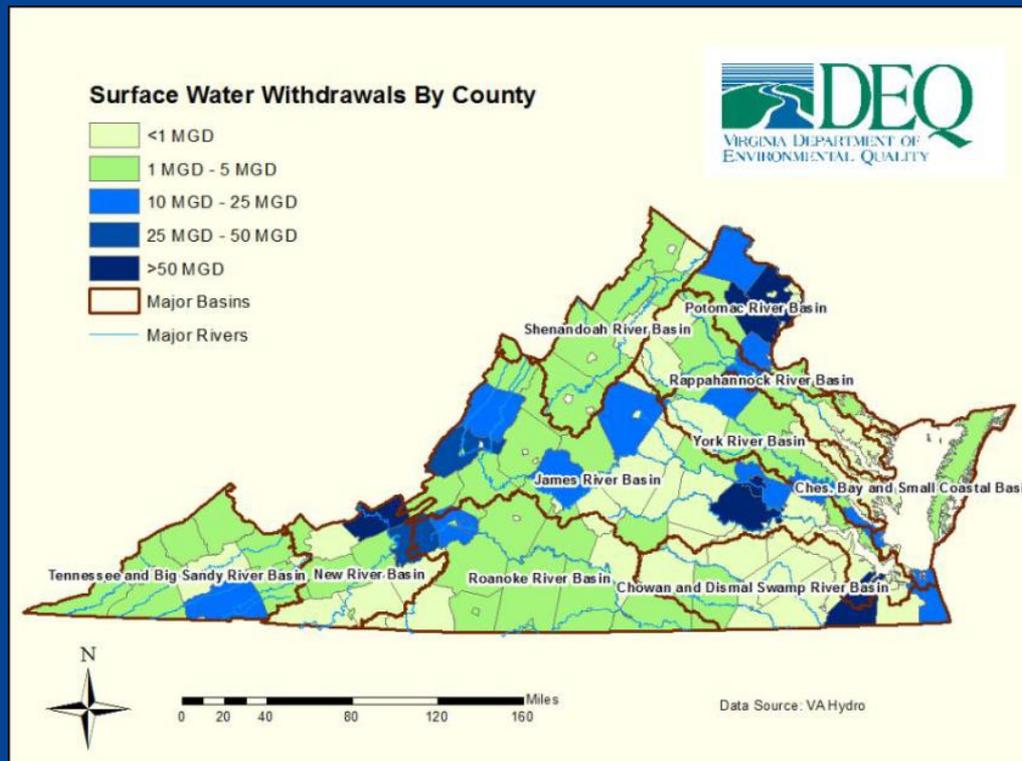
Surface Water Withdrawal Permitting

- Projects involving surface water withdrawals from state waters and related permanent structures are permitted under the Virginia Water Protection (VWP) Permit Program Regulations as directed by Article 2.2 of the State Water Control Law
- DEQ issues VWP Individual permits for such impacts through use of the Joint Permit Application process
- Permitting for projects that impact state waters, but do not include a surface water withdrawal component, is coordinated by the DEQ Office of Wetlands and Stream Protection

<http://www.deq.virginia.gov/Programs/Water/WaterSupplyWaterQuantity/WaterWithdrawalPermittingandCompliance/CurrentIssuedSurfaceWithdrawalPermits.aspx>

Surface Water Management Issues

- Unpermitted withdrawals
- Areas with potential future cumulative impacts



Virginia Department of Environmental Quality



www.deq.virginia.gov

Commonwealth of Virginia

State Water Resources Plan

VIRGINIA WATER RESOURCES PLAN

October 2015

http://www.deq.virginia.gov/Portals/0/DEQ/Water/WaterSupplyPlanning/Final_AWRR_2016.pdf?ver=2016-10-05-000000-000



Questions?

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