

Commonwealth of Virginia Chesapeake Bay TMDL Watershed Implementation Plan



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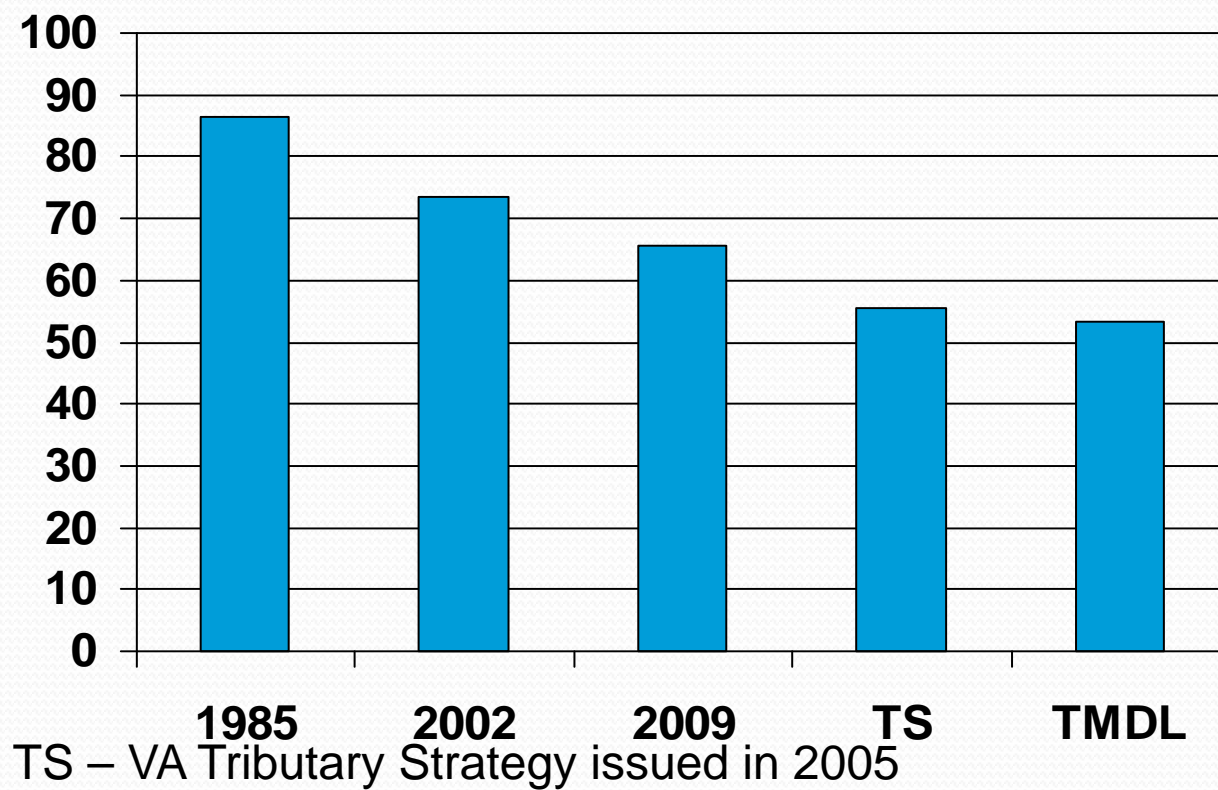


Chesapeake Bay Program History

- 1980 Chesapeake Bay Commission
- 1983 Chesapeake Bay Agreement
- 1987 Chesapeake Bay Agreement
 - 40% nutrient reduction
- 1992 Amended to develop Tributary strategies
- 2000 Chesapeake Bay 2000
 - meet water quality standards
- 2005 New Tributary strategies were released

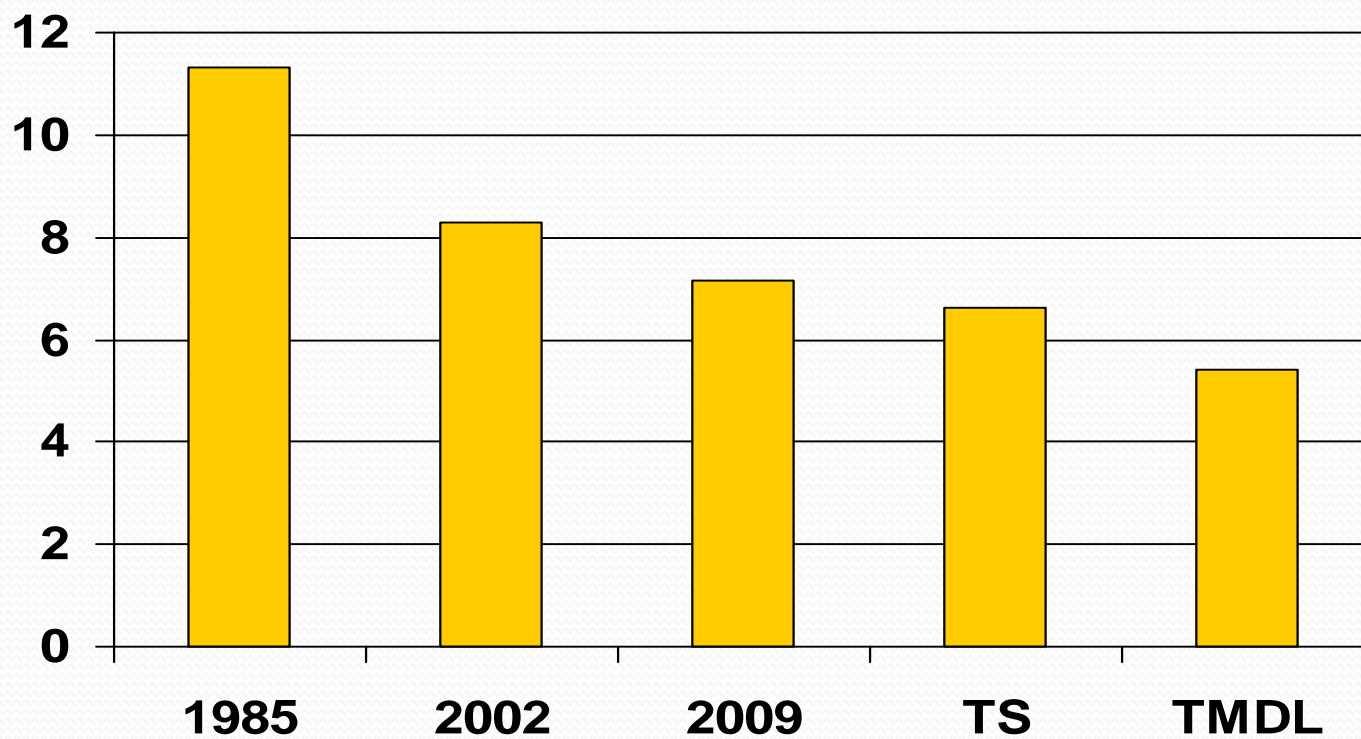
Virginia Nitrogen Loads

[million lbs/yr]



Virginia Phosphorus Loads

[million lbs/yr]



TS – VA Tributary Strategy issued in 2005

TMDL/WIP

- EPA Total Maximum Daily Load
- Jurisdictions Watershed Implementation Plan

WIP  TMDL

Backstops = EPA imposing additional requirements

- Phase I Develop Plan
- Phase II Extend down to local government level 2011
- Phase III Evaluate plans 2017 60% of practices in place



Virginia's Priorities

- Allow flexibility in implementation to ensure cost-effective practices are given priority.
- Want on the ground water quality improvements
- Recognize economic impacts of the TMDL and the need for federal funding as well as reductions from federal facilities.
- Developed to meet EPA deadlines and requirements.
- Reserve the right to modify the plan and adapt as necessary.
- The plan includes regulatory programs that are currently place.



Current Programs

- Municipal Separate Storm Sewer Systems MS₄
- Confined Animal Feeding Operations CAFO
- Agriculture BMP Cost Share Program
- Virginia Pollution Abatement Program VPA
- Chesapeake Bay Preservation Act CBPA
- Virginia Pollutant Discharge Elimination System
VPDES
- Clean Air Interstate Rule CAIR
- Many others



Virginia's Watershed Implementation Plan: Overview

- Submitted 27 Nov 2010
- Accepted By EPA 29 Dec 2010
- Meets 2017 target loads for all basins through management actions, plus use of existing nutrient credits achieve those target loads.
- Proposes a broad expansion of the existing nutrient credit exchange.
- Includes plan for the James River for additional study of the current chlorophyll standard.
- Expected Revisions to the 2025 allocations in 2017.



Expand Nutrient Credit Exchange

Legislative Findings and Purpose – [§62.1-44.19:12]

- Meeting cap allocations cost-effectively and as soon as possible
- Accommodating continued growth and economic development
- Providing foundation for establishing market-based incentives to help achieve non-point source reduction goals

Next Steps:

- Major programmatic undertaking for Commonwealth
- Will require General Assembly action
- Conduct legislature-sanctioned study during 2011
- Proposal for consideration during 2012 session of General Assembly



James River Strategy

- Conduct scientific study to determine the most appropriate chlorophyll criteria for the tidal James River
- Concurrently, begin pollution reduction actions during Phase II of TMDL Implementation to achieve the 60% reduction target by 2017
- Initiate rulemaking under the Virginia Administrative Process Act to amend water quality standards, as needed
- Amend TMDL allocations for the James River Basin, as needed, in response to revised water quality standards
- Implements necessary management actions during Phase III to achieve TMDL allocations prior to 2025



Wastewater Proposals

- Will meet allocations through Watershed General Permit that establishes nutrient caps for all significant discharges and ability to trade
- Propose additional reductions of 2.6 million lbs of N and 200,000 lbs of P in the James basin and 42,500 lbs of P in the York
- Propose new facilities under 1000 gpd must offset entire nutrient load.
- Propose offsets for nutrient loads from small dischargers expanding to less than 40,000 gallons per day



Onsite/Septic Proposals

- New or replacement systems in the Chesapeake Bay watershed utilize nitrogen reducing technology and implementation of new regulations for alternative systems that are currently under development.
- Establishing a tax credit or other financial incentive for the upgrade or replacement of existing conventional systems with systems that have nitrogen removal technologies.
- The plan proposes requiring septic pumpouts in areas outside those governed by the Chesapeake Bay Preservation Act which currently requires pumpouts every 5 years.



Agriculture/Forestry Proposals

- Extensive implementation of resource management plans on agricultural acres which could result in implementation of these practices:
 - nutrient management plans
 - livestock exclusion from streams
 - 35' stream buffers
 - soil conservation
- Vastly improved accounting of voluntary practices.
- Improved implementation of forestry water quality BMP requirements.



Urban/Suburban Stormwater Proposals

- The plan proposes urban nutrient management plans on golf courses, municipally owned lands.
- The plan proposes restrictions on do-it-yourself non-agricultural lawn and turf fertilizers including “P ban”
- The plan proposes a 20% phosphorus reduction standard for areas being redeveloped.
- The plan proposes stormwater *retrofits* on existing developed lands to reduce nitrogen, phosphorus and sediment.
- For new development, post development loads cannot exceed allowed loads of previous land uses



Water Quality Improvement Fund

- \$ 36.4 million in WQIF
- Split 90/10 non point source/point source
- \$ 27.8 million Virginia Natural Resource Commitment Fund
- \$3.0 million from the WQIF will be used for point source pollution reductions.



Future Dates and Expected Actions

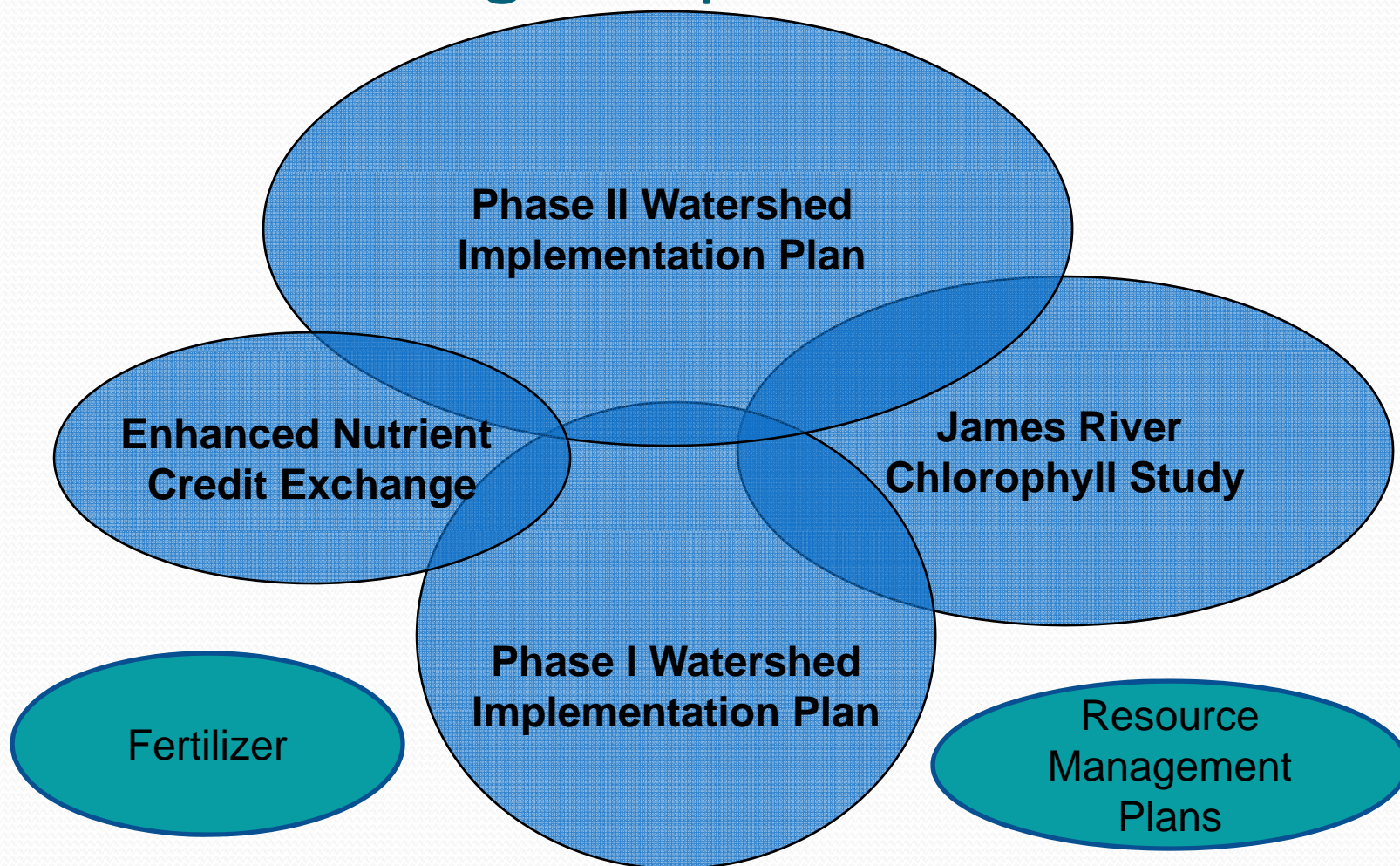
Expected in 2011:

- Revisions to the Chesapeake Bay Model to correct currently known deficiencies.
- States develop Phase II WIPS. Phase II plans are expected to be developed with actions proposed at a smaller, local scale. Submit draft summer 2011.
- Modifications of TMDL allocations by EPA by 15 Dec 2011

Expected in 2017:

- States develop and submit Phase III WIPS
- Adjust allocations according to progress on state plans
- Modifications of the TMDL allocations by Dec 2017
- BMPs in place by 2025

Virginia's Chesapeake Bay TMDL Planning Components





Dividing up Virginia's Chesapeake Bay Watershed

- 5 Major Basins
- 16 Planning District Commissions
- 32 Soil and Water Conservation Districts
- 40 Segment sheds
- 96 Localities (Counties and Cities)
- 216 Locality-Segments

Virginia Bay TMDL Segmentsheds

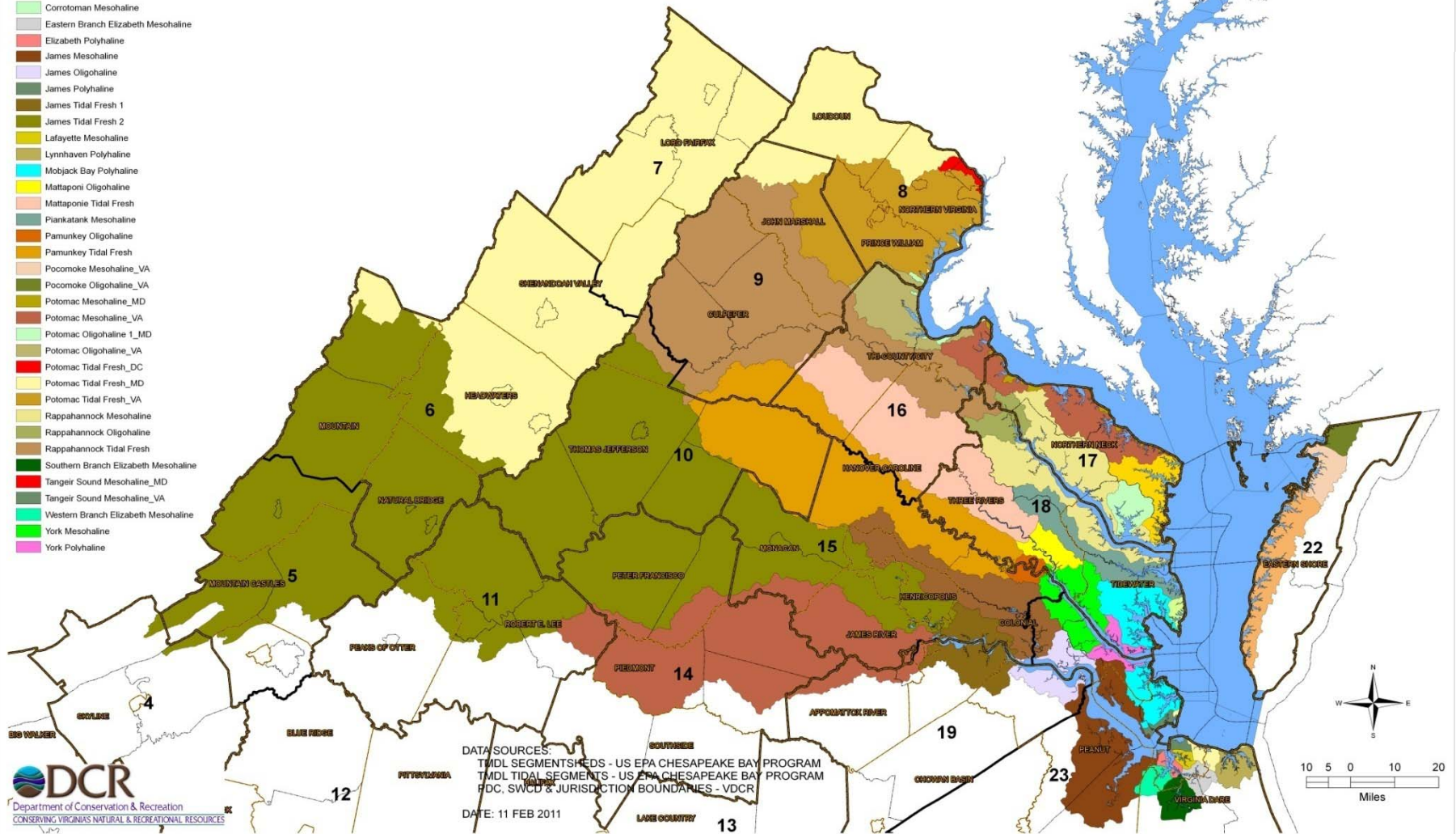
TMDL Segmentsheds

- Apomattox Tidal Fresh
- Chesapeake Bay 5 Mesohaline_VA
- Chesapeake Bay 6 Polyhaline
- Chesapeake Bay 7 Polyhaline
- Chesapeake Bay 8 Polyhaline
- Chickahominy Oligohaline
- Corrotoman Mesohaline
- Eastern Branch Elizabeth Mesohaline
- Elizabeth Polyhaline
- James Mesohaline
- James Oligohaline
- James Polyhaline
- James Tidal Fresh 1
- James Tidal Fresh 2
- Lafayette Mesohaline
- Lynnhaven Polyhaline
- Mobjack Bay Polyhaline
- Mattaponi Oligohaline
- Mattaponi Tidal Fresh
- Piankatank Mesohaline
- Pamunkey Oligohaline
- Pamunkey Tidal Fresh
- Pocomoke Mesohaline_VA
- Pocomoke Oligohaline_VA
- Potomac Mesohaline_MD
- Potomac Mesohaline_VA
- Potomac Oligohaline_1_MD
- Potomac Oligohaline_VA
- Potomac Tidal Fresh_DC
- Potomac Tidal Fresh_MD
- Potomac Tidal Fresh_VA
- Rappahannock Mesohaline
- Rappahannock Oligohaline
- Rappahannock Tidal Fresh
- Southern Branch Elizabeth Mesohaline
- Tangier Sound Mesohaline_MD
- Tangier Sound Mesohaline_VA
- Western Branch Elizabeth Mesohaline
- York Mesohaline
- York Polyhaline

- Jurisdiction Boundaries
- Soil & Water Conservation Districts
- PDC Boundaries
- TMDL Tidal Segments

Planning District Commissions

- 5 - Roanoke Valley - Alleghany Regional
- 6 - Central Shenandoah
- 7 - Northern Shenandoah Valley
- 8 - Northern Virginia
- 9 - Rappahannock - Rapidan
- 10 - Thomas Jefferson
- 11 - Region 2000
- 14 - Commonwealth
- 15 - Richmond Regional
- 16 - George Washington
- 17 - Northern Neck
- 18 - Middle Peninsula
- 19 - Crater
- 22 - Accomack - Northampton
- 23 - Hampton Roads



DATA SOURCES:
 TMDL SEGMENTSHEDS - US EPA CHESAPEAKE BAY PROGRAM
 TMDL TIDAL SEGMENTS - US EPA CHESAPEAKE BAY PROGRAM
 PDC, SWCD & JURISDICTION BOUNDARIES - VDCR

DATE: 11 FEB 2011



Phase II Development

- Further divide final target loads for “39” segment sheds *“using a finer geographic scale such as counties, conservation districts, sub watersheds or where appropriate individual sources.”*
- Work with local stakeholders including elected officials, staff, conservation districts, watershed associations and citizens to identify specific controls and practices to be implemented by 2017.
- Include specific controls and practices in the first 2-year milestones submitted after the development of the Phase II WIP.



Virginia's Phase II Approach

Develop local Profiles:

- Baseline Data
- Resource Assessment
- Source Identification
- Existing Program Evaluation
- Conservation Strategies

Elements of local Profiles compiled to form
Virginia's Phase II WIP



TMDL Phase II Key Points

- TMDL is a 15 year process
- Some proposals will take legislative actions
- Phase II WIP Development
 - ✓ Inform Delegation
 - ❖ Outreach to PDCs
 - Refine allocations - goals
 - Collect information from local governments
 - Work with stakeholders to develop plan
 - Develop 2 year milestones