Chesapeake Bay TMDL
Phase III WIP Process Overview

July 13, 2018

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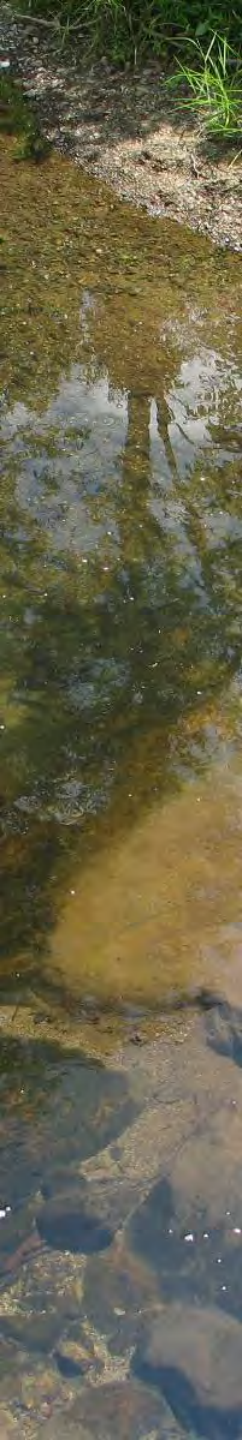
Rappahannock-Rapidan Regional Commission

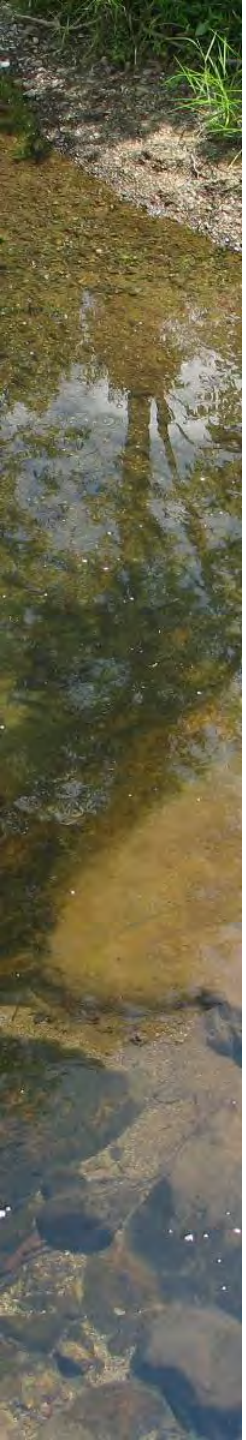
Thornton River, Rappahannock County



What is the Bay TMDL?

The Chesapeake Bay Total Maximum Daily Load (TMDL) is designed to ensure that all pollution control measures needed to fully restore the Bay and its tidal rivers are in place by 2025.

- Focuses on reducing nitrogen, phosphorus and sediment.
- Required under the U.S. Clean Water Act
- Prompted by insufficient progress of restoration efforts and continued poor water quality in the Chesapeake Bay and its tidal tributaries.

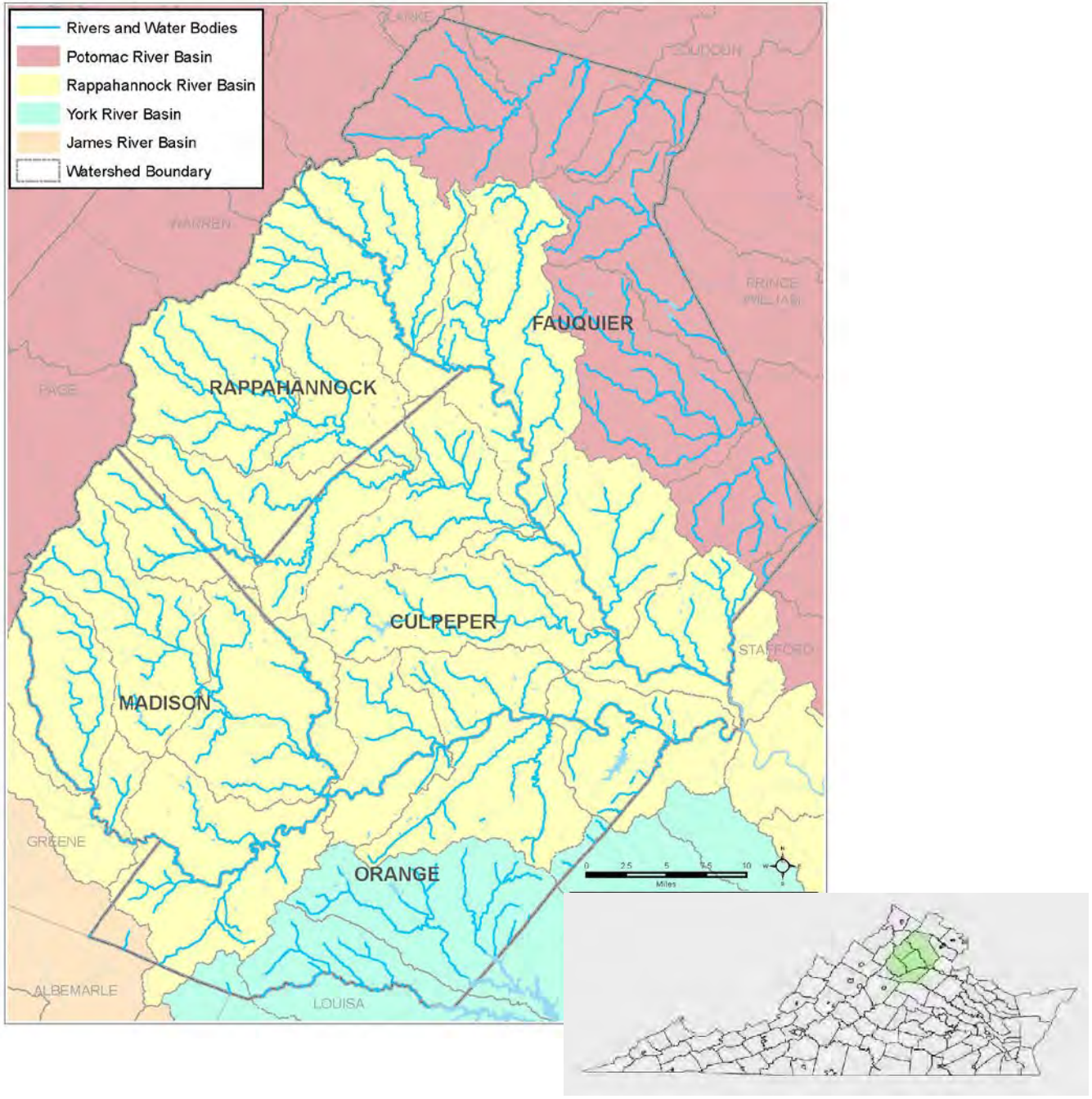


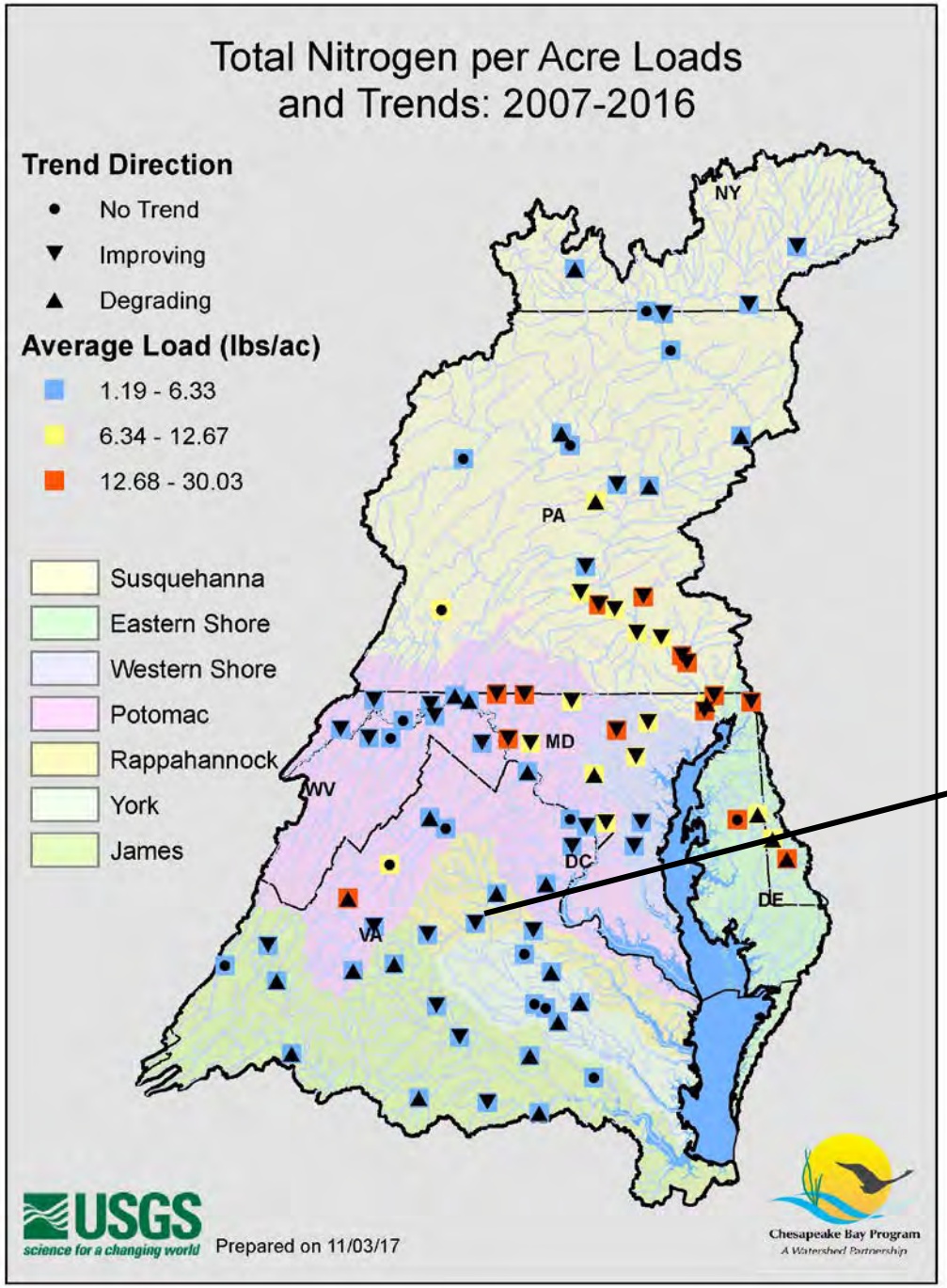
What is a WIP?

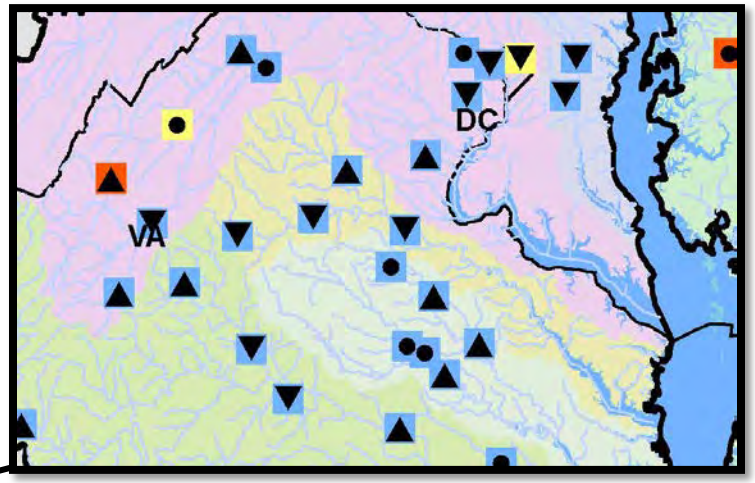
As part of the Bay TMDL, each of the six Chesapeake Bay states and D.C. are required to develop a Watershed Implementation Plan (WIP).

- The WIP details how and when the state will meet the nutrient reduction targets given by EPA.
- Phase I WIP submitted to EPA in November 2010
- Phase II WIP - March 2012
- Phase III WIP - Summer 2019

River Basins in the Rappahannock-Rapidan Region







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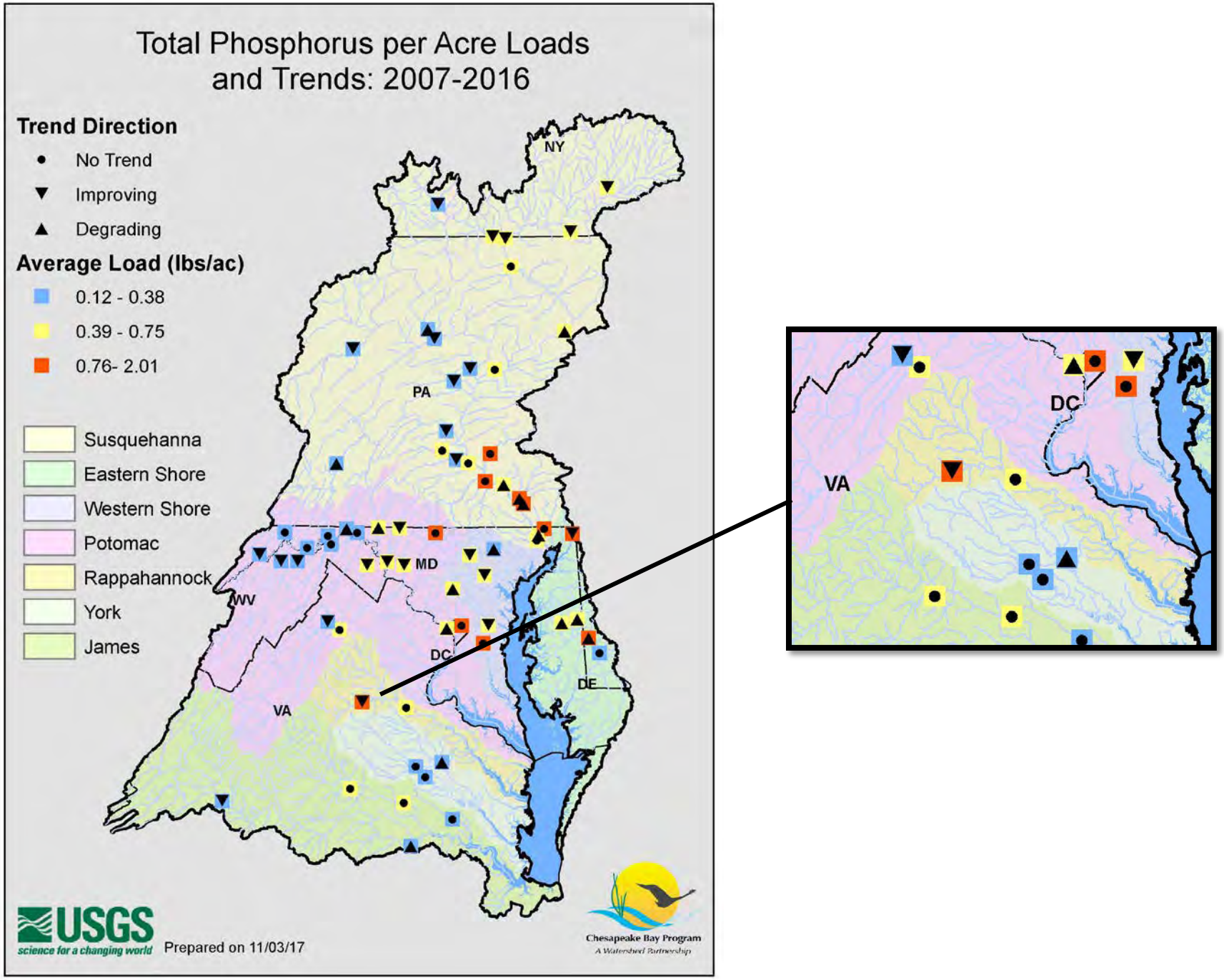
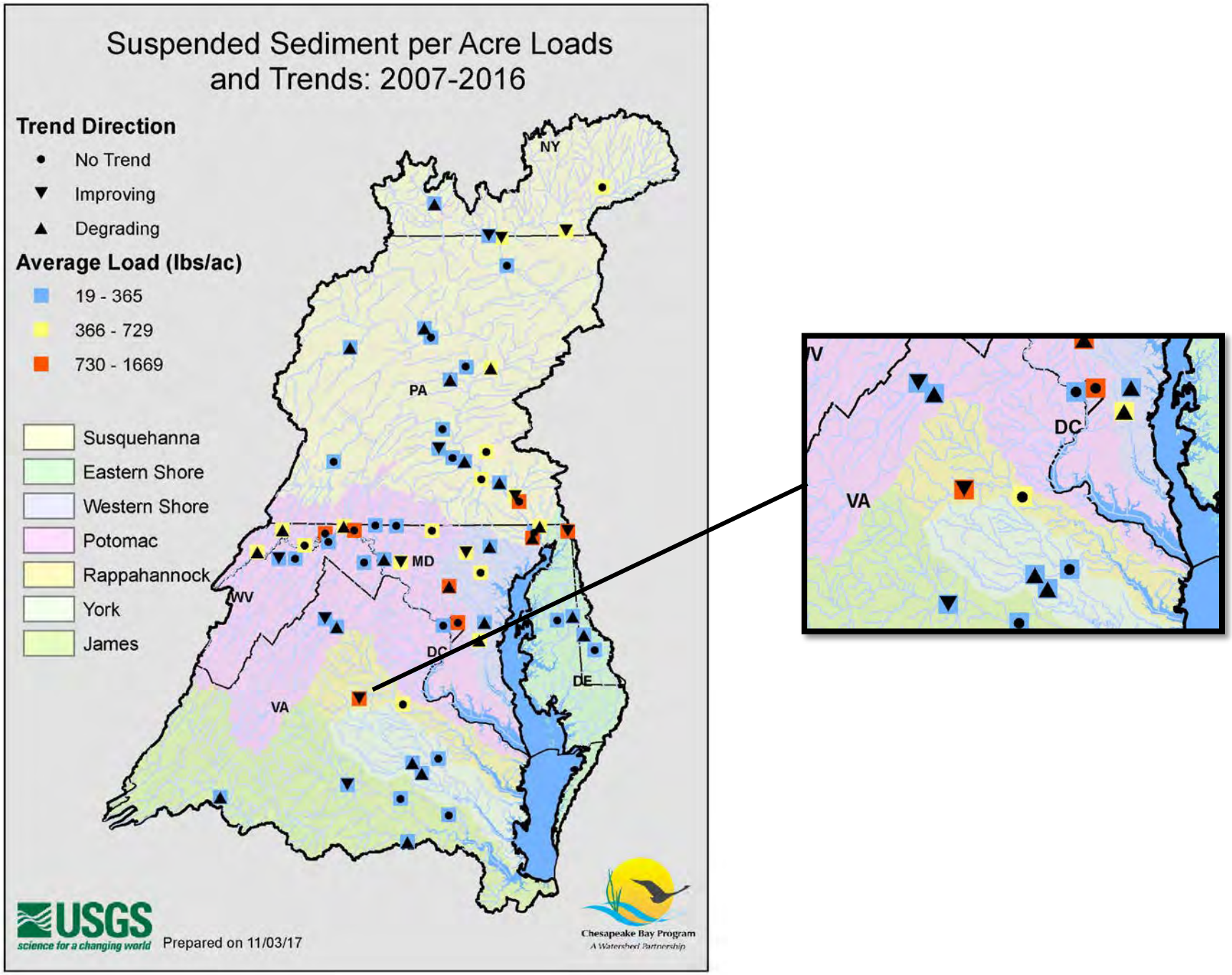
https://cbrim.er.usgs.gov/maps/


Total Phosphorus per Acre Loads and Trends: 2007-2016
Trend Direction
No Trend
Improving
Degrading
Average Load (lbs/ac)
0.12 - 0.38
0.39 - 0.75
0.76- 2.01
Susquehanna
Eastern Shore
Western Shore
Potomac
Rappahannock
York
James
NY
PA
MD
WV
DC
VA
DE
USGS
science for a changing world
Prepared on 11/03/17
Chesapeake Bay Program
A Watershed Partnership


Suspended Sediment per Acre Loads and Trends: 2007-2016
Trend Direction
No Trend
Improving
Degrading
Average Load (lbs/ac)
19 - 365
366 - 729
730 - 1669
Susquehanna
Eastern Shore
Western Shore
Potomac
Rappahannock
York
James
NY
PA
MD
WV
DC
DE
VA
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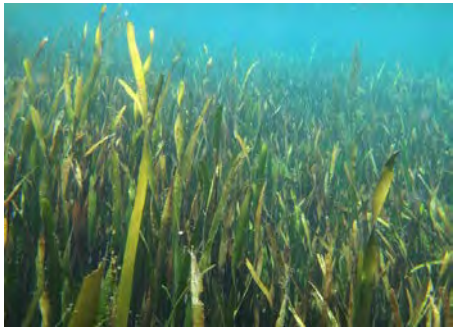
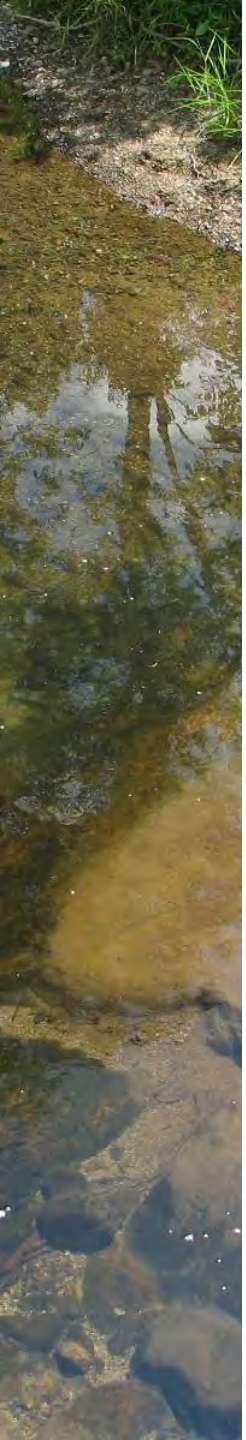
Other Bay Progress Indicators



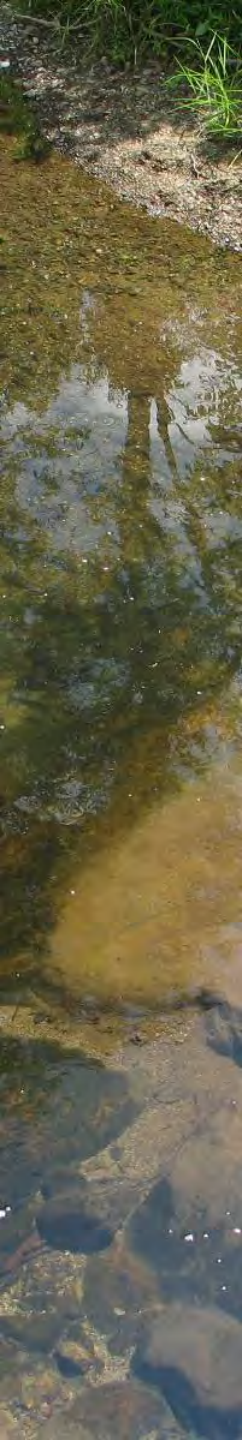
In 2014-2015, Submerged Aquatic Vegetation (SAV) increased by 21%, to the highest levels in the last three decades. Abundance of underwater grasses is a good indicator of water quality because they require clear water and sunlight.

Blue crab, shad, rockfish and oyster fisheries have all increased, especially blue crabs, whose number of adults tripled since 2014.



Bay Model Improvements

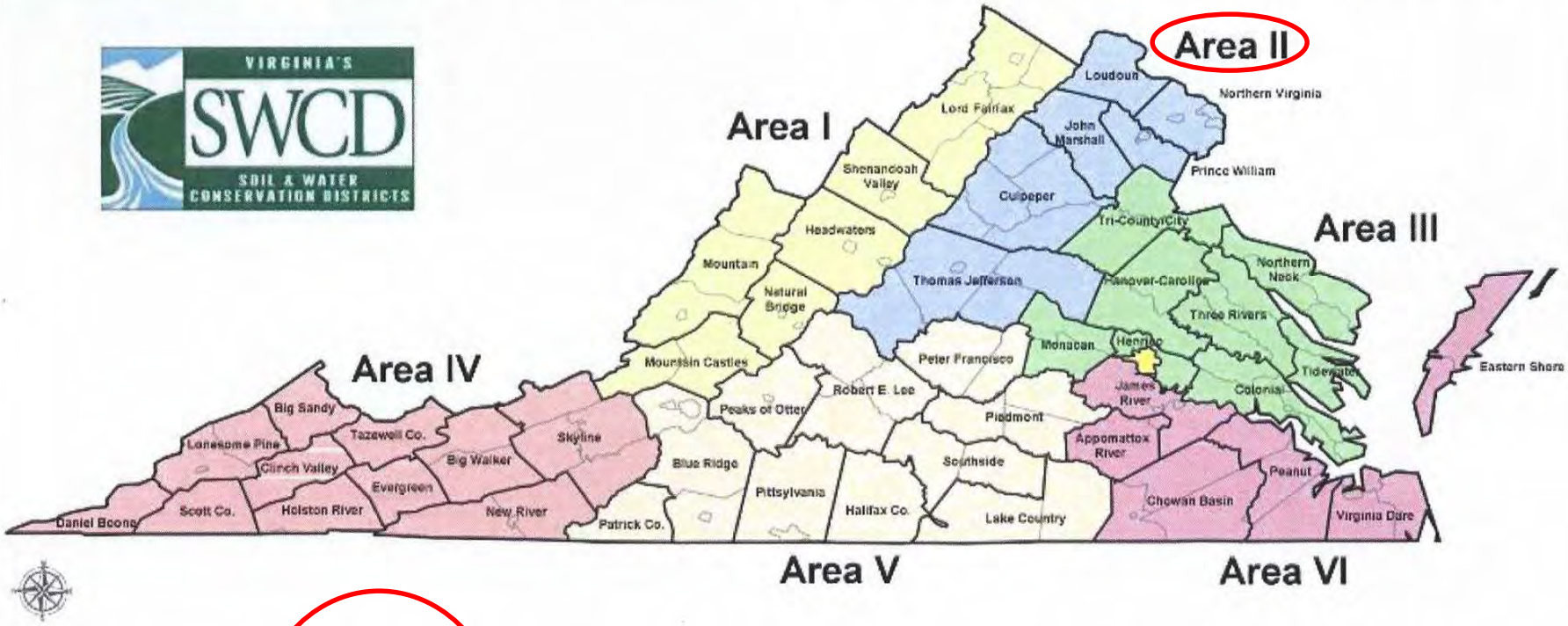
- Better Land Cover Data (1m resolution)
- Inclusion of Locality Data
- Improved MS4 Boundary Data
- Hundreds more BMPs
  - Including ag and forest lands conservation



Statewide WIP III Process Overview

- Regionalized response:
  - SWCDs will coordinate response to address agriculture and most forest nutrient reductions
  - PDCs will coordinate urban, septic and remaining forest nutrient reductions
- All data is aggregated at the SWCD Area or PDC level
- No local data or strategies
- SWCDs and PDCs submit information to DEQ
- DEQ then submits Virginia's WIP to EPA

Virginia Soil and Water Conservation Districts



Area I Districts
Headwaters
Lord Fairfax
Mountain
Mountain Castles
Natural Bridge
Shenandoah Valley

Area II Districts
Culpeper
John Marshall
Loudoun
Northern Virginia
Prince William
Thomas Jefferson

Area III Districts
Colonial
Hanover-Caroline
Henricopolis
Monacan
Northern Neck
Three Rivers
Tidewater
Tri-County/City

Area IV Districts
Big Sandy
Big Walker
Clinch Valley
Daniel Boone
Evergreen
Holston River
Lonesome Pine
New River
Scott County
Skyline
Tazewell

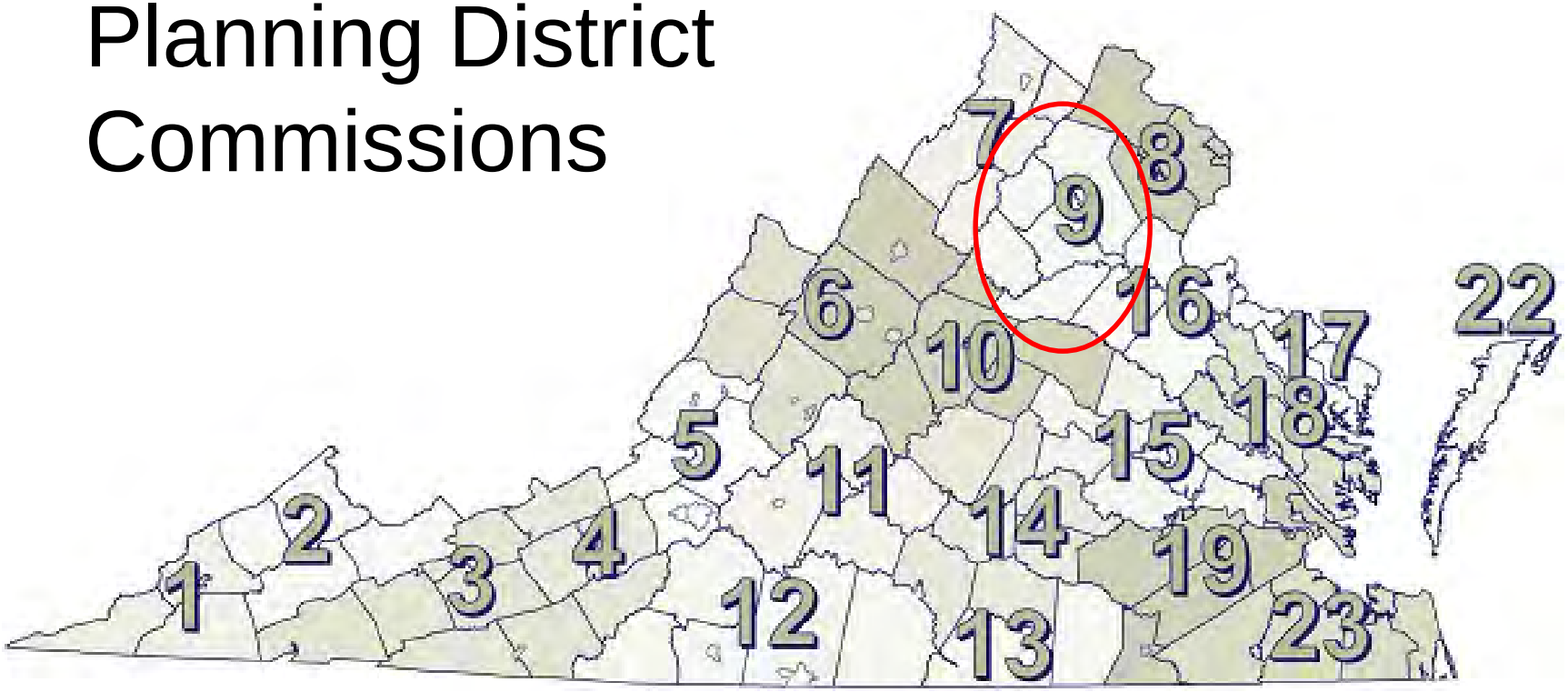
Area V Districts
Blue Ridge
Halifax
Lake Country
Patrick
Peaks of Otter
Peter Francisco
Piedmont
Pittsylvania
Robert E. Lee
Southside

Area VI Districts
Appomattox River
Chowan Basin
Eastern Shore
James River
Peanut
Virginia Dare

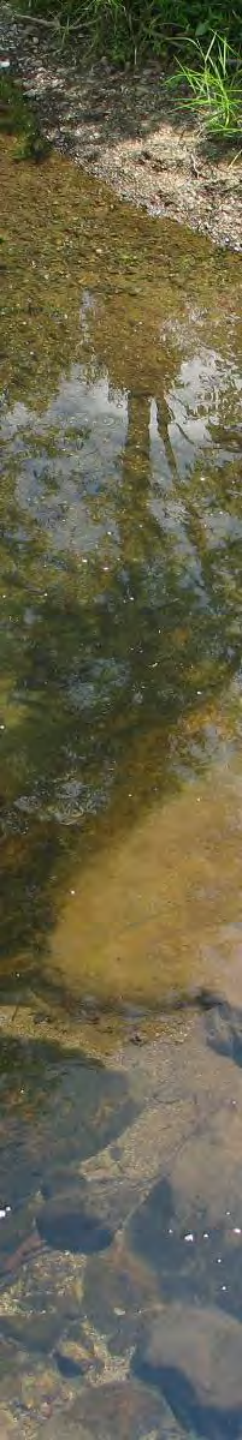
Source: Clinch Valley GIS, HSIP, ESRI
Z://Personal Folders/Trenton Miller/Districts_Map/Districts_Map_8_17_15

Map Author: Trenton Miller, Clinch Valley SWCD

Planning District Commissions

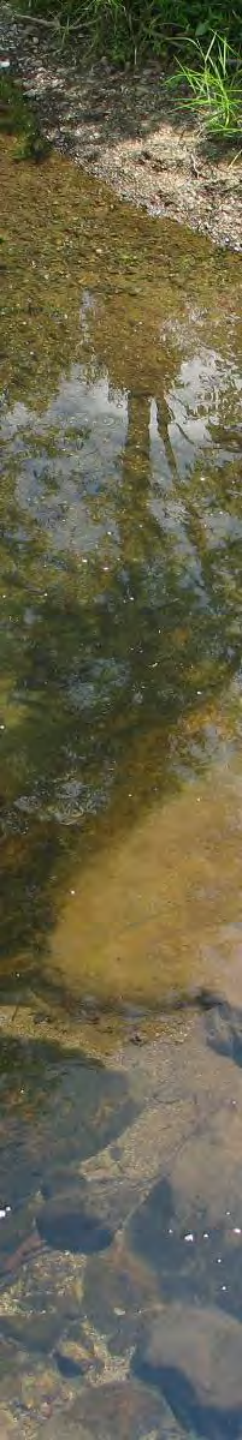


1. Lenowisco PDC
2. Cumberland Plateau PDC
3. Mount Rogers PDC
4. New River Valley RC
5. Roanoke Valley-Alleghany RC
6. Central Shenandoah PDC
7. N. Shenandoah Valley RC
8. Northern Virginia RC
9. Rappahannock-Rapidan RC
10. Thomas Jefferson PDC
11. Region 2000 LGC
12. West Piedmont PDC
13. Southside PDC
14. Commonwealth RC
15. Richmond Regional PDC
16. George Washington RC
17. Northern Neck PDC
18. Middle Peninsula PDC
19. Crater PDC
22. Accomack-Northampton PDC
23. Hampton Roads PDC



PDC Planning Tasks

1. Revise region's urban BMP input deck provided by DEQ
2. Review and update (as necessary) combined ag and urban BMP input deck
3. Develop regional implementation strategies
4. Outline resources needed for implementation
   - Funding, authority, education and technical assistance needs
5. List local co-benefits achieved through BMP and strategies
   - Such as improving local water quality, advancing economic development opportunities, enhancing outdoor recreation, climate resiliency, flood control



Why Participate?

- You care about the bay and its tributaries
- The state will submit BMP data and strategies with or without an individual locality's input
- Without local input, future policies, regulations and funding decisions guided by the WIP may not reflect local conditions and interests
- Participation ≠ local implementation requirements
- Implementing water quality BMPs can have additional local benefits

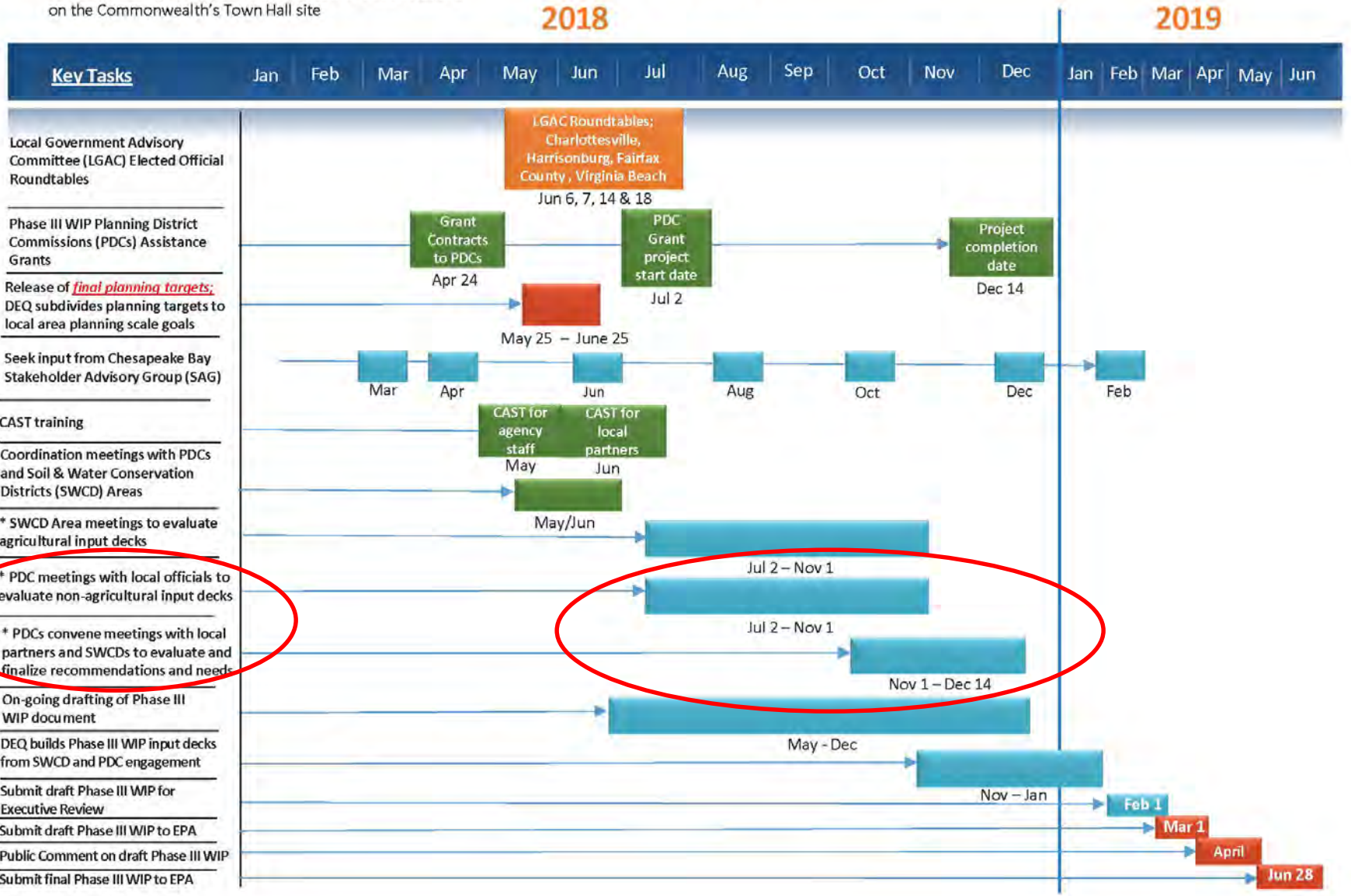
Regional Process Overview

1. Minimum of 3 urban stakeholder meetings (RRRC)
   - Agriculture stakeholder process to occur concurrently (SWCDs)
2. Minimum of 1 ag-urban joint stakeholder meeting (RRRC)
3. Submit regional information to DEQ (RRRC)

- *Technical assistance to individual localities upon request*

Virginia Phase III WIP Development Timeline – revised 4/23/18

* These meetings are open to the public and will be noticed on the Commonwealth's Town Hall site



Initial Stakeholder Meeting Goals

- List any additional stakeholder groups or individuals to invite to participate.
- Conduct initial review of urban BMP input deck
- Fine tune the regional WIP process including roles, and timeline.
- Determine what assistance and other resources the region needs from RRRC, DEQ or other organizations for the WIP planning process.
- Begin to compile a list of regional comments

Invited Stakeholder Groups

- Local governments
- Soil and Water Conservation Districts
- Natural Resource Conservation Service
- Rappahannock River Basin Commission
- Friends of the Rappahannock
- Piedmont Environmental Council
- Blue Ridge Foothills Conservancy
- RappFLOW
- Rappahannock League for Environmental Protection
- Chesapeake Bay Foundation
- VA Dept of Environmental Quality
- VA Department of Health
- VA Department of Forestry
- VA Dept. of Transportation
- Ecosystem Services
- Environmental Systems Services
- Bowman Consulting
- Welford Engineering
- Hinchey Baines Engineering
- ATCS
- Welford Engineering
- Ryan Homes
- Van Metre Homes