

Preliminary data from non-traditional monitoring census

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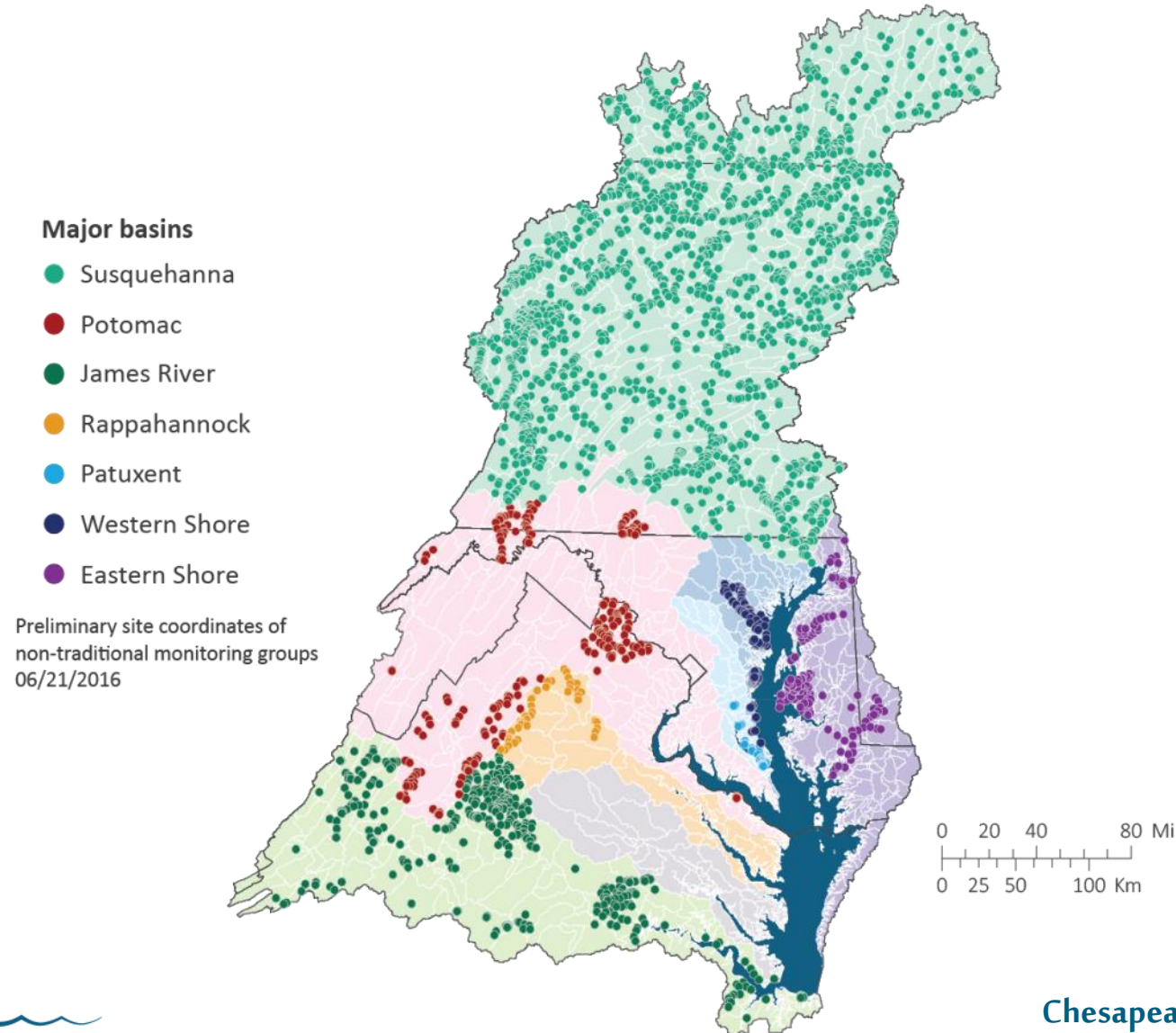
June 22, 2016

Integrated Monitoring
Networks Workgroup

CMC
Chesapeake Monitoring
Cooperative



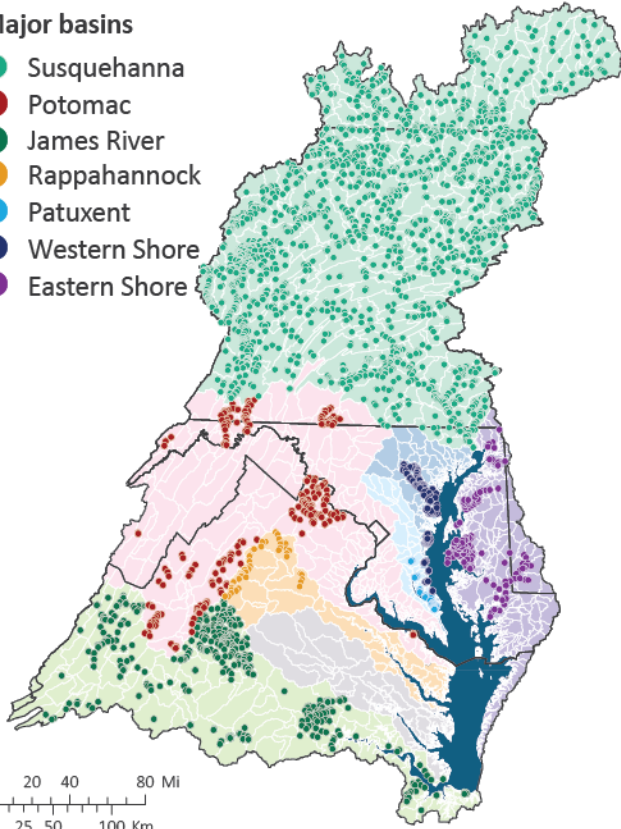
Preliminary site coordinates of non-traditional monitoring groups



Preliminary site coordinates of Susquehanna monitoring groups

Major basins

- Susquehanna
- Potomac
- James River
- Rappahannock
- Patuxent
- Western Shore
- Eastern Shore



Preliminary site coordinates of
non-traditional monitoring groups
06/21/2016

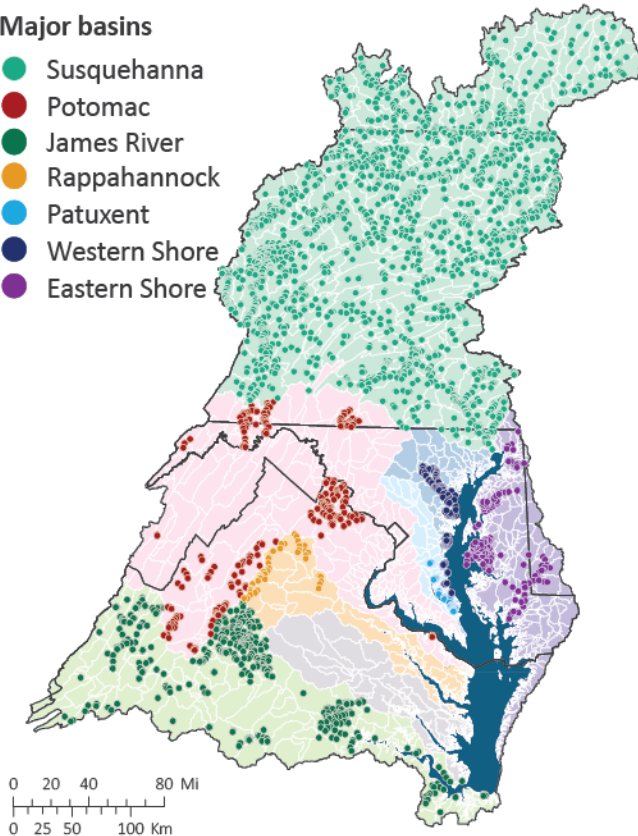
Estimated current sites monitored in Susquehanna = 1554

- Octoraro Watershed Association
- Cecil Senior Environment Corps
- ALLARM
- Warwick Township
- Dauphin County Conservation District
- Western Pennsylvania Conservancy
- Silver Spring Township
- Trout Unlimited
- York County Conservation District
- Mifflin County Conservation District
- WQVC : Lancaster County Conservancy and Lancaster County Conservation District
- Western Pennsylvania Conservancy
- Clearfield Creek Watershed Association
- Bradford County Monitors
- Nature Abounds (Senior Environment Corp Program)
- Water Resource Monitoring Project
- Luzerne Conservation District
- Luzerne Conservation District
- Evergreen Conservancy
- Watershed Alliance of York
- Susquehanna River Basin Commission
- Watershed Alliance of Adams County
- Watershed Alliance of Adams County
- Conococheague Watershed Alliance
- Middle Spring Watershed Association
- Lower Penns Creek Watershed Association
- Friends of Tom's Creek
- The Community Science Institute, Inc.
- God's Country Water Dogs (Potter County PA)

Preliminary site coordinates of Potomac monitoring groups

Major basins

- Susquehanna
- Potomac
- James River
- Rappahannock
- Patuxent
- Western Shore
- Eastern Shore



Preliminary site coordinates of
non-traditional monitoring groups
06/21/2016

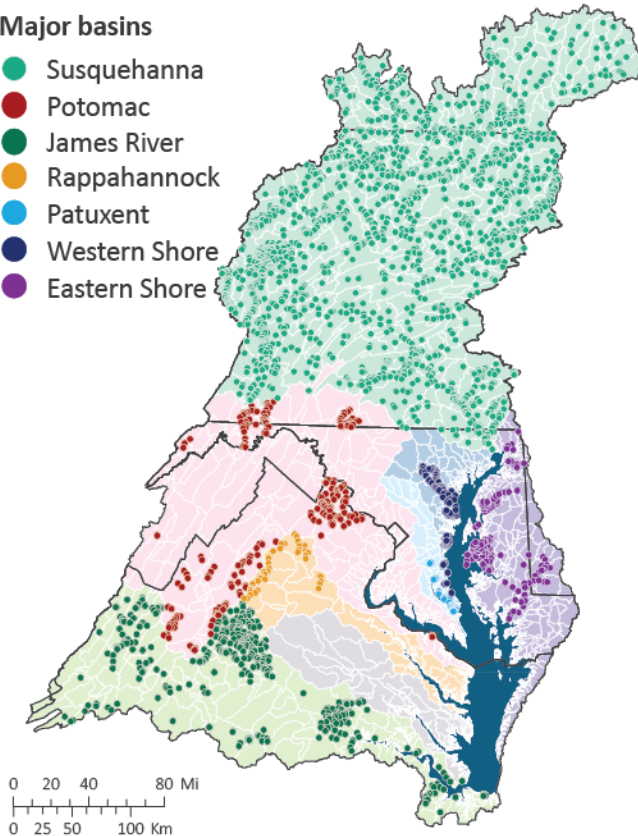
Estimated current sites monitored in Potomac = 1396

- Loudoun Watershed Watch
- Friends of the Middle River
- Lord Fairfax Soil & Water Conservation District
- Friends of Shenandoah
- GMU's Potomac Environmental Research & Education Center
- Shenandoah Valley Soil and Water Conservation District
- Prince William Soil and Water Conservation District
- G2 Associates
- Prince William Soil and Water Conservation District
- Fairfax County Stormwater Planning Division
- Shenandoah Valley Soil and Water Conservation District
- Elgin Perry, Ph. D.
- Reston Association
- West Virginia Rivers Coalition
- Blue Ridge Watershed Coalition
- The Mountain Institute
- WVDEP Nonpoint Source Program
- Mattawoman Watershed Society
- Friends of Accotink Creek
- Maryland Environmental Service
- Hood College Center for Coastal & Watershed Studies
- Potomac Riverkeeper Network
- Northern Virginia Soil and Water Conservation District

Preliminary site coordinates of James monitoring groups

Major basins

- Susquehanna
- Potomac
- James River
- Rappahannock
- Patuxent
- Western Shore
- Eastern Shore



Preliminary site coordinates of
non-traditional monitoring groups
06/21/2016

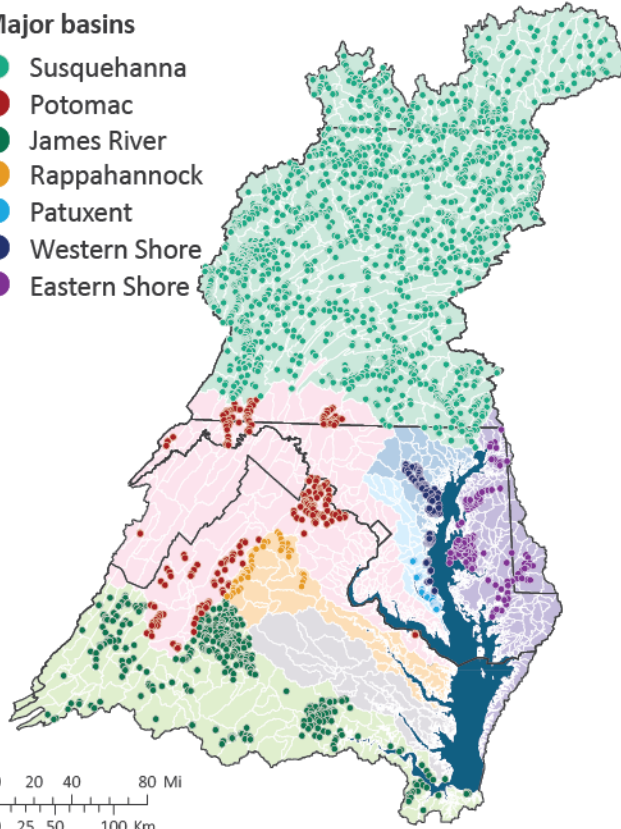
Estimated current sites monitored in the James = 550

- East Carolina University
- Shenandoah Watershed Study-Virginia Trout Stream Sensitivity Study
- Luck Companies
- James River Association
- Cowpasture River Preservation Association
- Master Naturalist
- Virginia Master Naturalist - Historic Southside Chapter, And Nansemond River Preservation Alliance
- Virginia Master Naturalist - Historic Southside Chapter
- Virginia DEQ/VA Save our Streams
- ODU OEAS
- Peter Francisco SWCD
- Chesterfield Water Trends
- Alliance for the Chesapeake Bay
- Rivanna Conservation Alliance
- Friends of Goochland Parks
- Henricopolis Soil & Water Conservation District
- StreamWatch/Rivanna Conservation Alliance

Preliminary site coordinates of Maryland tributary monitoring groups

Major basins

- Susquehanna
- Potomac
- James River
- Rappahannock
- Patuxent
- Western Shore
- Eastern Shore



Preliminary site coordinates of
non-traditional monitoring groups
06/21/2016

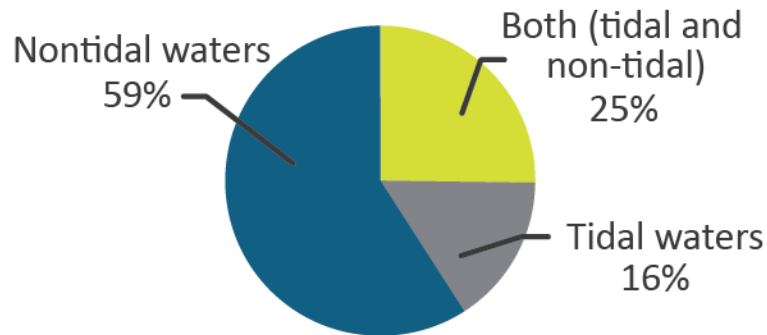
Estimated current sites monitored in Eastern Shore, Western Shore, and Patuxent = 2830

- Verna Harrison Associates, LLC
- Back Creek Conservancy
- Anne Arundel Community College
- Magothy River Assn
- Magothy River Assn
- Friends of the Bohemia
- Phillips Wharf Environmental Center
- Midshore River Conservancy
- Nanticoke Watershed Alliance
- Blue Water Baltimore
- Living Classrooms Foundation
- IWLA-WAC
- National Aquarium
- Baltimore County Dept of Environmental Protection & Sustainability
- Maryland Department of Natural Resources
- Howard County Conservancy
- Chesapeake Bay Foundation
- Restore Rock Creek
- Chesapeake Bay National Estuarine Research Reserve (MD Dept of Natural Resources)
- City of Baltimore
- Comm. College of Balt. County
- MDTU
- Chesapeake Bay Foundation
- Maryland DNR
- Restore Rock Creek
- Watershed Protection and Restoration Program
- CAT-N
- Calvert County
- Howard County Watershed Steward Academy
- Rock Creek Conservancy
- Gunpowder RIVERKEEPER
- USGS-Patuxent Wildl Res Ctr

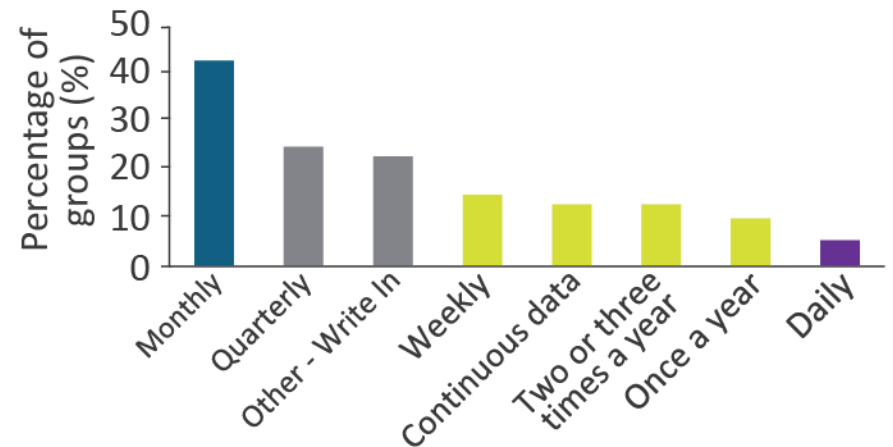
Survey results

Clear areas for further inquiries

Where do you monitor?



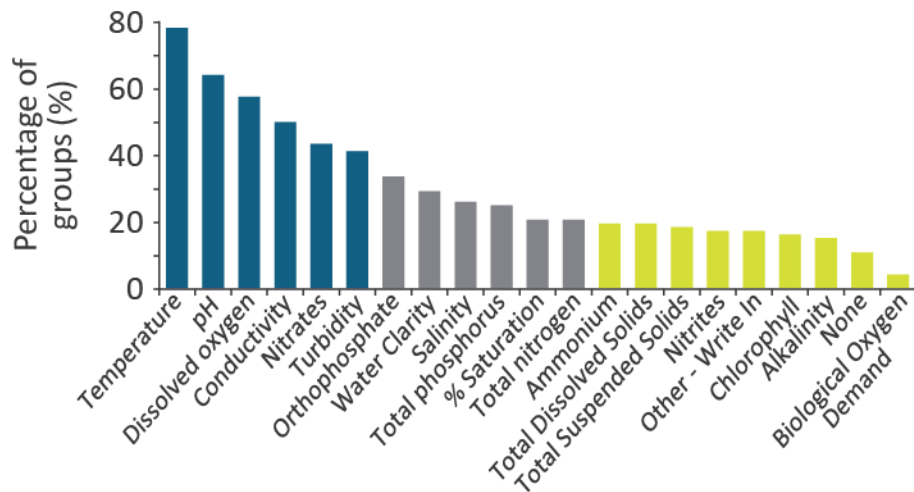
How frequently do you monitor?



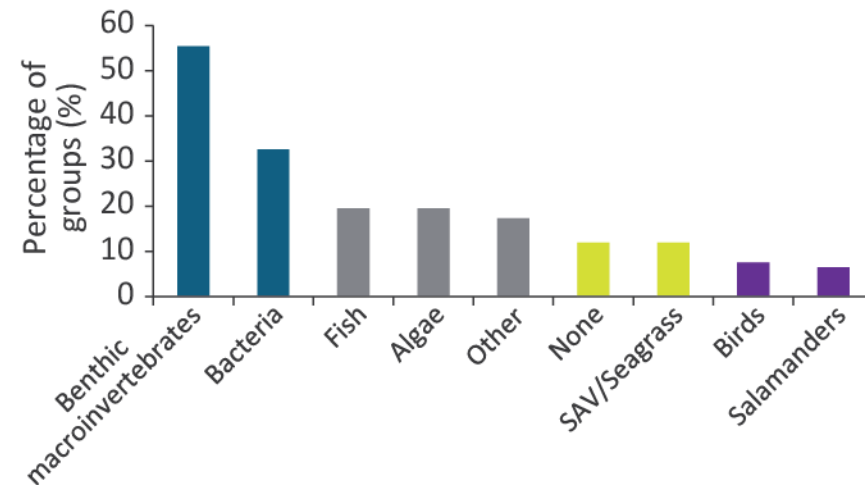
Survey results

Clear areas for further inquiries

What physical and chemical parameters do you monitor?



What biological parameters do you monitor?



States indicate best criteria for priority areas

Which of these criteria do you believe best serve as indicators of priority areas for citizen-based and nontraditional monitoring integration?

- DE
 - Data that fills data gaps with regard to under-represented areas or effectiveness of BMPs
- PA
 - BMP Implementation plans, high public interest, 319 or Pa Growing Greener project waters. Waters identified as 303(d) alternatives in Category 5Alt of the 2016 Integrated Report. Waters prioritized for TMDL development in Appendix H of the 2016 Integrated Report.
- DC
 - BMP implementation plans in the near future.
- VA
 - Areas where little to no state or federal monitoring has occurred during the past three 305(b)/303(d) assessment reports.
 - Areas where a 303(d) listing and/or TMDL implementation are occurring and parameters monitored for include those in the impairment listing.
 - Areas where there is strong citizen volunteer interest to monitor.
- Status and Trends WG Coordinator
 - Is the waterbody in a selected under-represented source sector: urban, suburban or agriculture?
 - Is the waterbody being considered as a sentinel site for climate change research?
 - Is the region undergoing change and development?
 - Is it in an area being prioritized across multiple goals or outcomes from the Chesapeake Watershed Agreement?

States indicate best criteria for priority areas

What additional information would be necessary for prioritization?

- DE
 - The type and frequency of data collected should also be considered for prioritizing
- PA
 - Identify the group and their capabilities and expertise.
- DC
 - None.
- VA
 - Sample site is safe to access and if private landowner permission is needed to sample it is obtained.
- Status and Trends WG Coordinator
 - Priority organizations to work with should include any organizations that maximize effectiveness by monitoring for different kinds of data that can be collected in the same place—along the lines of discussion at the Integrated Monitoring Networks workshop in April 2016.

States indicate best criteria for priority areas

How should we rate/score the water bodies/areas identified by states and the Chesapeake Bay Program using these criteria?

- DE
 - I think waterbodies/areas that are rated as “Strong Yes” for under-represented areas or effectiveness of BMPs should get highest score and be a priority.
- PA
 - Higher priority waters would be those that have BMPs/restoration in place or waters listed on Category 5Alt of the 2016 Integrated Report.
- DC
 - Tier II.
- VA
 - Ranking as listed in 1a.
- Status and Trends Coordinator
 - You would want to weight the criteria that folks think are most important (answers to 1a and 1b) higher than criteria people did not mention. A numeric score might be easier to rate. You could do 1-5 scale of agree/disagree and go from there.

States indicate best criteria for priority areas

Identify three to five areas or waterbodies that fit some of the criteria listed.

- DE:
 - Pocomoke River
 - Chester River
 - Choptank River
- PA:
 - Chiques Creek
 - Octoraro Creek
 - South Branch Conewago Creek
 - Fishing Creek
 - Kishacoquillas Creek
- DC:
 - Pope Branch
 - Nash Run
 - Hickey Run
 - Watts Branch
 - Ft. Dupont
- VA:
 - Numerous 2nd order streams in Virginia not already being sampled.
 - Segments of some major rivers not currently sampled.
 - Current GIS map showing monitored waters available in the 2014 Impaired Waters (303D) Database GIS Applications at <http://www.deq.state.va.us/ConnectWithDEQ/VEGIS.aspx>

Thank you!

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9. Why do you monitor?



Front cover photo: Chesapeake Bay Program

<p>DEEP SPACE PMS 295 C C100/M74/Y22/K48 #002E57 R0/G47/B87</p>	<p>NIGHT SKY PMS 7687 C C85/M67/Y15/K36 #29426E R42/G66/B110</p>	<p>SUPERNOVA PMS 380 C C22/M0/Y94/K0 #D1DE36 R210/G222/B55</p>
<p>SHADOW PMS 424 C C16/M16/Y16/K60 #6C6969 R108/G105/B105</p>	<p>HORIZON PMS 7462 C C100/M64/Y31/K5 #005C85 R0/G92/B133</p>	<p>FLARE PMS 2597 C C77/M99/Y0/K0 #622F92 R104/G46/B134</p>
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