



Chesapeake Monitoring Cooperative: The Prioritization Report

Lea Rubin, Izaak Walton League of America

STAR Team Meeting
February 23, 2017

Mission

Chesapeake Monitoring Cooperative works with diverse partners to collect and share new and existing water quality data. Through this collaboration, we aim to develop a comprehensive understanding of Chesapeake Bay Watershed health.



Photo courtesy of the Chesapeake Bay Program

CMC Data Collection Model



Community Interest



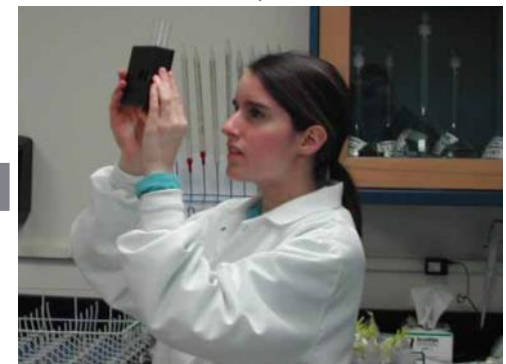
Monitoring trainings



Communities use data
to protect and restore
streams



Data interpretation



Data collection &
quality verification

Chesapeake Monitoring Trivia

1. How frequently do you monitor each site? (most popular answer)

- A) Weekly B) Monthly C) Quarterly D) 2-3 times/year

2. What percentage of monitoring groups target sampling during high flow events?

- A) 5% B) 10% C) 20% D) 30%

3. What is the most popular biological parameter monitored by volunteers?

- A) Benthos B) Fish C) Algae D) Bacteria

4. What is the most popular chemical parameter monitored by volunteers?

- A) DO B) Temperature C) pH D) Nutrients

5. What percentage of monitoring groups data are currently being used by gov't?

- A) 15% B) 30% C) 45% D) 60%

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Chesapeake Monitoring Census

Watershed Inventory (600+ entities):

- Monitoring Program Overview (Where? Why?)
- Monitoring Program Design (How?)
- Data Use and Storage

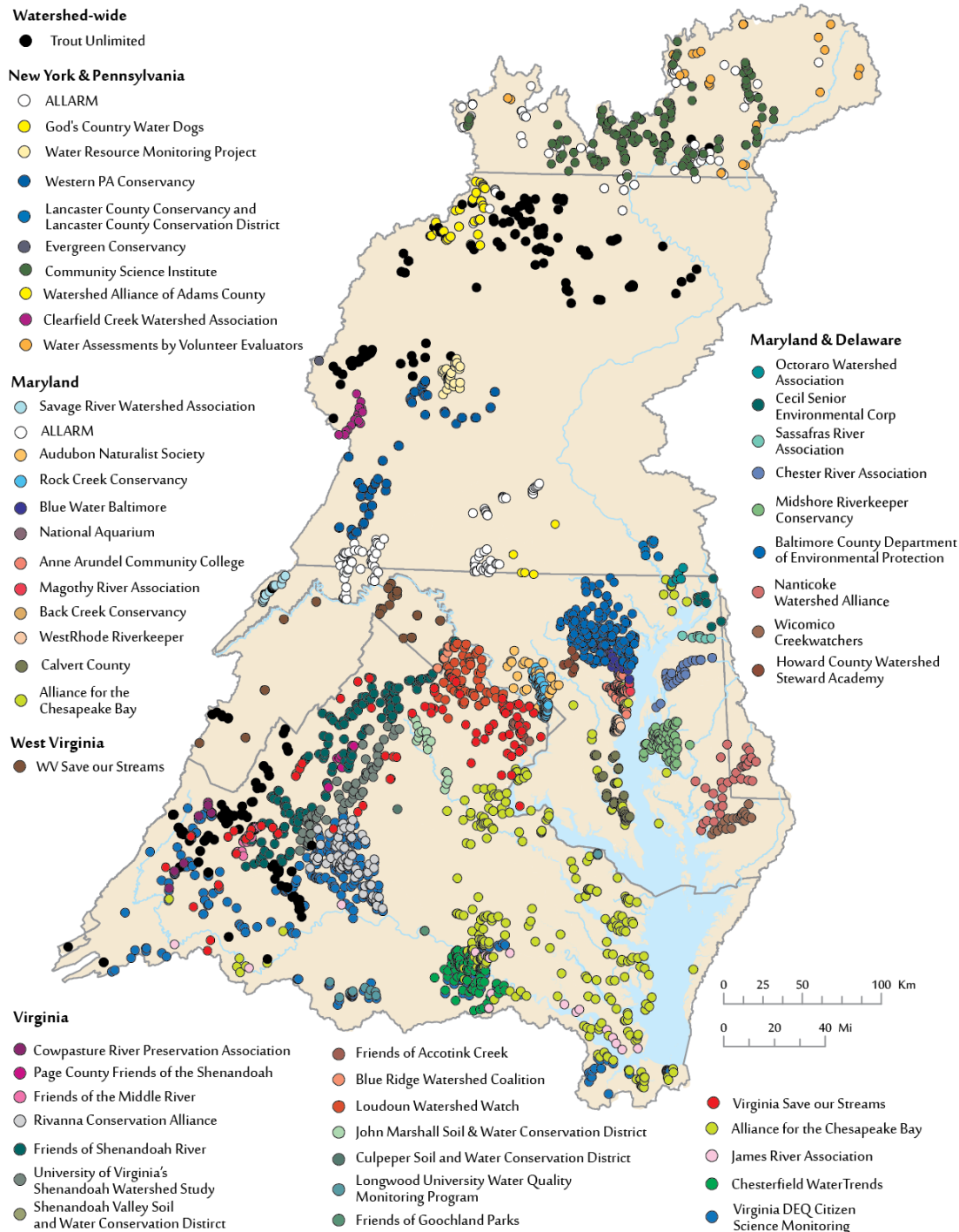
Take the survey @

<http://www.surveygizmo.com/s3/2671540/Chesapeake-Monitoring-Census>

or

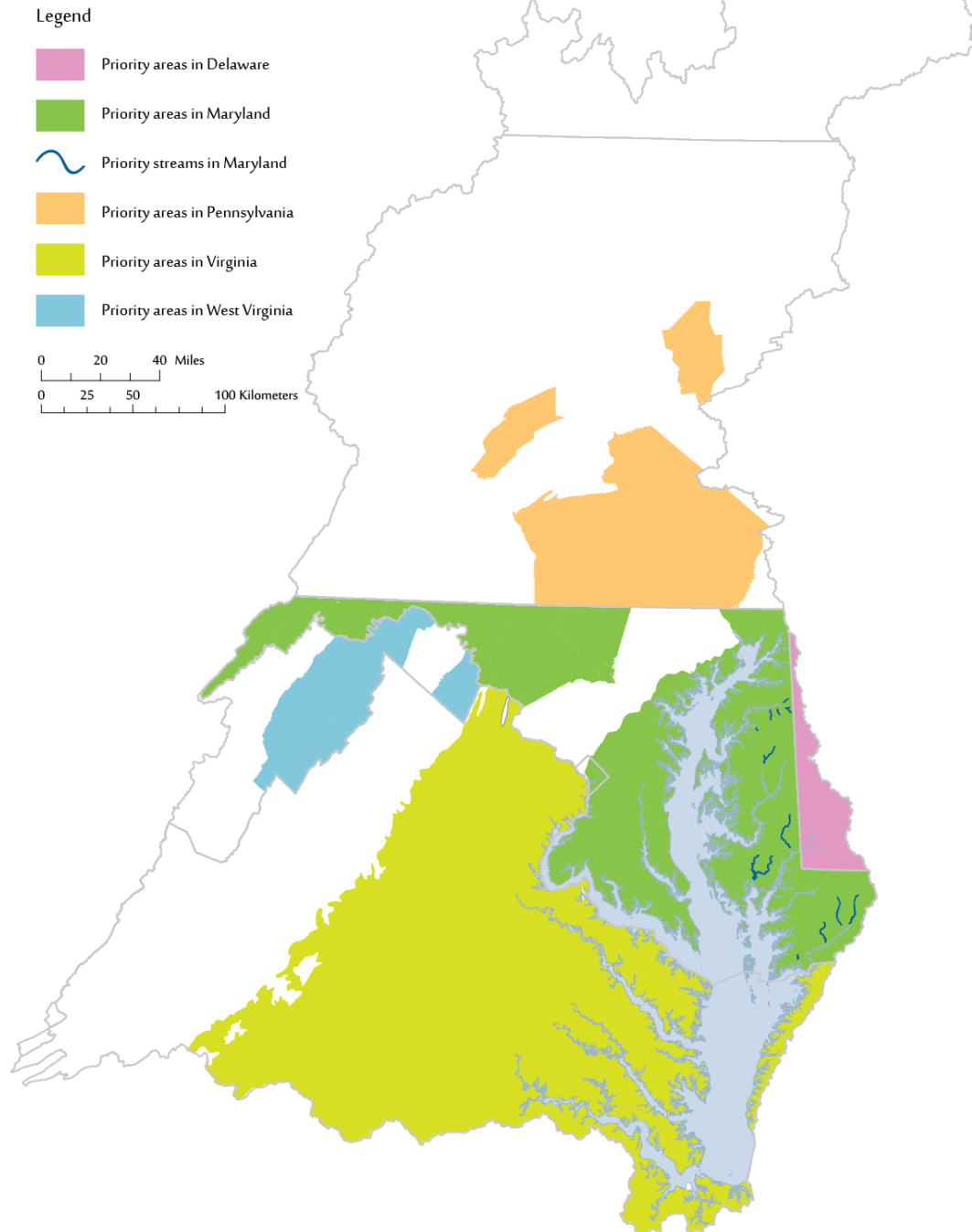
Visit our website **ChesapeakeMonitoringCoop.org**

Volunteers and Nontraditional monitoring groups are actively collecting data throughout the watershed



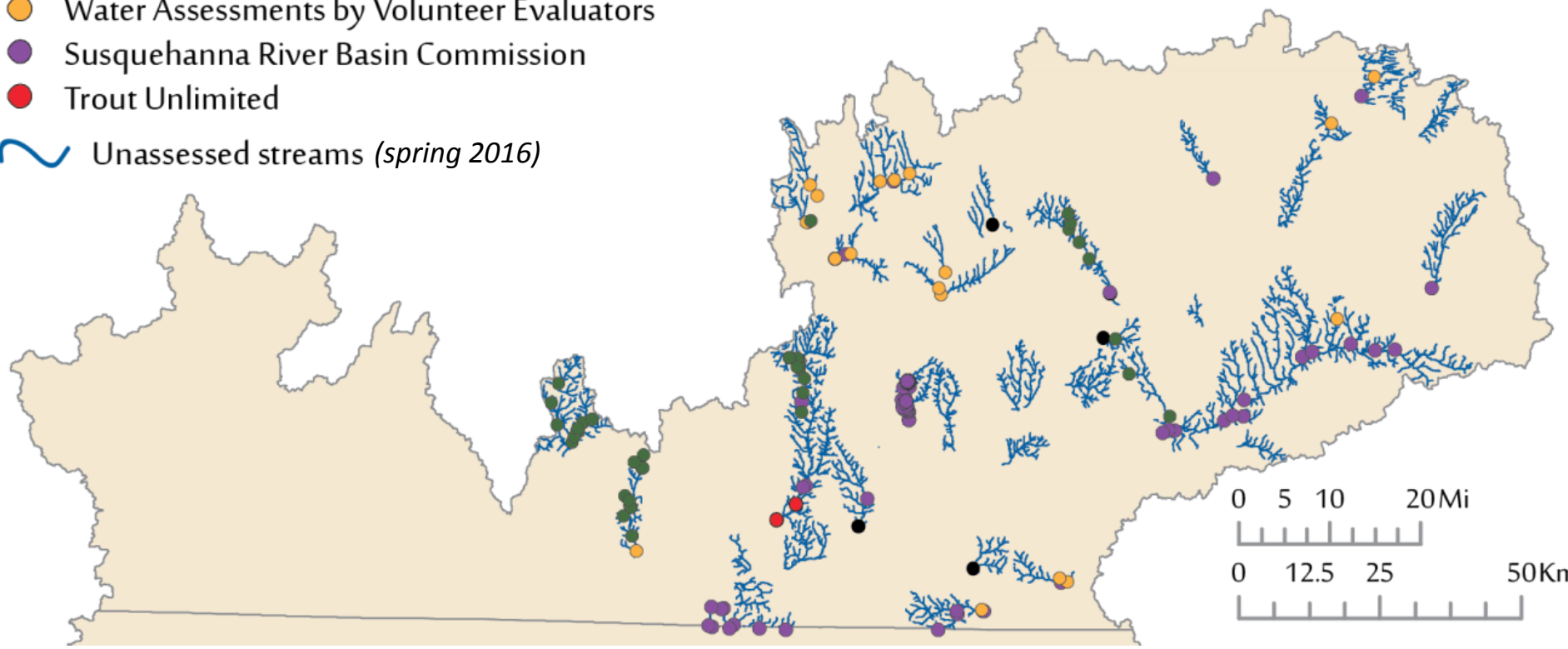
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Priority areas identified in the Chesapeake Bay Watershed

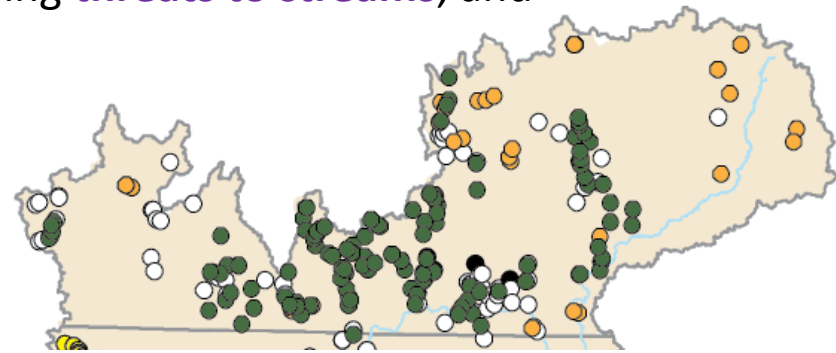


Monitoring groups

- ALLARM
- Community Science Institute
- Water Assessments by Volunteer Evaluators
- Susquehanna River Basin Commission
- Trout Unlimited
- ~ Unassessed streams (spring 2016)




The New York State Department of Environmental Conservation is interested in detecting **change in water quality over time**, identifying **threats to streams**, and targeting **restoration activities**.



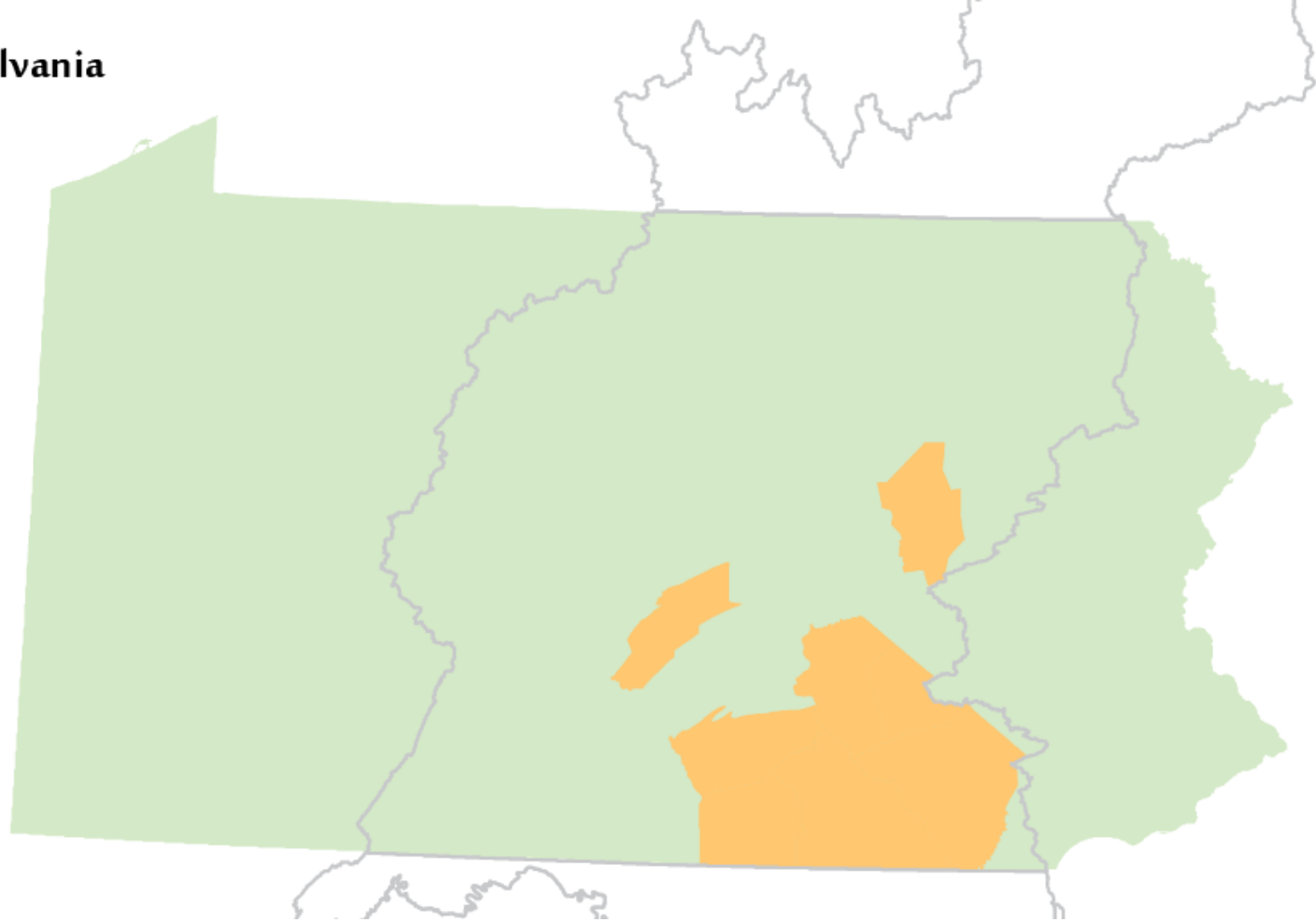
Priority Areas in Pennsylvania

Legend

 Priority areas in Pennsylvania

0 25 50 Miles

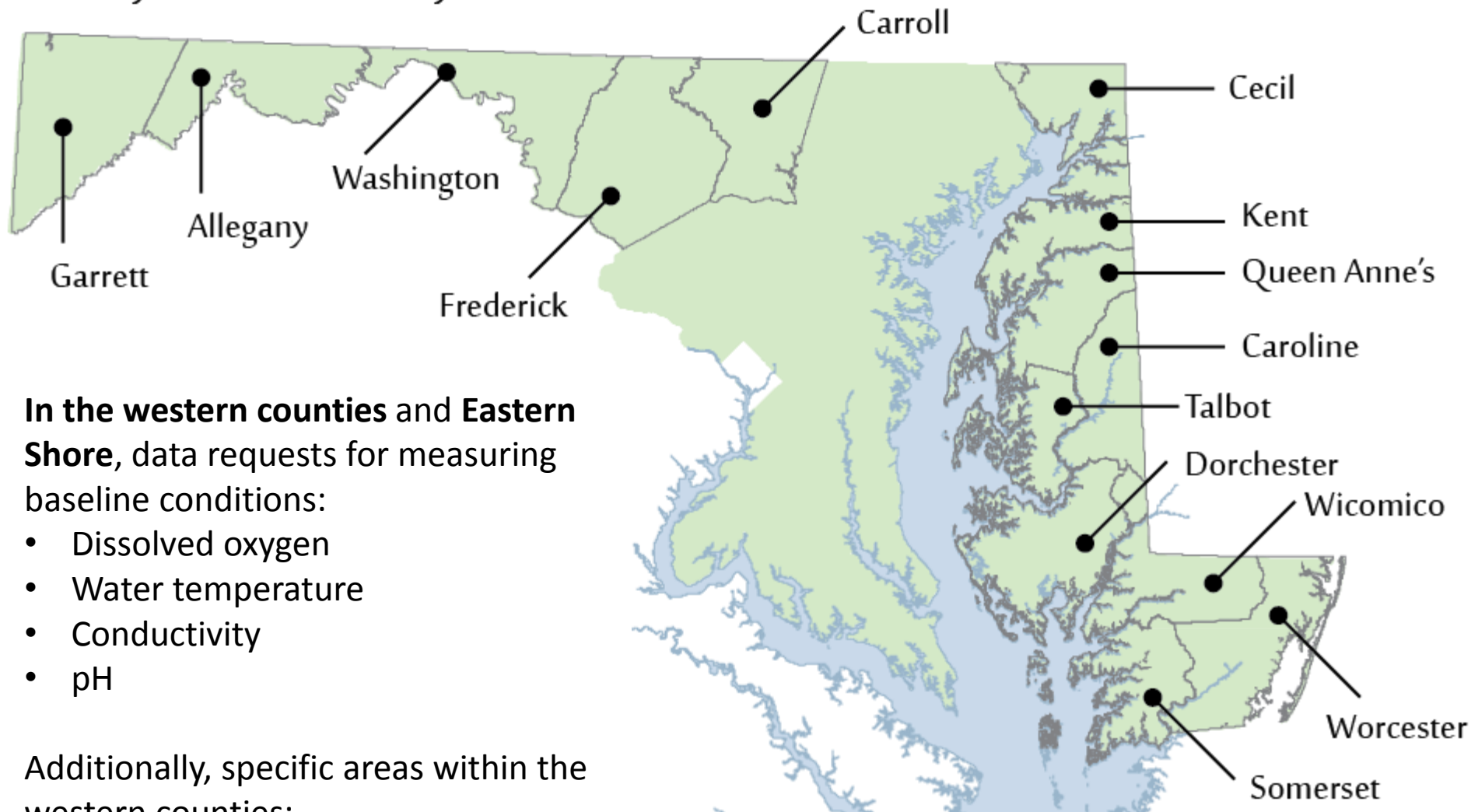
0 25 50 Kilometers



Chiques Creek, Octoraro Creek, South Branch Conewago Creek, Fishing Creek, and Kishacoquillas Creek.

Pennsylvania Department of Environmental Protection is interested in **detecting changes from current BMPs or planned BMP implementation.**

Priority Counties in Maryland



In the western counties and Eastern Shore, data requests for measuring baseline conditions:

- Dissolved oxygen
- Water temperature
- Conductivity
- pH

Additionally, specific areas within the western counties:

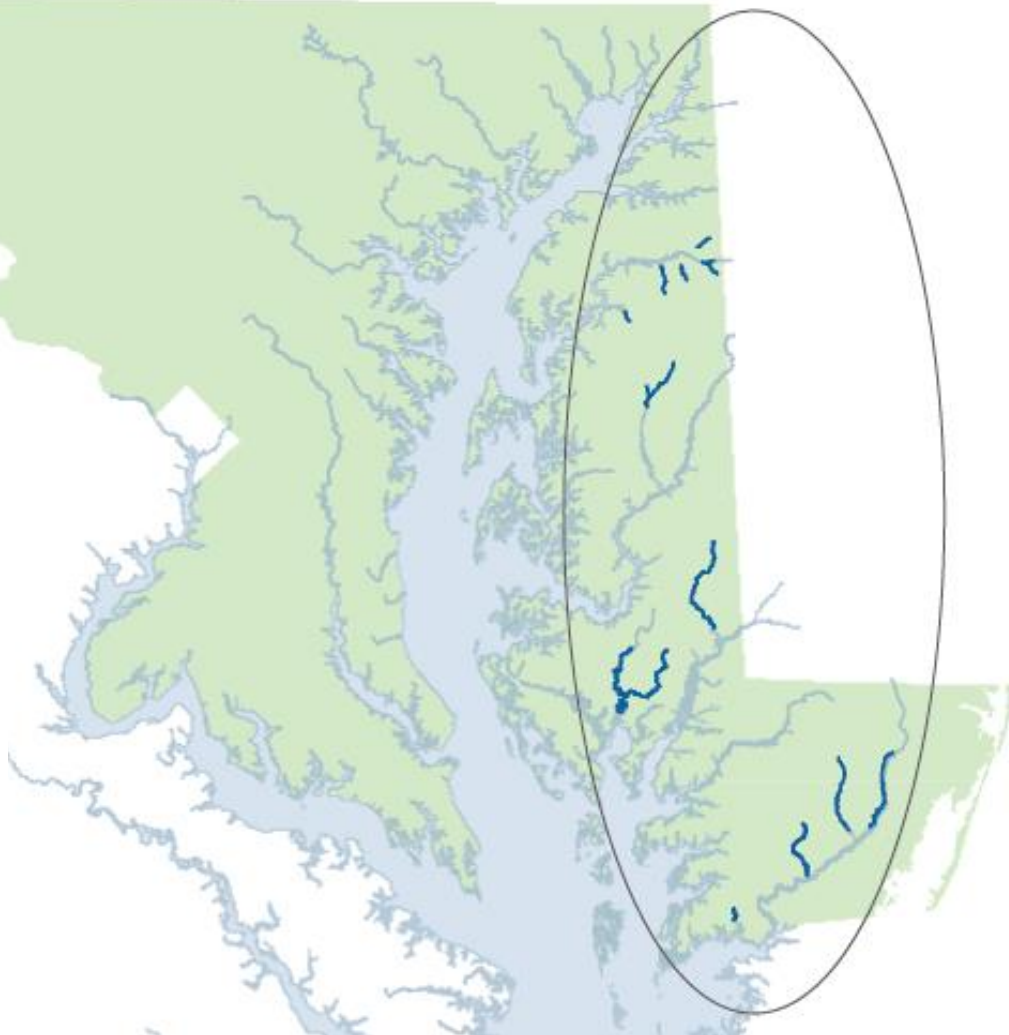
- Marcellus Shale
- Acid mine drainage mitigation

Priority Creeks in Maryland

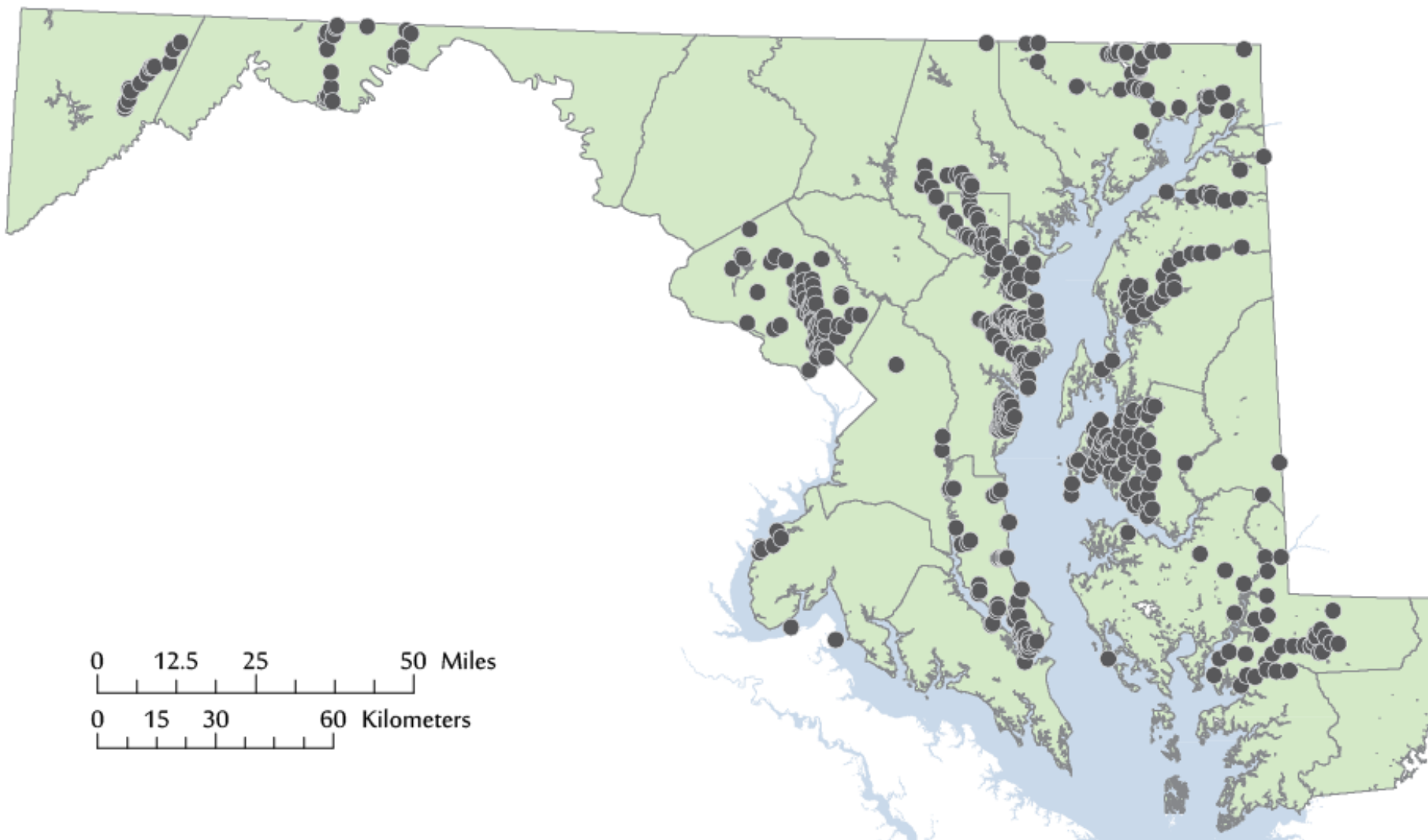
MDE is interested in specific creeks for determining if a TMDL is needed.

Parameters of interest include:

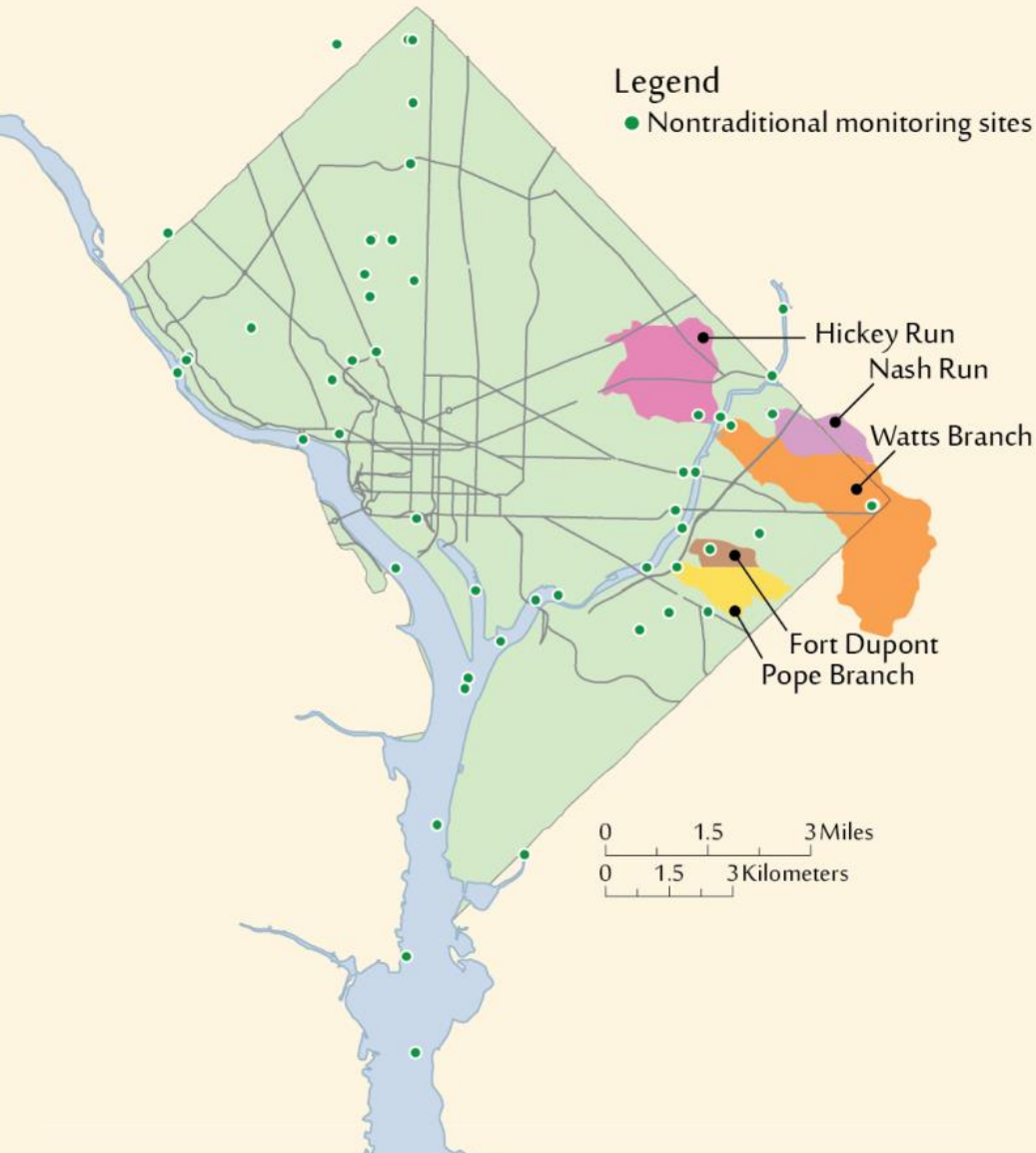
- Dissolved oxygen
- Biological Oxygen Demand
- Chlorophyll *a*
- pH
- Total Suspended Solids
- Turbidity
- Water temperature
- Nutrients



Nontraditional groups collecting conductivity data in Maryland



Priority Areas in Washington, DC

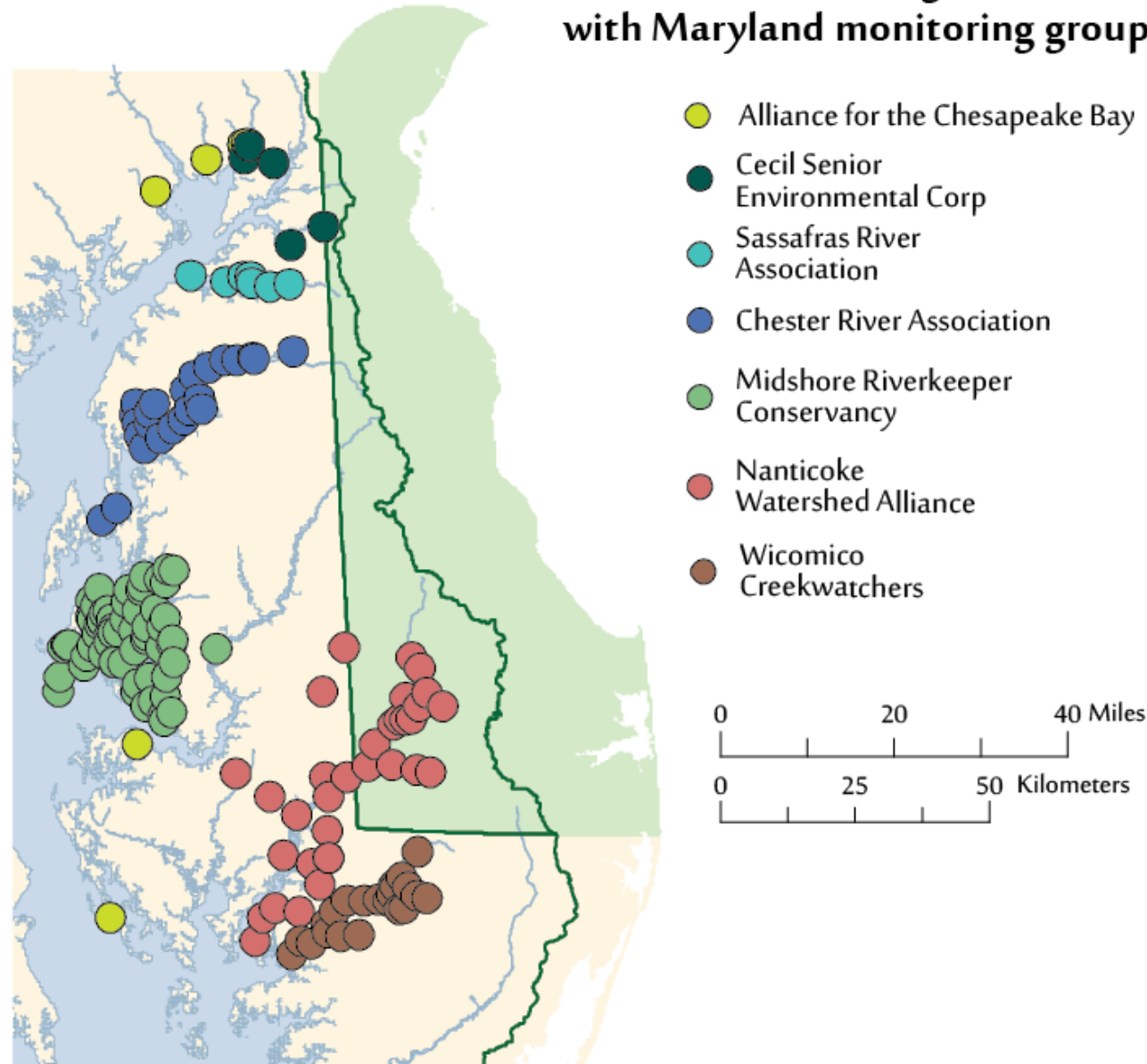


The District of Columbia Department of Energy and the Environment is interested in **baseline data** such as dissolved oxygen, water temperature, conductivity, pH, and benthic macroinvertebrates.

Priority Watersheds include: the Pope Branch, Nash Run, Hickey Run, Watts Branch, and Ft. Dupont

Investigating partnerships with: Smithsonian Anacostia Community Museum, Potomac Riverkeepers Network, Rock Creek Conservancy, and the Audubon Naturalist Society

Delaware monitoring sites and overlap with Maryland monitoring groups




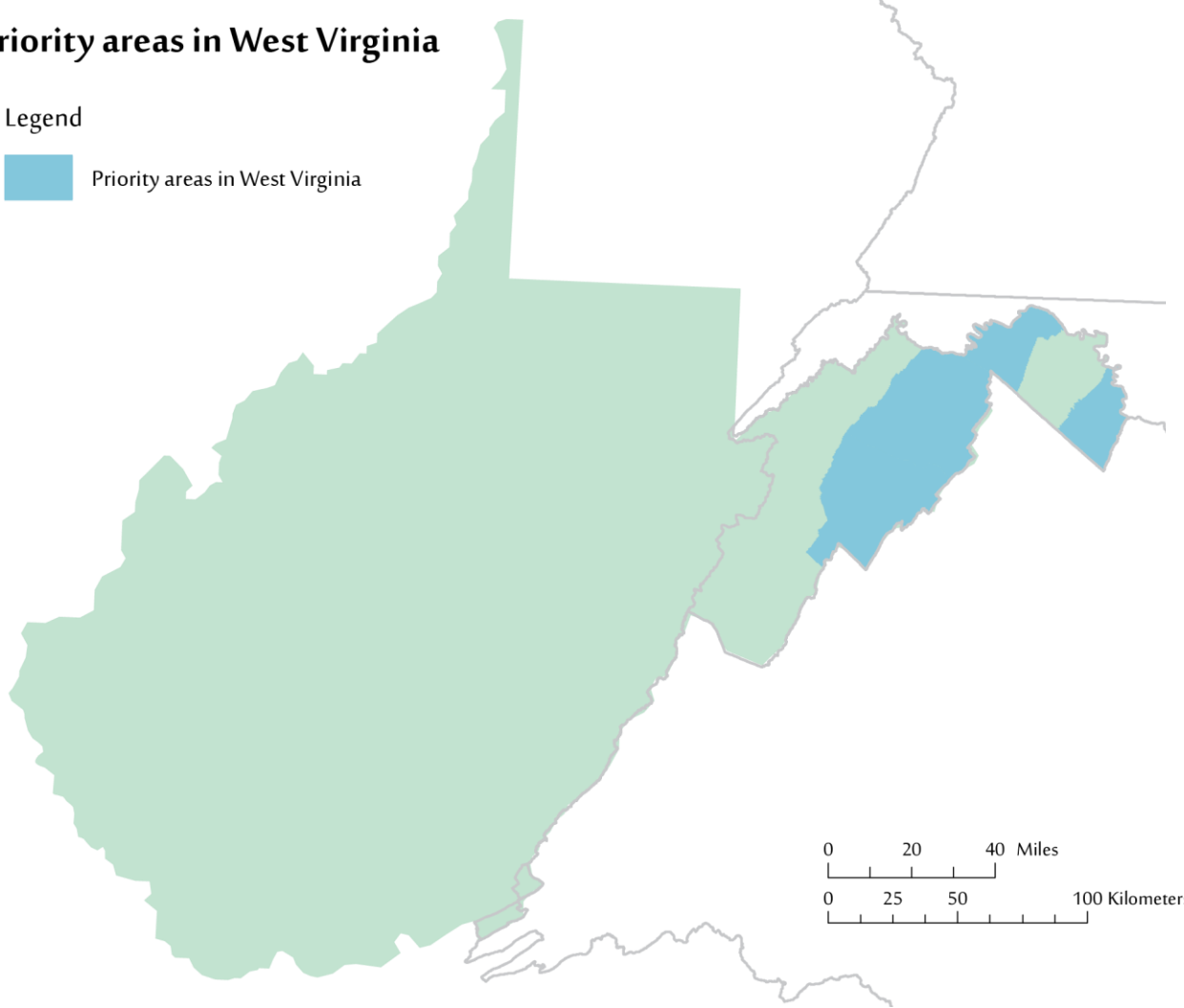
The Delaware Department of Natural Resources and Environmental Control is interested in **reducing spatial and temporal data gaps for state assessments and reporting.**

Specific interest in:
Pocomoke, Chester, and Choptank watersheds.

Priority areas in West Virginia

Legend

 Priority areas in West Virginia



Priority watersheds include:



- Sleepy Creek and Warm Springs Run in Morgan County
- West Virginia's tributaries to the Shenandoah River in Jefferson County
- Cacapon River and its tributaries
- the Lost River and North River in Hardy, Hampshire, and Morgan County
- Elks Run and Elk Branch in Jefferson County

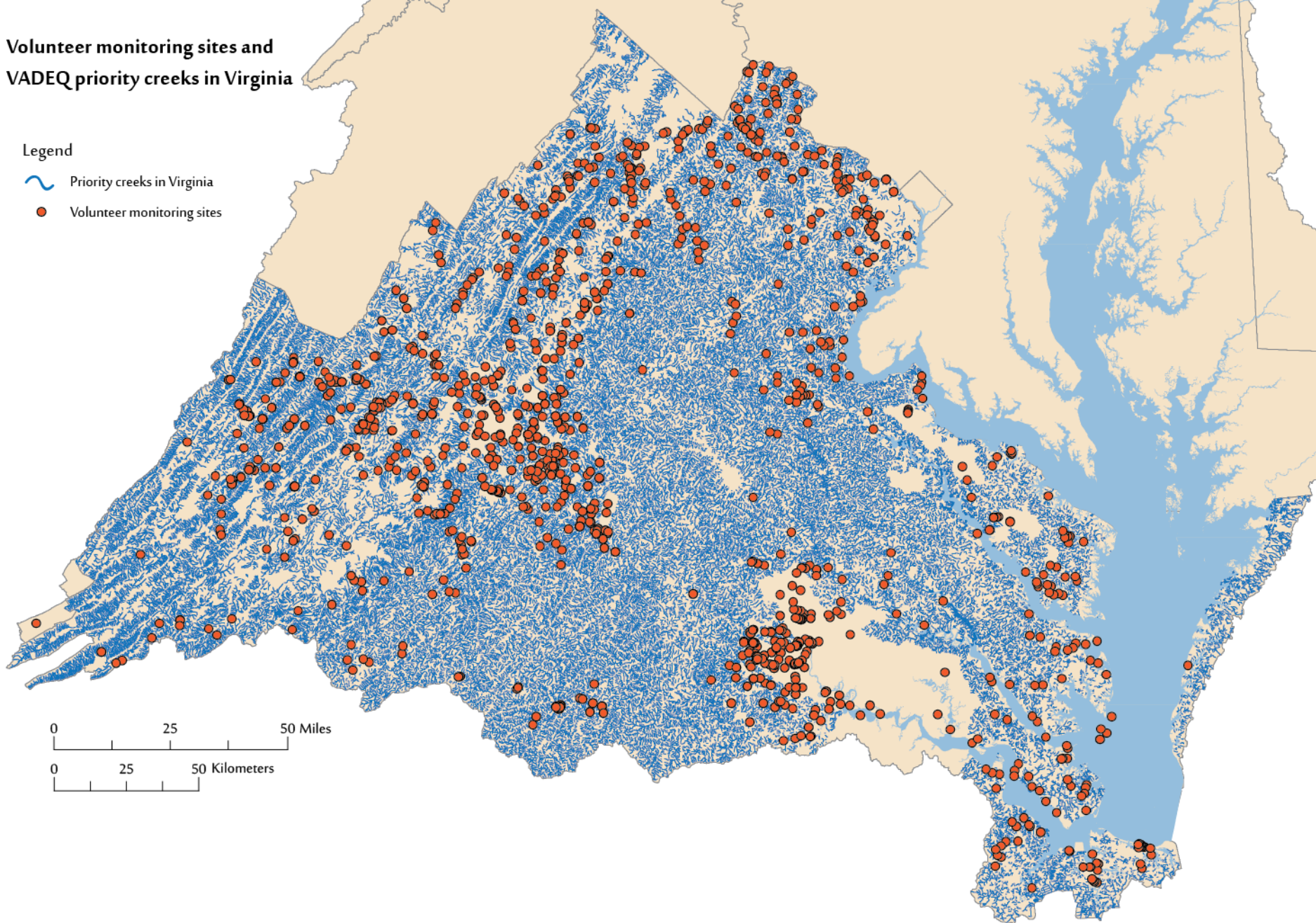
Figure courtesy of University of MD Center for Environmental Science

The West Virginia Department of Environmental Protection (WVDEP) is interested in assessing areas with **current or future BMP implementation plans**. As well as, additional support for **baseline assessments** and identifying areas of **high nutrient and sediment loading**.

Volunteer monitoring sites and VADEQ priority creeks in Virginia

Legend

-  Priority creeks in Virginia
-  Volunteer monitoring sites



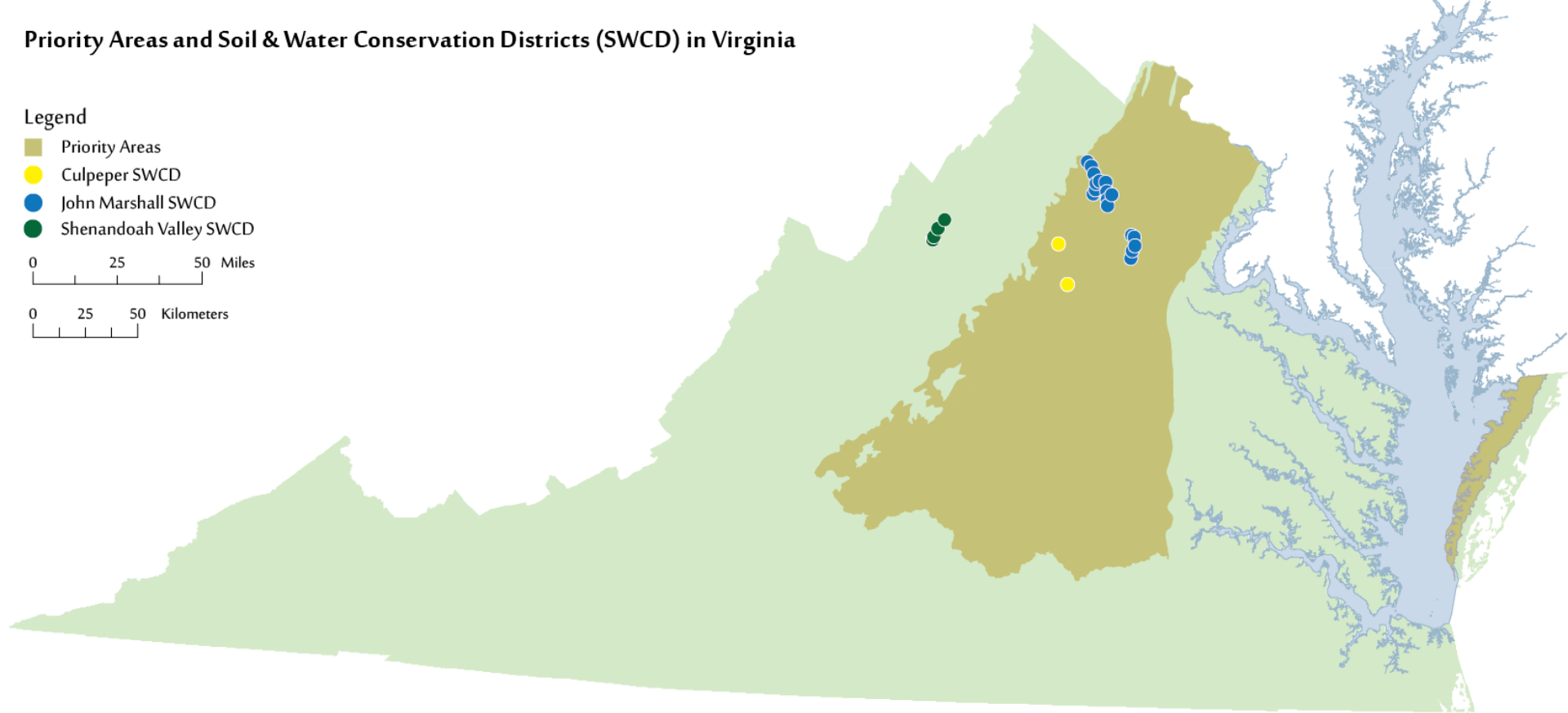
Priority Areas and Soil & Water Conservation Districts (SWCD) in Virginia

Legend

- Priority Areas
- Culpeper SWCD
- John Marshall SWCD
- Shenandoah Valley SWCD

0 25 50 Miles

0 25 50 Kilometers



Virginia Department of Environmental Quality (VADEQ) is interested in building partnerships and leveraging resources to **fill data gaps**.

Specifically in two broad areas of Virginia, the **Piedmont region in central Virginia** and the **Bay side of the Virginia Eastern Shore**. VADEQ is interested in basic water quality data such as dissolved oxygen, water temperature, and pH for determining **baseline conditions**.

Prioritization Report Key Sections

Section 1: **Identified Data Needs in the Chesapeake Bay Watershed**

Section 2: **Extensive Monitoring of the Watershed**

Section 3: **CMC Approach to Integrating New Partners**

Any questions?

SEND COMMENTS TO:

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