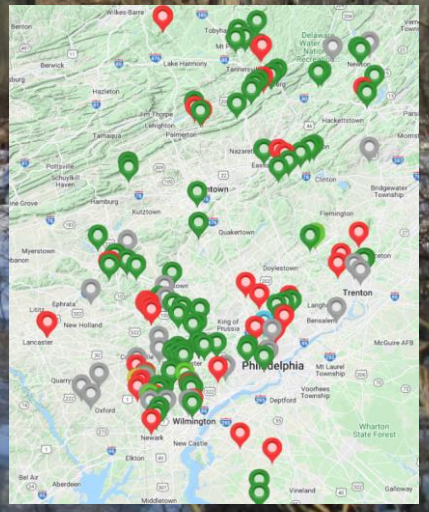
WELCOME!

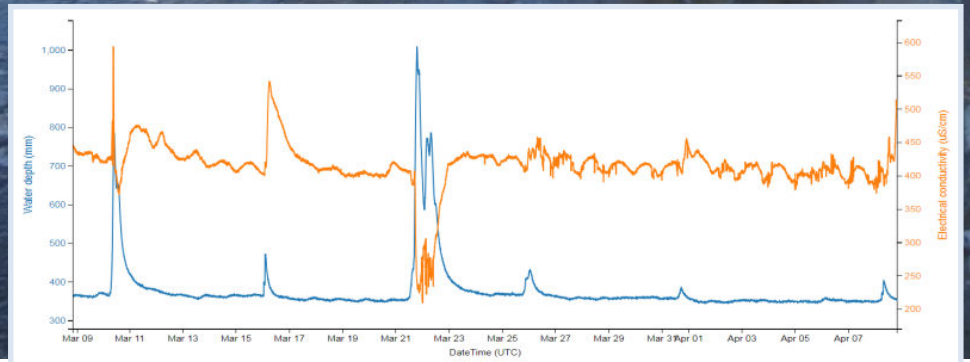
EnviroDIY and monitoring in the DRB monthly meeting

Online, Thursday, February 16, 2023, 2:30-3:30p

EnviroDIY



Monitor My Watershed®



STROUD WATER RESEARCH CENTER

Today's Agenda

1. Introduction
2. Stroud Updates
3. Presentation – Salt pollution in Valley Creek and Valley Forge TU response
4. Discussion
5. Conclusion

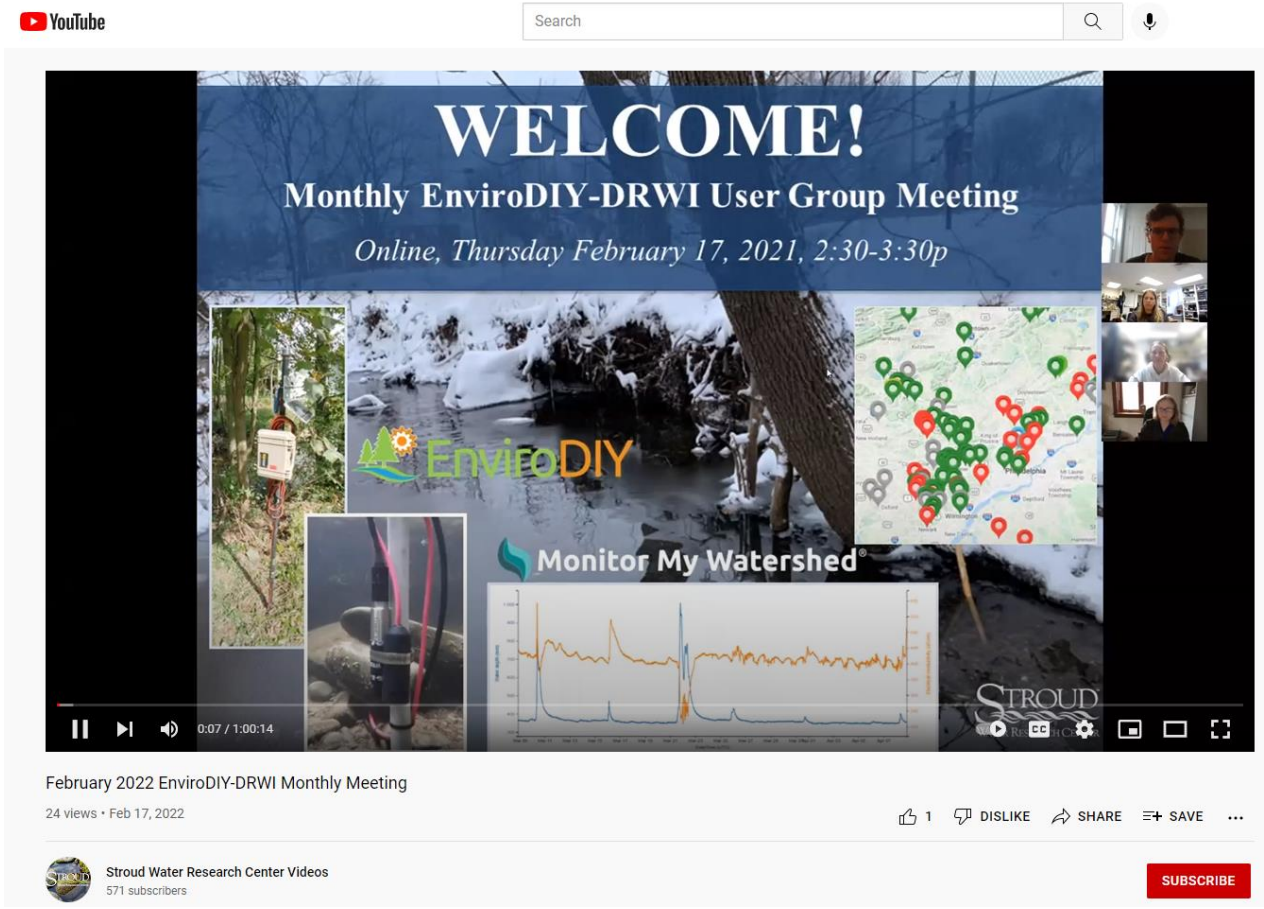
Zoom Orientation

*Meeting is being recorded

***Please mute when not speaking to the group**

These Monthly Meetings

Recordings available at: https://wikiwatershed.org/drwi/



These Monthly Meetings

- Every third Thursday of the month
- 2:30-3:30p
- Zoom link will remain the same: https://us02web.zoom.us/j/81881801310?pwd=eUFmbXZLbmRibVcxa1dtNVhzRmNvZz09
- Reminder email one week prior to each month's meeting
  - All are welcome, please share
  - **And let us know if others should be added**

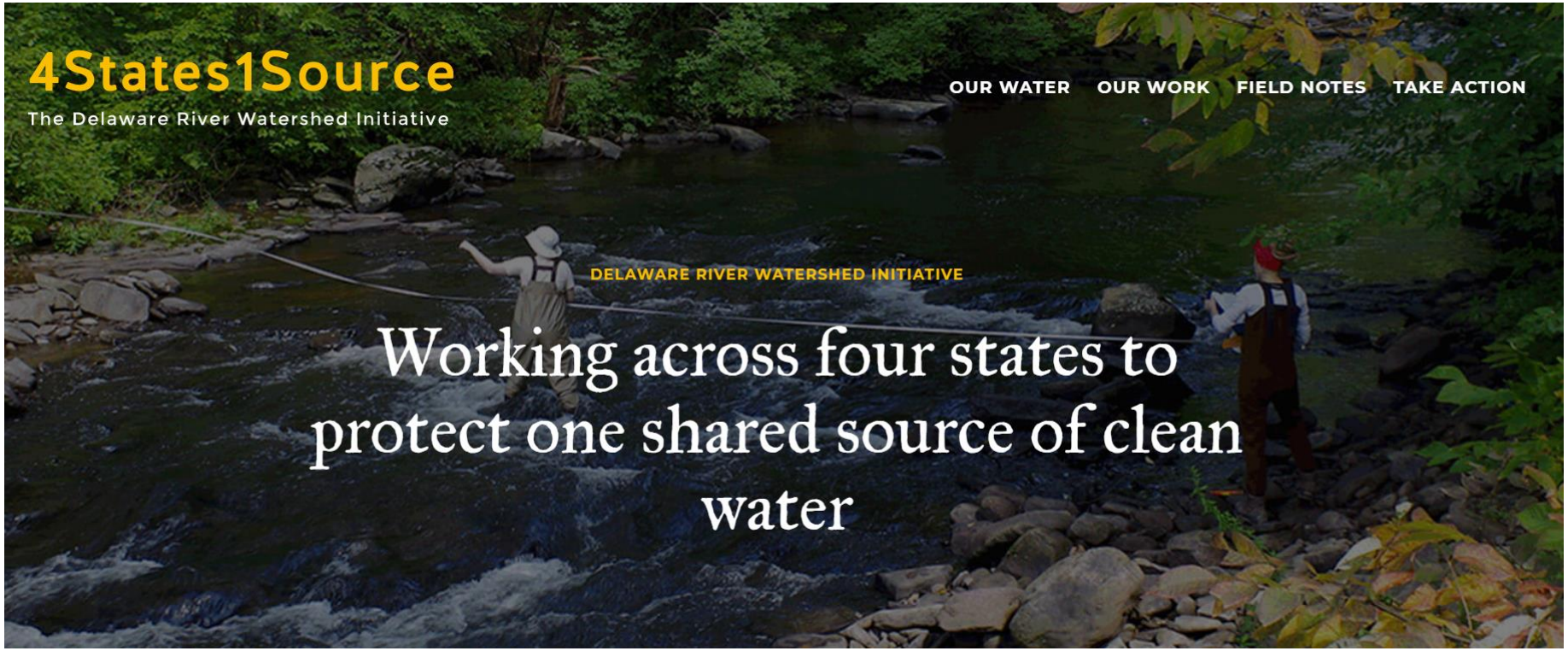
REMINDER

- Attendees include:
  - Groups working in Delaware River Watershed Initiative (DRWI)
  - Groups working in Delaware River Basin (DRB) but not DRWI
  - Folks from outside the DRB

- Stroud Center support via DRWI and C-SAW

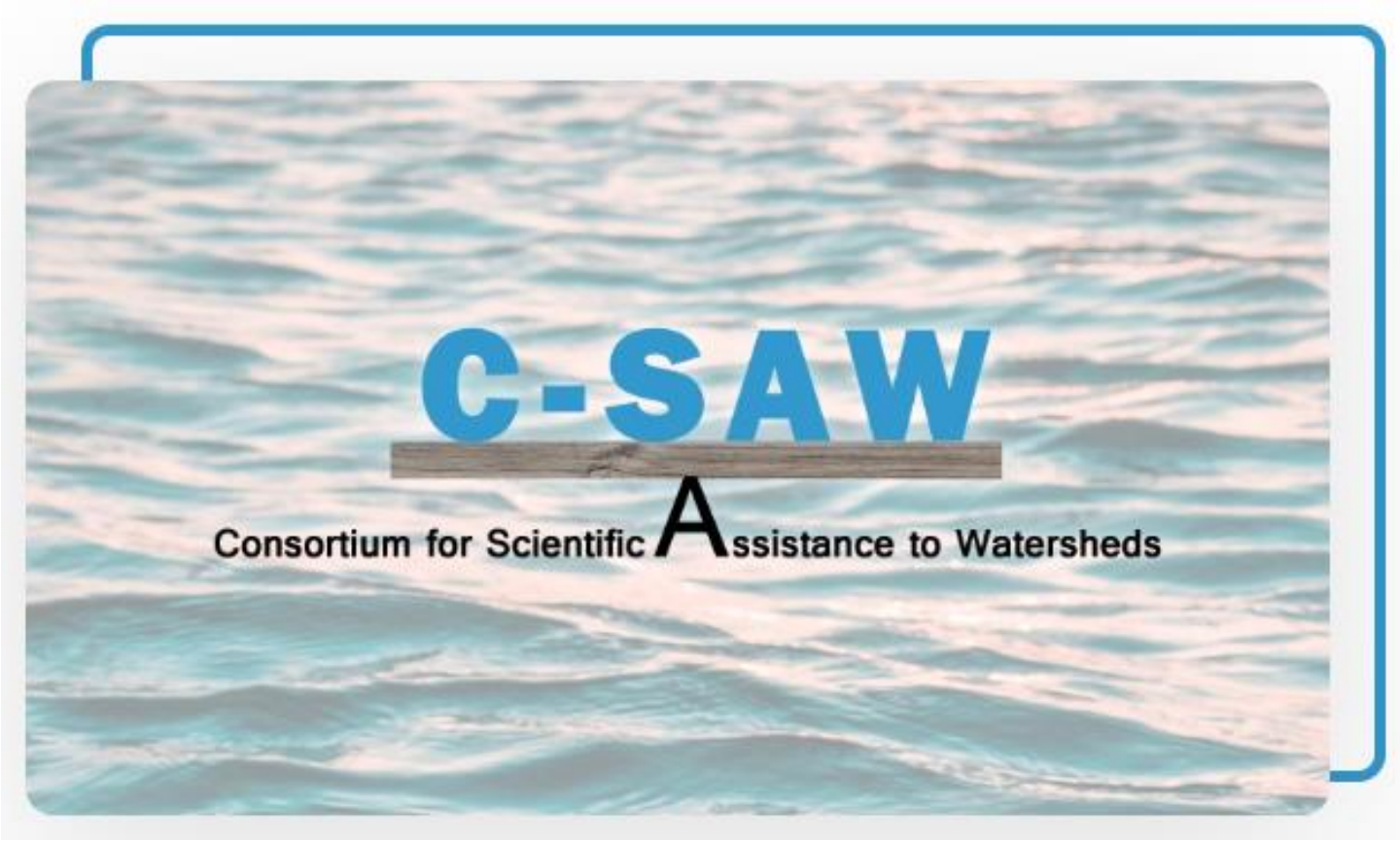
Delaware River Watershed Initiative (DRWI)

https://4states1source.org/



C-SAW

https://www.c-saw.info/



Goals for these monthly meetings

- **Time to check-in, ask questions, report issues, network, etc.**
- **Updates** from the Stroud Center
- **Presentations**
  - **Station Owner/Manager Presentations** – communicate about individual situations, local watershed work
  - **Focus Topic Presentations** – guest presenters talk about technical/ecological/other focus topics

All of this to support gathering good data and using it purposefully

Stroud Center project personnel

Stroud Center team:

David Bressler

Project facilitator

Rachel Johnson

Research Engineer Technician

Christa Reeves

Northern DRB technician and organization collaborator

Shannon Hicks

Research Engineer, Mayfly and EnviroDIY Inventor/Designer

Stroud Center project personnel

Master Watershed Steward Facilitators:

Carol Armstrong

George Seeds

Master Watershed Steward Program

PennState Extension

Stroud Center project personnel

Stroud Center DRWI Leads:

Dr. John Jackson

Senior Research Scientist

Matt Ehrhart

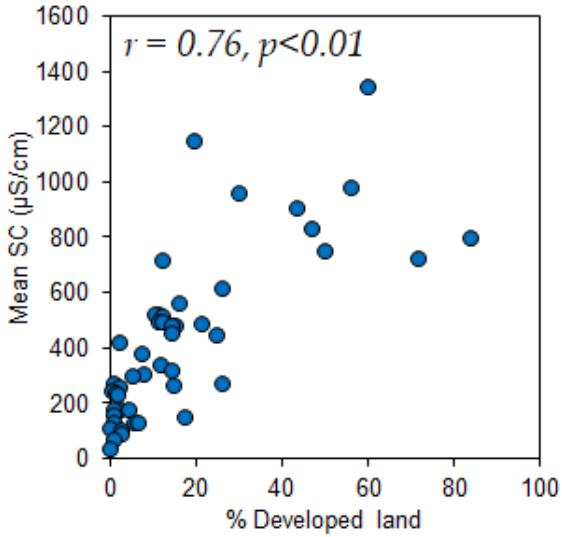
Director of Watershed Restoration

Dr. David Arscott

Executive Director, President
Research Scientist

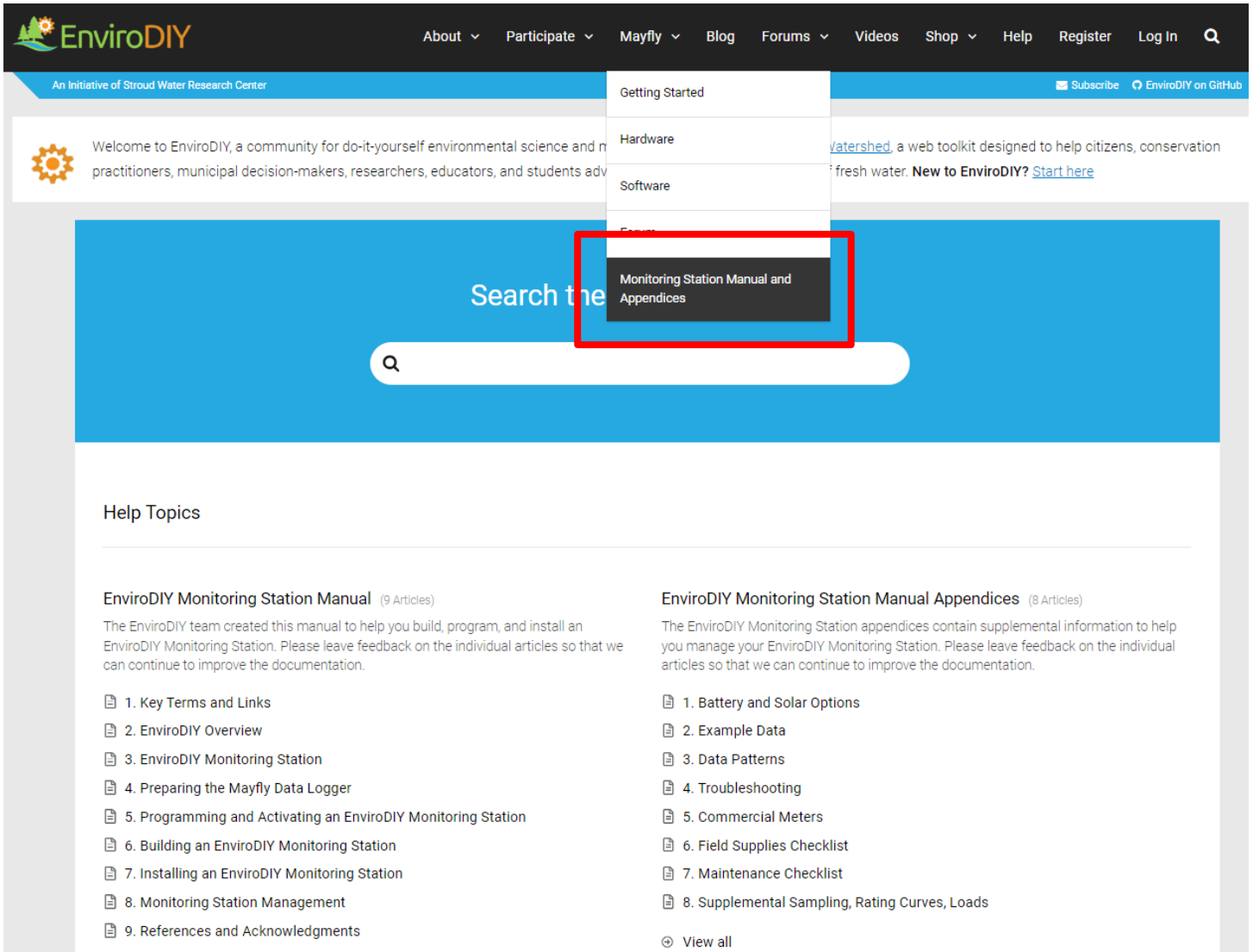
Stroud Center Perspective – EnviroDIY in the DRB

- Primary Goal
  - Support Station owners, managers, and volunteers
  - Use stations for local purposes
- Secondary Goal
  - Analyze basin-wide data set
  - Develop tools to characterize and contextualize watersheds



EnviroDIY manual

- EnviroDIY manual - https://www.envirodiy.org/knowledge-base/



EnviroDIY and monitoring resources

- Guidance materials - https://wikiwatershed.org/drwi/

Shortcuts to General Resources

- EnviroDIY Field Visit Data
- EnviroDIY Monitoring Station Help Resources
- Salt Monitoring Resources
- Data and Data Visualization Resources
- Volunteer Management Guidance Materials
- WikiWatershed Toolkit
- Project Updates

Shortcuts to Meetings, Workshops, Conferences

- Monthly EnviroDIY-DRWI User Group Meetings
- User Support Workshops and Trainings
- Conference Presentations
- Watershed Ecology Workshops

Stroud Center Updates

- A number of groups doing Salt Snapshots
  - Be in touch with the Stroud Center if you'd like assistance in doing this

Stroud Center Updates

Watershed Salt Snapshot – Instructions

Overview

The following is a method for documenting salt levels in streams and rivers across a watershed by measuring the concentration of chloride (Cl^-)(milligrams/liter, mg/l) during baseflow conditions. Measuring electrical conductivity is also recommended as it can provide explanatory information and is directly related to chloride concentration.

The intent of this method is to 1) determine salt levels that aquatic life is exposed to the majority of the time (i.e., during baseflow conditions) in streams of a watershed(s) and 2) identify specific areas of the watershed(s) that may be contributing to or preventing salt contamination of nearby streams.

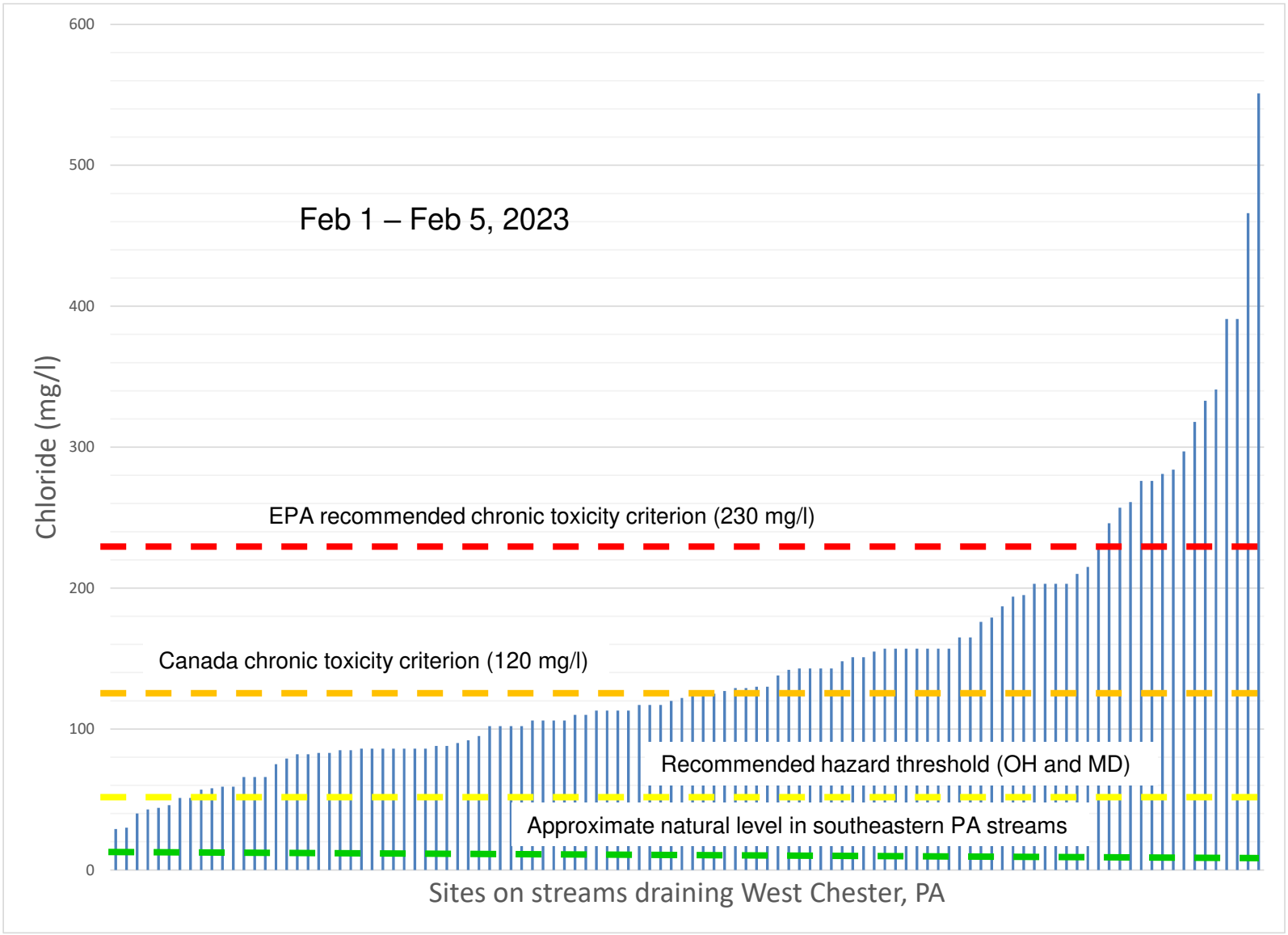
The basic method:
Over a short period of time (less than a week, to ensure consistency in data) a group of people fans out across a watershed (or other area of interest) during baseflow conditions and collects water samples from pre-determined stream sites. Sites are strategically chosen to help identify specific areas of the landscape that may be contributing to or protecting nearby streams from salt contamination. The samples are returned to a central meeting location where they are measured for chloride (mg/l) and specific conductivity (uS/cm). Because sampling is recommended to occur over a relatively short time period, it is important to consider the number of people available to conduct the work and the number of sites that can be visited in the allotted time. Judgment will be required to balance desired number of sites with personnel and time availability.

> *Baseflow: the resting state of a stream between precipitation events; a stream or river's normal flow state when not influenced by recent precipitation runoff, often composed primarily of groundwater; the flow that would exist in a stream without the contribution of direct overland runoff from rainfall or melting snow/ice.*

Equipment/Supplies

- Chloride QuanTab® Test Strips, 30-600 mg/L or other chloride measurement method
- Conductivity meter (e.g., Hanna DiST®3 Waterproof EC Tester)
- Conductivity meter calibration solution (e.g., 1413 µS/cm Conductivity Standard)
- 500-1000mL clean plastic or glass bottles with lids (one bottle per site).
- Waterproof bottle labels (if possible). Bottles can be directly labeled if necessary or labels can be prepared with normal paper and covered with packaging tape after labeling is completed
- Small plastic cups/containers (one per site) – for chloride strip measurements, should be small enough so chloride strip can stand upright on its own
- Pencils
- Watershed Salt Snapshot Data Sheet
- Portable/collapsible table (big enough to hold all sample bottles)
- Optional: white board to record sample results for group discussion
- Optional: large map to record sample results and locations for group discussion

Stroud Center Updates



Updates from Local Policy/Practice Workgroup

- Updates from the first meeting of workgroup leaders – David Manning, PA Master Watershed Steward and Schuylkill Water Steward with Green Valleys Watershed Association

Updates from Local Policy/Practice Workgroup

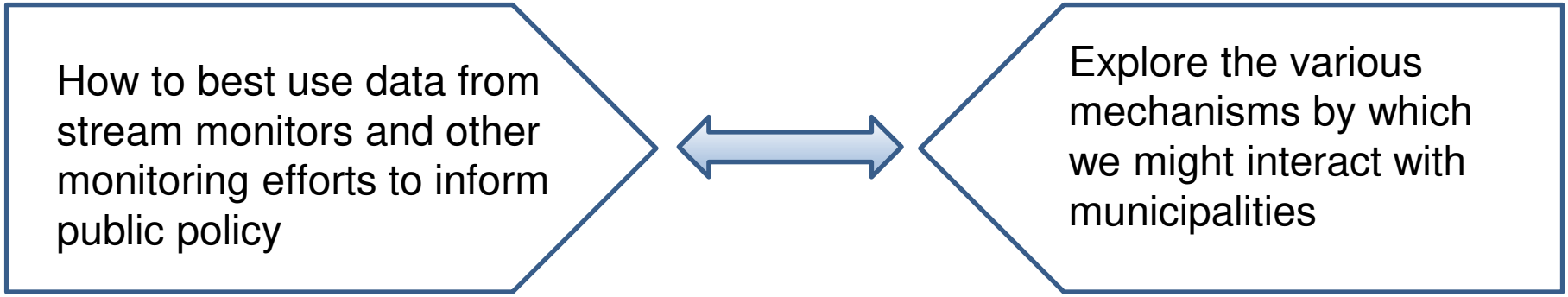
- Structure of workgroup
- Objectives (charge) for workgroup
- Municipal entities of interest
- Mechanisms of engagement

Updates from Local Policy/Practice Workgroup

- *Current leadership:*
  - Ian Brastow, Lopatcong Creek Initiative/New Jersey Highlands Coalition (NJ)
  - David Manning, PA Master Watershed Steward and Schuylkill Water Steward with Green Valleys Watershed Association (PA)
  - Christa Reeves, Musconetcong Watershed Association (NJ)
  - Alex Jackson, Brodhead Watershed Association (PA)
  - Erin Landis, Wissahickon Trails (PA)
  - Joe Debes, PA Master Watershed Steward and Stroud Center volunteer (PA)
- *Support:*
  - David Bressler, Stroud Water Research Center (PA)
- *Meetings:* 1st Thursdays, 11 am (Zoom)

Updates from Local Policy/Practice Workgroup

- **Defining the 'charge' for the workgroup**
  - *Central to the charge:* Exploring the means by which individuals can most effectively engage municipal entities in relation to stream and watershed concerns.



Updates from Local Policy/Practice Workgroup

- **Municipal entities**
  - Environmental Advisory Groups (EACs, ECs)
  - Zoning Hearing Boards
  - Planning Commissions
  - Boards of Supervisors
  - (School Boards)

Updates from Local Policy/Practice Workgroup

- **Engaging municipalities**

Individual	⟷	• Environmental Advisory Groups • Zoning Hearing Boards
Watershed association	⟷	• Planning Commissions • Boards of Supervisors
Grouping of watershed associations	⟷	• Collection of municipalities

•What triggers engagement?
•How do the data map to the needs, interests, and policies of municipalities?
•What might be the exact nature of engagement?

Any questions before we move on?

Today's presentation

- Salt pollution in Valley Creek – the data and the response by Valley Forge Trout Unlimited, Pete Goodman, VFTU

Mentors currently available

- Carol Armstrong (MWS), mnem.np@gmail.com, 610-659-7477
- George Seeds (MWS), geoseeds@verizon.net, 484-886-9586
- Rachel Johnson (Stroud Center), rjohnson@stroudcenter.org, 973-557-8995
- Christa Reeves (Musconetcong Watershed Association/Stroud Center), christa@musconetcong.org, 727-520-5849

Conclusion

Next month's meeting will be on:

Thursday March 16, 2023
2:30-3:30p

Onward!

Stroud Water Research Center contacts:

- David Bressler, dbressler@stroudcenter.org, 410-456-1071
- Shannon Hicks, shicks@stroudcenter.org, 610-268-2153 x267
- Rachel Johnson, rjohnson@stroudcenter.org, 973-557-8995
- Christa Reeves, christa@musconetcong.org, 908-537-7060

Master Watershed Stewards contacts:

- Carol Armstrong, mnem.np@gmail.com, 610-659-7477
- George Seeds, geoseeds@verizon.net, 484-886-9586