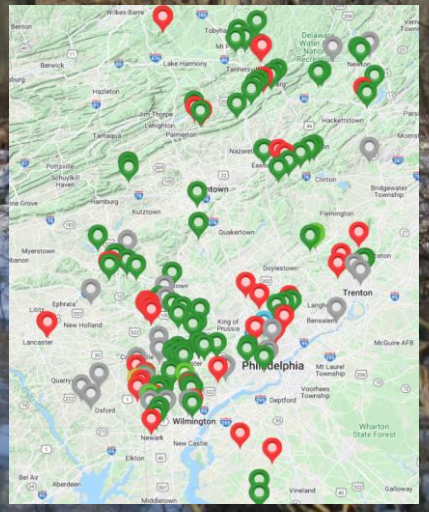
WELCOME!

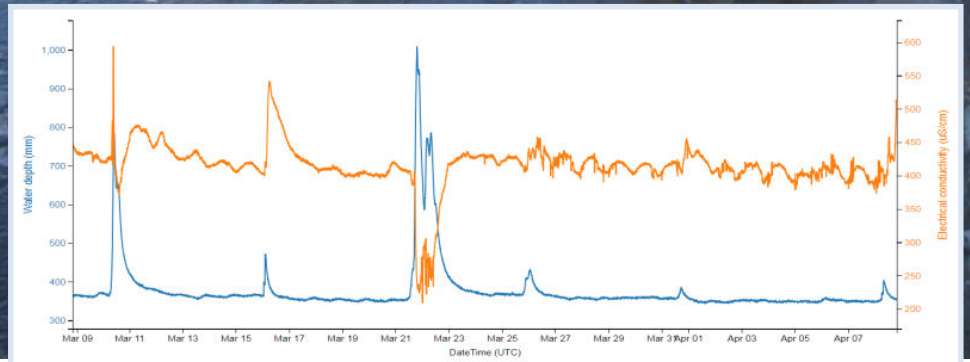
Monthly EnviroDIY in the DRB User Group Meeting

Online, Thursday, January 19, 2023, 2:30-3:30p

EnviroDIY



Monitor My Watershed®



STROUD WATER RESEARCH CENTER

Today's Agenda

1. Introduction
2. Stroud Updates
3. Discussion
    - 2023 monthly meeting topics and presenters
    - Focus group to support learning how to influence local policy and practice
4. Conclusion

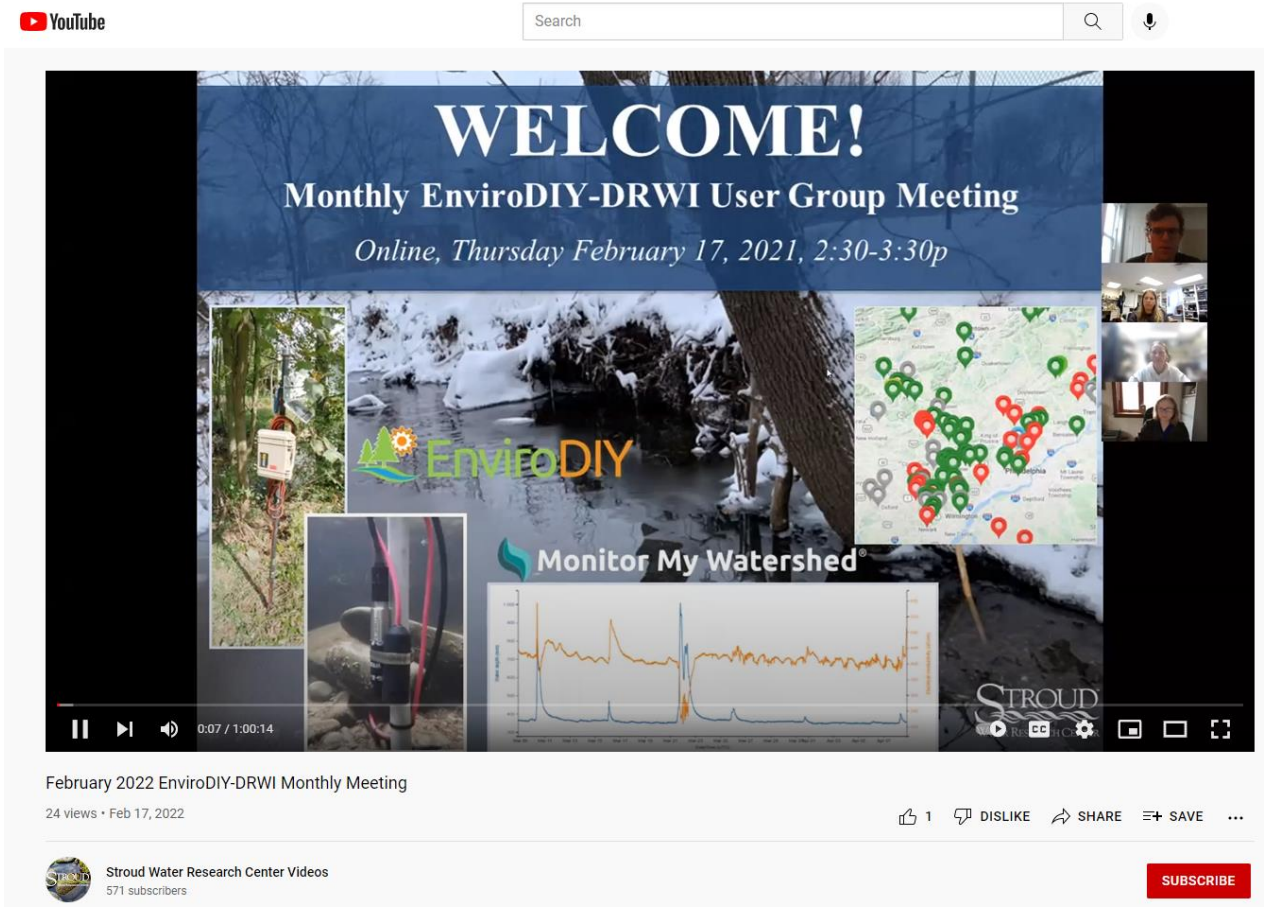
Zoom Orientation

*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**

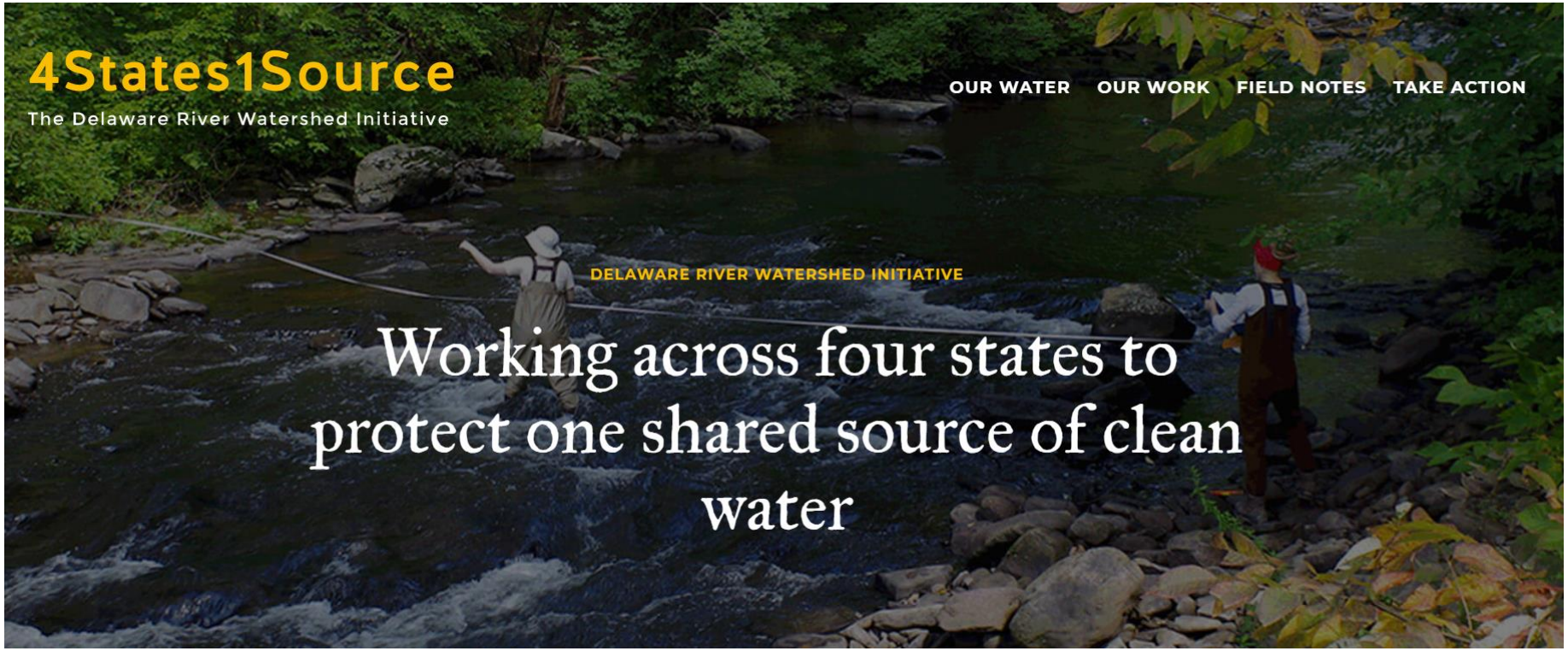
REMINDER

- 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

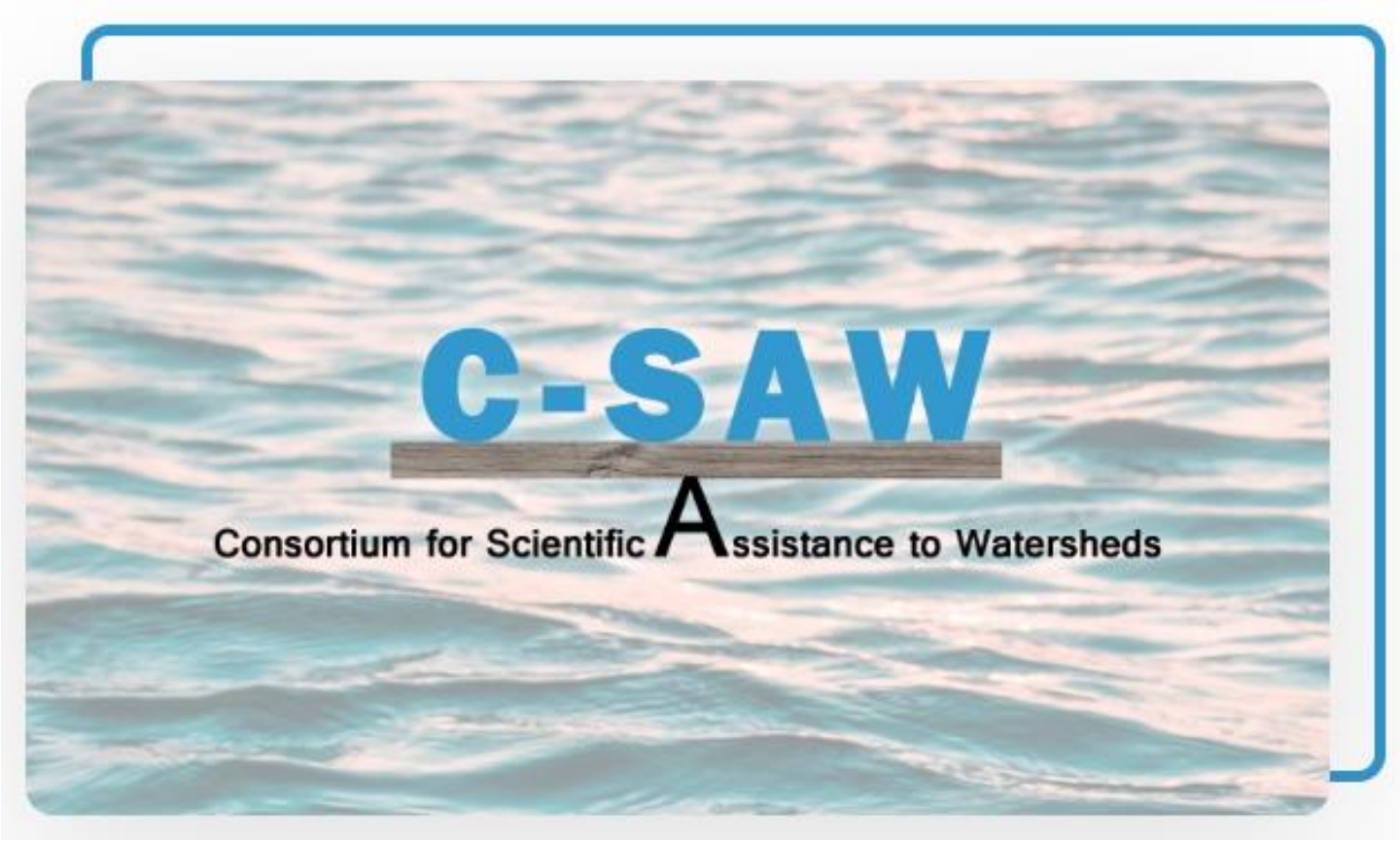
Delaware River Watershed Initiative (DRWI)

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

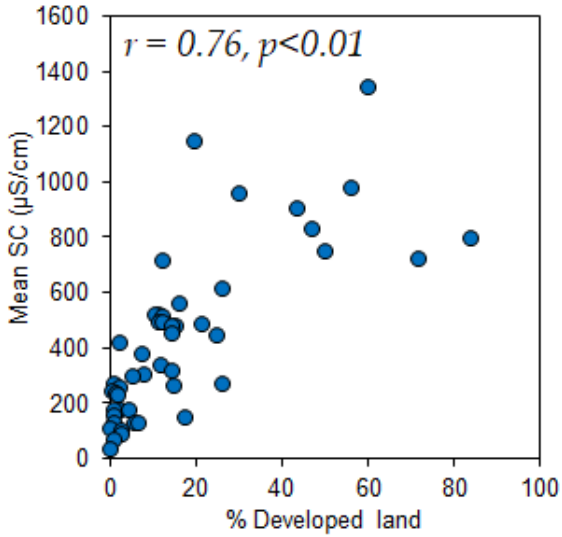
Director of Watershed Restoration

Dr. David Arscott

Executive Director, President
Research Scientist

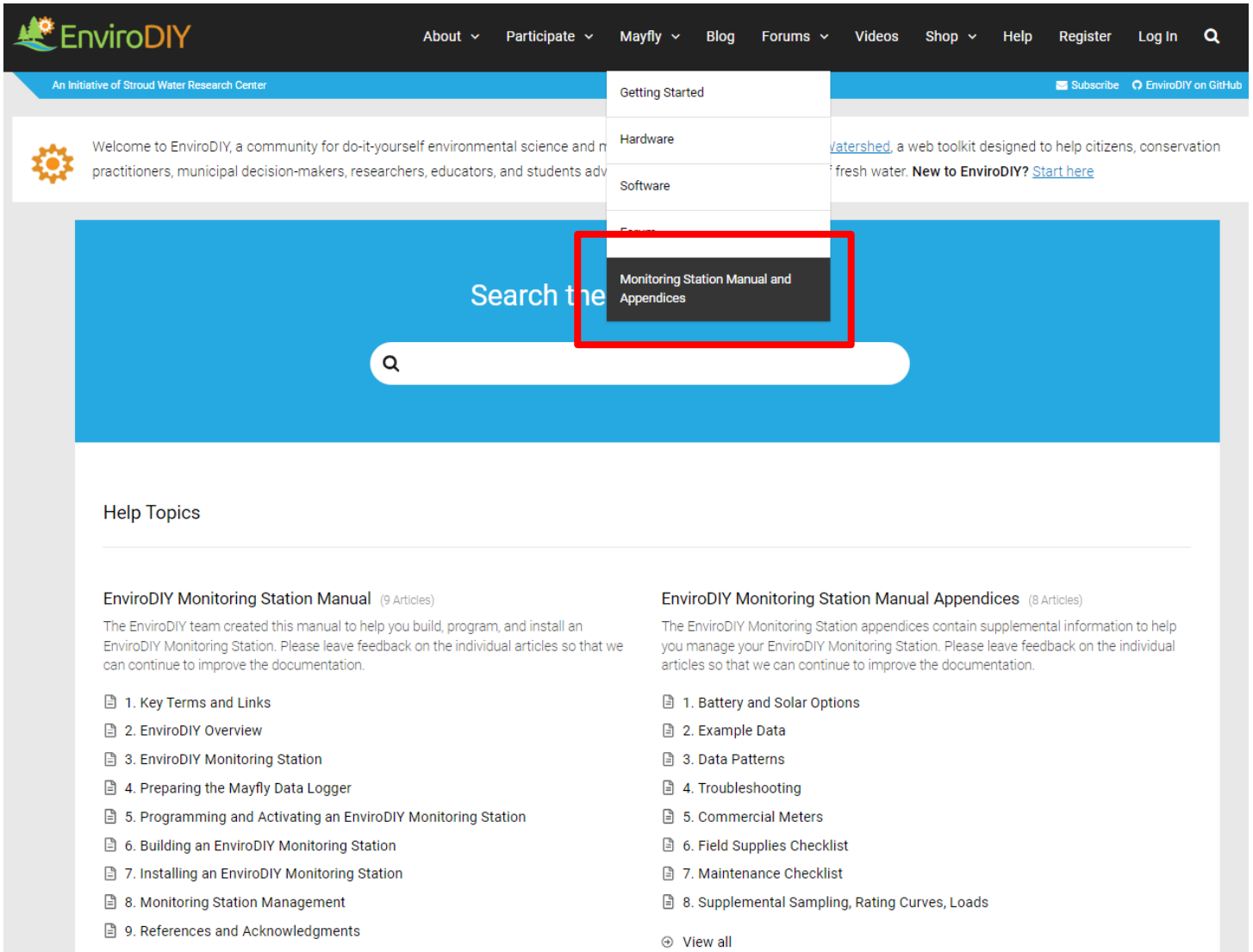
Stroud Center Perspective – EnviroDIY in the DRB

- 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

- Follow-up Questions/Discussion from these meetings and in general
  - Post to ManageMyWatershed.org – Stroud Center current recommendation

Manage My Watershed®

Any questions before we move on?

Discussion – 2023 Monthly Meetings

- What we'll do today:
  - Discuss monthly meeting content and possible presenters
    - *Volunteers needed
  - Discuss and begin organizing an independent work group/subcommittee to focus on learning about local government policy and practice

Discussion – 2023 Monthly Meetings

- **Proposed content for 2023 monthly meetings**
  - Topics tied to EnviroDIY
    - Water Temperature (thermal pollution)
      - Science of stream water temperature and recent advances
      - Monitoring (methods, continuous data, snapshots, etc.)
    - Conductivity (salt pollution)
      - Science of salt pollution and recent advances
      - Monitoring (methods, continuous data, snapshots, etc.)
  - Topics specific to the work being done by groups
  - Miscellaneous and Requested topics – possibly:
    - Review of current data and findings (EnviroDIY, snapshot, etc.)?
    - Hot topics in freshwater science?
    - Pressing issues?

Discussion – 2023 Monthly Meetings

- Planned and possible presentations for 2023:
  - Jan – Plan content for 2023 monthly meetings and organize local policy/practice focus group
  - Feb – Volunteer? 2022-23 winter salt spikes in DRB?
  - Mar – Alan Hunt (Musconetcong Watershed Association), forming a watershed council
  - April – John Jackson (Stroud), science of stream water temperature and recent advances
  - May – Dave Bressler (Stroud), monitoring of water temperature and what to do with the data (tie in guidance from local policy/practice focus group?)
  - June – Volunteer? Requested topic?
  - July – Presentation from local policy/practice focus group
  - Aug – Volunteer? 2023 water temperature in DRB?
  - Sept – John Jackson (Stroud), science of salt pollution and recent advances
  - Oct – Dave Bressler (Stroud), monitoring of salt pollution and what to do with the data (tie in guidance from local policy/practice focus group?)
  - Nov – Volunteer? Requested topic?
  - Dec – Dave Bressler (Stroud), end of year summary and planning for 2024
    - **Meeting is currently Dec 21 – suggestion to move it to Dec 14*

Discussion – 2023 Monthly Meetings

- Planned and possible presentations for 2023:
  - Jan – Planning meeting content for 2023 and local government focus group planning
  - **Feb – Volunteer(s)? 2022-23 winter salt spikes in DRB?**
  - Mar – Alan Hunt (Musconetcong Watershed Association), forming a watershed council
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  - **June – Volunteer(s)? Requested topic?**
  - **July – Presentation from local policy and practice focus group/subcommittee**
  - **Aug – Volunteer(s)? 2023 water temperature in DRB?**
  - Sept – John Jackson (Stroud), science of salt pollution and recent advances
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Discussion – 2023 Monthly Meetings

- Survey on topics and volunteers (enter link in chat)

Discussion – local policy/practice focus group

- Intention for the group:
  - Form a focus group/subcommittee to address the desire of many watershed groups to understand and influence the policies and practices of their local municipalities

Discussion – local policy/practice focus group

- Goals of the focus group/subcommittee would presumably be:
  - Build/document knowledge on how local government functions
  - Build/document knowledge of how to impact local policy/practice
  - Build/document guidance (and repositories of information) on these topics to help others

**Key points:*

- *Foundation of focus group knowledge should be from first hand experience – what has worked and what hasn't*
- *Learn about successes AND failures (of focus group participants and of other experienced people, e.g., speakers/consultants)*

Discussion – local policy/practice focus group

- Composition of the work group
  - People who have first-hand experience in local government functioning, policy/practice
  - People who want to learn and build their capacity to impact local decision-making in policy/practice

Discussion – local policy/practice focus group

- Logistics
  - Ideally, the group is independent but collaborative with the Stroud Center
    - Meet monthly
    - Survey today on participants and potential roles
  - Stroud can help facilitate via initial planning and Zoom account, but ideally the group is lead by folks from watershed groups (i.e., those who interact directly with municipalities)

Discussion – local policy/practice focus group

- Logistics (continued)
  - The focus group/subcommittee could support watershed groups via e.g.:
    - People from watershed groups get involved directly (i.e., attend meetings, provide feedback, pose questions, identify key topics, etc.)
    - Facilitate presentations from outside speakers on applicable topics
    - Provide brief monthly updates at EnviroDIY in DRB monthly meetings
    - Collaboration with EnviroDIY in DRB monthly meeting presenters (e.g., planned April/May and Sept/Oct presentations on science and monitoring of temperature and salt presented by Stroud)
    - One (or maybe two?) presentations per year at EnviroDIY in the DRB monthly meetings

Discussion – local policy/practice focus group

- Possible focus group topics (brainstorm and detail later in the focus group itself)
  - **Water temperature and thermal pollution**
    - **Tie to May temperature monitoring presentation by Stroud*
  - **Salt pollution and management**
    - **Tie to October salt monitoring presentation by Stroud*
  - Using your own data at the local level
  - Using existing data (e.g., emerging pollutants such as PFAS)
  - How can community science help advocacy groups?
  - How does partnership work?
  - Drinking water

Discussion – local policy/practice focus group

- Possible groups to call on for presentations/guidance/assistance:
  - DE Riverkeeper – protecting recreational contact, EV upgrades, habitat fragmentation (road crossings and pipelines)
  - Clean Water Action – history of Buffers 100, policy priorities
  - American Littoral Society – recreational contact
  - PennFuture
  - Pennsylvania Environmental Council (PEC)
  - DE Nature Society
  - League of Conservation Voters
  - Sierra Club PA
  - Association of New Jersey Environmental Commissions (ANJEC)
  - Others?

Discussion – local policy/practice focus

- Survey: (enter link in chat)
  - Sign up (Y/N) to be on email distribution list
  - Sign up (Y/N/Maybe) to serve as an organizer/leader of the group
  - List anyone else you know of that would like to be an organizer/leader

Focus group next steps

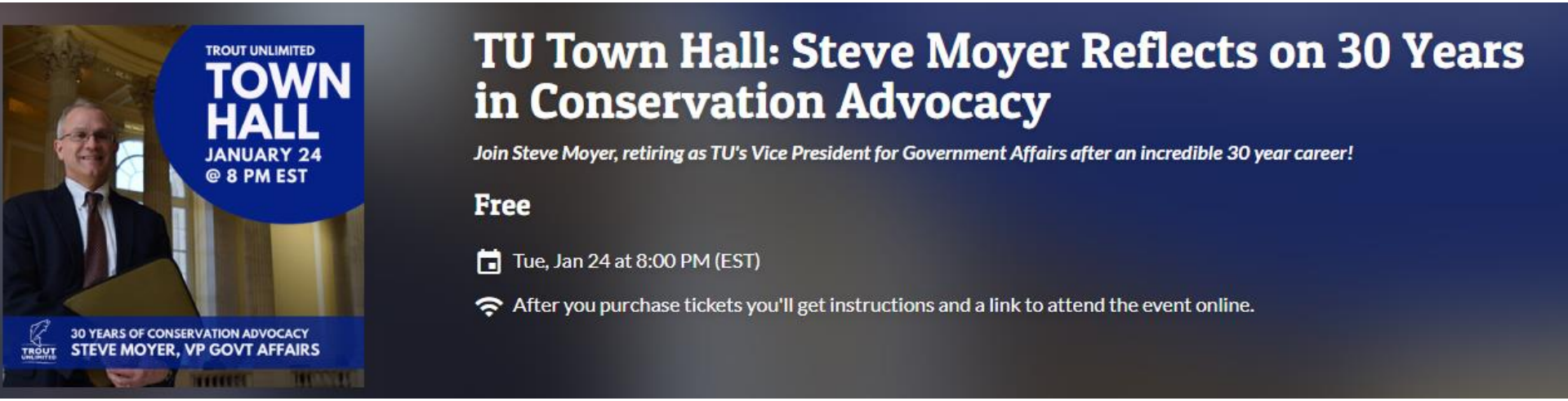
- Plan a first meeting especially for those who want to serve as leaders/organizers
- Plan a standard monthly meeting date and time
- Solidify mission/vision/unifying goals
  - Consider if/who focus group reports to – e.g., possibly quarterly reports to EnviroDIY in DRB network
- Plan specific topics, e.g.,
  - Water temperature guidance by April/May
  - Salt guidance by Sept/Oct
  - Etc., lots of other topics according to perceived needs as identified by focus group participants

- *A name for the group???*
- *What type of group is it? "Focus Group", "Subcommittee", etc.*

Focus group type material

- Watershed Allies Training (Musconetcong Watershed Association) on Thursday, February 16 (Christa, post link in chat)
  - MWA Executive Director, Thomas Dallessio, will be giving a **workshop on municipal engagement**
  - In-person, at MWA River Resource Center
  - The first in a new series MWA will be hosting to help build technical skills of stakeholders

Focus group type material



Focus group type material

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 February 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, EnviroDIY-DRWI contacts:

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