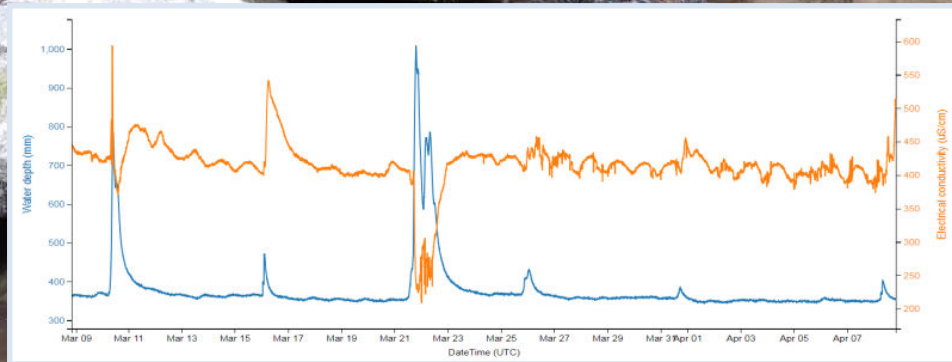
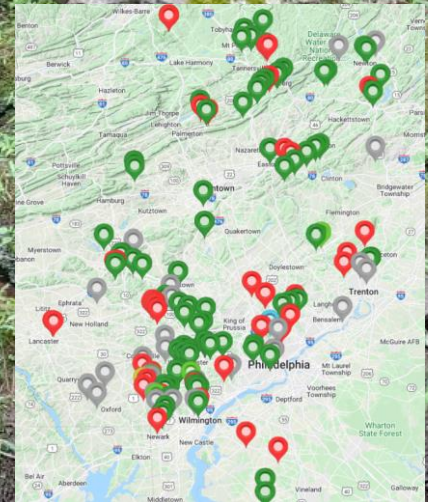


# WELCOME!

## EnviroDIY and monitoring in the DRB monthly meeting

*Online, Thursday June 20, 2024, 2:30-3:30p*



STROUD  
WATER RESEARCH CENTER



# These Monthly Meetings

- Learning, communication, discussion, questions about:
  - **EnviroDIY monitoring stations** and associated data (Conductivity, Water Temperature, Water Depth, Turbidity)
  - **Stream monitoring** in general and specifics, e.g., synoptic sampling (“snapshots”)
  - **Freshwater ecology** – concepts, data, etc.
  - **Data to Action** – using data to inform watershed management
  - **Tools and Resources** for understanding watersheds, e.g., Wikiwatershed tools
  - **Other** related watershed topics, e.g., conservation, environmental education

# Today's Agenda

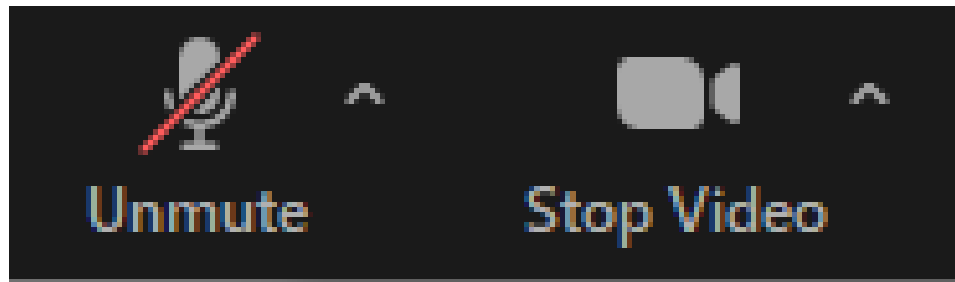
1. Introduction
2. Stroud Updates
3. Local Policy/Practice Workgroup Updates
4. Presentation – **Comprehensive update from the Local Policy and Practice Workgroup**
5. Discussion
6. Conclusion



# Zoom Orientation



**\*Meeting is being recorded**



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

# These Monthly Meetings

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

YouTube

Search

**WELCOME!**  
**Monthly EnviroDIY-DRWI User Group Meeting**  
*Online, Thursday February 17, 2021, 2:30-3:30p*

EnviroDIY

Monitor My Watershed®

STROUD

February 2022 EnviroDIY-DRWI Monthly Meeting

24 views • Feb 17, 2022

1 DISLIKE SHARE SAVE ...

Stroud Water Research Center Videos  
571 subscribers

SUBSCRIBE

# These Monthly Meetings

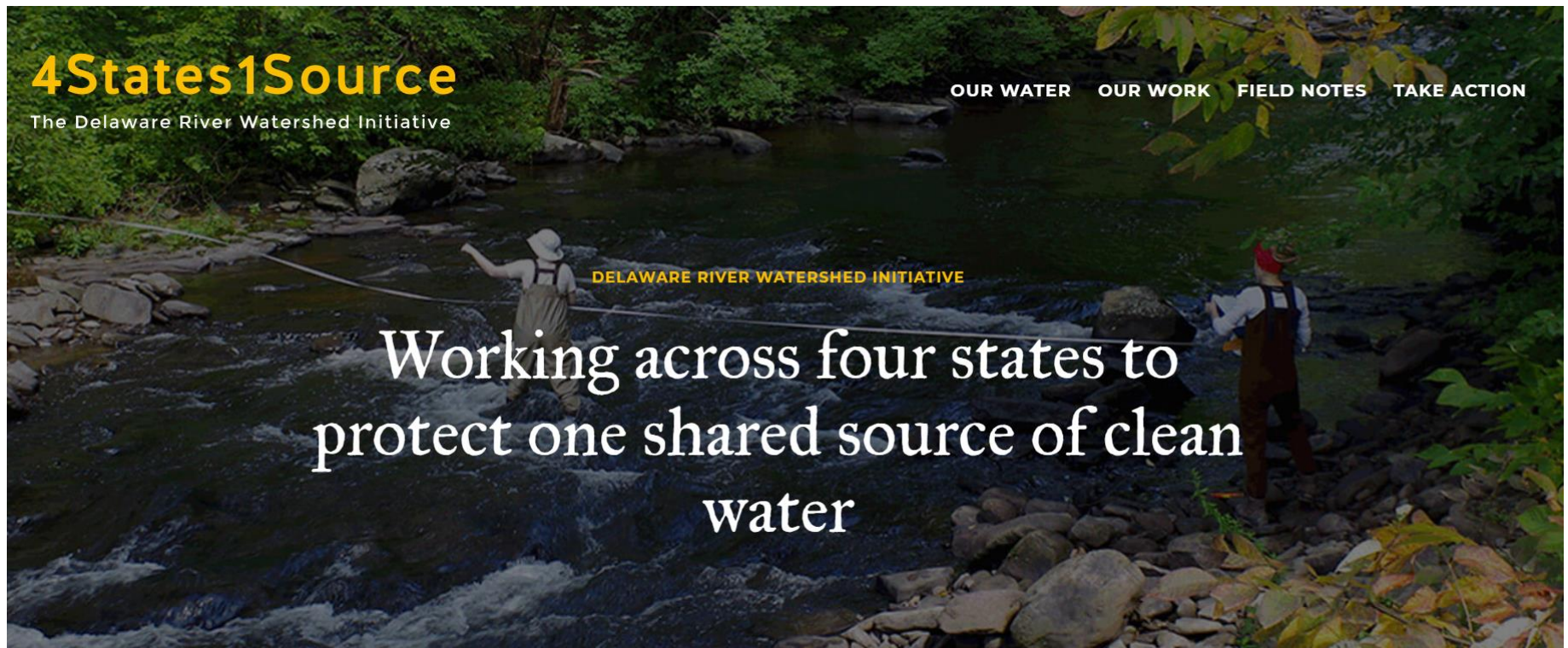
- Every third Thursday of the month
- 2:30-3:30p
- Zoom link will remain the same:  
<https://us02web.zoom.us/j/81881801310?pwd=eUFmbXZLbmRibVcxa1dtNVhzRmNvZz09>
- Reminder email one week prior to each month's meeting
  - All are welcome, please share
  - And let us know if others should be added

# 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)

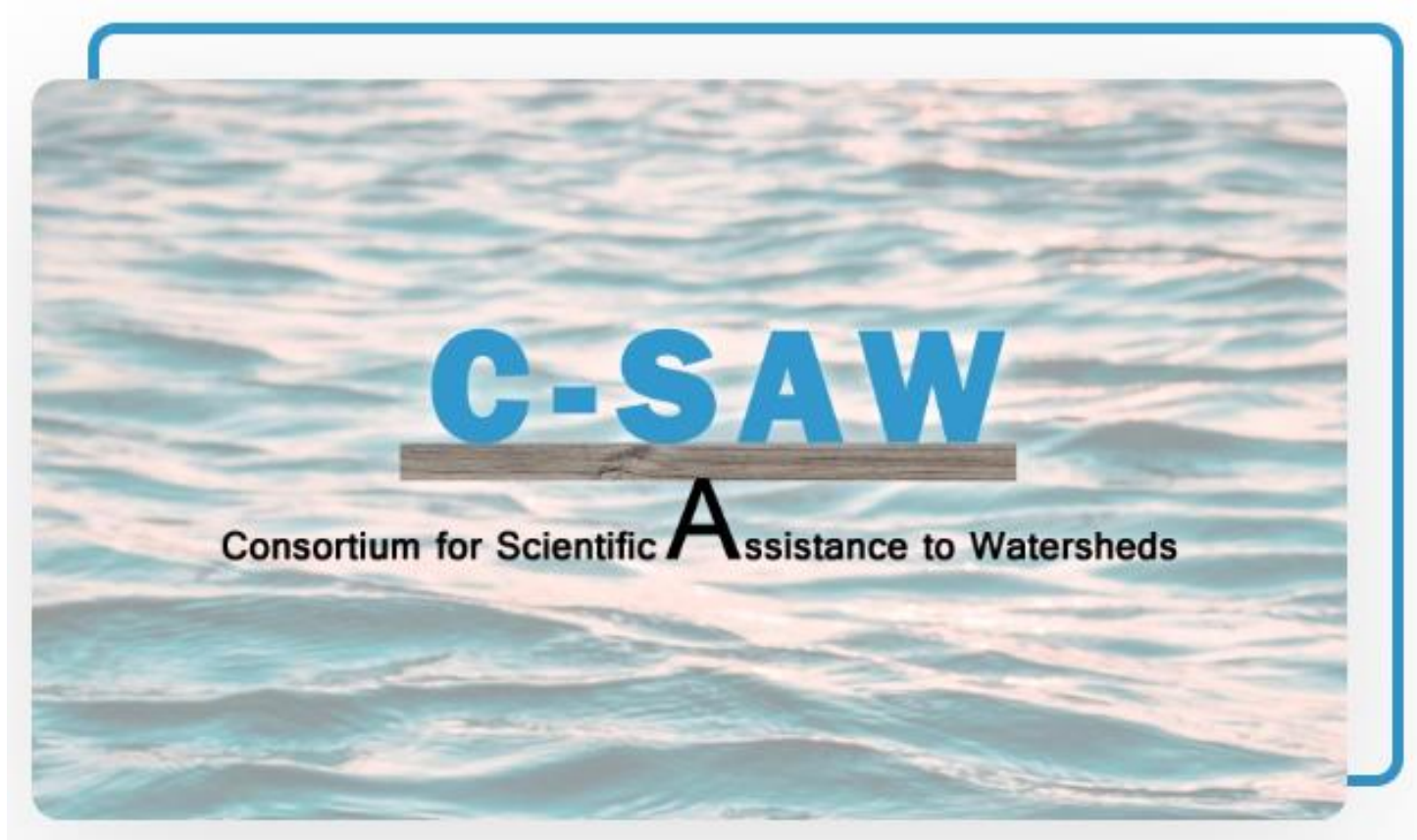
<https://4states1source.org/>





# C-SAW

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



# Stroud Center project personnel

## Stroud Center team:

David Bressler



Community science  
facilitator

Christa Reeves



Northern DRB technician  
and collaborator

Shannon Hicks



Research Engineer,  
Mayfly and EnviroDIY  
Inventor/Designer

# Stroud Center project personnel

## Master Watershed Steward Facilitators:

Carol Armstrong



Joe Debes, 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

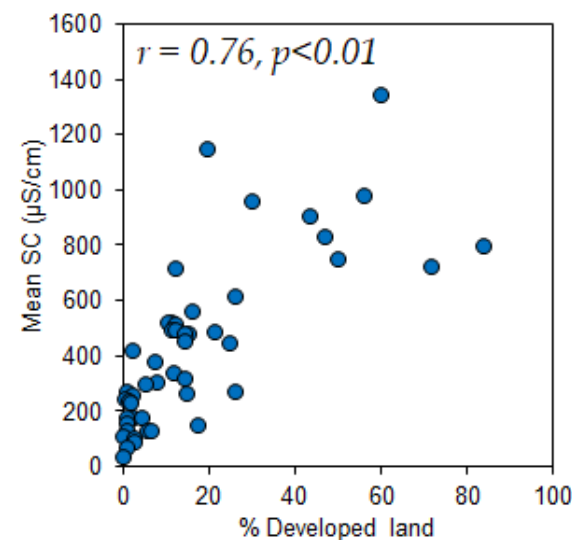


Executive Director, President  
Research Scientist



# 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



# Updates

- Updates from the Stroud Center on EnviroDIY, science and monitoring, communications, etc.

# Stroud Center support

- Stroud Center community science support
  - Salt (chloride and conductivity) and temperature synoptic sampling (“snapshots”)
  - Monitoring project design, methods, etc.
  - Data interpretation, evaluation
  - Watershed education
  - Other – lots of other freshwater ecology topics
- *\*Please feel free to be in touch*

# If you want, send your photos and stories



## Email or Text to:

- Diane Huskinson ([dhuskinson@stroudcenter.org](mailto:dhuskinson@stroudcenter.org); 717-383-1179)
- Dave Bressler ([dbressler@stroudcenter.org](mailto:dbressler@stroudcenter.org); 410-456-1071)



# EnviroDIY Workshop, August 13 and 14

<https://www.envirodiy.org>

<https://www.envirodiy.org/event/learn-diy-electronics-for-environmental-monitoring/>

## What Will the Workshop Cover?

- Programming electronic data loggers and connecting them to environmental sensors.
- Transmitting data from data loggers to web-based data portals via cellular radio.
- Assembling data loggers, sensors, cellular radios, and solar panels into monitoring stations.
- Deploying, maintaining, and troubleshooting monitoring stations.

## What Are the Prerequisites?

You should answer **yes** to all of the following questions and be comfortable using spreadsheet software. You don't need prior computer programming experience.

- Do you need more customized or less expensive monitoring equipment than commercial vendors provide?
- Do you enjoy learning hands-on electronic skills, computer coding, and web-based tools?
- Are you motivated to continue learning DIY skills on your own using internet resources?
- Can you accommodate the extra work required for DIY versus commercially available products?

## What Do I Need to Bring?

We loan attendees all of the electronics and hardware needed to follow the classroom curriculum. You should wear comfortable clothes and shoes for walking trails along White Clay Creek. Lunch will be provided.

## What Should I Expect From the Workshop?

- You'll get hands-on experience using data loggers, sensors, cellular radios, and laptop computers.
- You'll work in groups of two to program and assemble the provided electronic hardware.
- You'll learn how to find and use online resources on your own after the workshop.

I monitoring equipment.  
hers from environmental

## What Should I *Not Expect* From the Workshop?

- You won't get one-on-one support from the Stroud Center after the workshop. We can't guarantee your ability to monitor exactly where or how you want.
- You won't be an expert on DIY electronics after the workshop.
- You won't learn how to make or fix sensors.

# Local Policy/Practice Workgroup

- **Current leadership:**

- Ian Brastow, Lopatcong Creek Initiative/New Jersey Highlands Coalition (NJ)
- Dave Manning, PA Master Watershed Steward and Schuylkill Water Steward with Green Valleys Watershed Association (PA)
- Steve Tricarico, Tulpehocken Creek Watershed Association, member Bern Township planning committee (PA)
- Christa Reeves, Musconetcong Watershed Association (NJ)
- Alex Jackson, Township Supervisor (PA)
- Joe Debes, PA Master Watershed Steward and Stroud Center volunteer (PA)
- Carol Armstrong, PA Master Watershed Steward (PA)
- Tali MacArthur, PA Environmental Council (PEC)/PA Organization for Watersheds and Rivers (POWR)(PA)

- **Support:**

- David Bressler, Stroud Water Research Center (PA)

- ***Meetings: 1<sup>st</sup> Thursdays, 11:00a – 12:30p (Zoom, <https://zoom.us/j/5889670619>)***

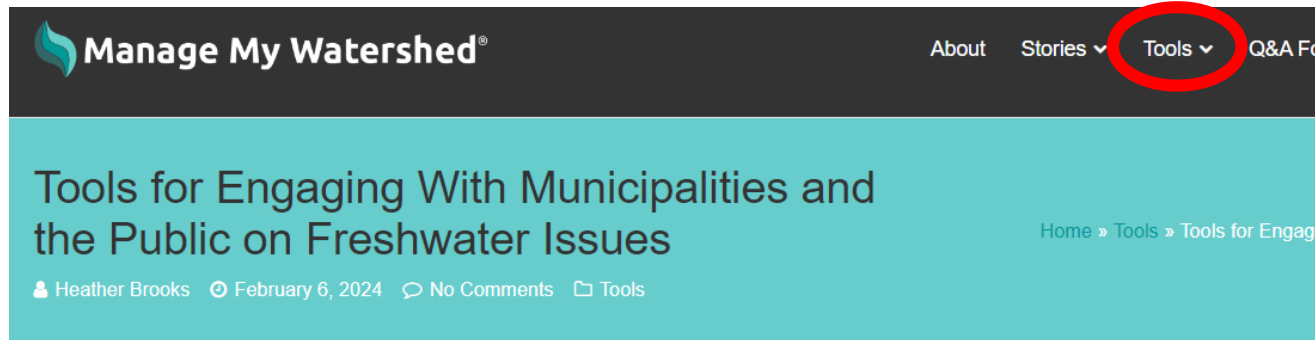
# Updates from Local Policy/Practice Workgroup

## Guidance Document Updates

- How to engage with municipal leaders (Ready for use)
- Putting Stream Temperature Data To Work (Ready for use)
  - One-pagers (some available but not posted yet, some in development)
- Putting Conductivity Data To Work (In development)
  - One-pagers (some available but not posted yet, some in development)

# Updates from Local Policy/Practice Workgroup

Two guidance documents are now available: <https://managemywatershed.org/>



The Delaware River Basin Policy and Practice Workgroup has developed a number of documents to provide foundational science references for environmental advocates who are collecting stream data and who wish to communicate results to local government officials.

The target readership for these documents is the stream monitoring community in the Delaware River Basin, but the workgroup hopes others may benefit as well.

The workgroup strongly believes that environmental advocates must have a clear understanding of the science and the issues under discussion. Therefore, the documents are written with sufficient detail and rigor to enable advocates to engage in confident and informed dialogue.

## Guidance Documents

- [How to Engage With Municipal Leaders](#)
- [Putting Stream Temperature Data to Work](#)

## Feedback

If you have questions or comments about the documents, please leave a reply on this post.



# Updates from Local Policy/Practice Workgroup

Example data communication products: <https://managemywatershed.org/>

## Example Communication Materials

Though some are geography-specific, these flyers, brochures, fact sheets, and presentations can serve as inspiration for producing materials to share with municipal governments and the public.

### Brochures, Fact Sheets, and Flyers

- [Be Winter Salt Smart Infographic](#)
- [Brodhead Creek: Are Waters Getting Too Warm for Trout?](#)
- [Map of Salt in Streams](#)
- [Rising Stream Temperatures: Why You Should Care](#)
- [Salt is Killing Valley Creek \(bifold brochure\)](#)
- [Salt is Killing Valley Creek \(for electronic distribution\)](#)
- [Save Angelica Creek From Road Salt](#)
- [Save Our Streams From Road Salt](#)
- [Save Pennypack Creek From Road Salt](#)
- [Temperature Thresholds for Trout Species](#)

### PowerPoint Presentations

- [How Much Road Salt is Too Much?](#)
- [Save Angelica Creek From Road Salt](#)
- [Summer Water Temperature and Chloride Snapshot Data for Sites in the Brodhead Watershed](#)
- [Summer Water Temperature Data From Continuous Monitoring Locations in the Brodhead Watershed](#)

## Feedback

If you have questions or comments about the documents, please leave a reply on this post.

managemywatershed.org  
Dave Bressler



[How to See a Stream: Part One, Stream Health Dynamics](#)  
Dave Bressler



[An Interview With Pete Goodman](#)  
Carol Armstrong

## Recent Tools

[Pennsylvania Watershed Organizations](#)

[Interactive Map](#)  
Scott Ensign



[USGS StreamStats](#)  
Dave Bressler

[Water Reporter](#)  
Scott Ensign

[Water Data Collaborative](#)  
Scott Ensign



Any questions before we move on?





# Today's Presentation

## **Comprehensive update from the Local Policy and Practice Workgroup**



Ian Brastow



Carol Armstrong

# Mentors currently available

- Carol Armstrong (MWS), [mnem.np@gmail.com](mailto:mnem.np@gmail.com), 610-659-7477
- Joe Debes (MWS), [j\\_debes@msn.com](mailto:j_debes@msn.com),
- Christa Reeves (Musconetcong Watershed Association/Stroud Center), [christa@musconetcong.org](mailto:christa@musconetcong.org), 727-520-5849



# Conclusion

Next month's meeting will be on:

**Thursday July 18, 2024**  
**2:30-3:30p**



# Onward!

## Stroud Water Research Center contacts:

- David Bressler, [dbressler@stroudcenter.org](mailto:dbressler@stroudcenter.org), 410-456-1071
- Shannon Hicks, [shicks@stroudcenter.org](mailto:shicks@stroudcenter.org), 610-268-2153 x267
- Christa Reeves, [christa@musconetcong.org](mailto:christa@musconetcong.org), 908-537-7060

## Master Watershed Stewards contacts:

- Carol Armstrong, [mnem.np@gmail.com](mailto:mnem.np@gmail.com), 610-659-7477
- George Seeds, [geoseeds@verizon.net](mailto:geoseeds@verizon.net), 484-886-9586