**WELCOME! EnviroDIY and monitoring in the DRB monthly meeting** *Online, Thursday, October 19, 2023, 2:30-3:30p* 

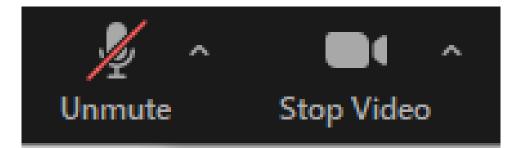


# Today's Agenda

- 1. Introduction
- 2. Stroud Updates
- 3. Presentation Monitoring salt pollution in streams, David Bressler
- 4. Discussion
- 5. Conclusion



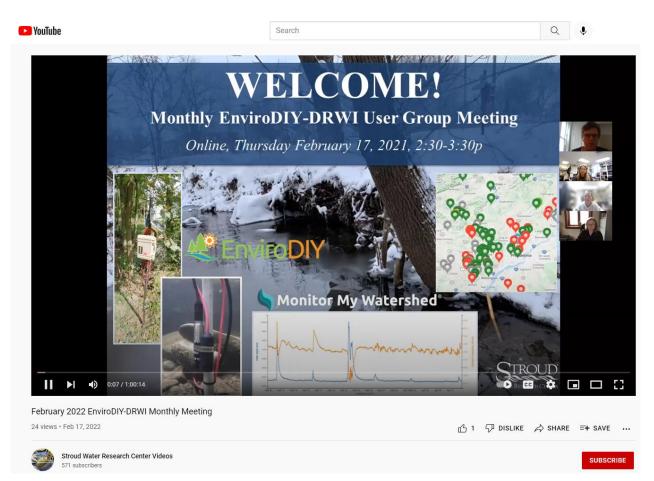
# \*Meeting is being recorded



\*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: <u>https://us02web.zoom.us/j/81881801310?pwd=eUFmbXZLbmRibV</u> <u>cxa1dtNVhzRmNvZz09</u>
- 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/

**4States1Source** 

The Delaware River Watershed Initiative

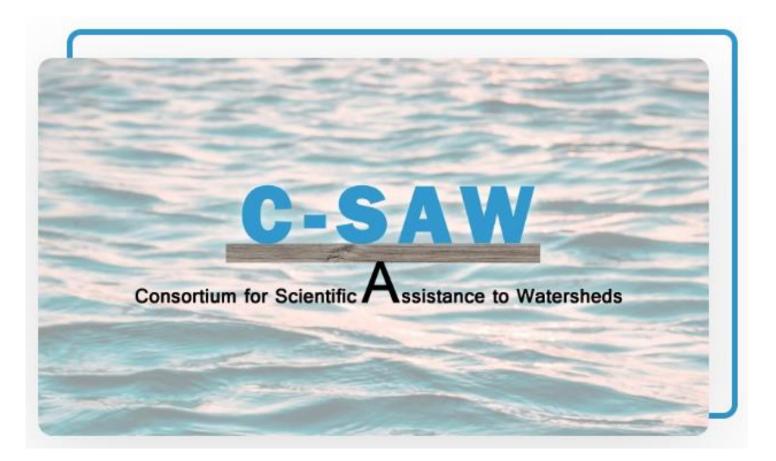
OUR WATER OUR WORK FIELD NOTES TAKE ACTION

DELAWARE RIVER WATERSHED INITIATIVE

## Working across four states to protect one shared source of clean water



## 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
  - Science
  - Monitoring
  - Watershed management

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

# 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:





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

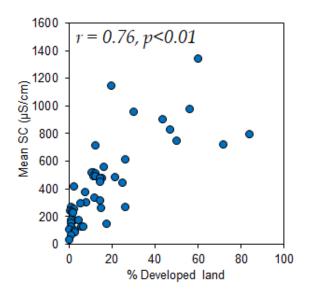


Executive Director, President Research Scientist

## 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.

# Fall EnviroDIY tech

- Battery power may be an issue for another month or so
  - Less light, still leaves on trees
  - Once leaves fall low battery should resolve in most cases
  - Can cycle batteries in the meantime
    - Talk to Stroud if you need to purchase a battery
- Turbidity sensors may start fouling when leaves fall





Freshwaters Illustrated

# Support on Snapshots

 Stroud Center support on synoptic sampling events (aka snapshots and blitzes)

• Salt (chloride and conductivity)

- Water temperature

• \*Please be in touch if you would like support in doing this type of monitoring

# If you want, send your photos and stories



Stroud Water Research Center @StroudCenter

Master Watershed Stewards George Seeds and Joe Debes are gearing up for #WorldWaterDay by volunteering to maintain #EnviroDIY Monitoring Stations. The stations collect continuous #waterquality #data. @WaterDataCollab #monitorwater #4states1source #DelawareRiver #DelRiverWatershed



9:02 AM · Mar 21, 2023 · 710 Views

#### Email or Text to:



Stroud Water Research Center @StroudCenter

#CommunityScience is helping to save our streams from #RoadSalt! Learn how at #WatershedCongress with @StroudCenter @WillistownCT @MuskyWatershed and Valley Forge Trout Unlimited. Register at classy.org/event/2023-wat... #citizenscience @DelRiverkeeper



Musconetcong Watershed Association will present

"Community Science Approaches to Our Salty Stream Problem."

Saturdau, March 25 Montgomery County Community College, Pottstown, PA

5:01 PM · Feb 20, 2023 · 264 Views

#### Tweet



Stroud Water Research Center @StroudCenter

Months after the icy conditions that brought the spreading of #deicer & #salt spikes in Tookany Creek that were saltier than seawater, an army of volunteers descended upon dozens of sites in small streams that feed the #DelawareRiver. Read why: stroudcenter.org/news/why-volun... #roadsalt



11:04 AM · Feb 17, 2023 · 284 Views

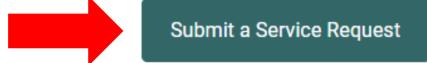
- Diane Huskinson (dhuskinson@stroudcenter.org; 717-383-1179)
- Dave Bressler (<u>dbressler@stroudcenter.org</u>; 410-456-1071)

# **EnviroDIY Service Request Form**

## https://wikiwatershed.org/drwi/

## EnviroDIY Monitoring Station Service Requests

Use this form to report technical issues that require assistance from the Stroud Center team.



# EnviroDIY Field Visit Data Form entry

https://wikiwatershed.org/drwi/

## EnviroDIY Field Visit Data



Enter Field Visit Data

- <u>View field visit data</u>
- View older data (7/18/2017 to 7/24/2018)

EnviroDIY Field Visit Data Sheets (Printable)

- EnviroDIY Field Visit Data sheet (blank)
- EnviroDIY Field Visit Data sheet tutorial

# EnviroDIY Field Visit Data Form entry

## https://wikiwatershed.org/drwi/

## Fill out any time a station is visited



#### EnviroDIY Field Visit Data

Enter all data online: wikiwatershed.org/drwi; password: drwi www.stroudcenter.org

NI.	-	-	-	101	
N	a	m	e	(S)	•

Site ID: Stream Name: GPS (Lat/Long): Photos? Yes/No

Precipitation last 24 Hours? Yes/No Amount:

General Notes/ Photo Descriptions:

Location:				
Date:	Arrival Time:	AM/PM?	*EST/EDT	
*EST=Eas (Daylight S	tern Standard Time; El Savings)	DT=Eastern Da	aylight Time	

SENSOR CLEANING (Recommended frequency: weekly or biweekly; monthly if only CTD sensor)									
leaned Sensors? Yes/No If Yes, exact time:	AM/PM?	EST/EDT?	*Clean >5 min. before grab sampling						



#### **EnviroDIY Field Visit Data**

If you have trouble with this form, please contact webmaster@stroudcenter.org.

Please enter your email so we can send you a copy of your submitted data and a link for editing

dbressler@stroudcenter.org Switch account

B

\* Required

Email \*

Your email

Name(s)

Your answer

Site ID \*

\*Cleaned Sensors? Yes/No If Yes, exact time

# EnviroDIY and monitoring resources

Guidance materials - <u>https://wikiwatershed.org/drwi/</u>

SwikiWatershed <sup>®</sup>	About	Model	Monitor	Help	News ~	Curricula	DRWI	Videos	Contact	Log in	Q	
Web Tools Advancing Knowledge and Stewardship of Fresh Water								f Like Us	🎔 Follow Us	🖂 Subscribe	🗘 GitHub	

Y WikiWatershed is an initiative of Stroud<sup>™</sup> Water Research Center. The Stroud Center seeks to advance knowledge and stewardship of freshwater systems through global research, education, and watershed restoration.

Home » Delaware River Watershed Initiative Resources

#### Delaware River Watershed Initiative Resources

The Delaware River Watershed Initiative (DRWI) is a cross-cutting collaboration that is working to <u>conserve and restore</u> the streams that supply drinking water to 15 million people in New York, New Jersey, Pennsylvania, and Delaware. In direct support of this initiative, <u>Stroud Water Research Center</u> is facilitating efforts to improve the capacity of watershed groups to conduct scientific investigations associated with DRWI projects, as well as to build general knowledge on the ecology of their watersheds and the broader basin.

These resources were created by the Stroud Center to assist DRWI efforts *specifically focused on stream monitoring using <u>EnviroDIY Monitoring Stations</u>. They may also be of interest to community scientists and watershed groups working in other locations.* 

Shortcuts to General Resources

- EnviroDIY Field Visit Data
- EnviroDIY Monitoring Station Help Resources
- <u>Salt Monitoring Resources</u>
- <u>Data and Data Visualization Resources</u>

Shortcuts to Meetings, Workshops, Conferences

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

# Next month's presentation (Nov 16)

# November 16 – Student presentations:

- Jay Byrd (Student/Intern, Heinz NWR)
- Elisabeth Ruschmann (Student, Princeton Univ)
- Saranya Anantapantula (Student, Spring-Ford High School)
- Toby Broun (Student, Saucon Creek Watershed Association)

# Coming months

• Dec 14 – End of year summary and planning for 2024, Dave Bressler (Stroud), Others???

## Local Policy/Practice Workgroup

#### <u>Current leadership:</u>

- 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, Brodhead Watershed Association (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, <u>https://zoom.us/j/5889670619</u>)

## Local Policy/Practice Work Group

### **Short Term Charge:**

To develop the most effective way of employing stream monitor data – conductivity, temperature, depth, and sometimes turbidity – and related measures to advise and otherwise influence municipal entities. The charge includes an emphasis on stream quality in relation to land use and development.

# Updates from Local Policy/Practice Workgroup

## **Deliverable Updates**

Temperature

- Guidance Document Putting Stream Temperature
  Data To Work (Last Stages of Internal Review)
- One-pager

## Municipal Interactions

 Document 5 – Municipal Engagement (Open External Review [Incorporating information from additional states])

Conductivity

• *Guidance Document (Outline by November)* 

# Updates from Local Policy/Practice Workgroup

## Putting Stream Temperature Data to Work

Update

- Final Stages of Internal Review
  - *Members of the LPPWG will be reading and suggesting edits*
  - Reaching out to partners for external review
- Discussion of making a 1-page executive document and supporting materials
- <u>Question for the Group</u> Would a temperature fact sheet be helpful? If so, what use cases would you tend to use a fact sheet for?

# Updates from Local Policy/Practice Workgroup

#### How to Engage with Municipal Leaders (aka Document 5) Update

- Openly available for external review
  - Should be distributed soon via Stroud
- There will be a feedback survey which will document requested changes or suggestions
- The document will "live" in one place (<u>https://wikiwatershed.org/drwi/</u>) but be distributed via partners

# Any questions before we move on?

# Today's Presentation

# October 19 – Monitoring salt pollution in streams



#### David Bressler, Stroud Water Research Center

# Mentors currently available

- Carol Armstrong (MWS), <u>mnem.np@gmail.com</u>, 610-659-7477
- Christa Reeves (Musconetcong Watershed Association/Stroud Center), <u>christa@musconetcong.org</u>, 727-520-5849

# Conclusion

Next month's meeting will be on:

# Thursday November 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
- 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