

WELCOME!

Monthly EnviroDIY in the DRB User Group Meeting

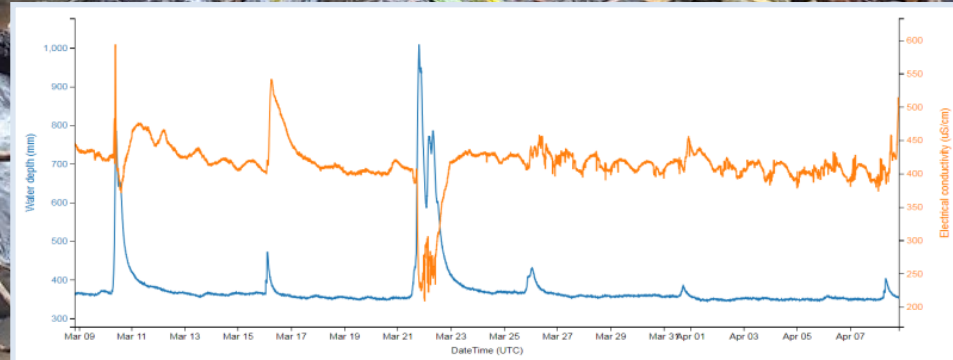
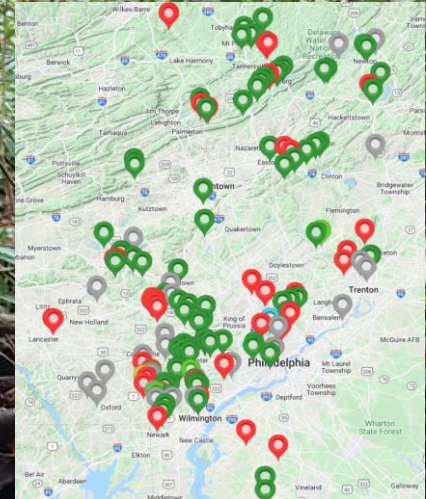
Online, June 16, 2022, 2:30-3:30p



EnviroDIY



Monitor My Watershed®



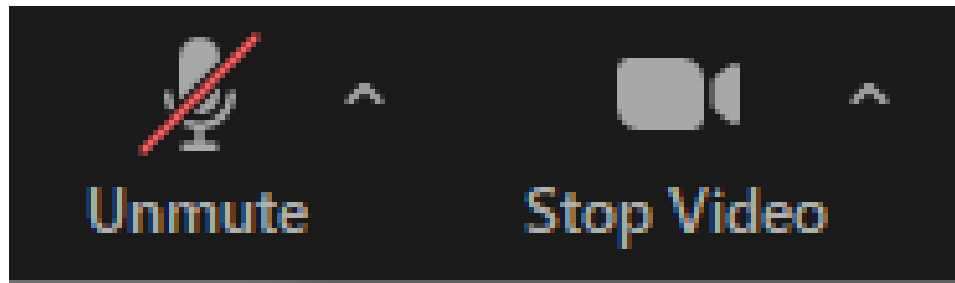
STROUD
WATER RESEARCH CENTER



Zoom Orientation



***Meeting is being recorded**



***Mute unless asking question**

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

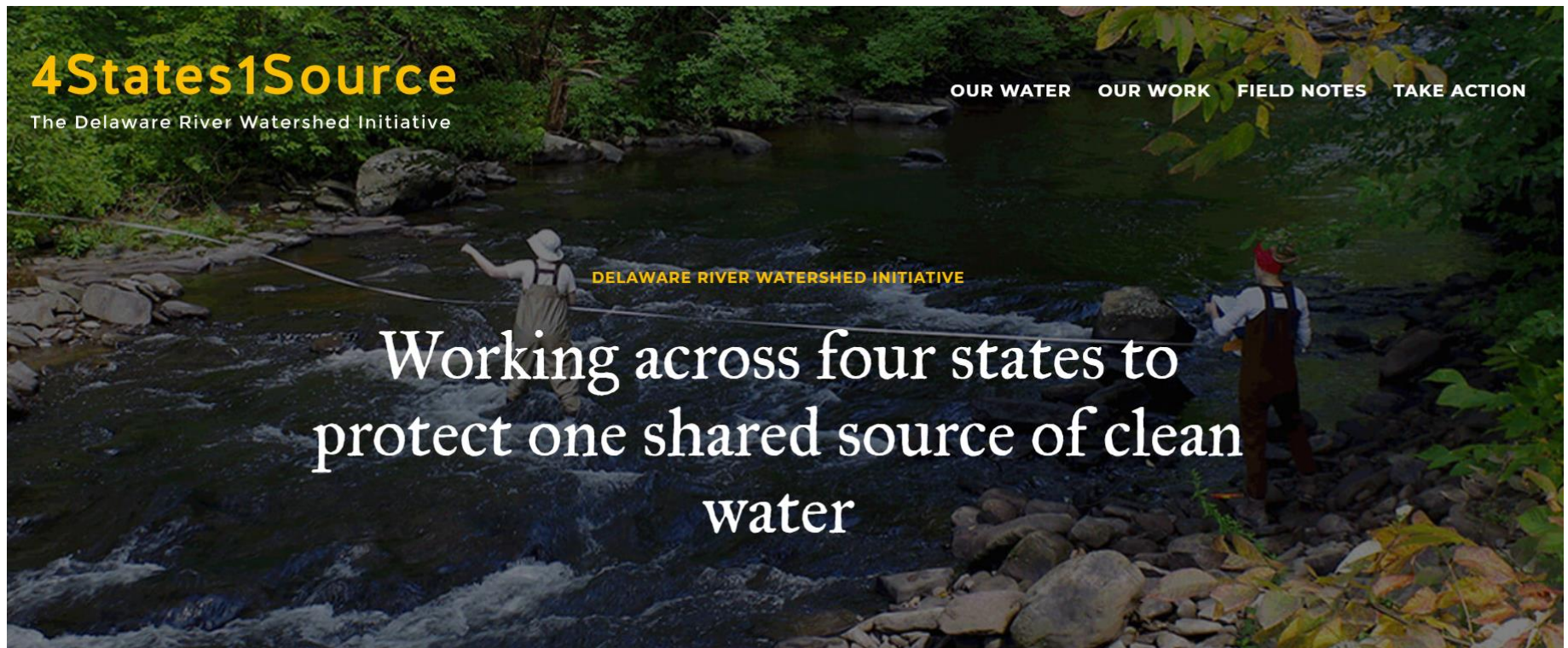
- Every third Thursday of the month
- 2:30-3:30p
- Zoom link will remain the same:
<https://us02web.zoom.us/j/81881801310?pwd=eUFmbXZLbmRibVcxa1dtNVhzRmNvZz09>
- Reminder email one week prior to each month's meeting
 - All are welcome, please share
 - **And let us know if others should be added**

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

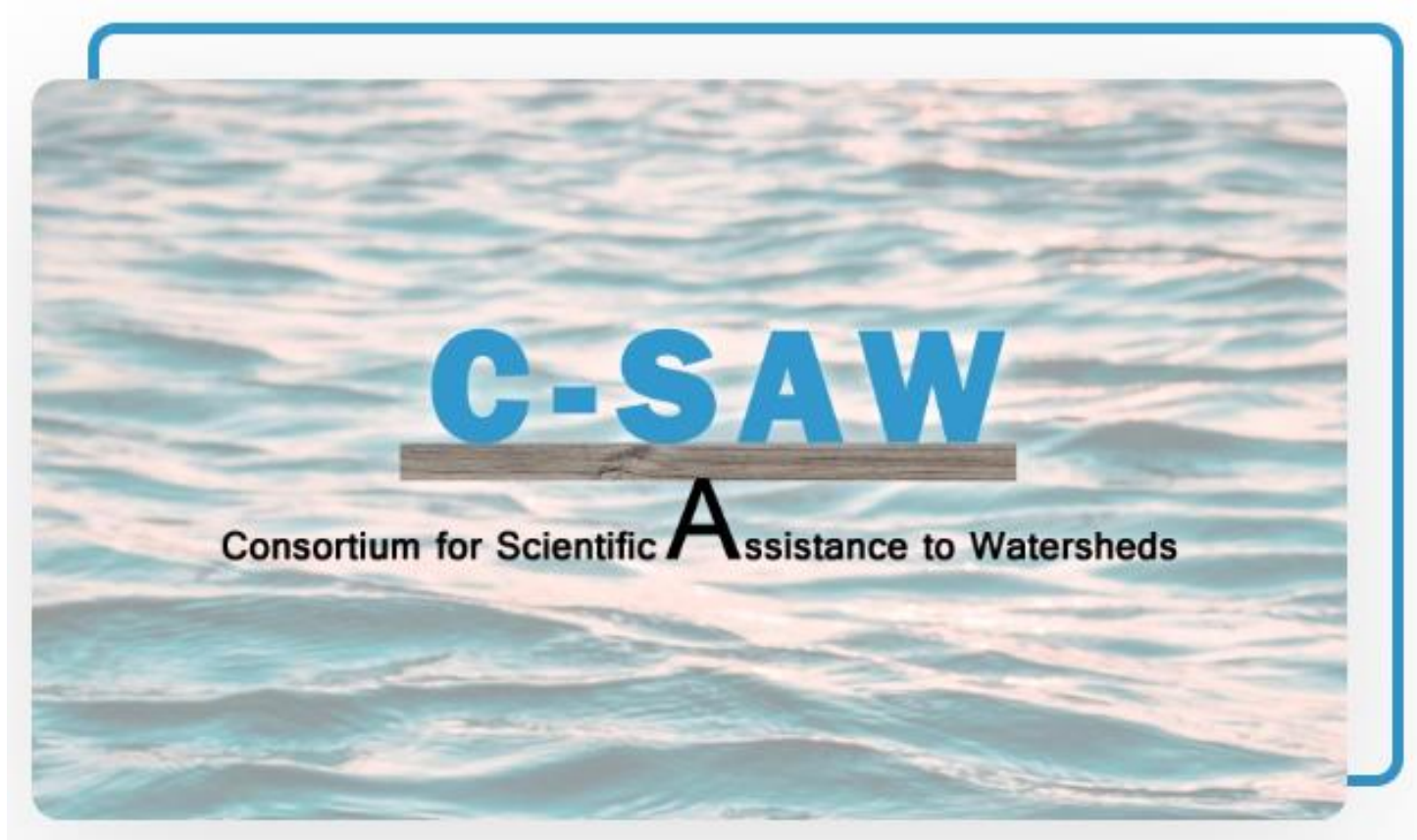
Delaware River Watershed Initiative (DRWI)

<https://4states1source.org/>



C-SAW

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



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 Facilitators:

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

Welcome to the EnviroDIY team Elena Hadley

Part-Time Environmental Educator / Research Technician



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

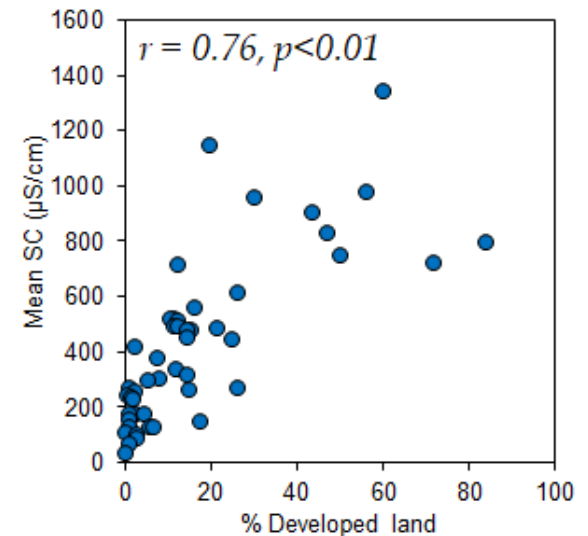
Dr. David Arscott



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




Today's Agenda

1. Introduction
2. Stroud Updates
3. Presentations:
 - Data communication products and salt pollution monitoring – Ryan Neuman, Tookany-Tacony/Frankford Watershed Partnership
4. Discussion
5. Conclusion

Stroud Center Updates


- EnviroDIY Monitoring Station Manual has been updated and has a new searchable format



[About](#)
[Participate](#)
[Mayfly](#)
[Blog](#)
[Forums](#)
[Videos](#)
[Shop](#)
[Help](#)
[Register](#)
[Log In](#)

An Initiative of Stroud Water Research Center

[Subscribe](#)
[EnviroDIY on GitHub](#)



Welcome to EnviroDIY, a community for do-it-yourself citizens, conservation practitioners, municipal decision makers, and students advance knowledge and stewardship of fresh water. **New to EnviroDIY?** [Start here](#)

[Getting Started](#)
[Hardware](#)
[Software](#)
[Forum](#)
[Monitoring Station Manual and Appendices](#)

[Getting Started](#)
[Hardware](#)
[Software](#)
[Forum](#)
[Monitoring Station Manual and Appendices](#)

Getting Started With the EnviroDIY Water Logger

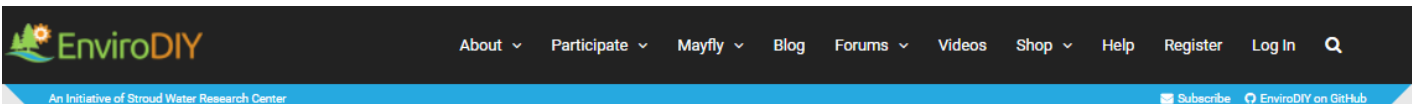
UPCOMING EVENTS

APR 27

April 27 - April 28
Hybrid Workshop: Building an EnviroDIY Monitoring Station

Stroud Center Updates

<https://www.envirodiy.org/knowledge-base/>



Welcome to EnviroDIY, a community for do-it-yourself environmental science and monitoring. EnviroDIY is part of [WikiWatershed](#), a web toolkit designed to help citizens, conservation practitioners, municipal decision-makers, researchers, educators, and students advance knowledge and stewardship of fresh water. **New to EnviroDIY?** [Start here](#)


Search the Knowledge Base

 Search the Knowledge Base...

Help Topics

EnviroDIY Monitoring Station Manual (9 Articles)









The EnviroDIY team created this manual to help you build, program, and install an EnviroDIY Monitoring Station. Please leave feedback on the individual articles so that we can continue to improve the documentation.

-  1. Key Terms and Links
-  2. EnviroDIY Overview
-  3. EnviroDIY Monitoring Station
-  4. Preparing the Mayfly Data Logger
-  5. Programming and Activating an EnviroDIY Monitoring Station
-  6. Building an EnviroDIY Monitoring Station
-  7. Installing an EnviroDIY Monitoring Station
-  8. Monitoring Station Management
-  9. References and Acknowledgments

 View all

EnviroDIY Monitoring Station Manual Appendices (8 Articles)

The EnviroDIY Monitoring Station appendices contain supplemental information to help you manage your EnviroDIY Monitoring Station. Please leave feedback on the individual articles so that we can continue to improve the documentation.

-  1. Battery and Solar Options
-  2. Example Data
-  3. Data Patterns
-  4. Troubleshooting
-  5. Commercial Sensors
-  6. Field Supplies Checklist
-  7. Maintenance Checklist
-  8. Supplemental Sampling, Rating Curves, Loads

 View all

Stroud Center Updates

<https://www.envirodiy.org/envirodiy-monitoring-station-parts-list/>

EnviroDIY Monitoring Station Parts List

This is the comprehensive parts list for building an EnviroDIY Monitoring station. Detailed instructions can be found in the EnviroDIY Monitoring Station Manual and Appendices available in the [knowledge base](#).

Items with (*) in the Product Name are included in the [EnviroDIY Monitoring Kit](#).

Please email webmaster@stroudcenter.org if you have trouble viewing this table.

EnviroDIY Parts List (PUBLIC) : Dynamic List

Product Name	Section in EnviroDIY online manual	Manufacturer	Vendor	VendorLink	Unit Cost	Quantity	Unit x Quantity	ModelDescription
EnviroDIY Mayfly Wireless Data Logging System								
EnviroDIY Monitoring Station Kit	Section 3.5	Stroud Water Research Center	EnviroDIY	Link	\$475.00	1	\$475.00	The EnviroDIY Monitoring Station Kit contains: Mayfly Data Logger and microUSB cable for connection with computer, EnviroDIY LTE bee : Hologram Global SIM card, 2 microSD cards and standard SD card adapter, vertical microSI clock, waterproof Pelican case with pre-cut foam and pre-drilled holes for cable glands (one for holding logger inside the Pelican case, 6-volt 3.5-watt solar panel with mounting bracket : Mayfly Data Logger, 2 waterproof cable glands: 1 small (3/8" NPT for cables 0.08" – 0.24"), 1 for mounting the waterproof box on a post, Grove cable and a Grove-to-3.5 mm jack adapter and stainless steel retaining pin for attaching sensor bundle to steel rebar (rebar not included)
EnviroDIY Mayfly Data Logger Starter Kit		Stroud Water Research Center	Amazon / EnviroDIY	Link	\$130.00	1	\$130.00	Includes waterproof enclosure with clear lid, 0.5watt solar panel, Custom microSD connector adapter, 1-meter microUSB cable, and 2 Grove cables.
CR1220 12mm Diameter - 3V Lithium Coin Cell Battery *	Section 4.4	Panasonic - BSG	Digi-Key	Link	\$1.01	1	\$1.01	lithium batteries for the Mayfly board so they'll retain the clock time after programming
Lithium Ion Battery Pack - 3.7V 4400mAh (recommended size)	Section 6.1	Adafruit Industries LLC	Adafruit	Link	\$19.95	1	\$19.95	This lithium ion pack is made of 2 balanced 2200mAh cells for a total of 4400mAh capacity
Lithium Ion Battery Pack - 3.7V 4400mAh (recommended size)	Section 6.1	Adafruit Industries LLC	Digi-Key	Link	\$19.95	1	\$19.95	optional vendor
EnviroDIY LTE Bee *	Section 6.1	Stroud Water Research Center	EnviroDIY		\$50.00	1	\$50.00	Bluetooth, Cellular 4G LTE CAT-M1 (AT&T/Verizon) Transceiver Module Antenna Not Included
Cellular LTE antenna *	Section 6.1	PulseLarsen Antennas	Digi-Key	Link	\$4.50	1	\$4.50	4G LTE cellular antenna with U.FI connector
Hologram Global SIM Card *	Section 6.1	Hologram	Hologram	Link	\$5.00	1	\$5.00	SIM card required for 2G or 3G communication
Medium 6V 2W Solar panel *	Section 6.4, 7.3	Voltaic Systems	Adafruit	Link	\$29.00	0	\$0.00	Standard for CTD sensor install
Grove 4Pin Cables 20cm (5PACK) *	Section 6.3	Seed Technology Co., Ltd	Digi-Key	Link	\$3.20	1	\$3.20	Grove series Cable Assembly
Term Block Plug 2POS STR 2.5mm(connector for solar panel cable) *	Section 6.2	Phoenix Contact	Digi-Key	Link	\$0.96	1	\$0.96	2 Position Terminal Block Plug, Female Sockets 0.098" (2.50mm) - 180° Free Hanging (In-Li
Grove to sensor adapter boards for CTD (Grove to 3.5mm stereo jack) 5 pack *	Section 6.2	EnviroDIY	EnviroDIY	Link	\$35.00	1	\$35.00	to connect CTD sensor to board via grove socket to headphone jack connector

Stroud Center Updates

- New model of the Hydros 21 CTD sensor by Meter Group is now available

HYDROS 21
Conductivity, Temperature,
Depth Sensor



Stroud Center Updates

- Technology Updates from Shannon Hicks



Stroud Center Updates

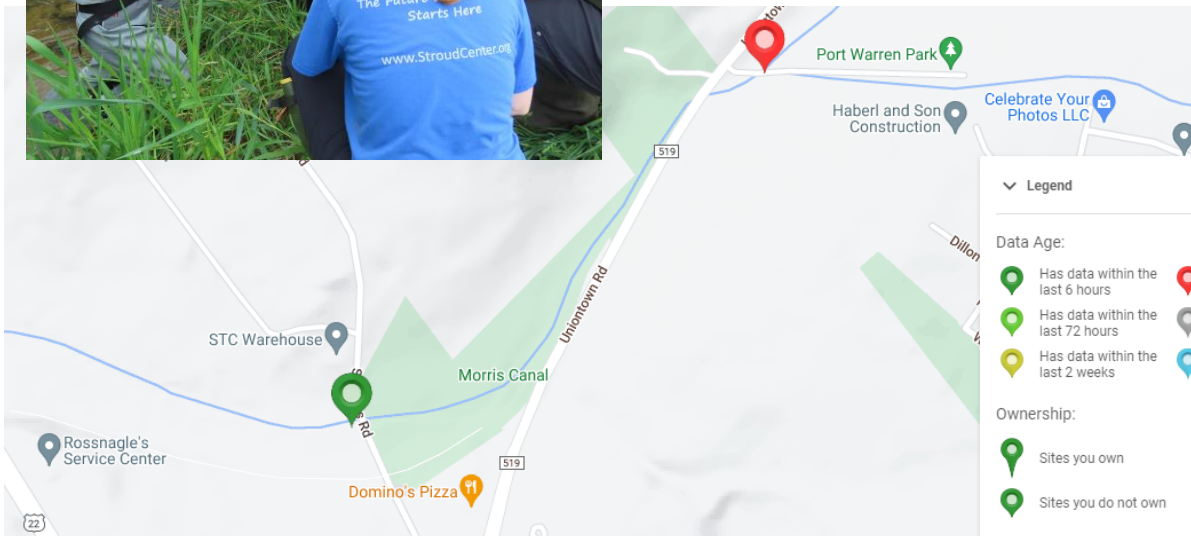
Recent EnviroDIY Monitoring Station Installations:

1. Lopatcong Creek at Morris Canal - Strykers Rd
2. Antietam Creek
3. Assunpink Creek near Mill Hill
4. Assunpink Creek at George Page Park
5. Muddy Run Tributary at Palatine Branch
6. Brandywine River Museum
7. Ramsey Run
8. West Branch Chester Creek at Newlin Grist Mill
9. Concord Creek at Newlin Grist Mill

Stroud Center Updates

Lopatcong Creek at Morris Canal - Strykers Rd

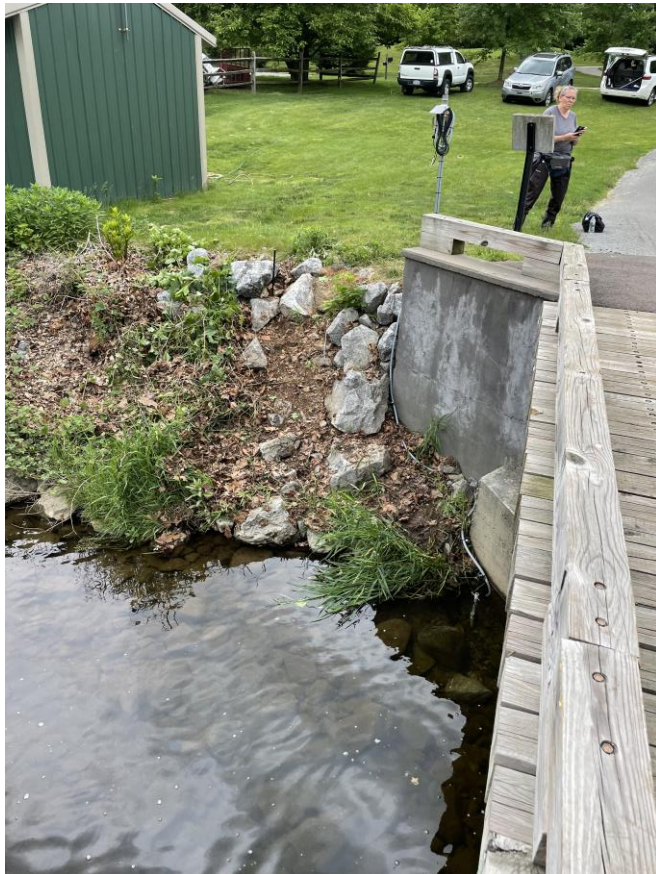
- Organization: The New Jersey Highlands Coalition
- Assisted with the installation: Christa Reeves, Sam Johnson, Joe Hernandez, Mary Budkoski



Stroud Center Updates

Antietam Creek @ Reading Country Club

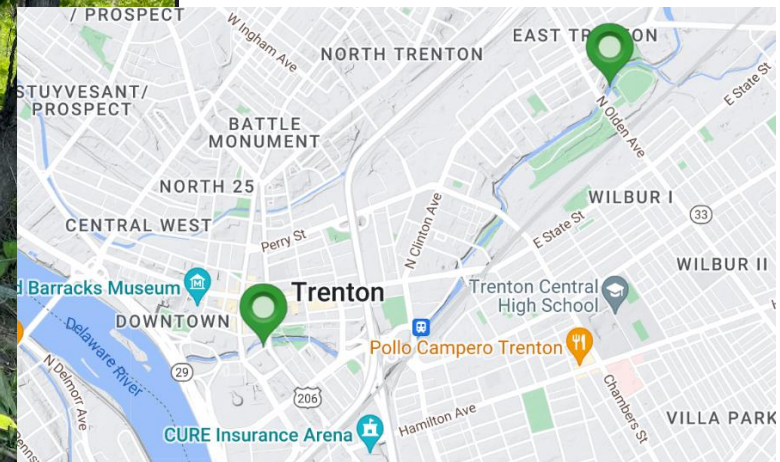
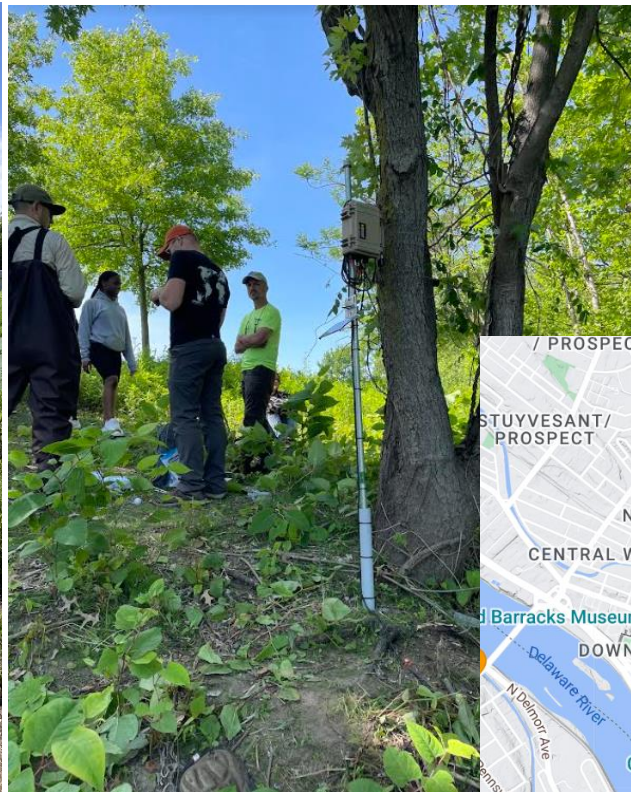
- Organization: St. Catharine of Siena School
- Assisted with the installation: Kellee Fries, Steve Tricarico



Stroud Center Updates

Assunpink Creek near Mill Hill & Assunpink Creek at George Page Park

- Organization: UrbanPromise Trenton
- Assisted with the installation: Eric Martin, Nicholas Ho, Steve Tuorto, David Bressler



Stroud Center Updates

Muddy Run Tributary at Palatine Branch

Organization: South Jersey Land and Water Trust

Assisted with the installation: Jenna Hamill, Elena Hadley



Stroud Center Updates

West Branch Chester Creek and Concord Creek at Newlin Grist Mill

- Organization: Newlin Grist Mill
- Assisted with the installation: Jessica Shahan, Kevin Magerr, Shannon Hicks



Stroud Center Updates

Brandywine River Museum

Organization: Stroud Water Research Center

Assisted with the installation: Shannon Hicks, Elena Hadley



Stroud Center Updates

- Reminder to request assistance via the EnviroDIY Service Request Form
 - <https://wikiwatershed.org/drwi/>



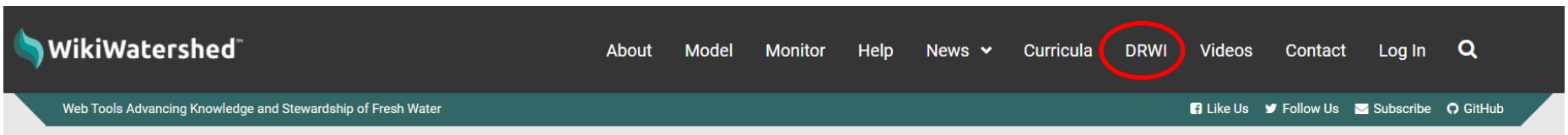
EnviroDIY Monitoring Station Service Request Form

Please complete this form with as much information as possible to assist Stroud Water Research Center technicians in troubleshooting your problem. For extremely urgent issues please contact the Stroud Center team directly (rjohnson@stroudcenter.org; shicks@stroudcenter.org; dbressler@stroudcenter.org).

*Please note, station assistance is only available to groups working within the Delaware River Basin.

Stroud Center Updates

- Reminder on resources available at <https://wikiwatershed.org/drwi/>
- <https://wikiwatershed.org>



Use the links below to jump to a specific section of this page.

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](#)

Meetings, Workshops, and Conferences

- [Monthly EnviroDIY-DRWI User Group Meetings](#)
- [User Support Workshops and Trainings](#)
- [Conference Presentations](#)
- [Watershed Ecology Workshops](#)

EnviroDIY Field Visit Data

EnviroDIY Field Visit Data Form (Online)

Any questions before we move on?



Presentation

- Data communication products and salt pollution monitoring – Ryan Neuman, Tookany-Tacony/Frankford Watershed Partnership



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 (Stroud Center)(in the north, situational), christa@musconetcong.org, 727-520-5849

****Anyone else interested? If so get in touch with Stroud Center or Carol or George***

Conclusion

Next month's meeting will be on:

Thursday July 21, 2021
2:30-3:30p

Onward!

Stroud Water Research Center, EnviroDIY-DRWI 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