

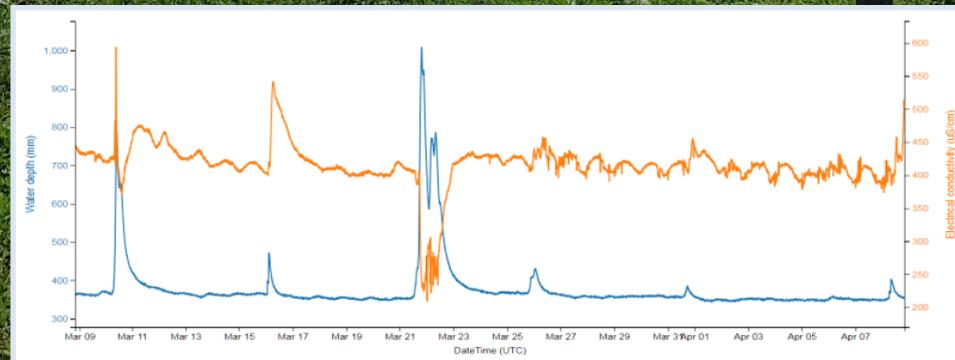
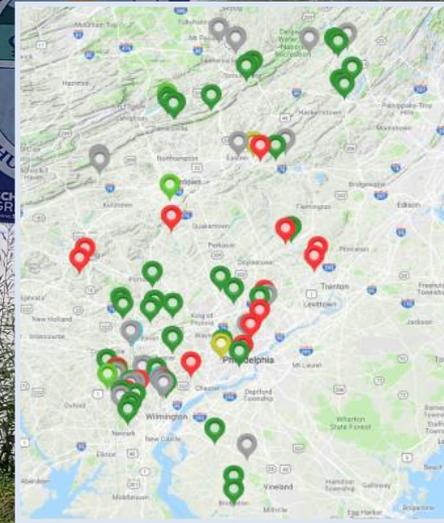
WELCOME!

Monthly EnviroDIY-DRWI User Group Meeting

Online, Thursday October 15, 2020, 2:30-3:30p



 **Monitor My Watershed®**



Monthly EnviroDIY-DRWI User Group Meeting

Third Meeting!

REMINDER

- This is a time for anyone working with EnviroDIY monitoring stations in the Delaware River Basin to check in with Stroud, ask questions of the group, bring up issues, network, and learn
- Attendees include:
 - Groups working directly in Delaware River Watershed Initiative
 - Groups working in Delaware Basin but not specifically in the context of the DRWI
- Stroud Center is able to support groups in using the stations via DRWI Funds (and also Consortium for Scientific Assistance to Watersheds, C-SAW)

Delaware River Watershed Initiative

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

Goals for these monthly meetings

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

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

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 will be sent one week prior to each month's meeting
 - Station owners/managers organize volunteers/others to attend and share Zoom link

Facilitators

Stroud Center Facilitators:

David Bressler, Rachel Johnson, Christa Reeves, Shannon Hicks



Master Watershed Steward Facilitators:

Carol Armstrong, George Seeds (Chester & Delaware Co.)

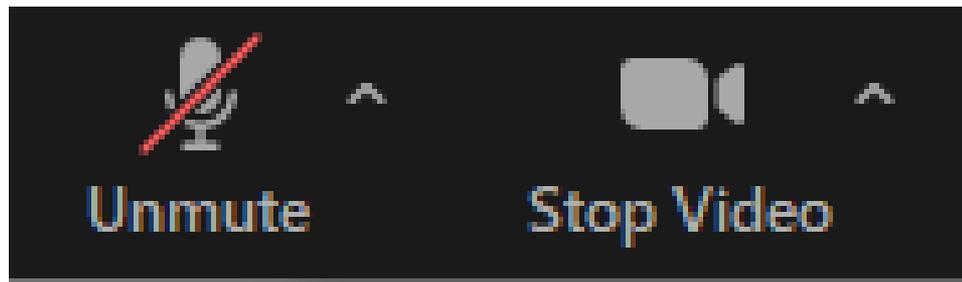




Zoom Orientation



***We WILL be recording presentations but WILL NOT be recording the Questions section**



***Everyone should be muted other than current speaker**

*Other than zoom logistics, audio, video etc. please save questions for the question period

These Monthly Meetings

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



Search



August 2020 EnviroDIY-DRWI Monthly Meeting

15 views • Aug 25, 2020

👍 0 🗨️ 0 ➦ SHARE ≡ SAVE ...

Monthly Meeting Agenda Format

1. Introduction – 5-10 min
2. Monthly station owner/manager presentation – 10 min
3. Monthly focus topic – 10 min
4. Open discussion – 20-25 min
5. Fail topic of the month! – 5-10 min
6. Conclusion – 5-10 min

****Adjust this format according to natural progression/development/needs of meetings***

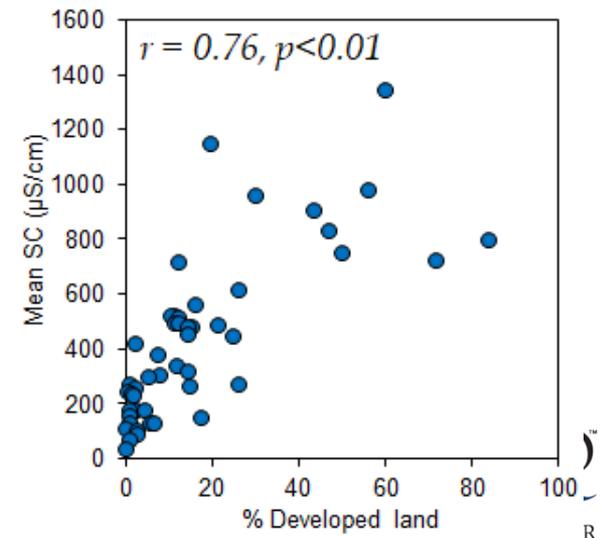
Today's Agenda

Agenda

1. Introduction, review agenda, updates – 5-10 min
2. Monthly station owner/manager presentation – 10 min
 - Watershed Stories - Temperature Monitoring and Station Maintenance for Citizen Science – Robert Samoski, Angelica Creek Watershed Association
3. Monthly focus topic – 10-15 min
 - Water temperature questions, issues, and recommendations – Dr. John Jackson, Stroud Water Research Center
4. Open discussion – 25 min
 - Discuss questions from attendees, address technical issues, review projects, goals, logistics
 - Fail of the Month: Water in my logger box! The vandals destroyed my station! The vines and ants and rodents are relentless! Tips and Solutions
5. Conclusion – 5-10 min

Stroud Center Perspective – EnviroDIY in DRWI

- **Primary Goal**
 - Support Station owners, managers, and volunteers
 - Maintaining stations
 - Using stations for their own purposes
- **Secondary Goal**
 - Analyze basin-wide data set
 - Develop tools for station owners to characterize and contextualize watersheds

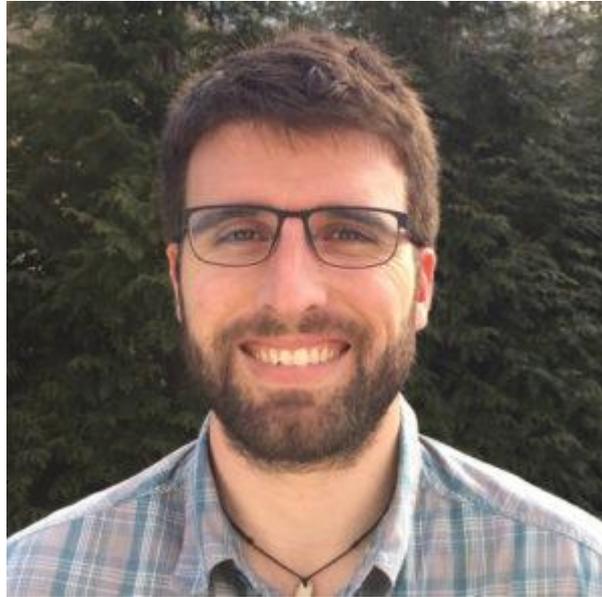


Stroud Center Updates

- Watershed Congress, Sept 2020: **Spatio-Temporal Patterns of Stream Conductivity and Temperature in the Delaware Basin**, Oviedo-Vargas, Peipoch, and Bressler
- Recording at <https://wikiwatershed.org/drwi/#conference-presentations>



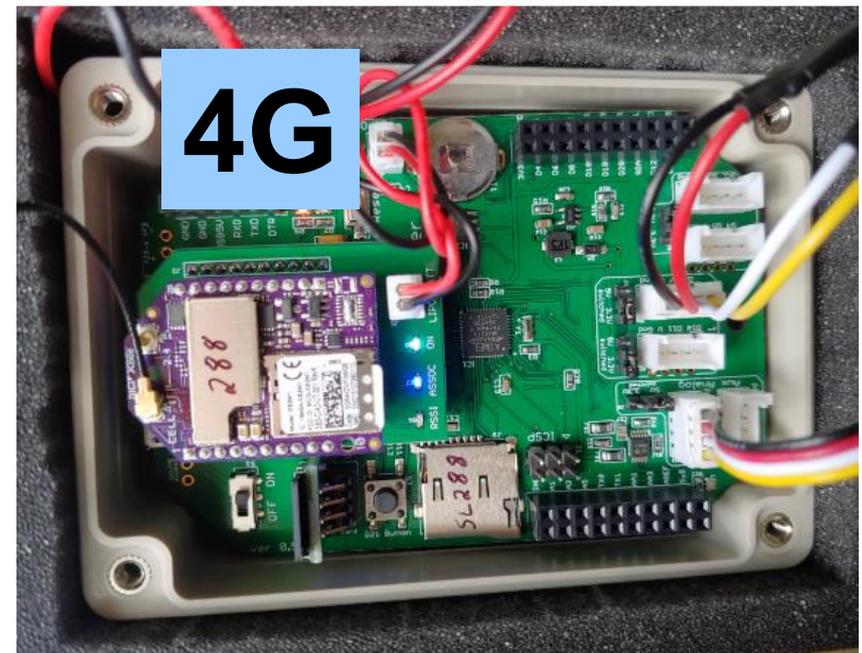
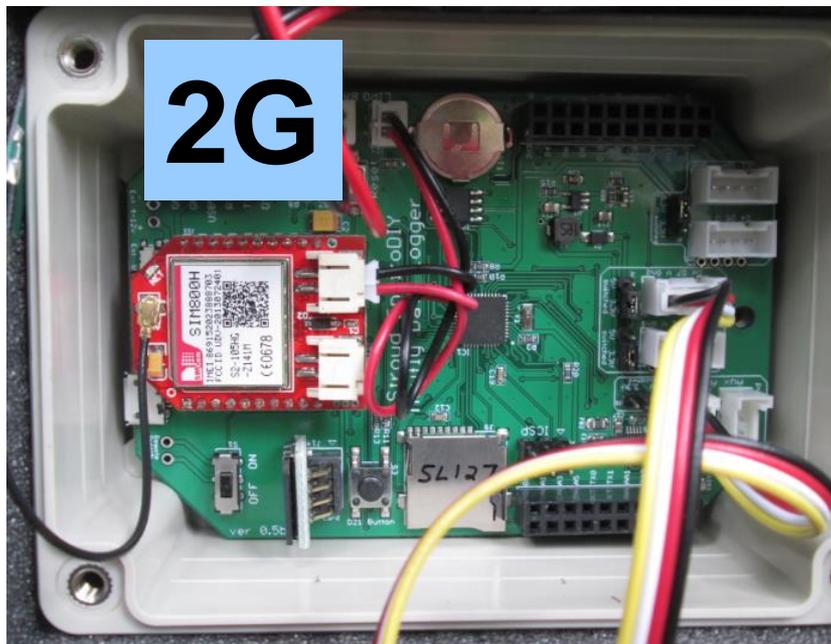
**Diana Oviedo-Vargas, PhD,
Assistant Research Scientist,
Stroud Water Research Center**



**Marc Peipoch, PhD,
Assistant Research Scientist,
Stroud Water Research Center**

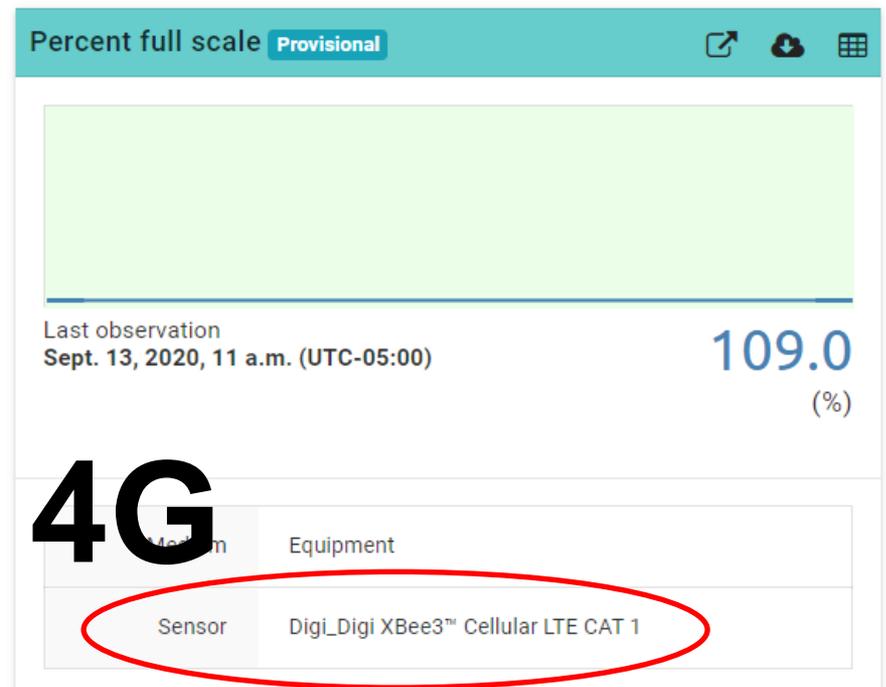
Stroud Center Updates

- 2G to 4G in 2020
 - 2G cell coverage phased out entirely by end of 2020
 - Stroud Center upgrading all Delaware Basin stations to 4G (with approval from station owners)



Stroud Center Updates

- 2G to 4G in 2020
 - To confirm your station's 2G or 4G status check MonitorMW, "Percent full scale" panel
 - 2G = Sodaq_GPRSbee (*a few have been upgraded but have not been changed on MonitorMW)
 - 4G = Digi_Digi XBee3™ Cellular LTE CAT 1



Stroud Center Updates

- Fall is leaves in the stream fouling sensors time



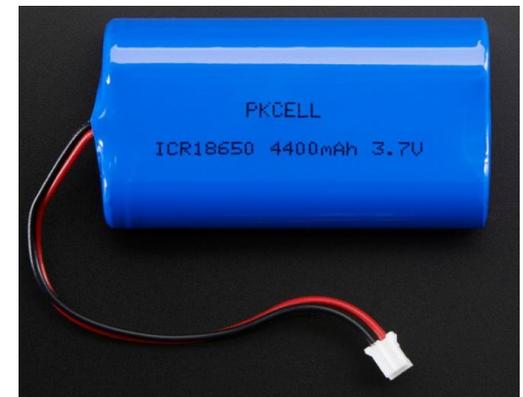
- This is just another example of the need to:
 - **Check Monitor My Watershed regularly (daily is ideal)**
 - **Visit station regularly (weekly or biweekly)**
 - **Conduct QC quarterly AND/OR when sensor readings look suspicious**

Stroud Center Updates

- New battery charger available – AVAILABLE IN LIMITED SUPPLY FROM STROUD (requires modification from supplier)



Recommended 4400 mAh battery,
<https://www.adafruit.com/product/354>



Stroud Center Updates

- PLEASE, take and **share** photos of damage, infestation, logger box leaks, and any other site-specific occurrences – VERY USEFUL FOR COMMUNICATION AND EDUCATION

<http://bit.ly/2SmhZBK>



?? Thoughts on utility of this for this group? – Discuss later today

Possibly allocate time to show/share photos during this meeting? “Photos of the Month”???

Any questions before we move on?



Monthly station owner/manager presentation

Temperature Monitoring and Station Maintenance for Citizen Science



**Robert Sarnoski, PA Master Naturalist,
Angelica Creek Watershed Association,
movingplaid@gmail.com**

Monthly Focus Topic

Water temperature questions, issues, and recommendations



**Dr. John Jackson, Senior Research Scientist,
Stroud Water Research Center,
jkjackson@stroudcenter.org**

Fails of the Month!

- Water in my logger box! The vandals destroyed my station! The vines and ants and rodents are relentless! Tips and Solutions
- -9999.0 on MonitorMW data panels

Fails of the Month!

- Water in my logger box!
 - Debris between seams – Open box and make sure no debris between the seams
 - Unsecured latches – Make sure latches are latched
 - Improper locking – Make sure lock is placed correctly and locked
 - *Use desiccant for minor condensation issues



Fails of the Month!

- The vandals destroyed my station!
 - Solutions
 - Make sure logger box is locked
 - Make sure there is a sign
 - Check on the station regularly – evaluate risk



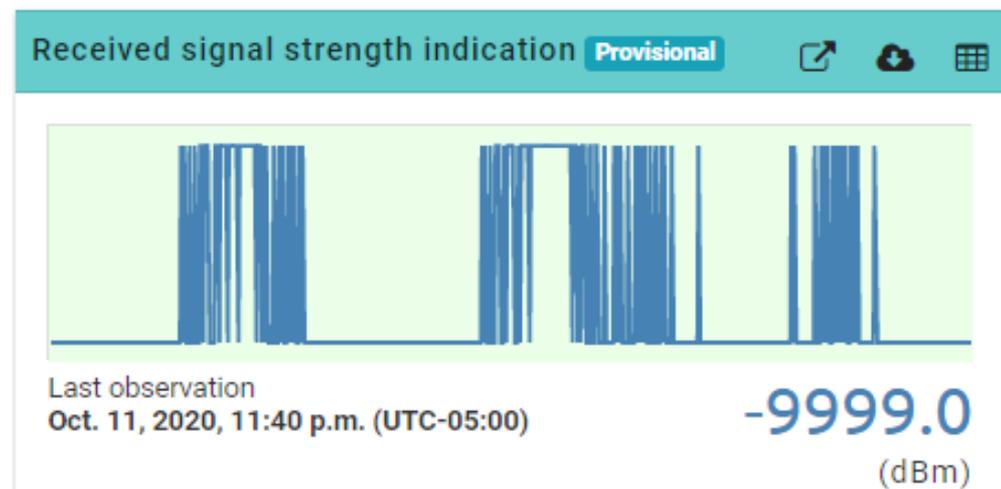
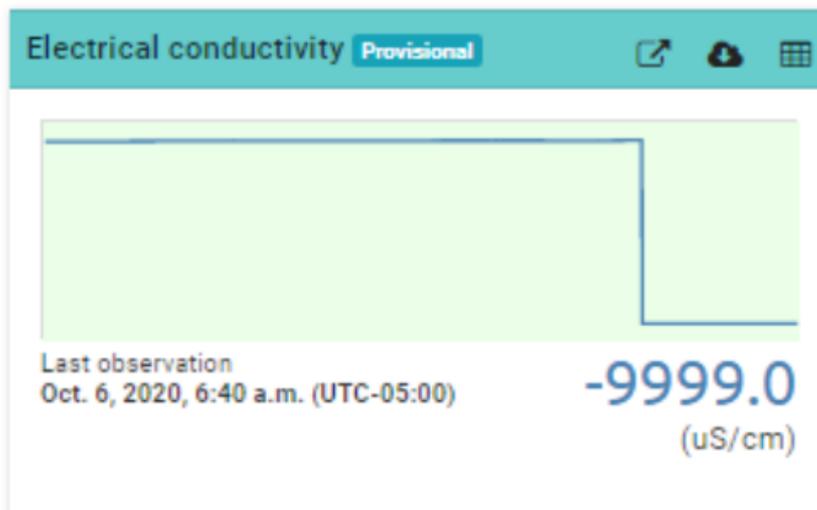
Fails of the Month!

- The vines and ants and rodents are relentless!
 - Solutions
 - Clear vegetation and debris from around logger box
 - Make sure box is latched and clear of debris
 - Protect wires with metal conduit when necessary
 - *Do not spray pesticide, cleaner, or chemicals into logger box



Fails of the Month!

- “-9999.0” on panels in Monitor My Watershed
 - Indicates Mayfly not properly communicating with the sensor or cell module
 - Head phone jack issue – make sure good connection and not damaged
 - Sensor wire is cut or damaged – replace sensor (CTD, Meter Hydros 21 CTD) or wire (Turbidity, Campbell OBS3+)
 - Coding issue – consult with Stroud Center



Fails of the Month!

- All of these Fails point to the need to:
 - **Check Monitor My Watershed regularly (daily is ideal)**
 - **Visit station regularly (weekly)**
 - **Conduct QC quarterly AND/OR when sensor readings look suspicious**

Questions/Discussion

- Questions for today's presenters?
- Questions about your station(s)?
- Questions about field visits and Quality Control?
- Questions about Monitor My Watershed?
- Questions about data patterns, ecology?
- Questions about troubleshooting?

Back up discussion topics

- Assistance/support needs?
- Covid-19 issues
- 4G upgrades by end of 2020
- Recent storm issues
 - Checking stations in person
 - Importance of latching logger boxes
 - **Importance of checking stations even if data look good, e.g., Reeves recent turbidity sensor burying situation**
 - Channel changes, e.g, Valley Creek at Valley Creek Park
 - Importance of QC depth, e.g., Taylor Run
- Conductivity, temperature, depth, turbidity data in ecological context
- Preparing for winter – station maintenance, road salt issues

Conclusion

Next month's meeting will be on:

**Thursday November 19, 2020,
2:30-3:30p**

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>
- **Station owners/managers organize volunteers/others to attend and share Zoom link**

Future meeting presenters

- Monthly station owner/manager presentations
 - Nov 19 – Derron LaBrake, Darby Creek Valley Assoc.
 - Dec 17 – Francis Collins, Primrose Creek Watershed Assoc.
 - Jan 21 – Juniper Leifer and Kristine Rogers, Lopatcong Creek Initiative and Wallkill River Watershed Management Group
 - Feb 18 – Dr. Paul Wilson(?), East Stroudsburg University
- Monthly focus topics
 - Nov 19 – Conductivity
 - Suggestions???

***Please be in touch if you'd like to do an owner/manager presentation or a focus topic presentation**

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***

Resources to Support the Work

<https://wikiwatershed.org/drwi/>

Delaware River Watershed Initiative Resources

General Resources

- ▼ EnviroDIY Field Visit Data
- ▼ EnviroDIY Monitoring Station Help Resources
- ▼ Data and Data Visualization Resources
- ▼ Project Updates and Station User Monthly Meetings
- ▼ Volunteer Management Guidance Materials
- ▼ WikiWatershed Toolkit

Workshop Resources

- ▼ Delaware Watershed Research Conference
- ▼ EnviroDIY Monitoring Station Management Workshop
- ▼ EnviroDIY Monitoring Station User Group Gatherings
- ▼ Master Watershed Steward Workshops
- ▼ Teacher Workshops
- ▼ Watershed 101, 102, and 201

Resources to Support the Work

- **Delaware Basin EnviroDIY Monitoring Stations**, private online group (<https://wikiwatershed.org/groups/delaware-basin-sensor-stations/>)

Delaware Basin EnviroDIY Monitoring Stations



The screenshot shows a Facebook group post. At the top, the group name 'Delaware Basin EnviroDIY Monitoring Stations' is displayed. Below the name is a banner image featuring a circular inset on the left showing a water sampling station in a stream, and a larger image on the right showing a close-up of a green circuit board with various components and wires. A 'GROUP MEMBERS' section shows two profile pictures. Below the images is a notification box that reads 'Your email status is All' with a link to 'Email (change)'. The post text, dated '9 minutes ago', describes the group's purpose: 'Facilitating communication and collaboration among groups and individuals managing EnviroDIY monitoring stations and conducting supplemental sampling and data collection in the Delaware River Basin.'

- Pose questions to the user group community
- Check for updates and new posts
- Set it for daily or weekly email updates

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