

BWA Monitoring Station (loggers) Program

Program and Tasks

THE PROGRAM

The BWA maintains a network of automated water monitoring stations (loggers) throughout the

Brodhead watershed. The loggers record short and long-term changes in water quality in the watershed. The loggers are connected to a website



(<https://monitormywatershed.org/browse/>) which records continuous data for conductivity, water depth and temperature. The network data supplements the BWA's long-running StreamWatch Program which has monitored streams for over 30 years. In 2022, the program switched from monitoring nutrients to monitoring conductivity and chloride.

To view Streamwatch data, click here:

<https://www.dropbox.com/sh/3ohtowzd3k0l5kx/AACdoTeLsQmja4GdRTstlVVga?dl=0>

the logger program is an important part of what the BWA does. The detailed logger data will allow the BWA to see and communicate to the public where and how much road salt enters streams, a record of how streams are being degraded over time, how climate change will affect streams over years, and how new land development may affect our water quality.

[Mill Creek at Brodhead confluence](#)

[Yankee Run below Mt. Pocono Five-Points intersection](#)

[Swiftwater below Rt 314, above Indian Run confluence](#)

[Forest Hills Run at Red Rock Road](#)

[Butz Run above Paradise confluence](#)

[Paradise above Brodhead confluence](#)

[Brodhead above Paradise confluence](#)

[Pocono at Tannersville Woods, below Route 715](#)

[Pocono at Rail Gap Preserve](#)

[Upper McMichael Creek](#)

[Lower McMichael Creek, Pomeroy Preserve](#)

[Marshalls Creek at Marshalls Falls](#)

Each station consists of a small plastic box mounted on a steel rod adjacent to a stream. In the box is a small computer, a battery, a cellular telephone connection, and a wired connection to an in-stream sensor. A solar panel, also mounted on the pole, recharges the battery. The in-stream sensor measures water depth, stream temperature and conductivity. The computer also records information on an internal SD card.

LOGGER MAINTENANCE:

Volunteers are needed to help maintain the loggers by:

- **Weekly: Check your site on** <https://monitormywatershed.org/browse/> (or follow link above) to see if the equipment is working properly.
- Each volunteer will also receive a status email for all stations from volunteer Charlie Coulter (ctcoulter827@gmail.com, who lives outside of the watershed and was recruited by Stroud Water Research Center to help us.
- **Monthly:** (Quality Control check.) **Visit your logger** to collect conductivity and temperature data with the Hanna conductivity meter. Record data from your site visit and from the same time from the logger data on MonitorMyWatershed in the [shared data file found here.](#)
- **If the station is not transmitting data - reset (turn off and on) the logger. If the battery is low, replace the battery.**
- **Record what corrective actions you took on your data sheet in the shared file.**
- **Notify Doug Taylor, (484-888-0808), responsible for logger maintenance, if these actions do not correct the problem.**
- **Attend, either in person or by zoom, a scheduled BWA Logger Team Meeting every six months.** These meetings are held to address:
 - Any common needs of the volunteers.
 - Identify safety concerns.
 - Learn how to download data from the SD cards.
 - See if loggers need to be relocated.

- Talk about improving how we distribute information to the public.
- How to better integrate Stream Watch sites with logger sites.
- Talk about how to make the maintenance easier on all of us.
- **We encourage volunteers to find a partner** who will know the location of your loggers, and help keep you safe.

TRAINING

We plan to host a workshop/team meeting in March to answer all your questions about cleaning, replacing batteries, and other simple maintenance tasks. Meanwhile, here's a link to a [video](#) recording of a logger maintenance presentation by David Bressler, Stroud Water Research Center. The presentation starts at 7:50. The video and PDF of the presentation can also be found here, <https://wikiwatershed.org/drwi/#monthly-meetings> .