Berks Nature
EnviroDIY Management Workshop

Saturday, March 9, 2024

Dave Manning and Eric Frankhouser

Technical Overview

Stroud Water Research Center

"…No, but I did stay at a Holiday Inn Express last night."

The name of the game…

Conductivity

Temperature

Depth

EnviroDIY™ Monitoring Stations

Waterproof logger box and solar panel

‘CTD’ sensor

CTD:

-Conductivity
-Temperature
-Depth

EnviroDIY™ Monitoring Stations

Mayfly Data Logger

What the Mayfly Data Logger Does

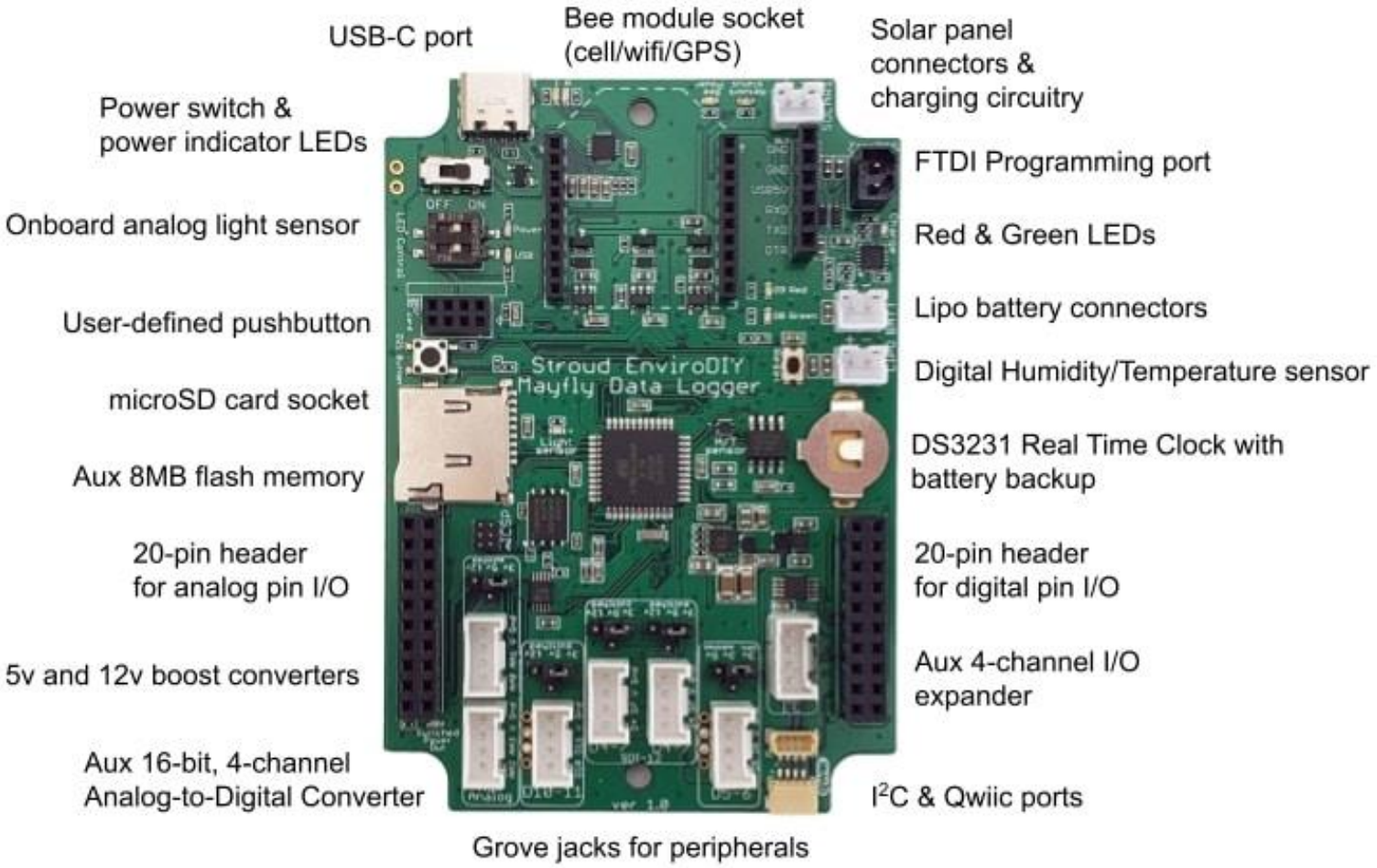
With programming achieved through Arduino 'sketches'…

- Calls to, and interprets responses from, sensor(s) at defined intervals of time.
- Copies data received to a microSD card.
- Sends data received via cell network to *Monitor My Watershed*.

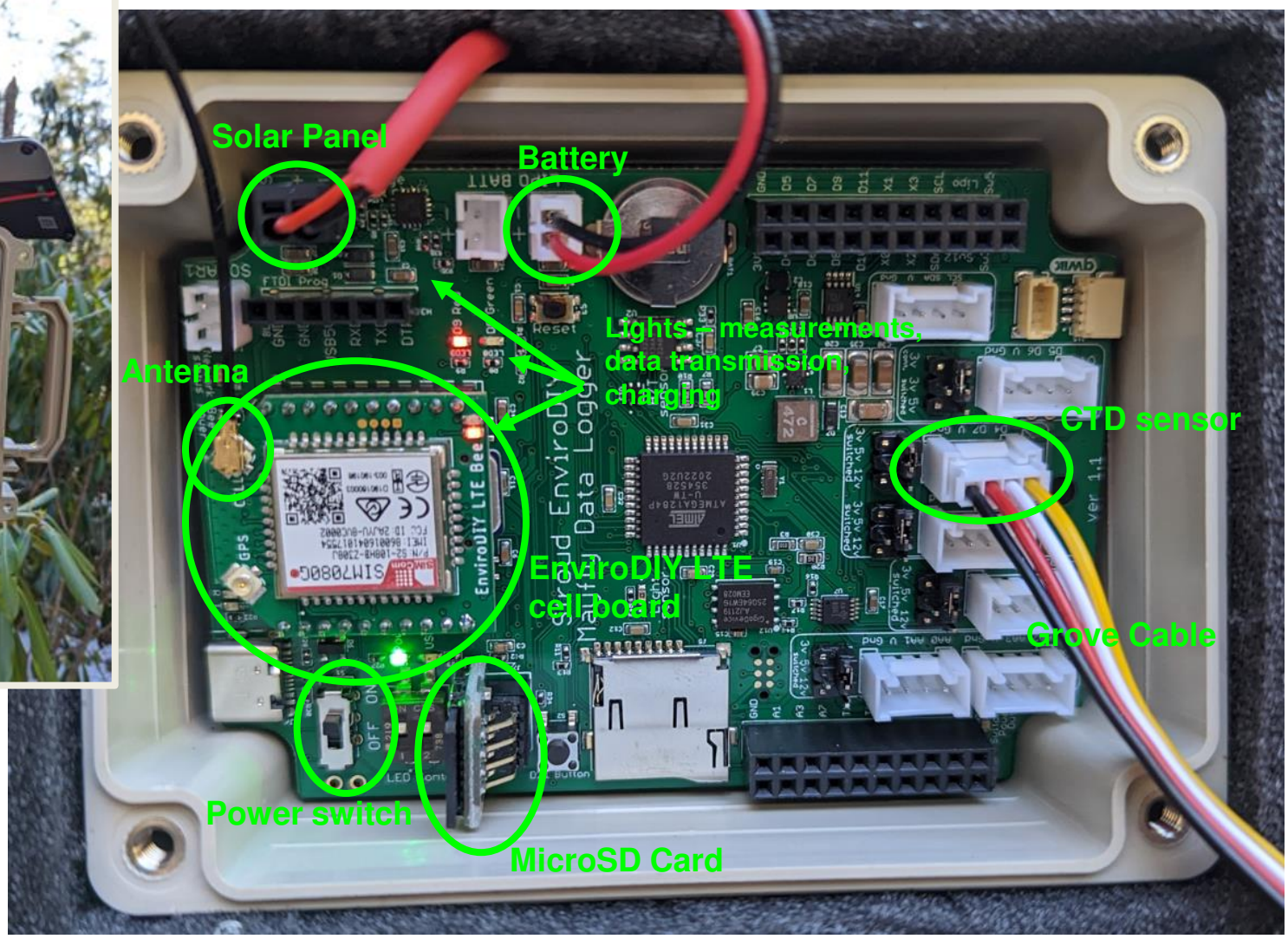
EnviroDIY™ Mayfly Data Logger

https://www.envirodiy.org/mayfly/

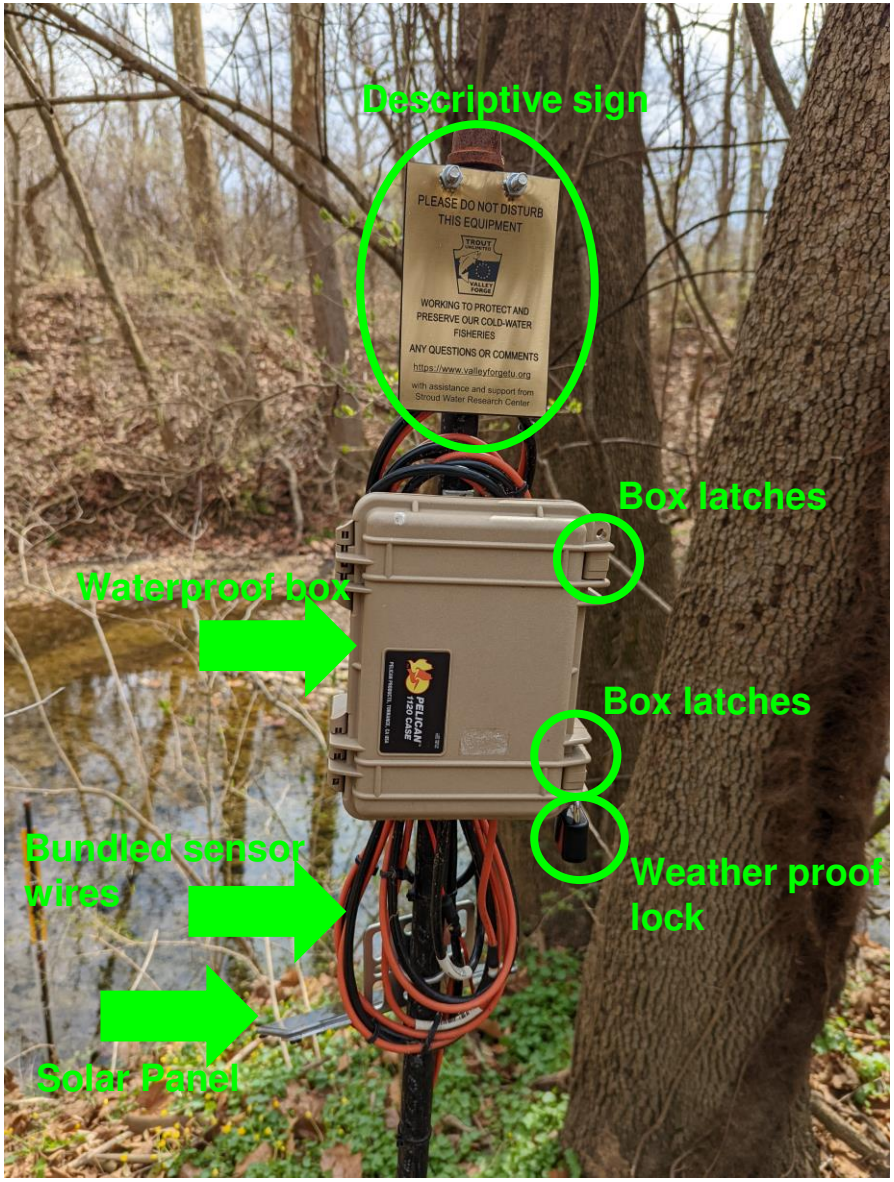
Features of the EnviroDIY Mayfly Data Logger v1.0 and v1.1

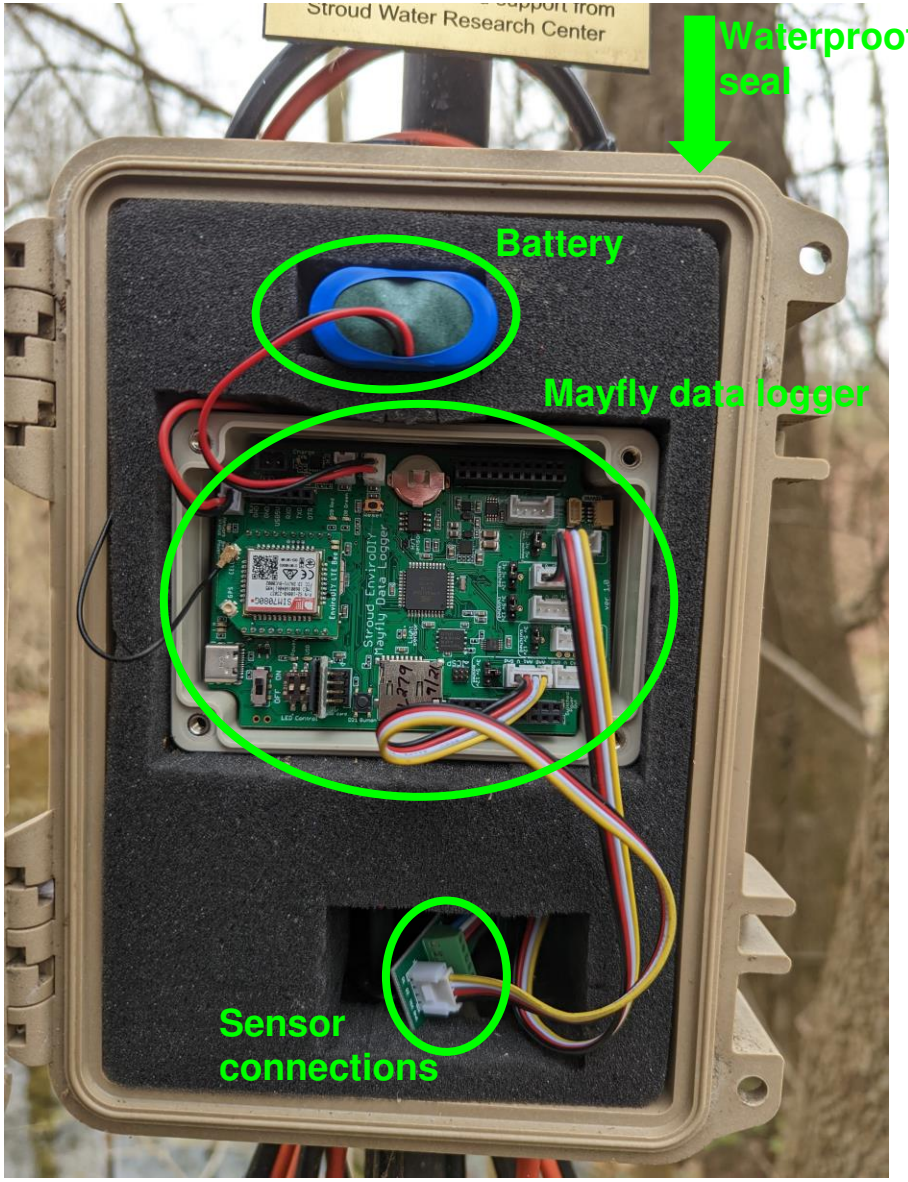


Parts of the Mayfly to know about



More about station setup





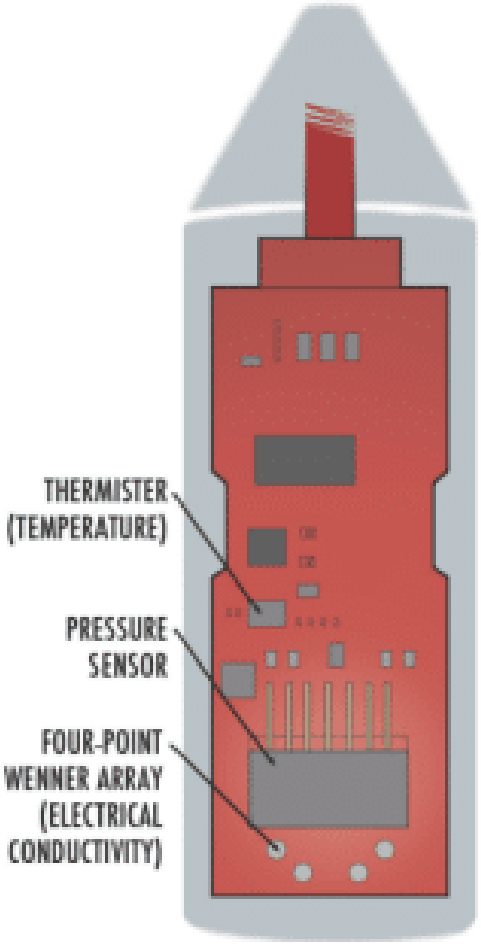
Why Waterproof?

And sometimes…

Metal conduit to protect sensor wires from rodent chewing and other damage

Placement of a station: What's important

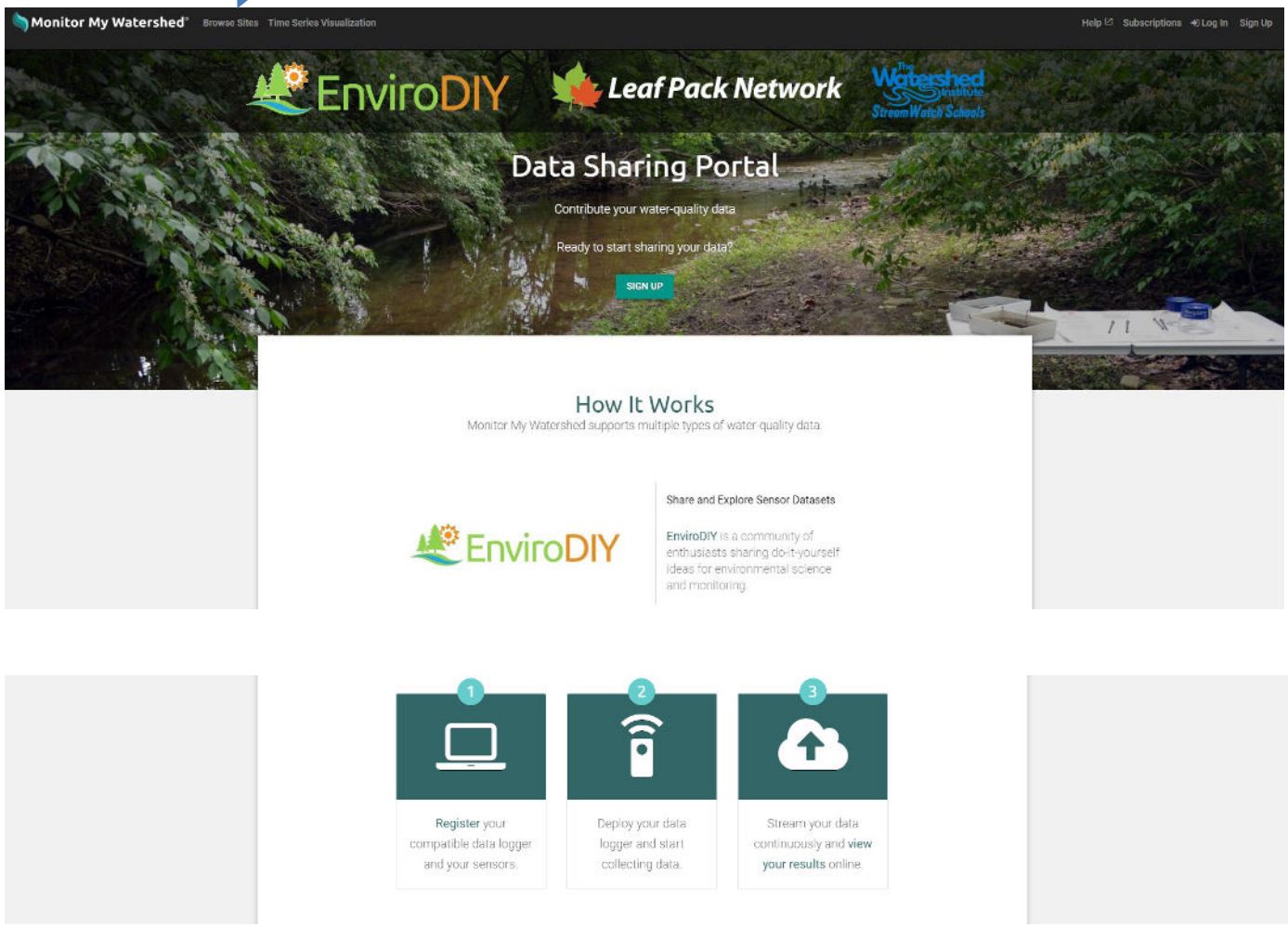
- ***The absolutes:***
  - Permission
  - Accessibility
  - Depth of sensor
  - Stability/Protection
- ***The highly desired:***
  - Cell signal strength
  - Solar exposure



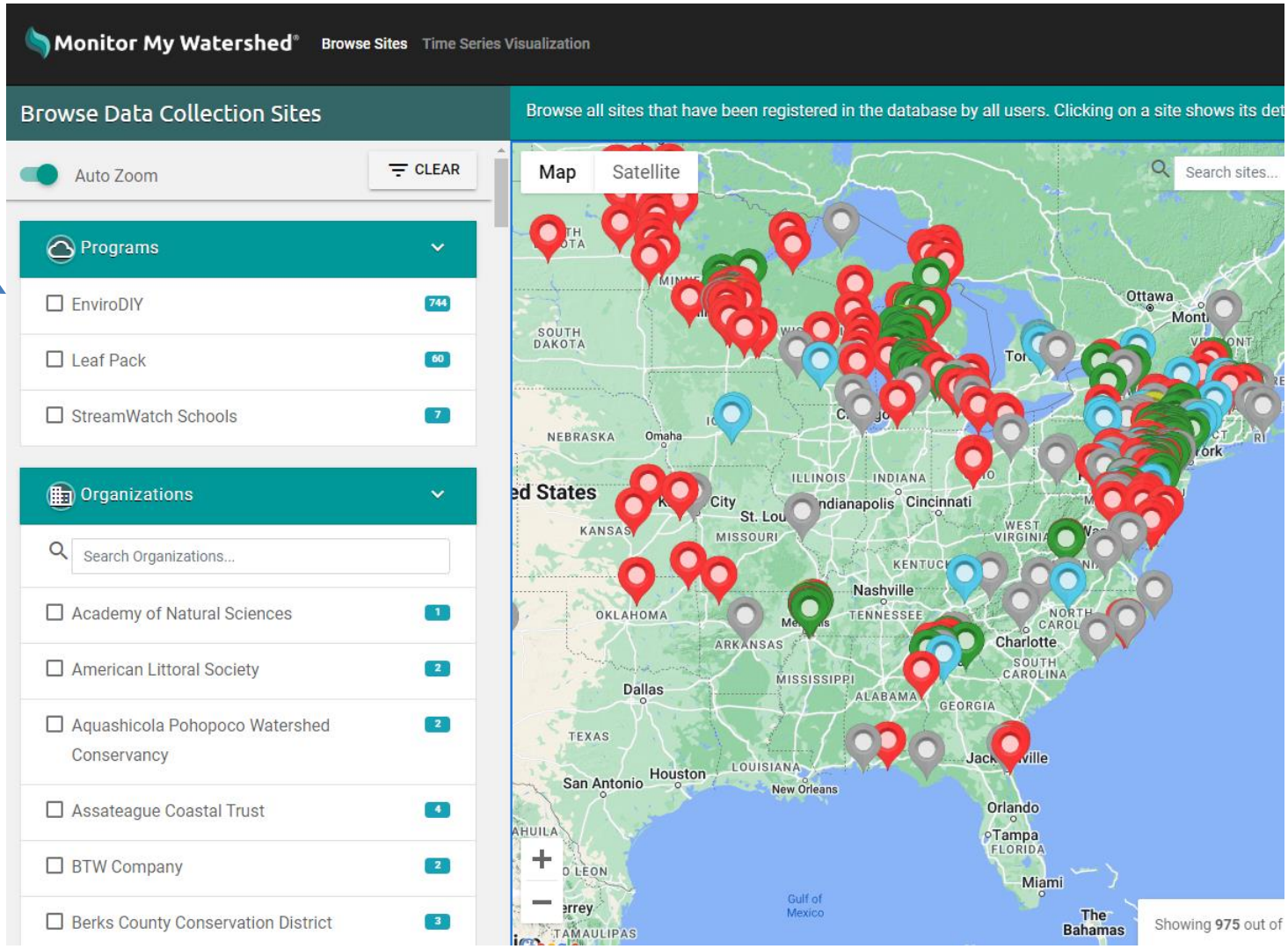
STROUD™
WATER RESEARCH CENTER

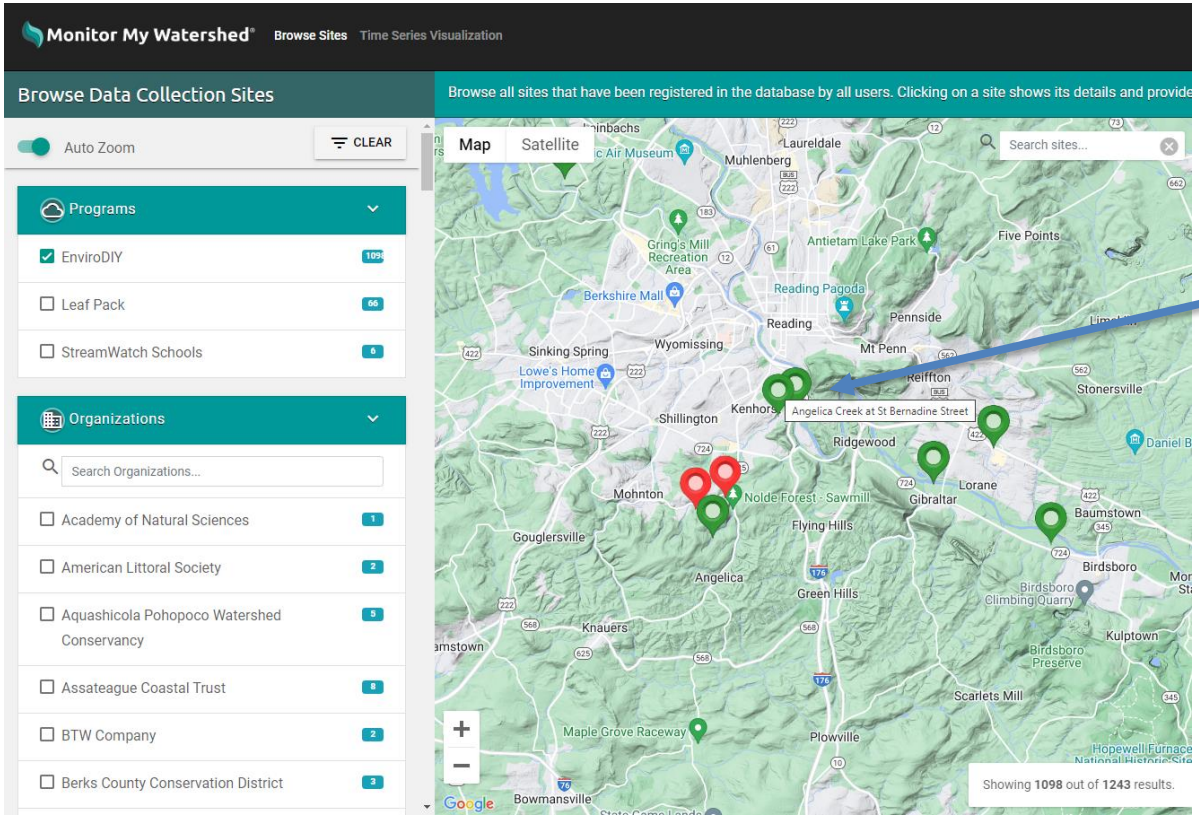
Flow

Browse Sites

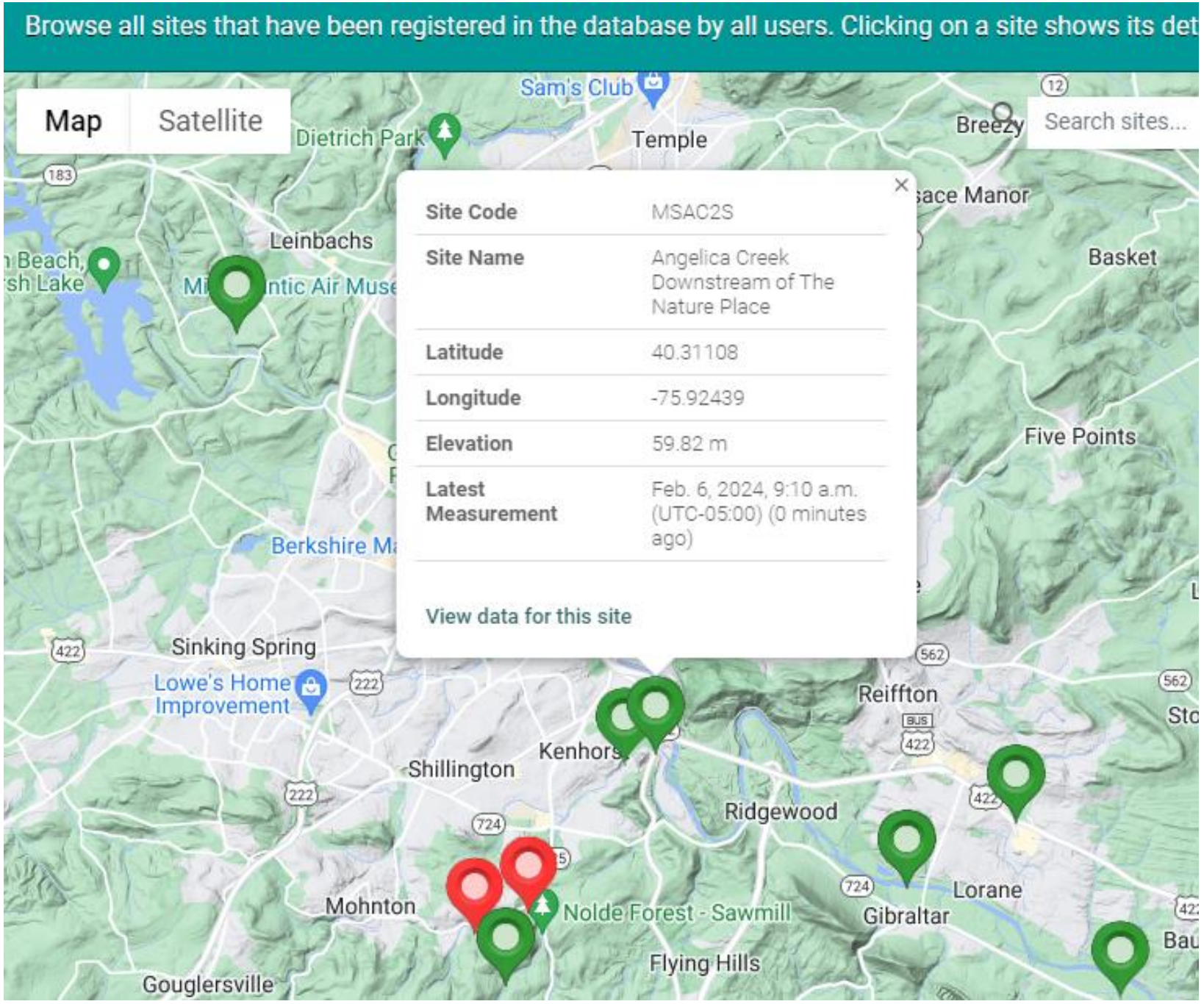


EnviroDIY


Monitor My Watershed
Browse Sites
Time Series Visualization
Browse Data Collection Sites
Browse all sites that have been registered in the database by all users. Clicking on a site shows its det
Auto Zoom
CLEAR
Programs
EnviroDIY 744
Leaf Pack 60
StreamWatch Schools 7
Organizations
Search Organizations...
Academy of Natural Sciences 1
American Littoral Society 2
Aquashicola Pohopoco Watershed Conservancy 2
Assateague Coastal Trust 4
BTW Company 2
Berks County Conservation District 3
Map
Satellite
Search sites...
Showing 975 out of



Angelica Creek


Browse all sites that have been registered in the database by all users. Clicking on a site shows its det
Map
Satellite
Search sites...
Site Code
MSAC2S
Site Name
Angelica Creek Downstream of The Nature Place
Latitude
40.31108
Longitude
-75.92439
Elevation
59.82 m
Latest Measurement
Feb. 6, 2024, 9:10 a.m. (UTC-05:00) (0 minutes ago)
View data for this site
Sam's Club
Dietrich Park
Temple
Breezy
Leinbachs
Basket
Five Points
Berkshire Ma
Sinking Spring
Lowe's Home Improvement
Reiffton
Kenhorst
Shillington
Ridgewood
Lorane
Gibraltar
Mohnton
Nolde Forest - Sawmill
Flying Hills
Gouglersville

wse Sites Time Series Visualization Help

Angelica Creek Downstream of The Nature Place (MSAC2S)

Deployment By	Michael Griffith
Organization	Berks Nature
Registration Date	Sept. 16, 2019, 8:06 p.m.
Deployment Date	Sept. 18, 2019, 4:15 p.m.
Latitude	40.31108
Longitude	-75.92439
Elevation (m)	59.82
Elevation Datum	MSL
Site Type	Stream
Stream Name	Angelica Creek
Major Watershed	-
Sub Basin	-
Closest Town	-

Time Series Visualization

Sensor Observations at this Site

EnviroDIY

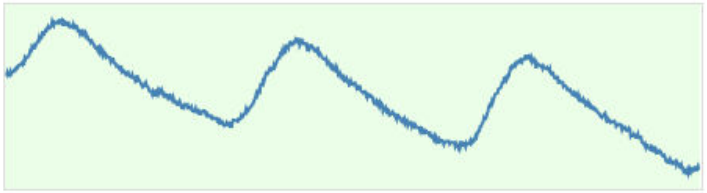
DOWNLOAD SENSOR DATA

Only the most recent 72 hours of available data are shown on the sparkline plots. The plots are broken when there are gaps in the data longer than 6 hours. Plots shaded in green have recent data. Plots shaded in red have not reported data in the last 72 hours.

Time Series Visualization
View data for this site.

Related Link

Water depth Provisional

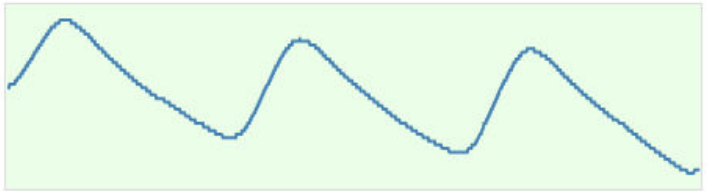


Last observation
Feb. 6, 2024, 9:10 a.m. (UTC-05:00)

468.7
(mm)

Medium	Liquid aqueous
Sensor	Decagon_CTD-10 Electrical Conductivity Temperature Depth Sensor

Temperature Provisional



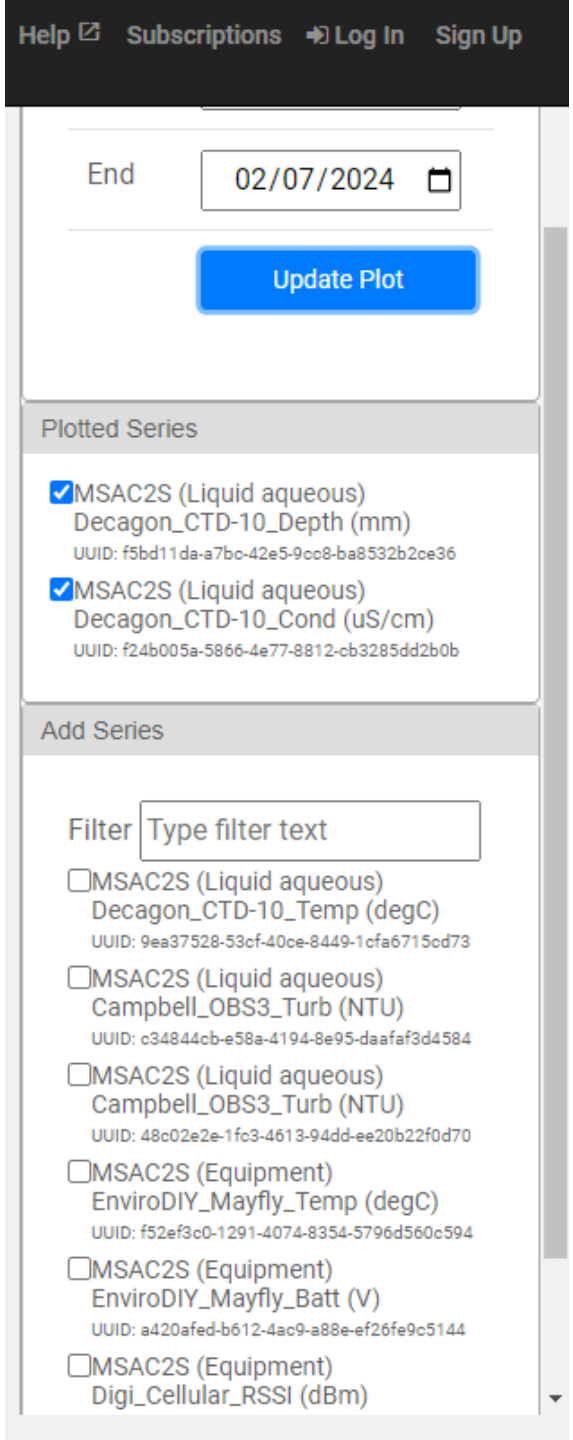
Last observation
Feb. 6, 2024, 9:10 a.m. (UTC-05:00)

3.9
(degC)

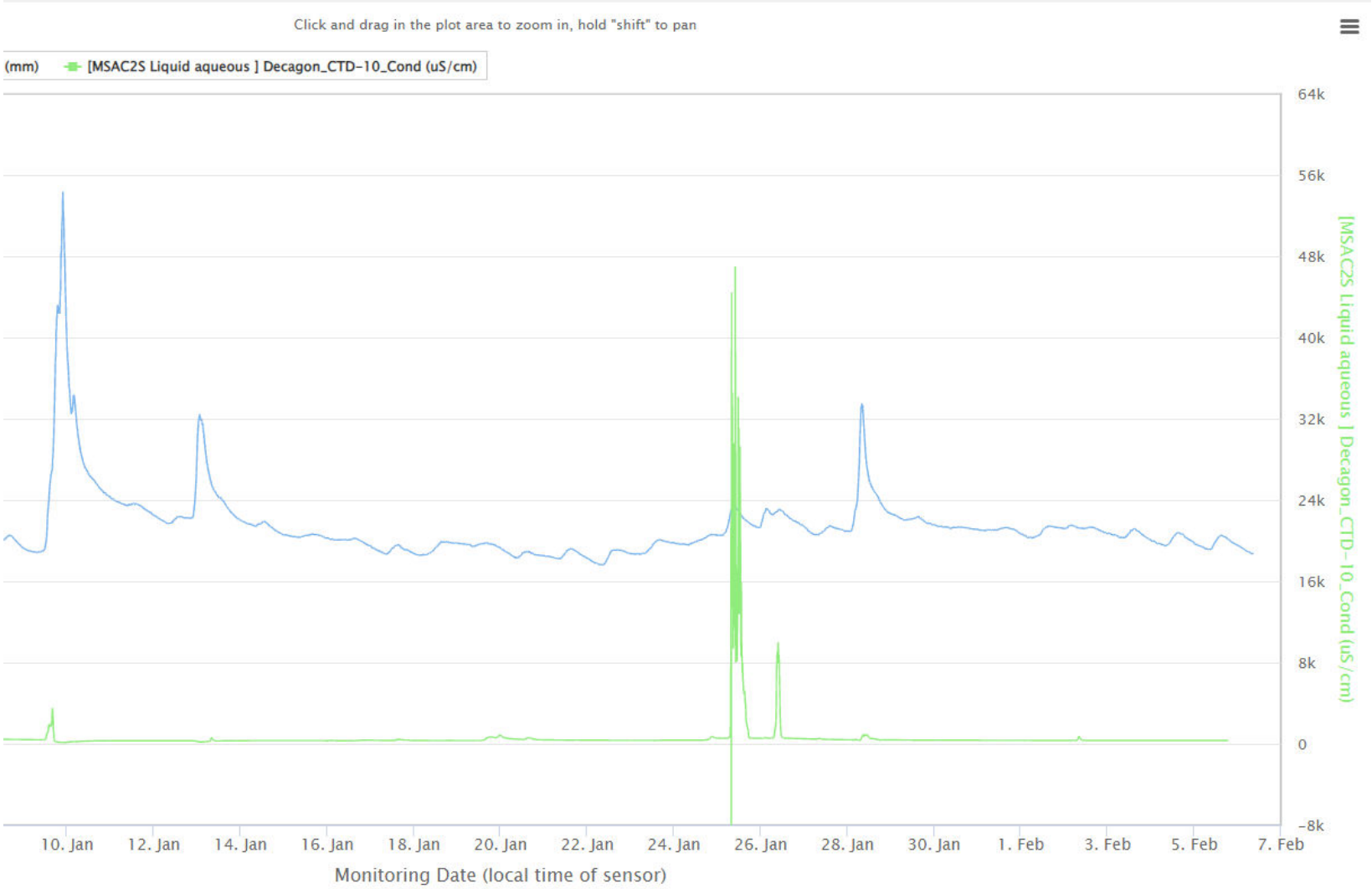
Medium	Liquid aqueous
Sensor	Decagon_CTD-10 Electrical Conductivity Temperature Depth Sensor

DEPTH

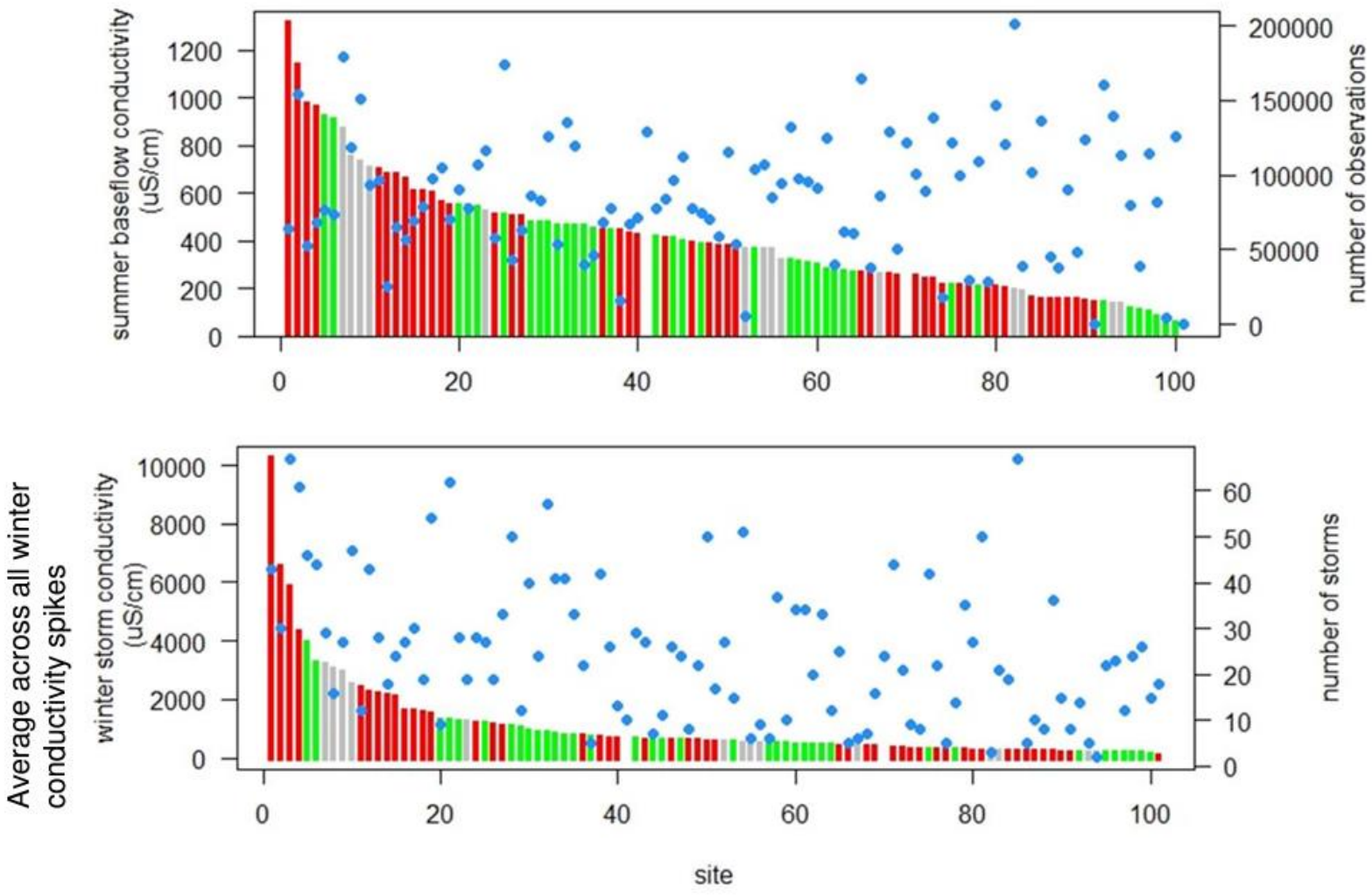
CONDUCTIVITY


Help
Subscriptions
Log In
Sign Up
End
02/07/2024
Update Plot
Plotted Series
MSAC2S (Liquid aqueous)
Decagon_CTD-10_Depth (mm)
UUID: f5bd11da-a7bc-42e5-9cc8-ba8532b2ce36
MSAC2S (Liquid aqueous)
Decagon_CTD-10_Cond (uS/cm)
UUID: f24b005a-5866-4e77-8812-cb3285dd2b0b
Add Series
Filter
Type filter text
MSAC2S (Liquid aqueous)
Decagon_CTD-10_Temp (degC)
UUID: 9ea37528-53cf-40ce-8449-1cfa6715cd73
MSAC2S (Liquid aqueous)
Campbell_OBS3_Turb (NTU)
UUID: c34844cb-e58a-4194-8e95-daafaf3d4584
MSAC2S (Liquid aqueous)
Campbell_OBS3_Turb (NTU)
UUID: 48c02e2e-1fc3-4613-94dd-ee20b22f0d70
MSAC2S (Equipment)
EnviroDIY_Mayfly_Temp (degC)
UUID: f52ef3c0-1291-4074-8354-5796d560c594
MSAC2S (Equipment)
EnviroDIY_Mayfly_Batt (V)
UUID: a420afed-b612-4ac9-a88e-ef26fe9c5144
MSAC2S (Equipment)
Digi_Cellular_RSSI (dBm)

tes Time Series Visualization



Continuous data statistics from across the DRB



QUESTIONS ???