

# Welcome!

## *2022 Mad River Watch* Info Session

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# Welcome! Zoom 101

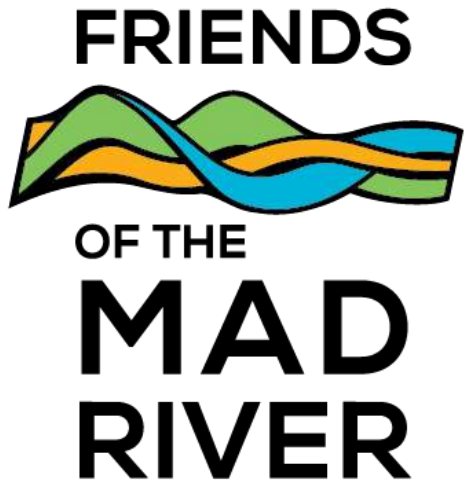
- **It's fun to see your face.** It feels more like a community, but we understand reasons for having the camera off. 😊
- **Is your full name displayed?** Your full name helps us all get to know each other better! Click on "Participants," then hover your mouse over your name in the "Participants" list on the right side of the Zoom window. Click on "More" and then "Rename."
- **Please keep your microphone muted** unless you want to speak. (In lower left corner, a red slash shows over the microphone icon indicating that your audio is off.)
- **You can use Zoom's "Raise your Hand" feature.** Hover near bottom center of screen and click on "Reactions" OR in "Participant" window, look near bottom of screen and then see the "Raise Hand" option. You can also wave frantically!



# Overview of Session

- I. Welcome & Intros (5 min)
- II. Friends of the Mad River & Mad River Watch (MRW) Through the Years (10 min)
- III. Mad River Watch 2.0, 2022 and On (30 min)
  - Goals & Program Overview
  - A Field Day – What does it look like?
  - A MRW Week – Sharing your Learning
  - The 2022 Field Season – Making it better
- IV. Next Steps & Questions (15 min)

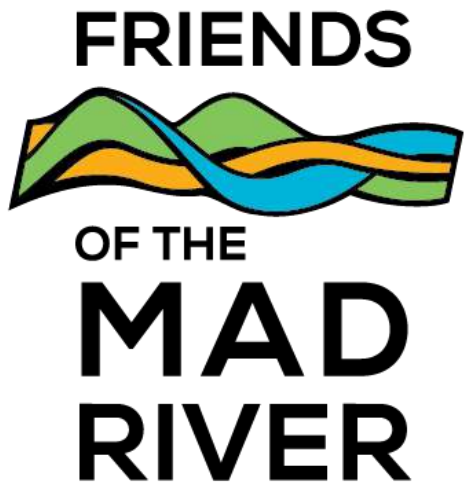




# Why?

Our mission is to steward the Mad River Valley's **healthy land** and **clean water** for our **community** and for future generations.





# What?

We bring people together to:

- *Learn* about the health of the land and water;
- *Conserve* our valued natural resources; and
- *Celebrate* this special place.

Keeping Water Local



Mad River Watch



Flood & Fish Friendly Roads



Ridge to River



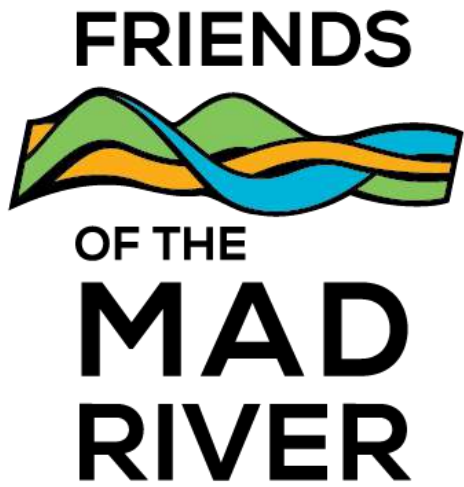
Storm Smart



Planting Trees







# Who?

- Staff & Board of Directors
- Donors
- Partnering Organizations, Businesses, and Towns



- Landowners
- Volunteers!



# Mad River Watch, Starting 38 Years

JULY 30, 2020

THE VALLEY REPORTER

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## Mad River Watch – 36 years old

By Mary Gow

Armed with coolers packed with sterile sample bottles and other field equipment for 36 years, usually six times every summer, volunteer citizen scientists have set out to approximately 30 sites on the main stem and tributaries of the Mad River collecting water samples. Analyzed in laboratories, the samples yield data on biological, chemical and physical conditions in the Mad River's waters.

The body of water quality data collected through Mad River Watch is unparalleled in Vermont. This longest-running program of Friends of the Mad River (FMR) has had broad reach in educating and influencing the community about public health and safety as well as environmental harm. It has provided data for municipal decisions and has documented long-term changes in the watershed. Mad River Watch (MRW) has been successful throughout the years in identifying source-

es of pollution and working with landowners, municipalities and funding agencies to resolve them. In celebrating successes of MRW, FMR is also looking ahead to see how it may change to address new challenges.

### LAUNCHED IN 1985

Mad River Watch launched in 1985 as part of the River Watch Network, founded with the goal to inspire local people to revive their own rivers. Initially, MRW was sponsored by the Winooski Conservation District. Jack Byrne, director of River Watch Network, reached out to Harwood Union High School biology teacher John Kerrigan to oversee the laboratory for processing local samples.

"Mad River Watch has had a major impact, not just in making people aware of the Mad River, but on students -- they had hands-on experience and access to professional equipment. It inspired many to careers in science," said John Kerrigan recalling early years of MRW. Originally, testing looked at fecal coliform, bacteria that lives in the intestines of animals and humans. Later, testing shifted to E. coli, a specific type of fecal coliform that is mostly harmless but can sometimes cause illness.

Kerrigan managed the lab for several years along the way with the team at Sugar-

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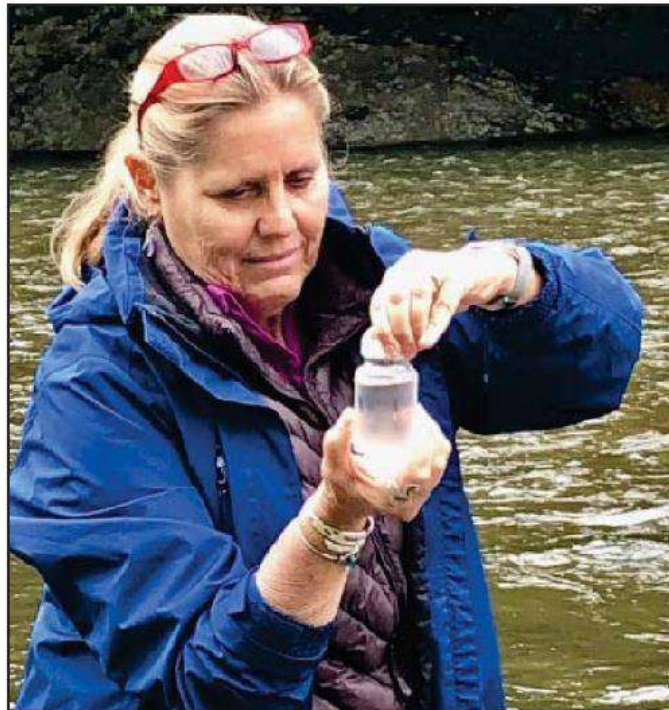


Photo: Suze Edwards.

Ruth Lacey collects a sample of water from the Mad River.

# Mad River Watch, Through the Years





# Mad River Watch 2.0 – Goals

1. Broaden & deepen volunteer experience

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1. Broaden & deepen volunteer experience
2. Learn from past data
3. Gather observations & respond to emerging environmental concerns
4. Identify opportunities for action
5. Take good care of our watershed
6. Track change over time






HEALTHY LAND. CLEAN WATER. VIBRANT COMMUNITY.



# MRW 2.0 Overview

- Field-based program, **6 field days**
- Field days on **Sunday OR Monday** (needs to be consistent)
- Data collection in **morning only (8-11 am)**
- Consistent data collection **requires iOS or Android tablet or phone\***
- Some sites require a bit of **dexterity** to reach and site conditions can change
- Volunteers visit **at least one site**, more if they are interested
- MRW 2.0 is a team effort - we need your help to make it the best it can be!



Bring your own if you are able. We can provide a limited number of devices for the field season.

# A Field Day –

## What Does it Look Like?



# A Field Day – Get There & Get Situated


- Review your site's profile and check the weather; dress for the conditions
- Organize your gear (phone, handbook, test strips, sampling bottle, temp/conductivity probe, field journal, art supplies 😊).
- Drive and/or walk to your site.
- Take out your phone or tablet (this is your 'field sheet!') and open the Fulcrum app.





# A Field Day – Observe: Take It All In

- Look around.
- Take note of the date/time, weather, air temperature, and your surroundings.
- Record your observations in the Fulcrum app.
- Take pictures of the stream and streambanks to capture a 360° perspective of the site (Fulcrum stores the pics).
- Capture pictures of anything else that you think is notable.



Starting with broad observations ensures that we don't miss important details by focusing too narrowly on collecting samples

# A Field Day – Physical Observations

- Observe the color and movement of the water
- Look for signs of new erosion or deposition of sediment
- Measure temperature
- Measure conductivity
- Optional: take measurements of the depth, width, and velocity of water





# A Field Day – Test Water Quality

- Measure pH using a test strip
- Once Sentinel sites are established, we will have a protocol for sending water samples to the lab

By testing around the same time of day (morning), we can get a sense of where pollutants are entering the waterways



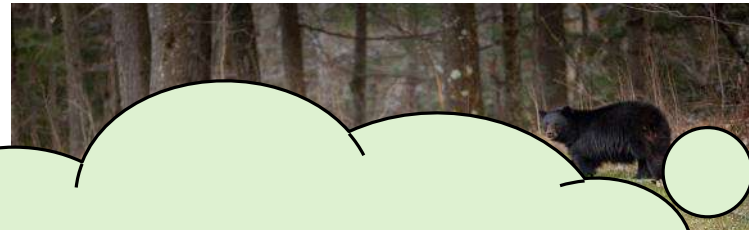


# A Field Day – Biological Observations

Take note of wildlife presence or sign, vegetation, the quality of the riparian buffer, and the presence of invasive species. Optional: identify Benthic Macroinvertebrates at your site!



Through practicing close observation, MRW volunteers will become skilled observers of the watershed





# A Field Day – Steward

Did you notice trash?

Measure & record the type and how much of it there is then get out those gloves and take some action!





# A Field Day – Reflect

Inspired to get your artsy on?  
Sit. Reflect. Read, write, paint, or draw?  
...the sky is the limit

Because we value the diverse perspectives this community can contribute, we want to bring art to the science



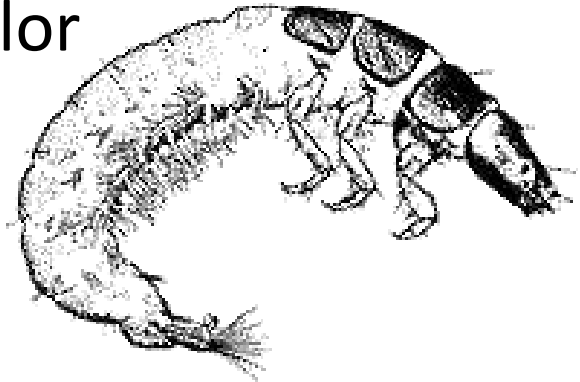
Mad River Watch  
Another good day at the Mill limb from a tree next to the recently, and we had to test downstream from the first into the site is so beautiful. photos that I uploaded are are in the meadow and all another Haiku for today:

Tree down at test site  
Still green so must be  
Birdsong, babbling brook

We were able to identify  
were unable to snap  
catbird and a dove. (I  
other wildlife that we

# A Field Day – Optional Explorations

- Flow
- Benthic Macroinvertebrates
- Apps
  - iNaturalist
  - Merlin
  - Crowdwater
  - Hydrocolor





# A MRW Week – Sharing your Learning





# A MRW Week – Sharing your Learning

JULY 29, 2021

THE VALLEY REPORTER

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## Water temp: a key to watershed's health



Photo: Ilyian Deskov, Mad River Watch volunteer.

High flow and turbid waters near the mouth of the Mad River.

On July 25 and 26, Friends of the Mad River's (FMR) Mad River Watch volunteers visited field sites across The Valley to monitor water quality

communities that live here," explained FMR director Corrie Miller.

### IMPACTS ON AND FROM THE LANDSCAPE

with even cooler temperatures needed for spawning," explained angler and Trout Unlimited board member Clark Amadon.

water quality, flood resilience and biodiversity in the watershed, Shadis explained.

### HIGHLIGHTS FROM THE FIELD

Following the recent stormy weather, volunteers saw increased flow and turbidity at their sites. A volunteer at Folsom Brook noted that there was, "evidence of the water being really high at the sampling site. Grass was still bent over from the storm. Maybe 48 inches above the current water level." Another volunteer noted the in-stream dynamics near Riverside Park, that the, "water level is high and up over the gravel beach. There is erosion on the upstream gravel island. Water is now flowing through the center of the island."

A volunteer at Shepard Brook took careful notes on the way a nearby tributary

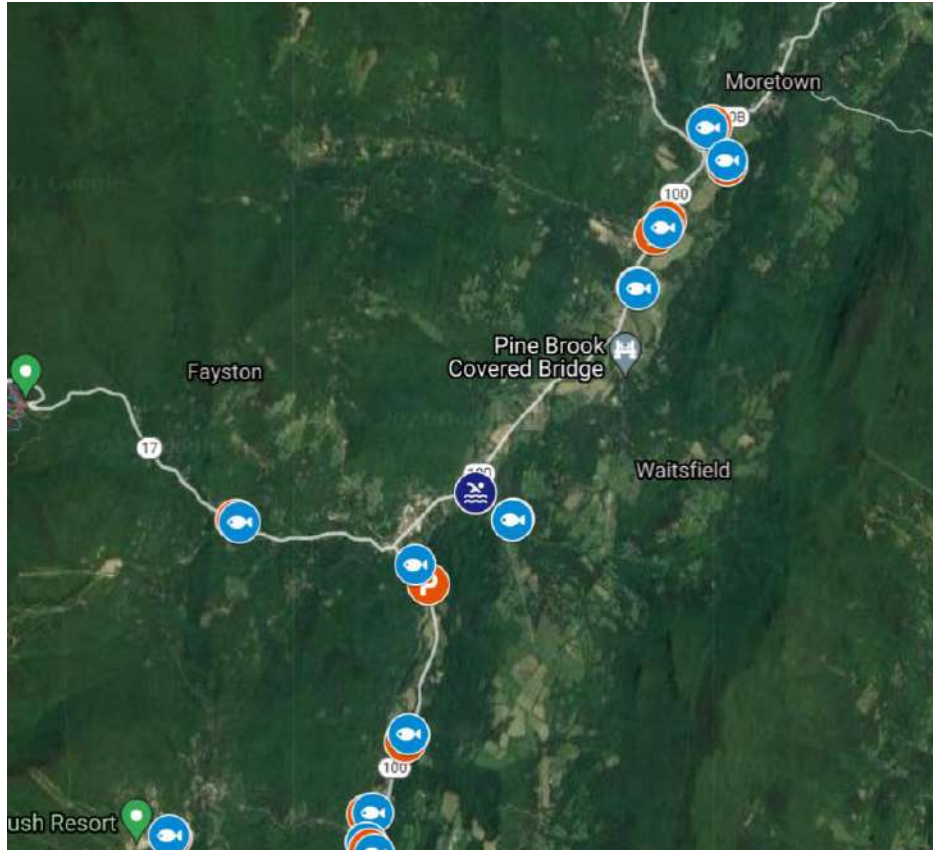
and riparian buffer responded to the storm. They noted that, "There is a stream running from the culvert under the driveway that is typically dry. The stream is running through an area of thick vegetation, predominantly ferns, meadow rue, swamp milkweed, jewelweed and other natives on edge of the brook and bishops weed amongst pine trees closer to the nearby driveway."

This week saw 13 teams of volunteers visit 21 field sites. Water temperatures ranged from a low of 59.2°F at Riverside Park in Warren on Sunday to a high of 64.92°F at the USGS gage in Moretown on Monday. Over the summer, FMR will compile data and observations and share key findings and highlights in The Valley Reporter and online at [friendsofthemadriver.org/madriverwatch](http://friendsofthemadriver.org/madriverwatch).

LUNCH SPECIALS						
August						
SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
Menu Subject to change if not feasible to order something	THE HURDLE SPECIAL 1	Turkey Reuben with chips	Jake's Hoewies Burger with Fries	Stuffed Green Peppers with a Green Salad	Grilled ham and Cheese with Chips and a pickle	Turkey Reuben with chips
	8	9	10	11	12	13
						14



# A MRW Season – Key Outcomes



## Every Year:

- Water quality priorities
- Opportunities for focused investigations & research
- Long term trends
- Corps of skilled watershed observers

## This Year:

- Incorporate 2021 feedback
- New feedback from volunteers
- Test optional components

# Next Steps...

1. Follow-up Emails from Friends
  - Volunteer Training Registration
  - Site Selection
  - Permissions and releases
  - How To: Fulcrum setup
2. Volunteer Training
  - Wednesday June 1st, 4 to 5:30pm
  - Thursday June 2nd, 4 to 5:30pm
  - Saturday June 4th, 10 to 11:30am
3. Enjoy the field season! Observe, learn & share!

→ If you haven't provided your email address, contact me at [ira@friendsofthemadriver.org](mailto:ira@friendsofthemadriver.org)





# Questions or Comments?



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# Thanks!

*Mad River Watch*  
2022

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