Friends of the Mad River

-- FOR IMMEDIATE RELEASE --
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Contact: Corrie Miller, Director, (802) 496-9127

It's Swimming Season! Is the Mad Clean?

The Mad River is generally safe for swimming and boating. The federal Clean Water Act, septic regulations, lots of money, careful land stewardship, and the hard work of many people are to thank. But, there are times – particularly after a rainfall event – when it is possible that our river might make you sick. Also, certain regions of the Mad River suffer from persistent water quality problems that contribute to poor aquatic wildlife habitat, harmful algal blooms, polluted groundwater, and exacerbated flooding. Our community has work still to do.

Friends of the Mad River (FMR) has run the Mad River Watch water quality monitoring program for the last three decades to get a sense of the watershed's overall health, provide public health information to river users, and identify areas needing improvement. Throughout the summer, community volunteers collect samples of water from dozens of river and tributary sites and then FMR and Vermont's Department of Environmental Conservation (DEC) laboratories analyze the samples' bacteria and nutrient levels. We post the data in the Valley Reporter, on our Facebook and web sites, and on signs at swimholes across the Valley so that people have information to make their own recreational health decisions. Over the decades, we've also used this data to guide many successful clean-up efforts.

2016 Upgrades
This past year, thanks to a generous private donation and a grant from Vermont's Departments of Fish and Wildlife and Environmental Conservation, FMR engaged a research scientist to analyze our historical data, identify persistent water quality problems, and make recommendations for the program moving forward. Stay tuned later this summer for occasions when we'll share lessons learned from the historical data and actions we can all take for clean and clear water.

We've designed a 2016 Mad River Watch program that will provide swimmers, paddlers, and anglers with information they need for safe recreation while also gathering water quality data that better identifies and resolves problematic land uses. The big picture change is that we're beginning to gradually transition the program's focus from monitoring water quality equally across the watershed to targeting problem areas in order to guide solutions.

E. coli is a type of coliform bacteria and is an indicator of pollution from human or animal waste (think cows, horses, dogs, and septic leaks) and the potential presence of disease-causing organisms. The utility of *E. coli* analysis is somewhat limited to understanding risks to human health so we've re-focused our analyses for *E. coli* at the dozen sites most used by people – the swimholes and access areas.

Folsom and High Bridge Brook drainages are among those with persistently high *E. coli* levels. So, we've added sites to these areas to further pinpoint sources of water quality problems. To gain a more holistic understanding of water quality issues across the watershed, we're also adding total nitrogen analysis to the mix. Since 2006, we've collected samples to be analyzed for phosphorus and turbidity at DEC's lab. Indicators like phosphorus and nitrogen (nutrients that exist naturally but can wreak havoc in unnaturally high concentrations) and turbidity (a measure of the sediment suspended in the water that can indicate erosion and runoff issues) help

paint a picture of watershed health beyond the capacity of *E. coli* analysis. Phosphorus, nitrogen, and turbidity results will be available at summer's end.

Watershed Health

A watershed is the entire region of land that drains into a river, defined by the high points and ridgelines. Because a watershed carries water "shed" from the land after rain falls and snow melts, the quality of the river's water is a measure of how well humans steward the land. If landowners and land managers limit pollutants and erosion and employ practices that slow down rain and snowmelt – allowing water time and space to soak into the ground – then runoff doesn't move so quickly over the land and into the streams and we pass fewer pollutant, sediment, and flood problems to our downstream neighbors.

In the case of the northward-flowing Mad River, our 144 square mile watershed drains the area of land between the Green Mountain ridgeline on our west, the Granville Gap to our south, and the Northfield Range on our east. The Mad River watershed entirely encompasses three towns – Warren, Fayston, and Waitsfield – as well as substantial portions of two others – Duxbury and Moretown. Our five town watershed is also part of the Winooski and Lake Champlain watersheds – the water draining our mountains and valley eventually enters those bodies of water on its way to the ocean.

The river connects our Mad River Valley community and its clean water is a measure of our success as stewards of the land.

This Year's First Sampling Day – June 13, 2016

Sampling results from the first round of *Friends of the Mad River's* show no sites with unfavorable swimming conditions as of Monday morning. It rained intermittently for several days prior to Monday's sampling and sediments and pollutants from the land into the river and streams had likely already flushed through the watershed.

The flow condition of the Mad River at the time of sampling Monday morning was high and rising (HR), measuring approximately 300 cubic feet per second (cfs) at the USGS flow gage in Moretown. The flow peaked at 376 cfs in Monday's afternoon hours. The median flow for this date is 195 cfs.

Remember that rains can cause *E. coli* levels to fluctuate, even on a daily basis, as water carrying pathogens moves down the watershed. FMR's *E. coli* sampling results are only a snapshot in time intended to give you a sense of the conditions that lead to high pathogen levels in the water so you can be informed. **You** are your best protector - use common sense and don't swim for several days after a rain. It is estimated that at the level of 235 colonies *E.coli* per 100 mL water, approximately 8 out of every 1,000 swimmers are likely to contract a water borne illness related to fecal contamination.

Many thanks to this week's Mad River Watch volunteers: Charlie Baldwin, Richard Czaplinski, Susy Deane, Annie & Hazel Macmillan, Kinny Perot, Fran & Gary Plewak, and Michael Ware. Thanks to Susanne and George Schaefer who drove water samples to the DEC's lab in Burlington for phosphorus, nitrogen, and turbidity analysis and to Sally Boudreau for posting data at swimholes across the watershed. The Mad River Watch Program would not be possible without these dedicated volunteers! This week Maryellen Kinhan, last year's Lab Coordinator and Warren resident, trained Paula Baldwin, a former MRW volunteer from Fayston, to fill her shoes. Welcome Paula!

For more information about *E. coli* and the Mad River Watch program and to view our most recent complete data report please visit the *Friends of the Mad River* website at www.FriendsoftheMadRiver.org. Results are also

available on Facebook (“Friends of the Mad River”) and on sign posts at swimholes across the Valley. *Friends* is a community-supported organization, and depends on the generous contributions of its members to continue the Mad River Watch and other important programs; learn how to become a member and donate securely online at our website.

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Mad River Watch (MRW) Results - June 13, 2016

SITE LOCATION	SITE #	Water Temp. °F	*E.coli* per 100ml *
Blueberry Lake	BBL	57.0	3.0
Warren Falls (Mad River)	1	48.0	77.1
Warren Store (Freeman Brook)	4	50.0	8.5
Warren Riverside Park (Mad River)	7	49.0	22.6
Lareau Swimhole (Mad River)	19	51.0	58.3
Couples Club Field (Mad River)	19.2	51.0	40.4
Waitsfield Covered Bridge (Mad River)	20	49.0	123.6
Tremblay Road (Mad River)	21.5	51.0	52.8
Meadow Road Bridge (Mad River)	23	52.0	18.5
Moretown Village Swim Access (Mad River)	27	51.0	101.7
Ward Swimhole (Mad River)	29	52.0	172.2

*** > 235 *E.coli* / 100ml = Not suitable for recreation,** according VT Department of Health and EP

Flow and Weather Analysis

The flow condition of the Mad River at the time of sampling Monday morning was high and rising (HR), measuring approximately 300 cubic feet per second (cfs) at the USGS flow gage in Moretown. The flow peaked at 376 cfs in Monday's afternoon hours. The median flow for this date is 195 cfs. **No sites tested above DOH / EPA safe E. coli level of 235 colonies per 100 mL of water.**

River Flow

HR - high and rising: Recent rains have caused a high river to rise even more.

Thanks to this week's volunteers!

Samplers - Charlie Baldwin, Richard Czaplinski, Susy Deane, Annie & Hazel Macmillan, Kinny Perot, Fran & Gary Plewak,

Posting Results - Sally Boudreau

E. coli Lab Coordinator - Paula Baldwin & Maryellen Kinhan

Transporting Samples - Susanne & George Schaefer