Mad River Watch (MRW) Results - July 27, 2015

SITE LOCATION	SITE #	Water <i>E.coli</i> per	
		Temp. °F	100ml *
- Blueberry Lake	BBL	77.0	5.2
- Warren Falls (Mad River)	1	56.0	53.0
Bobbin Mill (Lincoln Brook)	2	60.0	40.4
Warren Covered Bridge (Mad River)	3	58.0	93.4
- Warren Store (Freeman Brook)	4	60.0	63.8
Brook Road above Village (Freeman Brook)	4.5	60.0	44.1
North End Warren Village (Mad River)	5	58.0	90.6
Bridge on West Hill Road (Bradley Brook)	6	58.0	8.5
Seasons (Mad River)	6.5	57.0	195.6
- Warren Riverside Park (Mad River)	7	59.0	209.8
Bottom of Sugarbush Access Rd (Clay Brk)	8	58.0	22.6
Route 100 crossing (Folsom Brook)	10	60.0	9.8
"Dip" on East Warren Rd. (S. Folsom Brook)	10.6	59.0	11.0
Sugarbush Health Club (Rice Brook)	11	62.0	3.1
- Inferno Road Crossing (Clay Brook)	12	62.0	9.8
Fayston Elementary School (Slide Brk)	13.1	63.0	28.8
German Flats, Rt 17 (Chase Brk)	16	64.0	26.9
German Flats, Rt 17 (Mill Brk)	17	64.0	70.0
Mill Brook east of MRG	17.1	64.0	11.0
Mill Brook	18.1	64.0	55.6
- Lareau Swimhole (Mad River)	19	61.0	126.8
- Couples Club Field (Mad River)	19.2	61.0	123.0
- Waitsfield Covered Bridge (Mad River)	20	61.0	547.5
Joslin Hill Road Culvert (High Bridge Brook)	20.1	61.0	45.7
Tremblay Road (Mad River)	21.5	61.0	41.0
North Road Covered Bridge (Pine Brook	22	62.0	2.0
Meadow Road Bridge (Mad River)	23	62.0	67.1
Route 100 Bridge (Shepard Brook)	24	61.0	10.9
Route 100 Bridge (Dowsville Brook)	25	61.0	19.7
North Road near Moretown (Mad River)	26	63.0	92.1
- Moretown Village Swim Access (Mad River)	27	63.0	1413.6
Route 100B crossing (Doctors Brook)	27.1	63.0	26.0
Ward Clapboard Mill (Mad River)	28	62.0	1046.2
Near Stevens Brook Road (Welder Brook)	28.05	62.0	29.2
- Ward Swimhole (Mad River)	29	66.0	50.0
Lover's Lane Bridge (Mad River)	31	65.0	770.0

^{* &}gt; 235 E.coli/100ml = Not suitable for recreation, according VT Department of Health and EPA

Flow and Weather Analysis

The flow condition of the Mad River at the time of sampling Monday morning was high and declining (HD), measuring approximately 333 cubic feet per second (cfs) at the USGS flow gage in Moretown, down from about 495 cfs just 3 hours prior, after a night of intense, but geographically specific, thunderstorms and rain. The median flow for this date is 86 cfs. Four sites - all on the Mad River Main Stem - tested above DOH/EPA safe E. coli level of 235 colonies per 100 mL of water.

River Flow

HD - high and declining: After reaching a peak flow, dry weather has returned and the flow is falling.

Thanks to this week's volunteers!

<u>Samplers -</u> Paula & Charlie Baldwin, Susy Deane, Chase Fortier, Annie Macmillan, Fran & Gary Plewak, and Michael Ware

E. coli Lab Coordinator - Maryellen Kinhan

Posting Results - Sally Boudreau

<u>Transporting Samples -</u> Susanne & George Schaefer



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Sampling after a Storm

Sampling results from the fourth round of *Friends of the Mad River's* 2015 Mad River Watch (MRW) volunteer water quality program show <u>four</u> sites with unfavorable swimming conditions Monday morning. Localized thunderstorms and intense downpours hit the watershed overnight Sunday, washing sediments and pollutants from the land into the river and streams. By the time of sampling Monday morning, tributaries seem to have cleared while several Main Stem sites tested above DOH/EPA safe *E. coli* level of 235 colonies per 100 mL of water.



A crystal clear Doctor's Brook meets the turbid Main Stem of the Mad in Moretown early Monday morning. Photo by FMR.

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the time of sampling Monday morning was high and declining (HD), measuring approximately 333 cubic feet per second (cfs) at the USGS flow gage in Moretown, down from about 495 cfs just 3 hours prior, after a night of intense, but geographically specific, thunderstorms and rain. The median flow for this date is 86 cfs.

Samplers also noted that, in general, tributaries had clear water while the Main Stem was very turbid, with many sediments suspended in the water. What do you think can explain this observation? Were headwaters not as affected by localized storms? Had the tributaries been more turbid earlier in the morning, but cleared by the time of sampling? Are headwater streams eroding less or contributing less sediment than the Main Stem?

Always 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 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 at least a full day after a rain.

E. coli is a type of coliform bacteria and is used as an indicator of pollution from human or animal waste and the potential presence of disease causing organisms. 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: Paula & Charlie Baldwin, Susy Deane, Chase Fortier, Annie Macmillan, 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 and turbidity analysis, to Sally Boudreau for posting data at ten swimholes across the watershed, and to Maryellen Kinhan for completing the Wait House *E. coli* lab analysis. The Mad River Watch Program would not be possible without these dedicated volunteers!

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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