

## Bacteria Results 2014: Bacteria counts

2014 MRWC Bacteria Sampling Data								2014	
Location - Sample Date	6/10/14	6/24/14	7/8/14	7/22/14	8/5/14	8/19/14	9/2/14	GeoMean	contact
Millers River	count								RATING
New Boston Rd-OSF	88.6	156.5	517.2	na	133.3	109.9	187.2	164.3	2nd
Cass Meadow	52.1	81.3	224.7	47.3	76.3	68.3	129.1	84.3	primary
Winchendon boat launch	81.6	123.6	387.3	78.9	139.6	81.3	160.7	128.0	2nd
Orange-Riverfront park	52.9	30.9	365.4	63.7	88.0	82.0	25.6	68.4	primary
Erving	86.0	133.3	261.3	48	63.8	83.6	193.5	105.8	primary
Millers-confluence w/Ct	88.4	34.1	99	36.4	91.0	53.8	39.5	57.6	primary
Otter River	count								
Rt 2A crossing	90.6	123.6	235.9	76.2	99.0	70.8	98.7	104.8	primary
Rt 101 Crossing	66.3	78.5	517.2	74.9	209.8	172.2	135.4	138.7	2nd
Baldwinville	63.1	71.7	290.9	58.3	137.4	58.3	178.2	101.3	primary
Average of event	74.4	92.6	322.1	60.5	115.4	86.7	127.5		
Weather	Dry	Dry	Wet	Dry	Dry	Dry	Dry		
State limit for primary contact = 235 cfu single date maximum (seasonal geometric mean of 126 cfu)									
Secondary contact is acceptable up to a geometric mean of 630 cfu / 1240 cfu single date									

M=Millers river area, O=Otter River area

### **PRIMARY AND SECONDARY CONTACT RECREATIONAL USE (MassDEP)**

The *Primary Contact Recreational Use* is supported when conditions are suitable (fecal coliform bacteria densities, turbidity and aesthetics meet the SWQS) for any recreational or other water related activity during which there is prolonged and intimate contact with the water and there exists a significant risk of ingestion. Activities include, but are not limited to, wading, swimming, diving, surfing and water skiing.

The *Secondary Contact Recreational Use* is supported when conditions are suitable for any recreational or other water use during which contact with the water is either incidental or accidental. These include, but are not limited to, fishing, boating and limited contact related to shoreline activities.

MRWC expects to sample again at these sites and perhaps add other sites as more Blue Trail efforts move forward. Funding will determine the full scope of sampling in 2015.



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## **MRWC Bacteria Monitoring Program 2014 Summary Report: Millers & Otter Rivers**

In 2014 MRWC performed its fourth year of bacteria sampling on several river stretches with active or potential recreational activity. MRWC continues this program to build a baseline of water quality data, particularly since MRWC continues to foster its “BLUE TRAILS” program to promote recreation and river stewardship. 9 volunteers came forward and helped make the fourth year of this program a success. All received training in proper sampling techniques, and bi-weekly sampling began on June 10, 2014 and ran through September 2th. In all we conducted seven sampling events at nine sampling sites on the Millers and Otter Rivers.

Volunteers also noted temperature and other site conditions observed during the sampling event. Weather conditions within 48 hours of sampling events were recorded to measure the effects of stormwater runoff. Bacteria data can be found on the reverse side.

This fourth sampling year was a strong success. Volunteer samplers did well and there were few complications. This experience will continue to inform and guide the enhancement of MRWC’s monitoring program as we look to optimize the number of monitoring sites and encourage more people to explore and protect the Watershed and its rivers and tributaries.

### ***Summary of Key Results***

#### **GENERAL:**

- All sampling locations met the seasonal standard (geo. mean) for Secondary Contact.
- 2/3 of the sampling locations met the seasonal standard for Primary Contact.
- All individual sampling events on dry days met the daily standard for Primary Contact.
- Higher levels were generally recorded during wet weather events. This finding supports the recommendation that *after rain events, swimming and other Primary Contact should be avoided for at least 48 hours.*
- River Temperatures appeared slightly lower than 2013.
- There were no unusual odor or color observances.

#### **SITE-SPECIFIC:**

- Seasonal scores at Cass Meadow and Baldwinville met Primary Contact levels for the first time. These sites are near urbanized areas. Perhaps the greater number of dry sampling events influenced this.
- The New Boston Road (Otter River State Forest) site’s seasonal score also met Secondary, not Primary Contact levels--possibly due to higher summer flows and the proximity of wetlands and animal activity.
- Rt 101 site on the Otter River still met Secondary, but not Primary Contact levels, it is near an urban areas.