

## 2007 Bacteria Data - Rivers and Streams Enterococci Data

A number of groups of bacteria species are used to indicate the presence of human sewage and associated pathogens, or disease causing organisms. In Rhode Island two groups monitored in order to protect human health - fecal coliforms and enterococci. The USEPA has identified enterococci as better indicators of increased risks of contracting gastrointestinal illnesses from water contact than fecal coliforms. Therefore the Rhode Island Department of Health (RIHealth) adopted single-value enterococci standards for licensed swimming beaches in 2004, and the Rhode Island Department of Environmental Management (RIDEM) adopted enterococci for contact recreation standards on all waters (fresh and salt) shortly after. In addition, as required under the National Shellfish Sanitation Program for shellfish waters and as an indicator of overall water quality, RIDEM continues to assess fecal coliform levels, particularly in marine waters or waters that discharge directly to marine waters (fecal coliform data is available for marine waters and shellfish area tributaries in the "Tidal Rivers Bacteria" file).

While URIWW's Analytical Laboratories are State certified, Watershed Watch data is intended for screening purposes only. However our data are very valuable for targeting areas of concerns and for tracking potential sources of bacterial contamination. Samples from various sites may have been collected over a period of days for each collection period, so may reflect dry versus wet weather or rain event values. Please contact Watershed Watch for specific sample dates.

Any result above the state standard is considered unsafe, and swimmers should refrain from swimming until results return to acceptable levels, or at least for several days after heavy rain.

RI Department of Health standards for recreational contact (i.e. swimming):

Fresh Waters - Not to exceed 61 enterococci per 100 mL.

Watershed code	MONITORING LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	GEOMEAN
		----	<b>Most Probable Number of Enterococci per 100 mL</b>					----
CE	Bailey's Brook - ACA Upstream	125.9	488.4	1203.3	626	>9678.4	294	>717.3
CE	Bailey's Brook - SRU 1	6.1	9.5	62.2	980.4	9804	983	180.0
CE	Bailey's Brook - SRU 2	9.6	547.5	64.2	1203.3	2178	364	261.8
B	Blackstone River @ Manville Falls	8.6	15.8	16.4	12.5	54.4	6.3	14.6
NA	Buckeye Brook #1 @ Novelty Rd	142.1	488.4	282.8	1034.4	2746.8	888	606.0
NA	Buckeye Brook #2 @ Lockwood Brk	185	325.5	52.8	2599.4	>9678.4	2114	>747.7
NA	Buckeye Brook #3 @ Warner Brook	195.6	248.9	114.2	2239.8	9804	4884	917.4
NA	Buckeye Brook #4 @ Mill Cove	-	238	177.7	1841.6	6488	3282	1106.5
WD	Falls River D - Step Stone	5.2	30.5	190.4	114.7	99.2	4.1	33.5
WD	Falls River C - Austin Farm	1	50.4	579.4	259.5	176.8	8.4	47.3
WD	Falls River B - Sand Banks	2	20.9	686.7	125.9	107.4	1	27.0
WD	Falls River A - Twin Bridges	<1	30.6	613.1	160.7	75.8	12.1	36.8
GB	GB #1 - Maskerchugg	20.7	12	46.5	63.1	112.6	112	45.8
GB	GB #2 - Burger King	478.6	74.3	9.7	89.2	3265.6	2075	243.5
GB	GB #3 - Pipe @ Rte 115	47.1	88.6	50.4	72.3	3921.6	3873	247.7
GB	GB #4 - Mill Creek	18.1	53.3	45.9	774.6	2595.2	787.2	203.0
GB	GB #5 - Hardig Upstream	-	135.4	89.5	-	-	-	110.1
GB	GB #6 - Tuscatucket Br	11.1	27.8	99.9	145.6	999.2	>802	>123.8
GB	GB #7 - Southern Creek	13.5	116.9	208.4	387.2	2411	6931.6	358.6
H	HW #1A - Scrabbletown Brk @ Falls	-	-	28.8	87.3	482.2	73.8	97.3
H	HW #1B - Scrabbletown @ Rte 4 Bridge	-	-	16.4	104.3	> 4839.2	42.4	>204.5
H	HW #2 - Bear Brk @ South Rd.	-	-	19.3	328.2	1841.6	-	226.8
H	HW #3 - Frenchtown Brk @ Frenchtown	-	-	387.3	501.2	1002.4	198.1	443.1
H	HW #4 - Hunt River @ Davis Memorial	-	-	235.9	17.3	1373.4	21.8	105.1

## 2007 Bacteria Data - Rivers and Streams Enterococci Data

Watershed code	MONITORING LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
		---	<b>Most Probable Number of Enterococci per 100 mL</b>					---
H	HW #5 - Sandhill Brook (Saw Mill Inlet)	29.5	167	3683.2	500	6931.6	2481	733.7
H	HW #6 - Hunt River @ Forge Rd.	3	100.8	45	65	110.4	129.8	48.3
TH	Moosup Upstream	2	12.1	44.3	770.1	2190	552.8	100.0
TH	Moosup A - Fairbanks Bridge	4.2	45.3	2419.6	101.2	33.8	6.2	46.2
TH	Moosup C - Deerfield Drive	<1	15.8	> 200.5	127.4	143.4	28.8	>33.8
M	Moshassuck River - Collyer Field	Not run	686.7	816.4	325.5	>9678.4	6212.4	>1614.6
PE	NR 01- Gilbert Stuart	2	5.1	5.1	88.6	39.8	-	11.3
PE	NR 11 - Mettatumet Brook	111.2	181.5	107.7	Dry	Dry	-	129.5
PE	NR 12 - Mumford Brook	44	1986.3	> 9678.4	> 4839.2	>24196	>24196	> 3658.05
PE	NR 13 - Near Lakeside Rd. ^	<10	10	53	< 10	< 5 / 52*	110/87**	5.5
PE	NR 14 - Lakeside Outfall	2	6	> 9678.4	29.8	Dry/ 8664*	>24196/63**	> 125.4
			First value before rain / second value with rain					
			** First value first flush of rain / second value +24 hrs of rain					
PE	NR 15 - Crooked Brook Farm	13.4	15.6	38.8	Dry	Dry	Dry	20.1
PE	NR 16 - Crooked Brook School	11	275.5	Dry	Dry	Dry	Dry	55.0
WD	Pawcatuck River @ Avondale ^	<10	10	-	99	10	192	15.7
WD	Pawcatuck River @ Bradford	2	23.8	9.5	-	254.8	61.2	23.4
PA	Pawtuxet River @ Ross Simon Dr	-	-	14.8	42.2	260.2	36.4	25.0
PA	Pawtuxet River @ Ford Lane	-	-	-	24.6	182	33.6	53.2
PA	Pocasset River @ CLCF Field	-	-	206.8	> 2419.6	4839.2	362	> 1357.5
WD	Queen @ Wm Reynolds (Brownell's)	<1	6.4	18.3	1413.6	60.2	60.2	19.8
WD	Queen River @ Sand Bridge (TNC)	4.1	40.4	29.2	410.6	25.6	15	30.2
WD	Queen River @ Locke Brk	7.5	122.3	198.9	214.2	570.2	116.2	117.2
WD	Queen River @ Sherman Brk	4.2	2	2	65	581.8	47.4	17.6
WD	Shickasheen Brook @ Rte 2	19.2	-	130.5	-	-	Dry	50.1
WD	Shickasheen @ Miskiania Road	5.3	-	113.9/65	-	1986.3	>401	>125.6
			First value with recent rain / second value after several drier days					
WD	Shickasheen @ Barber Pond Outlet	1	-	80.9	-	5.2	Dry	7.5
WD	Shickasheen Brook @ Rte 138	7.2	-	210.5	-	-	980.4	114.1115
WO	Woonasquatucket River @ Cricket	9.6	105.9	1553.1	88.4	140	2	58.3
WO	Woonasquatucket River @ Donigian	19.7	88.4	2419.6	435.2	634	43.2	192.1

RI Department of Health standards for recreational contact (i.e. swimming):

Fresh Waters - Not to exceed 61 enterococci per 100 mL.

Marine Waters (indicated by ^) - Not to exceed 104 enterococci per 100 mL.

A factsheet describing how bacteria are monitored, what bacterial indicators are, where bacteria come from and how we can all help to reduce bacterial input into our local water resources is available at <http://www.uri.edu/ce/wq/ww/resources/Bacteria.pdf>

See the Rhode Island Department of Health beach monitoring website (<http://www.ribeaches.org/>) for additional information about beach monitoring and state standards.

The Rhode Island Department of Environmental Management website has information on State efforts to restore waters impaired by bacteria and other pollutants (<http://www.dem.ri.gov/programs/benviron/water/quality/index.htm>).