

## 2009 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 fecal coliform and enterococci are monitored in order to protect human health. 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. 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, URIWW data are intended for screening purposes only. 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 URIWW for specific sample dates. Our data are very valuable for targeting areas of concerns and for tracking potential sources of bacterial contamination. Results above the state standard could be unsafe, and you 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 - Single sample not to exceed 61 enterococci per 100 mL.

RI Department of Environmental Management Enterococci Standards:

Non-designated Bathing Beach (Fresh) Waters Geometric Mean Density - Not to exceed 54 enterococci per 100 mL.

Designated Bathing Beach (Fresh) Waters Geometric Mean Density - Not to exceed 33 enterococci per 100 mL.

Watershed code	MONITORING LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	GEOMEAN
		----	Most Probable Number of Enterococci per 100 mL					----
NA	Buckeye Brook #1 @ Novelty Rd	-	907.7	-	-	2100	91.2	558.1
NA	Buckeye Brook #2 @ Lockwood Brk	242.2	867.7	> 4839.2	452	6913.1	256	> 966
NA	Buckeye Brook #3 @ Warner Brook	50.4	1218	162.4	257.4	3684	12	220.0
NA	Buckeye Brook #4 @ Mill Cove	238.2	65	> 4839.2	-	6893	134.4	> 586
WD	Falls River D - Step Stone	17.8	29.1	37.3	206.4	82.3	57.6	51.6
WD	Falls River C - Austin Farm	13.4	36.8	123.2	272.3	101.3	54.6	67.1
WD	Falls River B - Sand Banks	12.8	27.8	156.1	259.5	248.1	83.3	81.7
WD	Falls River A - Twin Bridges	3	22.8	127.4	249.5	101.4	127.6	55.1
GB	GB #1 - Maskerchugg	44.8	2419.6	397.8	648.8	294	544.6	406.0
GB	GB #2 - Burger King	28.8	1119.9	>2419.6	>4839.2	>4840	645	>1028
GB	GB #3 - Pipe @ Rte 115	37.4	920.8	>2419.6	922.2	>4840	163.1	> 626
GB	GB #4 - Mill Creek	38.3	128.1	1299.7	311	1297.6	663	345.7
GB	GB #5 - Hardig Upstream	57.3	613.1	> 4839.2	262.8	4839.2	191.1	> 588
GB	GB #6 - Tuscatucket Br	20.8	>2419.6	139.4	119.1	>2419.6	23.8	> 190
GB	GB #7 - Southern Creek	54.6	547.5	>2419.6	393.6	3465.8	118.2	> 476
H	HW #1A - Scrabbletown Brk @ Falls	3.1	28.8	-	19.2	436	-	29.4
H	HW #1B - Scrabbletown @ Rte 4 Bridge	2	24.1	1413.6	144.5	613.1	-	90.4
H	HW #2 - Bear Brk @ South Rd.	5.2	30.1	15	40.6	-	115.3	25.6
H	HW #3 - Frenchtown Brk @ Frenchtown	<1	30.1	21.8	25.4	-	152.6	12.1
H	HW #4 - Hunt River @ Davis Memorial	13.4	410.6	-	52.9	-	55	63.3
H	HW #5 - Sandhill Brook (Saw Mill Inlet)	15.8	668	130	65.7	>9679	563.0	> 281
H	HW #6 - Hunt River @ Forge Rd.	88.4	44.8	242.7	124.6	2406.6	118.2	180.0

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		----	Most Probable Number of Enterococci per 100 mL					----
TH	Moosup Upstream	29.8	101	432.9	412.8	1297.6	31	166.9
TH	Moosup A - Fairbanks Bridge	3.1	18.3	97.9	98.4	24.2	28.1	26.8
TH	Moosup C - Deerfield Drive	<1	33.2	98.3	95.9	78	43.2	21.7
WD	Pawcatuck River @ Bradford	3	62.4	30	41.1	35.5	73.8	29.1
WD	Pawcatuck River - North of WWTP ^	20	20	10	52	63	75	31.5
WD	Pawcatuck River - South of WWTP ^	120	10	108	96	41	42	52.7
WD	Pawcatuck River - At the Mouth ^	111	111	73	10	< 10	20	23.8
WD	Queen @ Wm Reynolds (Brownell's)	1	35.9	2419.6	1119.9	35.5	21.8	65.0
WD	Queen River @ Sand Bridge (TNC)	4.2	27.5	1553.1	1119.9	292.4	10.4	92.1
WD	Queen River @ Locke Brk	<1	16	1732.9	102.4	14.2	18.8	20.6
WD	Queen River @ Sherman Brk	12.2	6.2	1986.3	287.4	1960.8	24.2	112.7
WD	Shickasheen Brook @ Rte 2	2	83.1	124.6	-	-	14.9	23.6
WD	Shickasheen @ Miskiania Road	3	165.2	108.6	38.4	-	52	40.4
WD	Shickasheen @ Barber Pond Outlet	<1	11.1	5.1	101.3	-	3.1	4.5
WD	Shickasheen Brook @ Rte 138	45.2	152.9	1034.4	284.6	242	139	202.2
TE	Ten Mile River	60.2	4839.2	> 4839.2	8	68.4	25.5	> 83.5
BI	Wesquage Outlet - Pondsides ^	44.6	45.2	7701	110	63	284.8	176.9
BI	Wesquage Outlet - Oceanside ^	42.6	62.2	19	63	41	135	51.0
WD	White Horn Brook @ Bike Trail	248.1	139.1	-	1149.6	52	175	204.9
WD	White Horn Brook @ Ministerial Rd.	52.8	35	-	>2416.9	554	759	> 285
WO	Woonasquatucket R. @ Greystone Pnd	18	1119.9	>2419.6	380.8	113.8	84	> 237
WO	Woonasquatucket River @ Donigian	10	488.4	> 4839.2	250.8	108.8	63	> 185
WO	Woonasquatucket River @ Waterplace	42	2092.4	>9678.4	440	>7017	226	> 916

^ Indicates salt or marine waters. RIHealth Single Sample Swimming Standard for Marine Waters: 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/Publications/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>).

