

2009 Bacteria Data: Great Salt Pond and its Tributaries - Fecal coliform and enterococci

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 in marine waters. 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.

While URIWW's Analytical Laboratories are State certified, Watershed Watch data is intended for screening purposes only. Our data are very valuable for targeting areas of concerns and for tracking potential sources of bacterial contamination. Samples 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 sample dates for specific sites.

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.

2009 Data

Monitoring Location	17-Jun	7/17 & 7/20	14-Aug	14-Sep	13-Oct	GeoMean	Max	Min
	--- Number of Fecal coliform colony forming units per 100 mL ---							
Great Salt Pond #1	< 1	<1	< 1	2	2	<1	<1	<1
Great Salt Pond #2	1	<1	9	6	24	3	24	1
Great Salt Pond #3	< 1	<1	1	1	2	1	2	1
Great Salt Pond #4	2	12	22	19	17	11	22	2
BI Sound - North of Breachway	< 1	1	< 1	> 1	< 1	1	1	1
BI Sound - South of Breachway	< 1	<1	< 1	-	< 1	<1	<1	<1
BI Tributary #1	-	84	376	360	-	225	376	84
BI Tributary #2	-	156	724	600	172	329	724	156
BI Tributary #3	138	116	418	1120	36	193	1120	36
BI Tributary #4	-	212	144	6440	-	581	6440	144
BI Tributary #5	260	44	170	448	43	130	448	43
BI Tributary #6	-	-	-	-	-	-	-	-
BI Beach Club	-	<1	-	-	-	-	-	-

Rhode Island DEM Shellfishing standards for Great Salt Pond sites: <15 cfu / 100 ml
 USEPA requires tributaries to meet receiving waters standards at the point where they enter.



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Monitoring Location	17-Jun	7/17 & 7/20	14-Aug	14-Sep	13-Oct	GeoMean	Max	Min
	----- Most Probable Number of Enterococci per 100 mL -----							
Great Salt Pond #1	10	< 10	<10	< 10	< 10	<10	10	<10
Great Salt Pond #2	< 10	< 10	<10	< 10	20	<10	20	<10
Great Salt Pond #3	10	< 10	10	< 10	< 10	<10	10	<10
Great Salt Pond #4	10	< 10	10	< 10	< 10	<10	10	<10
BI Sound - North of Breachway	< 10	< 10	<10	< 10	< 10	<10	<10	<10
BI Sound - South of Breachway	< 10	< 10	<10	-	< 10	<10	<10	<10
BI Tributary #1	-	208	233	717	-	326	717	208
BI Tributary #2	-	174.8	288	121	257	198.9	288	121
BI Tributary #3	860	1664	2064	2310	238	1102	2310	238
BI Tributary #4	-	171	239	1553	-	398.9	1553	171
BI Tributary #5	373	246	192	30	10	88	373	10
BI Tributary #6	-	-	-	-	-	-	-	-
BI Beach Club	-	< 10	-	-	-	-	-	-

Rhode Island DOH enterococci swimming standard 104 per 100 mL for salt water beaches

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>).

