

2005 Bacteria Data - Tributaries

URI Watershed Watch uses the USEPA approved membrane filtration method with mTEC media for analyzing fecal coliform bacteria, species that can indicate the presence of human sewage and associated pathogens, or disease causing organisms. For the past several years URI Watershed Watch has been splitting primarily marine site samples to analyze enterococci values using the USEPA approved membrane filtration method with mE media. Enterococci are a different group of bacteria species which have been identified as better indicators of increased risks of contracting gastrointestinal illnesses than the fecal coliforms as a group.

As of 2004, the Rhode Island Department of Health adopted standards for licensed swimming beaches based on enterococci. Rhode Island Department of Environmental Management water quality standards still consider fecal coliform as indicators of overall water quality. Watershed Watch currently analyzes enterococci using the USEPA membrane filtration method.

Watershed Watch data is intended for screening purposes only, but is 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 sample event, so may reflect dry versus wet weather or rain event values. Please contact Watershed Watch for specific sample dates.

RI Department of Environmental Management fresh water standards for recreational contact:

Fresh water - Not to exceed 200 fecal coliform per 100 mL.

RI Department of Health Enterococci Standards:

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

Bacteria results are summarized using a geometric mean rather than an arithmetic mean (or straight average.) This is done because bacteria results can vary from 10 to 10,000 fold over a given period in response to local or short-term contaminations (i.e. bird feces or stormwater.) The geometric mean dampens that, and gives a better picture of overall contaminations.

A record breaking rain event resulted in unusually high bacteria in October.

Watershed code	MONITORING LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	GEOMEAN
	Lake - Trib name/location	-- Number of Fecal coliform colony forming units per 100 mL --						
WD	Asseconk Swamp	-	-	52	-	-	22400	1079
WD	Barber - Mud Brook	3	55	-	142	-	-	29
A	Belleville - RR Xing	64	-	196	-	-	200	136
A	Belleville - Sluiceway	9	-	62	-	-	52	31
WD	Boone Tributary #1	-	-	-	-	-	-	-
PE	Carr Inlet (NK)	11	-	70	-	150	136	63
WO	Georgiaville - Capron Pond	26	20	-	34	-	9520	114
WO	Georgiaville - Harris	22	94	-	122	-	3500	172
SK	Nanaquaket - Quaket Brook	-	lab error	720	28	-	50	100
SK	Nanaquaket - Sin & Flesh Brook	-	lab error	102	64	-	250	118
SK	Nanaquaket - White Wine Brook	-	lab error	480	22	-	300	147
WD	Pasquisett Tributary	1	-	26	-	-	140	15
WD	Secret - Oak Hill Creek East	4	-	118	-	-	1870	96
WD	Secret - Oak Hill Creek West	4	-	110	-	-	2100	97
A	Secret - Shore Drive	14	-	134	-	-	530	100
A	Shunock River @ Babcock	-	-	280	-	-	3100	932
A	Shunock River @ Hewitt	-	-	20	-	-	4200	290
B	S&S - Balcom Brook	-	-	64	-	-	-	-

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	Lake - Trib name/location	-- Number of Fecal coliform colony forming units per 100 mL --						
B	S&S - Keech Brook	-	-	102	-	-	-	-
B	S&S - O'Donnel Brook	-	-	48	-	-	-	-
TA	Stafford Inlet - Downstream	-	lab error	840	-	-	-	-
TA	Stafford - NE Cove	-	lab error	2	-	-	392	28
WD	Watchaug - Perry Healy	2	-	70	-	-	1020	52
WD	Waterman - Rte 44	4	-	124	-	-	100	37
WO	Waterman - Saw Mill Rd.	32	-	226	-	-	60	76
WO	Waterman - Golf Course	2	-	132	-	-	225	39
WO	Waterman - Aldrich	< 2	-	122	-	-	40	70
WD	White Brook Pond Inlet	-	-	54	-	-	-	-

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	WPWA TRIBUTARIES	-- Number of Fecal coliform colony forming units per 100 mL --						
WD	Ashaway River @ Rte 216	-	128	138	46	220	1140	183
WD	Chipuxet River @ Rte 138	6	84	108	38	30	148	46
WD	Fisherville Brook	2	66	54	26	20	340	33
WD	Glen Rock Brook	< 1	lab error	266	4	12	5960	33
WD	Pawcatuck R @ Biscuit City Rd	-	88	60	50	66	-	65
WD	Pawcatuck R @ Burdickville Rd	24	lab error	68	30	36	9600	111
WD	Pawcatuck R @ Chase Hill Rd.	-	-	-	-	-	-	-
WD	P'tuck below Kenyon Ind.	30	lab error	106	90	278	80	91
WD	Pawcatuck R @ Rte 91	16	188	200	94	40	138	82
WD	Queen River @ Mail Rd	-	lab error	108	88	80	2520	209
WD	Queen River @ Rte 102	6	14	456	48	172	380	70
WD	Taney Brook	202	lab error	210	460	180	3500	415
WD	Tomaquag Bk @ Woodville Rd.	14	lab error	388	Dry	Dry	27000	527
WD	Usquepaugh River @ Rte 2	12	102	60	700	76	226	98

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>).