

2004 Parameter Data: Ammonium-Nitrogen

Ammonium-N Data for Rivers and Tributaries

Ammonium-nitrogen the most reactive form of nitrogen present in aquatic systems, and is the preferred form for algae and plant growth. It can adhere to soils and sediment, but when dissolved oxygen (DO) is readily available, bacteria quickly oxidize ammonium-N to nitrate-N through a process known as nitrification. Other types of bacteria produce ammonia as they decompose dead plant and animal matter – indirectly reducing dissolved oxygen concentrations. At higher temperatures and pH (a measurement of “acidity”) ammonium forms ammonium hydroxide, which is extremely toxic to fish and aquatic life. Waters with low DO and high ammonium hydroxide levels (typically hundreds of parts per billion (ppb) the units URI Watershed Watch reports measurements in) are more toxic than waters with low DO alone. While most sites monitored by URI Watershed Watch have low or no detectable levels of ammonium-nitrogen, many of our deep lakes had periods of quite ammonium-N levels from mid-summer until de-stratification in the fall, usually late September. In addition, high levels of ammonium-nitrogen in surface waters may indicate sewage outfalls, failed septic systems or eutrophication.

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	RIVER & BROOK SITES	-- (ug/l or ppb) --						
CE	Bailey's Brook	70	-	ND	ND	-	ND	30
NA	Buckeye Brook @ Novelty Rd	610	-	50	50	50	300	210
NA	Buckeye Brook @ Lockwood Brk	-	120	530	280	120	-	260
NA	Buckeye Brook @ Warner Rd	-	90	60	120	40	ND	70
NA	Buckeye Brook @ Mill Cove	270	-	130	70	130	ND	120
WD	Falls River A - Twin Bridges	80	-	60	ND	ND	ND	40
WD	Falls River B - Sand Banks	60	-	ND	ND	ND	50	30
WD	Falls River C - Austin Farm	ND	-	ND	ND	ND	70	30
WD	Falls River D - Step Stone	110	-	30	40	30	40	50
WD	Green Falls #1 - Green Falls Rd	-	-	30	40	50	ND	30
WD	Green Falls #2 - Putker Rd	-	-	40	40	40	-	40
WD	Green Falls #3 - Clark Falls Rd	-	-	50	60	30	ND	40
A	Himes River (NK)	ND	-	40	80	30	50	40
WD	Locv – Brushy Brook @ Sawmill	ND	-	ND	70	ND	ND	30
WD	Locv – Brushy Brook @ Woody	ND	-	ND	50	30	ND	30
WD	Locv – Moscow Brk @ Sawmill	ND	-	70	50	30	30	40
TH	Moosup River A - Fairbanks	130	-	ND	ND	ND	40	40
TH	Moosup River B - Trestle Trail	70	-	ND	ND	ND	50	30
TH	Moosup River - Upstream	110	-	40	70	50	40	60
PE	NR 01- Gilbert Stuart	ND	-	60	80	40	-	50
PE	NR 02 - Upper Pond 0.5M	230	-	80	40	-	-	120
PE	NR 02 - Upper Pond 3.0M	ND	-	40	60	-	-	40
PE	NR 03 - Lower Pond A 0.5M	90	-	70	40	60	-	70
PE	NR 03 - Lower Pond A 3.0M	90	-	80	120	120	-	100
PE	NR 04 - Lower Pond B 0.5M	70	-	80	40	100	-	70
PE	NR 04 - Lower Pond B 3.0M	80	-	150	90	110	-	110
PE	NR 05 - Lacey Bridge	ND	-	60	40	110	-	60
PE	NR 06 - Mettatuxet Beach	100	-	60	40	70	-	70
PE	NR 07 - End of Narrows	140	-	70	50	80	-	90

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Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	RIVERS (Continued)	-- (ug/l or ppb) --						
PE	NR 08 - Middlebridge	70	-	140	100	40	-	90
PE	NR 09 - Pettaquamscutt	-	-	130	-	120	-	130
PE	NR 10 - Sprague Bridge	ND	-	240	120	300	-	170
PE	NR 11 - Mettatuxet Brook	ND	-	-	430	130	-	190
PE	NR 12 - Mumford Brook	ND	-	60	40	140	-	60
WD	Pawcatuck River - Avondale 0.5M	100	-	260	160	170	250	190
WD	Pawcatuck River - Avondale 3.0M	290	-	180	170	180	-	210
WD	Pawcatuck River - Bradford	90	-	50	90	ND	ND	50
WD	Queen River @ Sand Bridge (TNC)	60	-	ND	-	40	ND	30
WD	Queen River @ Brownell's	60	-	ND	-	40	ND	50
WD	Queen River @ Locke Brk	ND	-	ND	60	40	ND	30
WD	Queen River @ Sherman Brk	ND	-	40	80	ND	ND	30
WD	Shickasheen @ Rte 2	-	-	dry	190	-	ND	100
WD	Shickasheen @ Miskiania Road	-	-	ND	30	-	ND	20
WD	Shickasheen @ Potter Road	-	-	ND	50	160	-	80
WD	Shickasheen @ Barber Pond outlet	-	-	60	40	-	130	80
WD	Shickasheen @ Rte 138	-	-	50	50	-	60	50
WD	Shickasheen @ Liberty Lane	-	-	40	40	-	50	40
WD	Shunock River @ Babcock	90	-	120	-	-	ND	80
WD	Shunock River @ Hewitt	60	-	50	-	-	ND	40
WO	Woonasquatucket River @ Donigian	170	-	30	80	120	40	90
Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	TRIBUTARIES	-- (ug/l or ppb) --						
WD	Asseconk Swamp	130	-	ND	-	-	ND	50
WD	Barber - Mud Brook	-	-	50	80	-	50	60
A	Belleville @ RR Xing	160	-	30	-	-	ND	70
A	Belleville @ Sluiceway	80	-	160	-	-	ND	90
PE	Carr Inlet (NK)	80	-	40	-	-	30	50
WO	Georgiaville @ Capron Pond	110	-	70	-	-	ND	70
WO	Georgeville @ Harris	120	-	40	-	-	50	70
GB	Greenwich Bay - 01 (Maskerchugg River)	ND	-	140	80	80	60	80
GB	Greenwich Bay - 02 (Gorton Pond outflow)	ND	-	120	70	120	30	70
GB	Greenwich Bay - 03 (Hardig Brook @ Rte 115)	ND	-	70	50	80	ND	50
GB	Greenwich Bay - 04 (Mill Creek)	-	-	50	40	30	ND	30
GB	Greenwich Bay - 05 (Hardig Brk @ Health Ctr)	ND	-	ND	40	40	ND	30
GB	Greenwich Bay - 06 (Tuscatucket Brook)	150	-	240	160	210	170	190
GB	Greenwich Bay - 07 (Southern Creek)	-	-	140	160	100	110	130
WD	Pasquisett Tributary	ND	-	-	-	-	ND	ND
H	Saw Mill Tributary	80	140	120	ND	60	ND	70

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Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	TRIBUTARIES - CONTINUED	-- (ug/l or ppb) --						
A	Secret - Oak Hill East	ND	-	60	-	-	ND	30
A	Secret - Oak Hill West	ND	-	30	-	-	30	30
A	Secret - Shore Drive	ND	-	50	-	-	ND	30
B	Smith & Sayles @ Keech	ND	-	30	-	-	-	20
B	Smith & Sayles @ Balcom	ND	-	30	-	-	ND	20
B	Smith & Sayles @ O'Donnel	ND	-	ND	-	-	-	ND
WO	Slack's Tributary A	70	-	ND	130	60	ND	58
WO	Slack's Tributary B	ND	-	70	ND	40	ND	31
WO	Slack's Tributary C	ND	-	70	40	30	ND	30
WO	Slack's Tributary D	ND	-	40	ND	30	ND	20
TA	Staf Inlet - Upstream	130	-	dry	-	-	-	130
TA	Staf Inlet - Downstream	ND	-	480	-	-	ND	170
TA	Stafford - NE Cove	70	-	100	-	-	40	70
WD	Watchaug - Perry Healy	ND	-	-	-	-	-	
WO	Waterman @ Rte 44	ND	-	50	-	-	ND	30
WO	Waterman @ Saw Mill	ND	-	70	-	-	30	40
WO	Waterman @ Golf Course	ND	-	60	-	-	ND	30
WO	Waterman @ Aldrich	ND	-	100	-	-	ND	40
Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	WPWA TRIBUTARIES	-- (ug/l or ppb) --						
WD	Ashaway River @ Rte 216	250	-	-	440	-	420	70
WD	Ashaway River @ Wellstown Rd.	ND	-	70	-	-	ND	80
WD	Asseconk Brook @ Rte 2	210	-	1840	1545	2570	510	100
WD	Chipuxet Brook @ Rte 138	80	-	30	-	-	50	70
WD	Fisherville Brook	-	-	-	-	-	-	40
WD	Glen Rock Brook	ND	-	ND	-	-	60	20
WD	Lewis Pond outlet	60	-	-	-	-	70	100
WD	P'tuck River @ Burdickville Rd	60	-	90	-	-	50	60
WD	P'tuck River @ Chase Hill Rd.	170	-	420	510	770	330	90
WD	P'tuck River below Kenyon Ind.	*	*	*	*	*	*	100
WD	P'tuck River @ Rte 91	*	*	*	*	*	*	70
WD	Queen River @ Mail Rd	70	-	ND	ND	-	ND	40
WD	Queen River @ Rte 102	610	-	50	50	50	300	50
WD	Shunock River @ Main St	-	120	530	280	120	-	60
WD	Shunock below Parke Pond	-	90	60	120	40	ND	40
WD	Taney Brook	270	-	130	70	130	ND	210
WD	Tomaquag Brook @ Chase Hill	80	-	60	ND	ND	ND	80
WD	Tomaquag Brook @ Woodville Rd.	60	-	ND	ND	ND	50	50
WD	Usquepaugh River @ Rte 2	ND	-	ND	ND	ND	70	50

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