

2005 Parameter Data: Ammonium-Nitrogen in Lakes, Ponds and Reservoirs

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 code	LOCATION	Sample Depth (m)	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
			-- (ug/l or ppb) --						
CE	ALMY POND	0.5	60	-	-	-	ND	ND	30
WD	ALTON POND	1	ND	-	40	-	-	-	28
TH	ARNOLD POND	1	ND	-	ND	-	-	70	33
S	ASA POND	1	ND	-	ND	-	-	-	ND
WD	BARBER POND	1	ND	ND	ND	ND	-	80	28
WD	BARBER POND	4.5	50	50	590	270	-	80	208
A	BELLEVILLE POND - LOWER	1	70	-	ND	-	-	90	58
A	BELLEVILLE POND - UPPER	0.5	70	-	ND	-	-	70	52
PA	BLACKAMORE POND	1	100	-	ND	-	-	470	195
TH	BLUE LAKE	1	-	-	ND	-	-	40	28
WD	BOONE LAKE	1	ND	-	ND	-	-	100	43
WD	BOONE LAKE	5	40	-	90	-	-	80	70
TH	BOWDISH RESERVOIR	1	60	-	ND	-	ND	-	30
WD	BREAKHEART POND	1	ND	-	50	-	-	-	33
TH	CARBUNCLE POND	1	ND	-	ND	-	ND	70	29
TH	CARBUNCLE POND	6.5	120	-	650	-	640	100	378
PE	CARR POND (NK)	1	60	-	ND	-	ND	70	40
PE	CARR POND (NK)	4.5	100	-	70	-	550	-	240
PA	CARR POND (WG)	1	-	-	ND	-	-	50	33
PA	CARR POND (WG)	9	90	-	ND	-	-	100	68
CW	DEEP POND	1	-	30	-	-	ND	100	48
CW	DEEP POND	5	-	ND	-	-	420	780	405
PA	ELM POND	1	-	ND	40	ND	-	-	23
PA	ELM POND	2	-	90	210	70	-	-	123
PA	FENNER POND	1	60	-	40	-	-	590	230

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PA	FLAT RIVER RESERVOIR	1	ND	-	ND	-	-	590	207
PA	FLAT RIVER RESERVOIR	7	-	-	120	-	-	720	420
WO	GEORGIAVILLE POND	1	ND	90	-	60	-	90	64
WO	GEORGIAVILLE POND	6	40	200	-	40	-	120	100
WO	HAWKINS POND	1	40	-	40	-	-	620	233
WD	HUNDRED ACRE POND	1	ND	-	ND	-	-	290	107
WD	HUNDRED ACRE POND	6	40	-	110	-	-	1140	430
S	INDIAN LAKE	1	ND	-	ND	-	-	150	60
B	KEECH POND	1	ND	-	ND	-	-	90	40
TH	LAKE WASHINGTON	1	ND	-	ND	-	140	140	78
CE	LILY POND	1	-	-	40	-	-	340	190
PA	LITTLE POND	1	50	-	ND	-	50	100	54
PA	LITTLE POND	5	40	-	ND	-	50	70	44
WD	LOCUSTVILLE POND	1	40	-	ND	-	-	40	32
S	LONG POND (SK)	1	ND	-	ND	-	-	170	67
S	LONG POND (SK)	7	40	-	40	-	-	100	60
WD	MEADOWBROOK POND	1	60	-	ND	-	-	120	65
NA	MELVILLE P - UPPER	1	50	-	140	-	-	420	203
PA	MISHNOCK LAKE	1	60	-	70	-	-	320	150
PA	MISHNOCK LAKE	4	-	-	560	-	-	320	440
SK	NANAQUAKET POND	1	120	-	70	-	-	340	177
B	NICHOLS POND	1	ND	-	40	-	-	-	28
PA	OAK SWAMP RES.	1	50	-	40	-	-	90	60
B	PASCOAG RESERVOIR	1	ND	-	ND	-	40	90	40
B	PASCOAG RESERVOIR	4	50	-	ND	-	60	250	94
WD	PASQUISETT POND	1	ND	-	ND	-	-	130	53
PA	PLEASURE POND	0.5	-	ND	110	ND	-	-	47
PA	PONAGANSETT RESERVOIR	1	30	-	ND	-	-	80	42
PA	PONAGANSETT RESERVOIR	9	70	-	290	-	-	150	170
NA	PRINCE'S POND	1	60	-	420	-	40	200	180
NA	PRINCE'S POND	3	360	-	900	-	1510	1630	1100
WD	QUEEN RIVER AT USQUEPAUGH (GLEN ROCK RES.)	1	ND	-	60	-	-	70	48
PA	RANDALL POND	1	40	-	ND	-	-	70	42

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PA	SAND POND	1	ND	-	ND	-	ND	140	46	
PA	SAND POND	7	1900	-	100	-	1720	110	958	
S	SAUGATUCKET POND	1	270	-	290	-	-	190	250	
CW	SCHOOLHOUSE POND - LOWER	1	ND	-	ND	-	-	40	23	
CW	SCHOOLHOUSE POND - LOWER	6+	110	-	50	-	-	100	87	
CW	SCHOOLHOUSE POND - UPPER	1	50	-	ND	-	-	60	42	
CW	SCHOOLHOUSE POND - UPPER	6+	130	-	50	-	-	80	87	
B	SCOTT POND	1	150	-	-	-	-	-	-	
B	SCOTT POND	9	690	-	-	-	-	-	-	
A	SECRET LAKE	1	90	-	50	-	-	60	67	
S	SILVER LAKE	1	40	-	70	-	-	170	93	
S	SILVER LAKE	7	50	-	ND	-	-	200	88	
PE	SILVER SPRING LAKE	1	50	-	40	-	-	230	107	
TE	SLATER POND	1	50	-	ND	-	ND	180	65	
B	SLATERSVILLE RESERVOIR - UPPER	1	80	-	50	-	-	130	87	
B	SLATERSVILLE RESERVOIR - UPPER	5.5	140	-	480	-	-	160	260	
B	SMITH & SAYLES RES.	1	-	-	50	-	-	-	-	
WD	SPALDING POND	1	-	-	40	-	-	330	-	
PA	SPECTACLE POND	1	170	-	50	-	-	520	247	
B	SPRING GROVE POND	1	ND	-	ND	-	-	60	30	
B	SPRING LAKE	1	ND	-	ND	-	-	120	50	
B	SPRING LAKE	5	40	-	ND	-	-	120	58	
TA	STAFFORD POND	1	-	40	190	-	70	240	135	
TA	STAFFORD POND	7	-	120	240	-	100	230	173	
PA	TARBOX POND	1	40	-	-	-	-	-	-	
PA	TIOGUE LAKE	1	60	-	ND	-	-	130	68	
WD	TUCKER POND	1	ND	-	ND	-	ND	70	29	
WD	TUCKER POND	7.5	100	-	330	-	460	180	268	
PA	UPPER DAM POND	1	60	-	140	-	-	790	330	
B	VALLEY FALLS POND	0.5	110	-	ND	-	-	210	112	
B	WALLUM LAKE	1	40	-	ND	-	-	-	28	
B	WALLUM LAKE	5	-	-	ND	-	-	-	-	
NA	WARWICK POND	1	ND	-	ND	-	40	430	125	
NA	WARWICK POND	5.5	140	-	1420	-	3480	450	1373	

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WD	WATCHAUG POND	1	40	-	ND	-	120	60	59	
WD	WATCHAUG POND	10	50	-	40	-	ND	110	54	
WO	WATERMAN RESERVOIR	1	40	-	40	-	-	50	43	
NA	WESQUAGE POND	1	60	60	ND	-	-	50	46	
WD	WHITE BROOK POND	1	-	370	190	-	-	130	230	
S	WHITE POND	1	-	-	ND	-	ND	-	ND	
S	WHITE POND	8+	-	-	40	-	ND	-	28	
WD	WINCHECK POND	1	80	-	40	-	-	-	60	
WD	WINCHECK POND	5	130	-	ND	-	-	-	73	
WO	WOONASQUA. RES. - STUMP	1	ND	-	ND	-	-	80	37	
WD	WORDEN POND	1	40	-	ND	-	-	-	28	
WD	WYASSUP LAKE	1	-	-	ND	-	-	80	48	
WD	WYASSUP LAKE	7	-	-	-	-	-	60	-	
WD	WYOMING POND	1	-	40	100	-	-	70	70	
WD	YAWGOO POND	1	40	160	70	ND	ND	130	72	
WD	YAWGOO POND	10	80	80	220	480	50	270	197	

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