

Ammonium-N Data for 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	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	Concentration at 1M	-- (ug/l or ppb) --						
CE	Almy Pond	70	-	-	-	-	-	-
WD	Alton Pond	ND	-	-	-	-	-	-
TH	Arnold Pond	ND	-	-	-	-	-	-
WD	Barber Pond	180	-	-	-	110	ND	100
A	Belleville Pond - Lower	70	-	-	-	-	-	-
A	Belleville Pond - upper	160	-	-	-	-	-	-
PA	Blackamore Pond	100	-	-	-	-	-	-
TH	Bowdish Reservoir	ND	-	-	-	-	-	-
WD	Breakheart Pond	90	-	-	-	-	-	-
NA	Brickyard Pond	130	-	-	-	-	-	-
WD	Browning Mill Pond	90	-	-	-	-	-	-
TH	Carbuncle Pond	ND	-	-	40	90	-	50
PE	Carr Pond (NK)	60	-	-	-	-	-	-
PA	Carr Pond (WG)	ND	-	-	-	-	-	-
WD	Chapman Pond	100	-	-	-	-	-	-
CW	Deep Pond	ND	-	-	-	-	-	-
PA	Fenner Pond	80	-	-	-	-	-	-
PA	Flat River Reservoir	ND	-	-	-	-	-	-
WO	Georgiaville Pond	60	-	-	-	-	-	-
B	Handy Pond	ND	-	-	-	-	-	-
WO	Hawkins Pond	70	-	-	-	-	-	-
WD	Hundred Acre Pond	120	-	-	-	-	50	90
S	Indian Lake	70	-	-	-	-	-	-
B	Keech Pond	ND	-	-	-	-	-	-
TH	Lake Washington	160	-	50	-	90	-	100

ND = No Detect; Limit of Detection = 30 ug/L

Mean calculated using half the limit of detection (15 ug/L) for ND.

2004 Parameter Data: Ammonium-Nitrogen

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	Concentration at 1M	-- (ug/l or ppb) --						
CE	Lily Pond	160	-	-	-	-	-	-
PA	Little Pond	70	-	-	-	50	240	120
WD	Locustville Pond	60	-	-	-	-	-	-
S	Long Pond (SK)	-	ND	-	-	-	-	-
PA	Mashapaug Pond	370	-	-	-	-	380	380
WD	Meadowbrook Pond	70	-	-	-	-	-	-
NA	Melville Pond - Upper	80	-	-	-	-	ND	50
PA	Mishnock Lake	ND	-	-	-	-	-	-
SK	Nanaquaket Pond	ND	-	-	-	-	-	-
PA	Oak Swamp Reservoir	ND	-	-	-	-	-	-
B	Pascoag Reservoir	ND	-	-	-	-	-	-
WD	Pasquissett Pond	ND	-	-	-	-	-	-
NA	Prince's Pond	ND	-	-	-	70	300	130
WD	Queen @ Usquepaugh (Glen Rock Res.)	ND	-	-	-	-	-	-
PA	Randall Pond	160	-	-	-	-	-	-
CE	Round Pond	80	-	-	-	-	-	-
PA	Sand Pond	690	-	110	ND	70	ND	180
S	Saugatucket Pond	210	-	-	-	-	-	-
CW	Schoolhouse Pond - Lower	ND	-	-	-	-	-	-
CW	Schoolhouse Pond - Upper	ND	-	-	-	-	-	-
A	Secret Lake	70	-	-	-	-	-	-
S	Silver Lake	60	-	-	-	-	-	-
PE	Silver Spring Lake	90	-	-	-	-	-	-
CE	Simmon Mills Pond	80	-	-	-	-	-	-
TH	Sisson P. (Coventry)	60	-	-	-	-	-	-
WO	Slack's Reservoir	ND	-	-	ND	ND	-	ND
TE	Slater Pond	100	-	-	-	-	-	-
B	Slatersville Reservoir - Upper	160	-	-	50	-	-	110
B	Smith & Sayles Reservoir	ND	-	-	-	-	-	-
WD	Spalding Pond	80	-	-	-	-	-	-
PA	Spectacle Pond	150	-	-	120	-	220	170
B	Spring Grove Pond	ND	-	-	-	-	-	-
B	Spring Lake	ND	-	-	-	-	-	-
TA	Stafford Pond	90	-	-	-	-	-	-
PA	Tarbox Pond	ND	-	-	-	-	-	-
PA	Tiogue Lake	70	-	-	-	-	-	-

ND = No Detect; Limit of Detection = 30 ug/L

Mean calculated using half the limit of detection (15 ug/L) for ND.

2004 Parameter Data: Ammonium-Nitrogen

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	Concentration at 1M	-- (ug/l or ppb) --						
WD	Tucker Pond	80	-	-	-	-	ND	60
PA	Upper Dam Pond	350	-	-	ND	-	-	180
TE	Valley Falls Pond	180	-	-	-	-	ND	100
B	Wallum Lake	ND	-	-	-	-	-	-
NA	Warwick Pond	100	-	-	ND	ND	470	150
WD	Watchaug Pond	ND	-	-	-	-	-	-
WO	Waterman Reservoir	ND	-	ND	-	-	-	ND
NA	Wesquage Pond	100	-	-	-	-	-	-
WD	White Brook Pond	190	-	-	-	-	70	130
WD	Wickaboxet Pond	ND	-	-	-	-	70	50
WD	Wincheck Pond	ND	-	-	-	-	-	-
WO	Woonasquatucket Res. - Stump	70	-	-	-	-	-	-
WD	Worden Pond	70	-	-	-	-	-	-
WD	Wyassup Lake	80	-	-	-	-	-	-
WD	Wyoming Pond	-	-	-	-	-	-	-
WD	Yawgoo Pond	60	-	-	ND	80	90	80

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	Concentration at ~+ 4meters	-- (ug/l or ppb) --						
WD	Barber Pond	160	-	440	-	330	40	240
NA	Brickyard Pond	80	-	120	-	-	-	100
TH	Carbuncle Pond	110	-	470	350	500	-	360
PE	Carr Pond (NK)	280	-	150	-	-	70	170
PA	Carr Pond (WG)	ND	-	50	-	-	50	40
CW	Deep Pond	70	-	ND	-	-	40	40
PA	Flat River Res	ND	-	120	-	-	310	150
WO	Georgiaville Pond	230	-	120	-	-	60	140
WD	Hundred Acre Pond	100	-	140	-	-	400	220
PA	Little Pond	100	-	40	-	730	260	290
S	Long Pond (SK)	-	-	30	-	-	50	40
PA	Mishnock Lake	90	-	320	-	-	-	210
B	Pascoag Reservoir	80	-	ND	-	-	ND	40
NA	Prince's Pond	260	-	1850	-	1430	580	1030
PA	Sand Pond	700	-	2430	1850	1260	2100	1670
CW	Schoolhouse Pond - Lower	60	-	90	-	-	30	60
CW	Schoolhouse Pond - Upper	70	-	ND	-	-	50	50

ND = No Detect; Limit of Detection = 30 ug/L

Mean calculated using half the limit of detection (15 ug/L) for ND.

2004 Parameter Data: Ammonium-Nitrogen

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	Concentration at ~+ 4meters				-- (ug/l or ppb) --			
S	Silver Lake	70	-	120	-	-	130	110
B	Slatersville Reservoir Upper	150	-	690	770	-	30	410
B	Spring Lake	80	-	90	-	-	40	70
TA	Stafford Pond	70	-	240	-	-	30	120
WD	Tucker Pond	250	-	-	440	-	420	370
B	Wallum Lake	ND	-	70	-	-	ND	30
PA	Warwick Pond	210	-	1840	1545	2570	510	1340
WD	Watchaug Pond	80	-	30	-	-	50	60
WD	Wickaboxet Pond	ND	-	ND	-	-	60	30
WD	Wincheck Pond	60	-	-	-	-	70	70
WD	Wyassup Lake	60	-	90	-	-	50	70
WD	Yawgoo Pond	170	-	420	510	770	330	440