

2005 Parameter Data: Total Phosphorus in River and Brook Sites, and Tributaries

In fresh water lakes, ponds, reservoirs and streams, phosphorus is the nutrient that has the most influence on plant growth. Just parts per billion (ppb) increases can stimulate the growth of algae. Measurement of total phosphorus includes readily available dissolved phosphorus, as well as particulate phosphorus and organic forms of phosphorus such as that making up algae. Phosphorus readily binds to lake sediments, but can be later released back into the water column if there is no oxygen in the bottom water of the lake. That process is known as internal phosphorus recycling.

River sites arranged upstream to downstream when appropriate.

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	RIVER & BROOK SITES	-- (ug/l or ppb) --						
CE	Bailey's Brook	18	-	28	15	-	35	24
NA	Buckeye @ Novelty Rd	24	19	22	12	18	36	22
NA	Buckeye @ Lockwood Brook	21	14	33	32	26	89	36
NA	Buckeye @ Warner Brook	25	17	21	39	20	161	47
NA	Buckeye @ Mill Cove	30	14	21	26	38	66	33
WD	Falls River D - Step Stone Falls	39	137	73	55	79	63	74
WD	Falls River C - Austin Farm Rd.	1243	58	34	13	41	45	239
WD	Falls River B - Sand Banks	24	46	22	8	15	49	27
WD	Falls River A - Twin Bridges	21	36	22	8	21	94	34
TH	Moosup Upstream	15	17	19	14	13	17	16
TH	Moosup A - Fairbanks	19	44	32	118	18	117	58
TH	Moosup B - Trestle Trail	16	22	26	29	16	23	22
M	Moshassuck R. - Collyer Field	24	27	20	-	36	127	47
PE	NR 01- Gilbert Stuart	10	13	23	12	17	-	15
PE	NR 02 - Upper Pond 0.5M	9	11	17	44	39	-	24
PE	NR 02 - Upper Pond 3.0M	16	15	22	33	39	-	25
PE	NR 03 - Lower Pond A 0.5M	15	13	42	41	46	-	31
PE	NR 03 - Lower Pond A 3.0M	21	17	47	45	45	-	35
PE	NR 04 - Lower Pond B 0.5M	14	14	26	49	1035	-	228
PE	NR 04 - Lower Pond B 3.0M	22	16	48	44	83	-	43
PE	NR 05 - Lacey Bridge	15	8	40	41	47	-	30
PE	NR 06 - Mettatuxet Beach	12	-	39	-	51	-	34
PE	NR 07 - End of Narrows	15	15	34	44	52	-	32
PE	NR 08 - Middlebridge	20	25	30	44	58	-	35
PE	NR 09 - Pettaquamscutt	42	-	45	56	-	-	48
PE	NR 10 - Sprague Bridge	22	120	38	48	65	-	59
PE	NR 11 - Mettatuxet Brook	7	20	41	42	1302	-	282
PE	NR 12 - Mumford Brook	8	11	25	29	18	-	18
PE	NR 15 - Crooked Brook Farm	34	-	-	-	-	34	34
PE	NR 16 - Crooked Brook School	25	168	-	-	-	25	73

Narrow River sites #2 - #9 are estuarine sites that are more strongly influenced by nitrogen than phosphorus

ND = No Detect; Limit of Detection = 4 ppb

Mean calculated using half the limit of detection (2 ppb) for ND

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Code	RIVER & BROOK SITES	-- (ug/l or ppb) --						
WD	Pawcatuck River @ Avondale	16	40	37	28	66	65	42
WD	Pawcatuck River @ Avondale	16	36	54	52	74	42	46
WD	Queen Riv. @ Wm Reynolds Rd. (Brownell's)	9	10	20	16	-	-	14
WD	Queen River @ Sand Bridge (TNC)	13	13	18	18	14	17	16
WD	Queen River @ Locke Brk	-	8	9	11	7	25	12
WD	Queen River @ Sherman Brk	5	11	17	13	10	114	28
WD	Shunock River @ Babcock	20	-	12	-	-	21	18
WD	Shunock River @ Hewitt	24	-	45	-	-	20	30
WO	Woonasquatucket R. @ Cricket Park	-	202	261	669	862	105	420
WO	Woonasquatucket R @ Donigian Park	44	87	84	72	67	164	86

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Council for Environmental Quality recommendation:

Maximum of 50 ppb total phosphorus where a river enters a lake.

Maximum of 100 ppb total phosphorus instream.

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	TRIBUTARIES	-- (ug/l or ppb) --						
WD	Asseconk Swamp	-	-	132	-	-	71	102
WD	Barber - Mud Brook	10	25	15	21	-	1031	220
A	Belleville @ RR Xing	27	-	27	-	-	60	38
A	Belleville @ Sluiceway	9	-	8	-	-	11	9
PE	Carr Inlet (NK)	12	-	5	-	11	-	9
WO	Georgiaville @ Capron Pond	6	8	-	14	-	53	20
WO	Georgeville @ Harris	5	ND	-	18	-	53	20
GB	Greenwich Bay - 01 (Maskerchugg River)	ND	12	9	6	8	20	10
GB	Greenwich Bay - 02 (Gorton Pond outflow)	4	22	13	56	13	26	22
GB	Greenwich Bay - 03 (Hardig Brook @ Rte 115)	25	13	14	8	12	26	16
GB	Greenwich Bay - 04 (Mill Creek)	6	9	13	7	10	75	20
GB	Greenwich Bay - 05 (Hardig Brk @ Health Ctr)	15	11	24	16	9	86	27
GB	Greenwich Bay - 06 (Tuscatucket Brook)	6	9	12	16	9	15	11
GB	Greenwich Bay - 07 (Southern Creek)	11	11	41	16	13	97	32
WD	Locv – Brushy @ Sawmill	7	-	18	-	-	-	13
WD	Locv – Brushy @ Woody	6	-	20	-	-	-	13
WD	Locv – Moscow @ Sawmill	7	-	12	-	-	-	10
SK	Nanaqua. Trib @ Quaket Brorok	36	112	79	186	-	20	87
SK	Nanaqua. Trib @ Sin & Flesh Brook	13	72	71	81	-	22	52
SK	Nanaqua. Trib @ White Wine Brook	24	63	75	102	-	36	60
WD	Pasquisset Tributary	7	-	6	-	-	36	16
H	Saw Mill Tributary	10	-	-	17	59	60	37

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Code	RIVER & BROOK SITES	-- (ug/l or ppb) --						
A	Secret - Oak Hill Brook West	-	-	25	-	-	52	39
A	Secret - Oak Hill Brook East	11	-	8	-	-	20	13
A	Secret - Shore Dr.	-	-	22	-	-	68	45
WD	Shickasheen @ Rte 2	18	71	107	-	-	-	65
WD	Shickasheen @ Miskiania Road	20	46	44	85	39	57	49
WD	Shickasheen @ Potter Road	20	44	53	57	29	70	46
WD	Shickasheen @ Barber Pond outlet	-	16	13	20	-	-	16
B	Smith & Sayles - Keech Brook	-	-	13	-	-	-	13
B	Smith & Sayles - Balcom Brook	-	-	17	-	-	-	17
B	Smith & Sayles - O'Donnel Brook	-	-	13	-	-	-	13
TA	Stafford Inlet - Downstream	-	330	1329	-	-	-	830
TA	Stafford Pond - NE Cove	-	15	27	-	28	-	23
WD	Watchaug - Perry Healy	8	-	19	-	-	23	17
WD	Waterman @ Rte 44	11	-	25	-	-	27	21
WO	Waterman @ Saw Mill	23	-	55	-	-	13	30
WO	Waterman @ Golf Course	12	-	20	-	-	13	15
WO	Waterman @ Aldrich	12	-	18	-	-	13	14
WD	White Brook Pond Inlet	-	38	110	-	-	-	74

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN
Code	WPWA - TRIBUTARIES	-- (ug/l or ppb) --						
WD	Ashaway River @ Rte 216	-	18	21	18	15	26	20
WD	Chipuxet Brook @ Rte 138	7	10	56	27	14	14	21
WD	Fisherville Brook	5	7	9	9	13	15	10
WD	Glen Rock Brook	5	13	11	13	8	29	13
WD	Pawcatuck River @ Biscuit City Rd.	-	21	21	21	15	-	20
WD	Pawcatuck River @ Burdickville Rd	17	111	64	141	121	29	81
WD	Pawcatuck River below Kenyon Ind.	47	119	151	389	361	20	181
WD	Pawcatuck River @ Rte 91	42	88	149	236	191	184	148
WD	Queen River @ Mail Rd	-	14	9	16	14	11	13
WD	Queen River @ Rte 102	6	5	10	15	14	14	11
WD	Taney Brook	37	121	128	182	130	23	104
WD	Tomaquag Brook @ Woodville Rd.	6	43	18	-	-	53	30
WD	Usquepaugh River @ Rte 2	13	16	16	115	18	8	31

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