

2006 Parameter Data: Alkalinity in Lakes, Ponds and Reservoirs

Alkalinity, or buffering capacity, is a measure of the ability of a water body to withstand acidic inputs without becoming more acidic itself. It is measured in mg/l calcium carbonate (CaCO₃). Because most of the soils in Rhode Island are formed from acidic granite, which has very little if any buffering capacity, the natural alkalinity of our waters is usually low. Exceptions are the lakes and ponds in the areas of Rhode Island which have limestone bedrock such as in the Lincoln area. Alkalinity can be artificially raised by wastewater discharges or runoff from lawns treated with limestone to increase soil pH.

Alkalinity is measured near the surface where much of the runoff and atmospheric deposition occurs, so sample depth is not indicated in the table below. All sample depths were between approximately 0.5 and 1.0 meters from the surface.

USEPA Alkalinity Classification:

ACIDIFIED: (< 1 ppm with pH < 5.0)

CRITICAL: (< 2 ppm)

ENDANGERED (2-5 ppm)

HIGHLY SENSITIVE (5-10 ppm)

SENSITIVE (10-20 ppm)

NOT SENSITIVE (> 20 ppm)

Watershed	LOCATION	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	MEAN	ALKALINITY
									CLASSIFICATION
Code	Alkalinity at 0.5 or 1M	----- (mg/L or ppm CaCO ₃) -----							
WD	ALTON POND	4	-	8	-	-	-	6	Highly Sensitive
S	ASA POND	13	-	21	-	-	-	17	Sensitive
WD	BARBER POND	3	-	5	-	-	1	3	Endangered
A	BELLEVILLE POND - LOWER	9	-	19	-	-	-	14	Sensitive
A	BELLEVILLE POND - UPPER	-	11	18	-	-	-	15	Sensitive
PA	BLACKAMORE POND	26	-	35	-	-	32	31	Not Sensitive
TH (?)	BLUE LAKE	6	-	15	-	-	6	9	Highly Sensitive
WD	BOONE LAKE	0	-	0	-	-	12	4	Endangered
TH	BOWDISH RESERVOIR	0	-	3	-	-	1	2	Critical
WD	BROWNING MILL POND	2	-	4	-	-	2	3	Endangered
TH	CARBUNCLE POND	2	-	3	3	-	7	4	Endangered
PE	CARR POND (NK)	11	-	18	-	-	10	13	Sensitive
PA	CARR POND (WG)	0	-	0	-	-	0	0	Critical
TH	CLARKVILLE POND	2	-	5	-	-	1	3	Endangered
CW	DEEP POND	-	2	4	-	-	3	3	Endangered
PA	FENNER POND	29	-	52	-	-	28	36	Not Sensitive
PA	FLAT RIVER RESERVOIR	3	-	7	-	-	9	6	Highly Sensitive
WO	GEORGIAVILLE POND	12	-	16	-	-	16	15	Sensitive
NA	GORTON POND	-	21	24	24	-	26	24	Not Sensitive
WO	HAWKINS POND	9	-	18	-	-	15	14	Sensitive
WD	HUNDRED ACRE POND	6	-	12	-	-	14	11	Sensitive
S	INDIAN LAKE	2	-	3	-	-	3	3	Endangered
B	KEECH POND	-	1	6	-	-	7	5	Endangered
CE	LILY POND	34	-	45	-	-	-	39	Not Sensitive
PA	LITTLE POND	8	-	8	9	-	10	9	Highly Sensitive
WD	LOCUSTVILLE POND	0	-	4	-	-	0	1	Critical
S	LONG POND (SK)	2	-	1	-	-	1	1	Critical
WD	MEADOWBROOK POND	6	-	8	-	-	6	7	Highly Sensitive

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Code	Alkalinity at 0.5 or 1M	----- (mg/L or ppm CaCO3) -----								
NA	MELVILLE POND - UPPER	21	-	37	-	-	30	29	Not Sensitive	
PA	MESHANTICUT POND	16	-	27	-	-	11	18	Sensitive	
PA	MISHNOCK LAKE	13	-	15	15	-	11	13	Sensitive	
SK	NANAQUAKET POND	111	-	104	-	-	106	107	Not Sensitive	
PA	OAK SWAMP RESERVOIR	9	-	17	-	-	-	13	Sensitive	
B	PASCOAG RESERVOIR	2	-	5	-	-	3	3	Endangered	
WD	PASQUISETT POND	-3	-	3	-	-	1	1	Critical	
PA	PONAGANSETT RESERVOIR	0	-	2	-1	-	-	0	Critical	
NA	PRINCE'S POND	69	-	89	-	-	91	83	Not Sensitive	
PA	PRINTWORKS POND	44	-	62	-	-	-	53	Not Sensitive	
WD	QUEEN USQUEPAUGH	3	-	6	-	-	5	5	Endangered	
PA	RANDALL POND	26	-	30	-	-	34	30	Not Sensitive	
PA	SAND POND	6	-	7	7	-	8	7	Highly Sensitive	
S	SAUGATUCKET POND	12	-	18	-	-	11	14	Sensitive	
CW	SCHOOLHOUSE POND - LOW	2	-	3	-	-	6	4	Endangered	
CW	SCHOOLHOUSE POND - UPPER	2	-	0	-	-	2	1	Critical	
B	SCOTT POND	25	-	23	-	-	30	26	Not Sensitive	
A	SECRET LAKE	15	-	26	-	-	20	21	Not Sensitive	
S	SILVER LAKE	9	-	10	-	-	8	9	Highly Sensitive	
PE	SILVER SPRING LAKE	15	-	24	-	-	17	18	Sensitive	
WO	SLACK'S RESERVOIR	-	-	15	-	-	-	-	Sensitive	
TE	SLATER POND	15	-	26	-	-	17	20	Sensitive	
B	SLATERSVILLE RESERVOIR -	-	5	11	-	-	8	8	Highly Sensitive	
WD	SPALDING POND	5	-	11	-	-	4	7	Highly Sensitive	
PA	SPECTACLE POND	29	-	40	-	-	44	38	Not Sensitive	
B	SPRING GROVE POND	6	-	6	-	-	7	6	Highly Sensitive	
B	SPRING LAKE	4	-	5	-	-	5	5	Endangered	
TA	STAFFORD POND	-	6	7	9	-	8	7	Highly Sensitive	
B	TARKILN POND	4	-	-	-	-	-	4	Endangered	
PA	TIOGUE LAKE	13	-	3	-	-	8	8	Highly Sensitive	
WD	TUCKER POND	1	-	-	2	-	-	1	Critical	
PA	UPPER DAM POND	12	-	15	-	-	14	13	Sensitive	
B	VALLEY FALLS POND	25	-	29	-	-	-	27	Not Sensitive	
NA	WARWICK POND	24	-	28	-	-	38	30	Not Sensitive	

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Code		----- (mg/L or ppm CaCO3) -----							
WD	WATCHAUG POND	2	-	1	2	-	-	2	Critical
WO	WATERMAN RESERVOIR	8	-	11	-	-	6	8	Highly Sensitive
NA	WESQUAGE POND	11	-	18	-	-	7	12	Sensitive
WD	WHITE BROOK POND	11	-	17	12	-	11	13	Sensitive
WD	WINCHECK POND	0	-	-	-	-	-	0	Critical
WO	WOONASQUA - STUMP	-	11	17	-	-	17	15	Sensitive
WD	WORDEN POND	5	-	8	-	-	7	7	Highly Sensitive
WD	WYASSUP LAKE	7	-	9	-	-	-	8	Highly Sensitive
WD	WYOMING POND	-	-	13	-	-	-	13	Sensitive
WD	YAWGOO POND	3	2	-	2	-	5	3	Endangered

