

2007 Parameter Data: Total Phosphorus at Greenwich Bay Watershed Sites

In most estuaries nitrogen is the primary nutrient that controls algal growth. However like nitrogen, phosphorus is also essential for life, and thus in salt water environments phosphorus levels must be considered in relationship to nitrogen levels. In estuaries the recommended level of total phosphorus is 10 to 100 ppb with 100 to 1000 ppb of total nitrogen (a 10:1 ratio of nitrogen to phosphorus). Under these conditions, most algal blooms may be avoided. To maintain those ratios, instream total phosphorus should not exceed 100 ppb. Like nitrogen, phosphorus also occurs in the total form which includes phosphorus bound in particulate matter and the soluble or dissolved form which is readily used by algae.

Watershed	LOCATION	Sample								MEAN
		Depth (m)	MAY	JUNE	JULY	AUG.	SEPT.	OCT.		
Code	TRIBUTARIES		-- (ug/l or ppb) --							
GB	Greenwich Bay - 01 (Maskerchugg River)	0.2	9	27	10	6	13	16	14	
GB	Greenwich Bay - 02 (Gorton Pond outflow)	0.2	297	19	22	13	31	32	69	
GB	Greenwich Bay - 03 (Hardig @ Rte 115)	0.2	275	10	16	11	26	33	62	
GB	Greenwich Bay - 04 (Mill Creek)	0.2	1004	-	12	29	20	12	215	
GB	Greenwich Bay - 05 (Hardig @ Health Ctr)	0.2	-	12	8	-	-	-	10	
GB	Greenwich Bay - 06 (Tuscatucket Brk)	0.2	1477	9	12	35	10	27	262	
GB	Greenwich Bay - 07 (Southern Creek)	0.2	1131	18	9	8	36	19	204	
Watershed code	LOCATION	Sample								MEAN
		Depth (m)	MAY	JUNE	JULY	AUG.	SEPT.	OCT.		
			-- (ug/l or ppb) --							
NA	Greenwich Bay #1 - Middle Ground Buoy	1	29	61	71	46	61	61	55	
NA	Greenwich Bay #1 - Middle Ground Buoy	DEEP	32	33	87	149	48	71	70	
NA	Greenwich Bay #2 - Sally Rock	1	20	65	94	36	36	59	52	
NA	Greenwich Bay #2 - Sally Rock	DEEP	38	61	93	405	66	45	118	
NA	Greenwich Bay #3 - The Brothers	1	-	71	98	35	36	64	61	
NA	Greenwich Bay #3 - The Brothers	DEEP	-	93	100	57	-	63	78	
NA	Greenwich Bay #4 - Greenwich Bay Marina	0.5	581	118	186	122	88	66	194	
NA	Greenwich Bay #4 - Greenwich Bay Marina	DEEP	354	92	138	128	67	76	143	
NA	Greenwich Bay #6 - Ponaug Marina	0.5	75	66	60	81	52	59	66	
NA	Greenwich Bay #8 - Little Rhody Boat Club	0.5	62	-	101	-	-	-	82	
NA	Greenwich Bay #9 - Warwick Cove Marina	0.5	62	39	113	48	33	66	60	
NA	Greenwich Bay #11 - Mouth of Greenwich Cove	0.5	64	93	134	56	61	71	80	
NA	Greenwich Bay #11 - Mouth of Greenwich Cove	DEEP	38	90	150	60	34	60	72	
NA	Greenwich Bay #12 - Harborside	0.5	42	115	181	69	47	81	89	
NA	Greenwich Bay #13 - EG Town Dock	0.5	-	152	176	80	55	68	106	

Recommended level of phosphorus in estuaries is 10 to 100 ppb.