

**Table 11.** Physical properties of sampling locations and chemical analyses of samples collected from seepage meters in and near a pond-bottom permeable reactive barrier, Ashumet Pond, Massachusetts, November 2004–July 2010.

[Easting and Northing: State plane coordinates are for North American Datum of 1983 (NAD83). Latitude and longitude in degrees (°), minutes (′), and seconds (″). Altitude refers to distance above or below the National Geodetic Vertical Datum of 1929. ft, foot; m, meter;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius; mg/L, milligram per liter; --, no data; n.d., not detected (spectrophotometer displayed 0.000); E, estimated value for constituent detected in the sample below the spectrophotometer reporting level. Paired meters are approximately 5 feet apart. Meters labeled "A" are on the south side of the pair, "B" meters are on the north side. Each meter covers a pond-bottom area of 2.64 square feet. Orthophosphate load calculated as product of mean water flux, concentration of orthophosphate, and meter area. Locations of sites shown in figure 8]

Site identifier	Easting (m)	Northing (m)	Latitude (° ' ")	Longitude (° ' ")	Date sampled	Pond stage (ft)	Water depth (ft)	Number of measurements	Mean water flux (ft/day)	Measured in field, unfiltered		Orthophosphate load (mg/day as P)
										Specific conductance ( $\mu\text{S}/\text{cm}$ )	Orthophosphate (mg/L as P)	
SM1A	280026.871	820957.685	41 38 04.89	70 32 24.27	11/2/04	43.43	0.9	3	2.6	181.0	0.440	86.7
					7/22/05	45.15	2.8	4	2.8	180	.799	167
					8/8/06	46.03	3.4	5	3.2	153	1.26	298
					7/16/07	45.99	3.1	5	1.0	206	.590	43.5
					8/8/08	44.50	1.7	4	3.3	173	.897	222
					7/23/09	46.01	3.3	5	2.4	183	1.11	202
					7/13/10	46.84	4.3	5	2.3	140	1.35	236
SM1B	280026.871	820957.685	41 38 04.89	70 32 24.27	11/2/04	43.43	0.9	3	2.9	209	.570	122
					7/22/05	45.15	2.8	4	1.6	165	.816	96.6
					8/8/06	46.03	3.4	5	1.7	132	1.30	164
					7/16/07	45.99	3.1	5	.43	--	--	--
					8/8/08	44.50	1.7	4	1.3	207	.310	30.4
					7/23/09	46.01	3.3	5	1.3	217	.414	40.1
					7/13/10	46.84	4.3	5	.89	103	.867	59.3
SM2A	280054.236	820986.384	41 38 05.81	70 32 23.07	11/2/04	43.43	dry	--	--	--	--	--
					7/22/05	45.15	1.8	4	1.4	215	<sup>E</sup> .065	7.01
					8/8/06	46.03	2.4	5	1.3	185	<sup>E</sup> .033	3.29
					7/16/07	45.99	2.1	4	1.1	150	<sup>E</sup> .110	8.74
					8/8/08	44.50	0.9	5	1.4	229	<sup>E</sup> .070	7.32
					7/23/09	46.01	3.5	5	1.0	313	<sup>E</sup> .031	2.23
					7/13/10	46.84	2.6	5	.77	155	<sup>E</sup> .011	.634
SM2B	280054.236	820986.384	41 38 05.81	70 32 23.07	11/2/04	43.43	dry	--	--	--	--	--
					7/22/05	45.15	1.8	4	1.4	259	<sup>E</sup> .033	3.39
					8/8/06	46.03	2.4	5	1.3	193	<sup>E</sup> .016	1.58
					7/16/07	45.99	2.1	4	1.2	169	<sup>E</sup> .110	9.63
					8/8/08	44.50	0.9	5	1.0	193	<sup>E</sup> .070	5.39
					7/23/09	46.01	3.5	5	.74	353	<sup>E</sup> .016	.889
					7/13/10	46.84	2.6	5	.48	133	<sup>E</sup> .021	.763
SM3A	280057.796	820984.604	41 38 05.75	70 32 22.92	11/2/04	43.43	0.5	4	1.3	224	<sup>E</sup> .070	6.85
					7/22/05	45.15	2.4	3	1.3	196	--	--
					8/8/06	46.03	3.0	4	1.3	162	<sup>E</sup> .049	4.68
					7/16/07	45.99	2.9	5	1.3	99.4	<sup>E</sup> .110	10.9
					8/8/08	44.50	1.5	4	.43	238	n.d.	.000
					7/23/09	46.01	2.9	5	.21	308	<sup>E</sup> .011	.169
					7/13/10	46.84	4.1	5	.39	80.3	n.d.	.000
SM3B	280057.796	820984.604	41 38 05.75	70 32 22.92	11/2/04	43.43	0.5	4	2.4	217	.210	37.5
					7/22/05	45.15	2.4	3	1.3	173	<sup>E</sup> .049	4.82
					8/8/06	46.03	3.0	4	1.3	179	<sup>E</sup> .065	6.15
					7/16/07	45.99	2.9	5	1.0	93.3	<sup>E</sup> .097	7.34
					8/8/08	44.50	1.5	4	1.4	233	<sup>E</sup> .070	7.45
					7/23/09	46.01	2.9	5	1.0	245	<sup>E</sup> .092	7.13
					7/13/10	46.84	4.1	5	.70	122	<sup>E</sup> .067	3.49

**Table 11.** Physical properties of sampling locations and chemical analyses of samples collected from seepage meters in and near a pond-bottom permeable reactive barrier, Ashumet Pond, Massachusetts, November 2004–July 2010—continued

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Site identifier	Easting (m)	Northing (m)	Latitude (° ' ")	Longitude (° ' ")	Date sampled	Pond Stage (ft)	Water depth (ft)	Number of measurements	Mean water flux (ft/day)	Measured in field, unfiltered		
										Specific conductance ( $\mu\text{S}/\text{cm}$ )	Ortho-phosphate (mg/L as P)	Ortho-phosphate load (mg/day as P)
SM4A	280060.688	820980.822	41 38 05.63	70 32 22.80	11/2/04	43.43	1.0	4	.95	162	n.d.	.000
					7/22/05	45.15	1.8	3	.94	134	--	--
					8/8/06	46.03	3.2	4	1.0	92.4	<sup>E</sup> .016	1.16
					7/16/07	45.99	3.1	5	.29	76.2	<sup>E</sup> .097	2.08
					8/8/08	44.50	1.6	4	.19	134	<sup>E</sup> .010	.139
					7/23/09	46.01	3.5	5	.20	276	<sup>E</sup> .231	3.51
					7/13/10	46.84	4.6	5	.12	26.2	n.d.	.000
SM4B	280060.688	820980.822	41 38 05.63	70 32 22.80	11/2/04	43.43	1.0	4	.82	175	n.d.	.000
					7/22/05	45.15	1.8	3	.81	132	.228	13.8
					8/8/06	46.03	3.2	4	.74	120	n.d.	.000
					7/16/07	45.99	3.1	5	.27	73.3	<sup>E</sup> .110	2.23
					8/8/08	44.50	1.6	4	.23	138	<sup>E</sup> .080	1.39
					7/23/09	46.01	3.5	5	.29	140	<sup>E</sup> .011	.238
					7/13/10	46.84	4.6	5	.18	40.9	n.d.	.000