

Date	Sta	Time	Water Temp C	DO (mg/L)	pH (su)	Cond. (µS/cm)	Specific conductance	N-NO ₃ (ppm)	Nitrate (ppm)	N-NO ₃ Reagent blank (ppm)	LB flow (cfs)	Date of last ppt	Total ppt on date (in)
April 13 2012	1	0921	9.2	12.2	6.58	86.8	126.9	0.33	1.46	0.00	9.2	12-Apr	0.24
	2	0951	10.6	12.2	6.88	78.9	110.8	0.21	0.93				
	3	1014	8.7	12.4	6.86	74.0	109.8	0.16	0.71				
	CMB-L	1033	7.7	13.6	7.06	76.5	117.0	ND	ND				
	4	1052	9.9	12.6	7.06	72.5	103.9	0.12	0.53				
	5	1105	9.3	12.2	6.79	73.7	107.4	0.07	0.31				
	6	1117	10.8	11.7	6.99	72.0	100.6	ND	ND				
May 30 2012	1	0808	20.4	8.0	6.30	90.9	100.1	0.08	0.35	0.02	23.0	26-May	0.72
	2	0823	21.0	6.6	6.56	83.0	90.2	0.08	0.35	(values not			
	DPO	0834	25.8	6.3	6.57	46.9	46.2	BLD	BLD	corrected			
	3	0843	20.1	7.7	6.70	83.1	92.1	BLD	BLD	for blank)			
	CMB-L	0850	17.2	8.7	6.74	75.4	89.4	0.14	0.62				
	4	0902	20.7	7.9	6.90	84.2	92.1	BLD	BLD				
	5	0914	20.5	7.8	6.83	84.9	93.3	BLD	BLD				
	6	0932	21.7	7.6	7.00	80.1	85.7	BLD	BLD				
June 28 2012	1	0948	19.5	ND	ND	ND	ND	0.05	0.22	0.03	20.0	25-Jun	2.25
	2	1000	19.0	ND	ND	ND	ND	0.12	0.53	(values not			
	See Remarks by Date	DPO	23.5	ND	ND	ND	ND	BLD	BLD	corrected			
	3	1012	17.5	ND	ND	ND	ND	BLD	BLD	for blank)			
	CMB-L	1017	15.0	ND	ND	ND	ND	0.23	1.02				
	4	1023	18.0	ND	ND	ND	ND	0.15	0.66				
	5	1033	18.5	ND	ND	ND	ND	0.06	0.27				
	6	1043	20.5	ND	ND	ND	ND	0.03	0.13				
July 27 2012	1	0937	21.5	5.5	6.54	136.4	146.7	0.50	2.22	0.01	3.1	26-Jul	0.15
	2	0949	22.7	6.9	6.71	106.1	111.2	0.28	1.24	(values not			
	DPO	0959	26.9	5.6	6.78	49.4	47.6	0.09	0.40	corrected			
	3	1007	21.9	6.0	6.70	104.3	111.2	0.19	0.84	for blank)			
	CMB-L	1012	20.3	7.2	7.13	98.4	108.6	0.29	1.28				
	4	1020	23.2	6.8	7.11	101.5	105.3	0.10	0.44				
	5	1031	22.3	6.6	6.87	92.0	97.3	0.18	0.80				
	6	1041	24.5	6.2	6.92	69.2	69.9	0.01	0.04				
August 20 2012	1	0902	17.8	6.2	6.12	118.7	138.7	0.33	1.46	0.01	3.1	20-Aug	0.01
	2	0912	18.7	7.1	6.50	97.7	111.8	0.19	0.84	(values not			
	DPO	0920	24.7	4.9	6.33	46.6	46.9	BLD	BLD	corrected			
	3	0927	17.9	7.5	6.73	91.6	106.8	0.12	0.53	for blank)			
	CMB-L	0935	15.5	9.0	7.20	85.5	105.6	0.31	1.37				

	4	0942	19.7	7.2	7.16	90.5	101.2	BLD	BLD				
	5	0952	17.3	6.8	6.95	79.7	94.2	0.09	0.40				
	6	1000	21.2	6.0	6.85	65.5	70.9	BLD	BLD				
September 5 2012	1	1005	21.5	6.8	6.61	88.6	95.3	0.14	0.62	0.03	25.0	4-Sep	2.02
	2	1016	21.3	6.6	6.64	82.6	89.2	0.05	0.22	(values not		5-Sep	0.23
	DPO	1027	25.2	5.9	6.70	43.4	43.2	0.02	0.09	corrected		(thru 1100)	
	3	1036	21.3	7.2	6.81	82.5	89.1	0.06	0.27	for blank)		Total event	2.25
	CMB-L	1043	20.8	7.8	6.90	85.9	93.8	0.09	0.40				
	4	1050	21.5	7.5	6.97	83.4	89.7	BLD	BLD				
	5	1102	21.8	6.9	6.71	79.2	84.6	0.03	0.13				
	6	1113	22.2	6.9	6.90	74.8	79.2	0.05	0.22				
October 23 2012	1	0908	12.0	6.7	6.44	87.5	118.2	ND	ND	ND	14.0	19-Oct	0.60
	2	0933	12.5	7.5	6.70	78.0	104.0	ND	ND	(See		20-Oct	0.06
	DPO	0946	15.0	7.4	6.74	37.2	46.5	ND	ND	Remarks by			
	3	0954	12.0	7.5	6.71	78.3	105.8	ND	ND	Date for		Total event	0.66
	CMB-L	1005	11.3	9.2	6.98	76.1	104.8	ND	ND	comment)			
See Remarks by Date	CMB-U	1027	11.4	6.7	6.57	61.3	84.2	ND	ND				
	4	1013	10.7	9.7	7.09	81.6	114.3	ND	ND				
	5	1041	11.7	7.6	6.78	73.9	100.7	ND	ND				
	6	1050	13.6	8.2	7.00	66.1	85.6	ND	ND				
November 14 2012	1	0930	8.0	8.6	6.61	82.9	125.6	0.29	1.28	0.02	13.0	13-Nov	0.22
	2	0948	8.3	10.1	6.80	75.8	113.8	0.14	0.62	(values not			
	DPO	0955	9.2	9.3	6.80	34.8	50.9	BLD	BLD	corrected			
	3	1002	8.6	9.3	6.77	78.5	116.8	0.09	0.40	for blank)			
	CMB-L	1015	7.5	10.9	7.07	77.0	118.5	0.09	0.40				
	CMB-U	1025	7.1	9.1	6.77	71.1	110.7	BLD	BLD				
	4	1008	8.6	10.5	7.02	76.9	114.4	0.09	0.40				
	5	1034	8.0	8.6	6.76	78.0	118.2	0.10	0.44				
	6	1044	8.9	9.0	6.96	71.1	104.9	0.03	0.13				
December 14 2012	1	0857	2.9	10.9	5.79	67.2	120.4	0.23	1.02	0.00	NA	10-Dec	1.49
	2	0908	4.4	11.4	6.16	61.1	103.9	0.12	0.53			11-Dec	0.03
	DPO	0917	5.4	11.3	6.37	32.2	53.0	0.04	0.18				
	3	0922	2.9	11.7	6.38	61.8	110.8	0.09	0.40			Total event	1.52
	CMB-L	1004	2.2	12.1	6.92	60.7	111.6	0.16	0.71				
	CMB-U	1015	2.2	11.4	6.65	49.6	91.2	BLD	BLD				
	4	0928	3.3	11.7	6.49	63.6	112.4	0.11	0.49				
	5	1030	2.5	11.7	6.71	65.6	119.3	0.14	0.62				
	6	1037	3.6	9.7	6.72	109.5	191.4	0.17	0.75				

Supplemental stations (see Remarks by Date)	A	0938	2.8	11.9	6.50	62.2	111.9	ND	ND				
	B	0947	5.2	9.6	6.52	79.5	131.6	ND	ND				
	C	0954	1.9	12.3	6.87	60.4	112.3	ND	ND				
January 10 2013	1	0907	2.0	ND	5.88	64.3	119.1	0.48	2.13	0.03	NA	5-Jan	0.10
	2	0920	2.0	ND	6.32	59.3	109.8	0.26	1.15	(values not		6-Jan	0.11
	DPO	0930	4.1	ND	6.57	32.5	55.8	0.02	0.09	corrected			
	3	0936	2.0	ND	6.63	58.9	109.1	0.26	1.15	for blank)		Total event	0.21
	CMB-L	0950	2.0	ND	6.83	59.0	109.3	0.27	1.20				
	CMB-U	0959	1.4	ND	6.67	40.7	77.1	0.04	0.18				
	4	0942	2.0	ND	6.79	59.8	110.7	0.23	1.02				
	5	1008	2.1	ND	6.72	61.6	113.7	0.26	1.15				
	6	1016	2.7	ND	6.87	66.0	119.1	0.18	0.80				
February 26 2013	1	0825	2.4	14.4	5.94	57.7	105.3	0.22	0.97	0.00	NA	24-Feb	0.24
Supplemental station (see Remarks by Date)	1.5	0835	2.4	14.4	6.35	55.7	101.6	0.23	1.02				
	2	0845	2.4	14.1	6.36	54.6	99.6	0.19	0.84				
	DPO	0855	4.0	12.5	6.27	33.3	57.4	0.06	0.27				
	3	0902	2.1	15.1	6.49	54.7	100.9	0.17	0.75				
	CMB-L	0910	2.0	15.8	6.47	55.5	102.8	0.23	1.02				
	CMB-U	0920	1.0	15.4	5.96	45.6	87.7	0.05	0.22				
	4	0952	2.2	15.8	6.85	54.6	100.4	0.16	0.71				
	5	0930	2.4	14.1	6.65	54.9	100.2	0.18	0.80				
	6	0943	2.4	14.4	6.80	55.2	100.7	0.16	0.71				
March 22 2013	1	0915	3.7	13.0	5.84	61.5	107.1	0.24	1.06	0.00	NA	19-Mar	0.79
	1.5	0925	3.8	13.1	6.07	58.7	101.9	0.25	1.11				
	2	0935	3.9	13.1	6.25	57.7	99.8	0.18	0.80				
	DPO	0945	3.3	13.1	6.24	29.3	51.8	BLD	BLD				
	3	0950	2.8	13.5	6.22	55.8	100.4	0.14	0.62				
	CMB-L	0955	2.0	14.6	6.40	58.0	107.4	0.26	1.15				
	CMB-U	1005	1.2	13.9	6.25	44.8	85.5	0.02	0.09				
	4	1040	2.9	13.9	6.80	54.5	97.7	0.15	0.66				
	5	1020	2.6	13.7	6.56	51.5	93.3	0.10	0.44				
	6	1030	3.0	13.3	6.80	49.6	88.6	0.12	0.53				
April 26 2013	1	0915	11.5	10.4	6.04	79.0	108.2	0.25	1.11	0.01	NA	19-20 Apr	0.81
	1.5	0927	12.0	11.0	6.41	76.2	103.0	0.21	0.93	(values not		25-Apr	0.05
	2	0935	13.0	10.3	6.38	76.8	101.1	0.11	0.49	corrected			
	DPO	0945	14.9	10.0	6.62	40.8	51.1	BLD	BLD	for blank)			
	3	0953	11.6	11.4	6.88	71.6	97.8	0.08	0.35				
	CMB-L	1000	9.3	12.9	6.72	73.1	106.6	0.18	0.80				

	CMB-U	1010	9.5	11.5	6.24	53.6	77.7	BLD	BLD				
	4	1040	12.1	11.4	7.19	70.4	94.9	0.08	0.35				
	5	1020	12.0	11.8	6.96	67.6	91.4	0.06	0.27				
	6	1030	12.6	10.4	7.06	67.1	89.2	0.03	0.13				
May 10 2013	1	1000	15.9	9.0	6.65	92.0	112.5	0.13	0.58	0.01	NA	8-May	0.34
	1.5	1015	16.1	9.8	6.60	87.6	106.6	0.25	1.11	(values not		9-May	0.18
	2	1025	16.4	8.6	6.59	86.3	104.2	0.13	0.58	corrected			
	DPO	1030	20.0	8.8	7.02	46.6	51.8	0.05	0.22	for blank)		Total event	0.52
	3	1037	15.4	10.3	7.03	83.5	103.3	0.11	0.49				
	CMB-L	1045	14.5	11.2	6.98	86.7	109.7	0.07	0.31				
	CMB-U	1055	14.3	9.8	6.20	61.8	78.6	BLD	BLD				
	4	1125	16.0	10.2	7.14	82.8	101.0	0.09	0.40				
	5	1105	16.3	8.8	7.05	86.3	104.5	0.08	0.35				
	6	1115	18.4	8.2	7.16	88.9	102.4	0.06	0.27				
June 21 2013	1	0900	18.0	ND	6.23	84.6	98.4	0.21	0.93	0.02	NA	18-Jun	0.28
	1.5	912	17.9	ND	6.50	81.1	94.5	0.26	1.15	(values not		19-Jun	0.01
	2	920	18.4	ND	6.73	77.9	89.7	0.14	0.62	corrected			
	DPO	930	23.5	ND	6.94	47.5	49.0	BLD	BLD	for blank)		Total event	0.29
	3	938	17.3	ND	7.05	76.0	89.8	0.12	0.53				
	CMB-L	945	14.5	ND	6.65	71.7	90.8	0.16	0.71				
	CMB-U	1000	14.7	ND	6.23	45.5	57.3	BLD	BLD				
	4	1030	18.3	ND	7.23	77.1	89.0	0.09	0.40				
	5	1010	18.0	ND	7.06	73.8	85.8	0.05	0.22				
	6	1020	18.9	ND	7.13	69.4	79.0	0.04	0.18				
July 30 2013	1	0824	21.0	6.9	6.05	107.6	117.0	0.41	1.82	0.00	NA	25-Jul	5.02
	1.5	0835	20.8	7.7	6.58	98.8	107.9	0.46	2.04			26-Jul	0.18
	2	0848	21.9	7.3	6.69	91.5	97.5	0.23	1.02				
	DPO	0900	26.3	5.9	6.64	51.4	50.1	BLD	BLD			Total event	5.20
	3	0907	20.9	7.2	6.63	100.3	109.3	0.20	0.89				
	CMB-L	0915	18.4	9.1	6.81	92.5	106.6	0.31	1.37				
	CMB-U	0925	18.7	7.4	6.44	68.5	78.4	0.04	0.18				
	4	0955	21.9	7.9	7.23	99.9	106.5	0.11	0.49				
	5	0935	20.2	6.2	6.94	102.4	113.3	0.19	0.84				
	6	0945	23.7	7.3	7.28	84.2	86.4	0.01	0.04				
August 15 2013	1	0915	17.6	7.4	ND	114.4	134.3	0.42	1.86	0.00	NA	13-Aug	0.18
	1.5	0927	17.6	8.3	ND	104.3	122.4	0.45	1.99				
	2	0937	18.9	8.1	ND	97.1	110.6	0.29	1.28				
	DPO	0945	24.1	6.5	ND	49.2	50.1	BLD	BLD				

	3	0953	18.1	9.4	ND	95.0	110.2	0.15	0.66			
	CMB-L	1000	15.8	9.5	ND	92.4	113.2	0.26	1.15			
	CMB-U	1010	16.1	7.6	ND	69.2	84.2	0.09	0.40			
	4	1040	19.1	8.6	ND	93.1	105.6	0.14	0.62			
	5	1018	17.3	7.7	ND	85.2	100.7	0.18	0.80			
	6	1030	22.0	7.4	ND	68.8	73.2	0.05	0.22			
September 24 2013	1	0830	12.8	8.0	5.59	110.8	146.6	0.55	2.44	0.00	NA	22-Sep 0.70
	1.5	0845	12.3	9.7	6.15	98.9	132.6	0.61	2.70			
	2	0855	13.5	9.0	6.26	95.5	124.0	0.30	1.33			
	DPO	0903	18.8	6.8	6.46	43.2	49.3	0.06	0.27			
	3	0910	12.6	8.6	6.56	96.3	128.1	0.24	1.06			
	CMB-L	0915	10.9	10.4	6.73	91.7	127.7	0.28	1.24			
	CMB-U	0925	10.9	8.8	6.34	60.3	84.0	0.03	0.13			
	4	1000	14.0	8.9	6.84	95.2	122.1	0.24	1.06			
	5	0940	12.1	7.4	6.60	90.7	122.2	0.23	1.02			
	6	0950	14.2	8.2	6.68	67.4	86.0	0.07	0.31			
October 25 2013	1	0915	8.1	7.0	5.82	124.7	188.4	0.57	2.53	0.01	NA	18-Oct 0.01
	1.5	0933	7.5	8.9	6.09	102.3	157.4	0.69	3.06	(values not		19-Oct 0.02
	2	0940	8.2	8.3	6.15	92.6	139.5	0.30	1.33	corrected		20-Oct 0.01
	DPO	0952	12.4	8.5	6.65	37.7	50.4	0.02	0.09	for blank)		
	3	0958	7.7	7.8	6.38	92.5	141.4	0.05	0.22			Total 0.04
	CMB-L	1010	6.0	11.7	6.77	71.6	115.5	0.12	0.53			
	CMB-U	1020	6.8	5.1	6.33	65.2	102.5	BLD	BLD			[last rain - Oct 5-7: 0.57"]
	4	1050	8.4	9.6	6.72	94.2	141.0	0.10	0.44			
	5	1027	6.6	6.6	6.26	107.1	169.5	0.32	1.42			
	6	1038	5.7	7.7	6.36	124.4	202.6	0.09	0.40			
November 22 2013	1	0917	5.1	11.0	5.96	99.0	164.5	0.50	2.22	0.00	NA	18-Nov 0.40
	1.5	0927	5.5	11.0	6.26	92.6	151.8	0.53	2.35			
	2	0936	5.7	10.4	6.46	88.4	144.0	0.35	1.55			22-Nov 0.02
	DPO	0945	7.0	10.7	6.66	36.8	57.5	0.05	0.22			(through 1100)
	3	0955	4.9	11.3	6.40	82.5	138.0	0.23	1.02			
	CMB-L	1002	5.1	12.0	6.76	71.8	119.3	0.32	1.42			
	CMB-U	1022	5.1	10.8	6.13	61.4	102.0	0.06	0.27			
	4	1043	5.5	11.8	6.71	80.6	132.1	0.12	0.53			
	5	1022	5.2	10.2	6.44	94.9	157.1	0.38	1.68			
	6	1032	6.7	7.2	6.39	155.4	245.1	0.19	0.84			
December 20 2013	1	0925	1.5	12.9	5.50	100.6	189.8	0.33	1.46	0.00	NA	15-Dec 0.41
	1.5	0937	1.3	13.4	6.11	84.2	160.1	0.35	1.55			

	2	0948	1.1	13.6	6.25	81.1	155.4	0.23	1.02				
	DPO	0958	2.1	12.1	6.36	29.3	54.1	0.01	0.04				
	3	1007	0.6	13.7	6.36	74.5	145.5	0.17	0.75				
	CMB-L	1015	0.6	14.2	6.47	74.5	145.5	0.21	0.93				
	CMB-U	1025	0.7	13.3	6.36	51.1	99.4	BLD	BLD				
	4	1107	0.9	13.0	6.59	73.7	142.3	0.16	0.71				
	5	1048	0.6	12.8	6.42	72.2	141.0	0.18	0.80				
	6	1058	2.4	12.6	6.66	63.9	116.6	0.09	0.40				
January 27 2014	1	0905	0.4	14.4	5.44	79.7	156.9	0.49	2.17	0.01	NA	25-Jan	0.01
	1.5	0918	0.3	13.7	5.94	67.5	133.4	0.49	2.17	(values not		21-Jan	0.05
	2	0928	0.5	13.7	6.00	67.7	132.7	0.37	1.64	corrected		18-Jan	0.20
	DPO	0935	1.7	13.2	6.07	32.1	60.1	0.03	0.13	for blank)		14-Jan	0.82
	3	0941	0.1	13.9	6.06	66.5	132.5	0.26	1.15				
	CMB-L	0949	0.1	14.1	6.19	64.9	129.3	0.26	1.15				
	CMB-U	0959	0.1	11.5	5.68	45.9	91.4	BLD	BLD				
	4	1030	0.3	14.6	6.32	67.3	133.0	0.25	1.11				
	5	1009	0.2	12.8	6.08	63.9	126.8	0.27	1.20				
	6	1019	1.5	13.2	6.33	53.8	101.5	0.14	0.62				
February 21 2014	1	0843	0.9	13.0	5.67	92.6	178.8	0.28	1.24	0.03	NA	19-Feb	0.29
	1.5	0855	0.8	13.6	6.13	85.6	165.9	0.27	1.20	(values not		20-Feb	0.10
	2	0903	0.6	13.5	6.26	82.6	161.3	0.22	0.97	corrected		21-Feb	0.01
	DPO	0915	3.6	11.1	6.03	36.0	62.9	0.06	0.27	for blank)			
	3	0923	0.4	14.4	6.23	76.5	150.6	0.18	0.80			Total	0.40
	CMB-L	0930	0.2	14.3	6.38	68.6	136.1	0.23	1.02				
	CMB-U	0943	0.1	12.6	5.69	46.2	92.0	0.09	0.40				
	4	1018	0.7	14.1	6.52	77.6	151.0	0.16	0.71				
	5	0952	1.4	12.8	6.20	69.2	131.1	0.17	0.75				
	6	1007	2.0	13.8	6.48	62.5	115.7	0.16	0.71				
March 14 2014	1	0936	0.9	14.5	5.62	60.6	117.0	0.27	1.20	0.00	NA	12-Mar	0.44
	1.5	0945	1.0	14.8	5.74	58.6	112.7	0.28	1.24				
	2	0952	1.2	15.5	5.83	51.4	98.1	0.17	0.75				
	DPO	1002	3.9	13.9	5.77	38.1	65.9	0.04	0.18				
	3	1009	0.1	14.8	5.87	59.2	117.9	0.18	0.80				
	CMB-L	1015	0.0	14.8	6.06	53.5	107.0	0.21	0.93				
	CMB-U	1023	0.0	13.7	5.30	45.8	91.6	0.01	0.04				
	4	1033	0.2	15.5	5.90	63.2	125.4	0.18	0.80				
	5	1042	1.1	14.0	6.09	61.3	117.4	0.18	0.80				
	6	1053	0.3	15.6	6.01	65.0	128.5	0.16	0.71				

April 11 2014 (Change in stations - see Remarks by Date)	SB-U	0948	8.1	11.9	6.09	116.8	176.4	0.07	0.31	0.02	NA	7-Apr	0.14
	OMB	0957	9.0	11.7	6.22	87.9	129.3	0.12	0.53	(values not		8-Apr	0.35
	1	1005	9.6	10.9	6.16	86.1	124.4	0.29	1.28	corrected			
	1.5	1015	9.7	11.2	6.19	82.9	119.5	0.29	1.28	for blank)		Total	0.49
	2	1025	9.6	11.1	6.28	79.4	114.7	0.20	0.89				
	3	1037	9.0	11.8	6.38	80.3	118.1	0.16	0.71				
	4	1044	8.9	11.7	6.48	80.4	118.6	0.15	0.66				
	CMB-L	1051	8.2	12.1	6.44	73.2	110.2	0.17	0.75				
	CMB-U	1100	8.3	11.0	6.01	50.6	76.0	0.03	0.13				
May 15 2014	SB-U	0945	14.4	9.9	6.60	140.8	178.7	0.05	0.22	0.02	NA	8-May	0.09
	OMB	0955	15.2	9.9	6.74	96.5	120.0	0.05	0.22	(values not		9-May	0.16
	1	0933	16.2	8.5	6.28	105.3	127.8	0.23	1.02	corrected		10-May	0.01
	1.5	1010	16.2	9.5	6.53	99.5	120.8	0.22	0.97	for blank)		11-May	0.15
	2	1017	16.4	8.8	6.52	96.2	116.2	0.13	0.58				
	3	1027	15.8	9.8	6.76	90.8	111.3	0.07	0.31			Total	0.41
	4	1035	16.1	9.1	6.79	91.4	111.2	0.09	0.40				
	CMB-L	1040	14.5	10.5	6.82	84.3	106.7	0.15	0.66				
	CMB-U	1053	14.9	8.8	6.41	55.4	69.4	BLD	BLD				
June 13 2014	SB-U	0854	16.1	10.0	6.24	135.6	165.0	BLD	BLD	0.00	NA	9-Jun	0.97
	OMB	0901	16.4	9.8	6.41	94.1	113.6	0.12	0.53				
	1	0844	17.4	8.5	5.86	100.9	119.0	0.28	1.24			13-Jun	0.46
	1.5	0910	17.3	9.4	6.24	89.7	106.0	0.20	0.89			(thru 1000)	
	2	0920	17.5	8.7	6.30	89.7	105.5	0.12	0.53				
	3	0926	17.0	9.1	6.19	92.0	109.5	0.15	0.66				
	4	0933	17.2	9.5	6.60	90.2	106.9	0.08	0.35				
	CMB-L	0939	15.4	10.0	6.59	83.4	103.2	0.13	0.58				
	CMB-U	0948	15.4	9.0	6.26	55.9	69.2	BLD	BLD				
July 11 2014	SB-U	0916	17.6	5.7	6.19	243.4	285.7	0.18	0.80	0.00	4.1	4-Jul	1.56
	OMB	0926	19.3	7.9	6.78	109.2	123.1	0.20	0.89				
	1	0904	20.6	5.6	6.13	163.4	179.2	0.58	2.57				
	1.5	0938	20.1	7.1	6.49	138.6	153.7	0.56	2.48				
	2	0948	21.8	7.0	6.60	126.3	134.9	0.32	1.42				
	3	0959	21.6	7.2	6.79	141.0	151.3	0.12	0.53				
	4	1005	22.5	7.4	6.98	150.1	158.0	0.12	0.53				
	CMB-L	1012	19.6	8.4	7.11	103.9	116.5	0.31	1.37				
	CMB-U	1022	18.9	6.6	6.74	95.2	108.4	0.12	0.53				
August 14 2014 (Change in station -	SB-L	0852	18.5	ND	5.91	163.4	187.8	BLD	BLD	0.00	29.0	13-Aug	3.77
	OMB	0900	18.6	ND	6.27	78.7	90.3	0.02	0.09				

see Remarks by Date)	1	0842	19.2	ND	5.79	101.1	114.4	0.10	0.44			
	1.5	0910	19.2	ND	5.98	97.5	110.3	0.11	0.49			
	2	0917	19.4	ND	5.97	96.1	108.2	0.08	0.35			
	3	0927	18.7	ND	6.20	106.4	121.7	0.08	0.35			
	4	0933	18.8	ND	6.33	108.8	124.2	0.05	0.22			
	CMB-L	0938	17.6	ND	6.49	108.7	127.6	0.06	0.27			
	CMB-U	0947	17.5	ND	5.70	113.3	133.3	BLD	BLD			
September 27 2014	SB-L	0900	12.1	7.5	5.89	138.8	187.1	0.13	0.58	0.00	1.8	25-Sep 0.64
	OMB	0910	13.8	9.8	6.38	92.3	118.9	0.18	0.80			
	1	0850	14.7	7.2	5.71	147.3	185.5	0.42	1.86			
	1.5	0922	14.2	8.5	6.39	129.0	164.5	0.54	2.39			
	2	0935	15.2	8.2	6.43	113.3	140.9	0.27	1.20			
	3	0943	14.6	8.6	6.38	93.0	117.4	0.12	0.53			
	4	0957	15.5	8.6	6.61	93.5	115.4	0.08	0.35			
	CMB-L	1007	13.6	9.7	6.81	83.0	107.5	0.28	1.24			
	CMB-U	1020	15.0	1.7	6.24	136.4	170.5	0.01	0.04			
October 17 2014	SB-L	0913	16.3	7.3	5.66	233.3	282.4	BLD	BLD	0.00	27.1	Oct 16-17 2.15
	OMB	0921	16.2	8.0	6.17	97.9	118.8	0.08	0.35		(average	
	1	0903	16.5	6.0	5.50	110.7	133.4	BLD	BLD		over 0900	
	1.5	0944	16.5	7.2	6.11	108.0	130.1	BLD	BLD		to 1030)	
	2	0952	16.7	6.7	6.03	107.3	128.7	BLD	BLD			
	3	1002	16.4	7.8	6.10	114.8	138.6	BLD	BLD			
	4	1012	16.4	8.0	6.22	113.1	136.6	BLD	BLD			
	CMB-L	1018	15.5	8.6	6.33	133.3	164.6	BLD	BLD			
	CMB-U	1028	15.8	6.5	5.18	139.3	170.7	BLD	BLD			
November 21 2014	SB-L	0930	1.6	13.6	5.72	124.5	234.0	0.10	0.44	0.02	11.0	17-Nov 1.69
	OMB	0937	1.9	14.3	6.16	63.2	117.5	0.11	0.49	(values not		
	1	0920	2.7	13.9	5.21	79.4	143.3	0.25	1.11	corrected		
	1.5	0948	2.9	12.8	5.91	73.2	131.2	0.25	1.11	for blank)		
	2	0958	3.4	12.5	5.99	70.0	123.2	0.13	0.58			
	3	1010	2.5	13.0	6.12	76.2	138.5	0.09	0.40			
	4	1020	3.9	13.0	6.23	72.3	125.1	0.10	0.44			
	CMB-L	1030	1.8	14.4	6.30	73.7	137.5	0.17	0.75			
	CMB-U	1040	1.5	13.9	5.67	56.6	106.8	0.03	0.13			
December 16 2014	SB-L	0935	3.2	ND	5.63	121.2	214.9	0.16	0.71	0.03	28.0	9-Dec 2.00
	OMB	0945	3.0	ND	5.96	61.3	109.5	0.12	0.53	(values not		
	1	0922	3.0	ND	5.31	69.6	124.3	0.22	0.97	corrected		
	1.5	0955	3.2	ND	5.86	67.1	119.0	0.22	0.97	for blank)		

	2	1003	3.2	ND	5.92	64.5	114.4	0.13	0.58				
	3	1012	2.9	ND	5.98	67.2	120.4	0.12	0.53				
	4	1018	2.8	ND	6.05	69.9	125.7	0.16	0.71				
	CMB-L	1025	2.7	ND	6.09	60.3	108.8	0.12	0.53				
	CMB-U	1033	2.3	ND	5.78	39.4	72.2	BLD	BLD				
January 15 2015	SB-L	0935	1.0	14.9	5.86	123.7	237.9	0.10	0.44	0.05	NA	12-Jan	0.47
	OMB	0945	0.6	14.1	6.16	86.6	169.1	0.11	0.49	(values not			
	1	0923	0.6	16.3	5.76	86.6	169.1	0.21	0.93	corrected			
	1.5	0955	0.8	13.5	5.98	66.3	128.5	0.19	0.84	for blank)			
	2	1005	0.7	13.2	6.01	68.7	133.7	0.19	0.84				
	3	1015	0.3	13.6	6.10	67.1	132.6	0.15	0.66				
	4	1022	0.3	13.2	6.15	69.8	137.9	0.17	0.75				
	CMB-L	1030	0.4	13.2	6.20	60.4	118.9	0.20	0.89				
	CMB-U	1045	0.2	12.6	5.50	39.9	79.2	0.02	0.09				
									0.00				
February 2015	All sta		ND	ND	ND	ND	ND	ND	ND	See Remarks by Date			
March 13 2015	SB-L	0940	0.6	17.3	ND	181.4	354.3	0.16	0.71	0.04	NA		NA
	OMB	0952	0.8	16.6	ND	178.8	346.5	0.12	0.53	(values not			
	1	0932	0.9	18.2	ND	78.7	151.9	0.28	1.24	corrected			
	1.5	1002	1.2	16.7	ND	76.7	146.4	0.24	1.06	for blank)			
	2	1012	1.2	15.5	ND	75.0	143.1	0.18	0.80				
	3	1023	0.7	16.1	ND	76.1	148.1	0.19	0.84				
	4	1033	0.5	16.6	ND	81.2	159.2	0.17	0.75				
	CMB-L	1040	0.5	16.5	ND	58.2	114.1	0.19	0.84				
	CMB-U	1102	0.5	17.4	ND	47.9	93.9	0.02	0.09				
April 27 2015	SB-L	0818	8.6	ND	ND	176.4	262.5	0.05	0.22	0.02	25.0		NA
	OMB	0826	9.5	ND	ND	103.8	150.4	0.08	0.35	(values not			
	1	0807	10.1	ND	ND	93.9	133.8	0.17	0.75	corrected			
	1.5	0837	10.1	ND	ND	89.3	127.2	0.19	0.84	for blank)			
	2	0845	10.3	ND	ND	86.6	122.7	0.11	0.49				
	3	0855	9.9	ND	ND	86.7	124.2	0.09	0.40				
	4	0905	10.0	ND	ND	89.6	128.0	0.08	0.35				
	CMB-L	0912	8.9	ND	ND	74.4	109.7	0.11	0.49				
	CMB-U	0923	8.7	ND	ND	47.5	70.5	0.01	0.04				
May 14 2015	SB-L	0815	11.1	10.5	ND	200.6	277.8	0.02	0.09	0.06	8.5	12-May	0.19
	OMB	0824	13.3	9.1	ND	149.4	195.0	0.07	0.31	(values not			
	1	0950	15.5	7.4	6.44	127.3	157.2	0.42	1.86	corrected			
	1.5	0833	15.4	7.7	ND	116.3	143.9	0.34	1.51	for blank)			

	2	0844	17.1	7.5	ND	113.3	134.6	0.14	0.62			
	3	0853	14.5	8.3	ND	107.0	135.4	0.08	0.35			
	4	0900	15.8	8.3	ND	111.5	136.6	0.03	0.13			
	CMB-L	0908	12.1	11.0	ND	86.7	116.8	0.04	0.18			
	CMB-U	0918	12.3	8.1	ND	55.7	74.7	BLD	BLD			
June 12 2015	SB-L	0800	16.0	7.7	ND	209.9	256.0	0.69	3.06	0.05	2.9	NA
	OMB	0810	17.7	8.3	ND	131.0	153.4	0.79	3.50	(values not		
	1	0940	19.1	6.5	ND	152.2	172.6	1.00	4.43	corrected		
	1.5	0820	19.1	6.8	ND	137.2	155.6	0.81	3.59	for blank)		
	2	0845	20.0	7.1	ND	126.8	140.9	0.55	2.44			
	3	0855	19.2	7.0	ND	123.9	140.2	0.45	1.99			
	4	0900	20.1	7.1	ND	127.7	141.6	0.58	2.57			
	CMB-L	0910	17.5	8.5	ND	102.8	120.9	0.51	2.26			
	CMB-U	0925	17.3	7.2	ND	71.3	84.3	0.17	0.75			
July 15 2015	SB-L	0802	18.3	7.0	ND	226.9	262.0	0.12	0.53	0.01	3.5	Total
	OMB	0810	20.1	7.6	ND	132.1	146.5	0.37	1.64	(values not		1.42
	1	0924	21.3	5.7	ND	173.0	186.8	0.67	2.97	corrected		for month
	1.5	0821	21.2	6.3	ND	146.3	158.3	0.80	3.54	for blank)		to date
	2	0828	22.9	6.1	ND	136.6	142.6	0.40	1.77			
	3	0836	21.6	6.5	ND	139.8	150.0	0.22	0.97			
	4	0843	23.1	6.6	ND	157.6	163.8	0.22	0.97			
	CMB-L	0849	19.8	8.0	ND	114.0	127.2	0.33	1.46			
	CMB-U	0858	19.9	6.3	ND	77.5	86.3	0.09	0.40			
August 12 2015	SB-L	0750	18.7	6.4	6.14	291.3	333.3	0.06	0.27	0.02	13.0	11-Aug
	OMB	0800	19.0	7.3	6.81	129.2	146.8	0.26	1.15	(values not		1.41
	1	1005	21.3	6.2	6.84	145.3	156.9	0.15	0.66	corrected		
	1.5	0812	21.2	6.0	6.87	135.9	147.1	0.15	0.66	for blank)		
	2	0822	21.7	6.7	6.87	132.4	141.8	0.14	0.62			
	3	0832	20.0	6.1	6.85	106.9	118.8	0.18	0.80			
	4	0840	20.0	6.7	6.94	111.8	124.2	0.16	0.71			
	CMB-L	0848	18.5	7.3	7.06	135.1	155.3	0.26	1.15			
	CMB-U	0924	19.0	5.8	6.34	129.3	146.9	0.09	0.40			
September 16 2015	SB-L	0820	15.1	6.2	6.17	235.8	294.0	0.18	0.80	0.05	3.2	Total
	OMB	0831	16.3	7.2	6.92	119.3	144.4	0.26	1.15	(values not		1.10
	1	0942	17.2	5.6	6.73	171.1	202.7	0.56	2.48	corrected		(questionable
	1.5	0840	16.9	6.6	6.67	132.7	158.4	0.65	2.88	for blank)		accuracy? -
	2	0848	18.5	5.9	6.83	124.1	142.6	0.39	1.73			see Remarks
	3	0859	16.8	6.8	6.96	145.9	174.5	0.09	0.40			by Date)

	4	0905	18.1	6.5	7.10	150.0	174.0	0.20	0.89			
	CMB-L	0915	15.5	8.0	7.34	102.5	126.5	0.33	1.46			
	CMB-U	0925	17.2	1.6	6.54	183.6	217.5	0.04	0.18			
October 20 2015	SB-L	0805	8.4	7.2	6.09	178.4	267.1	0.04	0.18	0.00	NA	Total 1.86
	OMB	0820	7.4	10.0	6.92	98.7	152.3	0.09	0.40			for month
	1	0938	7.3	8.0	6.66	146.2	226.3	0.52	2.30			to date
	1.5	0835	8.0	8.0	6.63	121.4	183.9	0.54	2.39			
	2	0845	8.8	7.5	6.67	111.0	164.2	0.26	1.15			
	3	0855	8.2	8.4	6.73	107.1	161.3	BLD	BLD			
	4	0903	8.7	8.7	6.99	106.3	157.7	0.02	0.09			
	CMB-L	0910	7.8	9.2	7.10	86.7	132.2	0.09	0.40			
	CMB-U	0920	8.2	3.4	6.22	163.4	246.1	ND	ND			
November 12 2015	SB-L	0835	10.0	13.1	6.12	173.6	248.0	0.17	0.75	0.04	NA	Total 0.01
	OMB	0843	10.0	12.4	6.75	103.7	148.1	0.04	0.18	(values not		for date (questionable
	1	0955	10.3	8.5	6.60	132.2	187.3	0.20	0.89	corrected		accuracy? -
	1.5	0858	10.2	10.2	6.75	121.0	171.9	0.13	0.58	for blank)		see Remarks
	2	0905	10.2	9.7	6.67	118.1	167.8	0.11	0.49			by Date)
	3	0915	9.9	10.4	6.81	114.8	164.5	BLD	BLD			
	4	0920	9.8	10.8	6.95	114.2	164.1	0.07	0.31			
	CMB-L	0928	9.7	10.9	7.09	119.0	171.5	0.06	0.27			
	CMB-U	0937	9.7	8.7	6.13	102.6	147.8	0.26	1.15			
December 17, 2015	SB-L	0817	8.5	ND	6.13	153.6	229.3	0.31	1.37	0.00	NA	NA
	OMB	0827	8.5	ND	6.55	87.9	131.2	0.21	0.93			
	1	0947	9.0	10.7	6.56	106.0	155.9	0.49	2.17			
	1.5	0837	9.1	ND	6.45	93.2	136.7	0.59	2.61			
	2	0845	9.3	ND	6.66	89.1	129.9	0.34	1.51			
	3	0855	8.4	ND	6.55	89.5	134.0	0.32	1.42			
	4	0902	8.3	ND	6.81	92.6	139.0	0.09	0.40			
	CMB-L	0907	8.2	ND	6.90	80.0	120.5	0.44	1.95			
	CMB-U	0917	7.9	ND	6.45	59.8	90.9	0.07	0.31			
January 7, 2016	SB-L	0905	0.4	14.0	6.01	128.7	253.3	0.20	0.89	0.00	NA	NA
	OMB	0915	0.4	14.5	6.31	82.2	161.8	0.11	0.49			
	1	1043	0.5	13.7	6.68	79.8	156.5	0.32	1.42			
	1.5	0926	0.5	12.2	6.24	73.9	144.9	0.32	1.42			
	2	0936	1.0	14.3	6.35	72.4	139.2	0.28	1.24			
	3	0948	0.3	14.7	6.68	76.5	151.2	0.24	1.06			
	4	0956	0.5	ND	6.73	82.3	161.4	0.08	0.35			
	CMB-L	1010	0.0	14.7	6.83	63.8	127.6	0.23	1.02			

See Remarks for below:	CMB-U	1023	0.4	12.7	6.56	44.1	86.8	0.02	0.09			
	Curtain drain near CMB-L	1007	ND	ND	ND	ND	ND	0.07	0.31			
February 11, 2016	SB-L	0804	0.9	13.3	6.47	144.9	279.7	0.27	1.20	0.01	NA	NA
	OMB	0815	1.1	13.5	6.60	79.1	151.5	0.12	0.53	(values not		
	1	0955	1.4	13.3	6.77	84.4	159.8	0.30	1.33	corrected		
	1.5	0828	1.3	13.4	6.62	78.6	149.4	0.35	1.55	for blank)		
	2	0838	1.3	13.4	6.73	75.5	143.5	0.23	1.02			
	3	0900	0.8	13.7	6.86	75.4	146.1	0.27	1.20			
	4	0910	1.0	14.4	6.92	80.4	154.6	0.17	0.75			
	CMB-L	0920	0.5	14.3	6.86	61.1	119.8	0.23	1.02			
See Remarks for below:	CMB-U	0936	0.3	13.5	6.40	39.7	78.5	0.01	0.04			
	Curtain drain near CMB-L	0925	ND	ND	ND	ND	ND	0.05	0.22			
March 24, 2016	SB-L	0805	6.9	11.1	6.66	164.5	257.8	0.64	2.84	0.03	NA	NA
	OMB	0815	8.1	11.0	6.88	92.3	139.4	0.36	1.59	(values not		
	1	0958	7.9	10.4	6.89	97.2	147.7	0.85	3.77	corrected		
	1.5	0825	7.7	10.2	6.78	90.0	137.6	0.67	2.97	for blank)		
	2	0835	8.0	10.9	6.87	86.0	130.3	0.42	1.86			
	3	0850	8.2	10.8	6.96	86.7	130.6	0.61	2.70			
	4	0857	8.8	10.4	7.07	93.5	138.3	0.70	3.10			
	CMB-L	0907	6.9	11.9	7.16	71.1	111.4	0.62	2.75			
See Remarks for below:	CMB-U	0920	6.5	11.2	6.94	47.3	75.1	0.09	0.40			
	Curtain drain near CMB-L	0915	ND	ND	ND	ND	ND	0.82	3.63			
April 21, 2016	SB-L	0815	7.4	10.5	6.47	164.9	254.5	0.28	1.24	0.03	NA	NA
	OMB	0827	9.1	10.8	6.86	98.5	144.4	0.09	0.40	(values not		
	1	0950	10.7	9.3	6.95	103.6	145.1	0.45	1.99	corrected		
	1.5	0840	10.4	10.4	6.77	95.7	135.2	0.42	1.86	for blank)		
	2	0850	11.4	10.7	6.98	92.2	126.6	0.21	0.93			
	3	0900	9.7	10.4	6.99	89.0	128.2	0.16	0.71			
	4	0910	10.9	10.2	7.23	98.8	137.6	0.13	0.58			
	CMB-L	0917	7.9	11.8	7.09	70.6	107.3	0.12	0.53			
See Remarks for below:	CMB-U	0930	8.4	10.2	6.48	46.8	70.1	BLD	BLD			
	#1 Curtain drain near CMB-L	0922	ND	ND	ND	ND	ND	0.17	0.75			
	#2 Curtain drain near CMB-L	0923	ND	ND	ND	ND	ND	0.09	0.40			
May 20, 2016	SB-L	0737	10.6	10.8	6.43	174.8	245.5	0.23	1.02	0.03	NA	NA
	OMB	0748	12.2	9.8	6.84	100.5	135.1	0.08	0.35	(values not		
	1	0913	13.9	8.2	7.11	109.6	140.9	0.28	1.24	corrected		
	1.5	0800	13.7	8.3	6.87	102.6	132.6	0.22	0.97	for blank)		
	2	0810	14.6	9.1	7.12	100.2	126.5	0.13	0.58			

	3	0820	13.7	9.0	7.22	97.8	126.4	0.14	0.62			
	4	0828	14.3	9.2	7.43	99.9	127.1	0.05	0.22			
	CMB-L	0837	11.2	10.3	7.09	78.6	108.6	0.12	0.53			
	CMB-U	0857	11.4	8.5	6.73	51.6	70.9	BLD	BLD			
Curtain drain near CMB-L		0842	ND	ND	ND	ND	ND	0.07	0.31			
June 22, 2016	SB-L	0732	14.9	7.4	6.57	205.2	257.1	0.55	2.44	0.22	NA	NA
	OMB	0743	16.7	8.4	7.08	112.8	135.3	0.20	0.89	(↑ repeated;		
	1	0908	18.3	5.4	6.94	168.9	195.0	0.54	2.39	similar result -		
	1.5	0758	17.3	6.9	6.87	141.4	167.1	0.78	3.46	unknown		
	2	0807	19.7	6.5	6.93	130.4	145.9	0.43	1.90	why so high)		
	3	0818	18.1	6.6	7.11	131.2	152.2	0.29	1.28	[but see		
	4	0828	20.1	6.8	7.37	145.5	161.3	0.22	0.97	note		
	CMB-L	0835	16.2	8.3	7.51	93.4	113.3	0.58	2.57	below]		
	CMB-U	0847	16.0	5.5	6.95	78.0	95.1	0.10	0.44	(values not		
										corrected		
										for blank)		
July 19, 2016	SB-L	0735	18.1	4.9	6.68	187.8	217.9	0.27	1.20	0.09	NA	NA
	OMB	0748	21.0	7.5	7.47	123.9	134.7	0.30	1.33	(↑ repeated;		
	1	0912	22.6	4.0	6.97	211.0	221.6	0.74	3.28	similar result -		
	1.5	0802	21.3	5.6	7.12	167.4	180.8	1.22	5.40	believe		
	2	0810	22.4	5.6	7.18	148.4	156.5	0.82	3.63	related to		
	3	0822	21.7	5.1	7.21	148.3	158.8	0.2	0.89	a black ppt		
	4	0830	22.8	5.8	7.33	154.0	161.1	0.29	1.28	seen in low		
	CMB-L	0840	20.2	7.1	7.62	80.7	89.3	0.47	2.08	nitrate		
	CMB-U	0853	20.8	0.5	6.93	147.3	160.8	0.02	0.09	samples)		
										(values not		
										corrected		
										for blank)		
August 24, 2016	SB-L	0803	16.2	6.6	6.50	269.0	326.5	0.21	0.93	0.22	NA	NA
	OMB	0816	17.4	8.4	7.28	114.0	134.4	0.27	1.20	(↑ repeated;		
	1	0932	18.7	5.2	7.15	172.8	197.7	0.40	1.77	similar result -		
	1.5	0827	18.2	7.2	7.05	142.3	164.7	0.47	2.08	believe		
	2	0837	19.9	6.3	7.12	133.5	148.7	0.31	1.37	related to		
	3	0847	18.1	7.5	7.17	119.7	138.9	0.16	0.71	a black ppt		
	4	0855	19.3	6.9	7.25	118.4	133.6	0.30	1.33	seen in low		
	CMB-L	0903	16.8	8.5	7.53	79.8	95.5	0.20	0.89	nitrate		
	CMB-U	0913	18.3	0.6	6.83	116.0	133.9	BLD	BLD	samples)		
										(values not		
										corrected		
										for blank)		
September 27, 2016	SB-L	0750	15.4	6.4	6.31	188.4	233.2	0.28	1.24	0.07	NA	27-Sep 0.40

	OMB	0800	14.9	8.7	7.04	105.8	132.6	0.40	1.77	(values not corrected for blank)	(according to EL Weatherlink Network)
	1	0927	16.3	7.8	7.04	146.8	177.7	0.68	3.01		
	1.5	0810	15.1	7.7	6.97	127.5	159.0	0.84	3.72		
	2	0820	15.7	7.1	7.02	117.0	143.7	0.58	2.57		
	3	0833	15.6	7.3	7.12	131.1	161.5	0.30	1.33		
	4	0842	16.5	7.3	7.16	126.5	152.4	0.24	1.06		
	CMB-L	0850	14.4	8.8	7.33	73.9	93.8	0.32	1.42		
	CMB-U	0900	17.3	4.6	6.78	53.8	63.6	0.12	0.53		
October 19, 2016	SB-L	0802	15.1	4.8	6.42	230.6	287.5	0.25 (?)	1.11 (?)	0.05	NA ND
	OMB	0814	15.6	8.2	7.35	118.3	145.7	0.17	0.75	(values not corrected for blank)	
	1	0927	15.6	6.4	7.09	181.0	222.9	0.60	2.66		
	1.5	0824	15.8	7.9	7.05	149.4	183.1	0.89	3.94		
	2	0832	15.9	6.0	7.07	131.5	160.8	0.46	2.04		
	3	0840	15.7	6.0	7.06	149.8	184.0	0.29	1.28	Value for SB-L questionable (see Remarks by Date)	
	4	0850	16.0	6.8	7.25	139.8	170.5	0.28	1.24		
	CMB-L	0858	15.4	7.6	7.43	103.6	128.2	0.11	0.49		
	CMB-U	0910	16.1	0.5	6.85	370.0	450.1	BLD	BLD		
November 17, 2016	SB-L	0802	7.2	9.4	6.43	171.5	266.3	0.03	0.13	0.00	NA 15-16 Nov 0.49
	OMB	0816	7.7	10.0	6.88	95.6	146.2	BLD	BLD		(according to EL Weatherlink Network)
	1	0928	7.3	9.3	6.77	125.3	194.0	0.27	1.20		
	1.5	0823	7.0	8.6	6.82	114.4	178.8	0.35	1.55		
	2	0830	7.3	9.0	6.81	112.3	173.8	0.22	0.97		
	3	0840	7.2	9.2	6.97	111.2	172.7	0.09	0.40		
	4	0848	8.1	9.7	7.00	113.9	172.1	0.10	0.44		
	CMB-L	0855	6.7	10.6	7.15	120.1	189.4	0.06	0.27		
	CMB-U	0906	7.2	8.0	6.24	139.8	217.1	BLD	BLD		
December 14, 2016	SB-L	0857	2.8	11.5	6.24	124.4	223.7	0.20	0.89	0.02	NA Dec 1-14 1.55
	OMB	0906	3.1	12.2	6.71	69.6	123.8	0.11	0.49	(values not corrected for blank)	(according to EL Weatherlink Network)
	1	1020	2.9	11.3	6.66	81.6	146.2	0.40	1.77		
	1.5	0915	2.9	11.3	6.61	76.3	136.7	0.36	1.59		
	2	0930	2.9	11.4	6.70	73.6	131.9	0.20	0.89		
	3	0940	2.9	11.8	6.73	74.5	133.5	0.24	1.06		
	4	0948	3.0	12.0	6.77	79.5	142.0	0.20	0.89		
	CMB-L	0955	2.9	12.3	6.87	64.6	115.8	0.01	0.04		
	CMB-U	1005	2.4	10.8	6.32	59.5	108.6	BLD	BLD		
Curtain drain near CMB-L		0958	ND	ND	ND	ND	ND	0.31	1.37		
January 19, 2017	SB-L	0840	4.2	10.6	6.54	152.8	261.6	0.20	0.89	0.01	NA Jan 1-19 1.99
	OMB	0849	4.0	11.6	6.81	77.7	134.0	0.17	0.75	(values not corrected for blank)	(according to EL Weatherlink Network)

Notes & Abbreviation Key:

BLD: With the exception of the reagent blank, a 0 value given by the
LaMotte instrument is denoted as Below Limit of Detection (BLD)
NA: information not available
ND: not determined (parameter not sampled, test not run, etc.)

Temperature, DO, pH, and conductivity measured using a YSI Professional Plus meter

N-NO₃ values are as determined using the LaMotte Cd reduction method

Actual Nitrate (NO₃⁻) concentration determined by multiplying the N-NO₃ value by 4.43

(see LaMotte SMART3 Colorimeter Operator's Manual for Nitrate-Nitrogen Low Range procedure)

Conductivity was measured in the field and specific conductance (conductivity at a
standard temperature of 25C) was calculated using a formula from USGS TWRI Book 9:

Specific conductance is equal to Conductivity / (1 + 0.02(Water Temperature - 25))

(Note that specific conductance units remain as µs/cm)

LB Streamflow and East Lyme rainfall records available from the USGS gauges in lower
LB and Flanders, respectively with the following exceptions:

no streamflow records from December 2012 through June 2014

no flow records from January through March 2015 due to ice

streamflow gauge discontinued after September 2015

No precipitation records March-April 2015 after gauge discontinued

A few records for May 2015 and after were from the East Lyme Harbor Master
WeatherLink Network. Daily values generally not available, but
month-to-date records were entered. Accuracy of this information is
unknown

Date	Remarks
April 13, 2012	<p>Samplers included Don Danila, Don Landers, and Judy Rondeau.</p> <p>Clear to partly cloudy. Light NW wind. Rain previous afternoon/evening - 0.24 inches recorded at the USGS LB gauge. Stream very clear at all stations.</p> <p>Could not obtain flow at Sta 1 - velocity too low (obtained the 0915 value from the USGS LB gauge).</p> <p>Sta 2 moved from Sylvan Road cul-de-sac to Colony Road culvert due to second stream channel discovered at the former.</p> <p>Sta 2 had some green algae, moss, and iron bacteria present.</p> <p>Sta 3 moved from off the fishing area parking lot to Rocco Drive culvert at Rt 161 due to second stream channel discovered at the former.</p> <p>Could not obtain flow at Sta 3 - velocity too low</p> <p>Observed two mallard ducks and possibly a brook trout at CMB.</p> <p>Sta 4 moved from Silver Falls Road to Chapman Drive culvert due to inaccessibility of stream at the former location.</p> <p>Could not obtain flow at Sta 5 - velocity too low.</p> <p>Took water velocity measurements closer to dam spillway than at culvert at Sta 6 due to low flow at the latter location.</p> <p>Could not process nitrate samples from CMB and Sta 6 because ran out of nitrate reducing agent.</p> <p>Calculated flow volumes using GO flowmeters may be inaccurate as our flows were greater than the USGS LB stream gauge measurements.</p>
May 30, 2012	<p>Samplers included Don Danila and Marvin Schutt</p> <p>Water velocity measurements no longer taken due to decision by Monitoring Sub-committee - could not be obtain accurately with a GO flowmeter</p> <p>Overcast, humid, little or no wind. Last ppt of 0.72 in on May 26.</p> <p>Station 1 moved to attraction water of Latimer Brook Fish Ladder at the dam due to large amounts of poison ivy by Rt 1 bridge</p> <p>Initial sampling of Darrow Pond outlet at the dam on Mostow Road - the Rt 161 culvert was very overgrown and not safe due to traffic</p> <p>Water very clear at all stations</p> <p>Dead beaver seen on side of Rt 161 by Darrow Pond outlet culvert</p>
June 28, 2012	<p>Don Danila sampled</p> <p>Clear, sunny day with light wind</p> <p>Station 1 moved to area in impoundment just above the Latimer Brook Fish Ladder at the dam due to ease of access</p> <p>Latimer Brook had been running at 9-11 cfs from 6/21 to early on 6/25. Heavy rain (2.25" total) began about 0800 and put flow up to a maximum of 288 cfs at 1830 on 6/25. Flow steadily decreased thereafter to today (20 cfs).</p> <p>YSI would not power up. Took water temperature with a scientific grade alcohol thermometer (+/- 0.5C). No DO, pH, or conductivity.</p> <p>Water temp at Sta 1 - 19.5C, 18.9C at the gage, but my water sample taken in impoundment by dam in a sunny spot.</p> <p>Sta 1 and 4 water appeared to be discolored with some turbidity.</p> <p>Could see some silt or floc in the CMB sample</p>
July 27, 2012	<p>Samplers included Don Danila and Marvin Schutt</p> <p>Overcast, warm, and humid. No wind or light W-SW wind. Expected severe storms last night did not pan out and we only received little rain - 0.15"</p> <p>Latimer Brook flow very low - 3.1 cfs. Water very clear, no unusual conditions noted (except very low flow and shallow depths at all stations).</p> <p>No water flowing over top of DPO, just seepage</p>
August 30, 2012	<p>Samplers included Don Danila and John Jasper</p> <p>Clear, sunny day with light westerly wind</p> <p>Latimer Brook flow very low - 3.1 cfs. Water very clear, no unusual conditions noted (except very low flow and shallow depths at all stations).</p> <p>Only 0.01 in of rain recorded on August 28 - last substantial rain was 0.88 in on August 18</p> <p>No water flowing over top of DPO, just seepage</p> <p>Station 3 had patches of filamentous green algae scattered on the bottom</p>
September 5, 2012	<p>Don Danila sampled</p> <p>Overcast at start, then light drizzle through occasional heavy rain and thunder/lightning; very warm, humid; light SW wind</p> <p>Second day of fairly significant rainstorm, which prompted this sampling</p> <p>Stream running strong compared to previous summer months, but not overly full to banks; water somewhat tannic brown in color</p> <p>About 1 in of water going over DPO dam and flowing over reservoir dam at Sta 6 - good flow there in channelized streambed</p> <p>Initial DO readings at Sta 1 through CMB appeared to be low (3.4-4.6 ppm) compared to the August sampling. Then, at Sta 4 appeared to be as expected (7.5 ppm), as it was at 5 and 6. So went back to the lower stations and re-measured DO - now got 5.9-7.8. Do not know why this happened.</p>
October 23, 2012	<p>Samplers included Don Danila and Marvin Schutt</p> <p>Partly cloudy with light wind</p>

	<p>Moderate flow</p> <p>About 1" flow over DPO dam. Aquatic vegetation now reduced in extent in pond.</p> <p>About 5 mallards and 3 ducks of another species (migratory?) seen on pond</p> <p>New station - CMB-U first sampled today - road crossing on Grassy Hill Road to west of Walnut Hill Road intersection</p> <p>Believe methodological error occurred in nitrate analysis as 0 (BLD) values were obtained for all stations and the blank. This is inconsistent with values found throughout this sampling. Therefore, all October 2012 values have been changed to "ND"</p>
November 14, 2012	<p>Don Danila sampled</p> <p>Partly cloudy to clear with winds N 10-15 MPH</p> <p>About 1" flow over DPO dam.</p> <p>Water very clear at all stations. No leaves, etc. in streamflow.</p>
December 14, 2012	<p>Don Danila and John Jasper sampled</p> <p>USGS flow gauge no longer in operation by USGS so Latimer Brook streamflow no longer available</p> <p>Sunny with light NW winds</p> <p>About 1" flow over DPO dam.</p> <p>About 0.125" ice at station 6, despite 3.6C water temperature. No water seen coming over dam - water level seemed low with little flow.</p> <p>Had unusually high (109.5) conductivity reading at station 6</p> <p>Took supplemental samples (but not nitrate) at three additional locations bracketing the influx of Cranberry Meadow Brook:</p> <ul style="list-style-type: none"> A Latimer Brook behind St. Mathias Church B Discharge of larger pond in campground (water source - CMB?) C Latimer Brook just below junction with Cranberry Meadow Brook
January 10, 2013	<p>Samplers included Don Danila and Marvin Schutt</p> <p>USGS flow gauge no longer working so streamflow not available</p> <p>Dissolved oxygen not taken - % saturation value during storage dropped to low level; membrane may need replacing</p> <p>Very clear. Light SE wind soon picked up to NW 15-20 MPH</p> <p>About 1" flow over DPO dam - pond iced over except right at outlet</p> <p>Beckwith Pond (just above sta 6) frozen over with trickle of water over the dam</p> <p>No ppt since Jan 5, but expected snow melt from late December snow storms as air temperatures have been above freezing for past few days</p>
February 26, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available</p> <p>Overcast with light E winds</p> <p>Streamflow appears to be strong, likely from snowmelt and recent precipitation</p> <p>Darrow Pond frozen over except for about 15' from outlet. Good flow (~4") over outlet dam.</p> <p>Beckwith Pond frozen over</p> <p>An extra station was sampled for all parameters - Latimer Brook crossing at Egret Road, which is upstream of Flanders Plaza and downstream of station 2</p> <p>This station was subsequently adopted in March as a permanent station that was designated as Station 1.5</p>
March 22, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available</p> <p>Sunny, clear with west winds about 10 MPH</p> <p>Streamflow appears to be strong, likely from recent precipitation and any remaining snowmelt</p> <p>Good flow over dams at stations 1, DPO, and 6 - all ponds free of ice</p> <p>Good flow out of pipe and dumping into CMB at CMB-L (was told it is discharge from house curtain drain). Filamentous green algae on ground in this flow</p> <p>Water pools in woods and fields near station 4 - heard mallards</p> <p>About 6 mallards in Beckwith Pond above station 6</p> <p>Saw great blue heron in brook downstream of the Egret Road site (Sta 1.5)</p>

April 26, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running strong</p> <p>Sunny, clear with light wind</p> <p>Fish ladder in operation at Sta 1 with many alewife observed in stream below the dam</p> <p>A number of geese seen in upper end of impoundment above the dam at Sta 1</p> <p>Several inches of water flowing over outlet dam at DPO and some flow over Beckwith Pond dam at Sta 6</p> <p>Flow from in-ground pipe at CMB-L running, but volume appears lower than in March</p> <p>Male mallard seen at Sta 3 and a deer in road just below Sta 6</p>
May 10, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running good, although not as high as in April</p> <p>Sunny, clear with light S wind</p> <p>CT DEEP personnel at Sta 1 fish ladder - were closing for the season. Reported to me an estimate of 30,000 alewife lifted this year</p> <p>Also reported a few trout (sea run browns, stocked browns and rainbows, and several native brook trout noted at the ladder</p> <p>Also reported that alewife found spawning in "quarry ponds" upstream in Latimer Brook (are these just below Rocco Drive area?)</p> <p>About 1 inch of water flowing over outlet dam at DPO and some flow over Beckwith Pond dam at Sta 6</p> <p>Saw 1 small largemouth bass at DPO, green frog at Sta 3, about 14 geese and 1 mallard duck by dam at Sta 6, and 1 osprey over Beckwith Pond</p> <p>Lots of milfoil, green algae at DPO and increasing growth of vascular plants in stream at most stations</p> <p>Flow from in-ground pipe at CMB-L now down to a trickle</p> <p>Water very clear at most stations except CMB-U, where it was tannic colored and slightly turbid or tannic at Sta 5</p> <p>Had to sample with a suspended bucket at Sta 5 - poison ivy growth now extensive in this area around the road bridge on all sides</p>
June 21, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running fast with relatively high water level</p> <p>Sunny, clear with light S wind</p> <p>Good flow of water over DPO outlet and dams at Stas 1 and 6</p> <p>DO probe not giving stable values, so did not record DO this month - believe probe was loose, causing this condition. Will fix prior to July sampling</p> <p>Saw female mallard with young at Sta 1, great blue heron at DPO, many whirligig beetles at Sta 6</p> <p>Good flow of water out of drain at CMB-L. Homeowner said a new drainage into brook has developed behind his property from housing development uphill</p> <p>Distinct tannic water color at CMB-U and somewhat turbid at Sta 5. Relatively clear elsewhere</p>
July 30, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at typically low summer water levels - the flow was low despite the 5.2" of rain recorded on July 25 (5.02") and 26 (0.18")</p> <p>Sunny, clear with light NW wind</p> <p>Saw green frog at Sta 2; frogs also likely present at 3 and CMB-U. Small minnow seen at CMB-U (blacknose dace?)</p> <p>About 2" of water running over dam at DPO, but no flow over dam at Sta 6, where water level appeared to be several inches below the dam</p> <p>Drain outlet near CMB-L with some flow, but all effluent sank into ground before reaching the brook</p> <p>Water very clear at most stations except CMB-U, where it was tannic colored</p>
August 15, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at a very low summer water level - water about 3" below level of Sta 1 dam and more so at 6; ~1/4" flow over DPO; very shallow elsewhere</p> <p>Sunny, clear with little or no wind</p> <p>Saw green frog at CMB-U; frogs also likely present at 2. A number of small minnows seen at CMB-U and one larger one at 3</p> <p>Large shed snake skin on grass near Sta 3</p> <p>Considerable filamentous green algae on bottom at Sta 3 - perhaps accounting for relatively high DO there?</p> <p>Water running out of pipe at CMB-L only a trickle that soon disappeared into the ground</p> <p>pH values from YSI do not appear to be stable - discarded some readings, did not record at some stations</p>

September 24, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at a very low summer water level - water about 6" below level of Sta 1 dam and more so at 6; scant flow over DPO; very shallow elsewhere/ particularly CMB-L</p> <p>Partly cloudy with light NW wind</p> <p>Some floating mats of green algae seen at Sta 1 and on bottom at Sta 3; floating mats of milfoil near DPO</p> <p>No flow out of drain near CMB-L</p> <p>Saw frog at CMB-U</p>
October 25, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at the lowest water level seen during this sampling - water about 6" below level of Sta 1 dam and more so at 6; no flow over DPO; very shallow elsewhere, particularly at CMB-L, where a tiny trickle was observed from the road culvet and water appeared to be tannic and had considerable floc; water also appeared static at Sta 6 low flow condition may have been the reason why DO was relatively low at CMB-U (i.e., higher BOD/COD)</p> <p>Clear with NW wind 10-20 MPH</p> <p>Some mats of filamentous green algae seen on bottom at Stas 3 and 6; floating mats of milfoil near DPO; because of algal mats sampled about 10' farther upstream at Sta 3 than usual; algae might be cause of relatively low nitrate at this station</p> <p>CMB choked with leaves and also many found in Latimer Brook</p> <p>Orange patches observed that were scattered on the bottom at Sta 4 - iron bacteria?</p> <p>Saw 2 mallards at Sta 3</p>
November 22, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at a very low water level - water below level several inches below tops of dams at Stas 1 and 6; little flow over DPO; very shallow elsewhere; CMB-L, had a small, but continuous flow at the road culvet and water appeared to be tannic; water also appeared static at Sta 6 (possible reason for unusually high conductivity reading there?)</p> <p>Overcast with very light rain or drizzle, little wind</p> <p>Some mats of filamentous green algae seen on bottom at Stas 3 and 6; floating mats of deteriorating milfoil and lily pads near DPO</p> <p>Many leaves observed on bottom at Stas 1.5, 3, 4, 5 both CMB stas, and mixed in with milfoil at DPO</p> <p>Large animal dropping on rock at Sta 1.5 - dark, containing hair and seeds - coyote?</p>
December 20, 2013	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at a moderately low water level - there was slight flow of water over dam at Sta 1, low level but moderately strong flow at Sta 2, about 1.5" flow over DPO. However, no flow noted at Beckwith Pond dam and water in channel at Sta 6 was low and did not appear to be flowing much. Good flow out of road culvert at CMB-U. Assume increased flow from snow melt due to recent warm weather (0.41" ppt on Dec 15)</p> <p>Partly cloudy with no wind at first; light SW wind later in morning</p> <p>Had to chop through 3- 4" ice at Stas 1 and 5 to take samples. Darrow Pond iced over except near the outlet. Beckwith Pond completely ice covered.</p> <p>Ice along stream edges at most Latimer Brook stations. Considerably more ice cover in CMB, with only a center channel open.</p> <p>No green algae seen at Stas 3 & 6 this month</p> <p>Two mallards seen at Sta 2</p>
January 27, 2014	<p>Don Danila and Andrea Brendalen sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at a moderately low water level, although more than in past few months. Modest flow over the dam at Sta 1 and several inches over the DPO outlet. Even though there appeared to be very little flow over the Beckwith Pond dam, there was flow in the channel at Sta 6, which has not been seen since late summer. Also good flow through the culvert at CMB-U, a volume which had not been seen for some months. Although scant recent precipitation, snowmelt may be contributing to the flow</p> <p>Overcast, winds SW 5-10 MPH</p> <p>Ice present at nearly all stations: complete cover and about 3 -4" at Stas 1, 3, and 5, shelves of ice off the bank at Sta 1.5 and 4, least at 2 and 6</p> <p>CMB-U completely iced over and CMB-L had only a narrow channel with free-flowing water. Darrow and Beckwith Ponds frozen over</p> <p>Flock of sea gulls on ice at Darrow Pond</p> <p>Some flow out of the drain on lawn at CMB-L that was running into the stream</p>

February 21, 2014	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at a good flow rate. Water was flowing over the dams at both Stas 1 and 6 and 3" over DPO. There was strong flow coming out of the culvert at CMB-U. The good streamflows are likely the result of recent precipitation plus recent warmer weather promoting snowmelt.</p> <p>Overcast with fog and drizzle; little or no wind</p> <p>Ice (about 5") at Sta 1, but a center channel there was open and ice free. Except for some frazil ice near shore at Sta 3, some ice near the bridge abutments at Sta 5 and on the pool at CMB-U, the stations were ice free. Darrow Pond (except for ~10 feet near DPO) and Beckwith Ponds were solidly frozen over.</p> <p>Saw three hooded mergansers at Sta 1</p> <p>Drain at CMB-L running strong and much filamentous green algae in flow before it enters CMB</p>
March 14, 2014	<p>Don Danila and Jun Zhang sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at a good flow rate, even more so than in February. Water was flowing over the dams at both Stas 1 and 6 and 3" over DPO. There was strong flow coming out of the culvert at CMB-U. The good streamflows are likely the result of recent precipitation plus recent warmer weather promoting snowmelt.</p> <p>Partly cloudy and cool with little wind</p> <p>DPO remains frozen over (except near outlet) as was Beckwith Pond. Some ice near shore edges at 3, CMB-U, and 5.</p> <p>Strong flow out of pipe at CMB-L with much green filamentous algae in the flow pathway</p>
April 11, 2014	<p>Don Danila and Maureen FitzGerald sampled</p> <p>New sampling regime established per Monitoring Sub-committee decision: former Stas 5, 6, and DPO were dropped and new stations established in Waterford at Stony Brook (SB-U) and Oil Mill Brook (OMB). Other stations in LB and CMB were retained.</p> <p>USGS flow gauge no longer working so streamflow not available, but stream appears to be running at a good flow rate, even more so than in March</p> <p>Water was flowing over the dam at Sta 1 and strong flow coming out of the culvert at CMB-U</p> <p>Mostly cloudy with light winds</p> <p>Strong flow out of pipe at CMB-L with much green filamentous algae in the flow pathway</p> <p>Water in Stony Brook somewhat tannic colored</p> <p>Many alewives observed below fishway at Sta 1. One Canada goose seen in impoundment at Sta 1.</p>
May 15, 2014	<p>Don Danila sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but streams appear to be running at a good flow rate</p> <p>Water was flowing over the dam at Sta 1 and strong flow coming out of the culvert at CMB-U</p> <p>Mostly cloudy to overcast with light winds</p> <p>Strong flow out of pipe at CMB-L with much green filamentous algae in the flow pathway</p> <p>Water at SB-U and CMB-U somewhat tannic colored</p> <p>A few alewives observed below fishway at Sta 1. One great blue heron seen at Sta 1 and a drake mallard at Sta 3.</p>
June 13, 2014	<p>Don Danila and Steve Tomichuk sampled</p> <p>USGS flow gauge no longer working so streamflow not available, but streams appear to be running at a good flow rate due to rain on Tuesday and today</p> <p>Water was flowing over the dam at Sta 1 and strong flow coming out of the culvert at CMB-U and the pipe at CMB-L</p> <p>Overcast and light to moderate rain. Little wind.</p> <p>Water appeared tannic colored at SB-U, OMB, and CMB-U</p> <p>Two great blue herons seen at Sta 1</p> <p>Some floc or sediment found in SB-U water sample take for the nitrate analysis</p>
July 11, 2014	<p>Don Danila and Heidi Harger sampled</p> <p>USGS flow gauge just re-instated and flow is 3.4 cfs. Streams appear to be running at a reduced volume due to recently dry conditions</p> <p>Water was about 7 inches below the dam crest at Sta 1 and there was no flow coming out of the pipe at CMB-L</p> <p>About an inch or so of water coming out of the culvert at CMB-U. Stony Brook was particularly shallow with very low flow</p> <p>Partly cloudy with little to no wind</p> <p>Water appeared tannic colored at SB-U, OMB, and CMB-U</p> <p>Green frogs heard at Sta 1.5 and some minnows (blacknose dace?) observed at CMB-U</p>

August 14, 2014	<p>Don Danila and Maureen FitzGerald sampled</p> <p>USGS flow gauge had flow at 29 cfs. Base flow for much of July and August was very low (e.g., 1.4-1.6 cfs just prior to the Aug 13 rainstorm).</p> <p>During the storm flow peaked at about 197 cfs (0600 on Aug 13), but decreased steadily thereafter.</p> <p>Streams appear to be running at a normal volume due to this recent storm, which totaled 3.77 inches of rain.</p> <p>Several inches of water flowing over dam at Sta 1. However, just a trickle of water coming out of the pipe at CMB-L.</p> <p>Clear with a light west wind</p> <p>Water at all stations appeared to have some tan/light brown color</p> <p>New station SB-L (intersection of stream with US 1) replaces SB-U. Sampling in pool just above large rocks placed in stream per CT DEEP.</p>
September 27, 2014	<p>Don Danila sampled</p> <p>Extremely low flow - USGS gauge at 3 cfs. Water levels as low as seen in this sampling. Water level 8" or more below dam at Sta 1</p> <p>No flow (except maybe sub-surface) at CMB-U - station a stagnant pool - reflected by DO of 1.7 ppm. Low water also at SB-L and OMB.</p> <p>No flow from discharge pipe at CMB-L - ground very dry</p> <p>Clear with little or no wind</p> <p>Filamentous green algal blooms observed at Stas 1 and 3</p> <p>Green frogs (1-2) seen at Stas 3 and CMB-U and about 4 minnows (unknown to species) at CMB-L</p>
October 17, 2014	<p>Don Danila sampled</p> <p>With 2.15" rain falling yesterday the streams were running strong at about 25 cfs. Water was flowing over the dam at Sta 1 and about 1.5" over the culvert at CMB-U, which was stagnant last month. Water color was a trurbid/tannic brown, particularly in the lower reaches of LB, SB, and OMB; less so in CMB. Only a little water flow coming out of drain at CMB-L, which quickly was absorbed by the ground.</p> <p>Clear snd sunny with light WSW wind.</p> <p>Observed a pair of mallard ducks at Sta 3 and a frog (could not see well, so species unknown) at CMB-U</p>
November 21, 2014	<p>Don Danila sampled</p> <p>Relatively low flow with water an inch or so below the Sta 1 dam crest. However, relatively good flow out of culvert at CMB-U. No flow at CMB-L drain</p> <p>Skim ice in shallow water at Sta 1 and also some quite close to the shoreline at Sta 3</p> <p>Clear and sunny, brisk and cool NW wind at 10-15 MPH</p> <p>Tannic-colored water at OMB</p> <p>Many leaves in water at CMB-U</p>
December 16, 2014	<p>Don Danila sampled</p> <p>Streams appear to be flowing well with the level just over the top of the dam at Sta 1 and several inches through the culvert at CMB-U</p> <p>Some discharge from the pipe at CMB-L with flow almost reaching the brook; some filamentous green algae in flow</p> <p>Overcast with no to a light east wind</p> <p>DO probe was apparently not working correctly - gave extremely high (and likely unrealistic) readings, so did not record; will address before next sampling</p> <p>Observed several dozen mallard ducks in CMB at farm about halfway up Walnut Hill Road on W side loafing by CMB bank</p>
January 15, 2015	<p>Don Danila sampled</p> <p>Streams appear to be flowing well with the level just at the top of the dam at Sta 1 and several inches through the culvert at CMB-U</p> <p>Some discharge from the pipe at CMB-L with flow almost reaching the brook; some filamentous green algae in flow</p> <p>About 3" ice at Sta 1 although stream mostly open above the impoundment. Ice along stream edges at all other stations (least amount at Sta 2)</p> <p>Overcast with no to a light northwest wind</p> <p>Much foam observed at the surface of OMB just above road culvert</p> <p>Observed two pairs of mallard ducks in pool just upstream of OMB sta</p> <p>Again observed several dozen mallard ducks in CMB at farm about halfway up Walnut Hill Road on W side loafing by CMB bank</p>
February 15, 2015	<p>February not sampled due to unavailability of D. Danila and weather conditions during the month, which consisted of frequent snowstorms, mostly very low air temperatures, heavy snowpack, and ice conditions on the water</p>
March 13, 2015	<p>Don Danila sampled</p> <p>Streams appear to be flowing well with the level about 1" over the top of the dam at Sta 1 and several inches through the culvert at CMB-U</p> <p>Good discharge from the pipe at CMB-L with flow almost reaching the brook; some filamentous green algae in flow</p> <p>Some ice along shore at Sta 1 and skim ice at SB-L, but excpet for some backwater areas (e.g., Sta 3) the streams were mostly ice-free</p> <p>Tannic-colored water at OMB</p>

	<p>Partly cloudy with SE wind 5-10 MPH</p> <p>Observed pairs of mallard ducks at both SB-L and CMB-L</p> <p>pH function on YSI appears to be malfunctioning (unreasonably high pH values), so this paramter considered ND</p>
April 27, 2015	<p>Don Danila sampled</p> <p>Streamflow down from March with only a fraction of an inch of water going over the dam at Sta 1 and about 1" through the culvert at CMB-U</p> <p>Good discharge from the pipe at CMB-L with some flow reaching the brook; some filamentous green algae in flow</p> <p>Tannic-colored water at OMB and CMB-U; very clear elsewhere</p> <p>Partly cloudy with a light northwest wind</p> <p>Observed one cormorant at Sta 1 and a female mallard duck at CMB-L. Some alewife milling around just below fish ladder at Sta 1</p> <p>pH function on YSI still malfunctioning (unreasonably high pH values), so this paramter considered ND</p> <p>No DO readings as protective plastic cap mistakenly left on end of probe</p>
May 14, 2015	<p>Don Danila sampled</p> <p>Streamflow continues to decrease due to dry weather with no water going over the top of the dam at Sta 1 (down several inches from top; only flow is through dam notch)</p> <p>About 1" of water flowing through the culvert at CMB-U</p> <p>Small discharge from the pipe at CMB-L with flow seeping into ground in about 10' and none reaching the brook;</p> <p>heavy filamentous green algae growth in the flow</p> <p>Tannic-colored water at OMB and CMB-U; very clear elsewhere</p> <p>Clear and sunny with light NW wind</p> <p>Observed one mallard duck at Sta 2 and a school of ~ 8 small (~15 mm) minnows at Sta 4. A few alewife milling around just below fish ladder at Sta 1</p> <p>pH function on YSI still malfunctioning (unreasonably high pH values), so this paramter considered ND</p> <p>pH value for Sta 1 courtesy of John Swenarton of the Millstone Environmental Laboratory</p> <p>Took water samples at Stas 3, 4, and CMB-L for nitrogen isotopic analyses by Dr. Craig Tobias of UConn-Avery Point; this will continue monthly until otherwise noted</p>
June 12, 2015	<p>Don Danila and Aaron Pauley sampled</p> <p>Streamflow continues to decrease due to dry weather with water about 6 inches below the top of the dam at Sta 1 and only flow through dam notch</p> <p>Water levels and flow also low in all the other streams</p> <p>About 0.5" of water flowing through the culvert at CMB-U</p> <p>Nearly no discharge from the pipe at CMB-L with flow seeping into ground in only about 1'; only little filamentous green algae remains</p> <p>Tannic-colored water at CMB-U; very clear elsewhere; some particulates noted in water at SB-L</p> <p>Partly cloudy with little or no wind</p> <p>pH function on YSI still malfunctioning (unreasonably high pH values), so this paramter considered ND</p> <p>One frog observed at CMB-U; 1 llama noted standing in CMB at farm midway up Walnut Hill Road with large flock of mallards also in that location</p>
July 15, 2015	<p>Don Danila and Aaron Pauley sampled</p> <p>Streamflow remains quite low due to dry weather with water about 6 inches below the top of the dam at Sta 1 and only flow through dam notch</p> <p>Water levels and flow also low in all the other streams</p> <p>About 1" of water flowing through the culvert at CMB-U</p> <p>Nearly no discharge from the pipe at CMB-L with flow seeping into ground in only about 1'; only little filamentous green algae remains</p> <p>Tannic-colored water at SB-L, OMB, and CMB-U; very clear elsewhere; some particulates noted in water at SB-L</p> <p>Cloudy, little or no wind, very humid</p> <p>pH function on YSI still malfunctioning (unreasonably high pH values), so this paramter considered ND</p> <p>Small school of minnows observed at CMB-U and a great blue heron at Sta 1</p>
August 12, 2015	<p>Don Danila sampled</p> <p>Due to heavy rain yesterday the streamflow appeared to be higher than the last few months, although less so in CMB than the other three streams</p> <p>Water level was about 1-2" below the top of the dam at Sta 1</p> <p>About 1" of water flowing through the culvert at CMB-U</p> <p>Nearly no discharge from the pipe at CMB-L with flow seeping into ground in only a few inches; only little filamentous green algae remains</p> <p>Tannic-colored water at SB-L, OMB, and CMB-U; very clear elsewhere; some particulates noted in water at SB-L</p> <p>Clear with little or no wind</p>
September 15, 2015	<p>Don Danila and Aaron Pauley sampled</p> <p>Clear and calm</p>

	<p>Although heavy rain on Sept 10 (gauged flow increased ~65X from 1.7 cfs to 110 cfs at peak), streamflows quickly dropped to very low levels within a few days</p> <p>Accuracy of EL Harbor MasterWeatherLink Network rain gauge in question as showed only 1.1" of rain for month to date when rainfall of several inches or more was observed in many areas of New London County on Sept 10, with additional lesser amounts thereafter</p> <p>Today water level was about 7 inches below the top of the dam at Sta 1 and only flow through dam notch</p> <p>No flow through culvert at CMB-U and pool was isolated - little or no flow in brook, some areas devoid of water (must be some sub-surface flow)</p> <p>No water discharged from curtain drain pipe at CMB-L and algae was dried up</p> <p>SB-L appeared to have had some erosion occurring in streambed in some places and deposition of sediments and gravel in other areas</p> <p>Large tree appeared to have fallen across stream at Sta 1.5 just above sampling site</p> <p>One pickerel frog observed at SB-L and considerable iron bacteria seen on bottom at Sta 4</p> <p>Based on a comparison with the Millstone Environmental Lab instrument at Sta 1, the NRWC YSI may have underestimated DO today - need to check</p>
October 20, 2015	<p>Don Danila sampled</p> <p>Partly cloudy with winds from WSW light to 15-20 MPH at finish</p> <p>Water levels in all streams very low</p> <p>Water level was about 10" below the top of the dam at Sta 1 with flow only through dam notch</p> <p>As last month, no flow through culvert at CMB-U and pool was isolated - little or no flow observed in brook</p> <p>No water discharged from curtain drain pipe at CMB-L and algae was dried up</p> <p>Tannic-colored water at SB-L, very clear elsewhere; some particulates noted in water at SB-L</p> <p>Home owner at CMB-L mentioned streamflow lowest he has seen in 7 years at that location</p> <p>Considerable leaves in all streams and also many acorns in the streams at some places</p>
November 12, 2015	<p>Don Danila sampled</p> <p>Overcast, foggy/light drizzle for most of day with little wind. Some heavier rain near end of sampling that continued off and on for rest of day</p> <p>EL Harbor Master Weather Link only showed 0.01" of rain for the day - believe this is inaccurate</p> <p>Streamflow appeared to be greater than previous 2 months with water filling streambeds from bank to bank</p> <p>Water level was about 1-2" below the top of the dam at Sta 1</p> <p>About 1" of water flowing through the culvert at CMB-U</p> <p>Again, no water discharged from curtain drain pipe at CMB-L and any filamentous green algae remained completely dried up</p> <p>Tannic-colored water at SB-L, and some color and particulates seen at other stations with the exception of CMB</p> <p>Considerable leaves in all streams and also many acorns in the streams at some places</p>
December 17, 2015	<p>Don Danila sampled</p> <p>Overcast with occasional light drizzle; little wind. Some heavier rain earlier this week ending during the night of December 15</p> <p>No rainfall data recorded as accuracy of the EL Harbor Master Weather Link for rainfall is questionable</p> <p>As in the November sampling, streamflow appeared to be good today</p> <p>Water level was about 1-2" below the top of the dam at Sta 1</p> <p>About 1" or more of water flowing through the culvert at CMB-U - even stronger flow here than in November</p> <p>Slight flow of water being discharged from curtain drain pipe at CMB-L with some filamentous green algae present. However, not enough flow to sample</p> <p>Tannic-colored water at SB-L and OMB, and CMB-U, and some color seen at LB stations, but not at CMB-L</p> <p>Turkeys heard vocalizing at some distance from Sta 1.5</p> <p>DO probe not working properly, so no readings recorded with the exception of Sta 1, where the DO value was obtained from the Millstone Env Lab sampler</p>
January 7, 2016	<p>Don Danila, Dr. Christine Kirchhoff, and William Grant sampled</p> <p>Mostly clear with some high, thin clouds; no wind. No precipitation for some time before sampling.</p> <p>No rainfall data recorded as accuracy of the EL Harbor Master Weather Link for rainfall is questionable (e.g., shows 8.72" of rain for month to date, but this is impossible)</p> <p>Streamflow appears to be good</p> <p>Some ice cover just upstream of OMB sampling location and ice shelves extending a few feet or so from banks at stas 1.5, 3, 4, and CMB-L</p> <p>Iced over at CMB-U (about 1/2") and sta 1 (several inches - most of impoundment iced over)</p> <p>Good flow out of culvert at CBM-U and curtain drain near CMB-L - flow went nearly to CMB and had much filamentous green algae present</p> <p>Special water sample taken from curtain drain flow near CMB-L to ascertain nitrate concentration</p> <p>DO taken with a YSI Model 85 given to NRWC by the Millstone Environmental Lab - appeared to be frozen at sta 4 so no DO reading from there</p>

February 11, 2016	<p>Don Danila sampled</p> <p>Overcast to mostly cloudy with occasional light snow; light SW wind</p> <p>Streamflow appears to be good and even better than in last two months with strong currents and bank-to-bank water levels</p> <ul style="list-style-type: none"> Water barely flowing over the top of the dam at Sta 1 Good flow out of culvert at CBM-U and curtain drain near CMB-L - flow went all the way to CMB and had much filamentous green algae present Some ice cover in the pool at CMB-U, but absent elsewhere Some floc observed in water at Sta 4 <p>Special water sample taken from curtain drain flow near CMB-L to ascertain nitrate concentration</p> <p>DO again taken with a YSI Model 85 instrument</p> <p>Homeowner at CMB-L reported seeing a mink present at this station a few days ago</p>
March 24, 2016	<p>Don Danila sampled</p> <p>Partly cloudy, E wind 5-20 MPH, picking up over the day</p> <p>Streamflow appears to be good, although not as strong or high as in February</p> <ul style="list-style-type: none"> Water just below the top of the dam at Sta 1 Good flow out of culvert at CBM-U and curtain drain near CMB-L - flow went all the way to CMB and had much filamentous green algae present <p>Special water sample taken from curtain drain flow near CMB-L to ascertain nitrate concentration</p> <p>DO again taken with a YSI Model 85 instrument</p> <p>Live mallard pair and dead blue jay floating in the stream at Sta 1.5</p> <p>Dead 11" yellow perch seen at Sta 4, which is unusual as this species typically not found in small streams</p> <p>Despite CT DEEP reports of the spawning run having started, no alewife were observed in the pool below the fish ladder at Sta 1</p>
April 21, 2016	<p>Don Danila sampled</p> <p>Partly cloudy, light N wind</p> <p>Streamflow appears to be good, although not as strong or high as in March, particularly SB</p> <ul style="list-style-type: none"> Water just below the top of the dam at Sta 1 Good flow out of culvert at CBM-U and curtain drain near CMB-L - flow went all the way to CMB and had much filamentous green algae present Water at OMB tannic colored <p>Special water samples taken from curtain drain flow near CMB-L to ascertain nitrate concentration - #1 at pipe discharge and #2 where flow entered CMB</p> <p>DO again taken with a YSI Model 85 instrument</p> <p>Great blue heron observed at Sta 4</p> <p>About 100 alewife observed in pool just below fishway entrance; some seen in fishway and 2 in pool above fishway exit</p>
May 20, 2016	<p>Don Danila sampled</p> <p>Sunny, no wind</p> <p>Streamflow appears to be good, although water levels are relatively low</p> <ul style="list-style-type: none"> Water tannic colored at SB-L, OMB, and CMB-U with some floc present Water below the top of the dam at Sta 1 and flowing through notch and a little over the far side Moderate flow out of culvert at CBM-U Had flow from curtain drain near CMB-L, but it did not reach CMB, although earth was wet; not as much filamentous green algae as past 2 months <p>Special water sample taken from curtain drain flow near CMB-L to ascertain nitrate concentration</p> <p>DO again taken with a YSI Model 85 instrument</p> <p>Two Canada geese observed at Sta 1 and deer tracks on bank at Sta 2</p> <p>Alewife run appears to be over with only 3 fish passed on May 17 and none observed today</p>
June 22, 2016	<p>Don Danila sampled</p> <p>Partly cloudy, no wind</p> <p>Streamflows and water levels appear to be relatively low at all locations</p> <ul style="list-style-type: none"> Water tannic colored at SB-L, OMB, and CMB-U with some floc present Water about 6" below the top of the dam at Sta 1 and only flow is through the dam notch Only about 0.5" flow out of culvert at CBM-U with low pool water level and slight flow to downstream No flow from curtain drain near CMB-L and filamentous green algae in flow path dried up <p>DO again taken with a YSI Model 85 instrument</p> <p>Great blue heron observed at Sta 3, a small minnow at CMB-U, and a green frog heard at Sta 1</p>

July 19, 2016	<p>Don Danila sampled</p> <p>Partly cloudy to sunny, no wind to light W</p> <p>Streamflows and water levels appear to be very low at all locations - SB appeared to be barely moving, OMB, LB, and CMB low, but with some flow</p> <ul style="list-style-type: none"> No flow from culvert at CMB-U; never saw water level so low here - isolated pool. Much of streamflow appears to be sub-surface in this upper reach Water considerably below top of dam at Sta 1 and only a low flow through dam notch Water tannic colored at CMB-U Small "oil" patches seen along stream edge at SB-L and CMB-U - resulting from a natural cause or condition? No flow from curtain drain near CMB-L and flow path dried up with no evidence of the algae formerly present <p>DO again taken with a YSI Model 85 instrument, although YSI Professional Plus instrument now seems to be giving DO readings, but not calibrated so unknown accuracy</p> <p>Despite low water and DO, CMB-U had a group of about 5 minnows and one small green frog; one small sunfish seen at Sta 1</p>
August 24, 2016	<p>Don Danila sampled</p> <p>Sunny, no wind</p> <p>Streamflows and water levels appear to be very low at all locations - SB appeared to be barely moving, OMB, LB, and CMB low, but with some flow</p> <ul style="list-style-type: none"> No flow from culvert at CMB-U; isolated pool with water level even lower than in July. Terrestrial weeds growing all over the streambed. Much of streamflow near CMB-U appears to be sub-surface with little discernable water. Very low (~2") depth at CMB-L Water considerably below top of dam at Sta 1 and only a low flow through dam notch Water level lowest observed during this sampling at Sta 4 <p>DO taken with the YSI Professional Plus instrument, which was recently calibrated</p> <p>Possible black-crowned night heron flew off as Sta 1.5 approached</p> <p>Despite little water volume and low DO, a few minnows observed at CMB-U</p>
September 27, 2016	<p>Don Danila and Aaron Pauley sampled</p> <p>Overcast with occasional light rain, no wind</p> <p>Despite a reported 0.4" of rain today and some rain last week, streamflows were still low, although water levels and current were apparently greater than seen during the past several months</p> <ul style="list-style-type: none"> No flow from culvert at CMB-U; isolated pool with low water level and downstream areas devoid of water at the rocky surfaces Water level about 8" below top of dam at Sta 1 with only flow through the dam notch Very low (~2") depth continues at CMB-L <p>Many fallen leaves starting to appear in the streams</p>
October 19, 2016	<p>Don Danila sampled</p> <p>Sunny, no wind</p> <p>Streamflows and water levels appear to be very low at all locations - SB appeared to be barely moving, OMB, LB, and CMB low, but with some flow</p> <ul style="list-style-type: none"> No flow from culvert at CMB-U; isolated pool with low water level and downstream areas devoid of water at the rocky surfaces Much of streamflow near CMB-U appears to be sub-surface with little discernable water. Very low (~2") depth at CMB-L Water level about 10" below top of dam at Sta 1 with only flow through the dam notch Water tannic colored at SB-L and darkly colored at CMB-U (tannin from leaves?) <p>Orange mats several inches in size noted on some bottom areas at Sta 4 - iron bacteria masses?</p> <p>Many fallen leaves and acorns present in many areas</p> <p>Nitrate value for SB-L uncertain as normal pink color from chemical process not noted - water was a dark murky color after chemicals added. Repeated measure gave similar result - result might have been due to unknown chemical constituent in water unrelated to nitrate</p>
November 17, 2016	<p>Don Danila and Ray Heller sampled</p> <p>Sunny, no wind to NE 10 MPH</p> <p>With ~0.5 inch of rain occurring on Nov 15-16, streamflows and water levels were up considerably over the past few months at all stations</p> <ul style="list-style-type: none"> About 1" of flow from culvert at CMB-U and normally appearing streamflow from pool going downstream; pool clogged with leaves Water level about 2" below top of dam at Sta 1 and even some flow over the top on the far south side of dam Despite good streamflow, no water coming out of curtain drain at CMB-L Water tannic colored at OMB <p>Large part of a tree has fallen across Latimer Brook just upstream of the Sta 1.5 location since the October sampling</p> <p>All nitrate tests appear to be good with little or no black precipitates and clear water</p> <p>Believe new chemicals used the reason for successful tests; issues over the past few months probably related to poor quality chemicals (Cd powder)</p>

December 14, 2016	<p>Don Danila sampled</p> <p>Sunny, no wind to light W</p> <p>Streamflows up considerably with water levels and flow not seen this good since last spring; water finally going from normal bank to bank stream width</p> <p> About 1.5+" of flow from culvert at CMB-U and normally appearing streamflow from pool going downstream</p> <p> Water level just below top of dam at Sta 1 and about 2" of flow over the top on the far south side of dam</p> <p> First water observed coming out of curtain drain at CMB-L since last May; flow almost reaching edge of brook - took water sample</p> <p> Water tannic colored at OMB, Sta 4, and CMB-U</p> <p>All nitrate tests appear to be good with little or no black precipitates and clear water</p>
January 19, 2017	<p>Don Danila and Ray Heller sampled</p> <p>Mostly to partly cloudy, little or no wind</p> <p>Streamflows and water levels remain good with water found from normal bank to bank stream width</p> <p> About 1.5+" of flow from culvert at CMB-U and normally appearing streamflow from pool going downstream</p> <p> Water level slightly overtopping most of dam at Sta 1</p> <p> Flow coming out of curtain drain at CMB-L with some reaching the brook; heavy growth of filamentous green alage in flow - took water sample</p> <p> Water tannic colored at OMB, and contained floc at Sta 4</p> <p>All nitrate tests appear to be normal</p>
February 16, 2017	<p>Don Danila and Ray Heller sampled</p> <p>Sunny, no wind to light W</p> <p>Streamflows and water levels remain good with water found from normal bank to bank stream width</p> <p> About 2" of flow from culvert at CMB-U and normally appearing streamflow from pool going downstream</p> <p> Water level slightly overtopping most of dam at Sta 1</p> <p> Flow coming out of curtain drain at CMB-L with some reaching the brook; heavy growth of filamentous green alage in flow - took water sample</p> <p> Water tannic colored at OMB, and contained floc at Sta 4</p> <p>No reliable precipitation data available. Heavy snowfall in East Lyme occurred on Feb 9 and much lesser amounts twice thereafter</p> <p> Some snowmelt occurring to keep stream flows up</p> <p> About 8-12+" snow cover remaining alongside streams</p>
March 16, 2017	<p>Don Danila and Ray Heller sampled</p> <p>Sunny, no wind to light W</p> <p>Streamflows and water levels highest than seen in months with complete bank to bank stream width</p> <p> About 2" of flow from culvert at CMB-U with strong streamflow from pool going downstream</p> <p> Water level slightly overtopping all of dam at Sta 1</p> <p> Flow coming out of curtain drain at CMB-L with lot of it reaching the brook; heavy growth of filamentous green alage in flow - took water sample</p> <p> Narrow shelves of ice formed along LB and SB stream banks</p> <p> Water contained floc at Stas 3 and 4</p> <p>Precipitation data obtained from Groton-NL Airport (1.18" of snowfall occurred on March 14)</p> <p>Buck whitetail deer seen just upstream of Sta 4 and turkey tracks in snow near Sta 2</p>