Nearly half of the 2014 nitrite and/or nitrate concentrations were slightly above baseline mean concentrations at stations L0-01, L1-09 and L2-03. However, the fall 2014 nitrite sample at L2-03 (0.067 mg/L) exceeded the benchmark (0.060 mg/L). The 2014 nitrite and nitrate concentrations were highest at station L2-03, located downstream of quarry QMNR-2. The Surveillance Network Program (SNP) water quality station MQ-C-B is located immediately downstream of QMNR-2 and approximately 1.2 km upstream of station L2-03. Nitrate concentrations at MQ-C-B were below detection in June 2014 and in July and September ranged between 1.61 mg/L and 5.29 mg/L. The highest 2014 nitrate concentration at L2-03 (1.0 mg/L) was measured during the August sampling event, coinciding with an MQ-C-B nitrate value of 1.91 mg/L.

Total ammonia concentrations were also elevated above mean baseline concentration (0.09 mg/L) at stations L1-05, L1-09 and L2-03. The highest 2014 total ammonia concentration was measured at station L2-03 (0.32 mg/L) during the August sampling event. Total ammonia results from MQ-C-B ranges from 0.03 mg/L to 0.98 mg/L between May and September 2014. The August 2014 MQ-C-B ammonia concentration was 0.60 mg/L nearly double that measured downstream at station L2-03.

Conclusion - Is there Evidence of Mine-Related Change in Camp Lake Tributary?

The 2014 monitoring program noted benchmark exceedances of nitrite, total aluminum and total iron at station L2-03 with general increases in nitrate and ammonia at stations L0-01, L1-05, L1-09 and L2-03. The highest concentrations of the above noted parameters were measured at station L2-03, located closest to Quarry QMR2. These increases are not evident in the L1 tributary upstream of L1-09 (i.e., L1-02 and L1-08). Therefore, the observed changes are mine-related, attributable to operation of the QMR2 quarry.

3.1.4 Camp Lake Water Quality Results

Five water quality stations have been established along a transect within Camp Lake, each with a shallow and deep sample collected (n=10). These stations are aligned from the Camp Lake Tributary outlet to the Camp Lake outlet (Figure 2.1). Water quality results from the 2014 sampling events on Camp Lake have been compared to historic baseline results and the AEMP benchmarks in Table A1.4 (Appendix A1), and key parameters are presented graphically in scatter plots and box and whisker plots of the baseline data in Appendix A5.

Table 3.7 presents a comparison of the 2014 lake-wide means for each parameter to the baseline mean and the AEMP benchmark as well as the midpoint value between the mean and the benchmark.

Table 3.7 Water Quality Summary Statistics - Camp Lake

Parameter	Baseline Data				AEMP Values		2014 Data			
	Mean	Median	Standard Deviation	n	Benchmark	Midpoint	Mean	Median	Standard Deviation	n
Total Metals										
Aluminum	0.00801	0.00615	0.00704	52	0.1	0.05295	0.00416	0.00415	0.00293	22
Arsenic	0.00010	0.00010	0.0[6]	52	0.005	0.00255	0.00010[6]	0.00010[6]	0.0	22
Cadmium	0.00001	0.00001	0.00001	52	0.0001	0.00006	0.00001[6]	0.00001[6]	0.0	22
Chromium	0.00012	0.00010	0.00003	52	0.0003	0.00021	**0.00033[5]**	**0.00050[5]**	0.00019	22
Cobalt	0.00011	0.00010	0.00002	52	0.004	0.00205	0.00010[6]	0.00010[6]	0.0	22
Copper	0.00169	0.00092	0.00311	49	0.004	0.00246	0.00094	0.00090	0.00007	22
Iron	0.02377	0.03000	0.01136	52	0.3	0.16500	0.01773[5,6]	0.03000[5,6]	0.01376	22
Lead	0.00007	0.00005	0.00007	49	0.001	0.00053	0.00009[4]	0.00005[4]	0.00010	22
Nickel	0.00067	0.00066	0.00010	49	0.025	0.01283	0.00065	0.00066	0.00006	22
Silver	0.00001	0.00001	0.000005	52	0.0001	0.00006	0.00001[6]	0.00001[6]	0.0	22
Thallium	0.00006	0.00010	0.00005	49	0.0008	0.00045	0.00006[5,6]	0.00010[5,6]	0.00005	22
Vanadium	0.00100	0.00100	0.0[6]	52	0.006	0.00350	0.00100[6]	0.00100[6]	0.0	22
Zinc	0.00221	0.00300	0.00106	49	0.030	0.01650	0.0030[6]	0.0030[6]	0.0[6]	22
Nutrients										
Ammonia (NH_3+NH_4)	0.10077	0.02000	0.24936	52	0.86	0.4475	0.07955	0.07000	0.02984	22
Nitrite (NO_2)	0.01154	0.00500	0.02587	52	0.06	0.0325	0.00500[6]	0.00500[6]	0.0	22
Nitrate (NO_3)	0.10000	0.10000	0.0[6]	52	13	6.55	0.10091[4]	0.10000[4]	0.00426	22
Phosphorus	0.00485	0.003	0.0032862	52	-	-	0.004[4]	0.003[4]	0.00156	22
Dissolved Anions										
Chloride (Cl)	2.0	1.00000	1.12877	52	120	61.5	3.6	3	0.95346	22
Sulphate	2.0	2.00000	0.98939	52	218	110	2.0	2	0.0	22

NOTES:

1. 2014 VALUES GREATER THAN MAXIMUM BASELINE CONCENTRATIONS WERE IDENTIFIED FOR CHROMIUM, CHLORIDE AND NITRATE AT VARIOUS STATIONS.
2. SHADED VALUES INDICATE CONCENTRATIONS ABOVE BASELINE STATISTICS.
3. BOLD, SHADED VALUES INDICATE 2014 CONCENTRATIONS NOTED ABOVE THE BENCHMARK CONCENTRATIONS.
4. INDICATES MOST VALUES WERE EQUAL TO OR SLIGHTLY ABOVE THE MDL – WHICH RESULTS IN A CALCULATED MEDIAN EQUAL TO THE MDL.
5. NON-DETECT RESULTS AT A HIGHER THAN USUAL MDL DURING SUMMER AND FALL SAMPLING EVENTS IS INFLUENCING SUMMARY STATISTICS UPWARD.
6. INDICATES VALUES WERE CONSISTENTLY BELOW THE METHOD DETECTION LIMIT.

Aggregating the water quality data from all Camp Lake stations, the 2014 mean and median concentrations are below or equal to the corresponding baseline mean and median values for all parameters except chromium, lead, nitrate and chloride. The variance in chromium and zinc concentrations causing a higher 2014 standard deviation is due to an elevated MDL used during the summer and fall sampling events as discussed below. The two chloride concentrations with concentrations greater than the maximum baseline concentration resulted in an increase in the 2014 mean and SD calculations. Nitrate values were all below the MDL, with the exception of one result which influenced the mean, median and SD calculations.

Table 3.8 presents a data analysis summary of the 2014 data for each parameter compared to the AEMP benchmark, midpoint and determination of change for Camp Lake. Individual sample results that were above the AEMP benchmark or midpoint have been identified.

Table 3.8 Camp Lake - 2014 Water Quality Data Summary

Steps	**Step 1**			**Step 2**	**Step 3**
Parameter	**Initial Data Analysis**			**Determine if Change is Mine-Related**	**Determine Action Level**
	Above AEMP Benchmark	**Above Midpoint**	**Determine if there is a Change**		
Total Metals					
Aluminum (B)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Arsenic (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Cadmium (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Chromium (B)	Various (MDL issue)	Various (MDL issue)	No change evident. MDL higher than benchmark value for some results.	N/A	N/A
Cobalt (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Copper (B)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Iron (B)	None	None	No change evident. High MDL for some results.	N/A	N/A
Lead (A)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Nickel (A)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Silver (A)	None	None	No change evident. High MDL for some results.	N/A	N/A
Thallium (A)	None	None	No change evident. High MDL for some results.	N/A	N/A
Vanadium (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A

Steps	Step 1			Step 2	Step 3
	Initial Data Analysis				
Parameter	Above AEMP Benchmark	Above Midpoint	Determine if there is a Change	Determine if Change is Mine-Related	Determine Action Level
Zinc (A)	None	None	No change evident. High MDL for some results.	N/A	N/A
Nutrients					
Ammonia (NH_3+NH_4) (A)	None	None	Slight increase in concentrations at all stations, above baseline.	Yes	Low
Nitrite (NO_2) (A)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Nitrate - NO_3 (A)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Dissolved Anions					
Chloride (Cl) (A)	None	None	No change evident. High MDL for some results.	N/A	N/A
Sulphate (A)	None	None	No change evident. Data consistent with baseline.	N/A	N/A

NOTES:

1. THE ORIGIN OF THE AEMP BENCHMARKS ARE IDENTIFIED AS (A) METHOD A = WATER QUALITY GUIDELINE FROM CCME/B.C. MOE; (B) METHOD B = 97.5 PERCENTILE OF BASELINE; OR (C) METHOD C = 3* MDL.

Concentrations of the parameters of interest were generally within the range of historic baseline data. The exceptions are discussed below.

Method Detection Limit of Chromium

The total chromium laboratory detection limit during the summer and fall events was 0.0005 mg/L, which, as discussed in Section 2.4 regarding the change in detection limits by the laboratory, was not appropriate to detect concentrations below the benchmark concentration (0.0003 mg/L). Future monitoring will require lower total chromium detection limits as discussed earlier.

Total Ammonia Lake-wide Concentrations

Ammonia concentrations, while well below the AEMP benchmark were consistently elevated in all samples. This is likely attributable to runoff from explosives residues used for blasting in the quarries and elevated nitrogen compounds in Camp Lake and possibly other unidentified sources.

Conclusion - Is there Evidence of Mine-Related Change in Camp Lake?

There is evidence of mine-related change in the concentration of ammonia, below the AEMP benchmark, necessitating a low action response. This low action response is shared with the low and moderate action responses triggered for Camp Lake Tributary.

3.1.5 Sheardown Lake NW Water Quality Results

Six water quality stations are located within Sheardown Lake NW, each with a shallow and deep sample collected (n=12). These stations are positioned near the inlets of tributary streams and along a gradient transect bisecting the lake (Figure 2.1). Water quality results from the 2014 sampling events on Sheardown Lake NW have been compared to historic baseline results and the AEMP benchmarks in Table A1.5 (Appendix A1), and key parameters are presented graphically in scatter plots and box and whisker plots of the baseline data in Appendix A6.

Table 3.9 presents a comparison of the 2014 lake-wide means for each parameter to the baseline mean and the AEMP benchmark as well as the midpoint value between the mean and the benchmark.

Table 3.9 Water Quality Summary Statistics - Sheardown Lake NW

Parameter	Baseline Data				AEMP Values		2014 Data			
	Mean	Median	Standard Deviation	n	Benchmark	Midpoint	Mean	Median	Standard Deviation	n
Total Metals										
Aluminum	0.01427	0.01020	0.03689	111	0.173	0.092	0.01179	0.01200	0.00855	36
Arsenic	0.00010	0.00010	0.0[6]	111	0.005	0.00255	0.00010[6]	0.00010[6]	0.0	36
Cadmium	0.00001	0.00001	0.0[6]	111	0.00009	0.00005	0.00001[6]	0.00001[6]	0.0	36
Chromium	0.00014	0.00010	0.00018	111	0.000642	0.000371	0.00036[4,5]	0.00050[4,5]	0.00021	36
Cobalt	0.00011	0.00010	0.00003	111	0.004	0.00205	0.00010[6]	0.00010[6]	0.0	36
Copper	0.00119	0.00089	0.00255	107	0.0024	0.00165	0.00092	0.00090	0.00008	36
Iron	0.03306	0.03000	0.05545	111	0.3	0.165	0.02183[4,5]	0.03000[4,5]	0.01378	36
Lead	0.00034	0.00005	0.00290	107	0.001	0.000525	0.00013[4]	0.00005[4]	0.00033	36
Nickel	0.00070	0.00065	0.00017	107	0.025	0.01284	0.00070	0.00070	0.00007	36
Silver	0.00001	0.000001	0.00002	111	0.0001	0.000055	0.00001[6]	0.00001[6]	0.0	36
Thallium	0.00016	0.00010	0.00096	107	0.0008	0.00045	0.00007[5,6]	0.00010[5,6]	0.00005	36
Vanadium	0.00100	0.00100	0.0[6]	111	0.006	0.0035	0.00100[6]	0.00100[6]	0.0	36
Zinc	0.00233	0.00300	0.00174	107	0.030	0.0165	0.00306[4]	0.00300[4]	0.00033	36
Nutrients										
Ammonia (NH_3+NH_4)	0.06090	0.02000	0.13409	111	0.855	0.445	0.07917	0.07500	0.03263	36
Nitrite (NO_2)	0.00997	0.00500	0.02278	101	0.1	6.55	0.00500[6]	0.00500[6]	0.0	36
Nitrate (NO_3)	**0.10072**	**0.10000[4]**	0.00759	111	13	0.0325	**0.10100[4]**	**0.10000[4]**	0.00426	36
Phosphorus	0.00554	0.003	0.00929	111	-	-	0.003[4]	0.003[4]	0.00195	36
Dissolved Anions										
Chloride (Cl)	2.60	3	0.90504	112	120	61.5	3.28	3	0.45426	36
Sulphate	2.80	3	1.22907	112	218	110.5	3.14	3	0.35074	36

NOTES:

1. NO 2014 CONCENTRATIONS WERE GREATER THAN MAXIMUM BASELINE CONCENTRATION FOR THE PARAMETERS OF INTEREST.
2. SHADED VALUES INDICATE CONCENTRATIONS ABOVE BASELINE STATISTICS.
3. BOLD, SHADED VALUES INDICATE 2014 CONCENTRATIONS NOTED ABOVE THE BENCHMARK CONCENTRATIONS.
4. INDICATES MOST VALUES WERE EQUAL TO OR SLIGHTLY ABOVE THE MDL – WHICH RESULTS IN A CALCULATED MEDIAN EQUAL TO THE MDL.
5. NON-DETECT RESULTS AT A HIGHER THAN USUAL MDL DURING SUMMER AND FALL SAMPLING EVENTS IS INFLUENCING SUMMARY STATISTICS UPWARD.
6. INDICATES VALUES WERE CONSISTENTLY BELOW THE METHOD DETECTION LIMIT.

Aggregating the water quality data from all Sheardown Lake NW stations, the 2014 mean and median concentrations are below or equal to the corresponding baseline midpoint, mean and median values for all parameters except chromium, zinc, ammonia, chloride and sulphate. The increases in median concentrations of aluminum and nickel are minimal. Chromium increases are due to higher MDLs discussed elsewhere. Baseline zinc MDLs were lower than the 2014 MDL, which shows an increased 2014 mean and median but a lower SD. Ammonia concentrations were slightly elevated in 2014 compared to baseline statistics, but were still within the upper baseline range. Chloride and sulphate concentrations in 2014 include a winter sampling event with higher concentrations than those recorded during the baseline period (few baseline winter data). The 2014 winter concentrations result in higher mean concentrations, with less variance among the data resulting in a lower 2014 SD compared to baseline.

Table 3.10 presents a data analysis summary of the 2014 data for each parameter compared to the AEMP benchmark, midpoint and determination of change for Sheardown Lake NW. Individual sample results that were above the AEMP benchmark or midpoint have been identified.

Table 3.10 Sheardown Lake NW - 2014 Water Quality Data Summary

Steps	**Step 1**			**Step 2**	**Step 3**
Parameter	**Initial Data Analysis**			**Determine if change is Mine-Related**	**Determine Action Level**
	Above AEMP Benchmark	**Above Midpoint**	**Determine if there is a Change**		
Total Metals					
Aluminum (B)	None	None	Summer concentration slightly elevated relative to baseline.	Evidence of change not conclusive	N/A
Arsenic (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Cadmium (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Chromium (B)	None	Various (MDL issue)	MDL higher than midpoint value at some stations.	N/A	N/A
Cobalt (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Copper (B)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Iron (B)	None	None	No change evident. Some results reported at higher MDL.	N/A	N/A
Lead (A)	DL0-01-4-S (winter)	DL0-01-4-S DL0-01-5-D (winter)	All 2014 data are within the range of the previous data, except DL0-01-4-S and DL0-01-5-D.	Benchmark exceedance within baseline, not expected to be mine-related	N/A
Nickel (A)	None	None	Possible slight increase. Data consistent with baseline.	N/A	N/A
Silver (A)	None	None	No change evident. Some results reported at higher MDL.	N/A	N/A

Steps	Step 1			Step 2	Step 3
	Initial Data Analysis				
Parameter	Above AEMP Benchmark	Above Midpoint	Determine if there is a Change	Determine if change is Mine-Related	Determine Action Level
Thallium (A)	None	None	No change evident. Some results reported at higher MDL.	N/A	N/A
Vanadium (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Zinc (A)	None	None	No change evident. Some results reported at higher MDL.	N/A	N/A
Nutrients					
Ammonia (NH_3+NH_4) (A)	None	None	Slight increase lake-wide.	Yes	Low
Nitrite (NO_2) (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Nitrate (NO_3) (A)	None	None	No change evident. All samples measured at MDL.	N/A	N/A
Dissolved Anions					
Chloride (Cl) (A)	None	None	No change evident. Some results reported at higher MDL.	N/A	N/A
Sulphate (A)	None	None	No change evident. Data consistent with baseline.	N/A	N/A

NOTES:

1. THE ORIGIN OF THE AEMP BENCHMARKS ARE IDENTIFIED AS (A) METHOD A = WATER QUALITY GUIDELINE FROM CCME/B.C. MOE; (B) METHOD B = 97.5 PERCENTILE OF BASELINE; OR (C) METHOD C = 3* MDL.

Concentrations of the parameters of interest were generally within the range of historic baseline data. The exceptions are discussed below.

Method Detection Limit of Chromium

As noted elsewhere, the MDL for total chromium during the summer and fall events was 0.0005 mg/L due to lab error (results were reported at an incorrect MDL). Future monitoring will require lower total chromium detection limits.

Total Aluminum

The total aluminum results suggest slightly elevated lake-wide concentrations during the summer sampling event compared to baseline.

Total Lead at DL0-01-4-S/D and DL0-01-5-D

Total lead concentrations for one sample (winter DL0-01-5-D) were above the midpoint concentration (0.000525 mg/L), and one sample (winter DL0-01-4-S) was above the benchmark (0.001 mg/L). Review of the plots in Appendix A6 show the 2014 winter sample from station DL0-01-4-D was above the baseline. The scatter plots in Appendix A6 also show occasional high total values that were historically identified as outliers. The remaining stations within Sheardown Lake NW show 2014 concentrations at baseline, with 75% of samples reported below the method detection limit (0.00005 mg/L).

Total Ammonia Lake-wide Concentrations

Ammonia concentrations, while well below the AEMP benchmark were consistently elevated in all samples. This is possibly attributable to runoff from quarry aggregate that could contain explosives residues, and are used for construction activities in the mine site development area. Direct influence from the QMR2 quarry operations may be possible, however quarry drainage is believed to report entirely to the L2 Camp Lake Tributary stream.

Conclusion - Is there Evidence of Mine-Related Change in Sheardown Lake NW?

The 2014 monitoring program noted elevated concentrations of total aluminum and total lead in Sheardown Lake NW, the source of which is unknown as the evidence to support mine-related change is inconclusive. There is evidence of mine-related change in the concentration of ammonia, below the AEMP benchmark, necessitating a low action response. This low action response is shared with the low and moderate action responses triggered for Camp Lake Tributary discussed earlier.

3.1.6 Sheardown Lake SE Water Quality Results

Five water quality stations are located within Sheardown Lake SE, each with a shallow and deep sample collected (n=10). Sample locations are shown on Figure 2.1. Water quality results from the 2014 sampling events on Sheardown Lake SE have been compared to historic baseline results and the AEMP benchmarks in Table A1.6 (Appendix A1), and key parameters are presented graphically in scatter plots and box and whisker plots of the baseline data in Appendix A7.

Table 3.11 presents a comparison of the 2014 lake-wide means for each parameter to the baseline mean and the AEMP benchmark as well as the midpoint value between the mean and the benchmark.

Table 3.11 Water Quality Summary Statistics - Sheardown Lake SE

Parameter	Baseline Data				AEMP Values		2014 Data			
	Mean	Median	Standard Deviation	n	Benchmark	Midpoint	Mean	Median	Standard Deviation	n
Total Metals										
Aluminum	0.05834	0.03050	0.06203	46	0.173	0.11050	0.05723	0.05550	0.04810	30
Arsenic	0.00010	0.00010	0.0[6]	46	0.005	0.00255	0.00010	0.00010	0.0[6]	30
Cadmium	0.00001	0.00001	0.0[6]	46	0.00009	0.00005	0.00001	0.00001	0.0[6]	30
Chromium	0.00017	0.00010	0.00016	46	0.000642	0.00037	0.00036[5]	0.00050[5]	0.00021	30
Cobalt	0.00011	0.00010	0.00003	46	0.004	0.00205	0.00010	0.00010	0.0[6]	30
Copper	0.00108	0.00085	0.00061	42	0.0024	0.00160	0.00084	0.00080	0.00009	30
Iron	0.08220	0.05850	0.06461	46	0.3	0.17650	0.07580	0.05000	0.05432	30
Lead	0.00010	0.00006	0.00007	42	0.001	0.00054	0.00015	0.00009	0.00017	30
Nickel	0.00067	0.00067	0.00015	42	0.025	0.01281	0.00063	0.00060	0.00005	30
Silver	0.00001	0.00001	0.0[6]	46	0.0001	0.00006	0.00001	0.00001	0.0[6]	30
Thallium	0.00008	0.00010	0.00004	42	0.0008	0.00045	0.00007[5,6]	0.00010[5,6]	0.00005	30
Vanadium	0.00100	0.00100	0.0[6]	46	0.006	0.00350	0.00100	0.00100	0.0[6]	30
Zinc	0.00198	0.00120	0.00199	42	0.030	0.01650	0.00300	0.00300	0.0[6]	30

Parameter	Baseline Data				AEMP Values		2014 Data			
	Mean	Median	Standard Deviation	n	Benchmark	Midpoint	Mean	Median	Standard Deviation	n
Nutrients										
Ammonia (NH_3+NH_4)	0.04542	0.02000	0.07760	48	0.855	0.4475	0.08233	0.06500	0.04725	30
Nitrite (NO_2)	0.00828	0.00500	0.01985	46	0.1	0.0325	0.00500	0.00500	0.0[6]	30
Nitrate (NO_3)	0.10000	0.10000	0.0[6]	48	13	6.55	0.10000	0.10000	0.0[6]	30
Phosphorus	0.00592	0.004	0.00354	48	-	-	0.004	0.003	0.00163	30
Dissolved Anions										
Chloride (Cl)	2.9	3	0.98908	48	120	61	2.6	2	0.85836	30
Sulphate	2.4	3	1.21876	48	218	110	2.3	2	0.47946	30

NOTES:

1. 2014 VALUES GREATER THAN MAXIMUM BASELINE CONCENTRATIONS WERE IDENTIFIED FOR LEAD AT VARIOUS STATIONS.
2. SHADED VALUES INDICATE CONCENTRATIONS ABOVE BASELINE STATISTICS.
3. BOLD, SHADED VALUES INDICATE 2014 CONCENTRATIONS NOTED ABOVE THE BENCHMARK CONCENTRATIONS.
4. INDICATES MOST VALUES WERE EQUAL TO OR SLIGHTLY ABOVE THE MDL – WHICH RESULTS IN A CALCULATED MEDIAN EQUAL TO THE MDL.
5. NON-DETECT RESULTS AT A HIGHER THAN USUAL MDL DURING SUMMER AND FALL SAMPLING EVENTS IS INFLUENCING SUMMARY STATISTICS UPWARD.
6. INDICATES VALUES WERE CONSISTENTLY BELOW THE METHOD DETECTION LIMIT.

Aggregating the water quality data from all Sheardown Lake SE stations, the 2014 mean and median concentrations are below the corresponding baseline mean and median values for all parameters except chromium, lead, thallium, zinc and ammonia. The variance in chromium and thallium concentrations causing a higher 2014 SD is due to an elevated MDL used during the summer and fall sampling events as discussed below. The 2014 zinc MDL was also above the baseline MDL and above the AEMP benchmark concentration, resulting in higher summary statistics than baseline which is also discussed below. Ammonia concentrations were slightly elevated in 2014 compared to baseline statistics, but were still within the upper baseline range.

Table 3.12 presents a data analysis summary of the 2014 data for each parameter compared to the AEMP benchmark, midpoint and determination of change for Sheardown Lake SE. Individual sample results that were above the AEMP benchmark or midpoint have been identified.

Table 3.12 Sheardown Lake SE - 2014 Water Quality Data Summary

Steps	Step 1			Step 2	Step 3
Parameter	Initial Data Analysis			Determine if Change is Mine-Related	Determine Action Level
	Above AEMP Benchmark	Above Midpoint	Determine if there is a change		
Total Metals					
Aluminum (B)	None	DL0-02-8-S/D DL0-02-7-D DL0-02-4-D (summer) DL0-02-3-D (summer/fall)	Some concentrations slightly elevated relative to baseline.	Evidence of change not conclusive	N/A
Arsenic (A)	None	None	No change evident. All results reported below MDL.	N/A	N/A
Cadmium (A)	None	None	No change evident. All results reported below MDL.	N/A	N/A
Chromium (B)	None	Various (MDL issue)	No change evident. MDL higher than midpoint value at some stations.	N/A	N/A
Cobalt (A)	None	None	No change evident. All results reported below MDL.	N/A	N/A
Copper (B)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Iron (B)	None	DL0-02-4-D DL0-02-8-D (summer)	Elevated summer concentrations lake-wide, with values greater than the midpoint at DL0-02-4-D and DL0-02-8-D.	Evidence of change not conclusive	N/A
Lead (A)	None	DL0-02-4-S (winter) DL0-02-7-D (summer)	2014 data occurs within the range of previous data, except values greater than the midpoint at DL0-02-4-S and DL0-02-7-D.	Evidence of change not conclusive	N/A
Nickel (A)	None	None	No change evident. Data consistent with baseline.	N/A	N/A
Silver (A)	None	None	No change evident. Some results reported at high MDL.	N/A	N/A
Thallium (A)	None	None	No change evident. Some results reported at high MDL.	N/A	N/A

Steps	Step 1			Step 2	Step 3
	Initial Data Analysis				
Parameter	Above AEMP Benchmark	Above Midpoint	Determine if there is a change	Determine if Change is Mine-Related	Determine Action Level
Vanadium (A)	None	None	No change evident. All results reported below MDL.	N/A	N/A
Zinc (A)	None	None	Unknown, nearly all results reported at high MDL.	N/A	N/A
Nutrients					
Ammonia (NH_3+NH_4) (A)	None	None	Slight lake-wide increase.	Yes	Low
Nitrite (NO_2^-) (A)	None	None	No change evident. All results reported below MDL.	N/A	N/A
Nitrate (NO_3) (A)	None	None	No change evident. All results reported below MDL.	N/A	N/A
Dissolved Anions					
Chloride (Cl^-) (A)	None	None	No change evident. Some results reported at high MDL.	N/A	N/A
Sulphate (A)	None	None	Unknown, nearly all results reported at high MDL.	N/A	N/A

NOTES:

1. THE ORIGIN OF THE AEMP BENCHMARKS ARE IDENTIFIED AS (A) METHOD A = WATER QUALITY GUIDELINE FROM CCME/B.C. MOE; (B) METHOD B = 97.5 PERCENTILE OF BASELINE; OR (C) METHOD C = 3* MDL.

Concentrations of the parameters of interest were generally within the range of historic baseline data. The exceptions are discussed below.

Method Detection Limits for Chromium and Zinc

Due to lab errors, the total chromium laboratory detection limit during the summer and fall events was 0.0005 mg/L, which was not appropriate to detect concentrations below the midpoint concentration (0.000371 mg/L). In addition, the total zinc laboratory detection limit of 0.003 mg/L was above the baseline detection limit of 0.001 mg/L. As such, all 2014 total zinc concentrations were reported below detection and at the upper end of the baseline range, which is below the midpoint (0.0165 mg/L) and benchmark (0.030 mg/L) concentrations.

Total Aluminum

The total aluminum results suggest slightly elevated lake-wide concentrations during the summer sampling event compared to baseline. Evidence that this represents a mine-related change is not conclusive.

Total Iron at DL0-02-4-D and DL0-02-8-D

Total iron concentrations at station DL0-02-4-D (0.18 mg/L) and DL0-02-8-D (0.18 mg/L) during the summer sampling event were marginally above the midpoint concentration (0.1765 mg/L). Review of the Appendix A7 plots show total iron concentrations at most other stations during the summer sampling event in Sheardown Lake SE are elevated above baseline condition. The spring and winter sampling results are shown within or below the baseline range.

Total Lead at DL0-02-4-S and DL0-02-7-D

Total lead concentrations at station DL0-02-4-S (0.00061 mg/L) and DL0-02-7-D (0.00032 mg/L) during the winter sampling event were above the midpoint concentration (0.000535 mg/L). Review of the Appendix A7 plots show total lead concentrations at most other station results throughout 2014 are within the baseline range.

Total Ammonia Lake-wide Concentrations

The total ammonia plots in Appendix A7 show a lake-wide increase. Lake-wide increases in total ammonia, also noted in Sheardown Lake NW, Camp Lake Tributary, and Camp Lake, were attributed to construction activities including quarrying and possibly fill placement in the mine development area.

Conclusion - Is there Evidence of Mine-Related Change in Sheardown Lake SE?

Yes, there appears to be mine-related change with respect to slightly elevated ammonia concentrations. Potential changes in total aluminum, total iron and total lead were also noted; however these concentrations appear to be within the range of baseline values. Assignment of these slight increases in metals concentrations as mine-related is not conclusive.

3.1.7 Other Mine Area Stream Water Quality

The watercourses identified as other mine area streams include tributaries of Camp Lake (e.g., K0-01), a tributary of Sheardown Lake NW (e.g., D1-00 and D1-05), and the EEM reference area streams of Mary River and Camp Lake Tributary 1. The 2014 water quality data collected from these streams are presented in Appendix A1.7, and are available to support interpretation of lake water quality data as required. Additional analysis of the data were not required for the purposes of this report, however the Sheardown Lake tributary data are discussed below in comparison to the Sheardown Lake NW benchmark criteria and 2014 water quality.

Stations D1-00 and D1-05

Total lead concentrations were above the midpoint (0.000525 mg/L) and benchmark (0.001 mg/L) concentrations at two stations within Sheardown Lake NW. Review of the Table A1.7 (Appendix A1) shows stream stations D1-00 and D1-05 have low dissolved and total fractions of lead (50% non-detect).

Total copper concentrations for the D1-00 and D1-05 2014 stream samples are above the SDL NW benchmark (0.0024 mg/L), ranging from 0.0029 mg/L to 0.0039 mg/L. The nearest lake station to the outlet of the D1 stream is DD-HAB9-STN1, which reported low total copper concentrations ranging from 0.0008 mg/L to 0.0009 mg/L. Therefore the elevated copper concentrations do not appear to substantially influence the lake water quality. Lake-wide 2014 total copper concentrations were similar to baseline condition, with a maximum value of 0.00127 mg/L.

3.2 SEDIMENT QUALITY

The following section includes discussion of the 2014 sediment quality results for Mary Lake, Camp Lake and the Sheardown Lake basins. The 2014 results have been compared to historic baseline results and were evaluated for inclusion in the baseline dataset. The interim AEMP concentrations presented in the original AEMP (Baffinland, 2014) have been revised to include most of the 2014 data, and lake-specific benchmarks have been developed instead of the area-wide sediment quality benchmarks proposed earlier.

3.2.1 Mary Lake Sediment Quality Results

A total of 10 sediment samples were collected from Mary Lake in 2014 at the locations shown on Figure 2.2. Of these, 9 samples met the TOC and % sand cut-offs established in the CREMP, which is greater than the previous baseline dataset of 6 samples that met the cut-off criteria.

Table 3.13 presents a comparison of the 2014 lake-wide means for each parameter to the baseline mean and the AEMP reference values. The 2014 sediment quality results for Mary Lake are compared to the AEMP benchmarks in Table B1.1 (Appendix B1). Standard linear regression slopes showing mean change over time for the baseline and 2014 data for key parameters are shown in Figure B2.1 (Appendix B2).

Table 3.13 Lake-wide Sediment Quality Summary Statistics - Mary Lake

Parameter	Baseline Data				AEMP Values		2014 Results			
	Mean	Median	Standard Deviation	n	Benchmark	Midpoint	Mean	Median	Standard Deviation	n
Arsenic	3.2	3.1	1.4	6	5.9	4.5	2.6	3.0	0.5	9
Cadmium	0.5[4]	0.5[4]	0.0[4]	6	1.5	1.0	0.5[4]	0.5[4]	0.0[4]	9
Chromium	74	76	20	6	98	86	87	88	9	9
Copper	30	30	7	6	50	40	33	33	5	9
Iron	37,100	35,750	10,836	6	52,400	44,750	38,933	38,900	5,450	9
Lead	19	19	7	6	35	27	20	20	3	9
Manganese	1,591	1,086	1,621	6	4,370	2,981	1,140	872	1,235	9
Nickel	52	56	10	6	72	62	61	58	6	9
Phosphorus	1,400	1,400	122	5	1,580	1,490	-	-	-	0
Zinc	69	67	27	6	135	102	96	93	29	9

NOTES:
1. CONCENTRATIONS ARE PRESENTED AS mg/kg.
2. SHADING INDICATES VALUE ABOVE THE CORRESPONDING BASELINE MEAN OR MEDIAN.
3. BOLD INDICATES VALUE ABOVE THE BENCHMARK CONCENTRATION.
4. INDICATES VALUES WERE CONSISTENTLY BELOW THE MDL; " – " INDICATES RESULTS WERE NOT OBTAINED.

Given that mining has not started, the expectation is that sediment quality in Mary Lake has been unaffected by the mine. The 2014 mean and median concentrations are above the corresponding baseline means and medians for a number of parameters. The plots for key metals presented on Figure B2.1, however, are not indicative of upward trending. Given the limited baseline dataset available for comparison (n=6), it is not unexpected that the 2014 results (n=9) may include values higher than previously detected.

The 2014 lake-wide standard deviations are almost all lower than the baseline standard deviations. This tightening of the dataset may be a result of a change in the sample collection procedure. Sediment samples collected between 2007 and 2011 shows higher variability that may be attributable to the use of a petite ponar dredge-style sampler which collected the upper 5 cm of sediment. Starting in 2012, a torpedo-style core sampler was utilized that targeted the upper 2 cm of sediment.

Therefore, determination of a source causing the increase in concentrations for some parameters in Mary Lake is inconclusive. KP does not propose that the AEMP response framework is appropriate to apply to the 2014 dataset.

Table 3.14 presents the individual 2014 sediment quality results in Mary Lake, compared to the final sediment quality benchmarks.

Table 3.14 Mary Lake - 2014 Sediment Quality Data Summary

Parameter	Arsenic	Cadmium	Chromium	Copper	Iron	Manganese	Nickel	Lead	Zinc
Benchmark	**5.9**	**1.5**	**98**	**54**	**52,300**	**4,300**	**75**	**35**	**133**
BL0-01	3	0.5	72	31	29,900	872	58	15	60
BL0-04	2	0.5	76	30	36,300	1,930	55	18	93
BL0-06	2	0.5	85	33	43,000	852	54	20	101
BL0-08	3	0.5	88	36	44,200	2,950	58	20	107
BL0-09	3	0.5	89	32	45,500	4,280	64	20	83
BL0-10	2	0.5	86	35	42,200	1,140	57	21	89
BL0-12	2	0.5	97	25	31,800	1,300	71	14	58
BL0-14	3	0.5	**99**	40	38,900	939	67	24	**142**
BL0-16	3	0.5	95	38	38,600	474	65	24	132

NOTES:
1. CONCENTRATIONS ARE PRESENTED AS mg/kg.
2. SHADING AND BOLD INDICATES EQUAL TO OR ABOVE THE CORRESPONDING BENCHMARK.

Concentrations of key metals in sediment within Mary Lake were below benchmark concentrations, with the exception of chromium and zinc at station BL0-14. This station is a newly added location to the CREMP and therefore no historic values are available for comparison. Nearby station BL0-04 does not show similar elevated results for chromium or zinc.

Conclusion - Is there Evidence of Mine-Related Change in Mary Lake Sediments?

The 2014 mean and median concentrations of chromium, copper, iron, lead nickel and zinc are above the previous baseline mean and median concentrations. Chromium and zinc concentrations exceeded the benchmarks at one station (BL0-14). The benchmarks for both chromium and zinc in Mary Lake, however, are based on the 97.5th percentile of baseline concentrations since both parameters are naturally elevated within the lake.

As discussed earlier, the previous baseline dataset is small (n=6) such that it likely does not represent the natural variability of metals concentrations in sediment. Time series plots in Appendix B2 do not indicate upward trending, and there is no obvious mine-related source or spatial trends that would indicate mine-related change. Therefore, there is no evidence of mine-related change. As such, the 2014 sediment quality dataset for Mary Lake should be adopted into the baseline for comparison against future monitoring in 2015.

3.2.2 Camp Lake Sediment Quality Results

A total of 10 sediment samples were collected from Camp Lake in 2014, at the locations shown on Figure 2.2. Of these, 8 samples met the TOC and % sand cut-offs established in the CREMP. The previous baseline dataset consists of 9 samples that met the cut-off criteria.

Table 3.15 presents a comparison of the 2014 lake-wide means for each parameter to the baseline mean and the AEMP reference values. The 2014 sediment quality results for Camp Lake are compared to the AEMP benchmarks in Table B1.2 (Appendix B1). Standard linear regression slopes showing mean change over time for the baseline and 2014 data for key parameters are shown in Figure B2.2 (Appendix B2).

Table 3.15 Lake-wide Sediment Quality Summary Statistics - Camp Lake

Parameter	Baseline Data				AEMP Values		2014 Data			
	Mean	Median	Standard Deviation	n	Benchmark	Midpoint	Mean	Median	Standard Deviation	n
Arsenic	3.2	3.0	0.7	9	5.9	4.6	4.0	4.0	1.0	8
Cadmium	0.5[4]	0.5[4]	0.0[4]	9	1.5	1.0	0.5[4]	0.5[4]	0.0[4]	8
Chromium	74	78	10	9	98	86	63	63	13	8
Copper	41	43	9	9	50	46	38	37	8	8
Iron	34,181	33,400	4,102	9	52,400	43,291	30,763	27,300	10,550	8
Lead	18	18	4	9	72	45	16	15	3	8
Manganese	861	822	170	9	4,370	2,616	1,440	1,045	1,220	8
Nickel	64	65	8	9	72	68	58	57	7	8
Phosphorus	1,060	1,000	336	5	35	548	-	-	-	0
Zinc	60	63	11	9	135	98	69	64	17	8

NOTES:
1. CONCENTRATIONS ARE PRESENTED AS mg/kg.
2. SHADING INDICATES VALUES ABOVE THE CORRESPONDING BASELINE MEAN OR MEDIAN.
3. BOLD INDICATES VALUES ABOVE THE BENCHMARK CONCENTRATION.
4. INDICATES VALUES WERE CONSISTENTLY BELOW THE MDL; “ – “ INDICATES RESULTS WERE NOT OBTAINED.

Aggregating the sediment quality data from all Camp Lake stations, the 2014 mean and median concentrations are below the corresponding baseline mean and median values for all parameters except arsenic, manganese, and zinc. A wider range of iron and manganese values were reported in 2014.

The plots for key metals presented on Figure B2.2 are not indicative of upward trending. Given the limited baseline dataset available for comparison (n=9), it is not unexpected that the 2014 results (n=8) may include values higher than previously detected.

Unlike Mary Lake, the 2014 sediment quality sampling in Camp Lake did not consistently result in smaller standard deviations.

Table 3.16 presents the individual 2014 sediment quality results in Camp Lake, compared to the final sediment quality benchmarks.

Table 3.16 Camp Lake - 2014 Sediment Quality Data Summary

Parameter	Arsenic	Cadmium	Chromium	Copper	Iron	Manganese	Nickel	Lead	Zinc
Benchmark	**5.9**	**1.5**	**98**	**50**	**52,400**	**4,370**	**72**	**35**	**135**
JL0-01	4	0.5	72	47	30,400	939	67	21	97
JL0-02	2	0.5	70	39	30,600	539	58	15	65
JL0-07	2	0.5	85	49	24,200	322	66	21	94
JL0-11	**6**	0.5	54	33	**53,100**	3,010	55	14	58
JL0-13	4	0.5	66	42	38,500	3,680	65	18	58
JL0-15	2	0.5	59	35	23,600	700	53	14	66
JL0-17	4	0.5	49	29	23,400	1,150	49	13	62

NOTES:
1. CONCENTRATIONS ARE PRESENTED AS mg/kg.
2. SHADING AND BOLD INDICATES VALUES EQUAL TO OR ABOVE THE CORRESPONDING BENCHMARK.

Individual metals concentrations in Camp Lake sediment were mostly below the benchmark concentrations, with the exception of arsenic and iron at station JL0-11. This station is a newly added location to the CREMP and therefore historic baseline data are not available for comparison.

Arsenic concentrations are not elevated at stations nearby to JL0-11, with the next highest concentration (4 mg/kg) noted at three stations located throughout the deeper regions of the lake. While the arsenic benchmark is the CWQG guideline (5.9 mg/kg), the calculated 97.5th percentile of combined Camp Lake and Mary Lake sediment (n=31) is 5.3 mg/kg. Therefore, a result of 6 mg/kg is within the range of baseline concentrations.

The iron concentration at JL0-11 is only slightly higher than the 97.5th percentile of baseline sediment quality benchmark established for Camp Lake and Mary Lake.

Conclusion - Is there Evidence of Mine-Related Change in Camp Lake Sediments?

Similar to Mary Lake, the previous baseline dataset is small, time series plots in Appendix B2 do not indicate upward trending, and there is no obvious mine-related source or spatial trends that would indicate mine-related change. Therefore, there is no evidence of mine-related change. As such, the 2014 sediment quality dataset for Camp Lake should be adopted into the baseline for comparison against future monitoring in 2015.

3.2.3 Sheardown Lake NW Sediment Quality Results

A total of 9 sediment samples were collected from Sheardown Lake NW in 2014, at the locations shown on Figure 2.2. Of these, 8 samples met the TOC and % sand cut-offs established in the CREMP. Sheardown Lake NW has a baseline dataset of 25 samples that met the cut-off criteria.

Table 3.17 presents a comparison of the 2014 lake-wide means for each parameter to the baseline mean and the interim area-wide AEMP reference values. The 2014 sediment quality results for Sheardown Lake NW are compared to the interim area-wide AEMP benchmarks in Table B1.1 (Appendix B1). Standard linear regression slopes showing mean change over time for the baseline and 2014 data for key parameters are shown in Figure B2.3 (Appendix B2).

Table 3.17 Lake-wide Sediment Quality Summary - Sheardown Lake NW

Parameter	Baseline Data				AEMP Values		2014 Data			
	Mean	Median	Standard Deviation	n	Interim Benchmark	Midpoint	Mean	Median	Standard Deviation	n
Arsenic	3.4	3.0	1.9	25	6.2	-	3.6	3.0	1.9	8
Cadmium	0.5	0.5	0[4]	25	1.5	-	0.5	0.5	0[4]	8
Chromium	68	72	18	25	97	-	81	83	8	8
Copper	42	41	12	25	58	-	53	51	6	8
Iron	35,184	34,700	10,348	25	52,200	-	40,850	39,000	8,690	8
Lead	17	18	5	25	35	-	19	19	1	8
Manganese	1,352	621	1,735	25	4,530	-	1,524	922	1,614	8
Nickel	61	65	15	25	77	-	76	76	6	8
Phosphorus	1086	900	532	14	1,958	-	-	-	-	0
Zinc	64	66	16	25	123	-	87	81	16	8

NOTES:
1. CONCENTRATIONS ARE PRESENTED AS mg/kg.
2. SHADING INDICATES VALUES ABOVE THE CORRESPONDING BASELINE MEAN OR MEDIAN.
3. NO VALUES WERE REPORTED ABOVE THE INTERIM AREA-WIDE BENCHMARK CONCENTRATION.
4. INDICATES VALUES WERE CONSISTENTLY BELOW THE MDL; " – " INDICATES RESULTS WERE NOT OBTAINED.

The 2014 lake-wide mean and median concentrations are below benchmark values. The 2014 lake-wide mean and median concentrations for arsenic, chromium, copper, iron, lead, manganese, nickel, and zinc are equal to or above the baseline mean and/or median concentrations.

Table 3.18 presents the individual 2014 sediment quality results in Sheardown Lake NW compared to the interim area-wide sediment quality benchmarks.

Table 3.18 Sheardown Lake NW - 2014 Sediment Quality Data Summary

Parameter	Arsenic	Cadmium	Chromium	Copper	Iron	Manganese	Nickel	Lead	Zinc
Benchmark	**6.2**	**1.5**	**97**	**58**	**52,200**	**4,530**	**77**	**35**	**123**
DD-HAB9-STN2	6	0.5	65	50	51,300	1,300	77	18	72
DL0-01	3	0.5	90	50	36,500	1,040	73	20	96
DL0-01-2	3	0.5	88	45	36,100	3,350	74	19	80
DL0-01-5	2	0.5	85	51	34,300	418	69	22	122
DL0-01-8 [2]	2	0.5	86	58	29,600	804	**82**	19	81
DL0-01-9 [2]	3	0.5	81	**60**	41,500	302	**81**	18	80
DL0-01-13 [2]	**7**	0.5	77	47	**55,200**	**4,670**	68	20	88

NOTES:

1. CONCENTRATIONS ARE PRESENTED AS mg/kg.
2. NEW SAMPLE STATION OF 2014 PROGRAM, NO PREVIOUS DATA FROM THIS LOCATION AVAILABLE.
3. SHADING AND BOLD INDICATES VALUES EQUAL TO OR ABOVE THE CORRESPONDING INTERIM BENCHMARK.

The 2014 samples were intended to build the baseline data set. The 2014 sample stations were selected to achieve the CREMP gradient study design and to match, where possible, proposed benthic macroinvertebrate stations. This included several new stations (see Note 2 in Table 3.18) that included new stations that did not have baseline data available for comparison, and excluded several stations with historic sediment quality data. The new 2014 stations were the only stations showing concentrations above the area-wide interim benchmarks. This suggests the baseline sampling prior to 2014 may not have captured the full range of natural variability within the lake.

Differences in the concentration of parameters of concern among sample stations and among years are apparent, however the driving factor(s) of this apparent change is not clear. Consequently, the interim area-wide sediment quality benchmarks established in the AEMP were used for comparison, and the establishment of final sediment quality benchmarks has been deferred (see Section 2.5.2).

Metals concentrations in Sheardown Lake NW were below the benchmark concentrations, with the exception of arsenic, iron and manganese at station DL0-01-13, and copper and nickel at station DL0-01-9, and nickel at station DL0-01-8, all of which are new 2014 sediment sampling stations. The AEMP benchmark for each of these parameters is based on the 97.5th percentile of baseline (which did not include data from these stations, as they were not sampled prior to 2014), and therefore exceedances of each of these parameters can be expected.

Scatter plots of all data for key metals in sediment with simple linear regression fits to show general trends are presented on Figure B2.3 in Appendix B2. Figures B2.4 plots the trends over time at the various sediment sampling stations for the nine metals listed in Table 3.18. Review of the data and plots identified two key observations, described below.

Short-term Increases in Arsenic, Iron and Manganese Concentrations in Sediment in 2008

Elevated concentrations of arsenic, iron and manganese were noted at various stations throughout the lake basin in 2008. Concentrations of these parameters at the same stations were reduced in subsequent monitoring years. Activities related to the bulk sample in 2008 are assumed to be the primary contributing factor, indicating a mine-related change based on a comparison to the 2007 dataset. Post-2008 monitoring results for the same parameters (arsenic, iron and manganese) appear generally consistent with 2007.

Apparent Increases in Chromium, Copper, Nickel, Lead and Zinc

Chromium, copper, nickel, lead and zinc are highly correlated and appear to increase over time. Additionally, the concentrations of the same five metals appear to be highly variable in 2007 and 2008 and less variable from 2011 to 2014. Tests were conducted to validate the correlation between the five metals (chromium, copper, nickel, lead and zinc) and confirm that each of the five metals manifests a similar apparent increase over time.

A number of potential factors were considered in establishing the potential cause(s) of the apparent increase in the five correlated metals:

- The apparent increase in concentrations of the five correlated metals (Cr, Cu, Ni, Pb and Zn) over time is not matched by similar increases in arsenic, iron and manganese over time. Therefore, it does not appear likely that the apparent increase of the five correlated metals is due to ore dust.
- The stations sampled in 2014 with some of the highest metals concentrations are new stations; a lack of continuity in sediment quality stations make interpretation of the results between years difficult.
- There is a gap in the data over the years; i.e., no data collected in 2009 and 2010, limited sampling in 2011.
- A change in sediment sample collection procedure may contribute to differences in the data; sediment samples collected between 2007 and 2011 show higher variability that may be attributable to the use of a petite ponar dredge-style sampler which collected the upper 5 cm of sediment. Starting in 2012, a torpedo-style core sampler was utilized that targeted the upper 2 cm of sediment. The change in sample collection gear appears to have reduced the variance within the 2014 results as shown by decreases in lake-wide concentration standard deviation calculations. A lower variance suggests the 2014 concentrations more accurately represent *in situ* sediment quality of Sheardown Lake NW.

It is possible that the apparent increase in these metals over time could be mine-related, though a definitive cause-effect relationship has not been identified. Additional investigation in 2015 would help further understand the natural variability of metals in sediment, and the potential influence of changes in sampling methods and stations on the apparent increase in the five correlated metals.

Conclusion - Is there Evidence of Mine Related Change in Sheardown Lake NW?

The sediment in Sheardown Lake NW has been affected by the mineralization in the area more than the other mine area lakes being monitored, which is to be expected given its close proximity to the deposit. There is evidence of mine-related change arising from the crushing and stockpiling of ore in 2008 as part of the bulk sample program.

Other metals that did not spike in 2008 (chromium, copper, nickel, lead and zinc) are correlated and appear to increase over time. As discussed above, it is possible that this apparent increase is due a number of factors including natural variability that hasn't been adequately characterized to date, and changes in both sampling methods and sample stations. It is possible that the apparent increase in these metals over time could be mine-related, though a definitive cause-effect relationship has not been identified. Additional investigation in 2015 would help better understand the natural variability of metals in sediment and the potential influence of changes in sampling methods and locations.

3.2.4 Sheardown Lake SE Sediment Quality Results

A total of 5 sediment samples were collected from Sheardown Lake SE in 2014, at the locations shown on Figure 2.2. Of these, all 5 samples met the TOC and % sand cut-offs established in the CREMP. Sheardown Lake SE has a small baseline dataset of 6 previous samples that met the cut-off criteria.

Table 3.19 presents a comparison of the 2014 lake-wide means for each parameter to the baseline mean and the AEMP reference values. The 2014 sediment quality results for Sheardown Lake SE are compared to the AEMP benchmarks in Table B1.1 (Appendix B1). Standard linear regression slopes showing mean change over time for the baseline and 2014 data for key parameters are shown in Figure B2.5 (Appendix B2).

Table 3.19 Lake-wide Sediment Quality Summary Statistics - Sheardown Lake SE

Parameter	Baseline Data				AEMP		2014 Data			
	Mean	Median	Standard Deviation	n	Benchmark	Midpoint	Mean	Median	Standard Deviation	n
Arsenic	1.6	1.7	0.4	6	5.9	3.8	1.0	1.0	1.0	5
Cadmium	0.6	0.5	0.2	6	1.5	1.0	0.5	0.6	0.2	5
Chromium	74	74	4	6	79	77	67	68	7	5
Copper	26	25	4	6	56	41	33	27	18	5
Iron	30,172	30,817	2,602	6	34,400	32,286	28,840	27,700	5,414	5
Lead	15	15	2	6	35	25	14	14	2	5
Manganese	427	412	74	6	657	542	463	394	180	5
Nickel	62	64	4	6	66	64	56	58	5	5
Phosphorus	1,050	1,000	173	4	1,278	1,164	-	-	-	0
Zinc	51	51	4	6	123	87	52	52	10	5

NOTES:
1. CONCENTRATIONS ARE PRESENTED AS mg/kg.
2. SHADING INDICATES VALUES ABOVE THE CORRESPONDING BASELINE MEAN OR MEDIAN.
3. BOLD INDICATES VALUES ABOVE THE BENCHMARK CONCENTRATION.
4. * INDICATES VALUES WERE CONSISTENTLY BELOW THE MDL; " - " INDICATES RESULTS WERE NOT OBTAINED.

Aggregating the sediment quality data from all Sheardown Lake SE stations, the 2014 mean and median concentrations are below the corresponding baseline mean and median values for all parameters except cadmium, copper, manganese, and zinc. A wider range of iron and manganese values were reported in 2014 (the same observation was noted in Camp Lake).

As with the other lakes, the higher 2014 lake-wide means and increase in the standard deviation for some parameters is likely due to increasing the number of sample locations and geographic coverage within the lake, which reflects an increase in the natural variability for some metals. Given the limited baseline dataset available for comparison (n=6), it is not unexpected that the 2014 results (n=5) may include values higher than previously detected.

During the establishment of final sediment quality benchmarks, Intrinsik (2015) performed analyses of variance (ANOVAs) of the log-transformed sediment metal concentrations followed by Tukey multiple comparison tests, to investigate differences between lakes for each of the following metals (arsenic, chromium, copper, iron, manganese, nickel, phosphorus, lead and zinc). For arsenic, copper, manganese and zinc, the Tukey multiple comparison tests revealed that Sheardown Lake SE had significantly lower sediment metal concentrations than at least one other lake. This was the basis for establishing AEMP benchmarks specific to this lake, based on the baseline record.

Table 3.20 presents the individual 2014 sediment quality results in Sheardown Lake SE, compared to the final sediment quality benchmarks.

Table 3.20 Data Analysis Summary of 2014 Sediment Quality - Sheardown Lake SE

Parameter	Arsenic	Cadmium	Chromium	Copper	Iron	Manganese	Nickel	Lead	Zinc
Benchmark	5.9	1.5	79	56	34,400	657	66	35	123
DL0-02-1	1	0.5	55	20	21,900	284	49	11	39
DL0-02-2	1	0.5	71	27	27,700	394	62	14	52
DL0-02-3	1	0.5	67	24	26,000	327	58	13	48
DL0-02-4	2	0.5	68	28	34,100	657	53	16	59
DL0-02-10[2]	2	1	74	64	**34,500**	655	60	17	64

NOTES:

1. CONCENTRATIONS ARE PRESENTED AS mg/kg.
2. NEW SAMPLE STATION OF 2014 PROGRAM, NO PREVIOUS DATA FROM THIS LOCATION AVAILABLE.
3. SHADING AND BOLD INDICATES VALUES EQUAL TO OR ABOVE THE CORRESPONDING BENCHMARK.

Metals concentrations in Sheardown Lake SE were all below the benchmark concentrations, with the exception of iron at station DL0-02-10, which is slightly higher than the benchmark. Nearby station DL0-02-4 has a similar iron concentration, slightly lower than the benchmark. The time series plots presented as Figure B2.4 (Appendix B2) do not indicate upward trending. Given that the AEMP benchmark for iron in Sheardown Lake SE is based on the 97.5th percentile of baseline, and the relatively small baseline dataset upon which the benchmarks have been established, this is not unexpected.

Sheardown tributary SDLT-9 reports to this region of Sheardown Lake SE and may have contributed to naturally enriched iron concentrations at these lake stations. A gradient of iron concentrations appears to be evident, showing decreasing concentrations between station DL0-02-10 and DL0-02-3 near the outlet of Sheardown Lake SE to the Mary River.

Conclusion - Is there Evidence of Mine-Related Change in Sheardown Lake SE?

There is no evidence of mine-related change to the sediment quality in Sheardown Lake SE. Two iron results were slightly above and slightly below the AEMP benchmark, which is based on background concentrations, and no upward trending of iron (or other metals) is apparent.

3.2.5 Tributaries

Three stream sediment samples were collected, one from each of the key tributaries as follows:

- L2-03 - A tributary of Camp Lake running along the base of the hill next to laydown areas and the airstrip, and downstream of quarry QMR2.
- D1-05 - Located on Sheardown Lake Tributary 1 (SDLT-1), close to the mine development area.
- SDLT-12 - Located on Sheardown Lake Tributary 12 (SDLT-12).

Sample locations are shown on Figure 2.2. As indicated in the water and sediment CREMP study design (KP, 2014), sediment quality results in streams are not subject to the formal data assessment and management response approach applied to the lakes, given the high variability of both the substrate and chemical analysis results. Instead, the stream sediment is monitored qualitatively and may be used to support the interpretation of lake sediment quality data as required.

The CREMP identified several other stream sediment sampling stations in tributaries of Camp Lake and the Sheardown Lake basins. Sediment samples were unable to be taken at these locations based on the following observations and *in situ* conditions:

Camp Lake Tributaries

- CLT1-US; high gravel/cobble base with boulders, no suitable depositional areas for sampling.
- CLT1 DS; high gravel/cobble base with boulders, no suitable depositional areas for sampling.
- CLT-2 DS; some depositional areas present, insufficient sample collected.

Sheardown Lake Tributaries

- D1-05 and SDLT-R4; mostly bedrock and boulder substrate, no suitable depositional areas for sampling.
- SDLT-1-R1 and D1-01; some depositional areas present, insufficient sample collected.
- SDLT-12-US; high gravel/cobble base with boulders, no suitable depositional areas for sampling.
- SDLT-9; steep gradient, boulder dominated substrate, no suitable depositional areas for sampling.

The 2014 sediment quality results are compared to the AEMP benchmarks of the corresponding lake waterbody in Table B1.1 (Appendix B1). Samples D1-05 and SDLT-12 met the cut-offs, and chromium at D1-05 (58 mg/kg) was slightly above the Sheardown Lake chromium benchmark of 57 mg/kg. Concentrations or key metals were otherwise unremarkable.

4 – QA/QC AND DATA PERFORMANCE

4.1 QA/QC DATA MANAGEMENT PROCEDURES

The quality of the data obtained for a project is assessed via adherence to a set of pre-defined data quality objectives (DQOs) for the project. DQOs provide a means of assessing whether the data in question are precise, accurate, representative, and complete. This 2014 QA/QC analysis covers three areas of operations:

- Field data collection
- Laboratory analysis
- Office data management

The results from QA/QC samples are reviewed to determine if sample contamination occurred. The data for any contaminated samples are then reviewed to determine if the contamination occurred during collection, handling, storage, shipping, or analysis.

The QA/QC Protocol and DQOs were compiled with reference to the following Canadian guidance documents:

- Guidance Document for the Sampling and Analysis of Metal Mining Effluents (Environment Canada, 2011).
- Canadian Council of Ministers of the Environment (CCME) Protocols Manual for Water Quality Sampling in Canada (CCME, 2011). This document is based on the Alberta and British Columbia sampling manuals (Alberta Environment, 2006; BC MWLAP, 2003).

Procedures for each area of operations are summarized in Section 2.3 and are described in detail within KP internal manuals and during staff training to ensure the proper collection, analysis, and management of data that will meet the DQOs. A summary of the results obtained during the QA/QC analysis are provided in the following sections.

4.2 QA/QC DATA ANALYSIS

The FULCRUM data management system was used to organize and store data received from EXOVA. Data are transferred electronically into the FULCRUM database. All original lab data files were saved and used to check the database.

Upon receipt of laboratory results, several data validation checks were conducted and any QA/QC issues were recorded in a tracking document. FULCRUM also performs a data QA/QC analysis and identifies duplicates, blanks, metals and other data quality issues. If the QA/QC results do not meet the DQOs, results associated with the QA/QC samples in question were flagged and inspected further. If the issue with the QA/QC sample is determined to potentially affect the validity of the sample, results from this sample are rejected. Rejected results are not to be used in the statistical analysis of the data, but are presented with the rest of the data. Data are also rejected when the QA/QC issue indicates that the analytical result is not representative of the sample (e.g. the blank sample is contaminated and the primary sample contains elevated concentrations of the same parameter that was observed in the blank sample). Data rejected due to potential contamination concerns are excluded from the final data tables and summary statistics.

The following elements form the aspects of the field data collection protocol:

- **Field Blanks** - Blank sample results are flagged if any analyte exceeds the method detection limit (MDL). Blank sample results that exceed five times the MDL are examined closely, and compared to detected concentrations. Blank sample results that are greater than the MDL, but lower than five times the MDL may not always indicate potential contamination because of the uncertainty of results near the MDL. The decision matrix used to assess the QA/QC results is provided in Table 4.1.
- **Hold Time Exceedances** - Hold time exceedances occur when the time period between the sample collection time and the sample analysis time is greater than the recommended maximum. These time frames range from 0.25 hours to 6 months and represent the maximum length of time that should not be exceeded to avoid potential sample degradation. Water quality monitoring in the north represents a challenge with respect to sample holding times and they can be exceeded during sampling events for some parameters despite best efforts by field staff and company logistics staff to expedite water quality samples to the laboratory. Reasons for any hold time exceedances are determined and processes are revised wherever applicable to prevent future exceedances. The validity of the results is determined on a case by case basis. Where the holding time exceedance was significant and likely to have an effect on the quality of the result, the results were examined more closely and considered suspect.
- **Duplicate Samples** - Analytical results obtained for two samples collected from the same site at the same time are flagged if the relative percent difference (RPD) is greater than 20% and the measured concentrations are greater than five times the MDL. The RPD is the absolute difference in concentrations of the two duplicate samples divided by the average of the two values. Flagged results are further reviewed to determine whether the high RPD is a result of naturally variable conditions or sampling error. If the latter case is suspected, efforts are made to prevent similar errors from occurring in the future and the results associated with the result in question may be rejected. If the high RPD is most likely a result of natural variability in the waterbody from which the duplicate samples are collected, then the data are flagged for discussion, but are not rejected.
- **Total and Dissolved Metals** - Total and dissolved metals data are compared for each sample and data are flagged when the dissolved concentrations exceeds the total concentration. When the RPD between total and dissolved metals is less than 30% the results are considered valid. If the RPD exceeds 30% the data are subject to further investigation, which may include contacting the laboratory to confirm the results. These data may be accepted as valid or invalid, pending the outcome of further investigation, but an explanation of their inclusion or exclusion will be included in any reporting.

Data from FULCRUM were exported to Microsoft Excel to verify statistical calculations. Results that were below the MDL were set to equal the MDL for the statistical analysis. *In situ* and laboratory results were compared with previous results for the same sites and with expected data trends. Any data outliers were confirmed with the laboratory for validity. Results that do not fit within the realistic expected range were flagged and may be rejected if the likely cause of the discrepancy is determined to be a methodology error. For all analytes, annual statistics and monthly mean values were calculated. Several of the calculations were checked at random using a calculator to proof the Excel spreadsheet calculations.

Table 4.1 Decision Matrix for Evaluating Blank Samples

Case	Travel Blank	Field Blank (unfiltered)	Field Blank (filtered)	Likely Cause	Actions Taken
1	>5xMDL	>5xMDL	>5xMDL	Contamination during transport, storage, or analysis of samples.	If the results were greater than 10% of the average of the results for samples collected on site, data were rejected.
2	>MDL	>MDL	>MDL	Some uncertainty associated with the MDL and the analysis.	Data were accepted, but the lab was consulted for a discussion on the uncertainty.
3	>5xMDL	-	-	Contamination at the laboratory or contamination of DDW.	Discussions with laboratory on potential contamination of DDW. Results were accepted.
4	-	>5xMDL	-	Contamination due to sampling procedures or leaching from bottles.	See Case 1.
5	-	-	>5xMDL	Contamination due to filters or filtering process.	See Case 1.
6	>5xMDL	>5xMDL	-	Potential contamination of DDW, contamination from the bottles, or a combination of contamination sources.	See Case 1.
7		>5xMDL	>5xMDL	Contamination due to sampling methods or contaminated DDW water.	See Case 1.
8	>5xMDL		>5xMDL	Contamination from two sources.	See Case 1.

NOTES:
1. MDL - METHOD DETECTION LIMIT.
2. DDW - DISTILLED / DEIONIZED WATER.

4.3 WATER QUALITY QA/QC SAMPLES

The following section discusses the 2014 QA/QC results including blank samples, duplicate samples and a comparison of metals parameters.

4.3.1 Blank Samples

Field blank samples were collected during the 2014 field programs: (1) summer and (2) fall. Due to restrictions on available deionized water provided at site, field blanks were not taken during the winter or spring sampling campaigns. The spring stream water blank and fall lake water blank showed all parameters below the MDL or within acceptable ranges as per Table 4.1. The fall stream water blank showed concentrations of barium, copper, manganese, and strontium greater than five times the MDL. Review of sampling conditions and field notes concluded the most likely point source of the metals concentrations was from contaminated deionized water. The deionized water used to make the fall field blank was from the onsite stock. Laboratory provided deionized water shipped with the sample bottles will be required for future sampling events to reduce the likelihood of utilizing old or contaminated control water.

It should be noted that for every group of laboratory samples analysed, EXOVA laboratories completes its own laboratory field blanks that are not reported here. Based on the decision making matrix presented in Table 4.1, no results were discarded as a result of the blank analysis. The complete field blank analysis is provided in Table C1.1 of Appendix C.

4.3.2 Duplicate Samples

A summary of the number of duplicate samples collected, compared to total samples collected is provided in Tables 4.2 and 4.3. A summary of duplicate lake and stream sample results for which the RPD between samples was greater than 20%, and where one or both sample concentrations was greater than five times the MDL are listed in Tables 4.4 and 4.5. All duplicate analytical results from EXOVA and ALS Laboratories for lake duplicates are shown in Table C2.1 of Appendix C. All duplicate analytical results from EXOVA and ALS Laboratories for stream duplicates are shown in Table C3.1 of Appendix C.

There were four duplicate stream samples and sixteen duplicate lake samples identified that did not satisfy the above RPD criteria. The stream sample results show turbidity, total ammonia, dissolved zinc and chlorophyll-a had one sample each, and dissolved aluminum had two samples exceeding the RPD criteria. These occurrences were reported at four of eight duplicate sample sites. The lake sample results show turbidity, total manganese and chlorophyll-a had the most occurrences of differences between the sample and duplicate sample results (8, 6, 5 occurrences respectively). The other analytes with one or two occurrences included dissolved zinc, total aluminum, total chromium and pheophytin-a.

Sampling was conducted by trained field staff using standard QA/QC procedures, therefore sampling error including sample preservation would not likely be attributed to the RPD differences. The most probable reason for duplicate sample RPDs exceeding 20% is a result of natural variability of water quality in surface water systems.

All data associated with duplicate samples exceeding the acceptable RPD criteria were flagged and further examined, but neither the site sample data nor the site data associated with the flagged duplicates were removed from the dataset used in the statistical analysis of results.

Table 4.2 Summary of Duplicate Lake Samples

Waterbody	Site	No. of Samples	No. of Duplicates	Duplicate Location
Camp Lake	JL0-01-S/D, JL0-02-S/D, JL0-07-S/D, JL0-09-S/D, JL0-10-S/D	22	4	JL0-01-S, JL0-02-S/D
Mary Lake	BL0-01-S/D, BL0-01-A-S/D, BL0-01-B-S/D, BL0-03-S/D, BL0-04-S/D, BL0-05-S/D, BL0-05-A-S/D, BL0-05-B-S/D, BL0-06-S/D, BL0-09-S/D	60	14	BL0-01-S/D, BL0-03-S/D, BL0-04-S/D, BL0-5-S/D, BL0-05-B-S/D
Sheardown Lake NW	DL0-01-1-S/D, DL0-01-2-S/D, DL0-01-4-S/D, DL0-01-5-S/D, DD-HAB 9-STN1-S/D, DL0-01-7-S/D	36	3	DL0-01-7-S/D, DD-HAB 9-STN1-S/D
Sheardown Lake SE	DL0-02-4-S/D, DL0-02-7-S/D, DL0-02-8-S/D, DL0-02-6-S/D, DL0-02-3-S/D	30	4	DL0-02-3-S/D, DL0-02-6-S/D
Total		**148**	**22**	

Table 4.3 Summary of Duplicate Stream Samples

Watercourse	Site	No. of Samples	No. of Duplicates	Duplicate Location
Camp Lake Tributary	L0-01, L1-02, L1-05, L1-08, L1-09, L2-03	18	2	L0-01, L1-08
Mary River	C0-01, C0-05, C0-10, E0-20, E0-21, E0-03, E0-10, G0-01, G0-03, G0-09, G0-09A, G0-09B	36	0	N/A
Other Mine Area Streams	I0-01, J0-01, K0-01, D1-00, D1-05, F0-01, CLT-REF3, CLT-REF4, MRY-REF2, MRY-REF3	30	6	D1-00, D1-05, F0-01, I0-01, K0-01
Total		**84**	**8**	

Table 4.4 Flagged Lake Water Quality Duplicate Results

Analyte (MDL)	Site	Sample Date	Concentrations		RPD (%)
			Sample	Duplicate	
Turbidity (0.1 NTU)	JL0-02-D	27-07-2014	0.8	0.5	**46.2%**
	BL0-03-D	26-07-2014	2.2	1	**75.0%**
	BL0-03-S	26-07-2014	1	1.9	**62.1%**
	BL0-04-S	25-08-2014	3.2	1.5	**72.3%**
	BL0-05-D	27-07-2014	3.5	2.6	**29.5%**
	DD-HAB9-STN1-S	25-07-2014	0.9	0.7	**25.0%**
	DL0-02-6-D	24-08-2014	1.4	1.1	**24.0%**
	DL0-02-6-S	24-08-2014	1.4	1.1	**24.0%**
Dissolved Zinc (0.003 mg/L)	BL0-04-S	01-05-2014	0.0023	0.003	**26.4%**
Total Aluminum (0.003 mg/L)	BL0-05-B-D	26-08-2014	0.061	0.037	**49.0%**
	DD-HAB9-STN1-S	25-07-2014	0.017	0.022	**25.6%**
Total Chromium (0.0005 mg/L)	BL0-03-S	01-05-2014	0.00011	0.00014	**24.0%**
Total Manganese (0.00005 mg/L)	BL0-01-S	26-08-2014	0.00167	0.00464	**94.1%**
	BL0-03-D	01-05-2014	0.000506	0.000372	**30.5%**
	BL0-03-S	01-05-2014	0.000392	0.00048	**20.2%**
	BL0-05-S	27-07-2014	0.00195	0.00255	**26.7%**
	DD-HAB9-STN1-S	25-07-2014	0.0024	0.00617	**88.0%**
	DL0-02-3-S	24-07-2014	0.00354	0.00281	**23.0%**
Chlorophyll-a (0.2 mg/m^3)	BL0-01-S	26-08-2014	1.1	1.6	**37.0%**
	BL0-05-S	27-07-2014	1.8	1.1	**48.3%**
	DD-HAB9-STN1-S	27-07-2014	1.6	2.4	**40.0%**
	DL0-02-6-D	24-08-2014	3.5	13.9	**119.5%**
Pheophytin-a (0.2 mg/m^3)	DL0-02-6-S	24-08-2014	6	24.1	**120.3%**
	BL0-05-B-S	26-08-2014	2.1	1.4	**40.0%**

NOTES:
1. UNITS FOR SAMPLE AND DUPLICATE ARE THE SAME AS THOSE USED TO REPORT THE MDL.
2. RPD INDICATES RELATIVE PERCENT DIFFERENCE. ANY SAMPLE WITH AN RPD GREATER THAN 20% HAS BEEN REPORTED HERE.

Table 4.5 Flagged Stream Water Quality Duplicate Results

Analyte (MDL)	Site	Sample Date	Sample Concentrations		RPD (%)
			Sample	Duplicate	
Turbidity (NTU)	D1-05	25-06-2014	1.3	0.8	**47.6%**
Total Ammonia (mg/L)	D1-00	25-07-2014	0.15	0.11	**30.8%**
	F0-01	26-07-2014	0.12	0.15	**22.2%**
Dissolved Aluminum (0.001 mg/L)	K0-01	19-06-2014	0.0417	0.007	**142.5%**
Dissolved Zinc (0.00033 mg/L)	K0-01	19-06-2014	0.002	0.0033	**49.1%**
Chlorophyll-a (0.2 mg/m^3)	D1-00	25-07-2014	1.2	4.1	**109.4%**

NOTES:
1. UNITS FOR SAMPLE AND DUPLICATE ARE THE SAME AS THOSE USED TO REPORT THE MDL.
2. RPD INDICATES RELATIVE PERCENT DIFFERENCE. ANY SAMPLE WITH AN RPD GREATER THAN 20% HAS BEEN REPORTED HERE.

4.3.3 Total and Dissolved Metals

Samples where the dissolved metal concentrations were higher than the total metals concentrations and the RPD was greater than 30% were flagged. The stream sample results show dissolved concentrations of molybdenum, zinc and sodium with a difference greater than 30%. These occurrences were at stations in Camp Lake Tributary 1 (L1-05, L1-08, L1-09, and L2-03), Mary River (E0-20) and the East Pond outflow stream (F0-01). Of these analytes, molybdenum accounted for five out of nine occurrences, all of which were reported from the summer sampling event.

The lake samples show aluminum, lead and molybdenum with a difference greater than 30% of total concentrations. All mine area lakes had at least one RPD exceedance with the Sheardown Lake basins comprising 16 of 22 dissolved concentrations greater than 30% RPD. The Sheardown Lake sample results with RPD greater than 30% mostly pertain to molybdenum concentrations during the summer sampling event. Molybdenum concentrations in stream and lake samples were low and the applicable water quality guidelines (CWQG 0.073 mg/L) were not exceeded. The metals comparison analytical results from EXOVA and ALS Laboratories for lake samples are shown in Table C2.2, and stream samples are shown in Table C3.2 of Appendix C.

4.4 SEDIMENT QUALITY QA/QC

There were 34 sediment sampling stations, with three duplicate sediment samples collected during the 2014 monitoring program. Sediment sampling was focussed on the depositional lake environments, however three stations were located in mine area streams (D1-05, L2-03 and SDLT-1). The remaining stations were located in Camp Lake, Mary Lake and the Sheardown Lake basins. A summary of duplicate stream and lake sample results for which the RPD between samples was greater than 20%, and where one or both sample concentrations was greater than five times the MDL, are listed in Table 4.6. The flagged analytes are not parameters of concern and are generally close to the 20% difference criteria. All duplicate analytical results from EXOVA for sediment duplicates are shown in Table C3.1 of Appendix C.

Table 4.6 Flagged Sediment Quality Duplicate Results

Analyte (MDL)	Site	Sample Date	Concentrations		RPD (%)
			Sample	Duplicate	
Total Kjeldahl Nitrogen (0.01 µg/g)	BL0-03	23-Aug-14	0.07	0.04	**54.6%**
Strontium (1 µg/g)	JL0-17	22-Jul-14	62	50	**21.4%**
Thallium (1 µg/g)	DL0-01-9	24-Aug-14	4	5	**22.2%**
Sand (%)	BL0-03	23-Aug-14	4	6	**40.0%**
	DL0-01-9	24-Aug-14	22	27	**20.4%**
Silt (%)	JL0-17	22-Aug-14	8	6	**28.6%**
Clay (%)	DL0-01-9	24-Aug-14	48	37	**25.9%**

4.5 QA/QC SUMMARY

The QA/QC Protocol followed for 2014 water quality sampling completed by KP involved three areas of operations: field data collection, laboratory analysis, and office data management. This QA/QC Protocol followed available federal guidance available (Environmental Canada, 2011; CCME, 2011) and seeks to meet standard DQOs.

The use of trip blanks poses a challenge in the north, as a result of the isolated geographic location of the Project. Water quality bottles are frequently sent up many weeks in advance of sampling, and may be stored in temperature-unregulated areas. As a result of exposing trip blanks to conditions that are not representative of samples, trip blanks were not utilized during the 2014 program. In future programs, trip blanks will travel to site with field personnel and be shipped with the other sample bottles back to the laboratory for analysis.

Three field blanks were collected during 2014, however one of these blanks was likely made with contaminated deionized water found onsite as indicated by the analytical results showing dissolved and total metal concentrations above the MDLs. Future monitoring programs will require back-up deionized water to be shipped from the analytical laboratories to reduce the likelihood of field blank sample contamination.

Duplicate samples represented 10% of total samples for stream sampling and 15% of total samples for lake sampling. Parameters which consistently exceeded the acceptable RPD between samples and duplicate measurements (20%) in both lake and stream data included: turbidity and chlorophyll-a. Other parameters that were noted in either lake or stream data included: total ammonia, dissolved aluminum, dissolved zinc, total aluminum, total chromium, total manganese and pheophytin-a. The elevated RPD for these samples could not be definitively attributed to laboratory error or sampling error. The elevated RPD is rather suspected to be as a result of matrix heterogeneity of the sampling environment. As a result, data exceeding the acceptable RPD of 20% were flagged and further examined, but neither the site sample data nor the site data associated with the flagged duplicate samples were removed from the dataset.

Surface water samples where the dissolved metal concentrations were higher than the total metals concentrations and the RPD was greater than 30% were flagged. Molybdenum accounted for the most RPD differences in both the stream and lake samples, with the majority reported from the summer sampling event.

5 – CONCLUSIONS

5.1 EVIDENCE OF MINE-RELATED CHANGE

The following section discusses the 2014 water and sediment quality results, where evidence of mine-related change was noted, and adoption of 2014 results into the baseline dataset.

5.1.1 Water Quality

Step 1 in the AEMP Data Assessment Approach and Response Framework is to assess the data for evidence of change. If change is observed, Step 2 is to determine if the observed change is mine-related (Baffinland, 2014). Evidence of mine-related change was observed in select samples from Camp Lake Tributary, Camp Lake, and in Sheardown Lake NW and SE.

Table 5.1 provides a list of potential mine-related sources based on our understanding of the 2014 project activities and onsite environmental protection practices. These potential sources will be discussed with Baffinland, since mitigation and abatement practices may already be employed at these locations, thereby removing them from the list of potential sources.

Table 5.1 Evidence of Mine-Related Change - Water Quality

Waterbody	Parameter(s)	Potential Source(s)
Camp Lake Tributary	Total Aluminum Total Iron Ammonia Nitrate	• QMR2 quarry operations upstream (explosives residue) • Fill material for tote road and pad construction (explosives residue)
Camp Lake	Ammonia	• QMR2 quarry operations upstream via Camp lake Tributary • Fill material for tote road and bridge construction activities (Tom River bridge, 2014) • Nearby borrow area activities
Sheardown Lake NW	Ammonia	• Fill material used at mine site development area
Sheardown Lake SE	Ammonia	• Fill material used at mine site development area (explosives residue)

Each of Camp Lake, its tributary 1 and both basins of Sheardown Lake appeared to show a slight increase in concentrations of nitrogen compounds, including ammonia, which elevated, remained well below the benchmarks, and nitrate, which exceeded the benchmark in Camp Lake Tributary downstream of QMR2. Within the Camp Lake Tributary the elevated nitrogen compounds are clearly attributable to runoff from the quarry. Aluminum and iron also exceeded the benchmarks in Camp Lake Tributary, and these exceedances have been attributed to quarry activities as well.

5.1.2 Sediment Quality

As noted in Section 3, the lake-wide sample size of the 2014 sediment quality data sets were greater than the baseline data sets for some lakes. As such, it was not unexpected that the 2014 results included concentrations higher than previously detected. In many cases the 2014 lake-wide standard deviations were lower than the baseline standard deviation. The high number of stations used in 2014 resulted in greater geographic coverage within the waterbodies and therefore better represents the natural variability among stations.

Evidence of mine-related change was observed in Sheardown Lake NW in 2008, attributable to the 2008 bulk sampling program. Post-2008 monitoring results for the same parameters (arsenic, iron and manganese) appear generally consistent with 2007.

Also within Sheardown Lake NW sediment, differences were observed in concentrations between sample stations and years for the following correlated parameters: chromium, copper, nickel, lead and zinc. There is an apparent increase of these five correlated metals over time. A number of factors were considered in establishing the potential cause(s) of the apparent increase:

- The previous baseline results for Sheardown Lake NW may not have fully represented the range of natural variability of metals in sediment.
- The stations sampled in 2014 with some of the highest metals concentrations are new stations; a lack of continuity in sediment quality stations make interpretation of the results between years difficult.
- There is a gap in the data over the years; i.e., no data collected in 2009 and 2010, limited sampling in 2011.
- A change in sediment sample collection procedure between 2007-2011 and 2012-2014 may contribute to differences in the data.
- The apparent increase in concentrations of the five correlated metals (Cr, Cu, Ni, Pb and Zn) over time is not matched by similar increases in arsenic, iron and manganese over time. Therefore, it does not appear likely that the apparent increase of the five correlated metals is due to ore dust.

It is possible, however, that the apparent increase in these metals over time could be mine-related, though a definitive cause-effect relationship has not been identified. Additional investigation in 2015 would help further understand the natural variability of metals in sediment, and the potential influence of changes in sampling methods and stations on the apparent increase in the five correlated metals.

5.2 ADOPTION OF 2014 DATA AS BASELINE

5.2.1 Water Quality

The mine site lakes and streams appear to have been affected by construction-related activities. As such, all 2014 data for nitrogen-containing compounds (ammonia, nitrate and nitrite), as well as aluminum and iron in Camp Lake Tributary should not be adopted as baseline for future comparison.

5.2.2 Sediment Quality

The baseline data sets for Mary Lake, Camp Lake and Sheardown Lake SE are small, the time series plots do not indicate upward trending of concentrations, and there is no obvious mine-related source or spatial trends that would indicate mine-related change in the 2014 data sets. Therefore it can be concluded that there is no evidence of mine-related change in Mary Lake, Camp Lake, and Sheardown Lake SE sediments. As such, the respective 2014 sediment quality datasets should be adopted into the baseline for comparison against future monitoring in 2015.

A number of factors complicated the interpretation of sediment quality data from Sheardown Lake NW. Additional investigation of sediment quality in Sheardown Lake NW is required in 2015 both understand the natural variability within the lake. This will allow Baffinland to understand how the previous sediment data can be treated as baseline, and also allow for the subsequent development of final AEMP benchmarks for Sheardown Lake NW.

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7 – CERTIFICATION

This report was prepared, reviewed and approved by the undersigned.

Prepared: ______________________________

for Dale Klodnicki, CET
Senior Environmental Technologist

Reviewed: ______________________________

Richard Cook, P.Geo.(Ltd.)
Senior Scientist

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Approval that this document adheres to Knight Piésold Quality Systems: SMA

APPENDIX A

2014 WATER QUALITY

APPENDIX A1

2014 WATER QUALITY RESULTS

(Page A1-1 to A1-12)

Knight Piésold CONSULTING

TABLE A1.1

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
MARY RIVER 2014 WATER QUALITY RESULTS

Print Mar/19/15 11:59:29

		Station ID	G0-09A	G0-09A	G0-09A	G0-09	G0-09	G0-09	G0-09B	G0-09B	G0-09B	G0-03	G0-03	G0-03	G0-01	G0-01	G0-01	E0-10	E0-10	E0-10	E0-03	E0-03	E0-03
		Date Sampled	20/06/2014	26/07/2014	21/08/2014	20/06/2014	26/07/2014	21/08/2014	20/06/2014	26/07/2014	21/08/2014	20/06/2014	24/07/2014	21/08/2014	20/06/2014	26/07/2014	21/08/2014	20/06/2014	26/07/2014	22/08/2014	20/06/2014	24/07/2014	22/08/2014
Parameter	Method Detection Limit	Mary River AEMP Benchmark																					
In Situ Parameters																							
Conductivity (In Situ) µS/cm	...				53			58			62			56									
Oxygen Dissolved (In Situ %) %	...		95.7	95.1	97.4	95.2	95.6	97.3	94.9	96.1	91.6	96.5	98.9	91.1	99.4	97.1		98.2	97		99.2	99.8	
Oxygen Dissolved (In Situ)	...		14	10.8	13.1	13.9	10.8	13.1	13.9	10.9	12.4	14.1	10.2	12.3	14.5	11		14.4	11		14.5	10.9	
pH (In Situ) pH	...		6.74	7.36	7.91	6.77	7.49	7.83	6.83	7.55	7.84	6.86	7.84	7.79	7.3	6.87		8.22	7.27		7.33	7.76	
Redox Potential (In Situ) mV	...				10.1						10.2			10.4									
Specific Conductivity (In Situ) µS/cm	...		20	53		20	66		18	64		6	57		16	67		32	76		21	60	
Temperature (In Situ) °C	...		0.01	9.65	2.91	0.01	10.2	2.95	0.02	9.78	2.89	0	14.1	2.99	0.02	9.72		0.3	9.75		0.17	11.4	
Turbidity (In Situ) NTU	...		2	34.8		-0.1	22.5		-0.4	22.3		1.9	19.4		2	16.8		11.2	15.1		5	17.5	
Physical Tests																							
Alkalinity (Total as CaCO3)	5		7	26	43	10	32	48	<5	30	51	6	27	47	14	32	55	15	37	61	10	29	50
Conductivity µS/cm	5		23	56	95	21	69	103	22	67	110	15	58	102	20	70	101	35	78	125	22	61	104
Hardness as CaCO3 (Dissolved)	0.5 to 1		9.9	25	46	8.6	32	50	7.5	31	54	5.2	27	48	9.3	32	49	15.6	37	67	9.5	29	55
Hardness as CaCO3 (Total)	0.5 to 1		10.1	27	45	8.8	34	50	7.8	32	54	5.2	28	48	9.9	34	49	16.8	39	66	11.6	30	53
pH pH	1		6.99	7.66	7.84	6.89	7.77	7.89	6.52	7.71	7.94	6.75	7.7	8	7.38	7.75	7.89	7.34	7.82	7.96	7.26	7.71	7.82
Total Dissolved Solids	1		15	36	62	14	45	67	14	44	72	10	38	66	13	46	66	23	51	81	14	40	68
Total Suspended Solids	2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	6	<2	<2	<2	<2	<2	11	<2	<2
Turbidity NTU	0.1		1	18.5	7.6	0.9	12.1	4.7	1	12.2	4.1	0.8	11.6	3.8	1.4	8.4	4.9	2.3	7.2	2	2.9	9.3	3.1
Dissolved Anions																							
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	120	<1	1	2	1	1	2	1	2	2	<1	1	2	<1	1	2	<1	1	2	<1	1	2
Sulphate (Dissolved)	1	218	<1	1	2	<1	2	1	3	2	2	<1	1	2	<1	2	2	<1	2	1	<1	1	2
Nutrients																							
Ammonia (Total)	0.02	0.855	0.04	0.16	0.09	0.1	0.13	0.09	0.06	0.15	0.13	0.05	0.1	0.06	0.06	0.12	0.02	0.04	0.06	0.03	0.05	0.05	0.05
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	<0.1	<0.1
Nitrite (as N)	0.005	0.06	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.1		0.24	0.22	<0.1	0.28	0.19	<0.1	0.21	0.17	0.13	0.15	0.15	0.1	0.2	0.14	0.13	0.28	0.13	<0.1	0.26	0.14	0.11
Phosphorus (Nutrient) Total	0.003		<0.003	0.035	0.006	<0.003	0.015	<0.003	<0.003	0.014	<0.003	<0.003	0.015	<0.003	0.004	0.007	<0.003	<0.003	0.007	0.004	0.007	0.025	0.003
Dissolved Metals																							
Aluminum (Dissolved)	0.001 to 0.003		0.0173	0.025	0.013	0.0154	0.026	0.011	0.0158	0.024	0.009	0.0157	0.018	0.009	0.0139	0.019	0.01	0.0207	0.015	0.007	0.0136	0.019	0.011
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00005		0.00134	0.00302	0.00496	0.00133	0.00389	0.00496	0.0013	0.00379	0.00545	0.00118	0.00335	0.0049	0.00128	0.00391	0.00495	0.00168	0.00419	0.00527	0.00136	0.00338	0.00529
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000033	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Dissolved)	0.05		1.88	5.35	10	1.6	6.77	11	1.4	6.5	11.9	0.994	5.77	10.6	1.82	6.77	10.8	3.13	7.86	14	1.89	6.16	11.5
Chromium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.0002 to 0.0005		0.00034	0.0006	0.0008	0.00033	0.0007	0.0008	0.00031	0.0006	0.0008	0.00027	0.0006	0.0008	0.00038	0.0006	0.0008	0.00049	0.0006	0.0007	0.00058	0.0007	0.0007
Iron (Dissolved)	0.01 to 0.03		0.01	<0.03	<0.03	0.01	<0.03	<0.03	0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	0.02	<0.03	<0.03	0.01	<0.03	<0.03
Lead (Dissolved)	0.00005		0.00006	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	0.00007	<0.00005	0.00005	0.00005	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	0.00007	<0.00005	<0.00005
Lithium (Dissolved)	0.0005 to 0.001		<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001
Magnesium (Dissolved)	0.05 to 0.1		1.26	2.91	5.08	1.11	3.64	5.53	0.98	3.49	5.94	0.67	3.1	5.33	1.16	3.7	5.39	1.9	4.3	7.8	1.16	3.3	6.29
Manganese (Dissolved)	0.00005		0.00278	0.00022	0.0002	0.00299	0.00018	0.00017	0.00342	0.00014	0.00014	0.0034	0.00014	0.00017	0.00346	0.00009	0.00012	0.00275	0.00006	0.00008	0.00349	0.00013	0.00011
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00005		<0.00005	<0.00005	0.00022	<0.00005	<0.00005	0.0002	<0.00005	0.00018	0.00021	<0.00005	<0.00005	0.00019	<0.00005	<0.00005	0.00017	<0.00005	<0.00005	0.00049	0.000173	<0.00005	0.0004
Nickel (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (Dissolved)	0.05 to 0.2		0.652	0.6	0.7	0.649	0.6	0.6	0.625	0.6	0.5	0.546	0.5	0.5	0.578	0.5	0.6	0.584	0.6	0.8	0.568	0.5	0.9
Selenium (Dissolved)	0.0001 to 0.001		<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001
Silicon (Dissolved)	0.05 to 0.1		0.22	0.5	0.9	0.18	0.6	0.9	0.14	0.6	1	0.12	0.6	0.9	0.16	0.6	0.9	0.24	0.6	0.8	0.16	0.6	0.9
Silver (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001
Sodium (Dissolved)	0.05		0.333	0.89	1.42	0.334	1	1.19	0.369	1	1.25	0.285	0.76	1.01	0.277	0.91	1.01	0.305	0.9	0.94	0.283	0.73	1.23
Strontium (Dissolved)	0.0001 to 0.0002		0.0015	0.0054	0.01	0.00145	0.006	0.0094	0.00146	0.0059	0.0096	0.00107	0.0051	0.0084	0.00129	0.0058	0.0084	0.00181	0.0062	0.0091	0.00182	0.005	0.009
Thallium (Dissolved)	1E-005 to 0.0001		<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00001		0.000166	0.00049	0.00148	0.00015	0.00065	0.00156	0.000167	0.00063	0.00161	0.000116	0.0004	0.00129	0.000087	0.00051	0.00131	0.000118	0.00058	0.00129	0.000117	0.00037	0.00127
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	0.00033 to 0.003		0.002	<0.003	<0.003	0.0016	<0.003	<0.003	0.0019	<0.003	<0.003	0.0027	<0.003	<0.003	0.0021	<0.003	<0.003	0.0022	<0.003	<0.003	0.0014	<0.003	<0.003
Total Metals																							
Aluminum (Total)	0.001 to 0.003	0.966	0.0386	0.617	0.245	0.0342	0.431	0.163	0.0357	0.506	0.119	0.0306	0.275	0.179	0.0999	0.227	0.136	0.0855	0.217	0.11	0.349	0.273	0.152
Antimony (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0001
Arsenic (Total)	0.0001	0.005	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001
Barium (Total)	0.00005		0.00157	0.00795	0.00651	0.00152	0.00658	0.00607	0.00147	0.00544	0.00624	0.00122	0.00515	0.00585	0.00185	0.00553	0.00588	0.00213	0.00563	0.00589	0.00319	0.00536	0.00605
Beryllium (Total)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Total)	0.00001	0.00006	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000021	<0.00001	<0.00001
Calcium (Total)	0.05		1.91	5.54	9.96	1.66	7.05	11.1	1.44	6.73	11.9	0.979	5.89	10.6	1.91	7.04	10.8	3.33	8.06	14	2.13	6.27	11.5
Chromium (Total)	0.0001 to 0.0005	0.0023	0.00014	0.0014	<0.0005	0.00012	0.0011	<0.0005	0.00013	0.0011	<0.0005	<0.00002	0.0007	<0.0005	0.00031	0.0006	<0.0005	0.00029	0.0005	<0.0005	0.00084	0.0006	<0.0005
Cobalt (Total)	0.0001	0.004	<0.0001	0.0004	0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.00024	0.0001	<0.0001
Copper (Total)	0.0002 to 0.0005	0.0024	<0.0002	0.0016	0.0013	<0.0002	0.0013	0.0011	<0.0002	0.0014	0.001	<0.0002	0.0012	0.0009	<0.0002	0.0011	0.0009	0.00065	0.001	0.0007	0.00187	0.0011	0.0009
Iron (Total)	0.003 to 0.03	0.874	0.031	0.73	0.21	0.028	0.47	0.15	0.03	0.51	0.1	0.025	0.32	0.12	0.102	0.27	0.11	0.087	0.24	0.06	0.417	0.3	0.1
Lead (Total)	0.00005	0.001	0.0001	0.0006	0.00023	0.0001	0.00038	0.00016	0.00011	0.00042	0.00011	0.00009	0.00029	0.00012	0.00014	0.00024	0.00011	0.00023	0.00022	0.00008	**0.00117**	0.00026	0.00011
Lithium (Total)	0.0005 to 0.001		<0.0005	0.002	<0.001	<0.0005	0.001	<0.001	<0.0005	0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001
Magnesium (Total)	0.05 to 0.1		1.3	3.14	4.87	1.14	3.9	5.4	1.02	3.74	5.77	0.67	3.28	5.21	1.25	3.95	5.32	2.07	4.58	7.41	1.51	3.51	5.95
Manganese (Total)	0.00005		0.0032	0.00959	0.00265	0.00341	0.00583	0.00218	0.00374	0.00603	0.00161	0.00365	0.00413	0.00143	0.00447	0.00335	0.00139	0.00369	0.00294	0.00063	0.0113	0.00372	0.00109
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.00005		<0.00005	<0.00005	0.00021	<0.00005	<0.00005	0.00022	<0.00005	<0.00005	0.00017	<0.00005	<0.00005	0.00015	<0.00005	<0.00005	0.00014	0.000067	<0.00005	0.00046	0.000252	<0.00005	0.0004
Nickel (Total)	0.0005	0.025	<0.0005	0.001	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	0.00064	0.0006	<0.0005	0.00071	<0.0005	<0.0005	0.00148	0.0006	<0.0005
Potassium (Total)	0.05 to 0.2		0.663	0.7	0.6	0.654	0.6	0.6	0.632	0.7	0.6	0.544	0.6	0.5	0.602	0.7	0.5	0.613	0.6	0.5	0.705	0.6	0.7
Selenium (Total)	1E-005 to 0.001		<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001
Silicon (Total)	0.05 to 0.1		0.26	1.6	1.3	0.22	1.4	1.2	0.18	1.5	1.2	0.15	1	1.2	0.36	0.9	1.2	0.37	1	1	0.83	1	1.2
Silver (Total)	0.00001	0.0001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00005	<0.00001	<0.00001
Sodium (Total)	0.05		0.344	0.86	1.28	0.339	0.98	1.09	0.373	0.98	1.16	0.278	0.78	0.94	0.261	0.93	0.94	0.304	0.89	0.79	0.3	0.73	1.07
Strontium (Total)	0.0001 to 0.0002		0.00158	0.0065	0.0104	0.00151	0.0069	0.0097	0.00148	0.0063	0.01	0.00109	0.0053	0.0086	0.00142	0.0059	0.0085	0.00207	0.0062	0.0091	0.00222	0.0055	0.0093
Thallium (Total)	1E-005 to 0.0001	0.0008	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	0.00001	<0.0001	<0.0001
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	0.01		<0.01	0.05	0.02	<0.01	0.03	0.01	<0.01	0.03	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	0.02	0.02	<0.01
Uranium (Total)	0.00001		0.000201	0.00067	0.00179	0.000172	0.00074	0.00162	0.000188	0.00076	0.00164	0.00013	0.0005	0.0013	0.000116	0.00059	0.00132	0.000181	0.00067	0.00132	0.000223	0.00045	0.00129
Vanadium (Total)	0.001	0.006	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	0.03	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	<0.003
Organics																							
Carbon Organic (Dissolved)	0.5		5	0.8	1.1	5.1	1	1.2	4.7	0.7	1.2	3.7	1.1	1.1	3.9	1.1	1.1	3.8	1.1	1.2	3.6	1.1	1.2
Carbon Organic (Total)	0.5		5.3	0.7	1.1	5.3	0.8	1.2	4.8	0.8	1.2	3.9	1.1	1.1	4.3	1	1.2	4.4	0.9	1.2	4.1	0.9	1.4
Chlorophyll-a mg/m3	0.2		0.9	6.3	<0.2	1.6	2	0.9	0.9	1.5	<0.2	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	1	7.2	0.9	<0.2	<0.2	<0.2
Pheophytin-a mg/m3	0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.2	<0.2	0.9	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2	<0.2
Semi Volatile Organics																							
Phenol	0.001		<0.001	<0.001	<0.001	0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Knight Piésold CONSULTING

TABLE A1.1

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
MARY RIVER 2014 WATER QUALITY RESULTS

Print Mar/19/15 11:59:29

Station ID			E0-21	E0-21	E0-21	E0-20	E0-20	E0-20	C0-10	C0-10	C0-10	C0-05	C0-05	C0-05	C0-01	C0-01	C0-01	Samples Collected	Minimum	25th Percentile/ Quartile 1	Median/ 50th Percentile/ Quartile 2	Mean	75th Percentile/ Quartile 3	Maximum	Standard Deviation	Inter-Quartile Range
Date Sampled			21/06/2014	24/07/2014	22/08/2014	21/06/2014	24/07/2014	22/08/2014	21/06/2014	24/07/2014	22/08/2014	21/06/2014	24/07/2014	22/08/2014	21/06/2014	24/07/2014	22/08/2014									
Parameter	Method Detection Limit	Mary River AEMP Benchmark																								
In Situ Parameters																										
Conductivity (In Situ) µS/cm	...																	4	53	55.25	57	57.3	59	62	3.77	3.75
Oxygen Dissolved (In Situ %) %	...		99.5	99.6		98.4	100		98.6	102		96.7	104		96.1	103		28	91.1	96	97.35	97.6	99.425	104	2.92	3.425
Oxygen Dissolved (In Situ)	...		14.1	11		13.8	11		13.5	10.9		13.6	11.2		13.7	10.8		28	10.18	10.97	12.73	12.5	13.89	14.51	1.51	2.92
pH (In Situ) pH	...		6.86	7.78		7.13	7.75		7.19	7.78		7.35	7.78		7.41	7.8		28	6.74	7.175	7.45	7.44	7.7825	8.22	0.415	0.6075
Redox Potential (In Situ) mV	...																	3	10.1	10.167	10.234	10.3	10.33	10.426	0.164	0.163
Specific Conductivity (In Situ) µS/cm	...		27	59		46	62		45	62		64	63		52	61		24	6	25.5	55	46.5	62.25	76	20.6	36.75
Temperature (In Situ) °C	...		1.04	11		1.38	11.2		2.25	12.2		1.5	12.2		0.87	13.3		28	0	0.7275	2.93	5.49	10.3775	14.06	5.21	9.65
Turbidity (In Situ) NTU	...		1.2	17.3		1	17.3		0.8	17.7		1.5	18.2		0.7	21.7		24	-0.4	1.425	13.15	11.1	17.825	34.8	10	16.4
Physical Tests																										
Alkalinity (Total as CaCO3)	5		11	28	50	22	30	50	24	30	50	31	30	50	25	29	49	36	5	23.5	30	31.8	48.25	61	15.7	24.75
Conductivity µS/cm	5		28	61	105	49	64	106	47	64	106	67	65	106	54	62	105	36	15	48.5	64.5	67.9	102.25	125	31.8	53.75
Hardness as CaCO3 (Dissolved)	0.5 to 1		13	29	55	22.2	31	56	22.3	31	55	31.6	31	55	25.8	30	56	36	5.2	22.275	31	33.1	49.25	67	17.2	26.975
Hardness as CaCO3 (Total)	0.5 to 1		13.1	30	53	22.1	32	55	22	31	55	31.9	32	54	25.5	30	54	36	5.2	22.075	31.95	33.3	49.25	66	16.6	27.175
pH pH	1		7.14	7.71	7.84	7.4	7.72	7.85	7.4	7.71	7.86	7.58	7.68	7.86	7.48	7.66	7.83	36	6.52	7.4	7.71	7.59	7.84	8	0.358	0.44
Total Dissolved Solids	1		18	40	68	32	42	69	31	42	69	44	42	69	35	40	68	36	10	31.75	42	44.3	66.25	81	20.7	34.5
Total Suspended Solids	2		<2	<2	<2	8	<2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	36	2	2	2	2.53	2	11	1.87	0
Turbidity NTU	0.1		1.4	8.8	3.4	2.1	9.5	3.1	1.3	10	3.4	1.7	10.4	3	1.4	11.6	0.4	36	0.4	1.625	3.4	5.31	8.925	18.5	4.46	7.3
Dissolved Anions																										
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	36	0.25	0.25	0.25	0.25	0.25	0.25	0	0
Chloride (Dissolved)	1	120	1	1	2	1	1	2	1	1	2	2	1	2	1	1	2	36	1	1	1	1.39	2	2	0.494	1
Sulphate (Dissolved)	1	218	<1	1	2	1	2	2	<1	2	2	1	2	2	<1	2	2	36	1	1	2	1.56	2	3	0.558	1
Nutrients																										
Ammonia (Total)	0.02	0.855	0.04	0.05	0.03	0.03	0.07	0.13	0.03	0.13	0.13	0.03	0.16	0.06	0.03	0.13	0.12	36	0.02	0.04	0.06	0.0781	0.1225	0.16	0.0437	0.0825
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	36	0.1	0.1	0.1	0.101	0.1	0.13	0.005	0
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	36	0.1	0.1	0.1	0.101	0.1	0.13	0.00523	0
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	36	0.005	0.005	0.005	0.00517	0.005	0.01	0.000845	0
Nitrogen Kjeldahl (Total)	0.1		0.17	<0.1	<0.1	0.18	0.14	0.2	0.16	0.22	0.22	0.16	0.23	0.14	0.13	0.3	0.19	36	0.1	0.13	0.16	0.171	0.2125	0.3	0.0569	0.0825
Phosphorus (Nutrient) Total	0.003		0.006	0.009	0.003	0.008	0.01	0.004	0.01	0.01	0.003	0.003	0.02	0.004	0.01	0.014	0.004	36	0.003	0.003	0.005	0.00797	0.01	0.035	0.0071	0.007
Dissolved Metals																										
Aluminum (Dissolved)	0.001 to 0.003		0.0244	0.019	0.01	0.0179	0.049	0.01	0.0132	0.016	0.008	0.0118	0.021	0.01	0.0163	0.016	0.01	36	0.007	0.01075	0.01555	0.0161	0.019	0.049	0.00757	0.00825
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Barium (Dissolved)	0.00005		0.00174	0.00343	0.00534	0.00273	0.0038	0.00542	0.00265	0.00336	0.00533	0.0033	0.00348	0.00534	0.00298	0.00342	0.00548	36	0.00118	0.00271	0.003455	0.00357	0.00496	0.00548	0.00146	0.00225
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	36	0.0001	0.0001	0.0005	0.000367	0.0005	0.0005	0.000191	0.0004
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	36	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.97E-11	0
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36	0.01	0.01	0.01	0.01	0.01	0.01	3.93E-10	0
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.0000106	0.00001	0.000033	0.00000383	0
Calcium (Dissolved)	0.05		2.63	6.2	11.6	4.41	6.42	11.7	4.44	6.4	11.6	6.35	6.57	11.6	5.15	6.24	11.9	36	0.994	4.4325	6.41	6.97	10.85	14	3.74	6.4175
Chromium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	36	0.0001	0.0001	0.0005	0.000367	0.0005	0.0005	0.000191	0.0004
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Copper (Dissolved)	0.0002 to 0.0005		0.00055	0.0007	0.0008	0.00058	0.0008	0.0008	0.00051	0.0007	0.0008	0.00058	0.0007	0.0008	0.00049	0.0007	0.0007	36	0.00027	0.0005725	0.0007	0.000631	0.0008	0.0008	0.000158	0.0002275
Iron (Dissolved)	0.01 to 0.03		0.02	<0.03	<0.03	0.02	0.04	<0.03	0.03	<0.03	<0.03	0.02	<0.03	<0.03	0.03	<0.03	<0.03	36	0.01	0.02	0.03	0.0258	0.03	0.04	0.00806	0.01
Lead (Dissolved)	0.00005		0.00014	<0.00005	<0.00005	0.0001	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	36	0.00005	0.00005	0.00005	0.0000581	0.0000525	0.00014	0.0000183	0.0000025
Lithium (Dissolved)	0.0005 to 0.001		<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	36	0.0005	0.0005	0.001	0.000833	0.001	0.001	0.000239	0.0005
Magnesium (Dissolved)	0.05 to 0.1		1.55	3.37	6.29	2.72	3.53	6.39	2.72	3.54	6.35	3.83	3.65	6.34	3.15	3.45	6.28	36	0.67	2.72	3.535	3.81	5.425	7.8	1.91	2.705
Manganese (Dissolved)	0.00005		0.00347	0.00014	0.00012	0.00371	0.0005	0.00025	0.00811	0.00026	0.00022	0.00654	0.00041	0.00032	0.00712	0.00044	0.00039	36	0.00006	0.00014	0.000255	0.00156	0.0030925	0.00811	0.00221	0.0029525
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	3.24E-13	0
Molybdenum (Dissolved)	0.00005		0.000156	<0.00005	0.00035	0.000153	0.00033	0.0003	0.000127	<0.00005	0.00027	0.000259	<0.00005	0.00026	0.000198	<0.00005	0.00019	36	0.00005	0.00005	0.0001545	0.000156	0.0002125	0.00049	0.000118	0.0001625
Nickel (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	0.00074	<0.0005	<0.0005	0.0007	<0.0005	<0.0005	0.00068	<0.0005	<0.0005	0.00062	<0.0005	<0.0005	36	0.0005	0.0005	0.0005	0.000521	0.0005	0.00074	0.0000607	0
Potassium (Dissolved)	0.05 to 0.2		0.571	0.5	0.9	0.609	0.6	0.8	0.65	0.5	0.8	0.708	0.6	0.7	0.657	0.6	0.8	36	0.5	0.57025	0.6	0.63	0.66775	0.9	0.11	0.0975
Selenium (Dissolved)	0.0001 to 0.001		<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	36	0.0001	0.0001	0.001	0.0007	0.001	0.001	0.00043	0.0009
Silicon (Dissolved)	0.05 to 0.1		0.25	0.6	0.9	0.38	0.6	0.9	0.37	0.6	0.9	0.42	0.6	0.9	0.39	0.6	0.9	36	0.12	0.3775	0.6	0.581	0.9	1	0.277	0.5225
Silver (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	3.24E-13	0
Sodium (Dissolved)	0.05		0.314	0.73	1.23	0.655	0.74	1.21	0.564	0.72	1.19	0.645	0.71	1.14	0.551	0.71	1.08	36	0.277	0.56075	0.75	0.795	1.0275	1.42	0.336	0.46675
Strontium (Dissolved)	0.0001 to 0.0002		0.00228	0.005	0.0091	0.00295	0.0052	0.0091	0.00291	0.005	0.009	0.00412	0.005	0.0089	0.00355	0.0048	0.0088	36	0.00107	0.00294	0.00515	0.00554	0.008825	0.01	0.00293	0.005885
Thallium (Dissolved)	1E-005 to 0.0001		<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	36	0.00001	0.00001	0.0001	0.00007	0.0001	0.0001	0.000043	0.00009
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36	0.01	0.01	0.01	0.01	0.01	0.01	3.93E-10	0
Uranium (Dissolved)	0.00001		0.000158	0.00036	0.00126	0.000209	0.00038	0.00123	0.00017	0.00036	0.00123	0.000343	0.00035	0.00116	0.000244	0.00032	0.00118	36	0.000087	0.00019925	0.00039	0.000648	0.00123	0.00161	0.00051	0.00103075
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	36	0.001	0.001	0.001	0.001	0.001	0.001	3.94E-11	0
Zinc (Dissolved)	0.00033 to 0.003		0.0012	<0.003	<0.003	0.0011	<0.003	<0.003	0.0011	<0.003	<0.003	<0.00033	<0.003	<0.003	<0.00033	<0.003	<0.003	36	0.00033	0.002075	0.003	0.0025	0.003	0.003	0.000827	0.000925
Total Metals																										
Aluminum (Total)	0.001 to 0.003	0.966	0.109	0.253	0.135	0.0915	0.255	0.135	0.0685	0.275	0.139	0.0644	0.268	0.149	0.0664	0.333	0.173	36	0.0306	0.0978	0.1505	0.19	0.25825	0.617	0.134	0.16045
Antimony (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.00011	0.00000167	0
Barium (Total)	0.00005		0.00212	0.00518	0.0059	0.00304	0.00529	0.00614	0.00299	0.00545	0.00605	0.00369	0.00533	0.00607	0.00321	0.00574	0.00624	36	0.00122	0.0031525	0.005445	0.00471	0.00605	0.00795	0.00183	0.0028975
Beryllium (Total)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	36	0.0001	0.0001	0.0005	0.000367	0.0005	0.0005	0.000191	0.0004
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	36	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.97E-11	0
Boron (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36	0.01	0.01	0.01	0.01	0.01	0.01	3.93E-10	0
Cadmium (Total)	0.00001	0.00006	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.0000103	0.00001	0.000021	0.00000183	0
Calcium (Total)	0.05		2.62	6.28	11.5	4.35	6.52	11.8	4.36	6.51	11.8	6.37	6.58	11.7	5.06	6.26	11.8	36	0.979	4.3575	6.515	7.04	10.875	14	3.73	6.5175
Chromium (Total)	0.0001 to 0.0005	0.0023	0.00028	0.0007	<0.0005	0.00028	0.0006	<0.0005	0.00024	0.0007	<0.0005	0.00022	0.0007	<0.0005	0.0002	0.0008	<0.0005	36	0.00002	0.0002875	0.0005	0.000516	0.000625	0.0014	0.000291	0.0003375
Cobalt (Total)	0.0001	0.004	<0.0001	0.0002	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0002	<0.0001	36	0.0001	0.0001	0.0001	0.000132	0.000125	0.0004	0.000064	0.000025
Copper (Total)	0.0002 to 0.0005	0.0024	0.00085	0.0012	0.0009	0.00089	0.0011	0.0009	0.00073	0.0011	0.0009	0.00072	0.0012	0.0009	0.00071	0.0013	0.001	36	0.0002	0.0007275	0.0009	0.000928	0.001125	0.00187	0.000389	0.0003975
Iron (Total)	0.003 to 0.03	0.874	0.111	0.31	0.08	0.105	0.29	0.08	0.101	0.31	0.09	0.093	0.33	0.09	0.089	0.39	0.14	36	0.025	0.08975	0.1105	0.195	0.3025	0.73	0.162	0.21275
Lead (Total)	0.00005	0.001	0.00056	0.0003	0.00011	0.00038	0.00026	0.0001	0.00026	0.00027	0.00022	0.00019	0.00029	0.00012	0.00018	0.00035	0.00018	36	0.00008	0.00011	0.00022	0.000251	0.00029	0.00117	0.000202	0.00018
Lithium (Total)	0.0005 to 0.001		<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	0.001	<0.001	36	0.0005	0.0005	0.001	0.000861	0.001	0.002	0.000307	0.0005
Magnesium (Total)	0.05 to 0.1		1.6	3.55	5.97	2.73	3.7	6.13	2.69	3.69	6.1	3.87	3.76	6.07	3.12	3.62	6.02	36	0.67	2.72	3.72	3.82	5.34	7.41	1.77	2.62
Manganese (Total)	0.00005		0.00505	0.00394	0.00107	0.00562	0.00375	0.00112	0.00945	0.00389	0.00119	0.00796	0.00444	0.00142	0.00847	0.00514	0.00288	36	0.00063	0.0020375	0.003705	0.00404	0.0050725	0.0113	0.00263	0.003035
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	3.24E-13	0
Molybdenum (Total)	0.00005		0.000203	0.00016	0.0003	0.000175	<0.00005	0.00026	0.000152	<0.00005	0.00023	0.000295	0.00006	0.00025	0.000226	0.00014	0.00015	36	0.00005	0.00005	0.000145	0.000149	0.0002215	0.00046	0.000109	0.0001715
Nickel (Total)	0.0005	0.025	0.00068	0.0007	<0.0005	0.00097	0.0007	<0.0005	0.00086	0.0007	<0.0005	0.00089	0.0008	<0.0005	0.0008	0.0008	0.0007	36	0.0005	0.0005	0.0006	0.000651	0.0007025	0.00148	0.000206	0.0002025
Potassium (Total)	0.05 to 0.2		0.607	0.5	0.7	0.652	0.6	0.7	0.674	0.6	0.7	0.719	0.6	0.7	0.683	0.7	0.7	36	0.5	0.6	0.6225	0.632	0.7	0.719	0.0665	0.1
Selenium (Total)	1E-005 to 0.001		<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	36	0.00001	0.00001	0.001	0.00067	0.001	0.001	0.000473	0.00099
Silicon (Total)	0.05 to 0.1		0.45	0.9	1.1	0.52	1	1.2	0.48	1	1.2	0.56	1	1.2	0.51	1.1	1.2	36	0.15	0.5175	1	0.903	1.2	1.6	0.398	0.6825
Silver (Total)	0.00001	0.0001	0.00003	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.0000119	0.00001	0.00005	0.00000749	0
Sodium (Total)	0.05		0.33	0.68	1.04	0.69	0.73	1.04	0.577	0.73	1.02	0.65	0.72	1	0.564	0.73	0.96	36	0.261	0.57375	0.755	0.752	0.98	1.28	0.286	0.40625
Strontium (Total)	0.0001 to 0.0002		0.00251	0.0052	0.0092	0.00309	0.0053	0.0093	0.00301	0.0054	0.0092	0.00432	0.0053	0.0092	0.00352	0.0052	0.009	36	0.00109	0.00307	0.00545	0.00579	0.009025	0.0104	0.00297	0.005955
Thallium (Total)	1E-005 to 0.0001	0.0008	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	36	0.00001	0.00001	0.0001	0.00007	0.0001	0.0001	0.000043	0.00009
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Titanium (Total)	0.01		<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	36	0.01	0.01	0.01	0.0153	0.02	0.05	0.00845	0.01
Uranium (Total)	0.00001		0.000265	0.00049	0.00132	0.000268	0.00045	0.00129	0.00022	0.00043	0.00125	0.00039	0.00044	0.00118	0.000282	0.00042	0.00118	36	0.000116	0.00026725	0.000495	0.000715	0.00126	0.00179	0.000512	0.00099275
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	36	0.001	0.001	0.001	0.001	0.001	0.001	3.94E-11	0
Zinc (Total)	0.003	0.03	0.0034	<0.003	<0.003	0.0032	<0.003	<0.003	0.0031	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	36	0.003	0.003	0.003	0.00305	0.003	0.004	0.00018	0
Organics																										
Carbon Organic (Dissolved)	0.5		3.8	1.1	1.3	3.7	1.1	1.4	3.8	1.2	1.4	3.3	1	1.4	3.5	1.2	1.2	36	0.7	1.1	1.2	2.09	3.625	5.1	1.41	2.525
Carbon Organic (Total)	0.5		4	1	1.3	3.7	1	1.4	3.9	1.1	1.4	3.3	1	1.4	3.6	1.2	1.1	36	0.7	1.075	1.2	2.14	3.75	5.3	1.54	2.675
Chlorophyll-a mg/m3	0.2		0.3	0.7	0.7	0.6	0.5	0.5	<0.2	2.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.8	36	0.2	0.2	0.3	0.922	0.9	7.2	1.53	0.7
Pheophytin-a mg/m3	0.2		0.3	0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.6	<0.2	<0.2	0.4	1	2.7	<0.2	36	0.2	0.2	0.2	0.453	0.225	2.7	0.578	0.025
Semi Volatile Organics																										
Phenol	0.001		0.002	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	0.001	<0.001	36	0.001	0.001	0.001	0.00103	0.001	0.002	0.000167	0

I:\1\02\00181\34\A\Report\Report 6 - 2014 CREMP Monitoring Results\Rev 0\Appendices\Appendix A\[Appendix A1_02FEB'15.xlsm]A1.1 Mary R

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE NOTED.
2. AEMP - AQUATIC EFFECTS MONITORING PLAN.
3. BOLD SHADED CELLS INDICATE VALUES THAT EXCEED THE AEMP BENCHMARK CRITERIA.
4. DETECTION LIMIT VALUES DISPLAY WITH LESS THAN SYMBOL (<); STATISTICS CALCULATED USING THE DETECTION LIMIT VALUE.

REV	DATE	DESCRIPTION	PREP'D	REV'D
0	19MAR'15	ISSUED WITH REPORT NB102-181/34-6	DKK	RAC

Knight Piésold CONSULTING

TABLE A1.2

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
MARY LAKE 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:00:27

		Station ID	BL0-01-S	BL0-01-S	BL0-01-S	BL0-01-D	BL0-01-D	BL0-01-D	BL0-01-A-S	BL0-01-A-S	BL0-01-A-S	BL0-01-A-D	BL0-01-A-D	BL0-01-A-D	BL0-01-B-S	BL0-01-B-S	BL0-01-B-S	BL0-01-B-D	BL0-01-B-D	BL0-01-B-D
		Date Sampled	30/04/2014	26/07/2014	26/08/2014	30/04/2014	26/07/2014	26/08/2014	30/04/2014	26/07/2014	26/08/2014	30/04/2014	26/07/2014	26/08/2014	30/04/2014	26/07/2014	26/08/2014	30/04/2014	26/07/2014	26/08/2014
Parameter	Method Detection Limit	Mary Lake AEMP Benchmark																		
In Situ Parameters																				
Depth to Bottom (below water surface) m	...			10.2			10.2			16			16			5.3			5.3	
Oxygen Dissolved (In Situ)	...		14.9	11.1	11.5	14.2	12.3	11.8	14.6	11.3	11.8	0.73	11.9	11.7	14.3	11.1	11.8	14.1	12.2	11.9
pH (In Situ) pH	...		7.69	7.82	7.92	7.7	7.84	7.89	7.67	7.85	7.81	7.33	7.74	7.81	7.6	7.86	7.98	7.6	7.92	7.94
Secchi Depth m	...			4.25			4.25			4.6			4.6			4.6			4.6	
Specific Conductivity (In Situ) µS/cm	...				127			127			127			127			126			126
Temperature (In Situ) °C	...		0.88	12.4	4.9	1.6	6.28	4.46	1.04	12.1	4.61	2.03	5.89	4.28	0.64	10.9	4.57	1.22	7.87	4.53
Turbidity (In Situ) NTU	...																			
Physical Tests																				
Alkalinity (Total as CaCO3)	5		110	45	62	107	35	62	107	44	62	109	35	62	112	48	62	113	37	62
Conductivity µS/cm	5			94	130		73	131		93	130		74	130		101	129		78	130
Hardness as CaCO3 (Dissolved)	0.5 to 1		115	46	67	111	36	67	112	46	67	108	36	68	114	51	67	113	39	67
pH pH	1		7.32	7.88	8.03	7.28	7.74	8.05	7.28	7.86	8.04	7.09	7.75	8.04	7.39	7.92	7.99	7.35	7.78	8.05
Total Dissolved Solids	1		151	61	84	147	47	85	147	60	84	148	48	84	152	66	84	151	51	84
Total Suspended Solids	2		<2	<2	<2	<2	<2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity NTU	0.1		0.3	0.5	0.9	0.1	1.8	0.9	0.3	0.7	0.9	0.4	1.4	0.8	0.2	0.5	1	0.2	1	1
Dissolved Anions																				
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	120	7	2	2	7	1	2	7	2	2	7	1	2	7	2	2	7	1	2
Sulphate (Dissolved)	1	218	4	1	2	4	1	2	4	1	2	3	1	2	4	1	2	4	1	2
Nutrients																				
Ammonia (Total)	0.02	0.855	0.06	0.08	0.12	0.05	0.11	0.05	0.07	0.07	0.12	0.06	0.07	0.12	0.06	0.08	0.03	0.06	0.1	0.12
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.1		0.14	0.16	<0.1	0.15	0.13	<0.1	0.14	0.14	0.11	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	0.16	<0.1
Phosphorus (Nutrient) Total	0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	<0.003	0.008	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	<0.003
Dissolved Metals																				
Aluminum (Dissolved)	0.001 to 0.003		0.0025	0.005	0.004	0.0017	0.005	0.004	0.0015	0.005	0.004	0.0018	0.005	0.003	0.0013	0.004	0.004	0.0013	0.007	0.005
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00005		0.0103	0.00402	0.00499	0.0101	0.00298	0.00503	0.00994	0.00385	0.00506	0.00928	0.00299	0.00503	0.0104	0.00415	0.0051	0.0103	0.00323	0.00493
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Dissolved)	0.05		23.4	9.48	13.5	22.6	7.35	13.5	22.7	9.4	13.4	22.2	7.46	13.6	23.3	9.74	13.4	23.1	8.04	13.4
Chromium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.0002 to 0.0005		0.00098	0.0007	0.0007	0.00096	0.0005	0.0007	0.00096	0.0007	0.0009	0.00062	0.0006	0.0008	0.00092	0.0007	0.0007	0.00089	0.0006	0.0007
Iron (Dissolved)	0.01 to 0.03		<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03
Lead (Dissolved)	0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	<0.00005	<0.00005	0.00025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Dissolved)	0.0005 to 0.001		<0.0005	<0.001	<0.001	0.00052	<0.001	<0.001	0.00065	<0.001	<0.001	0.00059	<0.001	<0.001	0.00075	<0.001	<0.001	0.00082	<0.001	<0.001
Magnesium (Dissolved)	0.05 to 0.1		13.7	5.44	8.14	13.3	4.23	8.11	13.4	5.4	8.07	12.8	4.33	8.17	13.6	5.52	8.05	13.5	4.63	8.1
Manganese (Dissolved)	0.00005		0.000765	0.00096	0.00094	0.000592	0.0006	0.00085	0.000255	0.00092	0.00112	0.00066	0.00168	0.00095	0.00107	0.00111	0.00084	0.00126	0.00099	0.00082
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00005		0.00028	<0.00005	0.00007	0.000267	<0.00005	0.00006	0.000288	<0.00005	0.00007	0.000196	<0.00005	0.00008	0.000284	<0.00005	0.00007	0.000283	<0.00005	0.00007
Nickel (Dissolved)	0.0005		0.00055	<0.0005	<0.0005	0.00054	<0.0005	<0.0005	0.00054	<0.0005	<0.0005	0.00063	<0.0005	<0.0005	0.00051	<0.0005	<0.0005	0.00056	<0.0005	<0.0005
Potassium (Dissolved)	0.05 to 0.2		1.11	0.6	0.6	1.08	0.4	0.7	1.09	0.6	0.7	1.05	0.4	0.7	1.13	0.6	0.6	1.12	0.5	0.7
Selenium (Dissolved)	0.0001 to 0.001		<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001
Silicon (Dissolved)	0.05 to 0.1		0.92	0.5	0.7	0.91	0.4	0.7	0.9	0.5	0.7	1.65	0.5	0.7	0.94	0.5	0.7	0.93	0.4	0.7
Silver (Dissolved)	1E-006 to 1E-005		<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001
Sodium (Dissolved)	0.0012 to 0.05		3.22	0.9	1.44	3.16	0.59	1.48	3.2	0.86	1.49	3.07	0.6	1.5	3.25	0.92	1.5	3.24	0.69	1.5
Strontium (Dissolved)	0.0001 to 0.0004		0.0151	0.0055	0.0077	0.0148	0.004	0.0077	0.015	0.0054	0.0077	0.0146	0.0041	0.0076	0.0148	0.0055	0.0075	0.0155	0.0045	0.0075
Thallium (Dissolved)	1E-005 to 0.0001		<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00001		0.00283	0.00052	0.00112	0.0026	0.00033	0.00111	0.00264	0.00049	0.00115	0.00193	0.0003	0.00113	0.00258	0.00057	0.00113	0.00271	0.00038	0.0011
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	0.00033 to 0.003		0.0012	<0.003	<0.003	0.0013	0.006	0.003	0.0012	<0.003	0.003	0.0012	<0.003	<0.003	<0.00033	<0.003	<0.003	<0.00033	<0.003	<0.003
Total Metals																				
Aluminum (Total)	0.001 to 0.003	0.13	<0.001	0.029	0.027	0.0031	0.052	0.03	0.003	0.028	0.033	<0.001	0.051	0.031	0.0031	0.024	0.034	<0.001	0.043	0.033
Antimony (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Total)	0.00005		0.0106	0.0042	0.00524	0.0101	0.00316	0.00528	0.01	0.00415	0.00536	0.00929	0.00343	0.0053	0.0104	0.00481	0.00524	0.0102	0.00365	0.00524
Beryllium (Total)	2E-005 to 0.0005		<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	0.01		0.023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Total)	0.00001	0.00006	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Total)	0.05		22.6	9.74	13.3	22.3	7.53	13.2	22.3	9.62	13.2	22.5	7.63	13.3	23.2	10.5	13.1	23.2	8.13	13.1
Chromium (Total)	2E-005 to 0.0005	0.0005	0.00018	<0.0005	<0.0005	0.00018	<0.0005	<0.0005	0.00014	<0.0005	<0.0005	0.00012	<0.0005	<0.0005	0.00016	<0.0005	<0.0005	0.00013	<0.0005	<0.0005
Total Trivalent Chromium (Cr III)																				
Total Hexavalent Chromium (Cr(VII))																				
Cobalt (Total)	0.0001	0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Total)	0.0002 to 0.0005	0.0024	0.00116	0.0007	0.0008	0.00102	0.0006	0.0008	0.00102	0.0012	0.0008	0.00068	0.0005	0.0008	0.00099	0.0007	0.0008	0.00107	0.0006	0.0008
Iron (Total)	0.003 to 0.03	0.3	0.017	<0.03	0.04	0.018	0.06	0.04	<0.003	0.03	0.04	0.064	0.06	0.04	0.026	<0.03	0.04	0.026	0.04	0.04
Lead (Total)	0.00005	0.001	0.00006	<0.00005	<0.00005	<0.00005	0.00007	<0.00005	0.00084	<0.00005	0.00006	<0.00005	0.00006	<0.00005	0.00018	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Total)	5E-005 to 0.001		0.0012	<0.001	<0.001	0.00069	<0.001	<0.001	0.00071	<0.001	<0.001	0.00064	<0.001	<0.001	0.0008	<0.001	<0.001	0.00083	<0.001	<0.001
Magnesium (Total)	0.05 to 0.1		13.4	5.61	8.07	12.9	4.42	7.99	13	5.64	8.06	13	4.48	8.07	13.6	6.05	7.94	13.7	4.79	7.95
Manganese (Total)	0.00005		0.00169	0.0014	0.00167	0.00183	0.00221	0.00183	0.000666	0.0015	0.00155	0.00989	0.00346	0.00177	0.00235	0.00145	0.00161	0.00239	0.00192	0.00159
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.00005		0.000393	<0.00005	0.00006	0.00027	<0.00005	0.00007	0.000277	<0.00005	0.00006	0.000201	<0.00005	0.00007	0.000269	<0.00005	<0.00005	0.000288	<0.00005	0.00005
Nickel (Total)	0.0005	0.025	0.00056	<0.0005	<0.0005	0.00058	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	0.00064	<0.0005	<0.0005	0.00059	<0.0005	<0.0005	0.0006	<0.0005	<0.0005
Potassium (Total)	0.05 to 0.2		1.16	0.6	0.7	1.06	0.4	0.7	1.08	0.6	0.7	1.01	0.3	0.7	1.14	0.6	0.7	1.12	0.3	0.6
Selenium (Total)	1E-005 to 0.001		<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001
Silicon (Total)	0.05 to 0.1		0.92	0.6	0.8	0.89	0.6	0.8	0.88	0.5	0.8	1.72	0.6	0.8	0.95	0.6	0.8	0.95	0.6	0.8
Silver (Total)	1E-006 to 1E-005	0.0001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001
Sodium (Total)	0.0012 to 0.05		3.36	0.85	1.44	3.13	0.49	1.47	3.2	0.82	1.48	3.03	0.53	1.48	3.33	1	1.48	3.27	0.61	1.48
Strontium (Total)	0.0001 to 0.0004		0.0149	0.0058	0.0078	0.0137	0.0042	0.0078	0.0139	0.0056	0.0076	0.0135	0.0044	0.0078	0.0142	0.0064	0.0077	0.0148	0.0049	0.0077
Thallium (Total)	1E-006 to 0.0001	0.0008	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Total)	0.00001		0.00273	0.0005	0.00113	0.0024	0.00033	0.00115	0.00254	0.00049	0.00114	0.00182	0.00031	0.00115	0.00254	0.00062	0.00115	0.00266	0.00037	0.00111
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	0.03	<0.003	<0.003	0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0414	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																				
Carbon Organic (Dissolved)	0.5		2	1.2	1.4	1.8	1.2	1.4	2	1.2	1.4	1.8	1.1	1.4	1.9	1.2	1.4	1.8	1.1	1.4
Carbon Organic (Total)	0.5		2	1.8	1.7	2	1.6	1.7	2.1	1.9	1.6	1.9	1.4	1.4	2.1	1.7	1.6	2.1	1.8	1.7
Chlorophyll-a mg/m3	0.2		<0.2	<0.2	1.1	<0.2	<0.2	0.4	<0.2	3.1	<0.2	<0.2	<0.2	0.3	<0.2	1.6	<0.2	2.5	<0.2	0.9
Pheophytin-a mg/m3	0.2		<0.2	<0.2	0.3	<0.2	<0.2	0.3	<0.2	<0.2	2.2	<0.2	<0.2	0.5	<0.2	<0.2	0.9	<0.2	<0.2	0.8
Semi Volatile Organics																				
Phenol	0.001 to 0.002		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002

TABLE A1.2

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
MARY LAKE 2014 WATER QUALITY RESULTS

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Parameter	Method Detection Limit	Mary Lake AEMP Benchmark	BL0-03-S	BL0-03-S	BL0-03-S	BL0-03-D	BL0-03-D	BL0-03-D	BL0-04-S	BL0-04-S	BL0-04-S	BL0-04-D	BL0-04-D	BL0-04-D	BL0-05-S	BL0-05-S	BL0-05-S	BL0-05-D	BL0-05-D	BL0-05-D	BL0-05-A-S	BL0-05-A-S	BL0-05-A-S
Date Sampled			01/05/2014	26/07/2014	25/08/2014	01/05/2014	26/07/2014	25/08/2014	01/05/2014	27/07/2014	25/08/2014	01/05/2014	27/07/2014	25/08/2014	02/05/2014	27/07/2014	26/08/2014	02/05/2014	27/07/2014	26/08/2014	02/05/2014	27/07/2014	26/08/2014
In Situ Parameters																							
Depth to Bottom (below water surface) m	...			15.3			15.3			21.8			21.8		20.5	21.6		20.5	21.6			12.3	
Oxygen Dissolved (In Situ)	...		15.1	12.6	11.8	13.3	12.2	11.6	15.1	12		12.5	11.9		15.5	12	11.2	12.1	11.9	11.2	15.5	11.6	11.3
pH (In Situ) pH	...		7.53	7.73	7.5	7.42	7.61	7.5	7.49	7.45		7.47	7.38		7.99	7.45	7.6	7.82	7.35	7.58	7.99	7.42	7.67
Secchi Depth m	...			2.45			2.45			2.9			2.9			1.05			1.05			1.5	
Specific Conductivity (In Situ) µS/cm	...				67			67									69			75	86		76
Temperature (In Situ) °C	...		0.88	6.25	6.14	1.49	4.96	6.06	0.95	9.68		2.09	4.05		0.79	7.31	5.89	1.99	4.02	5.56	0.79	9.63	5.7
Turbidity (In Situ) NTU	...																						
Physical Tests																							
Alkalinity (Total as CaCO3)	5		41	25	32	38	25	32	41	26	32	35	24	34	43	33	42	37	24	37	43	28	36
Conductivity µS/cm	5			54	70		53	70		56	70		51	73		72	71		52	82		60	78
Hardness as CaCO3 (Dissolved)	0.5 to 1		40.6	26	35	37.7	25	34	42.3	28	34	37.2	24	36	42.6	32	34	36.8	25	40	42.6	30	38
pH pH	1		7.13	7.58	7.69	6.75	7.58	7.7	6.83	7.57	7.7	6.76	7.47	7.71	6.83	7.7	7.81	6.77	7.53	7.86	6.83	7.6	7.83
Total Dissolved Solids	1		56	35	46	51	34	46	58	36	46	51	33	47	58	47	46	51	34	53	58	39	51
Total Suspended Solids	2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity NTU	0.1		0.2	1	0.5	0.2	2.2	1	0.1	1.6	3.2	0.2	3.3	0.4	0.2	5.8	1.3	0.2	3.5	2.5	0.1	5.6	2.1
Dissolved Anions																							
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	120	3	1	1	2	1	1	3	1	1	2	1	1	3	1	2	2	1	2	3	1	2
Sulphate (Dissolved)	1	218	1	1	1	1	1	1	2	1	1	1	1	1	2	2	1	1	1	2	2	1	2
Nutrients																							
Ammonia (Total)	0.02	0.855	0.05	0.13	0.09	0.06	0.07	0.04	0.05	0.08	0.07	0.06	0.05	0.05	0.05	0.12	0.04	0.05	0.03	0.05	0.06	0.21	0.12
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.1		<0.1	0.16	0.2	<0.1	0.11	0.32	0.14	0.14	0.18	<0.1	0.11	0.29	0.18	0.17	<0.1	<0.1	<0.1	<0.1	0.13	0.19	<0.1
Phosphorus (Nutrient) Total	0.003		<0.003	<0.003	0.007	0.011	<0.003	0.011	<0.003	<0.003	0.013	<0.003	0.006	0.018	<0.003	0.004	<0.003	<0.003	<0.003	0.006	0.004	<0.003	<0.003
Dissolved Metals																							
Aluminum (Dissolved)	0.001 to 0.003		0.0015	0.007	0.006	0.0022	0.006	0.007	0.0014	0.009	0.006	0.0023	0.009	0.008	0.0018	0.019	0.007	0.0023	0.007	0.008	0.0018	0.012	0.007
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00005		0.00407	0.00242	0.00308	0.00404	0.0023	0.00311	0.00452	0.00263	0.00322	0.00411	0.00252	0.00352	0.00454	0.00377	0.00332	0.00399	0.00245	0.00405	0.00455	0.0033	0.00375
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Dissolved)	0.05		8.34	5.37	7.4	7.74	5.12	7.35	8.72	5.64	7.34	7.65	5.06	7.69	8.73	6.77	6.82	7.57	5.02	8.16	8.75	6.13	7.82
Chromium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.0002 to 0.0005		0.00052	<0.0005	0.0006	0.00055	<0.0005	0.0006	0.00051	<0.0005	0.0006	0.00048	<0.0005	0.0006	0.00051	0.001	0.0005	0.00047	<0.0005	0.0006	0.00059	<0.0005	0.0006
Iron (Dissolved)	0.01 to 0.03		<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03
Lead (Dissolved)	0.00005		<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Dissolved)	0.0005 to 0.001		0.00058	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001
Magnesium (Dissolved)	0.05 to 0.1		4.8	3.1	3.91	4.46	2.96	3.88	4.98	3.26	3.86	4.4	2.88	4.01	5.05	3.76	4.08	4.35	2.91	4.82	5.04	3.45	4.6
Manganese (Dissolved)	0.00005		0.000239	0.00129	0.0003	0.000227	0.00111	0.00024	0.000195	0.00122	0.00028	0.000196	0.00102	0.00029	0.000207	0.00075	0.00024	0.000319	0.00099	0.00027	0.000233	0.00212	0.00041
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00005		0.000127	<0.00005	<0.00005	0.000109	<0.00005	<0.00005	0.000124	<0.00005	<0.00005	0.000118	<0.00005	0.00007	0.000126	<0.00005	<0.00005	0.000128	<0.00005	0.00008	0.000136	<0.00005	0.00007
Nickel (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (Dissolved)	0.05 to 0.2		0.556	0.3	0.4	0.521	0.3	0.4	0.582	0.4	0.4	0.52	0.4	0.4	0.579	0.5	0.5	0.501	0.3	0.6	0.608	0.5	0.6
Selenium (Dissolved)	0.0001 to 0.001		<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001
Silicon (Dissolved)	0.05 to 0.1		0.31	0.3	0.5	0.31	0.3	0.5	0.31	0.4	0.5	0.36	0.4	0.5	0.32	0.6	0.4	0.32	0.3	0.6	0.31	0.5	0.5
Silver (Dissolved)	1E-006 to 1E-005		<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001
Sodium (Dissolved)	0.0012 to 0.05		1.21	0.63	0.6	1.14	0.62	0.59	1.26	0.62	0.61	1.13	0.62	0.67	1.27	0.8	0.96	1.11	0.64	1.08	1.32	0.72	1.03
Strontium (Dissolved)	0.0001 to 0.0004		0.00612	0.0034	0.0046	0.00568	0.0034	0.0047	0.00652	0.0036	0.005	0.00575	0.0036	0.0054	0.00651	0.0054	0.005	0.00546	0.0034	0.0061	0.00664	0.0047	0.0058
Thallium (Dissolved)	1E-005 to 0.0001		<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00001		0.000655	0.00028	0.00042	0.000575	0.00029	0.00042	0.000648	0.00029	0.00047	0.000573	0.00026	0.00054	0.000666	0.00042	0.00052	0.000574	0.00025	0.00069	0.000681	0.00034	0.00068
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	0.00033 to 0.003		<0.00033	<0.003	<0.003	0.0023	<0.003	<0.003	0.0023	<0.003	<0.003	0.0026	<0.003	<0.003	0.0013	<0.003	<0.003	0.0017	0.01	<0.003	0.0015	<0.003	<0.003
Total Metals																							
Aluminum (Total)	0.001 to 0.003	0.13	0.0032	0.068	0.033	0.0065	0.07	0.028	0.0032	0.048	0.047	0.0039	0.08	0.065	0.0031	0.118	0.041	0.0032	0.12	0.07	0.0031	0.145	0.06
Antimony (Total)	0.0001		<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Total)	0.00005		0.00448	0.00289	0.00324	0.00399	0.00282	0.00326	0.0048	0.00274	0.00345	0.00381	0.00288	0.00382	0.00434	0.00458	0.00357	0.0039	0.00312	0.00431	0.00461	0.00423	0.00403
Beryllium (Total)	2E-005 to 0.0005		<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Total)	0.00001	0.00006	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Total)	0.05		8.61	5.44	7.16	8.13	5.3	7.19	8.94	5.66	7.26	7.49	5.13	7.61	8.51	6.88	7.02	7.42	5.08	8.17	8.58	6.1	7.8
Chromium (Total)	2E-005 to 0.0005	0.0005	0.00011	<0.0005	<0.0005	0.00015	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005
Total Trivalent Chromium (Cr III)																							
Total Hexavalent Chromium (Cr(VII))																							
Cobalt (Total)	0.0001	0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Total)	0.0002 to 0.0005	0.0024	0.00068	0.0006	0.0007	0.00123	0.0005	0.0006	0.00059	0.0005	0.0006	0.00107	0.0006	0.0007	0.00061	0.0008	0.0006	0.00051	0.0006	0.0007	0.00059	0.0008	0.0007
Iron (Total)	0.003 to 0.03	0.3	<0.003	0.08	0.04	<0.003	0.09	<0.03	<0.003	0.04	0.04	<0.003	0.09	0.05	<0.003	0.1	0.05	<0.003	0.15	0.07	<0.003	0.14	0.07
Lead (Total)	0.00005	0.001	0.00038	0.0001	0.00008	0.00016	0.00008	<0.00005	<0.00005	<0.00005	0.00012	<0.00005	0.00014	0.00007	<0.00005	0.00015	0.00007	<0.00005	0.00013	0.00009	0.00032	0.00014	0.0001
Lithium (Total)	5E-005 to 0.001		<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001
Magnesium (Total)	0.05 to 0.1		5.11	3.22	3.77	4.47	3.11	3.83	5.23	3.36	3.82	4.4	3.04	3.99	4.84	3.97	4.13	4.26	3	4.77	4.92	3.57	4.57
Manganese (Total)	0.00005		0.000392	0.00291	0.00144	0.000506	0.00279	0.00119	0.000284	0.00205	0.00138	0.000389	0.00327	0.00154	0.000354	0.00195	0.00147	0.000614	0.00376	0.00162	0.000362	0.00395	0.00206
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.00005		0.000139	0.00027	<0.00005	0.000133	0.00007	<0.00005	0.000151	<0.00005	<0.00005	0.000128	0.00012	0.00006	0.000145	<0.00005	<0.00005	0.000135	<0.00005	0.00007	0.000143	<0.00005	0.00006
Nickel (Total)	0.0005	0.025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005
Potassium (Total)	0.05 to 0.2		0.573	0.4	0.4	0.522	0.4	0.3	0.6	0.4	0.3	0.498	0.5	0.3	0.583	0.5	0.6	0.497	0.5	0.6	0.579	0.6	0.5
Selenium (Total)	1E-005 to 0.001		<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001
Silicon (Total)	0.05 to 0.1		0.32	0.4	0.5	0.32	0.4	0.5	0.31	0.4	0.5	0.35	0.5	0.6	0.31	0.7	0.5	0.32	0.5	0.7	0.32	0.8	0.6
Silver (Total)	1E-006 to 1E-005	0.0001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001
Sodium (Total)	0.0012 to 0.05		1.26	0.56	0.6	1.17	0.54	0.6	1.33	0.58	0.61	1.11	0.6	0.66	1.28	0.8	0.92	1.09	0.55	1.04	1.28	0.68	0.99
Strontium (Total)	0.0001 to 0.0004		0.00661	0.0037	0.0047	0.00608	0.0034	0.0048	0.00681	0.0037	0.005	0.00578	0.0036	0.0055	0.00663	0.0056	0.005	0.00572	0.0035	0.0062	0.00668	0.0049	0.0058
Thallium (Total)	1E-006 to 0.0001	0.0008	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Total)	0.00001		0.000671	0.00031	0.00044	0.000604	0.00032	0.00043	0.000688	0.00029	0.00047	0.000576	0.00033	0.00057	0.000707	0.00046	0.00056	0.000593	0.00032	0.00074	0.000701	0.00037	0.0007
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	0.03	<0.003	<0.003	<0.003	0.0082	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																							
Carbon Organic (Dissolved)	0.5		1.1	1.2	0.9	1	1.2	0.9	1.2	1.2	0.8	0.9	1.2	0.8	0.7	1	1.1	<0.5	1.2	1.1	0.7	1.2	1.2
Carbon Organic (Total)	0.5		1.2	1.4	1.2	1.1	1.4	1.2	1.4	1.6	1.2	1.1	1.4	1.1	0.9	1.1	1.4	0.7	1.2	1.3	1	1.5	1.6
Chlorophyll-a mg/m3	0.2		<0.2	<0.2	0.8	<0.2	<0.2	<0.2	<0.2	1	1.5	<0.2	1.2	<0.2	<0.2	1.8	2	<0.2	<0.2	<0.2	<0.2	0.8	0.3
Pheophytin-a mg/m3	0.2		<0.2	<0.2	0.4	<0.2	<0.2	1.5	<0.2	<0.2	<0.2	<0.2	<0.2	0.7	<0.2	<0.2	<0.2	<0.2	<0.2	2.2	<0.2	<0.2	2.4
Semi Volatile Organics																							
Phenol	0.001 to 0.002		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001

Knight Piésold
CONSULTING

TABLE A1.2

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
MARY LAKE 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:00:27

Parameter	Method Detection Limit	Mary Lake AEMP Benchmark	BL0-05-A-D	BL0-05-A-D	BL0-05-A-D	BL0-05-B-S	BL0-05-B-S	BL0-05-B-S	BL0-05-B-D	BL0-05-B-D	BL0-05-B-D	BL0-06-S	BL0-06-S	BL0-06-S	BL0-06-D	BL0-06-D	BL0-06-D	BL0-09-S	BL0-09-S	BL0-09-S	BL0-09-D	BL0-09-D	BL0-09-D
Date Sampled			02/05/2014	27/07/2014	26/08/2014	01/05/2014	27/07/2014	26/08/2014	01/05/2014	27/07/2014	26/08/2014	02/05/2014	27/07/2014	26/08/2014	02/05/2014	27/07/2014	26/08/2014	02/05/2014	27/07/2014	25/08/2014	02/05/2014	27/07/2014	25/08/2014
In Situ Parameters																							
Depth to Bottom (below water surface) m	...			12.3			8.25			8.25			9.33			9.33			30.2			30.2	
Oxygen Dissolved (In Situ)	...		12.1	12.1	11.2	16.2	12	11.2	16.2	12.1	11.2	15.8	11.8	11.1	15.3	10.9	11.2	15.4	12	11.8	8.43	11.9	11.5
pH (In Situ) pH	...		7.82	7.39	7.6	7.57	7.52	7.65	7.54	7.43	7.53	7.49	7.59	7.48	7.48	7.47	7.35	7.57	7.41	7.68	7.82	7.33	7.32
Secchi Depth m	...			1.5			1.25			1.25			2.9			2.9			2.55			2.55	
Specific Conductivity (In Situ) µS/cm	...		78		78			69			69	87		66	89		67	85		67	78		69
Temperature (In Situ) °C	...		1.99	4.16	5.28	0.85	7.52	5.88	1.13	4.21	5.8	0.81	5.67	5.93	1.23	4.51	5.87	0.86	7.63	5.82	2.45	3.96	5.68
Turbidity (In Situ) NTU	...																	-1.3			-1.2		
Physical Tests																							
Alkalinity (Total as CaCO3)	5		40	23	37	43	24	33	41	24	33	44	24	32	41	24	31	39	26	32	38	23	32
Conductivity µS/cm	5			51	80		54	71		52	71		52	68		51	68		56	69		50	70
Hardness as CaCO3 (Dissolved)	0.5 to 1		40	24	40	43.7	28	34	44.8	25	34	43.7	26	34	42.7	24	32	42.3	26	34	37.1	24	35
pH pH	1		6.8	7.46	7.84	6.83	7.6	7.86	6.85	7.56	7.81	6.85	7.5	7.83	6.81	7.48	7.78	6.84	7.55	7.7	6.74	7.45	7.63
Total Dissolved Solids	1		54	33	52	59	35	46	60	34	46	60	34	44	58	33	44	58	36	45	53	32	46
Total Suspended Solids	2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity NTU	0.1		0.1	5	2.5	0.3	3.8	1.2	0.2	3.4	1.6	0.2	1.7	1.2	0.5	2.4	1.2	0.2	2	0.5	0.2	3.7	1.5
Dissolved Anions																							
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	120	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	1	3	1	1
Sulphate (Dissolved)	1	218	1	1	2	2	1	1	2	1	1	2	1	1	2	1	2	2	1	1	1	1	1
Nutrients																							
Ammonia (Total)	0.02	0.855	0.05	0.06	0.12	0.06	0.05	0.12	0.06	0.07	0.16	0.05	0.1	0.1	0.05	0.08	0.09	0.05	0.07	0.04	0.05	0.07	0.03
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.1		<0.1	0.14	<0.1	0.21	<0.1	<0.1	<0.1	0.12	0.5	<0.1	0.15	<0.1	<0.1	0.13	0.43	0.16	0.14	<0.1	<0.1	0.15	<0.1
Phosphorus (Nutrient) Total	0.003		<0.003	0.008	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	0.011
Dissolved Metals																							
Aluminum (Dissolved)	0.001 to 0.003		0.0032	0.011	0.007	0.0016	0.01	0.006	0.0026	0.008	0.006	0.0022	0.006	0.005	0.002	0.008	0.006	0.0023	0.006	0.007	0.0024	0.008	0.013
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00005		0.00431	0.0026	0.00376	0.00454	0.00281	0.00327	0.00488	0.00249	0.00342	0.00463	0.00223	0.00313	0.00461	0.0024	0.00321	0.00447	0.0024	0.00331	0.00418	0.00241	0.00344
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Dissolved)	0.05		8.24	4.9	8.24	9	5.7	6.85	9.21	5.18	6.82	8.97	5.03	6.88	8.79	4.96	6.52	8.69	5.41	7.3	7.61	4.91	7.48
Chromium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.0002 to 0.0005		0.00056	<0.0005	0.0006	0.00056	0.0005	0.0006	0.00062	<0.0005	0.0005	0.00058	0.0006	0.0005	0.00054	<0.0005	0.0006	0.00055	<0.0005	0.0006	0.00049	<0.0005	0.0007
Iron (Dissolved)	0.01 to 0.03		<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03
Lead (Dissolved)	0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006
Lithium (Dissolved)	0.0005 to 0.001		<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001
Magnesium (Dissolved)	0.05 to 0.1		4.71	2.8	4.77	5.15	3.24	4.1	5.3	2.98	4.11	5.17	2.88	3.99	5.05	2.84	3.93	5.01	3.13	3.81	4.39	2.81	3.91
Manganese (Dissolved)	0.00005		0.000266	0.00098	0.00048	0.00025	0.00121	0.00024	0.000364	0.00102	0.00024	0.000262	0.00126	0.00024	0.000323	0.00114	0.00022	0.000242	0.00119	0.0003	0.000261	0.00102	0.00049
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00005		0.000125	<0.00005	0.00007	0.000138	<0.00005	0.00005	0.000136	<0.00005	0.00007	0.00015	<0.00005	<0.00005	0.000128	<0.00005	<0.00005	0.000117	<0.00005	0.00008	0.000101	<0.00005	0.00008
Nickel (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (Dissolved)	0.05 to 0.2		0.553	0.3	0.6	0.597	0.4	0.5	0.688	0.3	0.5	0.607	0.4	0.5	0.589	0.4	0.5	0.583	0.4	0.4	0.507	0.3	0.4
Selenium (Dissolved)	0.0001 to 0.001		<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001
Silicon (Dissolved)	0.05 to 0.1		0.3	0.4	0.6	0.32	0.4	0.4	0.31	0.3	0.4	0.32	0.3	0.4	0.32	0.3	0.4	0.31	0.3	0.5	0.75	0.3	0.5
Silver (Dissolved)	1E-006 to 1E-005		<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001
Sodium (Dissolved)	0.0012 to 0.05		1.21	0.6	1.04	1.3	0.62	0.96	1.48	0.6	0.95	1.31	0.58	0.92	1.29	0.58	0.93	1.26	0.58	0.61	1.28	0.59	0.63
Strontium (Dissolved)	0.0001 to 0.0004		0.00606	0.0037	0.0059	0.00686	0.004	0.0049	0.00694	0.0035	0.005	0.00677	0.0033	0.0048	0.00656	0.0033	0.0048	0.00643	0.0035	0.0051	0.00599	0.0035	0.0052
Thallium (Dissolved)	1E-005 to 0.0001		<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00001		0.000633	0.00026	0.0007	0.000687	0.00032	0.00051	0.000703	0.00027	0.00053	0.000702	0.00027	0.00047	0.000647	0.00026	0.00048	0.000675	0.00029	0.00049	0.000438	0.00026	0.0005
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	0.00033 to 0.003		0.0029	<0.003	<0.003	<0.00033	<0.003	<0.003	0.0025	<0.003	<0.003	0.0019	<0.003	<0.003	0.0021	<0.003	<0.003	0.0016	<0.003	<0.003	0.0019	<0.003	<0.003
Total Metals																							
Aluminum (Total)	0.001 to 0.003	0.13	0.0036	0.116	0.073	<0.001	0.107	0.038	0.0052	0.138	0.061	0.0038	0.046	0.042	0.0217	0.083	0.044	<0.001	0.06	0.059	0.0127	0.096	0.056
Antimony (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Total)	0.00005		0.00409	0.00328	0.00427	0.00443	0.00333	0.00361	0.00475	0.00354	0.00362	0.00456	0.00258	0.00333	0.00459	0.0029	0.0035	0.00456	0.00302	0.00357	0.00454	0.00312	0.00367
Beryllium (Total)	2E-005 to 0.0005		<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Total)	0.00001	0.00006	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Total)	0.05		8.13	5.08	8.05	9.18	5.39	7	9.1	5.06	7.03	8.85	5.17	6.73	8.77	5.1	6.77	8.62	5.62	7.12	8.72	5.05	7.27
Chromium (Total)	2E-005 to 0.0005	0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	0.00013	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	0.00015	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	0.00027	<0.0005	<0.0005
Total Trivalent Chromium (Cr III)																							
Total Hexavalent Chromium (Cr(VIII))																							
Cobalt (Total)	0.0001	0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Total)	0.0002 to 0.0005	0.0024	0.00056	0.0007	0.0008	0.00064	0.0007	0.0006	0.0006	0.0007	0.0007	0.00061	0.0005	0.0006	0.00065	0.0006	0.0006	0.0006	0.0006	0.0008	0.00069	0.0006	0.0007
Iron (Total)	0.003 to 0.03	0.3	<0.003	0.13	0.09	<0.003	0.14	0.05	0.01	0.18	0.06	<0.003	0.05	0.04	0.02	0.08	0.05	<0.003	0.06	0.05	0.015	0.1	0.04
Lead (Total)	0.00005	0.001	<0.00005	0.00015	0.00014	<0.00005	0.00014	0.00007	0.00007	0.00016	0.00007	0.00008	<0.00005	0.00007	0.00021	0.0001	0.00006	<0.00005	0.00008	0.00017	0.00035	0.00013	0.00006
Lithium (Total)	5E-005 to 0.001		<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.001	<0.001
Magnesium (Total)	0.05 to 0.1		4.71	3.04	4.7	5.4	3.15	4.1	5.32	2.96	4.12	5.1	3.05	3.97	5.08	3.03	3.97	4.94	3.31	3.71	4.98	3	3.82
Manganese (Total)	0.00005		0.000386	0.00371	0.00248	0.000342	0.00338	0.00152	0.000724	0.00333	0.00184	0.000385	0.00216	0.00136	0.000769	0.00265	0.00138	0.000355	0.00224	0.00162	0.000635	0.00342	0.00143
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.00005		0.000139	<0.00005	0.00005	0.000154	<0.00005	0.00009	0.000153	<0.00005	0.00005	0.000151	<0.00005	0.0001	0.000138	<0.00005	0.00013	0.000137	<0.00005	0.00006	0.000155	<0.00005	0.00006
Nickel (Total)	0.0005	0.025	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00056	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium (Total)	0.05 to 0.2		0.525	0.5	0.6	0.617	0.4	0.5	0.591	0.4	0.5	0.606	0.4	0.5	0.575	0.5	0.5	0.58	0.4	0.4	0.603	0.5	0.4
Selenium (Total)	1E-005 to 0.001		<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001
Silicon (Total)	0.05 to 0.1		0.31	0.6	0.6	0.33	0.5	0.5	0.31	0.6	0.5	0.34	0.4	0.5	0.37	0.5	0.5	0.32	0.5	0.6	0.34	0.5	0.6
Silver (Total)	1E-006 to 1E-005	0.0001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001
Sodium (Total)	0.0012 to 0.05		1.18	0.56	1.02	1.36	0.58	0.91	1.34	0.53	0.92	1.31	0.57	0.88	1.28	0.56	0.88	1.28	0.59	0.62	1.3	0.61	0.63
Strontium (Total)	0.0001 to 0.0004		0.00626	0.0038	0.006	0.00726	0.0038	0.005	0.00719	0.0036	0.0051	0.00688	0.0036	0.0047	0.00681	0.0038	0.0049	0.00664	0.004	0.0052	0.00679	0.0038	0.0051
Thallium (Total)	1E-006 to 0.0001	0.0008	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Total)	0.00001		0.000653	0.00031	0.00074	0.000714	0.00034	0.00056	0.000718	0.00032	0.00055	0.000709	0.00027	0.00049	0.000673	0.0003	0.00051	0.000694	0.00031	0.0005	0.000718	0.0003	0.00052
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	0.03	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																							
Carbon Organic (Dissolved)	0.5		0.6	1.1	1.2	1.4	1.2	1.1	1.4	1.2	1.2	0.7	1.1	1.1	0.7	1.2	1.1	0.7	1.1	0.8	0.8	1.2	0.7
Carbon Organic (Total)	0.5		0.8	1.7	1.3	1.4	1.7	1.4	1.4	1.7	1.4	1.1	1.3	1.3	0.9	2	1.3	0.9	1.8	1.2	0.8	1.7	1.2
Chlorophyll-a mg/m3	0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.2	1.9	1.2	1.1	<0.2	1.3	0.9	<0.2	1.7	<0.2	8	1.9	1.5
Pheophytin-a mg/m3	0.2		<0.2	0.7	2.1	<0.2	<0.2	2.1	<0.2	<0.2	0.4	<0.2	<0.2	0.4	<0.2	<0.2	1.8	<0.2	<0.2	1.4	<0.2	<0.2	0.3
Semi Volatile Organics																							
Phenol	0.001 to 0.002		<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001

I:\1\02\00181\34\A\Report\Report 6 - 2014 CREMP Monitoring Results\Rev 0\Appendices\Appendix A\[Appendix A1_02FEB'15.xlsm]A1.2 Mary L

0	19MAR'15	ISSUED WITH REPORT NB102-181/34-6	DKK	RAC
REV	DATE	DESCRIPTION	PREP'D	REV'D

Knight Piésold
CONSULTING

TABLE A1.3

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
CAMP LAKE TRIBUTARIES 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:00:27

Parameter	Method Detection Limit	CLT AEMP Benchmark	Samples Collected	Minimum	25th Percentile/ Quartile 1	Median/ 50th Percentile/ Quartile 2	Mean	75th Percentile/ Quartile 3	Maximum	Standard Deviation	Inter-Quartile Range
		Station ID									
		Date Sampled									
In Situ Parameters											
Conductivity (In Situ) µS/cm	...		4	82	105.25	114.5	134	143.5	226	63.1	38.25
Oxygen Dissolved (In Situ %) %	...		16	95	97.4	98.1	98.4	99.825	101.6	1.86	2.425
Oxygen Dissolved (In Situ)	...		16	10.01	11.5075	12.89	12.6	13.8975	14.3	1.43	2.39
pH (In Situ) pH	...		16	7.32	7.5825	7.71	7.75	7.98	8.25	0.254	0.3975
Redox Potential (In Situ) mV	...		2	10.354	10.413	10.472	10.5	10.531	10.59	0.167	0.118
Specific Conductivity (In Situ) µS/cm	...		13	33	68	117	115	150	248	63.4	82
Temperature (In Situ) °C	...		16	0.05	1.235	3.24	5.31	9.1375	15.12	5.12	7.9025
Turbidity (In Situ) NTU	...		12	-0.1	1.975	4.85	3.96	5.15	7.4	2.18	3.175
Physical Tests											
Alkalinity (Total as CaCO3)	5		18	16	35.25	64	60.7	79.5	117	27.4	44.25
Conductivity µS/cm	5		18	36	78.75	134.5	145	187.75	375	84.8	109
Hardness as CaCO3 (Dissolved)	0.5 to 1		18	16.3	38.1	67.5	68.6	92	158	36.5	53.9
Hardness as CaCO3 (Total)	0.5 to 1		18	16.1	38.15	69.5	68.7	90.75	155	36	52.6
pH pH	1		18	7.5	7.77	7.945	7.9	8.035	8.09	0.184	0.265
Total Dissolved Solids	1		18	23	51	87.5	94.1	122.25	244	55.2	71.25
Total Suspended Solids	2		18	2	2	2	2.67	2	14	2.83	0
Turbidity NTU	0.1		18	0.1	0.4	0.7	1.09	1.5	4.9	1.17	1.1
Dissolved Anions											
Bromide (Dissolved)	0.25		18	0.25	0.25	0.25	0.25	0.25	0.25	0	0
Chloride (Dissolved)	1	120	18	1	2	4.5	7.44	8.25	37	9.63	6.25
Sulphate (Dissolved)	1	218	18	1	1	1	1.83	2	7	1.54	1
Nutrients											
Ammonia (Total)	0.02	0.855	18	0.03	0.04	0.085	0.0883	0.11	0.32	0.0678	0.07
Nitrate (as N)	0.1	13	18	0.1	0.1	0.1	0.216	0.18	1	0.245	0.08
Nitrate+Nitrite (Dissolved)	0.1		18	0.1	0.1	0.1	0.225	0.19	1.07	0.264	0.09
Nitrite (as N)	0.005	0.06	18	0.005	0.005	0.005	0.0127	0.01	0.067	0.0171	0.005
Nitrogen Kjeldahl (Total)	0.1		18	0.1	0.1475	0.2	0.218	0.265	0.43	0.0954	0.1175
Phosphorus (Nutrient) Total	0.003		18	0.003	0.003	0.003	0.00322	0.003	0.005	0.000647	0
Dissolved Metals											
Aluminum (Dissolved)	0.001 to 0.003		18	0.003	0.005	0.006	0.0067	0.008875	0.0121	0.00278	0.003875
Antimony (Dissolved)	0.0001		18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	2.04E-12	0
Arsenic (Dissolved)	0.0001		18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	2.04E-12	0
Barium (Dissolved)	0.00005		18	0.00238	0.0041	0.00743	0.00677	0.00894	0.0118	0.00296	0.00484
Beryllium (Dissolved)	0.0001 to 0.0005		18	0.0001	0.0001	0.0005	0.000367	0.0005	0.0005	0.000194	0.0004
Bismuth (Dissolved)	0.0005		18	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.49E-11	0
Boron (Dissolved)	0.01		18	0.01	0.01	0.01	0.0111	0.01	0.02	0.00323	0
Cadmium (Dissolved)	0.00001		18	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	2.08E-13	0
Calcium (Dissolved)	0.05		18	3.2	8.115	14.05	14.1	19.1	32.5	7.58	10.985
Chromium (Dissolved)	0.0001 to 0.0005		18	0.0001	0.0001	0.0005	0.000394	0.0005	0.001	0.000244	0.0004
Cobalt (Dissolved)	0.0001		18	0.0001	0.0001	0.0001	0.000111	0.0001	0.0002	0.0000323	0
Copper (Dissolved)	0.0002 to 0.0005		18	0.00078	0.001005	0.00165	0.00142	0.0017	0.0019	0.000416	0.000695
Iron (Dissolved)	0.01 to 0.03		18	0.01	0.03	0.03	0.0472	0.04	0.22	0.0552	0.01
Lead (Dissolved)	0.00005		18	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	1.02E-12	0
Lithium (Dissolved)	0.0005 to 0.001		18	0.0005	0.000625	0.001	0.00124	0.00175	0.003	0.000813	0.001125
Magnesium (Dissolved)	0.05 to 0.1		18	2.01	4.49	8.025	8.07	10.6825	18.6	4.26	6.1925
Manganese (Dissolved)	0.00005		18	0.0001	0.000649	0.002615	0.00487	0.003955	0.0286	0.00778	0.003306
Mercury (Dissolved)	0.00001		18	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	2.08E-13	0
Molybdenum (Dissolved)	0.00005		18	0.000088	0.000154	0.0002465	0.000397	0.0005125	0.00169	0.000395	0.0003585
Nickel (Dissolved)	0.0005		18	0.0005	0.000525	0.00069	0.000734	0.0008	0.0014	0.000256	0.000275
Potassium (Dissolved)	0.05 to 0.2		18	0.642	1.1225	1.25	1.26	1.375	2.1	0.391	0.2525
Selenium (Dissolved)	0.0001 to 0.001		18	0.0001	0.0001	0.001	0.0007	0.001	0.001	0.000437	0.0009
Silicon (Dissolved)	0.05 to 0.1		18	0.26	0.4625	0.8	0.706	0.8	1.3	0.273	0.3375
Silver (Dissolved)	1E-006 to 1E-005		18	0.000001	0.00001	0.00001	0.0000095	0.00001	0.00001	0.00000212	0
Sodium (Dissolved)	0.0012 to 0.05		18	0.1	0.695	1.585	2.5	2.5125	15.6	3.74	1.8175
Strontium (Dissolved)	0.0001 to 0.0004		18	0.00166	0.0052125	0.00704	0.0117	0.0169	0.0344	0.00979	0.0116875
Thallium (Dissolved)	1E-005 to 0.0001		18	0.00001	0.00001	0.0001	0.00007	0.0001	0.0001	0.0000437	0.00009
Tin (Dissolved)	0.0001		18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	2.04E-12	0
Titanium (Dissolved)	0.01		18	0.01	0.01	0.01	0.01	0.01	0.01	1.51E-10	0
Uranium (Dissolved)	0.00001		18	0.000101	0.000365	0.000945	0.0013	0.00191	0.00602	0.00143	0.001545
Vanadium (Dissolved)	0.001		18	0.001	0.001	0.001	0.001	0.001	0.001	2.98E-11	0
Zinc (Dissolved)	0.00033 to 0.003		18	0.00033	0.003	0.003	0.00306	0.003	0.0091	0.00197	0
Total Metals											
Aluminum (Total)	0.001 to 0.003	0.179	18	0.006	0.009	0.013	0.0384	0.0331	0.219	0.0556	0.0241
Antimony (Total)	0.0001		18	0.0001	0.0001	0.0001	0.000106	0.0001	0.0002	0.0000236	0
Arsenic (Total)	0.0001	0.005	18	0.0001	0.0001	0.0001	0.000101	0.0001	0.00011	0.00000236	0
Barium (Total)	0.00005		18	0.00266	0.0047775	0.0072	0.00695	0.008985	0.0127	0.00285	0.0042075
Beryllium (Total)	1E-005 to 0.0005		18	0.00001	0.0001	0.0005	0.000362	0.0005	0.0005	0.000202	0.0004
Bismuth (Total)	0.0005		18	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.49E-11	0
Boron (Total)	0.01		18	0.01	0.01	0.01	0.0111	0.01	0.02	0.00323	0
Cadmium (Total)	0.00001	0.00008	18	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	2.08E-13	0
Calcium (Total)	0.05		18	3.2	7.6225	14	14.1	19.2	32.4	7.65	11.5775
Chromium (Total)	0.0001 to 0.0005	0.000856	18	0.00011	0.0003525	0.0005	0.000419	0.0005	0.0005	0.000137	0.0001475
Cobalt (Total)	0.0001	0.004	18	0.0001	0.0001	0.0001	0.000113	0.0001	0.0002	0.0000324	0
Copper (Total)	0.0002 to 0.0005	0.0022	18	0.001	0.0011725	0.0017	0.00154	0.0019	0.002	0.000386	0.0007275
Iron (Total)	0.003 to 0.03	0.326	18	0.014	0.03175	0.06	0.104	0.107	0.4	0.109	0.07525
Lead (Total)	0.00005	0.001	18	0.00005	0.00005	0.00005	0.0000783	0.0000575	0.00027	0.0000601	0.0000075
Lithium (Total)	0.0005 to 0.001		18	0.0005	0.00075	0.001	0.00126	0.00175	0.003	0.000802	0.001
Magnesium (Total)	0.05 to 0.1		18	1.97	4.64	8.25	8.09	10.33	17.9	4.1	5.69
Manganese (Total)	0.00005		18	0.00024	0.0009865	0.00343	0.00598	0.00524	0.0313	0.00834	0.0042535
Mercury (Total)	0.00001		18	0.00001	0.00001	0.00001	0.0000106	0.00001	0.00002	0.00000236	0
Molybdenum (Total)	0.00005		18	0.00005	0.000142	0.000224	0.000402	0.000565	0.00175	0.000416	0.000423
Nickel (Total)	0.0005	0.025	18	0.0005	0.0006025	0.0008	0.000811	0.0008775	0.0013	0.00027	0.000275
Potassium (Total)	0.05 to 0.2		18	0.622	1.0375	1.2	1.26	1.4	2.2	0.382	0.3625
Selenium (Total)	1E-005 to 0.001		18	0.00001	0.00001	0.001	0.00067	0.001	0.001	0.00048	0.00099
Silicon (Total)	0.05 to 0.1		18	0.3	0.635	0.7	0.767	0.95	1.4	0.277	0.315
Silver (Total)	0.00001	0.0001	18	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	2.08E-13	0
Sodium (Total)	0.05		18	0.13	0.5425	1.655	2.58	2.4075	16.7	4.04	1.865
Strontium (Total)	0.0001 to 0.0002		18	0.0017	0.0050175	0.00757	0.0117	0.016825	0.0341	0.00954	0.0118075
Thallium (Total)	1E-005 to 0.0001	0.0008	18	0.00001	0.00001	0.0001	0.00007	0.0001	0.0001	0.0000437	0.00009
Tin (Total)	0.0001		18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	2.04E-12	0
Titanium (Total)	0.01		18	0.01	0.01	0.01	0.01	0.01	0.01	1.51E-10	0
Uranium (Total)	0.00001		18	0.000107	0.000452	0.000975	0.00132	0.0018925	0.00608	0.00142	0.0014405
Vanadium (Total)	0.001	0.006	18	0.001	0.001	0.001	0.001	0.001	0.001	2.98E-11	0
Zinc (Total)	0.003	0.03	18	0.003	0.003	0.003	0.00307	0.003	0.0038	0.000194	0
Organics											
Carbon Organic (Dissolved)	0.5		18	1.1	2.35	2.7	3.19	4.55	5.1	1.31	2.2
Carbon Organic (Total)	0.5		18	1.1	2.45	2.65	3.27	4.775	5.2	1.38	2.325
Chlorophyll-a mg/m3	0.2		18	0.2	0.2	0.2	0.828	1.175	3.6	1.05	0.975
Pheophytin-a mg/m3	0.2		18	0.2	0.2	0.2	0.228	0.2	0.7	0.118	0
Semi Volatile Organics											
Phenol	0.001		18	0.001	0.001	0.001	0.00133	0.001	0.007	0.00141	0

I:\1\02\00181\34\A\Report\Report 6 - 2014 CREMP Monitoring Results\Rev 0\Appendices\Appendix A\[Appendix A1_02FEB'15.xlsm]A1.3 CLT

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE NOTED.
2. CLT AEMP - CAMP LAKE TRIBUTARY AQUATIC EFFECTS MONITORING PLAN.
3. BOLD SHADED CELLS INDICATE VALUES THAT EXCEED THE AEMP BENCHMARK CRITERIA.
4. DETECTION LIMIT VALUES DISPLAY WITH LESS THAN SYMBOL (<); STATISTICS CALCULATED USING THE DETECTION LIMIT VALUE.

Page 1 of 1

0	19MAR'15	ISSUED WITH REPORT NB102-181/34-6	DKK	RAC
REV	DATE	DESCRIPTION	PREP'D	REV'D

Knight Piésold
CONSULTING

TABLE A1.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
CAMP LAKE 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:02:45

Station ID			JL0-01-S	JL0-01-S	JL0-01-D	JL0-01-D	JL0-02-S	JL0-02-S	JL0-02-S	JL0-02-D	JL0-02-D	JL0-02-D	JL0-07-S	JL0-07-S
Date Sampled			03/05/2014	23/08/2014	03/05/2014	23/08/2014	30/04/2014	27/07/2014	23/08/2014	30/04/2014	27/07/2014	23/08/2014	30/04/2014	23/08/2014
Parameter	Method Detection Limit	Camp Lake AEMP Benchmark												
In Situ Parameters														
Conductivity (In Situ) µS/cm	...			79		80	77	75	80	78	75	80	74	79
Depth to Bottom (below water surface) m	...			16.7		16.7		12.2	11.4		12.2	11.4		32.5
Oxygen Dissolved (In Situ %) %	...		102	100	95.3	99.6	113	106	99.5	110	107	97.6	107	95.1
Oxygen Dissolved (In Situ)	...		14.3	12.6	13.3	12.5	15.9	13.5	12.5	15.5	14	12.3	15.2	11.9
pH (In Situ) pH	...		7.8	8.03	7.79	7.87	7.38	7.59	7.94	7.4	7.75	7.94	7.68	7.96
Secchi Depth m	...			3.5		3.5		5.25	5.5		5.25	5.5		5
Specific Conductivity (In Situ) µS/cm	...		147		141									
Temperature (In Situ) °C	...		1.29	5.73	1.69	5.72	1.26	5.55	5.69	1.41	4.13	5.69	1.29	5.74
Turbidity (In Situ) NTU	...		-1.1		-1.1									
Physical Tests														
Alkalinity (Total as CaCO3)	5		73	58	68	58	77	55	59	75	57	59	74	58
Conductivity µS/cm	5			127		127		120	128		125	128		128
Hardness as CaCO3 (Dissolved)	0.5 to 1		78.1	66	73.4	65	77.6	62	67	74.7	65	66	75.5	66
Hardness as CaCO3 (Total)	0.5 to 1		76.5	64	74.2	64	78.3	61	65	74.2	63	64	76	64
pH pH	1		7.28	7.93	7.22	7.93	7.03	7.93	7.93	7.01	7.91	7.95	7.02	7.92
Specific Conductivity µS/cm	5		152		146		160			154			154	
Total Dissolved Solids	1		99	83	95	83	104	78	83	100	81	83	100	83
Total Suspended Solids	2		<2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity NTU	0.1		0.2	0.4	<0.1	0.5	0.3	0.4	0.5	0.3	0.8	0.4	0.2	0.4
Dissolved Anions														
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	120	4	3	4	3	4	3	3	4	3	3	4	3
Sulphate (Dissolved)	1	218	2	2	2	2	2	2	2	2	2	2	2	2
Nutrients														
Ammonia (Total)	0.02	0.855	0.06	0.07	0.05	0.11	0.06	0.07	0.1	0.07	0.05	0.04	0.07	0.09
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.1		<0.1	0.18	<0.1	0.19	0.18	0.13	0.21	<0.1	0.34	0.19	<0.1	0.18
Phosphorus (Nutrient) Total	0.003		<0.003	0.003	<0.003	0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.003
Dissolved Metals														
Aluminum (Dissolved)	0.001 to 0.003		<0.001	<0.003	<0.001	<0.003	<0.001	<0.003	<0.003	<0.001	<0.003	<0.003	<0.001	<0.003
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00005		0.00668	0.00517	0.00634	0.0053	0.0069	0.00481	0.00544	0.0066	0.00485	0.00534	0.00681	0.00521
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Dissolved)	0.05		15.8	14	14.9	14	15.7	12.6	14.2	15.1	13.2	14.2	15.3	14
Chromium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.0002 to 0.0005		0.00083	0.0009	0.00084	0.0009	0.00097	0.0008	0.0009	0.00085	0.0009	0.0009	0.00086	0.0009
Iron (Dissolved)	0.01 to 0.03		<0.01	<0.03	<0.01	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03
Lead (Dissolved)	0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Dissolved)	0.0005 to 0.001		0.00099	<0.001	0.00097	<0.001	0.00079	<0.001	<0.001	0.00081	<0.001	<0.001	0.00088	<0.001
Magnesium (Dissolved)	0.05 to 0.1		9.37	7.48	8.79	7.4	9.31	7.37	7.55	8.95	7.72	7.54	9.04	7.49
Manganese (Dissolved)	0.00005		0.000118	0.00017	0.000103	0.00012	0.000242	0.00081	0.0002	0.000154	0.00038	0.00016	0.000126	0.00014
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00005		0.000251	0.00026	0.000243	0.00024	0.000298	<0.00005	0.00021	0.000279	<0.00005	0.00021	0.000271	0.00032
Nickel (Dissolved)	0.0005		0.00063	0.0006	0.00058	0.0006	0.00066	0.0005	0.0006	0.00066	0.0005	0.0006	0.00064	0.0007
Potassium (Dissolved)	0.05 to 0.2		1.06	0.9	1.01	0.7	1.1	0.8	0.8	1.05	0.9	0.8	1.07	0.8
Selenium (Dissolved)	0.0001 to 0.001		<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001
Silicon (Dissolved)	0.05 to 0.1		0.46	0.4	0.46	0.4	0.46	0.4	0.4	0.44	0.4	0.4	0.44	0.4
Silver (Dissolved)	1E-006 to 1E-005		<0.000001	<0.00001	<0.000001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001
Sodium (Dissolved)	0.0012 to 0.05		1.29	0.87	1.24	0.84	1.32	0.96	0.86	1.26	0.99	0.87	1.29	0.86
Strontium (Dissolved)	0.0001 to 0.0004		0.0109	0.009	0.0104	0.0091	0.0116	0.0077	0.0091	0.0112	0.0081	0.0091	0.0115	0.0091
Thallium (Dissolved)	1E-005 to 0.0001		<0.00001	<0.0001	<0.00001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	0.0023	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00001		0.000703	0.00058	0.000683	0.00058	0.000775	0.00055	0.00063	0.000732	0.00058	0.00062	0.000731	0.00058
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	0.00033 to 0.003		<0.00033	<0.003	0.0014	<0.003	0.0016	<0.003	0.008	0.0016	<0.003	<0.003	0.0012	<0.003
Total Metals														
Aluminum (Total)	0.001 to 0.003	0.1	<0.001	0.006	<0.001	0.005	<0.001	0.008	0.01	<0.001	0.007	0.008	0.0043	0.004
Antimony (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Total)	0.00005		0.00666	0.00534	0.00621	0.00516	0.00673	0.00492	0.00545	0.00632	0.00496	0.00538	0.00607	0.00519
Beryllium (Total)	2E-005 to 0.0005		<0.00002	<0.0005	<0.00002	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	0.014	<0.01
Cadmium (Total)	0.00001	0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Total)	0.05		15.5	13.6	14.9	13.6	16	12.4	13.8	15.1	12.8	13.7	15.5	13.8
Chromium (Total)	2E-005 to 0.0005	0.0003	0.00012	<0.0005	0.00014	<0.0005	0.00011	<0.0005	<0.0005	0.00022	<0.0005	<0.0005	0.0002	<0.0005
Cobalt (Total)	0.0001	0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Total)	0.0002 to 0.0005	0.004	0.00094	0.0011	0.00094	0.0009	0.00102	0.0009	0.0009	0.00092	0.0009	0.0009	0.00091	0.0009
Iron (Total)	0.003 to 0.03	0.3	<0.003	<0.03	<0.003	<0.03	<0.003	<0.03	<0.03	<0.003	<0.03	<0.03	<0.003	<0.03
Lead (Total)	0.00005	0.001	<0.00005	<0.00005	0.00038	<0.00005	0.00042	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005
Lithium (Total)	5E-005 to 0.001		0.00088	<0.001	0.00108	<0.001	0.00091	<0.001	<0.001	0.00105	<0.001	<0.001	0.00069	<0.001
Magnesium (Total)	0.05 to 0.1		9.18	7.22	8.94	7.22	9.34	7.33	7.32	8.85	7.57	7.28	9.06	7.28
Manganese (Total)	0.00005		0.000584	0.0014	0.0011	0.00137	0.00061	0.00172	0.00144	0.000494	0.0019	0.00144	0.000572	0.00144
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.00005		0.00028	0.00022	0.000276	0.00022	0.000268	<0.00005	0.0002	0.000274	<0.00005	0.00021	0.000263	0.00029
Nickel (Total)	0.0005	0.025	0.00064	0.0007	0.00063	0.0006	0.00074	0.0005	0.0006	0.00072	0.0006	0.0006	0.00062	0.0007
Potassium (Total)	0.05 to 0.2		1.07	0.8	1.03	0.8	1.1	0.9	0.7	1.05	0.9	0.7	0.966	0.8
Selenium (Total)	1E-005 to 0.001		<0.00001	<0.001	<0.00001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001
Silicon (Total)	0.05 to 0.1		0.46	0.4	0.46	0.4	0.49	0.4	0.5	0.44	0.4	0.4	0.46	0.4
Silver (Total)	1E-006 to 1E-005	0.0001	<0.000001	<0.00001	<0.000001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001
Sodium (Total)	0.0012 to 0.05		1.28	0.83	1.28	0.82	1.36	0.94	0.84	1.3	0.97	0.84	1.17	0.81
Strontium (Total)	0.0001 to 0.0004		0.0111	0.0091	0.0108	0.0087	0.0108	0.0078	0.0092	0.0112	0.008	0.0092	0.0109	0.009
Thallium (Total)	1E-006 to 0.0001	0.0008	<0.000001	<0.0001	<0.000001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Total)	0.00001		0.000708	0.00059	0.000703	0.00056	0.000702	0.00055	0.00063	0.000727	0.00057	0.00062	0.000753	0.00059
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	0.03	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics														
Carbon Organic (Dissolved)	0.5		1	1.6	0.9	1.4	1.8	1.6	1.5	1.7	1.8	1.5	1.8	1.5
Carbon Organic (Total)	0.5		1.3	1.6	1.3	1.5	1.9	1.9	1.6	1.8	1.8	1.5	1.9	1.5
Chlorophyll-a mg/m3	0.2		3.6	2.8	<0.2	1.3	<0.2	<0.2	0.7	<0.2	<0.2	0.9	<0.2	1.2
Phenols	0.001		<0.001		<0.001		<0.001			<0.001			<0.001	
Pheophytin-a mg/m3	0.2		<0.2	<0.2	1.8	0.5	<0.2	<0.2	0.5	<0.2	<0.2	<0.2	<0.2	0.3
Semi Volatile Organics														
Phenol	0.001			<0.001		<0.001		<0.001	<0.001		<0.001	<0.001		<0.001

Station ID	JL0-07-D	JL0-07-D	JL0-09-S	JL0-09-S	JL0-09-D	JL0-09-D	JL0-10-S	JL0-10-S	JL0-10-D	JL0-10-D	Samples Collected	Minimum	25th Percentile/ Quartile 1	Median/ 50th Percentile/ Quartile 2	Mean	75th Percentile/ Quartile 3	Maximum	Standard Deviation	Inter-Quartile Range
Date Sampled	30/04/2014	23/08/2014	30/04/2014	23/08/2014	30/04/2014	23/08/2014	03/05/2014	23/08/2014	03/05/2014	23/08/2014									
In Situ Parameters																			
Conductivity (In Situ) µS/cm	79	79	75	79	71	79		79		79	18	71	75.5	79	77.6	79	80	2.55	3.5
Depth to Bottom (below water surface) m		32.5		13.8		13.8		8.9		8.9	12	8.9	11.4	12.975	15.9	16.65	32.5	8.13	5.25
Oxygen Dissolved (In Situ %) %	40.8	93.5	107	101	96.8	100	105	101	103	100	22	40.8	98.075	100.8	99.1	105.775	112.5	13.9	7.7
Oxygen Dissolved (In Situ)	5.55	11.8	15.1	12.7	13.5	0.0126	14.8	12.7	14.5	12.6	22	0.01258	12.465	12.98	12.6	14.47	15.87	3.49	2.005
pH (In Situ) pH	7.44	7.9	7.6	7.93	7.61	7.95	7.98	7.94	7.93	7.91	22	7.38	7.6275	7.885	7.79	7.94	8.03	0.201	0.3125
Secchi Depth m		5		5.25		5.25		4.7		4.7	12	3.5	4.7	5.125	4.87	5.25	5.5	0.689	0.55
Specific Conductivity (In Situ) µS/cm							149		148		4	141	145.5	147.5	146	148.25	149	3.59	2.75
Temperature (In Situ) °C	2.62	5.68	1.27	5.75	1.64	5.67	1.18	5.76	1.36	5.76	22	1.18	1.3725	4.84	3.72	5.7125	5.76	2.12	4.34
Turbidity (In Situ) NTU							-1.1		-1.1		4	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	0	0
Physical Tests																			
Alkalinity (Total as CaCO3)	69	58	75	58	70	58	77	66	71	58	22	55	58	62.5	65	72.5	77	7.86	14.5
Conductivity µS/cm		127		127		126		127		127	12	120	126.75	127	126	127.25	128	2.19	0.5
Hardness as CaCO3 (Dissolved)	74.5	65	75.9	66	70.4	66	82.3	66	76.5	66	22	62	66	66.5	70.2	75.3	82.3	5.75	9.3
Hardness as CaCO3 (Total)	71.1	63	76.4	64	71.4	64	80.9	64	74.5	64	22	61	64	64.5	69	74.425	80.9	6.3	10.425
pH pH	6.87	7.93	7.01	7.9	6.94	7.93	7.3	7.91	7.25	7.92	22	6.87	7.0775	7.905	7.55	7.93	7.95	0.436	0.8525
Specific Conductivity µS/cm	154		155		146		162		152		10	146	152	154	154	154.75	162	5.1	2.75
Total Dissolved Solids	100	83	101	83	95	82	105	83	99	83	22	78	83	83	90.3	99.75	105	9.21	16.75
Total Suspended Solids	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	22	2	2	2	2	2	2	0	0
Turbidity NTU	0.3	0.3	0.1	2.6	0.3	0.5	0.2	0.4	0.2	0.3	22	0.1	0.225	0.3	0.441	0.4	2.6	0.507	0.175
Dissolved Anions																			
Bromide (Dissolved)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	22	0.25	0.25	0.25	0.25	0.25	0.25	0	0
Chloride (Dissolved)	7	3	4	3	4	3	5	3	4	3	22	3	3	3	3.64	4	7	0.953	1
Sulphate (Dissolved)	2	2	2	2	2	2	2	2	2	2	22	2	2	2	2	2	2	0	0
Nutrients																			
Ammonia (Total)	0.06	0.1	0.09	0.14	0.07	0.1	0.05	0.08	0.06	0.16	22	0.04	0.06	0.07	0.0795	0.0975	0.16	0.0298	0.0375
Nitrate (as N)	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	22	0.1	0.1	0.1	0.101	0.1	0.12	0.00426	0
Nitrate+Nitrite (Dissolved)	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	22	0.1	0.1	0.1	0.101	0.1	0.12	0.00426	0
Nitrite (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	22	0.005	0.005	0.005	0.005	0.005	0.005	1.06E-10	0
Nitrogen Kjeldahl (Total)	<0.1	0.23	<0.1	0.29	<0.1	<0.1	<0.1	0.12	<0.1	0.11	22	0.1	0.1	0.115	0.152	0.1875	0.34	0.0688	0.0875
Phosphorus (Nutrient) Total	0.003	0.003	<0.003	<0.003	<0.003	0.003	<0.003	0.008	0.008	0.004	22	0.003	0.003	0.003	0.00364	0.003	0.008	0.00156	0
Dissolved Metals																			
Aluminum (Dissolved)	<0.001	<0.003	<0.001	0.006	<0.001	<0.003	<0.001	<0.003	<0.001	<0.003	22	0.001	0.001	0.003	0.00223	0.003	0.006	0.00131	0.002
Antimony (Dissolved)	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	22	0.0001	0.0001	0.0001	0.000105	0.0001	0.0002	0.0000213	0
Arsenic (Dissolved)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1.91E-12	0
Barium (Dissolved)	0.00655	0.00533	0.00672	0.00537	0.00622	0.00528	0.00707	0.00526	0.00662	0.00538	22	0.00481	0.005285	0.00541	0.00588	0.006615	0.00707	0.000757	0.00133
Beryllium (Dissolved)	<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0005	22	0.0001	0.0001	0.0005	0.000318	0.0005	0.0005	0.000204	0.0004
Bismuth (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.43E-11	0
Boron (Dissolved)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	22	0.01	0.01	0.01	0.01	0.01	0.01	2.12E-10	0
Cadmium (Dissolved)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	22	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	2.07E-13	0
Calcium (Dissolved)	15.1	13.9	15.4	14	14.2	14.1	16.7	14	15.5	14	22	12.6	14	14.2	14.5	15.25	16.7	0.948	1.25
Chromium (Dissolved)	<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0005	<0.0001	<0.0005	22	0.0001	0.0001	0.0005	0.000318	0.0005	0.0005	0.000204	0.0004
Cobalt (Dissolved)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1.91E-12	0
Copper (Dissolved)	0.00082	0.0008	0.00096	0.0009	0.00082	0.0009	0.00088	0.0009	0.00084	0.0009	22	0.0008	0.00084	0.0009	0.000876	0.0009	0.00097	0.0000464	0.00006
Iron (Dissolved)	<0.01	<0.03	<0.01	<0.03	<0.01	<0.03	<0.01	<0.03	<0.01	<0.03	22	0.01	0.01	0.03	0.0209	0.03	0.03	0.0102	0.02
Lead (Dissolved)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00064	<0.00005	<0.00005	<0.00005	<0.00005	22	0.00005	0.00005	0.00005	0.0000768	0.00005	0.00064	0.000126	0
Lithium (Dissolved)	0.00092	<0.001	0.0009	<0.001	0.00081	<0.001	0.00109	<0.001	0.00106	<0.001	22	0.00079	0.0009325	0.001	0.000965	0.001	0.00109	0.0000793	0.0000675
Magnesium (Dissolved)	8.92	7.36	9.09	7.46	8.45	7.52	9.87	7.42	9.16	7.44	22	7.36	7.465	7.635	8.21	9.0175	9.87	0.863	1.5525
Manganese (Dissolved)	0.000108	0.00012	0.000153	0.00142	0.000155	0.00016	0.000187	0.00015	0.000077	0.00014	22	0.000077	0.0001215	0.0001535	0.000245	0.00018275	0.00142	0.000303	0.00006125
Mercury (Dissolved)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	22	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	2.07E-13	0
Molybdenum (Dissolved)	0.000269	0.00028	0.000278	0.00056	0.000257	0.00041	0.000267	0.00022	0.000247	0.0002	22	0.00005	0.000225	0.0002585	0.000258	0.00027875	0.00056	0.000102	0.00005375
Nickel (Dissolved)	0.00063	0.0006	0.00063	0.0006	0.0006	0.0007	0.00069	0.0006	0.00064	0.0006	22	0.0005	0.0006	0.0006	0.000616	0.00064	0.0007	0.0000515	0.00004
Potassium (Dissolved)	1.04	0.7	1.07	0.8	1.01	0.8	1.13	0.7	1.07	0.9	22	0.7	0.8	0.9	0.919	1.0575	1.13	0.145	0.2575
Selenium (Dissolved)	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	22	0.0001	0.0001	0.001	0.000591	0.001	0.001	0.000459	0.0009
Silicon (Dissolved)	0.43	0.4	0.45	0.5	0.43	0.4	0.49	0.4	0.46	0.4	22	0.4	0.4	0.415	0.428	0.4575	0.5	0.0328	0.0575
Silver (Dissolved)	<0.000001	<0.00001	<0.000001	<0.00001	<0.000001	<0.00001	<0.000001	<0.00001	<0.000001	<0.00001	22	0.000001	0.000001	0.00001	0.00000591	0.00001	0.00001	4.59E-06	0.000009
Sodium (Dissolved)	1.27	0.85	1.28	0.86	1.23	0.86	1.37	0.85	1.28	0.84	22	0.84	0.86	0.975	1.06	1.2775	1.37	0.212	0.4175
Strontium (Dissolved)	0.0114	0.009	0.0115	0.0091	0.0108	0.0091	0.0116	0.0089	0.0106	0.0091	22	0.0077	0.0091	0.0091	0.0099	0.011125	0.0116	0.00125	0.002025
Thallium (Dissolved)	<0.00001	<0.0001	<0.00001	<0.0001	<0.00001	<0.0001	<0.00001	<0.0001	<0.00001	<0.0001	22	0.00001	0.00001	0.0001	0.0000591	0.0001	0.0001	0.0000459	0.00009
Tin (Dissolved)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	<0.0001	22	0.0001	0.0001	0.0001	0.000209	0.0001	0.0023	0.000469	0
Titanium (Dissolved)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	22	0.01	0.01	0.01	0.01	0.01	0.01	2.12E-10	0
Uranium (Dissolved)	0.000715	0.00059	0.000751	0.0006	0.000679	0.00059	0.000727	0.00059	0.000692	0.00058	22	0.00055	0.0005825	0.000625	0.000648	0.000712	0.000775	0.0000706	0.0001295
Vanadium (Dissolved)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	22	0.001	0.001	0.001	0.001	0.001	0.001	2.87E-11	0
Zinc (Dissolved)	<0.00033	<0.003	0.0012	<0.003	<0.00033	<0.003	<0.00033	<0.003	<0.00033	<0.003	22	0.00033	0.0012	0.003	0.00226	0.003	0.008	0.00171	0.0018
Total Metals																			
Aluminum (Total)	0.0032	0.006	<0.001	<0.003	<0.001	0.005	<0.001	0.006	<0.001	0.008	22	0.001	0.001	0.00415	0.00416	0.006	0.01	0.00293	0.005
Antimony (Total)	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	22	0.0001	0.0001	0.0001	0.000105	0.0001	0.0002	0.0000213	0
Arsenic (Total)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1.91E-12	0
Barium (Total)	0.00659	0.00521	0.00678	0.00529	0.00608	0.00523	0.00712	0.00539	0.00645	0.00528	22	0.00492	0.0052425	0.00542	0.00581	0.0064175	0.00712	0.000693	0.001175
Beryllium (Total)	<0.00002	<0.0005	<0.00002	<0.0005	<0.00002	<0.0005	<0.00002	<0.0005	<0.00002	<0.0005	22	0.00002	0.00002	0.0005	0.000282	0.0005	0.0005	0.000245	0.00048
Bismuth (Total)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	22	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.43E-11	0
Boron (Total)	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	22	0.01	0.01	0.01	0.0106	0.01	0.015	0.00165	0
Cadmium (Total)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	22	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	2.07E-13	0
Calcium (Total)	14.4	13.5	15.6	13.7	14.5	13.8	16.2	13.6	15	13.6	22	12.4	13.6	13.8	14.3	15.075	16.2	1.04	1.475
Chromium (Total)	0.00023	<0.0005	<0.00002	<0.0005	<0.00002	<0.0005	0.00012	<0.0005	0.00012	<0.0005	22	0.00002	0.000125	0.0005	0.000332	0.0005	0.0005	0.000195	0.000375
Cobalt (Total)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1.91E-12	0
Copper (Total)	0.00089	0.0009	0.00101	0.0009	0.00093	0.0009	0.00103	0.0009	0.0009	0.0011	22	0.00089	0.0009	0.0009	0.00094	0.00094	0.0011	0.0000662	0.00004
Iron (Total)	<0.003	<0.03	<0.003	<0.03	<0.003	<0.03	<0.003	<0.03	<0.003	<0.03	22	0.003	0.003	0.03	0.0177	0.03	0.03	0.0138	0.027
Lead (Total)	0.00013	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	0.00007	<0.00005	22	0.00005	0.00005	0.00005	0.0000882	0.0000575	0.00042	0.000103	0.0000075
Lithium (Total)	0.00072	<0.001	0.00103	<0.001	0.00098	<0.001	0.00106	<0.001	0.00116	<0.001	22	0.00069	0.001	0.001	0.00098	0.001	0.00116	0.000104	0
Magnesium (Total)	8.51	7.17	9.13	7.24	8.53	7.3	9.79	7.18	9	7.21	22	7.17	7.25	7.45	8.08	8.985	9.79	0.931	1.735
Manganese (Total)	0.00297	0.00137	0.000574	0.00014	0.000689	0.00143	0.000592	0.00139	0.000559	0.00137	22	0.00014	0.000586	0.00137	0.00114	0.0014375	0.00297	0.000632	0.0008515
Mercury (Total)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	22	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	2.07E-13	0
Molybdenum (Total)	0.000193	0.0003	0.000261	0.00052	0.000264	0.00037	0.000278	0.00022	0.000265	0.00021	22	0.00005	0.0002125	0.0002635	0.000249	0.0002775	0.00052	0.0000944	0.000065
Nickel (Total)	0.00065	0.0006	0.00069	0.0006	0.00066	0.0007	0.00072	0.0007	0.00066	0.0007	22	0.0005	0.0006	0.000655	0.000651	0.0007	0.00074	0.0000582	0.0001
Potassium (Total)	1	0.7	1.07	0.8	0.987	0.8	1.16	0.8	1.03	0.8	22	0.7	0.8	0.9	0.907	1.03	1.16	0.143	0.23
Selenium (Total)	<0.00001	<0.001	<0.00001	<0.001	<0.00001	<0.001	<0.00001	<0.001	<0.00001	<0.001	22	0.00001	0.00001	0.001	0.00055	0.001	0.001	0.000505	0.00099
Silicon (Total)	1.33	0.4	0.46	0.4	0.46	0.4	0.48	0.4	0.44	0.4	22	0.4	0.4	0.42	0.472	0.46	1.33	0.195	0.06
Silver (Total)	<0.000001	<0.00001	<0.000001	<0.00001	<0.000001	<0.00001	<0.000001	<0.00001	<0.000001	<0.00001	22	0.000001	0.000001	0.00001	0.00000591	0.00001	0.00001	4.59E-06	0.000009
Sodium (Total)	2.48	0.81	1.33	0.84	1.21	0.82	1.42	0.83	1.26	0.82	22	0.81	0.83	0.955	1.1	1.28	2.48	0.382	0.45
Strontium (Total)	0.0112	0.0088	0.0101	0.0091	0.0103	0.0091	0.0115	0.009	0.0109	0.0091	22	0.0078	0.009025	0.0092	0.00977	0.010875	0.0115	0.00113	0.00185
Thallium (Total)	<0.000001	<0.0001	<0.000001	<0.0001	<0.000001	<0.0001	<0.000001	<0.0001	<0.000001	<0.0001	22	0.000001	0.000001	0.0001	0.000055	0.0001	0.0001	0.0000505	0.000099
Tin (Total)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	1.91E-12	0
Titanium (Total)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	22	0.01	0.01	0.01	0.01	0.01	0.01	2.12E-10	0
Uranium (Total)	0.000497	0.00059	0.000651	0.00061	0.000674	0.00059	0.000775	0.0006	0.000716	0.00059	22	0.000497	0.00059	0.000615	0.000636	0.00070275	0.000775	0.0000734	0.00011275
Vanadium (Total)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	22	0.001	0.001	0.001	0.001	0.001	0.001	2.87E-11	0
Zinc (Total)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	22	0.003	0.003	0.003	0.003	0.003	0.003	6.13E-11	0
Organics																			
Carbon Organic (Dissolved)	1.4	1.4	1.6	1.5	1.6	1.5	1.2	1.4	1.1	1.4	22	0.9	1.4	1.5	1.46	1.6	1.8	0.242	0.2
Carbon Organic (Total)	1.6	1.8	1.9	1.6	1.9	1.6	2.4	1.7	1.2	1.5	22	1.2	1.5	1.6	1.67	1.875	2.4	0.266	0.375
Chlorophyll-a mg/m3	<0.2	0.5	<0.2	2.5	<0.2	2.3	<0.2	3.4	0.8	0.3	22	0.2	0.2	0.4	1.01	1.275	3.6	1.14	1.075
Phenols	<0.001		<0.001		<0.001		<0.001		<0.001		10	0.001	0.001	0.001	0.001	0.001	0.001	2.13E-11	0
Pheophytin-a mg/m3	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	1.1	<0.2	<0.2	0.7	22	0.2	0.2	0.2	0.368	0.275	1.8	0.39	0.075
Semi Volatile Organics																			
Phenol		<0.001		<0.001		<0.001		<0.001		<0.001	12	0.001	0.001	0.001	0.001	0.001	0.001	2.03E-11	0

I:\1\02\00181\34\A\Report\Report 6 - 2014 CREMP Monitoring Results\Rev 0\Appendices\Appendix A\[Appendix A1_02FEB'15.xlsm]A1.4 Camp L

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE NOTED.
2. AEMP - AQUATIC EFFECTS MONITORING PLAN.
3. BOLD SHADED CELLS INDICATE VALUES THAT EXCEED THE AEMP BENCHMARK CRITERIA.
4. DETECTION LIMIT VALUES DISPLAY WITH LESS THAN SYMBOL (<); STATISTICS CALCULATED USING THE DETECTION LIMIT VALUE.

0	19MAR'15	ISSUED WITH REPORT NB102-181/34-6	DKK	RAC
REV	DATE	DESCRIPTION	PREP'D	RCV'D

TABLE A1.5

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
SHEARDOWN LAKE NORTHWEST 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:12:20

		Station ID	DL0-01-1-S	DL0-01-1-S	DL0-01-1-S	DL0-01-1-D	DL0-01-1-D	DL0-01-1-D	DL0-01-2-S	DL0-01-2-S	DL0-01-2-S	DL0-01-2-D	DL0-01-2-D	DL0-01-2-D	DL0-01-4-S	DL0-01-4-S	DL0-01-4-S	DL0-01-4-D	DL0-01-4-D	DL0-01-4-D	DL0-01-5-S	DL0-01-5-S	DL0-01-5-S	DL0-01-5-D	DL0-01-5-D
		Date Sampled	05/05/2014	25/07/2014	25/08/2014	05/05/2014	25/07/2014	25/08/2014	04/05/2014	25/07/2014	25/08/2014	04/05/2014	25/07/2014	25/08/2014	04/05/2014	25/07/2014	25/08/2014	04/05/2014	25/07/2014	25/08/2014	05/05/2014	25/07/2014	24/08/2014	05/05/2014	25/07/2014
Parameter	Method Detection Limit	SDL NW AEMP Benchmark																							
In Situ Parameters																									
Conductivity (In Situ) µS/cm	...			77	76		70	76		77	79		70	76		76	77		71	77		77	77		70
Depth to Bottom (below ground surface) m	...							12.1			15.7			15.7			7			7			22.8		
Depth to Bottom (below water surface) m	...			21.7	12.1		21.7			12.2			12.2			6.12			6.12			23.6			23.6
Oxygen Dissolved (In Situ %) %	...		97.7	107	13.8	96.7	99.8	101	98.9	110	102	96.8	100	100	98.4	108	106	98.1	103	102	97.6	108	104	77.2	99.5
Oxygen Dissolved (In Situ)	...		13.5	12.8	105	13.3	12.9	12.4	13.7	13	12.8	13.3	12.9	12.4	13.6	13	13.1	13.5	13.2	12.6	13.4	12.9	12.9	10.6	12.9
pH (In Situ) pH	...		7.81	7.76	7.97	7.72	7.73	7.97	7.83	7.75	8	7.74	7.73	7.99	7.83	7.78	7.94	7.79	7.81	7.98	8.25	7.8	7.84	7.74	7.75
Secchi Depth m	...			4.1	4.5		4.1	4.5		4.05	5		4.05	5		4.35	6		4.35	6		4.2	5.5		4.2
Specific Conductivity (In Situ) µS/cm	...		144			144			145			144			144			144			143			143	
Temperature (In Situ) °C	...		2.16	7.59	6.29	2.28	4.55	6.29	2.06	8.12	6.29	2.25	4.54	6.32	2.14	7.48	6.37	2.19	5	6.32	2.18	7.59	6.39	2.36	4.45
Turbidity (In Situ) NTU	...		-1			-1			-1.1			-1			-1.1			-1.1			-0.9			-0.5	
Physical Tests																									
Alkalinity (Total as CaCO3)	5		71	52	54	69	52	54	72	52	54	68	52	55	72	53	54	73	52	55	71	53	55	68	52
Conductivity µS/cm	5			116	121		116	121		115	121		116	122		117	122		115	122		117	122		116
Hardness as CaCO3 (Dissolved)	0.5 to 1		75.7	57	62	73.9	57	61	75.7	57	61	72.9	57	61	74.9	58	61	73.5	57	61	76.3	57	62	74.5	57
Hardness as CaCO3 (Total)	0.5 to 1		75.9	59	60	72.1	59	60	74.7	59	61	74	59	61	77.3	60	60	74.3	59	60	73.6	58	60	73	59
pH pH	1		7.24	7.88	7.93	7.17	7.89	7.93	7.23	7.85	7.94	7.19	7.83	7.95	7.21	7.87	7.94	7.17	7.86	7.95	7.17	7.91	7.95	7.14	7.87
Specific Conductivity µS/cm	5		154			149			155			149			153			149			151			149	
Total Dissolved Solids	1		100	75	79	97	75	79	101	75	79	97	75	79	99	76	79	97	75	79	98	76	79	97	75
Total Suspended Solids	2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity NTU	0.1		0.2	1.1	0.4	0.2	0.7	0.5	0.2	0.9	0.6	0.2	0.8	0.7	0.3	0.7	0.5	0.2	0.8	0.4	0.2	0.7	1.5	0.2	0.7
Dissolved Anions																									
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	120	4	3	3	4	3	3	4	3	3	3	3	3	4	3	3	4	3	3	4	3	3	4	3
Sulphate (Dissolved)	1	218	4	3	3	3	3	3	4	3	3	3	3	3	4	3	3	3	3	3	4	3	3	3	3
Nutrients																									
Ammonia (Total)	0.02	0.855	0.07	0.15	0.1	0.08	0.08	0.05	0.07	0.12	0.05	0.05	0.12	0.06	0.07	0.12	0.12	0.07	0.09	0.04	0.07	0.12	0.03	0.08	0.15
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.1		0.12	0.17	0.35	<0.1	0.24	0.18	<0.1	0.15	<0.1	0.11	0.17	0.22	<0.1	0.16	0.12	0.1	0.14	<0.1	<0.1	0.17	<0.1	0.16	0.19
Phosphorus (Nutrient) Total	0.003		0.007	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.014	<0.003	<0.003	<0.003	<0.003
Dissolved Metals																									
Aluminum (Dissolved)	0.001 to 0.003		<0.001	<0.003	<0.003	<0.001	<0.003	<0.003	0.0015	<0.003	0.003	<0.001	<0.003	0.003	<0.001	<0.003	<0.003	<0.001	<0.003	<0.003	0.0012	<0.003	0.004	<0.001	<0.003
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00005		0.00607	0.00437	0.00466	0.00577	0.00436	0.0046	0.00635	0.00448	0.00461	0.00606	0.00441	0.00466	0.0063	0.00444	0.00455	0.00581	0.00449	0.00469	0.00613	0.0044	0.00497	0.00609	0.00434
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Dissolved)	0.05		15.2	11.4	12.9	14.8	11.4	12.8	15.1	11.4	12.9	14.5	11.4	12.9	14.9	11.6	12.9	14.6	11.4	12.8	15.2	11.5	13	14.9	11.4
Chromium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.0002 to 0.0005		0.00084	0.0007	0.0009	0.0011	0.0007	0.0009	0.00085	0.0008	0.0008	0.00081	0.0007	0.0009	0.00083	0.0009	0.0009	0.00081	0.0014	0.001	0.00079	0.0008	0.0009	0.0008	0.0007
Iron (Dissolved)	0.01 to 0.03		<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03
Lead (Dissolved)	0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Dissolved)	0.0005 to 0.001		0.0007	<0.001	<0.001	0.00091	<0.001	<0.001	0.00101	<0.001	<0.001	0.00101	<0.001	<0.001	0.00095	<0.001	<0.001	0.00075	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001
Magnesium (Dissolved)	0.05 to 0.1		9.18	6.86	7.15	8.98	6.88	7.03	9.22	6.86	7.06	8.9	6.85	7.09	9.15	7.02	7.06	8.98	6.86	7.05	9.29	6.92	7.07	9.07	6.91
Manganese (Dissolved)	0.00005		0.000135	0.0009	0.00012	<0.00005	0.00024	0.0001	0.000213	0.0008	0.00012	0.00008	0.00062	0.00014	0.000321	0.00087	0.0003	0.000106	0.00038	0.0002	0.000132	0.00095	0.00015	0.00019	0.00024
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00005		0.000867	0.00044	0.00084	0.000812	0.0004	0.0007	0.000844	0.00039	0.00071	0.000799	0.0004	0.00069	0.000867	0.00044	0.00071	0.000818	0.00038	0.00067	0.000851	0.0004	0.00063	0.000786	0.0004
Nickel (Dissolved)	0.0005		0.0007	<0.0005	0.0007	0.0007	0.0005	0.0007	0.00074	<0.0005	0.0007	0.00069	0.0005	0.0007	0.00068	0.0006	0.0007	0.0007	0.0009	0.0007	0.00067	0.0005	0.0007	0.00073	0.0005
Potassium (Dissolved)	0.05 to 0.2		1.05	0.8	0.8	1.02	0.8	0.8	1.12	0.8	0.7	1.07	0.8	0.7	1.12	0.8	0.8	1.01	0.8	0.8	1.05	0.8	0.8	1.05	0.8
Selenium (Dissolved)	0.0001 to 0.001		<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001
Silicon (Dissolved)	0.05 to 0.1		0.8	0.6	0.7	0.78	0.6	0.6	0.78	0.7	0.6	0.76	0.7	0.7	0.76	0.6	0.6	0.76	0.7	0.6	0.79	0.6	0.6	0.9	0.6
Silver (Dissolved)	1E-006 to 1E-005		<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001
Sodium (Dissolved)	0.0012 to 0.05		1.24	0.96	0.85	1.23	0.96	0.88	1.37	0.96	0.86	1.31	0.95	0.9	1.36	0.97	0.85	1.27	0.95	0.9	1.28	0.95	0.84	1.32	0.96
Strontium (Dissolved)	0.0001 to 0.0004		0.00948	0.0069	0.0073	0.00892	0.0069	0.0072	0.00935	0.0071	0.0072	0.00893	0.0071	0.0073	0.00938	0.0071	0.0071	0.00899	0.0072	0.0073	0.00925	0.007	0.008	0.00899	0.007
Thallium (Dissolved)	1E-005 to 0.0001		<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00001		0.0011	0.0008	0.00088	0.00108	0.0008	0.00088	0.00112	0.0008	0.00086	0.00105	0.0008	0.00086	0.00109	0.00081	0.00086	0.00108	0.00081	0.00088	0.00109	0.0008	0.00083	0.00101	0.00081
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	0.00033 to 0.003		0.0022	<0.003	<0.003	0.0015	<0.003	<0.003	0.002	<0.003	<0.003	0.0016	<0.003	<0.003	0.0016	0.003	<0.003	<0.00033	0.008	<0.003	0.0011	<0.003	<0.003	<0.00033	<0.003
Total Metals																									
Aluminum (Total)	0.001 to 0.003	0.173	<0.001	0.018	0.012	<0.001	0.023	0.01	<0.001	0.015	0.012	<0.001	0.02	0.011	<0.001	0.019	0.01	<0.001	0.028	0.013	<0.001	0.021	0.013	0.0032	0.026
Antimony (Total)	0.0001		<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Total)	0.00005		0.00608	0.00423	0.00497	0.00574	0.00421	0.00469	0.00621	0.00438	0.00456	0.00597	0.00438	0.00463	0.0064	0.0045	0.00471	0.00597	0.0043	0.00478	0.00602	0.00427	0.00472	0.00597	0.00426
Beryllium (Total)	2E-005 to 0.0005		<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Total)	0.00001	0.00009	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Total)	0.05		15	11.7	12.6	14.3	11.6	12.6	14.8	11.6	12.7	14.6	11.7	12.7	15.3	11.8	12.6	14.7	11.6	12.6	14.6	11.6	12.6	14.4	11.6
Chromium (Total)	2E-005 to 0.0005	0.000642	0.00011	<0.0005	<0.0005	0.00012	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	0.0001	<0.0005
Cobalt (Total)	0.0001	0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Total)	0.0002 to 0.0005	0.0024	0.00094	0.0009	0.0009	0.00088	0.0009	0.0009	0.00091	0.0008	0.0009	0.00094	0.0009	0.0009	0.00097	0.0009	0.0009	0.00089	0.0009	0.001	0.00127	0.0009	0.0009	0.0009	0.0009
Iron (Total)	0.003 to 0.03	0.3	<0.003	<0.03	<0.03	<0.003	0.03	<0.03	<0.003	<0.03	<0.03	<0.003	<0.03	<0.03	<0.003	<0.03	<0.03	<0.003	0.04	0.04	<0.003	0.03	<0.03	<0.003	0.04
Lead (Total)	0.00005	0.001	0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	**0.00195**	<0.00005	<0.00005	0.00022	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	0.0006	<0.00005
Lithium (Total)	5E-005 to 0.001		0.00065	<0.001	<0.001	0.0009	<0.001	<0.001	0.00078	<0.001	<0.001	0.0009	<0.001	<0.001	0.00074	<0.001	<0.001	0.00074	<0.001	<0.001	0.00098	<0.001	<0.001	0.00077	<0.001
Magnesium (Total)	0.05 to 0.1		9.36	7.27	6.94	8.85	7.21	6.97	9.17	7.2	7.01	9.12	7.25	7.03	9.51	7.32	6.95	9.14	7.2	6.97	9.02	7.17	6.91	8.97	7.2
Manganese (Total)	0.00005		0.00087	0.00238	0.00128	0.00113	0.00242	0.00125	0.000735	0.00235	0.00122	0.00109	0.00273	0.00125	0.00102	0.00259	0.0012	0.00113	0.00277	0.00143	0.00083	0.00239	0.00128	0.00173	0.00275
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00017	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.00005		0.000884	0.00049	0.00093	0.000846	0.0005	0.00081	0.00089	0.00027	0.00072	0.000893	0.00024	0.00068	0.000903	0.00031	0.00065	0.000888	0.00055	0.00066	0.000857	0.00049	0.00062	0.000859	0.00055
Nickel (Total)	0.0005	0.025	0.00077	0.0006	0.0007	0.00071	0.0006	0.001	0.00077	0.0007	0.0007	0.00074	0.0007	0.0007	0.00077	0.0007	0.0007	0.00072	0.0006	0.0007	0.00069	0.0006	0.0007	0.00078	0.0006
Potassium (Total)	0.05 to 0.2		1.07	0.9	0.7	1	0.8	0.8	1.06	0.9	0.8	1.06	0.8	0.8	1.08	0.9	0.7	1.02	0.8	0.7	1.03	0.9	0.8	1.04	0.8
Selenium (Total)	1E-005 to 0.001		<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001
Silicon (Total)	0.05 to 0.1		0.8	0.6	0.6	0.77	0.6	0.7	0.76	0.6	0.6	0.77	0.7	0.6	0.79	0.6	0.7	0.77	0.6	0.7	0.77	0.6	0.7	0.9	0.6
Silver (Total)	1E-006 to 1E-005	0.0001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001
Sodium (Total)	0.0012 to 0.05		1.33	0.94	0.86	1.25	0.94	0.86	1.31	0.94	0.84	1.37	0.95	0.84	1.4	0.95	0.85	1.31	0.93	0.84	1.26	0.94	0.83	1.32	0.94
Strontium (Total)	0.0001 to 0.0004		0.00975	0.0065	0.0073	0.00939	0.0064	0.0072	0.00963	0.0069	0.0073	0.00955	0.007	0.0072	0.00982	0.007	0.0072	0.00963	0.0064	0.0072	0.00923	0.0065	0.0076	0.00958	0.0065
Thallium (Total)	1E-006 to 0.0001	0.0008	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Total)	0.00001		0.00108	0.00083	0.00087	0.00107	0.00084	0.00089	0.00109	0.0008	0.00086	0.00107	0.00082	0.00087	0.00112	0.00083	0.00088	0.00106	0.00084	0.00089	0.00109	0.00084	0.00087	0.00109	0.00084
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	0.03	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																									
Carbon Organic (Dissolved)	0.5		1	1.6	1.2	0.9	1.6	1.2	1	1.6	1.2	1	1.6	1.2	1	1.6	1.2	1	1.6	1.2	1	1.6	1.3	0.9	1.6
Carbon Organic (Total)	0.5		1.2	1.7	1.5	1.4	1.8	1.6	1.2	1.8	1.6	1.5	1.8	1.7	1.2	1.8	1.6	1.1	1.8	1.6	1.1	1.8	1.5	1.2	1.7
Chlorophyll-a mg/m3	0.2		0.7	1.4	0.5	<0.2	0.8	0.7	2.7	1.3	0.4	3.7	3.1	2	0.5	2	0.4	5.5	4.3	1.2	5.6	0.9	<0.2	3.2	5.6
Phenols	0.001		<0.001			<0.001			0.003			<0.001			<0.001			<0.001			0.001			<0.001	
Pheophytin-a mg/m3	0.2		0.5	<0.2	0.8	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	<0.2	0.6	<0.2	0.6	<0.2	<0.2	<0.2	<0.2	<0.2	2.7	<0.2	<0.2
Semi Volatile Organics																									
Phenol	0.001			<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001

Knight Piésold CONSULTING

TABLE A1.5

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
SHEARDOWN LAKE NORTHWEST 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:12:20

		Station ID	DL0-01-5-D	DL0-01-7-S	DL0-01-7-S	DL0-01-7-S	DL0-01-7-D	DL0-01-7-D	DL0-01-7-D	DD-HAB9-STN1-S	DD-HAB9-STN1-S	DD-HAB9-STN1-S	DD-HAB9-STN1-D	DD-HAB9-STN1-D	DD-HAB9-STN1-D									
		Date Sampled	24/08/2014	04/05/2014	25/07/2014	25/08/2014	04/05/2014	25/07/2014	25/08/2014	05/05/2014	25/07/2014	25/08/2014	05/05/2014	25/07/2014	25/08/2014									
Parameter	Method Detection Limit	SDL NW AEMP Benchmark														Samples Collected	Minimum	25th Percentile/ Quartile 1	Median/ 50th Percentile/ Quartile 2	Mean	75th Percentile/ Quartile 3	Maximum	Standard Deviation	Inter-Quartile Range
In Situ Parameters																								
Conductivity (In Situ) µS/cm	...		90		75	77		70	81		79	77		71	77	24	70	74	77	76	77	90	4.39	3
Depth to Bottom (below ground surface) m	...					10.7			10.7			5.5			5.5	10	5.5	7	10.7	11.3	14.8	22.8	5.54	7.8
Depth to Bottom (below water surface) m	...		22.8		12.1			12.1			10			10		14	6.12	10.5125	12.125	14.7	21.65	23.6	6.48	11.1375
Oxygen Dissolved (In Situ %) %	...		71	99.7	109	104	97.7	101	101	98.7	108	104	97.5	101	102	36	13.85	98	100.6	97.9	104.025	109.7	16.2	6.025
Oxygen Dissolved (In Situ)	...		9.07	13.7	13.3	12.7	13.5	13.1	12.6	13.6	12.7	12.8	13.4	13	12.7	36	9.07	12.7425	12.985	15.4	13.415	104.9	15.4	0.6725
pH (In Situ) pH	...		7.77	7.68	7.53	8.06	7.67	7.68	8.99	7.74	7.79	7.97	7.72	7.77	7.95	36	7.53	7.74	7.79	7.86	7.955	8.99	0.237	0.215
Secchi Depth m	...		22.8		4.1	6		4.1	6		4.2	5.5		4.2	5.5	24	4.05	4.175	4.425	5.51	5.5	22.8	3.75	1.325
Specific Conductivity (In Situ) µS/cm	...			144			143			144			143			12	143	143	144	144	144	145	0.622	1
Temperature (In Situ) °C	...		6.17	2.14	7.06	6.33	2.19	4.68	6.28	2.09	8.35	6.47	2.19	4.8	6.39	36	2.06	2.235	5.585	4.9	6.375	8.35	2.15	4.14
Turbidity (In Situ) NTU	...									-1			-1			10	-1.1	-1.075	-1	-0.97	-1	-0.5	0.177	0.075
Physical Tests																								
Alkalinity (Total as CaCO3)	5		54	72	52	54	69	59	54	71	52	55	72	52	55	36	52	52.75	54.5	59.3	69	73	8.33	16.25
Conductivity µS/cm	5		122		116	121		116	121		115	122		116	123	24	115	116	119	119	122	123	3.01	6
Hardness as CaCO3 (Dissolved)	0.5 to 1		61	78	57	61	73.7	57	61	77.3	57	61	73.9	57	61	36	57	57	61	64.4	73.75	78	7.84	16.75
Hardness as CaCO3 (Total)	0.5 to 1		60	73.7	58	60	73.1	58	60	72.5	59	60	73.3	59	60	36	58	59	60	64.3	73.025	77.3	6.99	14.025
pH pH	1		7.91	7.22	7.87	7.93	7.2	7.84	7.93	7.17	7.83	7.94	7.1	7.81	7.94	36	7.1	7.2175	7.865	7.66	7.93	7.95	0.344	0.7125
Specific Conductivity µS/cm	5			155			148			151			150			12	148	149	150.5	151	153.25	155	2.54	4.25
Total Dissolved Solids	1		79	101	75	79	96	75	79	98	75	79	98	75	80	36	75	75	79	84.2	97	101	10.3	22
Total Suspended Solids	2		<2	<2	<2	<2	<2	<2	5	<2	<2	<2	<2	<2	<2	36	2	2	2	2.08	2	5	0.5	0
Turbidity NTU	0.1		0.5	0.2	1.8	0.4	0.2	0.9	0.4	0.2	0.9	0.5	0.2	1	0.4	36	0.2	0.2	0.5	0.564	0.725	1.8	0.382	0.525
Dissolved Anions																								
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	36	0.25	0.25	0.25	0.25	0.25	0.25	0	0
Chloride (Dissolved)	1	120	3	4	3	3	4	3	3	4	3	3	3	3	3	36	3	3	3	3.28	4	4	0.454	1
Sulphate (Dissolved)	1	218	3	4	3	3	3	3	3	3	3	3	3	3	3	36	3	3	3	3.14	3	4	0.351	0
Nutrients																								
Ammonia (Total)	0.02	0.855	0.11	0.07	0.08	0.04	0.03	0.08	0.06	0.08	0.08	0.04	0.07	0.12	0.03	36	0.03	0.0575	0.075	0.0792	0.1025	0.15	0.0326	0.045
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	36	0.1	0.1	0.1	0.1	0.1	0.1	1.68E-09	0
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	36	0.1	0.1	0.1	0.1	0.1	0.1	1.68E-09	0
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	36	0.005	0.005	0.005	0.005	0.005	0.005	1.96E-10	0
Nitrogen Kjeldahl (Total)	0.1		0.4	0.1	0.14	<0.1	<0.1	0.15	<0.1	0.13	0.16	0.3	<0.1	0.22	0.21	36	0.1	0.1	0.14	0.157	0.1725	0.4	0.0727	0.0725
Phosphorus (Nutrient) Total	0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.005	<0.003	<0.003	0.003	<0.003	<0.003	36	0.003	0.003	0.003	0.00347	0.003	0.014	0.00195	0
Dissolved Metals																								
Aluminum (Dissolved)	0.001 to 0.003		0.004	<0.001	<0.003	<0.003	<0.001	<0.003	<0.003	0.007	<0.003	<0.003	<0.001	<0.003	<0.003	36	0.001	0.00115	0.003	0.00258	0.003	0.007	0.00123	0.00185
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Barium (Dissolved)	0.00005		0.00503	0.00637	0.00451	0.00449	0.00607	0.00444	0.00461	0.00614	0.00439	0.00464	0.00606	0.00451	0.00457	36	0.00434	0.0044875	0.004625	0.00507	0.00606	0.00637	0.000762	0.0015725
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	36	0.0001	0.0001	0.0005	0.000367	0.0005	0.0005	0.000191	0.0004
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	36	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.97E-11	0
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36	0.01	0.01	0.01	0.01	0.01	0.01	3.93E-10	0
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	3.24E-13	0
Calcium (Dissolved)	0.05		12.8	15.5	11.5	12.8	14.6	11.5	12.8	15.4	11.4	12.9	14.8	11.4	12.9	36	11.4	11.5	12.9	13.1	14.65	15.5	1.48	3.15
Chromium (Dissolved)	0.0001 to 0.0005		<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	36	0.0001	0.0001	0.0005	0.000367	0.0005	0.0005	0.000191	0.0004
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Copper (Dissolved)	0.0002 to 0.0005		0.0009	0.0009	0.0008	0.0009	0.00077	0.0007	0.0009	0.00086	0.0008	0.0009	0.00077	0.0011	0.0009	36	0.0007	0.0008	0.000845	0.000862	0.0009	0.0014	0.000133	0.0001
Iron (Dissolved)	0.01 to 0.03		<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	36	0.01	0.01	0.03	0.0233	0.03	0.03	0.00956	0.02
Lead (Dissolved)	0.00005		<0.00005	0.00863	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	36	0.00005	0.00005	0.00005	0.00029	0.00005	0.00863	0.00143	0
Lithium (Dissolved)	0.0005 to 0.001		<0.001	0.00097	<0.001	<0.001	0.00091	<0.001	<0.001	0.00051	<0.001	<0.001	<0.0005	<0.001	<0.001	36	0.0005	0.000965	0.001	0.000923	0.001	0.00101	0.000165	0.000035
Magnesium (Dissolved)	0.05 to 0.1		7.04	9.54	6.95	7.07	9.02	6.92	7.09	9.4	6.83	7.08	9	6.83	7.08	36	6.83	6.92	7.07	7.7	8.985	9.54	1.04	2.065
Manganese (Dissolved)	0.00005		0.00012	0.000317	0.00075	0.00013	0.000056	0.00028	0.00011	0.000234	0.00086	0.00015	0.000173	0.00026	0.00017	36	0.00005	0.0001275	0.000195	0.000305	0.000318	0.00095	0.000272	0.0001905
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	3.24E-13	0
Molybdenum (Dissolved)	0.00005		0.00066	0.000833	0.00045	0.00063	0.000807	0.00042	0.00066	0.000856	0.00076	0.00064	0.000813	0.00056	0.00063	36	0.00038	0.0004475	0.00068	0.000655	0.00081225	0.000867	0.000172	0.00036475
Nickel (Dissolved)	0.0005		0.0006	0.00072	0.0005	0.0007	0.00072	0.0005	0.0007	0.00069	0.0005	0.0007	0.00064	<0.0005	0.0007	36	0.0005	0.0005	0.0007	0.000644	0.0007	0.0009	0.000101	0.0002
Potassium (Dissolved)	0.05 to 0.2		0.8	1.12	0.8	0.7	1.07	0.8	0.8	1.09	0.8	0.8	1.05	0.8	0.8	36	0.7	0.8	0.8	0.881	1.05	1.12	0.139	0.25
Selenium (Dissolved)	0.0001 to 0.001		<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	36	0.0001	0.0001	0.001	0.0007	0.001	0.001	0.00043	0.0009
Silicon (Dissolved)	0.05 to 0.1		0.6	0.79	0.7	0.6	0.74	0.7	0.6	0.8	0.7	0.6	0.76	0.7	0.7	36	0.6	0.6	0.7	0.689	0.76	0.9	0.083	0.16
Silver (Dissolved)	1E-006 to 1E-005		<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	36	0.000001	0.000001	0.00001	0.000007	0.00001	0.00001	0.0000043	0.000009
Sodium (Dissolved)	0.0012 to 0.05		0.87	1.37	0.96	0.86	1.3	0.95	0.86	1.33	0.95	0.86	1.3	0.96	0.91	36	0.84	0.895	0.96	1.04	1.2725	1.37	0.194	0.3775
Strontium (Dissolved)	0.0001 to 0.0004		0.008	0.00937	0.0079	0.0072	0.00907	0.0071	0.0073	0.0093	0.0072	0.0071	0.00903	0.0073	0.0072	36	0.0069	0.0071	0.0073	0.00789	0.00899	0.00948	0.000957	0.00189
Thallium (Dissolved)	1E-005 to 0.0001		<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	36	0.00001	0.00001	0.0001	0.00007	0.0001	0.0001	0.000043	0.00009
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36	0.01	0.01	0.01	0.01	0.01	0.01	3.93E-10	0
Uranium (Dissolved)	0.00001		0.00085	0.00108	0.0008	0.00085	0.00107	0.00078	0.00085	0.00109	0.00081	0.00088	0.00105	0.00082	0.00088	36	0.00078	0.00081	0.00086	0.000914	0.001055	0.00112	0.00012	0.000245
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	36	0.001	0.001	0.001	0.001	0.001	0.001	3.94E-11	0
Zinc (Dissolved)	0.00033 to 0.003		<0.003	0.0013	<0.003	<0.003	0.0014	<0.003	<0.003	0.001	<0.003	<0.003	0.0029	<0.003	<0.003	36	0.00033	0.0019	0.003	0.00262	0.003	0.008	0.00125	0.0011
Total Metals																								
Aluminum (Total)	0.001 to 0.003	0.173	0.014	0.0282	0.017	0.01	<0.001	0.02	0.011	<0.001	0.017	0.012	<0.001	0.02	0.011	36	0.001	0.001	0.012	0.0118	0.01825	0.0282	0.00855	0.01725
Antimony (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Barium (Total)	0.00005		0.00485	0.00598	0.00435	0.00474	0.00601	0.00441	0.00464	0.00568	0.00443	0.00469	0.00587	0.00447	0.00472	36	0.00421	0.004425	0.004715	0.00502	0.005895	0.0064	0.000725	0.00147
Beryllium (Total)	2E-005 to 0.0005		<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	36	0.00002	0.00002	0.0005	0.00034	0.0005	0.0005	0.000229	0.00048
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	36	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.97E-11	0
Boron (Total)	0.01		<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36	0.01	0.01	0.01	0.0101	0.01	0.013	0.0005	0
Cadmium (Total)	0.00001	0.00009	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	3.24E-13	0
Calcium (Total)	0.05		12.6	14.6	11.6	12.6	14.5	11.5	12.6	14.3	11.6	12.5	14.5	11.7	12.5	36	11.5	11.7	12.6	13	14.425	15.3	1.28	2.725
Chromium (Total)	2E-005 to 0.0005	0.000642	<0.0005	0.00014	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	36	0.00002	0.00011	0.0005	0.000356	0.0005	0.0005	0.000209	0.00039
Cobalt (Total)	0.0001	0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Copper (Total)	0.0002 to 0.0005	0.0024	0.0009	0.00099	0.0009	0.0011	0.00088	0.0009	0.0009	0.00088	0.0009	0.0009	0.0009	0.0009	0.0009	36	0.0008	0.0009	0.0009	0.000921	0.0009	0.00127	0.0000754	0
Iron (Total)	0.003 to 0.03	0.3	<0.03	<0.003	<0.03	<0.03	<0.003	0.03	<0.03	<0.003	<0.03	<0.03	<0.003	<0.03	<0.03	36	0.003	0.003	0.03	0.0218	0.03	0.04	0.0138	0.027
Lead (Total)	0.00005	0.001	<0.00005	0.00006	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	36	0.00005	0.00005	0.00005	0.000127	0.00005	0.00195	0.000327	0
Lithium (Total)	5E-005 to 0.001		<0.001	0.00075	<0.001	<0.001	0.00082	<0.001	<0.001	0.00094	<0.001	<0.001	0.00078	<0.001	<0.001	36	0.00065	0.0009	0.001	0.000938	0.001	0.001	0.000105	0.0001
Magnesium (Total)	0.05 to 0.1		6.97	9.06	7.18	6.96	8.99	7.16	6.95	8.91	7.23	6.94	9.03	7.25	6.95	36	6.91	6.97	7.205	7.76	8.975	9.51	0.97	2.005
Manganese (Total)	0.00005		0.00132	0.000914	0.00247	0.00141	0.00102	0.00294	0.00141	0.000821	0.0024	0.00122	0.00121	0.00269	0.00123	36	0.000735	0.00113	0.00128	0.00164	0.0023925	0.00294	0.000706	0.0012625
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	36	0.00001	0.00001	0.00001	0.0000147	0.00001	0.00017	0.0000267	0
Molybdenum (Total)	0.00005		0.00063	0.000914	0.00028	0.00063	0.000847	0.0003	0.00066	0.000838	0.00026	0.00063	0.000844	0.00029	0.00063	36	0.00024	0.0004975	0.000655	0.000646	0.0008495	0.00093	0.000225	0.000352
Nickel (Total)	0.0005	0.025	0.0007	0.00068	0.0007	0.0007	0.00068	0.0007	0.0007	0.00069	0.0007	0.0007	0.00074	0.0007	0.0007	36	0.0006	0.0006975	0.0007	0.000704	0.0007025	0.001	0.0000687	0.000005
Potassium (Total)	0.05 to 0.2		0.8	1.05	0.9	0.8	1.01	0.9	0.8	1.02	0.9	0.8	1.03	0.8	0.8	36	0.7	0.8	0.9	0.891	1.02	1.08	0.119	0.22
Selenium (Total)	1E-005 to 0.001		<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	36	0.00001	0.00001	0.001	0.00067	0.001	0.001	0.000473	0.00099
Silicon (Total)	0.05 to 0.1		0.7	0.74	0.6	0.7	0.75	0.7	0.7	0.76	0.6	0.7	0.77	0.6	0.7	36	0.6	0.6	0.7	0.69	0.76	0.9	0.0794	0.16
Silver (Total)	1E-006 to 1E-005	0.0001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	36	0.000001	0.000001	0.00001	0.000007	0.00001	0.00001	0.0000043	0.000009
Sodium (Total)	0.0012 to 0.05		0.86	1.37	0.95	0.89	1.28	0.95	0.86	1.28	0.95	0.85	1.27	0.96	0.87	36	0.83	0.86	0.945	1.04	1.2725	1.4	0.203	0.4125
Strontium (Total)	0.0001 to 0.0004		0.0076	0.00972	0.007	0.0072	0.00932	0.007	0.0073	0.00914	0.007	0.0072	0.00923	0.0071	0.0073	36	0.0064	0.007	0.00725	0.00786	0.0092525	0.00982	0.00122	0.0022525
Thallium (Total)	1E-006 to 0.0001	0.0008	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	36	0.000001	0.000001	0.0001	0.000067	0.0001	0.0001	0.0000473	0.000099
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	4.34E-12	0
Titanium (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36	0.01	0.01	0.01	0.01	0.01	0.01	3.93E-10	0
Uranium (Total)	0.00001		0.00086	0.00113	0.0008	0.00085	0.00105	0.00079	0.00086	0.00105	0.0008	0.00088	0.00104	0.00083	0.00087	36	0.00079	0.00084	0.00087	0.000924	0.0010525	0.00113	0.000115	0.0002125
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	36	0.001	0.001	0.001	0.001	0.001	0.001	3.94E-11	0
Zinc (Total)	0.003	0.03	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	36	0.003	0.003	0.003	0.00306	0.003	0.005	0.000333	0
Organics																								
Carbon Organic (Dissolved)	0.5		1.1	0.9	1.5	1.3	1	1.5	1.2	1.1	1.6	1.2	1	1.5	1.3	36	0.9	1	1.2	1.26	1.525	1.6	0.252	0.525
Carbon Organic (Total)	0.5		1.5	1.3	1.9	1.6	1.3	2	1.4	1.2	1.7	1.6	1.2	1.8	1.6	36	1.1	1.3	1.6	1.54	1.725	2	0.25	0.425
Chlorophyll-a mg/m3	0.2		2.2	2.2	1.4	<0.2	1.6	2.6	<0.2	2.2	1.6	1.3	2.5	4.1	0.3	36	0.2	0.65	1.5	1.92	2.625	5.6	1.59	1.975
Phenols	0.001			<0.001			<0.001			<0.001			0.001			12	0.001	0.001	0.001	0.00117	0.001	0.003	0.000577	0
Pheophytin-a mg/m3	0.2		<0.2	<0.2	<0.2	1.5	<0.2	<0.2	2.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.7	36	0.2	0.2	0.2	0.433	0.275	2.7	0.565	0.075
Semi Volatile Organics																								
Phenol	0.001		<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	24	0.001	0.001	0.001	0.001	0.001	0.001	3.13E-11	0

I:\1\02\00181\34\A\Report\Report 6 - 2014 CREMP Monitoring Results\Rev 0\Appendices\Appendix A\[Appendix A1_02FEB'15.xlsm]A1.5 SDL NW

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE NOTED.
2. SDL NW AEMP - SHEARDOWN LAKE NORTHWEST AQUATIC EFFECTS MONITORING PLAN.
3. BOLD SHADED CELLS INDICATE VALUES THAT EXCEED THE AEMP BENCHMARK CRITERIA.
4. DETECTION LIMIT VALUES DISPLAY WITH LESS THAN SYMBOL (<); STATISTICS CALCULATED USING THE DETECTION LIMIT VALUE.

0	19MAR'15	ISSUED WITH REPORT NB102-181/34-6	DKK	RAC
REV	DATE	DESCRIPTION	PREP'D	REV'D

Knight Piésold CONSULTING

TABLE A1.6

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
SHEARDOWN LAKE SOUTHEAST 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:13:01

		Station ID	DL0-02-3-S	DL0-02-3-S	DL0-02-3-S	DL0-02-3-D	DL0-02-3-D	DL0-02-3-D	DL0-02-4-S	DL0-02-4-S	DL0-02-4-S	DL0-02-4-D	DL0-02-4-D	DL0-02-4-D	DL0-02-6-S	DL0-02-6-S	DL0-02-6-S	DL0-02-6-D	DL0-02-6-D	DL0-02-6-D	DL0-02-7-S	DL0-02-7-S
		Date Sampled	04/05/2014	24/07/2014	24/08/2014	04/05/2014	24/07/2014	24/08/2014	03/05/2014	24/07/2014	24/08/2014	03/05/2014	24/07/2014	24/08/2014	04/05/2014	24/07/2014	24/08/2014	04/05/2014	24/07/2014	24/08/2014	04/05/2014	24/07/2014
Parameter	Method Detection Limit	SDL SE AEMP Benchmark																				
In Situ Parameters																						
Conductivity (In Situ) µS/cm	...			58	65	146	55	65		56	66		53	66	155	67	67	153	60	67	155	65
Depth to Bottom (below ground surface) m	...				13.5									7.3			6.7					
Depth to Bottom (below water surface) m	...			14			14	13.5		9.1	7.3		9.1			7.4			7.4	6.7		4
Oxygen Dissolved (In Situ %) %	...		106	108	102	104	100	102	106	108	103	106	97.7	102	93.1	109	103	93.1	102	103	101	109
Oxygen Dissolved (In Situ)	...		14.5	12.9	12.7	14.2	12.7	12.7	14.5	12.6	12.9	14.4	12.3	12.7	12.9	12.9	12.8	12.9	12.8	12.8	14.2	12.7
pH (In Situ) pH	...		8.3	7.4	7.88	7.8	7.48	7.88	7.2	6.84	8.13	7.1	6.83	7.97	7.58	7.66	7.86	7.52	7.67	7.86	7.63	7.63
Secchi Depth m	...			1.35	2.1		1.35	2.1		1.15	2.3		1.15	2.3		1.6	2		1.6	2		1.5
Specific Conductivity (In Situ) µS/cm	...		145						146			146										
Temperature (In Situ) °C	...		2.43	7.72	6	2.59	5.13	6	2.3	8.49	6.07	2.54	5.63	6.03	1.85	8.08	5.86	1.95	5.7	5.86	1.19	8.86
Turbidity (In Situ) NTU	...		-1			-0.8			-0.9			-0.9			-0.9			-0.2				
Physical Tests																						
Alkalinity (Total as CaCO3)	5		74	40	48	72	41	48	74	38	48	74	38	48	78	44	48	74	45	49	78	44
Conductivity µS/cm	5			88	105		90	105		82	105		83	105		97	106		98	107		97
Hardness as CaCO3 (Dissolved)	0.5 to 1		74.5	43	53	77.1	44	53	78.1	41	53	76.8	41	54	81.9	49	54	80.5	48	54	84	47
Hardness as CaCO3 (Total)	0.5 to 1		74.6	43	53	76.1	45	52	77.2	41	53	75.6	41	53	80.8	49	52	78.2	49	54	80.1	48
pH pH	1		7.19	7.8	7.85	7.2	7.78	7.84	7.13	7.76	7.86	7.16	7.75	7.85	7.13	7.82	7.88	7.13	7.82	7.91	7.15	7.85
Specific Conductivity µS/cm	5		153			152			156			150			162			160			163	
Total Dissolved Solids	1		99	57	68	99	58	68	101	53	68	98	54	68	105	63	69	104	64	70	106	63
Total Suspended Solids	2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity NTU	0.1		0.3	3.1	1.3	0.3	2.7	1.3	0.3	2.9	1.6	0.2	4.5	1.2	0.4	2.3	1.4	0.3	3.2	1.4	0.3	2
Dissolved Anions																						
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	120	4	2	2	3	2	2	4	2	2	3	2	2	4	2	2	4	2	2	4	2
Sulphate (Dissolved)	1	218	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2	3	2	2	3	2
Nutrients																						
Ammonia (Total)	0.02	0.855	0.04	0.06	0.2	0.05	0.06	0.1	0.05	0.16	0.07	0.06	0.09	0.05	0.05	0.1	0.05	0.1	0.07	0.02	0.23	0.07
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.1		0.11	0.13	<0.1	0.15	0.13	<0.1	0.13	0.18	<0.1	<0.1	0.14	0.16	<0.1	0.21	0.38	0.12	0.19	0.17	0.37	0.11
Phosphorus (Nutrient) Total	0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	<0.003	0.008	<0.003	<0.003	0.006	<0.003	<0.003	0.005	<0.003	<0.003	0.003
Dissolved Metals																						
Aluminum (Dissolved)	0.001 to 0.003		<0.001	0.005	0.004	0.0013	0.004	0.005	0.0012	0.01	0.005	<0.001	0.005	0.004	<0.001	0.004	0.006	<0.001	0.005	0.005	<0.001	0.005
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00005		0.00604	0.00345	0.00454	0.00613	0.00352	0.00467	0.00612	0.00329	0.00449	0.00567	0.00332	0.0045	0.00676	0.00373	0.00468	0.00653	0.00365	0.00475	0.00675	0.00359
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Dissolved)	0.05		15	8.65	11.3	15.5	8.92	11.3	15.8	8.25	11.3	15.5	8.28	11.4	16.5	9.9	11.5	16.2	9.68	11.6	16.8	9.57
Chromium (Dissolved)	0.0001 to 0.0005		<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.0002 to 0.0005		0.00068	0.0006	0.0007	0.00072	0.0006	0.0007	0.00068	0.0006	0.0007	0.00071	0.0006	0.0007	0.00067	0.0007	0.0007	0.00068	0.0007	0.0007	0.00067	0.0007
Iron (Dissolved)	0.01 to 0.03		<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03
Lead (Dissolved)	0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	0.00007
Lithium (Dissolved)	0.0005 to 0.001		0.00092	<0.001	<0.001	0.00093	<0.001	<0.001	0.00078	<0.001	<0.001	0.00082	<0.001	<0.001	0.00093	<0.001	<0.001	0.0009	<0.001	<0.001	0.00101	<0.001
Magnesium (Dissolved)	0.05 to 0.1		8.99	5.18	6.06	9.35	5.31	6.03	9.4	4.86	6.02	9.27	4.91	6.12	9.9	5.92	6.13	9.72	5.74	6.18	10.2	5.71
Manganese (Dissolved)	0.00005		0.000175	0.00074	0.00021	0.000294	0.00047	0.00022	0.000632	0.00092	0.00022	0.00019	0.00045	0.00021	0.00214	0.00082	0.00021	0.00163	0.00053	0.00023	0.000826	0.0009
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00005		0.000559	0.00021	0.00045	0.000561	0.0002	0.00042	0.000553	0.00062	0.00044	0.000542	0.00047	0.00054	0.000527	0.00024	0.00041	0.000519	0.00025	0.00042	0.000557	0.00026
Nickel (Dissolved)	0.0005		0.00054	<0.0005	0.0005	0.00055	<0.0005	0.0006	0.00059	<0.0005	0.0005	0.00058	<0.0005	0.0005	0.00064	<0.0005	0.0005	0.00062	<0.0005	0.0005	0.00063	<0.0005
Potassium (Dissolved)	0.05 to 0.2		0.97	0.6	0.6	1	0.7	0.6	0.993	0.6	0.6	0.962	0.6	0.7	1.06	0.7	0.7	1.04	0.7	0.7	1.08	0.7
Selenium (Dissolved)	0.0001 to 0.001		<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001
Silicon (Dissolved)	0.05 to 0.1		0.6	0.5	0.6	0.62	0.5	0.5	0.65	0.5	0.6	0.63	0.5	0.7	0.73	0.5	0.5	0.7	0.5	0.6	0.7	0.5
Silver (Dissolved)	1E-006 to 1E-005		<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001
Sodium (Dissolved)	0.0012 to 0.05		1.33	0.72	0.7	1.37	0.74	0.7	1.36	0.66	0.7	1.32	0.67	0.7	1.44	0.82	0.71	1.4	0.79	0.71	1.47	0.78
Strontium (Dissolved)	0.0001 to 0.0004		0.00983	0.005	0.0072	0.00986	0.0051	0.0072	0.01	0.0049	0.007	0.00968	0.0049	0.007	0.0103	0.0057	0.0075	0.0102	0.0056	0.0076	0.0104	0.0055
Thallium (Dissolved)	1E-005 to 0.0001		<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00001		0.000904	0.00055	0.00069	0.000901	0.00054	0.0007	0.000922	0.0005	0.00071	0.000913	0.00052	0.00071	0.000878	0.00065	0.0007	0.000867	0.00062	0.0007	0.000908	0.00063
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	0.00033 to 0.003		<0.00033	<0.003	<0.003	0.0035	<0.003	<0.003	0.001	<0.003	<0.003	0.001	<0.003	<0.003	0.0011	<0.003	<0.003	0.0028	<0.003	<0.003	0.0024	<0.003
Total Metals																						
Aluminum (Total)	0.001 to 0.003	0.173	<0.001	0.1	0.055	<0.001	0.115	0.054	<0.001	0.124	0.06	0.0057	0.143	0.051	<0.001	0.086	0.058	0.0037	0.101	0.049	<0.001	0.088
Antimony (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Total)	0.00005		0.00608	0.00401	0.00502	0.00606	0.00423	0.00499	0.00616	0.00407	0.00506	0.00605	0.00415	0.00503	0.00672	0.00411	0.00483	0.00643	0.00452	0.00498	0.00652	0.00419
Beryllium (Total)	2E-005 to 0.0005		<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Total)	0.00001	0.00009	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Total)	0.05		15	8.66	11.2	15.2	9	11.1	15.4	8.23	11.2	15.1	8.26	11.2	16.2	9.88	11	15.6	9.83	11.3	16	9.64
Chromium (Total)	2E-005 to 0.0005	0.000642	<0.00002	<0.0005	<0.0005	0.0001	<0.0005	<0.0005	0.00014	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	0.0001	<0.0005
Cobalt (Total)	0.0001	0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Total)	0.0002 to 0.0005	0.0024	0.00071	0.0008	0.0008	0.00077	0.0009	0.0008	0.00084	0.0008	0.0008	0.00115	0.0009	0.0008	0.00074	0.0009	0.0008	0.00091	0.0009	0.0008	0.00076	0.0009
Iron (Total)	0.003 to 0.03	0.3	0.023	0.13	0.05	0.019	0.15	0.05	0.021	0.16	0.04	0.03	0.18	0.05	0.055	0.1	0.05	0.06	0.14	0.04	0.035	0.11
Lead (Total)	0.00005	0.001	<0.00005	0.00013	<0.00005	0.0001	0.00019	0.00005	0.00061	0.00015	0.00006	0.00007	0.00018	0.00006	<0.00005	0.0001	0.00005	0.00019	0.00013	0.00005	0.00032	0.00012
Lithium (Total)	5E-005 to 0.001		0.00081	<0.001	<0.001	0.00086	<0.001	<0.001	0.00084	<0.001	<0.001	0.00071	<0.001	<0.001	0.00078	<0.001	<0.001	<0.00005	<0.001	<0.001	0.00079	<0.001
Magnesium (Total)	0.05 to 0.1		9.04	5.16	5.98	9.28	5.38	5.95	9.41	4.92	6.01	9.22	4.94	5.99	9.81	5.94	5.9	9.5	5.92	6.13	9.75	5.78
Manganese (Total)	0.00005		0.0036	0.00354	0.00269	0.00284	0.00433	0.00273	0.00313	0.00304	0.00261	0.00441	0.00454	0.00246	0.00776	0.00335	0.00275	0.00861	0.00705	0.00253	0.00458	0.00333
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.00005		0.00058	0.0001	0.00039	0.00059	0.00012	0.00037	0.000633	0.00015	0.00064	0.000588	0.00013	0.00055	0.000571	0.0002	0.0004	0.000553	0.0002	0.00038	0.000585	0.00018
Nickel (Total)	0.0005	0.025	0.00058	0.0006	0.0006	0.00062	0.0007	0.0006	0.00067	0.0006	0.0006	0.00062	0.0007	0.0006	0.00063	0.0006	0.0006	0.00065	0.0007	0.0006	0.00065	0.0008
Potassium (Total)	0.05 to 0.2		0.94	0.7	0.6	0.948	0.6	0.5	0.99	0.7	0.6	0.975	0.6	0.5	1.02	0.8	0.6	0.968	0.7	0.6	1	0.7
Selenium (Total)	1E-005 to 0.001		<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001
Silicon (Total)	0.05 to 0.1		0.61	0.6	0.8	0.62	0.7	0.8	0.64	0.7	0.7	0.64	0.7	0.8	0.72	0.7	0.8	0.69	0.7	0.8	0.68	0.7
Silver (Total)	1E-006 to 1E-005	0.0001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001
Sodium (Total)	0.0012 to 0.05		1.34	0.71	0.69	1.34	0.75	0.69	1.37	0.67	0.69	1.37	0.68	0.68	1.48	0.81	0.68	1.32	0.8	0.71	1.39	0.78
Strontium (Total)	0.0001 to 0.0004		0.01	0.0051	0.0075	0.0102	0.0053	0.0074	0.0106	0.005	0.0076	0.0101	0.005	0.0075	0.0107	0.0057	0.0072	0.0105	0.0057	0.0073	0.0107	0.0056
Thallium (Total)	1E-006 to 0.0001	0.0008	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Total)	0.00001		0.000888	0.00057	0.00068	0.000915	0.0006	0.0007	0.000934	0.00053	0.00073	0.000958	0.00054	0.00069	0.000877	0.00067	0.00071	0.000875	0.00067	0.00074	0.00093	0.00066
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	0.03	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																						
Carbon Organic (Dissolved)	0.5		<0.5	1.3	1.1	0.9	1.3	1	1	1.3	1	1	1.2	1.3	1	1.5	0.9	1	1.4	1.1	1.1	1.4
Carbon Organic (Total)	0.5		1.1	1.5	1.2	1.2	1.5	1.3	1.2	1.7	1.3	1.1	1.7	1.4	1.5	1.6	1.3	1.3	1.5	1.3	1.1	1.8
Chlorophyll-a mg/m3	0.2		3.6	<0.2	1.6	1.1	<0.2	<0.2	<0.2	<0.2	0.4	8	<0.2	0.4	2.8	<0.2	<0.2	3.1	<0.2	3.5	4.2	<0.2
Phenols	0.001		<0.001			<0.001			<0.001			0.002			<0.001			<0.001			<0.001	
Pheophytin-a mg/m3	0.2		<0.2	<0.2	<0.2	<0.2	<0.2	2.6	<0.2	<0.2	0.7	<0.2	<0.2	0.7	<0.2	<0.2	6	<0.2	<0.2	<0.2	<0.2	<0.2
Semi Volatile Organics																						
Phenol	0.001			<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	<0.001		0.001	<0.001		<0.001

TABLE A1.6

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
SHEARDOWN LAKE SOUTHEAST 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:13:01

Parameter	Method Detection Limit	SDL SE AEMP Benchmark	Station ID DL0-02-7-S, Date Sampled 24/08/2014	DL0-02-7-D 04/05/2014	DL0-02-7-D 24/07/2014	DL0-02-7-D 24/08/2014	DL0-02-8-S 03/05/2014	DL0-02-8-S 24/07/2014	DL0-02-8-S 24/08/2014	DL0-02-8-D 03/05/2014	DL0-02-8-D 24/07/2014	DL0-02-8-D 24/08/2014	Samples Collected	Minimum	25th Percentile/ Quartile 1	Median/ 50th Percentile/ Quartile 2	Mean	75th Percentile/ Quartile 3	Maximum	Standard Deviation	Inter-Quartile Range
In Situ Parameters																					
Conductivity (In Situ) µS/cm	...		65	151	55	65		57	66		55	65	25	53	58	65	79.9	67	155	37.1	9
Depth to Bottom (below ground surface) m	...		4			4			13.1			13.1	7	4	5.35	7.3	8.8	13.05	13.5	4.3	7.7
Depth to Bottom (below water surface) m	...				4			13.2			13.2		13	4	7.3	9.1	9.45	13.15	14	3.71	5.85
Oxygen Dissolved (In Situ %) %	...		104	102	105	102	105	108	103	104	99.3	102	30	93.1	101.725	102.95	103	105.625	109.4	3.95	3.9
Oxygen Dissolved (In Situ)	...		13	14	12.9	12.7	14.4	12.6	12.9	14.2	12.6	12.7	30	12.29	12.7	12.85	13.2	13.7675	14.52	0.712	1.0675
pH (In Situ) pH	...		7.9	7.65	7.68	7.91	7.15	7.1	7.98	7.24	7.29	7.91	30	6.83	7.3175	7.655	7.6	7.88	8.3	0.372	0.5625
Secchi Depth m	...		2		1.5	2		1.05	2.5		1.05	2.5	20	1.05	1.35	1.8	1.76	2.1	2.5	0.482	0.75
Specific Conductivity (In Situ) µS/cm	...						146			146			5	145	146	146	146	146	146	0.447	0
Temperature (In Situ) °C	...		6	1.97	6.37	6.01	2.5	8.89	6.12	2.57	5.12	6.01	30	1.19	2.5475	5.86	5.06	6.06	8.89	2.29	3.5125
Turbidity (In Situ) NTU	...						-0.9			-0.8			8	-1	-0.9	-0.9	-0.8	-0.8	-0.2	0.251	0.1
Physical Tests																					
Alkalinity (Total as CaCO3)	5		47	75	40	48	76	38	57	71	40	48	30	38	44	48	54.8	73.5	78	14.9	29.5
Conductivity µS/cm	5		105		87	106		83	105		88	105	20	82	88	101.5	97.4	105	107	9.28	17
Hardness as CaCO3 (Dissolved)	0.5 to 1		53	81.5	43	53	79	41	53	76.7	43	53	30	41	47.25	53	58.8	76.775	84	15.2	29.525
Hardness as CaCO3 (Total)	0.5 to 1		53	79.8	43	52	76	41	52	75.8	44	53	30	41	48.25	53	58.2	75.75	80.8	14.4	27.5
pH pH	1		7.85	7.14	7.78	7.88	7.17	7.77	7.84	7.15	7.77	7.85	30	7.13	7.175	7.78	7.6	7.85	7.91	0.324	0.675
Specific Conductivity µS/cm	5			159			159			152			10	150	152.25	157.5	157	159.75	163	4.62	7.5
Total Dissolved Solids	1		68	103	57	69	103	54	68	99	57	68	30	53	63	68	76	99	106	19.2	36
Total Suspended Solids	2		<2	<2	<2	<2	<2	<2	<2	<2	2	<2	30	2	2	2	2	2	2	0	0
Turbidity NTU	0.1		0.7	0.2	2.8	1.1	0.3	3.1	1.2	0.3	2.8	1.4	30	0.2	0.3	1.3	1.5	2.6	4.5	1.18	2.3
Dissolved Anions																					
Bromide (Dissolved)	0.25		<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	30	0.25	0.25	0.25	0.25	0.25	0.25	0	0
Chloride (Dissolved)	1	120	2	4	2	2	4	2	2	3	2	2	30	2	2	2	2.57	3	4	0.858	1
Sulphate (Dissolved)	1	218	2	3	2	2	3	2	2	3	2	2	30	2	2	2	2.33	3	3	0.479	1
Nutrients																					
Ammonia (Total)	0.02	0.855	0.1	0.04	0.1	0.12	0.05	0.11	0.11	0.06	0.06	0.04	30	0.02	0.05	0.065	0.0823	0.1	0.23	0.0472	0.05
Nitrate (as N)	0.1	13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	30	0.1	0.1	0.1	0.1	0.1	0.1	1.43E-09	0
Nitrate+Nitrite (Dissolved)	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	30	0.1	0.1	0.1	0.1	0.1	0.1	1.43E-09	0
Nitrite (as N)	0.005	0.06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	30	0.005	0.005	0.005	0.005	0.005	0.005	1.67E-10	0
Nitrogen Kjeldahl (Total)	0.1		<0.1	0.11	0.16	0.12	<0.1	0.2	0.35	0.14	0.16	<0.1	30	0.1	0.1025	0.13	0.157	0.1675	0.38	0.0781	0.065
Phosphorus (Nutrient) Total	0.003		<0.003	<0.003	0.007	<0.003	<0.003	0.007	<0.003	<0.003	0.008	<0.003	30	0.003	0.003	0.003	0.0038	0.003	0.008	0.00163	0
Dissolved Metals																					
Aluminum (Dissolved)	0.001 to 0.003		0.005	<0.001	0.007	0.005	<0.001	0.005	0.005	<0.001	0.005	0.006	30	0.001	0.00105	0.005	0.00385	0.005	0.01	0.00229	0.00395
Antimony (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	30	0.0001	0.0001	0.0001	0.000103	0.0001	0.0002	0.0000183	0
Arsenic (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	30	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	3.69E-12	0
Barium (Dissolved)	0.00005		0.00463	0.00668	0.00338	0.00473	0.00751	0.00324	0.00443	0.0058	0.00345	0.0045	30	0.00324	0.003605	0.004585	0.00482	0.00598	0.00751	0.00127	0.002375
Beryllium (Dissolved)	0.0001 to 0.0005		<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	30	0.0001	0.0001	0.0005	0.000367	0.0005	0.0005	0.000192	0.0004
Bismuth (Dissolved)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	30	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.58E-11	0
Boron (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	30	0.01	0.01	0.01	0.01	0.01	0.01	3.34E-10	0
Cadmium (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	30	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	1.74E-13	0
Calcium (Dissolved)	0.05		11.2	16.4	8.7	11.3	16	8.25	11.3	15.4	8.75	11.4	30	8.25	9.5975	11.3	12.1	15.475	16.8	2.99	5.8775
Chromium (Dissolved)	0.0001 to 0.0005		<0.0005	<0.0001	<0.0005	0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	30	0.0001	0.0001	0.0005	0.000367	0.0005	0.0005	0.000192	0.0004
Cobalt (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	30	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	3.69E-12	0
Copper (Dissolved)	0.0002 to 0.0005		0.0007	0.00073	0.0007	0.0007	0.00085	0.0006	0.0007	0.00068	0.0006	0.0007	30	0.0006	0.0006725	0.0007	0.000682	0.0007	0.00085	0.0000518	0.0000275
Iron (Dissolved)	0.01 to 0.03		<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	<0.01	<0.03	<0.03	30	0.01	0.01	0.03	0.0233	0.03	0.03	0.00959	0.02
Lead (Dissolved)	0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	30	0.00005	0.00005	0.00005	0.0000513	0.00005	0.00007	5.07E-06	0
Lithium (Dissolved)	0.0005 to 0.001		<0.001	0.00097	<0.001	<0.001	0.00082	<0.001	<0.001	0.0009	<0.001	<0.001	30	0.00078	0.00094	0.001	0.000966	0.001	0.00101	0.0000632	0.00006
Magnesium (Dissolved)	0.05 to 0.1		6.01	9.84	5.16	6.03	9.5	4.9	6.04	9.27	5.21	6.06	30	4.86	5.7175	6.05	6.97	9.27	10.2	1.9	3.5525
Manganese (Dissolved)	0.00005		0.00018	0.000851	0.00061	0.00033	0.000635	0.00076	0.00021	0.000196	0.00038	0.00021	30	0.000175	0.00021	0.000415	0.000546	0.000755	0.00214	0.00045	0.000545
Mercury (Dissolved)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	30	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	1.74E-13	0
Molybdenum (Dissolved)	0.00005		0.00042	0.000526	0.00023	0.00042	0.000558	0.0003	0.00049	0.000554	0.00028	0.00045	30	0.0002	0.0003275	0.00045	0.000433	0.0005415	0.00062	0.000127	0.000214
Nickel (Dissolved)	0.0005		<0.0005	0.00057	<0.0005	0.0005	0.00073	<0.0005	0.0005	0.00058	<0.0005	0.0005	30	0.0005	0.0005	0.0005	0.000538	0.0005775	0.00073	0.0000591	0.0000775
Potassium (Dissolved)	0.05 to 0.2		0.7	1.08	0.6	0.6	1.27	0.6	0.7	0.963	0.6	0.7	30	0.6	0.6	0.7	0.781	0.96825	1.27	0.199	0.36825
Selenium (Dissolved)	0.0001 to 0.001		<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	30	0.0001	0.0001	0.001	0.0007	0.001	0.001	0.000432	0.0009
Silicon (Dissolved)	0.05 to 0.1		0.5	0.68	0.5	0.5	0.65	0.5	0.6	0.64	0.5	0.6	30	0.5	0.5	0.6	0.577	0.6375	0.73	0.0798	0.1375
Silver (Dissolved)	1E-006 to 1E-005		<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	30	0.000001	0.000001	0.00001	0.000007	0.00001	0.00001	4.32E-06	0.000009
Sodium (Dissolved)	0.0012 to 0.05		0.7	1.46	0.7	0.74	1.69	0.66	0.69	1.28	0.73	0.69	30	0.66	0.7	0.735	0.948	1.3275	1.69	0.342	0.6275
Strontium (Dissolved)	0.0001 to 0.0004		0.0072	0.0102	0.005	0.0074	0.0101	0.0049	0.0072	0.00981	0.0052	0.0073	30	0.0049	0.005525	0.0072	0.00749	0.009825	0.0104	0.00204	0.0043
Thallium (Dissolved)	1E-005 to 0.0001		<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	30	0.00001	0.00001	0.0001	0.00007	0.0001	0.0001	0.0000432	0.00009
Tin (Dissolved)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	30	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	3.69E-12	0
Titanium (Dissolved)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	30	0.01	0.01	0.01	0.01	0.01	0.01	3.34E-10	0
Uranium (Dissolved)	0.00001		0.0007	0.000897	0.00055	0.0007	0.000918	0.00051	0.00072	0.000885	0.00056	0.0007	30	0.0005	0.0006225	0.0007	0.000722	0.00088325	0.000922	0.000144	0.00026075
Vanadium (Dissolved)	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	30	0.001	0.001	0.001	0.001	0.001	0.001	3.16E-11	0
Zinc (Dissolved)	0.00033 to 0.003		<0.003	<0.00033	<0.003	<0.003	0.0017	<0.003	<0.003	<0.00033	<0.003	<0.003	30	0.00033	0.0025	0.003	0.00248	0.003	0.0035	0.000971	0.0005
Total Metals																					
Aluminum (Total)	0.001 to 0.003	0.173	0.043	<0.001	0.127	0.056	0.0031	0.131	0.062	0.0064	0.133	0.056	30	0.001	0.0042	0.0555	0.0572	0.097	0.143	0.0481	0.0928
Antimony (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	30	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	3.69E-12	0
Arsenic (Total)	0.0001	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	30	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	3.69E-12	0
Barium (Total)	0.00005		0.00506	0.00646	0.00414	0.00495	0.00611	0.00391	0.00508	0.00605	0.00421	0.0051	30	0.00391	0.004215	0.005025	0.00514	0.0060575	0.00672	0.000897	0.0018425
Beryllium (Total)	2E-005 to 0.0005		<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	<0.00002	<0.0005	<0.0005	30	0.00002	0.00002	0.0005	0.00034	0.0005	0.0005	0.00023	0.00048
Bismuth (Total)	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	30	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1.58E-11	0
Boron (Total)	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	30	0.01	0.01	0.01	0.01	0.01	0.01	3.34E-10	0
Cadmium (Total)	0.00001	0.00009	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	30	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	1.74E-13	0
Calcium (Total)	0.05		11.2	15.9	8.59	11.1	15.1	8.21	11.1	15.1	8.8	11.2	30	8.21	9.6875	11.2	11.8	15.1	16.2	2.8	5.4125
Chromium (Total)	2E-005 to 0.0005	0.000642	<0.0005	<0.00002	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	30	0.00002	0.00011	0.0005	0.000358	0.0005	0.0005	0.000206	0.00039
Cobalt (Total)	0.0001	0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	30	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	3.69E-12	0
Copper (Total)	0.0002 to 0.0005	0.0024	0.001	0.00079	0.0009	0.0008	0.00082	0.0009	0.0008	0.00077	0.0009	0.0008	30	0.00071	0.0008	0.0008	0.000842	0.0009	0.00115	0.0000869	0.0001
Iron (Total)	0.003 to 0.03	0.3	0.04	0.036	0.16	0.05	0.022	0.16	0.05	0.033	0.18	0.05	30	0.019	0.037	0.05	0.0758	0.125	0.18	0.0543	0.088
Lead (Total)	0.00005	0.001	0.00005	0.00084	0.00014	0.00006	<0.00005	0.00029	0.00005	0.00008	0.00015	0.00005	30	0.00005	0.00005	0.00009	0.000149	0.00015	0.00084	0.000174	0.0001
Lithium (Total)	5E-005 to 0.001		<0.001	0.00095	<0.001	<0.001	0.00078	<0.001	<0.001	0.00088	<0.001	<0.001	30	0.00005	0.000865	0.001	0.000915	0.001	0.001	0.000187	0.000135
Magnesium (Total)	0.05 to 0.1		6	9.72	5.16	5.95	9.28	4.93	5.97	9.24	5.3	5.98	30	4.92	5.81	5.98	6.92	9.235	9.81	1.84	3.425
Manganese (Total)	0.00005		0.00259	0.00464	0.00399	0.00284	0.00375	0.00376	0.00257	0.00533	0.0045	0.00308	30	0.00246	0.0027725	0.003445	0.0039	0.0044775	0.00861	0.00155	0.001705
Mercury (Total)	0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	30	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	1.74E-13	0
Molybdenum (Total)	0.00005		0.00031	0.00059	0.00016	0.00036	0.000596	0.00013	0.00046	0.000593	0.00016	0.00042	30	0.0001	0.000185	0.000395	0.00039	0.00058375	0.00064	0.000192	0.00039875
Nickel (Total)	0.0005	0.025	0.0006	0.00066	0.0006	0.0006	0.00061	0.0006	0.0006	0.00063	0.0007	0.0006	30	0.00058	0.0006	0.0006	0.000631	0.00065	0.0008	0.0000486	0.00005
Potassium (Total)	0.05 to 0.2		0.6	1	0.7	0.6	0.977	0.5	0.6	0.964	0.7	0.6	30	0.5	0.6	0.7	0.743	0.96	1.02	0.181	0.36
Selenium (Total)	1E-005 to 0.001		<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	30	0.00001	0.00001	0.001	0.00067	0.001	0.001	0.000475	0.00099
Silicon (Total)	0.05 to 0.1		0.8	0.67	0.7	0.8	0.62	0.7	0.8	0.64	0.7	0.8	30	0.6	0.6725	0.7	0.711	0.8	0.8	0.0669	0.1275
Silver (Total)	1E-006 to 1E-005	0.0001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	30	0.000001	0.000001	0.00001	0.000007	0.00001	0.00001	4.32E-06	0.000009
Sodium (Total)	0.0012 to 0.05		0.7	1.44	0.7	0.69	1.39	0.67	0.68	1.33	0.72	0.69	30	0.67	0.69	0.715	0.932	1.3375	1.48	0.323	0.6475
Strontium (Total)	0.0001 to 0.0004		0.0076	0.0109	0.0051	0.0074	0.0103	0.0049	0.0076	0.0101	0.0051	0.0076	30	0.0049	0.005625	0.0075	0.00771	0.0101	0.0109	0.00216	0.004475
Thallium (Total)	1E-006 to 0.0001	0.0008	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	<0.000001	<0.0001	<0.0001	30	0.000001	0.000001	0.0001	0.000067	0.0001	0.0001	0.0000475	0.000099
Tin (Total)	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	30	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	3.69E-12	0
Titanium (Total)	0.01		<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	30	0.01	0.01	0.01	0.01	0.01	0.01	3.34E-10	0
Uranium (Total)	0.00001		0.00067	0.000888	0.00058	0.0007	0.000904	0.00052	0.00072	0.000909	0.00058	0.0007	30	0.00052	0.0006625	0.0007	0.000735	0.00088525	0.000958	0.000138	0.00022275
Vanadium (Total)	0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	30	0.001	0.001	0.001	0.001	0.001	0.001	3.16E-11	0
Zinc (Total)	0.003	0.03	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	30	0.003	0.003	0.003	0.003	0.003	0.003	8.93E-11	0
Organics																					
Carbon Organic (Dissolved)	0.5		<0.5	1	1.3	0.9	1.4	1.3	1	0.9	1.3	0.9	30	0.5	1	1.05	1.09	1.3	1.5	0.243	0.3
Carbon Organic (Total)	0.5		1.3	1.3	1.8	1.2	2.1	1.8	1.3	1.1	1.9	1.3	30	1.1	1.225	1.3	1.42	1.575	2.1	0.267	0.35
Chlorophyll-a mg/m3	0.2		6.5	1.1	<0.2	2	<0.2	<0.2	<0.2	2.4	<0.2	0.4	30	0.2	0.2	0.3	1.47	2.3	8	2.01	2.1
Phenols	0.001			<0.001			<0.001			<0.001			10	0.001	0.001	0.001	0.0011	0.001	0.002	0.000316	0
Pheophytin-a mg/m3	0.2		<0.2	0.7	<0.2	<0.2	<0.2	4.7	1.1	<0.2	<0.2	0.4	30	0.2	0.2	0.2	0.71	0.35	6	1.36	0.15
Semi Volatile Organics																					
Phenol	0.001		<0.001		0.001	<0.001		<0.001	<0.001		<0.001	<0.001	20	0.001	0.001	0.001	0.001	0.001	0.001	3.16E-11	0

I:\1\02\00181\34\A\Report\Report 6 - 2014 CREMP Monitoring Results\Rev 0\Appendices\Appendix A\[Appendix A1_02FEB'15.xlsm]A1.6 SDL SE

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE NOTED.
2. SDL SE AEMP - SHEARDOWN LAKE SOUTHEAST AQUATIC EFFECTS MONITORING PLAN.
3. BOLD SHADED CELLS INDICATE VALUES THAT EXCEED THE AEMP BENCHMARK CRITERIA.
4. DETECTION LIMIT VALUES DISPLAY WITH LESS THAN SYMBOL (<); STATISTICS CALCULATED USING THE DETECTION LIMIT VALUE.

REV	DATE	DESCRIPTION	PREP'D	REV'D
0	19MAR'15	ISSUED WITH REPORT NB102-181/34-6	DKK	RAC

Knight Piésold
CONSULTING

TABLE A1.7

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
OTHER STREAMS 2014 WATER QUALITY RESULTS

Print Mar/19/15 12:13:43

Parameter	Method Detection Limit	I0-01 24/06/2014	I0-01 26/07/2014	I0-01 21/08/2014	J0-01 21/06/2014	J0-01 26/07/2014	J0-01 21/08/2014	K0-01 19/06/2014	K0-01 24/07/2014	K0-01 21/08/2014	D1-05 25/06/2014	D1-05 25/07/2014	D1-05 21/08/2014
In Situ Parameters													
Conductivity (In Situ) µS/cm	...	37		73			78			99			
Oxygen Dissolved (In Situ %) %	...	101	100	100	102	106	107	98.5	99	105	96.2	97.2	
Oxygen Dissolved (In Situ)	...	13.9	10.2	13.7	13.8	13.3	13.2	14.1	9.75	13.6	13.2	11.6	
pH (In Situ) pH	...	7.39	7.78	7.97	7.45	7.23	7.87	7.62	8.13	8.1	6.84	7.49	
Redox Potential (In Situ) mV	...			10.4			10.6			10.3			
Specific Conductivity (In Situ) µS/cm	...		105		87	119		40	126		74	148	
Temperature (In Situ) °C	...	2.4	14.6	2.54	2.59	5.76	5.7	0.19	16.1	4.29	2.41	7.67	
Turbidity (In Situ) NTU	...	5.6	5.4		37.1	5.1		4.1	5.1		25	4.8	
Physical Tests													
Alkalinity (Total as CaCO3)	5	16	51	66	42	56	58	21	64	84	40	58	72
Conductivity µS/cm	5		108	139	91	123	129		129	169	73	153	170
Hardness as CaCO3 (Dissolved)	0.5 to 1	18.5	52	71	43.8	61	65	21	65	88	34.6	71	82
Hardness as CaCO3 (Total)	0.5 to 1	18.4	54	70	44.7	63	63	21.2	67	87	36.2	73	80
pH pH	1	7.23	7.95	8	7.76	7.89	7.92	7.36	8.04	8.11	7.46	7.85	8
Specific Conductivity µS/cm	5	38						42					
Total Dissolved Solids	1	25	70	90	59	80	84	27	84	110	47	99	110
Total Suspended Solids	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity NTU	0.1	0.6	0.8	0.7	1.1	0.5	0.3	0.9	0.3	0.4	1.3	0.3	0.3
Dissolved Anions													
Bromide (Dissolved)	0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	1	2	3	3	3	4	1	1	2	2	7	6
Sulphate (Dissolved)	1	1	1	1	1	2	2	<1	1	1	2	5	4
Nutrients													
Ammonia (Total)	0.02		0.05	0.06	0.05	0.16	0.1		0.08	0.14	0.04	0.12	0.14
Ammonia (Un-Ionized)	0.02	0.06						0.04					
Nitrate (as N)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.26	0.18
Nitrate+Nitrite (Dissolved)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.26	0.18
Nitrite (as N)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.1	0.18	<0.1	<0.1	0.14	0.16	0.21	0.23	0.15	0.18	0.13	0.32	0.23
Phosphorus (Nutrient) Total	0.003	0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003
Dissolved Metals													
Aluminum (Dissolved)	0.001 to 0.003	0.0138	0.008	0.004	0.0065	<0.003	<0.003	0.0417	0.004	<0.003	0.0145	0.006	0.005
Antimony (Dissolved)	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00005	0.0022	0.00471	0.00526	0.00398	0.00479	0.00524	0.00209	0.00664	0.00765	0.00404	0.00749	0.0073
Beryllium (Dissolved)	0.0001 to 0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Bismuth (Dissolved)	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01
Cadmium (Dissolved)	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000035	0.00003	0.00003
Calcium (Dissolved)	0.05	3.65	10.8	15	8.95	12.4	13.7	4.18	13.5	18.6	6.61	13.7	16.5
Chromium (Dissolved)	0.0001 to 0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	0.00011	<0.0005	<0.0005	0.00013	<0.0005	<0.0005
Cobalt (Dissolved)	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.0002 to 0.0005	0.00056	0.0008	0.0008	0.00065	0.0008	0.0009	0.00067	0.0012	0.0012	0.00313	0.0038	0.0037
Iron (Dissolved)	0.01 to 0.03	0.01	<0.03	<0.03	0.01	<0.03	0.05	0.04	<0.03	<0.03	0.01	<0.03	<0.03
Lead (Dissolved)	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	0.00006	<0.00005	<0.00005
Lithium (Dissolved)	0.0005 to 0.001	<0.0005	<0.001	<0.001	0.0006	<0.001	<0.001	<0.0005	0.001	0.001	<0.0005	0.001	0.001
Magnesium (Dissolved)	0.05 to 0.1	2.25	6.16	8.19	5.22	7.23	7.41	2.56	7.57	10.2	4.39	8.83	9.82
Manganese (Dissolved)	0.00005	0.00228	0.00017	0.00022	0.00295	0.00073	0.00139	0.00504	0.00027	0.00062	0.000268	0.00022	0.00028
Mercury (Dissolved)	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00005	0.000078	<0.00005	0.00018	0.000148	0.00011	0.00025	0.000097	0.00005	0.00028	0.00174	0.00278	0.0034
Nickel (Dissolved)	0.0005	0.00176	<0.0005	<0.0005	0.00054	<0.0005	0.0008	<0.0005	<0.0005	<0.0005	0.00134	0.0012	0.0012
Potassium (Dissolved)	0.05 to 0.2	0.605	0.6	0.5	0.83	0.9	0.7	0.83	1	1	1.1	1.7	1.6
Selenium (Dissolved)	0.0001 to 0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001
Silicon (Dissolved)	0.05 to 0.1	0.23	0.5	0.8	0.33	0.4	0.5	0.31	0.6	0.8	0.76	1.4	1.3
Silver (Dissolved)	1E-006 to 1E-005	<0.000001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001
Sodium (Dissolved)	0.0012 to 0.05	0.485	1.16	1.34	0.738	0.98	0.86	0.263	0.89	0.94	0.931	2.42	1.88
Strontium (Dissolved)	0.0001 to 0.0004	0.00223	0.0062	0.0084	0.00591	0.008	0.009	0.00194	0.0067	0.0092	0.00428	0.0088	0.0098
Thallium (Dissolved)	1E-005 to 0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	0.00001	<0.0001	<0.0001
Tin (Dissolved)	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00001	0.000121	0.00072	0.00126	0.000363	0.00054	0.00061	0.000068	0.00058	0.00118	0.000617	0.00238	0.00477
Vanadium (Dissolved)	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	0.00033 to 0.003	0.001	<0.003	<0.003	0.001	<0.003	<0.003	0.002	<0.003	<0.003	0.0015	<0.003	<0.003
Total Metals													
Aluminum (Total)	0.001 to 0.003	0.035	0.024	0.032	0.0477	0.009	0.008	0.0452	0.008	0.008	0.0348	0.018	0.01
Antimony (Total)	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Total)	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Total)	0.00005	0.00233	0.0049	0.00545	0.00429	0.00471	0.00517	0.00225	0.00653	0.00787	0.00424	0.00718	0.00732
Beryllium (Total)	1E-005 to 0.0005	<0.00001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.00001	<0.0005	<0.0005
Bismuth (Total)	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01
Cadmium (Total)	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	0.00004	0.00003
Calcium (Total)	0.05	3.68	11	15	9.1	12.7	13.6	4.19	13.8	18.7	6.98	13.9	16.4
Chromium (Total)	0.0001 to 0.0005	0.00016	<0.0005	<0.0005	0.00023	<0.0005	<0.0005	0.00037	<0.0005	<0.0005	0.0002	<0.0005	<0.0005
Cobalt (Total)	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Total)	0.0002 to 0.0005	0.00058	0.0008	0.0008	0.00078	0.0009	0.0008	0.00074	0.0012	0.0012	0.00314	0.0039	0.0036
Iron (Total)	0.003 to 0.03	0.037	<0.03	<0.03	0.068	<0.03	0.06	0.045	<0.03	<0.03	0.034	<0.03	<0.03
Lead (Total)	0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	0.0001	<0.00005	<0.00005	0.00009	0.00012	<0.00005
Lithium (Total)	0.0005 to 0.001	<0.0005	<0.001	<0.001	0.0005	<0.001	<0.001	<0.0005	0.001	0.001	<0.0005	0.001	0.001
Magnesium (Total)	0.05 to 0.1	2.26	6.34	7.85	5.35	7.58	7.1	2.62	7.92	9.83	4.54	9.26	9.54
Manganese (Total)	0.00005	0.00278	0.00042	0.00049	0.00454	0.00214	0.00242	0.00531	0.00051	0.00072	0.000536	0.00063	0.00036
Mercury (Total)	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.00005	0.000058	<0.00005	0.00018	0.000163	<0.00005	0.00023	0.000136	0.00036	0.00026	0.00182	0.00246	0.00341
Nickel (Total)	0.0005	<0.0005	<0.0005	<0.0005	0.00071	0.0006	0.0008	<0.0005	<0.0005	<0.0005	0.00137	0.0014	0.0012
Potassium (Total)	0.05 to 0.2	0.594	0.6	0.5	0.859	0.8	0.7	0.859	1.1	0.9	1.07	1.7	1.5
Selenium (Total)	1E-005 to 0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001
Silicon (Total)	0.05 to 0.1	0.3	0.6	0.9	0.44	0.4	0.5	0.3	0.6	0.8	0.86	1.3	1.4
Silver (Total)	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Total)	0.05	0.448	1.11	1.23	0.772	0.95	0.76	0.317	0.87	0.84	0.898	2.57	1.8
Strontium (Total)	0.0001 to 0.0002	0.0023	0.0066	0.0084	0.00619	0.008	0.0089	0.00243	0.0066	0.0094	0.00449	0.0086	0.0097
Thallium (Total)	1E-005 to 0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001
Tin (Total)	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Total)	0.00001	0.000119	0.0007	0.00126	0.000379	0.00055	0.0006	0.000084	0.00061	0.00114	0.000611	0.00239	0.00474
Vanadium (Total)	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5	3.8	1.4	1.5	3.1	2	1.8	6.5	1.8	1.9	3.3	3	2.5
Carbon Organic (Total)	0.5	4.2	1.4	1.5	3.1	1.9	1.9	6.7	1.8	1.9	3.4	3.2	2.9
Chlorophyll-a mg/m3	0.2	<0.2	<0.2	<0.2	<0.2	1.7	<0.2	0.5	<0.2	0.7	<0.2	<0.2	<0.2
Phenols	0.001	<0.001						<0.001					
Pheophytin-a mg/m3	0.2	<0.2	<0.2	<0.2	1.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.4	0.7	<0.2
Semi Volatile Organics													
Phenol	0.001		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	F0-01 20/06/2014	F0-01 26/07/2014	F0-01 21/08/2014	D1-00 25/06/2014	D1-00 25/07/2014	D1-00 21/08/2014	MRY-REF2 21/06/2014	MRY-REF2 24/07/2014	MRY-REF2 22/08/2014	MRY-REF3 21/06/2014	MRY-REF3 24/07/2014	MRY-REF3 22/08/2014	CLT-REF3 21/06/2014	CLT-REF3 24/07/2014	CLT-REF3 22/08/2014	CLT-REF4 21/06/2014	CLT-REF4 24/07/2014	CLT-REF4 22/08/2014
In Situ Parameters																		
Conductivity (In Situ) µS/cm																		
Oxygen Dissolved (In Situ %) %	96.5	96		99.4	101		100	100		99	99.3		98.4	99.3		98.1	98.8	
Oxygen Dissolved (In Situ)	14.1	11.1		11.8	10.6		13.5	10.7		14.3	11.2		14.3	12.2		13.8	11.4	
pH (In Situ) pH	6.86	7.89		7.34	7.99		7.2	7.35		6.82	6.38		6.84	7.54		7.04	7.52	
Redox Potential (In Situ) mV																		
Specific Conductivity (In Situ) µS/cm	6	139		91	189		48	79		13	45		21	62		22	61	
Temperature (In Situ) °C	0	9.1		7.9	13.1		2.81	12.3		0.44	10.2		0.33	6.39		1.41	9.19	
Turbidity (In Situ) NTU	1.9	4.9		7.3	6.1		1	5.6		0.2	13.2		2.2	5.4		0.5	6.3	
Physical Tests																		
Alkalinity (Total as CaCO3)	25	70	68	43	81	94	24	39	54	<5	12	20	7	31	51	9	31	58
Conductivity µS/cm	48	143	140	92	194	215		82	113		46	69		64	105		63	115
Hardness as CaCO3 (Dissolved)	23.8	73	74	45.2	94	108	24	40	59	4.8	18	30	9.7	32	56	10.2	31	61
Hardness as CaCO3 (Total)	24.4	76	73	46.1	97	107	24	40	58	4.9	18	29	9.5	32	54	10.2	32	60
pH pH	7.61	8.06	8.03	7.64	8.04	8.13	7.4	7.81	7.89	6.68	7.38	7.45	7.04	7.69	7.87	7.21	7.71	7.92
Specific Conductivity µS/cm							51			14			22			26		
Total Dissolved Solids	31	93	91	60	126	140	33	53	73	9	30	45	14	42	68	17	41	75
Total Suspended Solids	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity NTU	2.4	0.3	2.6	2.2	1	3.2	1.3	0.8	0.9	0.8	6.6	0.6	0.6	0.8	0.5	1.1	1.3	0.6
Dissolved Anions																		
Bromide (Dissolved)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride (Dissolved)	1	2	2	2	7	6	1	1	2	<1	2	4	<1	<1	<1	<1	<1	<1
Sulphate (Dissolved)	<1	2	1	2	5	5	<1	2	2	<1	5	7	<1	1	2	<1	1	1
Nutrients																		
Ammonia (Total)	0.03	0.12	0.06	0.04	0.15	0.09		0.1	0.02		0.1	0.03		0.12	0.06		0.11	0.04
Ammonia (Un-Ionized)							0.03			0.03			0.03			0.03		
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	0.46	0.34	<0.1	<0.1	0.22	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate+Nitrite (Dissolved)	<0.1	<0.1	<0.1	<0.1	0.47	0.34	<0.1	<0.1	0.22	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen Kjeldahl (Total)	0.15	0.12	<0.1	0.16	0.35	0.24	0.16	0.16	0.14	0.12	0.11	<0.1	0.12	0.15	<0.1	0.13	0.13	<0.1
Phosphorus (Nutrient) Total	0.005	<0.003	0.003	<0.003	<0.003	<0.003	0.004	<0.003	<0.003	<0.003	0.005	0.004	0.003	0.004	<0.003	0.003	0.003	<0.003
Dissolved Metals																		
Aluminum (Dissolved)	0.0181	0.003	<0.003	0.0227	0.012	0.004	0.0155	0.015	0.007	0.0304	0.024	0.029	0.0213	0.02	0.006	0.0183	0.022	0.004
Antimony (Dissolved)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Dissolved)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Dissolved)	0.00209	0.00609	0.00472	0.00532	0.0099	0.00968	0.0027	0.00376	0.00511	0.00187	0.00356	0.00517	0.00152	0.00335	0.00492	0.00105	0.00244	0.00413
Beryllium (Dissolved)	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Bismuth (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Dissolved)	<0.01	<0.01	<0.01	0.011	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Dissolved)	<0.00001	<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Dissolved)	4.81	15.4	16.1	8.74	18.2	22	4.91	8.38	12.6	1.05	4.01	6.64	1.99	6.73	12	2.16	6.65	13.5
Chromium (Dissolved)	<0.0001	<0.0005	<0.0005	0.00016	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Cobalt (Dissolved)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Dissolved)	0.00062	0.0006	<0.0005	0.00319	0.003	0.0028	0.00044	0.0006	0.0007	0.00055	0.0009	0.0011	0.0009	0.0014	0.0012	0.00037	<0.0005	0.0006
Iron (Dissolved)	0.02	<0.03	<0.03	0.04	0.05	0.05	0.02	<0.03	<0.03	0.02	<0.03	<0.03	0.01	<0.03	<0.03	0.01	<0.03	<0.03
Lead (Dissolved)	0.0001	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	0.00013	0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium (Dissolved)	<0.0005	<0.001	<0.001	0.00066	0.001	0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001
Magnesium (Dissolved)	2.86	8.48	8.1	5.67	11.7	12.9	2.85	4.66	6.79	0.53	1.95	3.23	1.15	3.82	6.24	1.17	3.58	6.71
Manganese (Dissolved)	0.00203	<0.00005	<0.00005	0.0013	0.00228	0.00181	0.00265	0.00033	0.0004	0.00293	0.00016	0.00019	0.00165	0.00035	0.00038	0.00173	0.00008	0.00007
Mercury (Dissolved)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.000072	<0.00005	0.00009	0.00149	0.00197	0.00249	0.000077	<0.00005	0.00018	0.000052	<0.00005	0.00032	0.000094	0.0001	0.0004	<0.00005	<0.00005	0.00017
Nickel (Dissolved)	<0.0005	<0.0005	<0.0005	0.00151	0.0014	0.0014	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	<0.0005	<0.0005	<0.0005
Potassium (Dissolved)	0.622	0.7	0.4	1.26	1.7	1.6	0.628	0.6	0.7	0.485	0.6	0.7	0.362	0.4	0.5	0.32	0.4	0.3
Selenium (Dissolved)	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.001	<0.001
Silicon (Dissolved)	0.27	0.8	0.7	0.79	1.4	1.4	0.39	0.6	0.8	0.25	0.7	0.9	0.36	0.8	0.9	0.3	0.6	0.7
Silver (Dissolved)	<0.00001	<0.00001	<0.00001	<0.000001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Dissolved)	0.375	0.69	0.23	1.02	2.31	1.91	0.593	0.88	1.11	0.415	1.24	1.94	0.277	0.51	0.54	0.334	0.47	0.58
Strontium (Dissolved)	0.00258	0.0087	0.0083	0.00615	0.0115	0.0123	0.00374	0.0057	0.0086	0.00224	0.0074	0.0122	0.00123	0.0038	0.0066	0.00151	0.0044	0.0086
Thallium (Dissolved)	<0.00001	<0.0001	<0.0001	0.000015	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001
Tin (Dissolved)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Dissolved)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.000149	0.00125	0.0012	0.000961	0.00248	0.00422	0.000349	0.0006	0.00137	0.000187	0.00027	0.00072	0.000344	0.00068	0.00237	0.000283	0.00089	0.00498
Vanadium (Dissolved)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	<0.00033	<0.003	<0.003	0.0036	<0.003	<0.003	0.0012	<0.003	<0.003	0.0016	<0.003	<0.003	0.001	<0.003	<0.003	<0.00033	<0.003	<0.003
Total Metals																		
Aluminum (Total)	0.136	0.009	0.101	0.0821	0.032	0.174	0.06	0.02	0.046	0.0562	0.209	0.172	0.0379	0.026	0.033	0.0435	0.028	0.029
Antimony (Total)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic (Total)	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium (Total)	0.00273	0.00577	0.00543	0.00568	0.00941	0.0108	0.00297	0.00394	0.00527	0.00206	0.00503	0.0061	0.00161	0.0034	0.00517	0.00121	0.00248	0.00425
Beryllium (Total)	<0.0001	<0.0005	<0.0005	<0.00001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Bismuth (Total)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron (Total)	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (Total)	<0.00001	<0.00001	<0.00001	0.000013	0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Total)	4.88	15.8	16.2	9	18.6	21.9	4.87	8.47	12.4	1.05	4.02	6.58	1.94	6.67	11.5	2.13	6.72	13.2
Chromium (Total)	0.00039	<0.0005	<0.0005	0.00034	<0.0005	<0.0005	0.00018	<0.0005	<0.0005	0.00018	0.0005	<0.0005	0.0002	<0.0005	<0.0005	0.00013	<0.0005	<0.0005
Cobalt (Total)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper (Total)	0.00078	0.0006	0.0007	0.00328	0.0032	0.0029	0.00052	0.0006	0.0007	0.00067	0.0012	0.0012	0.00101	0.0014	0.0016	<0.0002	<0.0005	0.0006
Iron (Total)	0.126	<0.03	0.1	0.101	0.08	0.23	0.058	<0.03	0.03	0.044	0.24	0.12	0.031	0.03	<0.03	0.037	<0.03	<0.03
Lead (Total)	0.00039	<0.00005	0.00013	0.00012	<0.00005	0.00015	0.00006	<0.00005	<0.00005	0.00009	0.00024	0.00021	0.0002	0.00011	0.00008	0.00009	<0.00005	<0.00005
Lithium (Total)	<0.0005	<0.001	<0.001	0.0006	0.001	0.002	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	<0.001
Magnesium (Total)	2.97	8.9	7.98	5.74	12.2	12.7	2.87	4.67	6.44	0.55	2.04	3.04	1.12	3.78	6.04	1.18	3.59	6.55
Manganese (Total)	0.00353	0.00009	0.0032	0.0023	0.00289	0.00432	0.0036	0.00053	0.00061	0.00361	0.00292	0.00153	0.00194	0.00058	0.00059	0.00235	0.0003	0.00015
Mercury (Total)	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.000093	<0.00005	0.00006	0.0016	0.00185	0.00241	0.00007	<0.00005	0.00016	0.000061	<0.00005	0.00027	0.000107	0.00009	0.0004	0.000052	<0.00005	0.00017
Nickel (Total)	0.00063	<0.0005	0.0005	0.00167	0.0016	0.0017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	0.0005	0.0007	<0.0005	<0.0005	<0.0005
Potassium (Total)	0.677	0.7	0.4	1.27	1.7	1.5	0.657	0.5	0.5	0.506	0.6	0.6	0.355	0.4	0.6	0.335	0.4	0.5
Selenium (Total)	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001	<0.00001	<0.001	<0.001
Silicon (Total)	0.52	0.7	0.9	0.99	1.3	1.7	0.52	0.6	0.8	0.3	1	1.2	0.39	0.8	1	0.35	0.6	0.8
Silver (Total)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Total)	0.385	0.64	0.17	0.894	2.44	1.85	0.613	0.88	1	0.433	1.25	1.78	0.278	0.51	0.55	0.357	0.46	0.56
Strontium (Total)	0.00284	0.0082	0.0086	0.0062	0.0111	0.0125	0.00377	0.0058	0.0086	0.00231	0.0076	0.012	0.00128	0.0038	0.0068	0.00158	0.0044	0.0087
Thallium (Total)	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001
Tin (Total)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium (Total)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium (Total)	0.000278	0.00128	0.00124	0.000988	0.00256	0.00433	0.000365	0.0006	0.00138	0.000206	0.0004	0.00083	0.00039	0.00067	0.0024	0.00035	0.00091	0.00498
Vanadium (Total)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc (Total)	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0033	<0.003	<0.003	0.0038	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																		
Carbon Organic (Dissolved)	4.3	1	0.8	3.3	3.5	2.6	3.4	1.5	1.7	3.2	1	1.2	2.8	1.9	1.6	1.9	0.9	0.8
Carbon Organic (Total)	4.4	1	0.8	3.3	3.2	2.8	3.4	1.8	1.7	3.4	1	1.2	2.6	2	1.3	1.9	1.3	0.8
Chlorophyll-a mg/m3	1.1	<0.2	<0.2	<0.2	1.2	<0.2	1.6	<0.2	0.4	0.3	<0.2	1.4	<0.2	<0.2	<0.2	<0.2	<0.2	0.8
Phenols							0.001			0.002			0.001			0.001		
Pheophytin-a mg/m3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	0.3	<0.2	<0.2	1.3	<0.2	0.7	<0.2	<0.2	<0.2
Semi Volatile Organics																		
Phenol	<0.001	<0.001	<0.001	<0.001	<0.001	0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001

I:\1\02\00181\34\A\Report\Report 6 - 2014 CREMP Monitoring Results\Rev 0\Appendices\Appendix A\[Appendix A1_02FEB'15.xlsm]A1.7 Other Stream

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE NOTED.
2. BOLD SHADED CELLS INDICATE VALUES THAT EXCEED THE CCME CRITERIA.
3. DETECTION LIMIT VALUES DISPLAY WITH LESS THAN SYMBOL (<); STATISTICS CALCULATED USING THE DETECTION LIMIT VALUE.

0	19MAR'15	ISSUED WITH REPORT NB102-181/34-6	DKK	RAC
REV	DATE	DESCRIPTION	PREP'D	REV'D

APPENDIX A2

GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - MARY RIVER

(Pages A2-1 to A2-46)

APPENDIX A2
GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - MARY RIVER

The Appendix A2 tables and graphs were generated using the R (2014) statistical package as follows:

Table 1: AEMP Benchmarks and Midpoint Concentrations of Parameters of Interest
Table 2: Mary River Sample Size by Year and Season
Table 3: Mary River Sample Size by Location and Season

Mary River Sample Distributions:

Data have been presented in graphs by Month, Season, Year and Station.

Total Boxplot on Log Scale and Total Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Seasonal Scatter Plot and Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Reference:

R Development Core Team, 2014. *R: A language and environment for statistical computing*. R. Foundation for Statistical Computing, Vienna, Austria. Retrieved from: http://www.R-project.org.

Appendix A2 - Mary River

Table 1: Mary River: AEMP Benchmarks and Midpoints

	AEMP Benchmark	Midpoint	Minimum MDL	Maximum MDL
Al	0.966	0.555	all $>$ MDL	all $>$ MDL
As	0.005	0.00255	1e-04	2e-04
Cd	6e-05	4e-05	1e-05	2e-05
Cr	0.0023	0.0012	2e-05	5e-04
Co	0.004	0.0021	1e-04	3e-04
Cu	0.0024	0.0017	2e-04	8e-04
Fe	0.874	0.502	5e-05	0.947
Pb	0.001	0.00058	5e-05	5e-04
Ni	0.025	0.01281	5e-04	5e-04
Ag	1e-04	6e-05	1e-06	1e-04
Tl	8e-04	0.00045	1e-06	2e-04
V	0.006	0.0035	9e-04	0.002
Zn	0.03	0.0165	0.00033	0.003
Cl	120	61.5	1	1.6
Ammonia	0.855	0.4425	0.02	0.02
NO2	0.06	0.0325	0.002	0.1
NO3	13	6.55	0.05	0.1
SO4	218	110.5	0.5	3

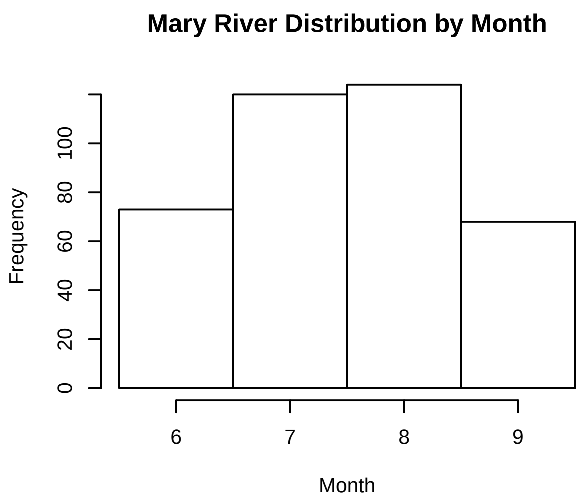
Table 2: Mary River Sample Size by Year and Season

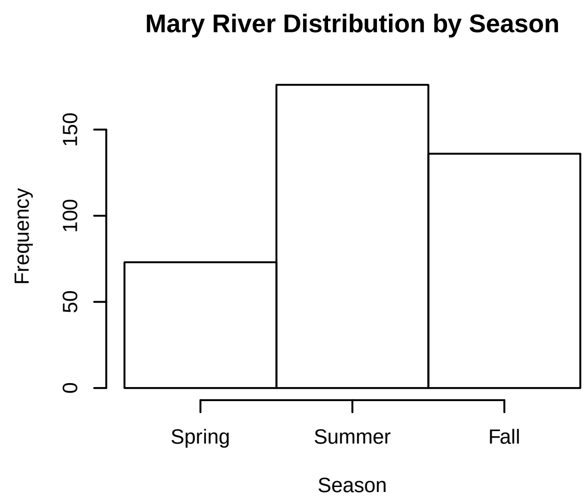
	Spring	Summer	Fall
2005	5	5	5
2006	16	31	17
2007	13	38	32
2008	6	50	33
2009	5	14	10
2010	0	4	4
2011	0	4	6
2012	8	9	8
2013	8	9	9
2014	12	12	12

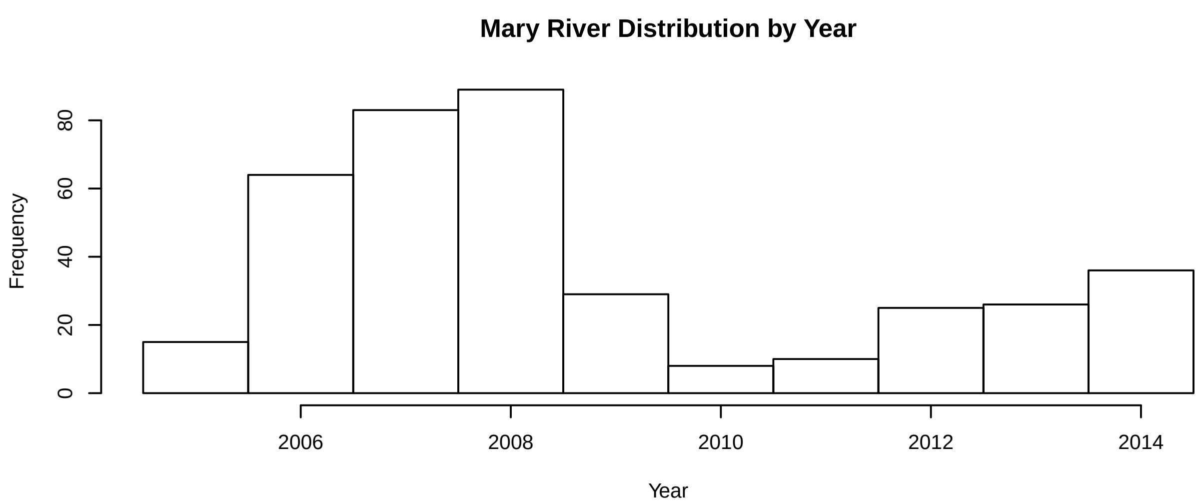
No 2014 Values Greater than Maximum of Mary River Baseline Data

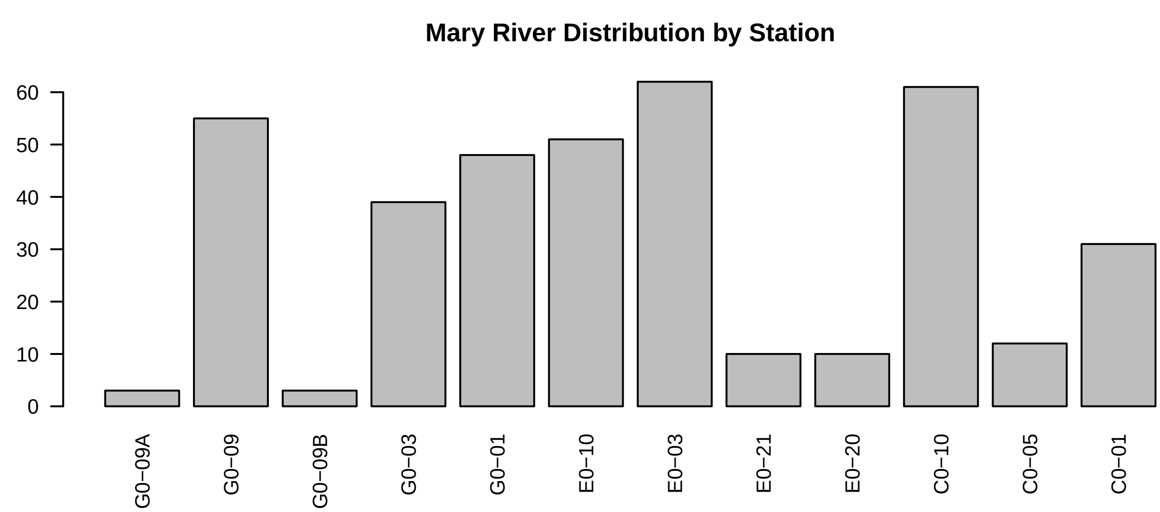
Table 3: Mary River Sample Size by Location and Season

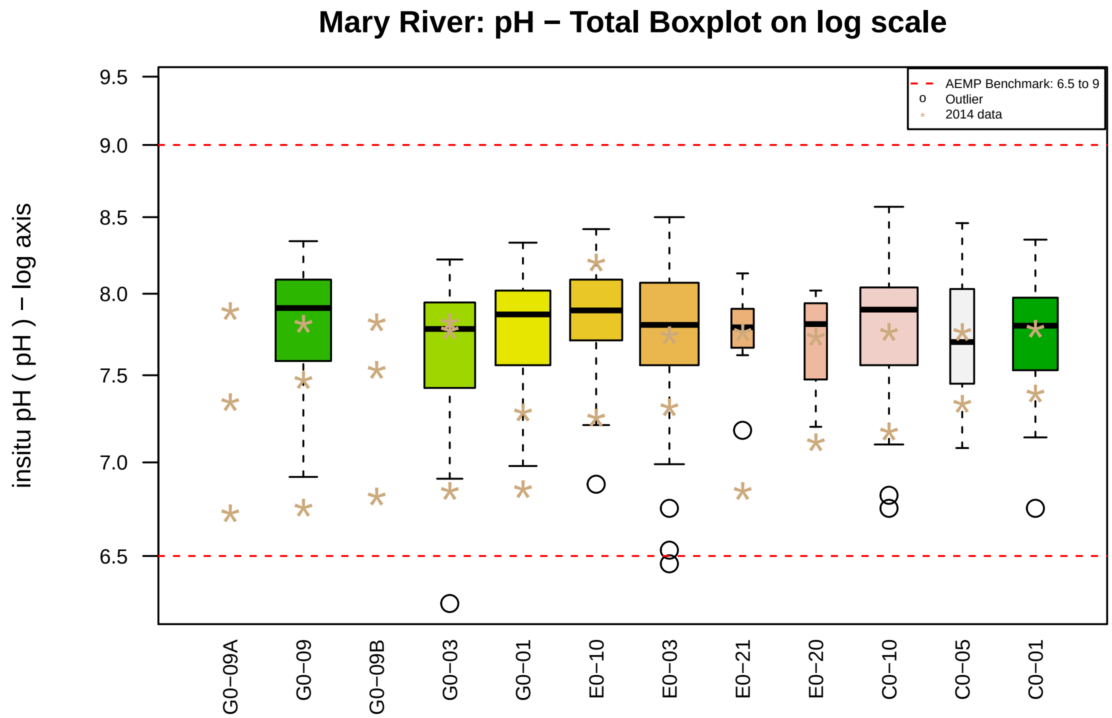
	Spring	Summer	Fall
G0-09A	1	1	1
G0-09	9	27	19
G0-09B	1	1	1
G0-03	8	17	14
G0-01	7	24	17
E0-10	9	26	16
E0-03	11	29	22
E0-21	3	3	4
E0-20	3	3	4
C0-10	11	28	22
C0-05	3	4	5
C0-01	7	13	11

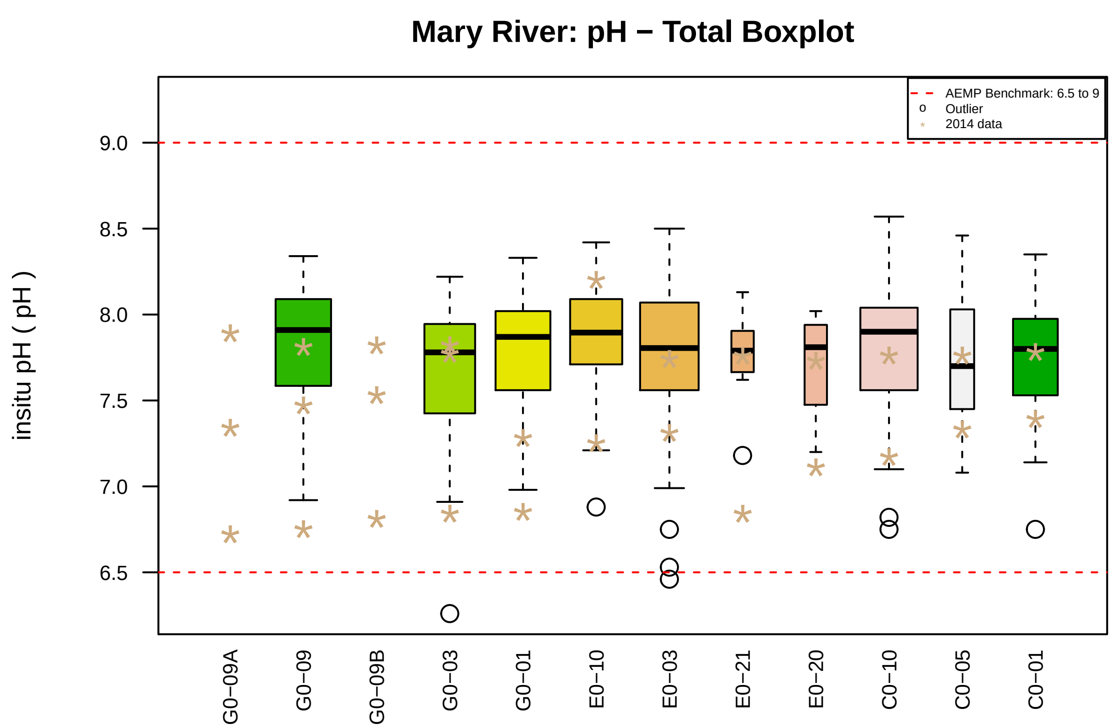

Mary River Distribution by Month
Frequency
0
20
40
60
80
100
6
7
8
9
Month

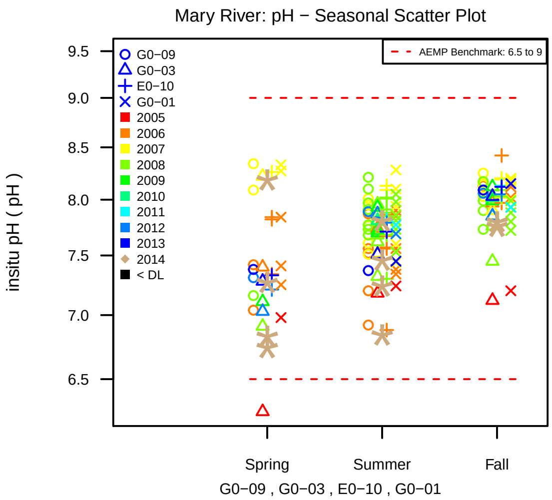

Mary River Distribution by Season
Frequency
0
50
100
150
Spring
Summer
Fall
Season

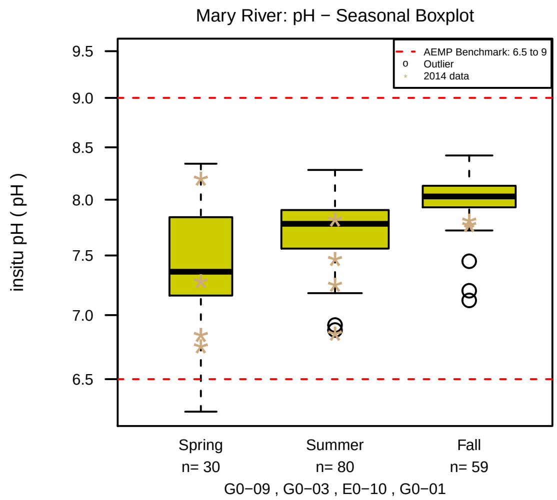

Mary River Distribution by Year
Frequency
0
20
40
60
80
2006
2008
2010
2012
2014
Year

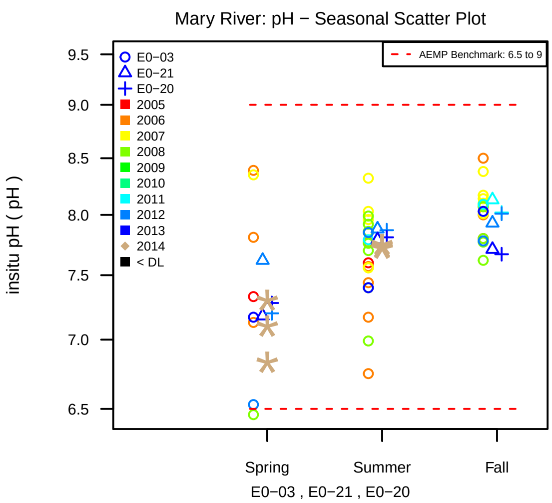

Mary River Distribution by Station
0
10
20
30
40
50
60
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

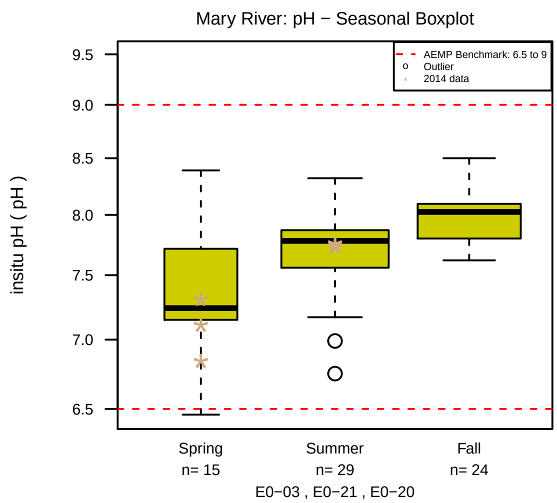

Mary River: pH − Total Boxplot on log scale
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH) − log axis
9.5
9.0
8.5
8.0
7.5
7.0
6.5
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

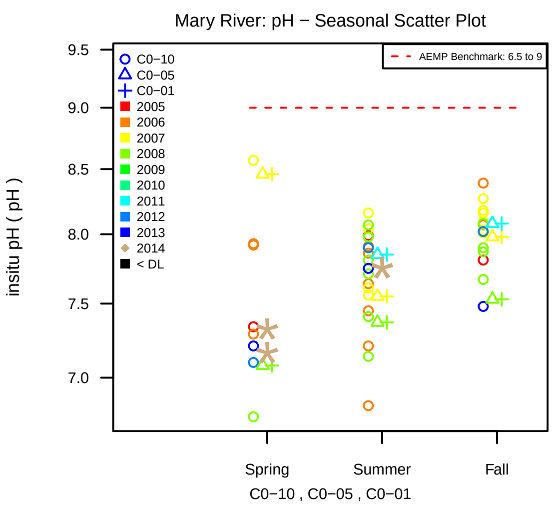

Mary River: pH − Total Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
9.0
8.5
8.0
7.5
7.0
6.5
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

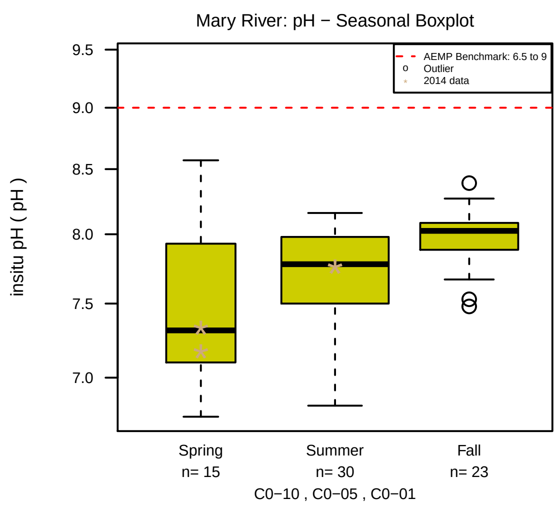

Mary River: pH − Seasonal Scatter Plot
insitu pH (pH)
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

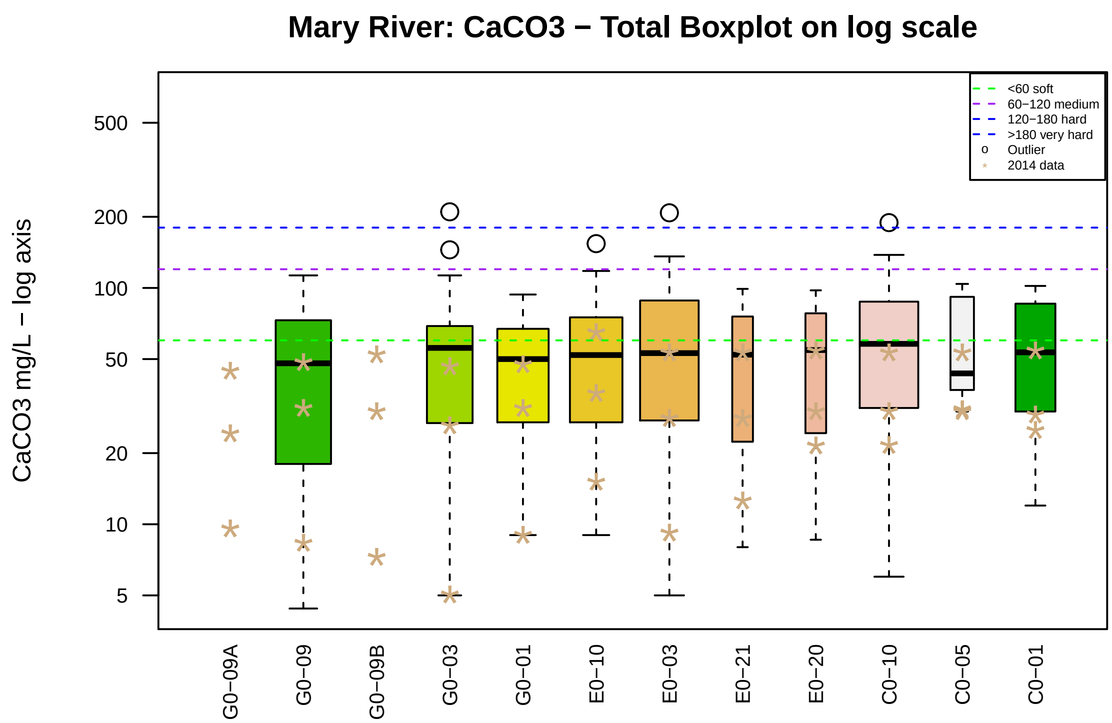

Mary River: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
Spring n= 30
Summer n= 80
Fall n= 59
G0−09 , G0−03 , E0−10 , G0−01

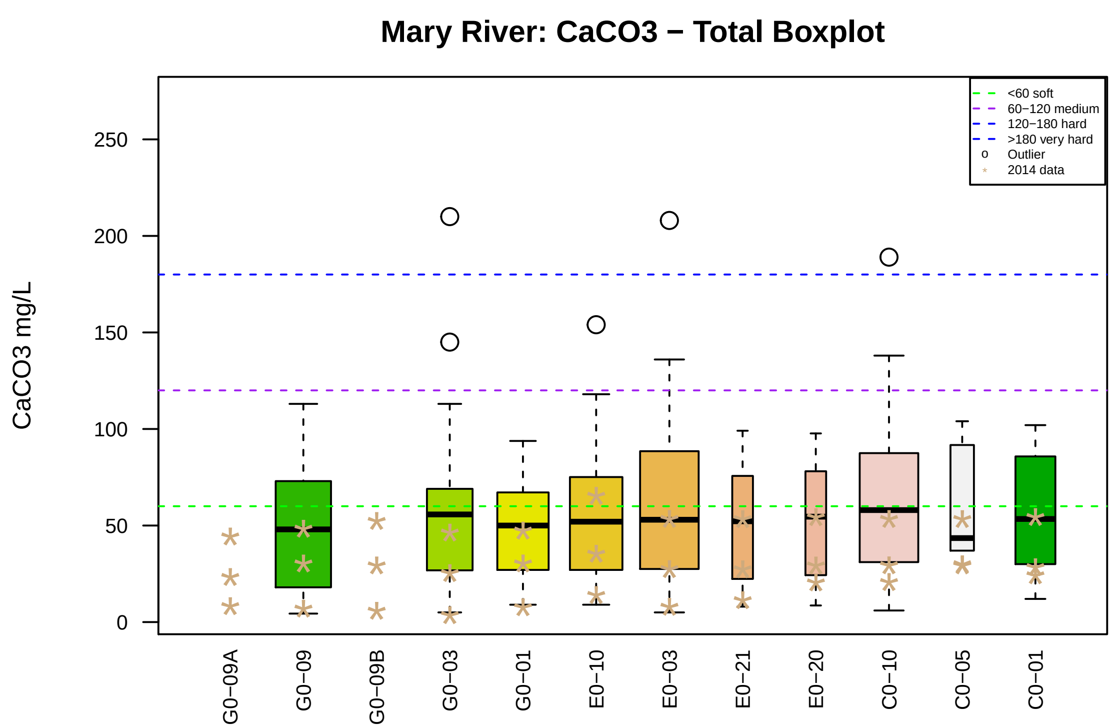

Mary River: pH − Seasonal Scatter Plot
insitu pH (pH)
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

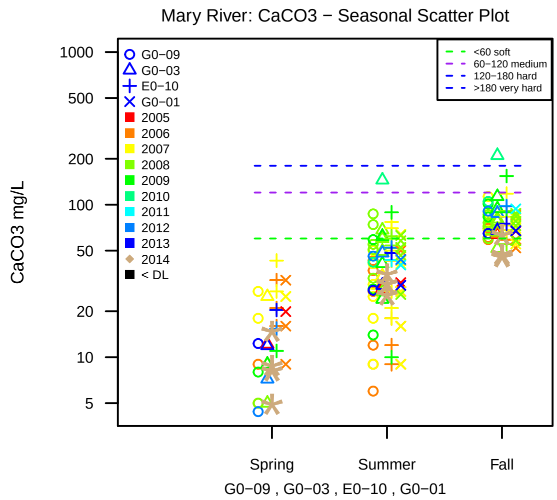

Mary River: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
Spring n= 15
Summer n= 29
Fall n= 24
E0−03 , E0−21 , E0−20

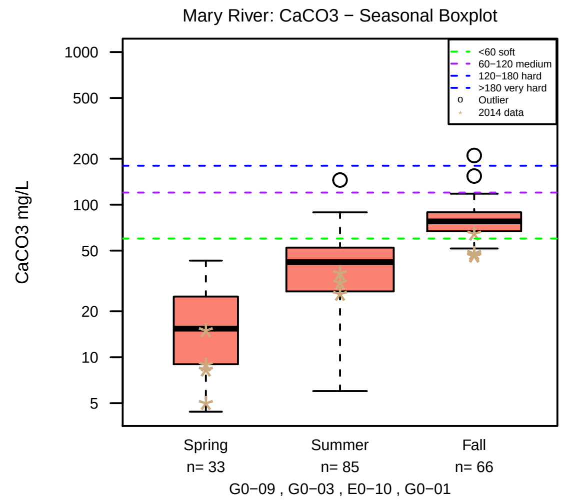

Mary River: pH − Seasonal Scatter Plot
insitu pH (pH)
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

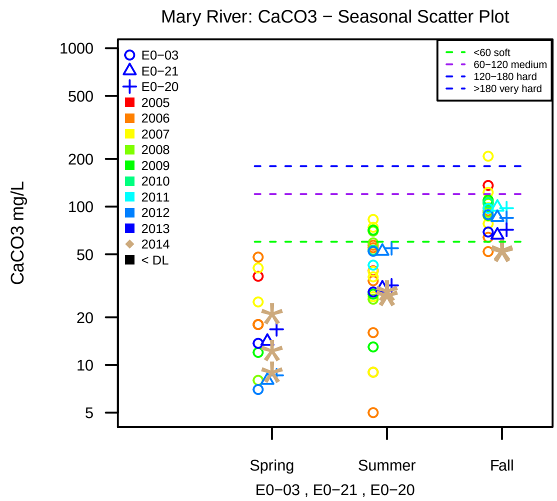

Mary River: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
Spring n= 15
Summer n= 30
Fall n= 23
C0−10 , C0−05 , C0−01

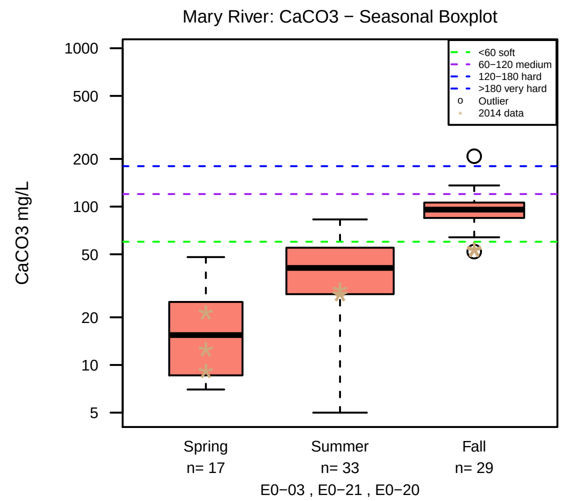

Mary River: CaCO3 − Total Boxplot on log scale
CaCO3 mg/L − log axis
500
200
100
50
20
10
5
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

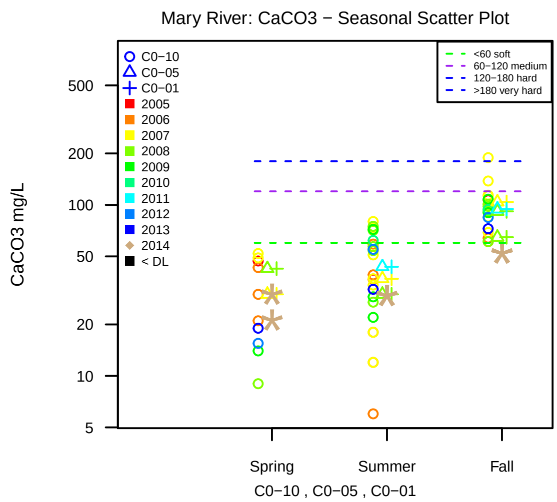

Mary River: CaCO3 − Total Boxplot
CaCO3 mg/L
250
200
150
100
50
0
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

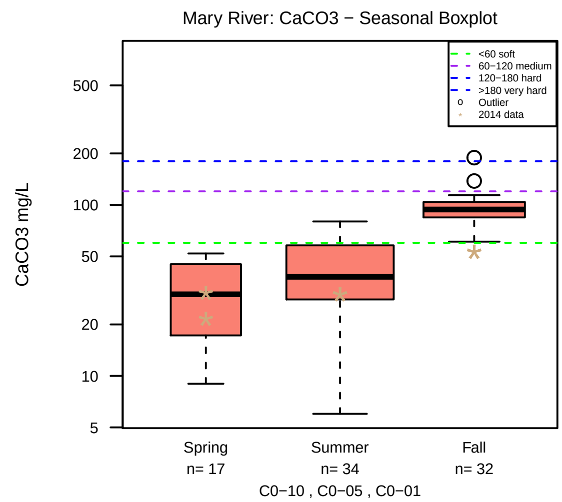

Mary River: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

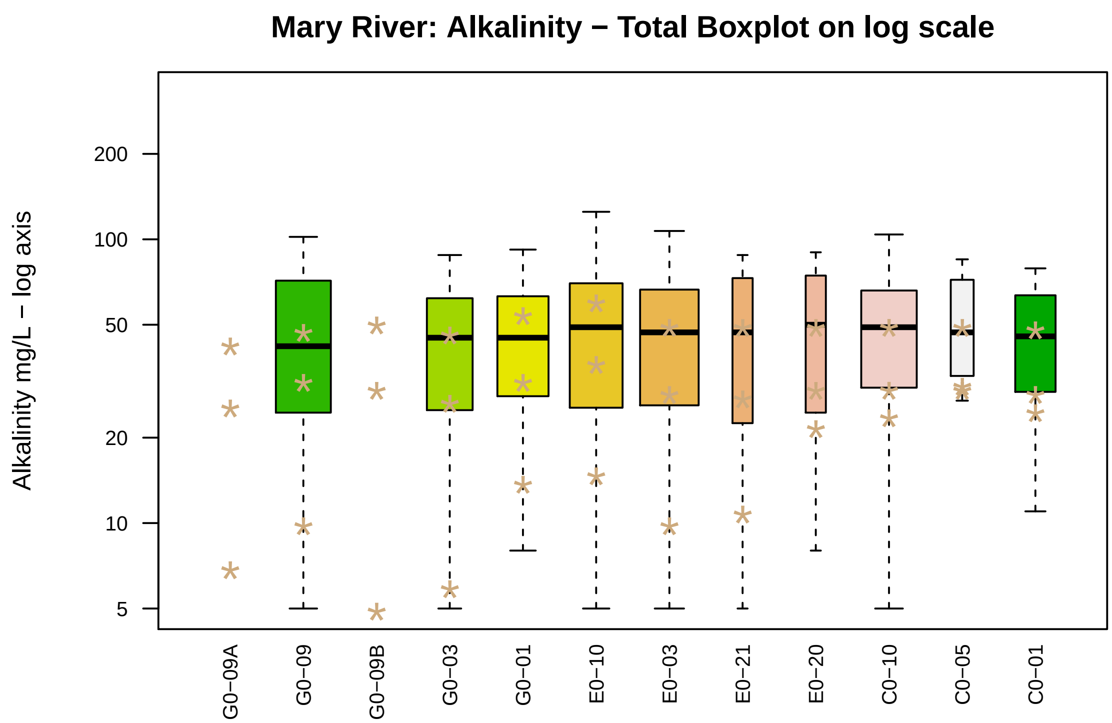

Mary River: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Spring
n= 33
Summer
n= 85
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

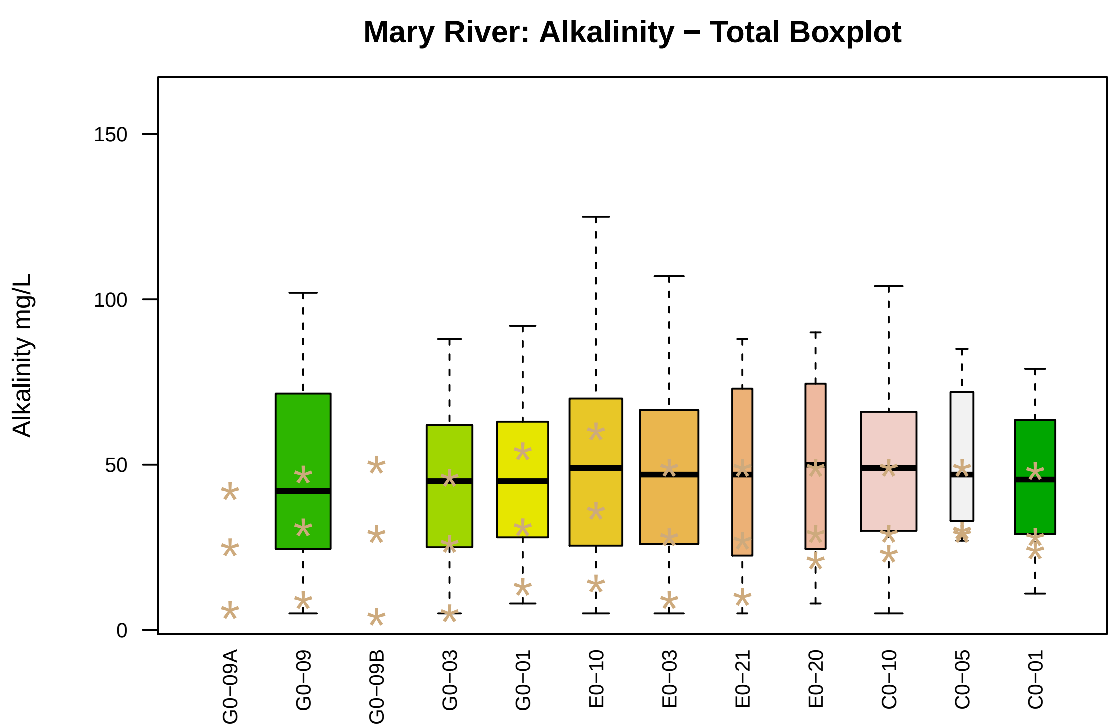

Mary River: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

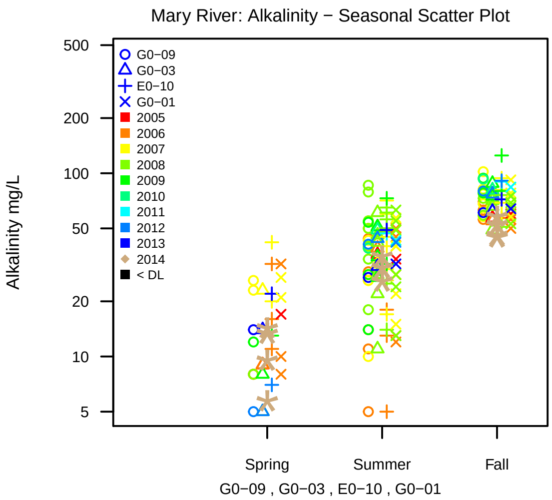

Mary River: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Spring
n= 17
Summer
n= 33
Fall
n= 29
E0−03 , E0−21 , E0−20

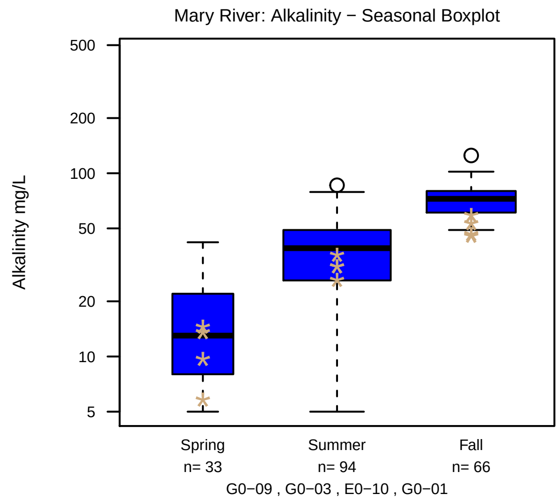

Mary River: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

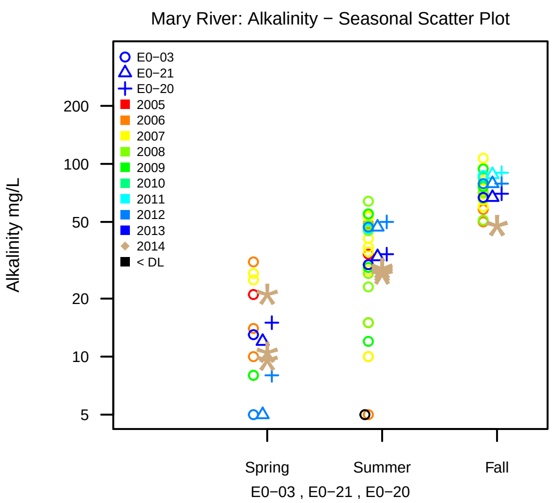

Mary River: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Spring
n= 17
Summer
n= 34
Fall
n= 32
C0−10 , C0−05 , C0−01

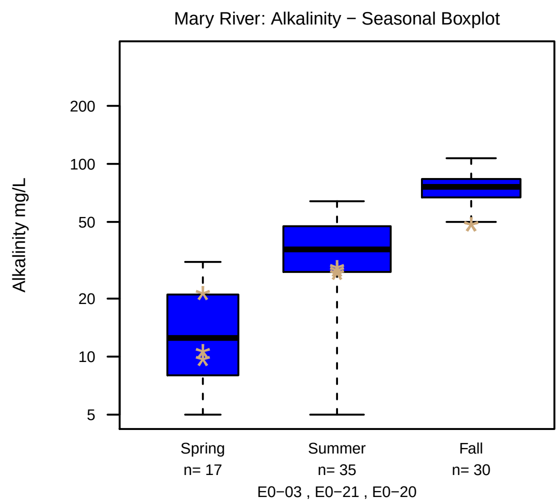

Mary River: Alkalinity − Total Boxplot on log scale
Alkalinity mg/L − log axis
200
100
50
20
10
5
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

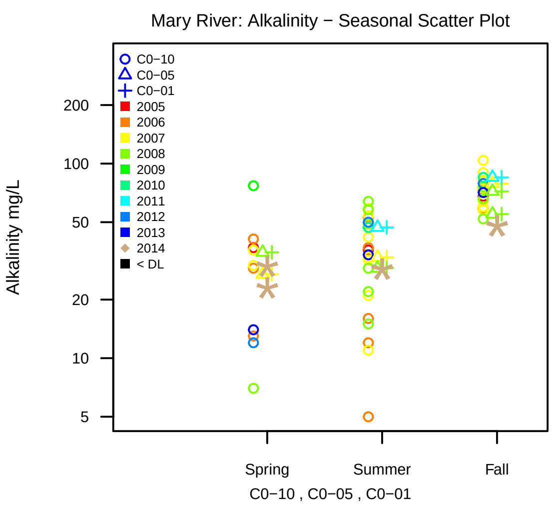

Mary River: Alkalinity − Total Boxplot
Alkalinity mg/L
150
100
50
0
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

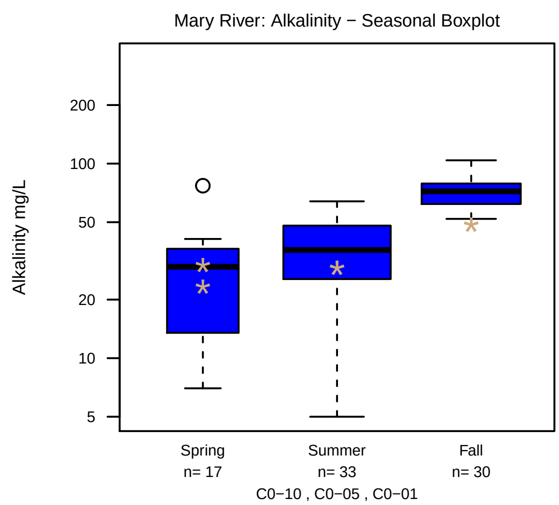

Mary River: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
500
200
100
50
20
10
5
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

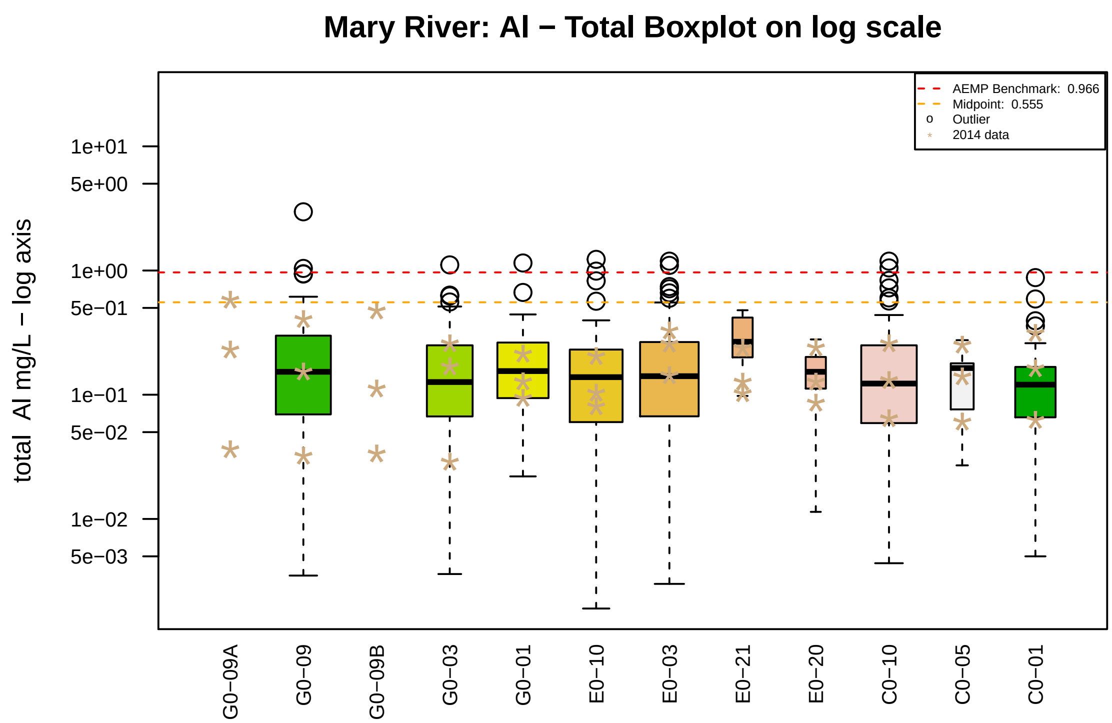

Mary River: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
500
200
100
50
20
10
5
Spring
n= 33
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

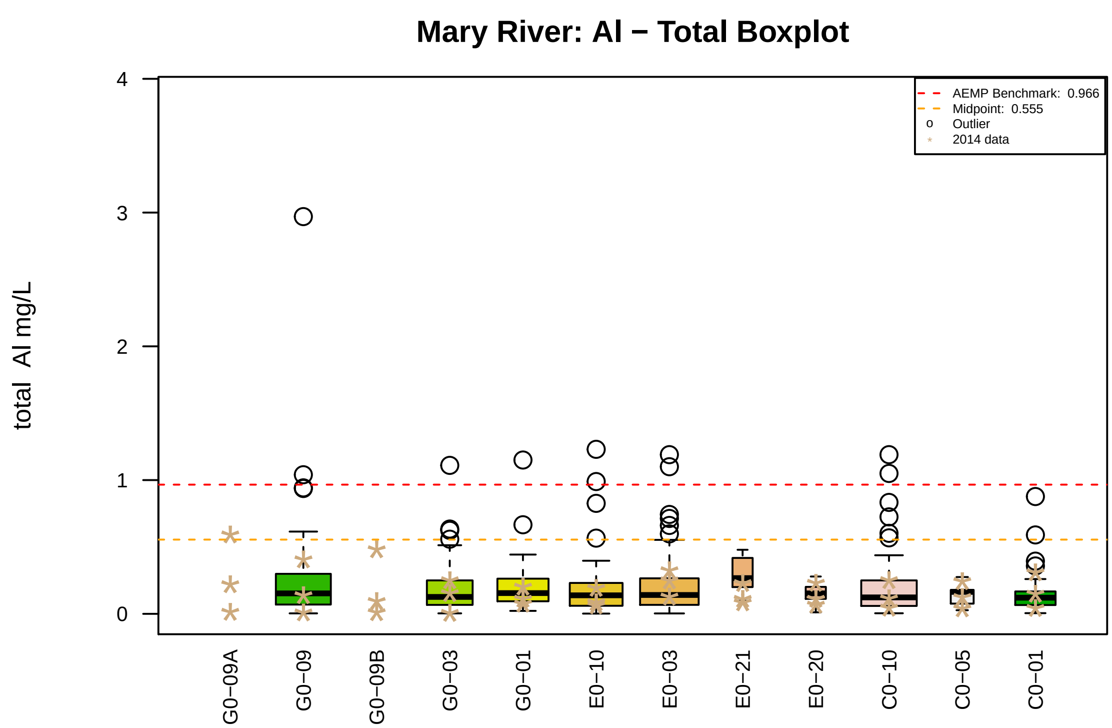

Mary River: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
200
100
50
20
10
5
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

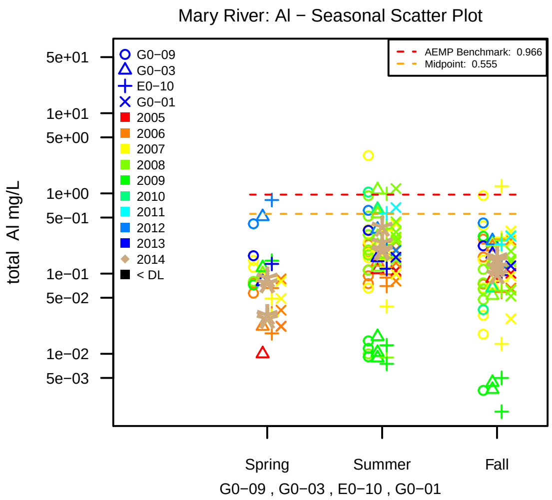

Mary River: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
200
100
50
20
10
5
Spring
n= 17
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

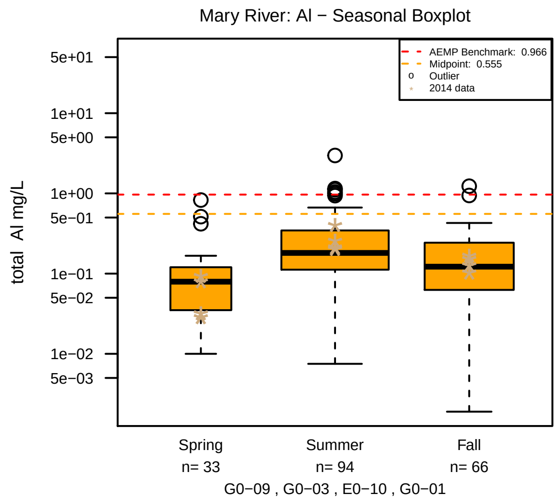

Mary River: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
200
100
50
20
10
5
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

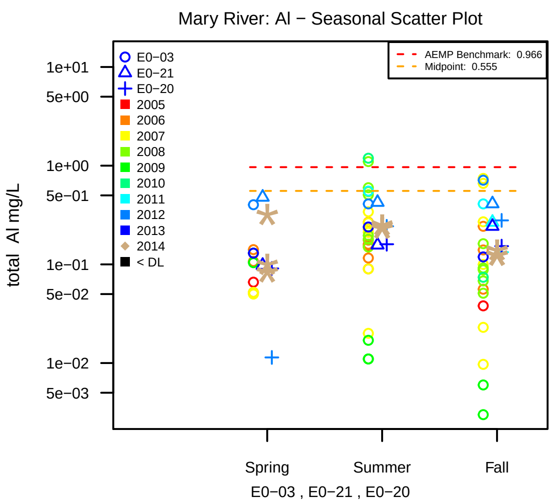

Mary River: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
200
100
50
20
10
5
Spring
n= 17
Summer
n= 33
Fall
n= 30
C0−10 , C0−05 , C0−01

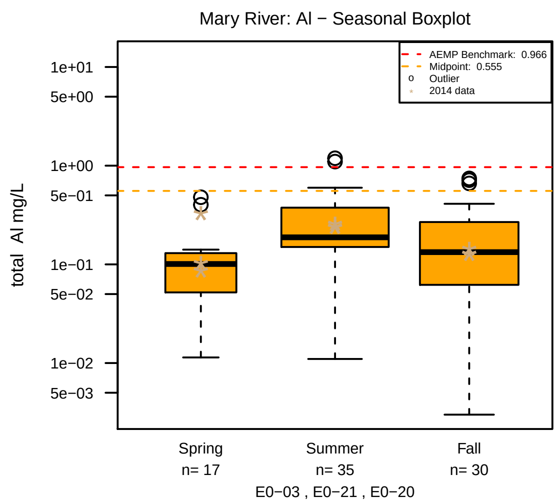

Mary River: Al − Total Boxplot on log scale
AEMP Benchmark: 0.966
Midpoint: 0.555
Outlier
2014 data
total Al mg/L − log axis
1e+01
5e+00
1e+00
5e−01
1e−01
5e−02
1e−02
5e−03
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

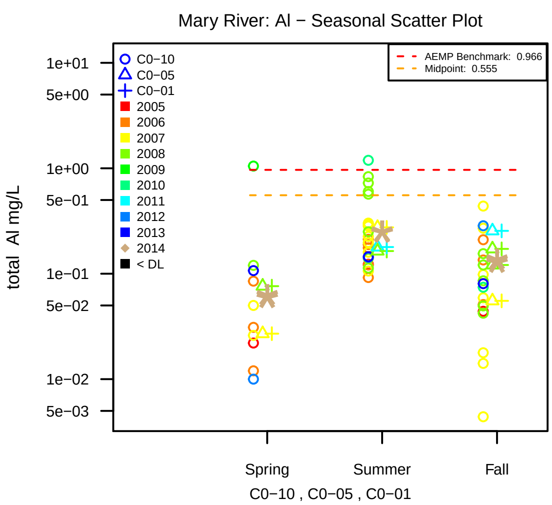

Mary River: Al − Total Boxplot
AEMP Benchmark: 0.966
Midpoint: 0.555
Outlier
2014 data
total Al mg/L
4
3
2
1
0
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

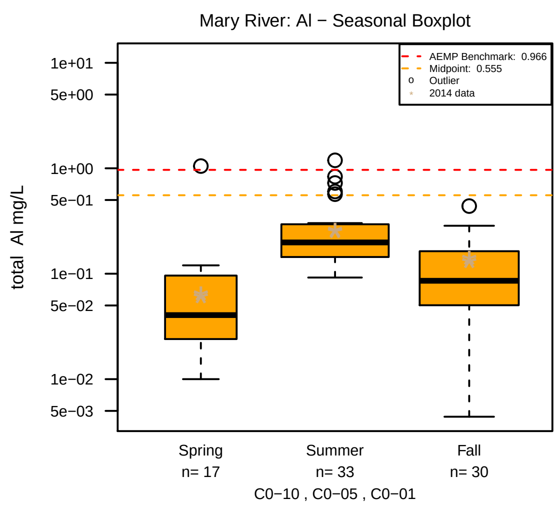

Mary River: Al − Seasonal Scatter Plot
total Al mg/L
5e+01
1e+01
5e+00
1e+00
5e−01
1e−01
5e−02
1e−02
5e−03
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.966
Midpoint: 0.555
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

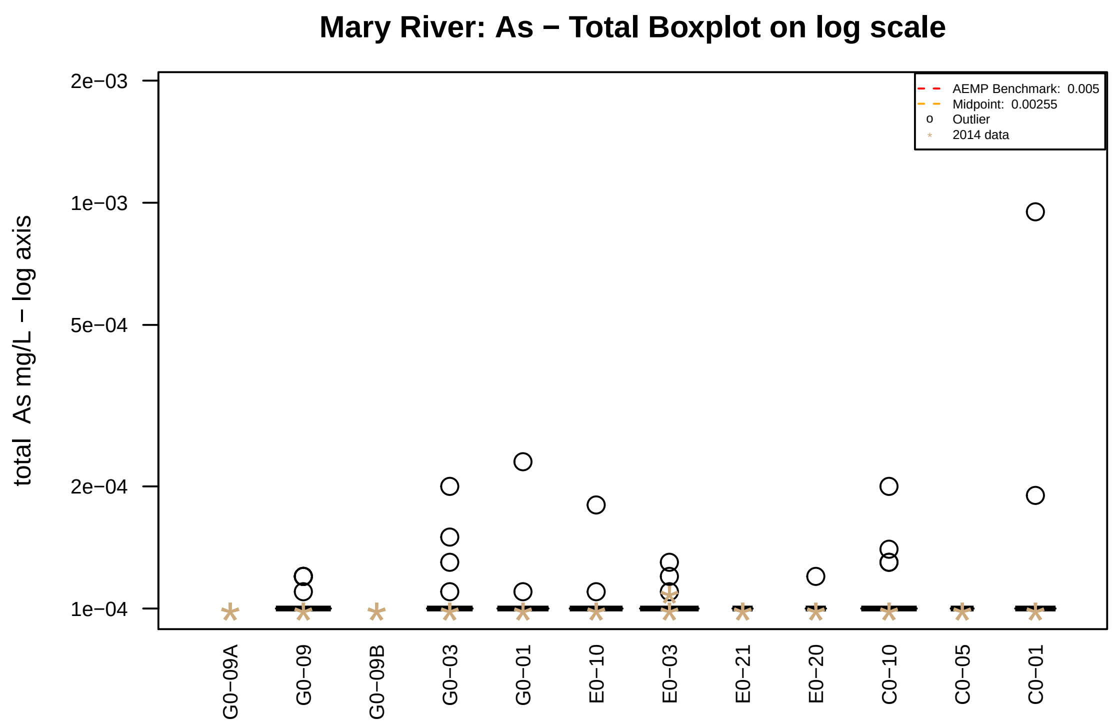

Mary River: Al − Seasonal Boxplot
total Al mg/L
5e+01
1e+01
5e+00
1e+00
5e−01
1e−01
5e−02
1e−02
5e−03
AEMP Benchmark: 0.966
Midpoint: 0.555
Outlier
2014 data
Spring
n= 33
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

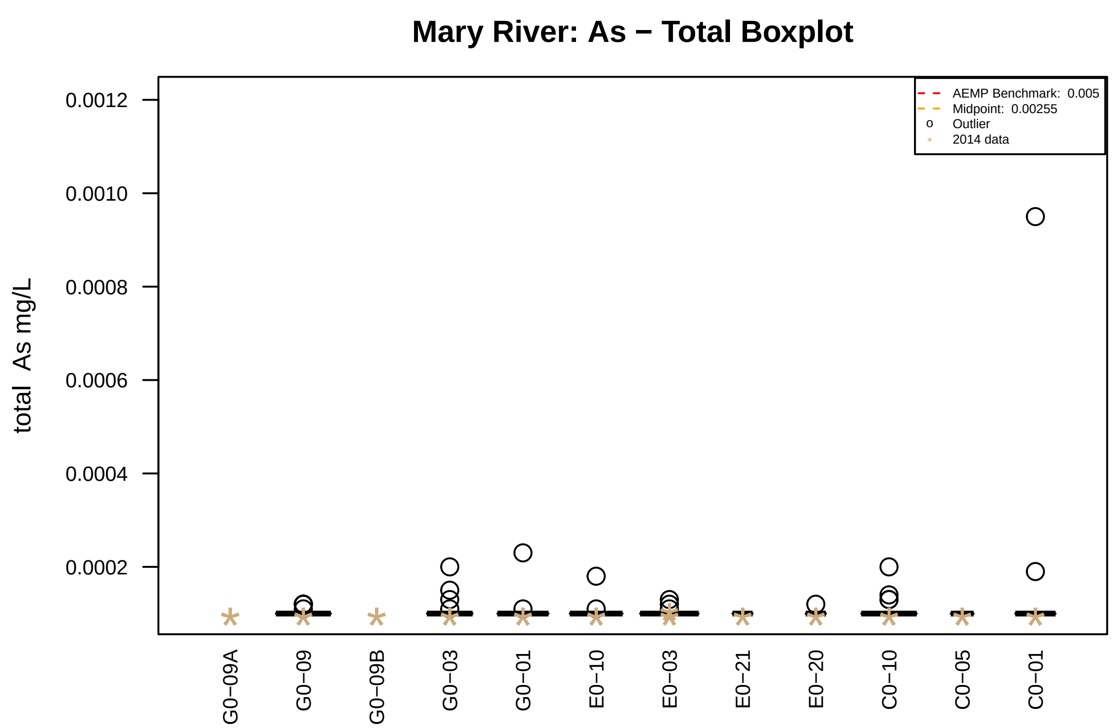

Mary River: Al − Seasonal Scatter Plot
total Al mg/L
1e+01
5e+00
1e+00
5e−01
1e−01
5e−02
1e−02
5e−03
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.966
Midpoint: 0.555
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

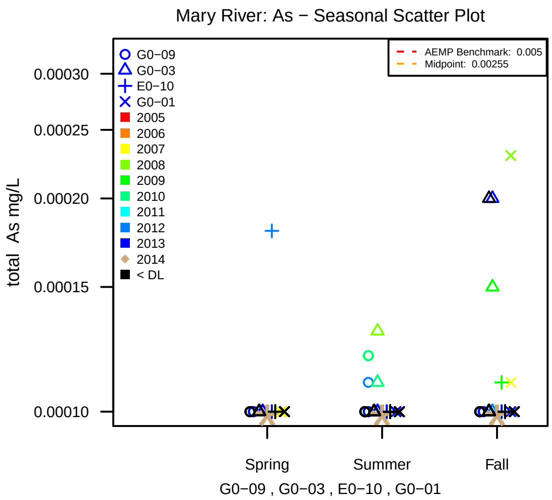

Mary River: Al − Seasonal Boxplot
total Al mg/L
1e+01
5e+00
1e+00
5e−01
1e−01
5e−02
1e−02
5e−03
AEMP Benchmark: 0.966
Midpoint: 0.555
Outlier
2014 data
Spring
n= 17
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

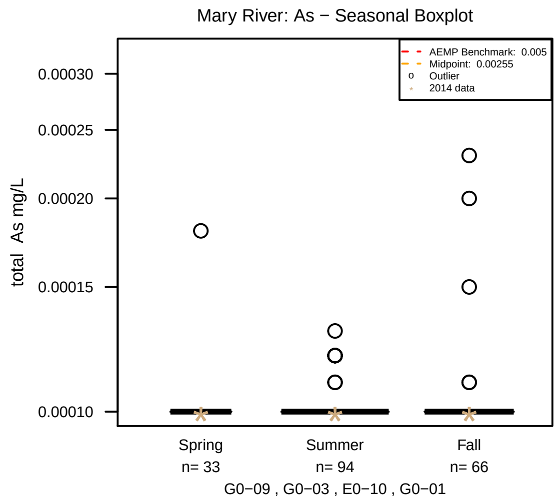

Mary River: Al − Seasonal Scatter Plot
total Al mg/L
1e+01
5e+00
1e+00
5e−01
1e−01
5e−02
1e−02
5e−03
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.966
Midpoint: 0.555
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

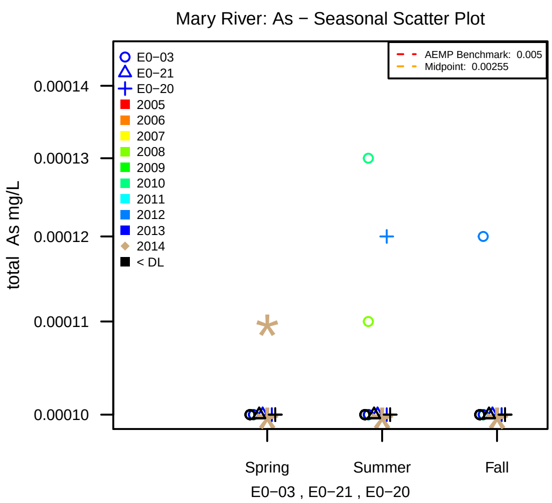

Mary River: Al − Seasonal Boxplot
total Al mg/L
1e+01
5e+00
1e+00
5e−01
1e−01
5e−02
1e−02
5e−03
AEMP Benchmark: 0.966
Midpoint: 0.555
Outlier
2014 data
Spring
n= 17
Summer
n= 33
Fall
n= 30
C0−10 , C0−05 , C0−01

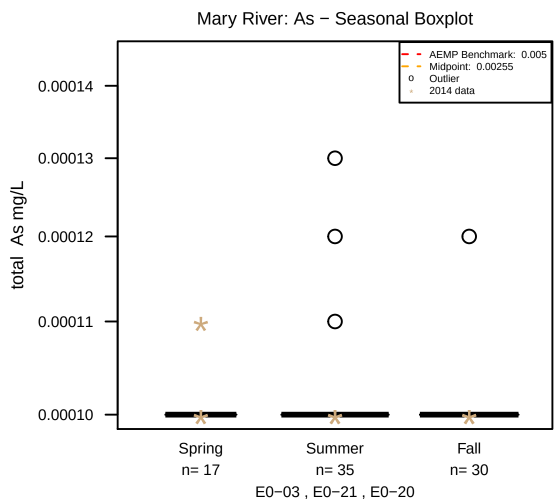

Mary River: As − Total Boxplot on log scale
total As mg/L − log axis
2e−03
1e−03
5e−04
2e−04
1e−04
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

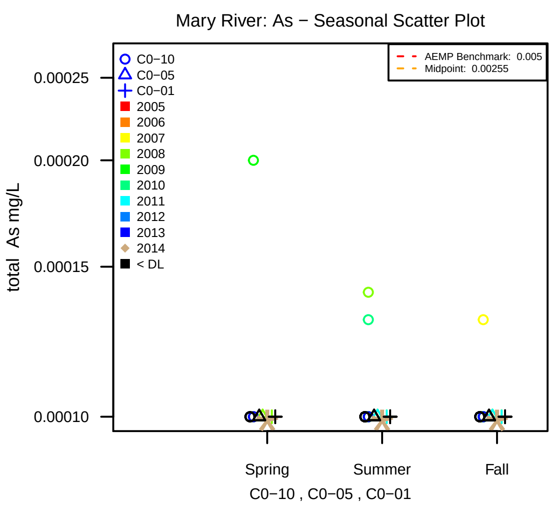

Mary River: As − Total Boxplot
total As mg/L
0.0012
0.0010
0.0008
0.0006
0.0004
0.0002
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

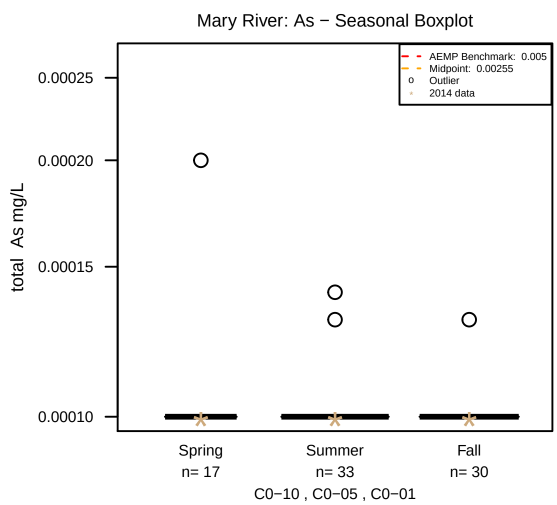

Mary River: As − Seasonal Scatter Plot
total As mg/L
0.00030
0.00025
0.00020
0.00015
0.00010
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

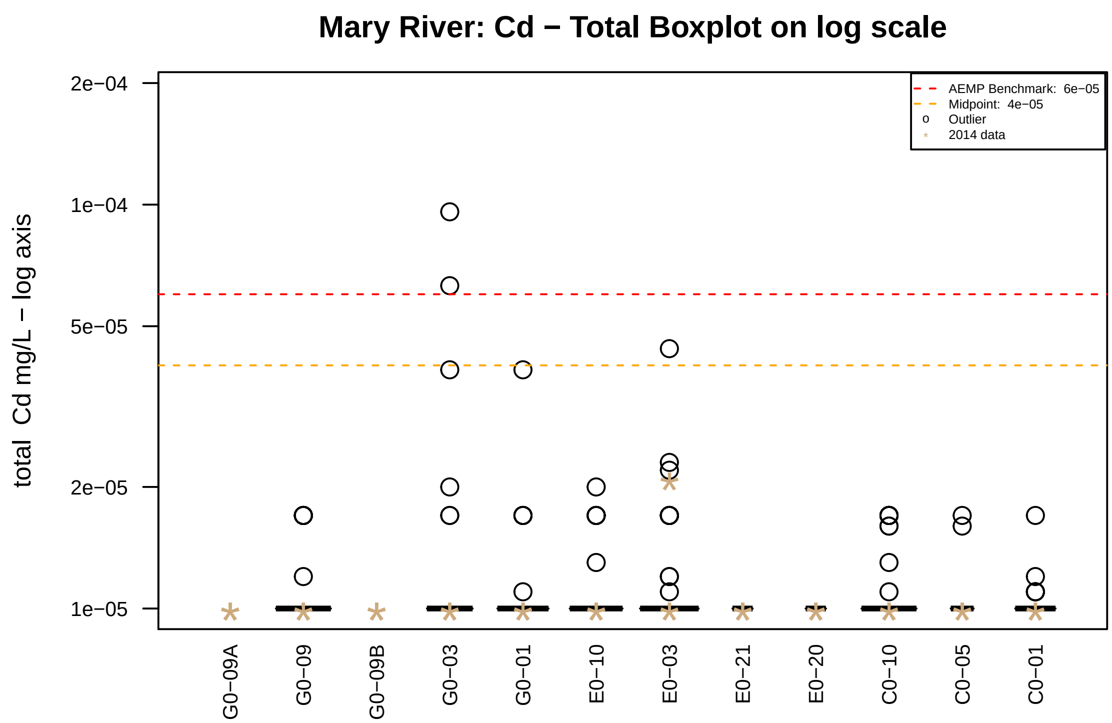

Mary River: As − Seasonal Boxplot
total As mg/L
0.00030
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Spring
n= 33
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

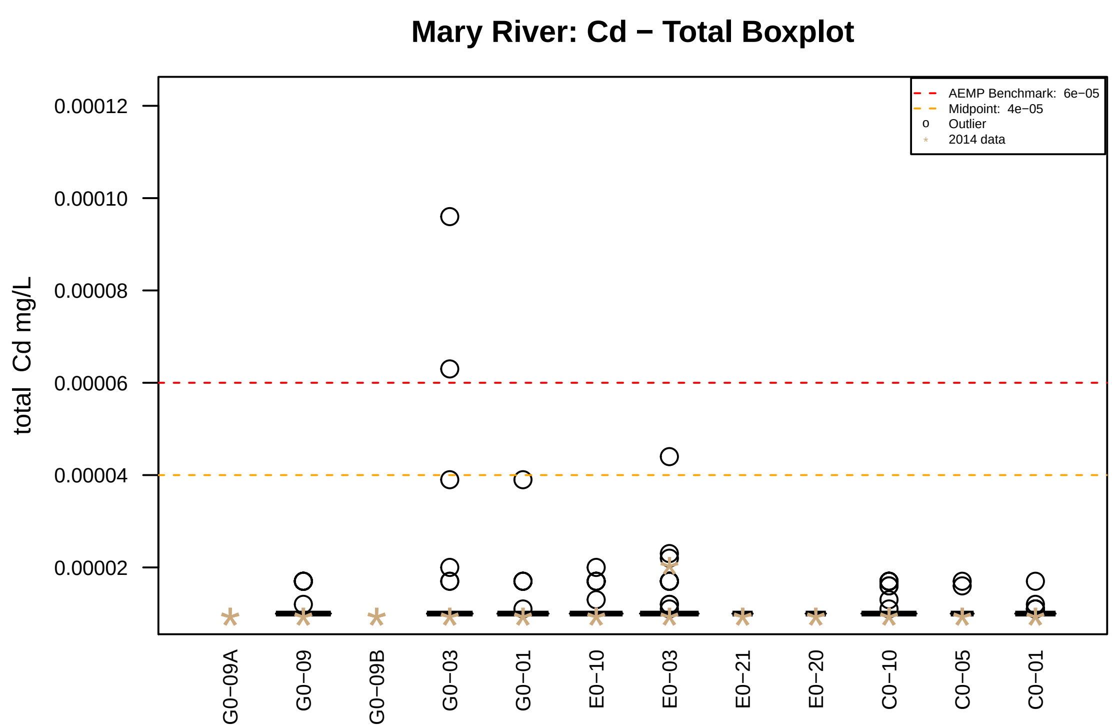

Mary River: As − Seasonal Scatter Plot
total As mg/L
0.00014
0.00013
0.00012
0.00011
0.00010
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Spring
Summer
Fall
E0−03 , E0−21 , E0−20


Mary River: As − Seasonal Boxplot
total As mg/L
0.00014
0.00013
0.00012
0.00011
0.00010
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Spring
n= 17
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

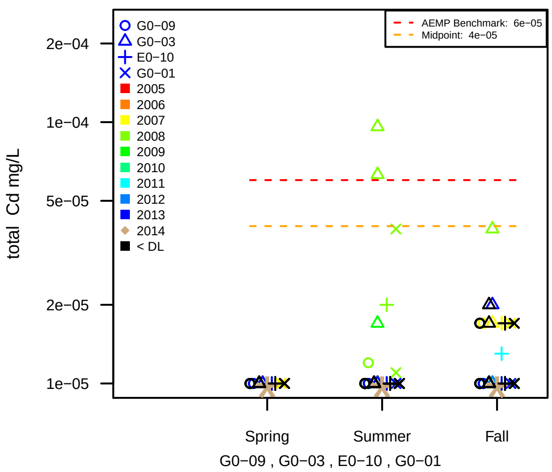

Mary River: As − Seasonal Scatter Plot
total As mg/L
0.00025
0.00020
0.00015
0.00010
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Spring
Summer
Fall
C0−10 , C0−05 , C0−01


Mary River: As − Seasonal Boxplot
total As mg/L
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Spring
n= 17
Summer
n= 33
Fall
n= 30
C0−10 , C0−05 , C0−01

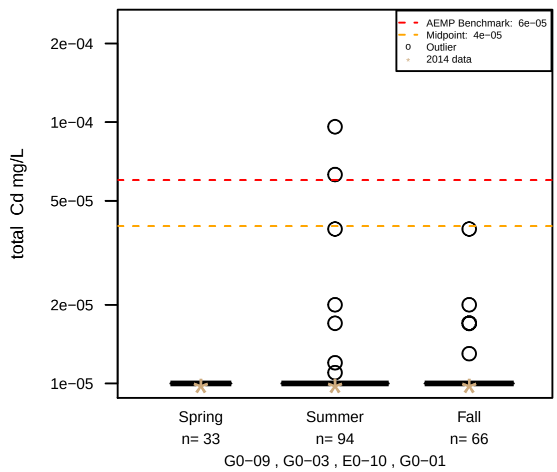

Mary River: Cd − Total Boxplot on log scale
total Cd mg/L − log axis
2e−04
1e−04
5e−05
2e−05
1e−05
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01


Mary River: Cd − Total Boxplot
total Cd mg/L
0.00012
0.00010
0.00008
0.00006
0.00004
0.00002
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

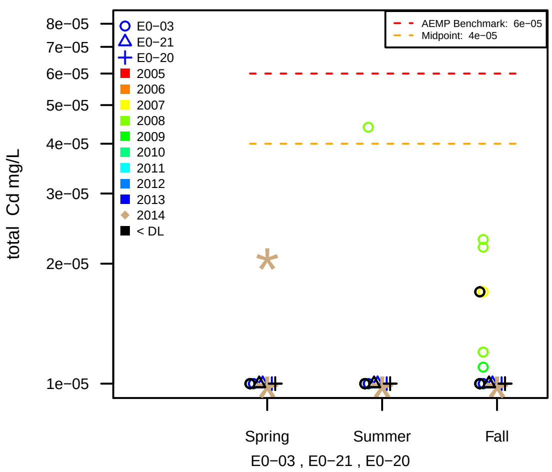
Mary River: Cd − Seasonal Scatter Plot



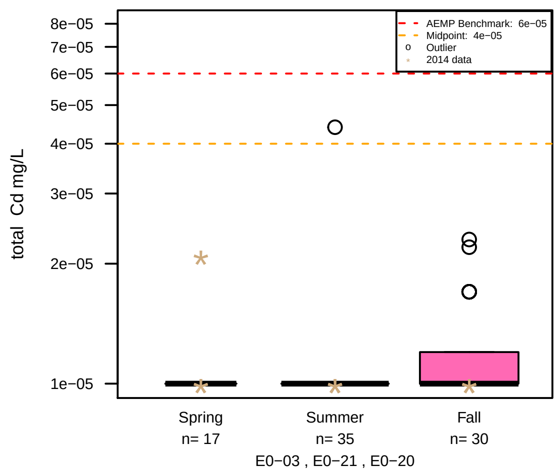
Mary River: Cd − Seasonal Boxplot



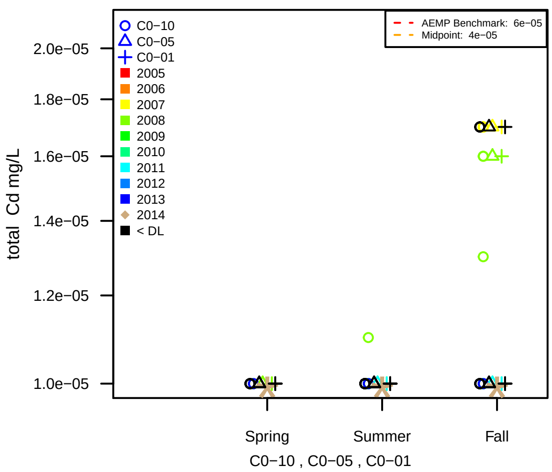
Mary River: Cd − Seasonal Scatter Plot



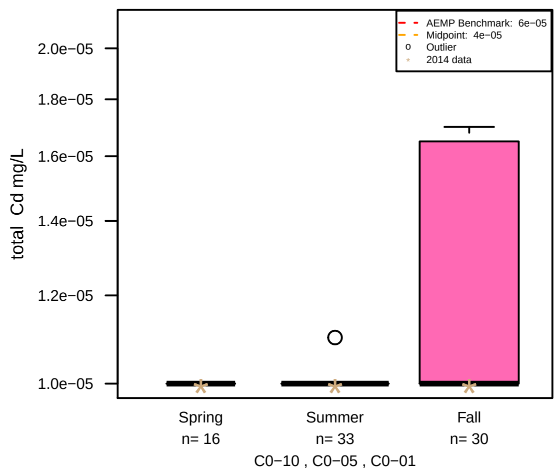
Mary River: Cd − Seasonal Boxplot

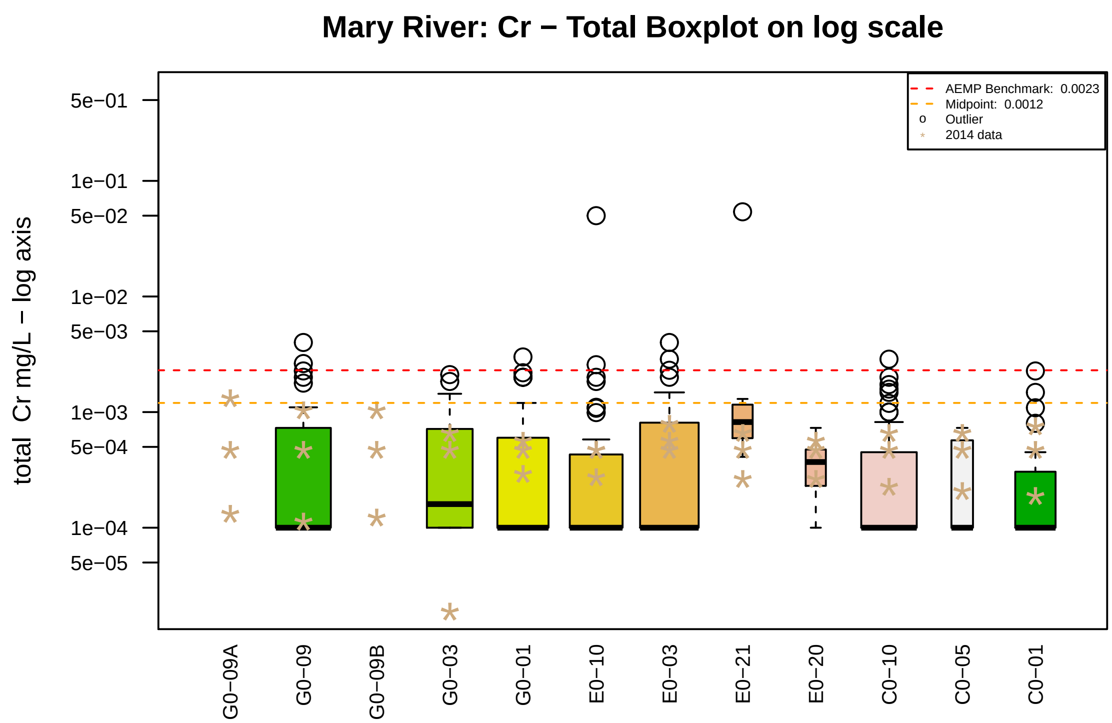


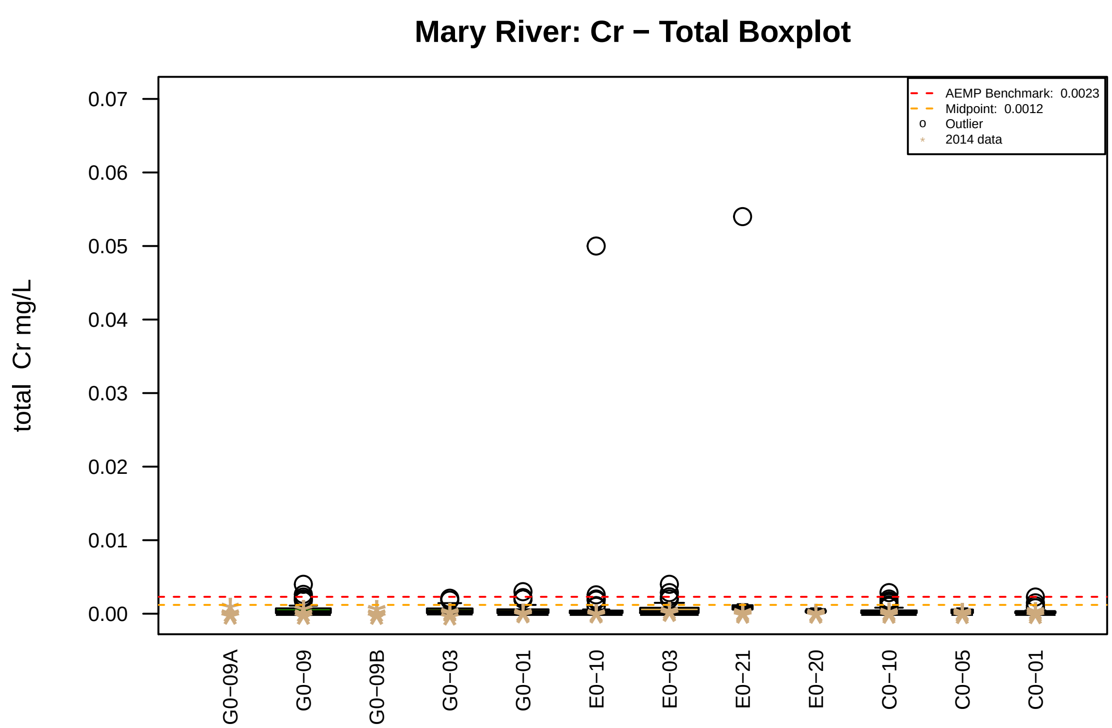
Mary River: Cd − Seasonal Scatter Plot

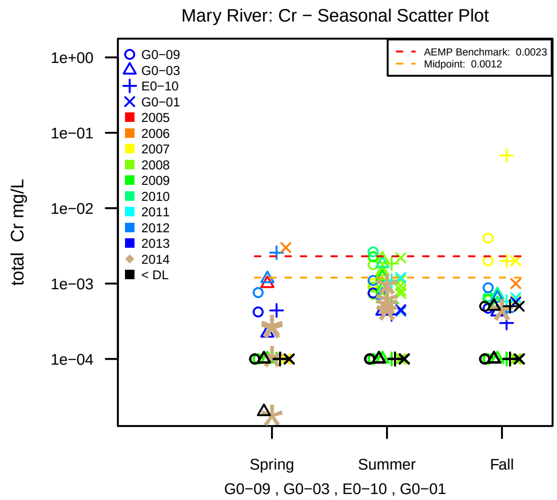


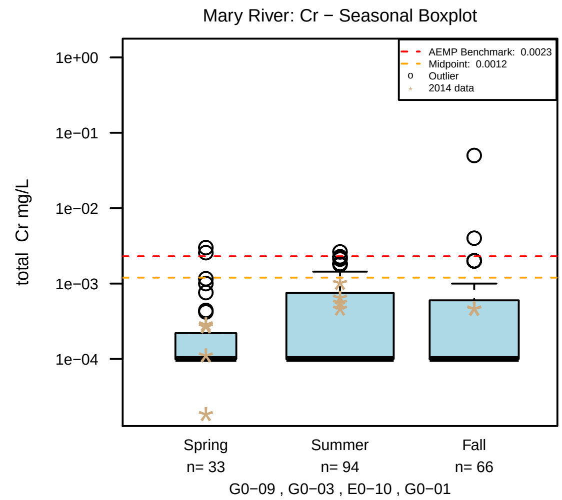
Mary River: Cd − Seasonal Boxplot

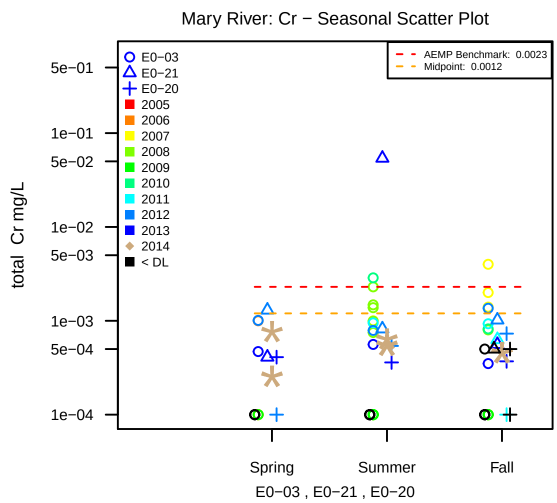


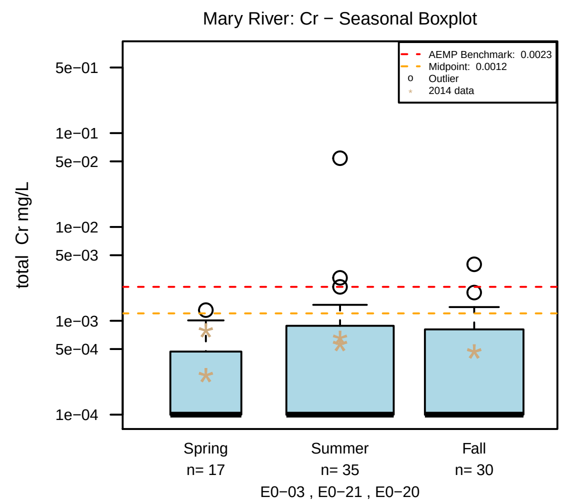

Mary River: Cr − Total Boxplot on log scale
AEMP Benchmark: 0.0023
Midpoint: 0.0012
Outlier
2014 data
total Cr mg/L − log axis
5e−01
1e−01
5e−02
1e−02
5e−03
1e−03
5e−04
1e−04
5e−05
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

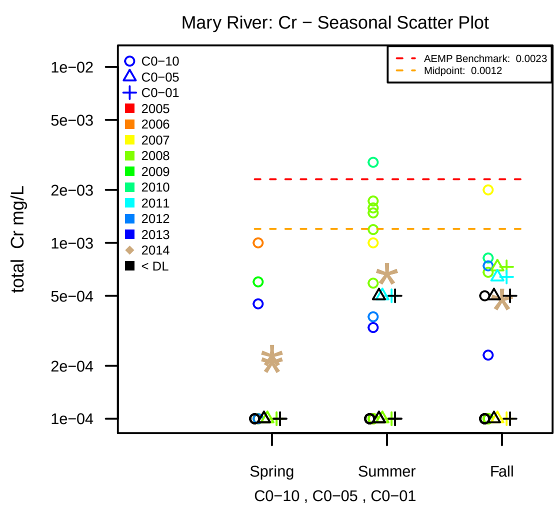

Mary River: Cr − Total Boxplot
AEMP Benchmark: 0.0023
Midpoint: 0.0012
Outlier
2014 data
total Cr mg/L
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

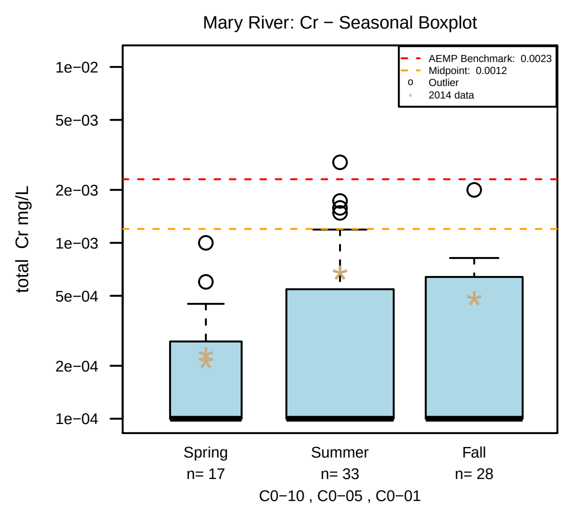

Mary River: Cr − Seasonal Scatter Plot
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0023
Midpoint: 0.0012
total Cr mg/L
1e+00
1e−01
1e−02
1e−03
1e−04
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

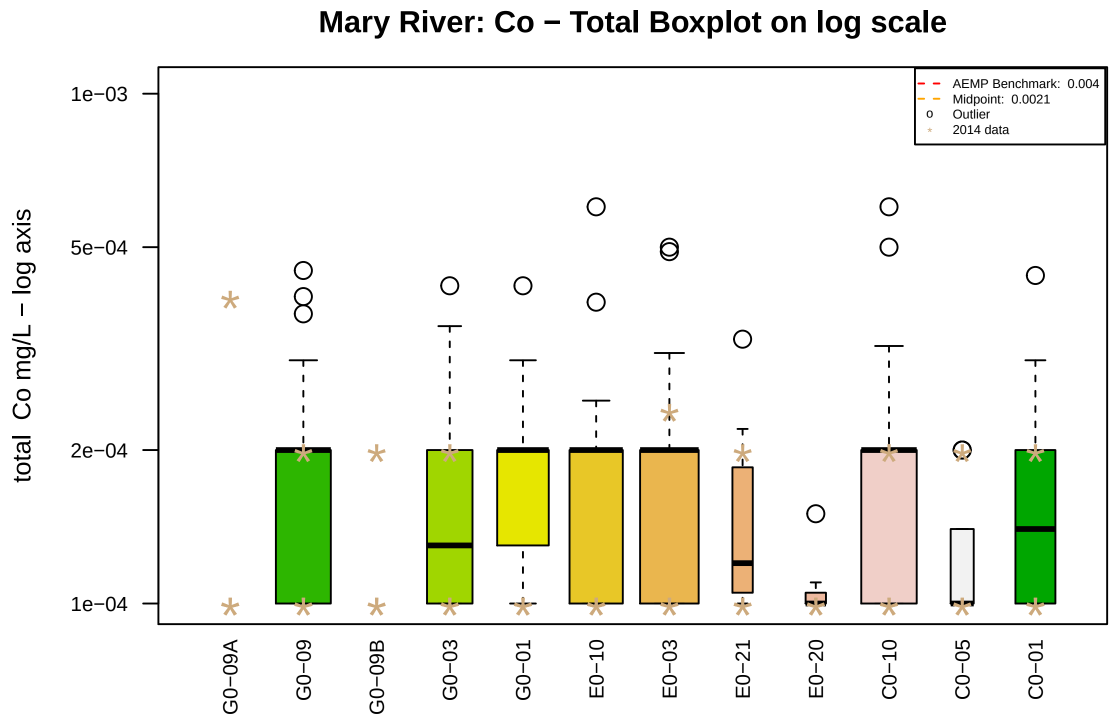

Mary River: Cr − Seasonal Boxplot
AEMP Benchmark: 0.0023
Midpoint: 0.0012
Outlier
2014 data
total Cr mg/L
1e+00
1e−01
1e−02
1e−03
1e−04
Spring
n= 33
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

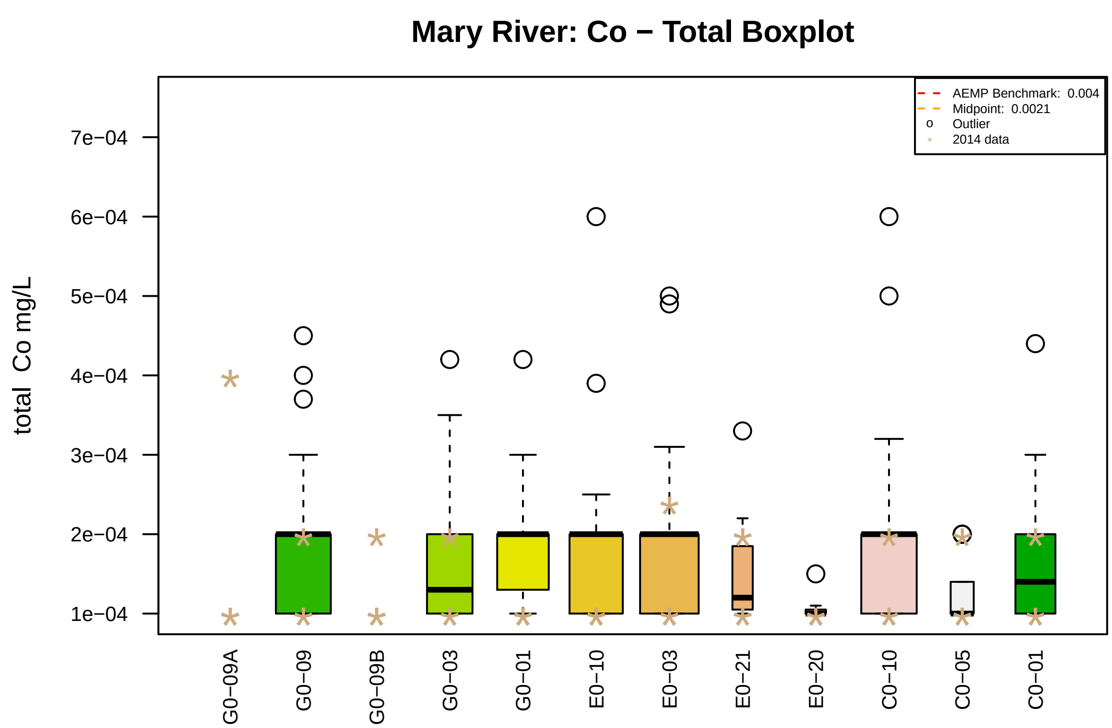

Mary River: Cr − Seasonal Scatter Plot
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0023
Midpoint: 0.0012
total Cr mg/L
5e−01
1e−01
5e−02
1e−02
5e−03
1e−03
5e−04
1e−04
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

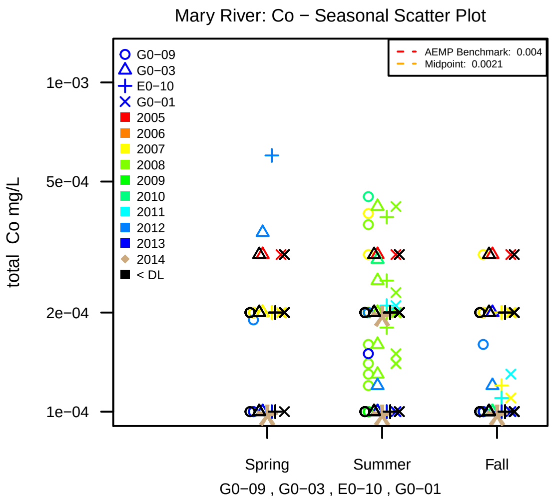

Mary River: Cr − Seasonal Boxplot
AEMP Benchmark: 0.0023
Midpoint: 0.0012
Outlier
2014 data
total Cr mg/L
5e−01
1e−01
5e−02
1e−02
5e−03
1e−03
5e−04
1e−04
Spring
n= 17
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

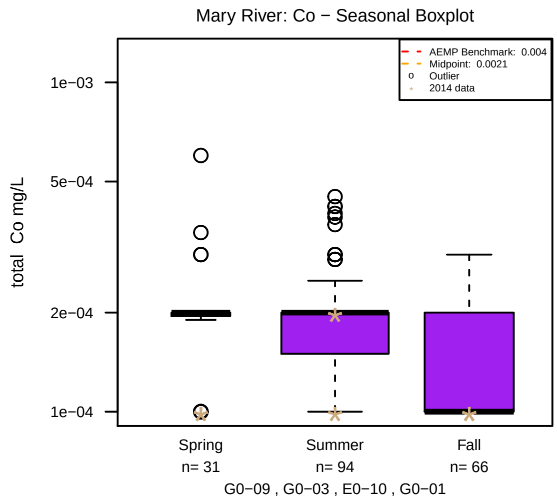

Mary River: Cr − Seasonal Scatter Plot
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0023
Midpoint: 0.0012
total Cr mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

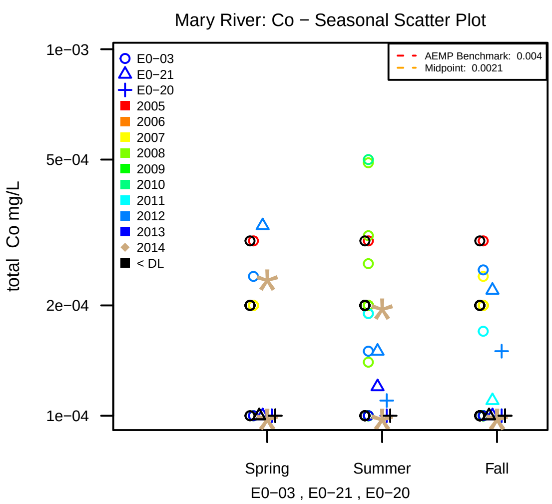

Mary River: Cr − Seasonal Boxplot
AEMP Benchmark: 0.0023
Midpoint: 0.0012
Outlier
2014 data
total Cr mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Spring
n= 17
Summer
n= 33
Fall
n= 28
C0−10 , C0−05 , C0−01

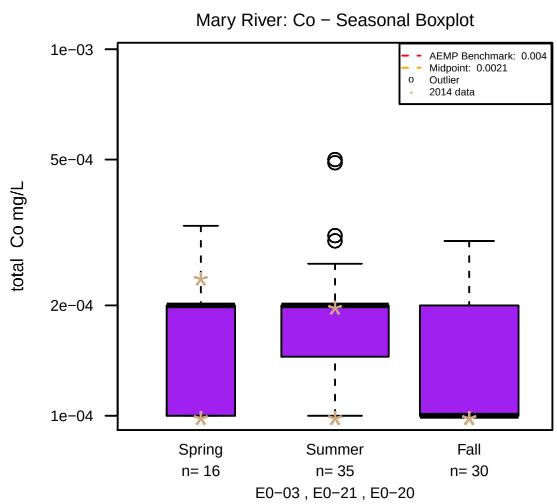

Mary River: Co − Total Boxplot on log scale
AEMP Benchmark: 0.004
Midpoint: 0.0021
Outlier
2014 data
total Co mg/L − log axis
1e−03
5e−04
2e−04
1e−04
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

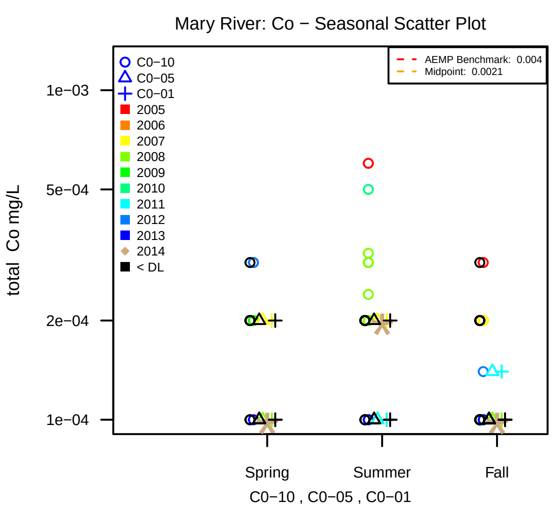

Mary River: Co − Total Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.0021
Outlier
2014 data
total Co mg/L
7e−04
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

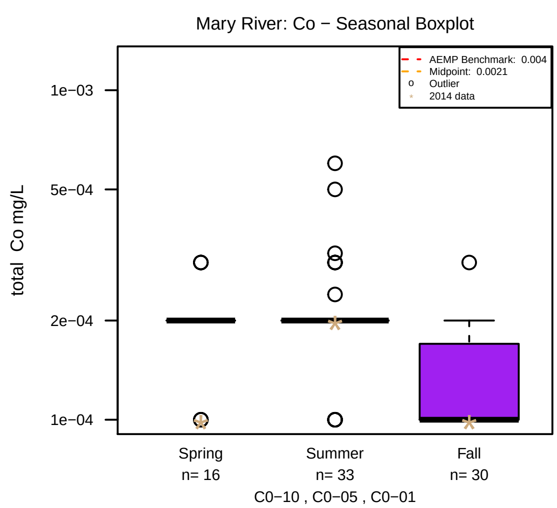

Mary River: Co − Seasonal Scatter Plot
total Co mg/L
1e−03
5e−04
2e−04
1e−04
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.0021
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

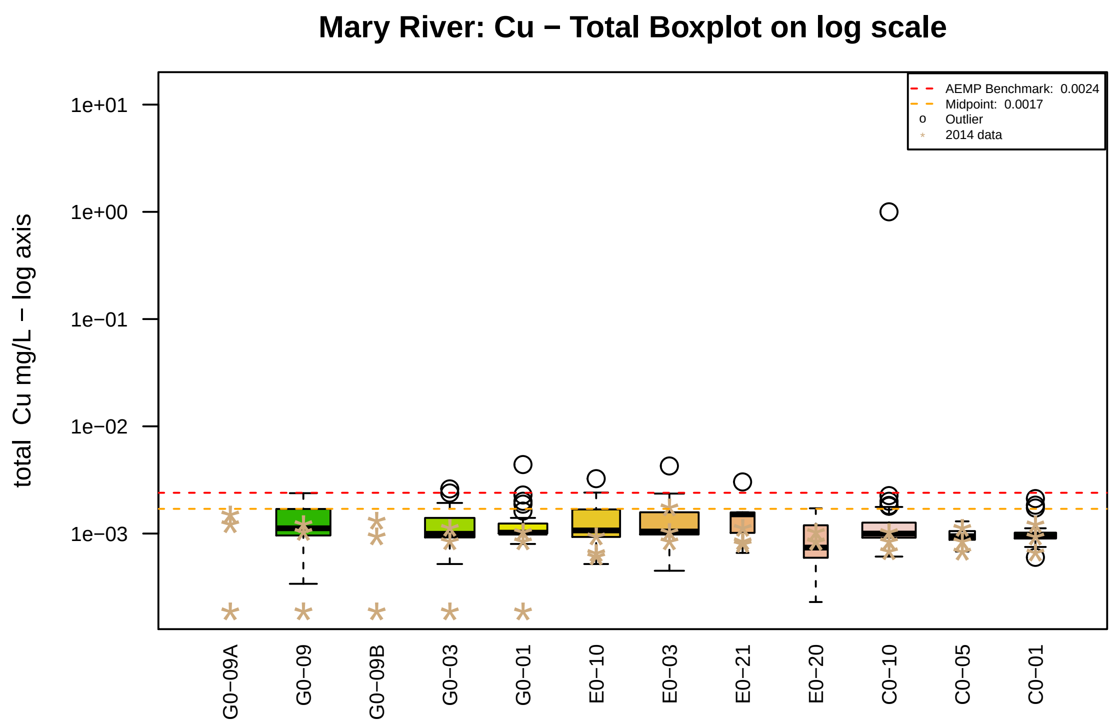

Mary River: Co − Seasonal Boxplot
total Co mg/L
1e−03
5e−04
2e−04
1e−04
AEMP Benchmark: 0.004
Midpoint: 0.0021
Outlier
2014 data
Spring
n= 31
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

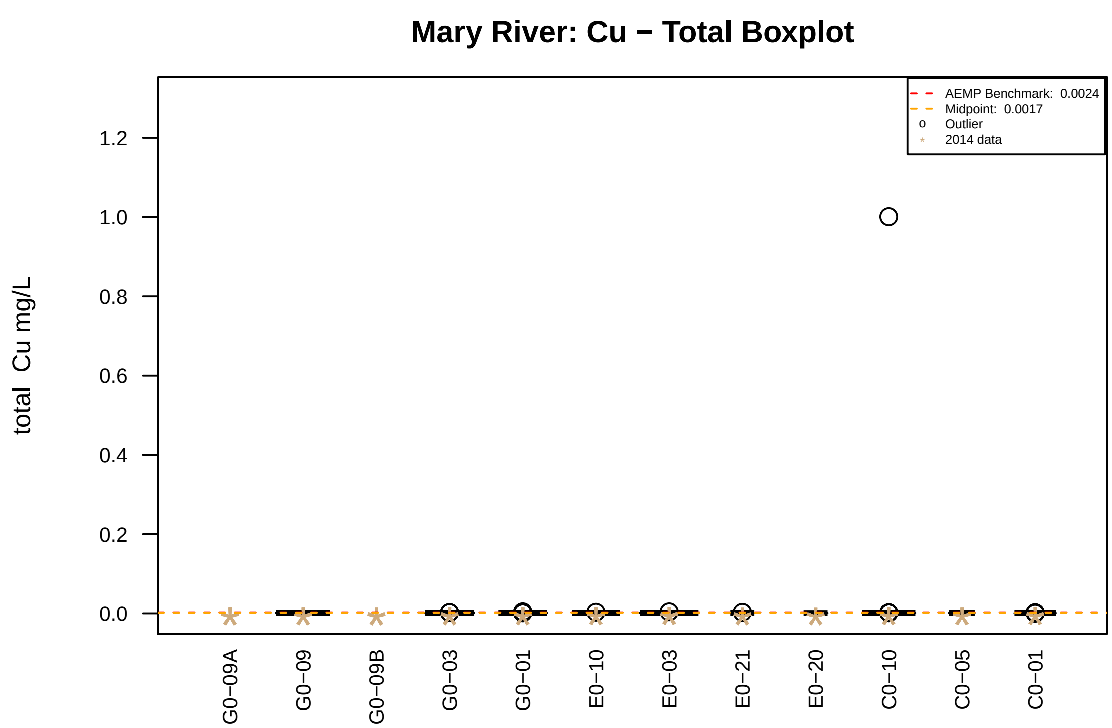

Mary River: Co − Seasonal Scatter Plot
total Co mg/L
1e−03
5e−04
2e−04
1e−04
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.0021
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

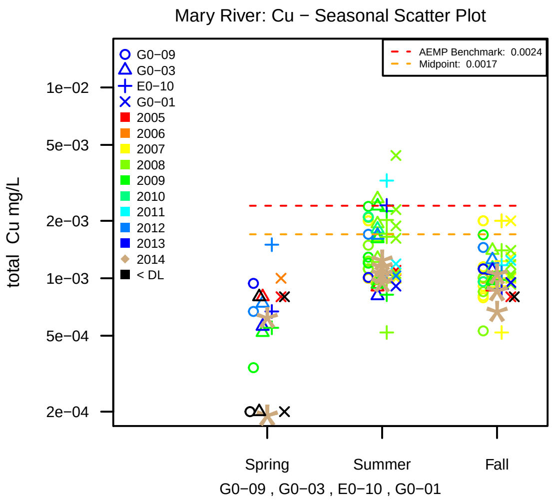

Mary River: Co − Seasonal Boxplot
total Co mg/L
1e−03
5e−04
2e−04
1e−04
AEMP Benchmark: 0.004
Midpoint: 0.0021
Outlier
2014 data
Spring
n= 16
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

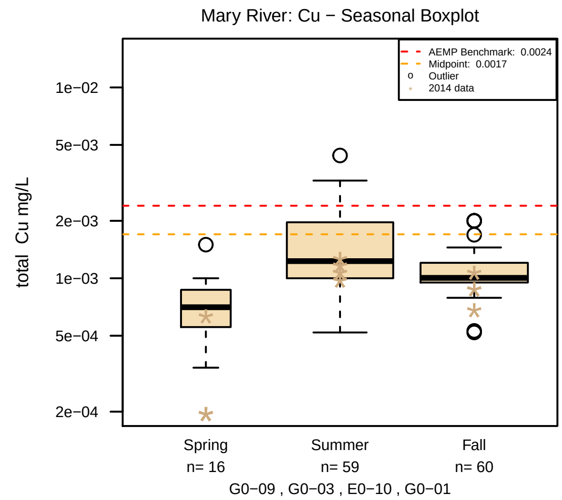

Mary River: Co − Seasonal Scatter Plot
total Co mg/L
1e−03
5e−04
2e−04
1e−04
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.0021
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

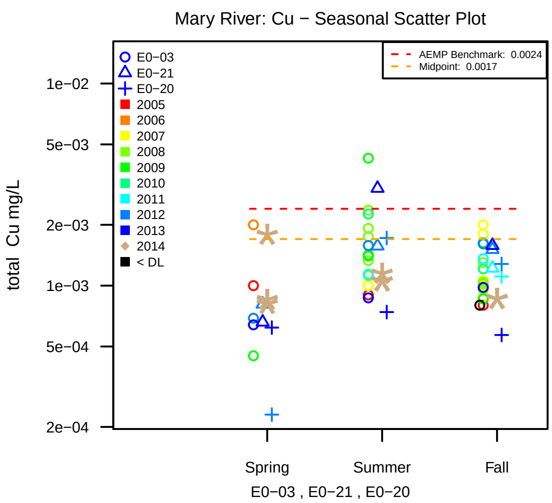

Mary River: Co − Seasonal Boxplot
total Co mg/L
1e−03
5e−04
2e−04
1e−04
AEMP Benchmark: 0.004
Midpoint: 0.0021
Outlier
2014 data
Spring
n= 16
Summer
n= 33
Fall
n= 30
C0−10 , C0−05 , C0−01

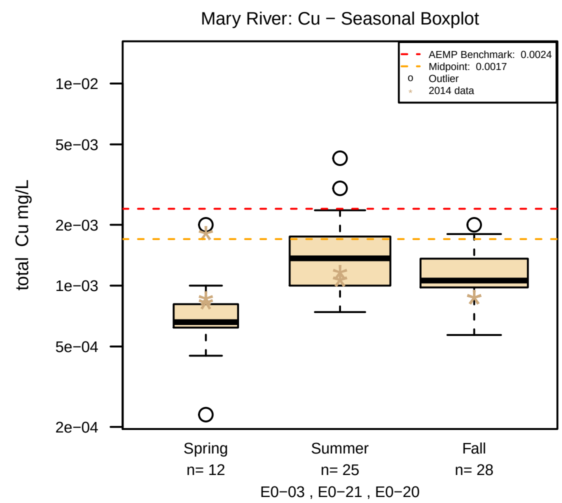

Mary River: Cu − Total Boxplot on log scale
AEMP Benchmark: 0.0024
Midpoint: 0.0017
Outlier
2014 data
total Cu mg/L − log axis
1e+01
1e+00
1e−01
1e−02
1e−03
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

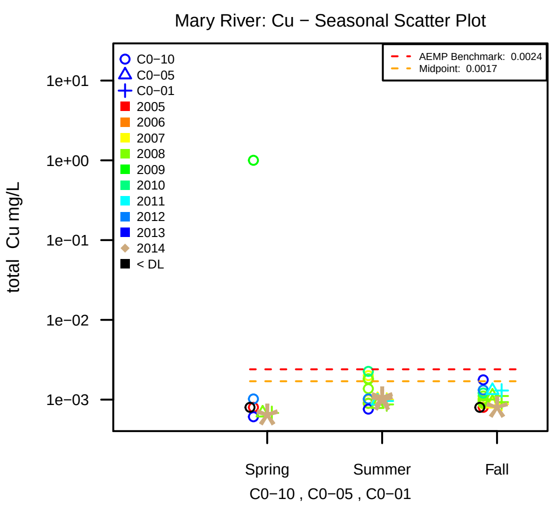

Mary River: Cu − Total Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.0017
Outlier
2014 data
total Cu mg/L
1.2
1.0
0.8
0.6
0.4
0.2
0.0
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

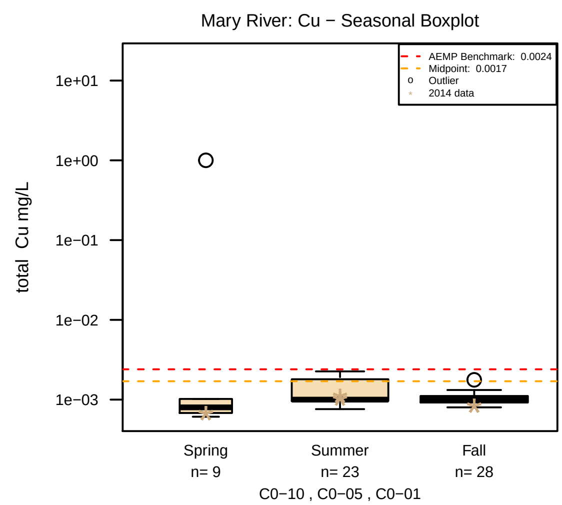

Mary River: Cu − Seasonal Scatter Plot
total Cu mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.0017
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

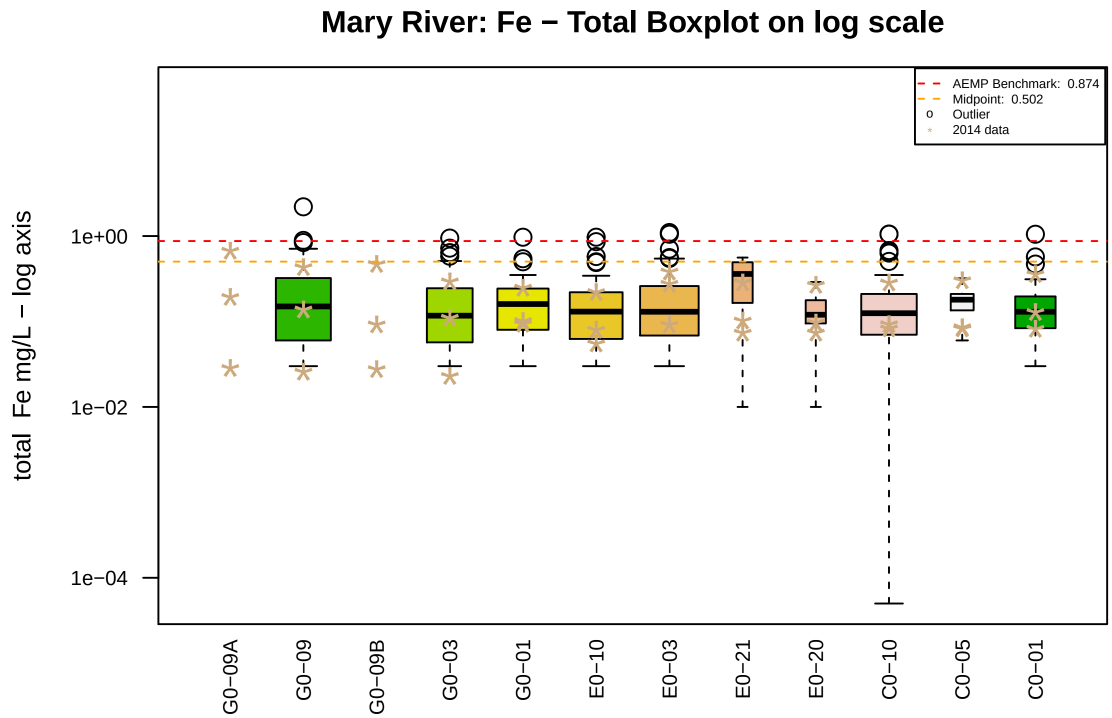

Mary River: Cu − Seasonal Boxplot
total Cu mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
AEMP Benchmark: 0.0024
Midpoint: 0.0017
Outlier
2014 data
Spring
n= 16
Summer
n= 59
Fall
n= 60
G0−09 , G0−03 , E0−10 , G0−01

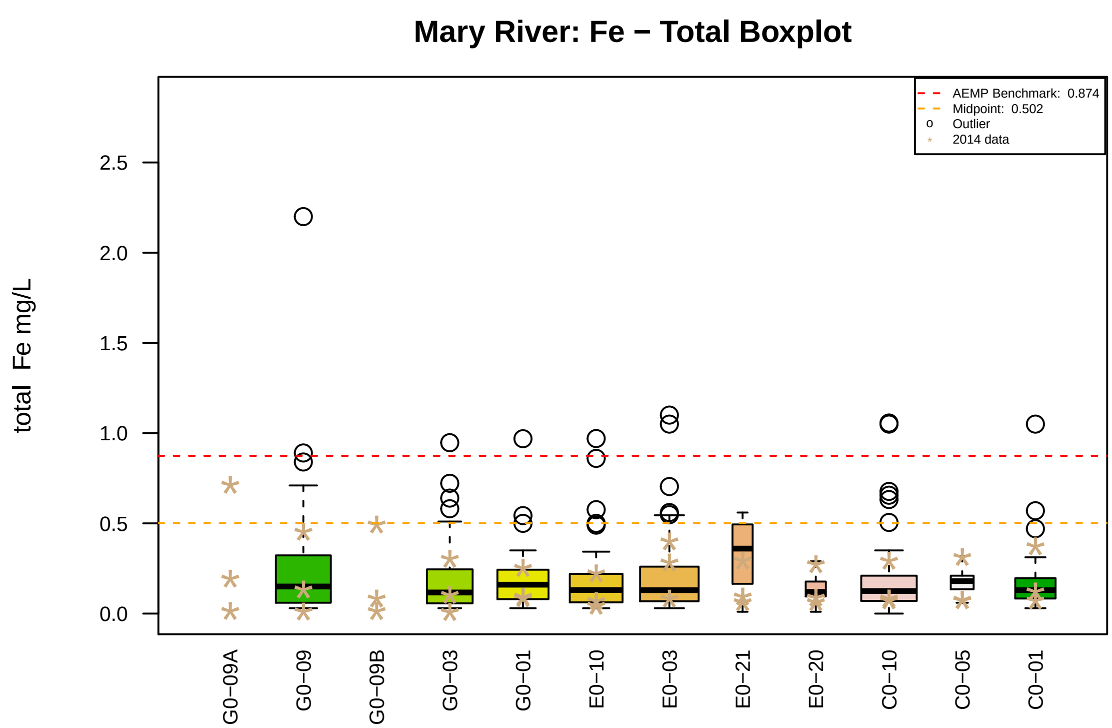

Mary River: Cu − Seasonal Scatter Plot
total Cu mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.0017
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

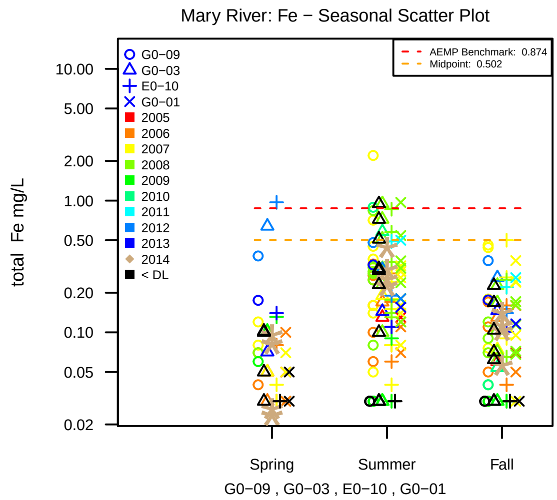

Mary River: Cu − Seasonal Boxplot
total Cu mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
AEMP Benchmark: 0.0024
Midpoint: 0.0017
Outlier
2014 data
Spring
n= 12
Summer
n= 25
Fall
n= 28
E0−03 , E0−21 , E0−20

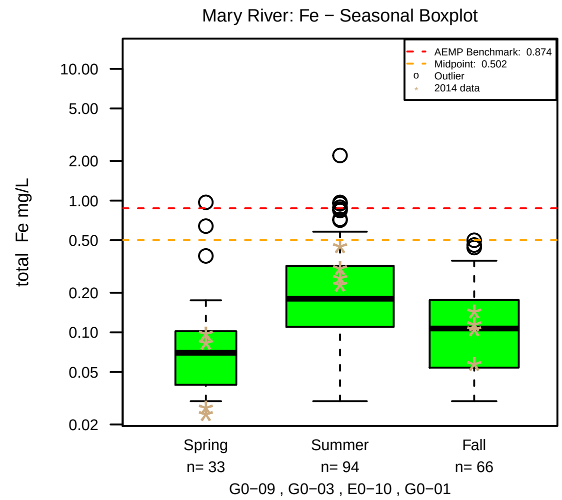

Mary River: Cu − Seasonal Scatter Plot
total Cu mg/L
1e+01
1e+00
1e−01
1e−02
1e−03
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.0017
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

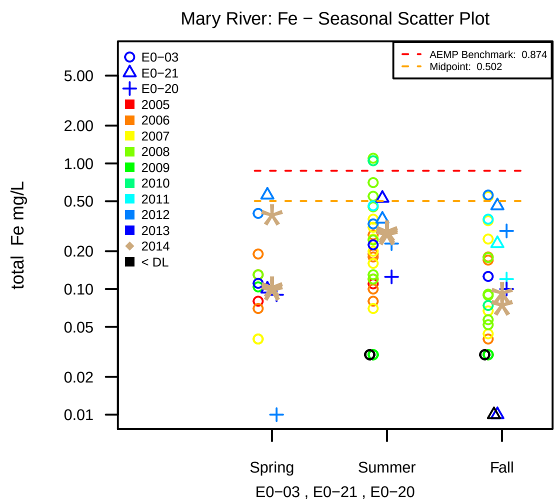

Mary River: Cu − Seasonal Boxplot
total Cu mg/L
1e+01
1e+00
1e−01
1e−02
1e−03
AEMP Benchmark: 0.0024
Midpoint: 0.0017
Outlier
2014 data
Spring
n= 9
Summer
n= 23
Fall
n= 28
C0−10 , C0−05 , C0−01

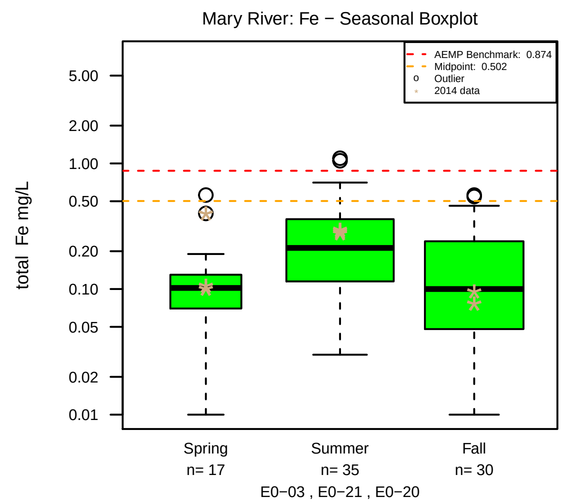

Mary River: Fe – Total Boxplot on log scale
AEMP Benchmark: 0.874
Midpoint: 0.502
Outlier
2014 data
total Fe mg/L – log axis
1e+00
1e−02
1e−04
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

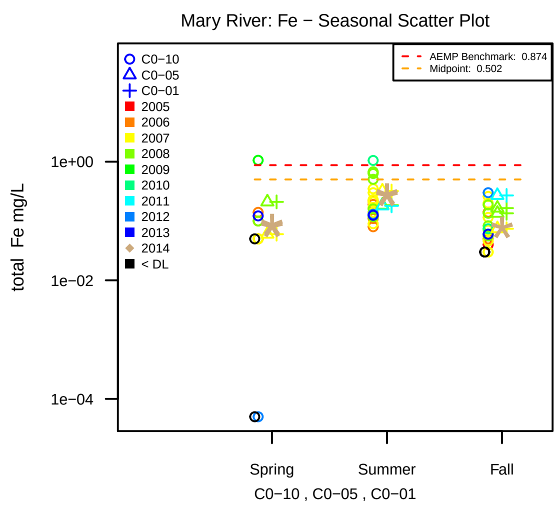

Mary River: Fe – Total Boxplot
AEMP Benchmark: 0.874
Midpoint: 0.502
Outlier
2014 data
total Fe mg/L
2.5
2.0
1.5
1.0
0.5
0.0
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

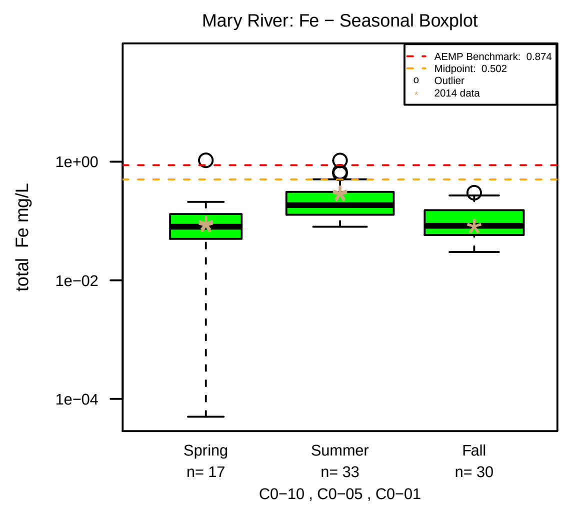

Mary River: Fe − Seasonal Scatter Plot
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.874
Midpoint: 0.502
total Fe mg/L
10.00
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

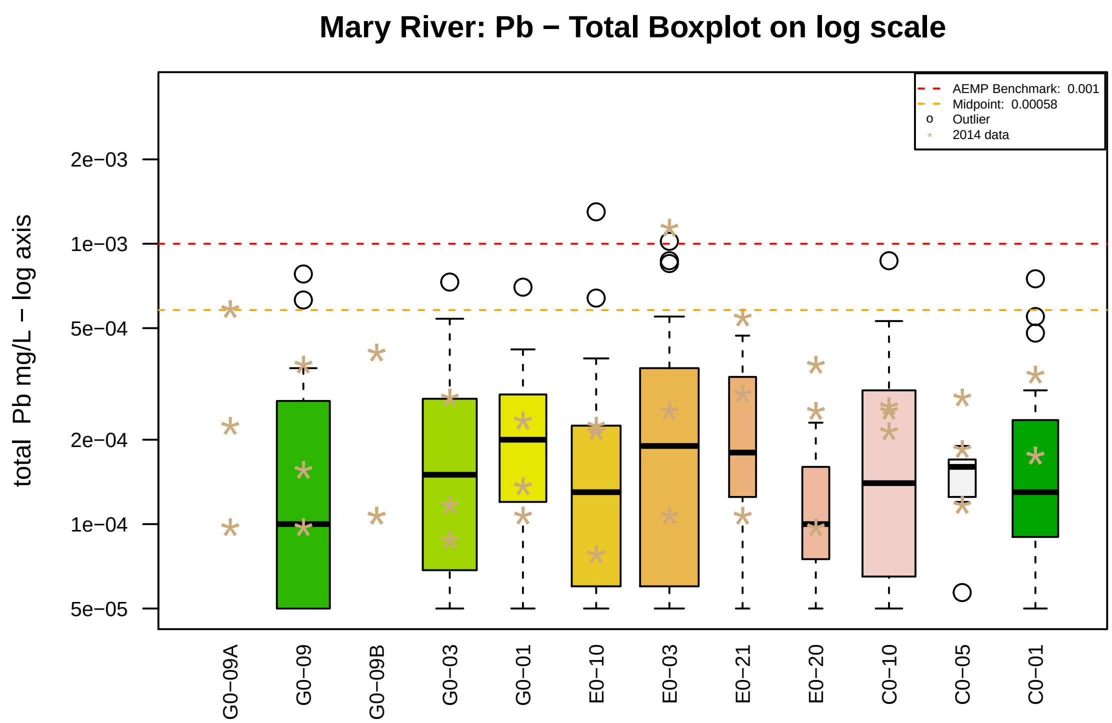

Mary River: Fe − Seasonal Boxplot
AEMP Benchmark: 0.874
Midpoint: 0.502
Outlier
2014 data
total Fe mg/L
10.00
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
Spring
n= 33
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

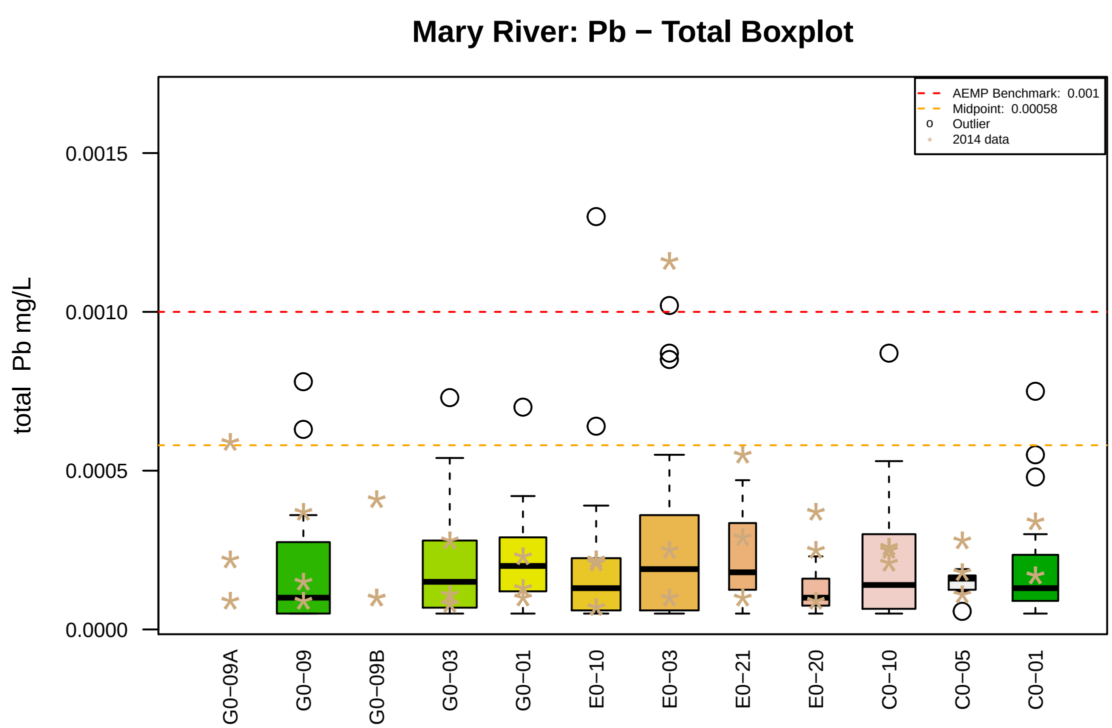

Mary River: Fe − Seasonal Scatter Plot
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.874
Midpoint: 0.502
total Fe mg/L
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
0.01
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

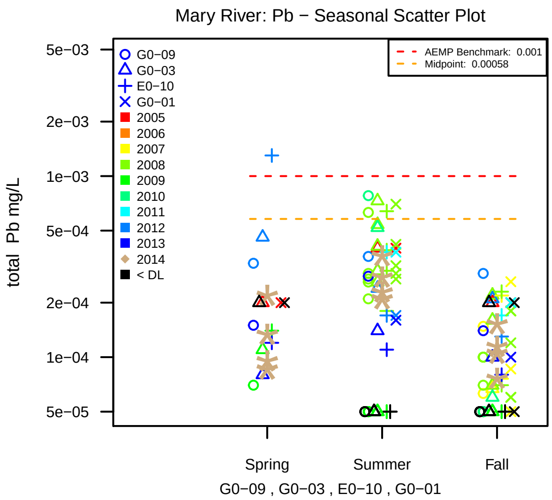

Mary River: Fe − Seasonal Boxplot
AEMP Benchmark: 0.874
Midpoint: 0.502
Outlier
2014 data
total Fe mg/L
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
0.01
Spring
n= 17
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

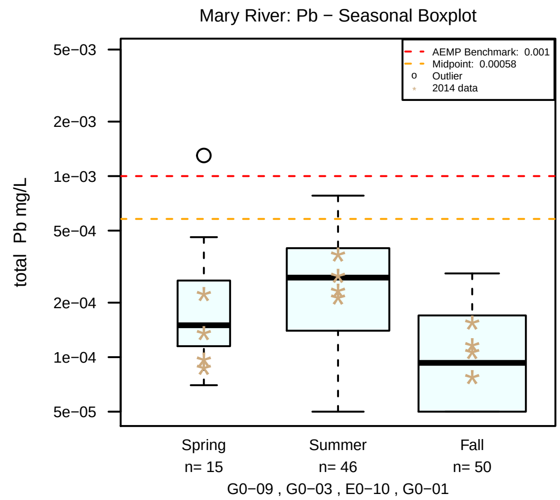

Mary River: Fe − Seasonal Scatter Plot
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.874
Midpoint: 0.502
total Fe mg/L
1e+00
1e−02
1e−04
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

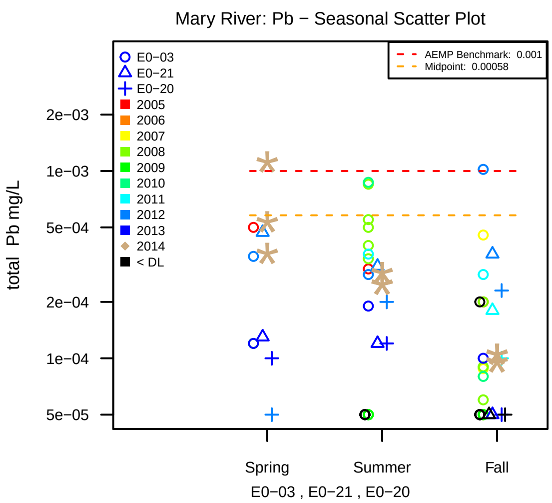

Mary River: Fe − Seasonal Boxplot
AEMP Benchmark: 0.874
Midpoint: 0.502
Outlier
2014 data
total Fe mg/L
1e+00
1e−02
1e−04
Spring
n= 17
Summer
n= 33
Fall
n= 30
C0−10 , C0−05 , C0−01

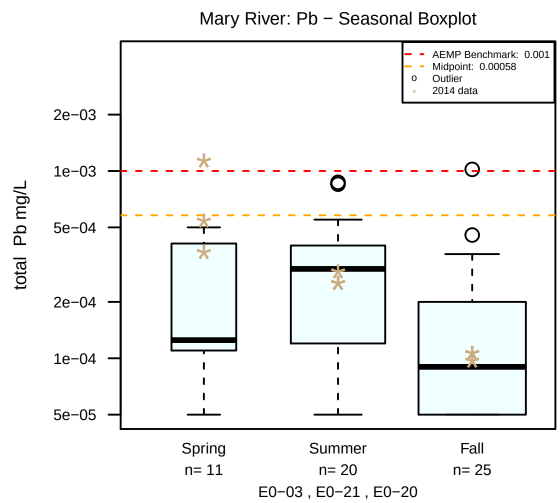

Mary River: Pb − Total Boxplot on log scale
AEMP Benchmark: 0.001
Midpoint: 0.00058
Outlier
2014 data
total Pb mg/L − log axis
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

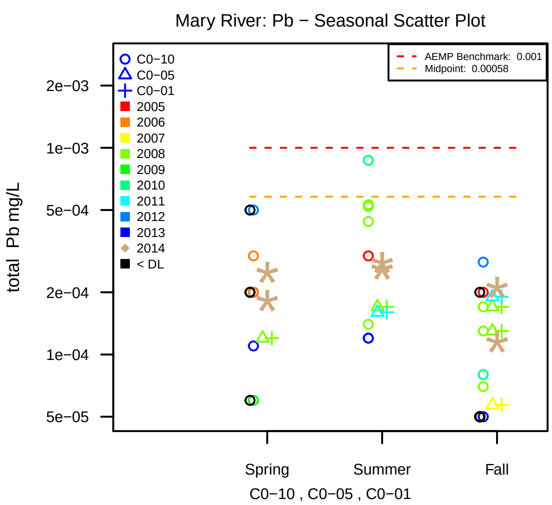

Mary River: Pb − Total Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.00058
Outlier
2014 data
total Pb mg/L
0.0015
0.0010
0.0005
0.0000
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

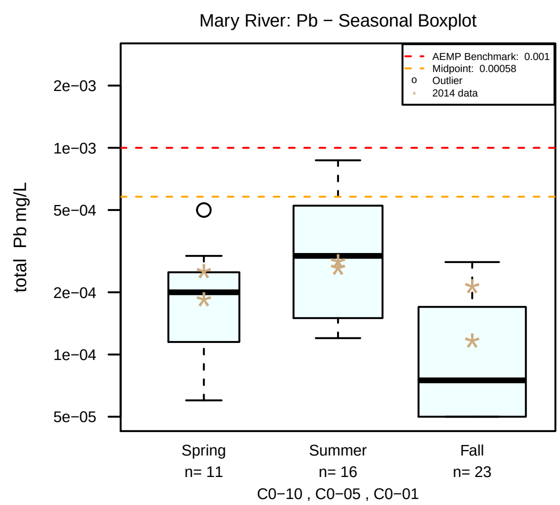

Mary River: Pb − Seasonal Scatter Plot
total Pb mg/L
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00058
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

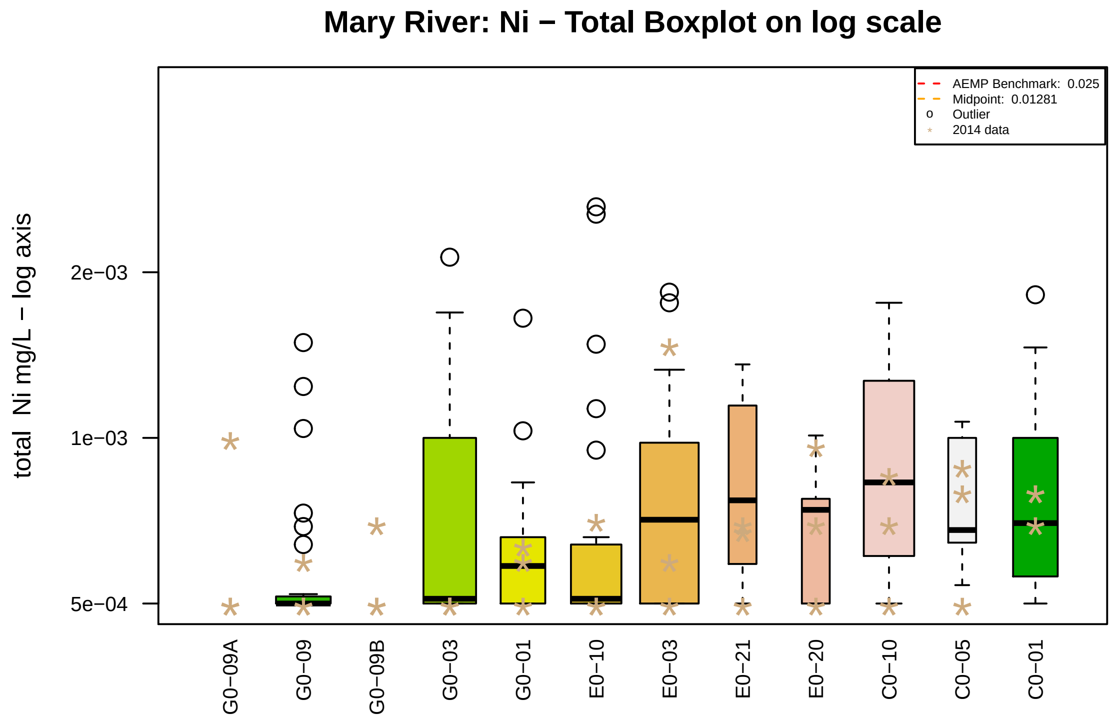

Mary River: Pb − Seasonal Boxplot
total Pb mg/L
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00058
Outlier
2014 data
Spring
n= 15
Summer
n= 46
Fall
n= 50
G0−09 , G0−03 , E0−10 , G0−01

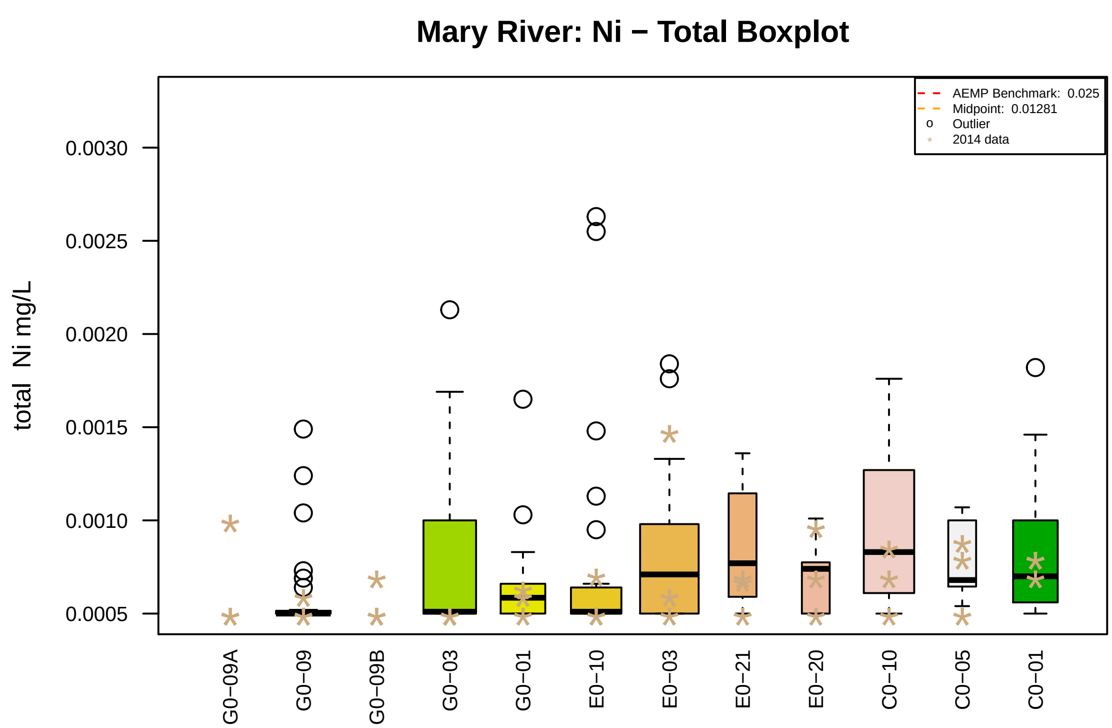

Mary River: Pb − Seasonal Scatter Plot
total Pb mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00058
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

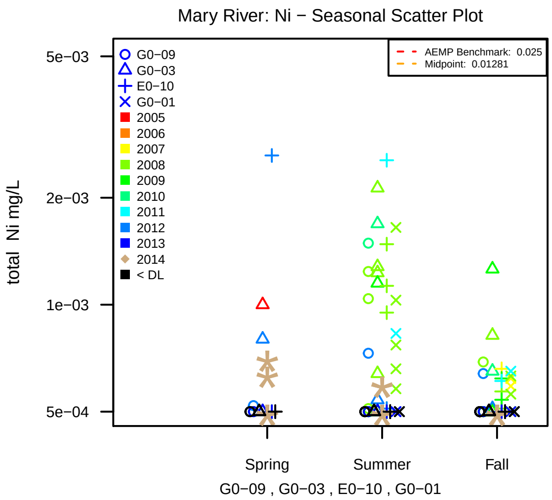

Mary River: Pb − Seasonal Boxplot
total Pb mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00058
Outlier
2014 data
Spring
n= 11
Summer
n= 20
Fall
n= 25
E0−03 , E0−21 , E0−20

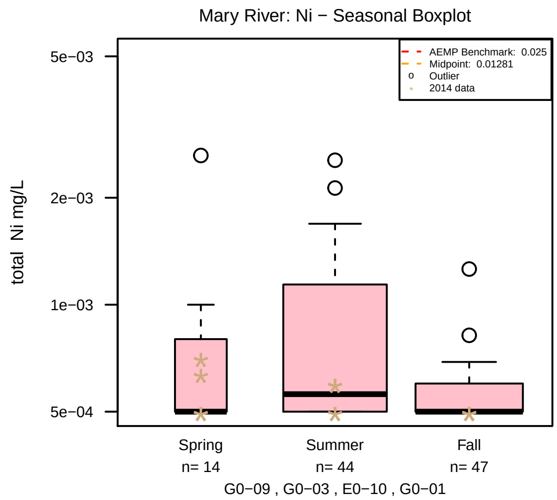

Mary River: Pb − Seasonal Scatter Plot
total Pb mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00058
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

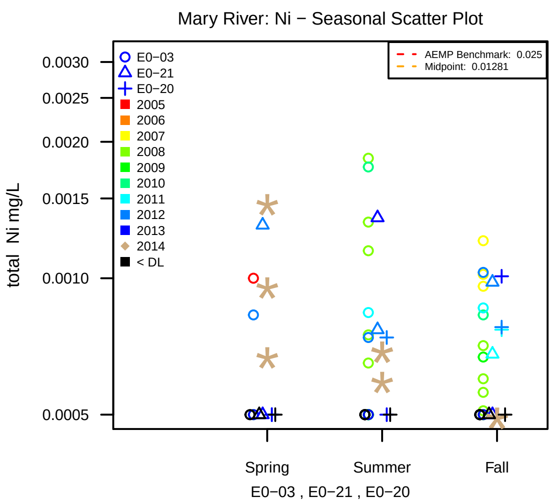

Mary River: Pb − Seasonal Boxplot
total Pb mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00058
Outlier
2014 data
Spring
n= 11
Summer
n= 16
Fall
n= 23
C0−10 , C0−05 , C0−01

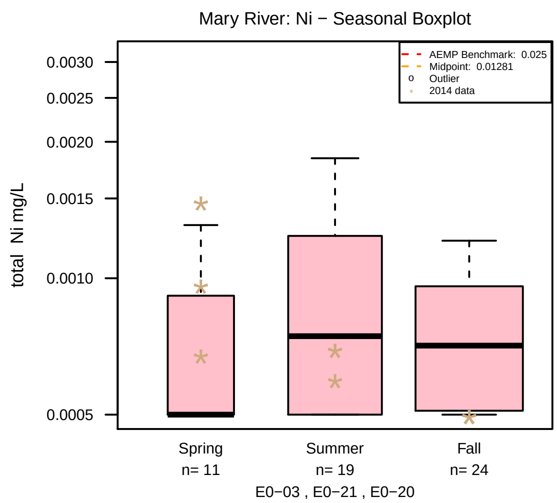

Mary River: Ni − Total Boxplot on log scale
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
total Ni mg/L − log axis
2e−03
1e−03
5e−04
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

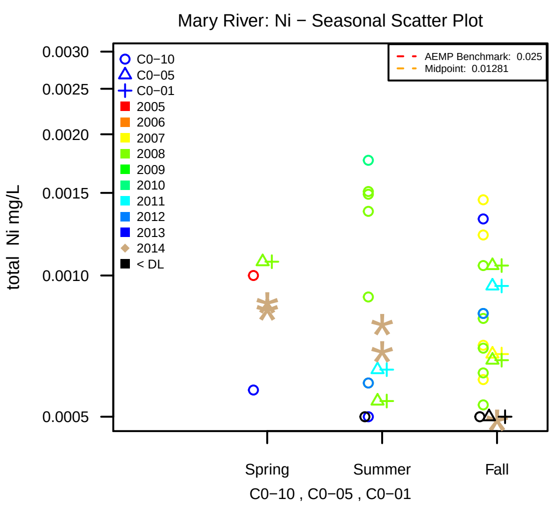

Mary River: Ni − Total Boxplot
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
total Ni mg/L
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

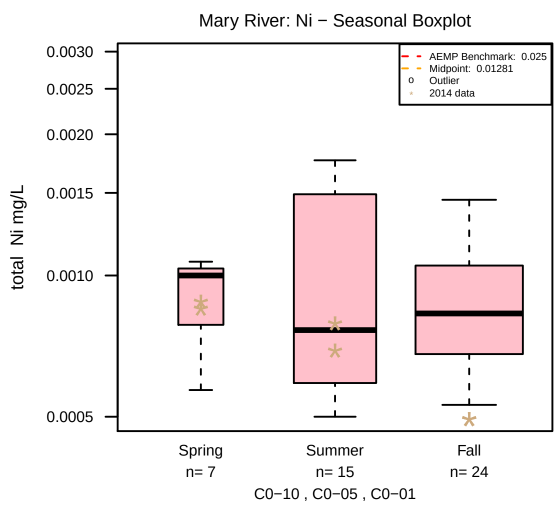

Mary River: Ni − Seasonal Scatter Plot
total Ni mg/L
5e−03
2e−03
1e−03
5e−04
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01281
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

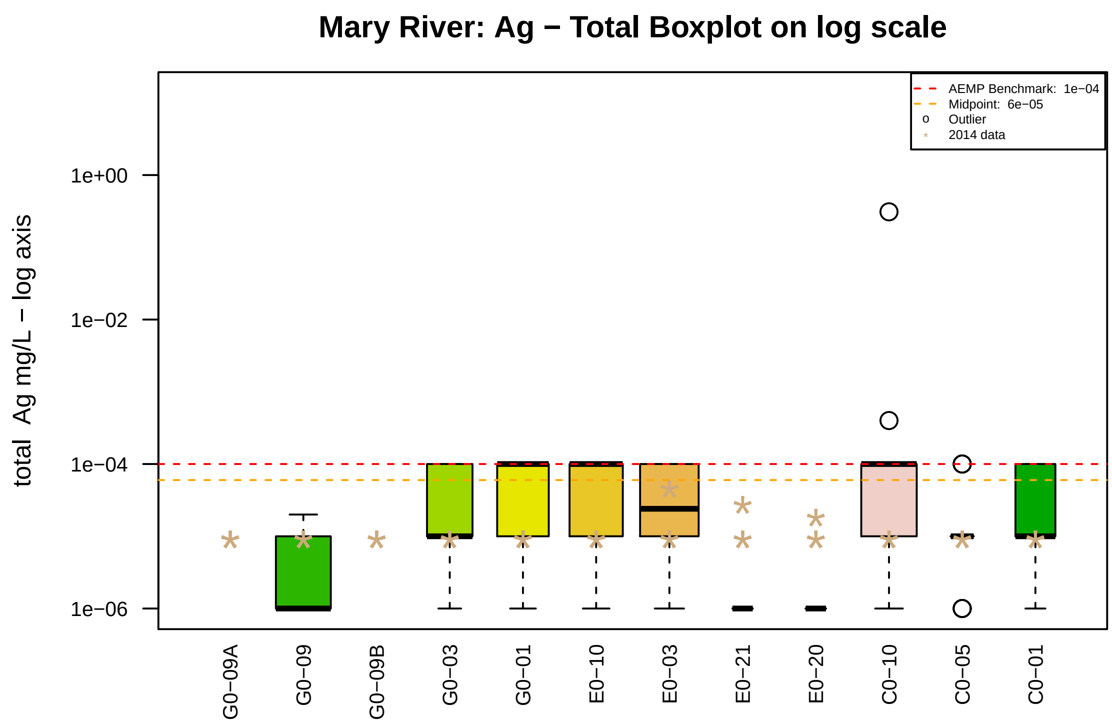

Mary River: Ni − Seasonal Boxplot
total Ni mg/L
5e−03
2e−03
1e−03
5e−04
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
Spring
n= 14
Summer
n= 44
Fall
n= 47
G0−09 , G0−03 , E0−10 , G0−01

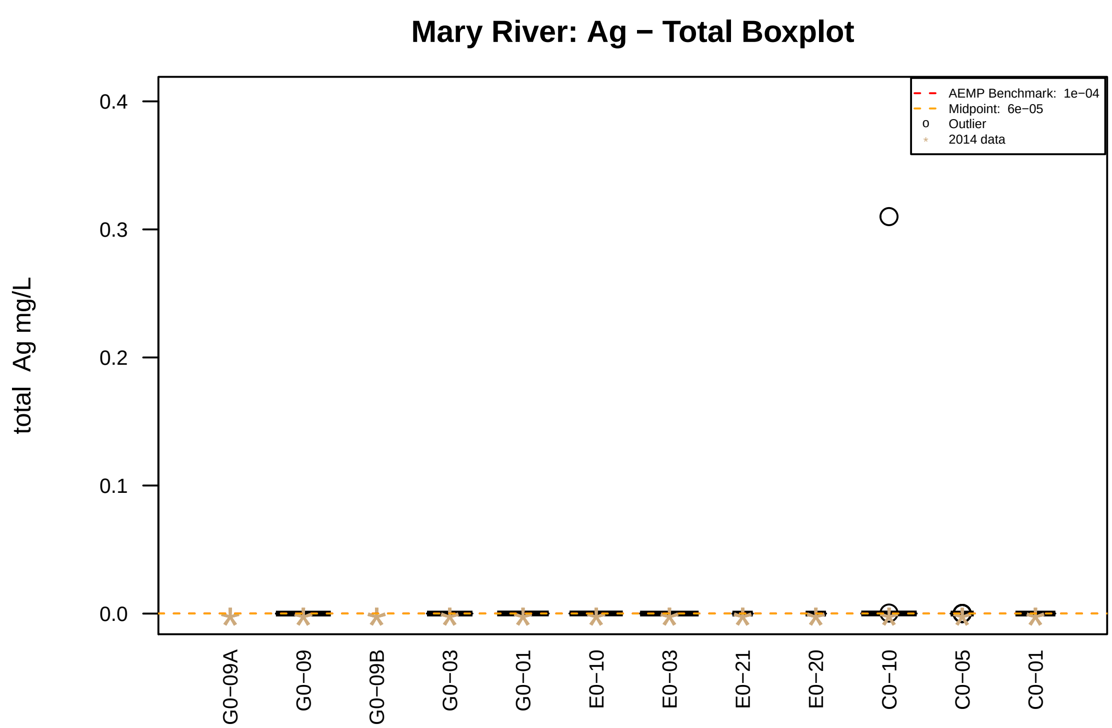

Mary River: Ni − Seasonal Scatter Plot
total Ni mg/L
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01281
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

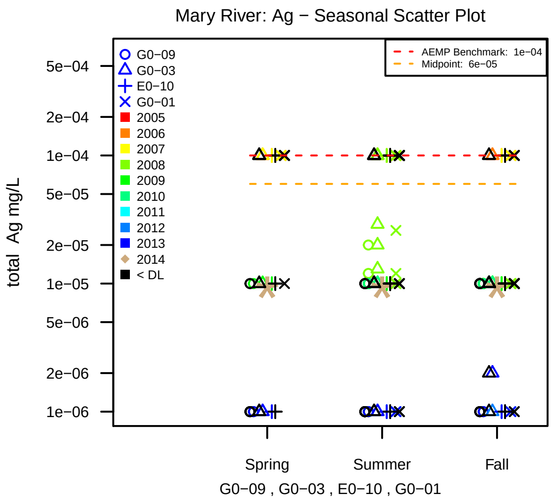

Mary River: Ni − Seasonal Boxplot
total Ni mg/L
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
Spring
n= 11
Summer
n= 19
Fall
n= 24
E0−03 , E0−21 , E0−20

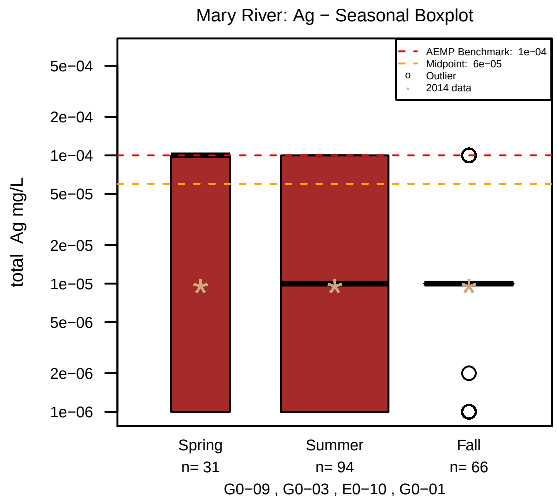

Mary River: Ni − Seasonal Scatter Plot
total Ni mg/L
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01281
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

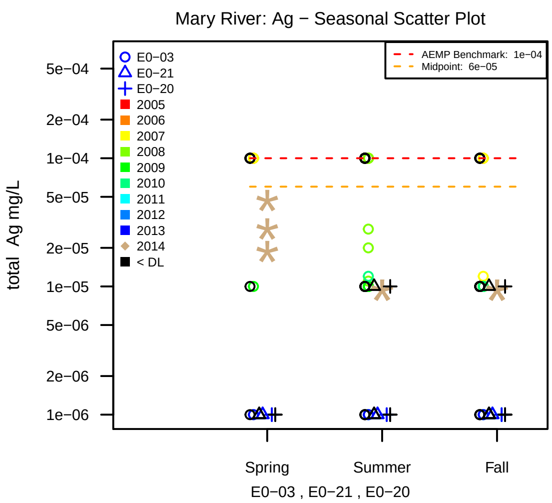

Mary River: Ni − Seasonal Boxplot
total Ni mg/L
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
Spring
n= 7
Summer
n= 15
Fall
n= 24
C0−10 , C0−05 , C0−01

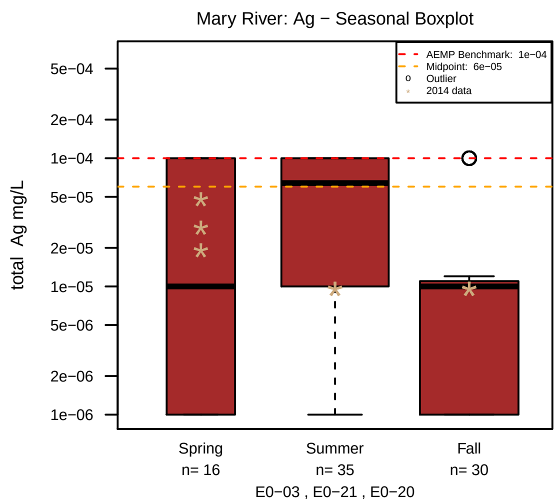

Mary River: Ag − Total Boxplot on log scale
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L − log axis
1e+00
1e−02
1e−04
1e−06
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

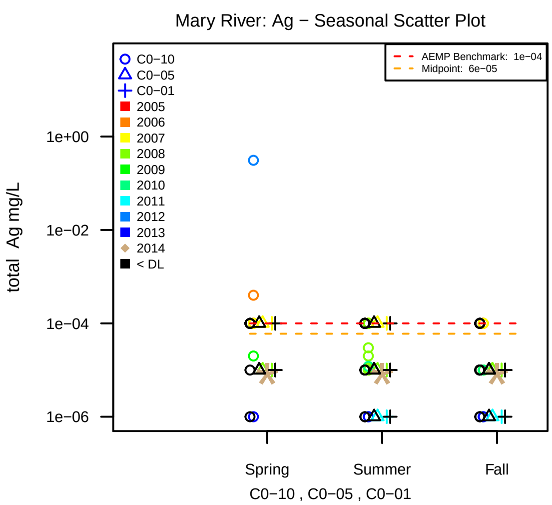

Mary River: Ag − Total Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
0.4
0.3
0.2
0.1
0.0
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

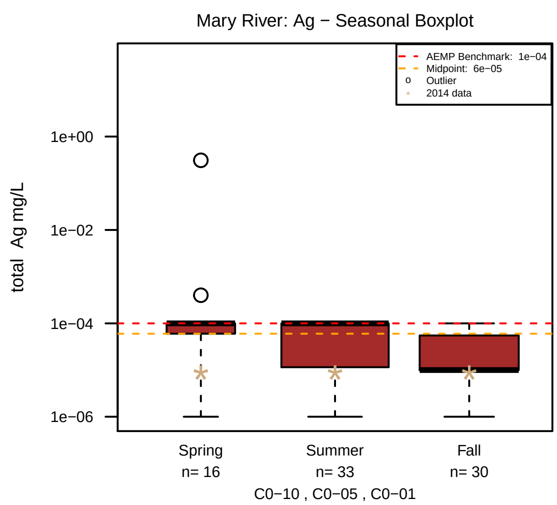

Mary River: Ag − Seasonal Scatter Plot
total Ag mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

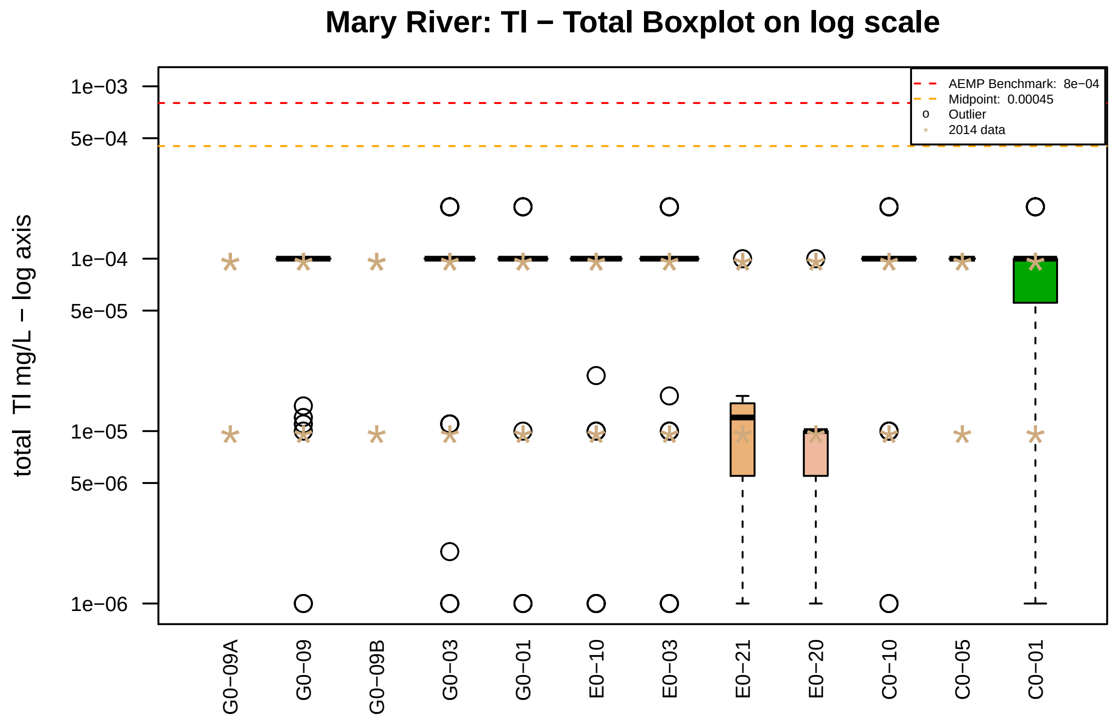

Mary River: Ag − Seasonal Boxplot
total Ag mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
Spring
n= 31
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

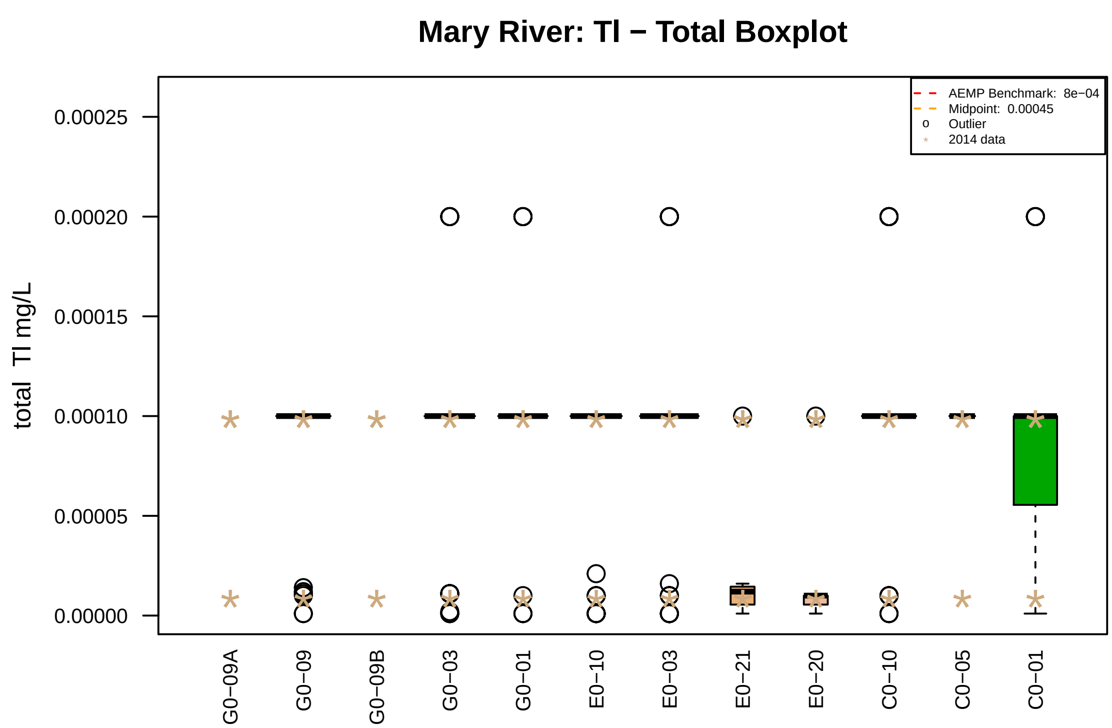

Mary River: Ag − Seasonal Scatter Plot
total Ag mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

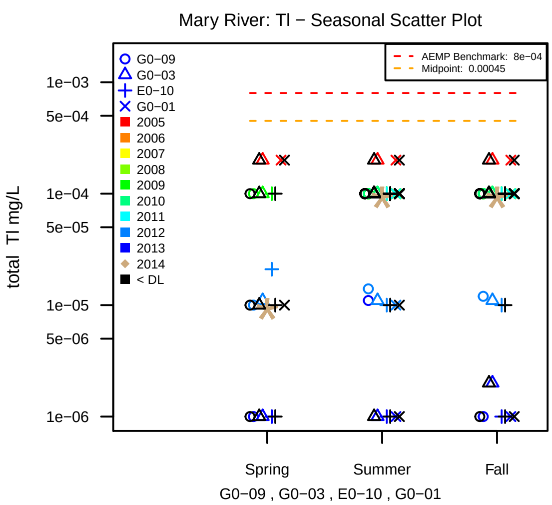

Mary River: Ag − Seasonal Boxplot
total Ag mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
Spring
n= 16
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

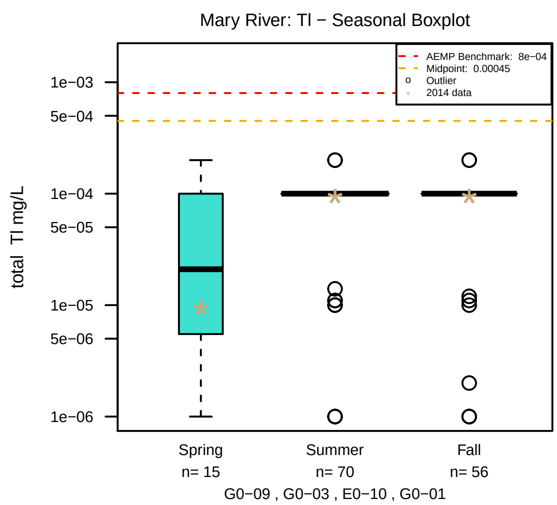

Mary River: Ag − Seasonal Scatter Plot
total Ag mg/L
1e+00
1e−02
1e−04
1e−06
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

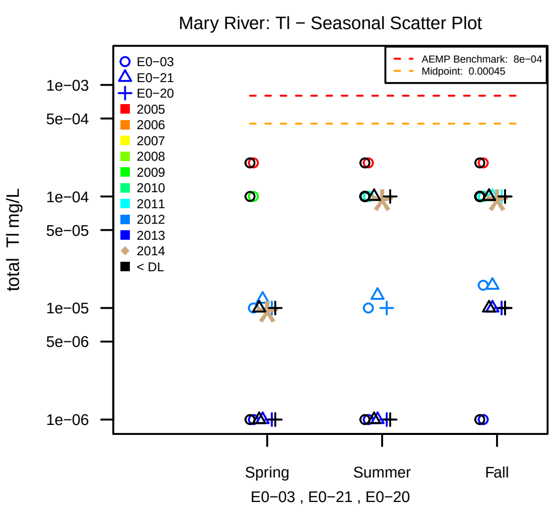

Mary River: Ag − Seasonal Boxplot
total Ag mg/L
1e+00
1e−02
1e−04
1e−06
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
Spring
n= 16
Summer
n= 33
Fall
n= 30
C0−10 , C0−05 , C0−01

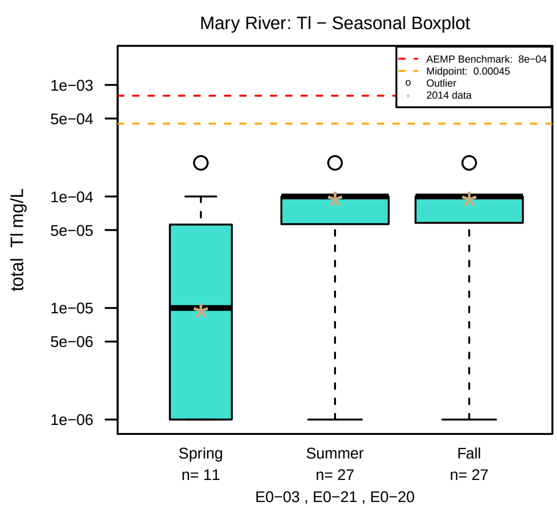

Mary River: Tl − Total Boxplot on log scale
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L − log axis
1e−03
5e−04
1e−04
5e−05
1e−05
5e−06
1e−06
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

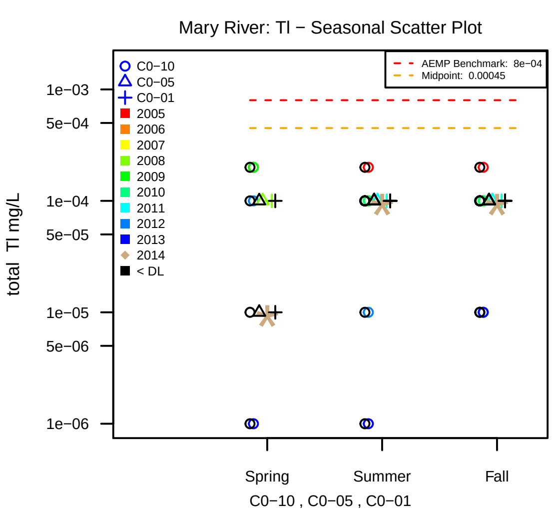

Mary River: Tl − Total Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

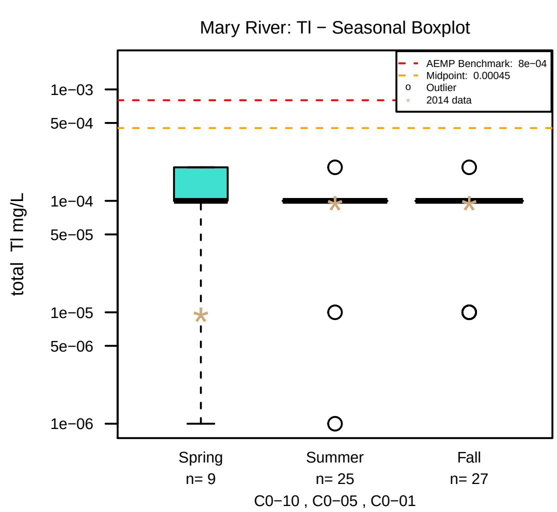

Mary River: Tl − Seasonal Scatter Plot
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
total Tl mg/L
1e−03
5e−04
1e−04
5e−05
1e−05
5e−06
1e−06
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

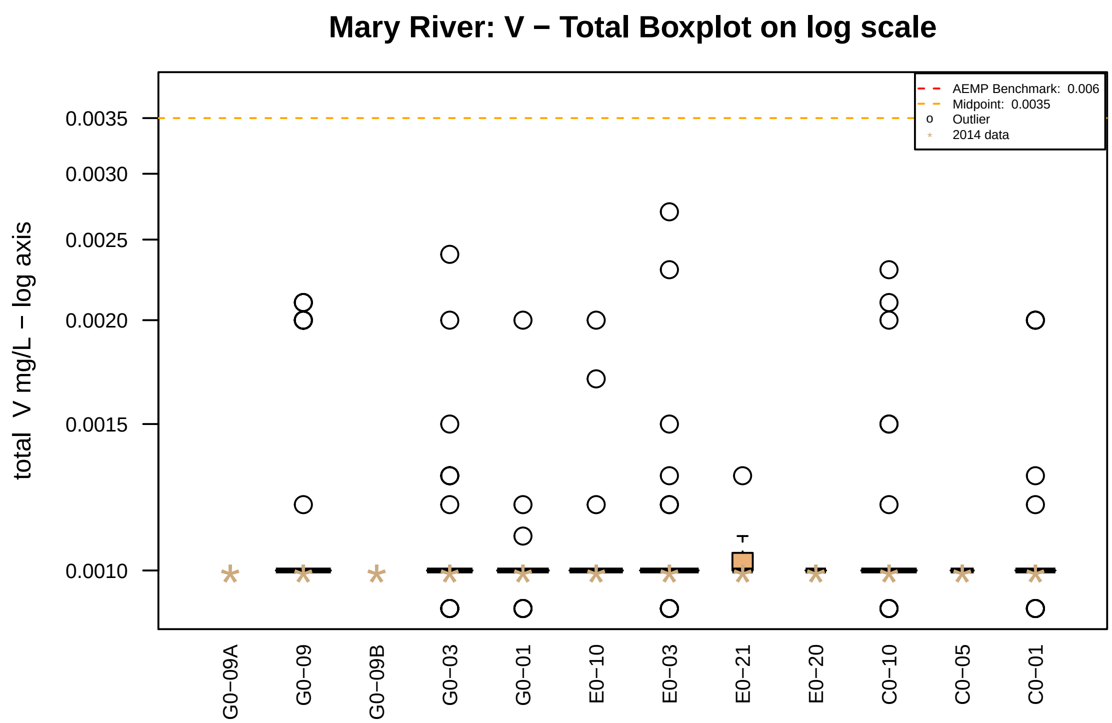

Mary River: Tl − Seasonal Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
1e−03
5e−04
1e−04
5e−05
1e−05
5e−06
1e−06
Spring
n= 15
Summer
n= 70
Fall
n= 56
G0−09 , G0−03 , E0−10 , G0−01

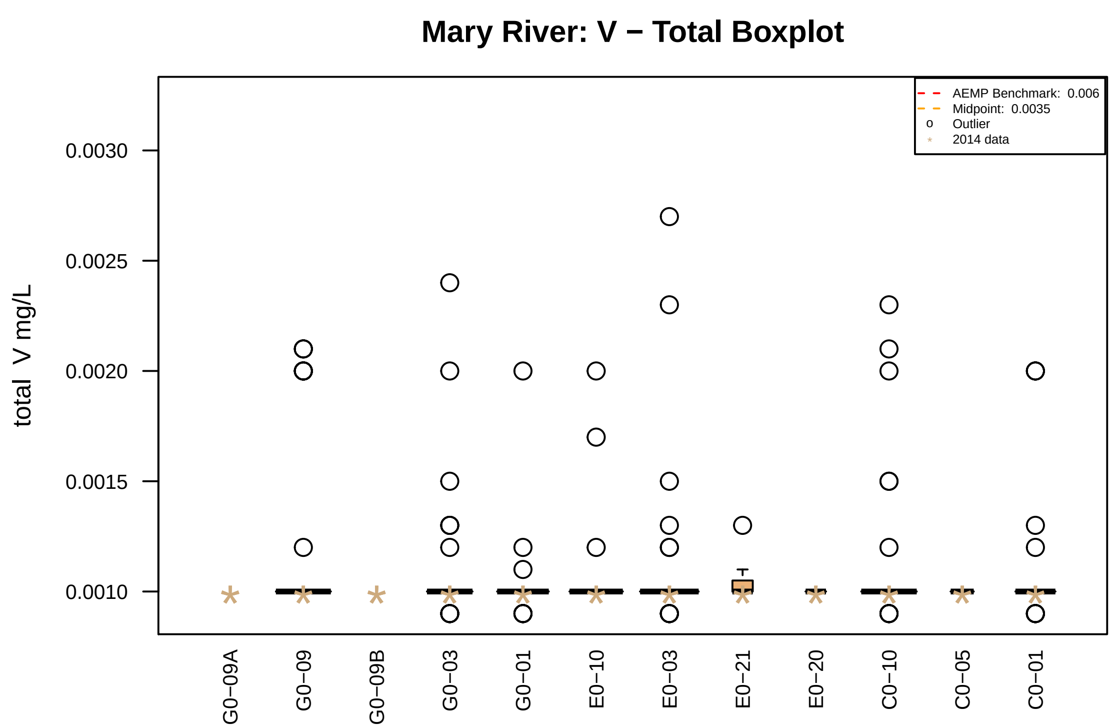

Mary River: Tl − Seasonal Scatter Plot
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
total Tl mg/L
1e−03
5e−04
1e−04
5e−05
1e−05
5e−06
1e−06
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

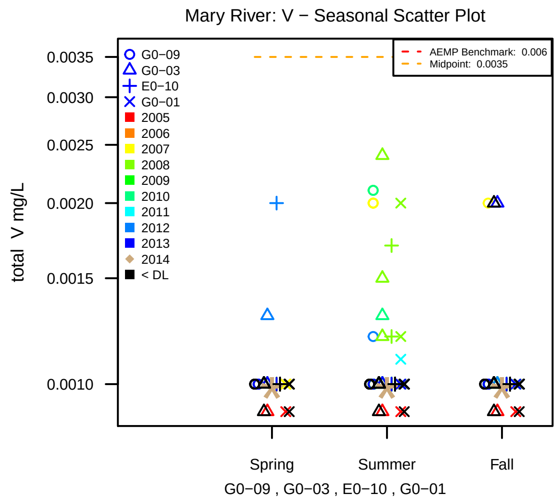

Mary River: Tl − Seasonal Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
1e−03
5e−04
1e−04
5e−05
1e−05
5e−06
1e−06
Spring
n= 11
Summer
n= 27
Fall
n= 27
E0−03 , E0−21 , E0−20

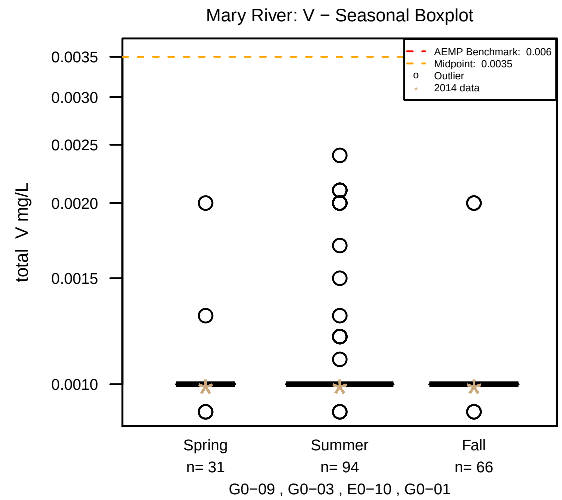

Mary River: Tl − Seasonal Scatter Plot
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
total Tl mg/L
1e−03
5e−04
1e−04
5e−05
1e−05
5e−06
1e−06
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

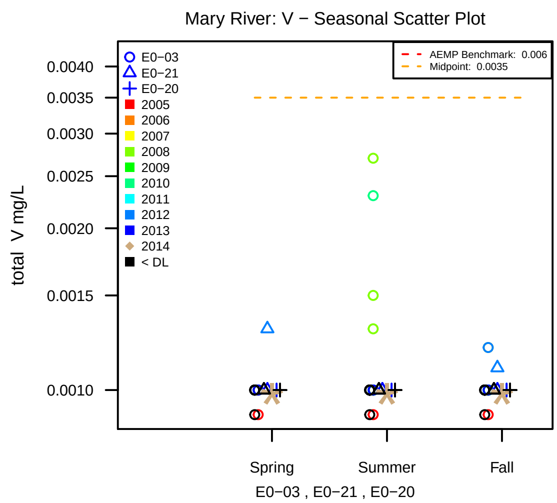

Mary River: Tl − Seasonal Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
1e−03
5e−04
1e−04
5e−05
1e−05
5e−06
1e−06
Spring
n= 9
Summer
n= 25
Fall
n= 27
C0−10 , C0−05 , C0−01

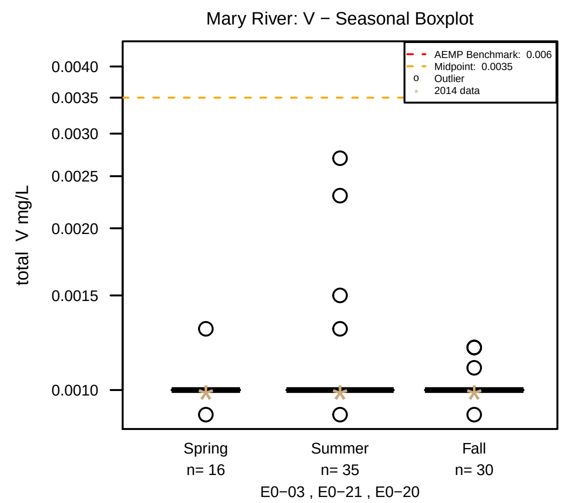

Mary River: V − Total Boxplot on log scale
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L − log axis
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

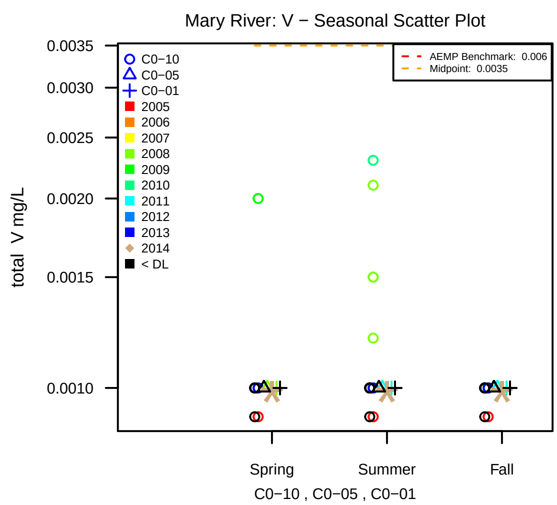

Mary River: V − Total Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
0.0030
0.0025
0.0020
0.0015
0.0010
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

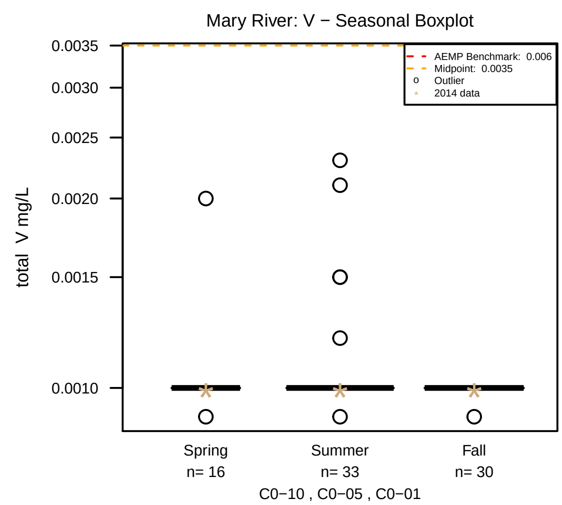

Mary River: V − Seasonal Scatter Plot
total V mg/L
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

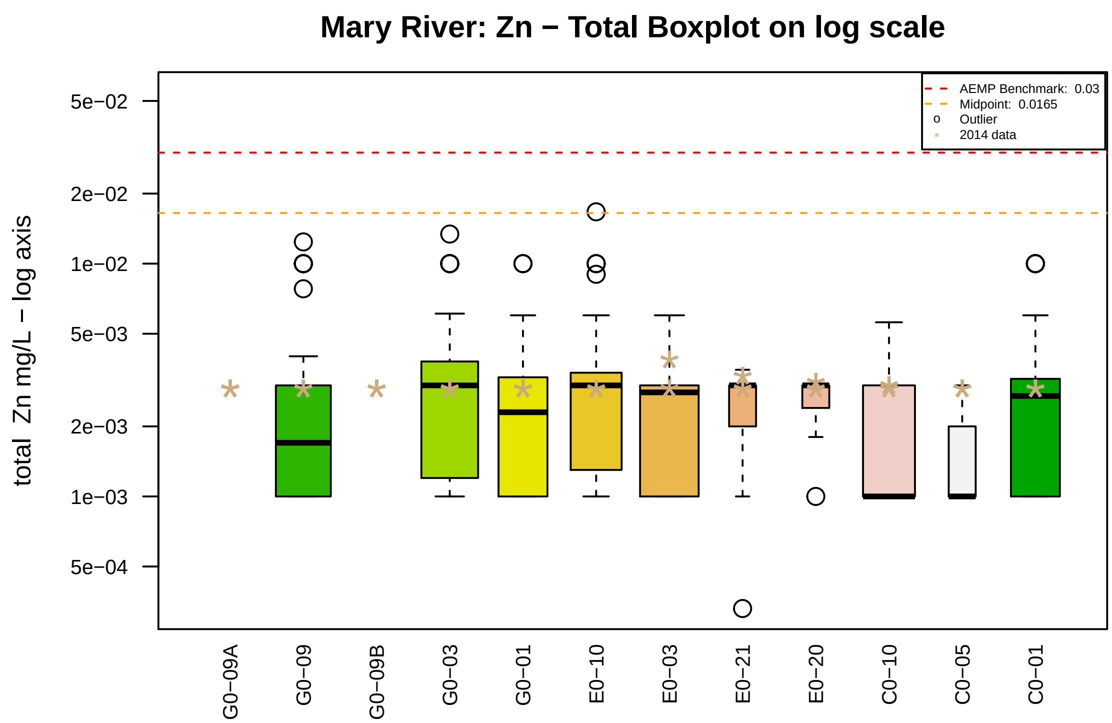

Mary River: V − Seasonal Boxplot
total V mg/L
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
Spring
n= 31
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

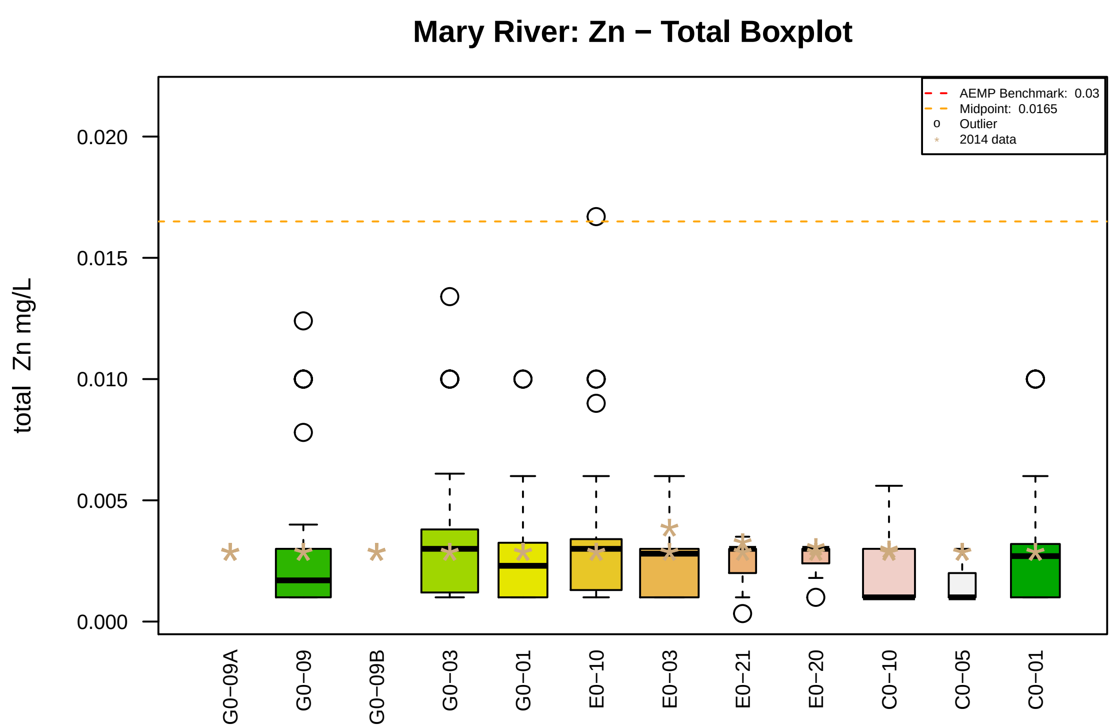

Mary River: V − Seasonal Scatter Plot
total V mg/L
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

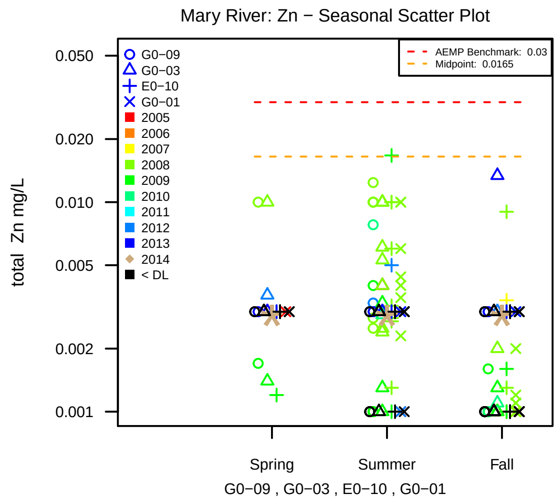

Mary River: V − Seasonal Boxplot
total V mg/L
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
Spring
n= 16
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

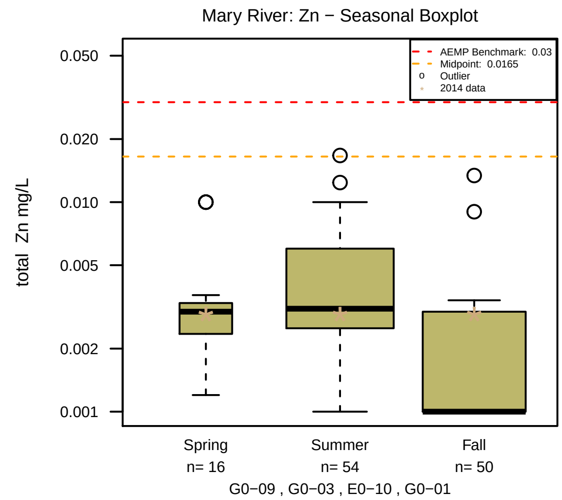

Mary River: V − Seasonal Scatter Plot
total V mg/L
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

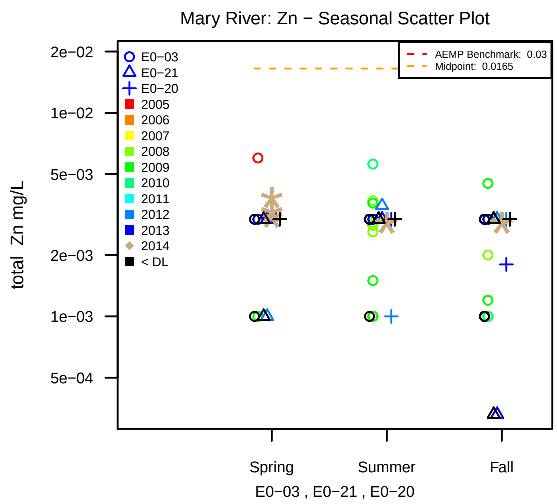

Mary River: V − Seasonal Boxplot
total V mg/L
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
Spring
n= 16
Summer
n= 33
Fall
n= 30
C0−10 , C0−05 , C0−01

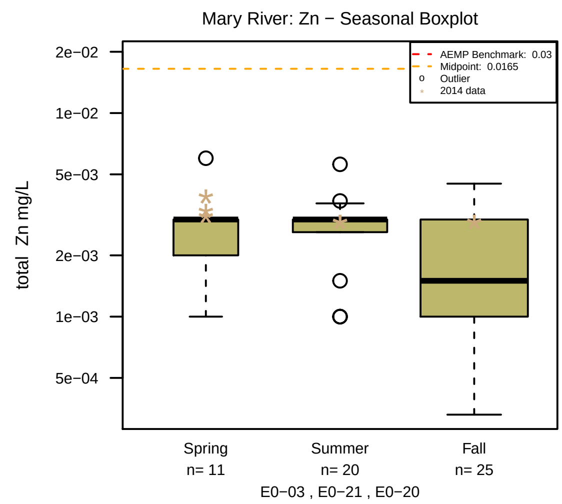

Mary River: Zn − Total Boxplot on log scale
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
total Zn mg/L − log axis
5e−02
2e−02
1e−02
5e−03
2e−03
1e−03
5e−04
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

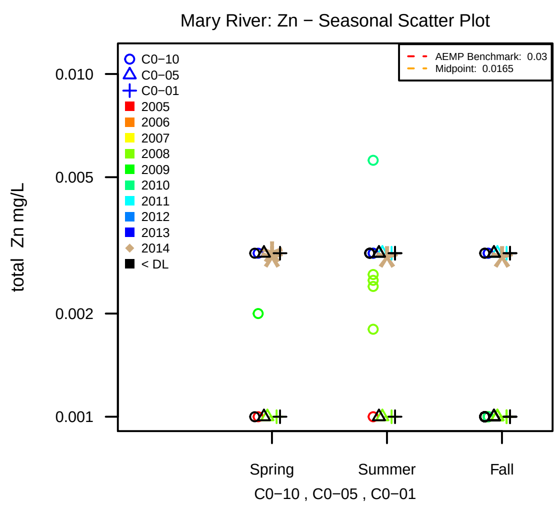

Mary River: Zn − Total Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
total Zn mg/L
0.020
0.015
0.010
0.005
0.000
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

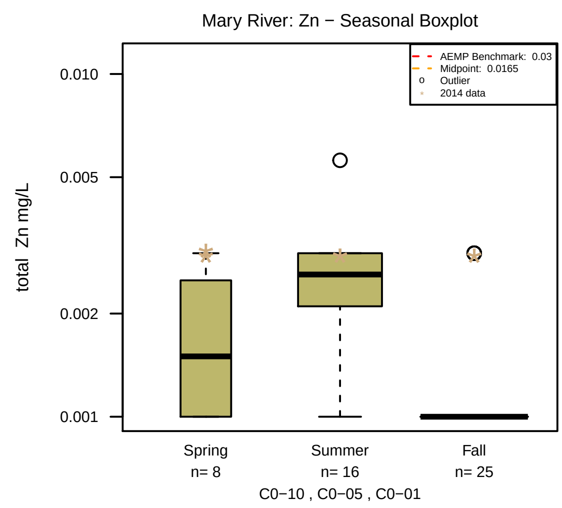

Mary River: Zn − Seasonal Scatter Plot
total Zn mg/L
0.050
0.020
0.010
0.005
0.002
0.001
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

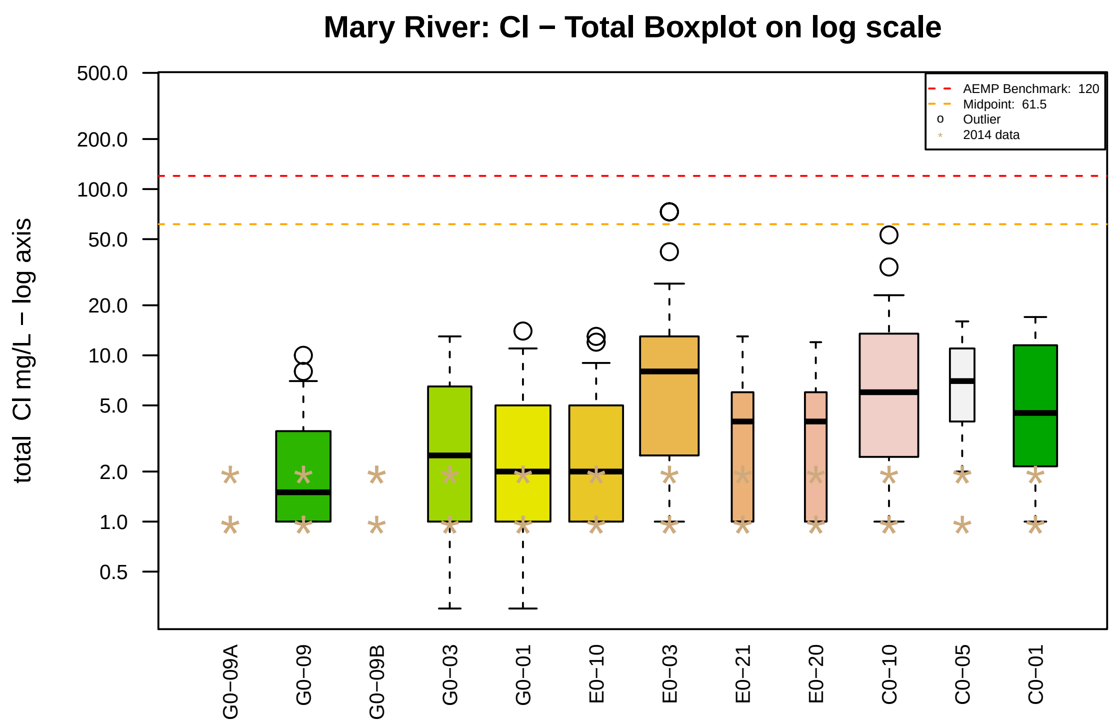

Mary River: Zn − Seasonal Boxplot
total Zn mg/L
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Spring
n= 16
Summer
n= 54
Fall
n= 50
G0−09 , G0−03 , E0−10 , G0−01

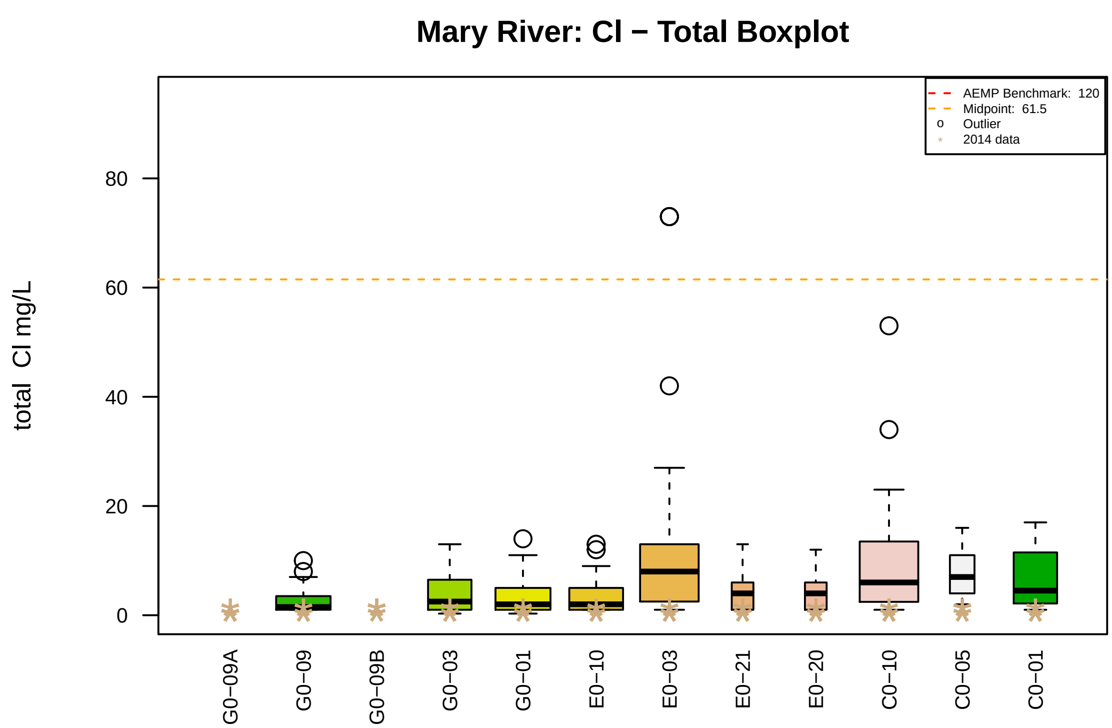

Mary River: Zn − Seasonal Scatter Plot
total Zn mg/L
2e−02
1e−02
5e−03
2e−03
1e−03
5e−04
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

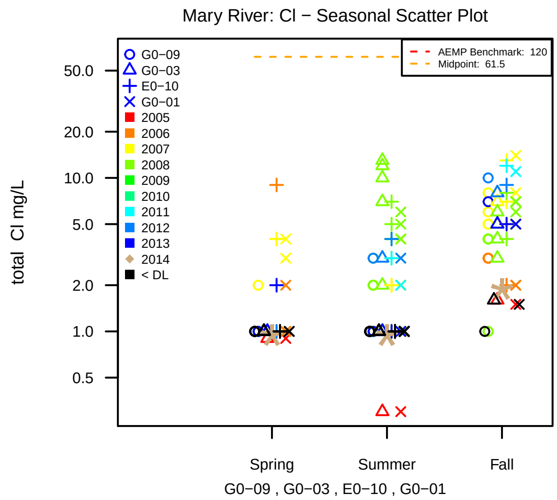

Mary River: Zn − Seasonal Boxplot
total Zn mg/L
2e−02
1e−02
5e−03
2e−03
1e−03
5e−04
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Spring
n= 11
Summer
n= 20
Fall
n= 25
E0−03 , E0−21 , E0−20

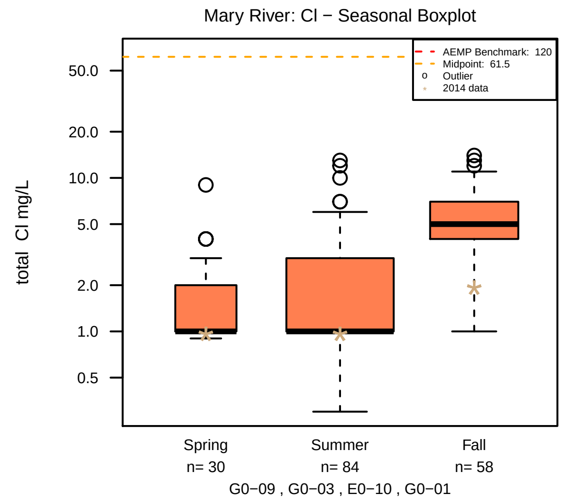

Mary River: Zn − Seasonal Scatter Plot
total Zn mg/L
0.010
0.005
0.002
0.001
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

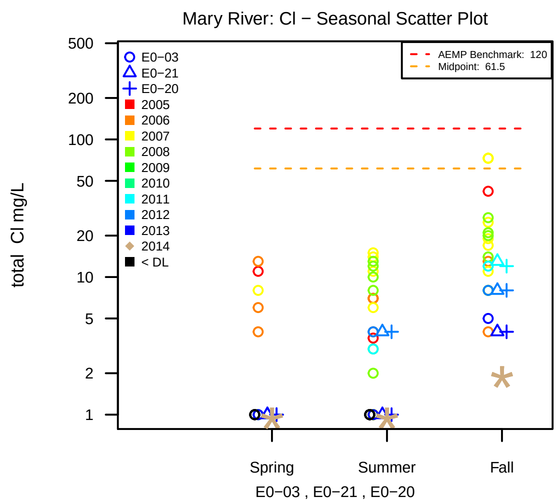

Mary River: Zn − Seasonal Boxplot
total Zn mg/L
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Spring
n= 8
Summer
n= 16
Fall
n= 25
C0−10 , C0−05 , C0−01

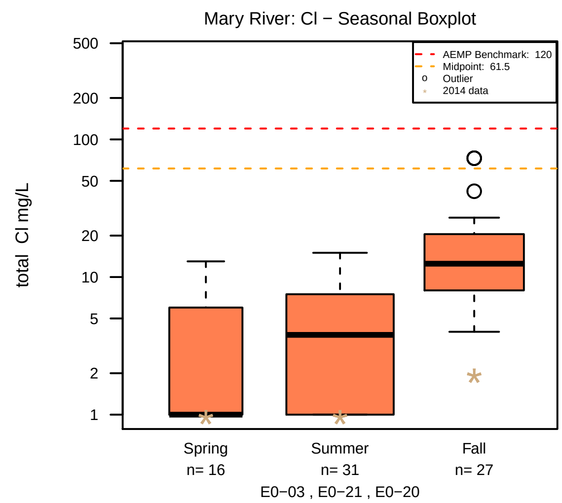

Mary River: Cl − Total Boxplot on log scale
total Cl mg/L − log axis
500.0
200.0
100.0
50.0
20.0
10.0
5.0
2.0
1.0
0.5
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

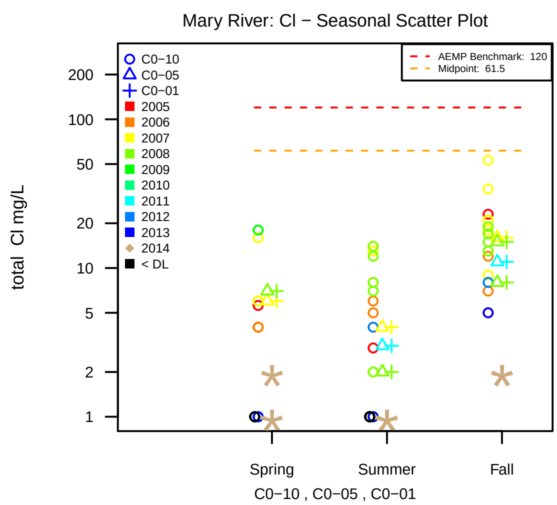

Mary River: Cl − Total Boxplot
total Cl mg/L
80
60
40
20
0
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

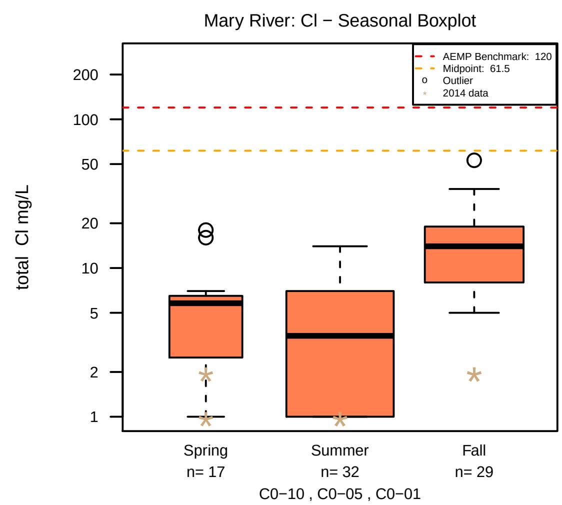

Mary River: Cl − Seasonal Scatter Plot
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
total Cl mg/L
50.0
20.0
10.0
5.0
2.0
1.0
0.5
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

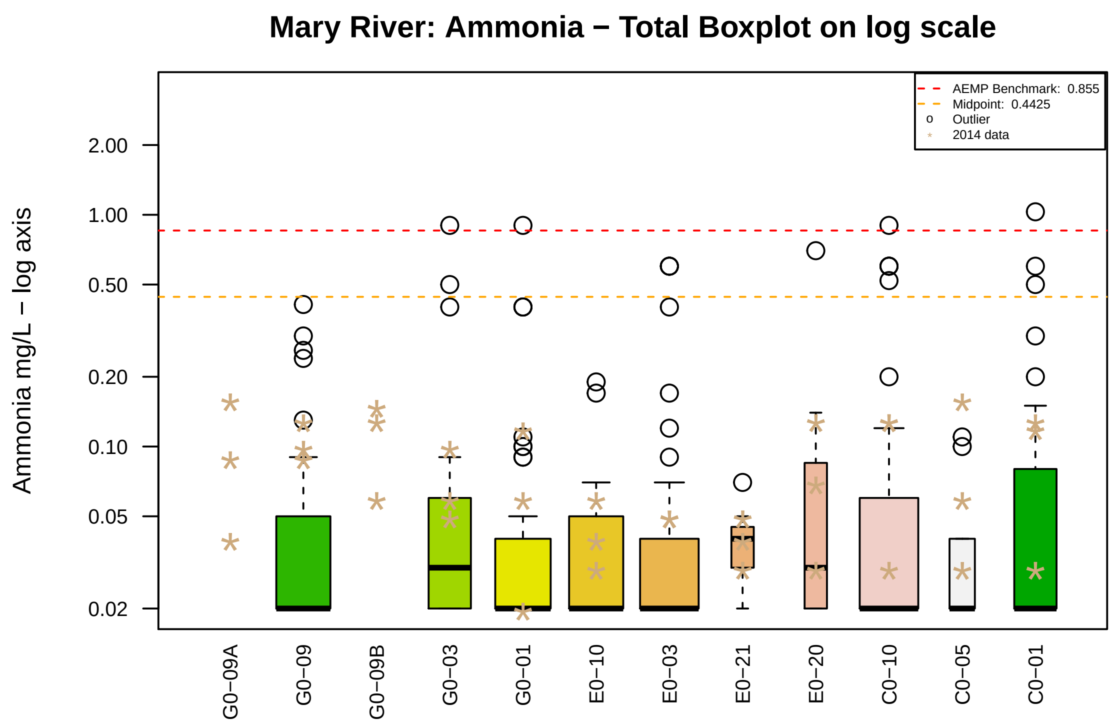

Mary River: Cl − Seasonal Boxplot
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L
50.0
20.0
10.0
5.0
2.0
1.0
0.5
Spring
n= 30
Summer
n= 84
Fall
n= 58
G0−09 , G0−03 , E0−10 , G0−01

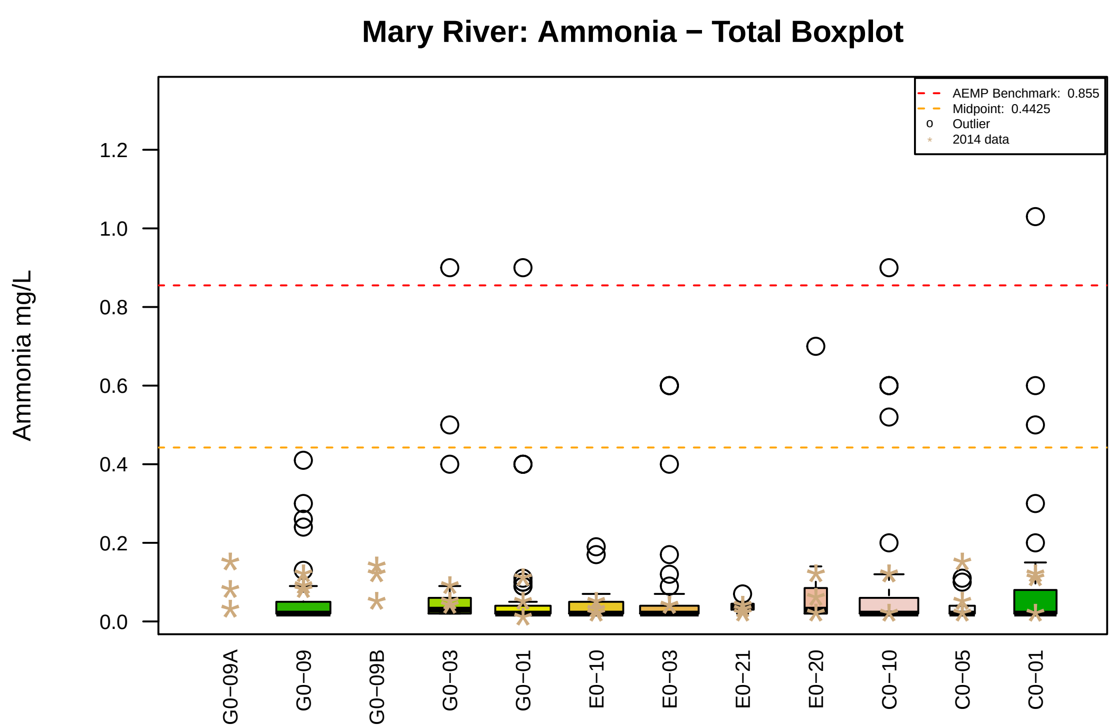

Mary River: Cl − Seasonal Scatter Plot
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
total Cl mg/L
500
200
100
50
20
10
5
2
1
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

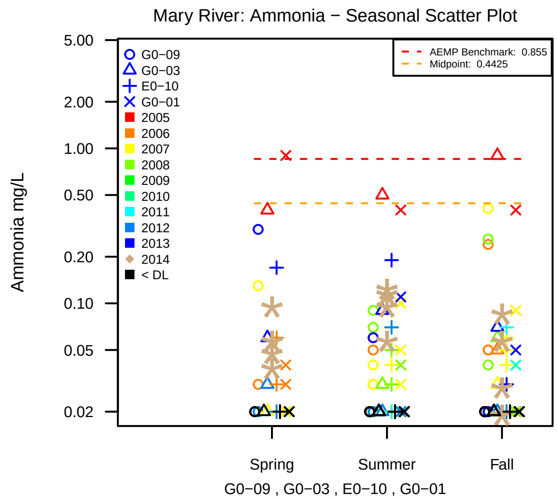

Mary River: Cl − Seasonal Boxplot
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L
500
200
100
50
20
10
5
2
1
Spring
n= 16
Summer
n= 31
Fall
n= 27
E0−03 , E0−21 , E0−20

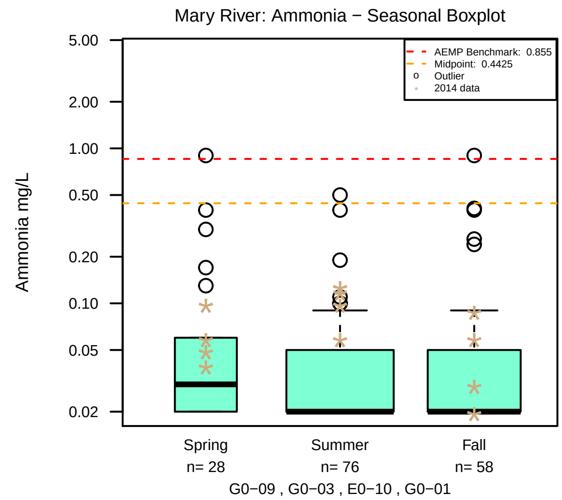

Mary River: Cl − Seasonal Scatter Plot
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
total Cl mg/L
200
100
50
20
10
5
2
1
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

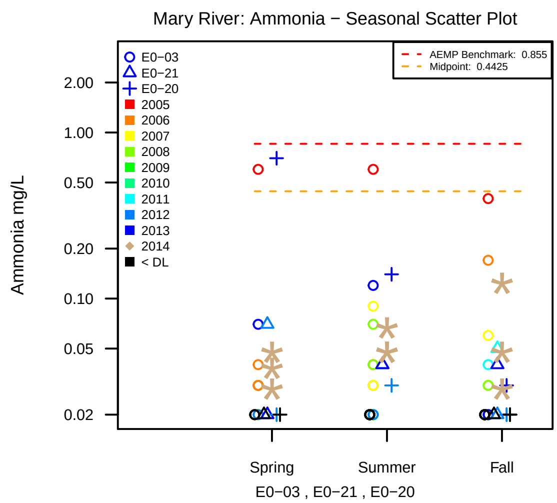

Mary River: Cl − Seasonal Boxplot
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L
200
100
50
20
10
5
2
1
Spring
n= 17
Summer
n= 32
Fall
n= 29
C0−10 , C0−05 , C0−01

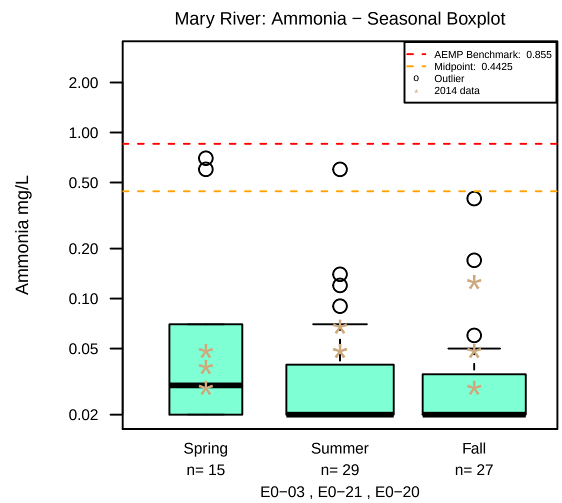

Mary River: Ammonia − Total Boxplot on log scale
AEMP Benchmark: 0.855
Midpoint: 0.4425
Outlier
2014 data
Ammonia mg/L − log axis
2.00
1.00
0.50
0.20
0.10
0.05
0.02
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

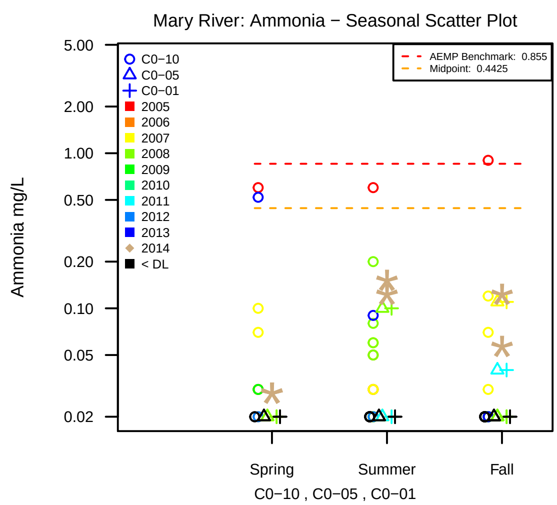

Mary River: Ammonia − Total Boxplot
AEMP Benchmark: 0.855
Midpoint: 0.4425
Outlier
2014 data
Ammonia mg/L
1.2
1.0
0.8
0.6
0.4
0.2
0.0
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

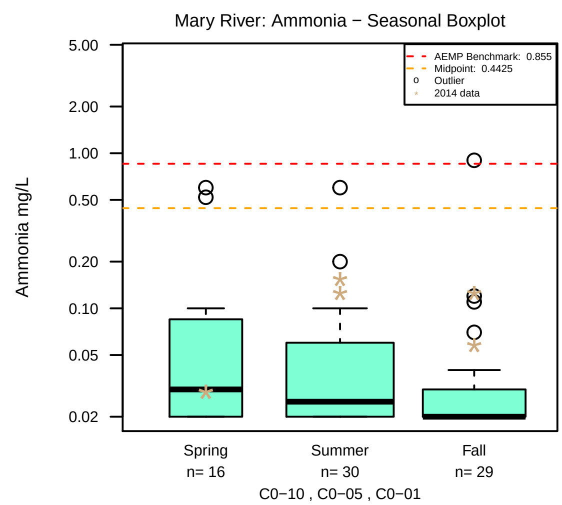

Mary River: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.4425
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

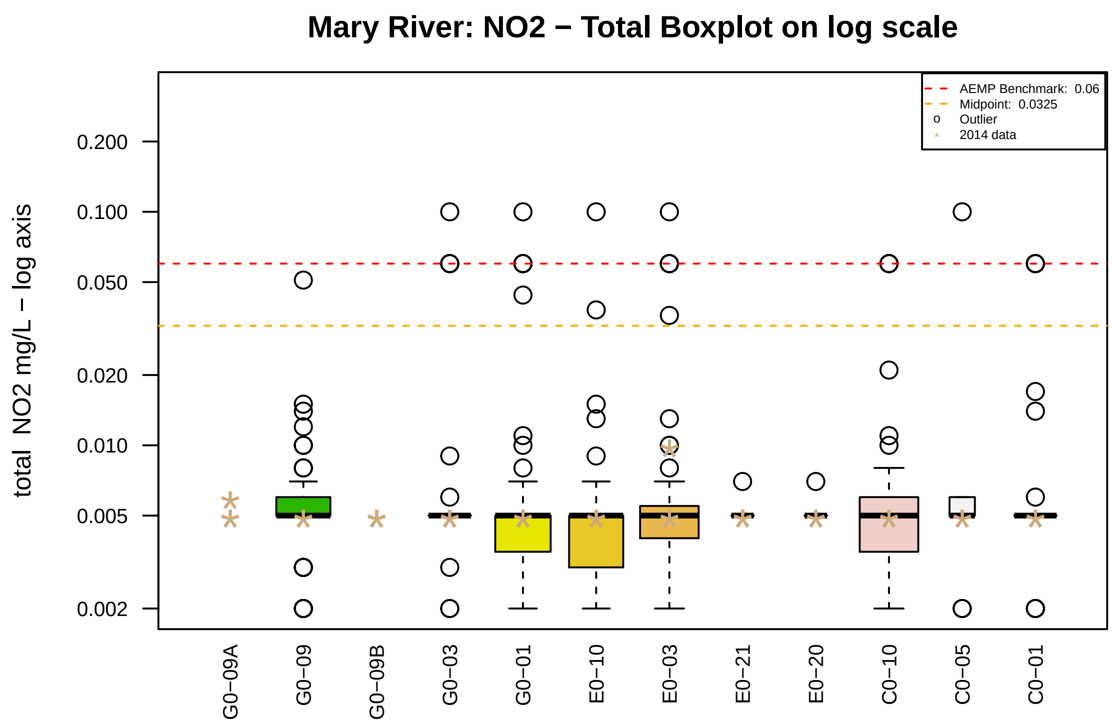

Mary River: Ammonia − Seasonal Boxplot
Ammonia mg/L
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.4425
Outlier
2014 data
Spring
n= 28
Summer
n= 76
Fall
n= 58
G0−09 , G0−03 , E0−10 , G0−01

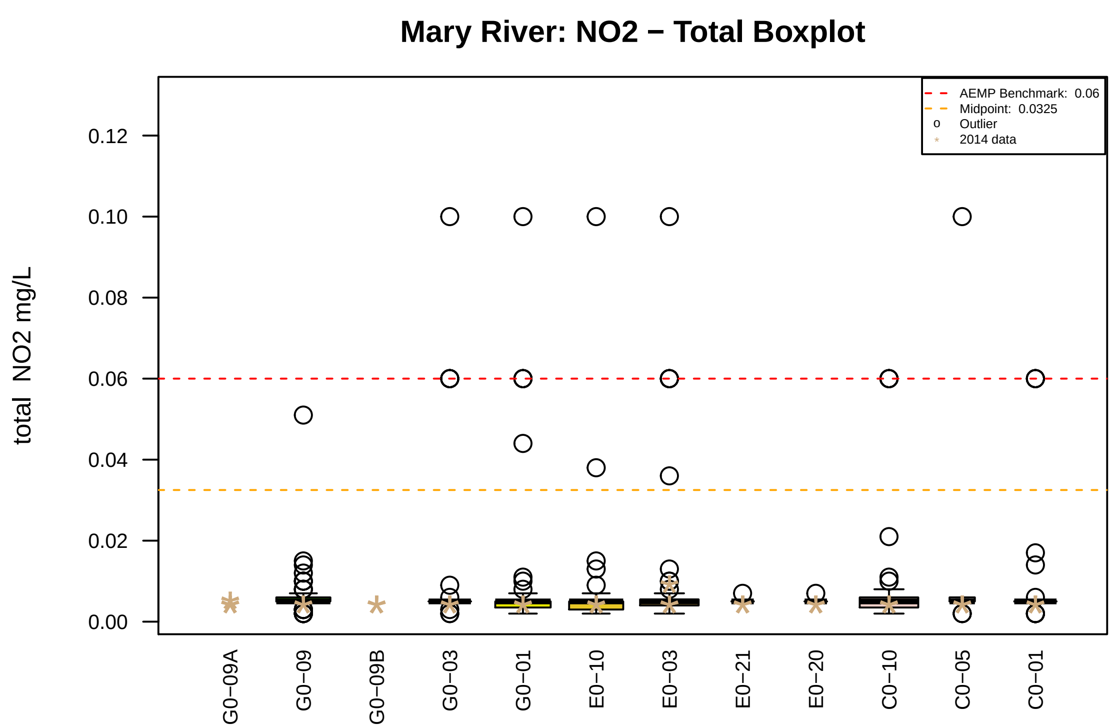

Mary River: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
2.00
1.00
0.50
0.20
0.10
0.05
0.02
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.4425
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

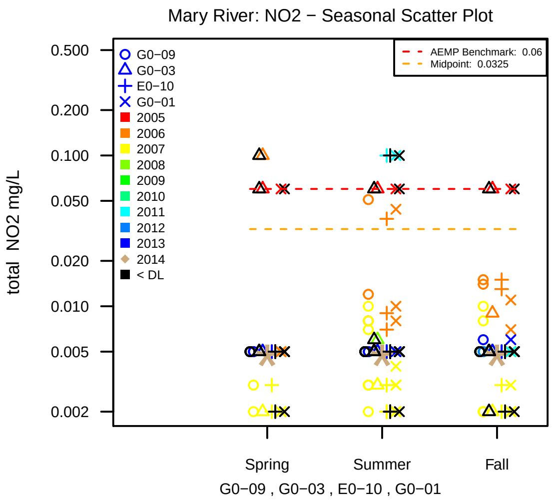

Mary River: Ammonia − Seasonal Boxplot
Ammonia mg/L
2.00
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.4425
Outlier
2014 data
Spring
n= 15
Summer
n= 29
Fall
n= 27
E0−03 , E0−21 , E0−20

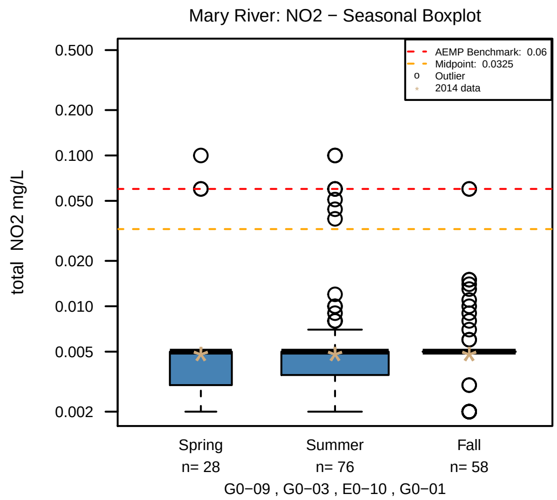

Mary River: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.4425
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

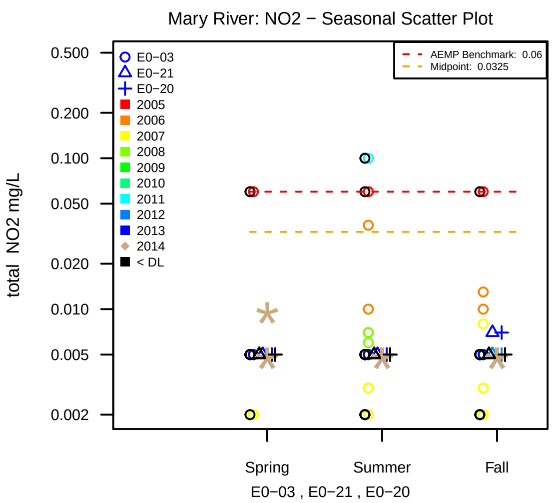

Mary River: Ammonia − Seasonal Boxplot
Ammonia mg/L
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.4425
Outlier
2014 data
Spring
n= 16
Summer
n= 30
Fall
n= 29
C0−10 , C0−05 , C0−01

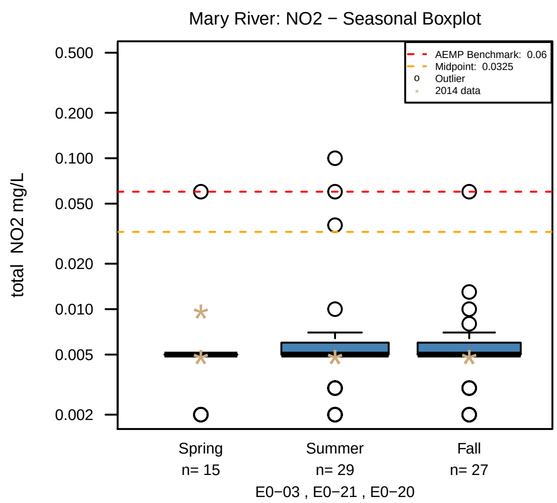

Mary River: NO2 – Total Boxplot on log scale
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L – log axis
0.200
0.100
0.050
0.020
0.010
0.005
0.002
G0–09A
G0–09
G0–09B
G0–03
G0–01
E0–10
E0–03
E0–21
E0–20
C0–10
C0–05
C0–01

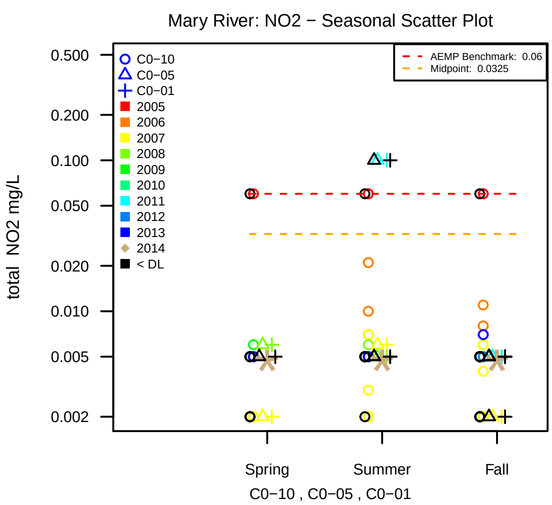

Mary River: NO2 – Total Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.12
0.10
0.08
0.06
0.04
0.02
0.00
G0–09A
G0–09
G0–09B
G0–03
G0–01
E0–10
E0–03
E0–21
E0–20
C0–10
C0–05
C0–01

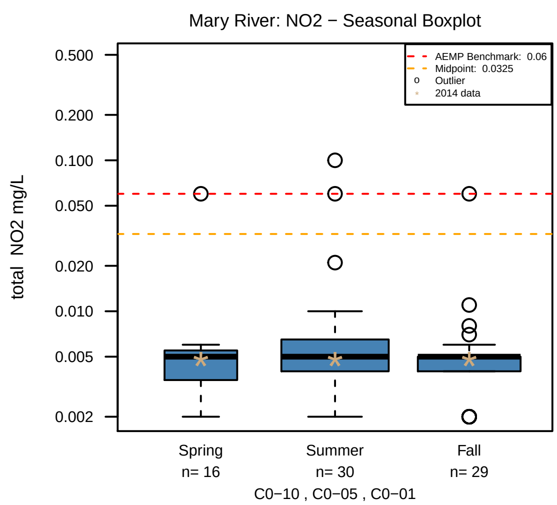

Mary River: NO2 − Seasonal Scatter Plot
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01

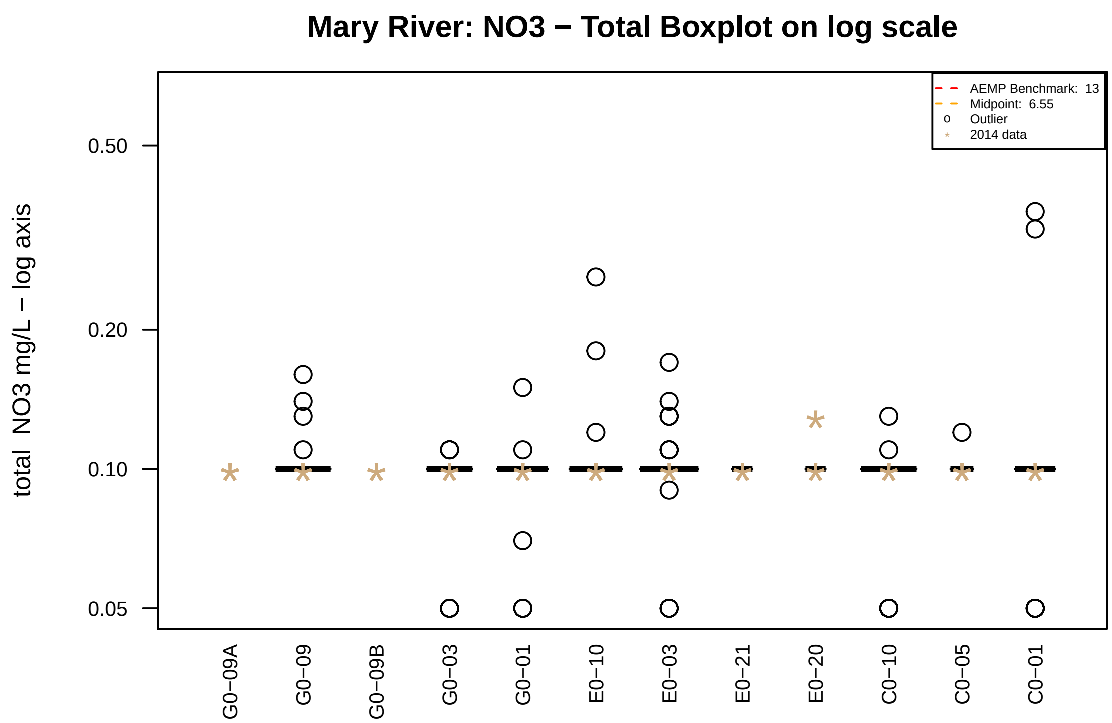

Mary River: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Spring
n= 28
Summer
n= 76
Fall
n= 58
G0−09 , G0−03 , E0−10 , G0−01

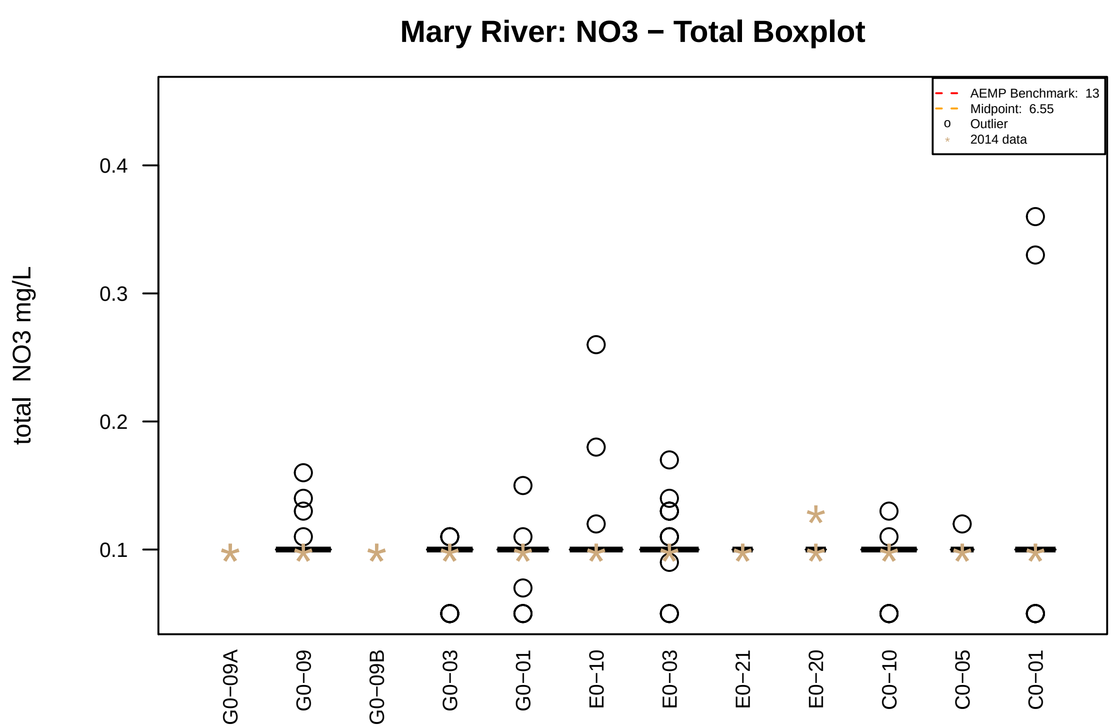

Mary River: NO2 − Seasonal Scatter Plot
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Spring
Summer
Fall
E0−03 , E0−21 , E0−20

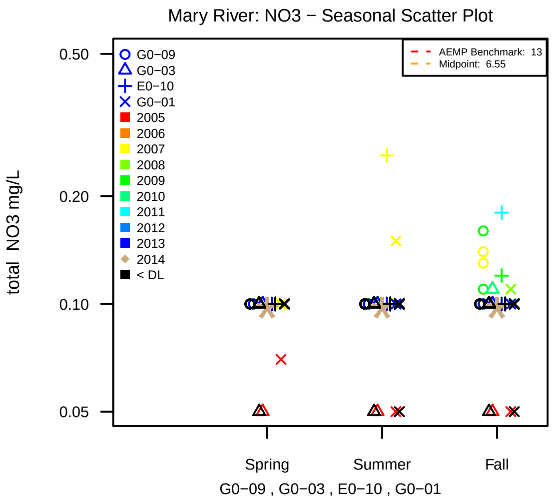

Mary River: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Spring
n= 15
Summer
n= 29
Fall
n= 27
E0−03 , E0−21 , E0−20

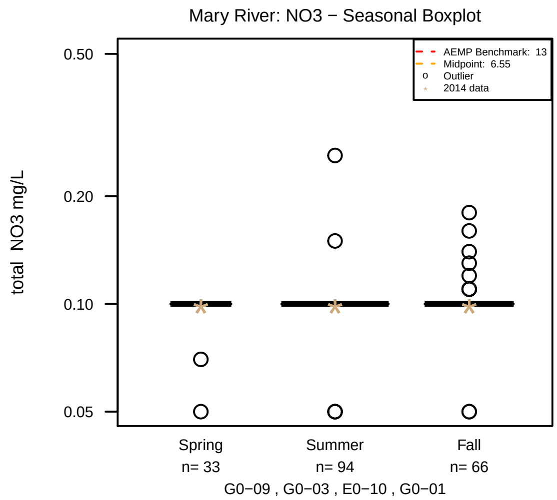

Mary River: NO2 − Seasonal Scatter Plot
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

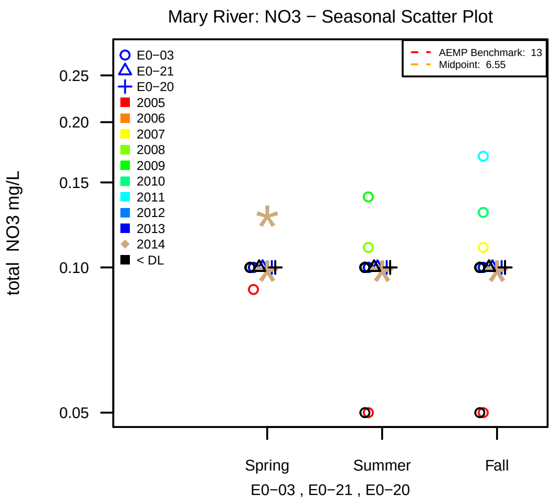

Mary River: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Spring
n= 16
Summer
n= 30
Fall
n= 29
C0−10 , C0−05 , C0−01

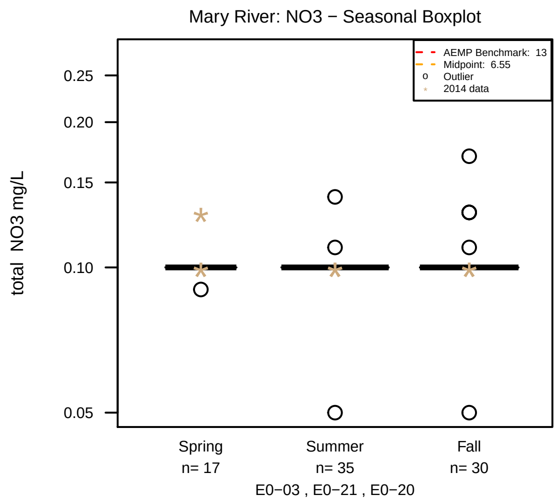

Mary River: NO3 – Total Boxplot on log scale
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L – log axis
0.50
0.20
0.10
0.05
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

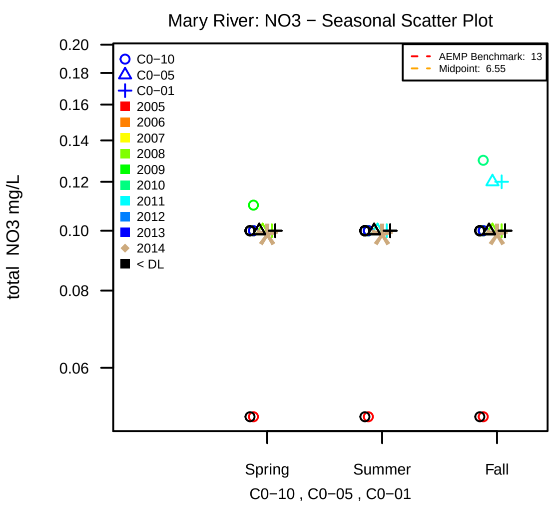

Mary River: NO3 – Total Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.4
0.3
0.2
0.1
G0−09A
G0−09
G0−09B
G0−03
G0−01
E0−10
E0−03
E0−21
E0−20
C0−10
C0−05
C0−01

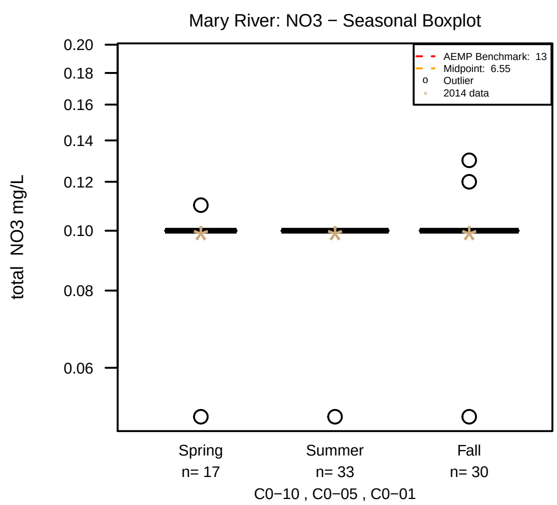

Mary River: NO3 − Seasonal Scatter Plot
total NO3 mg/L
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
0.50
0.20
0.10
0.05
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01


Mary River: NO3 − Seasonal Boxplot
total NO3 mg/L
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
0.50
0.20
0.10
0.05
Spring
n= 33
Summer
n= 94
Fall
n= 66
G0−09 , G0−03 , E0−10 , G0−01

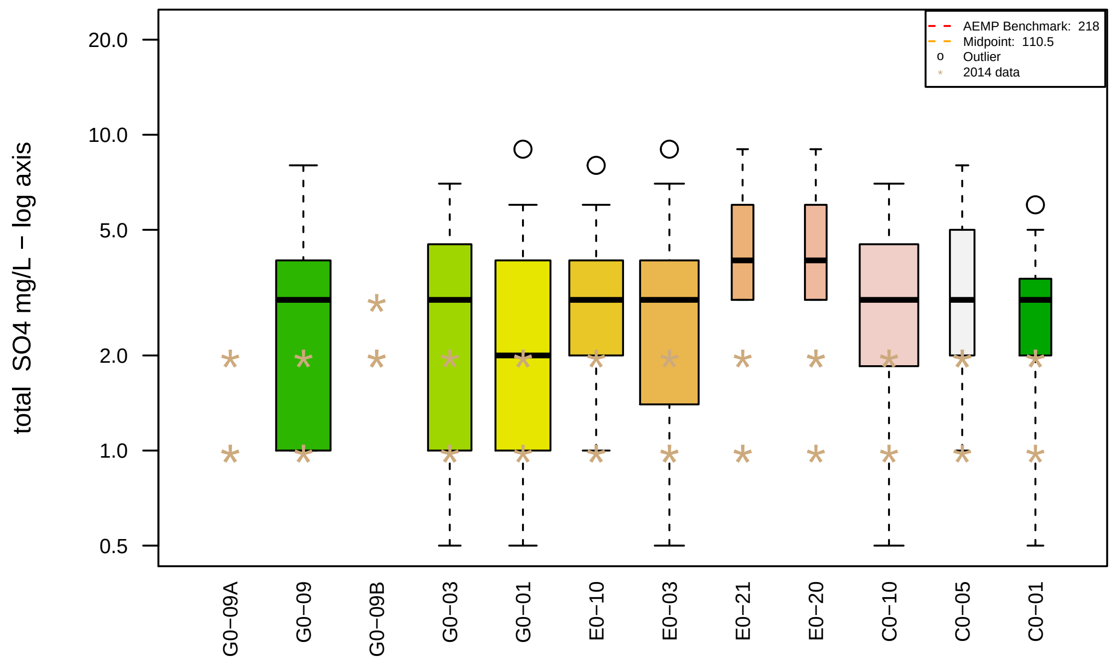

Mary River: NO3 − Seasonal Scatter Plot
total NO3 mg/L
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
0.25
0.20
0.15
0.10
0.05
Spring
Summer
Fall
E0−03 , E0−21 , E0−20


Mary River: NO3 − Seasonal Boxplot
total NO3 mg/L
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
0.25
0.20
0.15
0.10
0.05
Spring
n= 17
Summer
n= 35
Fall
n= 30
E0−03 , E0−21 , E0−20

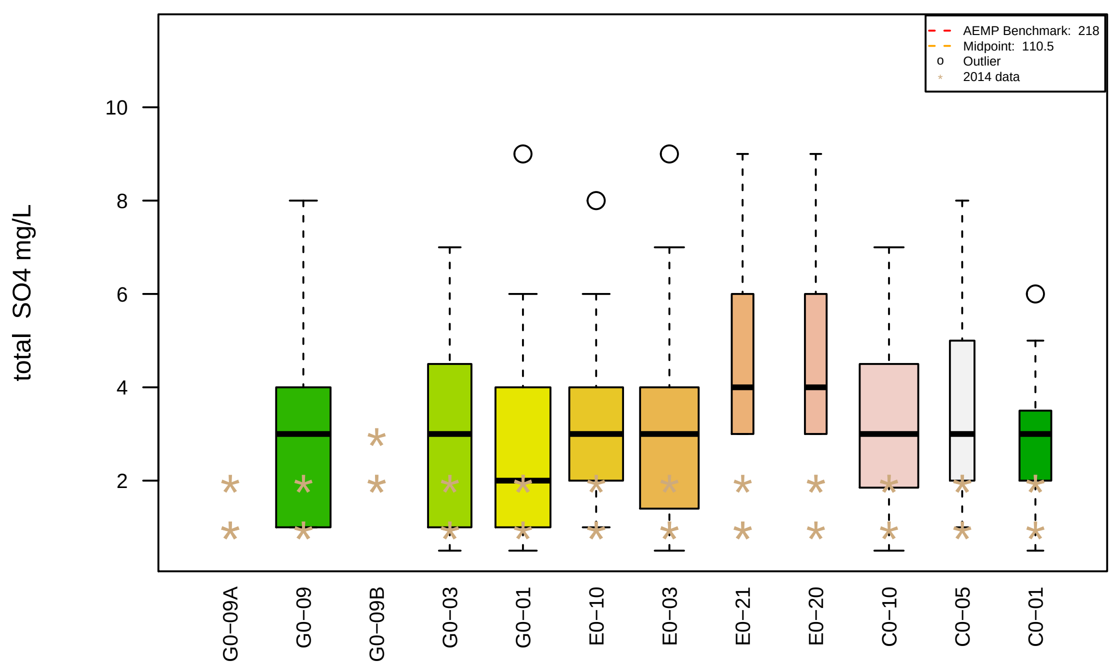

Mary River: NO3 − Seasonal Scatter Plot
total NO3 mg/L
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
Spring
Summer
Fall
C0−10 , C0−05 , C0−01

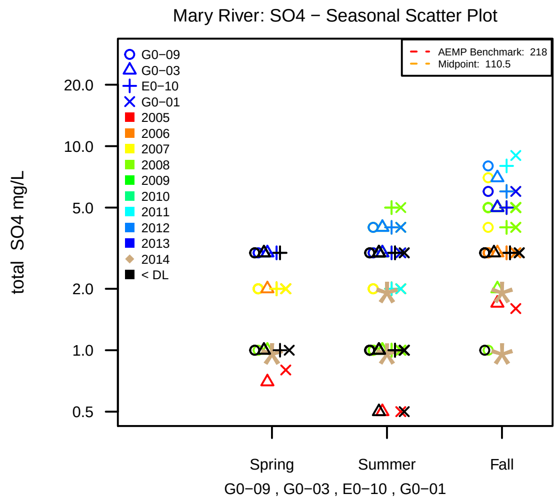

Mary River: NO3 − Seasonal Boxplot
total NO3 mg/L
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
Spring
n= 17
Summer
n= 33
Fall
n= 30
C0−10 , C0−05 , C0−01

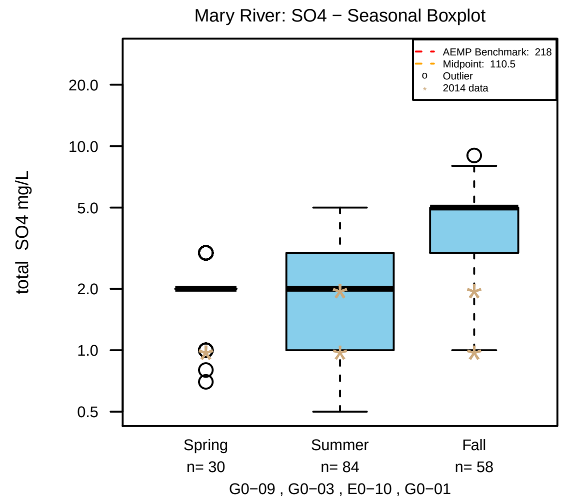
Mary River: SO4 − Total Boxplot on log scale

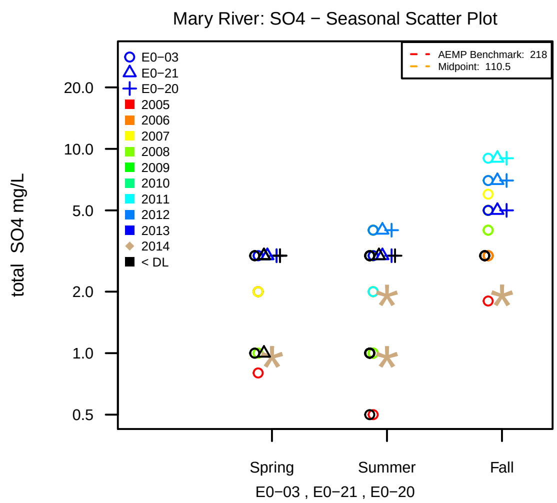


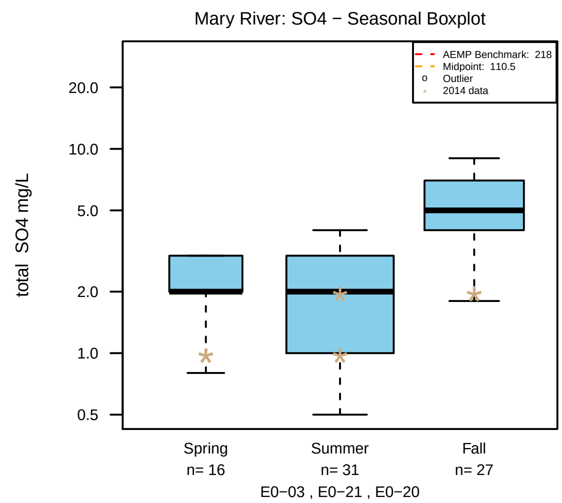
Mary River: SO4 − Total Boxplot

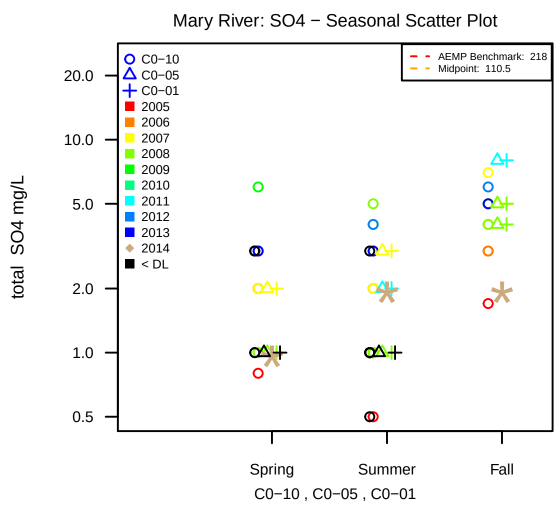


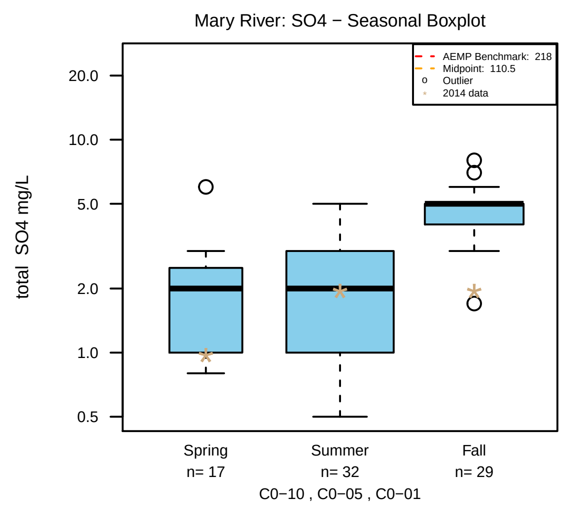

Mary River: SO4 − Seasonal Scatter Plot
G0−09
G0−03
E0−10
G0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110.5
total SO4 mg/L
20.0
10.0
5.0
2.0
1.0
0.5
Spring
Summer
Fall
G0−09 , G0−03 , E0−10 , G0−01


Mary River: SO4 − Seasonal Boxplot
AEMP Benchmark: 218
Midpoint: 110.5
Outlier
2014 data
total SO4 mg/L
20.0
10.0
5.0
2.0
1.0
0.5
Spring
n= 30
Summer
n= 84
Fall
n= 58
G0−09 , G0−03 , E0−10 , G0−01


Mary River: SO4 − Seasonal Scatter Plot
E0−03
E0−21
E0−20
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110.5
total SO4 mg/L
20.0
10.0
5.0
2.0
1.0
0.5
Spring
Summer
Fall
E0−03 , E0−21 , E0−20


Mary River: SO4 − Seasonal Boxplot
AEMP Benchmark: 218
Midpoint: 110.5
Outlier
2014 data
total SO4 mg/L
20.0
10.0
5.0
2.0
1.0
0.5
Spring
n= 16
Summer
n= 31
Fall
n= 27
E0−03 , E0−21 , E0−20


Mary River: SO4 − Seasonal Scatter Plot
C0−10
C0−05
C0−01
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110.5
total SO4 mg/L
20.0
10.0
5.0
2.0
1.0
0.5
Spring
Summer
Fall
C0−10 , C0−05 , C0−01


Mary River: SO4 − Seasonal Boxplot
AEMP Benchmark: 218
Midpoint: 110.5
Outlier
2014 data
total SO4 mg/L
20.0
10.0
5.0
2.0
1.0
0.5
Spring
n= 17
Summer
n= 32
Fall
n= 29
C0−10 , C0−05 , C0−01

APPENDIX A3

GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - MARY LAKE

(Pages A3-1 to A3-67)

APPENDIX A3
GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - MARY LAKE

The Appendix A3 tables and graphs were generated using the R (2014) statistical package as follows:

Table 1: AEMP Benchmarks and Midpoint Concentrations of Parameters of Interest
Table 2: Mary Lake Sample Size by Year and Season
Table 3: Mary Lake Sample Size by Location and Season

Mary Lake Sample Distributions:

Data have been presented in graphs by Month, Season, Year and Station.

Total Boxplot on Log Scale and Total Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Seasonal Scatter Plot and Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Reference:

R Development Core Team, 2014. *R: A language and environment for statistical computing*. R. Foundation for Statistical Computing, Vienna, Austria. Retrieved from: http://www.R-project.org.

Appendix A3 - Mary Lake

Due to the limited amount of data at BL0-05-B4-S and BL0-05-B4-D these stations were collapsed with stations BL0-05-S and BL0-05-D respectively.

Table 1: Mary Lake: AEMP Benchmarks and Midpoints

	AEMP Benchmark	Midpoint	Minimum MDL	Maximum MDL
Al	0.13	0.0839	0.001	0.001
As	0.005	0.00255	1e-04	0.00017
Cd	6e-05	4e-05	1e-05	1.7e-05
Cr	5e-04	5e-04	2e-05	0.001
Co	0.004	0.00205	1e-04	2e-04
Cu	0.0024	0.00155	all $>$ MDL	all $>$ MDL
Fe	0.3	0.17	0.003	0.03
Pb	0.001	0.00053	5e-05	5e-05
Ni	0.025	0.01275	5e-04	0.00076
Ag	1e-04	6e-05	1e-06	1e-05
Tl	8e-04	0.00045	1e-06	1e-04
V	0.006	0.0035	0.001	0.001
Zn	0.03	0.0165	0.001	0.003
Cl	120	61	1	1
Ammonia	0.855	0.4575	0.02	0.18
NO2	0.06	0.0325	0.002	0.1
NO3	13	6.55	0.1	0.1
SO4	218	110	1	3

Table 2: Mary Lake Sample Size by Year and Season

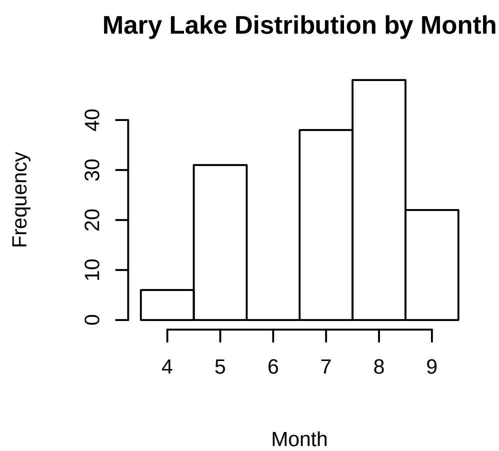
	Spring	Summer	Fall
2006	8	4	0
2007	10	14	8
2008	10	0	4
2011	4	0	0
2012	0	2	0
2013	10	6	5
2014	20	20	20

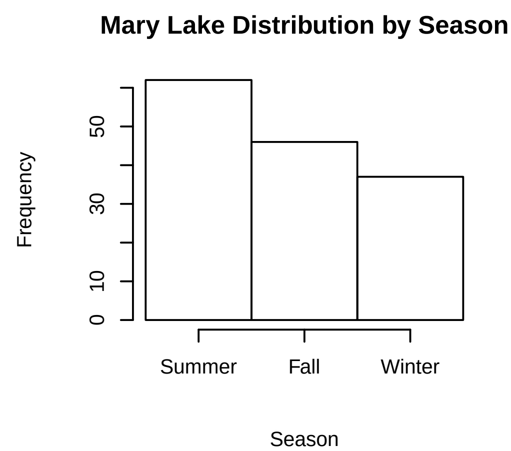
Table 3: Mary Lake Sample Size by Location and Season

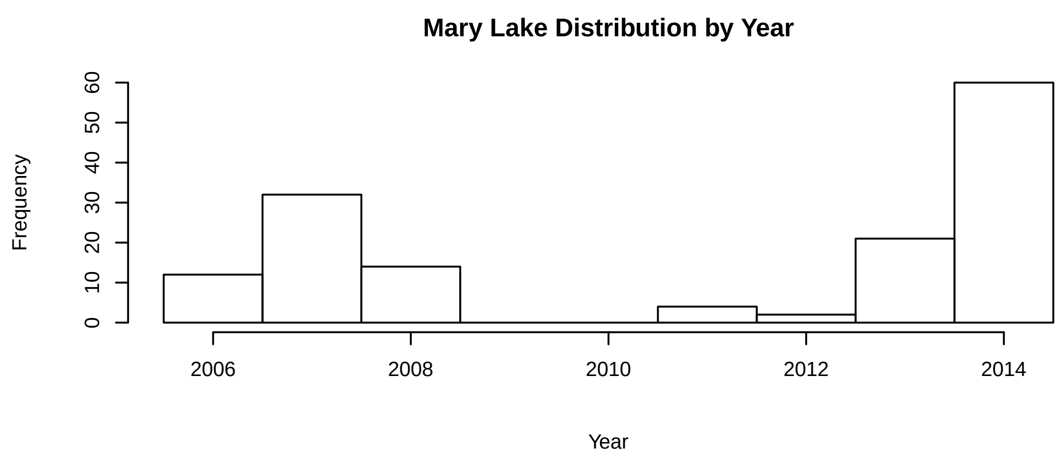
	Spring	Summer	Fall
BL0-01-S	5	3	4
BL0-01-A-S	1	1	1
BL0-01-B-S	1	1	1
BL0-03-S	5	3	2
BL0-04-S	5	3	3
BL0-05-A-S	1	1	1
BL0-05-S	7	6	3
BL0-05-B-S	1	1	1
BL0-09-S	1	1	1
BL0-06-S	4	3	1
BL0-01-D	5	3	5
BL0-01-A-D	1	1	1
BL0-01-B-D	1	1	1
BL0-03-D	5	3	2
BL0-04-D	5	3	3
BL0-05-A-D	1	1	1
BL0-05-D	7	6	3
BL0-05-B-D	1	1	1
BL0-09-D	1	1	1
BL0-06-D	4	3	1

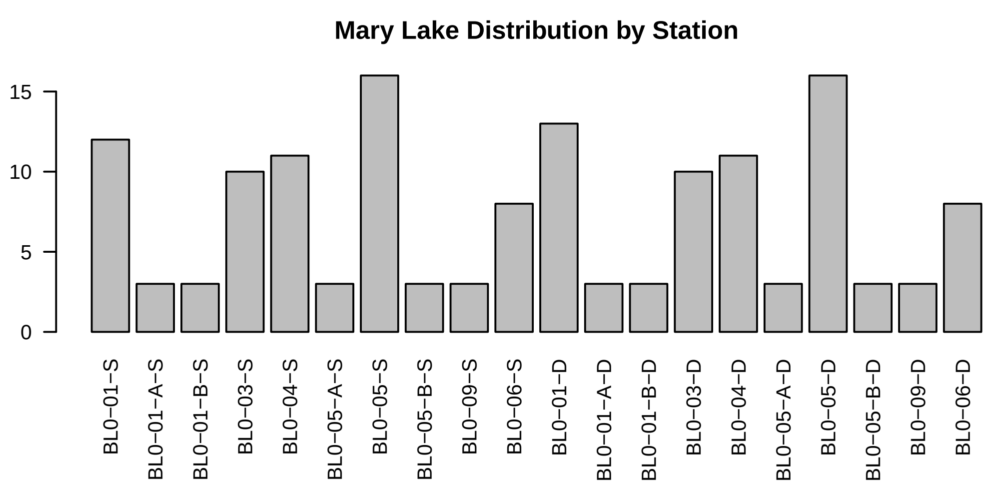
Table 4: 2014 Values Greater than Maximum of Mary Lake Baseline Data

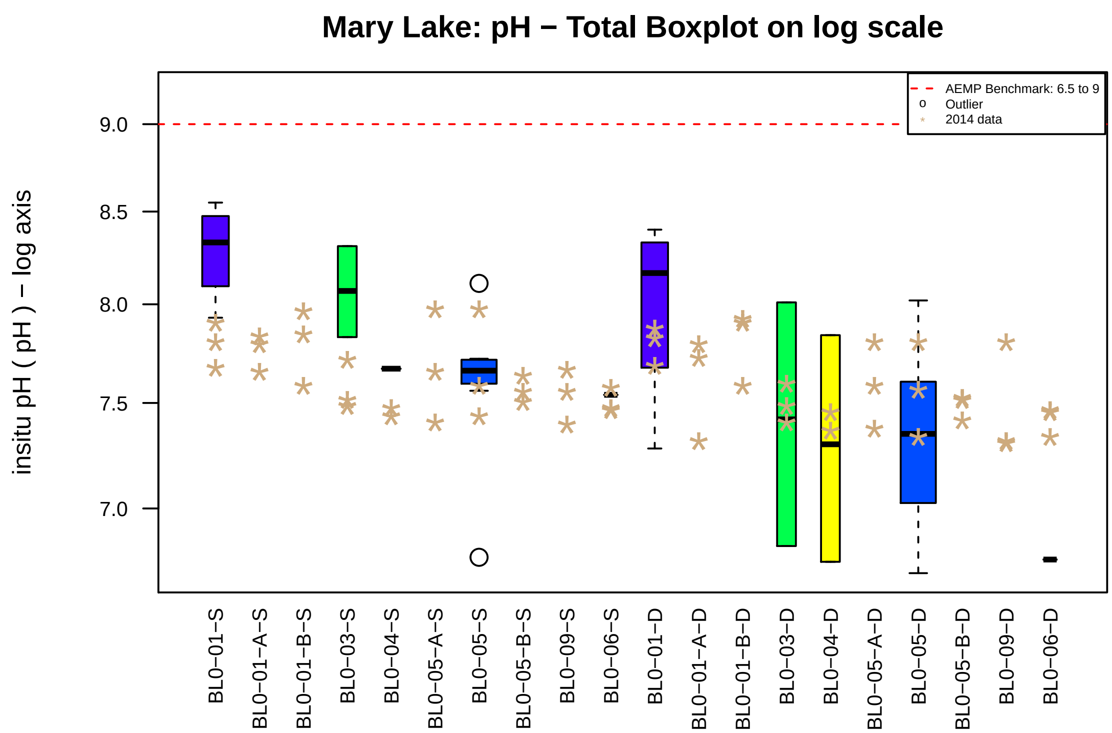
	Parameter	Baseline Max	Station	Value
1	Pb	0.000149	BL0-03-S	0.00038
2	Pb	0.000149	BL0-03-D	0.00016
3	Pb	0.000149	BL0-05-S	0.00015
4	Pb	0.000149	BL0-05-A-S	0.00032
5	Pb	0.000149	BL0-05-A-D	0.00015
6	Pb	0.000149	BL0-05-B-D	0.00016
7	Pb	0.000149	BL0-06-D	0.00021
8	Pb	0.000149	BL0-09-S	0.00017
9	Pb	0.000149	BL0-09-D	0.00035
10	Pb	0.000149	BL0-01-A-S	0.00084
11	Pb	0.000149	BL0-01-B-S	0.00018
12	Zn	0.003	BL0-03-D	0.0082
13	Zn	0.003	BL0-01-S	0.005
14	Zn	0.003	BL0-01-B-S	0.0414
15	NO3	0.14	BL0-05-S	0.19
16	NO3	0.14	BL0-01-A-D	0.19

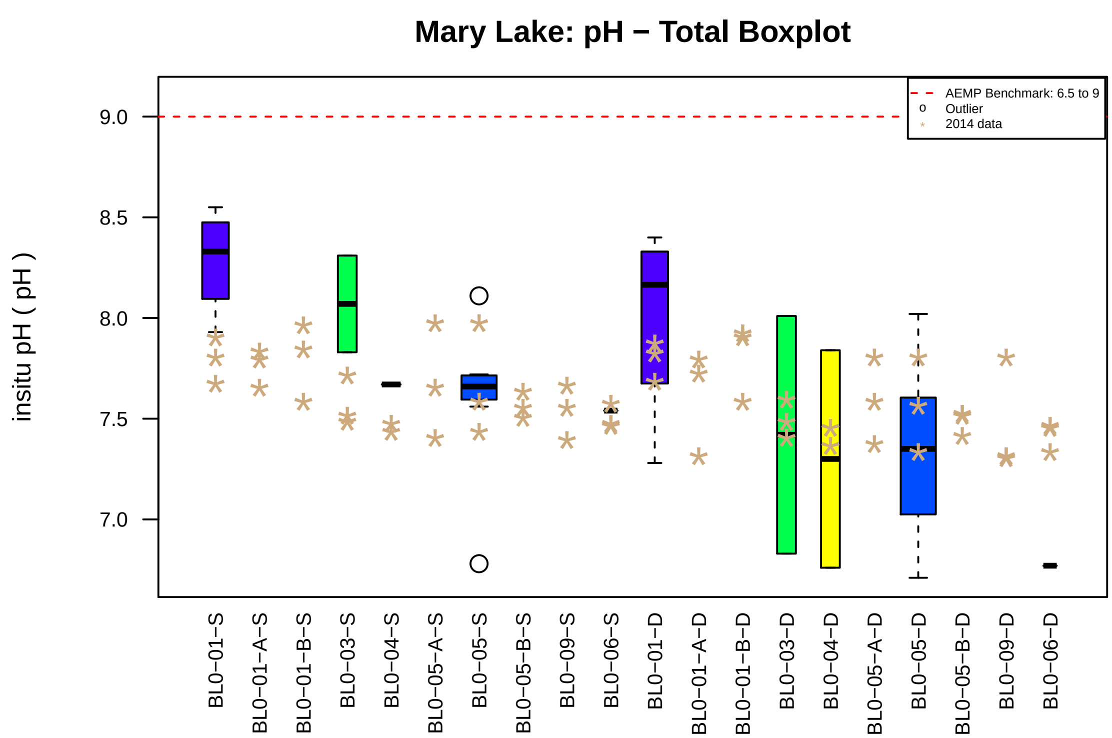

Mary Lake Distribution by Month
Frequency
0
10
20
30
40
4
5
6
7
8
9
Month

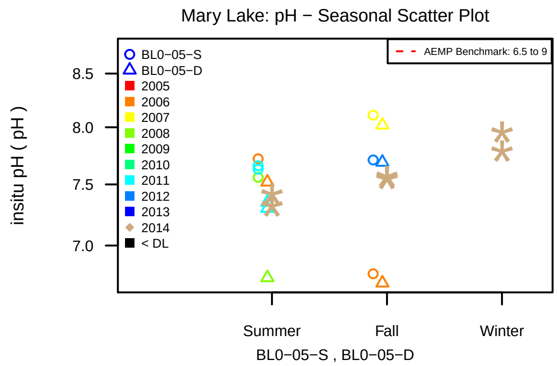

Mary Lake Distribution by Season
Frequency
0
10
30
50
Summer
Fall
Winter
Season

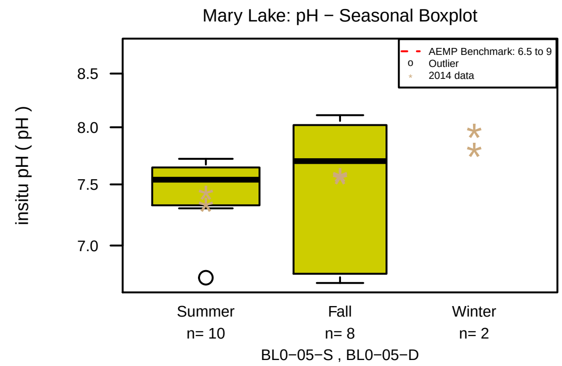

Mary Lake Distribution by Year
Frequency
0
10
20
30
40
50
60
2006
2008
2010
2012
2014
Year

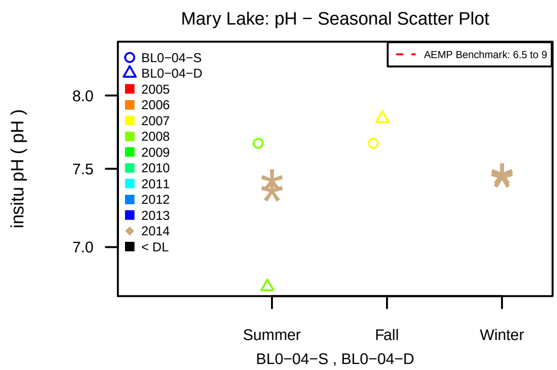

Mary Lake Distribution by Station
0
5
10
15
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

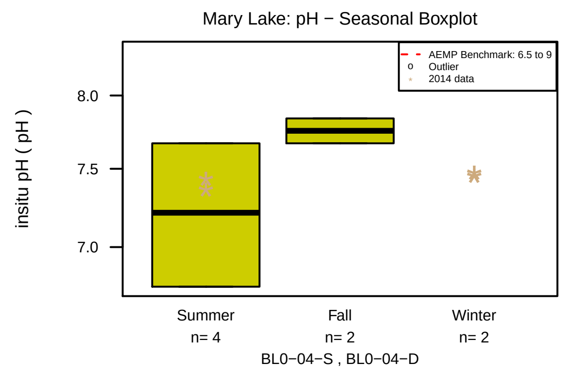

Mary Lake: pH − Total Boxplot on log scale
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH) − log axis
9.0
8.5
8.0
7.5
7.0
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

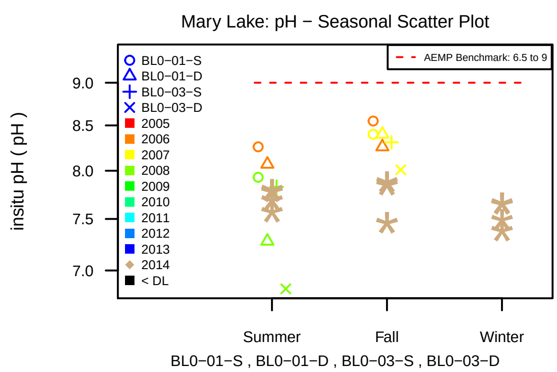

Mary Lake: pH − Total Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
9.0
8.5
8.0
7.5
7.0
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

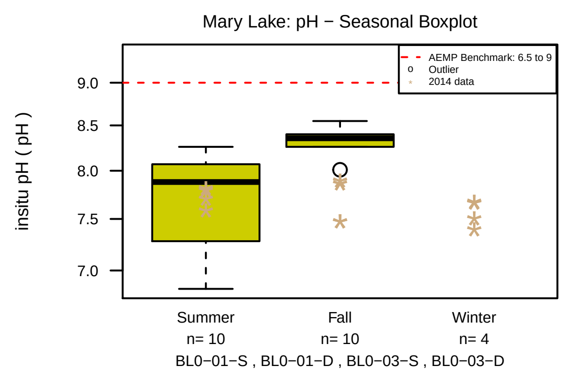

Mary Lake: pH − Seasonal Scatter Plot
insitu pH (pH)
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
7.0
7.5
8.0
8.5
Summer
Fall
Winter
BL0−05−S , BL0−05−D

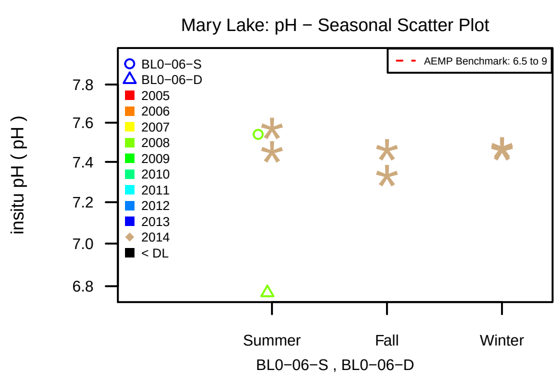

Mary Lake: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
7.0
7.5
8.0
8.5
Summer
n= 10
Fall
n= 8
Winter
n= 2
BL0−05−S , BL0−05−D

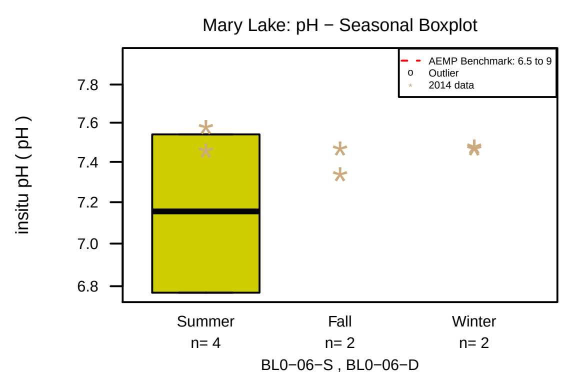

Mary Lake: pH − Seasonal Scatter Plot
insitu pH (pH)
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
7.0
7.5
8.0
Summer
Fall
Winter
BL0−04−S , BL0−04−D

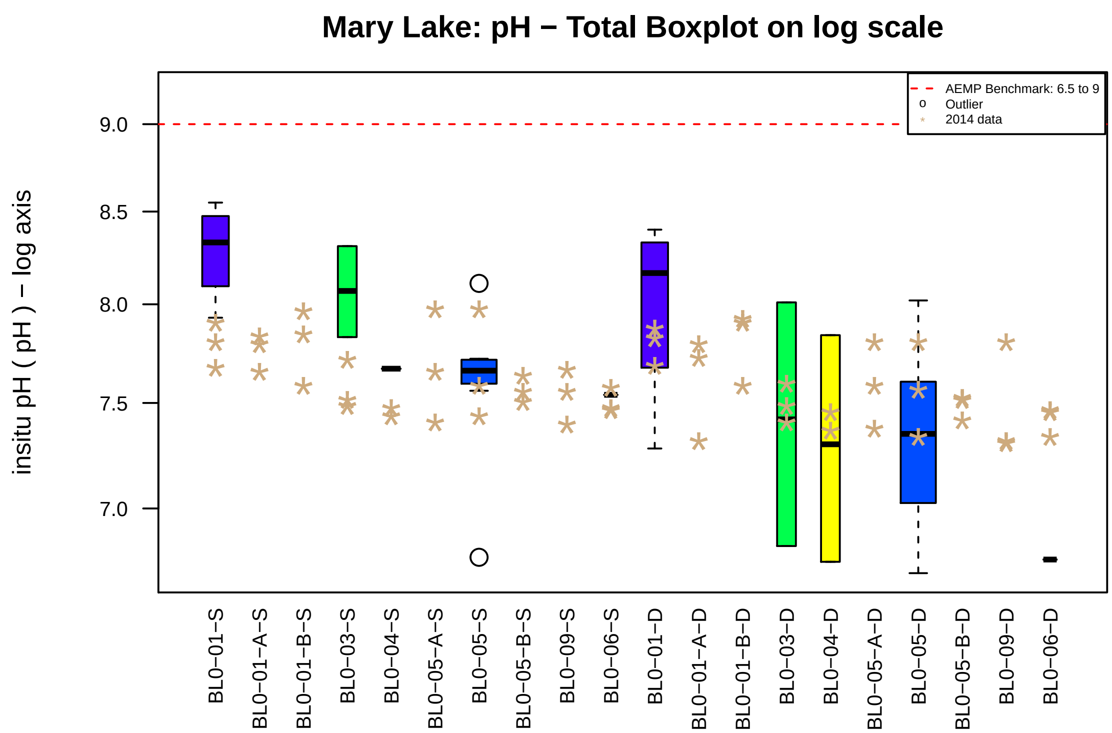

Mary Lake: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
7.0
7.5
8.0
Summer
n= 4
Fall
n= 2
Winter
n= 2
BL0−04−S , BL0−04−D

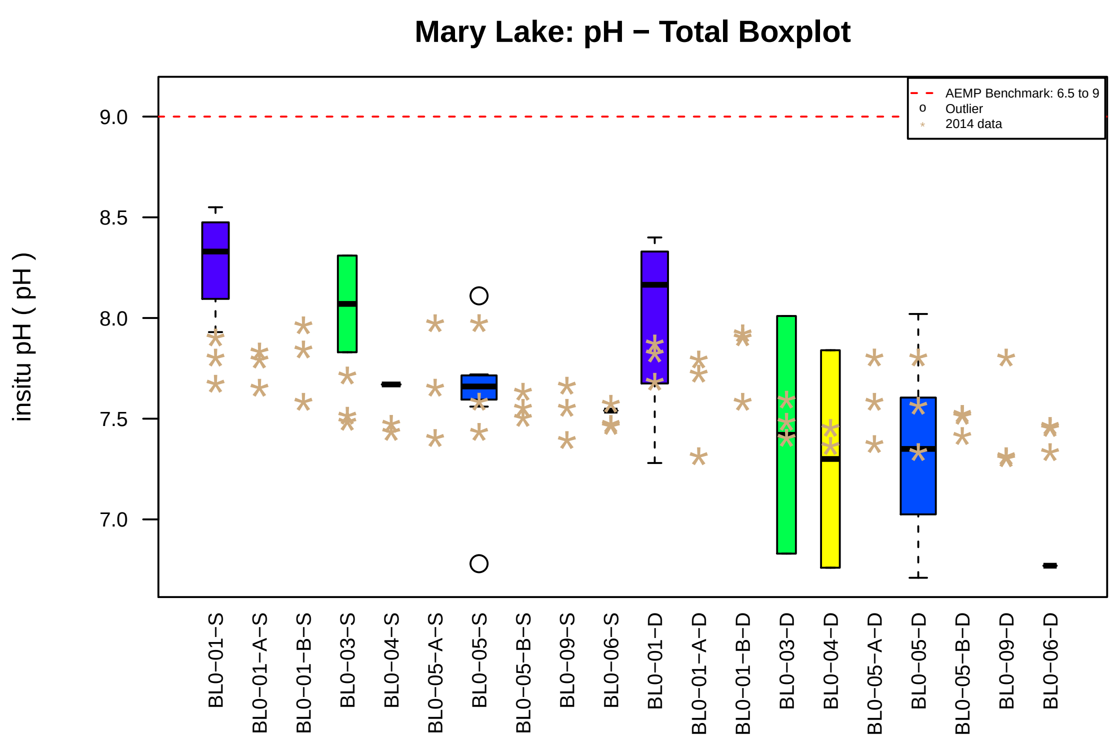

Mary Lake: pH − Seasonal Scatter Plot
insitu pH (pH)
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
7.0
7.5
8.0
8.5
9.0
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

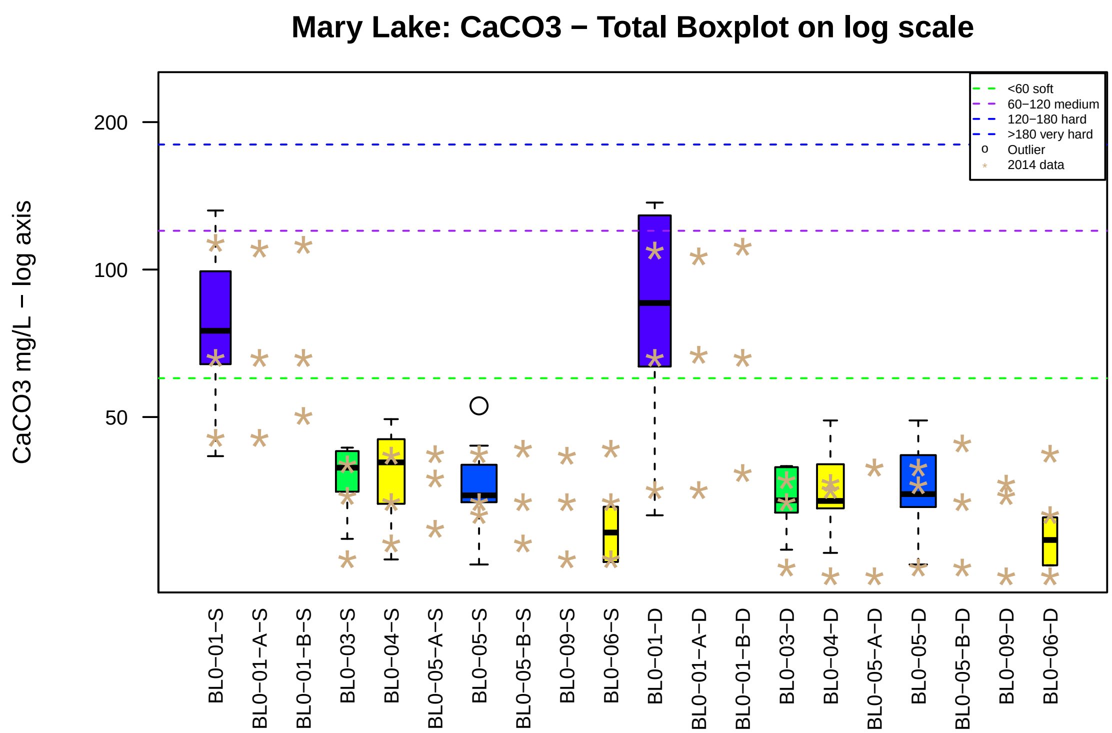

Mary Lake: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
7.0
7.5
8.0
8.5
9.0
Summer
n= 10
Fall
n= 10
Winter
n= 4
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

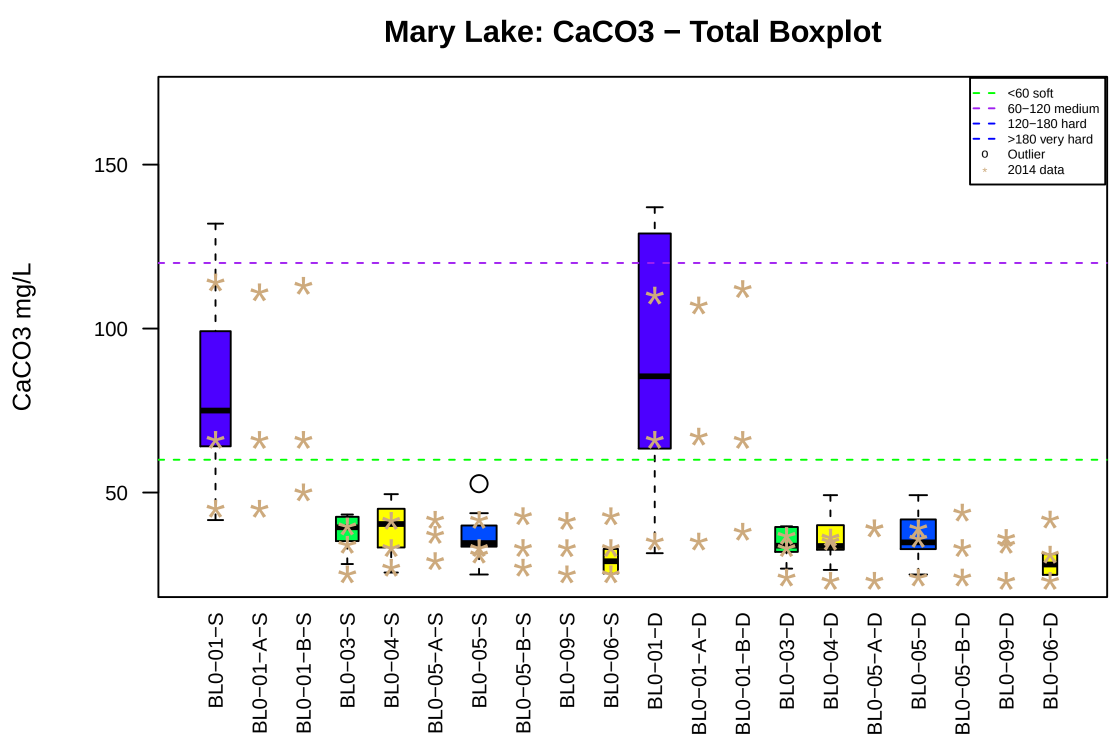

Mary Lake: pH − Seasonal Scatter Plot
insitu pH (pH)
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
6.8
7.0
7.2
7.4
7.6
7.8
Summer
Fall
Winter
BL0−06−S , BL0−06−D

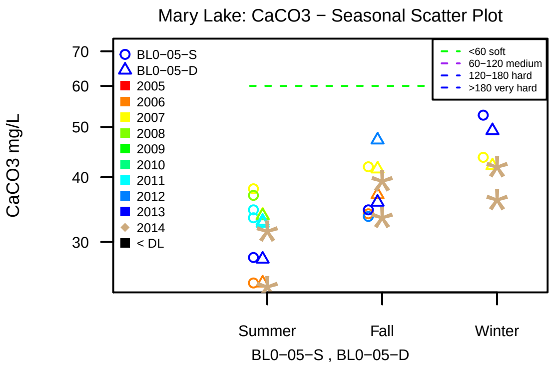

Mary Lake: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
6.8
7.0
7.2
7.4
7.6
7.8
Summer
n= 4
Fall
n= 2
Winter
n= 2
BL0−06−S , BL0−06−D

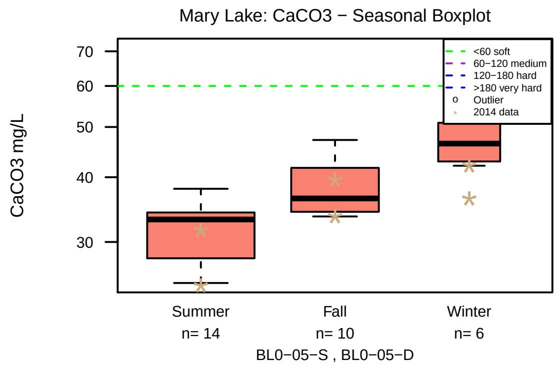

Mary Lake: pH − Total Boxplot on log scale
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH) − log axis
9.0
8.5
8.0
7.5
7.0
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

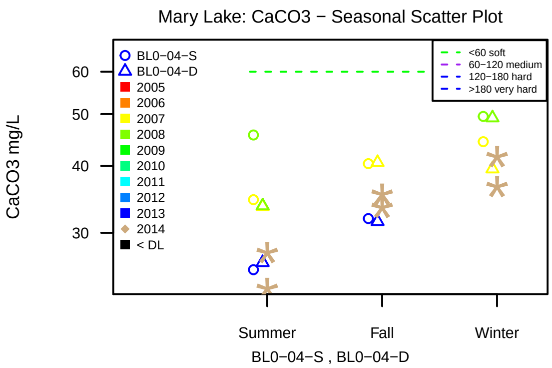

Mary Lake: pH − Total Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
9.0
8.5
8.0
7.5
7.0
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

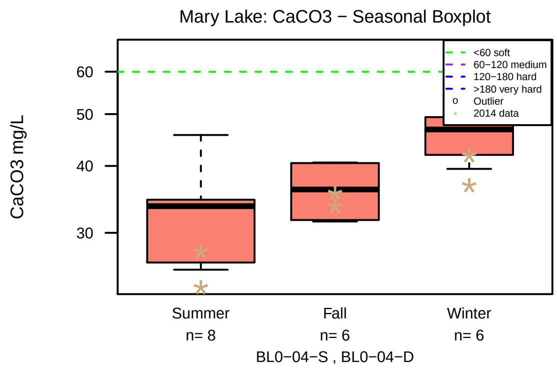

Mary Lake: CaCO3 − Total Boxplot on log scale
CaCO3 mg/L − log axis
200
100
50
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

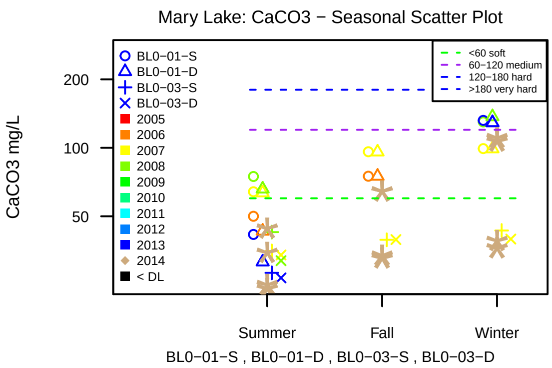

Mary Lake: CaCO3 − Total Boxplot
CaCO3 mg/L
150
100
50
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

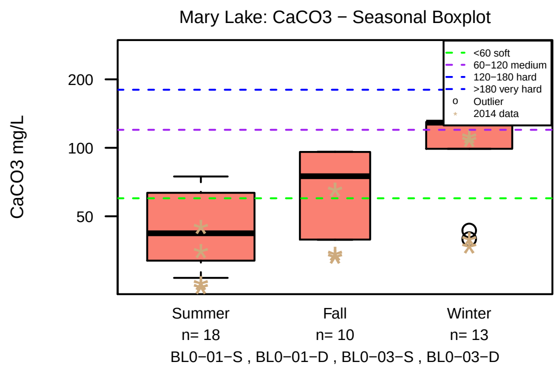

Mary Lake: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Summer
Fall
Winter
BL0−05−S , BL0−05−D

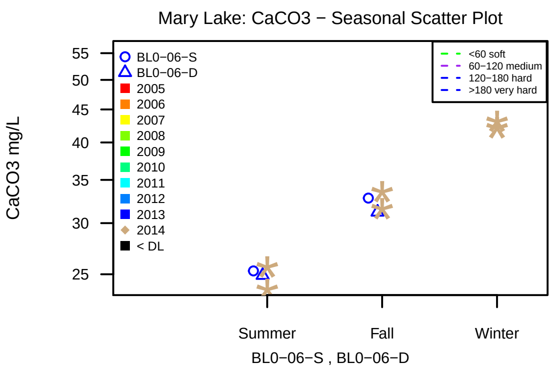

Mary Lake: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

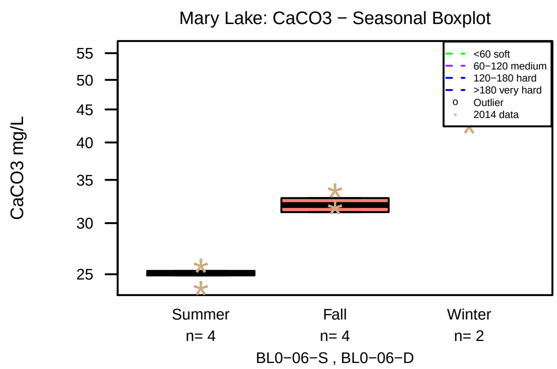

Mary Lake: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Summer
Fall
Winter
BL0−04−S , BL0−04−D


Mary Lake: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

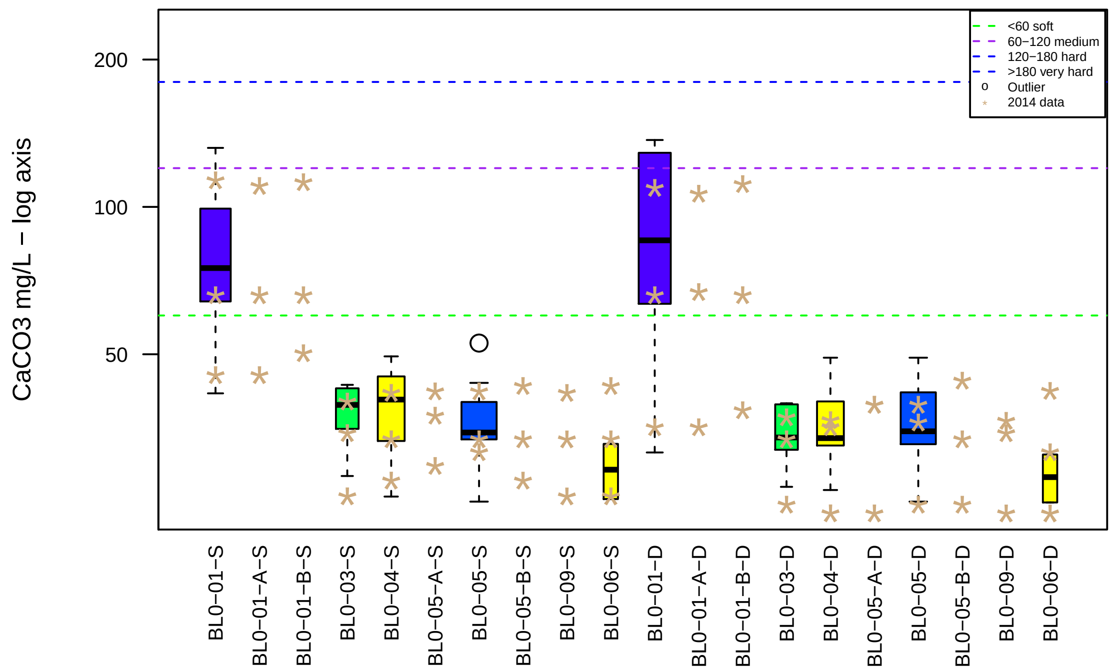

Mary Lake: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D


Mary Lake: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

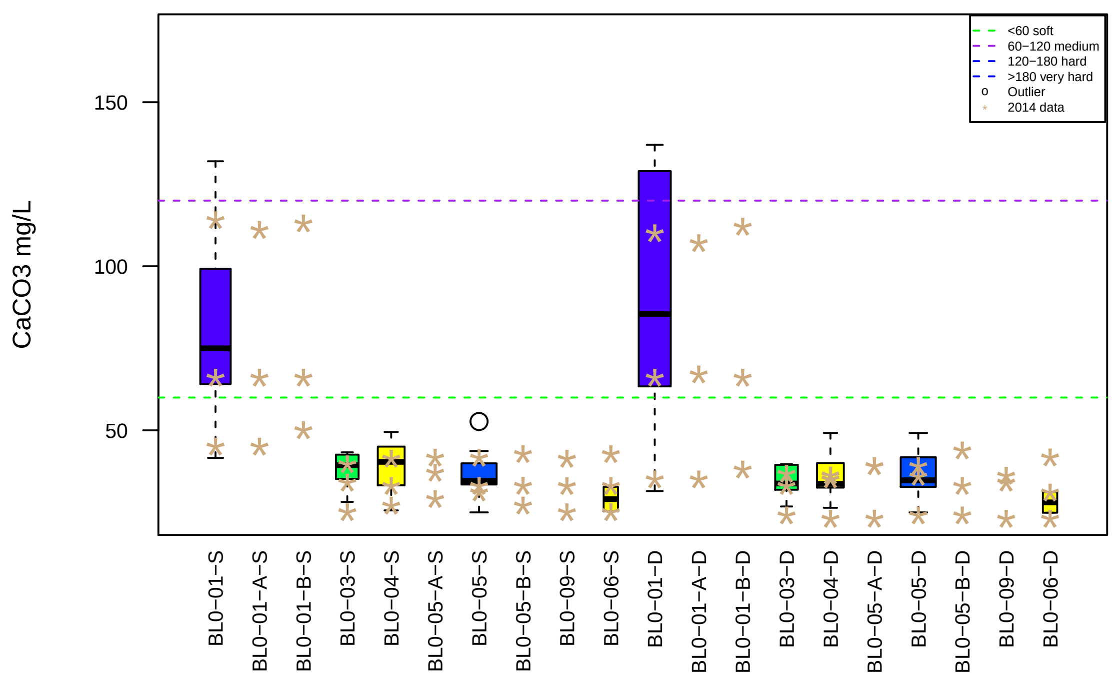

Mary Lake: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Summer
Fall
Winter
BL0−06−S , BL0−06−D

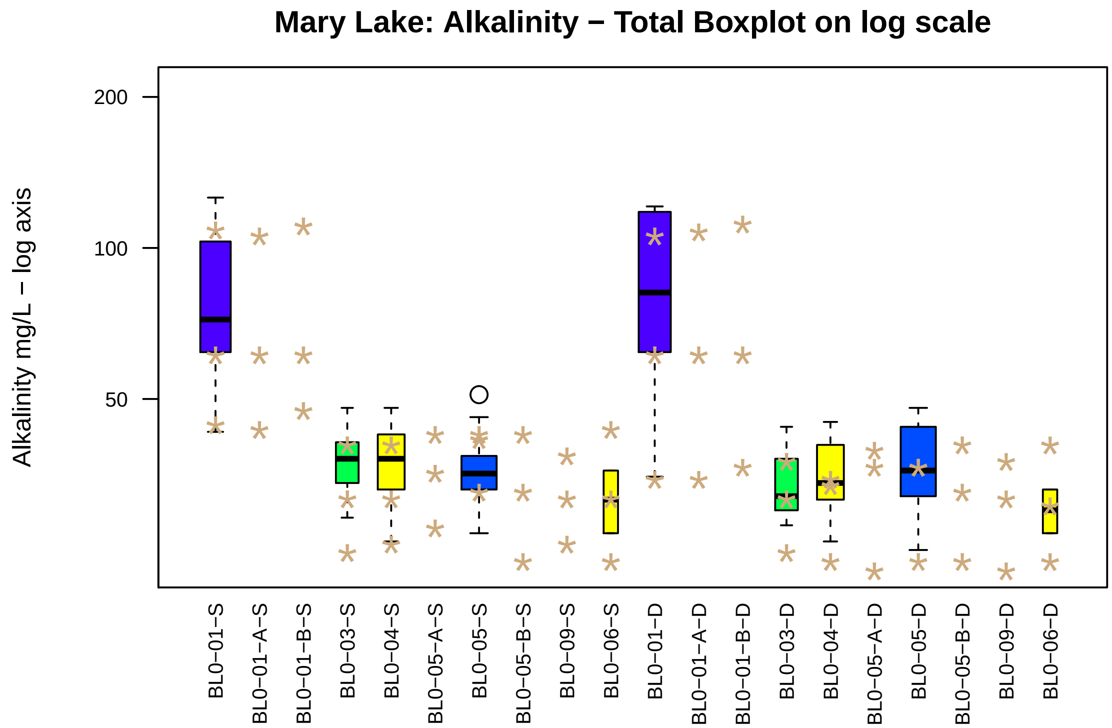

Mary Lake: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

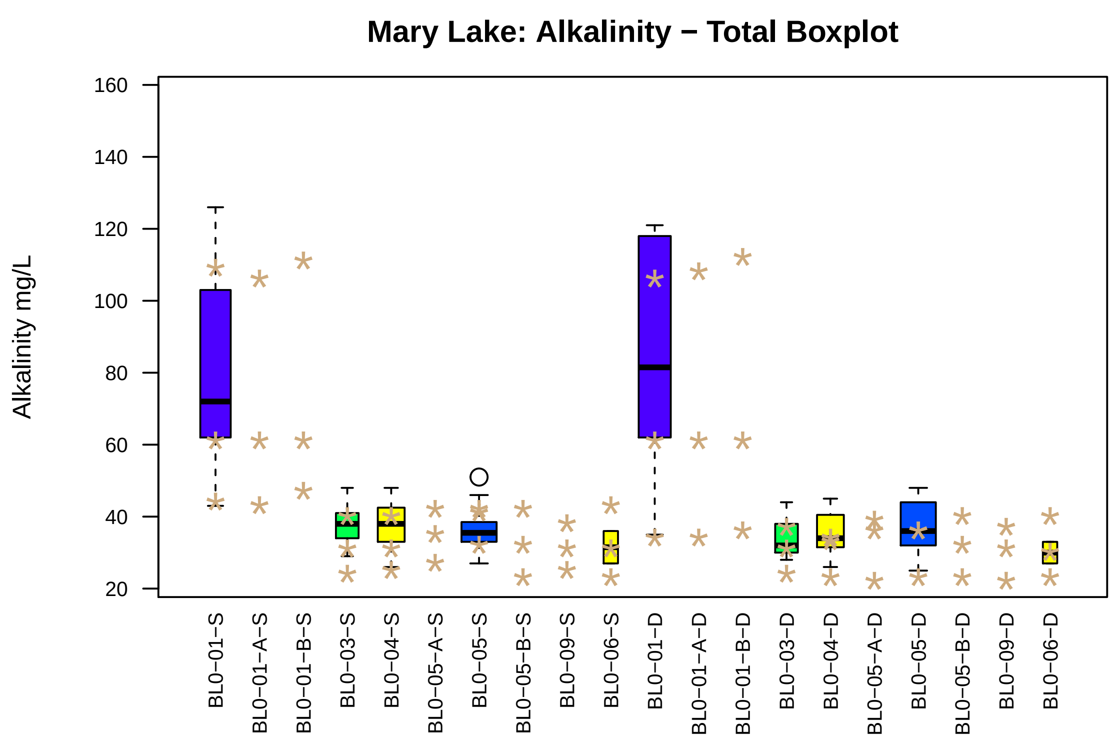
Mary Lake: CaCO3 – Total Boxplot on log scale

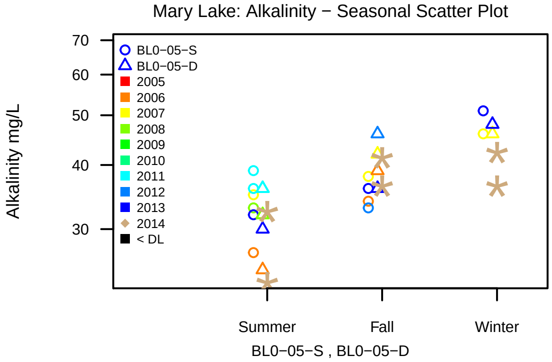


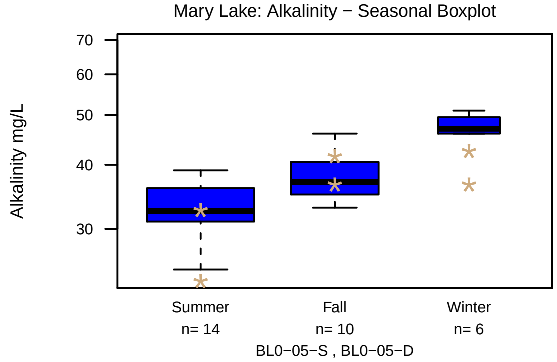
Mary Lake: CaCO3 – Total Boxplot

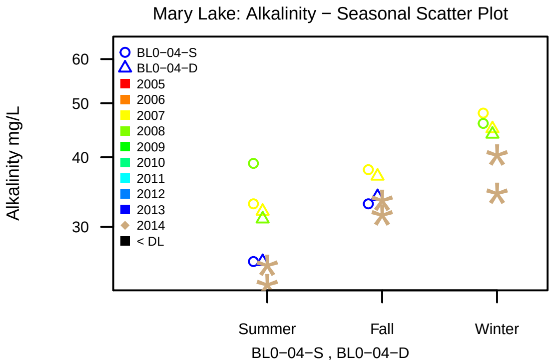


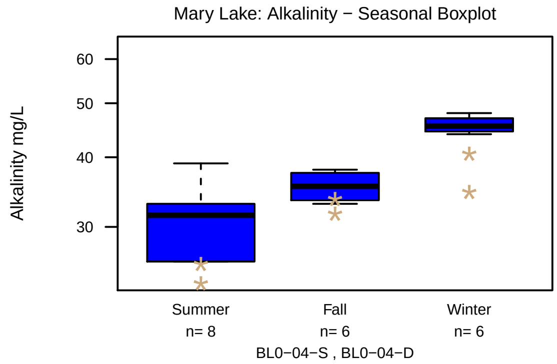

Mary Lake: Alkalinity − Total Boxplot on log scale
Alkalinity mg/L − log axis
200
100
50
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

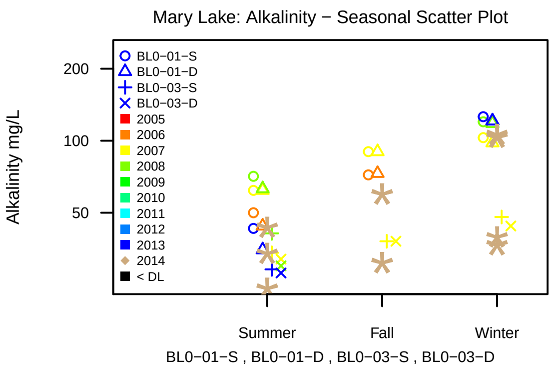

Mary Lake: Alkalinity − Total Boxplot
Alkalinity mg/L
160
140
120
100
80
60
40
20
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

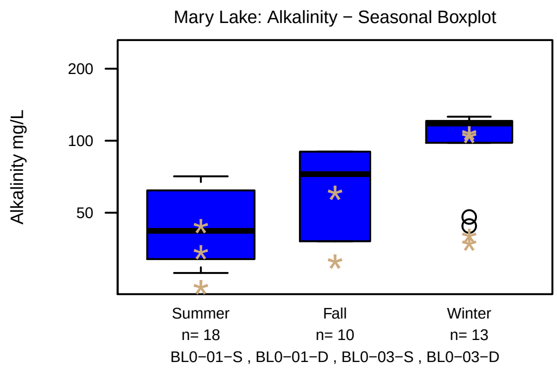

Mary Lake: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
70
60
50
40
30
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
BL0−05−S , BL0−05−D

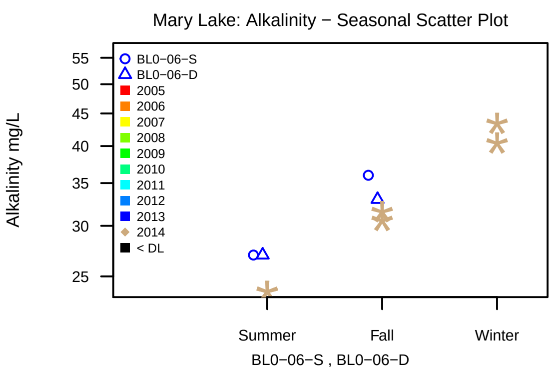

Mary Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
70
60
50
40
30
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

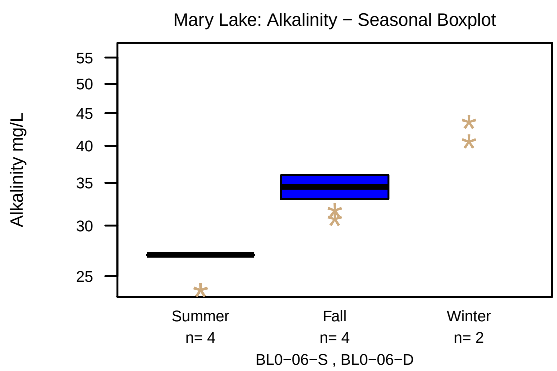

Mary Lake: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
60
50
40
30
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
BL0−04−S , BL0−04−D

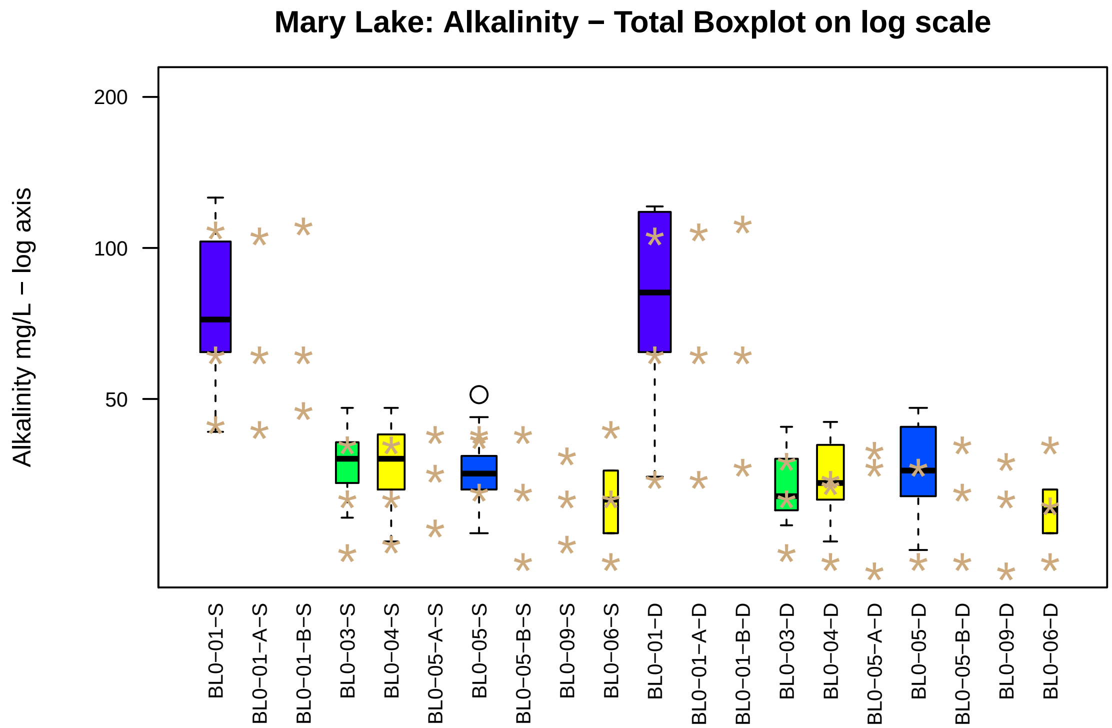

Mary Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
60
50
40
30
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

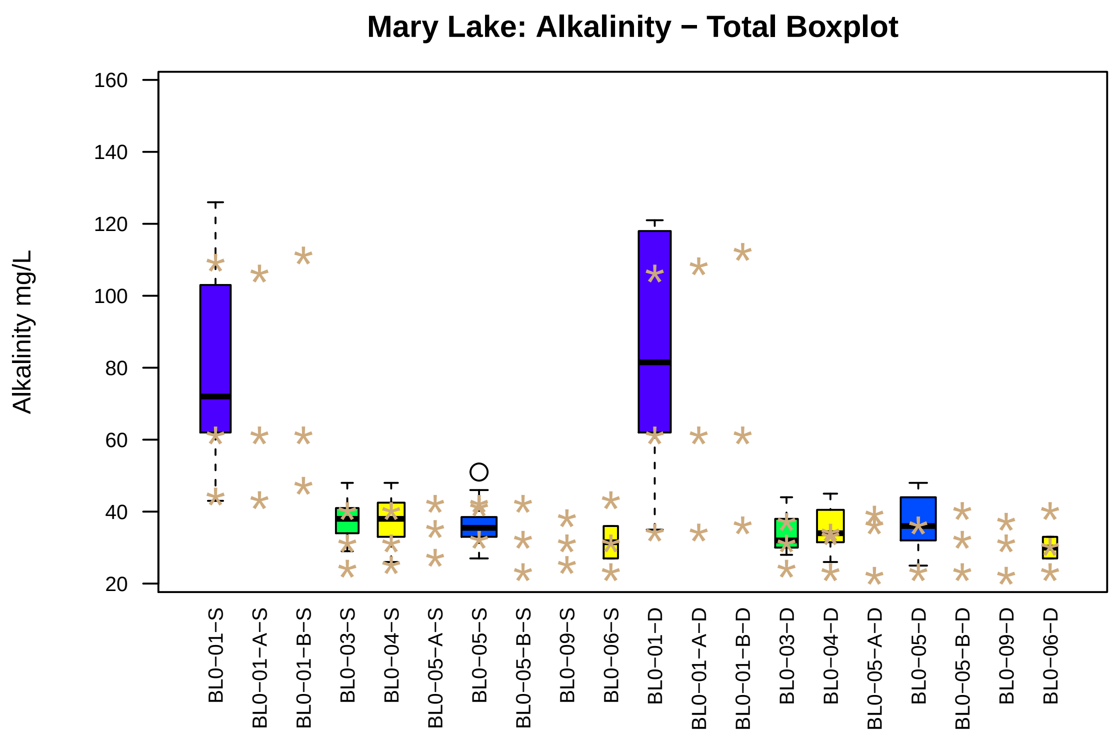

Mary Lake: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
200
100
50
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

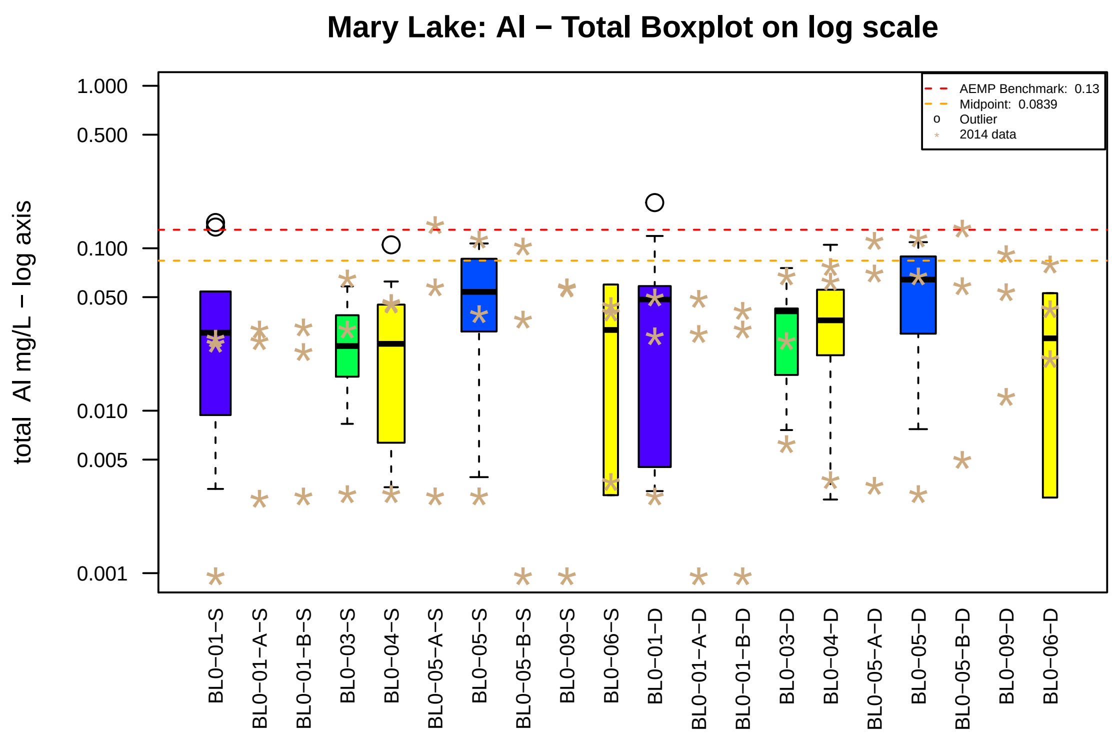

Mary Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
200
100
50
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

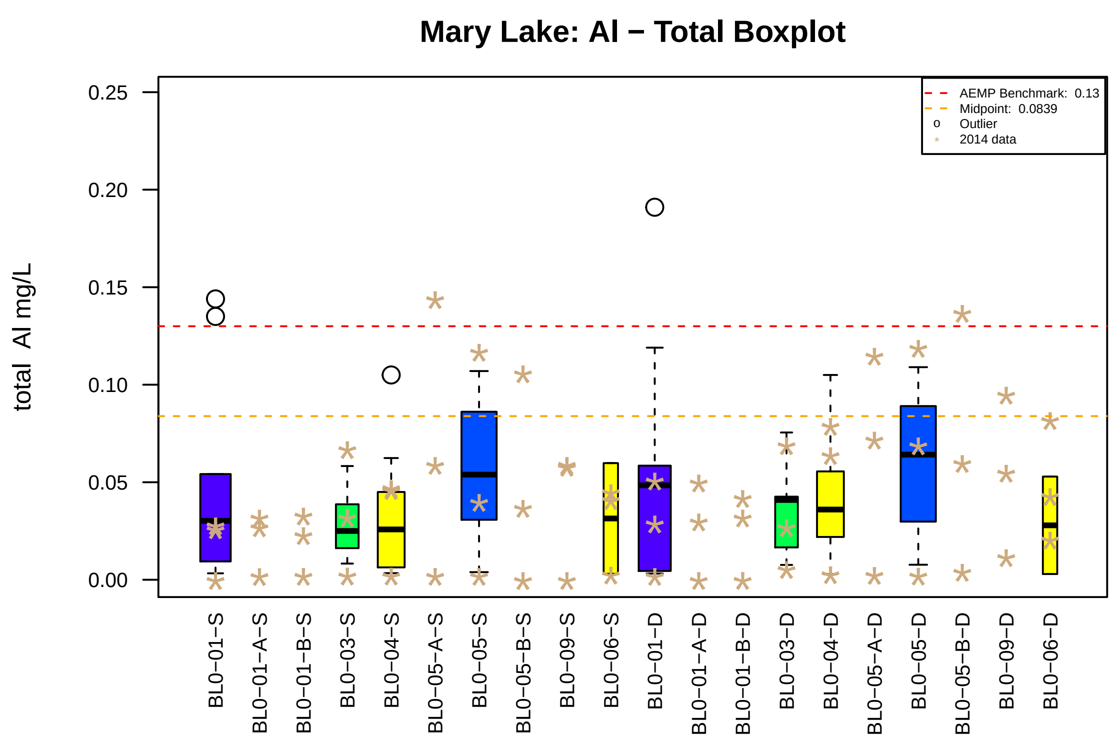

Mary Lake: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
55
50
45
40
35
30
25
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
BL0−06−S , BL0−06−D

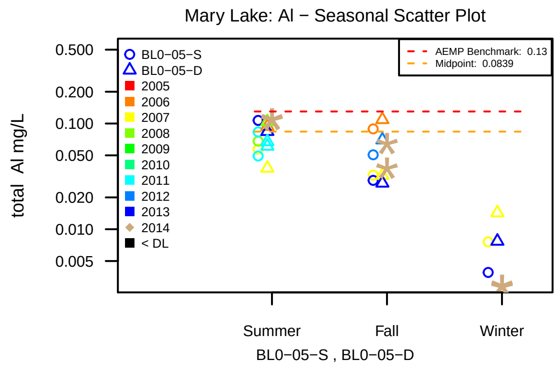

Mary Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
55
50
45
40
35
30
25
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

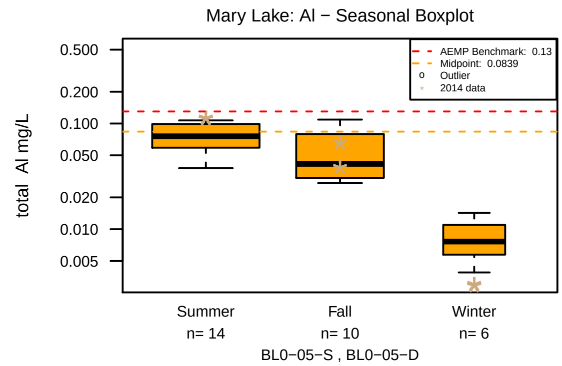

Mary Lake: Alkalinity − Total Boxplot on log scale
Alkalinity mg/L − log axis
200
100
50
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

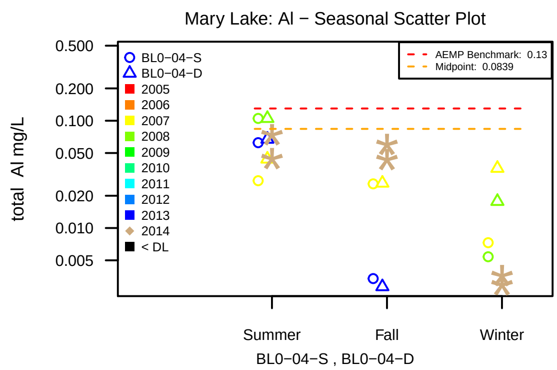

Mary Lake: Alkalinity − Total Boxplot
Alkalinity mg/L
160
140
120
100
80
60
40
20
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

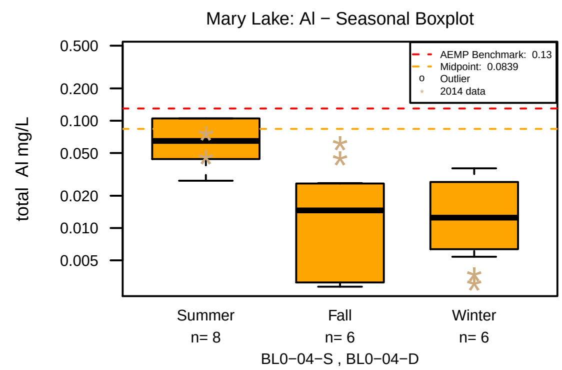

Mary Lake: Al − Total Boxplot on log scale
total Al mg/L − log axis
1.000
0.500
0.100
0.050
0.010
0.005
0.001
AEMP Benchmark: 0.13
Midpoint: 0.0839
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

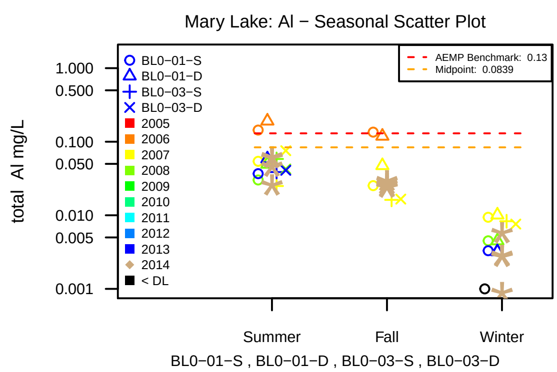

Mary Lake: Al − Total Boxplot
total Al mg/L
0.25
0.20
0.15
0.10
0.05
0.00
AEMP Benchmark: 0.13
Midpoint: 0.0839
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

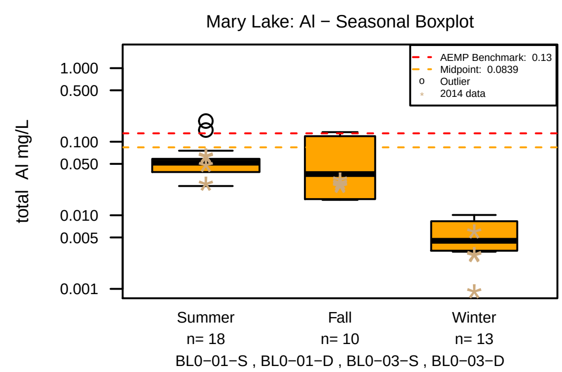

Mary Lake: Al − Seasonal Scatter Plot
total Al mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.13
Midpoint: 0.0839
Summer
Fall
Winter
BL0−05−S , BL0−05−D

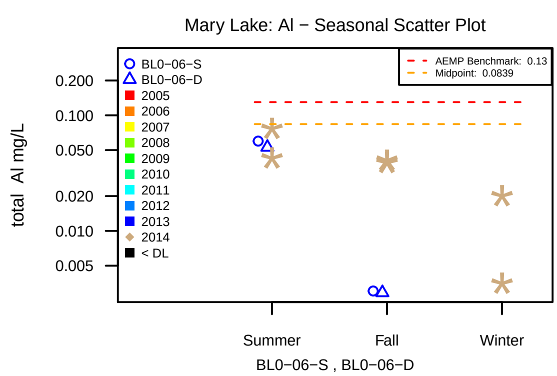

Mary Lake: Al − Seasonal Boxplot
total Al mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.13
Midpoint: 0.0839
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

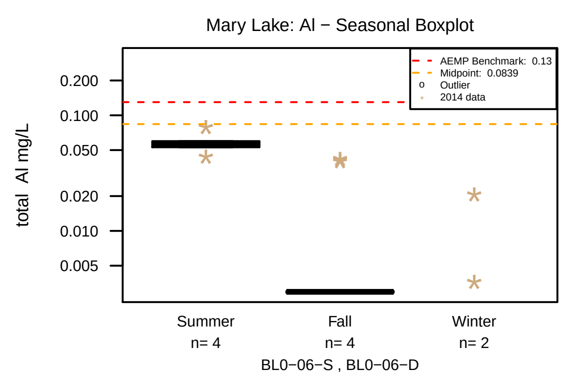

Mary Lake: Al − Seasonal Scatter Plot
total Al mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.13
Midpoint: 0.0839
Summer
Fall
Winter
BL0−04−S , BL0−04−D

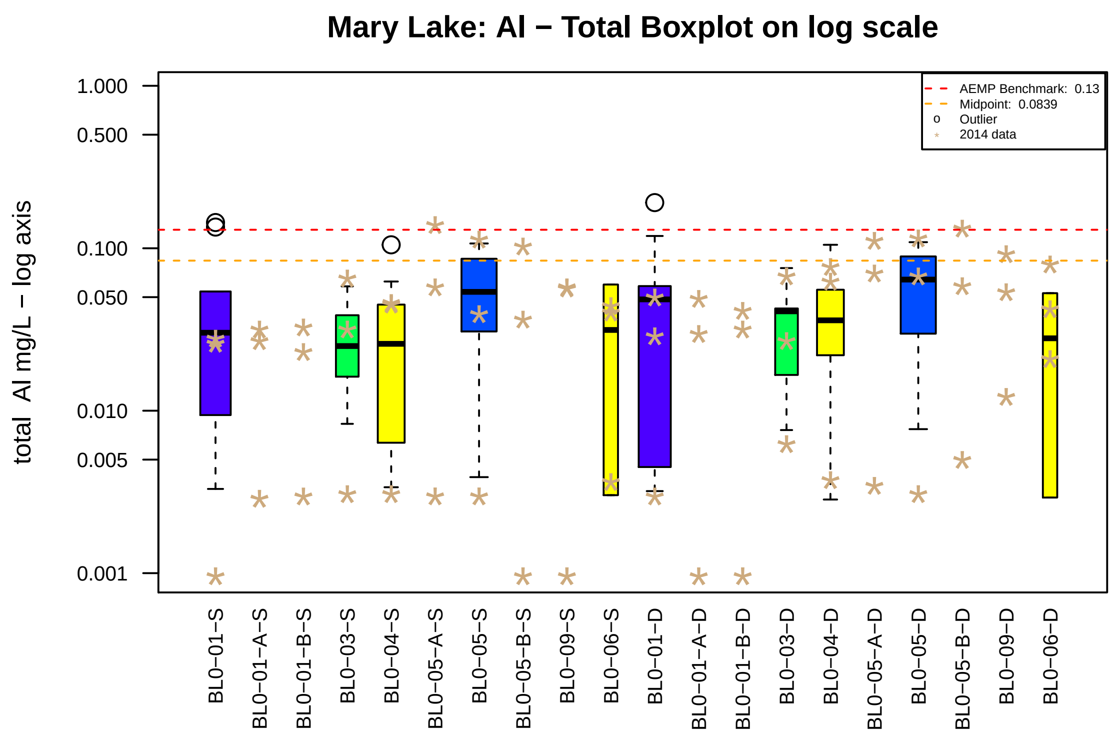

Mary Lake: Al − Seasonal Boxplot
total Al mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.13
Midpoint: 0.0839
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

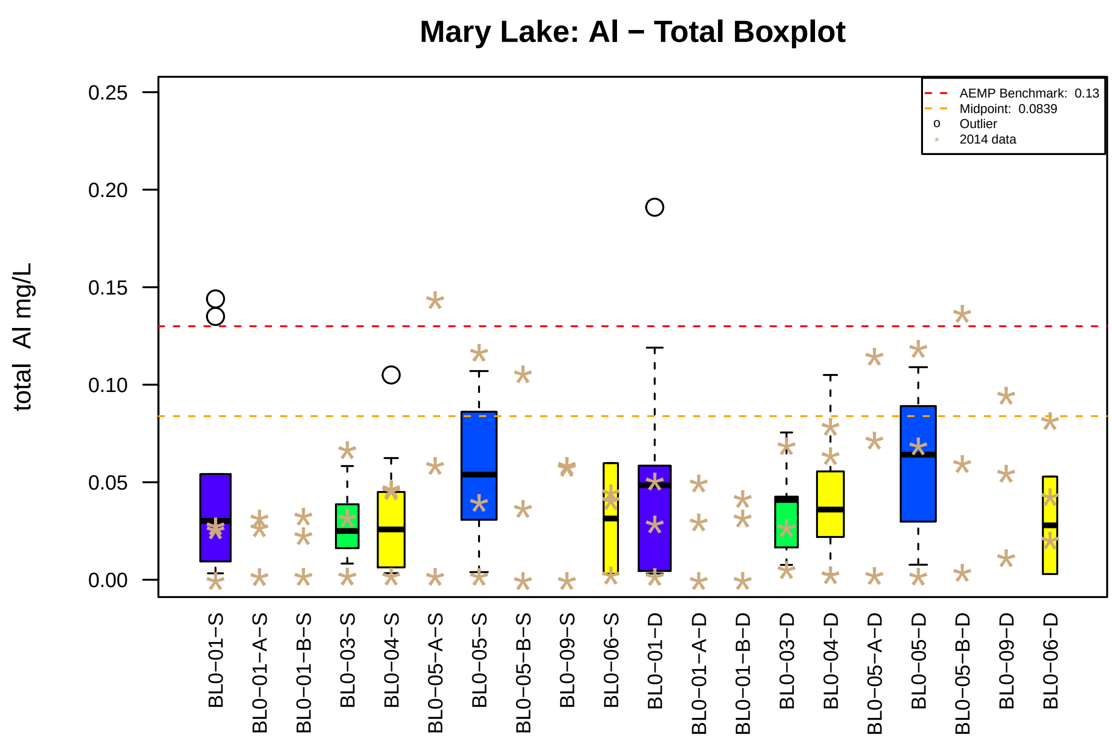

Mary Lake: Al − Seasonal Scatter Plot
total Al mg/L
1.000
0.500
0.100
0.050
0.010
0.005
0.001
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.13
Midpoint: 0.0839
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

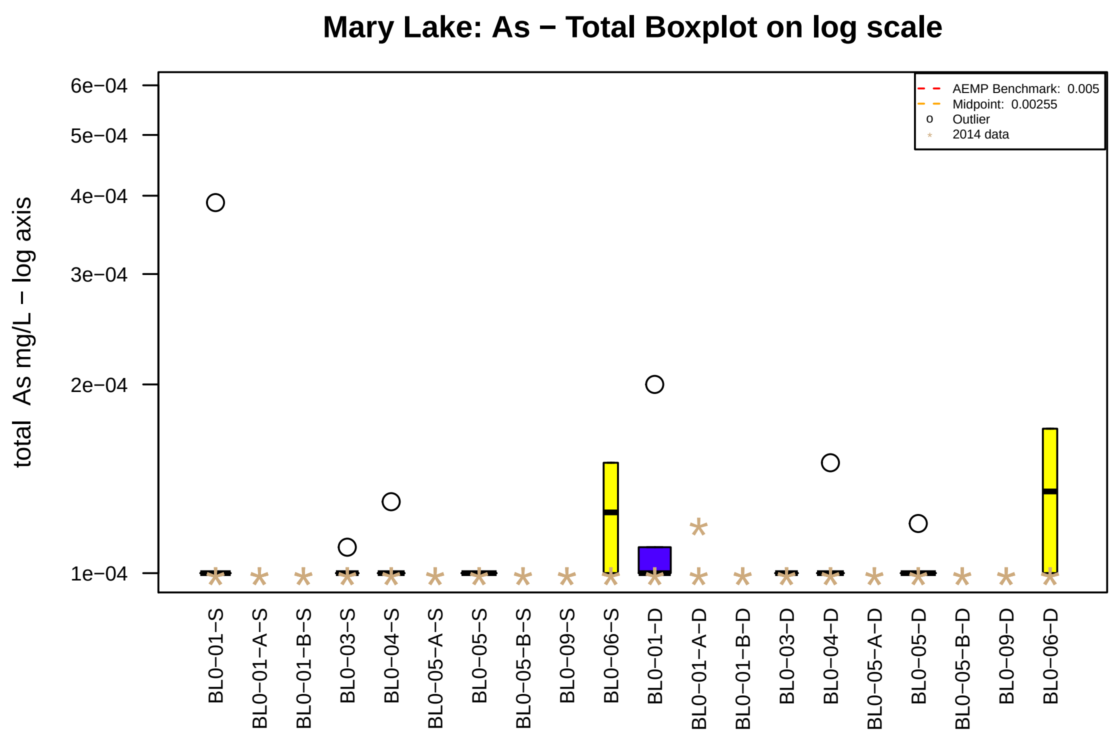

Mary Lake: Al − Seasonal Boxplot
total Al mg/L
1.000
0.500
0.100
0.050
0.010
0.005
0.001
AEMP Benchmark: 0.13
Midpoint: 0.0839
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

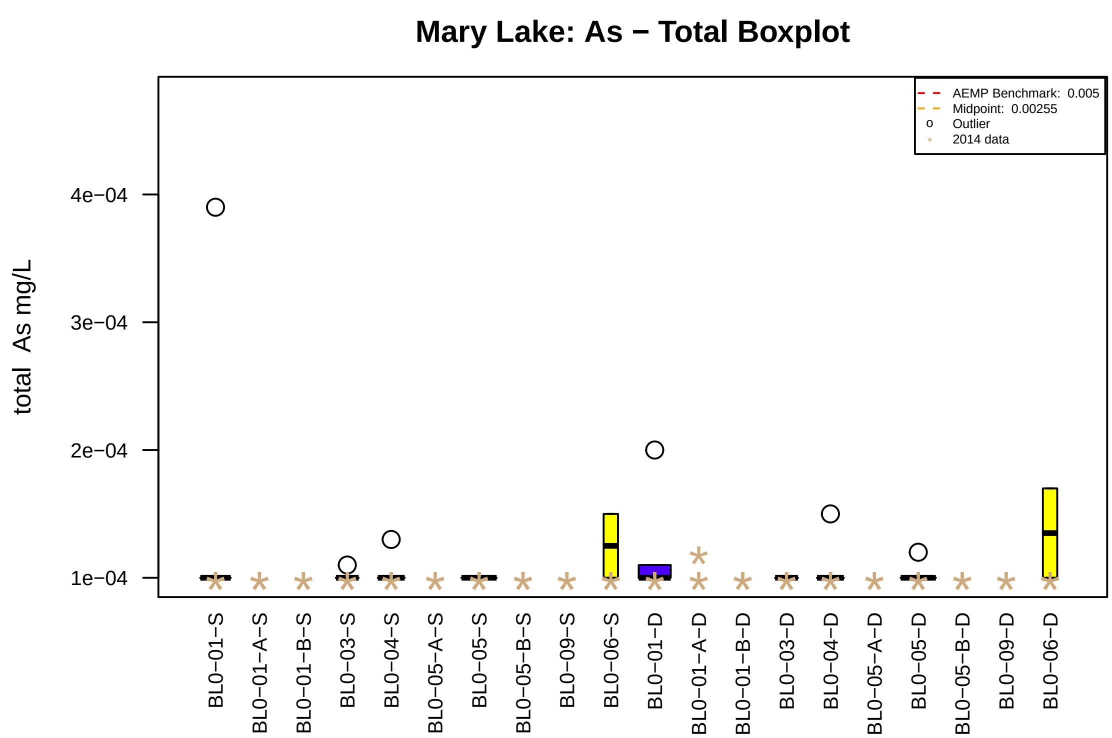

Mary Lake: Al − Seasonal Scatter Plot
total Al mg/L
0.200
0.100
0.050
0.020
0.010
0.005
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.13
Midpoint: 0.0839
Summer
Fall
Winter
BL0−06−S , BL0−06−D

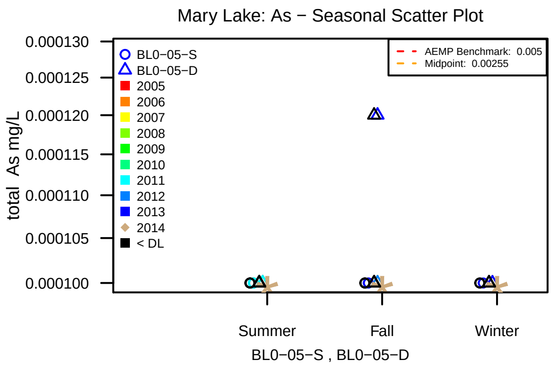

Mary Lake: Al − Seasonal Boxplot
total Al mg/L
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.13
Midpoint: 0.0839
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

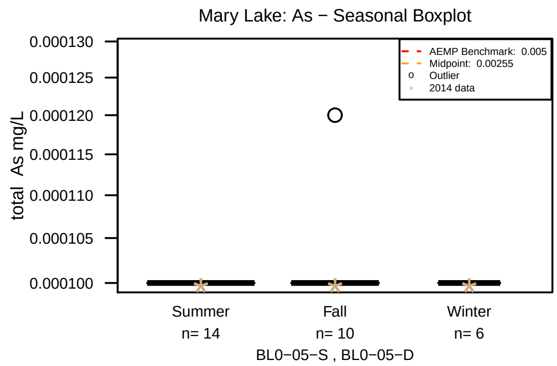

Mary Lake: Al − Total Boxplot on log scale
total Al mg/L − log axis
1.000
0.500
0.100
0.050
0.010
0.005
0.001
AEMP Benchmark: 0.13
Midpoint: 0.0839
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

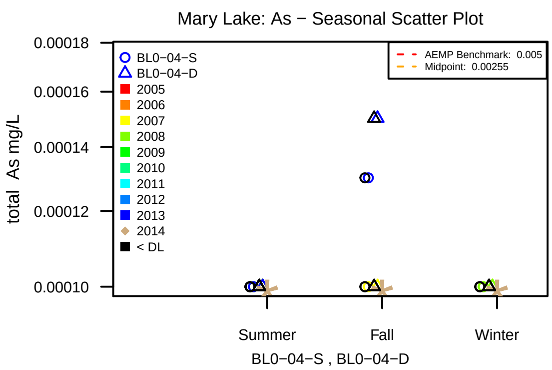

Mary Lake: Al − Total Boxplot
total Al mg/L
0.25
0.20
0.15
0.10
0.05
0.00
AEMP Benchmark: 0.13
Midpoint: 0.0839
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

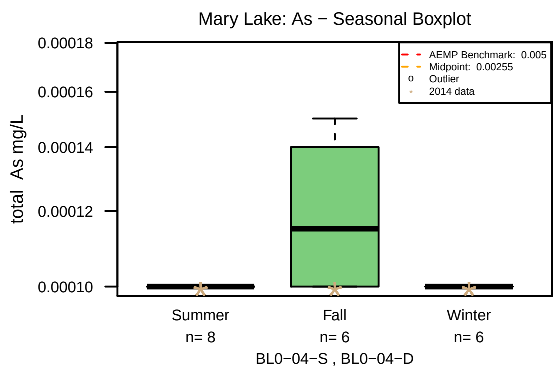

Mary Lake: As − Total Boxplot on log scale
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L − log axis
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

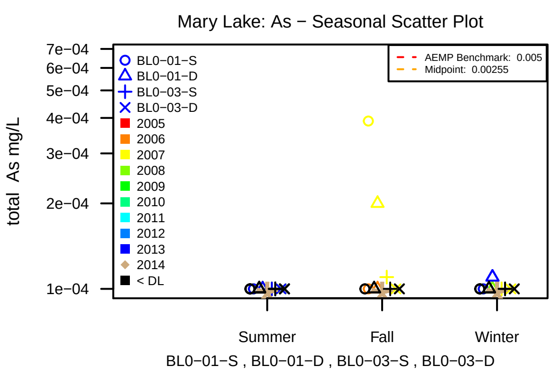

Mary Lake: As − Total Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L
4e−04
3e−04
2e−04
1e−04
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

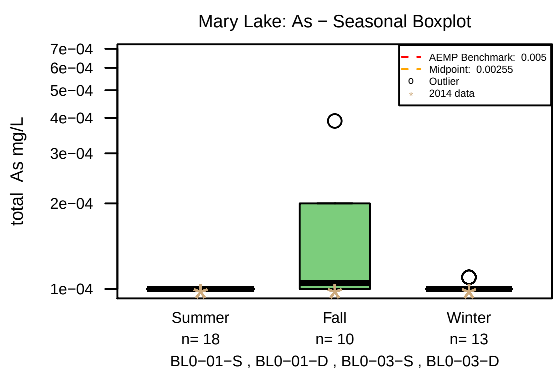

Mary Lake: As − Seasonal Scatter Plot
total As mg/L
0.000130
0.000125
0.000120
0.000115
0.000110
0.000105
0.000100
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
BL0−05−S , BL0−05−D

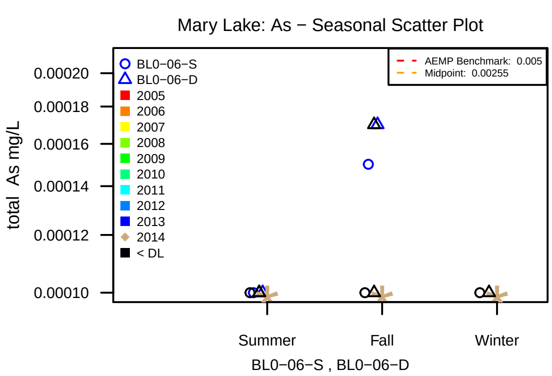

Mary Lake: As − Seasonal Boxplot
total As mg/L
0.000130
0.000125
0.000120
0.000115
0.000110
0.000105
0.000100
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

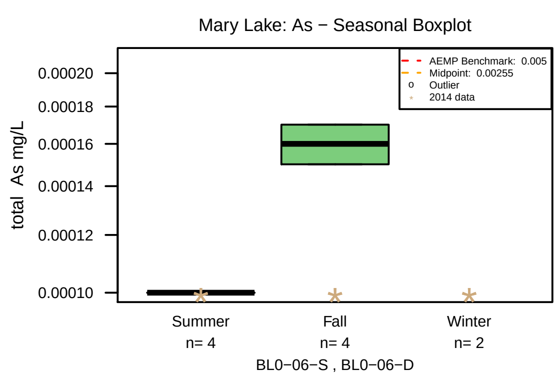

Mary Lake: As − Seasonal Scatter Plot
total As mg/L
0.00018
0.00016
0.00014
0.00012
0.00010
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
BL0−04−S , BL0−04−D

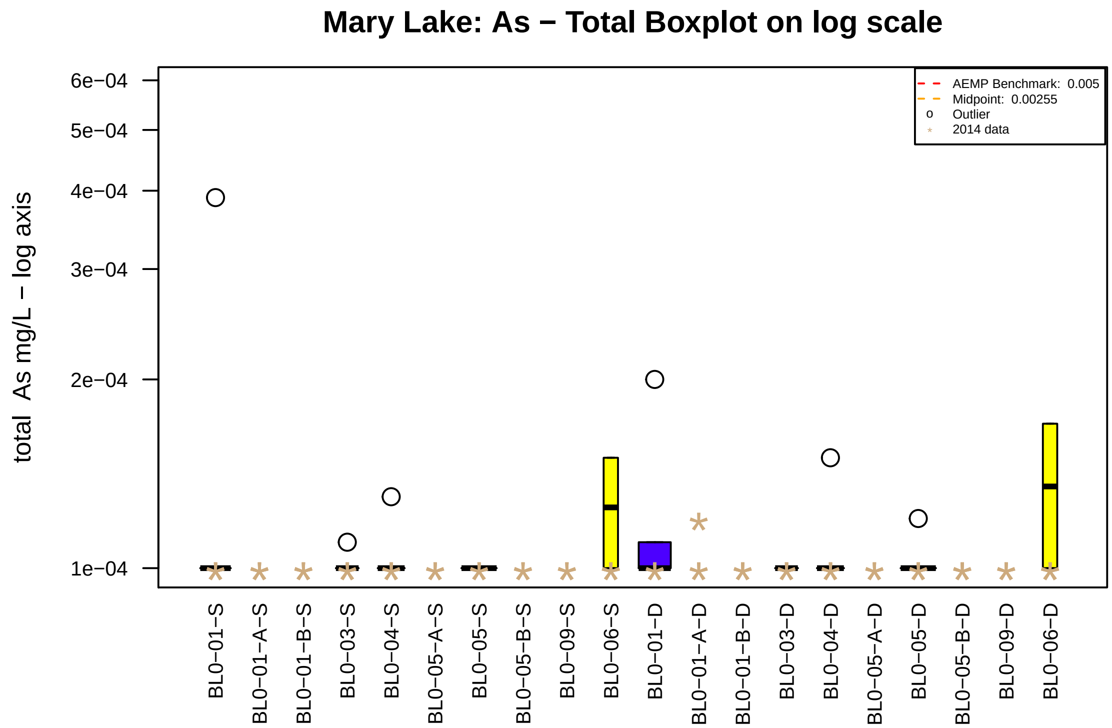

Mary Lake: As − Seasonal Boxplot
total As mg/L
0.00018
0.00016
0.00014
0.00012
0.00010
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

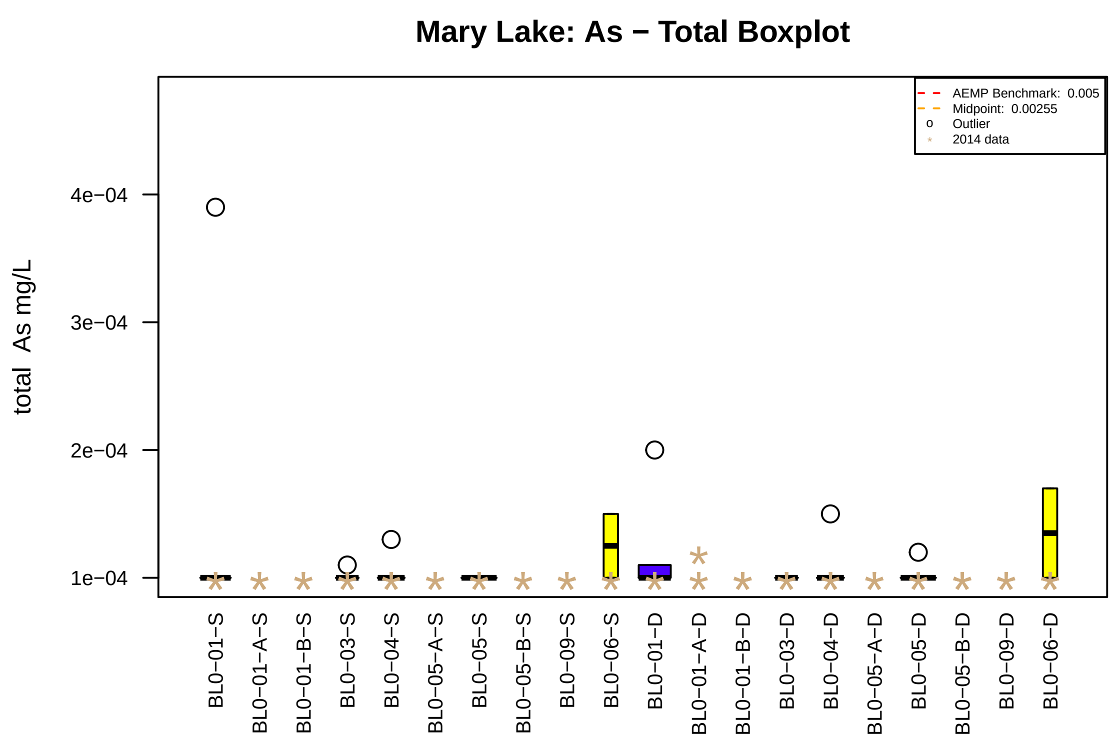

Mary Lake: As − Seasonal Scatter Plot
total As mg/L
7e−04
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

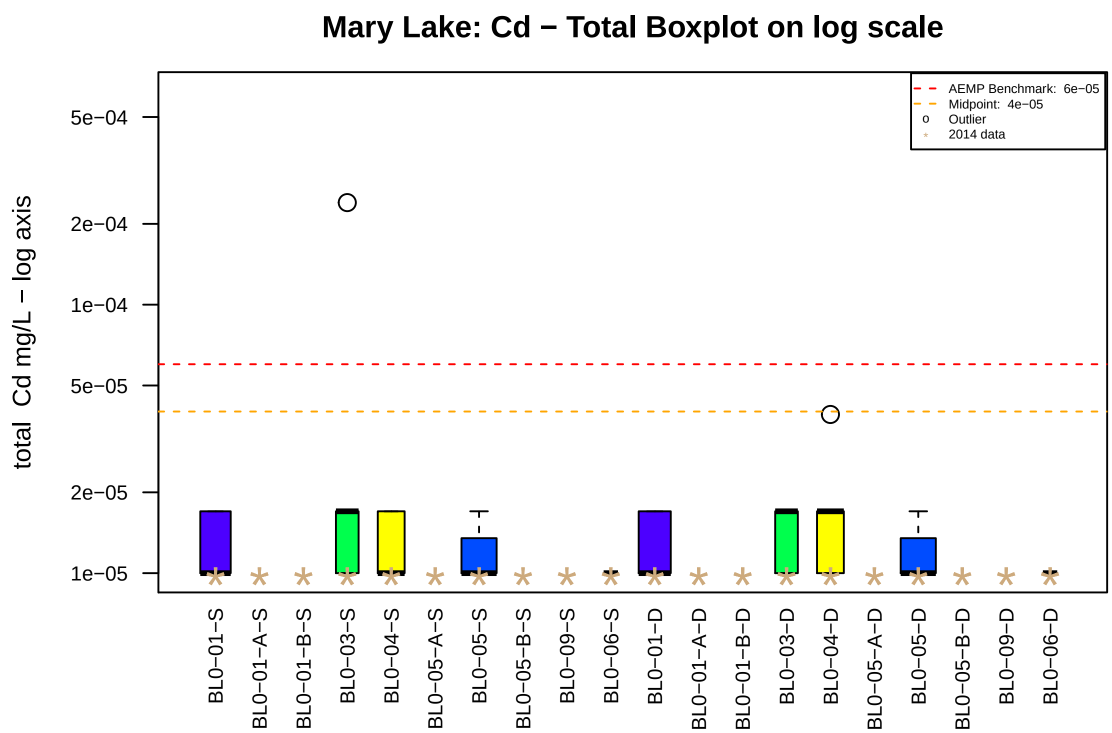

Mary Lake: As − Seasonal Boxplot
total As mg/L
7e−04
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

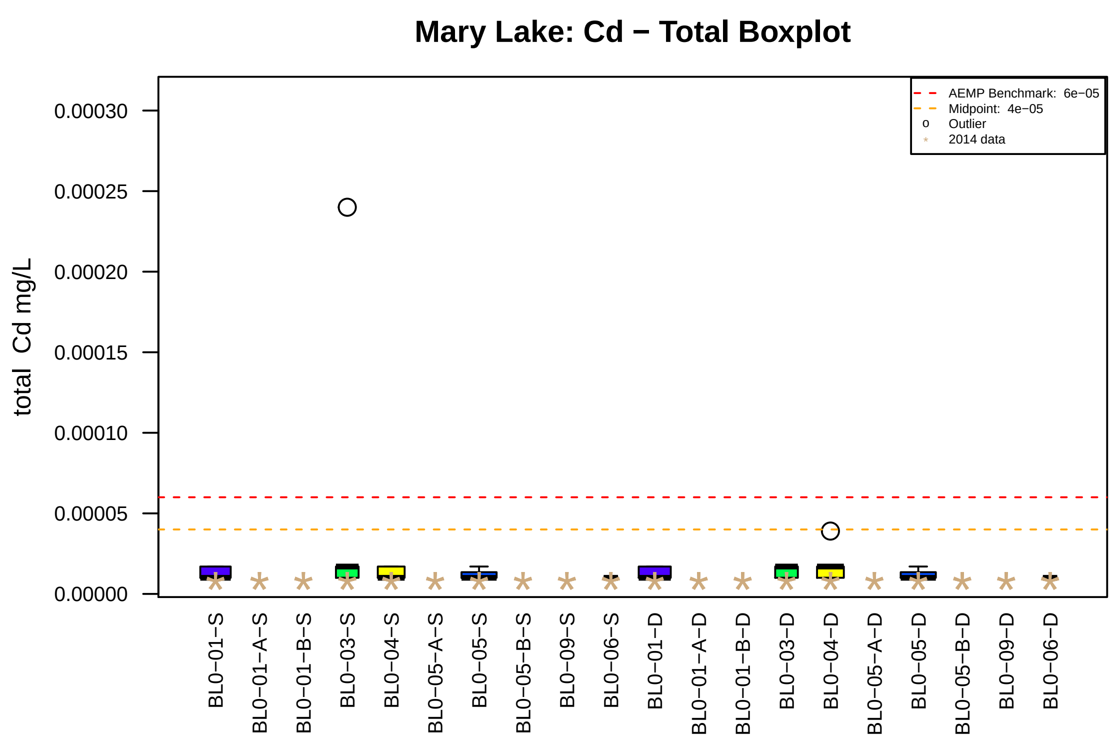

Mary Lake: As − Seasonal Scatter Plot
total As mg/L
0.00020
0.00018
0.00016
0.00014
0.00012
0.00010
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
BL0−06−S , BL0−06−D

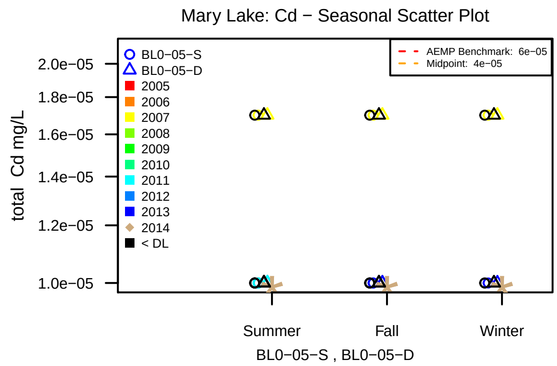

Mary Lake: As − Seasonal Boxplot
total As mg/L
0.00020
0.00018
0.00016
0.00014
0.00012
0.00010
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

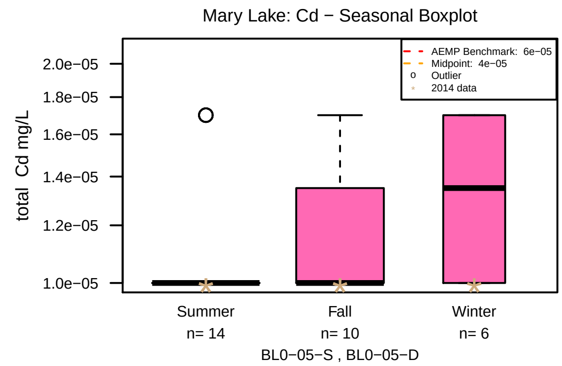

Mary Lake: As − Total Boxplot on log scale
total As mg/L − log axis
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

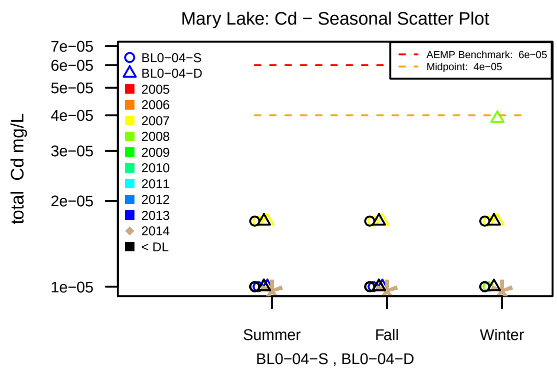

Mary Lake: As − Total Boxplot
total As mg/L
4e−04
3e−04
2e−04
1e−04
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

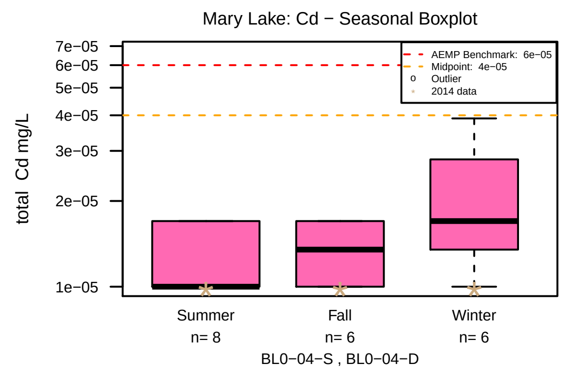

Mary Lake: Cd − Total Boxplot on log scale
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
total Cd mg/L − log axis
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

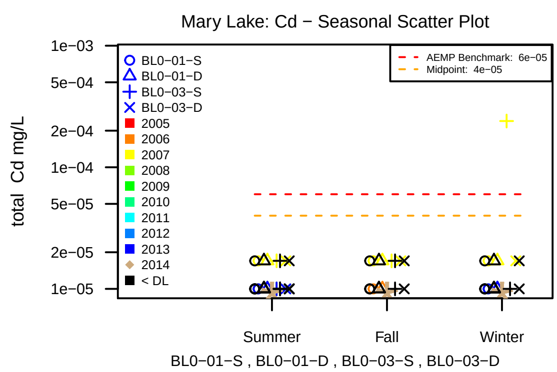

Mary Lake: Cd − Total Boxplot
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
total Cd mg/L
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

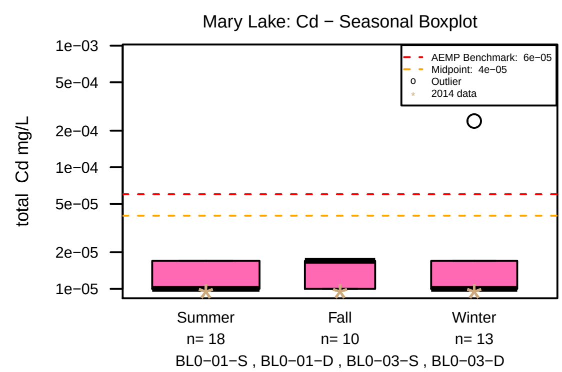

Mary Lake: Cd − Seasonal Scatter Plot
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Summer
Fall
Winter
BL0−05−S , BL0−05−D

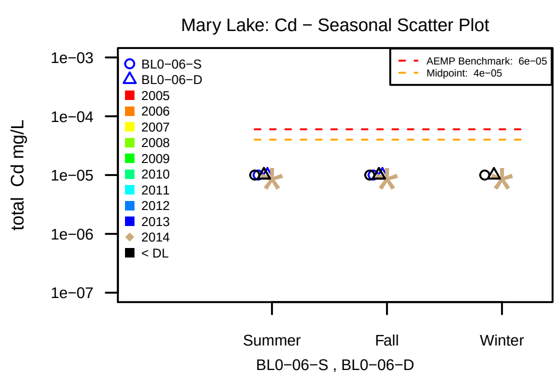

Mary Lake: Cd − Seasonal Boxplot
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

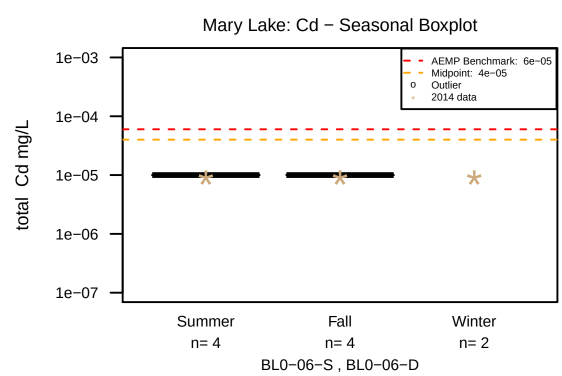

Mary Lake: Cd − Seasonal Scatter Plot
total Cd mg/L
7e−05
6e−05
5e−05
4e−05
3e−05
2e−05
1e−05
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Summer
Fall
Winter
BL0−04−S , BL0−04−D

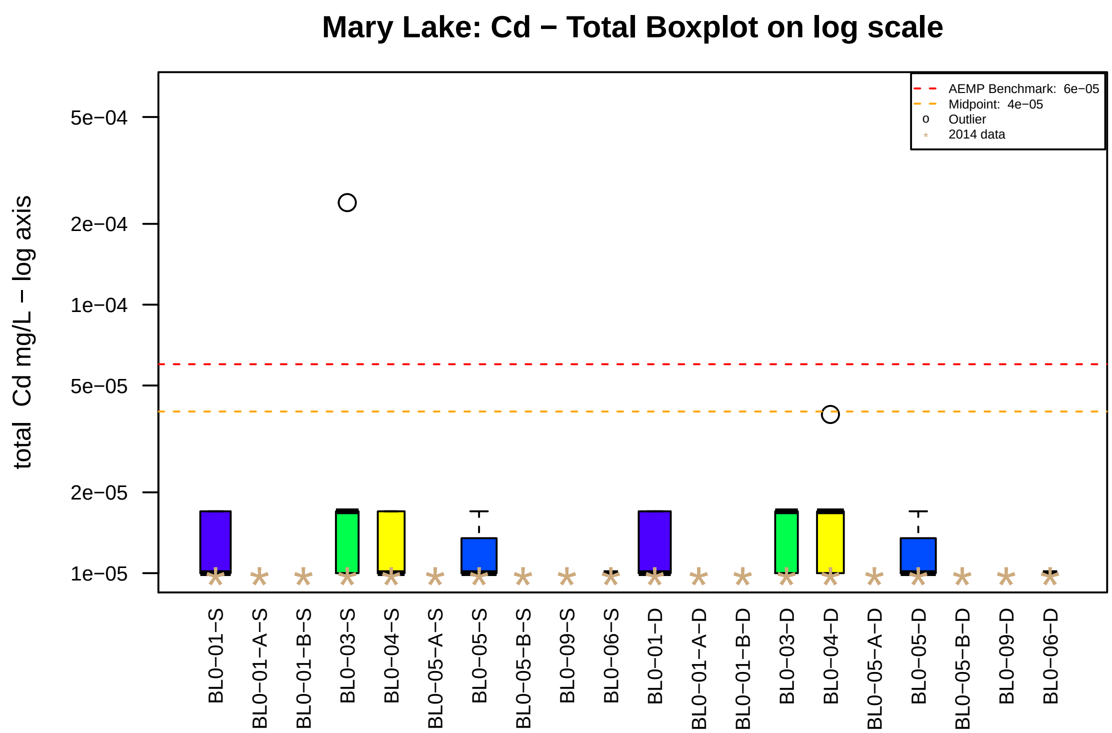

Mary Lake: Cd − Seasonal Boxplot
total Cd mg/L
7e−05
6e−05
5e−05
4e−05
3e−05
2e−05
1e−05
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

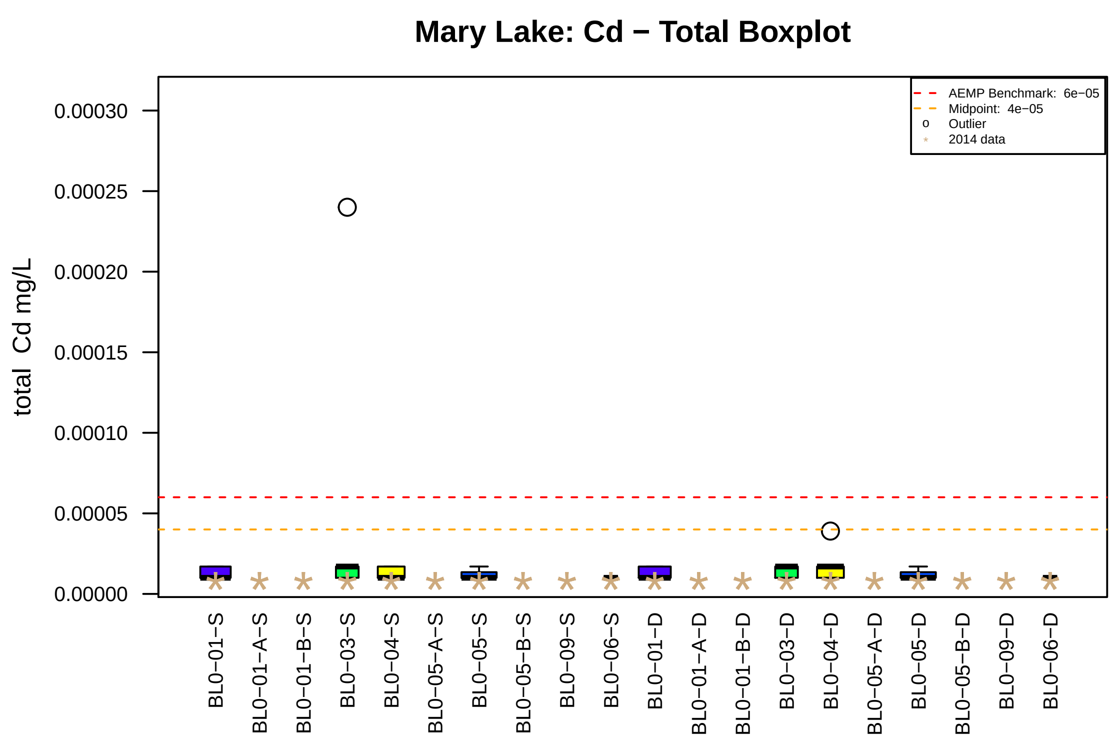

Mary Lake: Cd − Seasonal Scatter Plot
total Cd mg/L
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

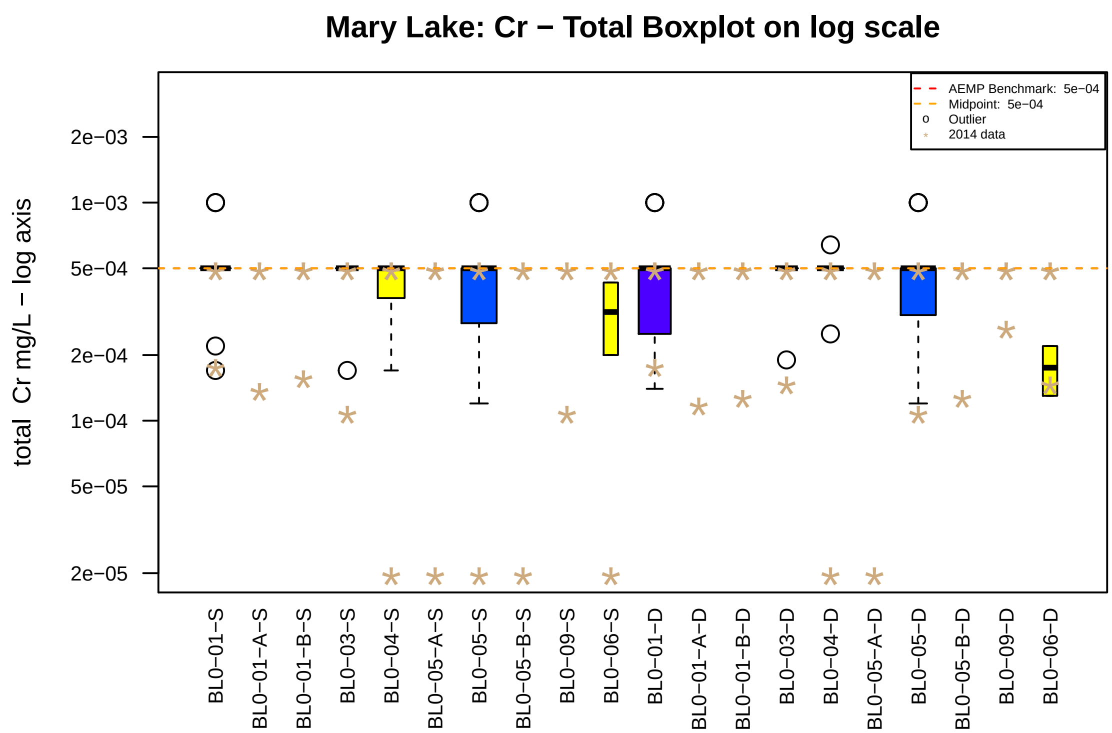

Mary Lake: Cd − Seasonal Boxplot
total Cd mg/L
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

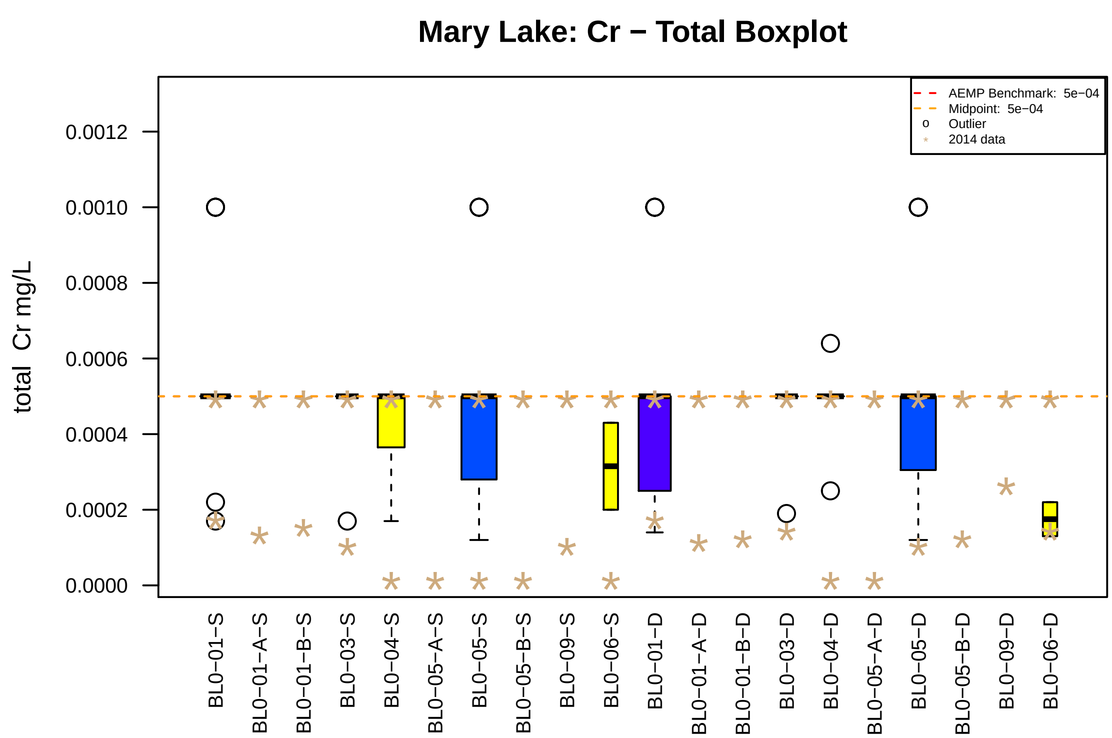

Mary Lake: Cd − Seasonal Scatter Plot
total Cd mg/L
1e−03
1e−04
1e−05
1e−06
1e−07
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Summer
Fall
Winter
BL0−06−S , BL0−06−D

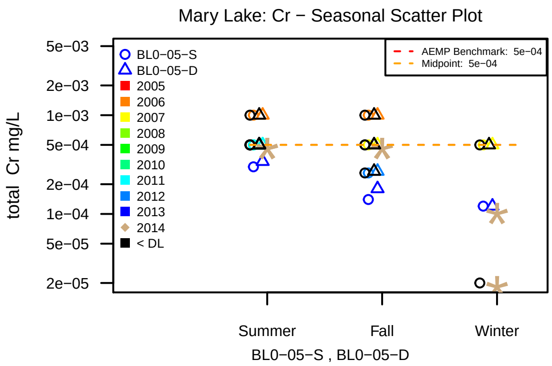

Mary Lake: Cd − Seasonal Boxplot
total Cd mg/L
1e−03
1e−04
1e−05
1e−06
1e−07
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

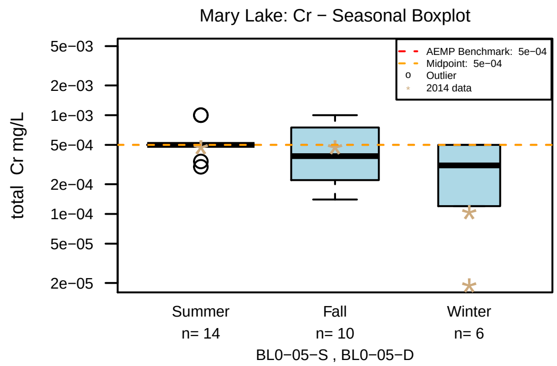

Mary Lake: Cd − Total Boxplot on log scale
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
total Cd mg/L − log axis
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

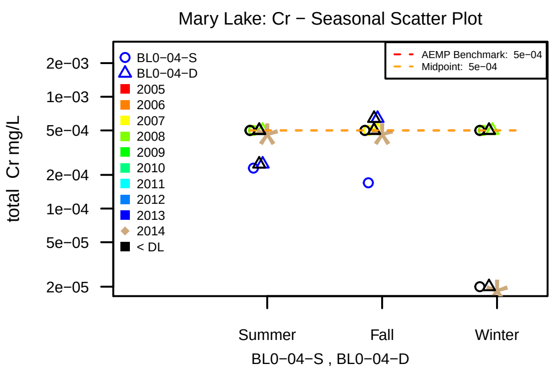

Mary Lake: Cd − Total Boxplot
AEMP Benchmark: 6e−05
Midpoint: 4e−05
Outlier
2014 data
total Cd mg/L
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

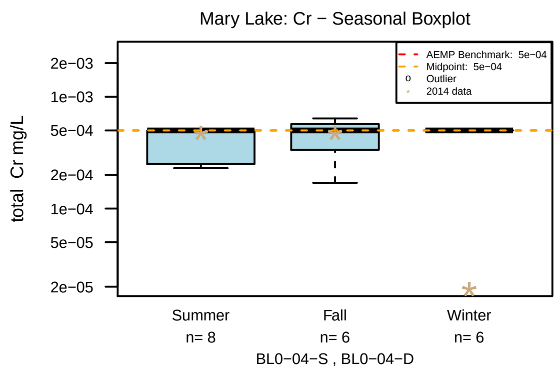

Mary Lake: Cr − Total Boxplot on log scale
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Outlier
2014 data
total Cr mg/L − log axis
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

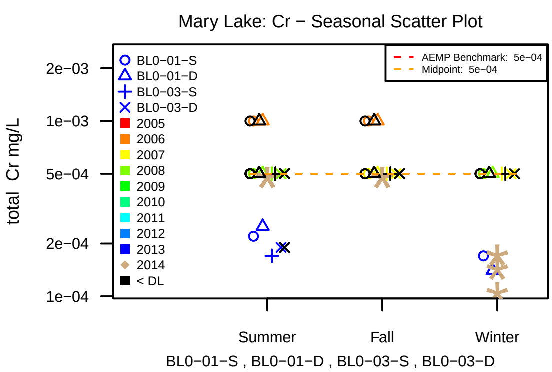

Mary Lake: Cr − Total Boxplot
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Outlier
2014 data
total Cr mg/L
0.0012
0.0010
0.0008
0.0006
0.0004
0.0002
0.0000
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

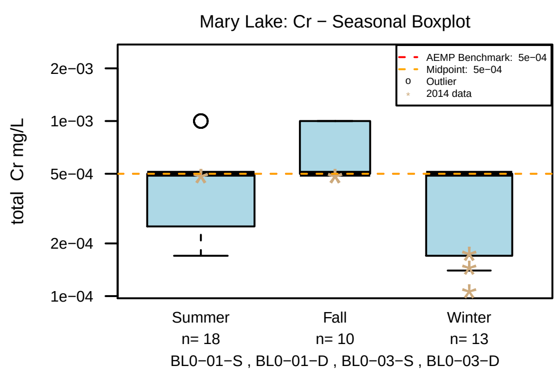

Mary Lake: Cr − Seasonal Scatter Plot
total Cr mg/L
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Summer
Fall
Winter
BL0−05−S , BL0−05−D

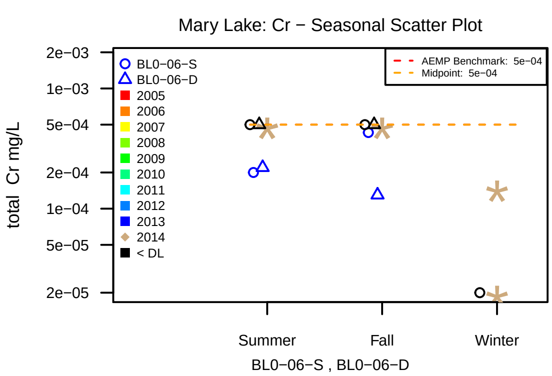

Mary Lake: Cr − Seasonal Boxplot
total Cr mg/L
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

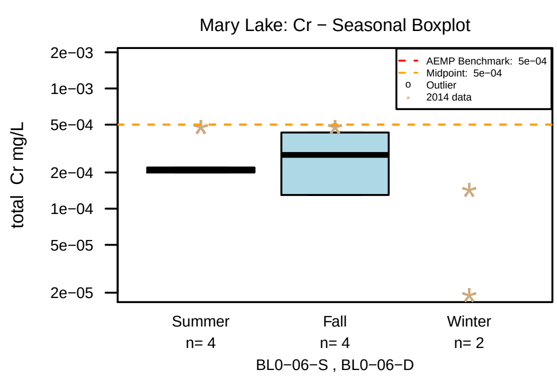

Mary Lake: Cr − Seasonal Scatter Plot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Summer
Fall
Winter
BL0−04−S , BL0−04−D

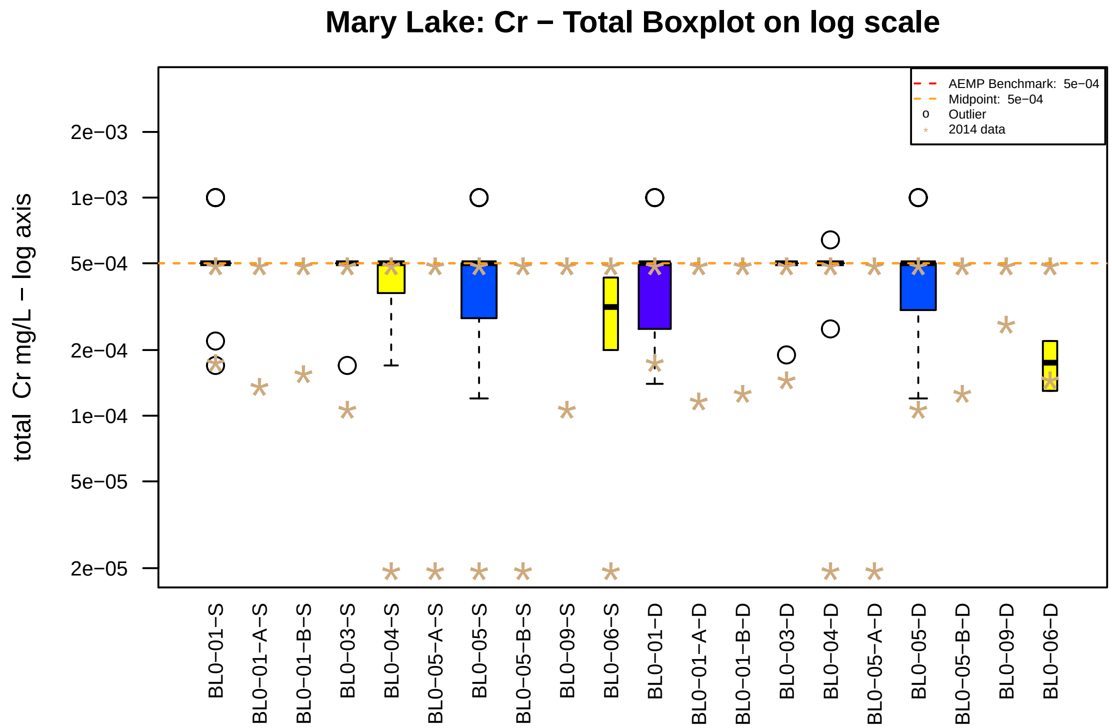

Mary Lake: Cr − Seasonal Boxplot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

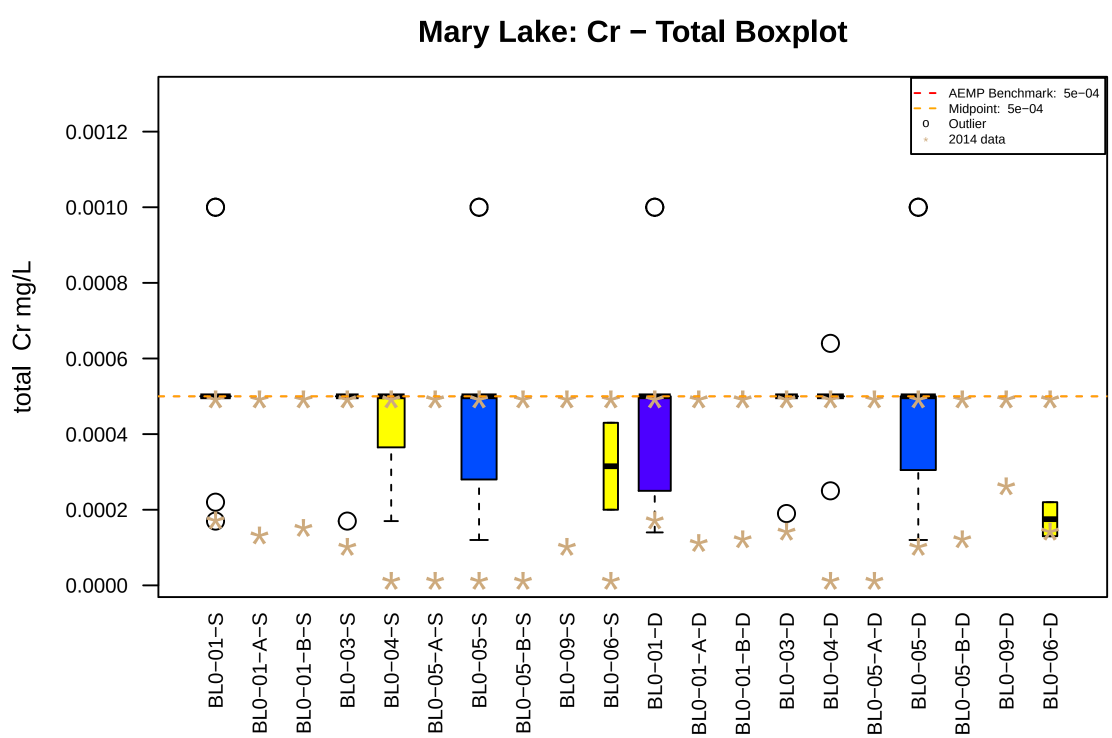

Mary Lake: Cr − Seasonal Scatter Plot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

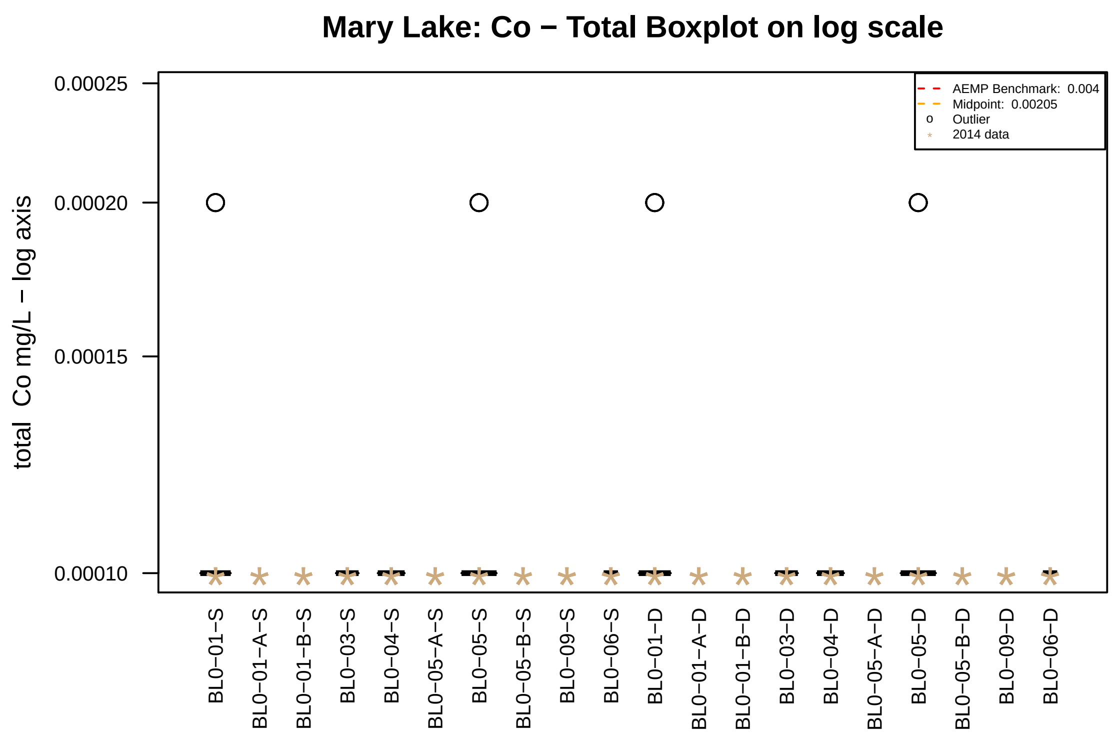

Mary Lake: Cr − Seasonal Boxplot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

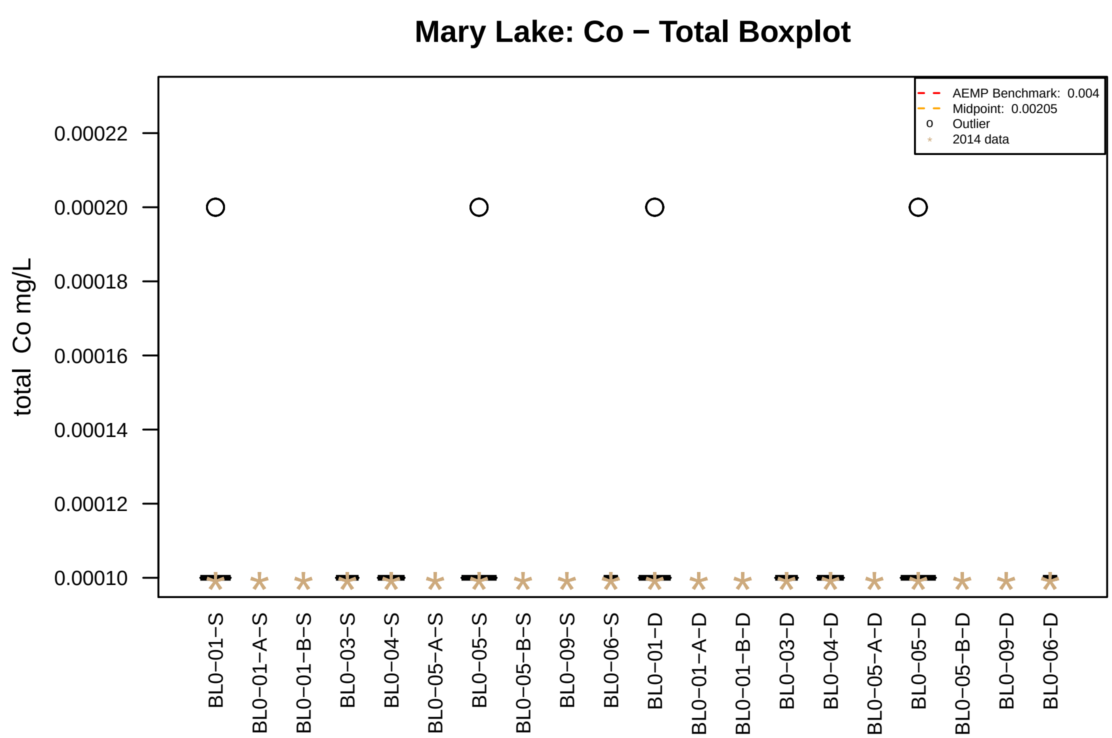

Mary Lake: Cr − Seasonal Scatter Plot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Summer
Fall
Winter
BL0−06−S , BL0−06−D

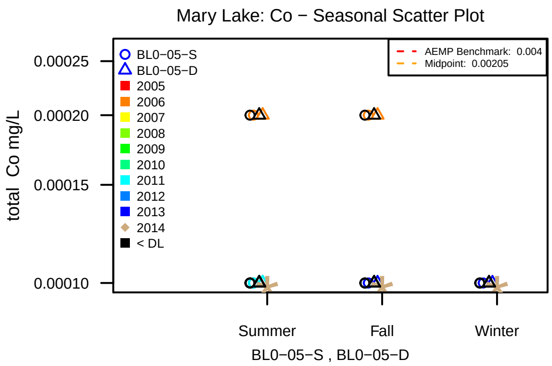

Mary Lake: Cr − Seasonal Boxplot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

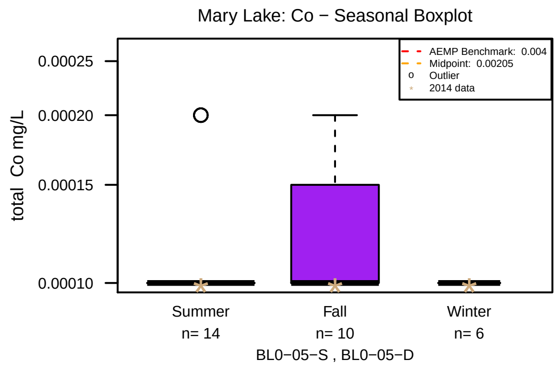

Mary Lake: Cr − Total Boxplot on log scale
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Outlier
2014 data
total Cr mg/L − log axis
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

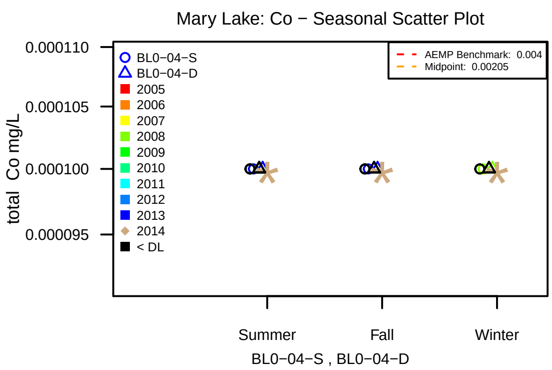

Mary Lake: Cr − Total Boxplot
AEMP Benchmark: 5e−04
Midpoint: 5e−04
Outlier
2014 data
total Cr mg/L
0.0012
0.0010
0.0008
0.0006
0.0004
0.0002
0.0000
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

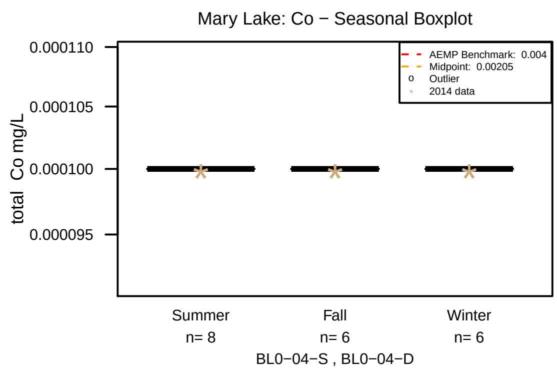

Mary Lake: Co − Total Boxplot on log scale
total Co mg/L − log axis
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

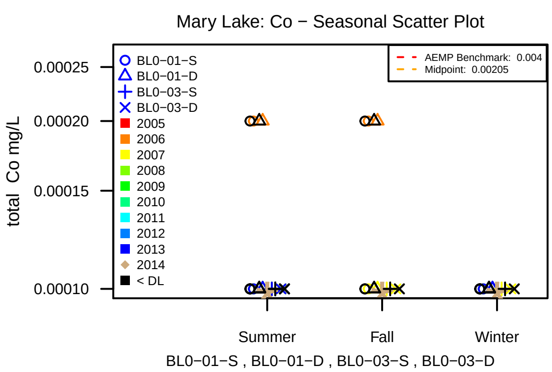

Mary Lake: Co − Total Boxplot
total Co mg/L
0.00022
0.00020
0.00018
0.00016
0.00014
0.00012
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

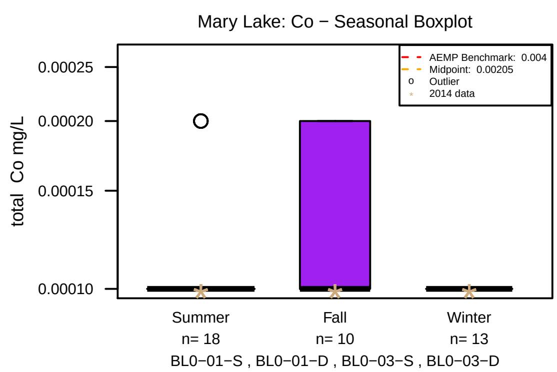

Mary Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.00025
0.00020
0.00015
0.00010
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
BL0−05−S , BL0−05−D

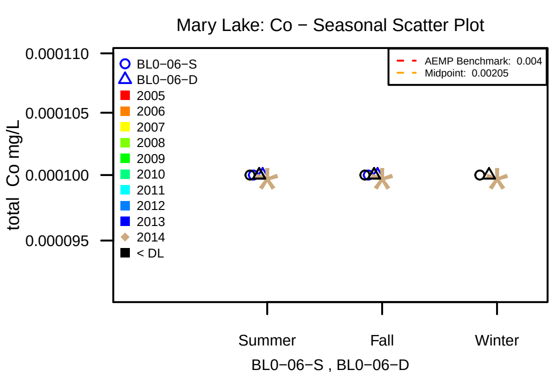

Mary Lake: Co − Seasonal Boxplot
total Co mg/L
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

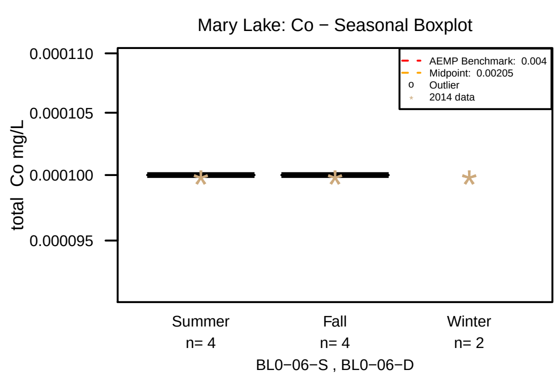

Mary Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
BL0−04−S , BL0−04−D

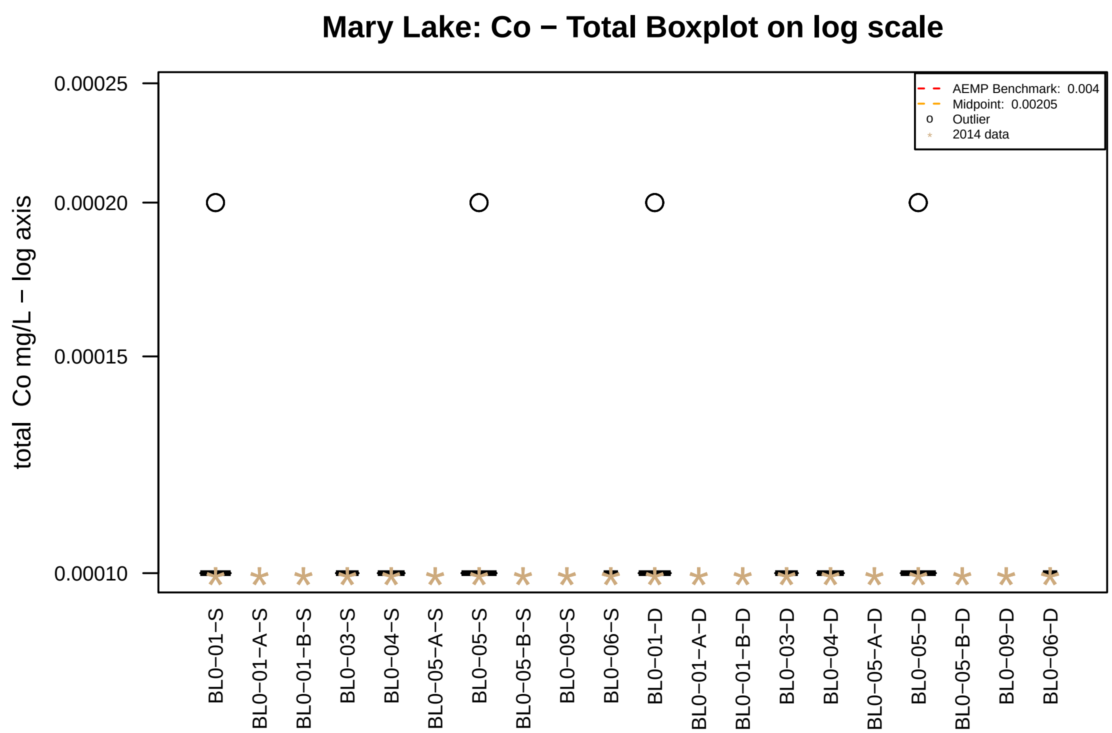

Mary Lake: Co − Seasonal Boxplot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

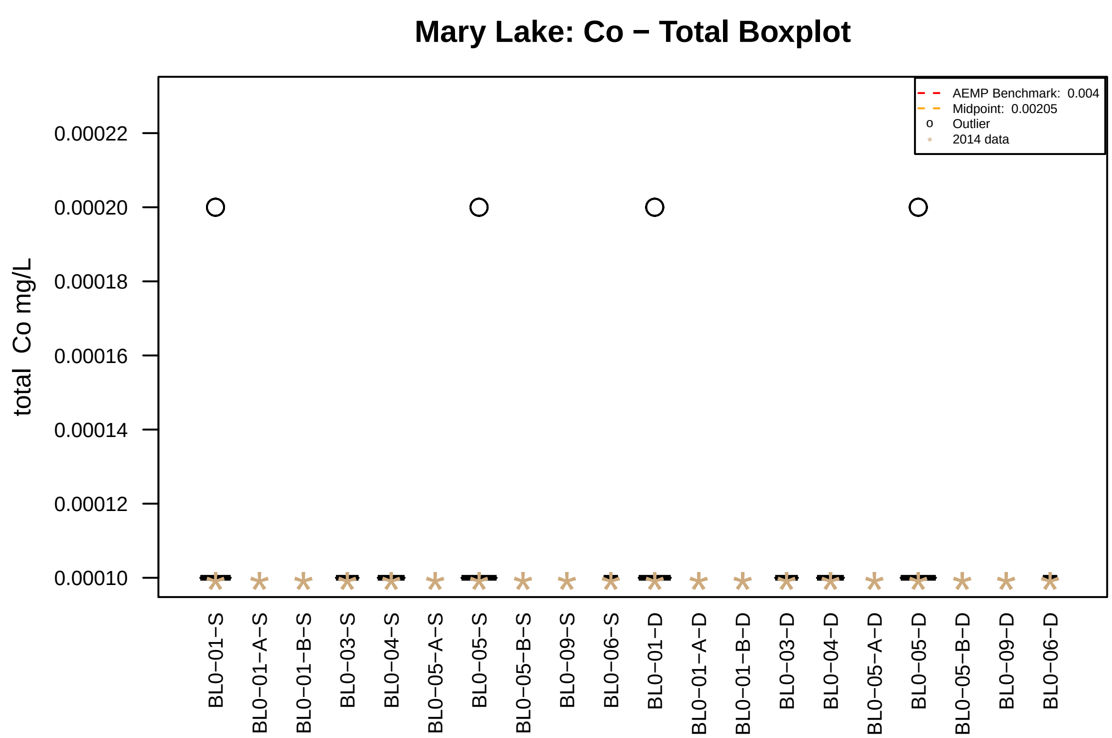

Mary Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.00025
0.00020
0.00015
0.00010
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

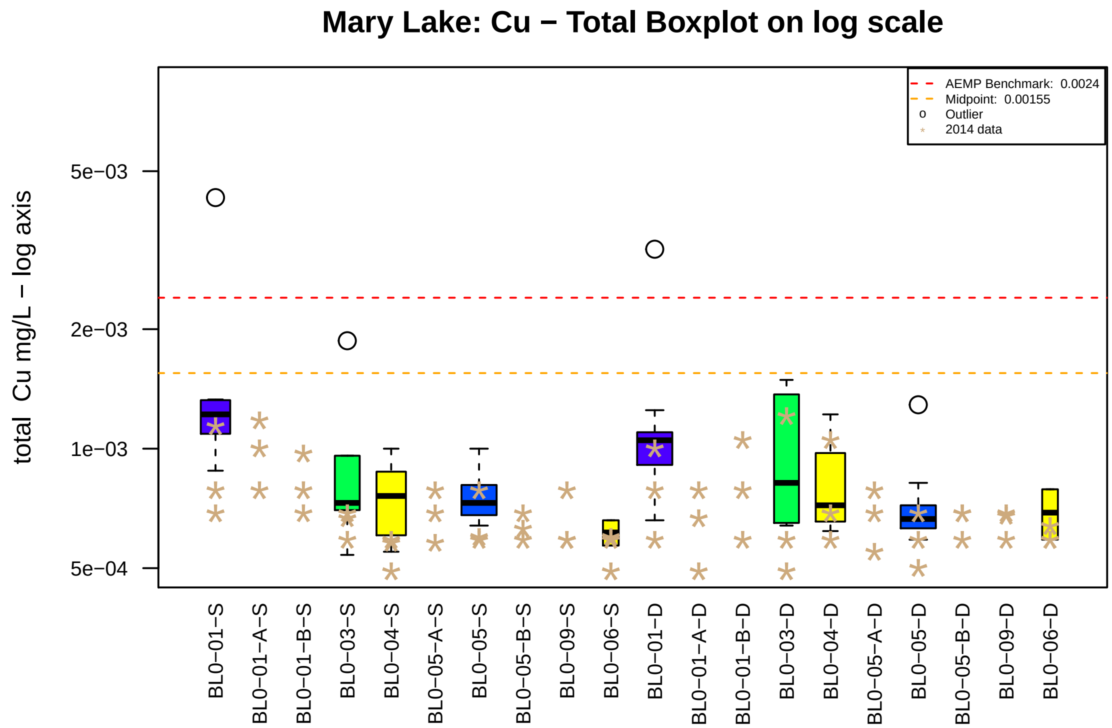

Mary Lake: Co − Seasonal Boxplot
total Co mg/L
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

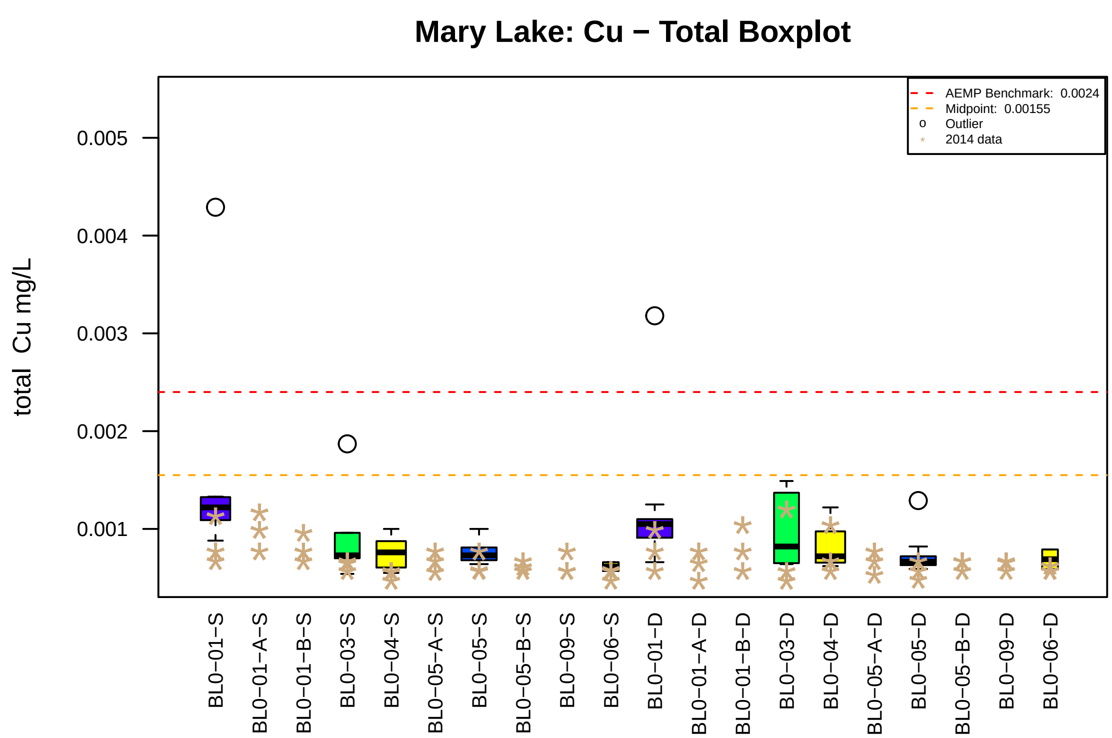

Mary Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
BL0−06−S , BL0−06−D

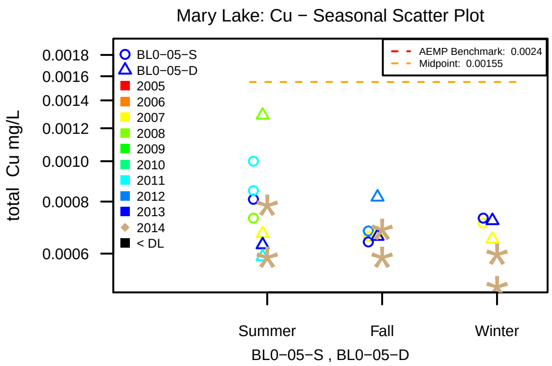

Mary Lake: Co − Seasonal Boxplot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

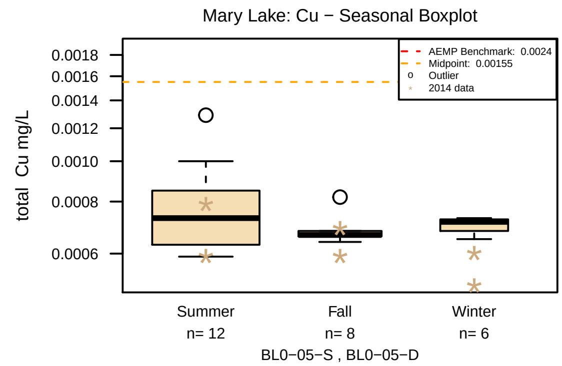

Mary Lake: Co − Total Boxplot on log scale
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L − log axis
0.00025
0.00020
0.00015
0.00010
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

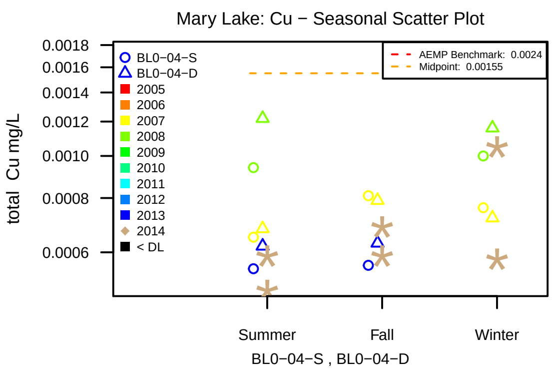

Mary Lake: Co − Total Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.00022
0.00020
0.00018
0.00016
0.00014
0.00012
0.00010
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

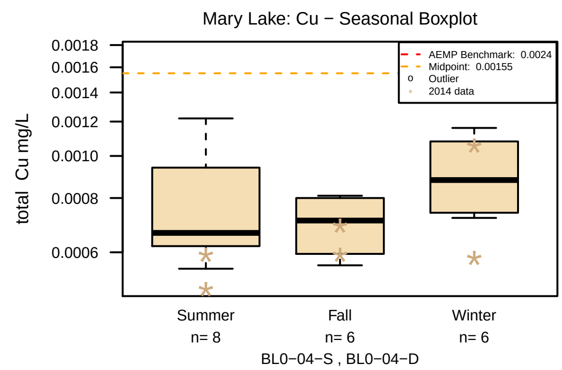

Mary Lake: Cu – Total Boxplot on log scale
AEMP Benchmark: 0.0024
Midpoint: 0.00155
Outlier
2014 data
total Cu mg/L – log axis
5e−03
2e−03
1e−03
5e−04
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

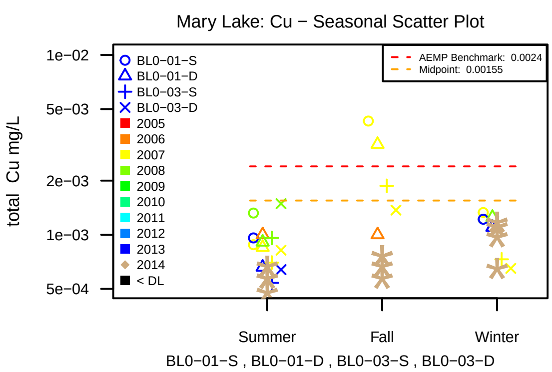

Mary Lake: Cu – Total Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
Outlier
2014 data
total Cu mg/L
0.005
0.004
0.003
0.002
0.001
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

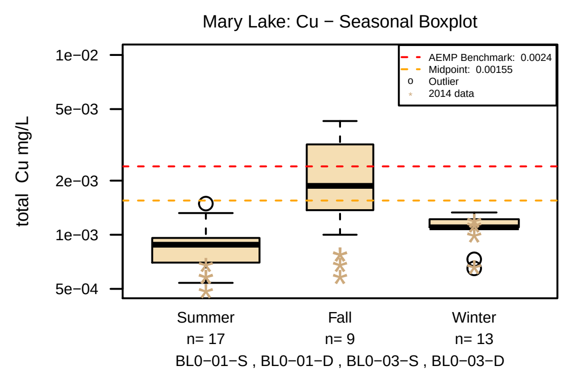

Mary Lake: Cu − Seasonal Scatter Plot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
0.0018
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
total Cu mg/L
Summer
Fall
Winter
BL0−05−S , BL0−05−D

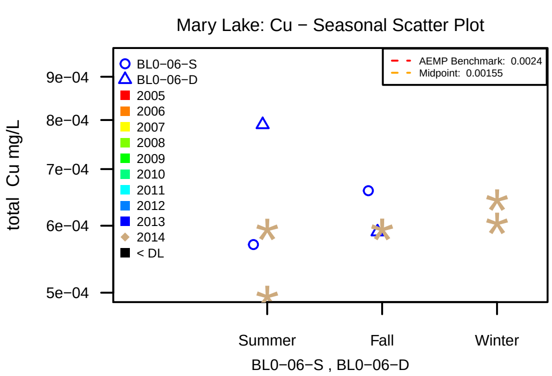

Mary Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
Outlier
2014 data
0.0018
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
total Cu mg/L
Summer
n= 12
Fall
n= 8
Winter
n= 6
BL0−05−S , BL0−05−D

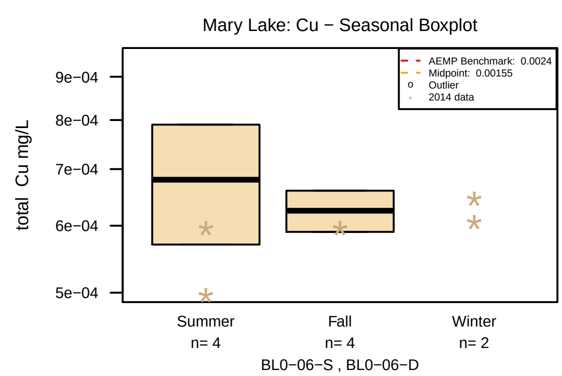

Mary Lake: Cu − Seasonal Scatter Plot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
0.0018
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
total Cu mg/L
Summer
Fall
Winter
BL0−04−S , BL0−04−D

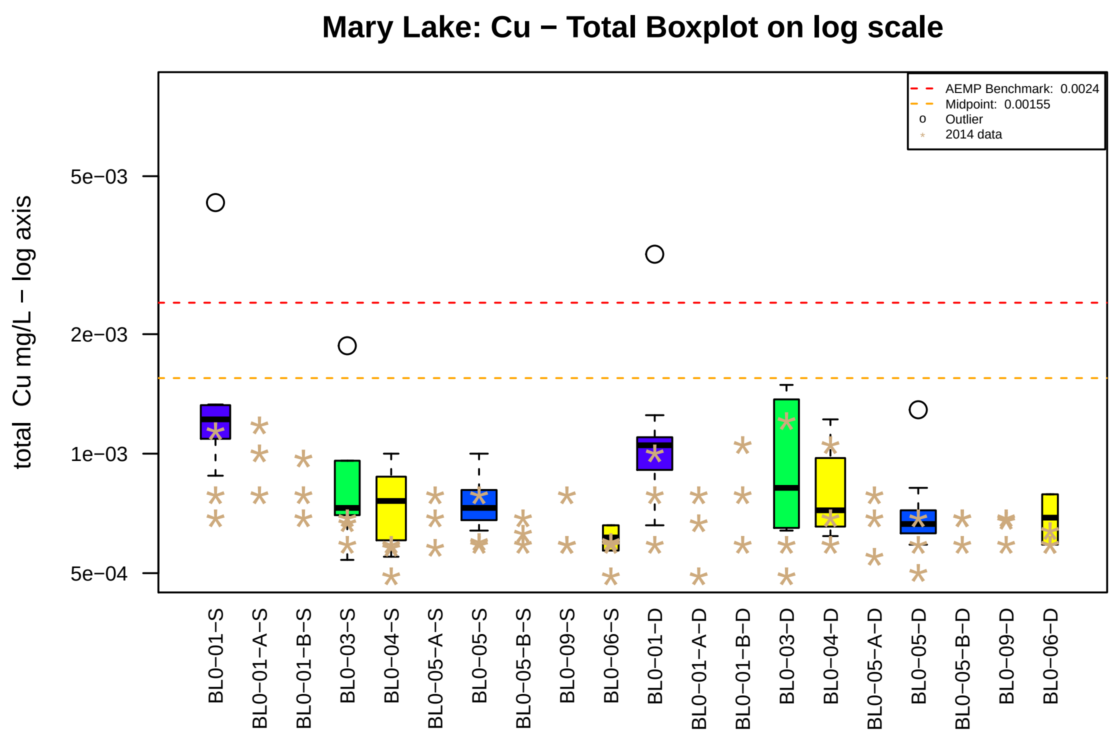

Mary Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
Outlier
2014 data
0.0018
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
total Cu mg/L
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

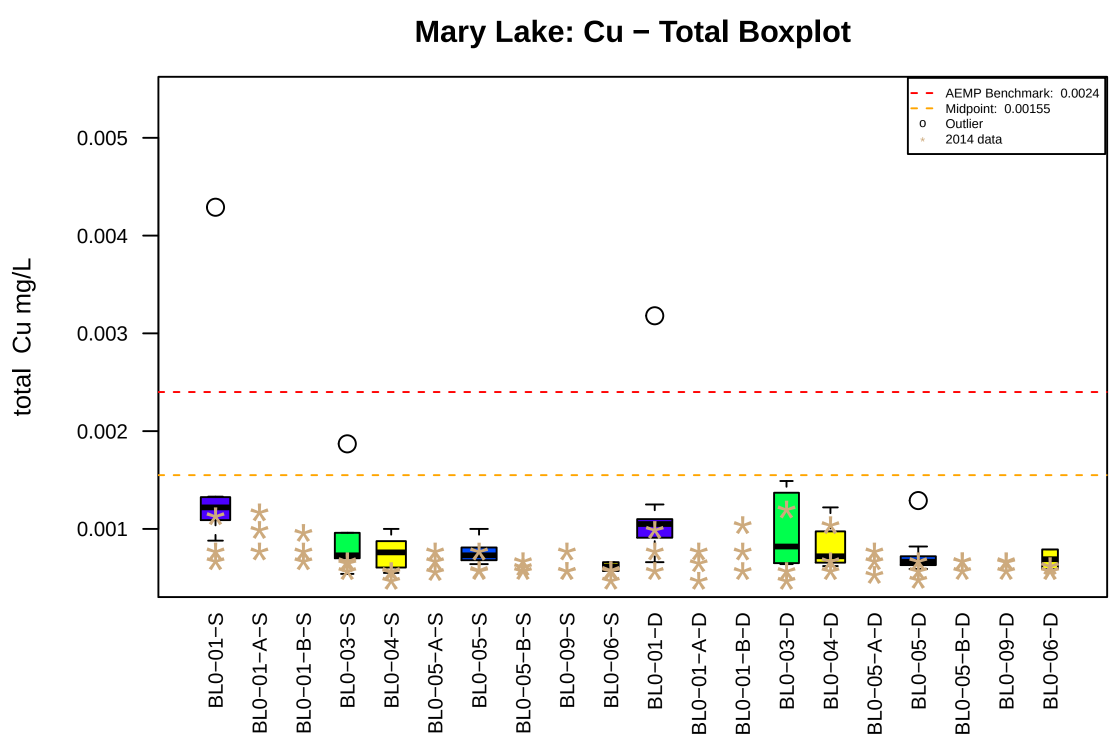

Mary Lake: Cu − Seasonal Scatter Plot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
1e−02
5e−03
2e−03
1e−03
5e−04
total Cu mg/L
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

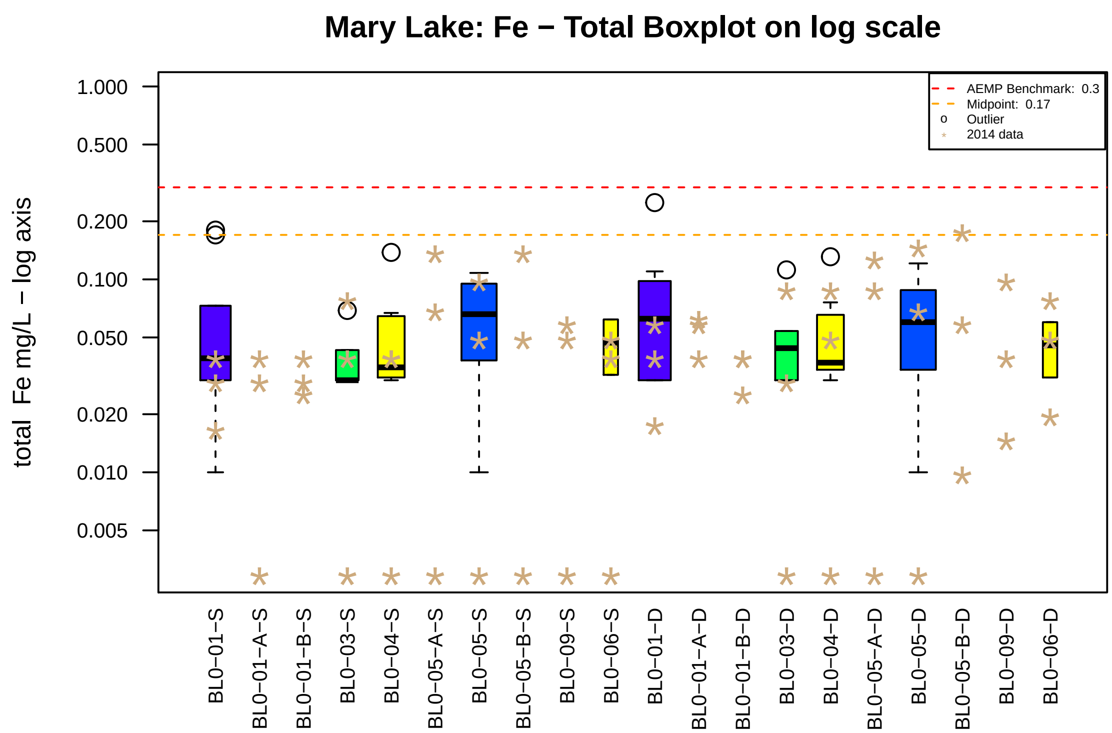

Mary Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
Outlier
2014 data
1e−02
5e−03
2e−03
1e−03
5e−04
total Cu mg/L
Summer
n= 17
Fall
n= 9
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

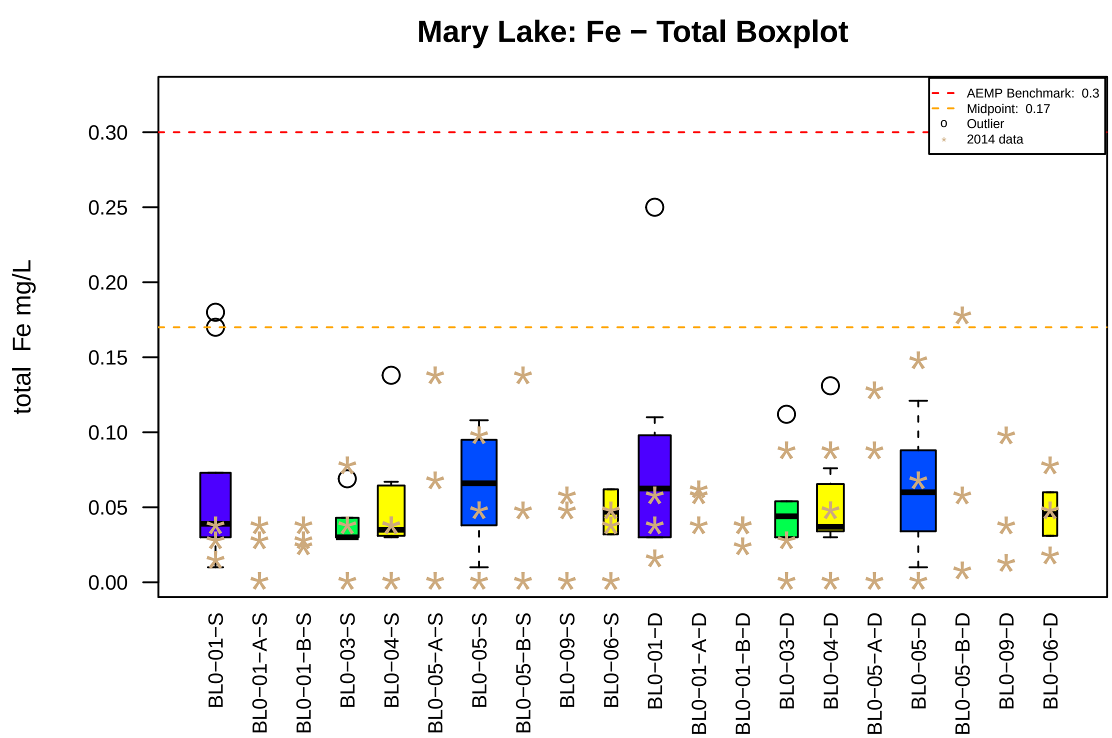

Mary Lake: Cu − Seasonal Scatter Plot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
9e−04
8e−04
7e−04
6e−04
5e−04
total Cu mg/L
Summer
Fall
Winter
BL0−06−S , BL0−06−D

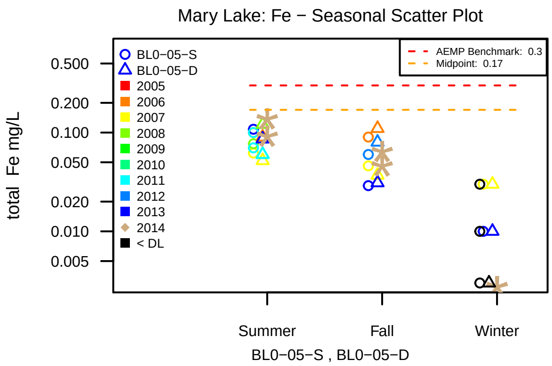

Mary Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
Outlier
2014 data
9e−04
8e−04
7e−04
6e−04
5e−04
total Cu mg/L
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

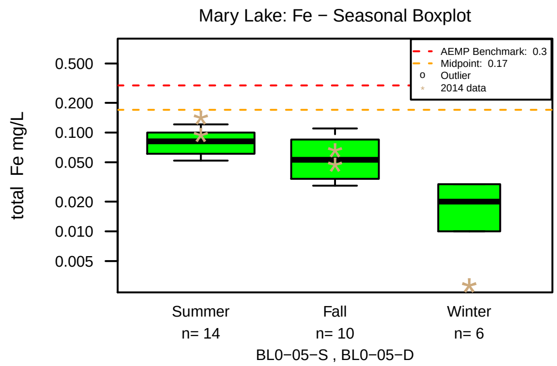

Mary Lake: Cu − Total Boxplot on log scale
AEMP Benchmark: 0.0024
Midpoint: 0.00155
Outlier
2014 data
total Cu mg/L − log axis
5e−03
2e−03
1e−03
5e−04
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

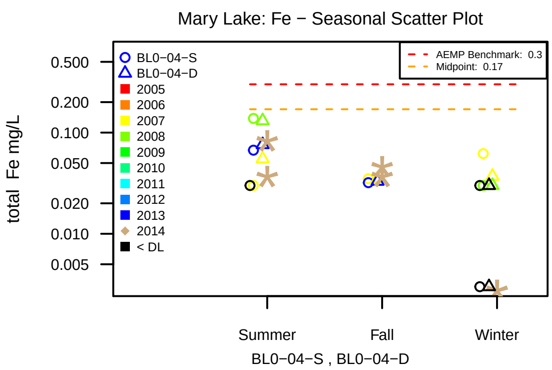

Mary Lake: Cu − Total Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.00155
Outlier
2014 data
total Cu mg/L
0.005
0.004
0.003
0.002
0.001
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

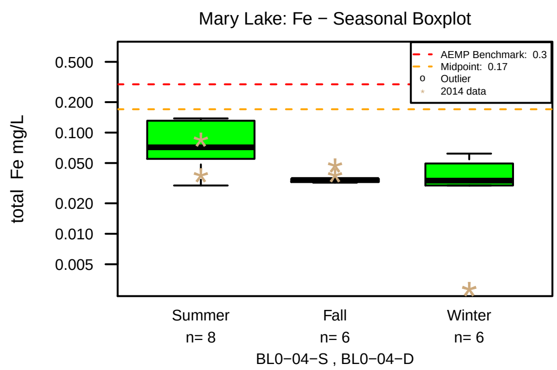

Mary Lake: Fe − Total Boxplot on log scale
total Fe mg/L − log axis
1.000
0.500
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.17
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

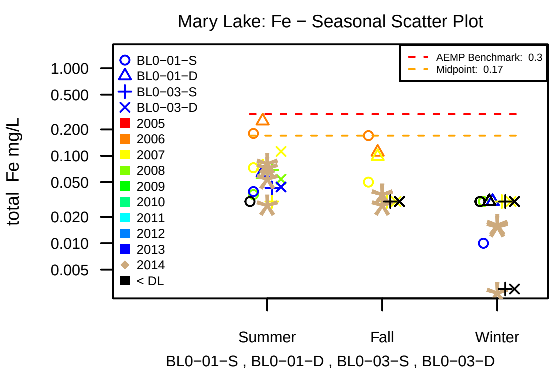

Mary Lake: Fe − Total Boxplot
total Fe mg/L
0.30
0.25
0.20
0.15
0.10
0.05
0.00
AEMP Benchmark: 0.3
Midpoint: 0.17
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

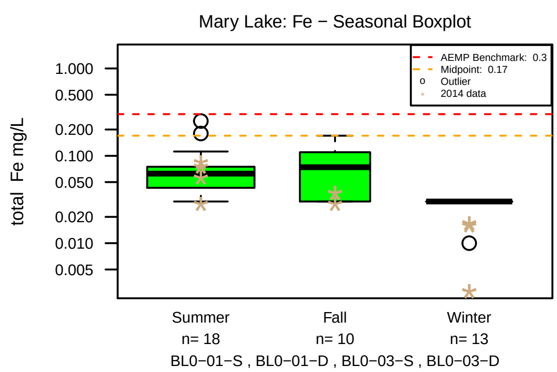

Mary Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.17
Summer
Fall
Winter
BL0−05−S , BL0−05−D

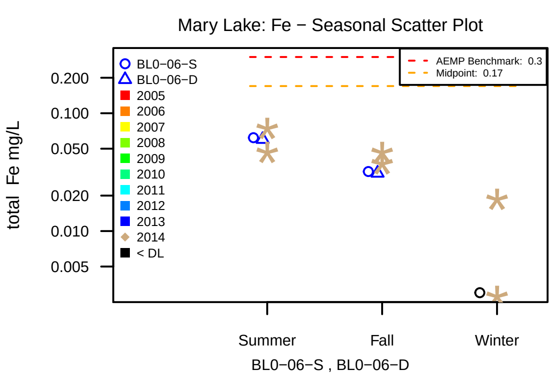

Mary Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.17
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

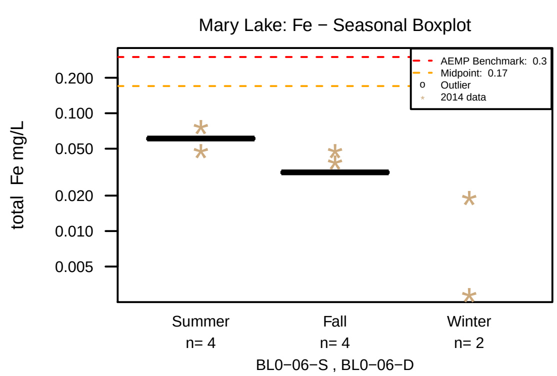

Mary Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.17
Summer
Fall
Winter
BL0−04−S , BL0−04−D

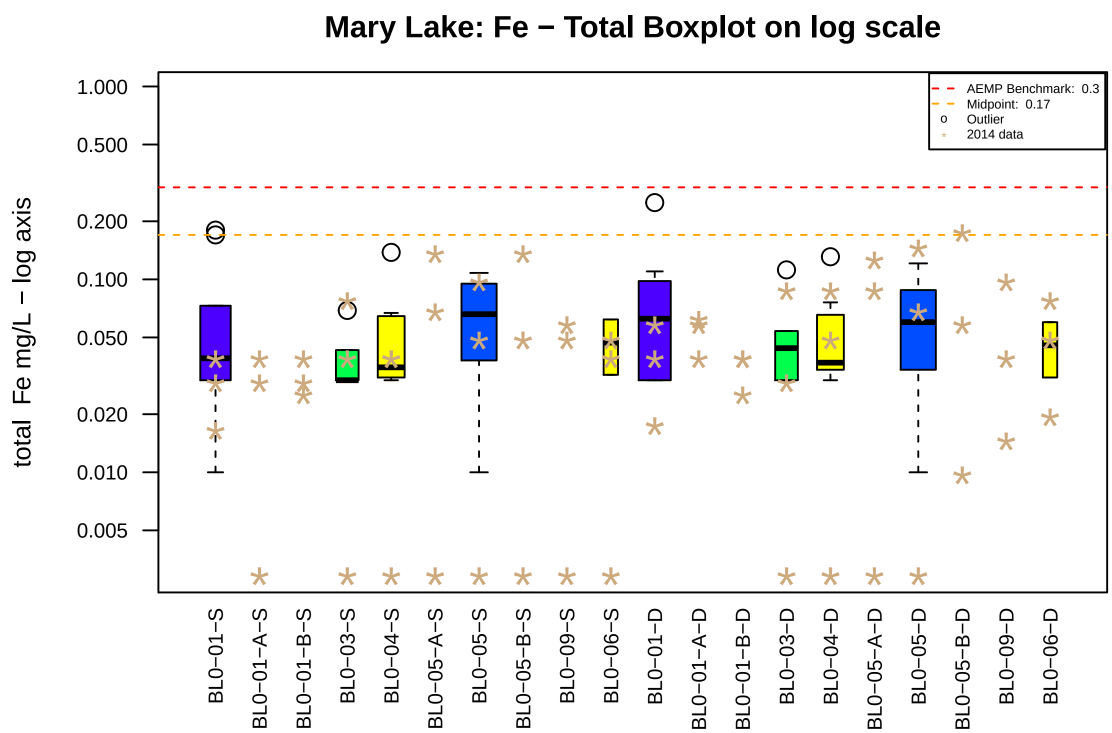

Mary Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.17
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

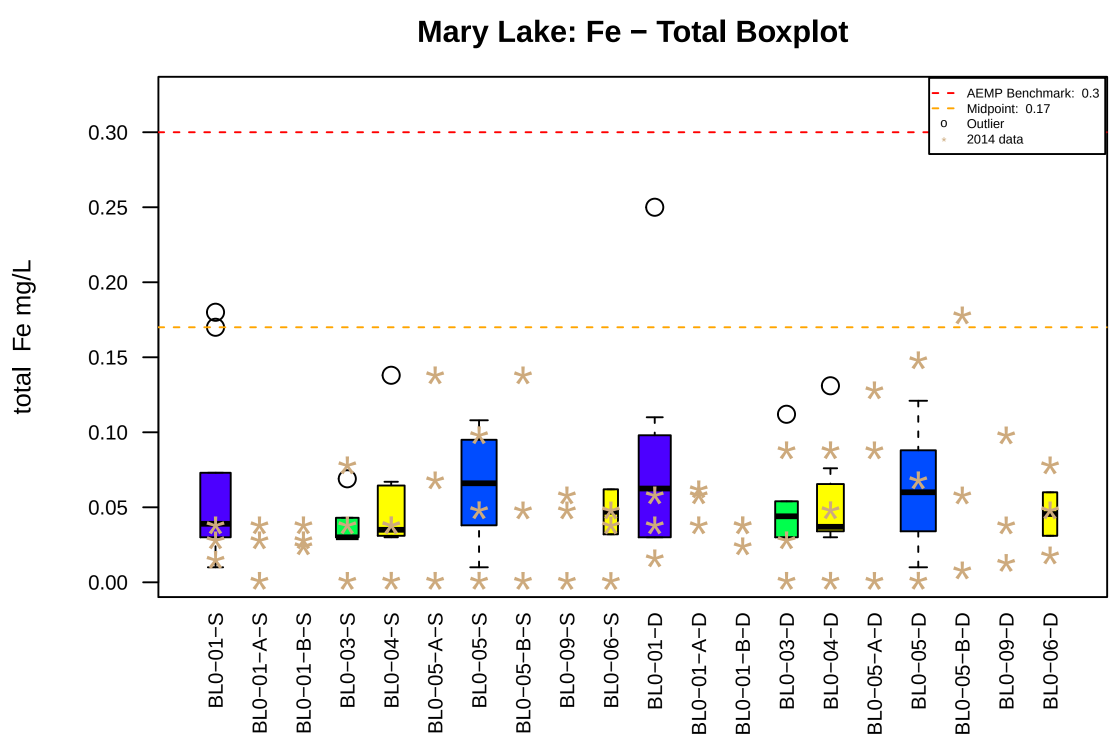

Mary Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
1.000
0.500
0.200
0.100
0.050
0.020
0.010
0.005
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.17
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

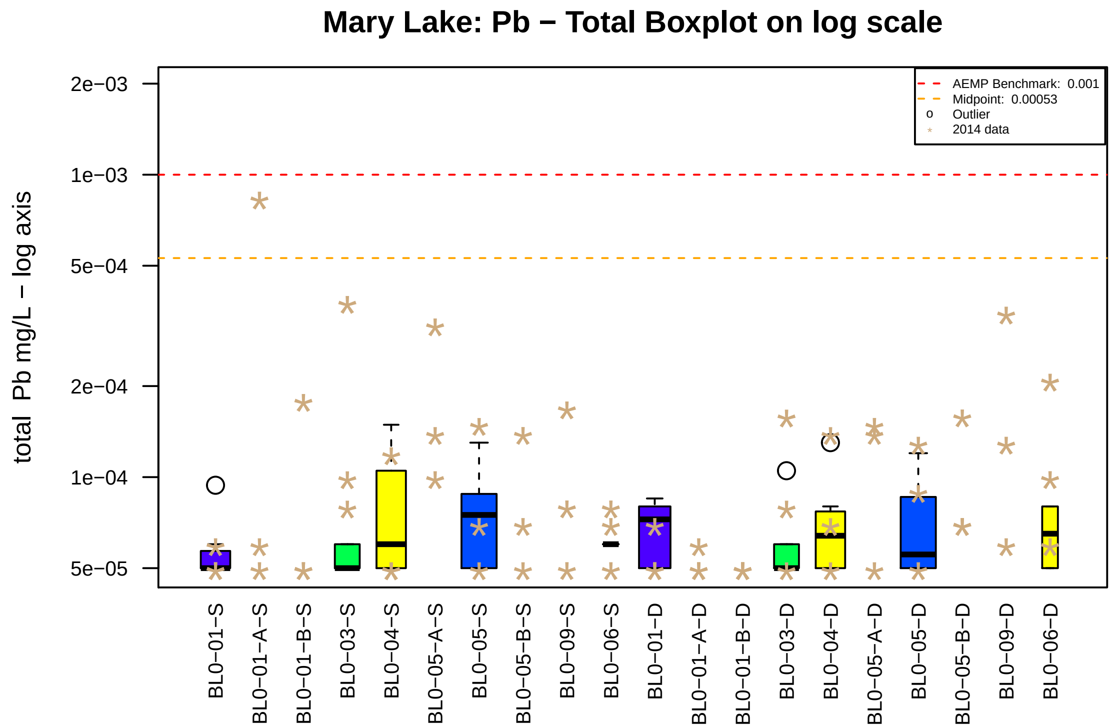

Mary Lake: Fe − Seasonal Boxplot
total Fe mg/L
1.000
0.500
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.17
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

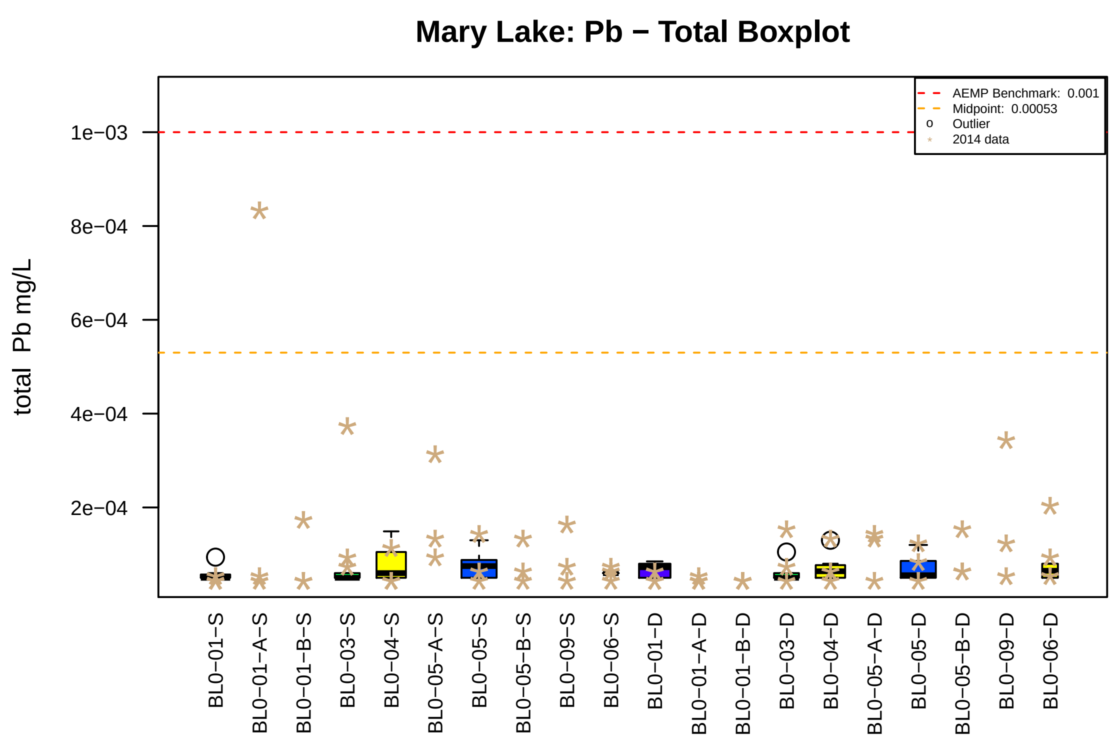

Mary Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.200
0.100
0.050
0.020
0.010
0.005
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.17
Summer
Fall
Winter
BL0−06−S , BL0−06−D

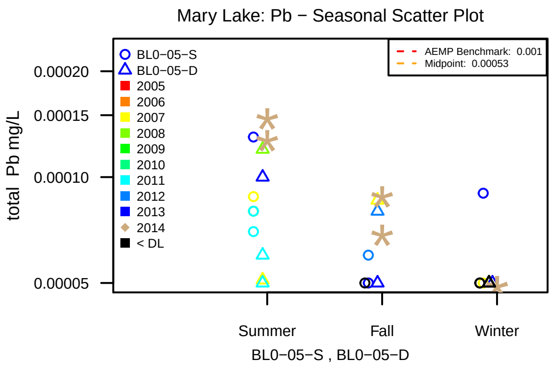

Mary Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.17
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

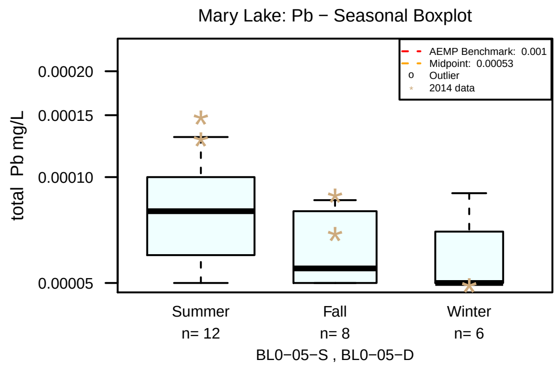

Mary Lake: Fe − Total Boxplot on log scale
total Fe mg/L − log axis
1.000
0.500
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.17
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

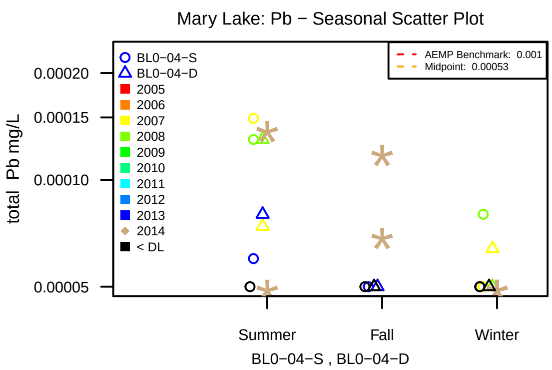

Mary Lake: Fe − Total Boxplot
total Fe mg/L
0.30
0.25
0.20
0.15
0.10
0.05
0.00
AEMP Benchmark: 0.3
Midpoint: 0.17
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

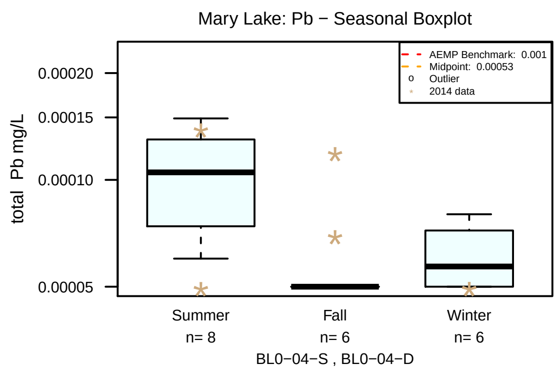

Mary Lake: Pb – Total Boxplot on log scale
total Pb mg/L – log axis
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00053
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

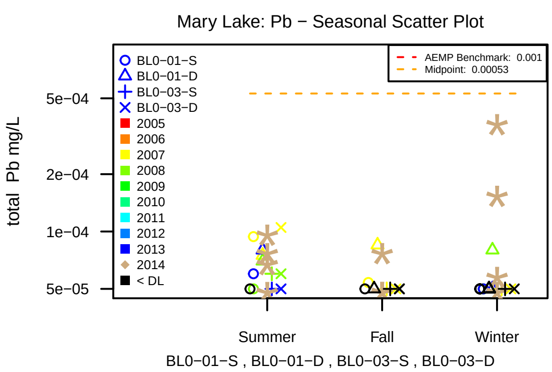

Mary Lake: Pb – Total Boxplot
total Pb mg/L
1e−03
8e−04
6e−04
4e−04
2e−04
AEMP Benchmark: 0.001
Midpoint: 0.00053
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

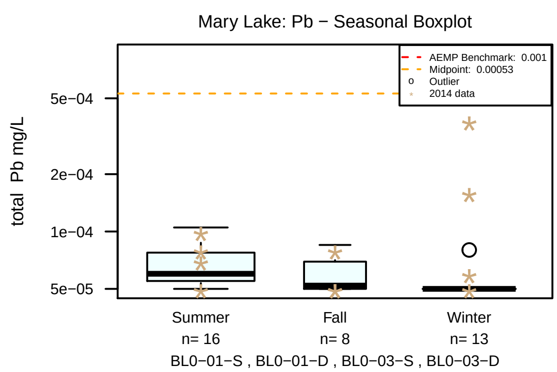

Mary Lake: Pb − Seasonal Scatter Plot
total Pb mg/L
0.00020
0.00015
0.00010
0.00005
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00053
Summer
Fall
Winter
BL0−05−S , BL0−05−D

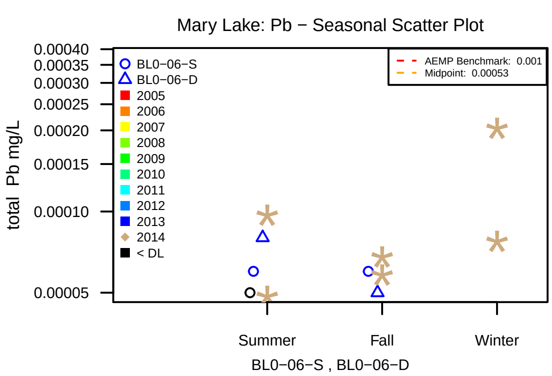

Mary Lake: Pb − Seasonal Boxplot
total Pb mg/L
0.00020
0.00015
0.00010
0.00005
AEMP Benchmark: 0.001
Midpoint: 0.00053
Outlier
2014 data
Summer
n= 12
Fall
n= 8
Winter
n= 6
BL0−05−S , BL0−05−D

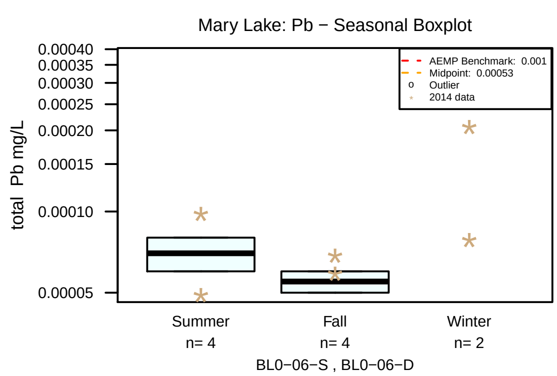

Mary Lake: Pb − Seasonal Scatter Plot
total Pb mg/L
0.00020
0.00015
0.00010
0.00005
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00053
Summer
Fall
Winter
BL0−04−S , BL0−04−D

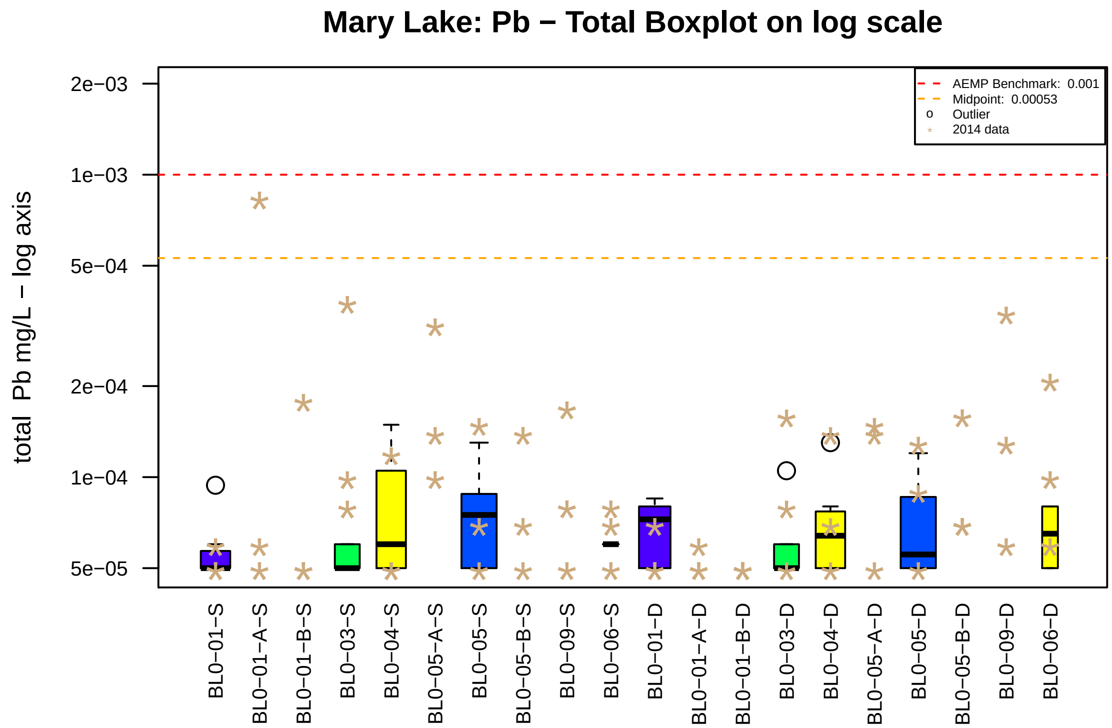

Mary Lake: Pb − Seasonal Boxplot
total Pb mg/L
0.00020
0.00015
0.00010
0.00005
AEMP Benchmark: 0.001
Midpoint: 0.00053
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

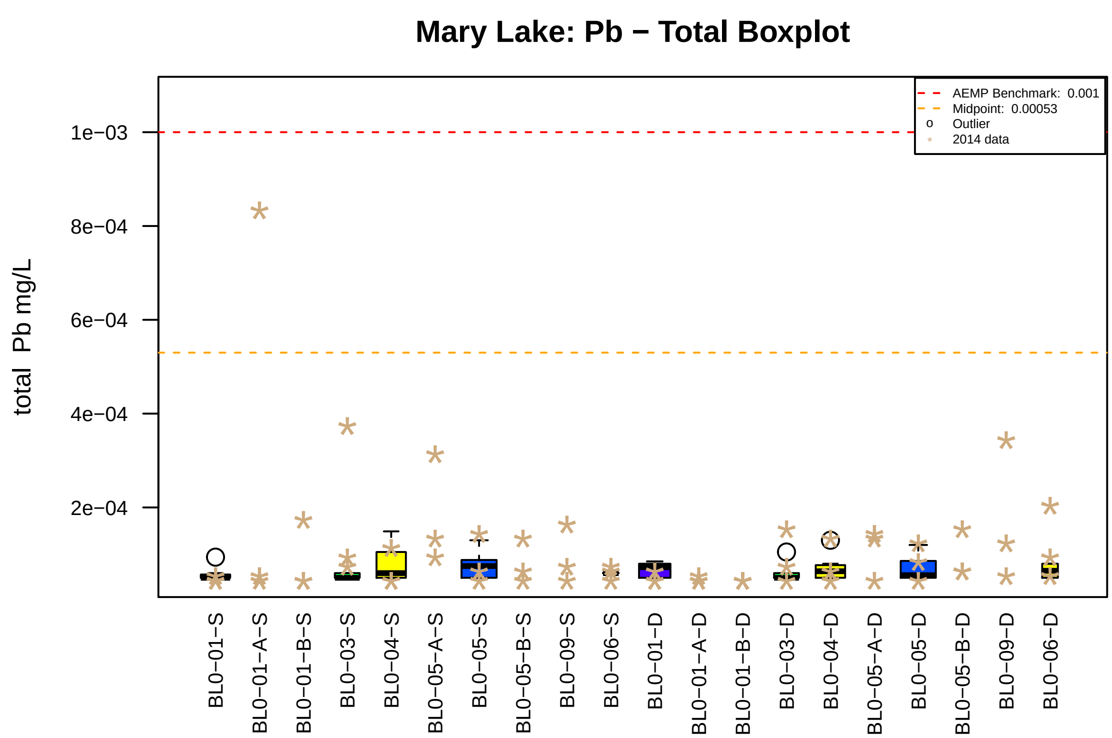

Mary Lake: Pb − Seasonal Scatter Plot
total Pb mg/L
5e−04
2e−04
1e−04
5e−05
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00053
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D


Mary Lake: Pb − Seasonal Boxplot
total Pb mg/L
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00053
Outlier
2014 data
Summer
n= 16
Fall
n= 8
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

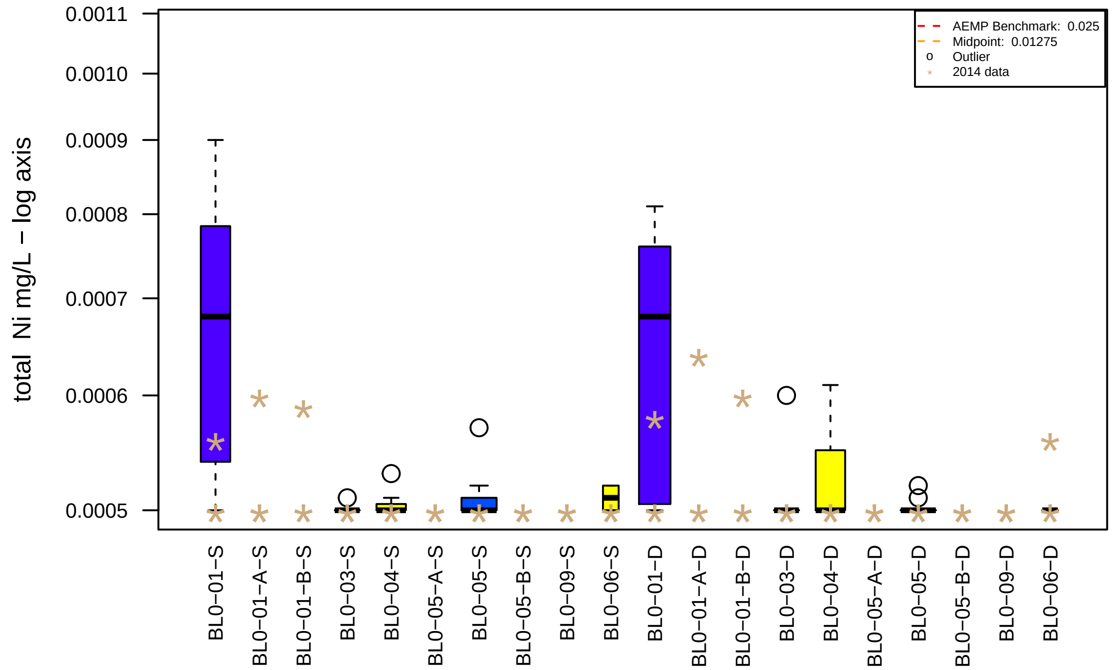

Mary Lake: Pb − Seasonal Scatter Plot
total Pb mg/L
0.00040
0.00035
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00053
Summer
Fall
Winter
BL0−06−S , BL0−06−D


Mary Lake: Pb − Seasonal Boxplot
total Pb mg/L
0.00040
0.00035
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
AEMP Benchmark: 0.001
Midpoint: 0.00053
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

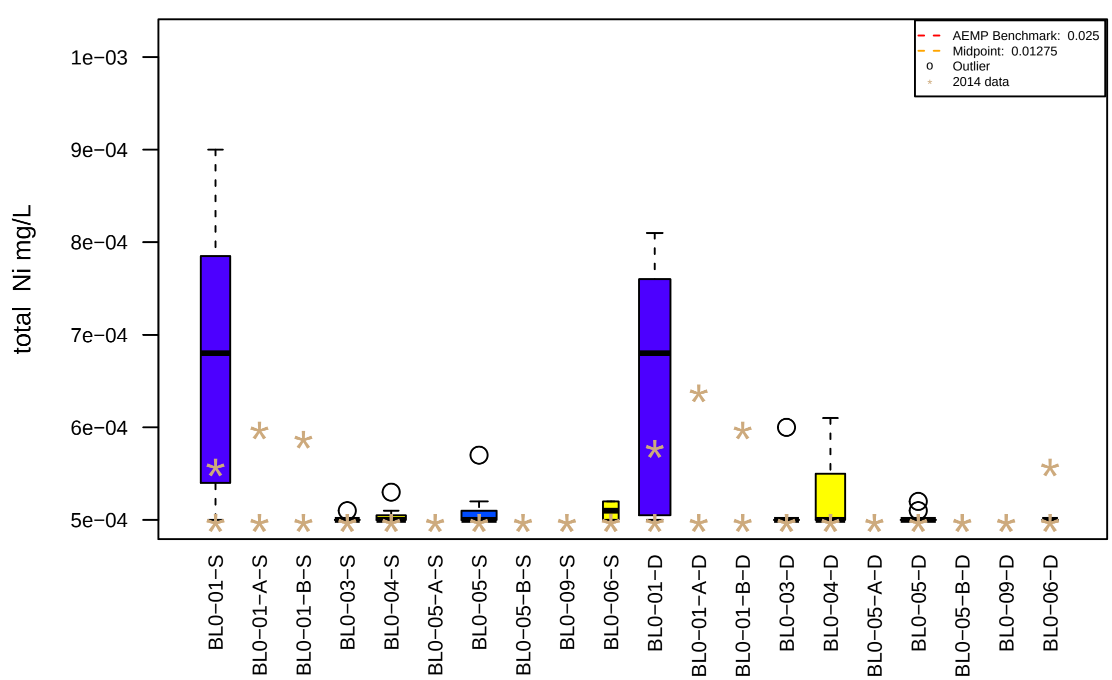

Mary Lake: Pb – Total Boxplot on log scale
AEMP Benchmark: 0.001
Midpoint: 0.00053
Outlier
2014 data
total Pb mg/L – log axis
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

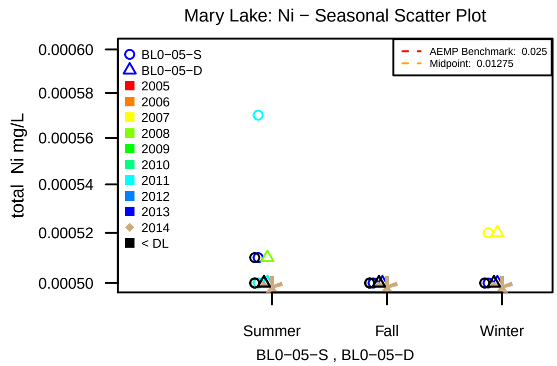

Mary Lake: Pb – Total Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.00053
Outlier
2014 data
total Pb mg/L
1e−03
8e−04
6e−04
4e−04
2e−04
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

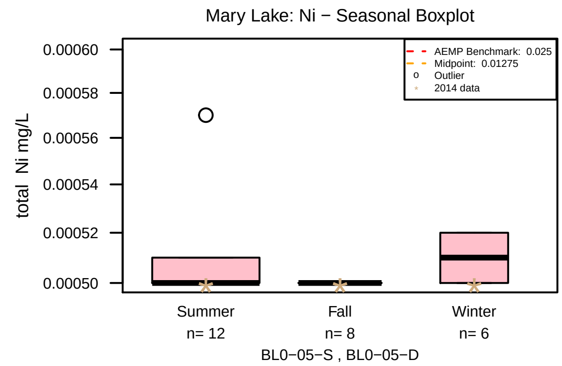
Mary Lake: Ni − Total Boxplot on log scale

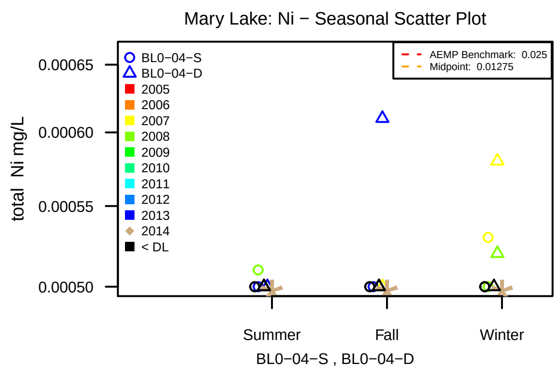


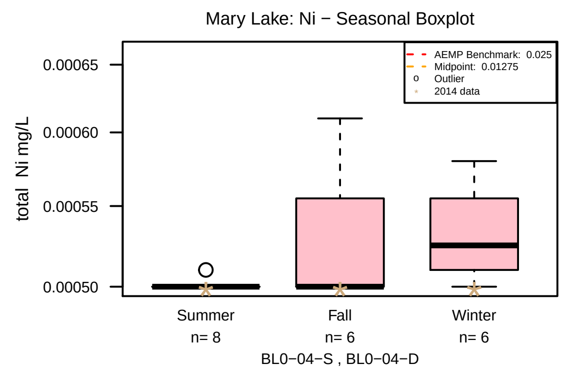
Mary Lake: Ni − Total Boxplot

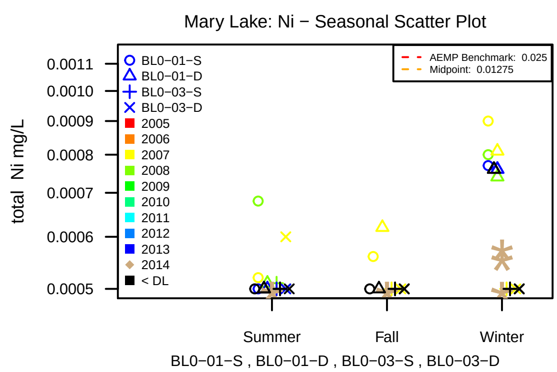


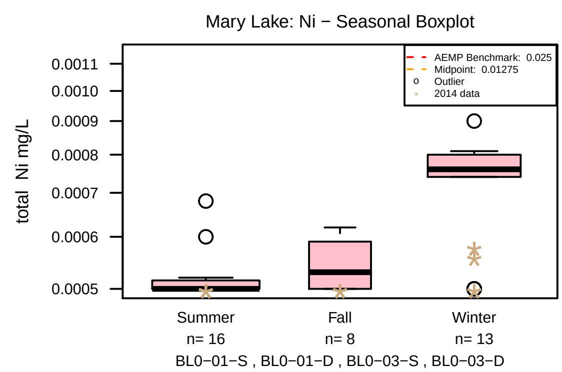

Mary Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
0.00060
0.00058
0.00056
0.00054
0.00052
0.00050
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01275
Summer
Fall
Winter
BL0−05−S , BL0−05−D

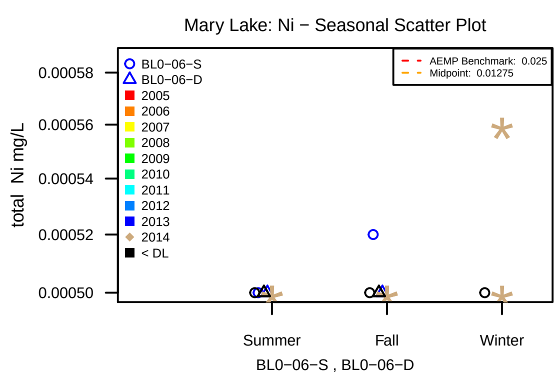

Mary Lake: Ni − Seasonal Boxplot
total Ni mg/L
0.00060
0.00058
0.00056
0.00054
0.00052
0.00050
AEMP Benchmark: 0.025
Midpoint: 0.01275
Outlier
2014 data
Summer
n= 12
Fall
n= 8
Winter
n= 6
BL0−05−S , BL0−05−D

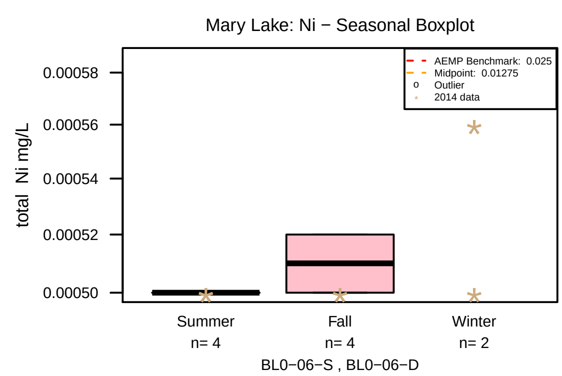

Mary Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
0.00065
0.00060
0.00055
0.00050
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01275
Summer
Fall
Winter
BL0−04−S , BL0−04−D

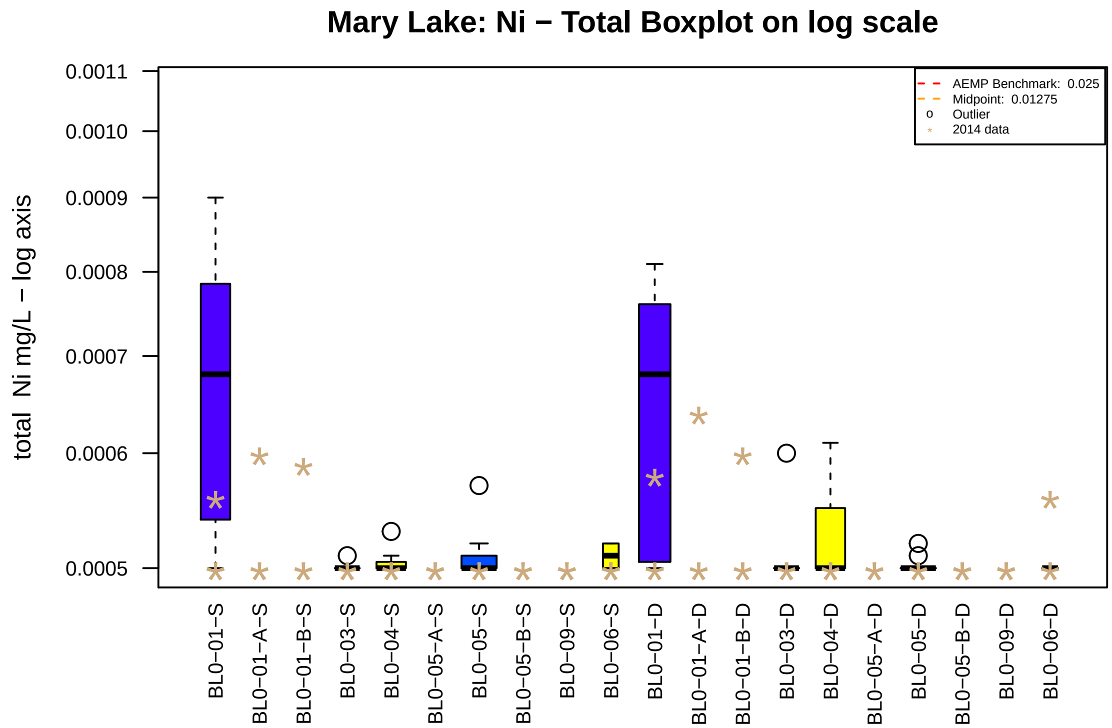

Mary Lake: Ni − Seasonal Boxplot
total Ni mg/L
0.00065
0.00060
0.00055
0.00050
AEMP Benchmark: 0.025
Midpoint: 0.01275
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

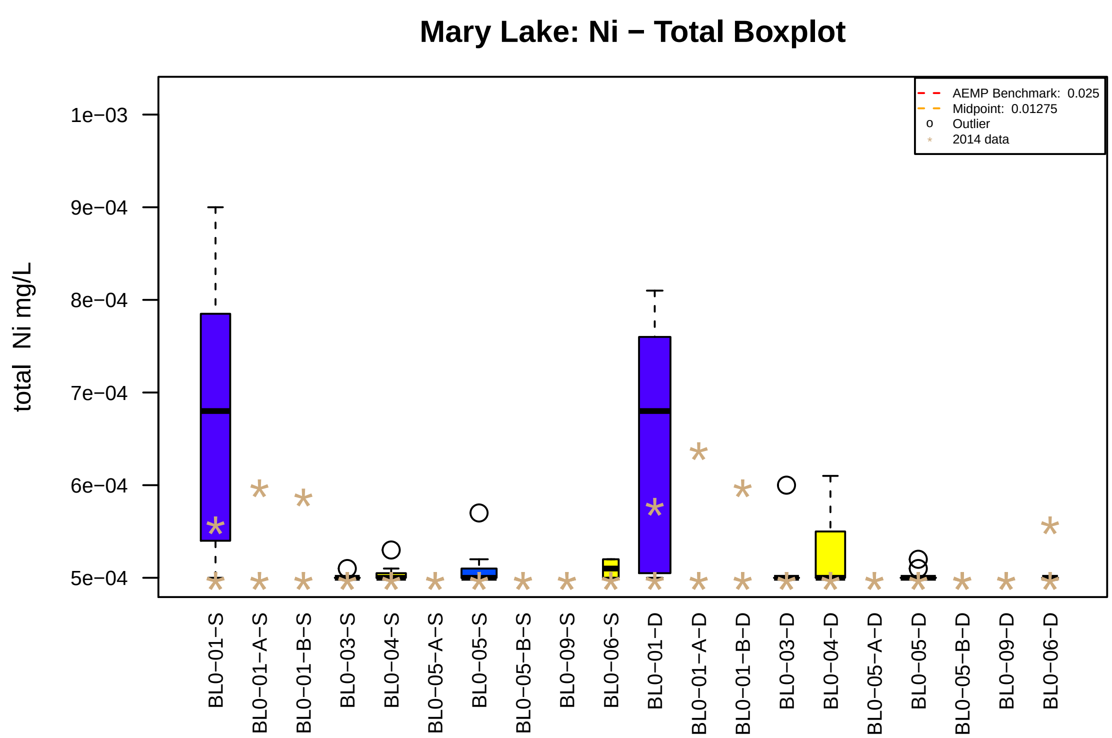

Mary Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0.0005
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01275
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

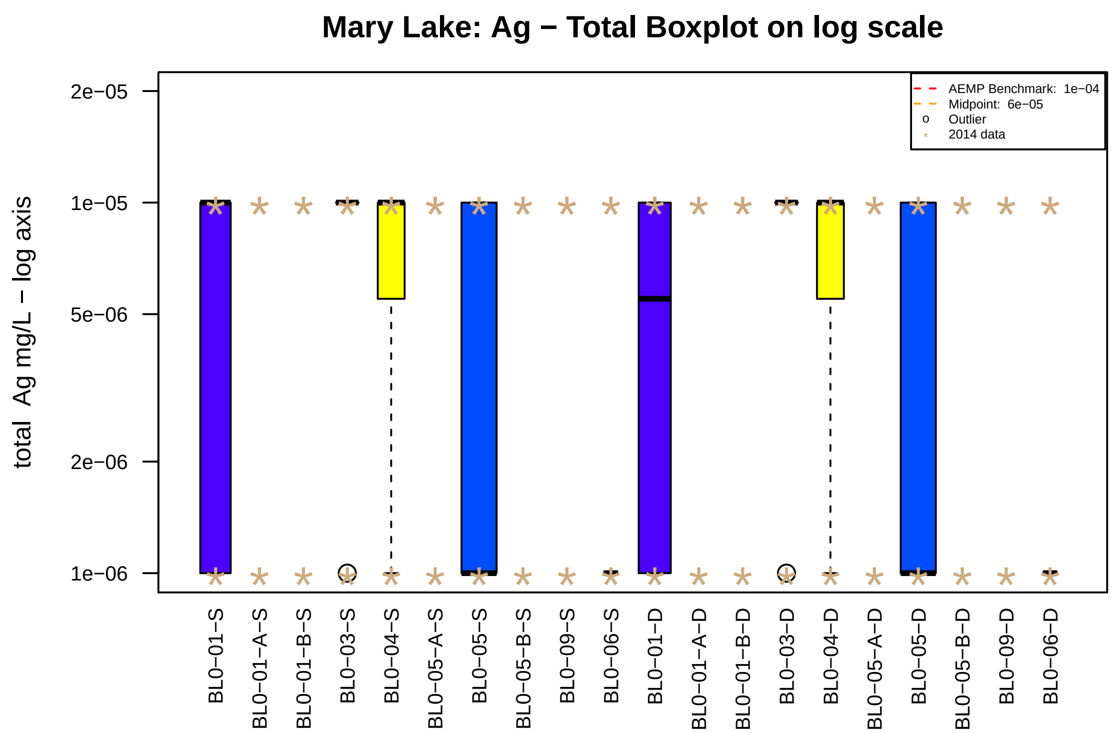

Mary Lake: Ni − Seasonal Boxplot
total Ni mg/L
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0.0005
AEMP Benchmark: 0.025
Midpoint: 0.01275
Outlier
2014 data
Summer
n= 16
Fall
n= 8
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

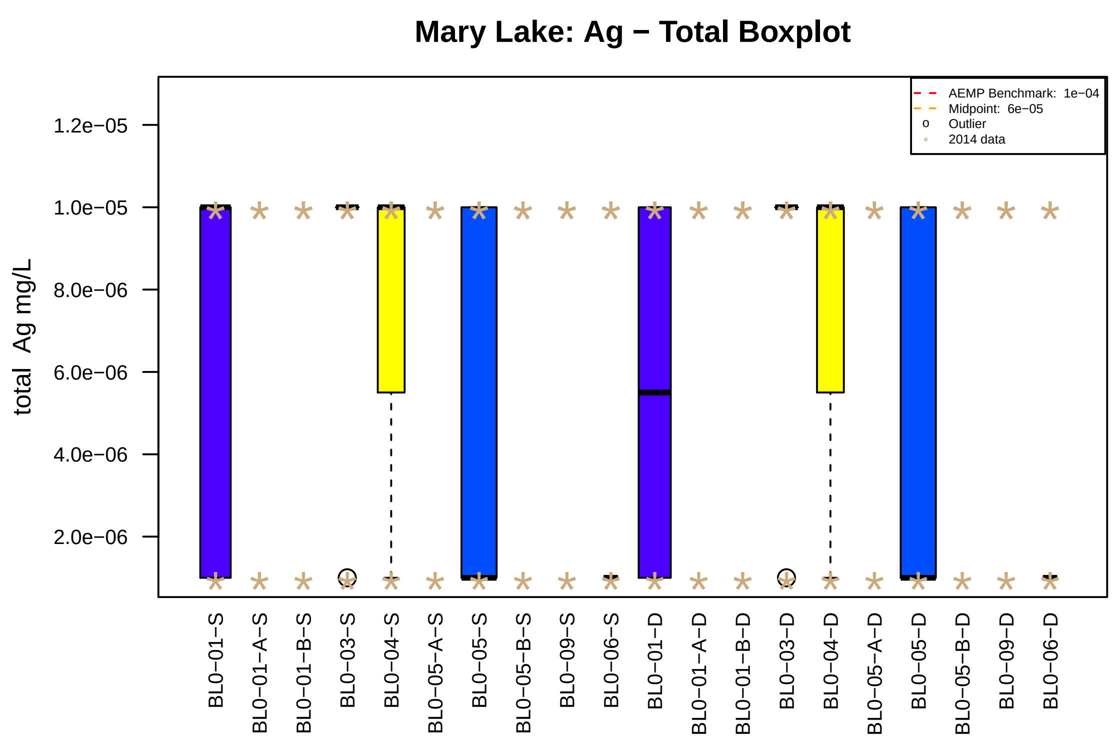

Mary Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
0.00058
0.00056
0.00054
0.00052
0.00050
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01275
Summer
Fall
Winter
BL0−06−S , BL0−06−D


Mary Lake: Ni − Seasonal Boxplot
total Ni mg/L
0.00058
0.00056
0.00054
0.00052
0.00050
AEMP Benchmark: 0.025
Midpoint: 0.01275
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

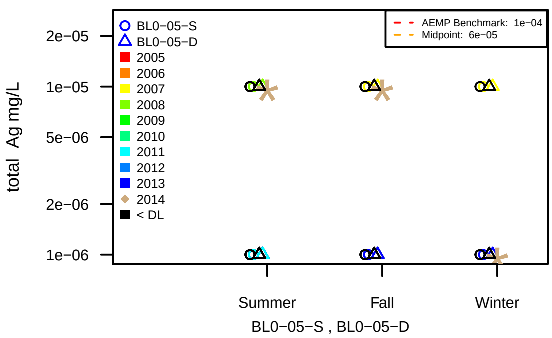

Mary Lake: Ni − Total Boxplot on log scale
total Ni mg/L − log axis
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0.0005
AEMP Benchmark: 0.025
Midpoint: 0.01275
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D


Mary Lake: Ni − Total Boxplot
total Ni mg/L
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
AEMP Benchmark: 0.025
Midpoint: 0.01275
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

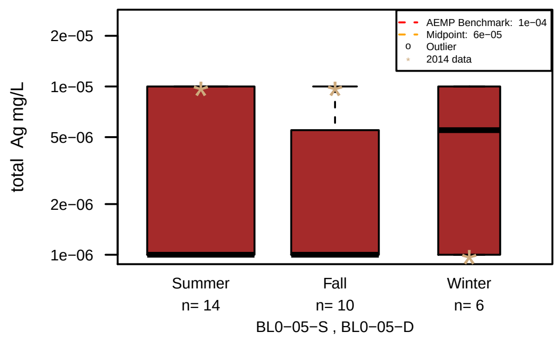

Mary Lake: Ag – Total Boxplot on log scale
total Ag mg/L – log axis
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D


Mary Lake: Ag – Total Boxplot
total Ag mg/L
1.2e−05
1.0e−05
8.0e−06
6.0e−06
4.0e−06
2.0e−06
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

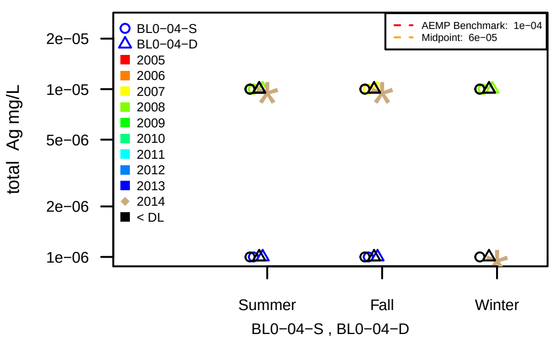
Mary Lake: Ag − Seasonal Scatter Plot



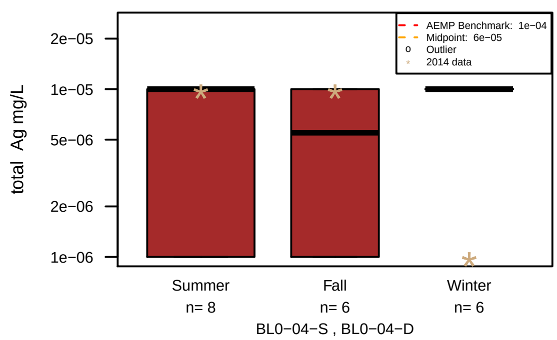
Mary Lake: Ag − Seasonal Boxplot



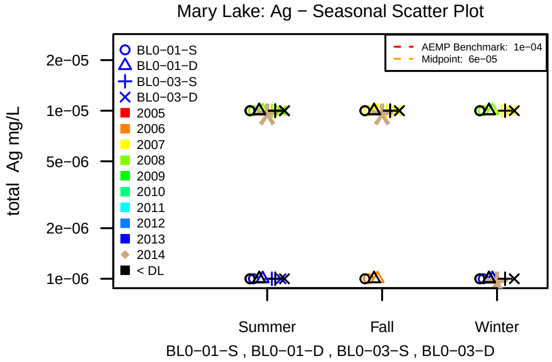
Mary Lake: Ag − Seasonal Scatter Plot



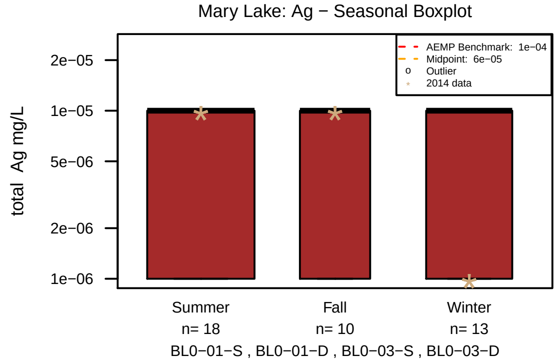
Mary Lake: Ag − Seasonal Boxplot



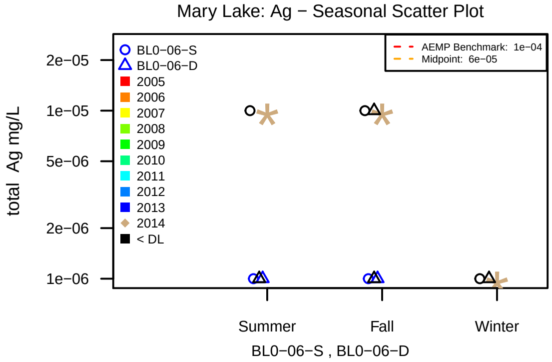
Mary Lake: Ag − Seasonal Scatter Plot



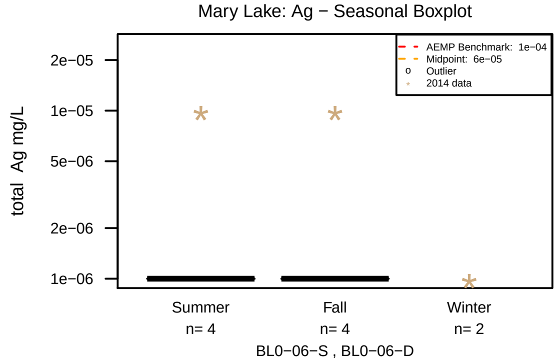
Mary Lake: Ag − Seasonal Boxplot

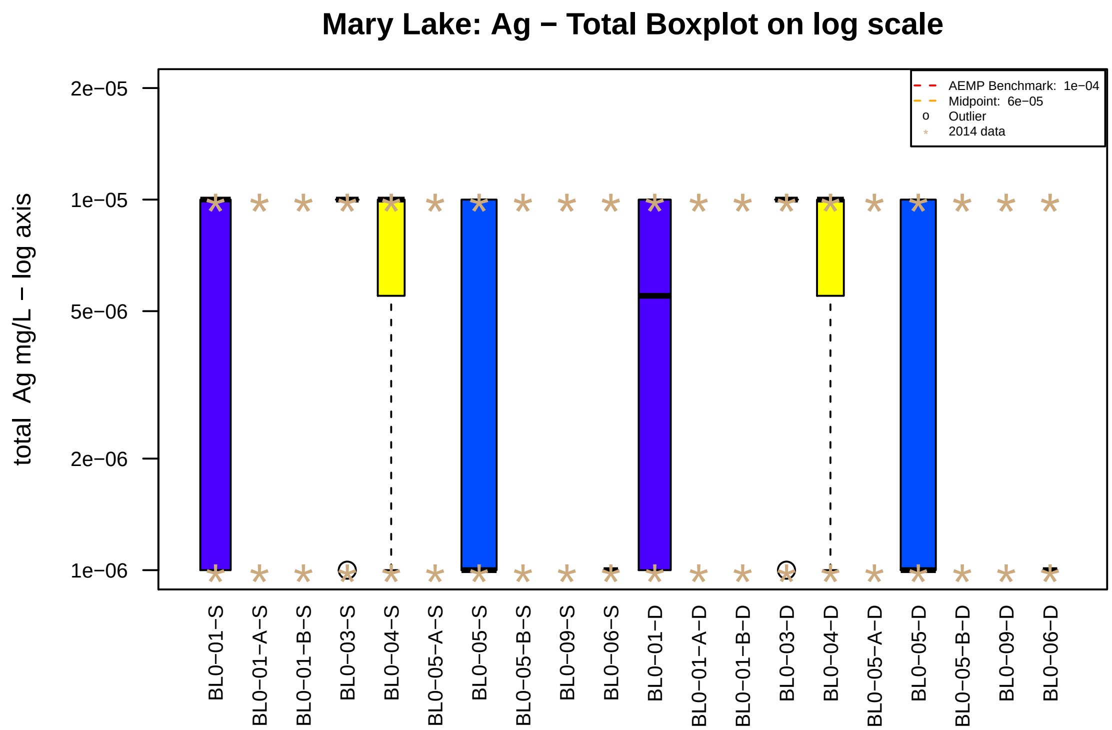


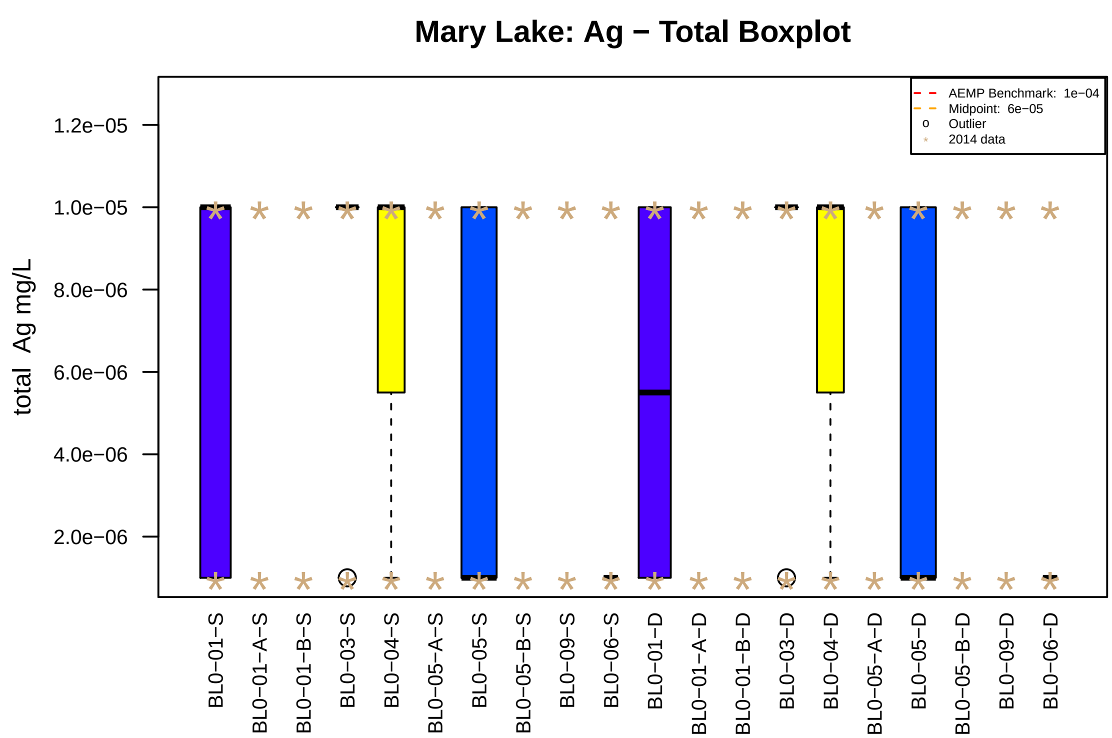
Mary Lake: Ag − Seasonal Scatter Plot

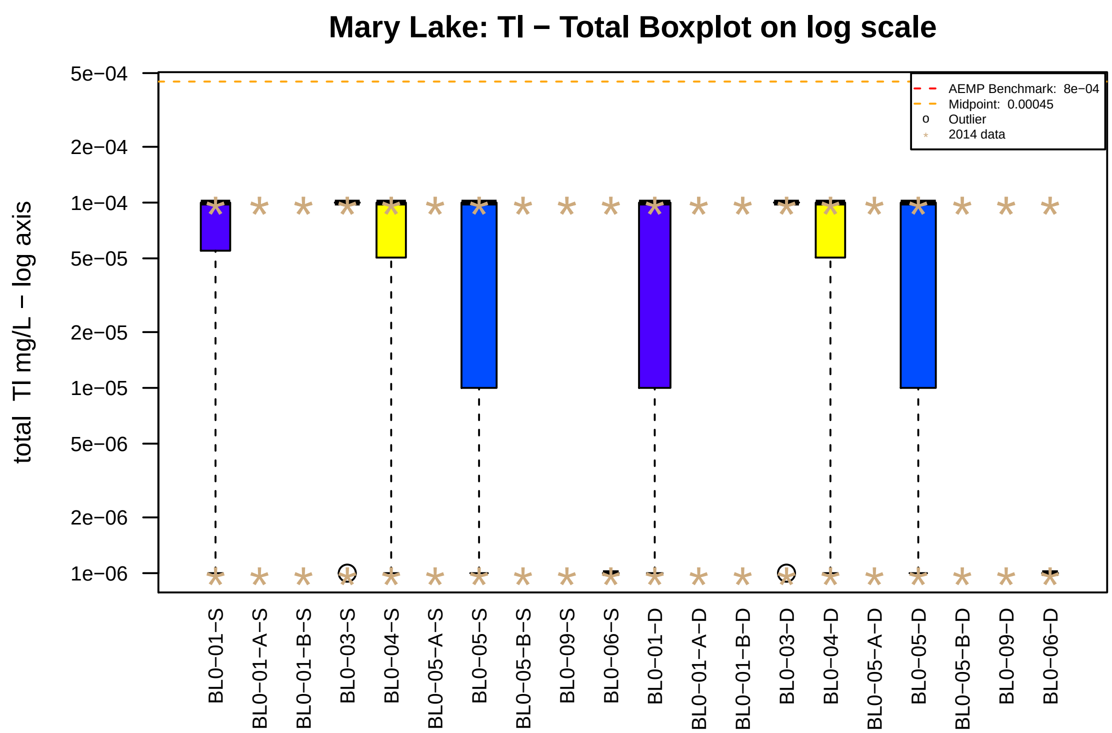


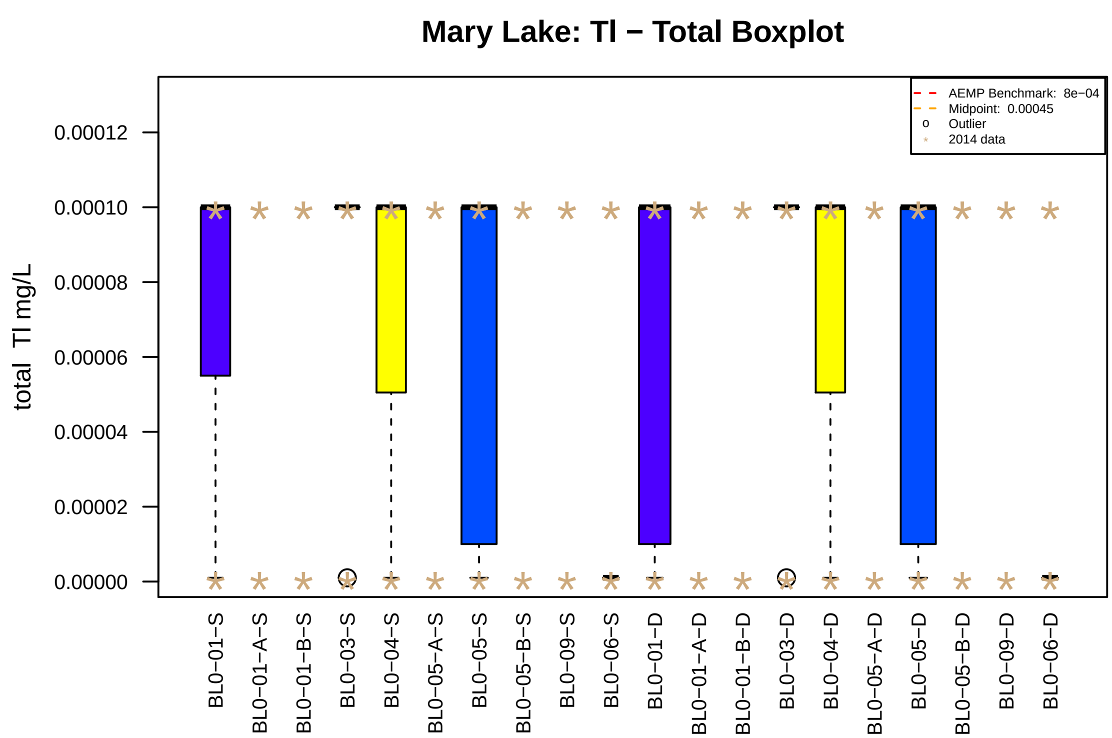
Mary Lake: Ag − Seasonal Boxplot

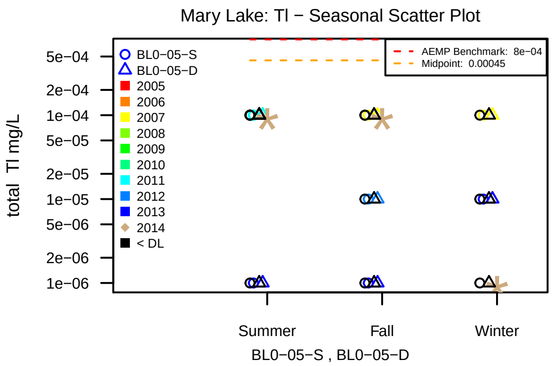


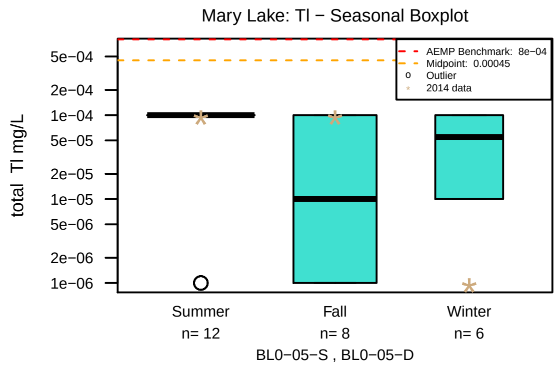

Mary Lake: Ag – Total Boxplot on log scale
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L – log axis
2e−05
1e−05
5e−06
2e−06
1e−06
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

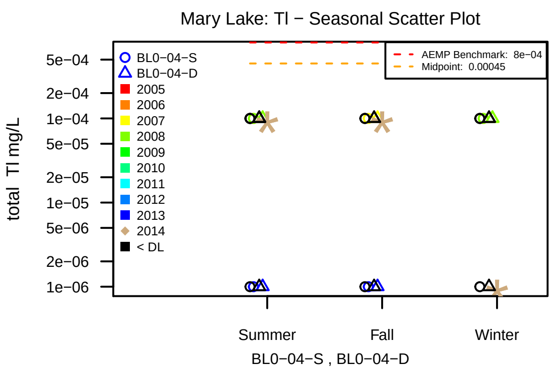

Mary Lake: Ag – Total Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
1.2e−05
1.0e−05
8.0e−06
6.0e−06
4.0e−06
2.0e−06
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

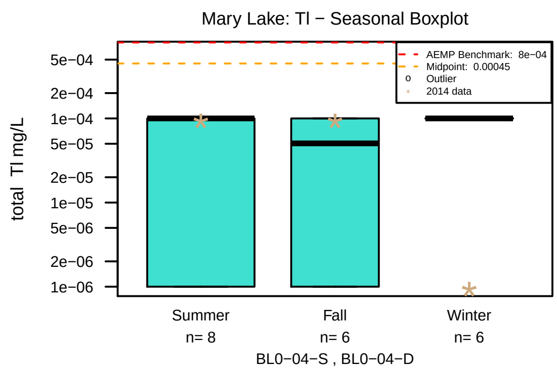

Mary Lake: Tl − Total Boxplot on log scale
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L − log axis
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

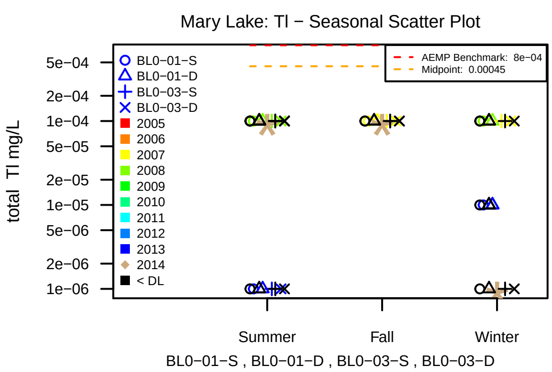

Mary Lake: Tl − Total Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
0.00012
0.00010
0.00008
0.00006
0.00004
0.00002
0.00000
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

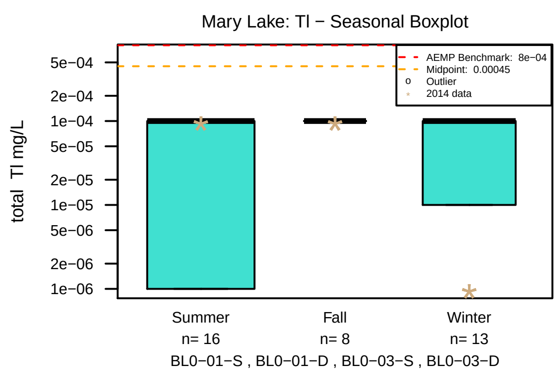

Mary Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
BL0−05−S , BL0−05−D

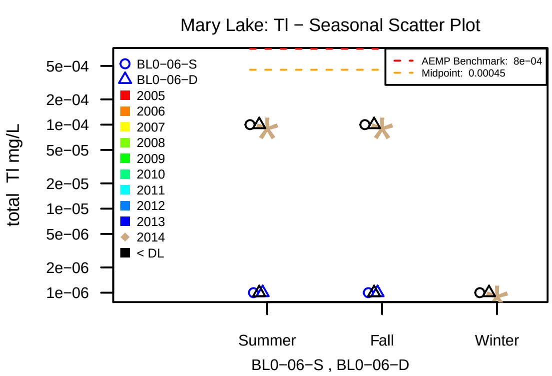

Mary Lake: Tl − Seasonal Boxplot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer
n= 12
Fall
n= 8
Winter
n= 6
BL0−05−S , BL0−05−D

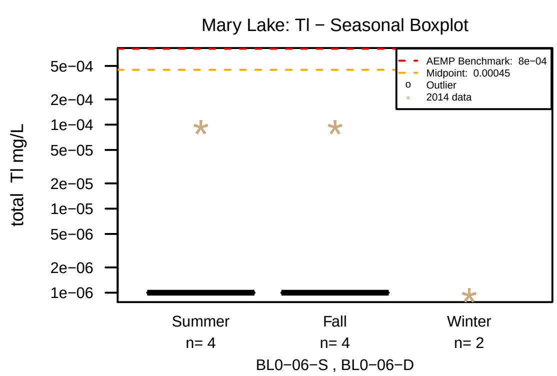

Mary Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
BL0−04−S , BL0−04−D


Mary Lake: Tl − Seasonal Boxplot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

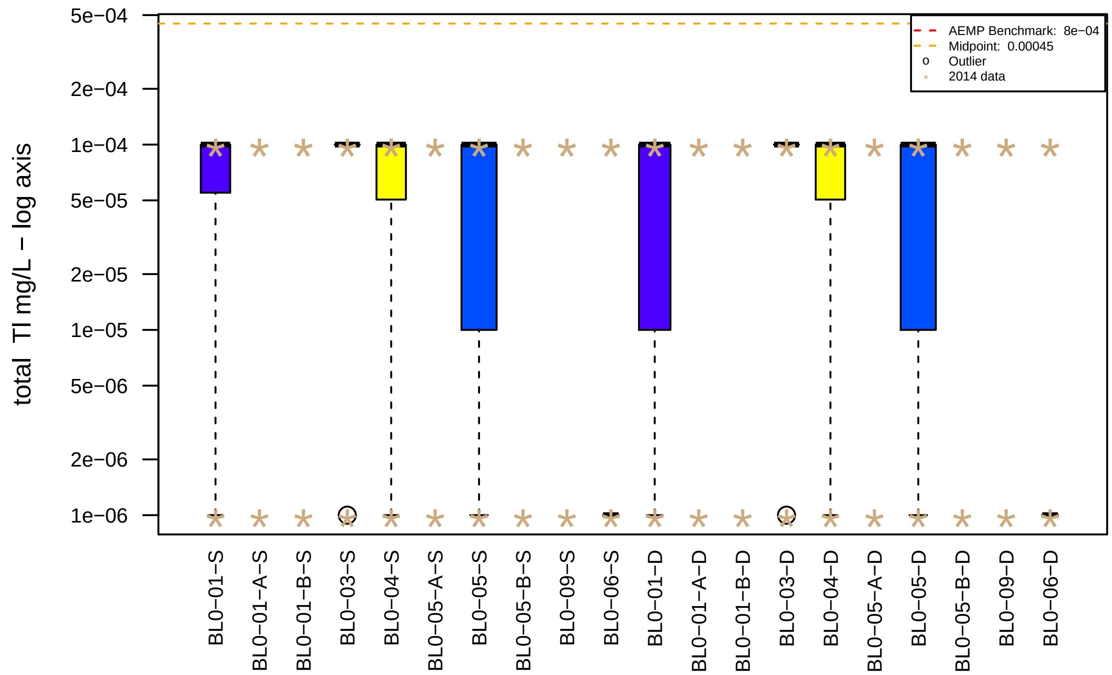

Mary Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D


Mary Lake: Tl − Seasonal Boxplot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer
n= 16
Fall
n= 8
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

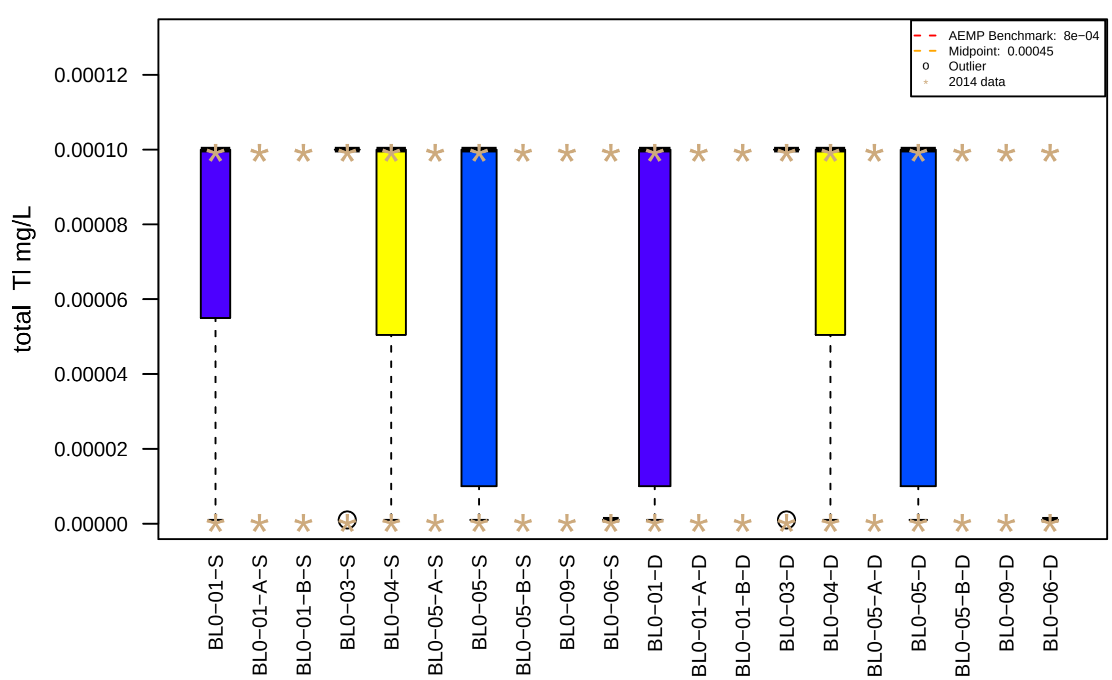

Mary Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
BL0−06−S , BL0−06−D

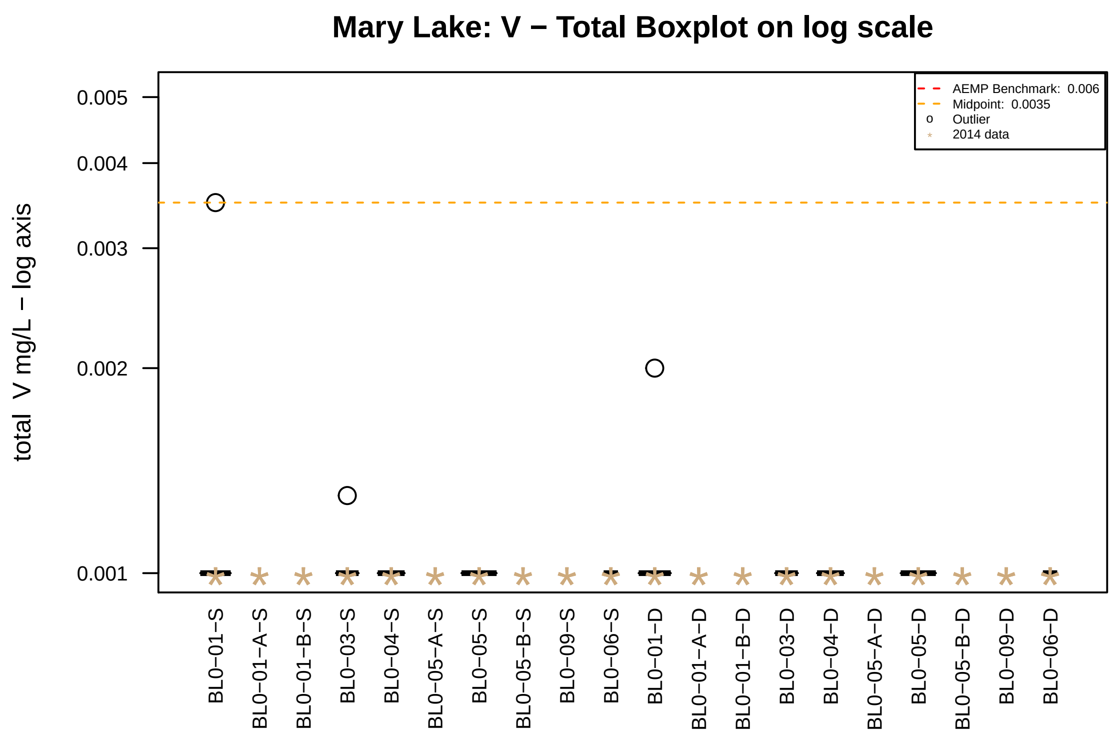

Mary Lake: Tl − Seasonal Boxplot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

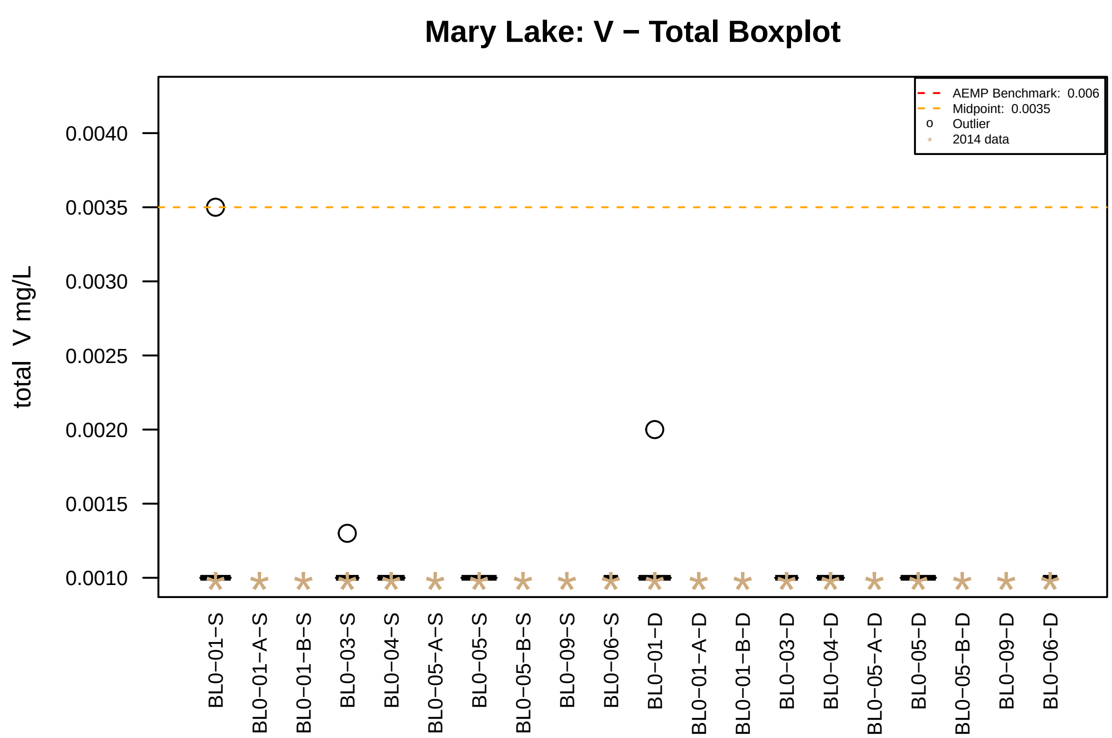
Mary Lake: Tl − Total Boxplot on log scale

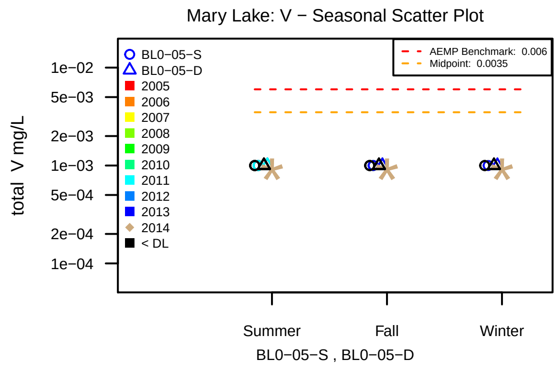


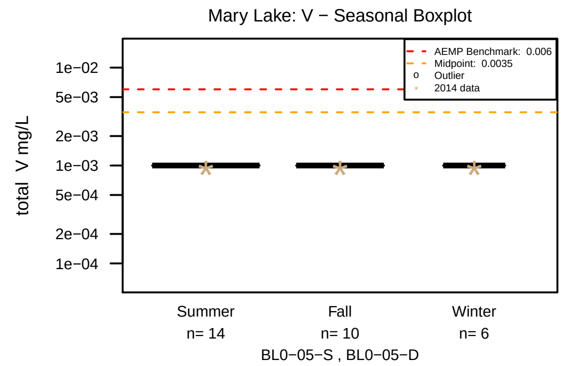
Mary Lake: Tl − Total Boxplot

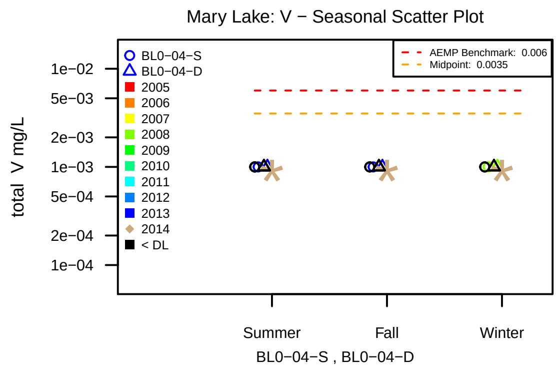


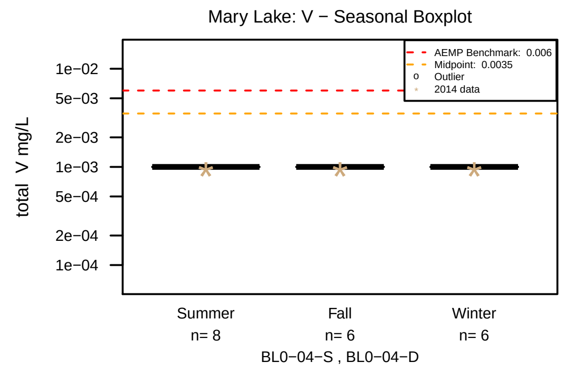

Mary Lake: V − Total Boxplot on log scale
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L − log axis
0.005
0.004
0.003
0.002
0.001
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

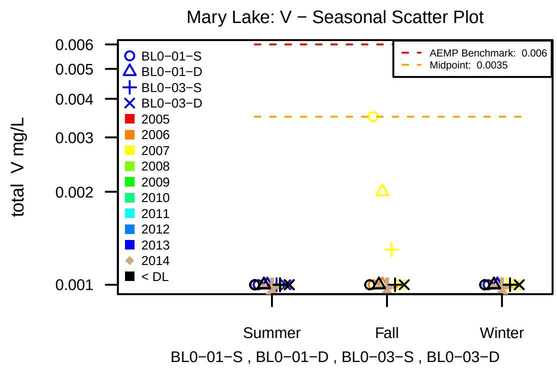

Mary Lake: V − Total Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

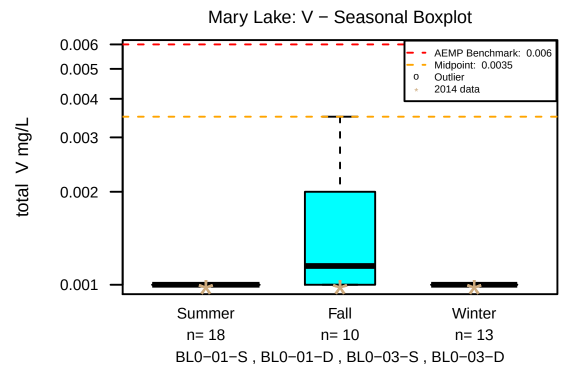

Mary Lake: V − Seasonal Scatter Plot
total V mg/L
BL0−05−S
BL0−05−D
AEMP Benchmark: 0.006
Midpoint: 0.0035
Summer
Fall
Winter
BL0−05−S , BL0−05−D

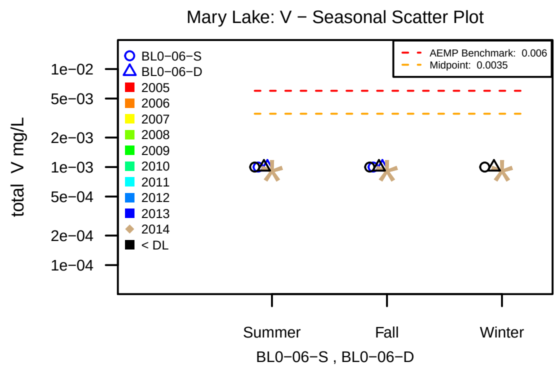

Mary Lake: V − Seasonal Boxplot
total V mg/L
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
Summer n= 14
Fall n= 10
Winter n= 6
BL0−05−S , BL0−05−D

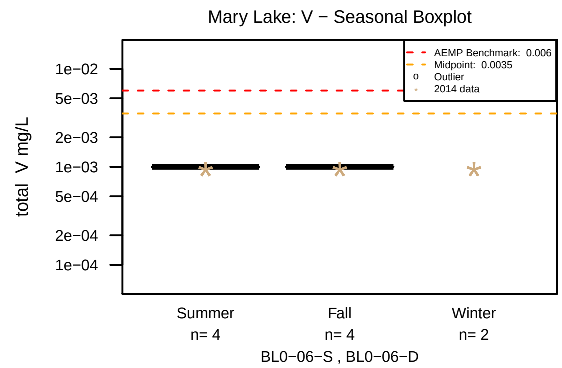

Mary Lake: V − Seasonal Scatter Plot
total V mg/L
BL0−04−S
BL0−04−D
AEMP Benchmark: 0.006
Midpoint: 0.0035
Summer
Fall
Winter
BL0−04−S , BL0−04−D

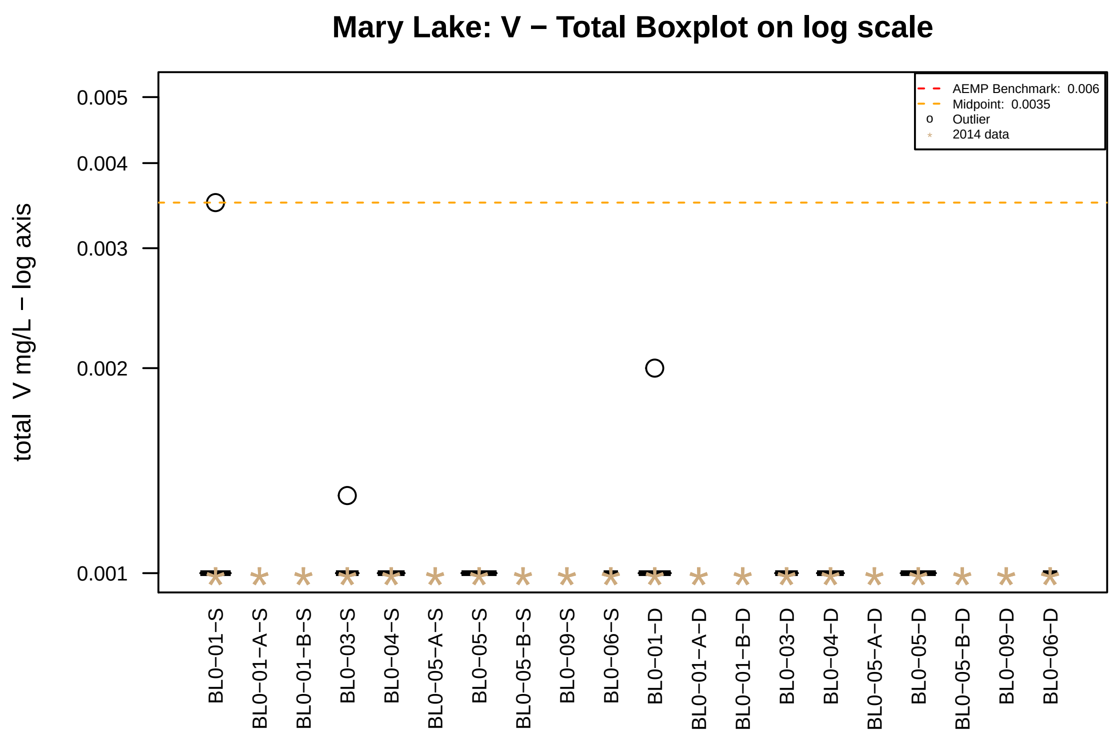

Mary Lake: V − Seasonal Boxplot
total V mg/L
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
Summer n= 8
Fall n= 6
Winter n= 6
BL0−04−S , BL0−04−D

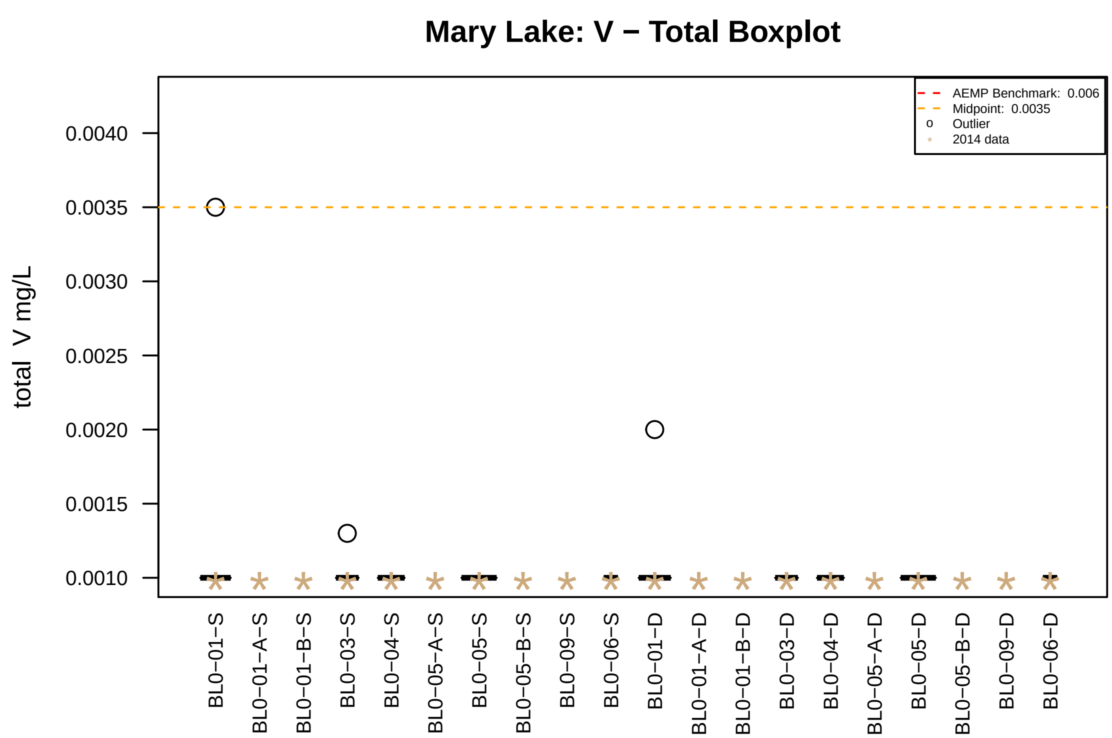

Mary Lake: V − Seasonal Scatter Plot
total V mg/L
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
AEMP Benchmark: 0.006
Midpoint: 0.0035
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

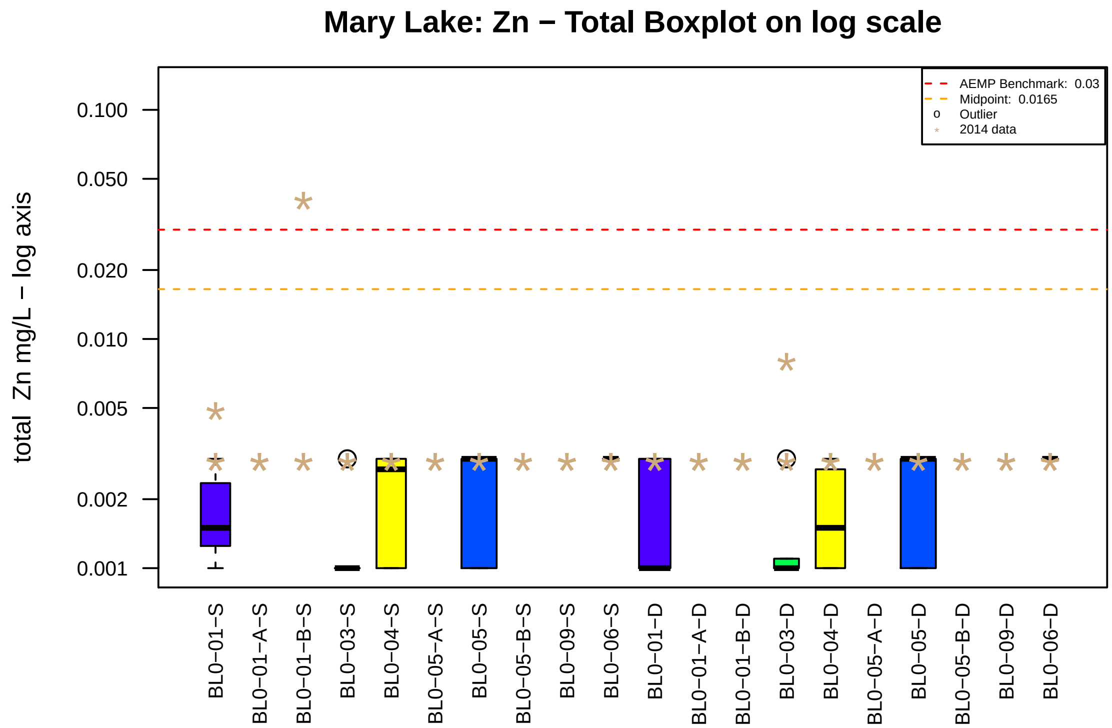

Mary Lake: V − Seasonal Boxplot
total V mg/L
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
Summer n= 18
Fall n= 10
Winter n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

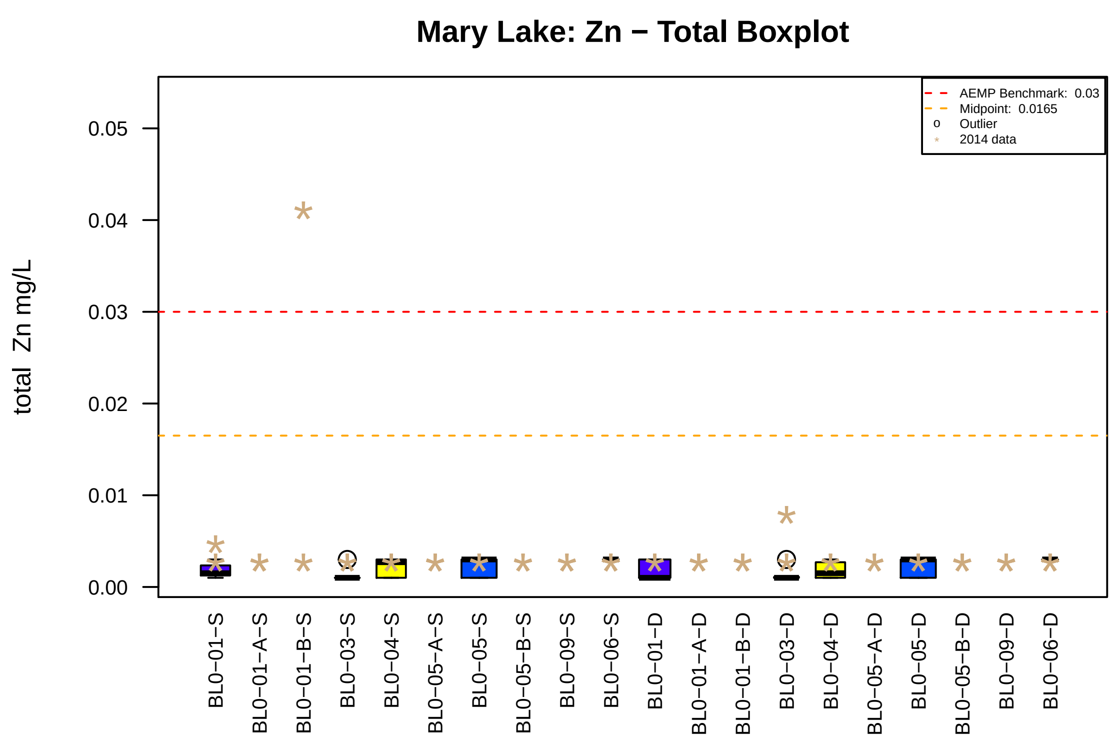

Mary Lake: V − Seasonal Scatter Plot
total V mg/L
BL0−06−S
BL0−06−D
AEMP Benchmark: 0.006
Midpoint: 0.0035
Summer
Fall
Winter
BL0−06−S , BL0−06−D

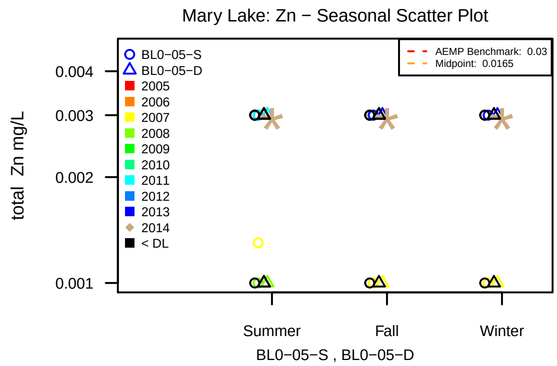

Mary Lake: V − Seasonal Boxplot
total V mg/L
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
Summer n= 4
Fall n= 4
Winter n= 2
BL0−06−S , BL0−06−D

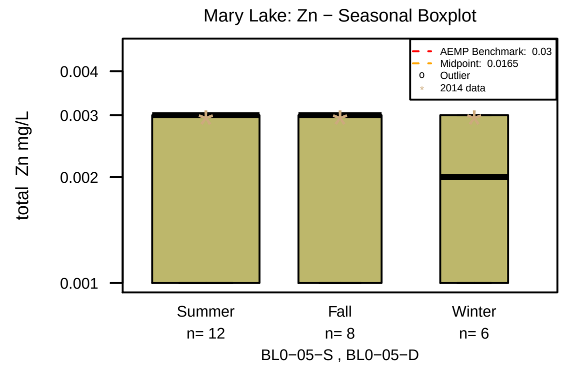

Mary Lake: V − Total Boxplot on log scale
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L − log axis
0.005
0.004
0.003
0.002
0.001
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

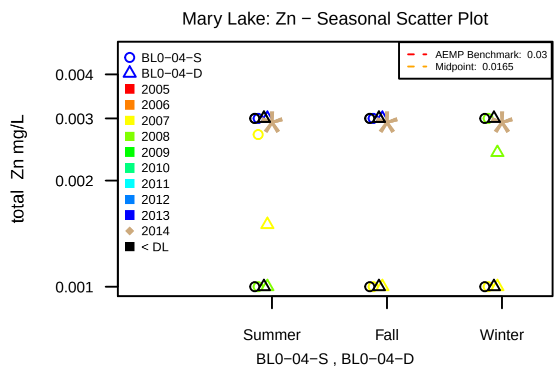

Mary Lake: V − Total Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

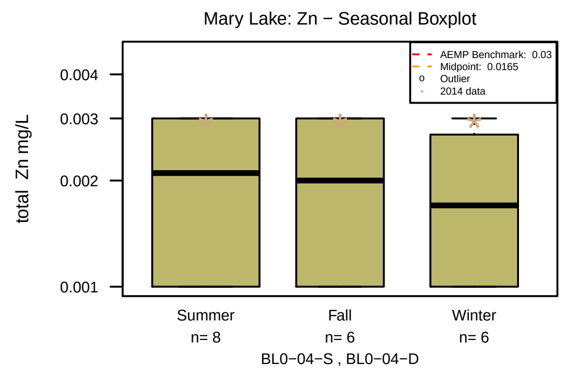

Mary Lake: Zn − Total Boxplot on log scale
total Zn mg/L − log axis
0.100
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

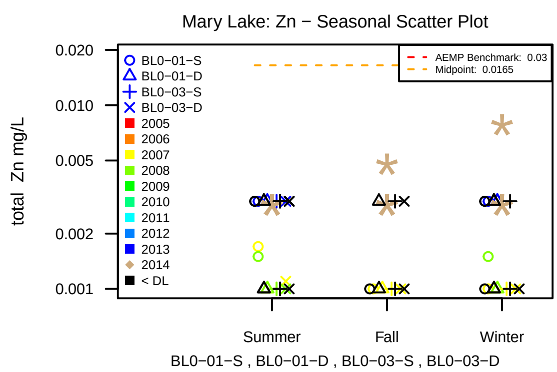

Mary Lake: Zn − Total Boxplot
total Zn mg/L
0.05
0.04
0.03
0.02
0.01
0.00
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

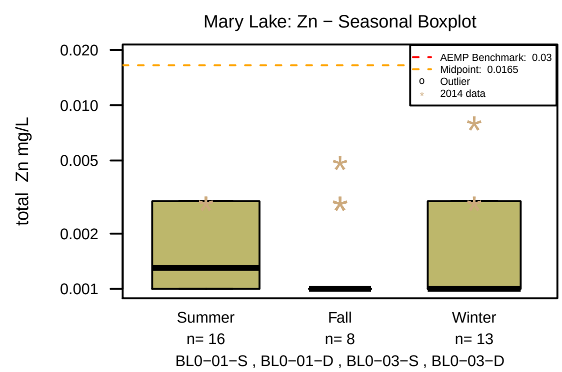

Mary Lake: Zn − Seasonal Scatter Plot
total Zn mg/L
0.004
0.003
0.002
0.001
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Summer
Fall
Winter
BL0−05−S , BL0−05−D

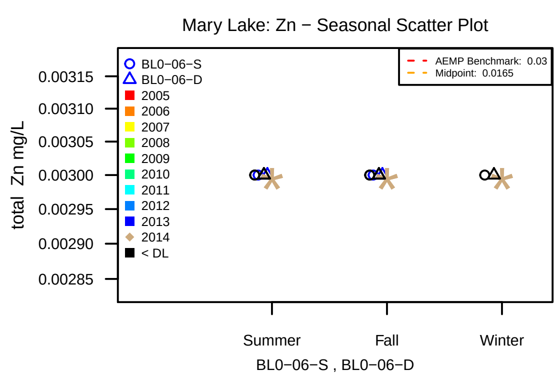

Mary Lake: Zn − Seasonal Boxplot
total Zn mg/L
0.004
0.003
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Summer
n= 12
Fall
n= 8
Winter
n= 6
BL0−05−S , BL0−05−D

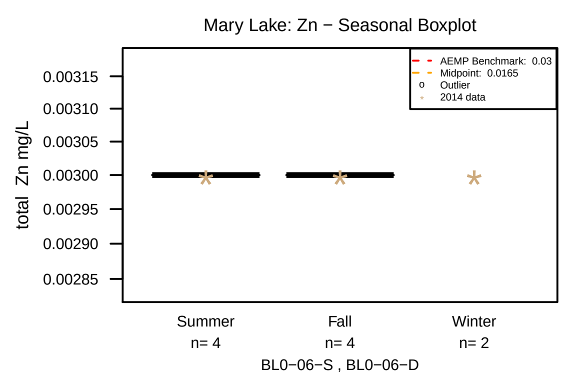

Mary Lake: Zn − Seasonal Scatter Plot
total Zn mg/L
0.004
0.003
0.002
0.001
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Summer
Fall
Winter
BL0−04−S , BL0−04−D

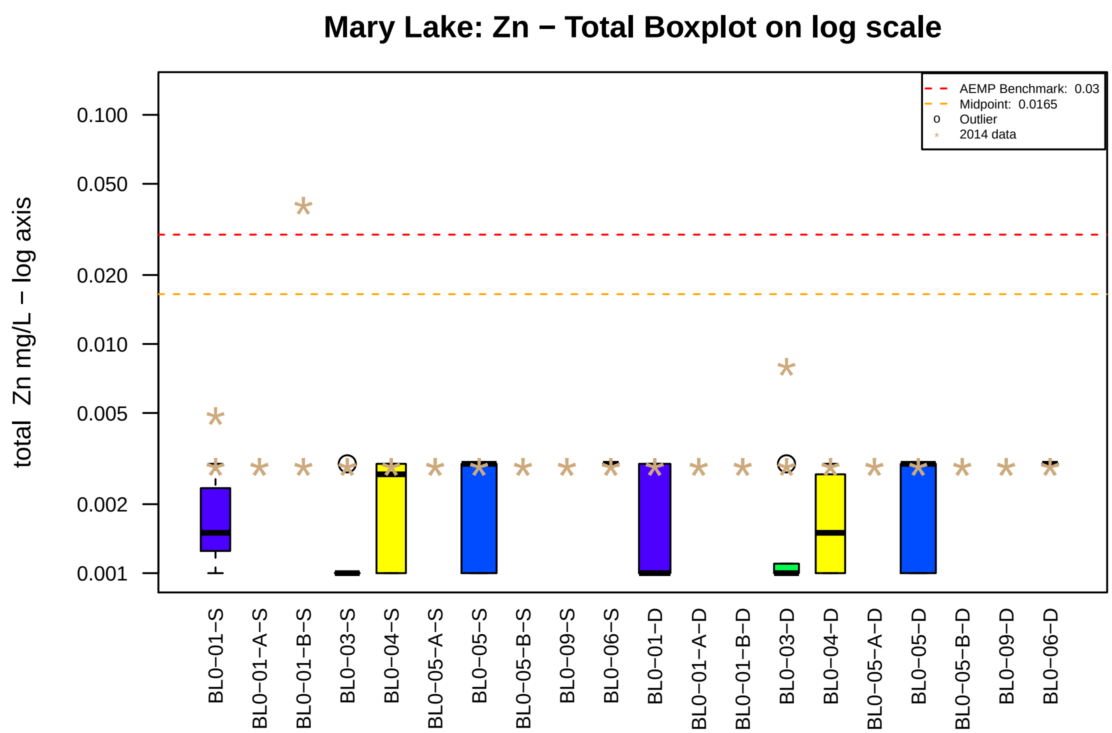

Mary Lake: Zn − Seasonal Boxplot
total Zn mg/L
0.004
0.003
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

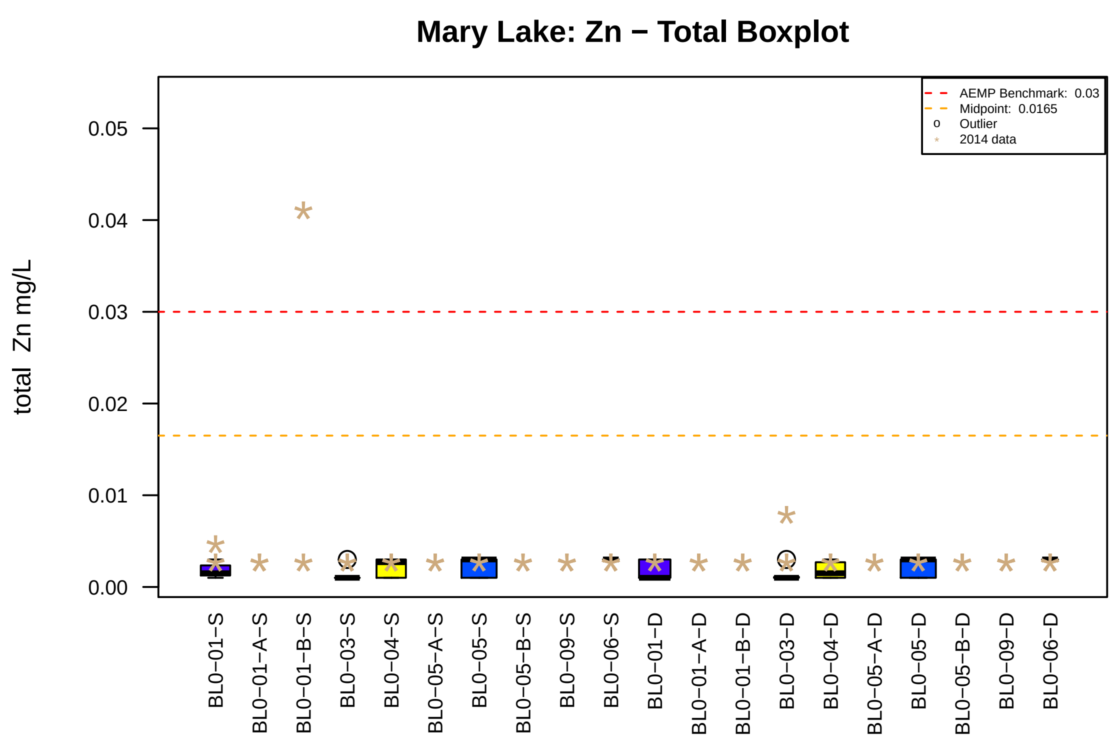

Mary Lake: Zn − Seasonal Scatter Plot
total Zn mg/L
0.020
0.010
0.005
0.002
0.001
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

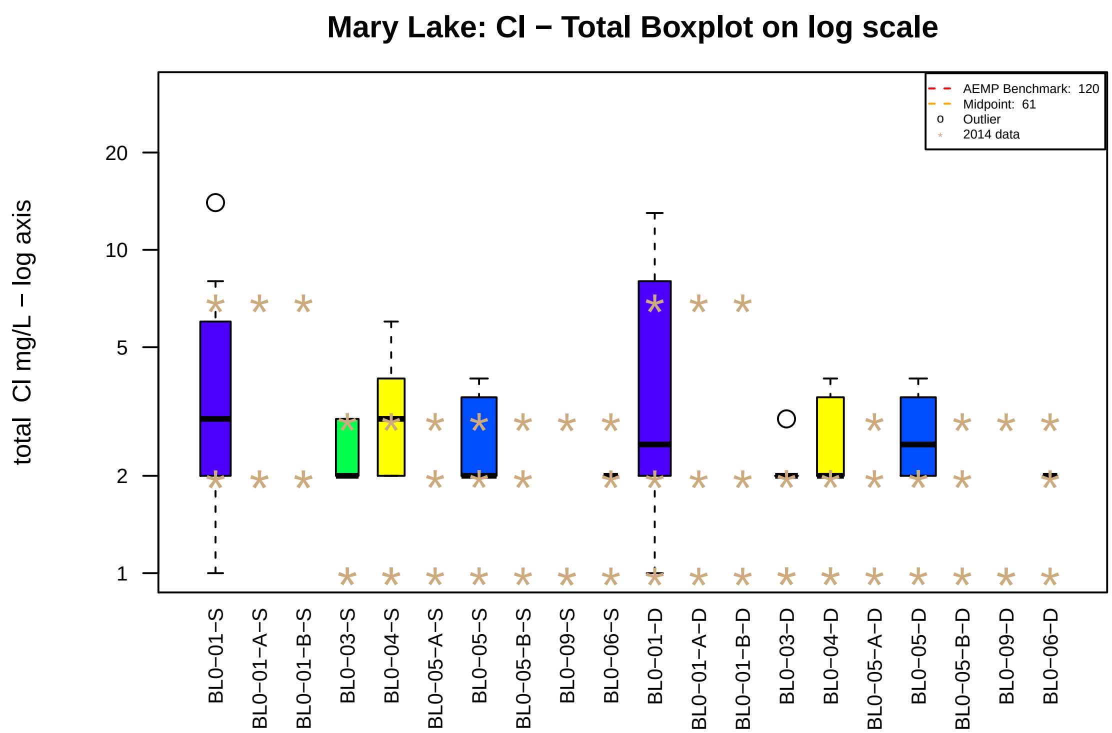

Mary Lake: Zn − Seasonal Boxplot
total Zn mg/L
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Summer
n= 16
Fall
n= 8
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

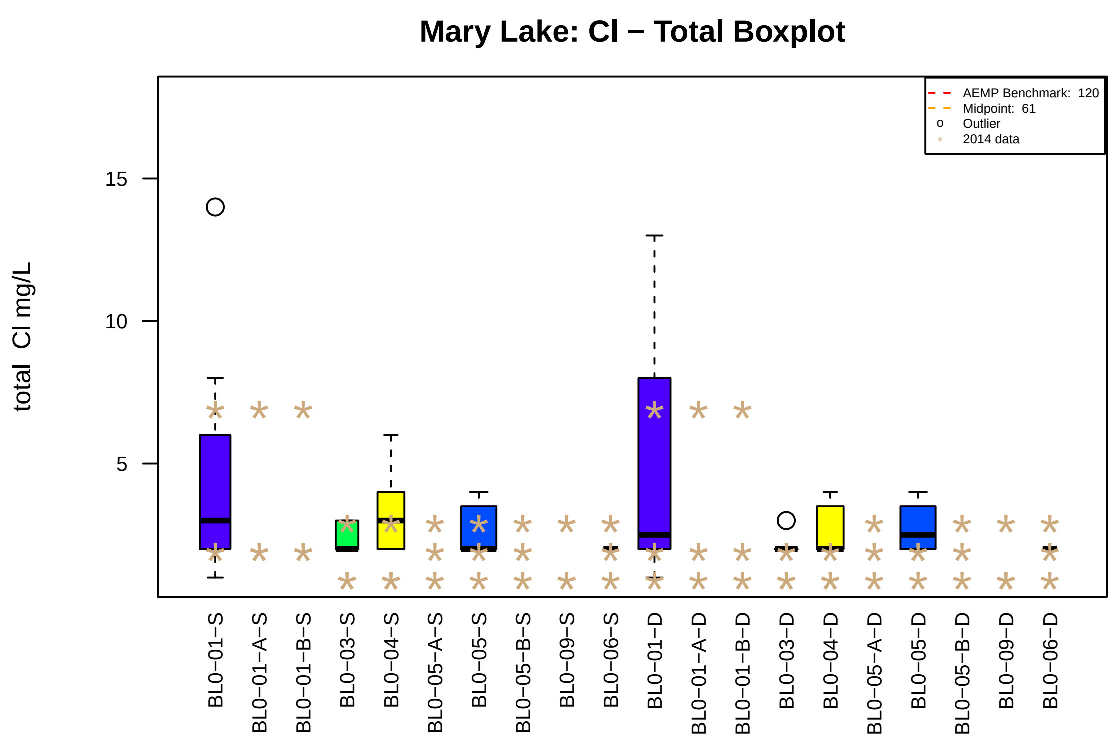

Mary Lake: Zn − Seasonal Scatter Plot
total Zn mg/L
0.00315
0.00310
0.00305
0.00300
0.00295
0.00290
0.00285
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Summer
Fall
Winter
BL0−06−S , BL0−06−D

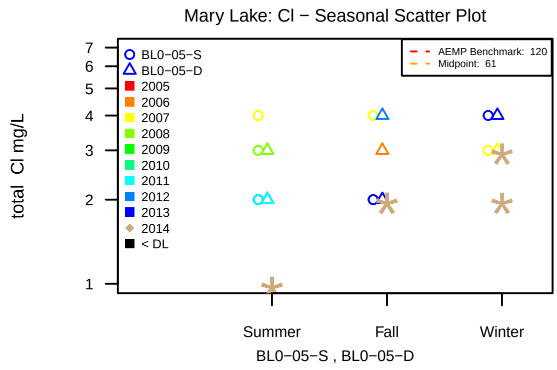

Mary Lake: Zn − Seasonal Boxplot
total Zn mg/L
0.00315
0.00310
0.00305
0.00300
0.00295
0.00290
0.00285
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

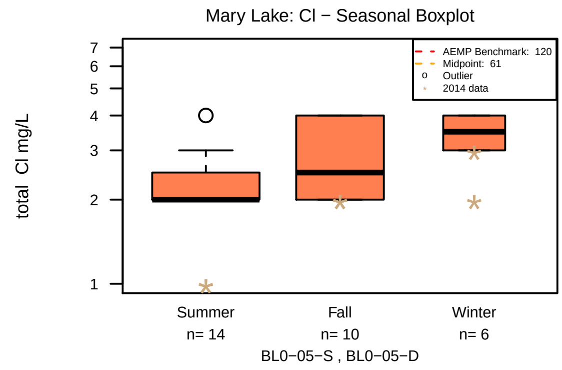

Mary Lake: Zn − Total Boxplot on log scale
total Zn mg/L − log axis
0.100
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

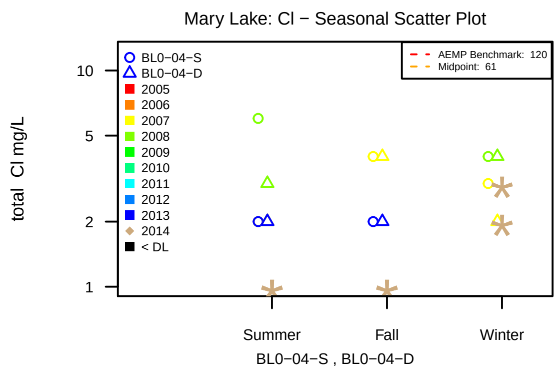

Mary Lake: Zn − Total Boxplot
total Zn mg/L
0.05
0.04
0.03
0.02
0.01
0.00
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

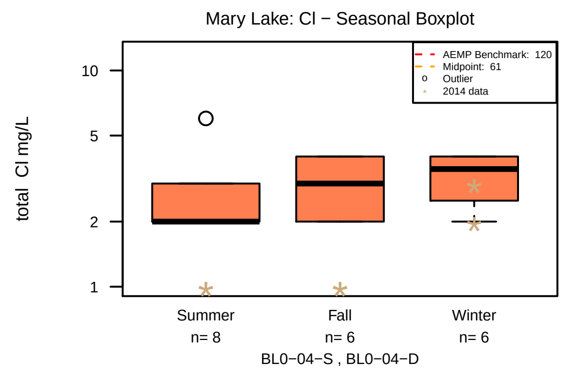

Mary Lake: Cl – Total Boxplot on log scale
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
total Cl mg/L – log axis
20
10
5
2
1
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D

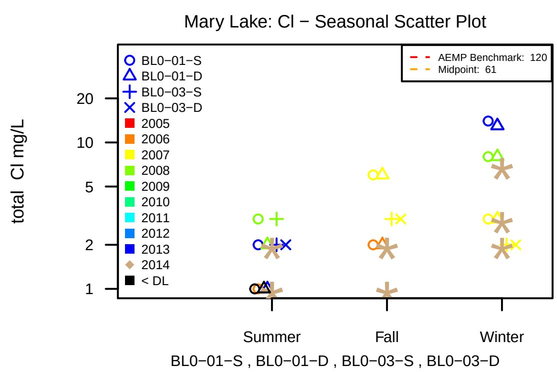

Mary Lake: Cl – Total Boxplot
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
total Cl mg/L
15
10
5
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D

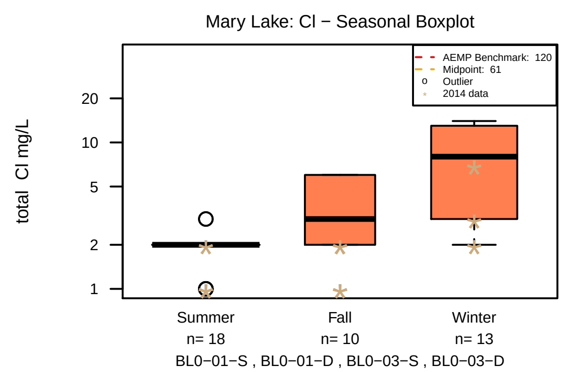

Mary Lake: Cl − Seasonal Scatter Plot
total Cl mg/L
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61
Summer
Fall
Winter
BL0−05−S , BL0−05−D

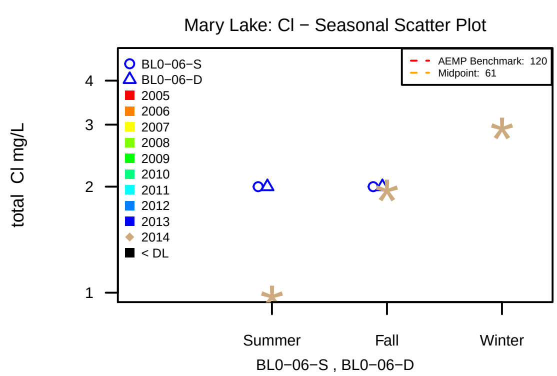

Mary Lake: Cl − Seasonal Boxplot
total Cl mg/L
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

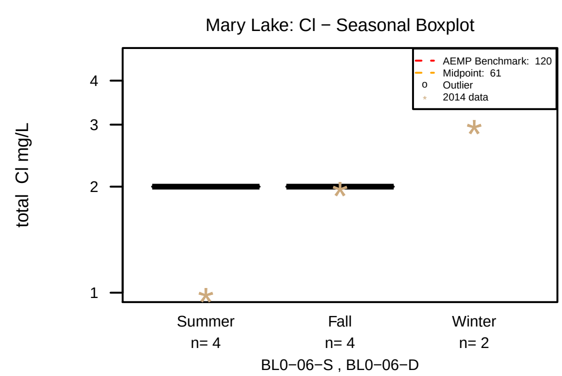

Mary Lake: Cl − Seasonal Scatter Plot
total Cl mg/L
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61
Summer
Fall
Winter
BL0−04−S , BL0−04−D

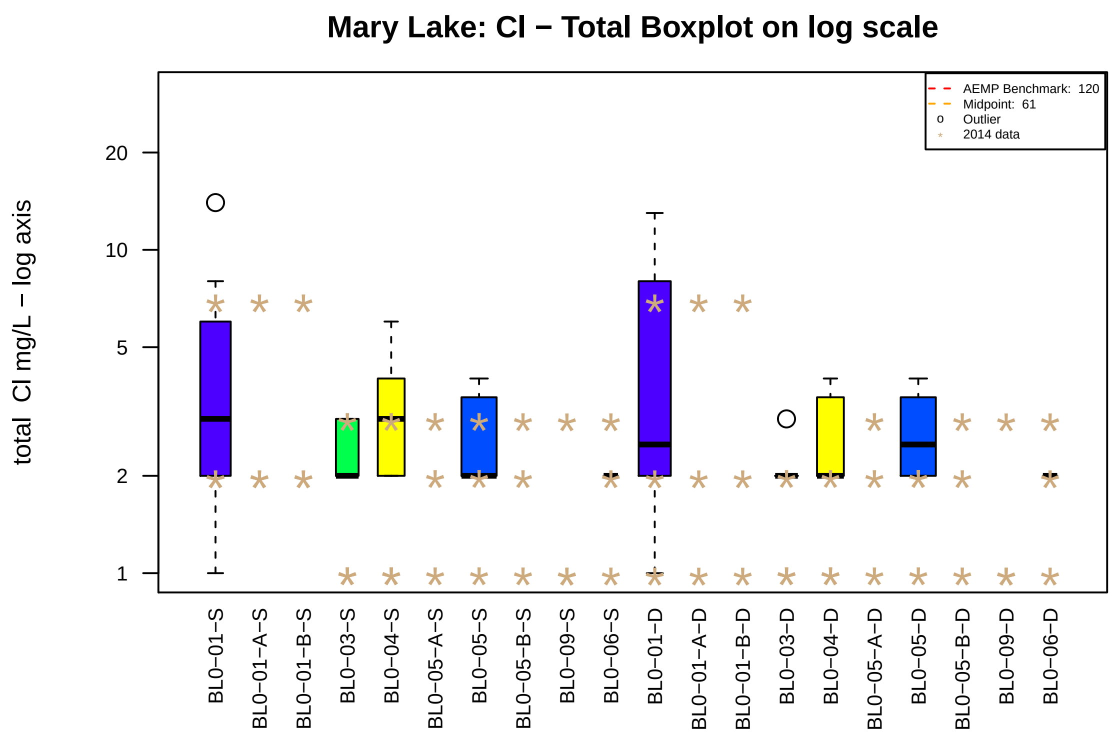

Mary Lake: Cl − Seasonal Boxplot
total Cl mg/L
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

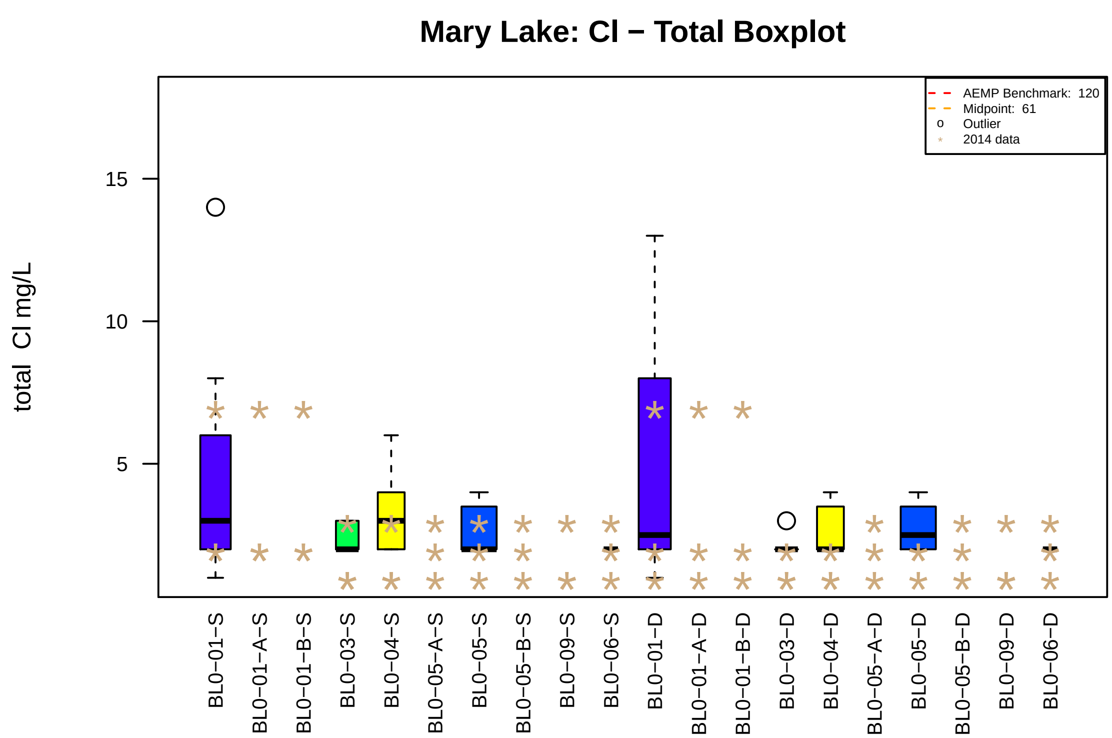

Mary Lake: Cl − Seasonal Scatter Plot
total Cl mg/L
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D


Mary Lake: Cl − Seasonal Boxplot
total Cl mg/L
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D


Mary Lake: Cl − Seasonal Scatter Plot
total Cl mg/L
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61
Summer
Fall
Winter
BL0−06−S , BL0−06−D


Mary Lake: Cl − Seasonal Boxplot
total Cl mg/L
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D


Mary Lake: Cl – Total Boxplot on log scale
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
total Cl mg/L – log axis
20
10
5
2
1
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D


Mary Lake: Cl – Total Boxplot
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
total Cl mg/L
15
10
5
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
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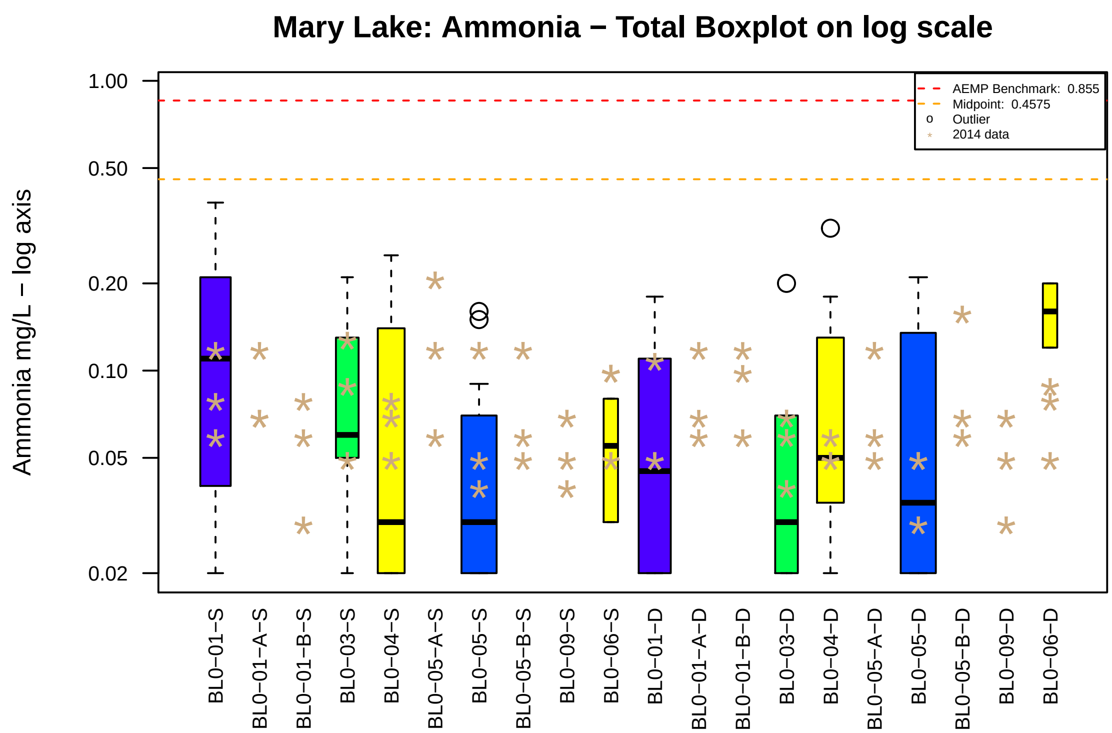
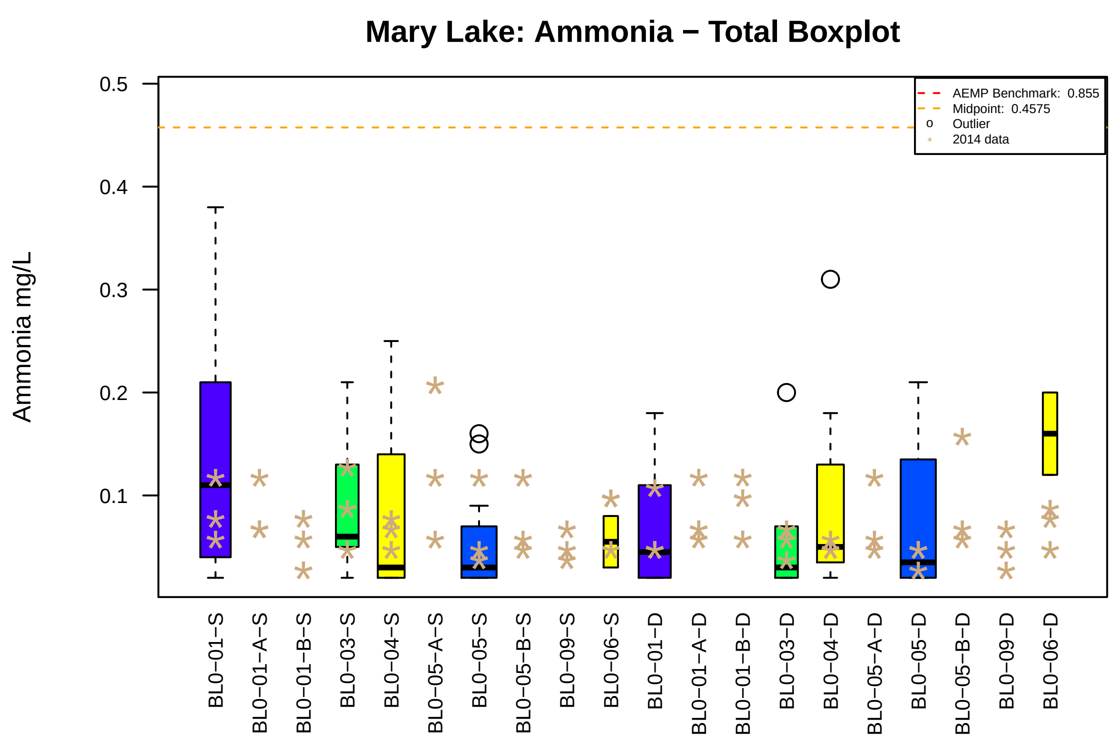
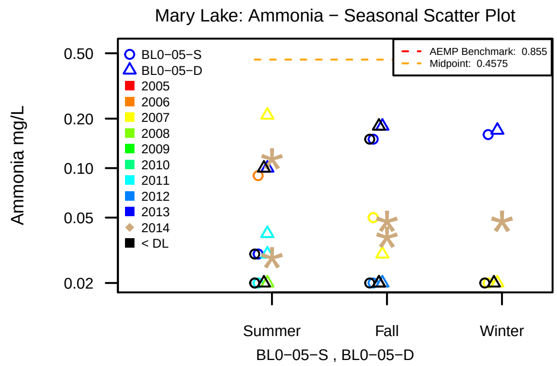
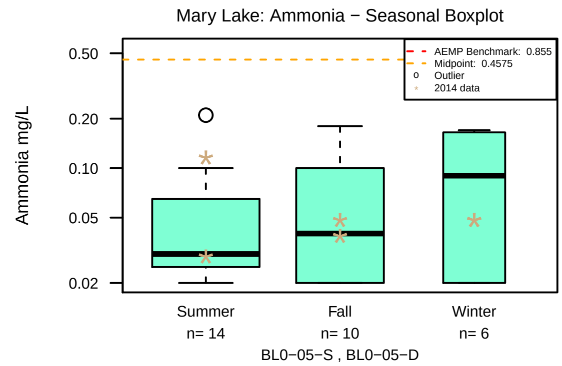
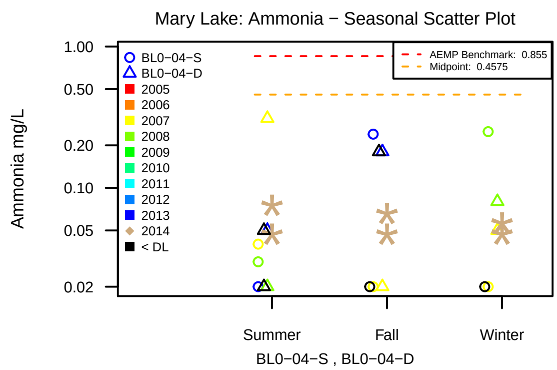
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D

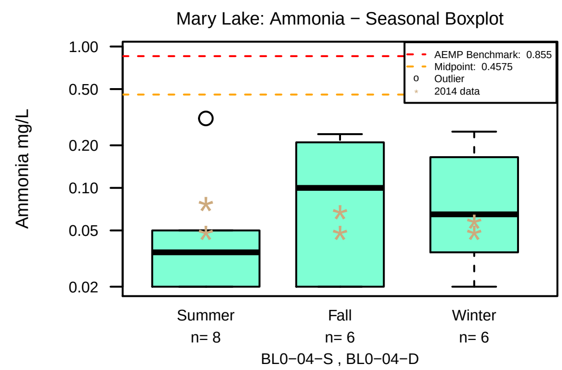

Mary Lake: Ammonia − Total Boxplot on log scale
AEMP Benchmark: 0.855
Midpoint: 0.4575
Outlier
2014 data
Ammonia mg/L − log axis
1.00
0.50
0.20
0.10
0.05
0.02
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

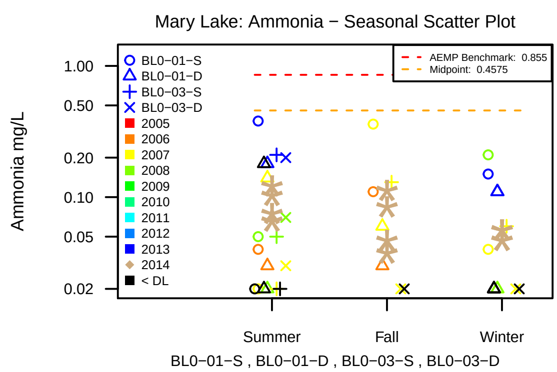

Mary Lake: Ammonia − Total Boxplot
AEMP Benchmark: 0.855
Midpoint: 0.4575
Outlier
2014 data
Ammonia mg/L
0.5
0.4
0.3
0.2
0.1
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

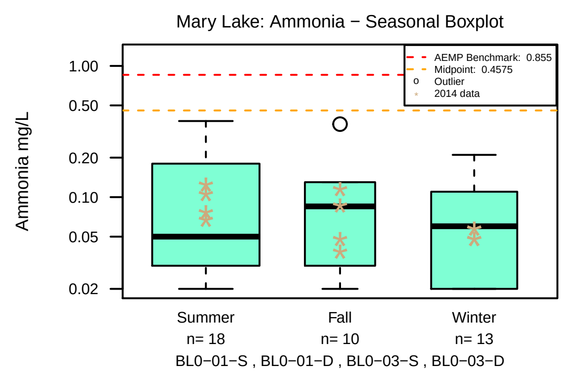

Mary Lake: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
0.50
0.20
0.10
0.05
0.02
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.4575
Summer
Fall
Winter
BL0−05−S , BL0−05−D

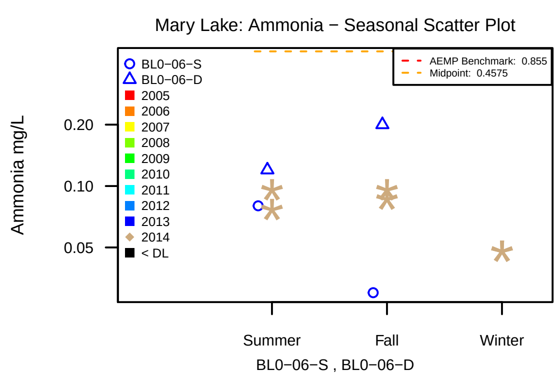

Mary Lake: Ammonia − Seasonal Boxplot
Ammonia mg/L
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.4575
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

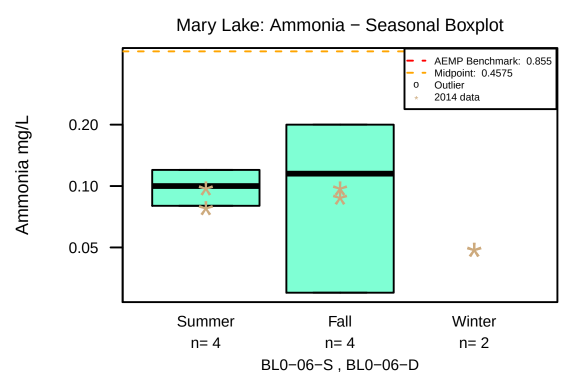

Mary Lake: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
1.00
0.50
0.20
0.10
0.05
0.02
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.4575
Summer
Fall
Winter
BL0−04−S , BL0−04−D

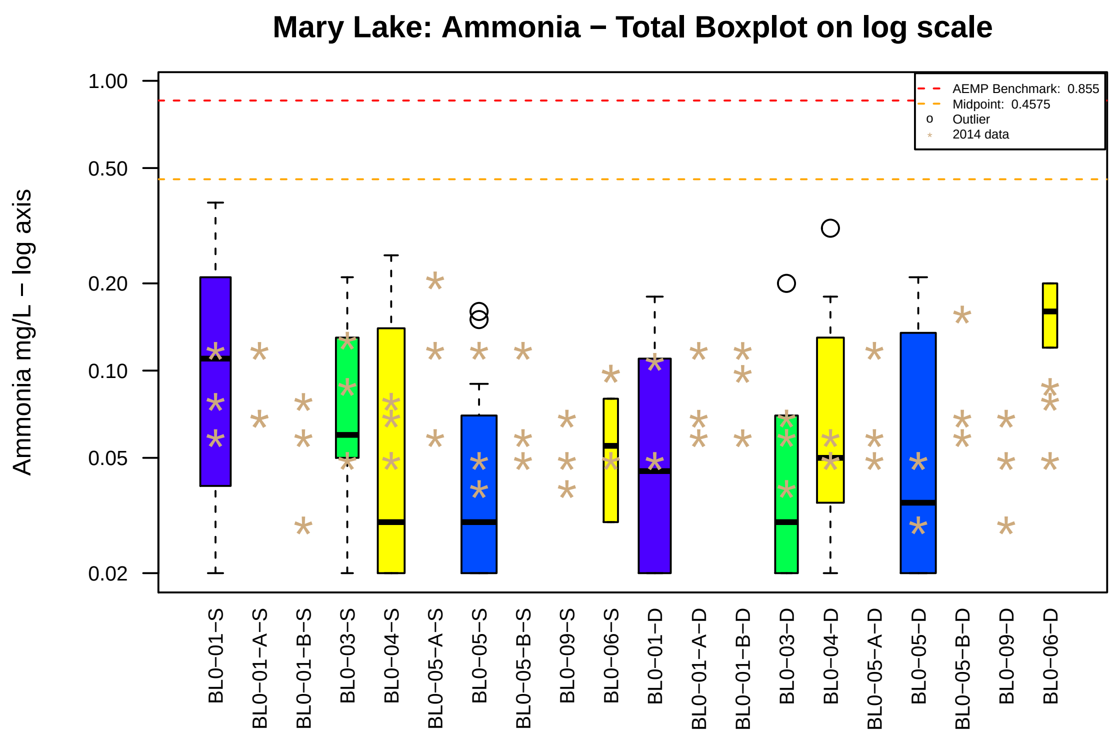

Mary Lake: Ammonia − Seasonal Boxplot
Ammonia mg/L
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.4575
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

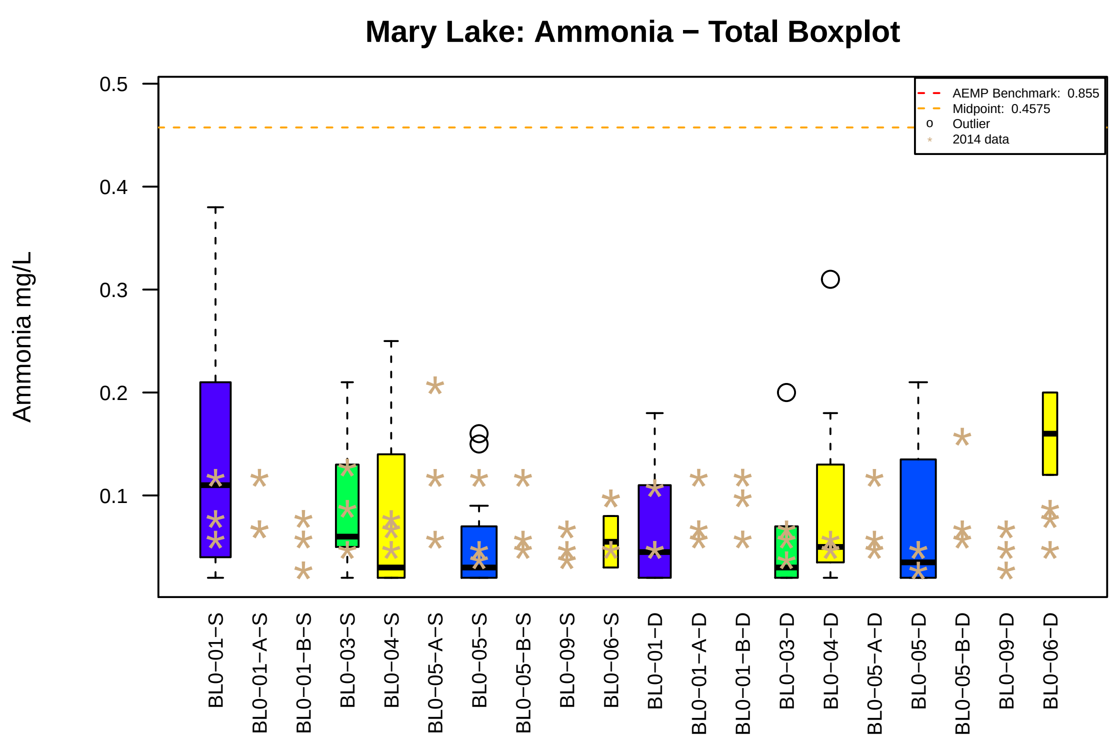

Mary Lake: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
1.00
0.50
0.20
0.10
0.05
0.02
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.4575
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

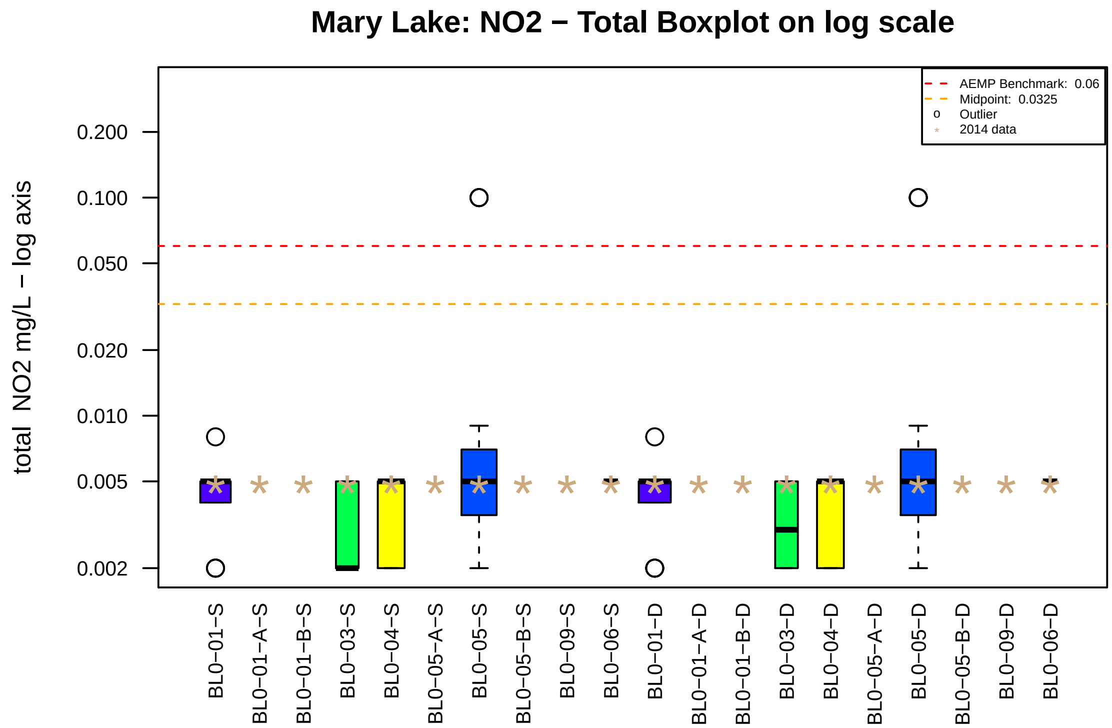

Mary Lake: Ammonia − Seasonal Boxplot
Ammonia mg/L
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.4575
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

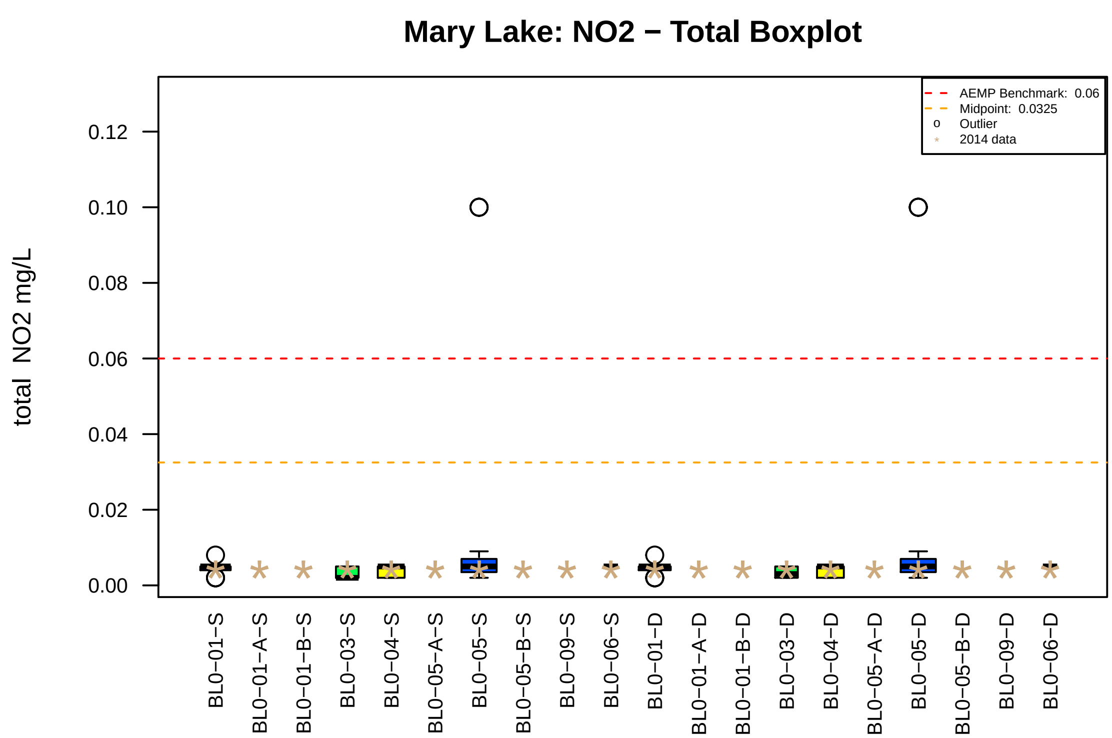

Mary Lake: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
0.20
0.10
0.05
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.4575
Summer
Fall
Winter
BL0−06−S , BL0−06−D

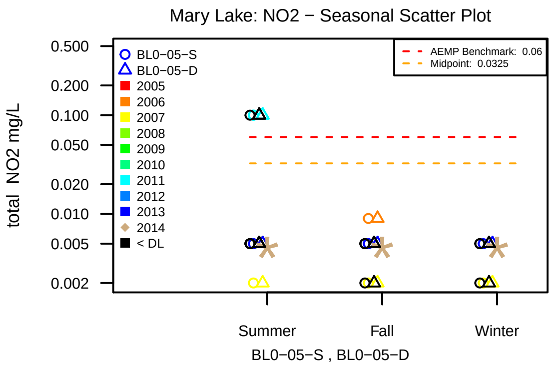

Mary Lake: Ammonia − Seasonal Boxplot
Ammonia mg/L
0.20
0.10
0.05
AEMP Benchmark: 0.855
Midpoint: 0.4575
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

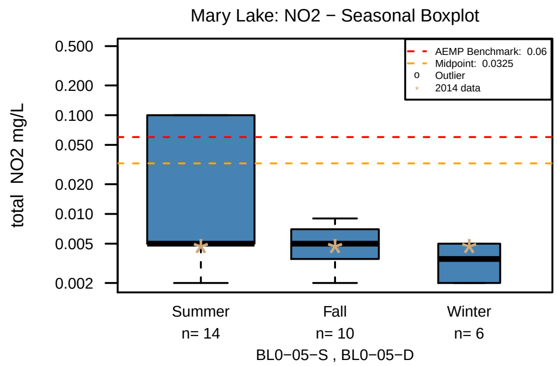

Mary Lake: Ammonia − Total Boxplot on log scale
Ammonia mg/L − log axis
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.4575
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

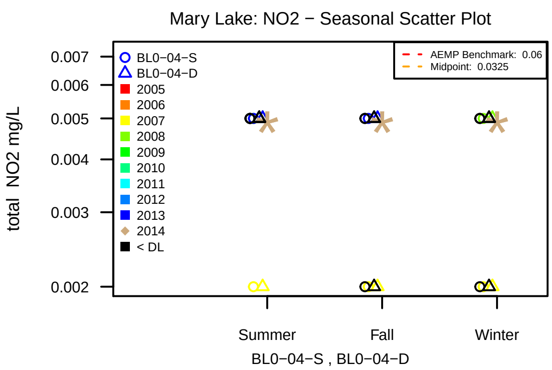

Mary Lake: Ammonia − Total Boxplot
Ammonia mg/L
0.5
0.4
0.3
0.2
0.1
AEMP Benchmark: 0.855
Midpoint: 0.4575
Outlier
2014 data
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

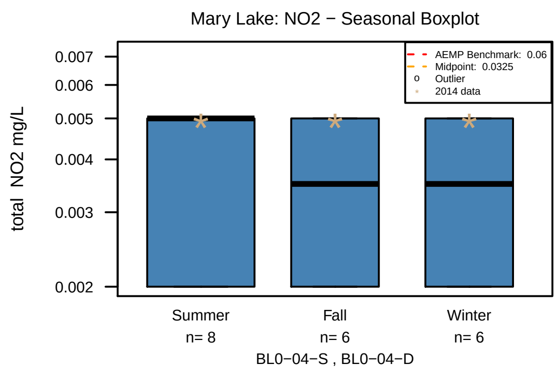

Mary Lake: NO2 − Total Boxplot on log scale
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L − log axis
0.200
0.100
0.050
0.020
0.010
0.005
0.002
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

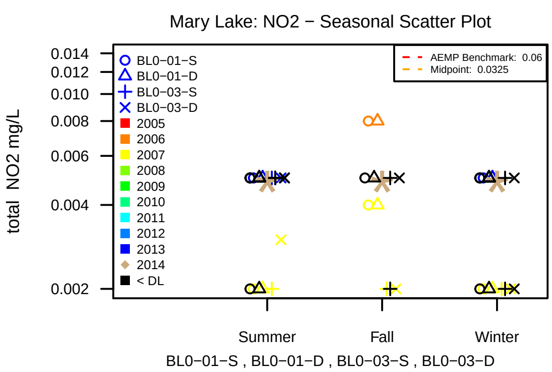

Mary Lake: NO2 − Total Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.12
0.10
0.08
0.06
0.04
0.02
0.00
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

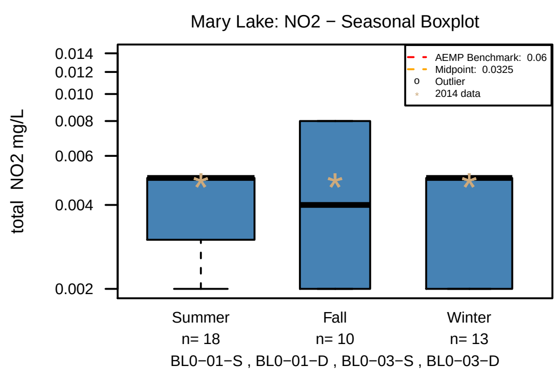

Mary Lake: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
BL0−05−S , BL0−05−D

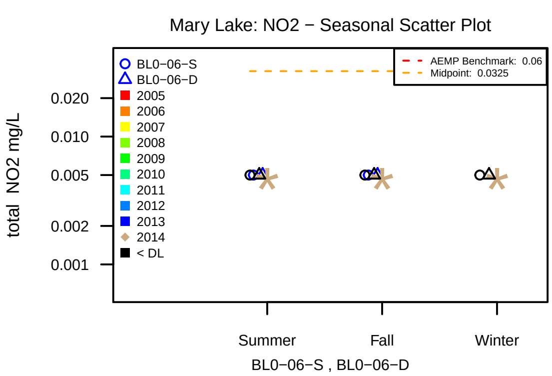

Mary Lake: NO2 − Seasonal Boxplot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

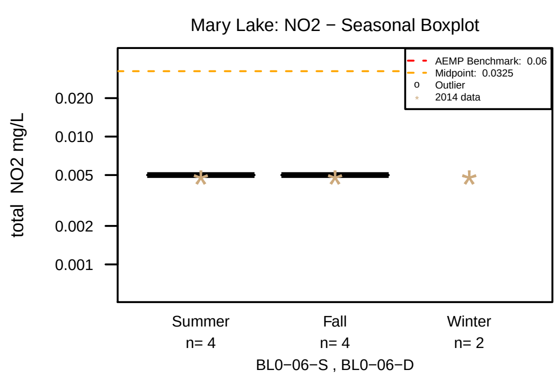

Mary Lake: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.007
0.006
0.005
0.004
0.003
0.002
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
BL0−04−S , BL0−04−D

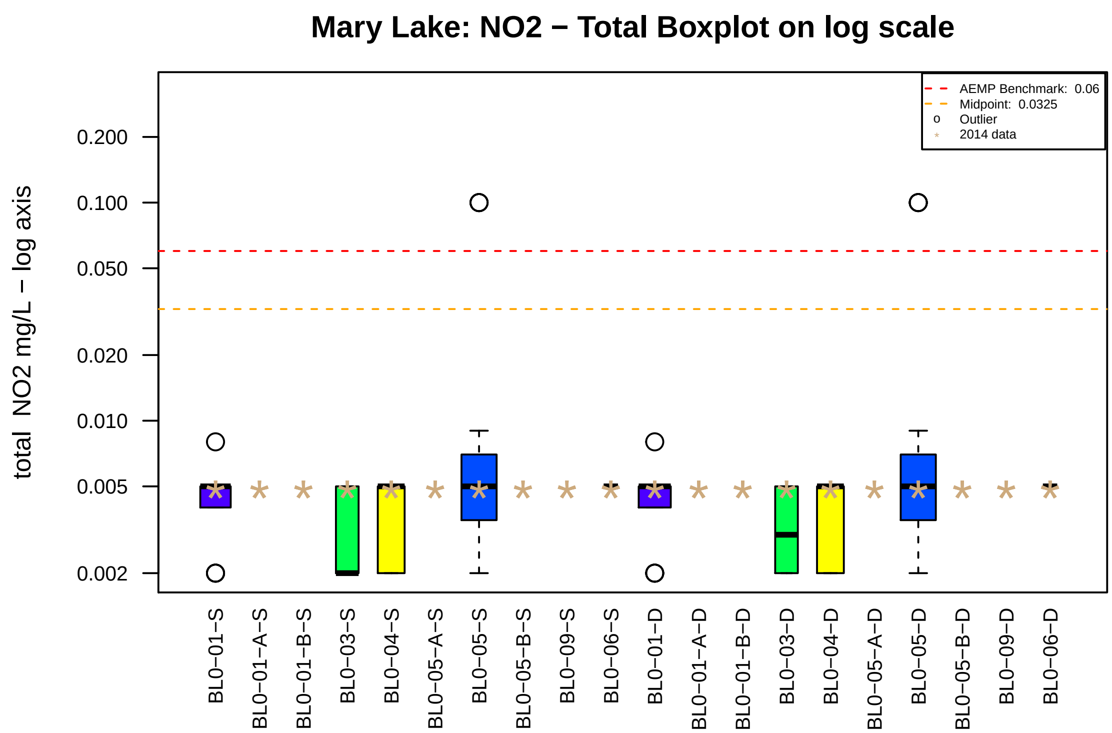

Mary Lake: NO2 − Seasonal Boxplot
total NO2 mg/L
0.007
0.006
0.005
0.004
0.003
0.002
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

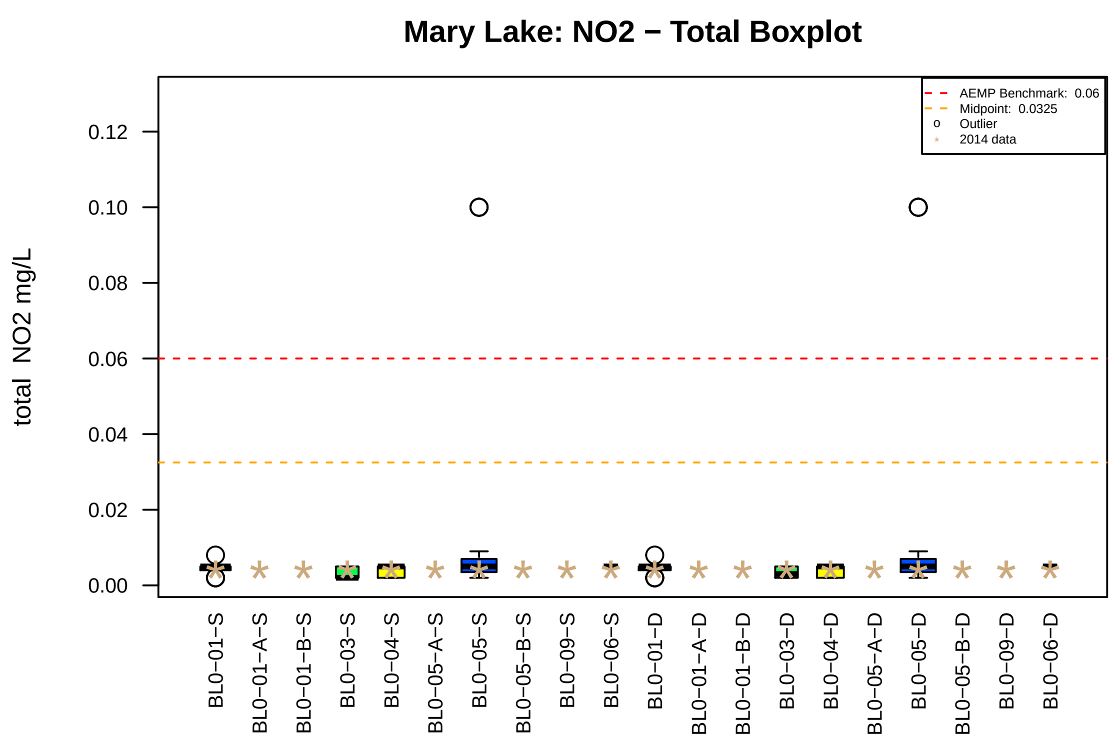

Mary Lake: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.014
0.012
0.010
0.008
0.006
0.004
0.002
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D


Mary Lake: NO2 − Seasonal Boxplot
total NO2 mg/L
0.014
0.012
0.010
0.008
0.006
0.004
0.002
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

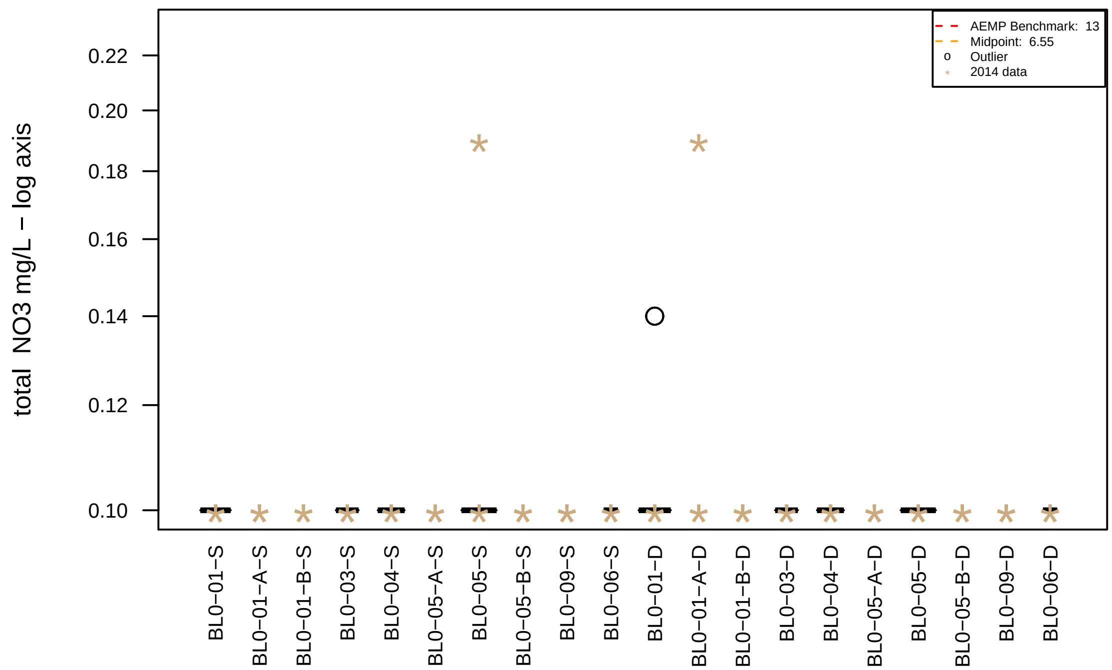

Mary Lake: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.020
0.010
0.005
0.002
0.001
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
BL0−06−S , BL0−06−D


Mary Lake: NO2 − Seasonal Boxplot
total NO2 mg/L
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

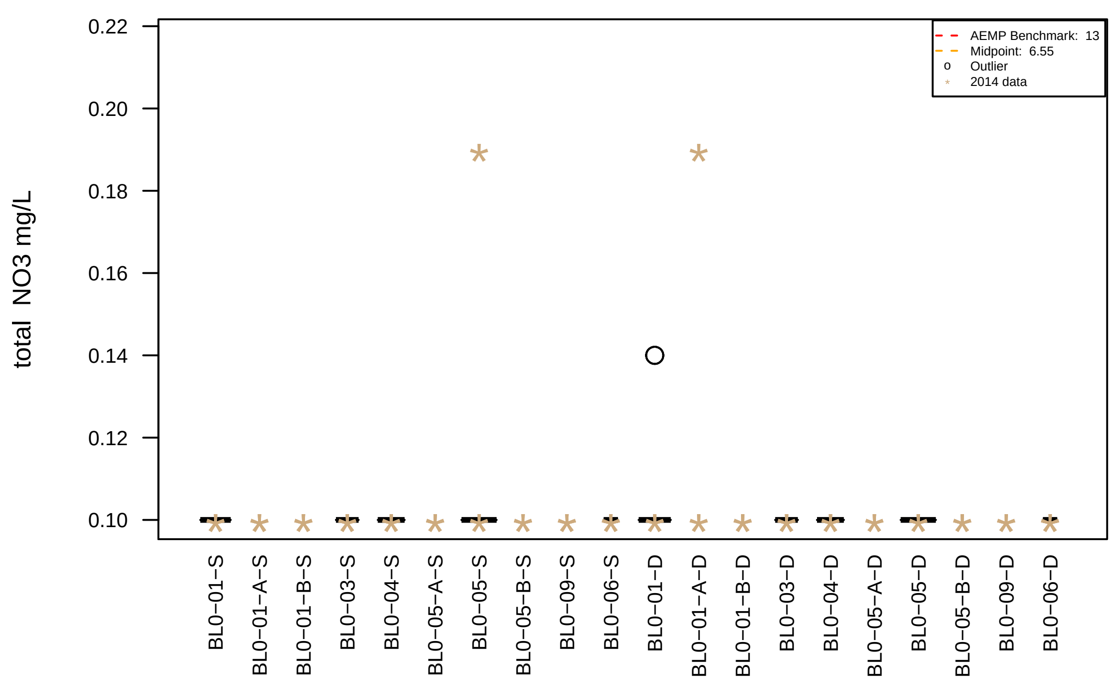

Mary Lake: NO2 – Total Boxplot on log scale
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L – log axis
0.200
0.100
0.050
0.020
0.010
0.005
0.002
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D

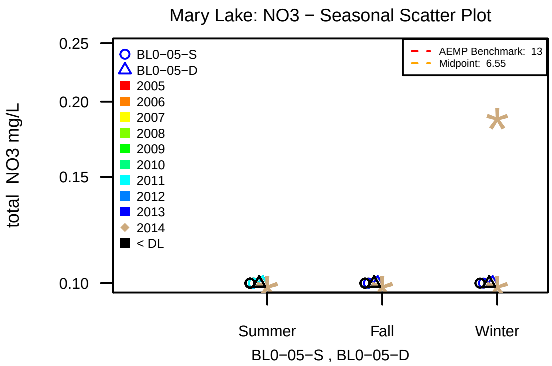

Mary Lake: NO2 – Total Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.12
0.10
0.08
0.06
0.04
0.02
0.00
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D

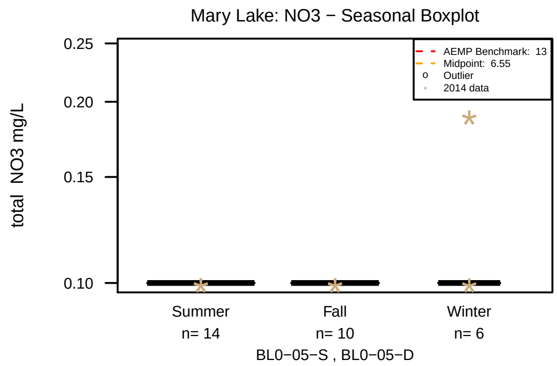
Mary Lake: NO3 − Total Boxplot on log scale

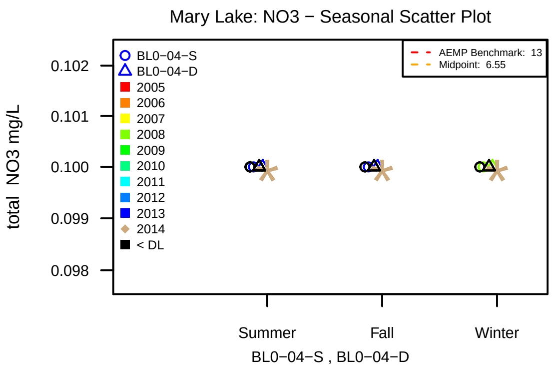


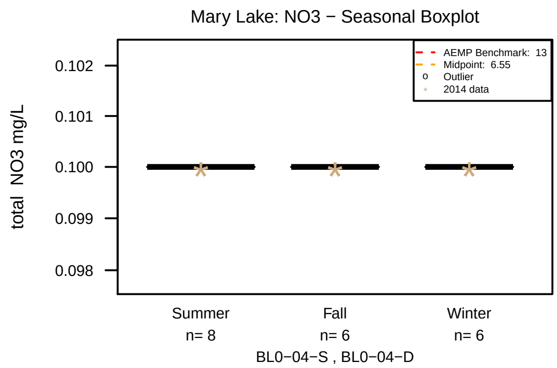
Mary Lake: NO3 − Total Boxplot

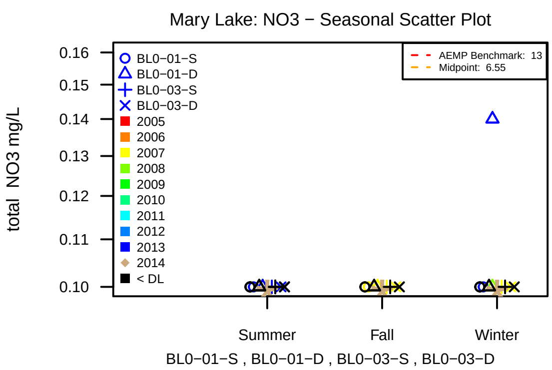


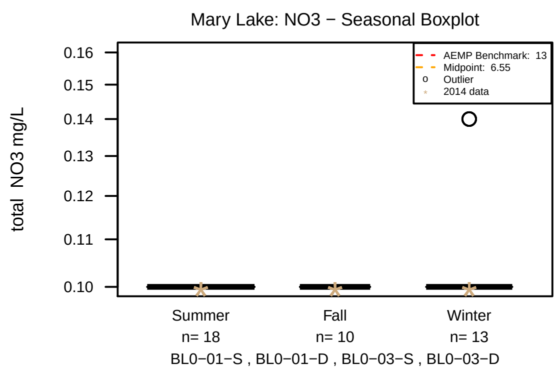

Mary Lake: NO3 − Seasonal Scatter Plot
total NO3 mg/L
0.25
0.20
0.15
0.10
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
Summer
Fall
Winter
BL0−05−S , BL0−05−D

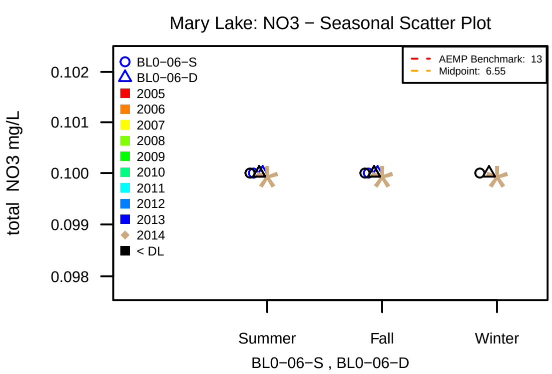

Mary Lake: NO3 − Seasonal Boxplot
total NO3 mg/L
0.25
0.20
0.15
0.10
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

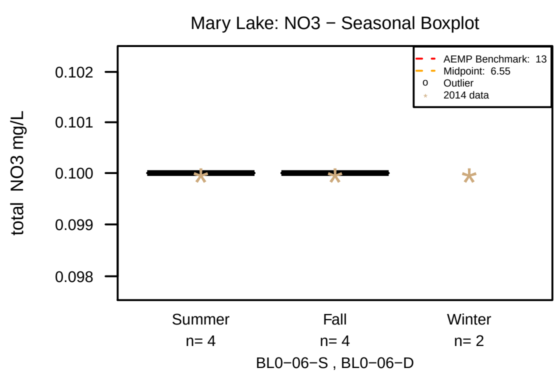

Mary Lake: NO3 − Seasonal Scatter Plot
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
Summer
Fall
Winter
BL0−04−S , BL0−04−D

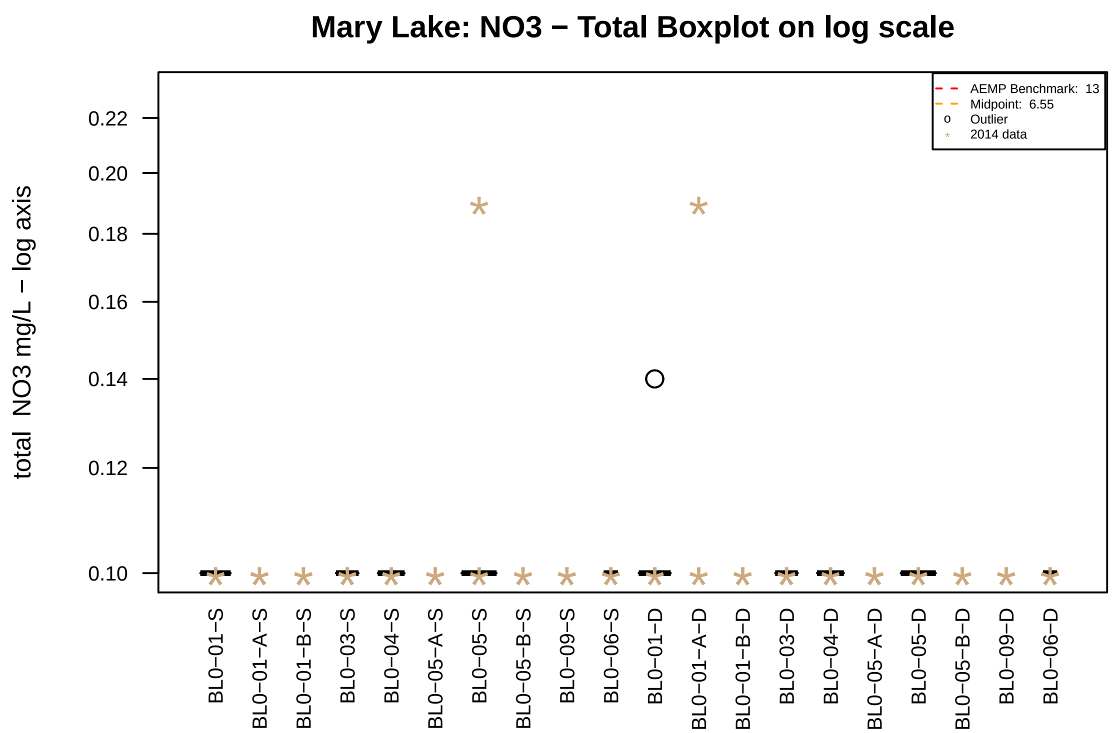

Mary Lake: NO3 − Seasonal Boxplot
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

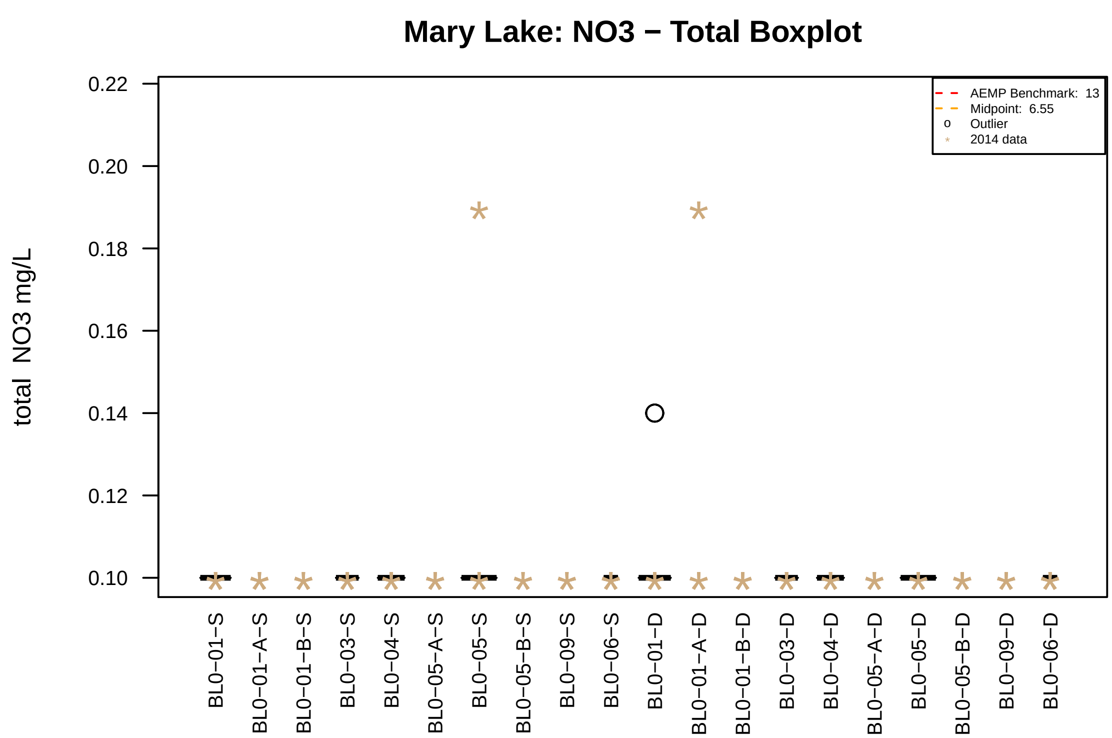

Mary Lake: NO3 − Seasonal Scatter Plot
total NO3 mg/L
0.16
0.15
0.14
0.13
0.12
0.11
0.10
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

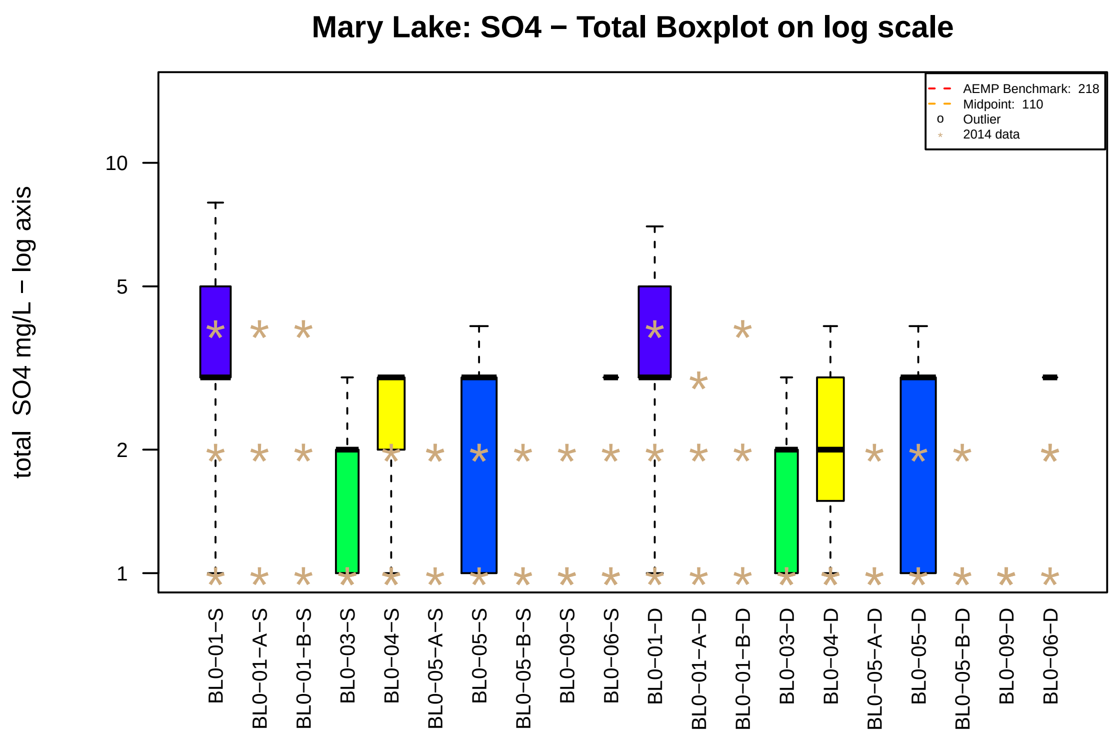

Mary Lake: NO3 − Seasonal Boxplot
total NO3 mg/L
0.16
0.15
0.14
0.13
0.12
0.11
0.10
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D

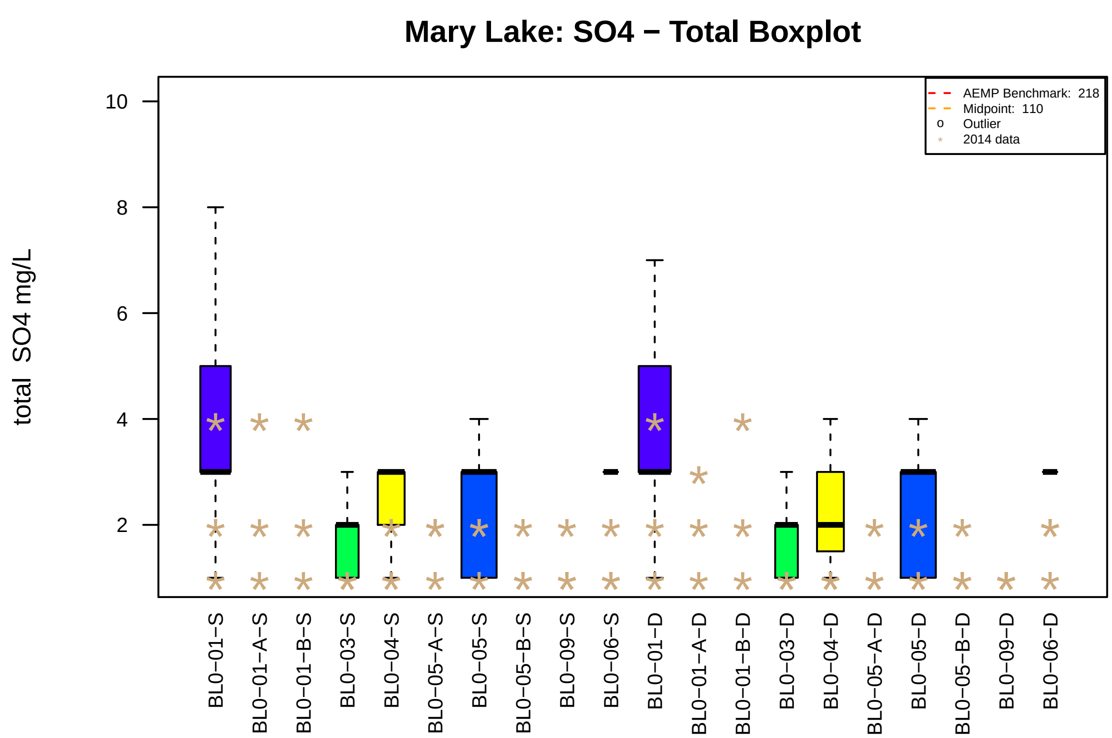

Mary Lake: NO3 − Seasonal Scatter Plot
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
Summer
Fall
Winter
BL0−06−S , BL0−06−D

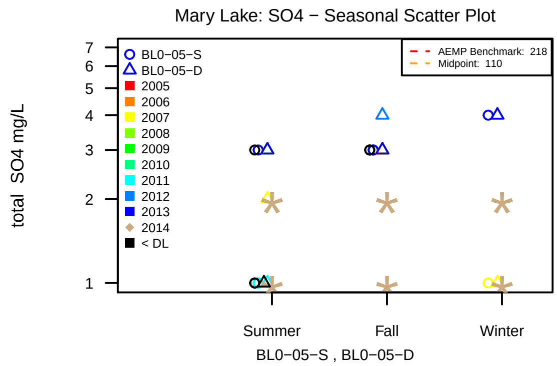

Mary Lake: NO3 − Seasonal Boxplot
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D

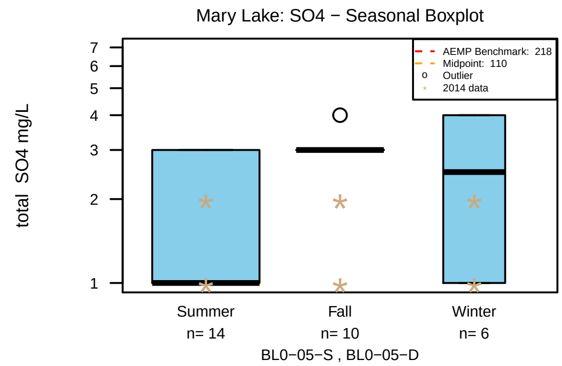

Mary Lake: NO3 − Total Boxplot on log scale
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L − log axis
0.22
0.20
0.18
0.16
0.14
0.12
0.10
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

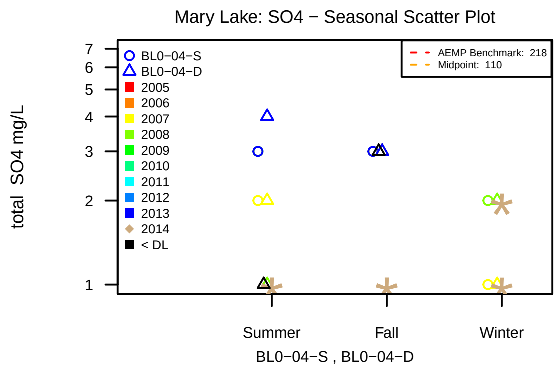

Mary Lake: NO3 − Total Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.22
0.20
0.18
0.16
0.14
0.12
0.10
BL0−01−S
BL0−01−A−S
BL0−01−B−S
BL0−03−S
BL0−04−S
BL0−05−A−S
BL0−05−S
BL0−05−B−S
BL0−09−S
BL0−06−S
BL0−01−D
BL0−01−A−D
BL0−01−B−D
BL0−03−D
BL0−04−D
BL0−05−A−D
BL0−05−D
BL0−05−B−D
BL0−09−D
BL0−06−D

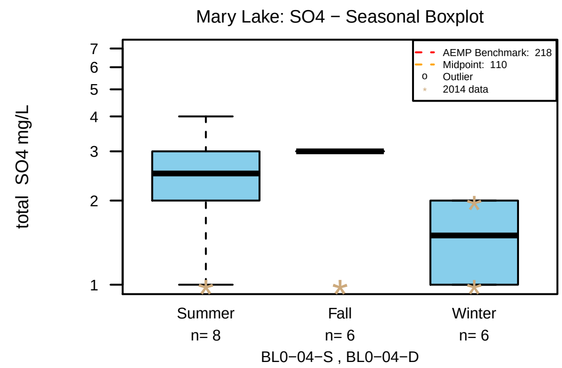

Mary Lake: SO4 – Total Boxplot on log scale
total SO4 mg/L – log axis
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
10
5
2
1
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D

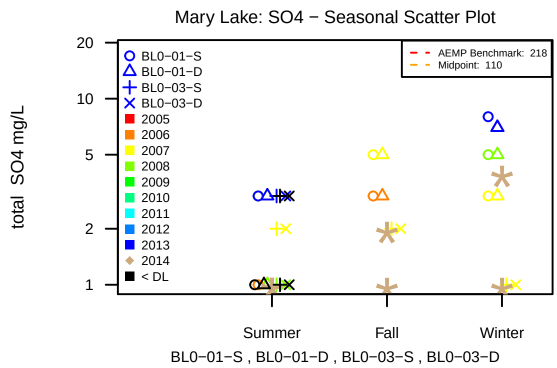

Mary Lake: SO4 – Total Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
10
8
6
4
2
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D

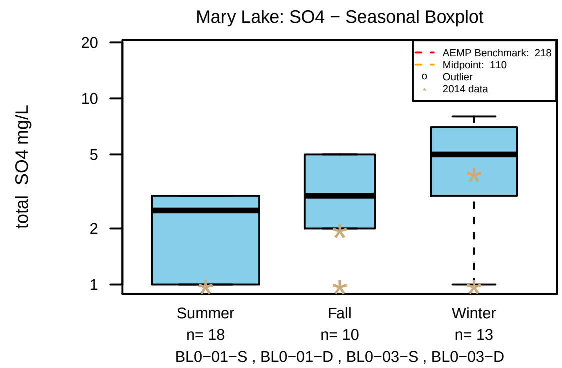

Mary Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
BL0−05−S
BL0−05−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
BL0−05−S , BL0−05−D

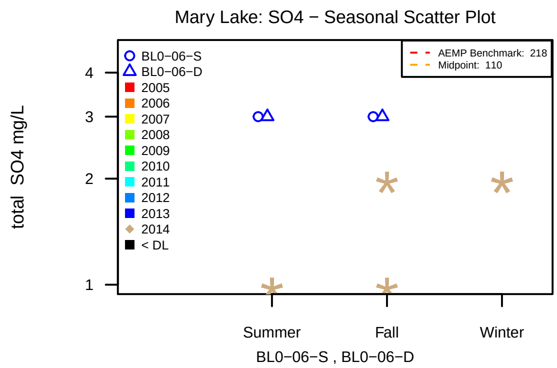

Mary Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 14
Fall
n= 10
Winter
n= 6
BL0−05−S , BL0−05−D

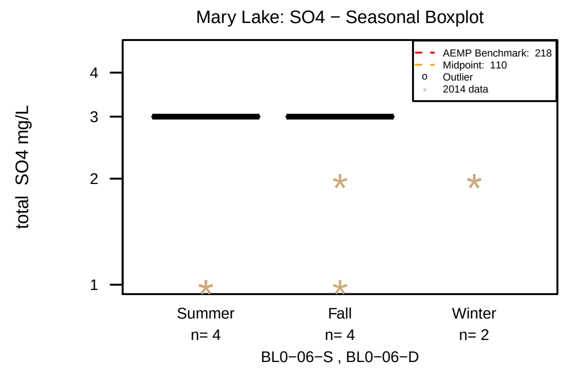

Mary Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
BL0−04−S
BL0−04−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
BL0−04−S , BL0−04−D

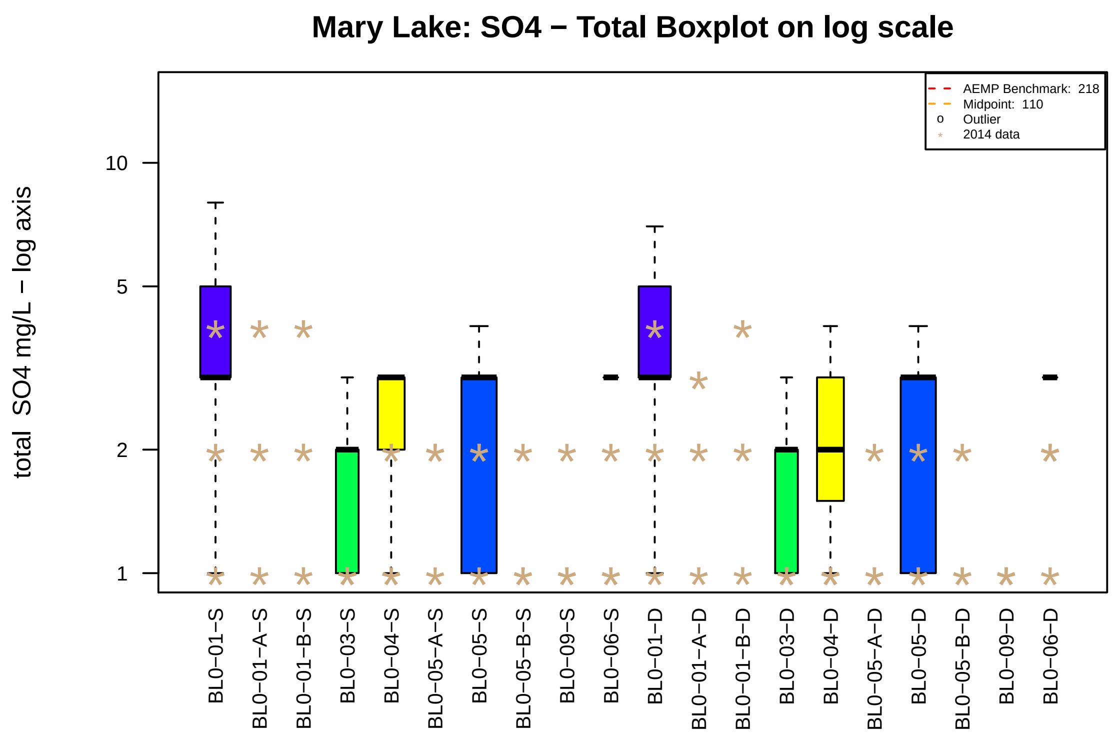

Mary Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 8
Fall
n= 6
Winter
n= 6
BL0−04−S , BL0−04−D

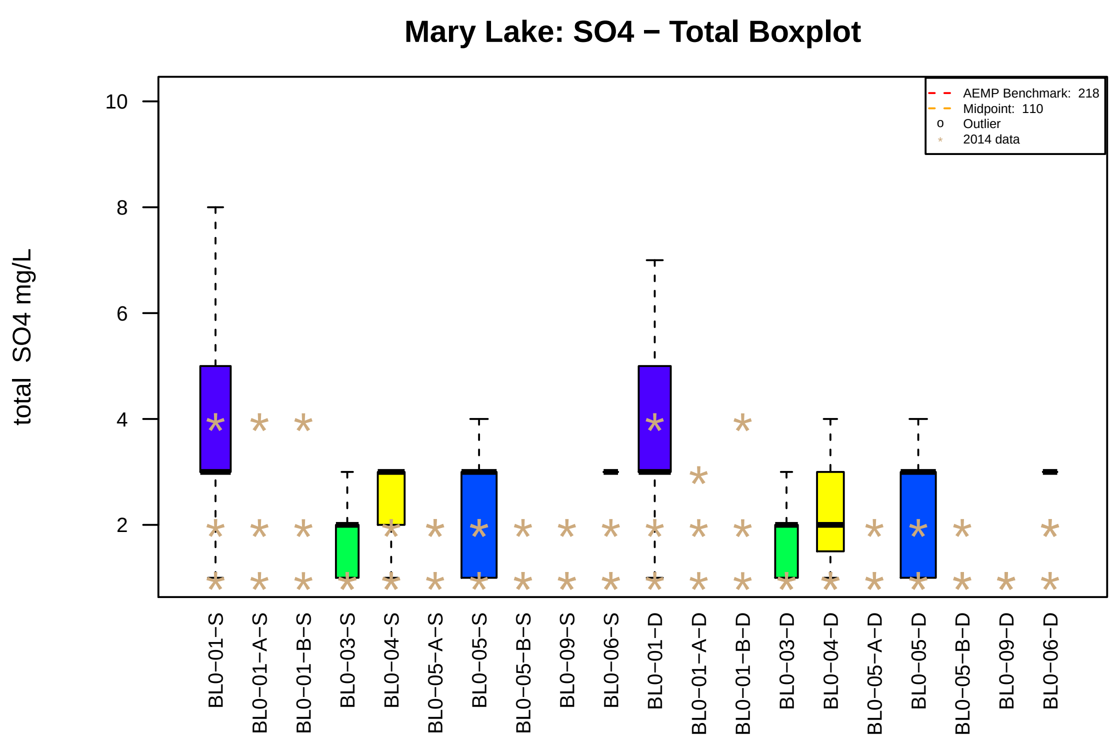

Mary Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
BL0−01−S
BL0−01−D
BL0−03−S
BL0−03−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D


Mary Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 18
Fall
n= 10
Winter
n= 13
BL0−01−S , BL0−01−D , BL0−03−S , BL0−03−D


Mary Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
BL0−06−S
BL0−06−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
BL0−06−S , BL0−06−D


Mary Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 4
Fall
n= 4
Winter
n= 2
BL0−06−S , BL0−06−D


Mary Lake: SO4 – Total Boxplot on log scale
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
total SO4 mg/L – log axis
10
5
2
1
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D


Mary Lake: SO4 – Total Boxplot
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
total SO4 mg/L
10
8
6
4
2
BL0–01–S
BL0–01–A–S
BL0–01–B–S
BL0–03–S
BL0–04–S
BL0–05–A–S
BL0–05–S
BL0–05–B–S
BL0–09–S
BL0–06–S
BL0–01–D
BL0–01–A–D
BL0–01–B–D
BL0–03–D
BL0–04–D
BL0–05–A–D
BL0–05–D
BL0–05–B–D
BL0–09–D
BL0–06–D

APPENDIX A4

GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - CAMP LAKE TRIBUTARY

(Pages A4-1 to A4-46)

APPENDIX A4
GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - CAMP LAKE TRIBUTARIES

The Appendix A4 tables and graphs were generated using the R (2014) statistical package as follows:

Table 1: AEMP Benchmarks and Midpoint Concentrations of Parameters of Interest
Table 2: Camp Lake Tributaries Sample Size by Year and Season
Table 3: Camp Lake Tributaries Sample Size by Location and Season

Camp Lake Tributaries Sample Distributions:

Data have been presented in graphs by Month, Season, Year and Station.

Total Boxplot on Log Scale and Total Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Seasonal Scatter Plot and Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Reference:

R Development Core Team, 2014. *R: A language and environment for statistical computing*. R. Foundation for Statistical Computing, Vienna, Austria. Retrieved from: http://www.R-project.org.

Appendix A5 - Camp Lake

Table 1: Mary Lake: AEMP Benchmarks and Midpoints

	AEMP Benchmark	Midpoint	Minimum MDL	Maximum MDL
Al	0.1	0.05295	0.001	0.005
As	0.005	0.00255	1e-04	1e-04
Cd	1e-04	5.5e-05	1e-05	1.7e-05
Cr	3e-04	0.0002075	2e-05	5e-04
Co	0.004	0.00205	1e-04	2e-04
Cu	0.004	0.002455	all $>$ MDL	all $>$ MDL
Fe	0.3	0.165	0.003	0.03
Pb	0.001	0.000525	5e-05	8e-05
Ni	0.025	0.01283	all $>$ MDL	all $>$ MDL
Ag	1e-04	5.5e-05	1e-06	1e-05
Tl	8e-04	0.00045	1e-06	1e-04
V	0.006	0.0035	0.001	0.001
Zn	0.03	0.0165	0.001	0.003
Cl	120	61.5	1	1
Ammonia	0.855	0.445	0.02	0.84
NO2	0.06	0.0325	0.002	0.1
NO3	13	6.55	0.1	0.1
SO4	218	110	1	3

Table 2: Camp Lake Sample Size by Year and Season

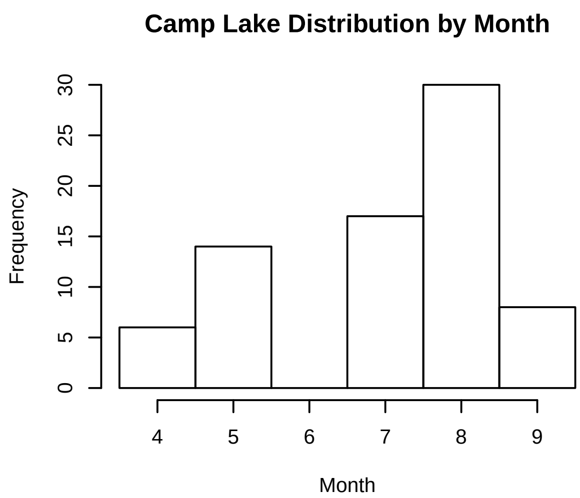
	Spring	Summer	Fall
2006	2	2	0
2007	6	6	6
2008	6	0	2
2011	4	0	0
2012	0	6	0
2013	5	6	2
2014	2	10	10

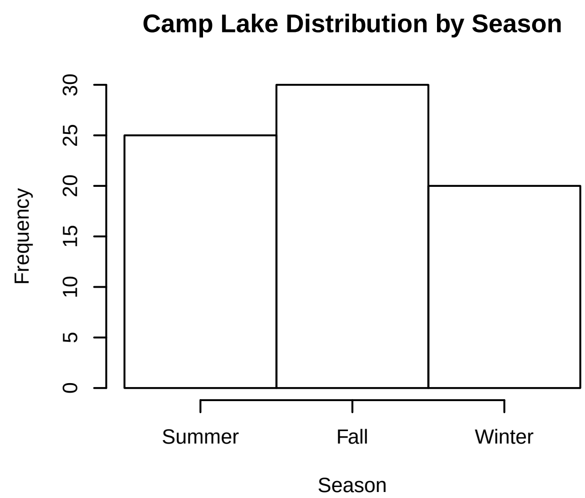
Table 3: Camp Lake Sample Size by Location and Season

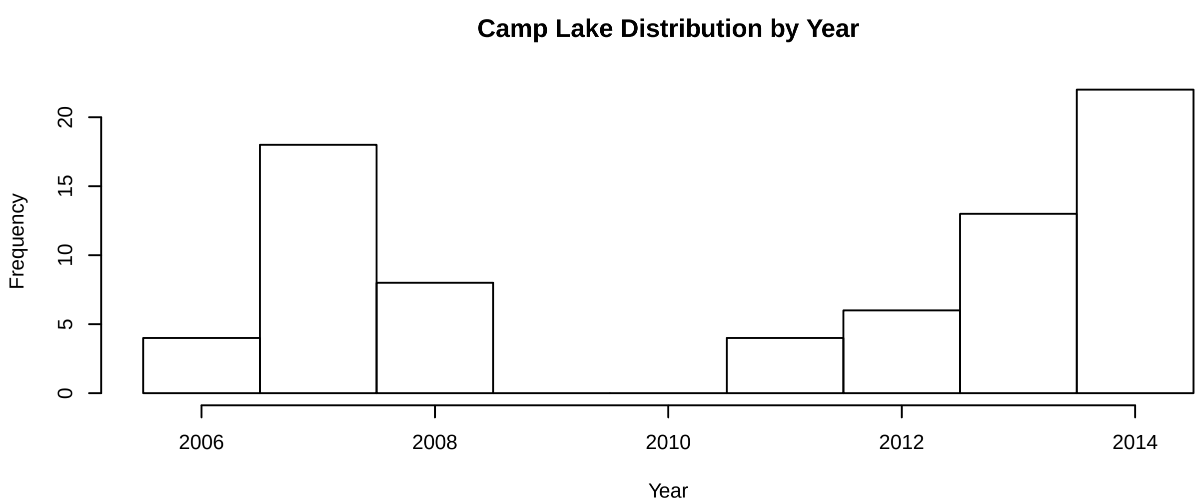
	Spring	Summer	Fall
JL0-02-S	5	4	2
JL0-10-S	0	1	1
JL0-01-S	5	5	4
JL0-07-S	0	1	1
JL0-09-S	3	4	2
JL0-02-D	5	5	2
JL0-10-D	0	1	1
JL0-01-D	4	4	4
JL0-07-D	0	1	1
JL0-09-D	3	4	2

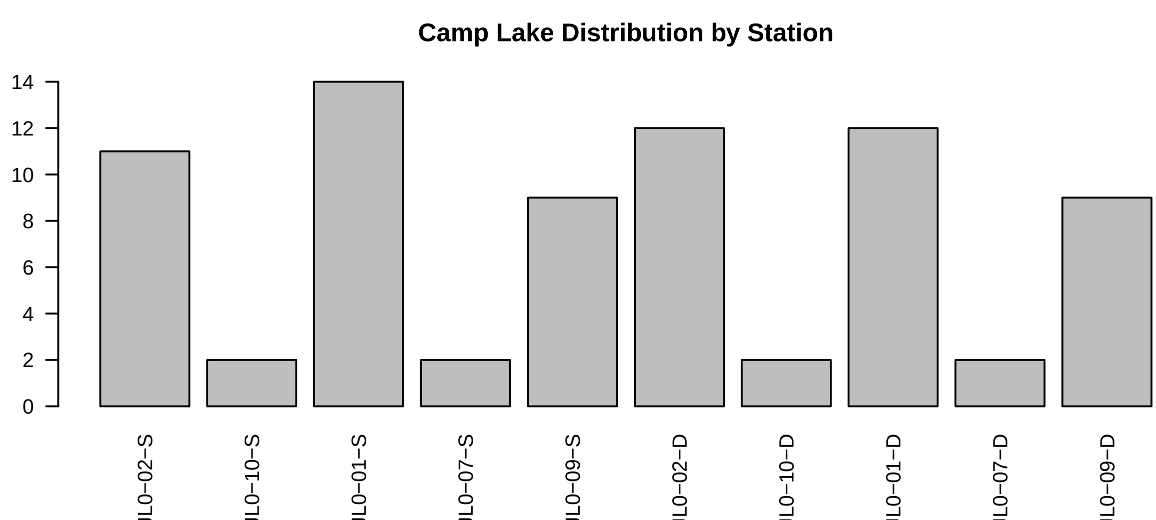
Table 4: 2014 Values Greater than Maximum of Camp Lake Baseline Data

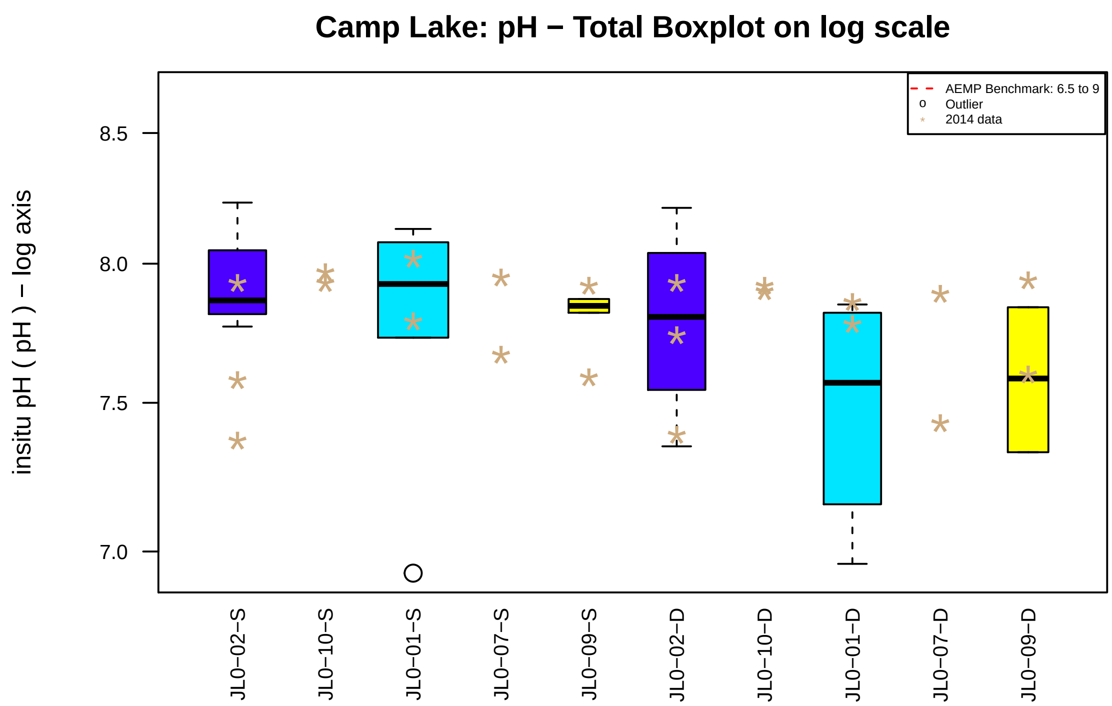
	Parameter	Baseline Max	Station	Value
1	CaCO3	77.1	JL0-01-S	78.1
2	CaCO3	77.1	JL0-02-S	77.6
3	CaCO3	77.1	JL0-10-S	82.3
4	Alkalinity	74	JL0-02-S	77
5	Alkalinity	74	JL0-02-D	75
6	Alkalinity	74	JL0-09-S	75
7	Alkalinity	74	JL0-10-S	77
8	Cr	0.00024	JL0-01-S	5e-04
9	Cr	0.00024	JL0-01-D	5e-04
10	Cr	0.00024	JL0-02-S	5e-04
11	Cr	0.00024	JL0-02-S	5e-04
12	Cr	0.00024	JL0-02-D	5e-04
13	Cr	0.00024	JL0-02-D	5e-04
14	Cr	0.00024	JL0-07-S	5e-04
15	Cr	0.00024	JL0-07-D	5e-04
16	Cr	0.00024	JL0-09-S	5e-04
17	Cr	0.00024	JL0-09-D	5e-04
18	Cr	0.00024	JL0-10-S	5e-04
19	Cr	0.00024	JL0-10-D	5e-04
20	Cl	4	JL0-07-D	7
21	Cl	4	JL0-10-S	5
22	NO3	0.1	JL0-07-D	0.12

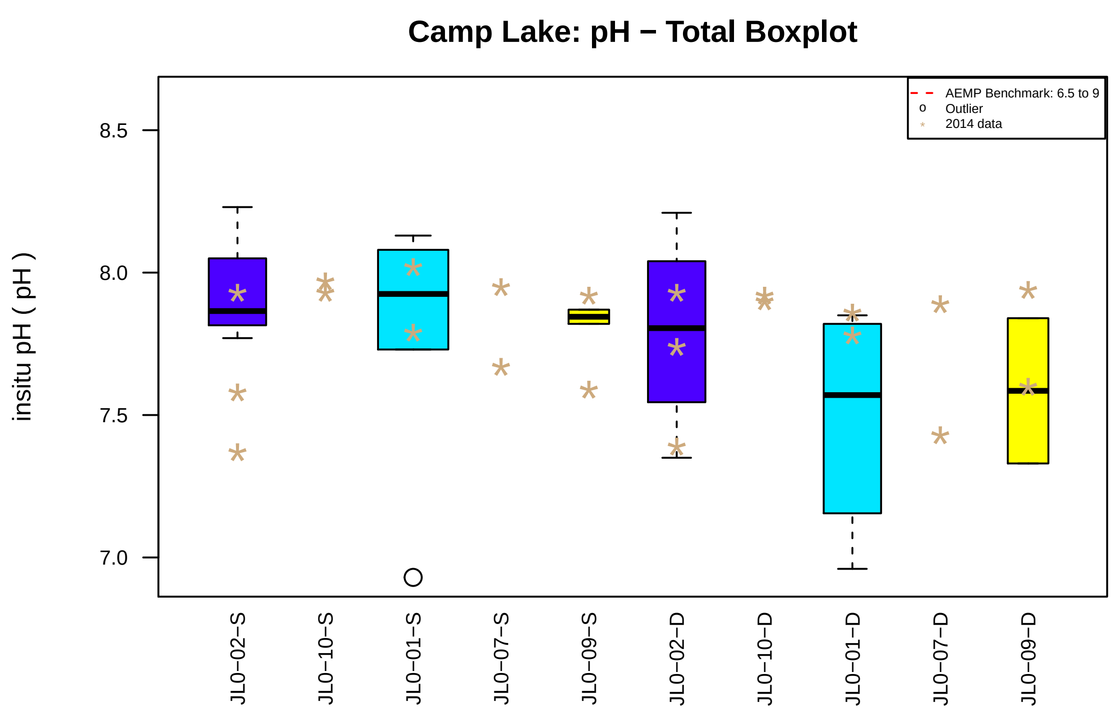

Camp Lake Distribution by Month
Frequency
Month
4 5 6 7 8 9

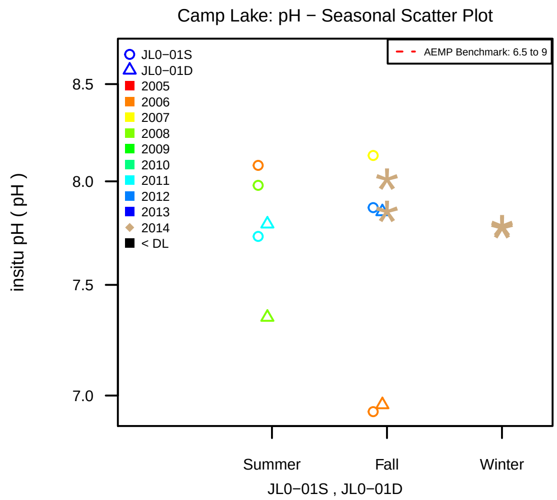

Camp Lake Distribution by Season
Frequency
Season
Summer
Fall
Winter

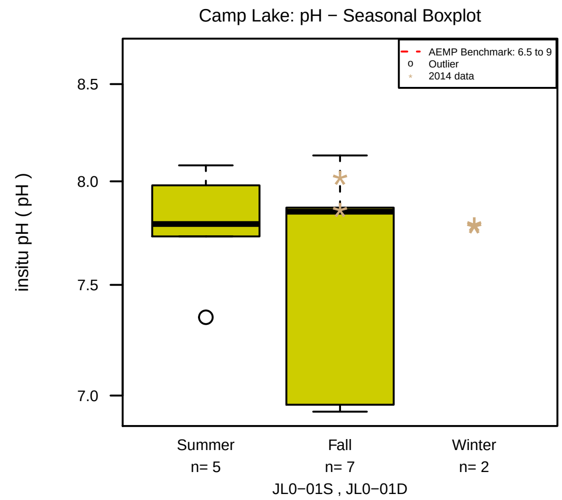

Camp Lake Distribution by Year
Frequency
Year
2006 2008 2010 2012 2014

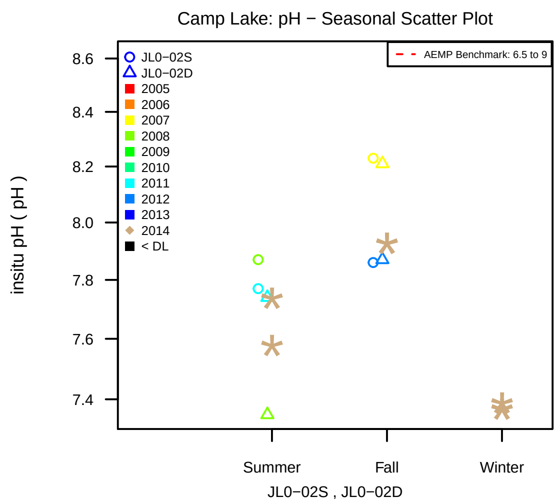

Camp Lake Distribution by Station
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

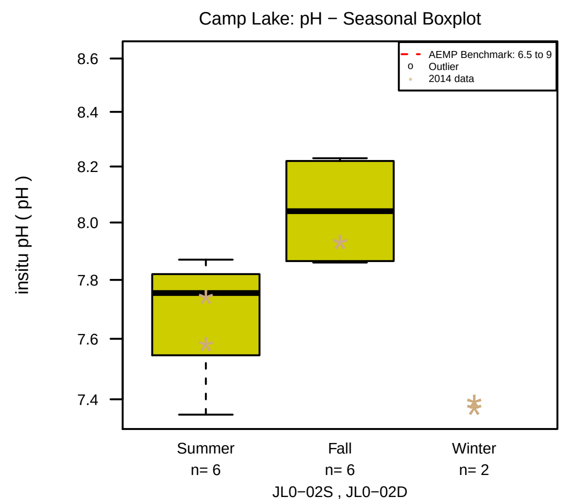

Camp Lake: pH − Total Boxplot on log scale
insitu pH (pH) − log axis
8.5
8.0
7.5
7.0
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

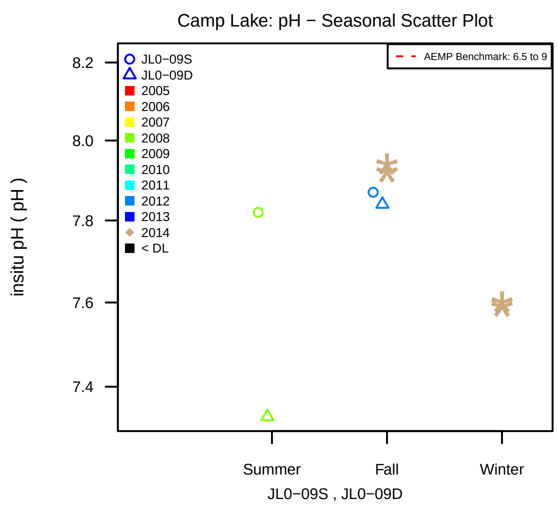

Camp Lake: pH − Total Boxplot
insitu pH (pH)
8.5
8.0
7.5
7.0
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

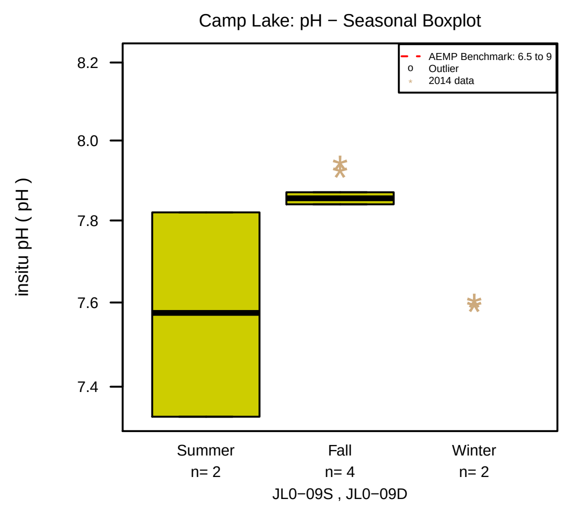

Camp Lake: pH − Seasonal Scatter Plot
insitu pH (pH)
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
8.5
8.0
7.5
7.0
Summer
Fall
Winter
JL0−01S , JL0−01D

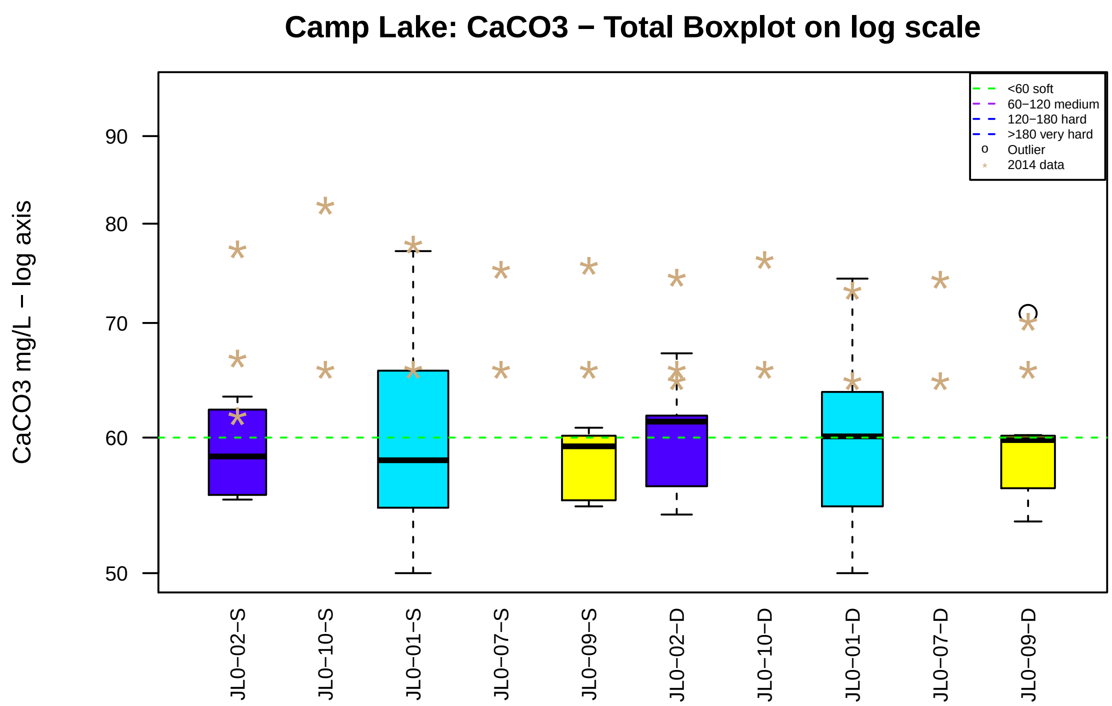

Camp Lake: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
8.5
8.0
7.5
7.0
Summer
n= 5
Fall
n= 7
Winter
n= 2
JL0−01S , JL0−01D

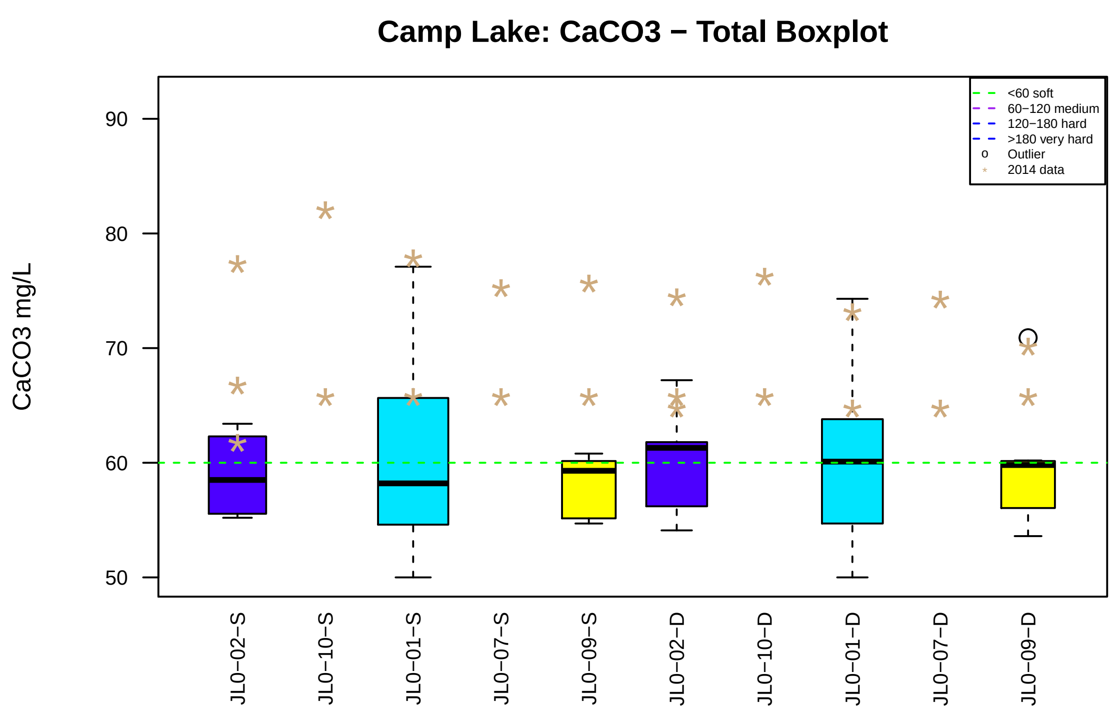

Camp Lake: pH − Seasonal Scatter Plot
insitu pH (pH)
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
8.6
8.4
8.2
8.0
7.8
7.6
7.4
Summer
Fall
Winter
JL0−02S , JL0−02D

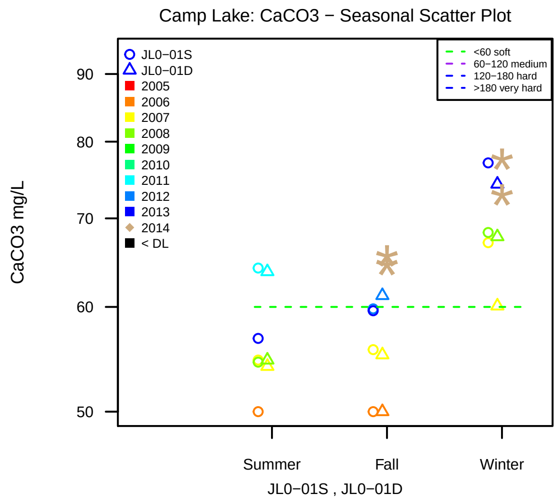

Camp Lake: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
8.6
8.4
8.2
8.0
7.8
7.6
7.4
Summer
n= 6
Fall
n= 6
Winter
n= 2
JL0−02S , JL0−02D

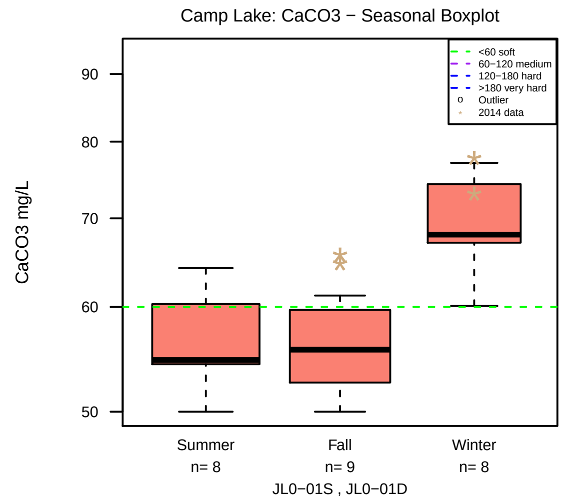

Camp Lake: pH − Seasonal Scatter Plot
insitu pH (pH)
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
8.2
8.0
7.8
7.6
7.4
Summer
Fall
Winter
JL0−09S , JL0−09D

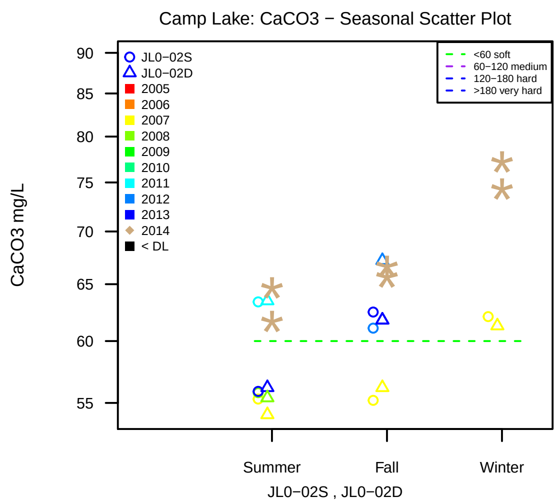

Camp Lake: pH − Seasonal Boxplot
insitu pH (pH)
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
8.2
8.0
7.8
7.6
7.4
Summer
n= 2
Fall
n= 4
Winter
n= 2
JL0−09S , JL0−09D

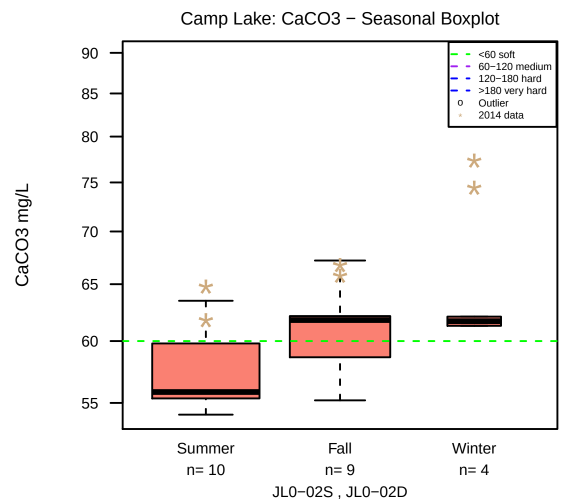

Camp Lake: CaCO3 − Total Boxplot on log scale
CaCO3 mg/L − log axis
90
80
70
60
50
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

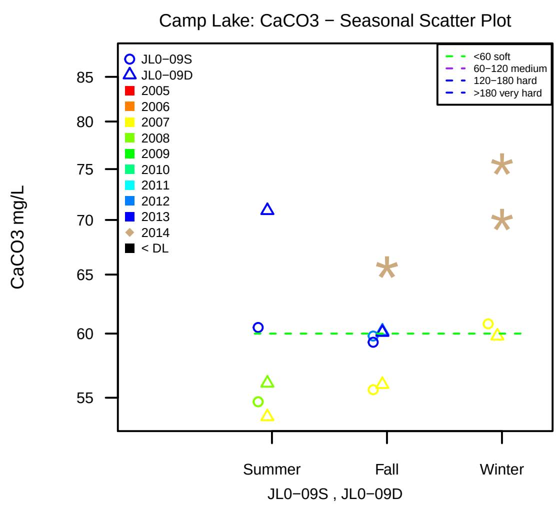

Camp Lake: CaCO3 − Total Boxplot
CaCO3 mg/L
90
80
70
60
50
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

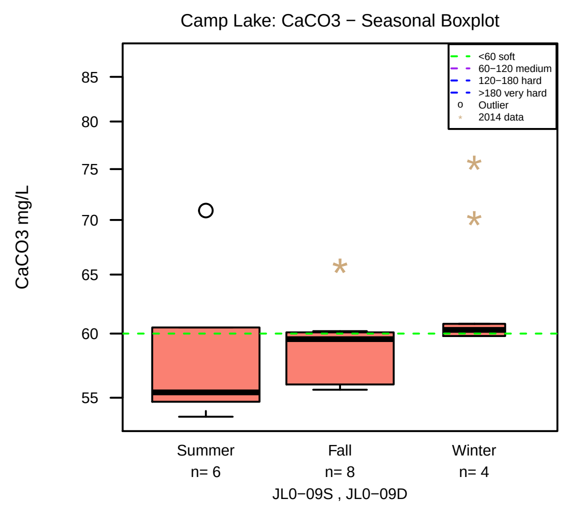

Camp Lake: CaCO3 − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
CaCO3 mg/L
90
80
70
60
50
Summer
Fall
Winter
JL0−01S , JL0−01D


Camp Lake: CaCO3 − Seasonal Boxplot
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
CaCO3 mg/L
90
80
70
60
50
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

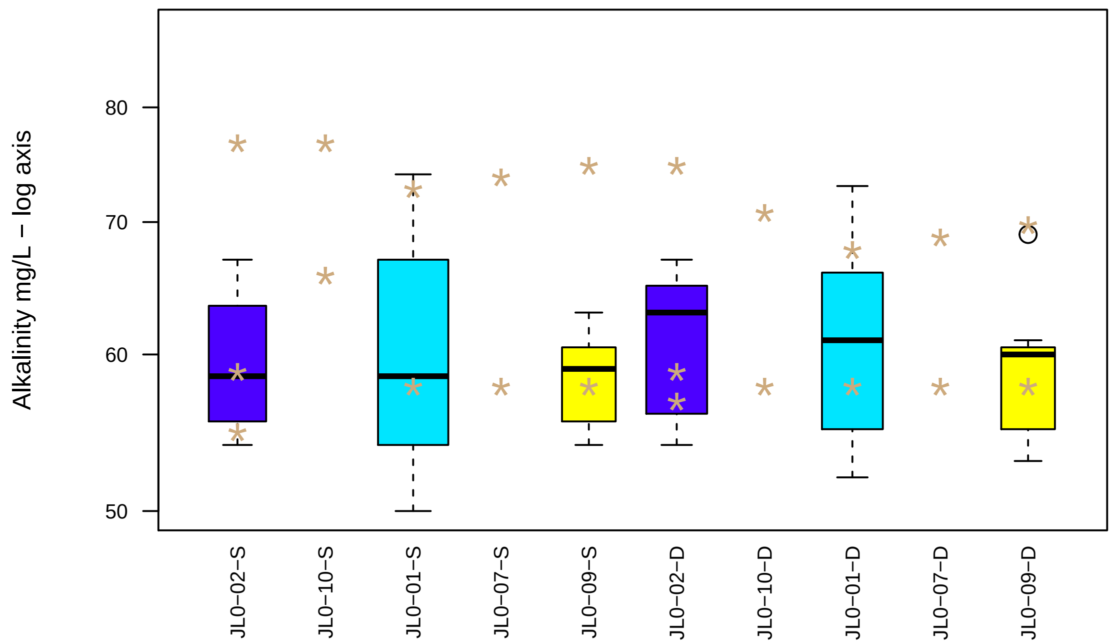

Camp Lake: CaCO3 − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
CaCO3 mg/L
90
85
80
75
70
65
60
55
Summer
Fall
Winter
JL0−02S , JL0−02D


Camp Lake: CaCO3 − Seasonal Boxplot
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
CaCO3 mg/L
90
85
80
75
70
65
60
55
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

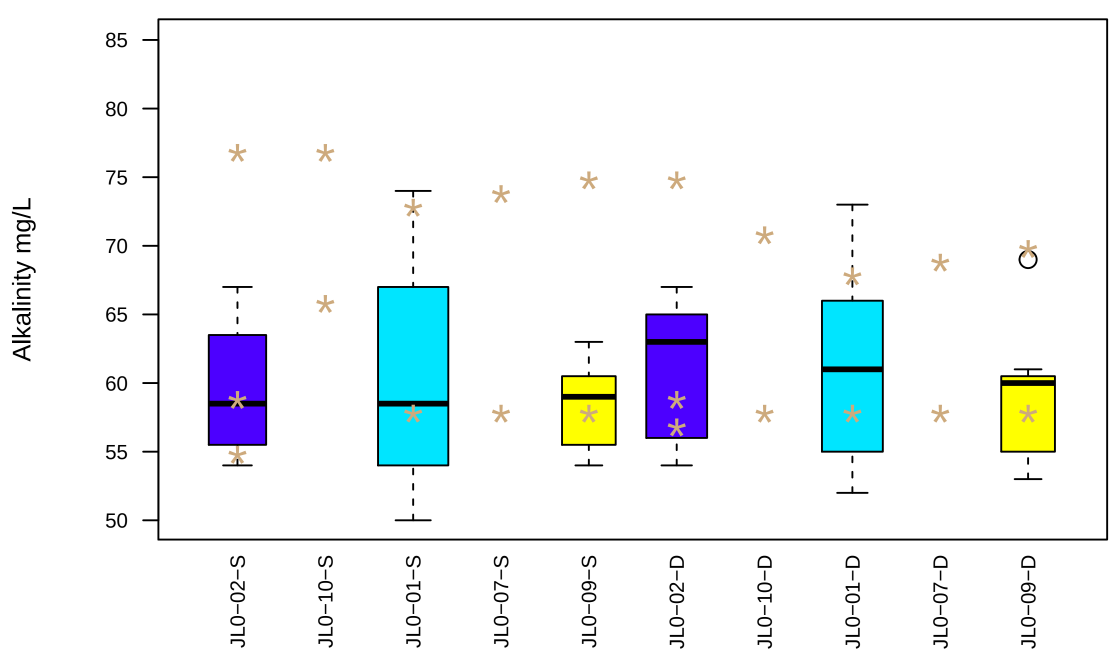

Camp Lake: CaCO3 − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
CaCO3 mg/L
85
80
75
70
65
60
55
Summer
Fall
Winter
JL0−09S , JL0−09D

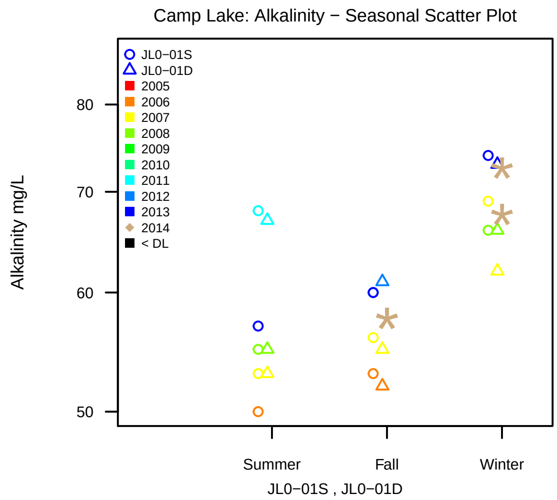

Camp Lake: CaCO3 − Seasonal Boxplot
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
CaCO3 mg/L
85
80
75
70
65
60
55
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

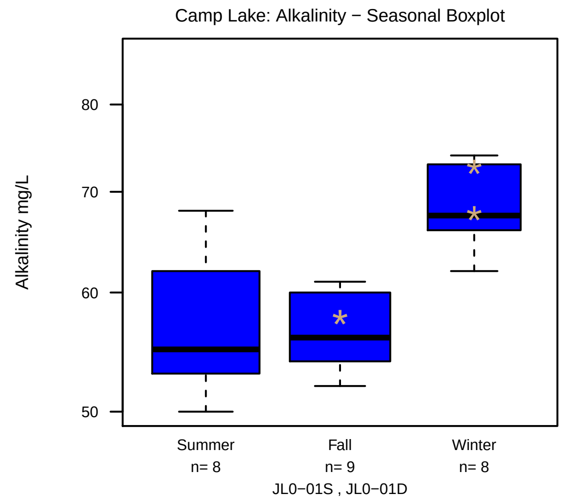
Camp Lake: Alkalinity – Total Boxplot on log scale

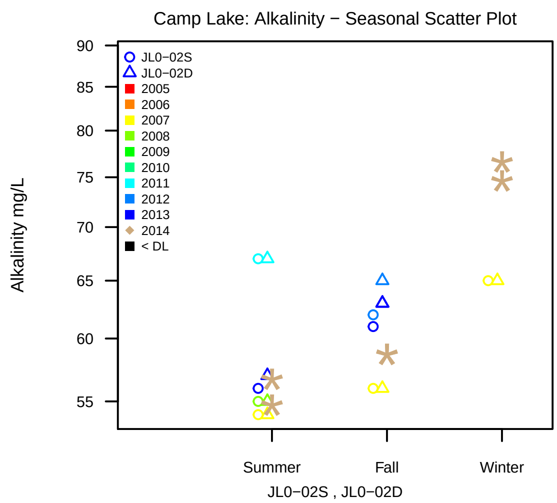


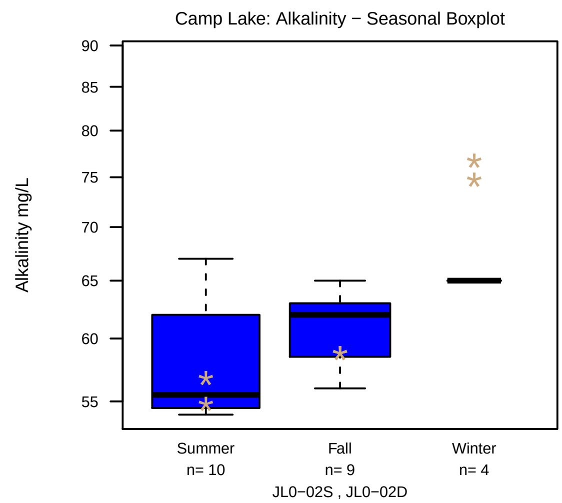
Camp Lake: Alkalinity – Total Boxplot

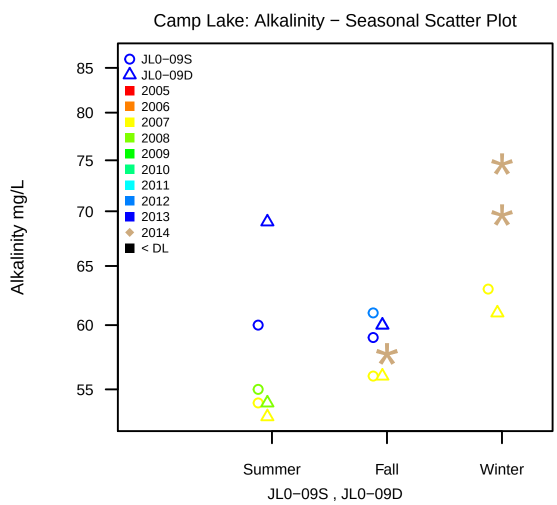


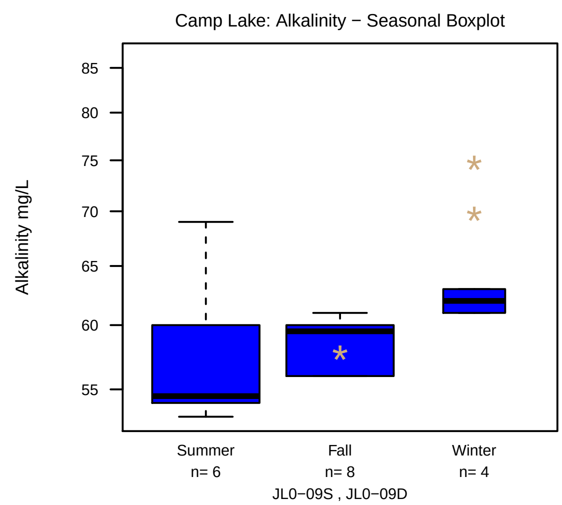

Camp Lake: Alkalinity − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
50
60
70
80
Summer
Fall
Winter
JL0−01S , JL0−01D

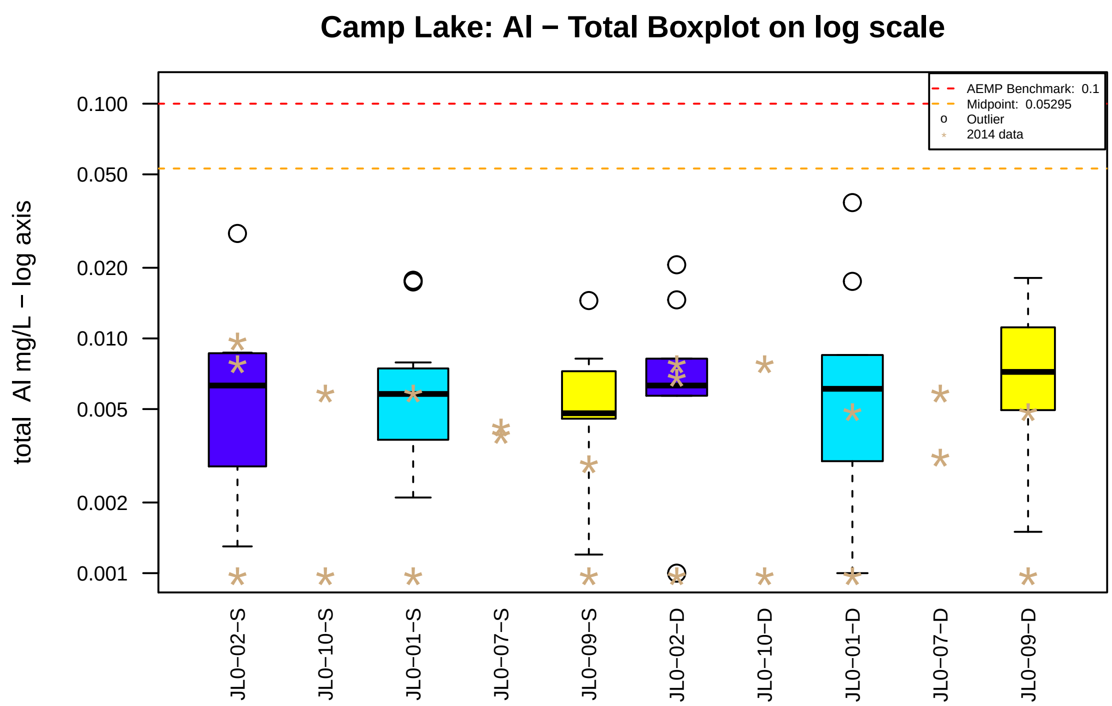

Camp Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
50
60
70
80
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

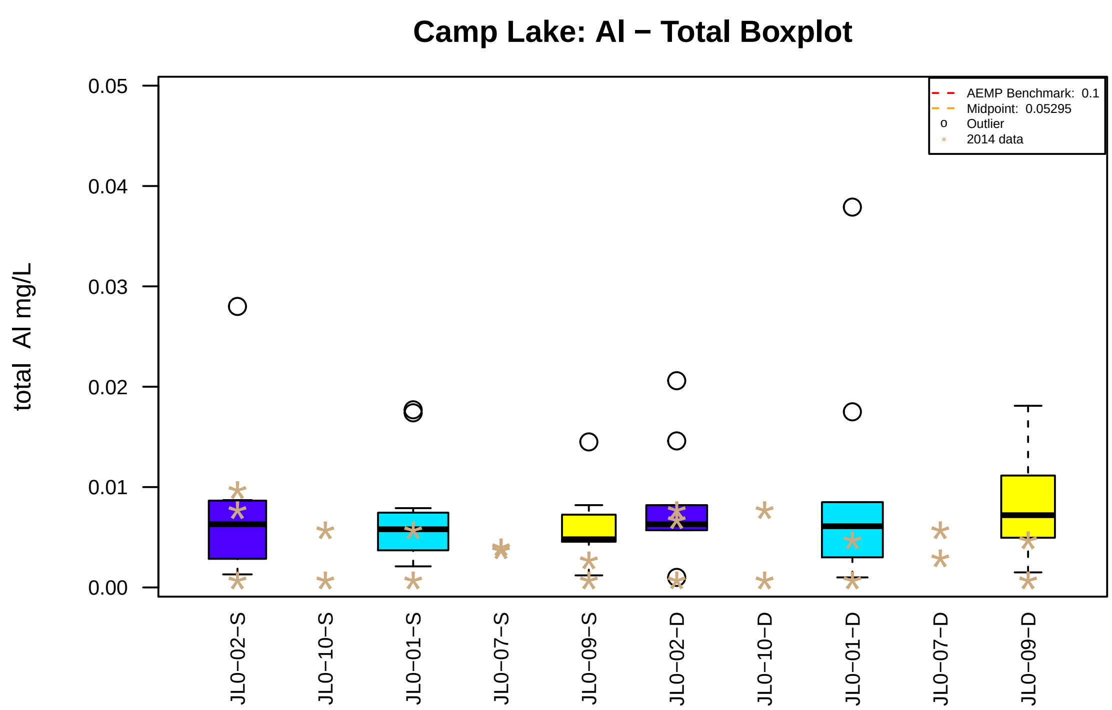

Camp Lake: Alkalinity − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
55
60
65
70
75
80
85
90
Summer
Fall
Winter
JL0−02S , JL0−02D

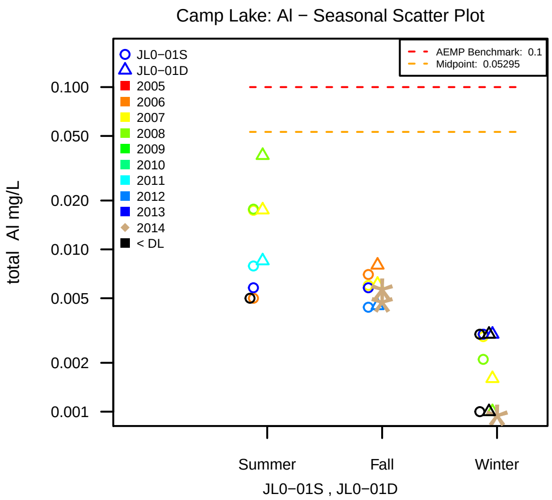

Camp Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
55
60
65
70
75
80
85
90
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

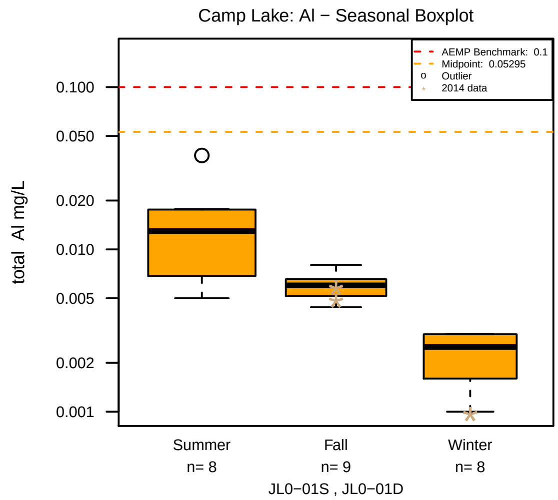

Camp Lake: Alkalinity − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
55
60
65
70
75
80
85
Summer
Fall
Winter
JL0−09S , JL0−09D

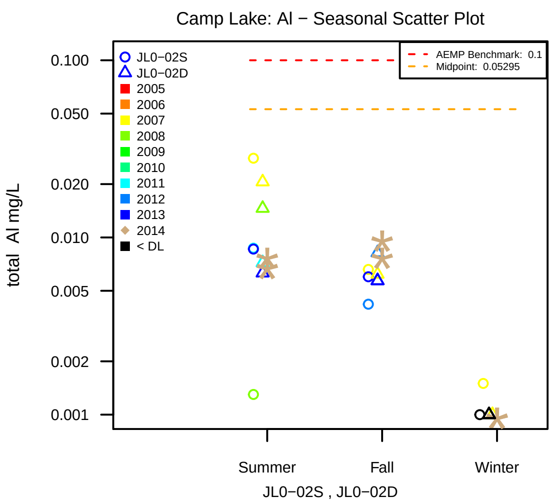

Camp Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
55
60
65
70
75
80
85
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

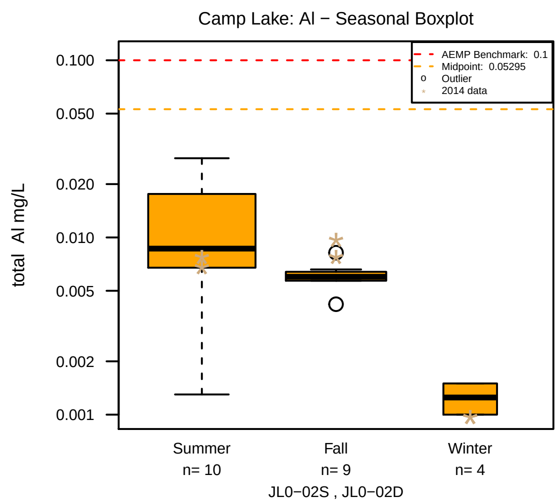

Camp Lake: Al − Total Boxplot on log scale
AEMP Benchmark: 0.1
Midpoint: 0.05295
Outlier
2014 data
total Al mg/L − log axis
0.100
0.050
0.020
0.010
0.005
0.002
0.001
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

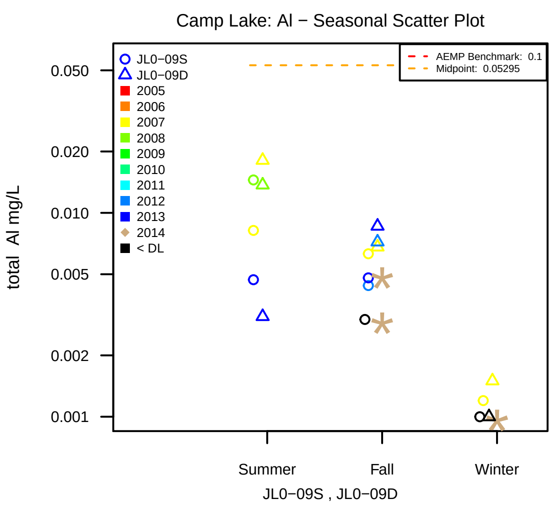

Camp Lake: Al − Total Boxplot
AEMP Benchmark: 0.1
Midpoint: 0.05295
Outlier
2014 data
total Al mg/L
0.05
0.04
0.03
0.02
0.01
0.00
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

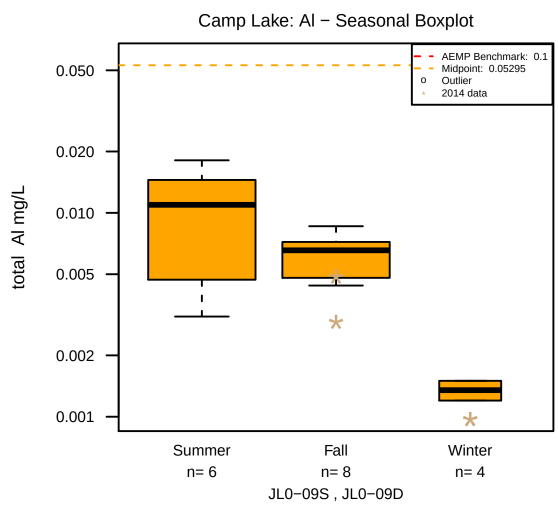

Camp Lake: Al − Seasonal Scatter Plot
total Al mg/L
0.100
0.050
0.020
0.010
0.005
0.002
0.001
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.1
Midpoint: 0.05295
Summer
Fall
Winter
JL0−01S , JL0−01D

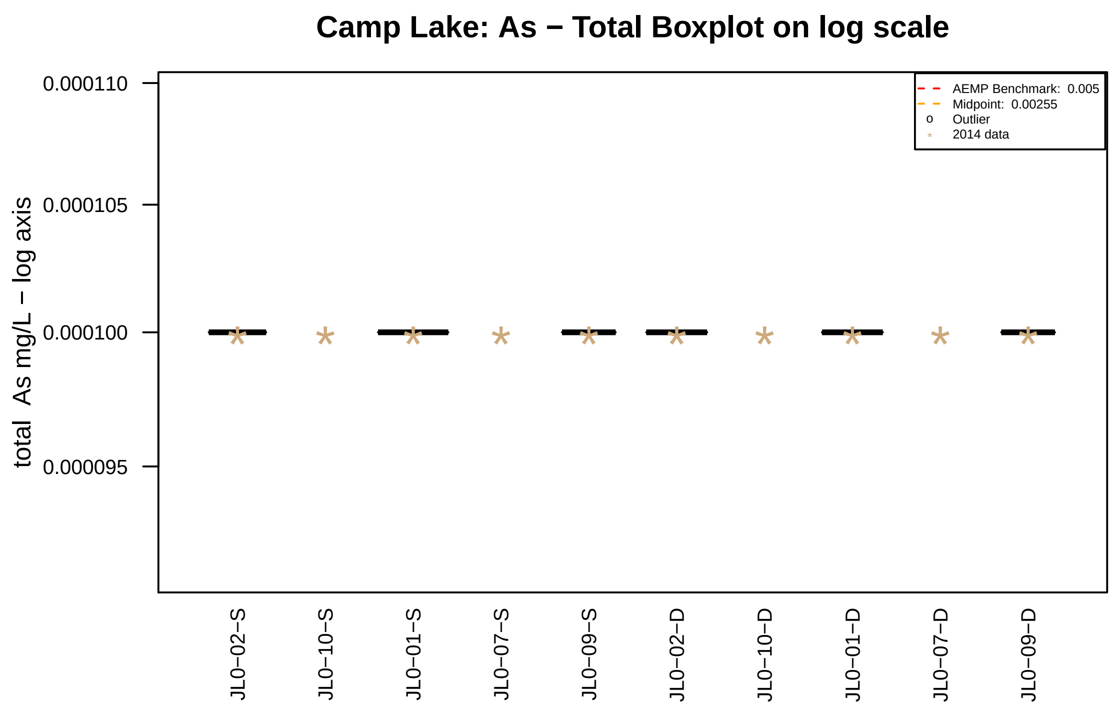

Camp Lake: Al − Seasonal Boxplot
total Al mg/L
0.100
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.1
Midpoint: 0.05295
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

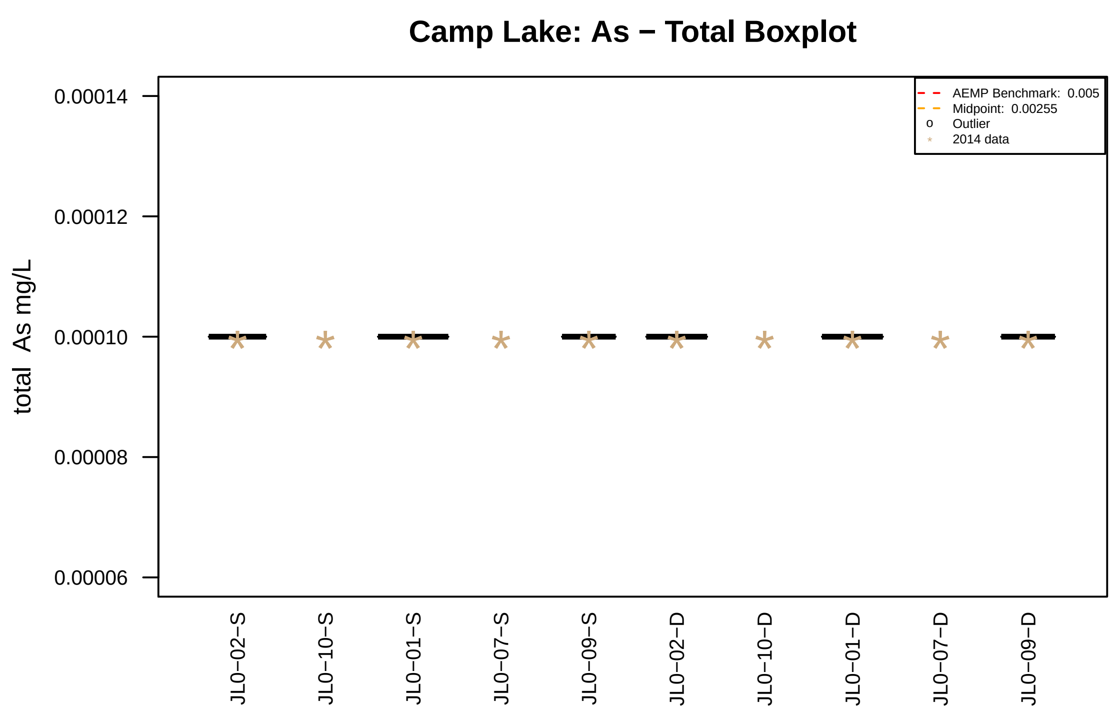

Camp Lake: Al − Seasonal Scatter Plot
total Al mg/L
0.100
0.050
0.020
0.010
0.005
0.002
0.001
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.1
Midpoint: 0.05295
Summer
Fall
Winter
JL0−02S , JL0−02D

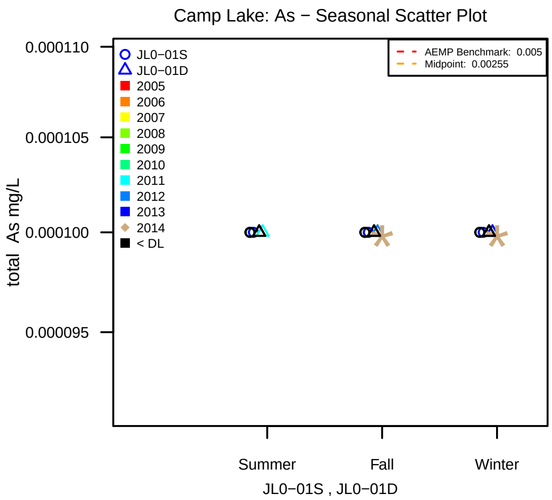

Camp Lake: Al − Seasonal Boxplot
total Al mg/L
0.100
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.1
Midpoint: 0.05295
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

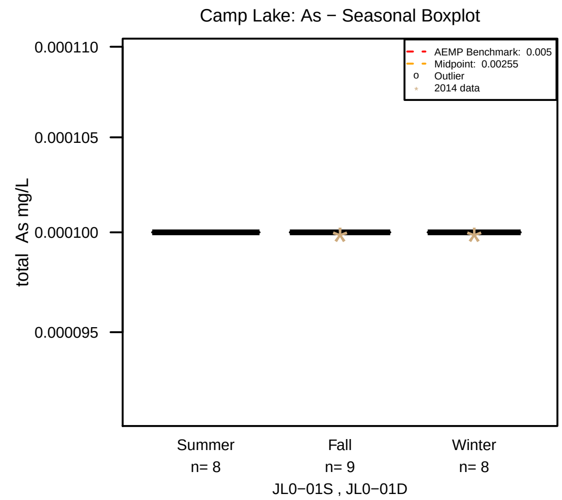

Camp Lake: Al − Seasonal Scatter Plot
total Al mg/L
0.050
0.020
0.010
0.005
0.002
0.001
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.1
Midpoint: 0.05295
Summer
Fall
Winter
JL0−09S , JL0−09D

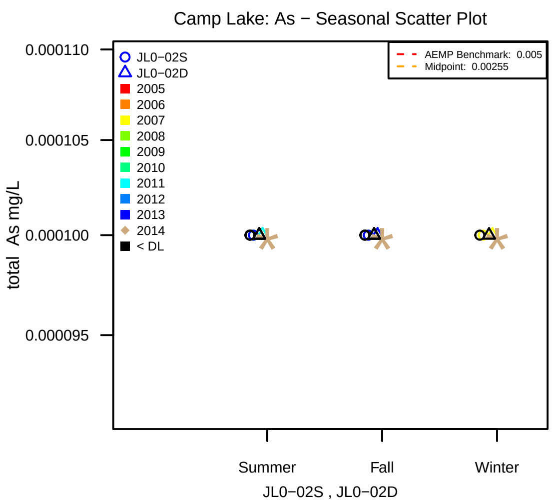

Camp Lake: Al − Seasonal Boxplot
total Al mg/L
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.1
Midpoint: 0.05295
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

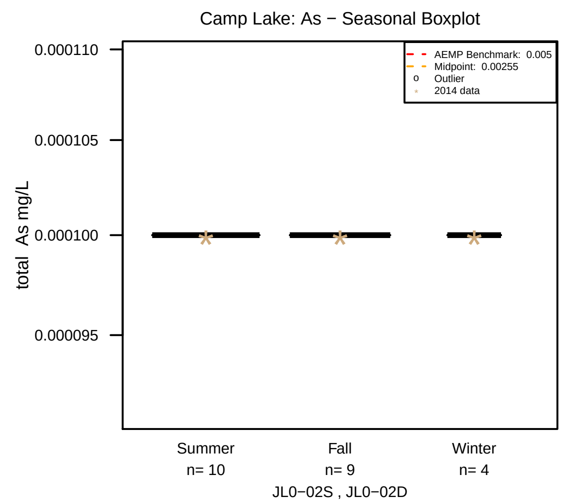

Camp Lake: As − Total Boxplot on log scale
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
0.000110
0.000105
0.000100
0.000095
total As mg/L − log axis
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

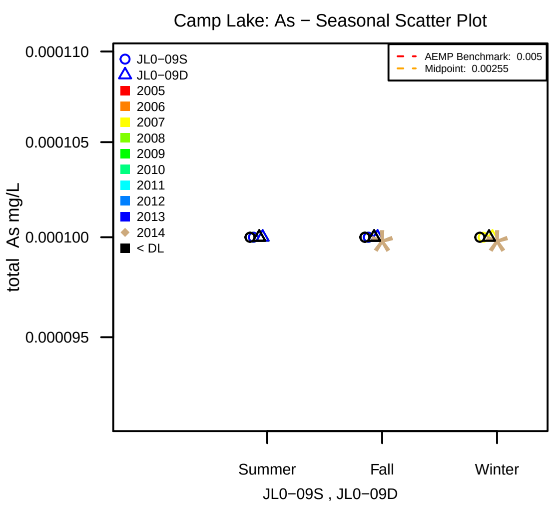

Camp Lake: As − Total Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
0.00014
0.00012
0.00010
0.00008
0.00006
total As mg/L
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

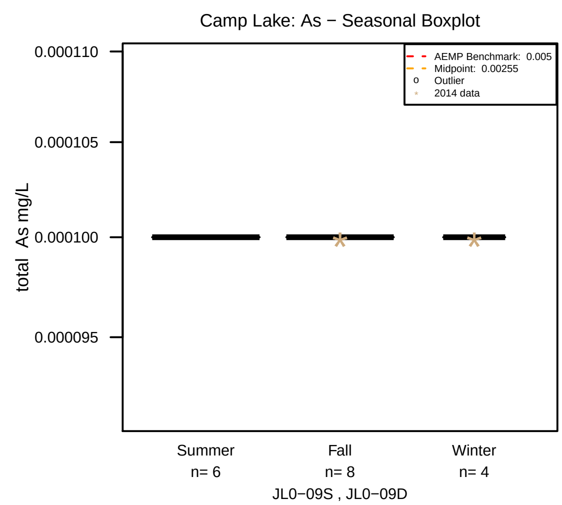

Camp Lake: As − Seasonal Scatter Plot
0.000110
0.000105
0.000100
0.000095
total As mg/L
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
JL0−01S , JL0−01D

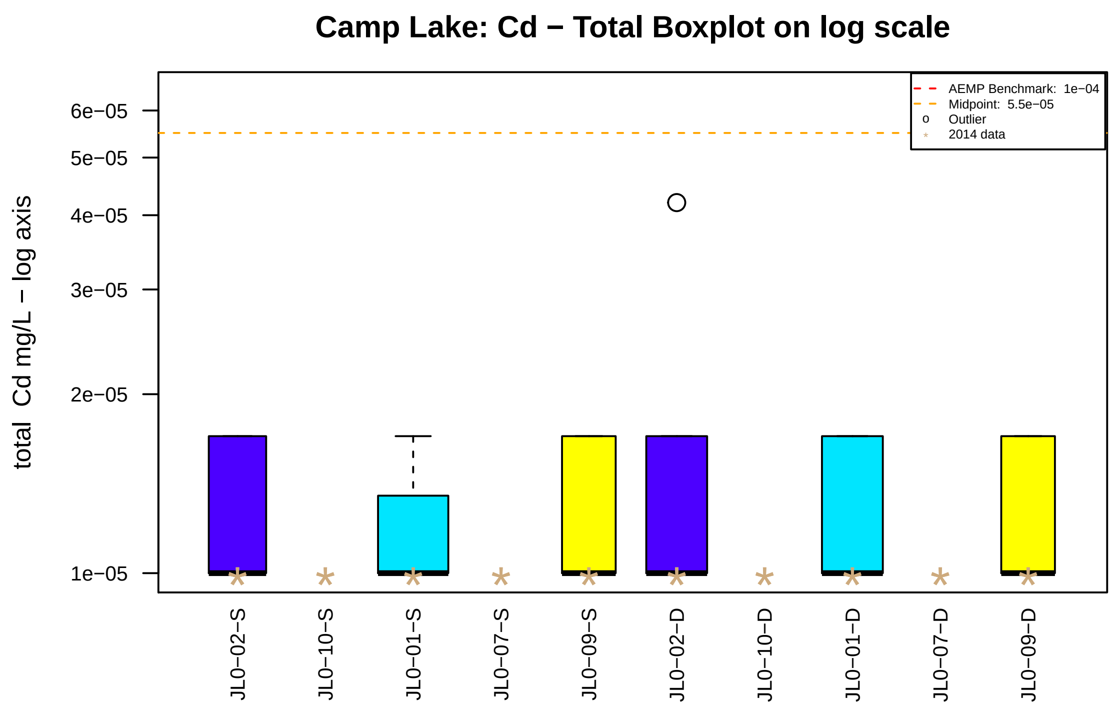

Camp Lake: As − Seasonal Boxplot
0.000110
0.000105
0.000100
0.000095
total As mg/L
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

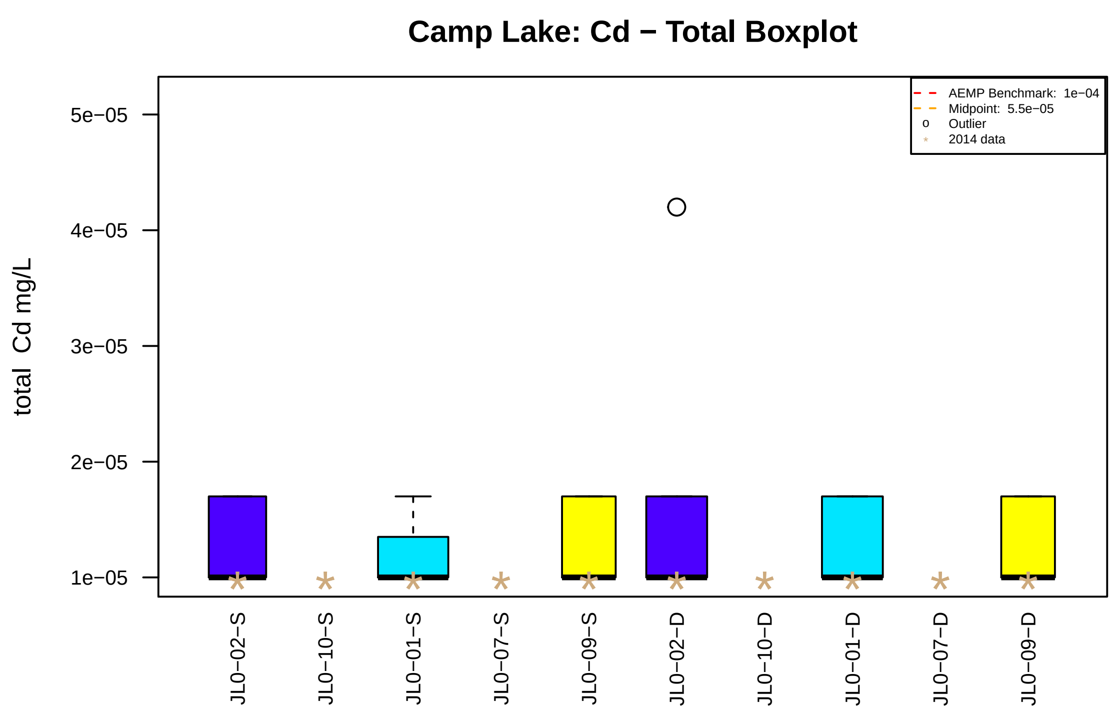

Camp Lake: As − Seasonal Scatter Plot
0.000110
0.000105
0.000100
0.000095
total As mg/L
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
JL0−02S , JL0−02D

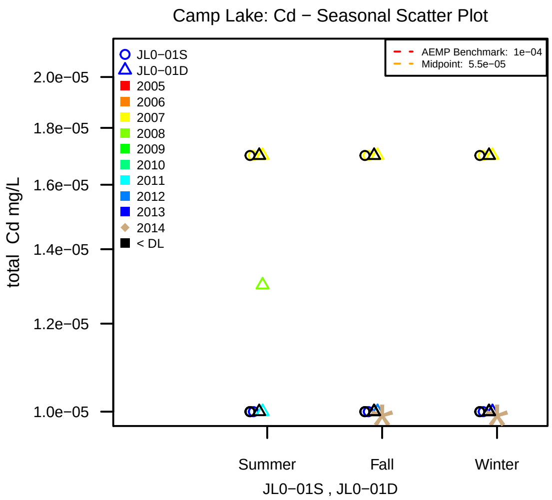

Camp Lake: As − Seasonal Boxplot
0.000110
0.000105
0.000100
0.000095
total As mg/L
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

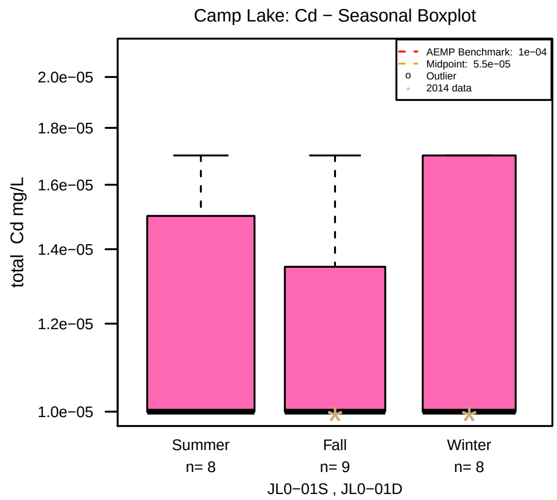

Camp Lake: As − Seasonal Scatter Plot
0.000110
0.000105
0.000100
0.000095
total As mg/L
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
JL0−09S , JL0−09D

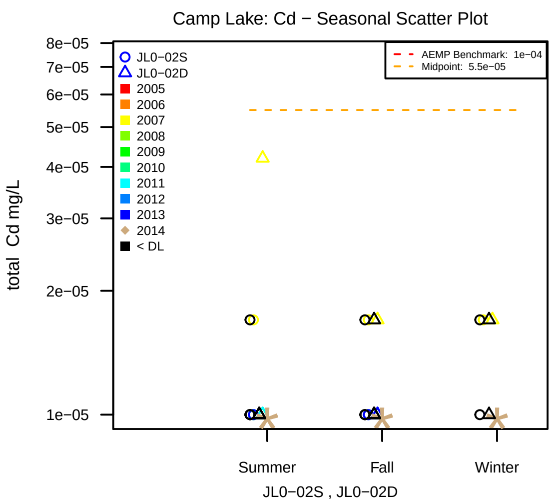

Camp Lake: As − Seasonal Boxplot
0.000110
0.000105
0.000100
0.000095
total As mg/L
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

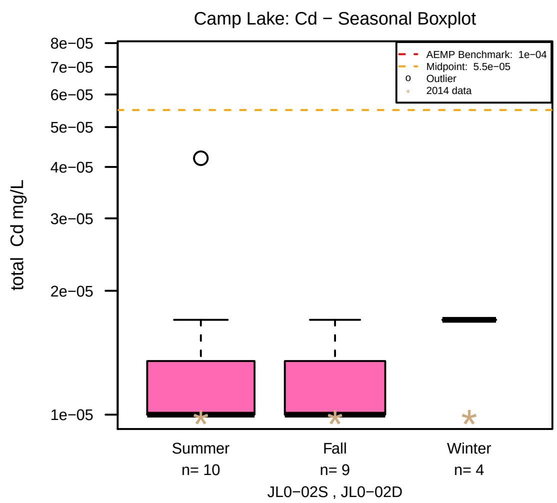

Camp Lake: Cd − Total Boxplot on log scale
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Cd mg/L − log axis
6e−05
5e−05
4e−05
3e−05
2e−05
1e−05
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

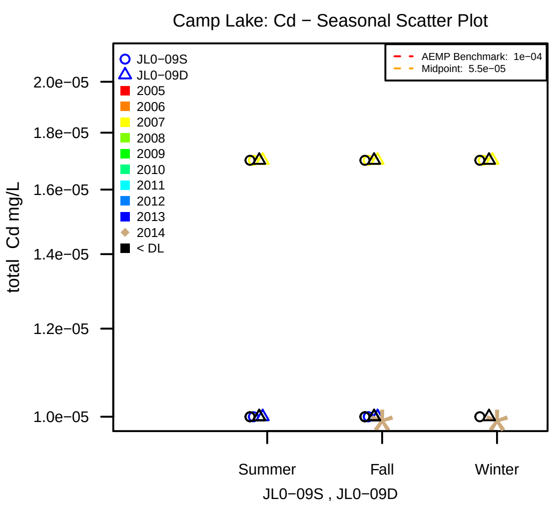

Camp Lake: Cd − Total Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Cd mg/L
5e−05
4e−05
3e−05
2e−05
1e−05
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

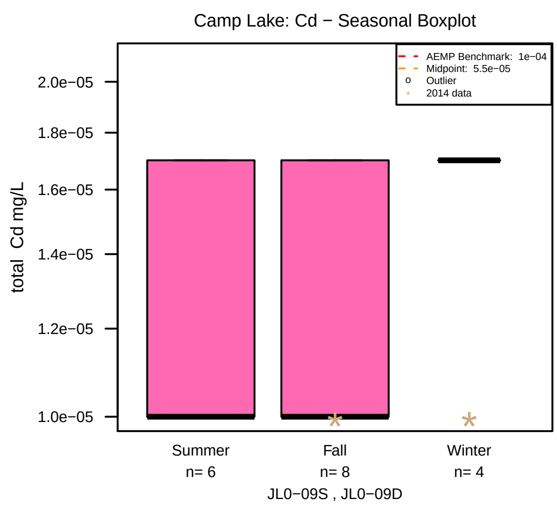

Camp Lake: Cd − Seasonal Scatter Plot
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Summer
Fall
Winter
JL0−01S , JL0−01D

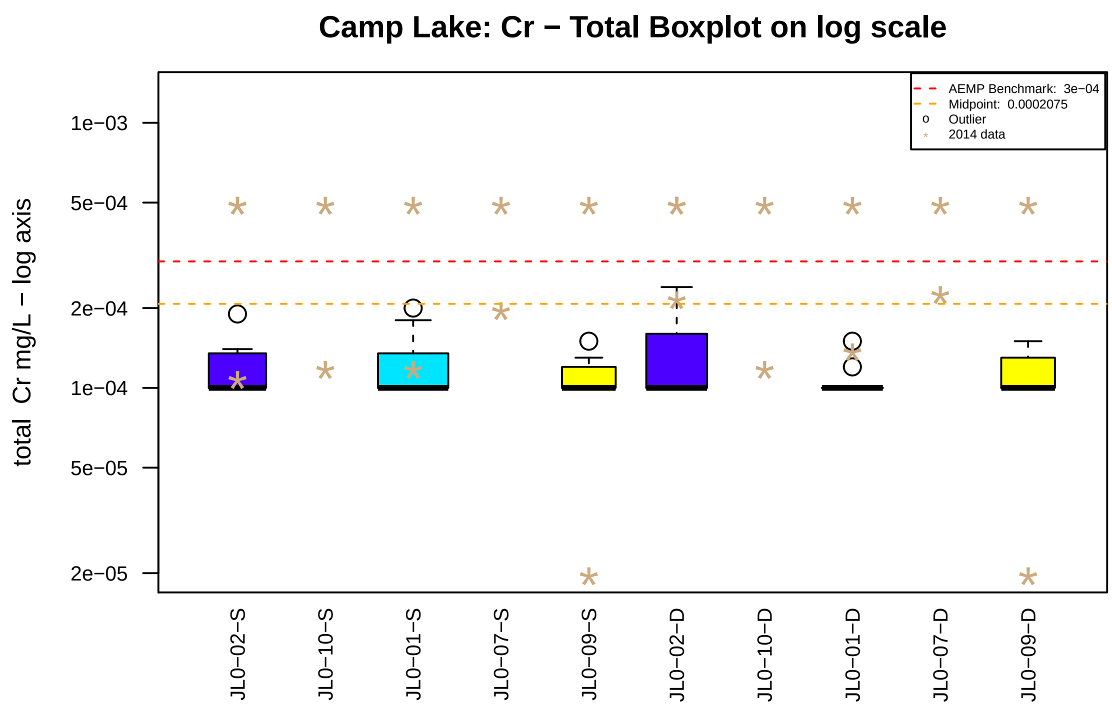

Camp Lake: Cd − Seasonal Boxplot
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

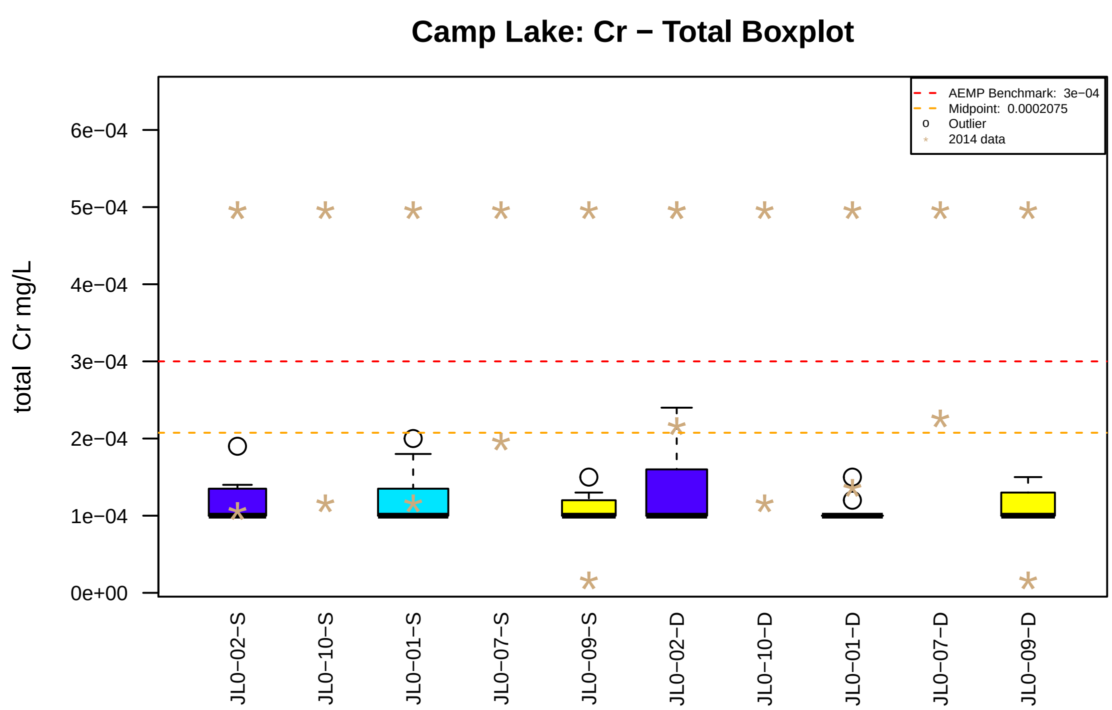

Camp Lake: Cd − Seasonal Scatter Plot
total Cd mg/L
8e−05
7e−05
6e−05
5e−05
4e−05
3e−05
2e−05
1e−05
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Summer
Fall
Winter
JL0−02S , JL0−02D

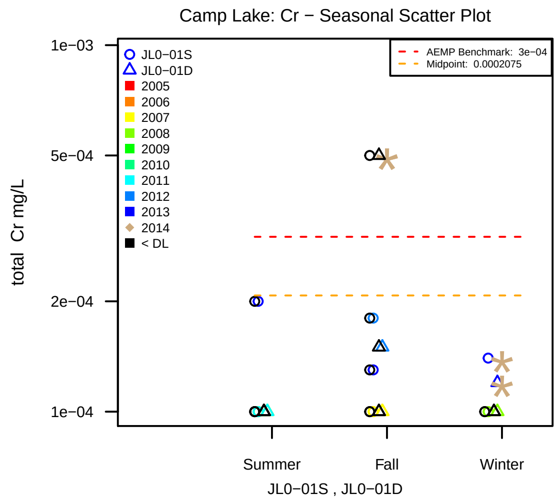

Camp Lake: Cd − Seasonal Boxplot
total Cd mg/L
8e−05
7e−05
6e−05
5e−05
4e−05
3e−05
2e−05
1e−05
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

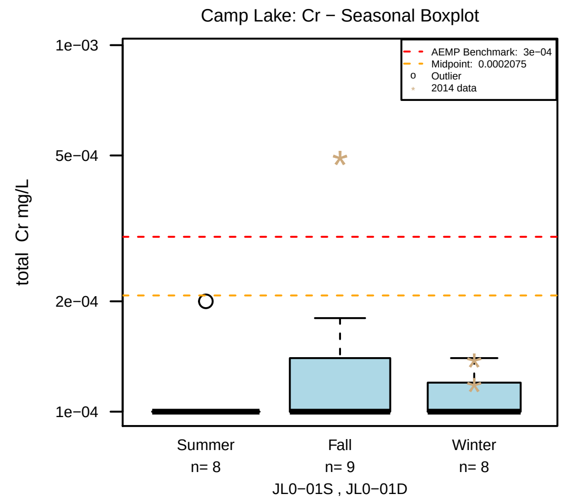

Camp Lake: Cd − Seasonal Scatter Plot
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Summer
Fall
Winter
JL0−09S , JL0−09D

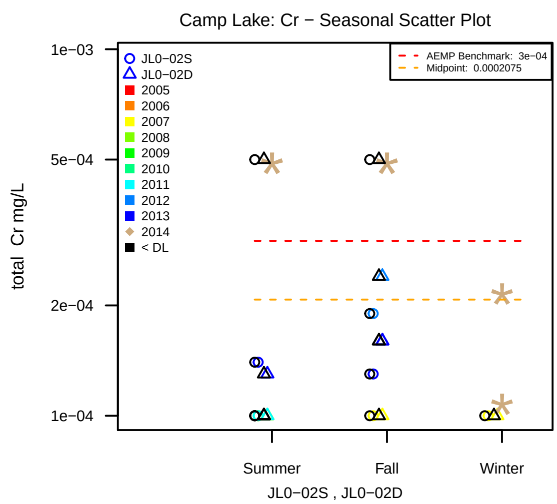

Camp Lake: Cd − Seasonal Boxplot
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

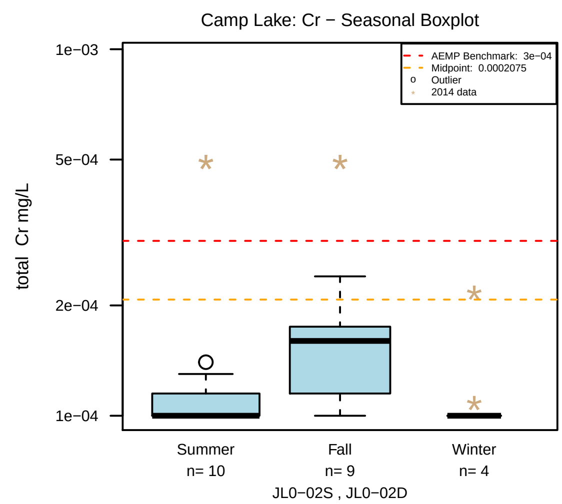

Camp Lake: Cr − Total Boxplot on log scale
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
total Cr mg/L − log axis
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

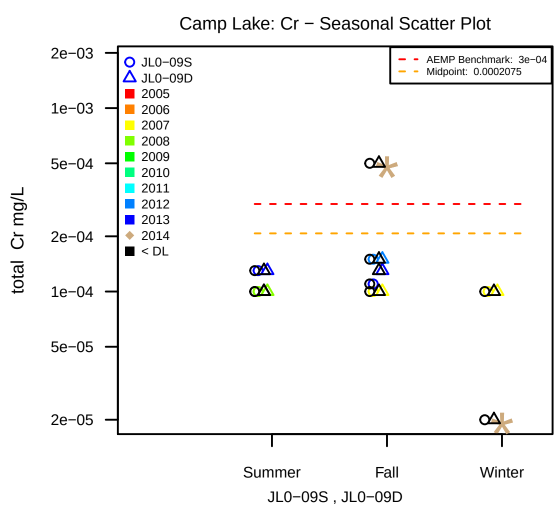

Camp Lake: Cr − Total Boxplot
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
total Cr mg/L
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

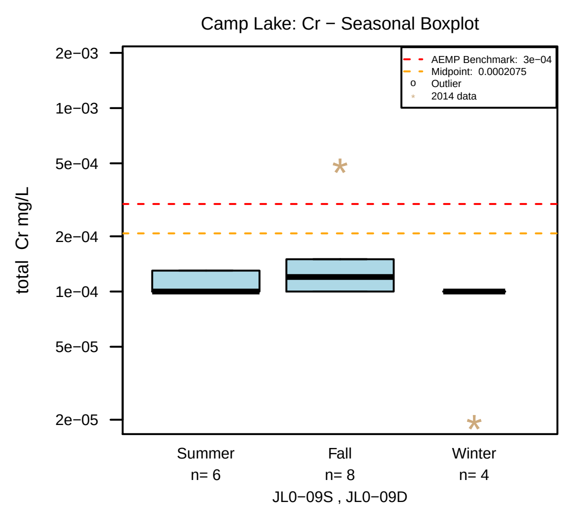

Camp Lake: Cr – Seasonal Scatter Plot
1e−03
5e−04
2e−04
1e−04
total Cr mg/L
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Summer
Fall
Winter
JL0−01S , JL0−01D

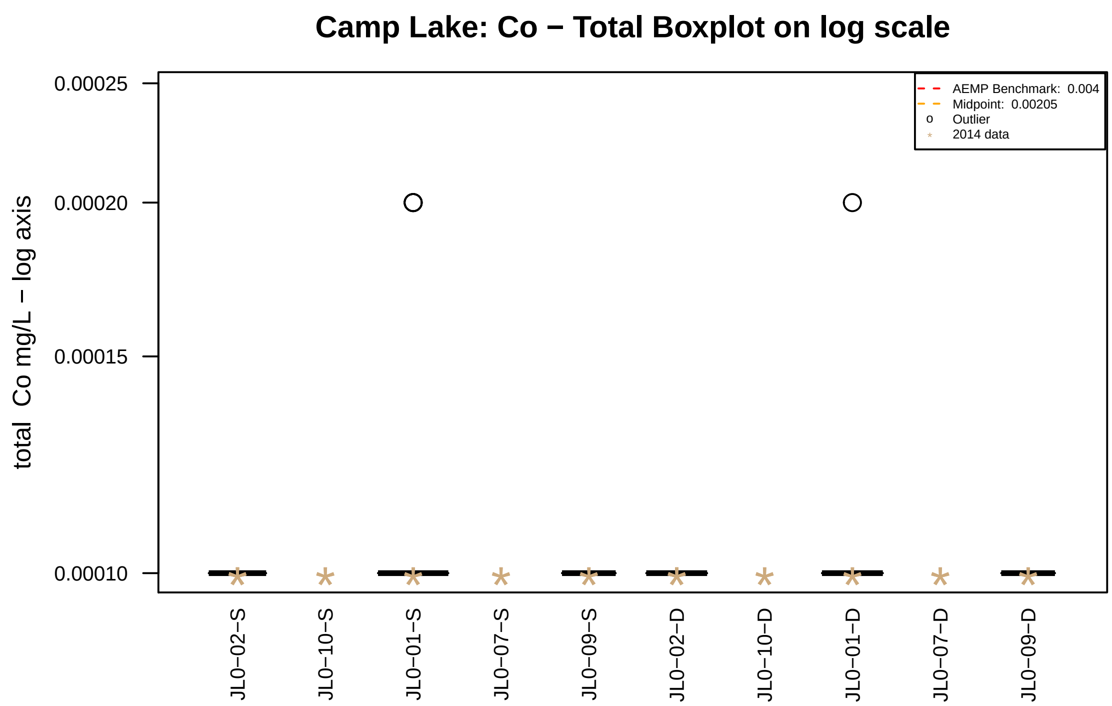

Camp Lake: Cr – Seasonal Boxplot
1e−03
5e−04
2e−04
1e−04
total Cr mg/L
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

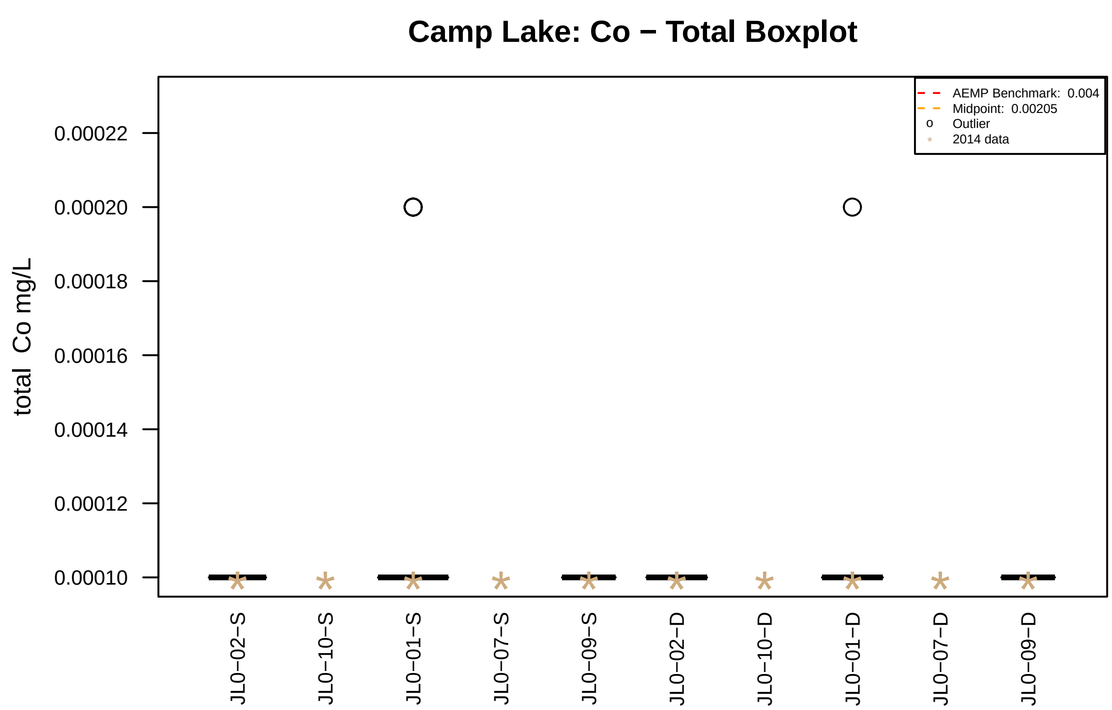

Camp Lake: Cr – Seasonal Scatter Plot
1e−03
5e−04
2e−04
1e−04
total Cr mg/L
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Summer
Fall
Winter
JL0−02S , JL0−02D

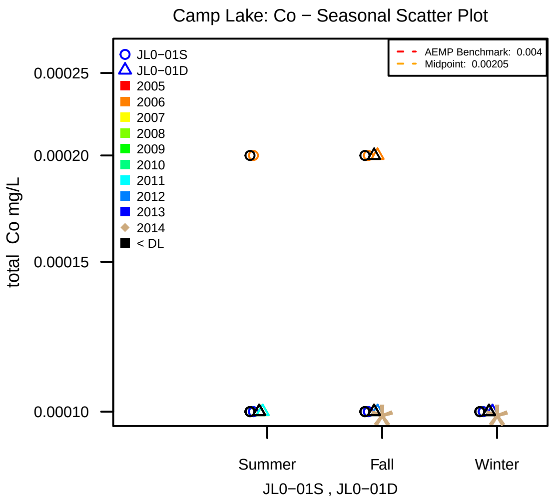

Camp Lake: Cr – Seasonal Boxplot
1e−03
5e−04
2e−04
1e−04
total Cr mg/L
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

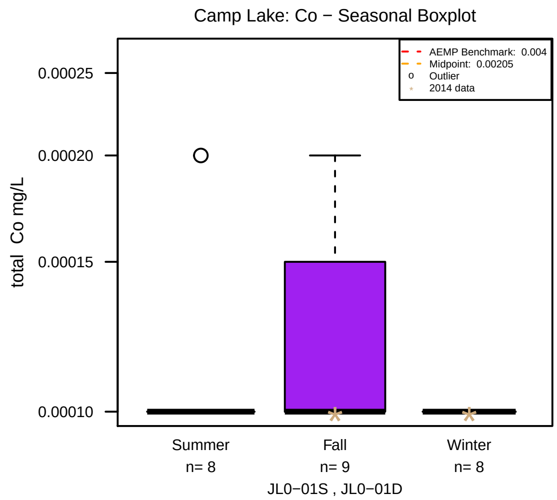

Camp Lake: Cr – Seasonal Scatter Plot
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
total Cr mg/L
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Summer
Fall
Winter
JL0−09S , JL0−09D

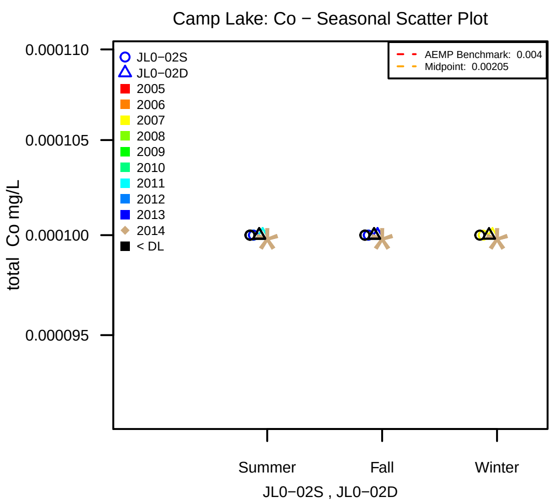

Camp Lake: Cr – Seasonal Boxplot
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
total Cr mg/L
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

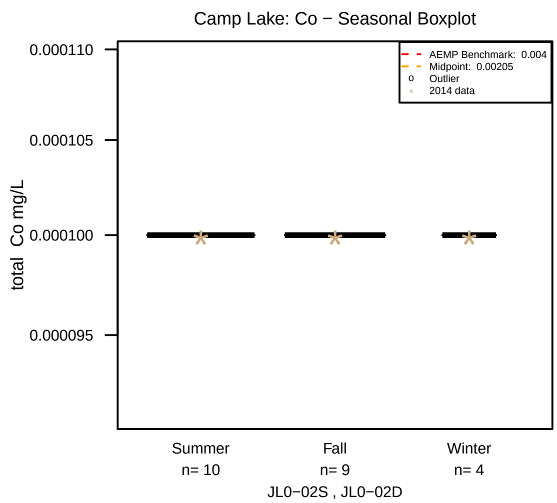

Camp Lake: Co − Total Boxplot on log scale
total Co mg/L − log axis
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

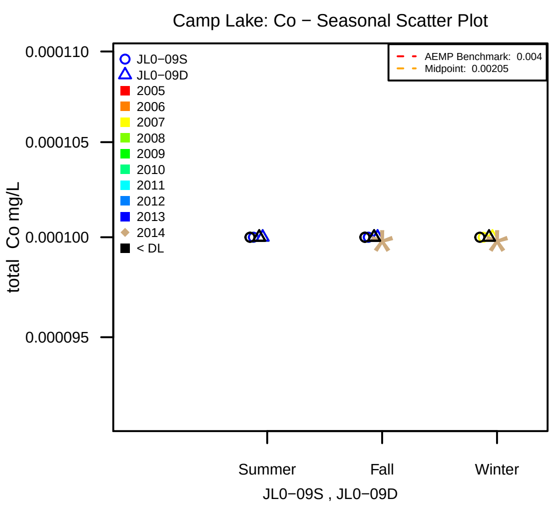

Camp Lake: Co − Total Boxplot
total Co mg/L
0.00022
0.00020
0.00018
0.00016
0.00014
0.00012
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

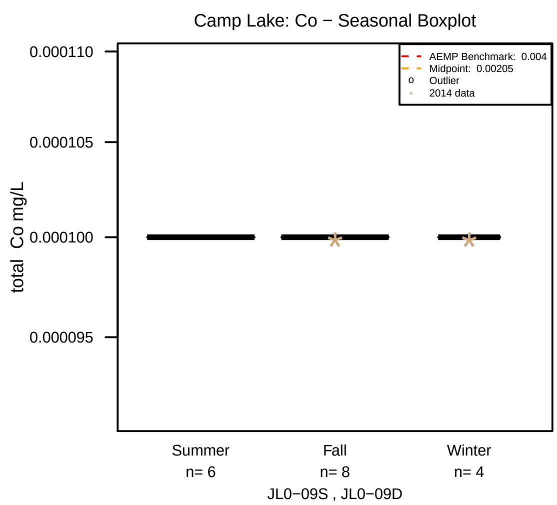

Camp Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.00025
0.00020
0.00015
0.00010
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
JL0−01S , JL0−01D

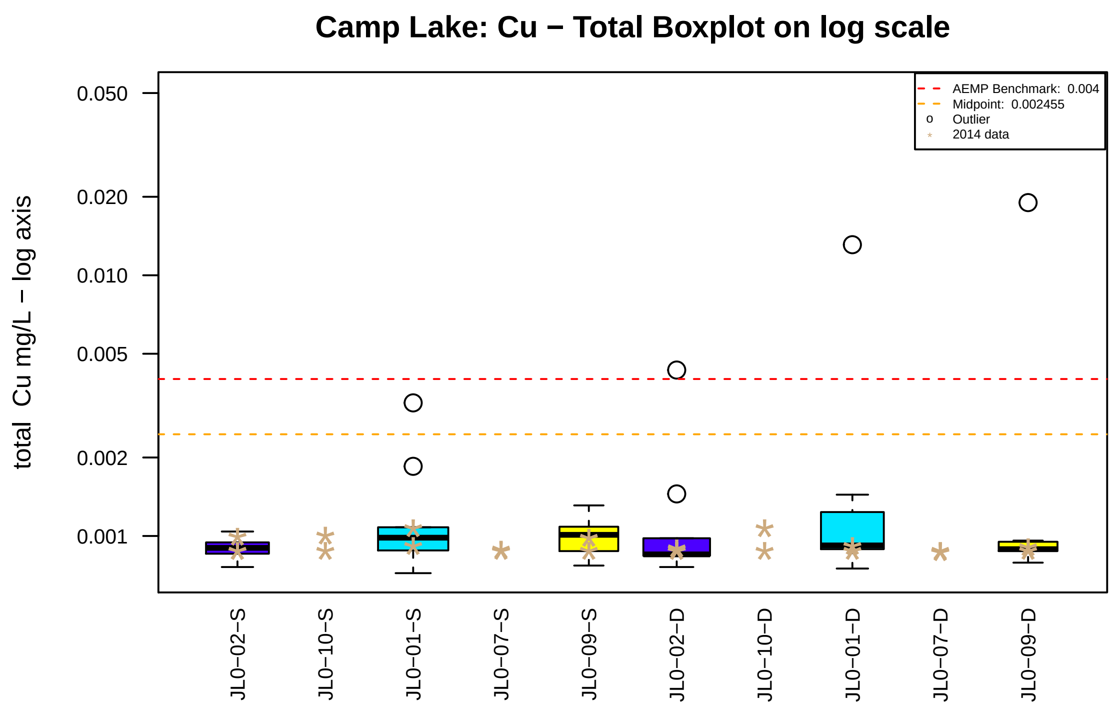

Camp Lake: Co − Seasonal Boxplot
total Co mg/L
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

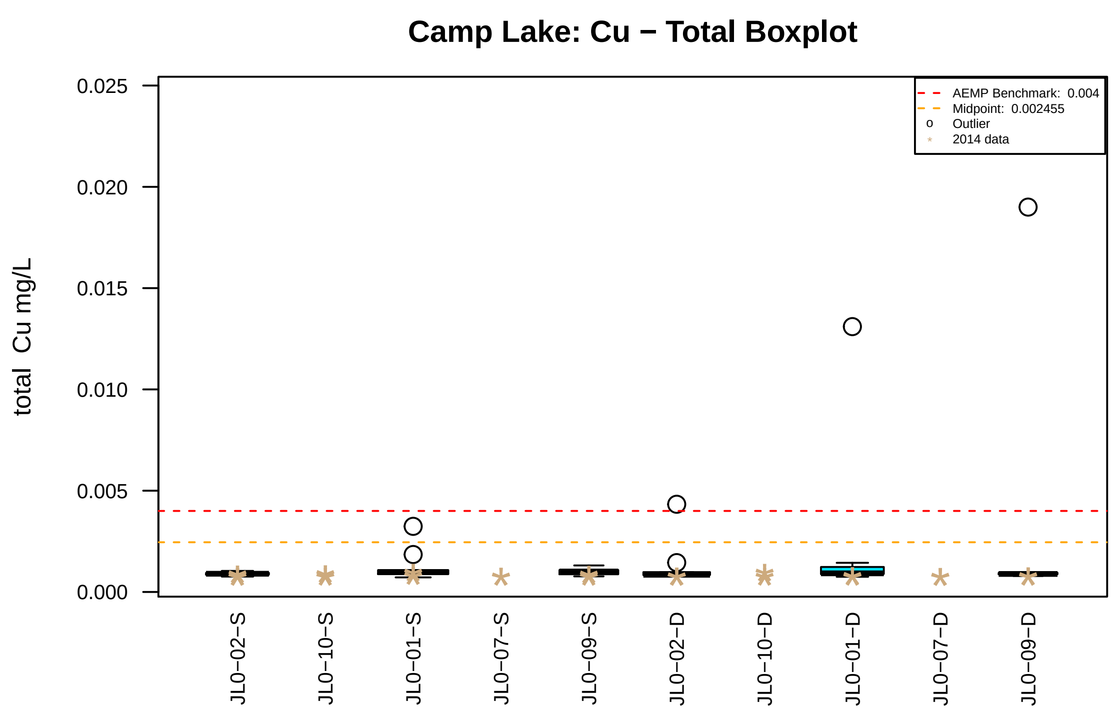

Camp Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
JL0−02S , JL0−02D

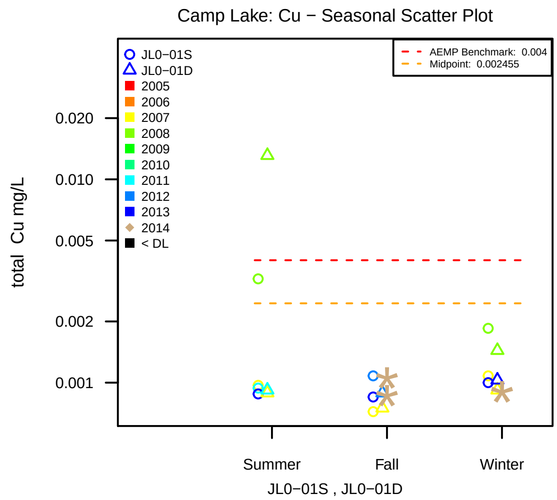

Camp Lake: Co − Seasonal Boxplot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

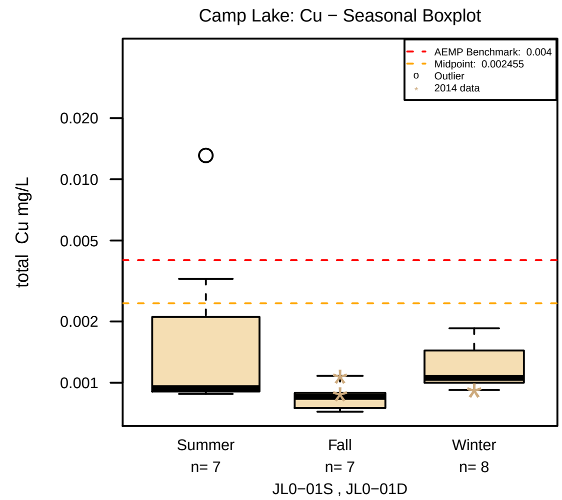

Camp Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
JL0−09S , JL0−09D

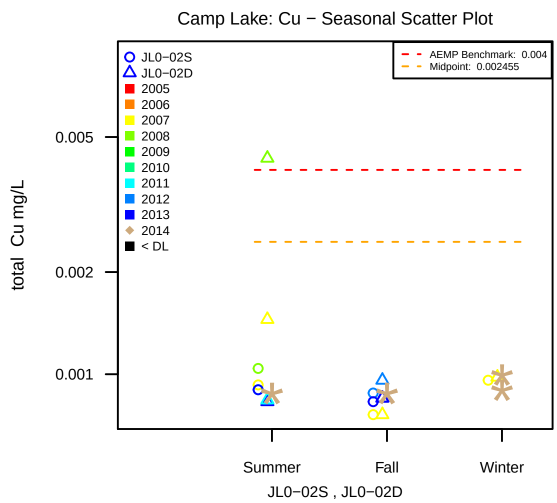

Camp Lake: Co − Seasonal Boxplot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

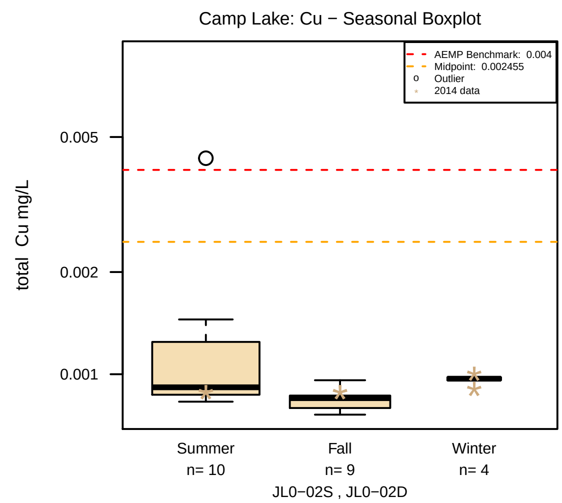

Camp Lake: Cu − Total Boxplot on log scale
total Cu mg/L − log axis
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

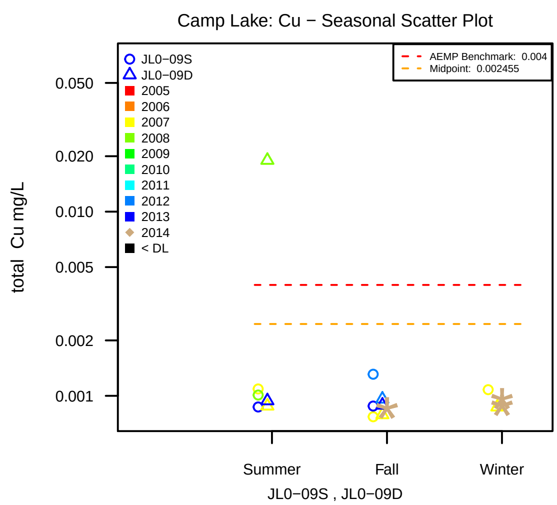

Camp Lake: Cu − Total Boxplot
total Cu mg/L
0.025
0.020
0.015
0.010
0.005
0.000
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

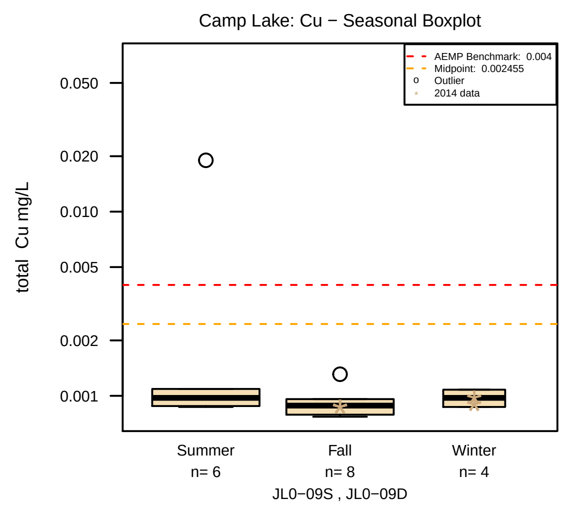

Camp Lake: Cu − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.002455
total Cu mg/L
0.020
0.010
0.005
0.002
0.001
Summer
Fall
Winter
JL0−01S , JL0−01D

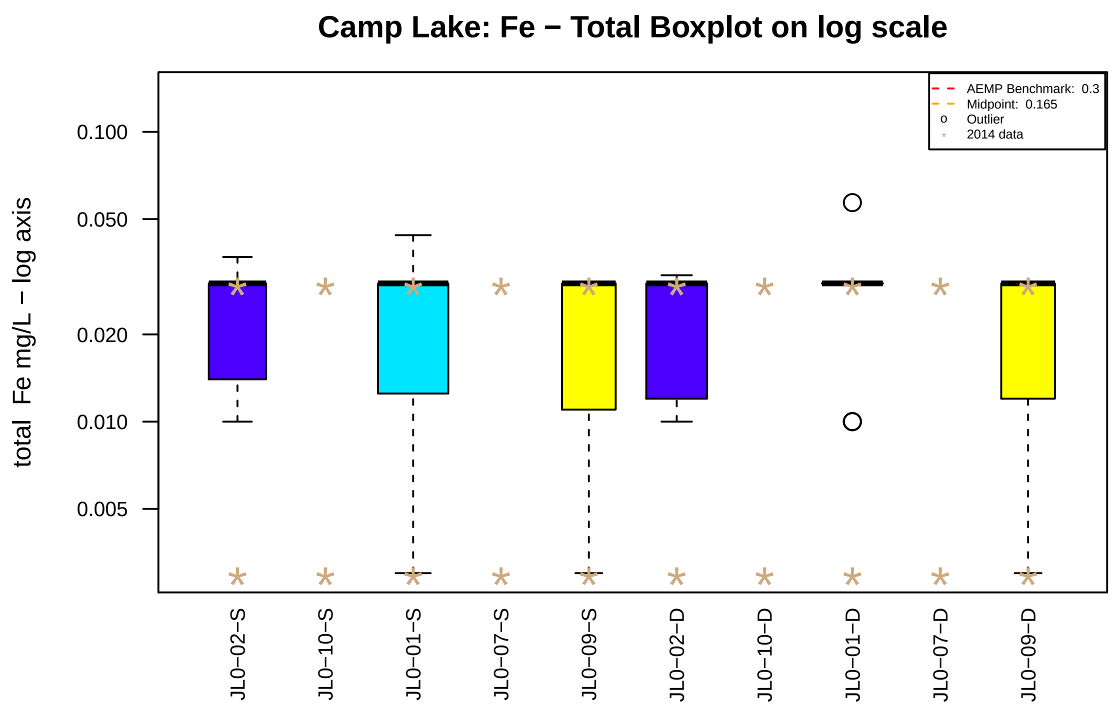

Camp Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
total Cu mg/L
0.020
0.010
0.005
0.002
0.001
Summer
n= 7
Fall
n= 7
Winter
n= 8
JL0−01S , JL0−01D

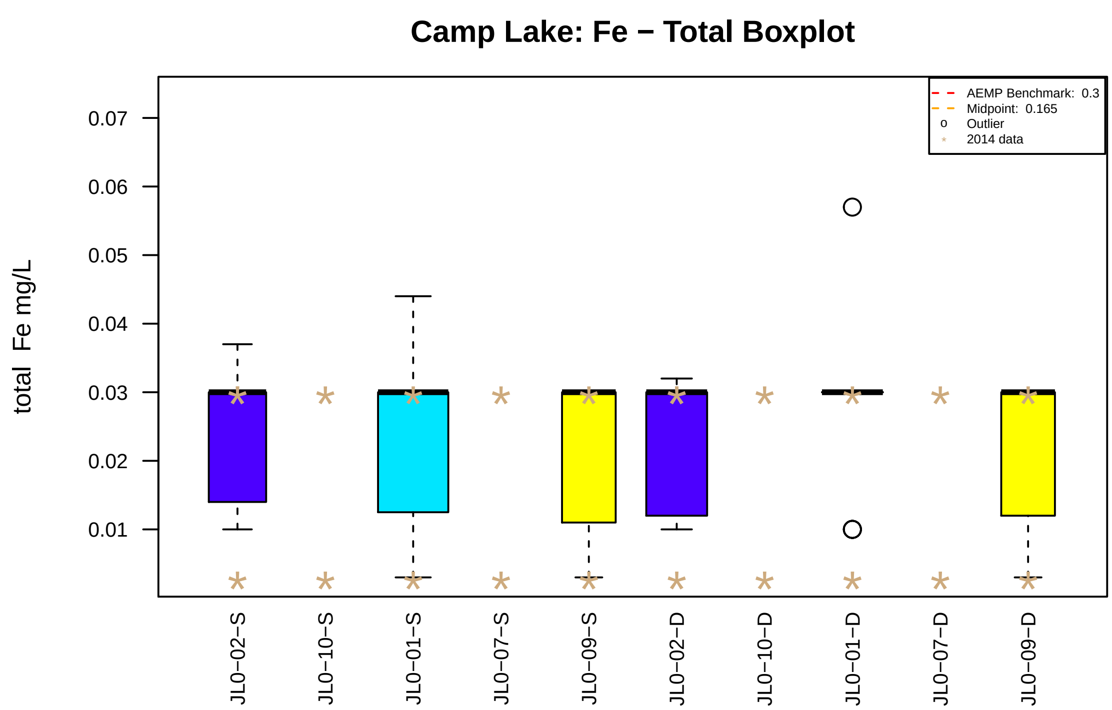

Camp Lake: Cu − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.002455
total Cu mg/L
0.005
0.002
0.001
Summer
Fall
Winter
JL0−02S , JL0−02D

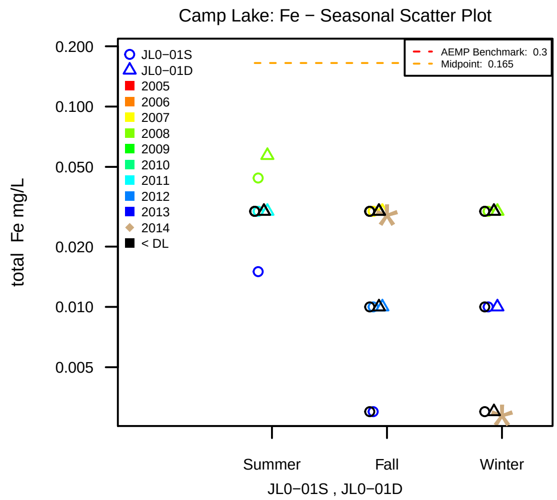

Camp Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
total Cu mg/L
0.005
0.002
0.001
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

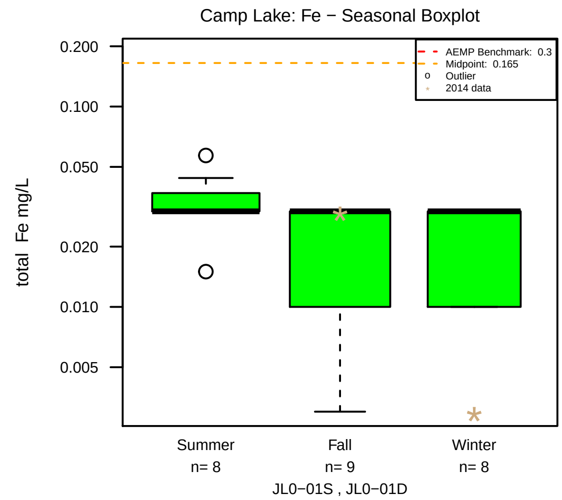

Camp Lake: Cu − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.002455
total Cu mg/L
0.050
0.020
0.010
0.005
0.002
0.001
Summer
Fall
Winter
JL0−09S , JL0−09D

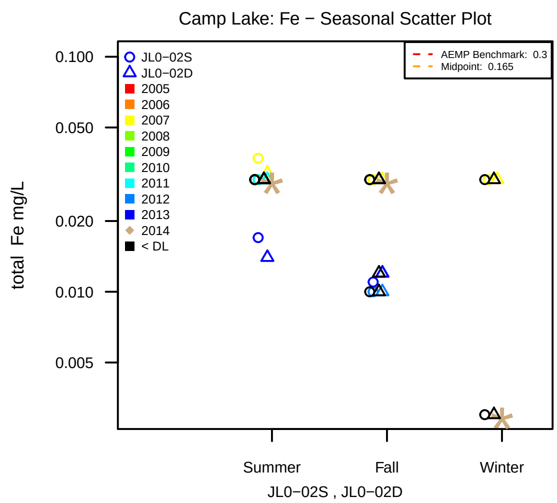

Camp Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
total Cu mg/L
0.050
0.020
0.010
0.005
0.002
0.001
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

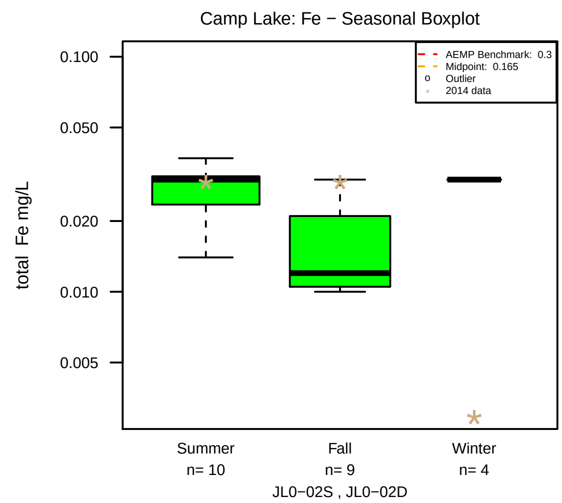

Camp Lake: Fe − Total Boxplot on log scale
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L − log axis
0.100
0.050
0.020
0.010
0.005
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

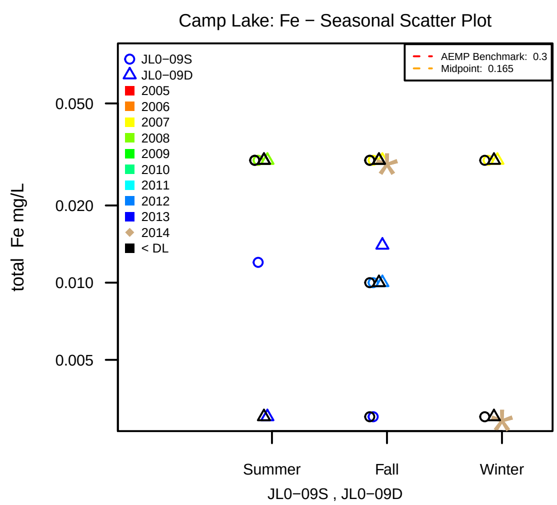

Camp Lake: Fe − Total Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L
0.07
0.06
0.05
0.04
0.03
0.02
0.01
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

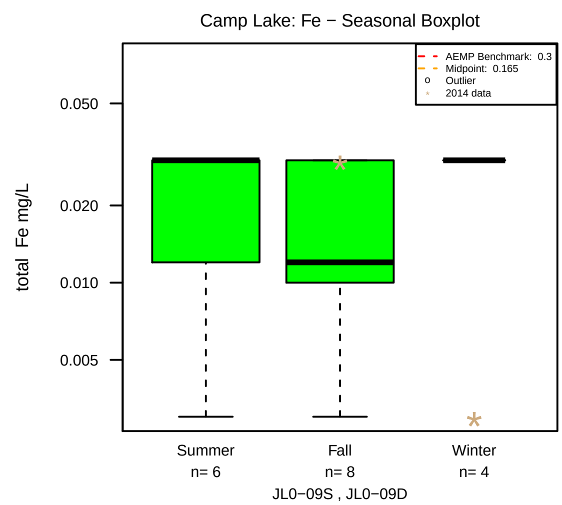

Camp Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.200
0.100
0.050
0.020
0.010
0.005
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
Summer
Fall
Winter
JL0−01S , JL0−01D


Camp Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

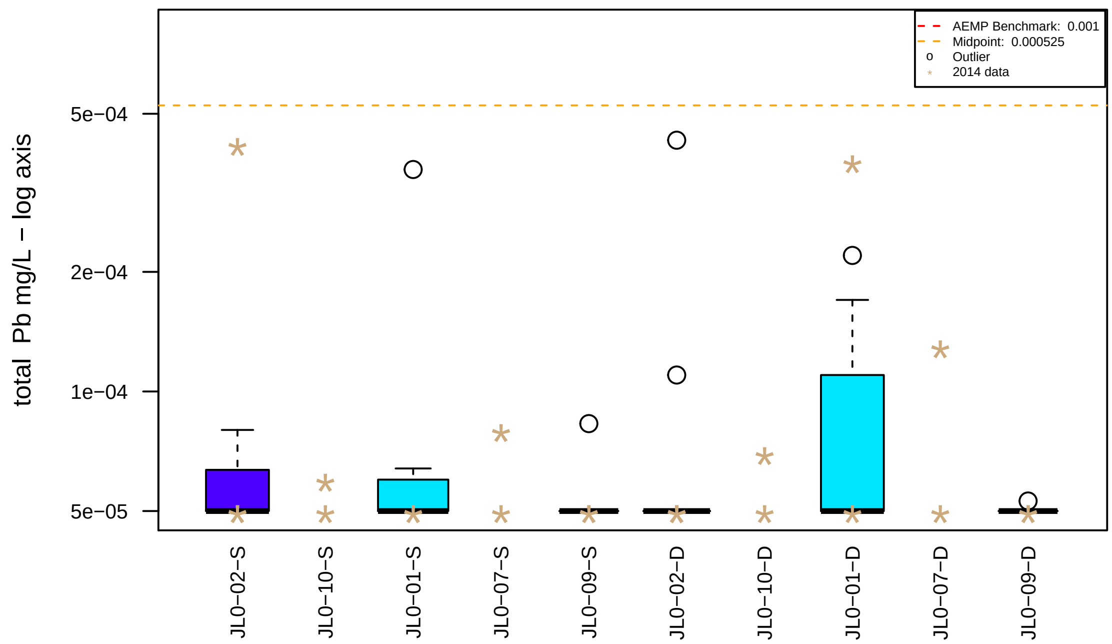

Camp Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.100
0.050
0.020
0.010
0.005
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
Summer
Fall
Winter
JL0−02S , JL0−02D


Camp Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

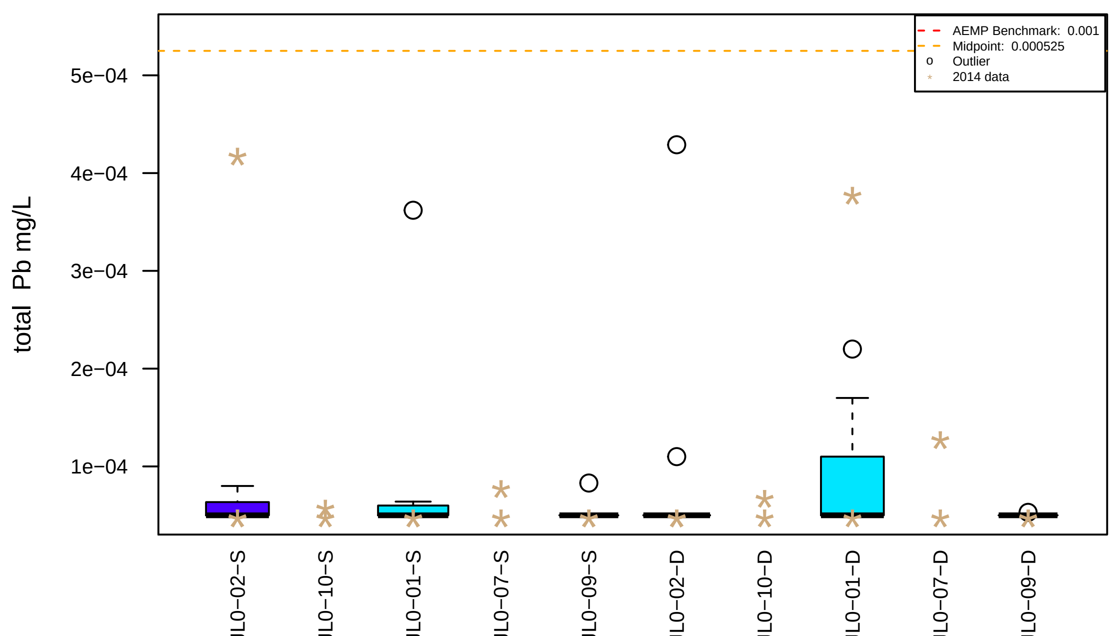

Camp Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.050
0.020
0.010
0.005
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
Summer
Fall
Winter
JL0−09S , JL0−09D

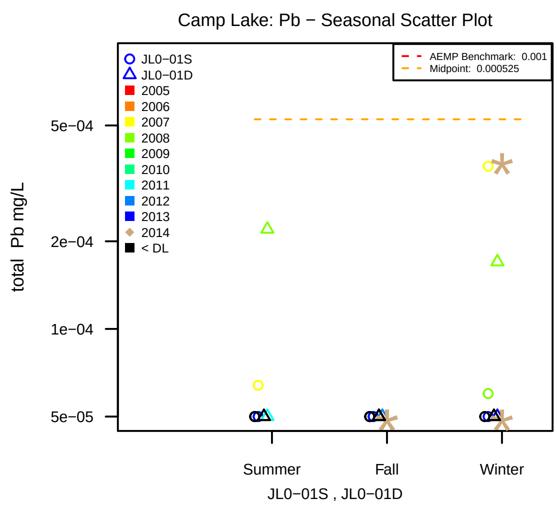

Camp Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

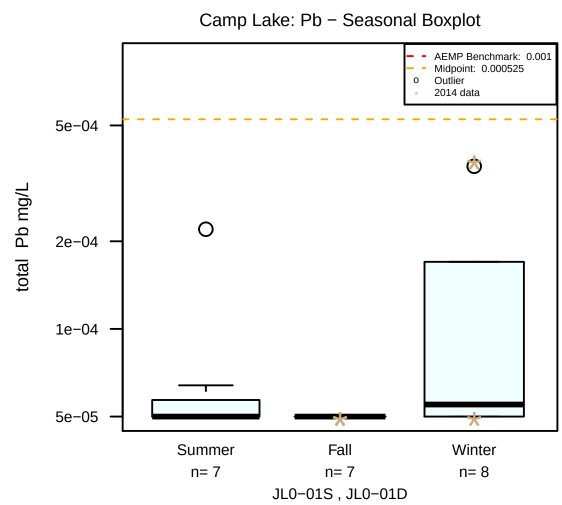
Camp Lake: Pb − Total Boxplot on log scale

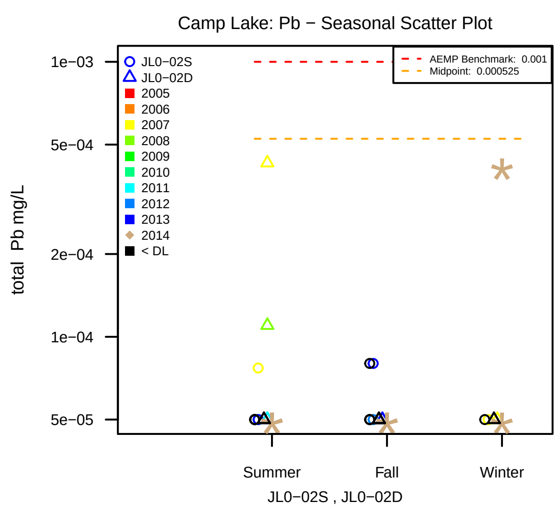


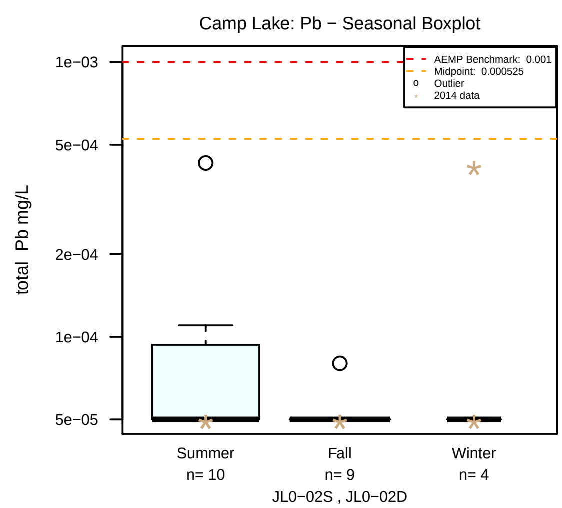
Camp Lake: Pb − Total Boxplot

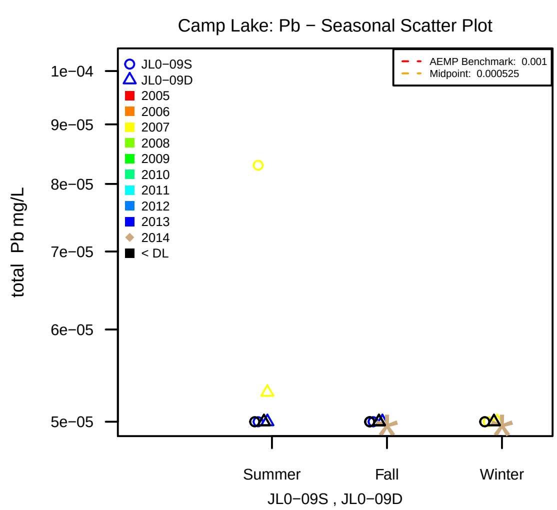


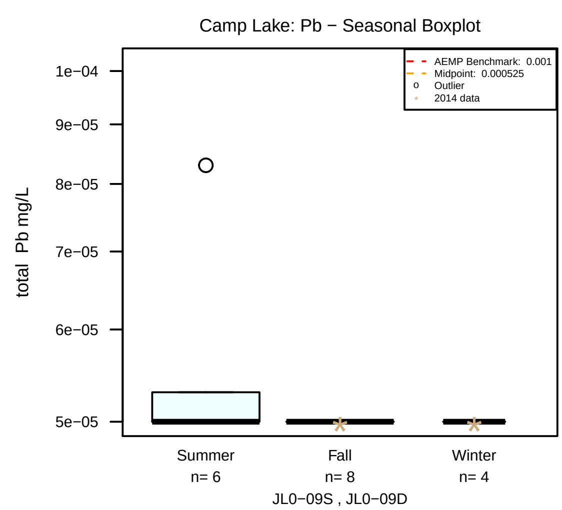

Camp Lake: Pb − Seasonal Scatter Plot
total Pb mg/L
5e−04
2e−04
1e−04
5e−05
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.000525
Summer
Fall
Winter
JL0−01S , JL0−01D

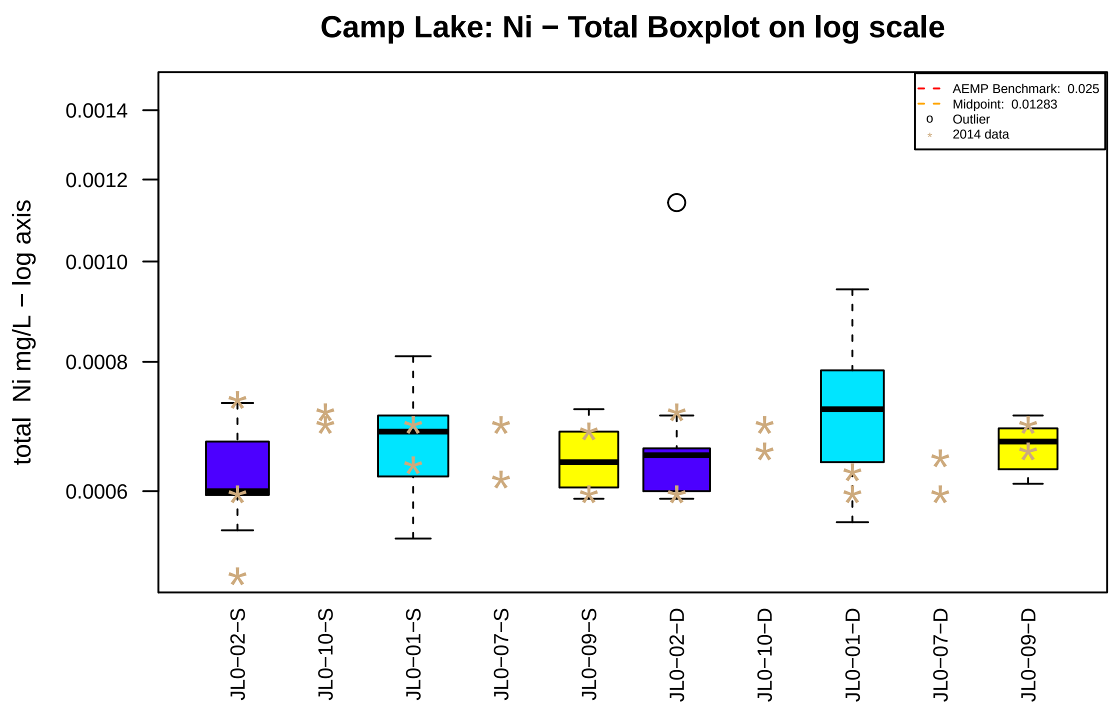

Camp Lake: Pb − Seasonal Boxplot
total Pb mg/L
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.000525
Outlier
2014 data
Summer
n= 7
Fall
n= 7
Winter
n= 8
JL0−01S , JL0−01D

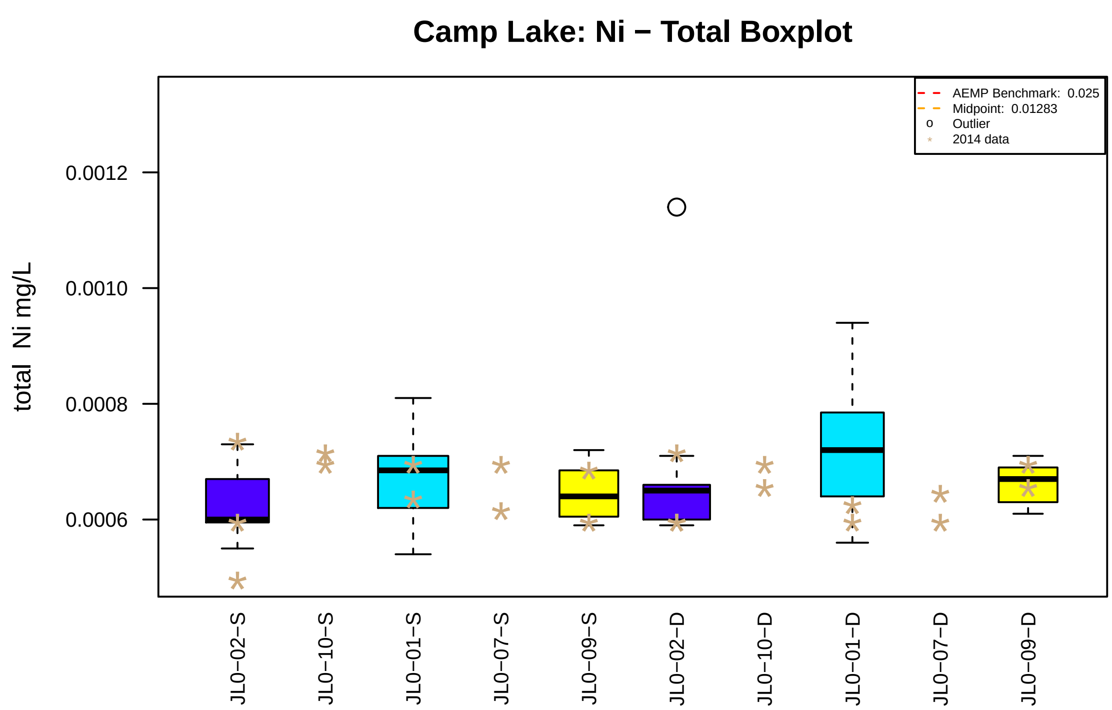

Camp Lake: Pb − Seasonal Scatter Plot
total Pb mg/L
1e−03
5e−04
2e−04
1e−04
5e−05
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.000525
Summer
Fall
Winter
JL0−02S , JL0−02D

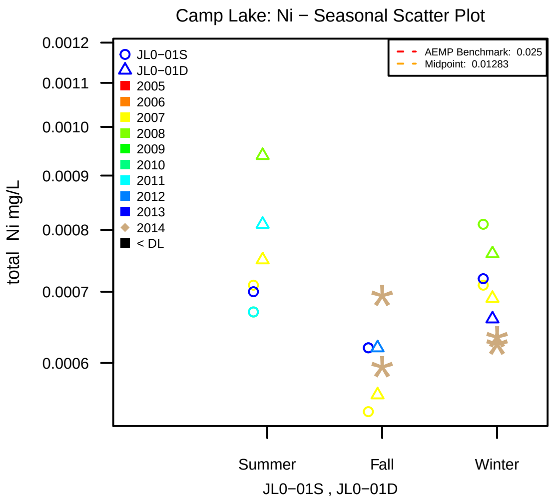

Camp Lake: Pb − Seasonal Boxplot
total Pb mg/L
1e−03
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.000525
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

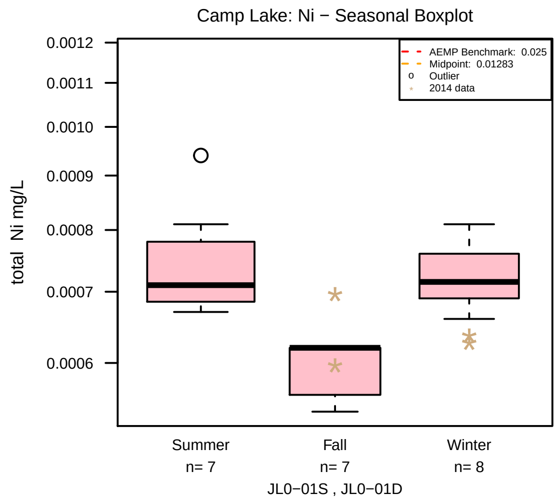

Camp Lake: Pb − Seasonal Scatter Plot
total Pb mg/L
1e−04
9e−05
8e−05
7e−05
6e−05
5e−05
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.000525
Summer
Fall
Winter
JL0−09S , JL0−09D

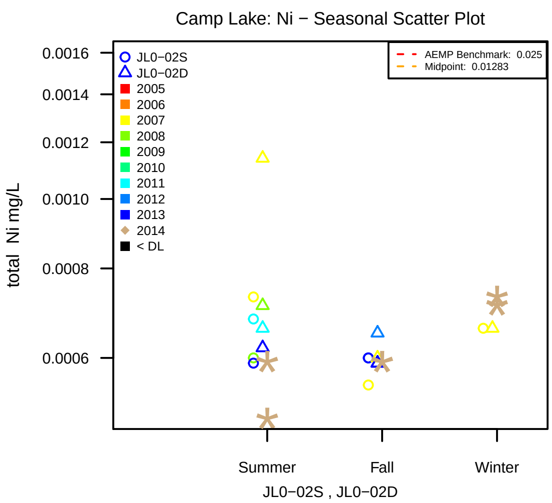

Camp Lake: Pb − Seasonal Boxplot
total Pb mg/L
1e−04
9e−05
8e−05
7e−05
6e−05
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.000525
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

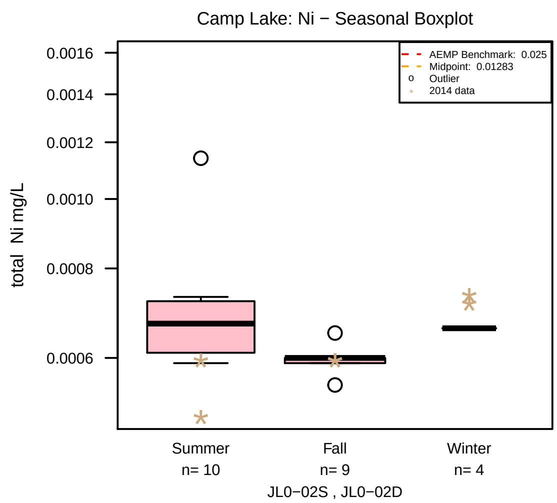

Camp Lake: Ni − Total Boxplot on log scale
total Ni mg/L − log axis
0.0014
0.0012
0.0010
0.0008
0.0006
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

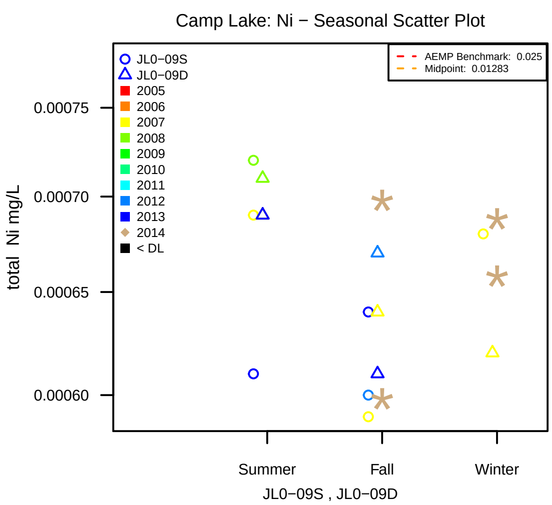

Camp Lake: Ni − Total Boxplot
total Ni mg/L
0.0012
0.0010
0.0008
0.0006
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

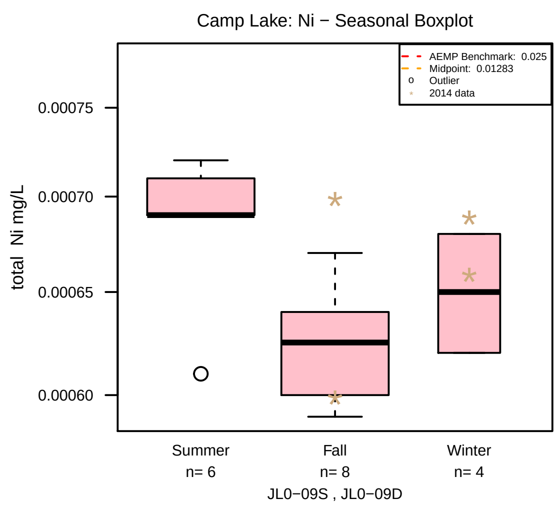

Camp Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
0.0012
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01283
Summer
Fall
Winter
JL0−01S , JL0−01D

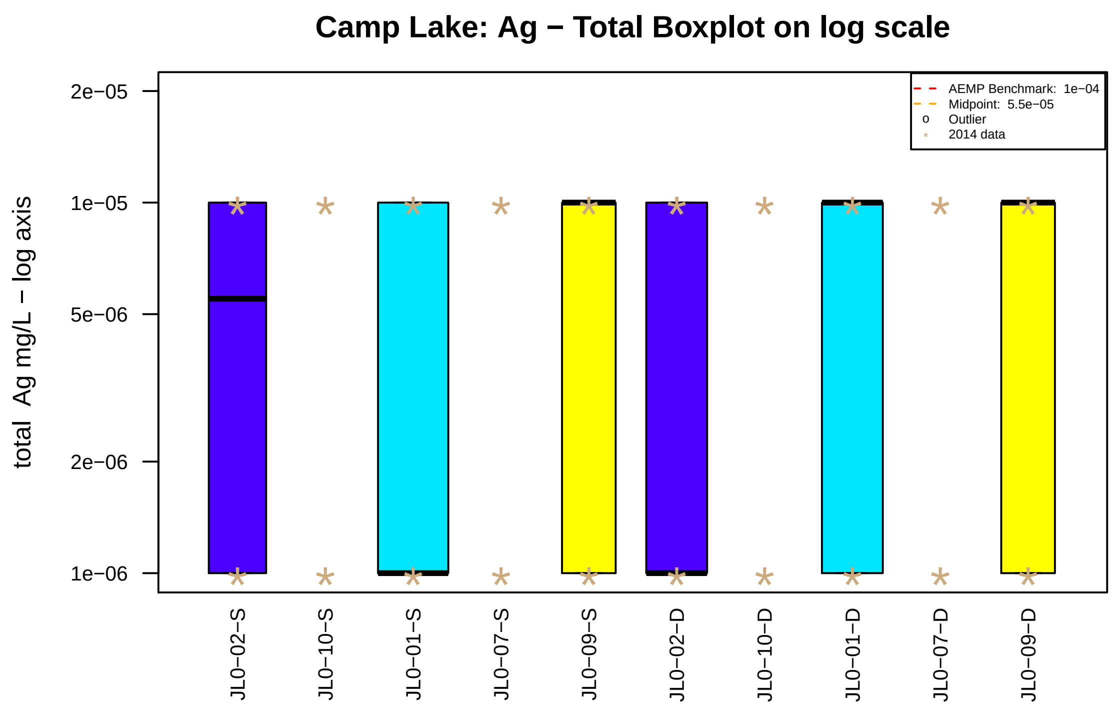

Camp Lake: Ni − Seasonal Boxplot
total Ni mg/L
0.0012
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
Summer
n= 7
Fall
n= 7
Winter
n= 8
JL0−01S , JL0−01D

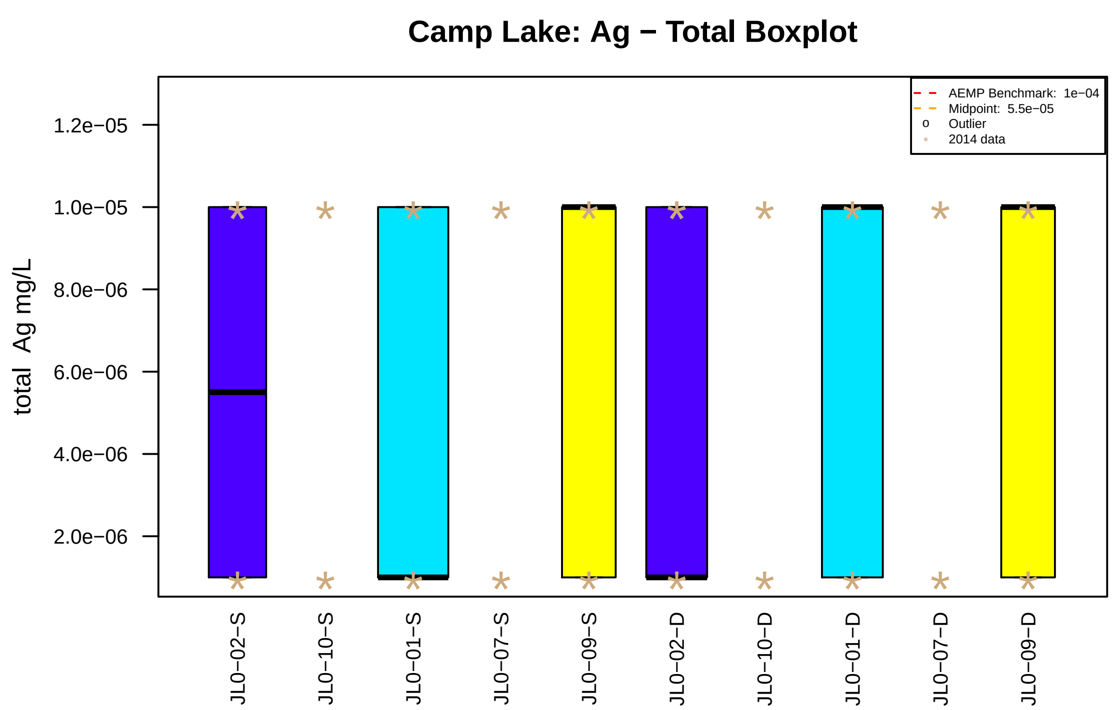

Camp Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01283
Summer
Fall
Winter
JL0−02S , JL0−02D

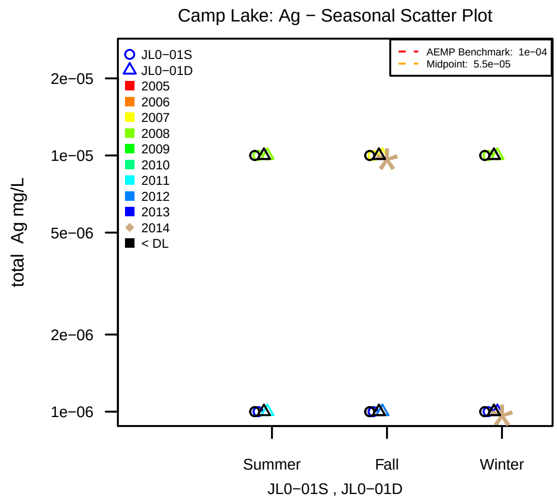

Camp Lake: Ni − Seasonal Boxplot
total Ni mg/L
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

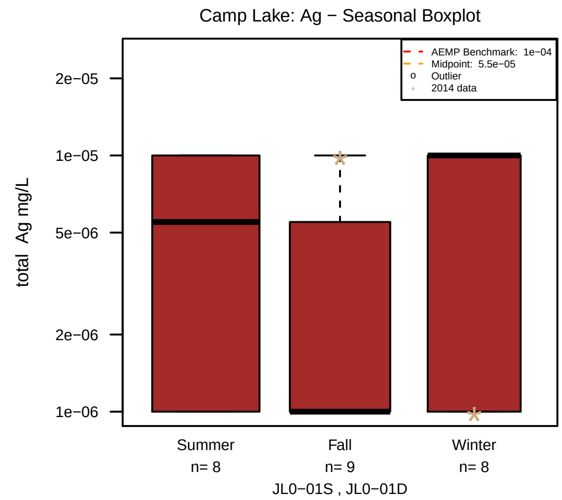

Camp Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
0.00075
0.00070
0.00065
0.00060
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01283
Summer
Fall
Winter
JL0−09S , JL0−09D

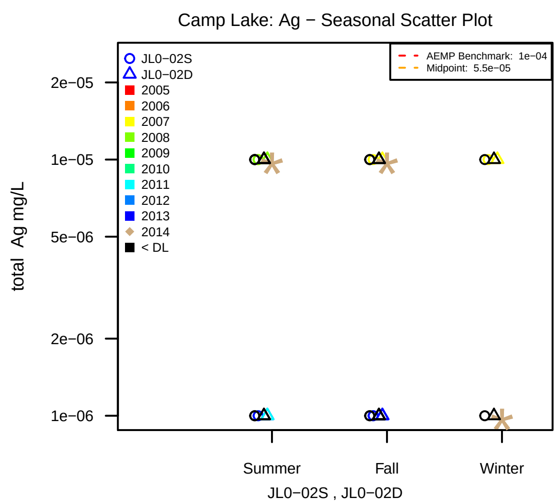

Camp Lake: Ni − Seasonal Boxplot
total Ni mg/L
0.00075
0.00070
0.00065
0.00060
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

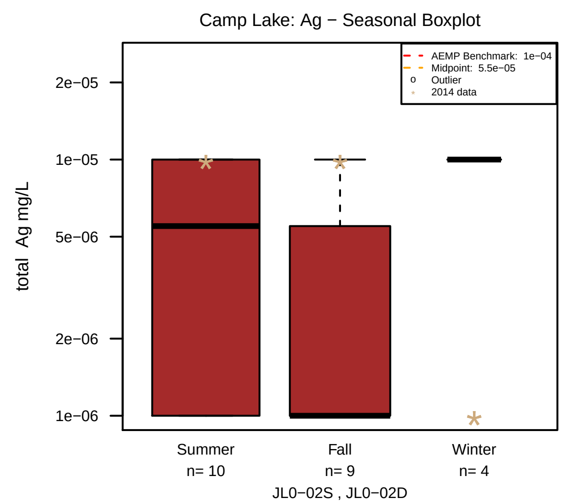

Camp Lake: Ag − Total Boxplot on log scale
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L − log axis
2e−05
1e−05
5e−06
2e−06
1e−06
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

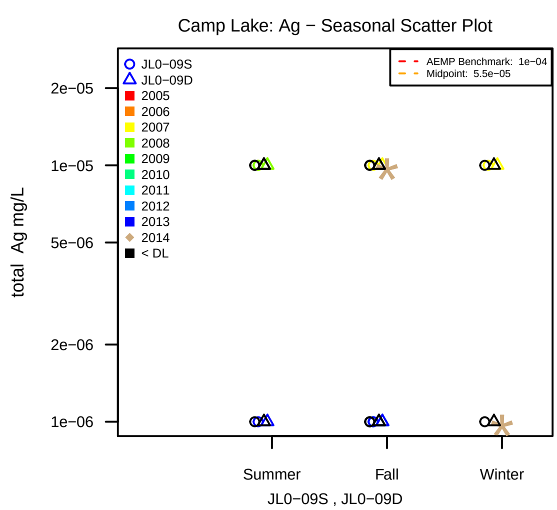

Camp Lake: Ag − Total Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L
1.2e−05
1.0e−05
8.0e−06
6.0e−06
4.0e−06
2.0e−06
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

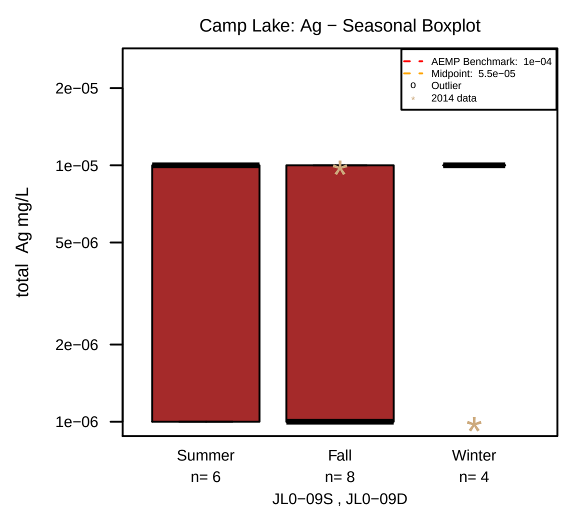

Camp Lake: Ag − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
JL0−01S , JL0−01D

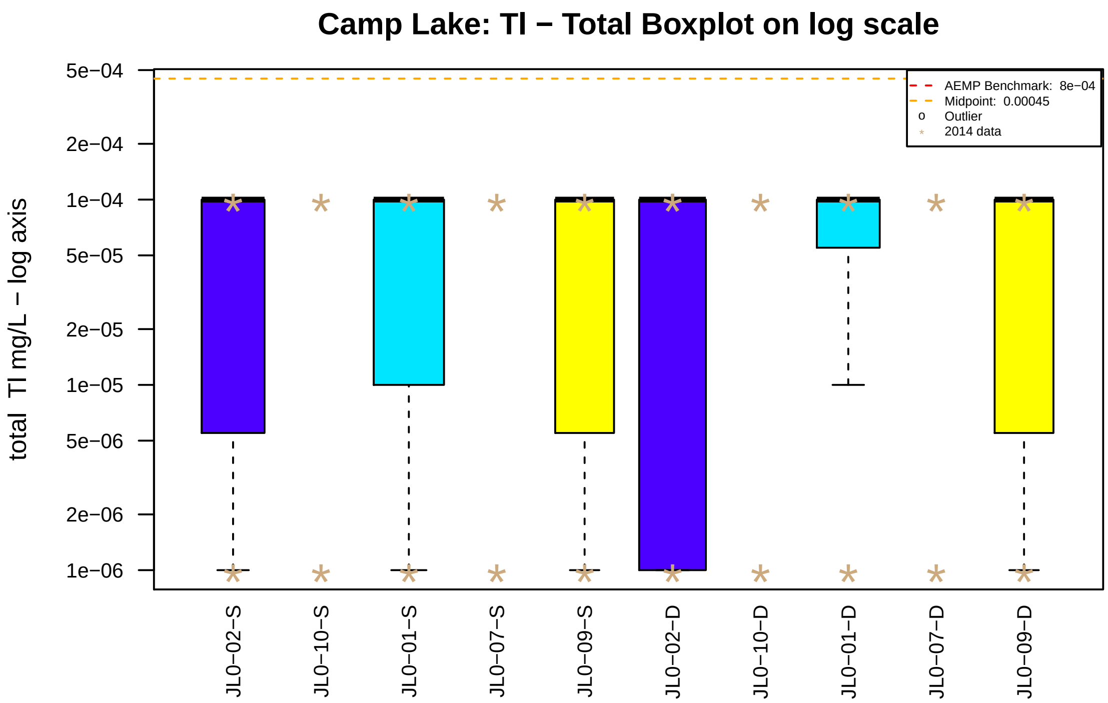

Camp Lake: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

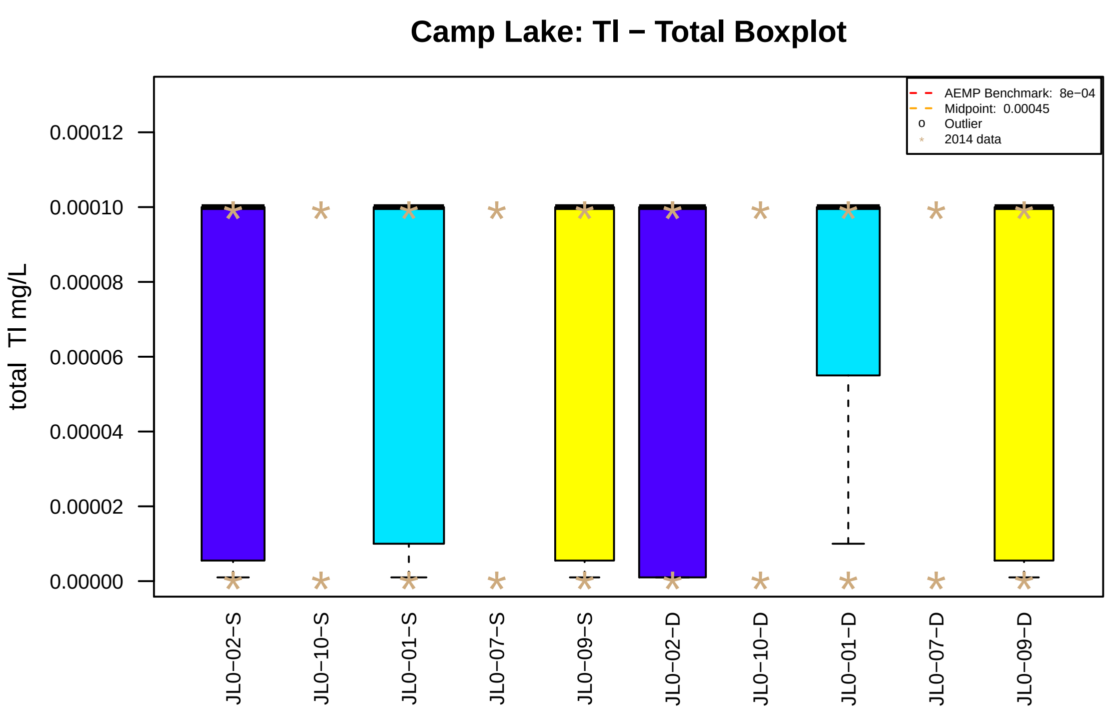

Camp Lake: Ag − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
JL0−02S , JL0−02D

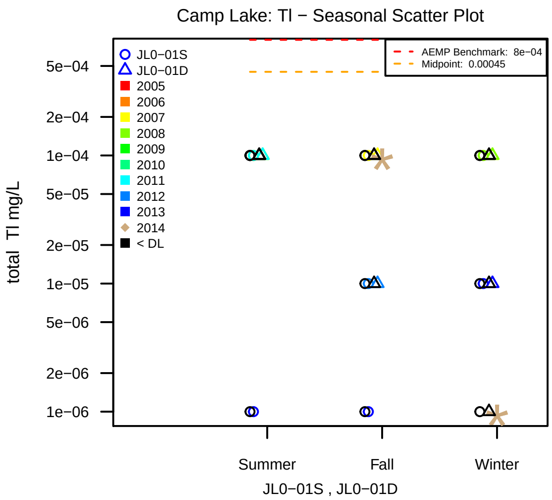

Camp Lake: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

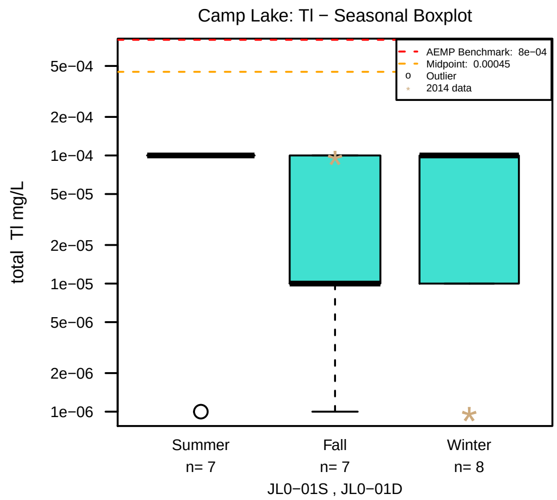

Camp Lake: Ag − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
JL0−09S , JL0−09D

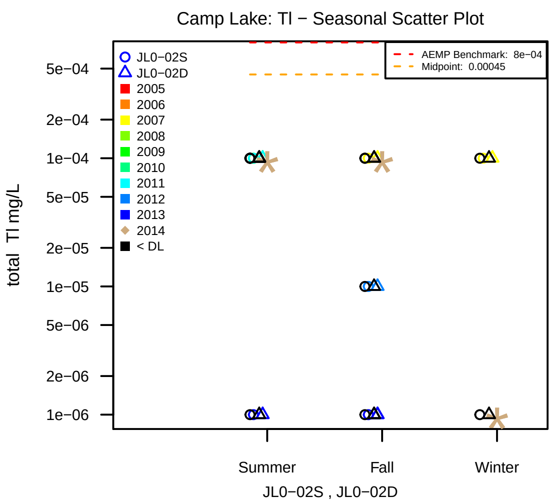

Camp Lake: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

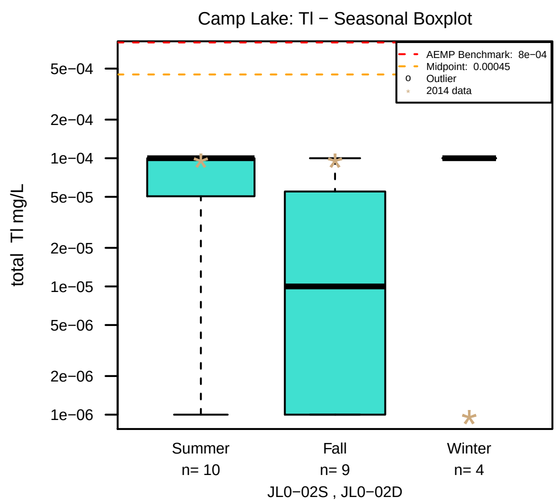

Camp Lake: Tl – Total Boxplot on log scale
total Tl mg/L – log axis
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

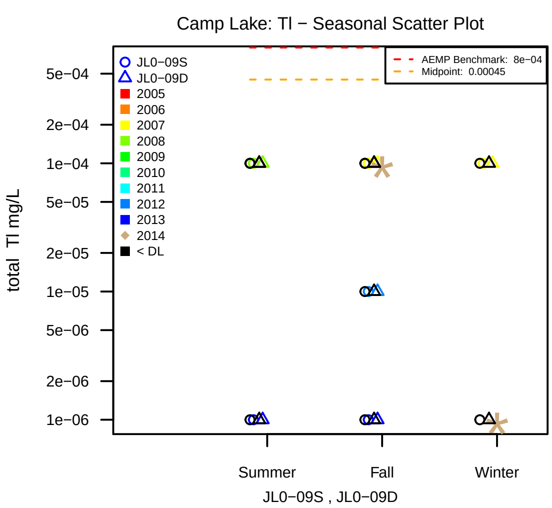

Camp Lake: Tl – Total Boxplot
total Tl mg/L
0.00012
0.00010
0.00008
0.00006
0.00004
0.00002
0.00000
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

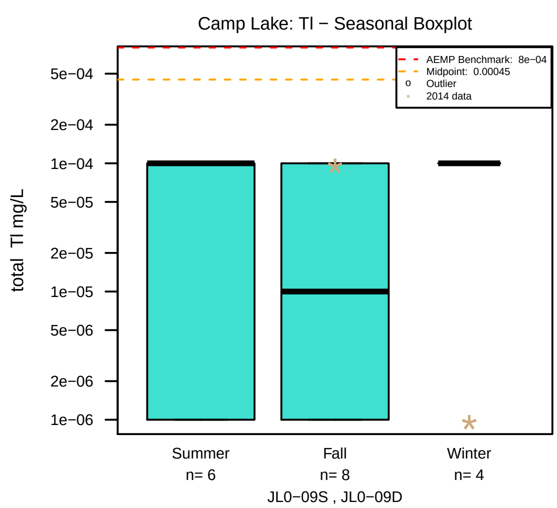

Camp Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
JL0−01S , JL0−01D

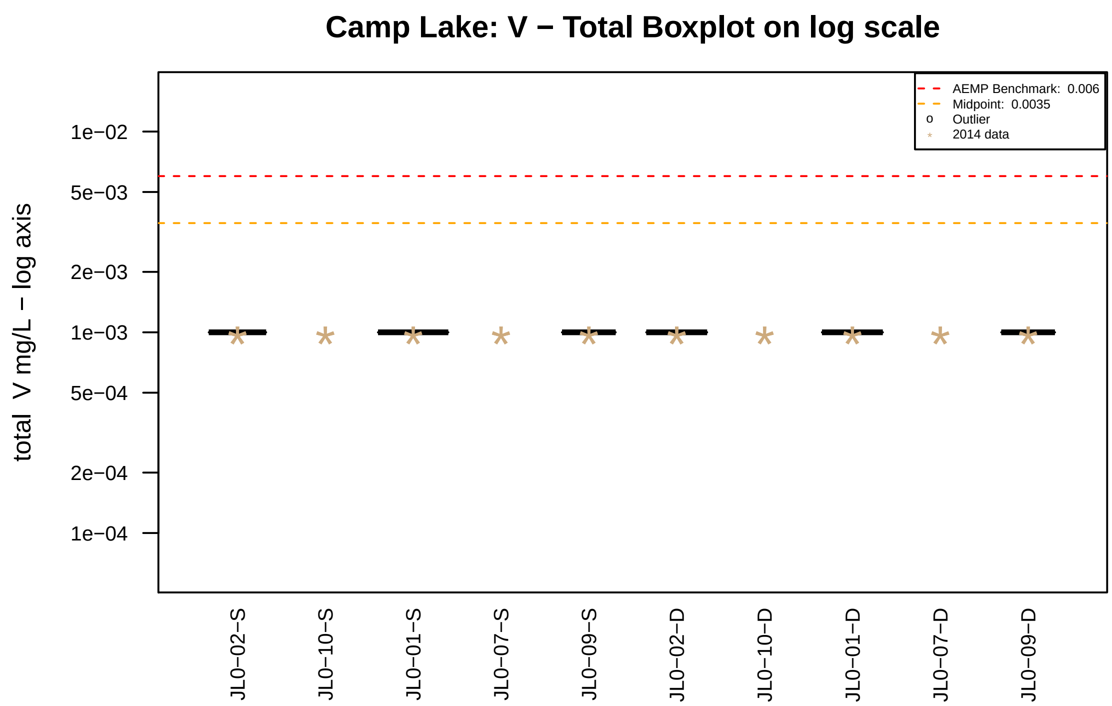

Camp Lake: Tl − Seasonal Boxplot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer
n= 7
Fall
n= 7
Winter
n= 8
JL0−01S , JL0−01D

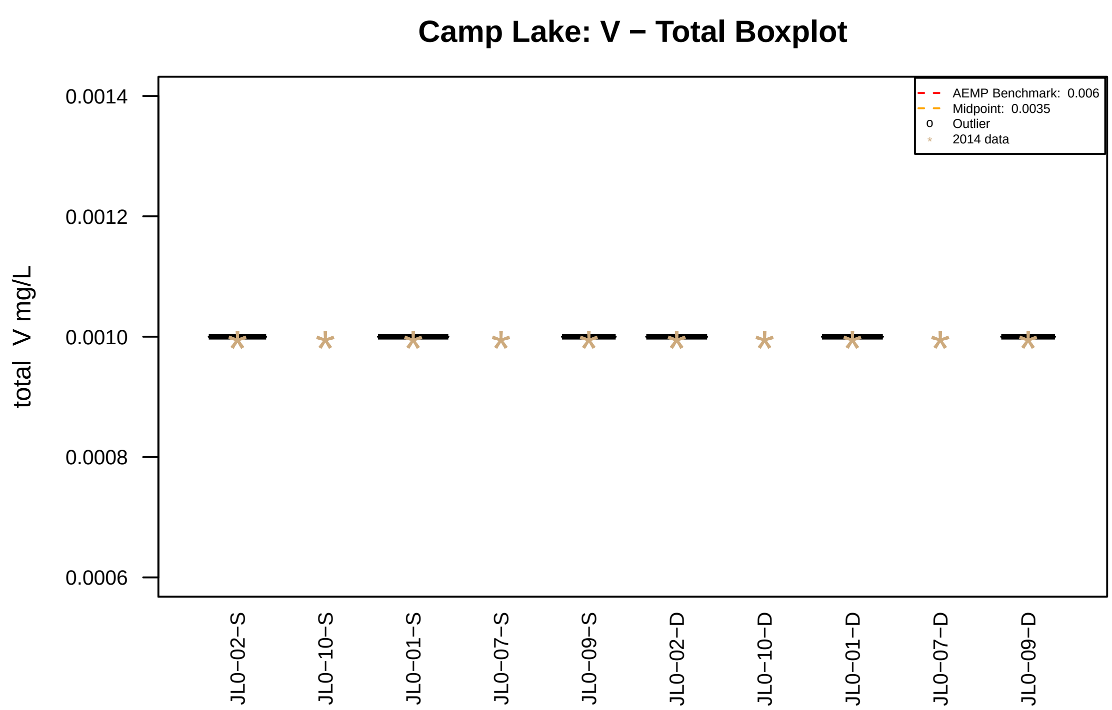

Camp Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
JL0−02S , JL0−02D

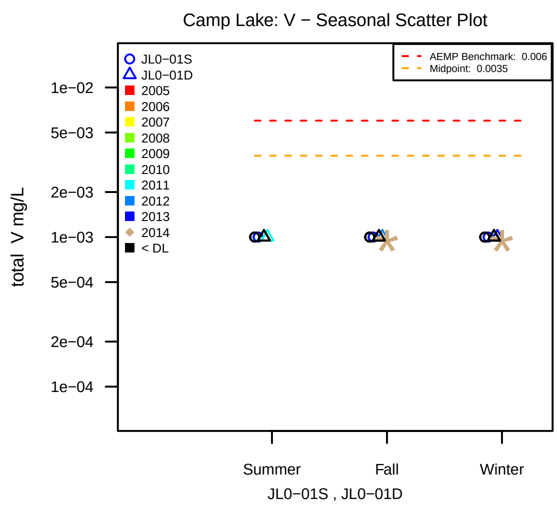

Camp Lake: Tl − Seasonal Boxplot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

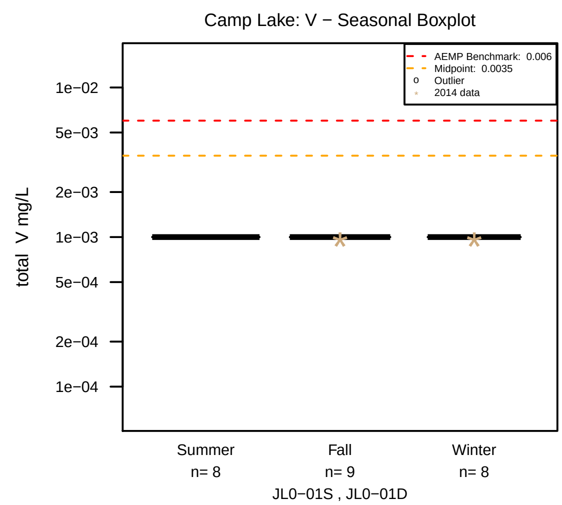

Camp Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
JL0−09S , JL0−09D

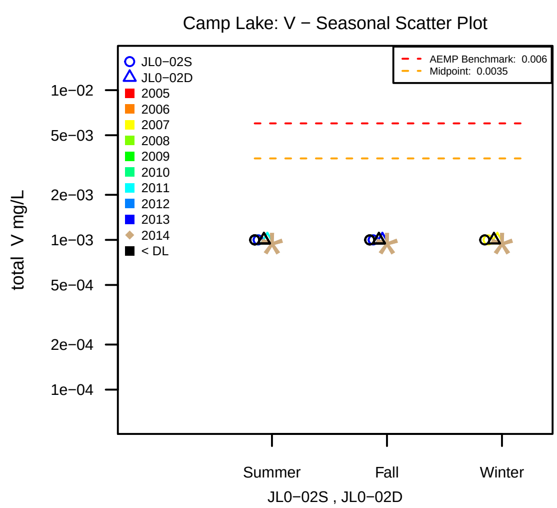

Camp Lake: Tl − Seasonal Boxplot
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

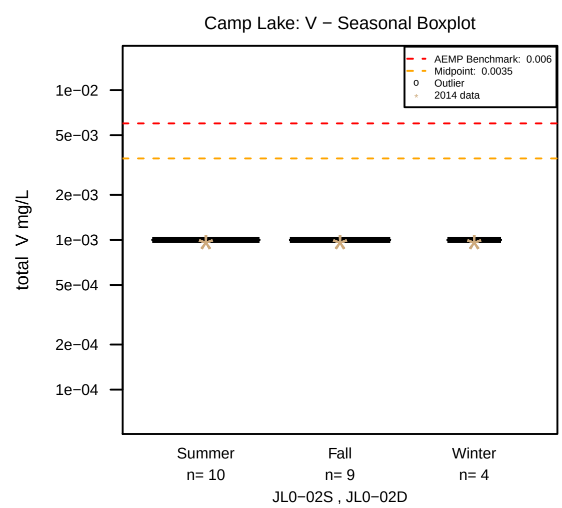

Camp Lake: V − Total Boxplot on log scale
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L − log axis
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

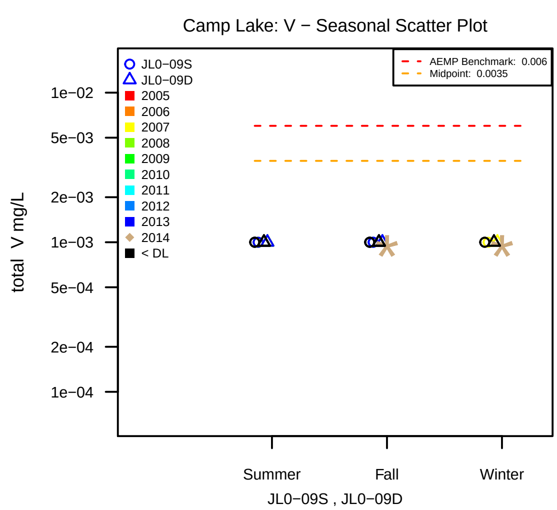

Camp Lake: V − Total Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
0.0014
0.0012
0.0010
0.0008
0.0006
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

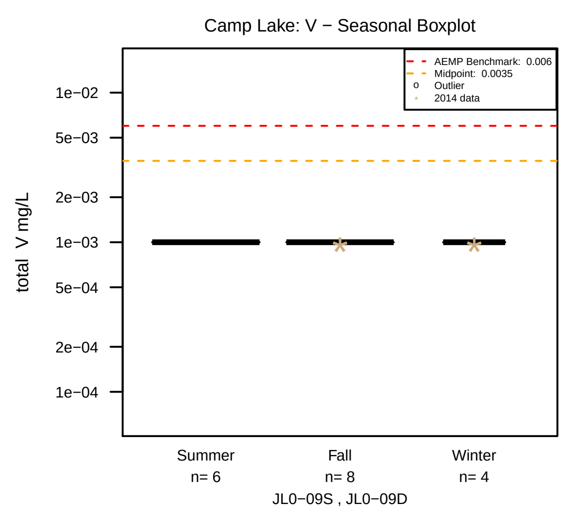

Camp Lake: V − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
JL0−01S , JL0−01D

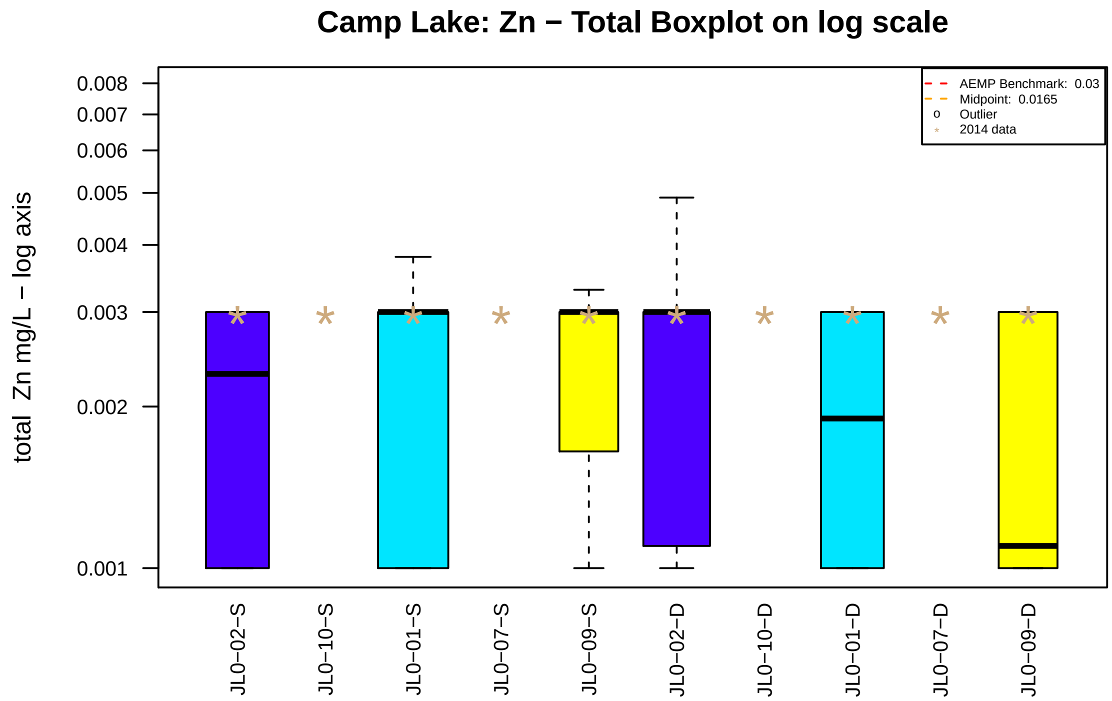

Camp Lake: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

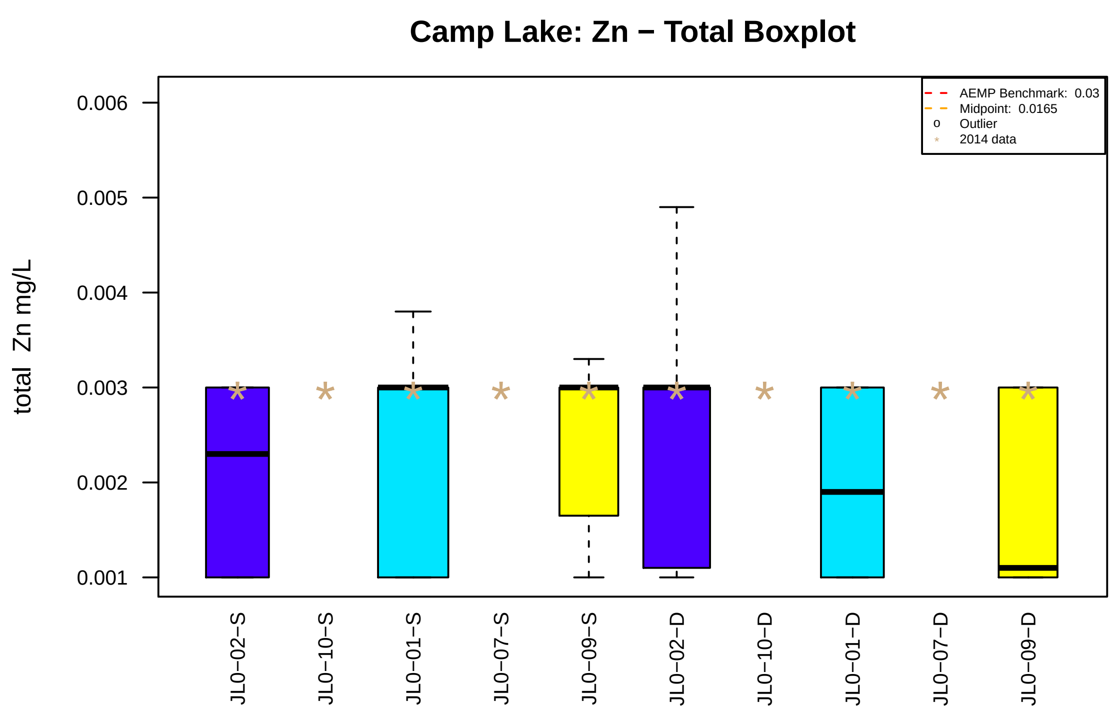

Camp Lake: V − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
JL0−02S , JL0−02D

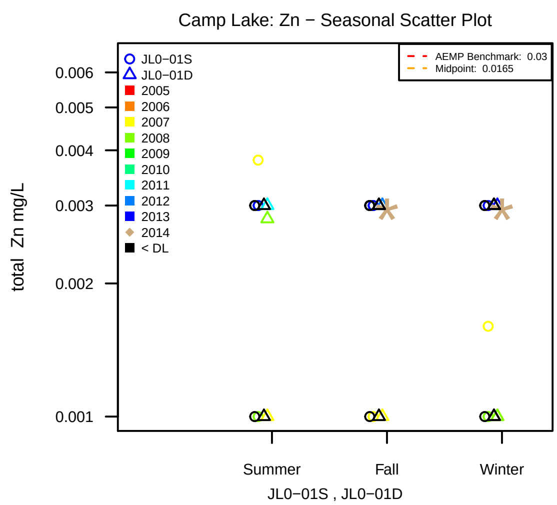

Camp Lake: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

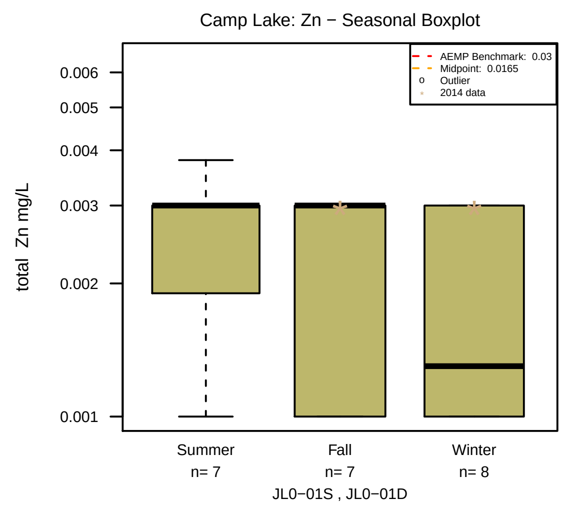

Camp Lake: V − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
JL0−09S , JL0−09D

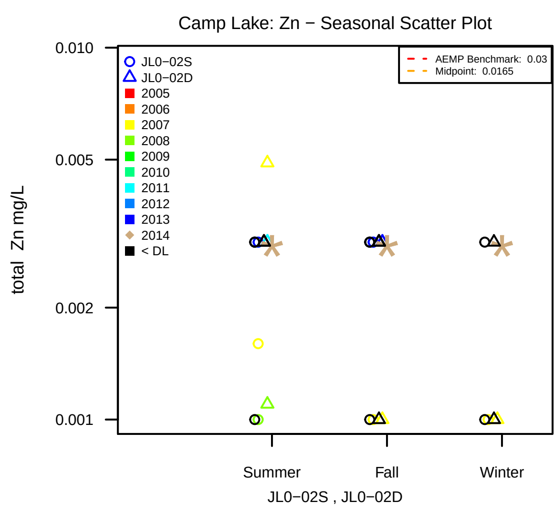

Camp Lake: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

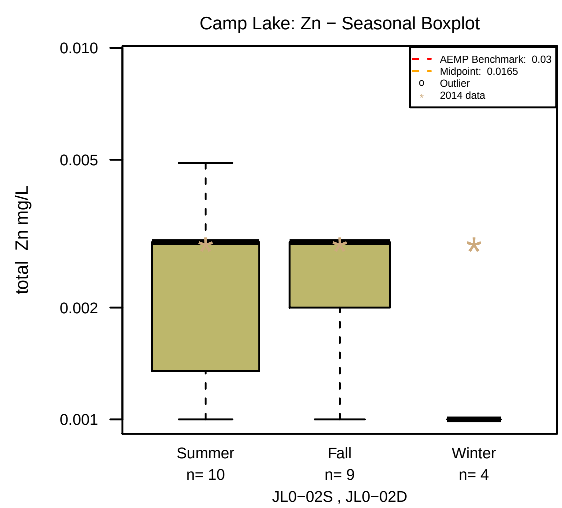

Camp Lake: Zn − Total Boxplot on log scale
total Zn mg/L − log axis
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

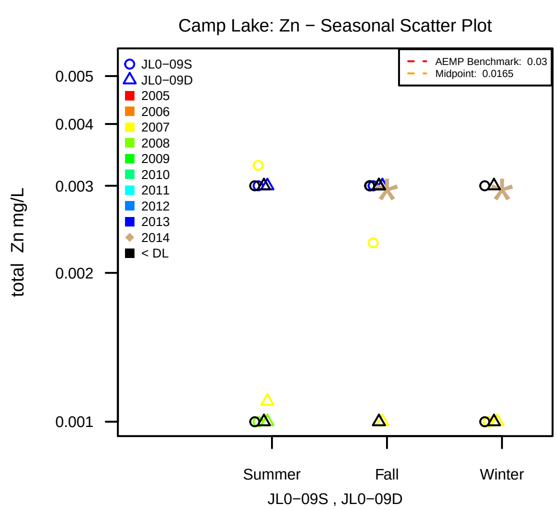

Camp Lake: Zn − Total Boxplot
total Zn mg/L
0.006
0.005
0.004
0.003
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

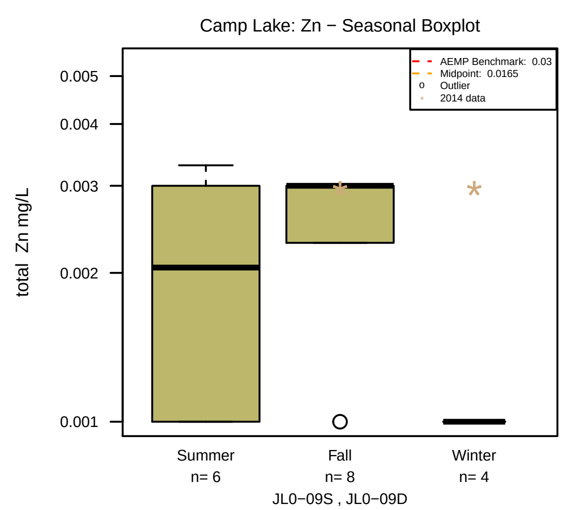

Camp Lake: Zn − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.006
0.005
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
JL0−01S , JL0−01D

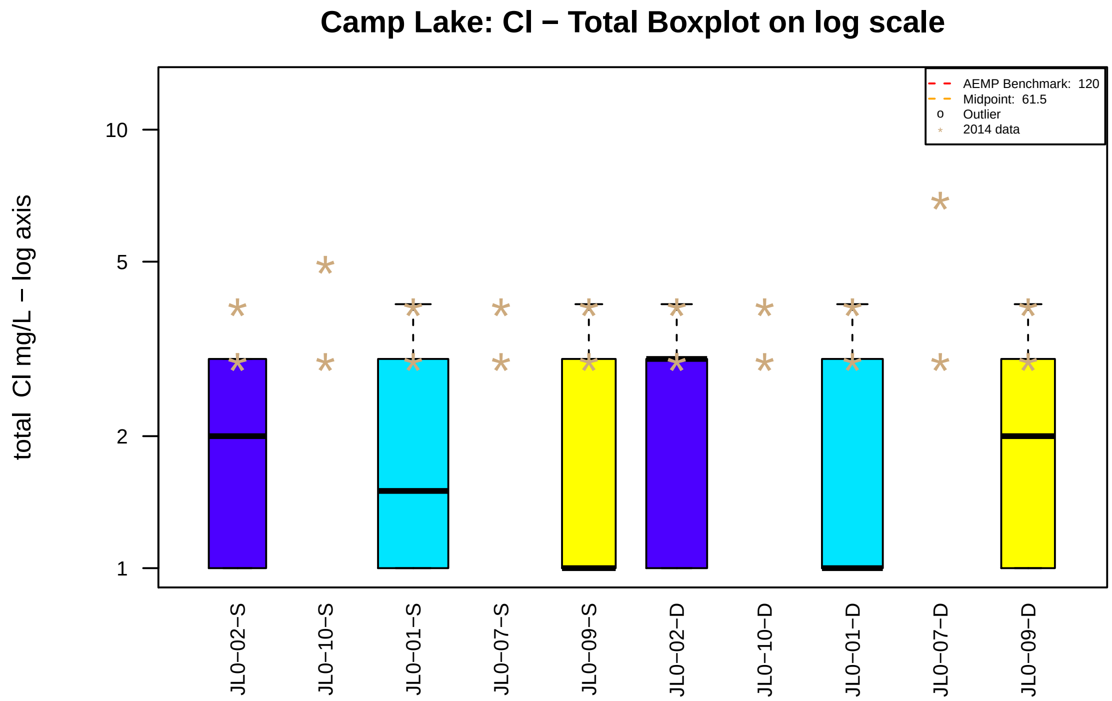

Camp Lake: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.006
0.005
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
n= 7
Fall
n= 7
Winter
n= 8
JL0−01S , JL0−01D

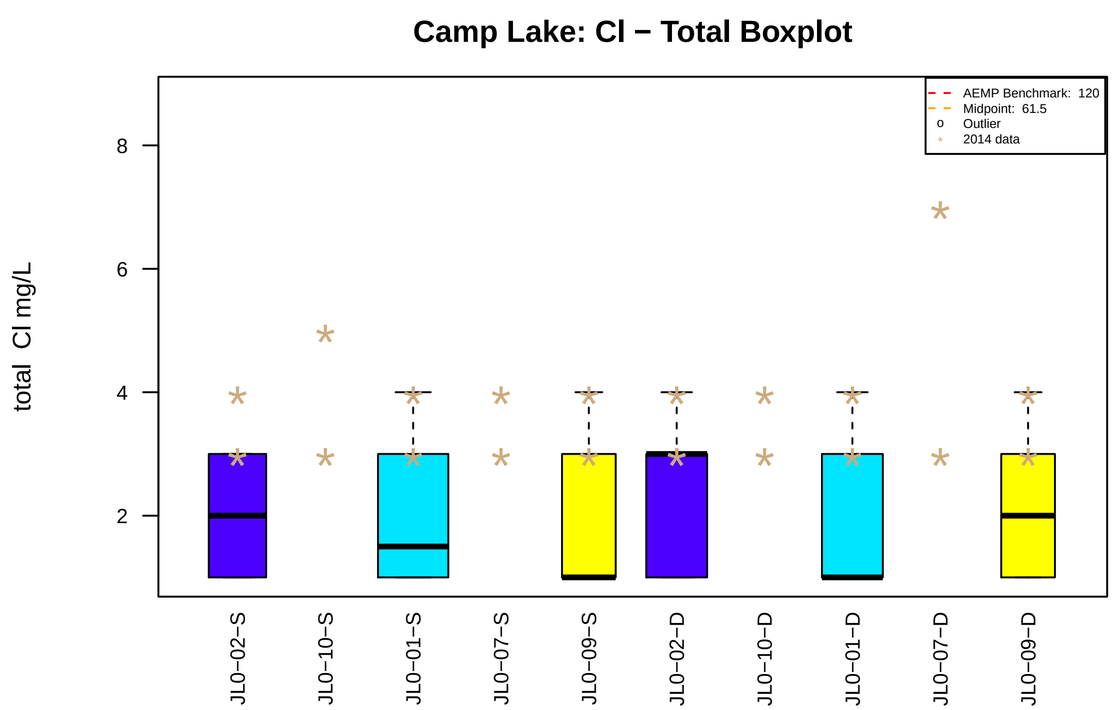

Camp Lake: Zn − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.010
0.005
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
JL0−02S , JL0−02D

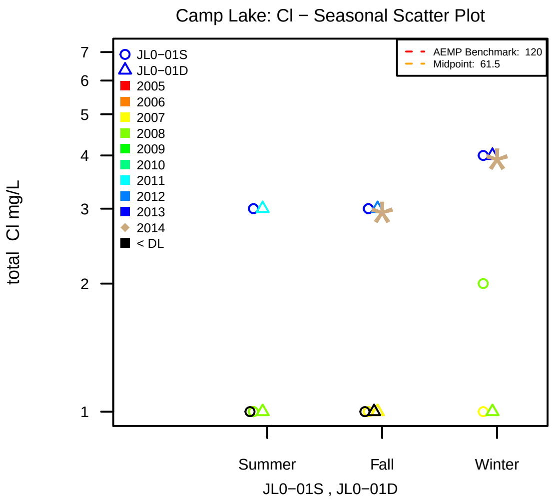

Camp Lake: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.010
0.005
0.002
0.001
total Zn mg/L
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

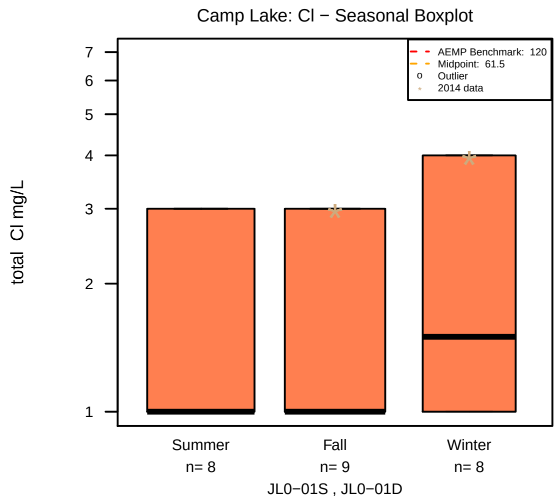

Camp Lake: Zn − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.005
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
JL0−09S , JL0−09D

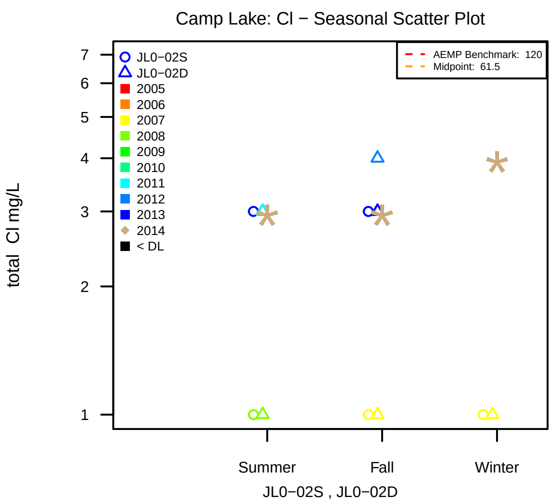

Camp Lake: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.005
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

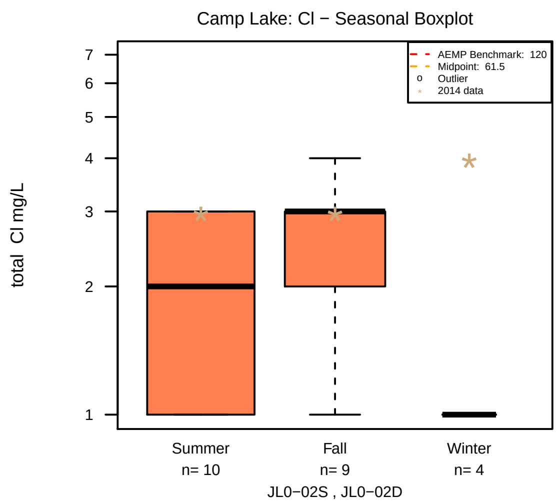

Camp Lake: Cl − Total Boxplot on log scale
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L − log axis
10
5
2
1
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

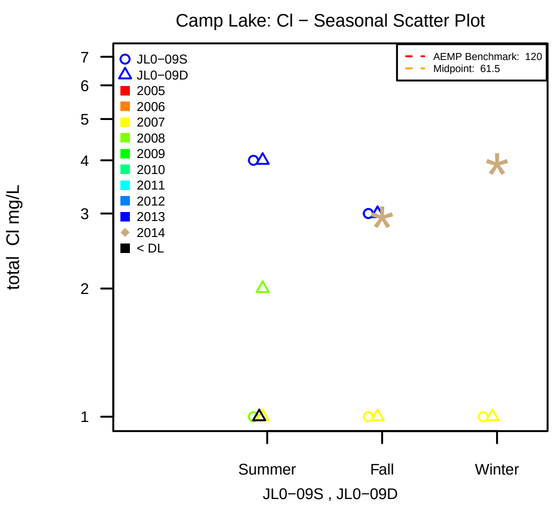

Camp Lake: Cl − Total Boxplot
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L
8
6
4
2
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

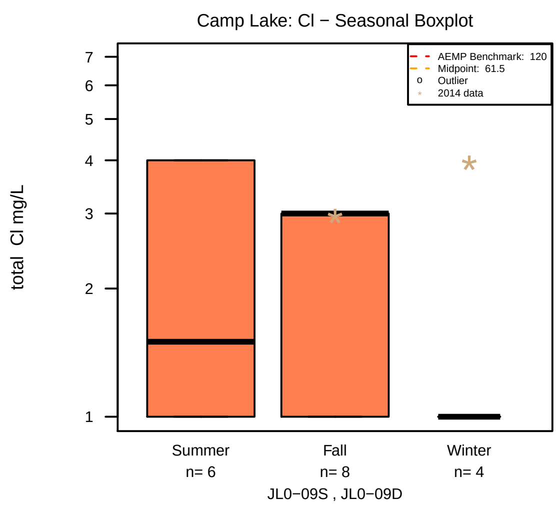

Camp Lake: Cl − Seasonal Scatter Plot
total Cl mg/L
7
6
5
4
3
2
1
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
Summer
Fall
Winter
JL0−01S , JL0−01D

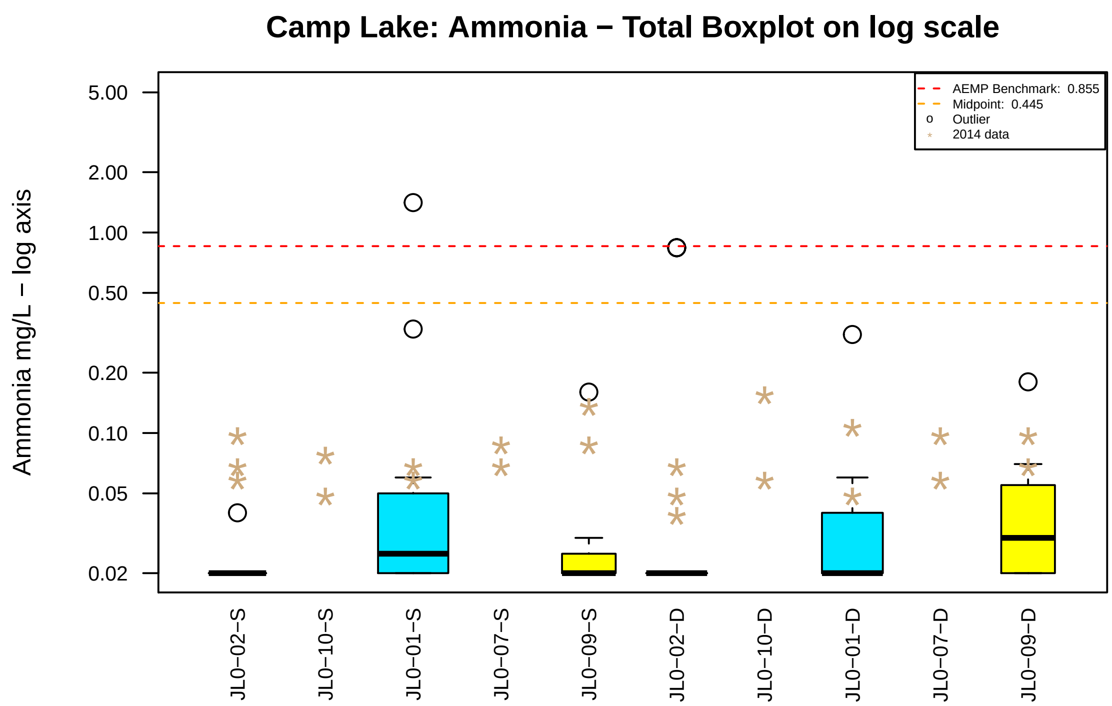

Camp Lake: Cl − Seasonal Boxplot
total Cl mg/L
7
6
5
4
3
2
1
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

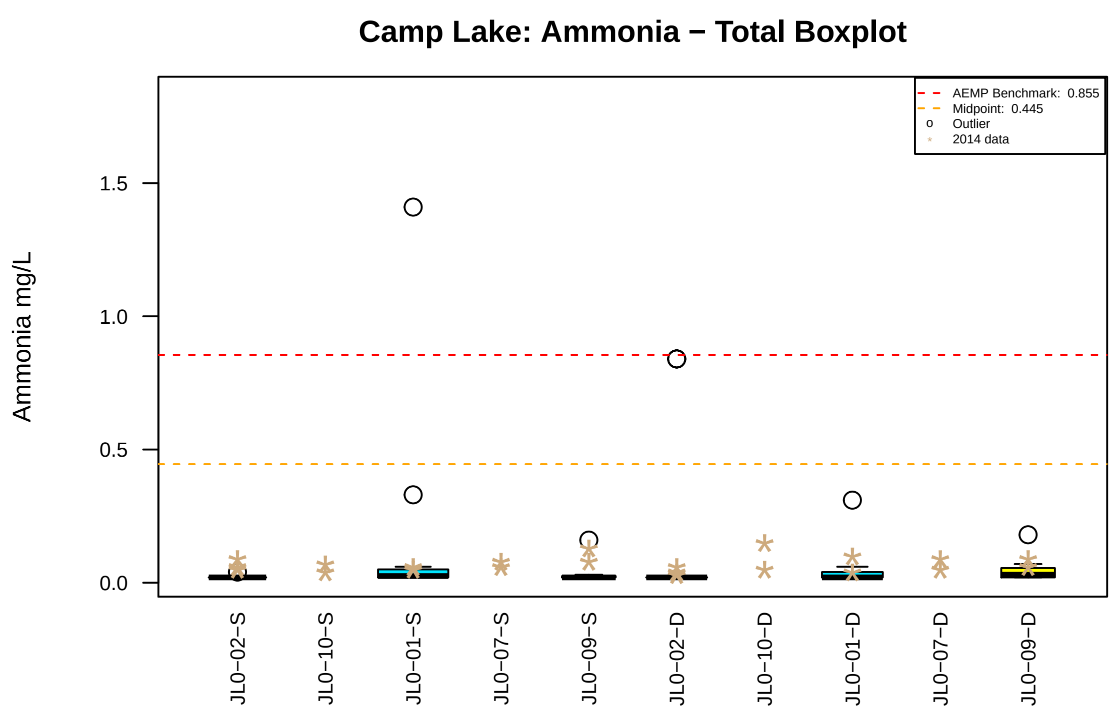

Camp Lake: Cl − Seasonal Scatter Plot
total Cl mg/L
7
6
5
4
3
2
1
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
Summer
Fall
Winter
JL0−02S , JL0−02D


Camp Lake: Cl − Seasonal Boxplot
total Cl mg/L
7
6
5
4
3
2
1
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

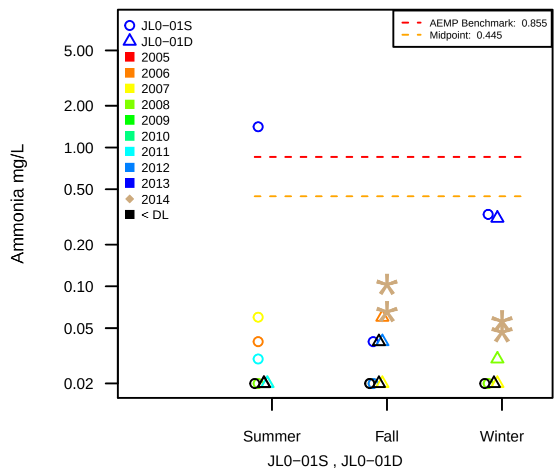

Camp Lake: Cl − Seasonal Scatter Plot
total Cl mg/L
7
6
5
4
3
2
1
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
Summer
Fall
Winter
JL0−09S , JL0−09D


Camp Lake: Cl − Seasonal Boxplot
total Cl mg/L
7
6
5
4
3
2
1
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

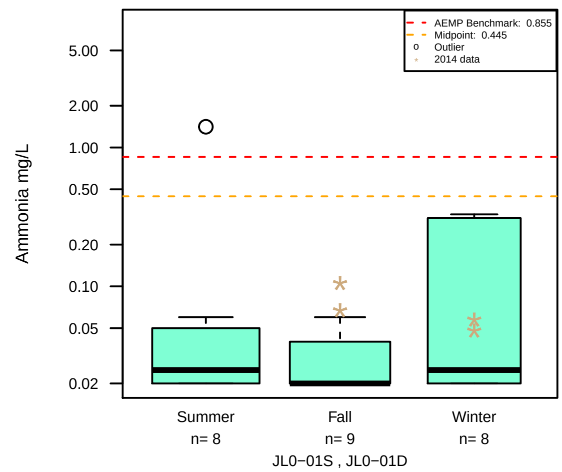

Camp Lake: Ammonia − Total Boxplot on log scale
Ammonia mg/L − log axis
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D


Camp Lake: Ammonia − Total Boxplot
Ammonia mg/L
1.5
1.0
0.5
0.0
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

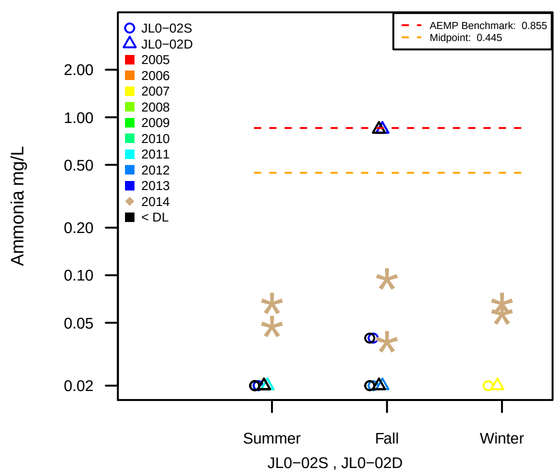
Camp Lake: Ammonia − Seasonal Scatter Plot



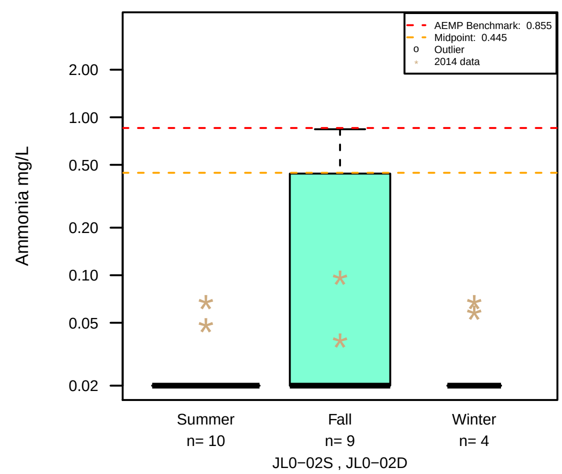
Camp Lake: Ammonia − Seasonal Boxplot



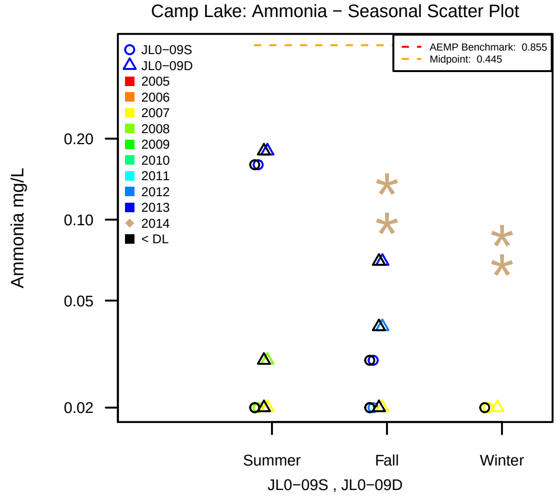
Camp Lake: Ammonia − Seasonal Scatter Plot



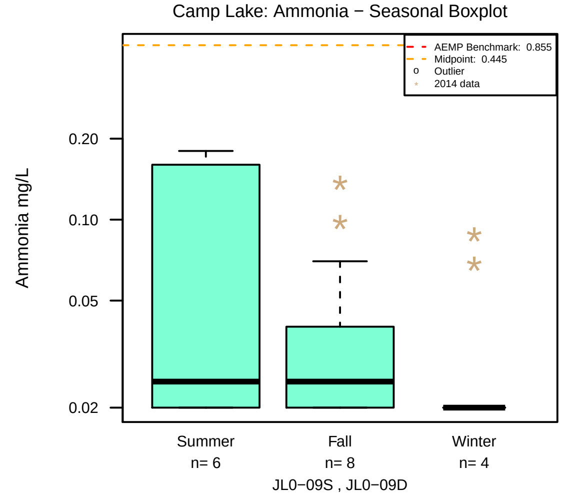
Camp Lake: Ammonia − Seasonal Boxplot

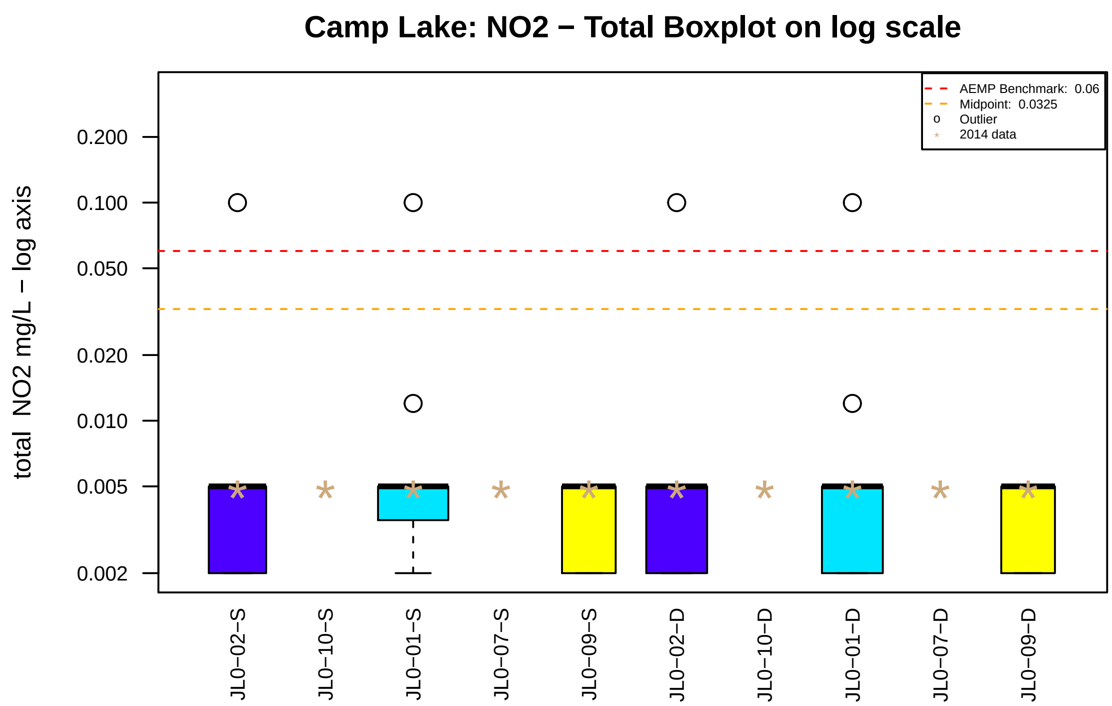


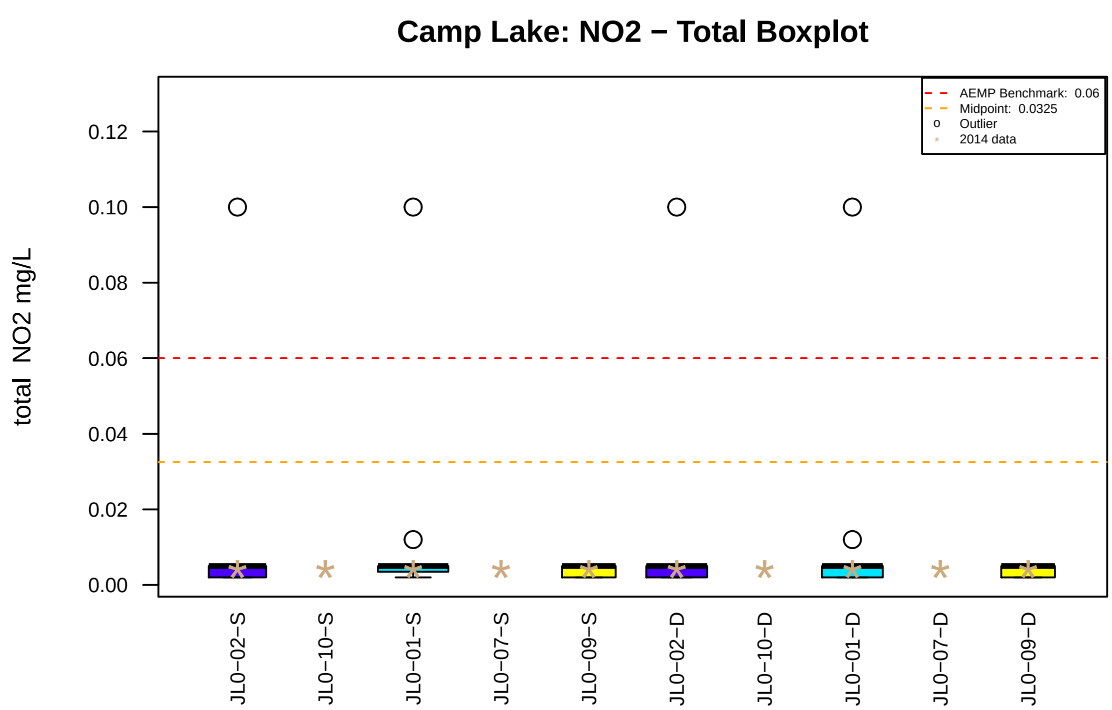
Camp Lake: Ammonia − Seasonal Scatter Plot

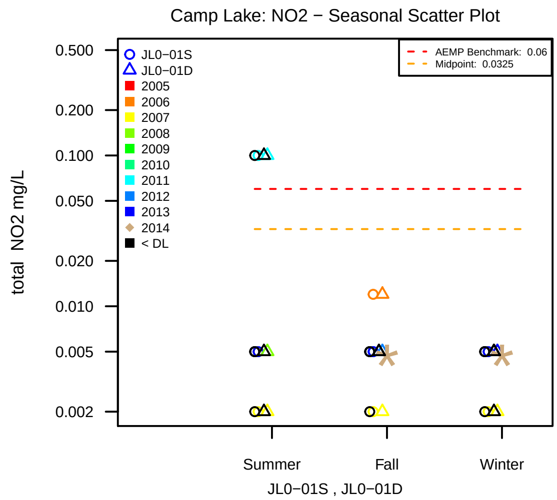


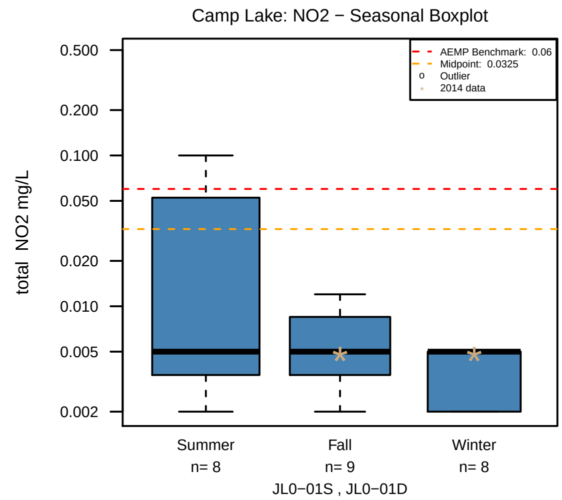
Camp Lake: Ammonia − Seasonal Boxplot

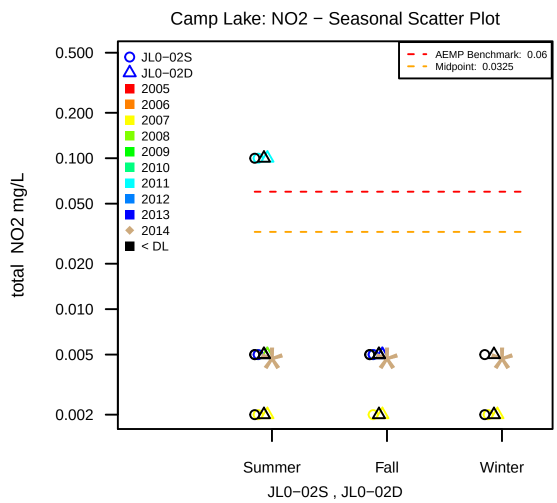


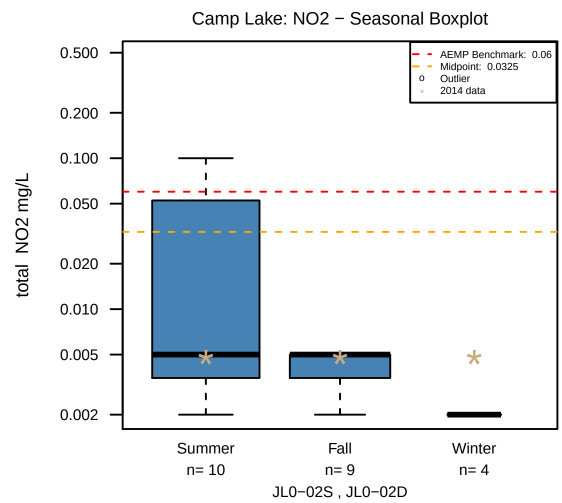

Camp Lake: NO2 − Total Boxplot on log scale
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L − log axis
0.200
0.100
0.050
0.020
0.010
0.005
0.002
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

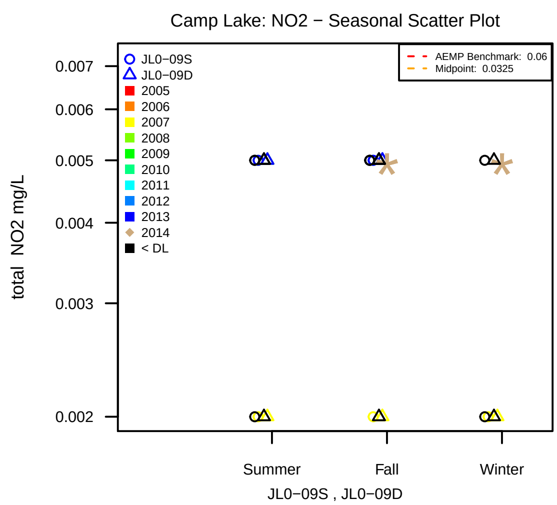

Camp Lake: NO2 − Total Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.12
0.10
0.08
0.06
0.04
0.02
0.00
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

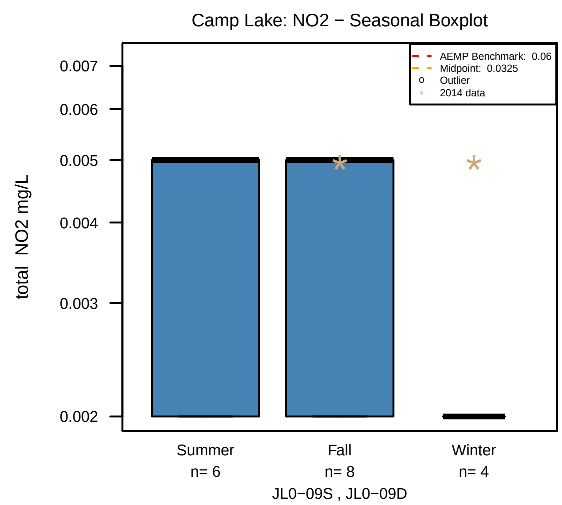

Camp Lake: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
JL0−01S , JL0−01D

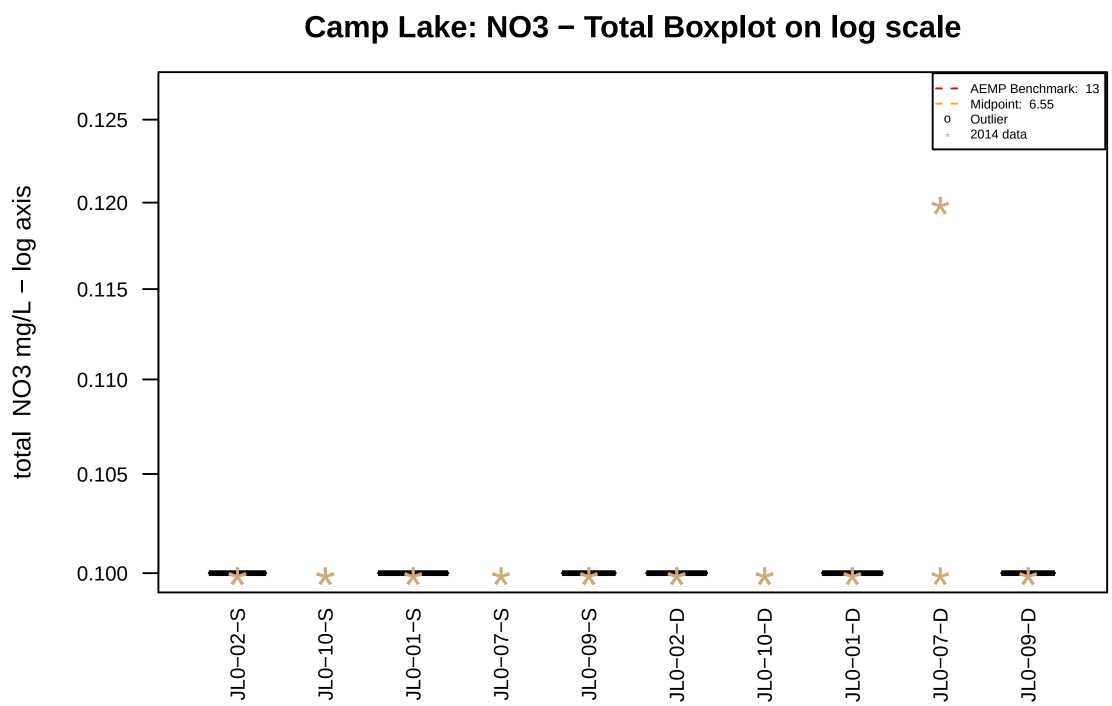

Camp Lake: NO2 − Seasonal Boxplot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

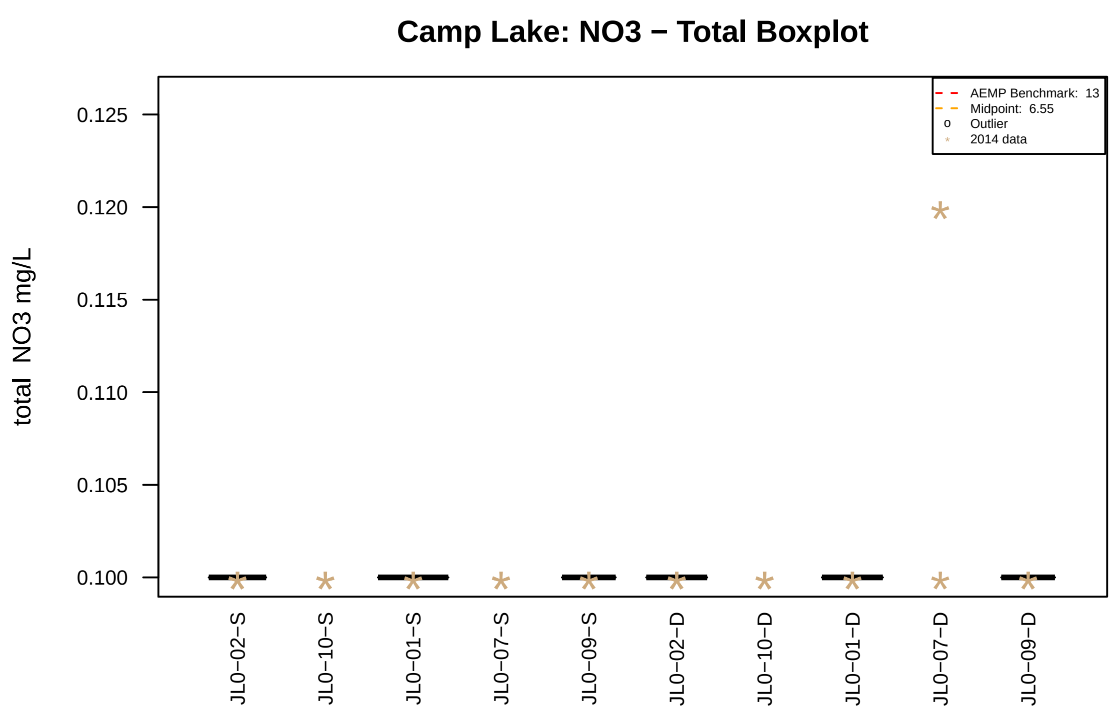

Camp Lake: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
JL0−02S , JL0−02D

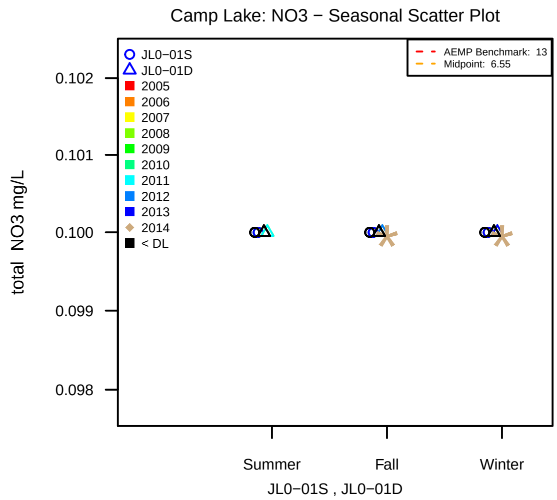

Camp Lake: NO2 − Seasonal Boxplot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

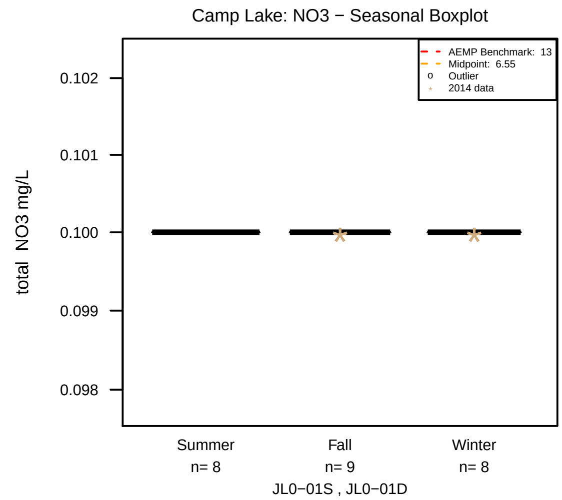

Camp Lake: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.007
0.006
0.005
0.004
0.003
0.002
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
JL0−09S , JL0−09D

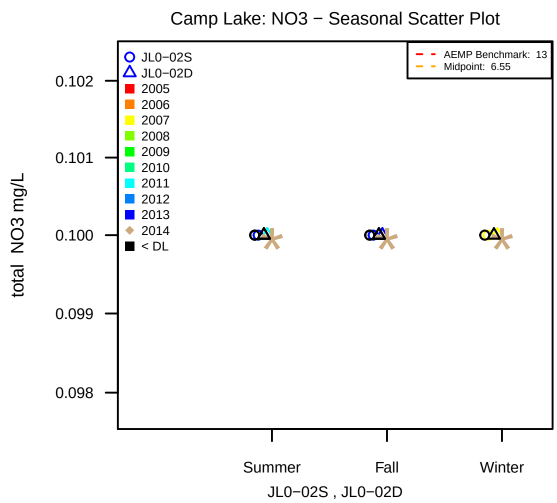

Camp Lake: NO2 − Seasonal Boxplot
total NO2 mg/L
0.007
0.006
0.005
0.004
0.003
0.002
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

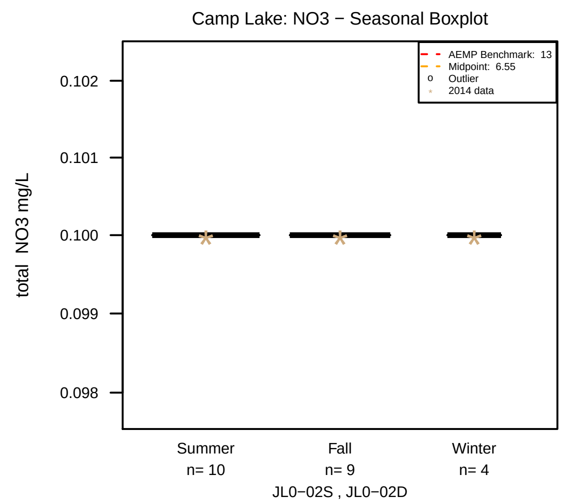

Camp Lake: NO3 − Total Boxplot on log scale
total NO3 mg/L − log axis
0.125
0.120
0.115
0.110
0.105
0.100
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

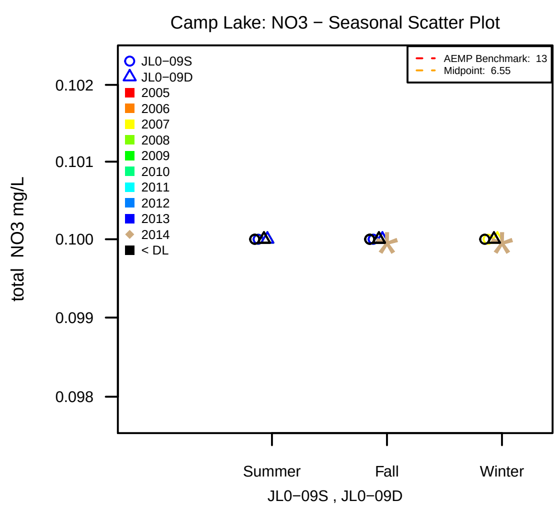

Camp Lake: NO3 − Total Boxplot
total NO3 mg/L
0.125
0.120
0.115
0.110
0.105
0.100
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

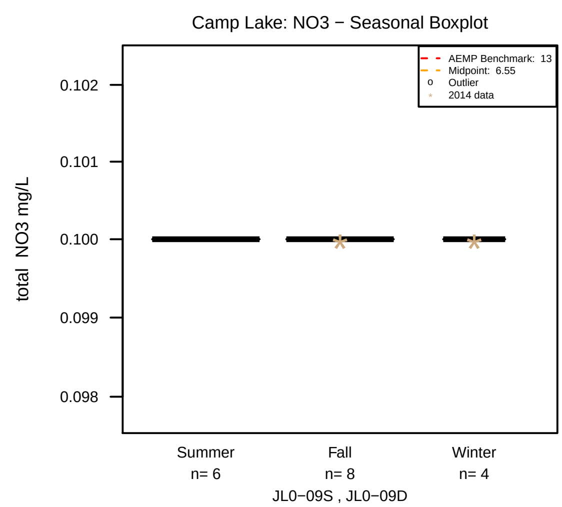

Camp Lake: NO3 − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
0.102
0.101
0.100
0.099
0.098
total NO3 mg/L
Summer
Fall
Winter
JL0−01S , JL0−01D

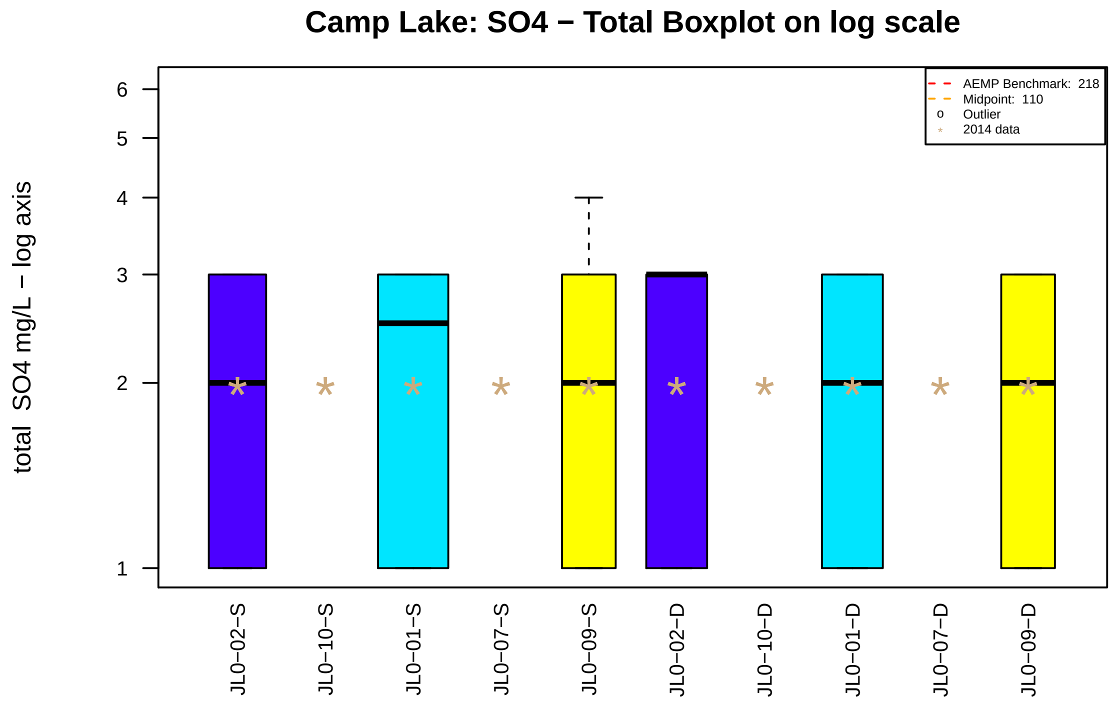

Camp Lake: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
0.102
0.101
0.100
0.099
0.098
total NO3 mg/L
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

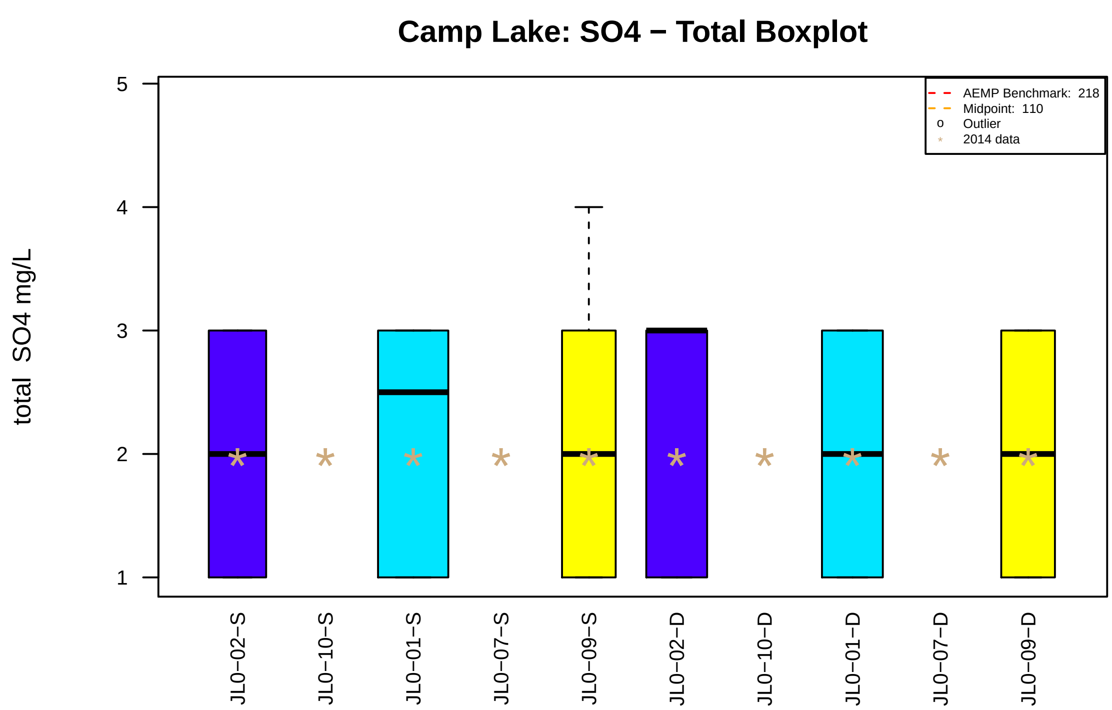

Camp Lake: NO3 − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
0.102
0.101
0.100
0.099
0.098
total NO3 mg/L
Summer
Fall
Winter
JL0−02S , JL0−02D

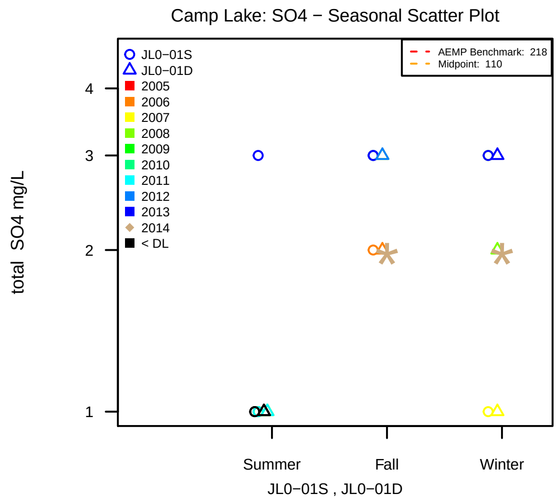

Camp Lake: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
0.102
0.101
0.100
0.099
0.098
total NO3 mg/L
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

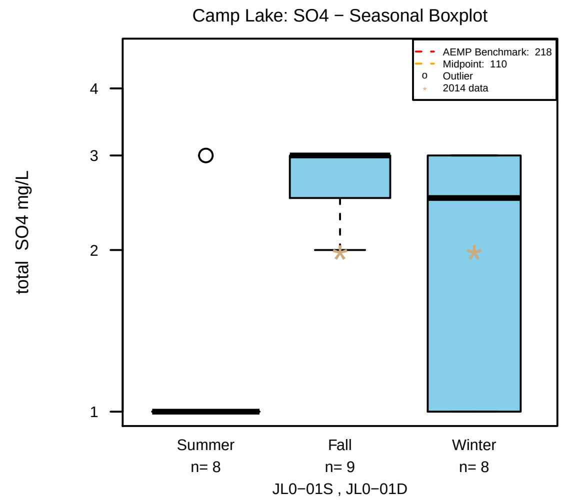

Camp Lake: NO3 − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
0.102
0.101
0.100
0.099
0.098
total NO3 mg/L
Summer
Fall
Winter
JL0−09S , JL0−09D

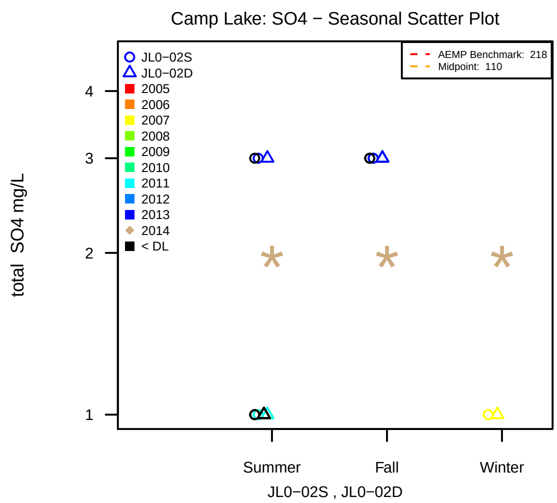

Camp Lake: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
0.102
0.101
0.100
0.099
0.098
total NO3 mg/L
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

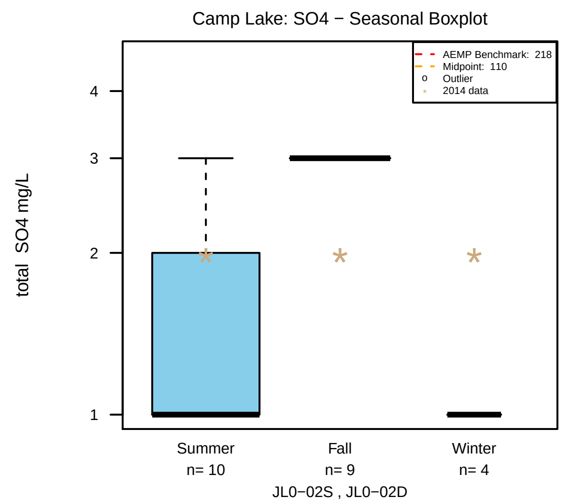

Camp Lake: SO4 − Total Boxplot on log scale
total SO4 mg/L − log axis
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

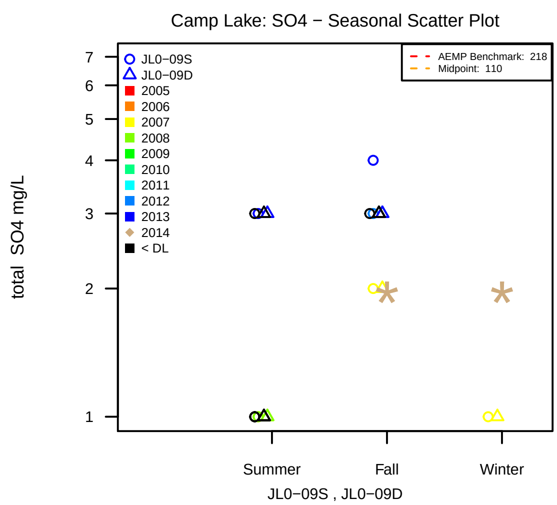

Camp Lake: SO4 − Total Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

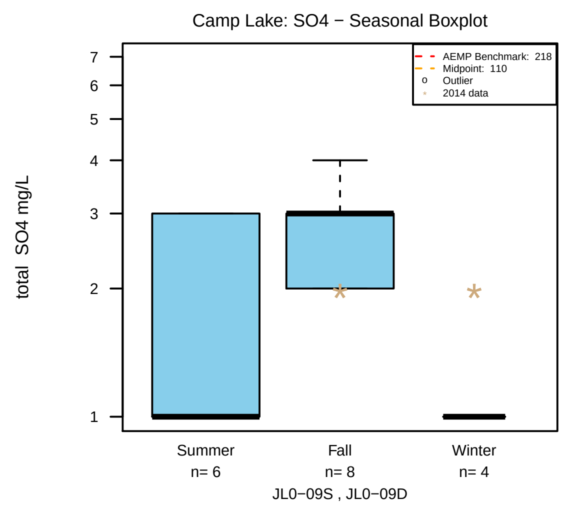

Camp Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
JL0−01S , JL0−01D


Camp Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer n= 8
Fall n= 9
Winter n= 8
JL0−01S , JL0−01D


Camp Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
JL0−02S , JL0−02D


Camp Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer n= 10
Fall n= 9
Winter n= 4
JL0−02S , JL0−02D


Camp Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
JL0−09S , JL0−09D


Camp Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer n= 6
Fall n= 8
Winter n= 4
JL0−09S , JL0−09D

APPENDIX A5

GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - CAMP LAKE

(Pages A5-1 to A5-46)

APPENDIX A5
GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - CAMP LAKE

The Appendix A5 tables and graphs were generated using the R (2014) statistical package as follows:

Table 1: AEMP Benchmarks and Midpoint Concentrations of Parameters of Interest
Table 2: Camp Lake Sample Size by Year and Season
Table 3: Camp Lake Sample Size by Location and Season

Camp Lake Sample Distributions:

Data have been presented in graphs by Month, Season, Year and Station.

Total Boxplot on Log Scale and Total Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Seasonal Scatter Plot and Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Reference:

R Development Core Team, 2014. *R: A language and environment for statistical computing*. R. Foundation for Statistical Computing, Vienna, Austria. Retrieved from: http://www.R-project.org.

Appendix A5 - Camp Lake

Table 1: Mary Lake: AEMP Benchmarks and Midpoints

	AEMP Benchmark	Midpoint	Minimum MDL	Maximum MDL
Al	0.1	0.05295	0.001	0.005
As	0.005	0.00255	1e-04	1e-04
Cd	1e-04	5.5e-05	1e-05	1.7e-05
Cr	3e-04	0.0002075	2e-05	5e-04
Co	0.004	0.00205	1e-04	2e-04
Cu	0.004	0.002455	all > MDL	all > MDL
Fe	0.3	0.165	0.003	0.03
Pb	0.001	0.000525	5e-05	8e-05
Ni	0.025	0.01283	all > MDL	all > MDL
Ag	1e-04	5.5e-05	1e-06	1e-05
Tl	8e-04	0.00045	1e-06	1e-04
V	0.006	0.0035	0.001	0.001
Zn	0.03	0.0165	0.001	0.003
Cl	120	61.5	1	1
Ammonia	0.855	0.445	0.02	0.84
NO2	0.06	0.0325	0.002	0.1
NO3	13	6.55	0.1	0.1
SO4	218	110	1	3

Table 2: Camp Lake Sample Size by Year and Season

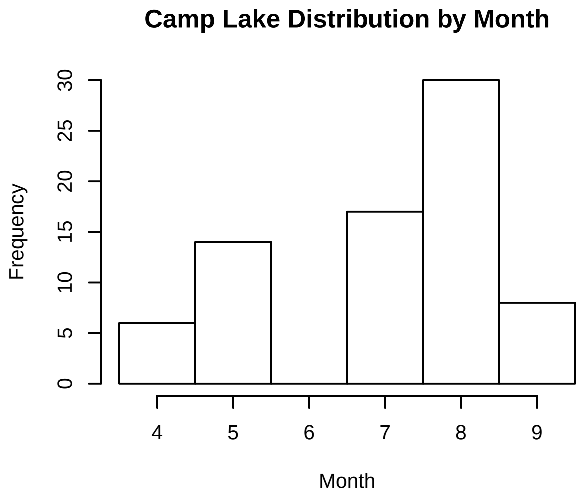
	Spring	Summer	Fall
2006	2	2	0
2007	6	6	6
2008	6	0	2
2011	4	0	0
2012	0	6	0
2013	5	6	2
2014	2	10	10

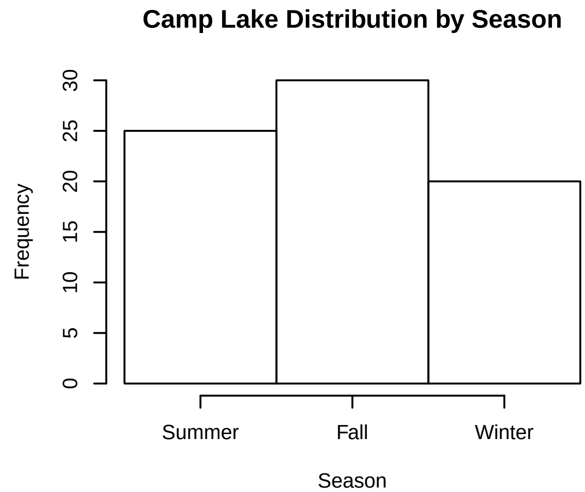
Table 3: Camp Lake Sample Size by Location and Season

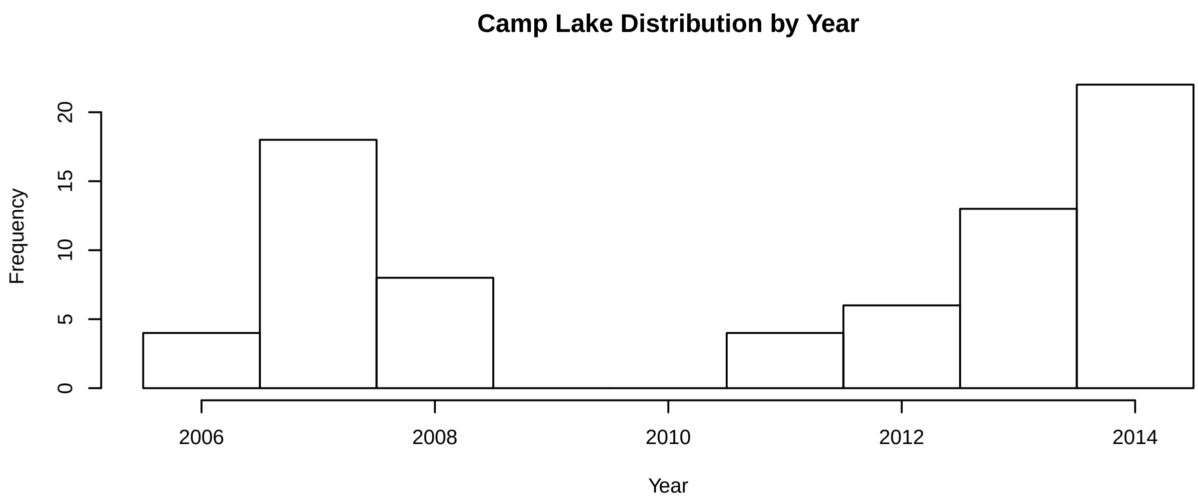
	Spring	Summer	Fall
JL0-02-S	5	4	2
JL0-10-S	0	1	1
JL0-01-S	5	5	4
JL0-07-S	0	1	1
JL0-09-S	3	4	2
JL0-02-D	5	5	2
JL0-10-D	0	1	1
JL0-01-D	4	4	4
JL0-07-D	0	1	1
JL0-09-D	3	4	2

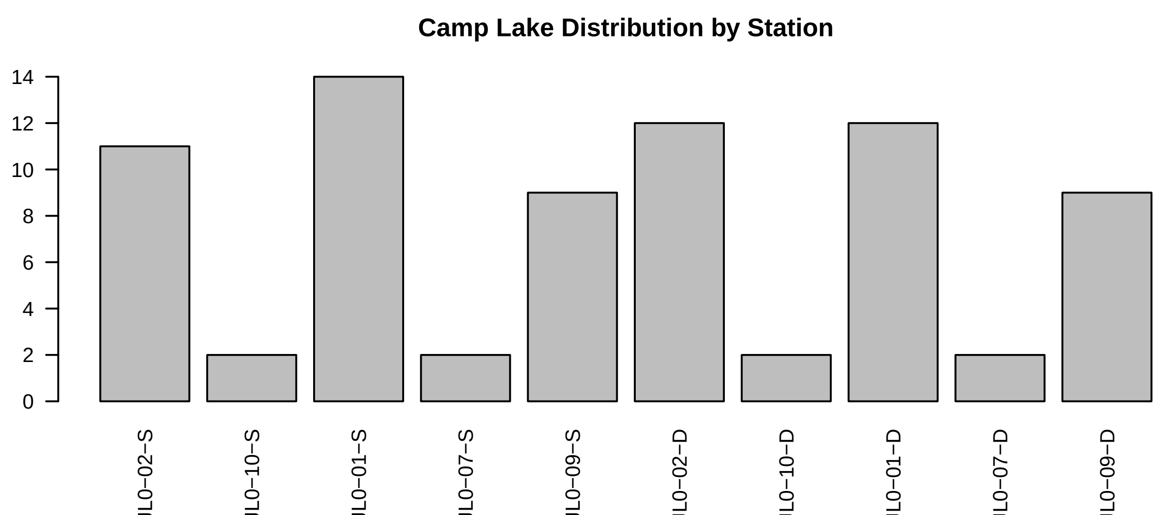
Table 4: 2014 Values Greater than Maximum of Camp Lake Baseline Data

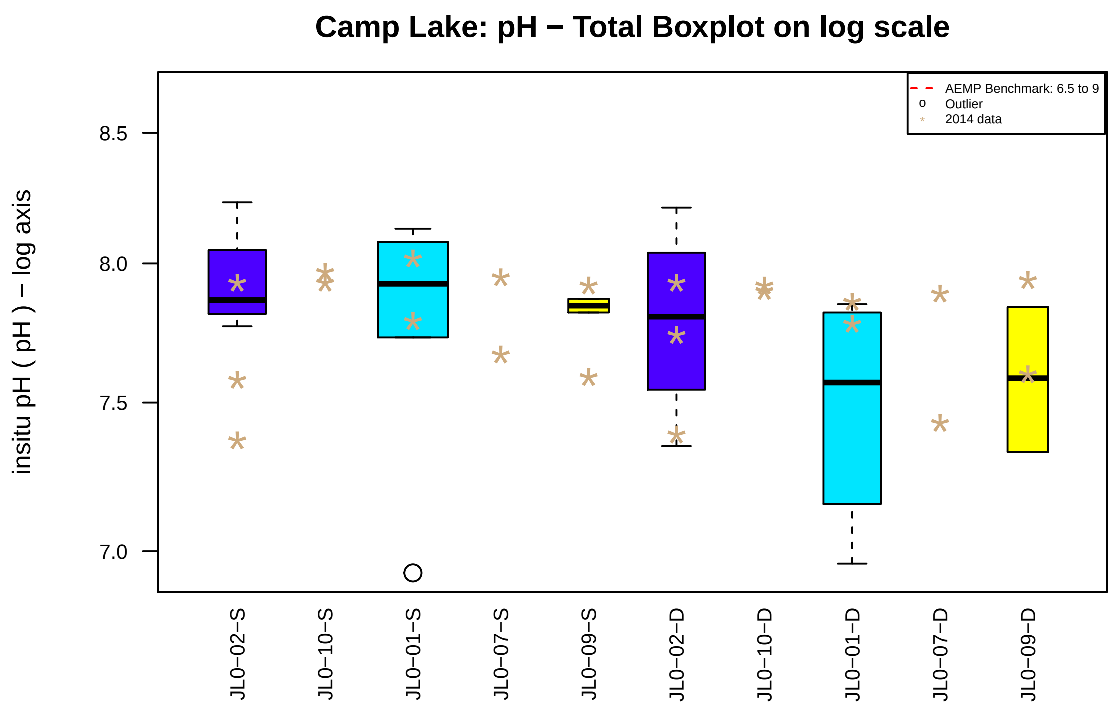
	Parameter	Baseline Max	Station	Value
1	CaCO3	77.1	JL0-01-S	78.1
2	CaCO3	77.1	JL0-02-S	77.6
3	CaCO3	77.1	JL0-10-S	82.3
4	Alkalinity	74	JL0-02-S	77
5	Alkalinity	74	JL0-02-D	75
6	Alkalinity	74	JL0-09-S	75
7	Alkalinity	74	JL0-10-S	77
8	Cr	0.00024	JL0-01-S	5e-04
9	Cr	0.00024	JL0-01-D	5e-04
10	Cr	0.00024	JL0-02-S	5e-04
11	Cr	0.00024	JL0-02-S	5e-04
12	Cr	0.00024	JL0-02-D	5e-04
13	Cr	0.00024	JL0-02-D	5e-04
14	Cr	0.00024	JL0-07-S	5e-04
15	Cr	0.00024	JL0-07-D	5e-04
16	Cr	0.00024	JL0-09-S	5e-04
17	Cr	0.00024	JL0-09-D	5e-04
18	Cr	0.00024	JL0-10-S	5e-04
19	Cr	0.00024	JL0-10-D	5e-04
20	Cl	4	JL0-07-D	7
21	Cl	4	JL0-10-S	5
22	NO3	0.1	JL0-07-D	0.12

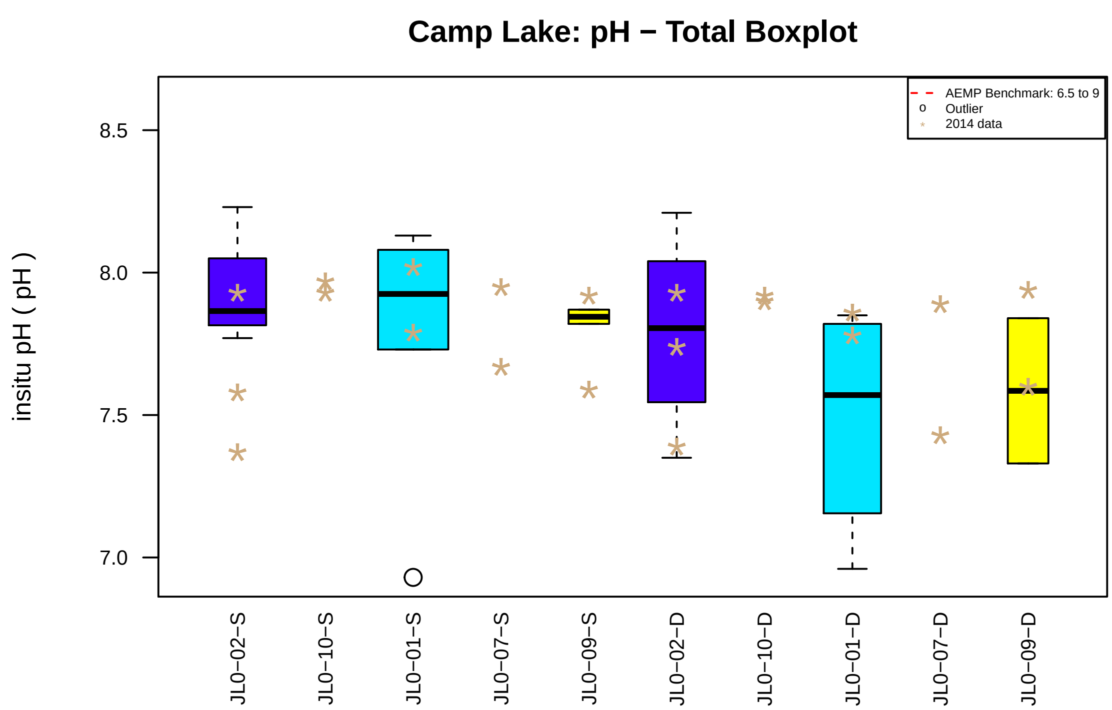

Camp Lake Distribution by Month
Frequency
0
5
10
15
20
25
30
4
5
6
7
8
9
Month

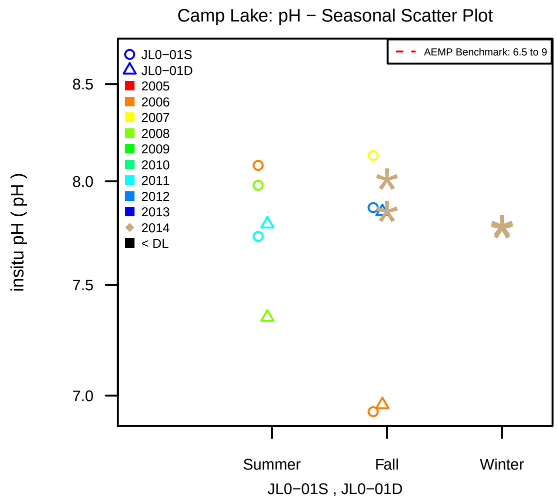

Camp Lake Distribution by Season
Frequency
0
5
10
15
20
25
30
Summer
Fall
Winter
Season

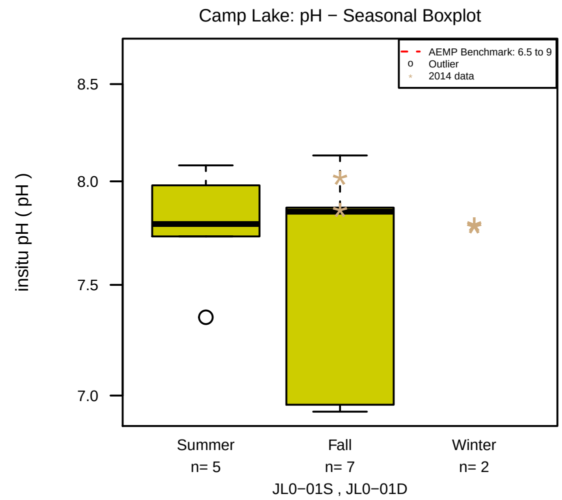

Camp Lake Distribution by Year
Frequency
0
5
10
15
20
2006
2008
2010
2012
2014
Year

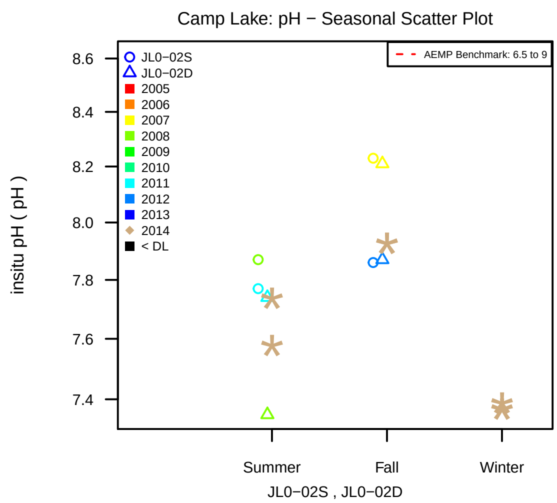

Camp Lake Distribution by Station
0
2
4
6
8
10
12
14
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

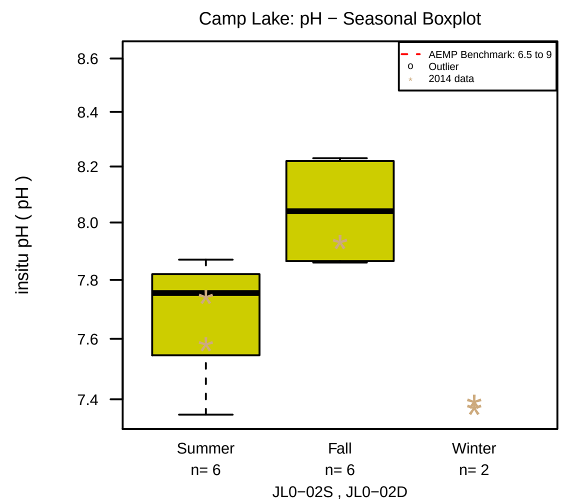

Camp Lake: pH − Total Boxplot on log scale
insitu pH (pH) − log axis
8.5
8.0
7.5
7.0
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

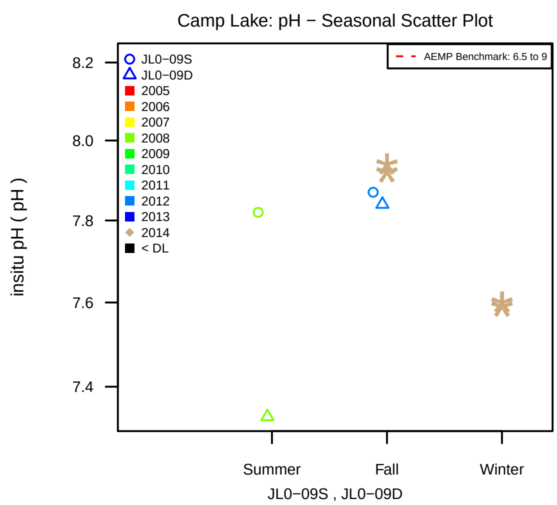

Camp Lake: pH − Total Boxplot
insitu pH (pH)
8.5
8.0
7.5
7.0
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

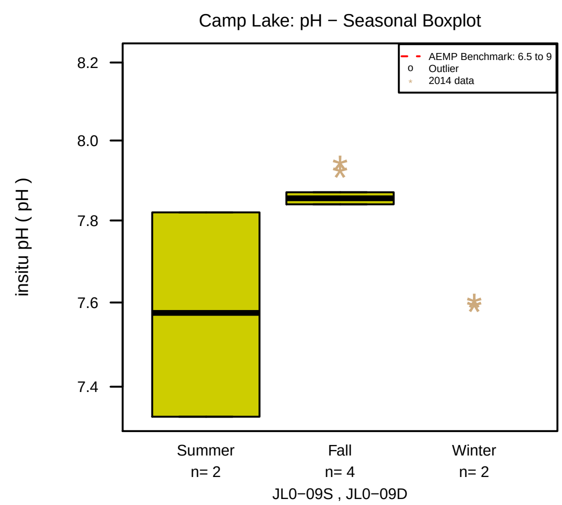

Camp Lake: pH − Seasonal Scatter Plot
AEMP Benchmark: 6.5 to 9
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
insitu pH (pH)
8.5
8.0
7.5
7.0
Summer
Fall
Winter
JL0−01S , JL0−01D

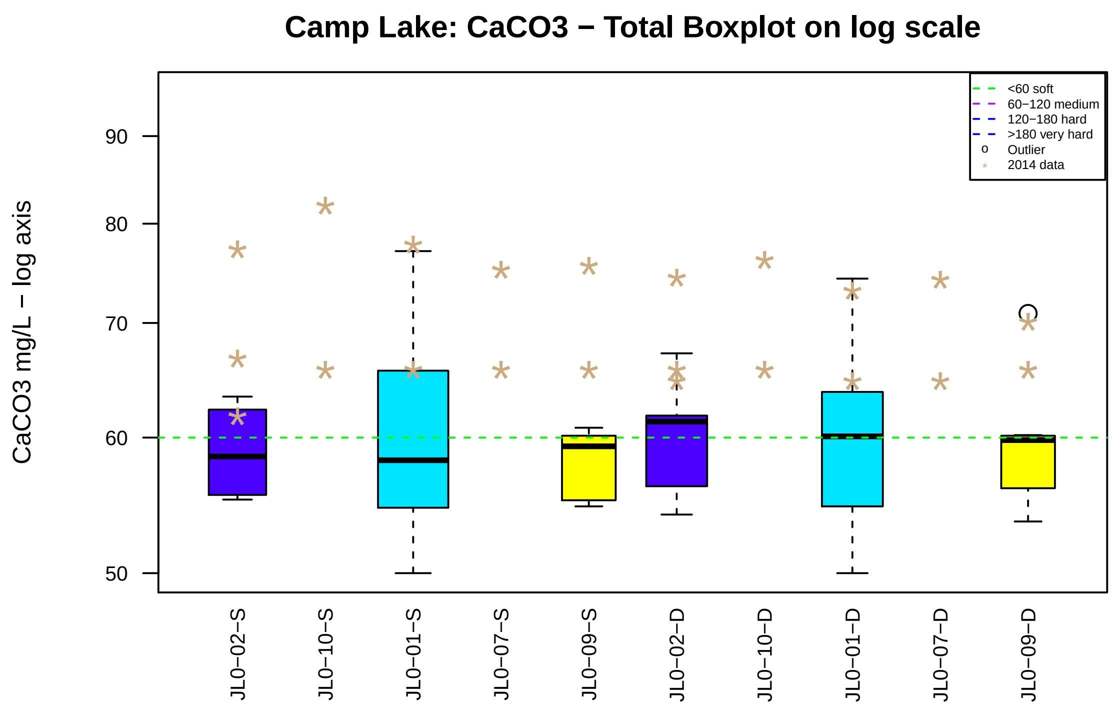

Camp Lake: pH − Seasonal Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
8.5
8.0
7.5
7.0
Summer
n= 5
Fall
n= 7
Winter
n= 2
JL0−01S , JL0−01D

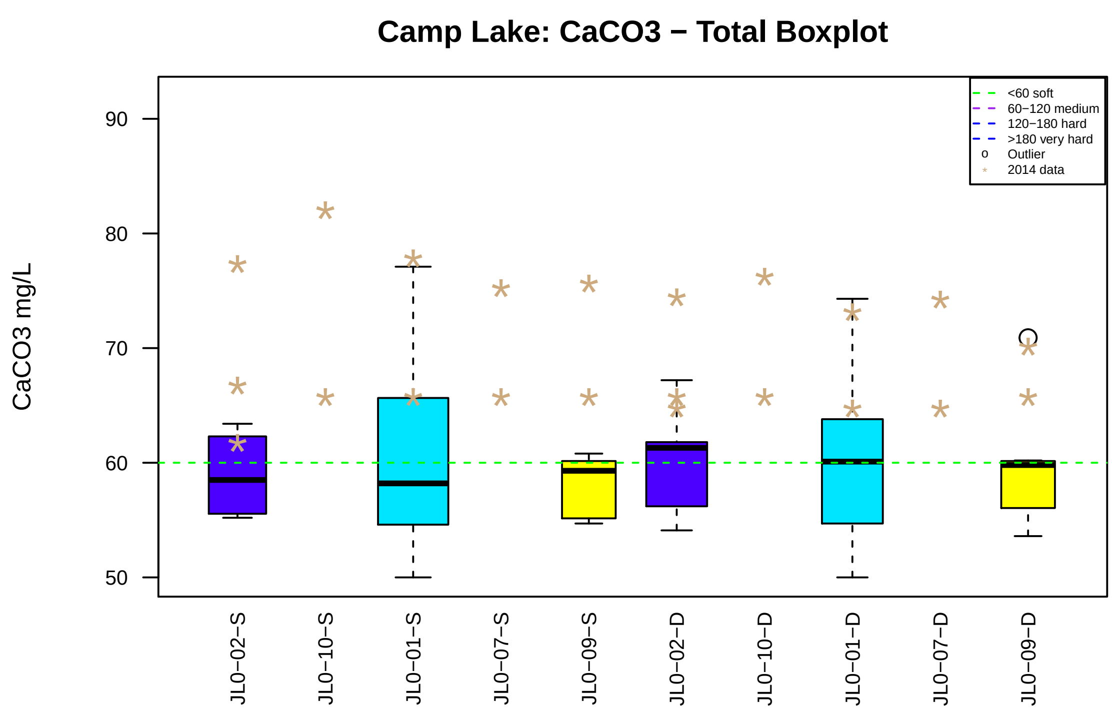

Camp Lake: pH − Seasonal Scatter Plot
AEMP Benchmark: 6.5 to 9
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
insitu pH (pH)
8.6
8.4
8.2
8.0
7.8
7.6
7.4
Summer
Fall
Winter
JL0−02S , JL0−02D

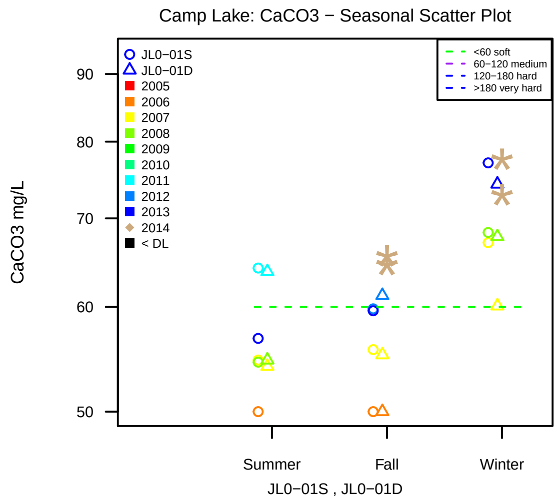

Camp Lake: pH − Seasonal Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
8.6
8.4
8.2
8.0
7.8
7.6
7.4
Summer
n= 6
Fall
n= 6
Winter
n= 2
JL0−02S , JL0−02D

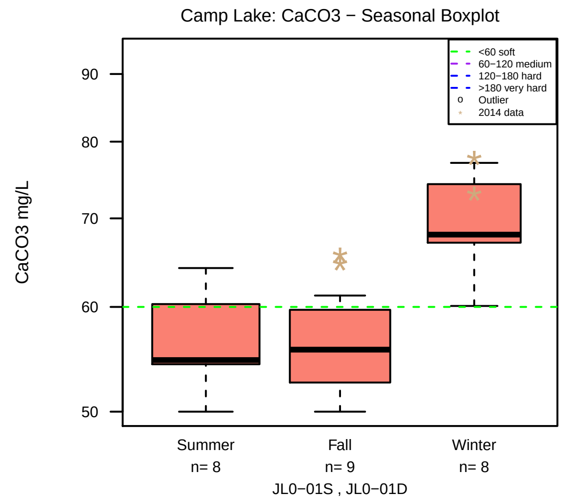

Camp Lake: pH − Seasonal Scatter Plot
AEMP Benchmark: 6.5 to 9
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
insitu pH (pH)
8.2
8.0
7.8
7.6
7.4
Summer
Fall
Winter
JL0−09S , JL0−09D

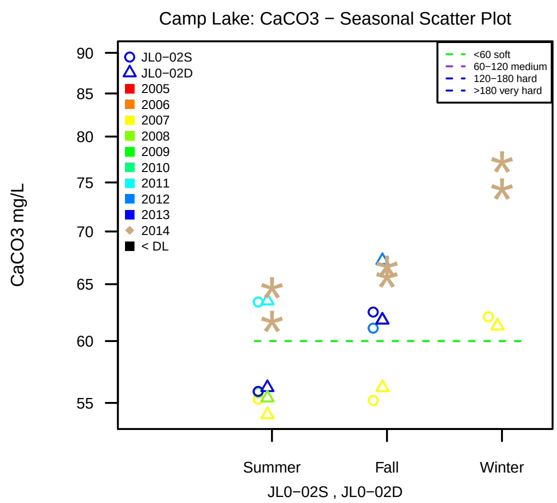

Camp Lake: pH − Seasonal Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
8.2
8.0
7.8
7.6
7.4
Summer
n= 2
Fall
n= 4
Winter
n= 2
JL0−09S , JL0−09D

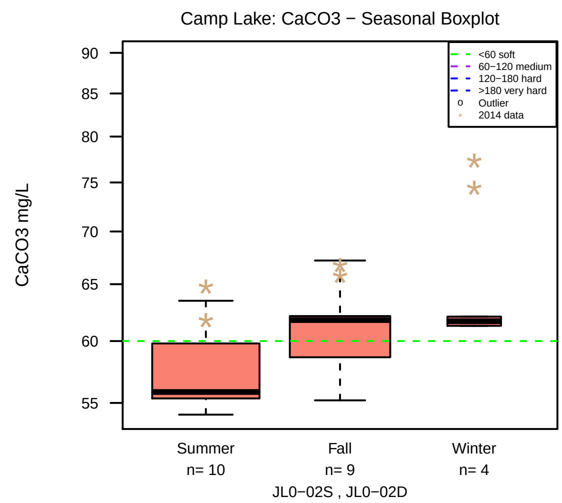

Camp Lake: CaCO3 − Total Boxplot on log scale
CaCO3 mg/L − log axis
90
80
70
60
50
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

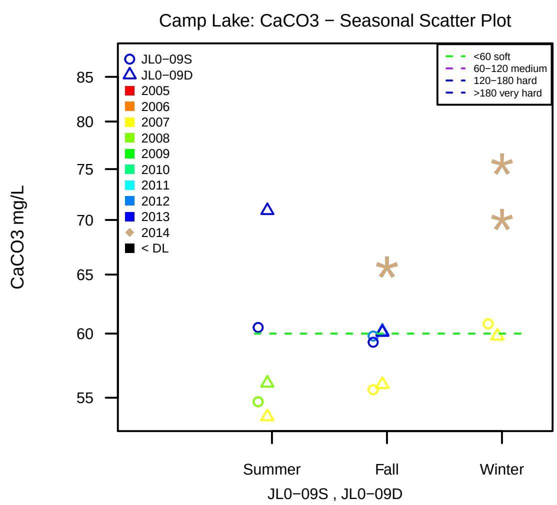

Camp Lake: CaCO3 − Total Boxplot
CaCO3 mg/L
90
80
70
60
50
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

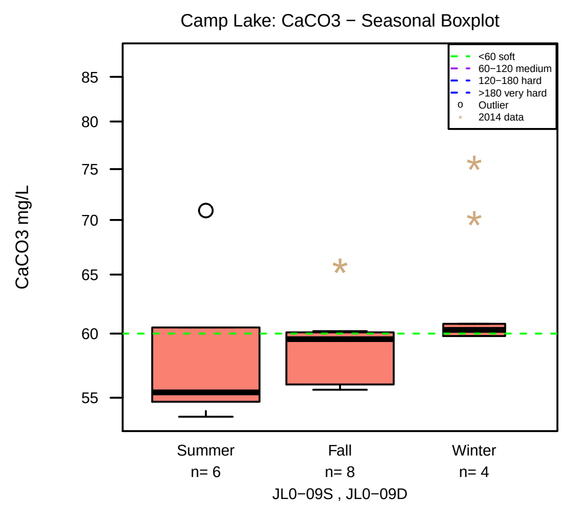

Camp Lake: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
90
80
70
60
50
Summer
Fall
Winter
JL0−01S , JL0−01D


Camp Lake: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
90
80
70
60
50
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

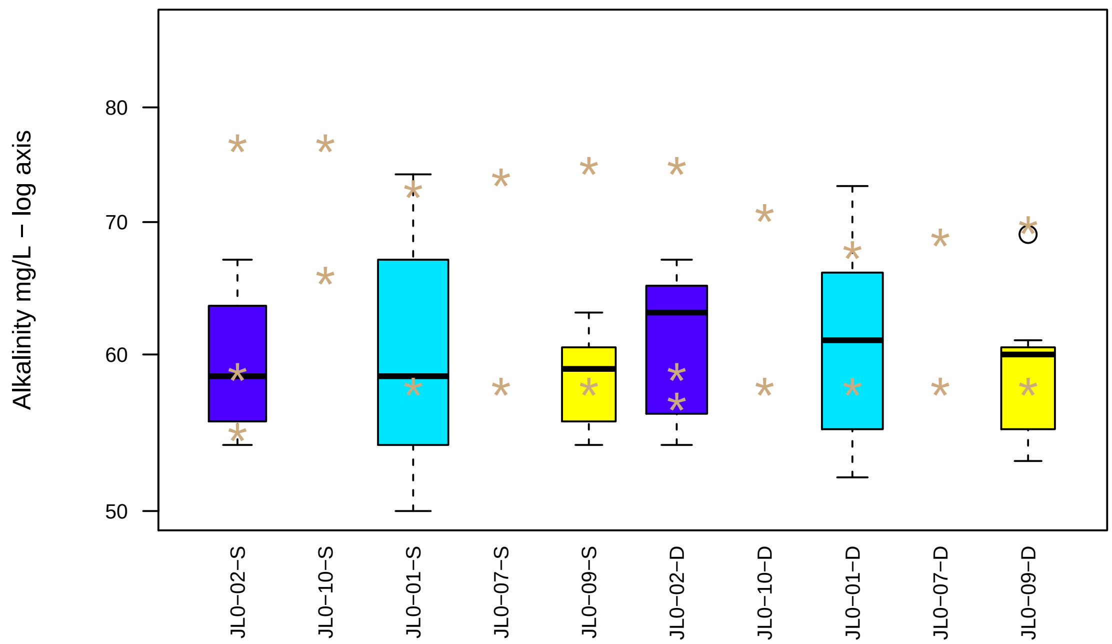

Camp Lake: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
90
85
80
75
70
65
60
55
Summer
Fall
Winter
JL0−02S , JL0−02D


Camp Lake: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
90
85
80
75
70
65
60
55
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

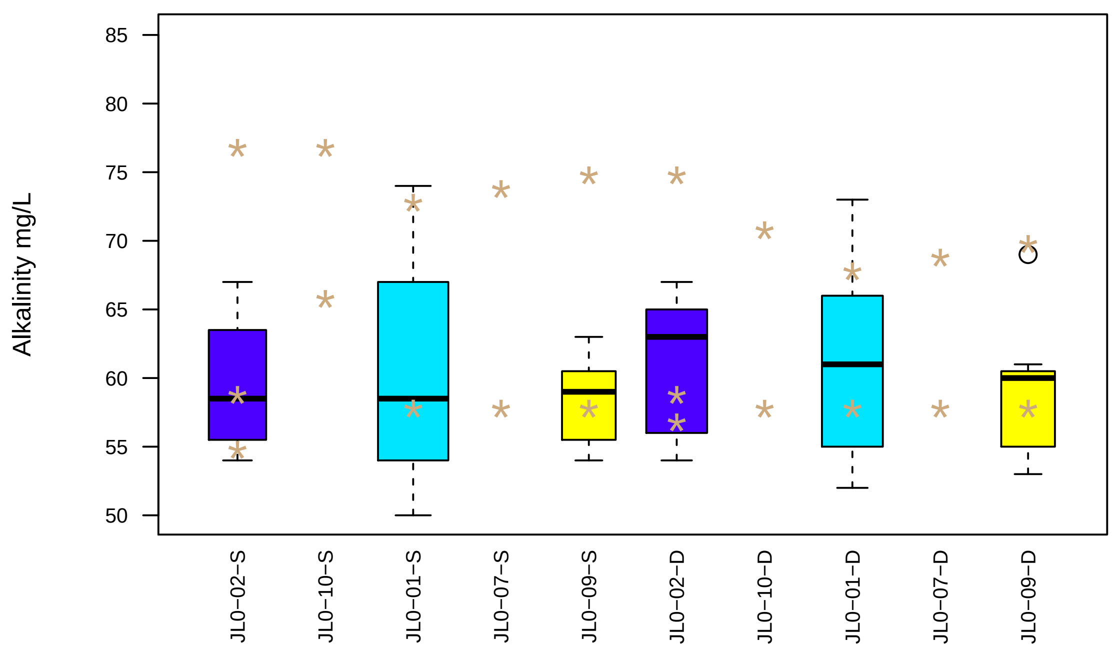

Camp Lake: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
85
80
75
70
65
60
55
Summer
Fall
Winter
JL0−09S , JL0−09D

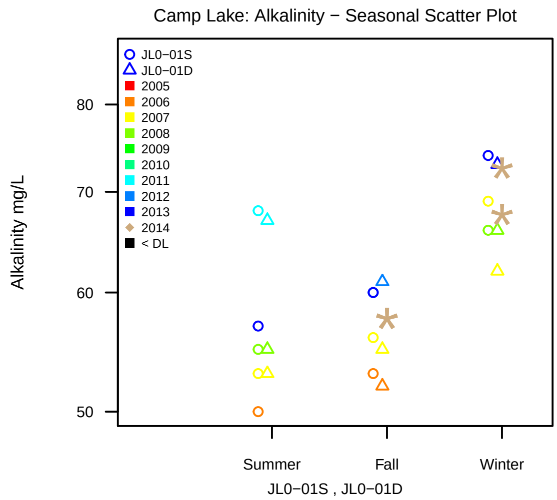

Camp Lake: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
85
80
75
70
65
60
55
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

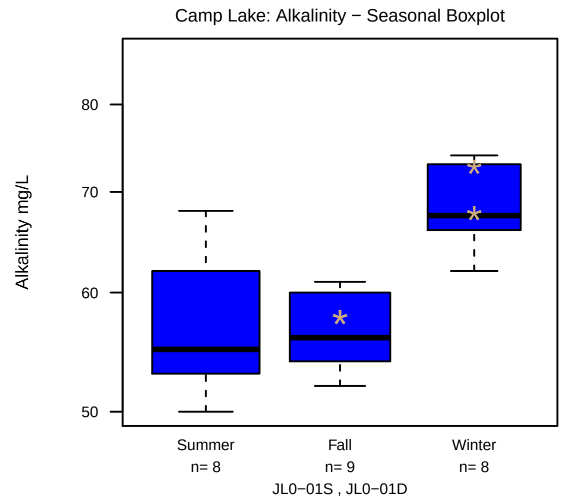
Camp Lake: Alkalinity − Total Boxplot on log scale

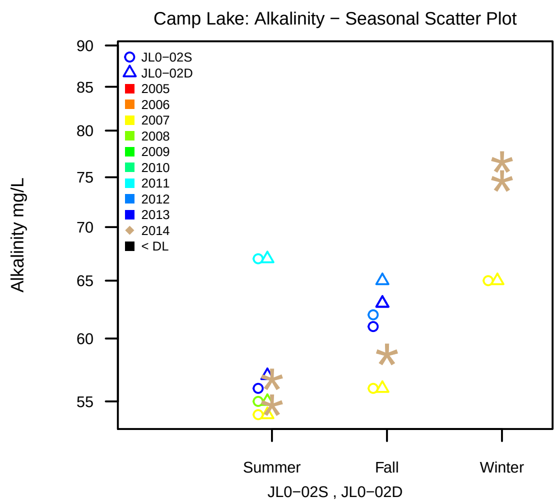


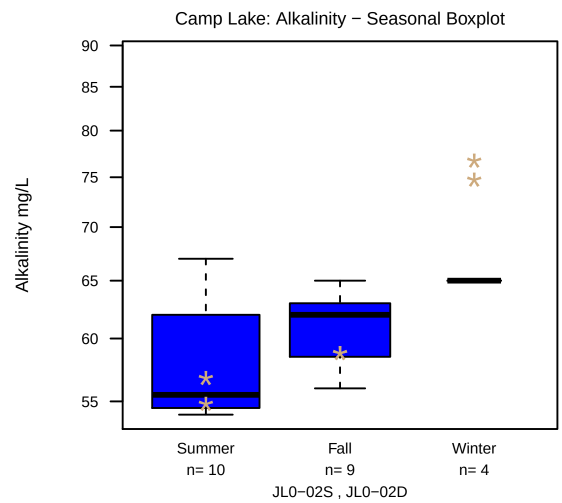
Camp Lake: Alkalinity − Total Boxplot

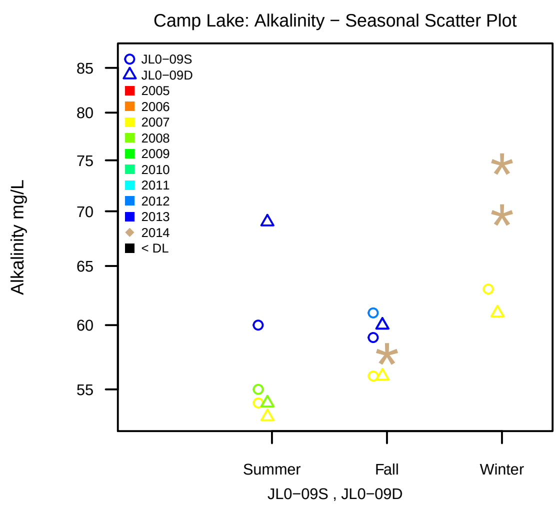


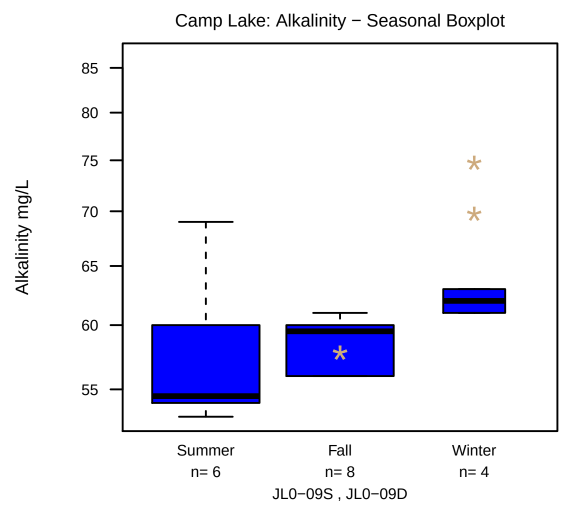

Camp Lake: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
JL0−01S , JL0−01D


Camp Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

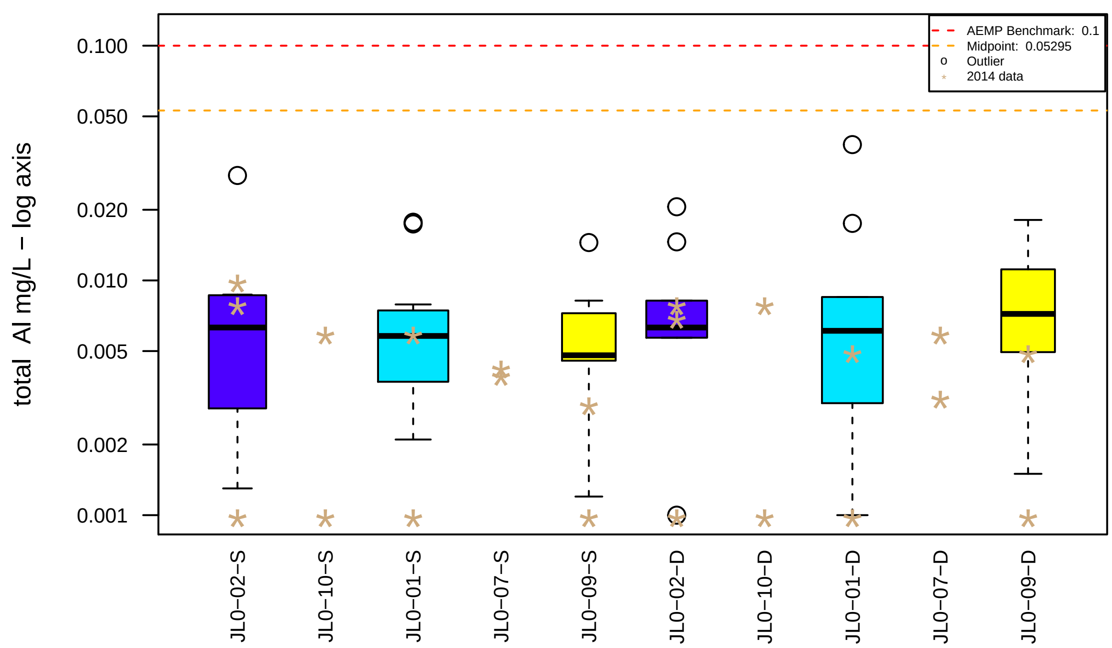

Camp Lake: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
JL0−02S , JL0−02D


Camp Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

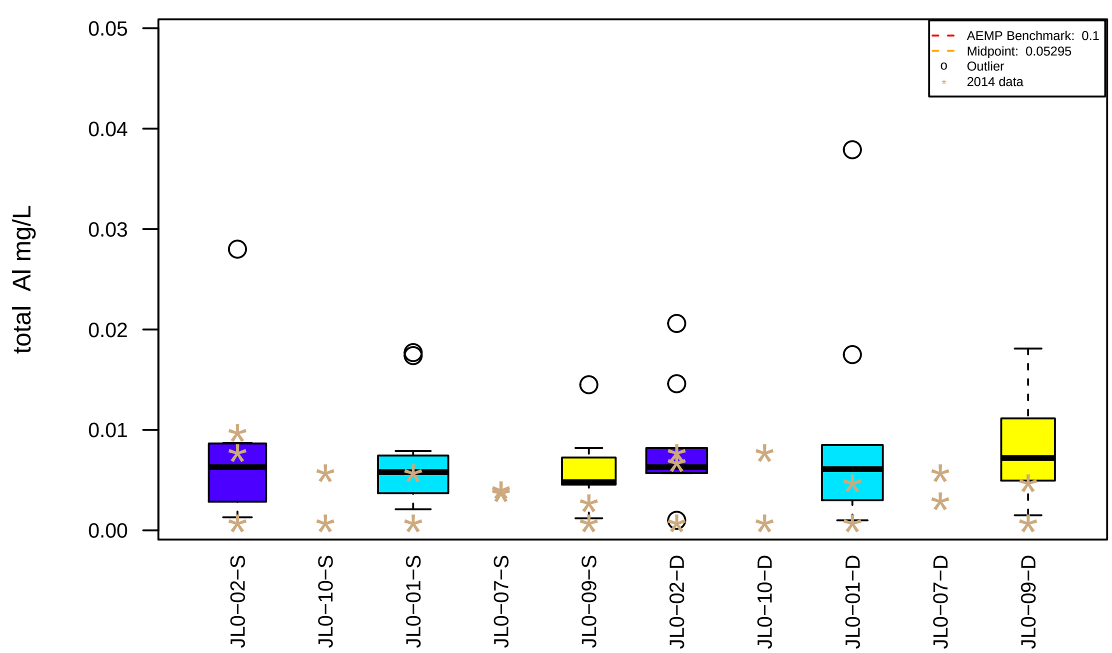

Camp Lake: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
JL0−09S , JL0−09D

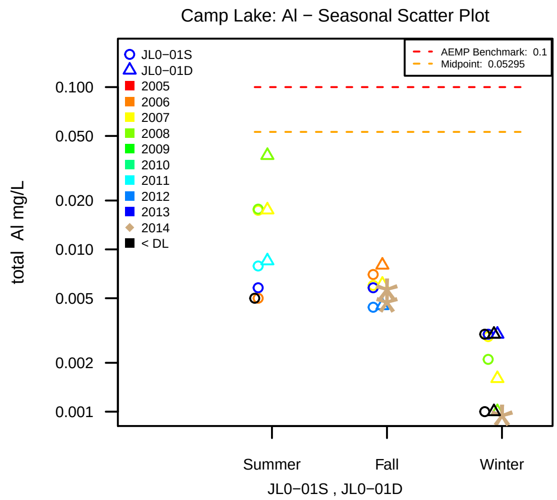

Camp Lake: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

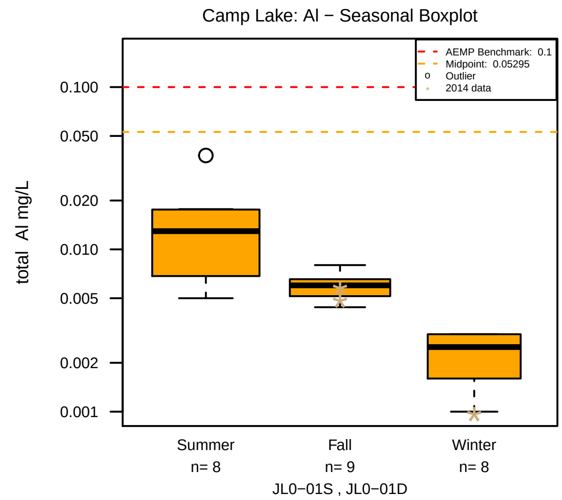
Camp Lake: Al − Total Boxplot on log scale

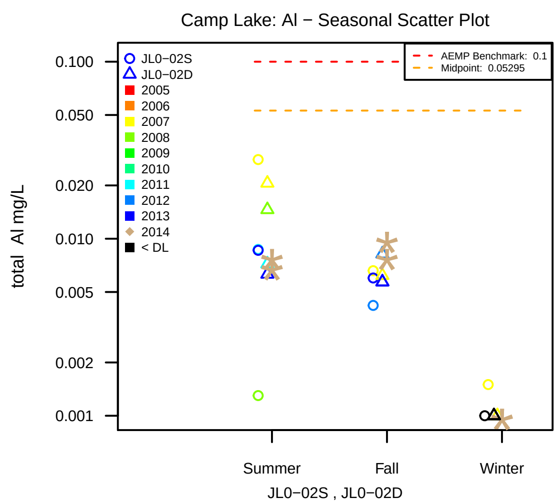


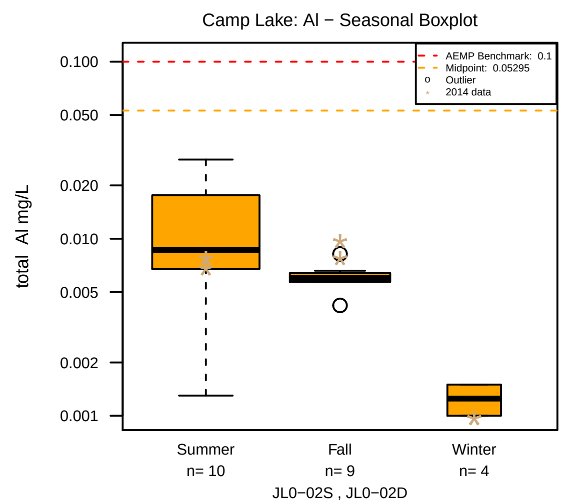
Camp Lake: Al − Total Boxplot

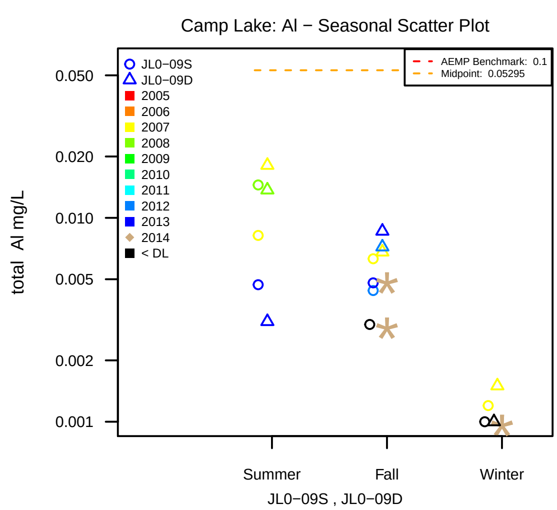


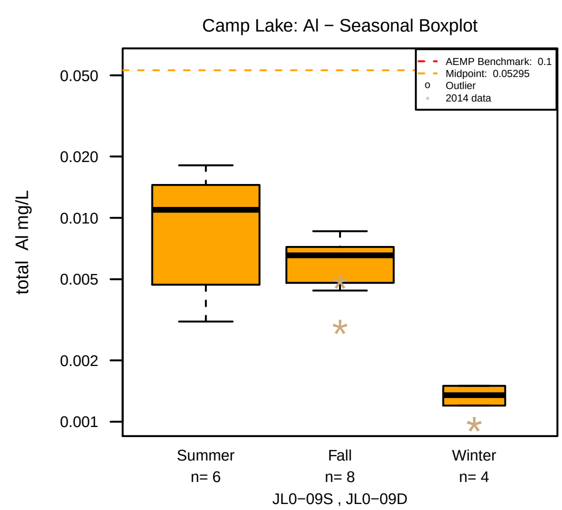

Camp Lake: Al − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.1
Midpoint: 0.05295
total Al mg/L
0.100
0.050
0.020
0.010
0.005
0.002
0.001
Summer
Fall
Winter
JL0−01S , JL0−01D

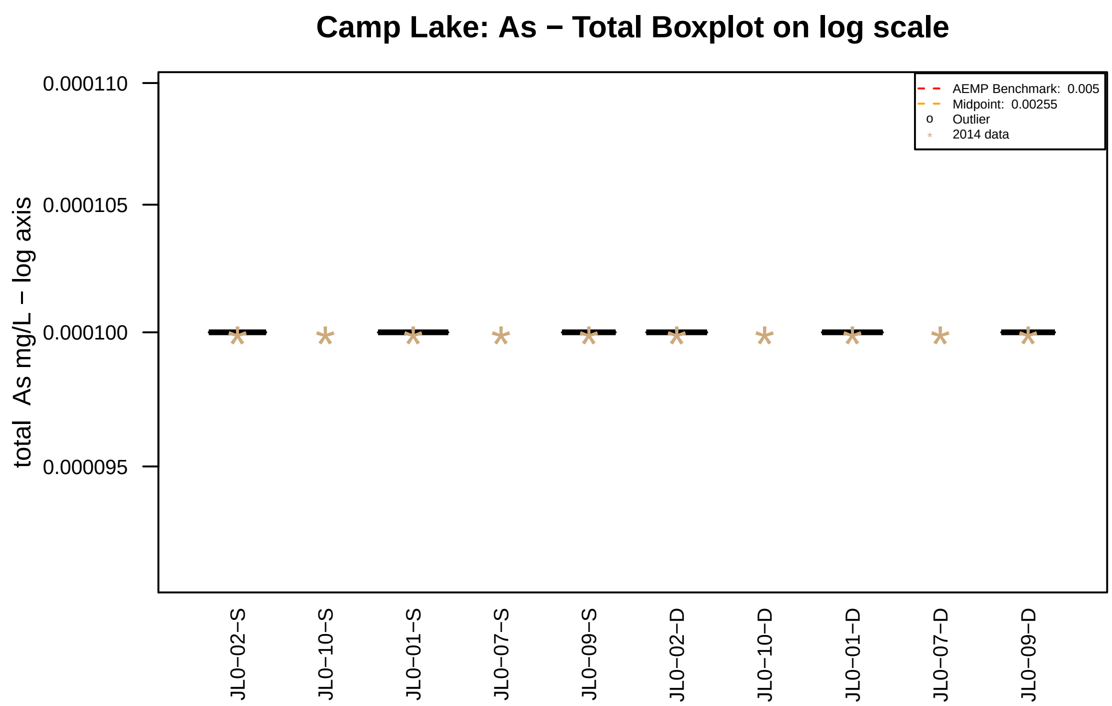

Camp Lake: Al − Seasonal Boxplot
AEMP Benchmark: 0.1
Midpoint: 0.05295
Outlier
2014 data
total Al mg/L
0.100
0.050
0.020
0.010
0.005
0.002
0.001
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

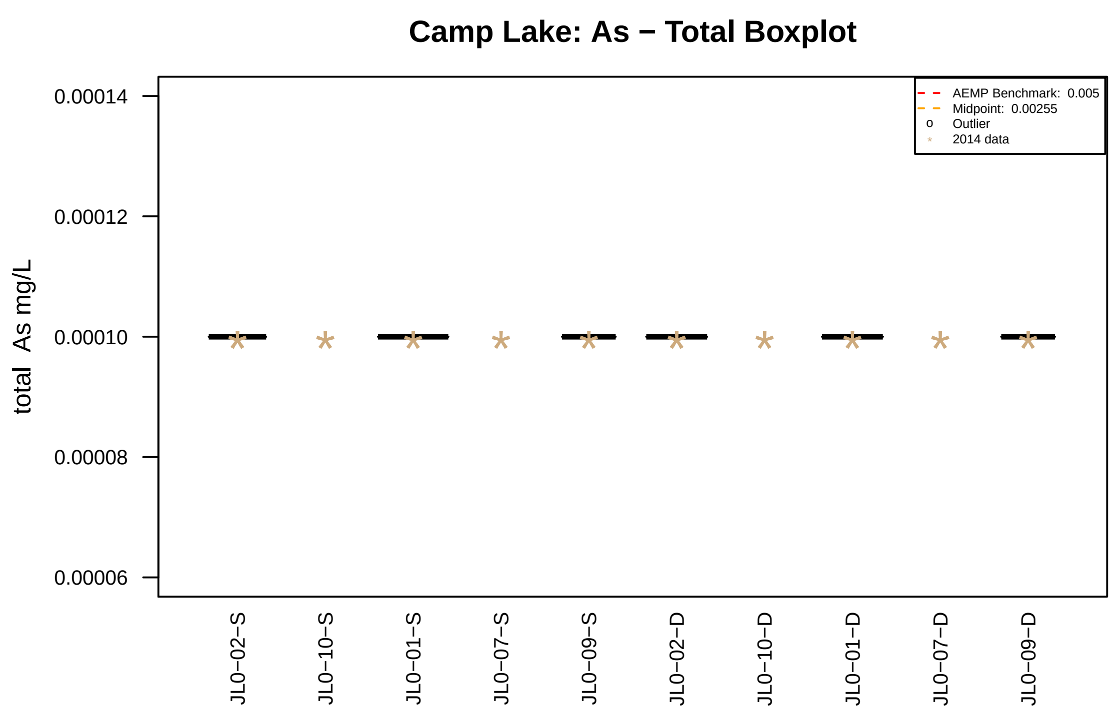

Camp Lake: Al − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.1
Midpoint: 0.05295
total Al mg/L
0.100
0.050
0.020
0.010
0.005
0.002
0.001
Summer
Fall
Winter
JL0−02S , JL0−02D

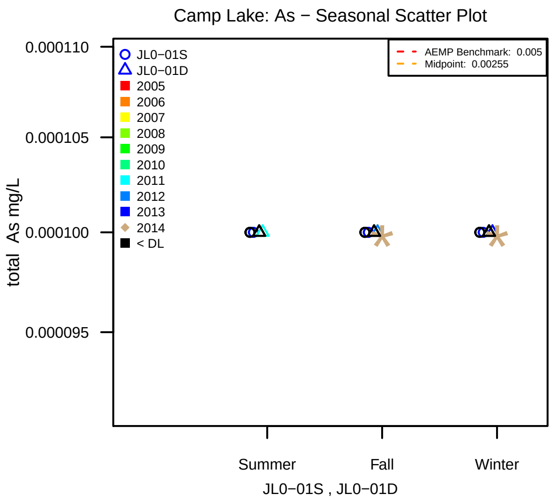

Camp Lake: Al − Seasonal Boxplot
AEMP Benchmark: 0.1
Midpoint: 0.05295
Outlier
2014 data
total Al mg/L
0.100
0.050
0.020
0.010
0.005
0.002
0.001
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

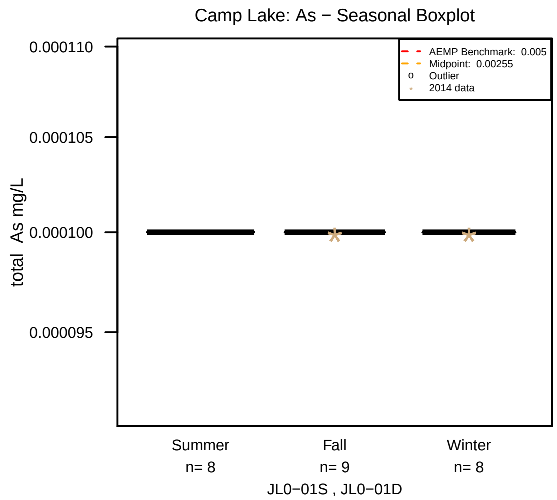

Camp Lake: Al − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.1
Midpoint: 0.05295
total Al mg/L
0.050
0.020
0.010
0.005
0.002
0.001
Summer
Fall
Winter
JL0−09S , JL0−09D

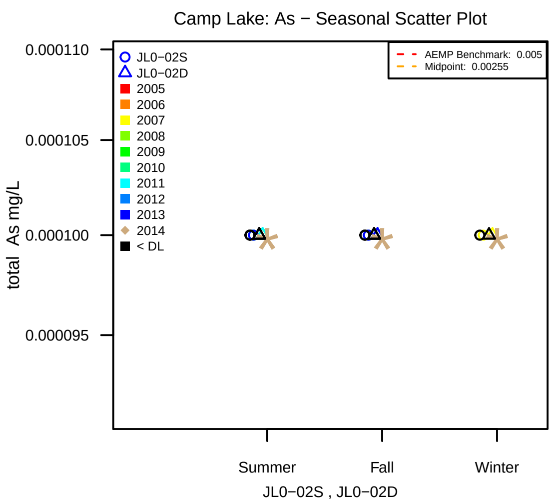

Camp Lake: Al − Seasonal Boxplot
AEMP Benchmark: 0.1
Midpoint: 0.05295
Outlier
2014 data
total Al mg/L
0.050
0.020
0.010
0.005
0.002
0.001
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

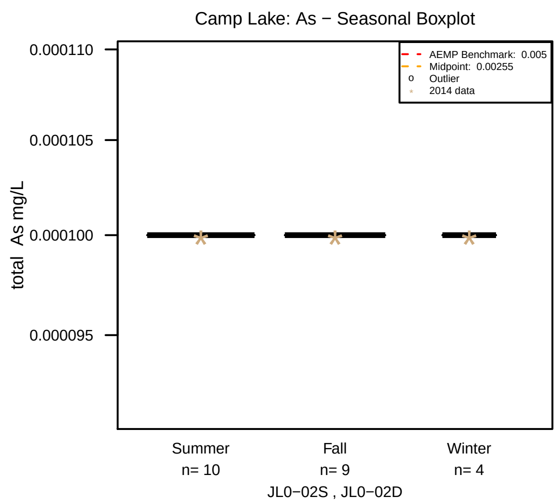

Camp Lake: As − Total Boxplot on log scale
total As mg/L − log axis
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

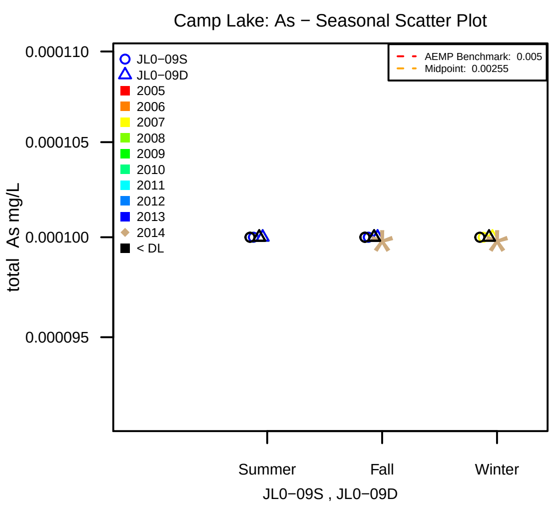

Camp Lake: As − Total Boxplot
total As mg/L
0.00014
0.00012
0.00010
0.00008
0.00006
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

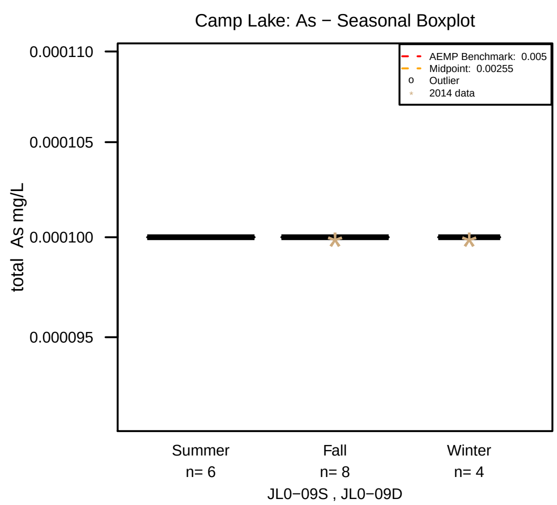

Camp Lake: As − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
total As mg/L
0.000110
0.000105
0.000100
0.000095
Summer
Fall
Winter
JL0−01S , JL0−01D

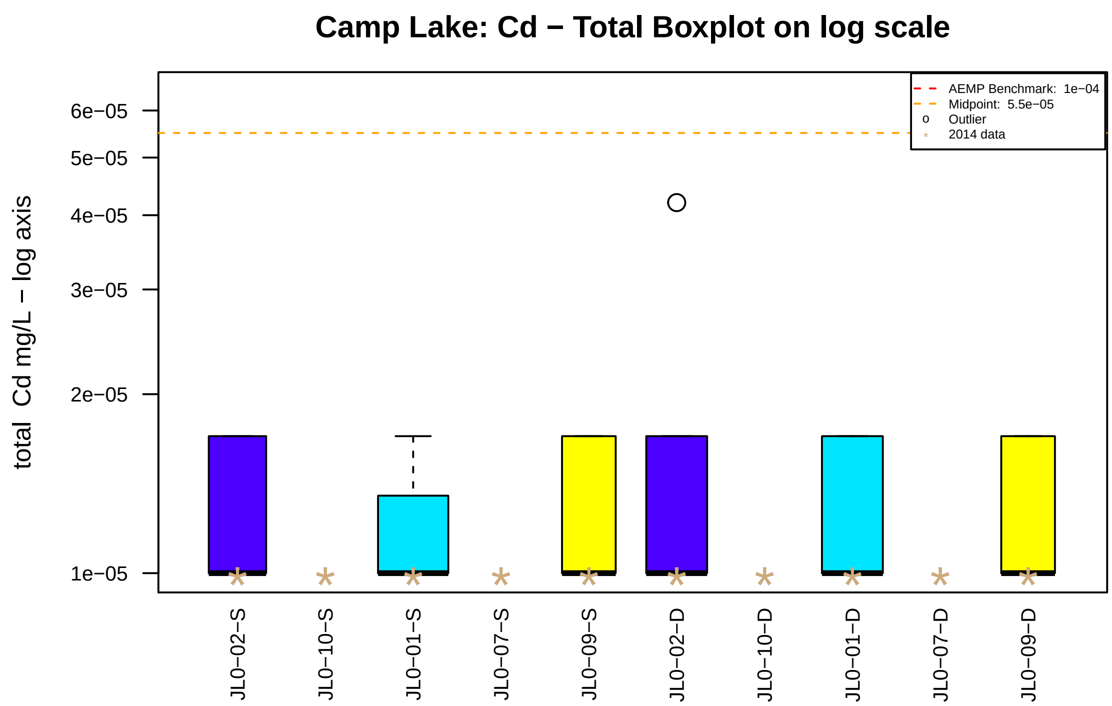

Camp Lake: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L
0.000110
0.000105
0.000100
0.000095
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

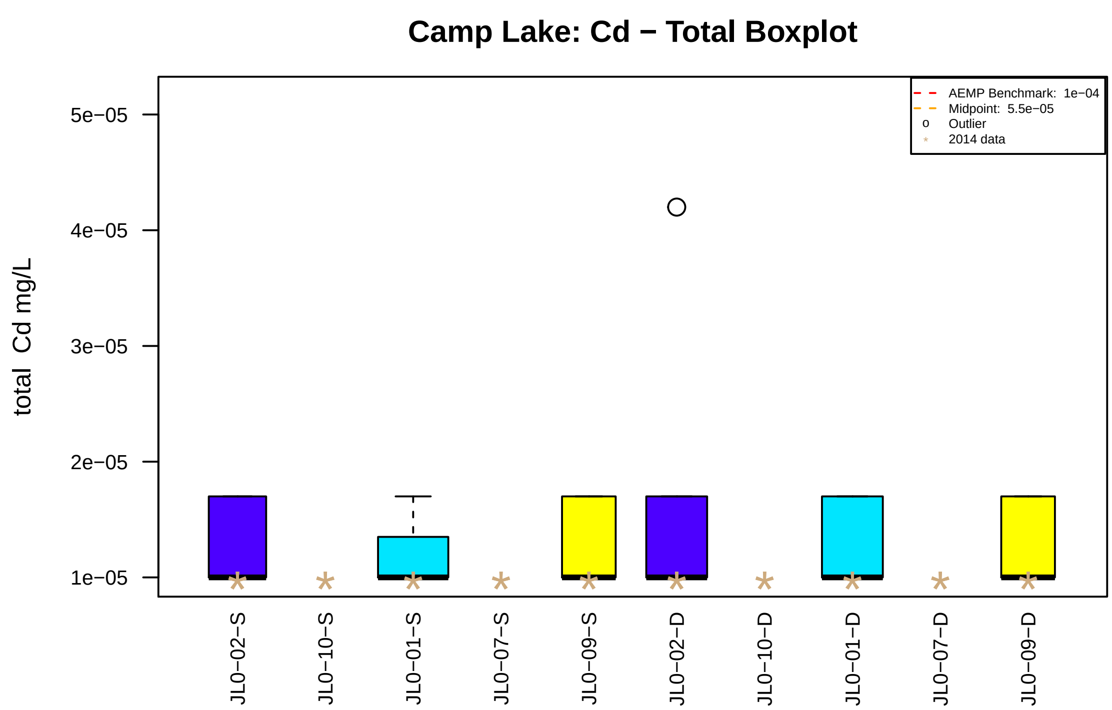

Camp Lake: As − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
total As mg/L
0.000110
0.000105
0.000100
0.000095
Summer
Fall
Winter
JL0−02S , JL0−02D

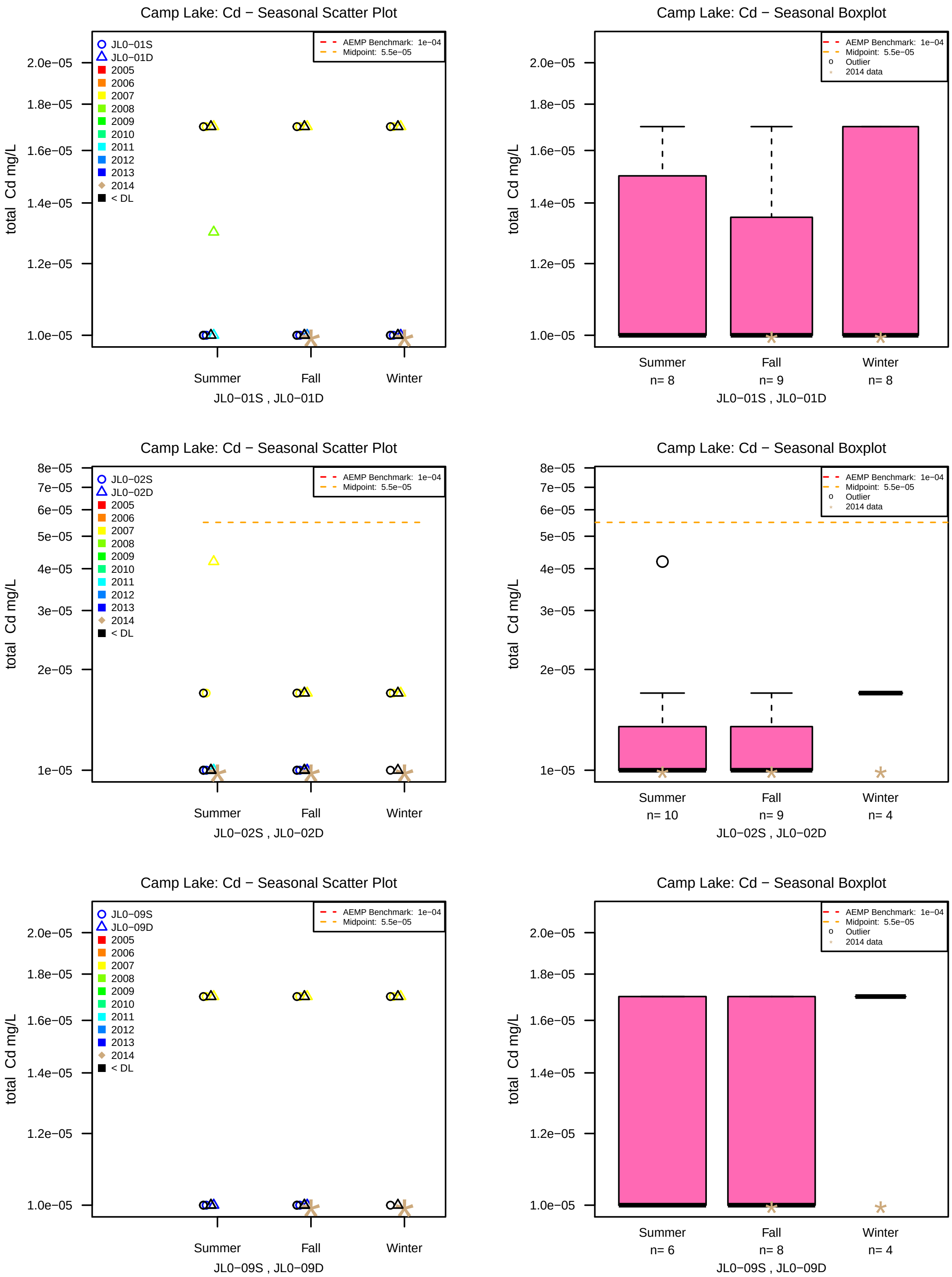

Camp Lake: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L
0.000110
0.000105
0.000100
0.000095
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

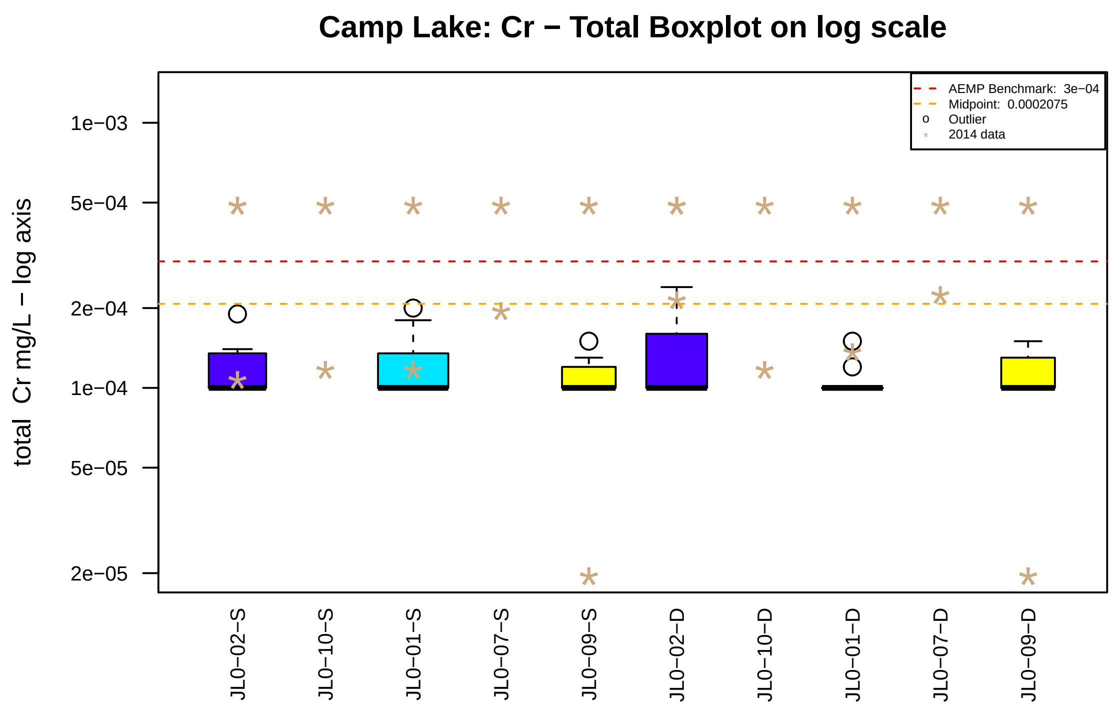

Camp Lake: As − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
total As mg/L
0.000110
0.000105
0.000100
0.000095
Summer
Fall
Winter
JL0−09S , JL0−09D

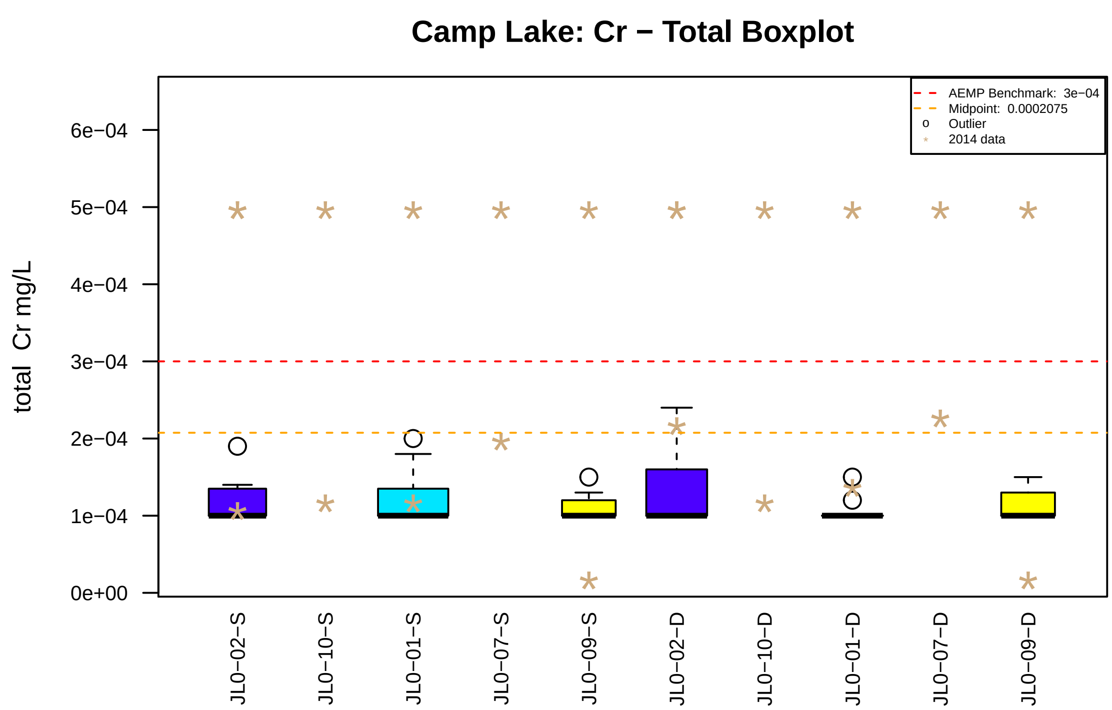

Camp Lake: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L
0.000110
0.000105
0.000100
0.000095
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

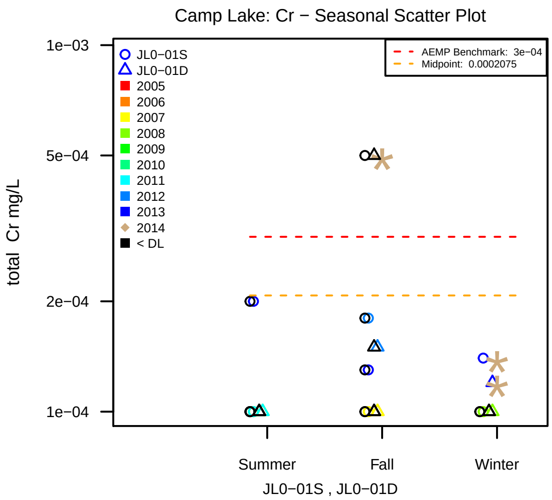

Camp Lake: Cd − Total Boxplot on log scale
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Cd mg/L − log axis
6e−05
5e−05
4e−05
3e−05
2e−05
1e−05
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

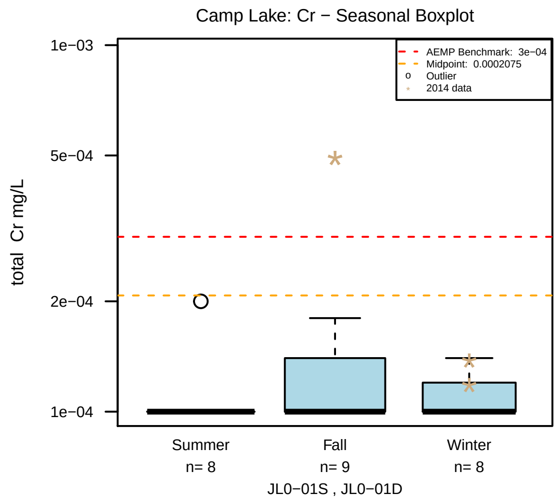

Camp Lake: Cd − Total Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Cd mg/L
5e−05
4e−05
3e−05
2e−05
1e−05
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

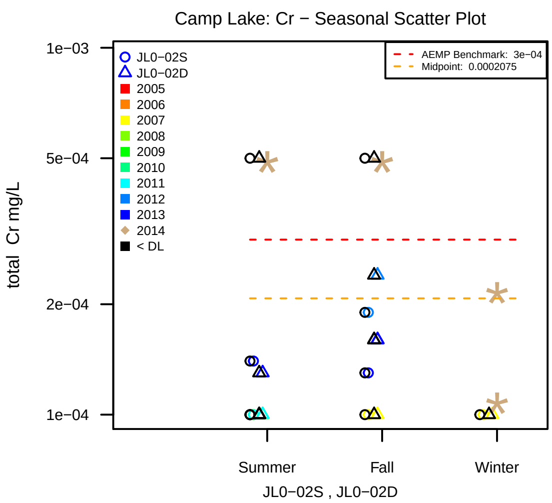

Camp Lake: Cd − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
JL0−01S , JL0−01D
Camp Lake: Cd − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D
Camp Lake: Cd − Seasonal Scatter Plot
JL0−02S
JL0−02D
8e−05
7e−05
6e−05
5e−05
4e−05
3e−05
2e−05
1e−05
Summer
Fall
Winter
JL0−02S , JL0−02D
Camp Lake: Cd − Seasonal Boxplot
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D
Camp Lake: Cd − Seasonal Scatter Plot
JL0−09S
JL0−09D
Summer
Fall
Winter
JL0−09S , JL0−09D
Camp Lake: Cd − Seasonal Boxplot
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

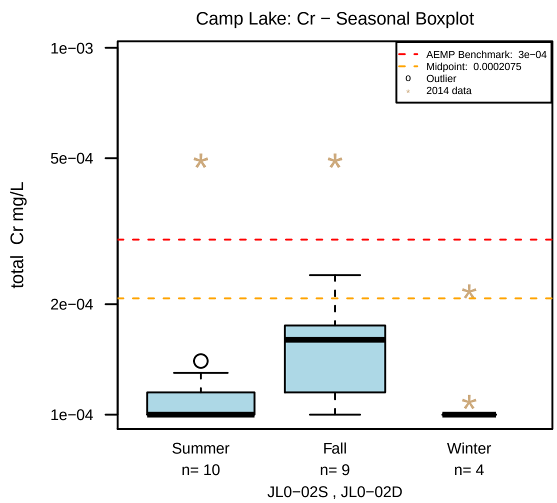

Camp Lake: Cr − Total Boxplot on log scale
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
total Cr mg/L − log axis
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

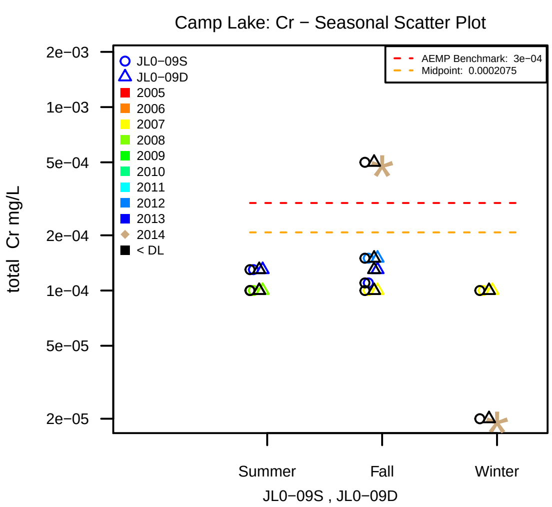

Camp Lake: Cr − Total Boxplot
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
total Cr mg/L
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

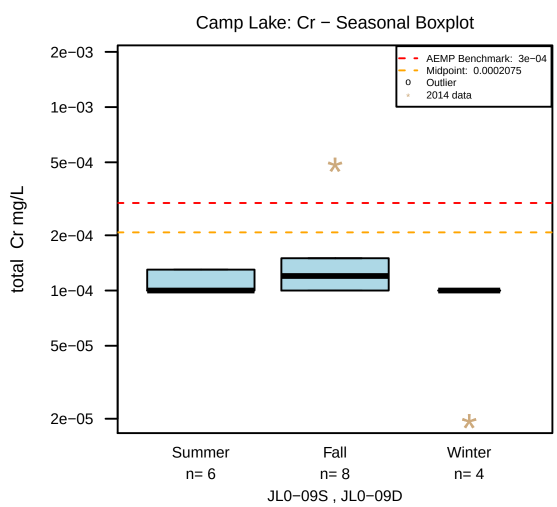

Camp Lake: Cr − Seasonal Scatter Plot
total Cr mg/L
1e−03
5e−04
2e−04
1e−04
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Summer
Fall
Winter
JL0−01S , JL0−01D

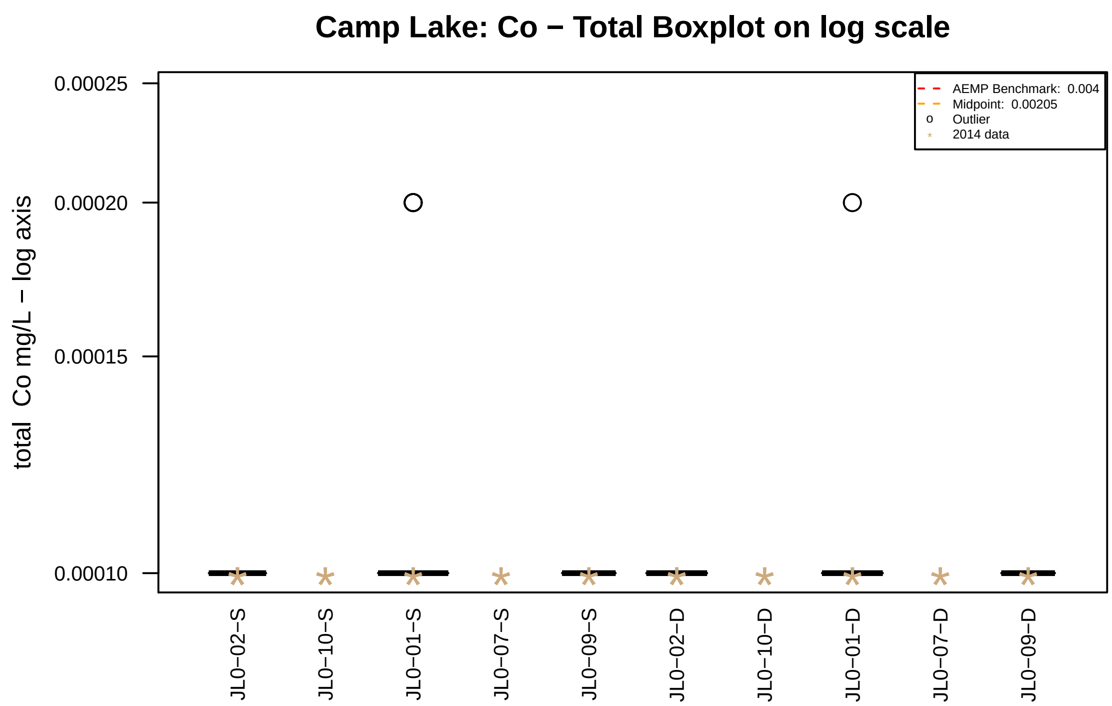

Camp Lake: Cr − Seasonal Boxplot
total Cr mg/L
1e−03
5e−04
2e−04
1e−04
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

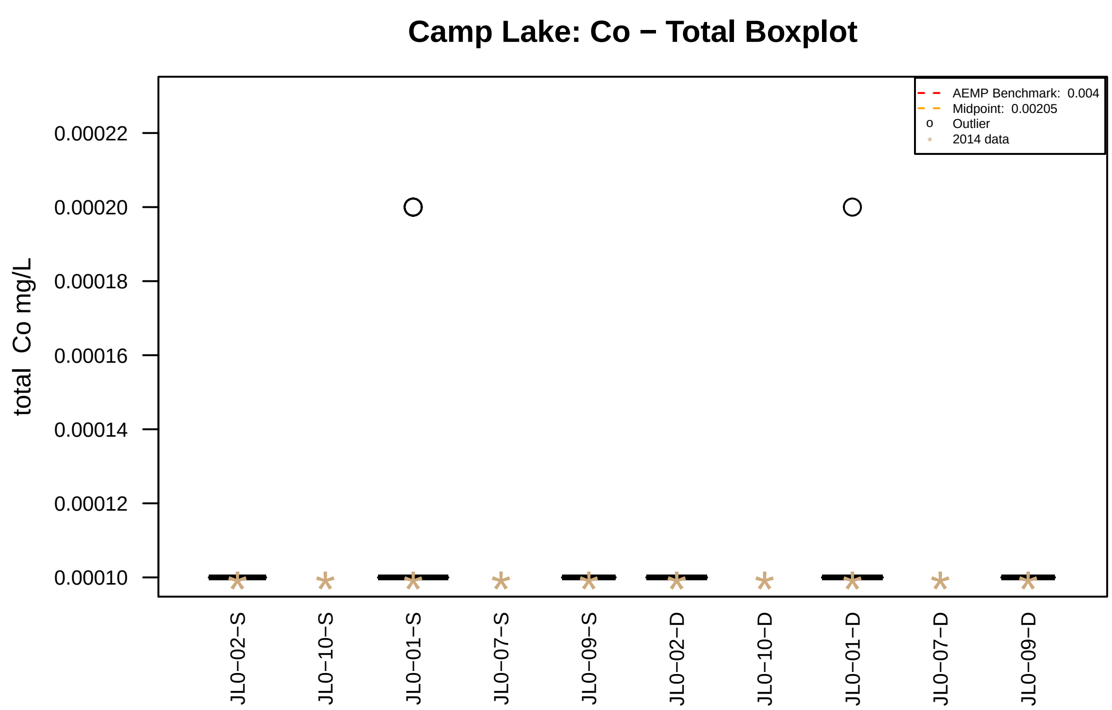

Camp Lake: Cr − Seasonal Scatter Plot
total Cr mg/L
1e−03
5e−04
2e−04
1e−04
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Summer
Fall
Winter
JL0−02S , JL0−02D

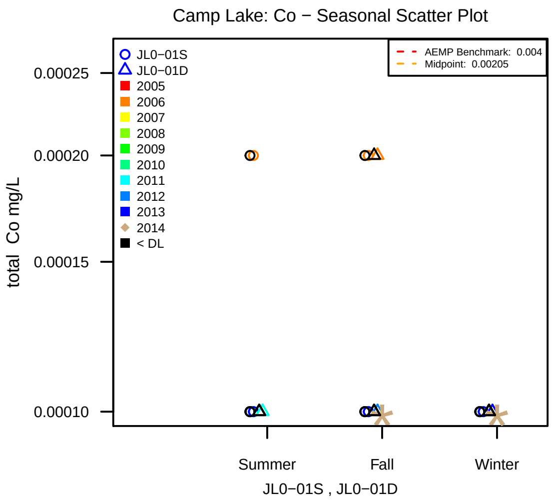

Camp Lake: Cr − Seasonal Boxplot
total Cr mg/L
1e−03
5e−04
2e−04
1e−04
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

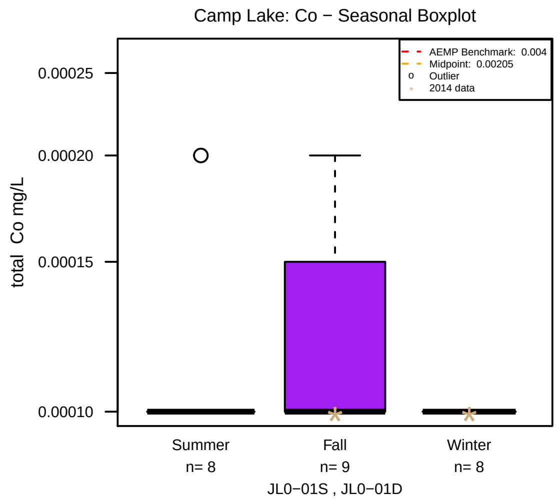

Camp Lake: Cr − Seasonal Scatter Plot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Summer
Fall
Winter
JL0−09S , JL0−09D

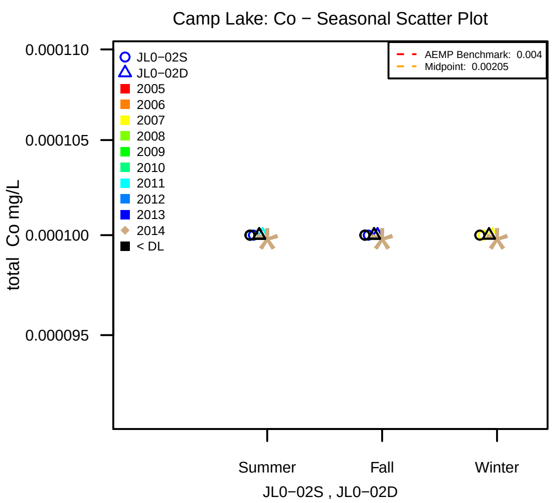

Camp Lake: Cr − Seasonal Boxplot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
AEMP Benchmark: 3e−04
Midpoint: 0.0002075
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

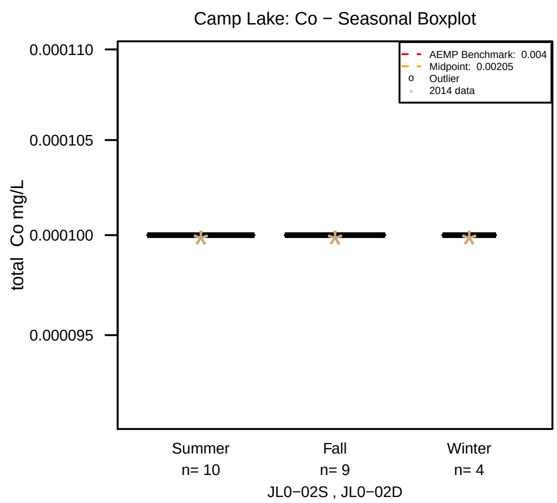

Camp Lake: Co − Total Boxplot on log scale
total Co mg/L − log axis
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

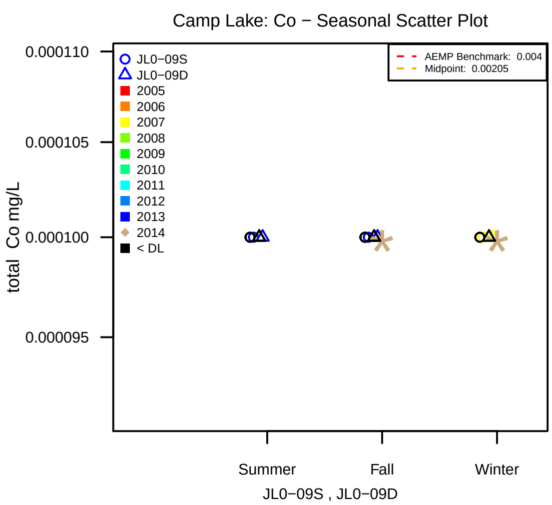

Camp Lake: Co − Total Boxplot
total Co mg/L
0.00022
0.00020
0.00018
0.00016
0.00014
0.00012
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

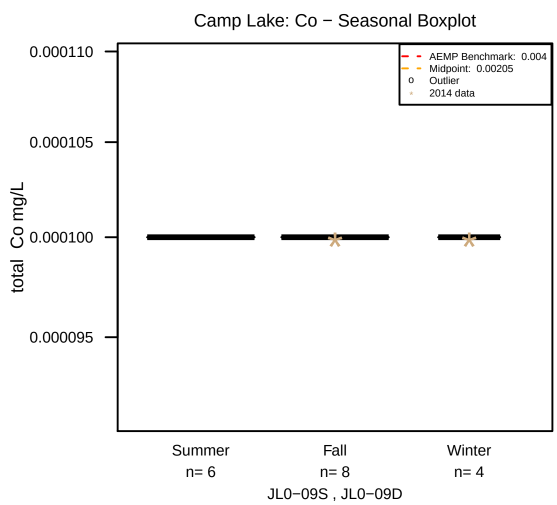

Camp Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.00025
0.00020
0.00015
0.00010
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
JL0−01S , JL0−01D

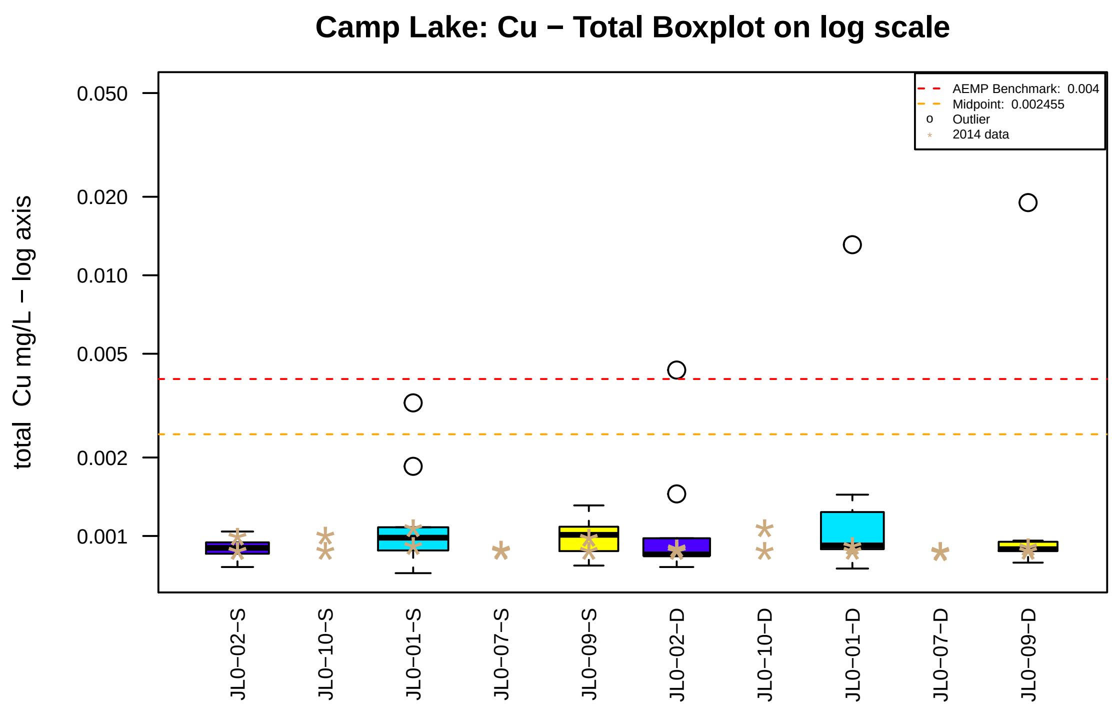

Camp Lake: Co − Seasonal Boxplot
total Co mg/L
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

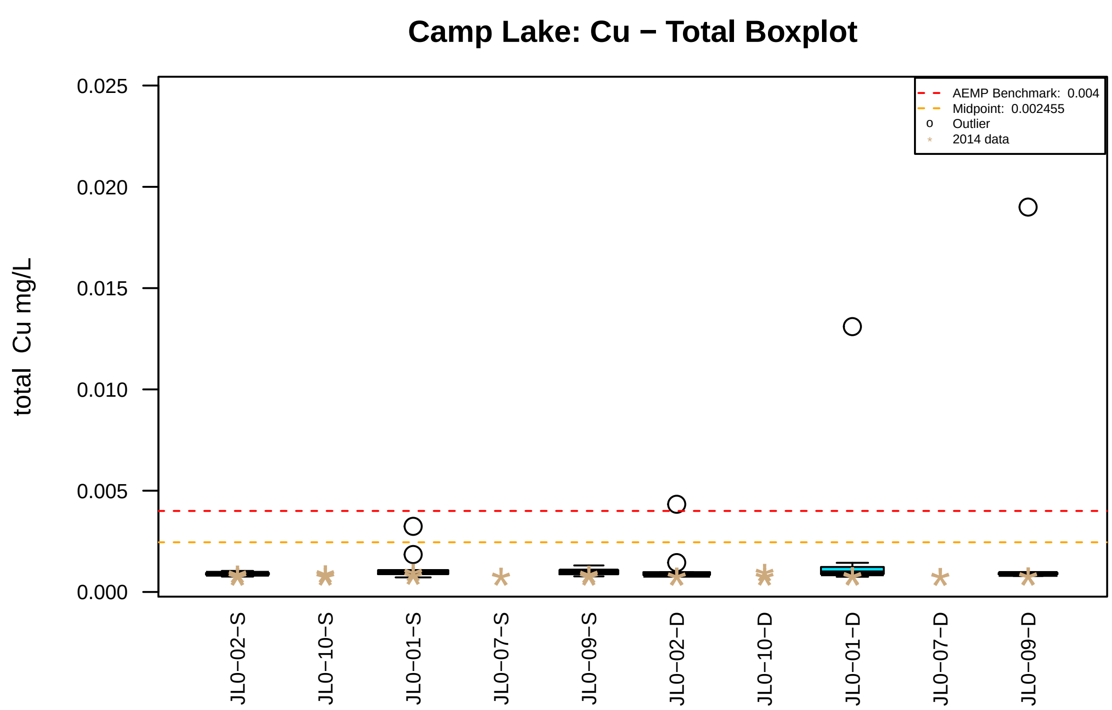

Camp Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
JL0−02S , JL0−02D

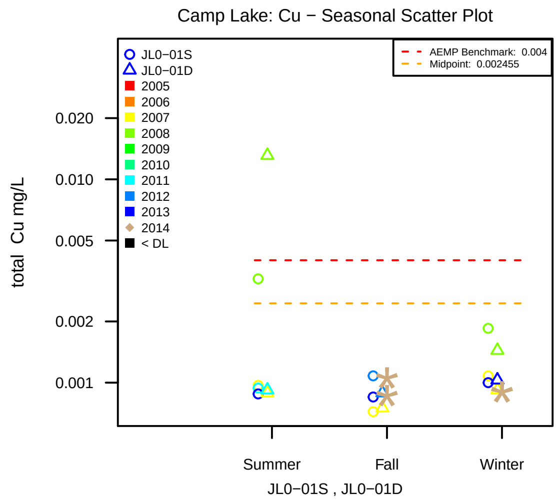

Camp Lake: Co − Seasonal Boxplot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

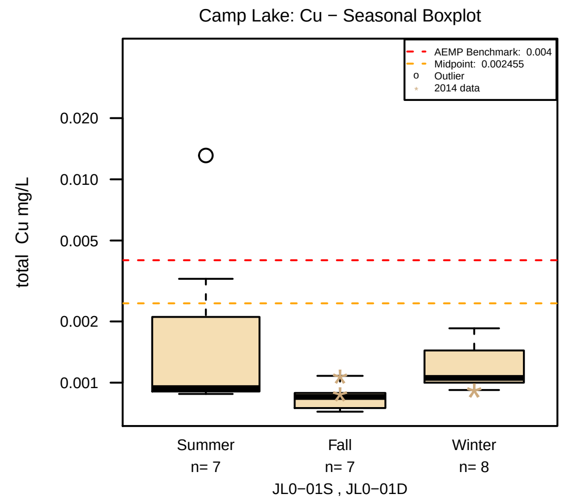

Camp Lake: Co − Seasonal Scatter Plot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
Summer
Fall
Winter
JL0−09S , JL0−09D

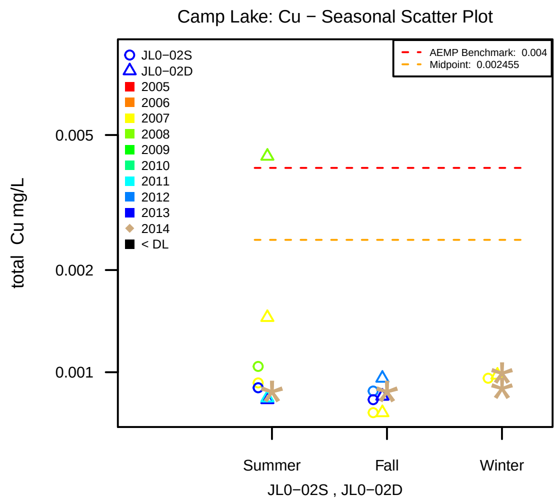

Camp Lake: Co − Seasonal Boxplot
total Co mg/L
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

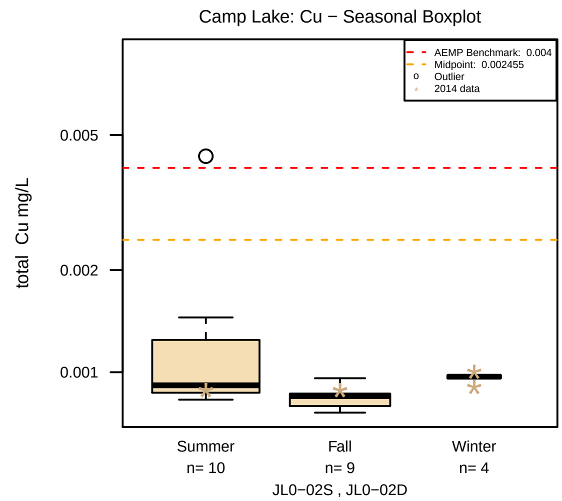

Camp Lake: Cu − Total Boxplot on log scale
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
total Cu mg/L − log axis
0.050
0.020
0.010
0.005
0.002
0.001
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

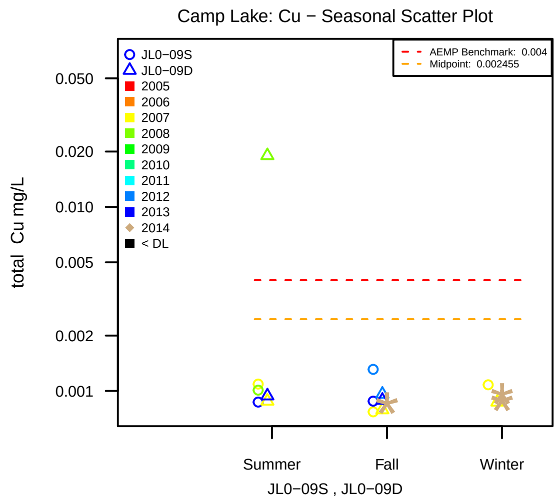

Camp Lake: Cu − Total Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
total Cu mg/L
0.025
0.020
0.015
0.010
0.005
0.000
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

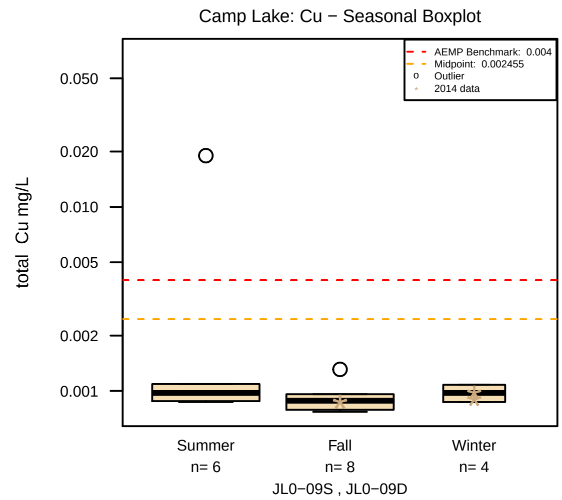

Camp Lake: Cu − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.002455
total Cu mg/L
0.020
0.010
0.005
0.002
0.001
Summer
Fall
Winter
JL0−01S , JL0−01D

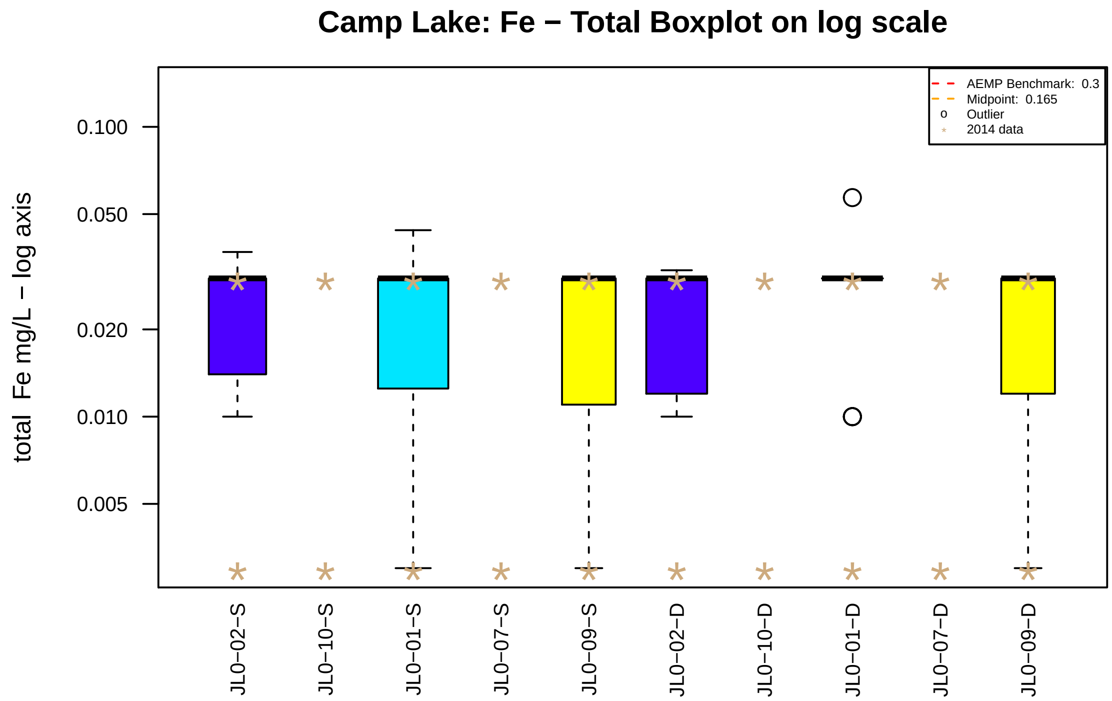

Camp Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
total Cu mg/L
0.020
0.010
0.005
0.002
0.001
Summer
n= 7
Fall
n= 7
Winter
n= 8
JL0−01S , JL0−01D

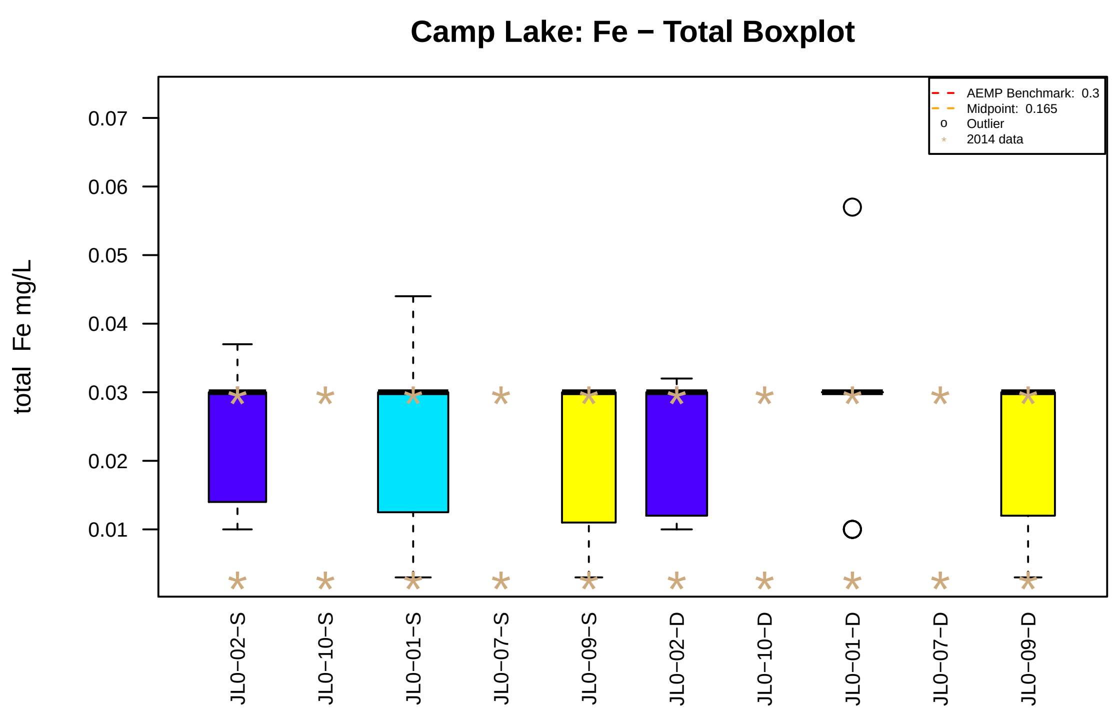

Camp Lake: Cu − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.002455
total Cu mg/L
0.005
0.002
0.001
Summer
Fall
Winter
JL0−02S , JL0−02D

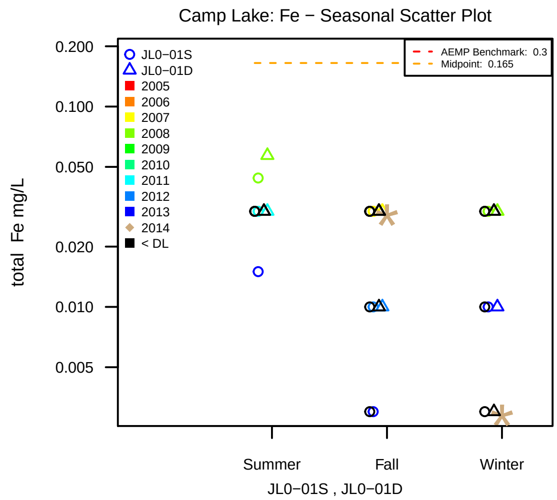

Camp Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
total Cu mg/L
0.005
0.002
0.001
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

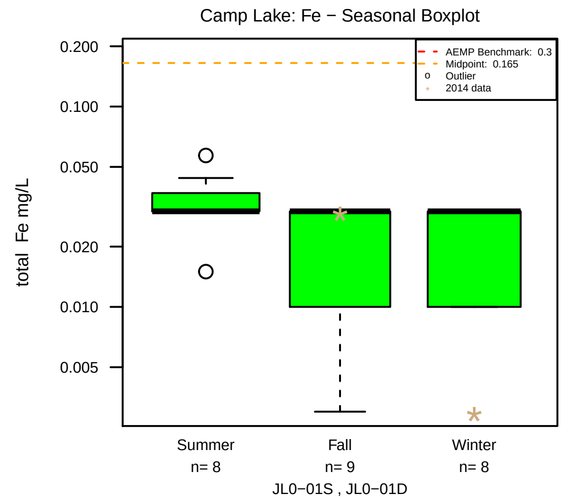

Camp Lake: Cu − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.002455
total Cu mg/L
0.050
0.020
0.010
0.005
0.002
0.001
Summer
Fall
Winter
JL0−09S , JL0−09D

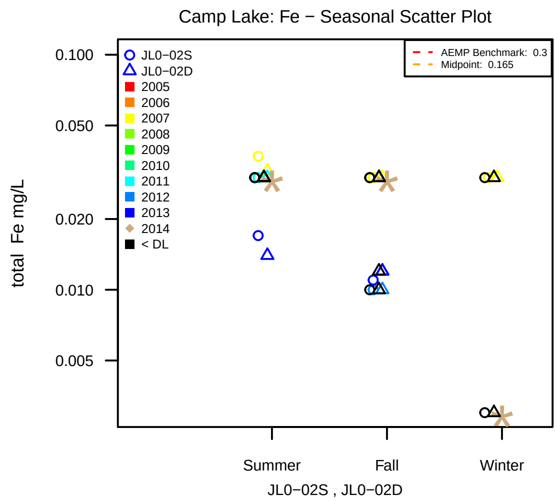

Camp Lake: Cu − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.002455
Outlier
2014 data
total Cu mg/L
0.050
0.020
0.010
0.005
0.002
0.001
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

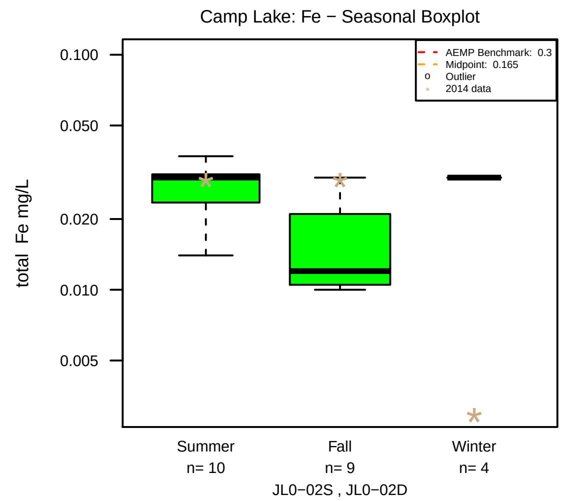

Camp Lake: Fe − Total Boxplot on log scale
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L − log axis
0.100
0.050
0.020
0.010
0.005
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

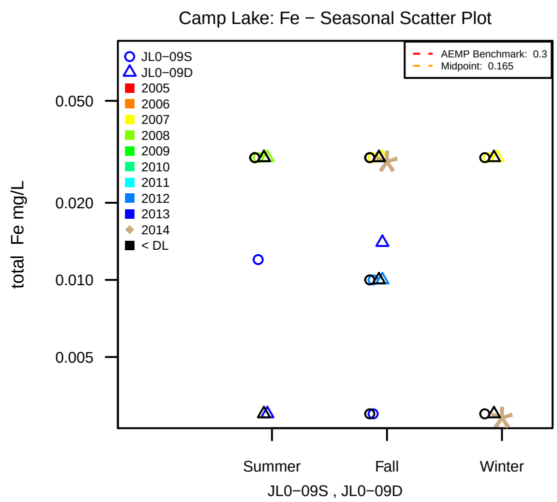

Camp Lake: Fe − Total Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L
0.07
0.06
0.05
0.04
0.03
0.02
0.01
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

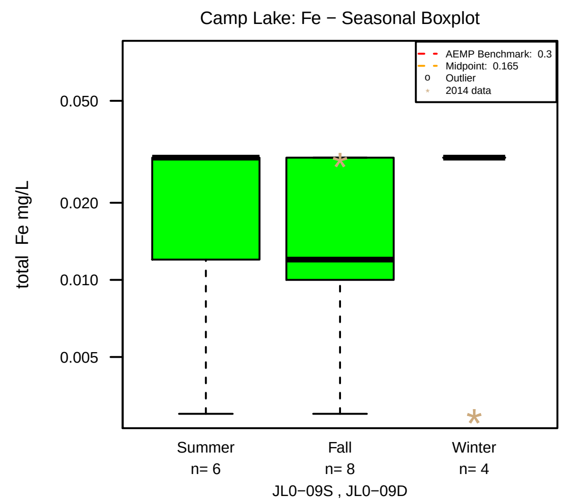

Camp Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.200
0.100
0.050
0.020
0.010
0.005
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
Summer
Fall
Winter
JL0−01S , JL0−01D

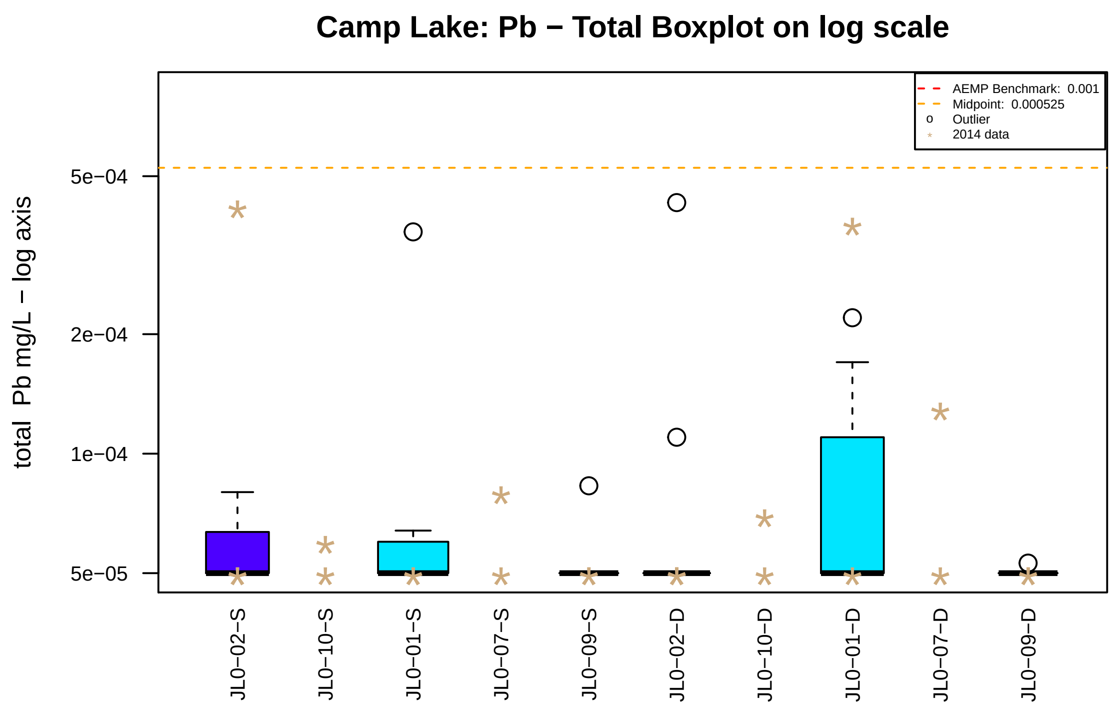

Camp Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.200
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

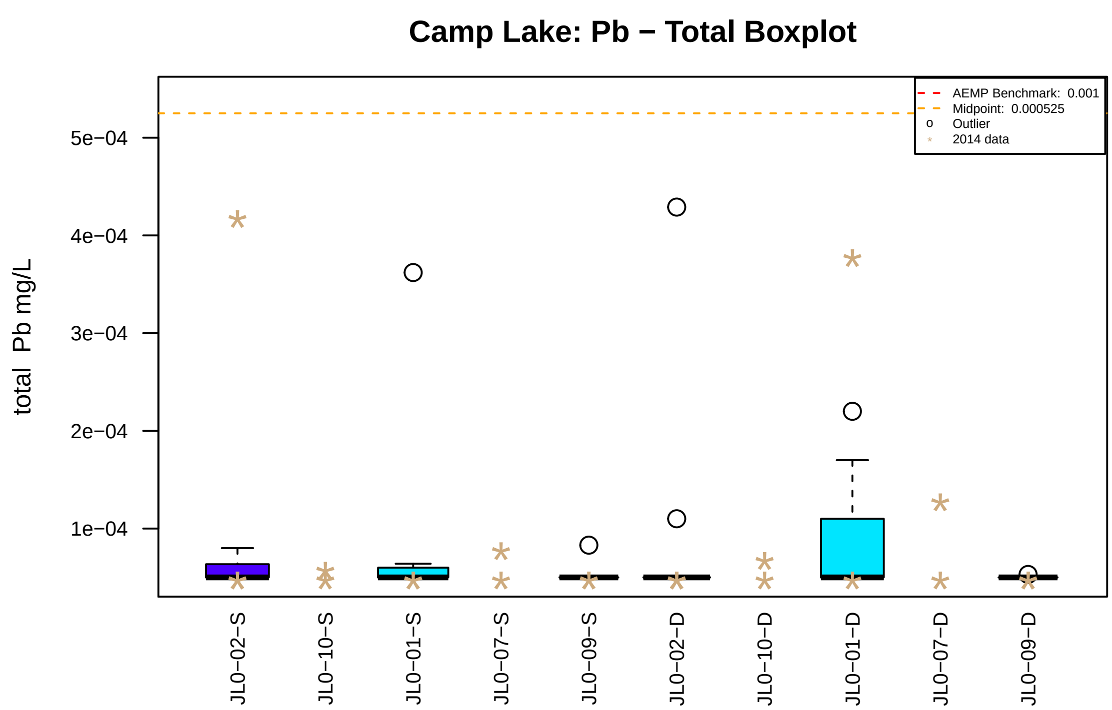

Camp Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.100
0.050
0.020
0.010
0.005
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
Summer
Fall
Winter
JL0−02S , JL0−02D

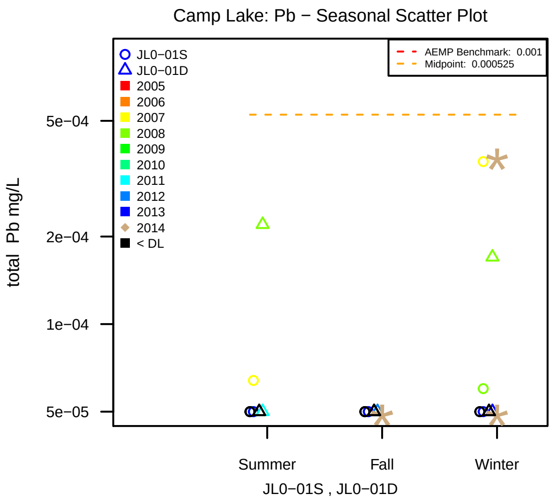

Camp Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.100
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

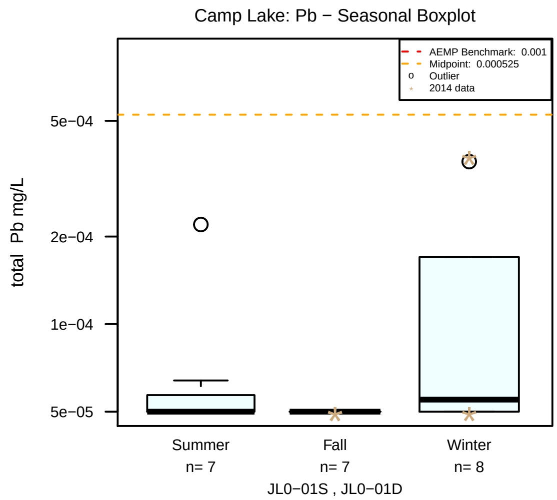

Camp Lake: Fe − Seasonal Scatter Plot
total Fe mg/L
0.050
0.020
0.010
0.005
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
Summer
Fall
Winter
JL0−09S , JL0−09D

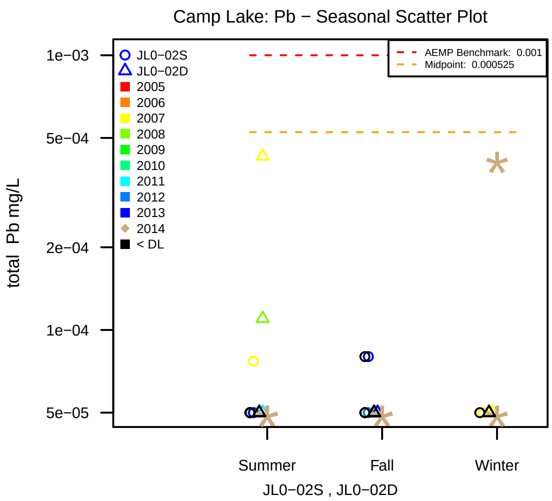

Camp Lake: Fe − Seasonal Boxplot
total Fe mg/L
0.050
0.020
0.010
0.005
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

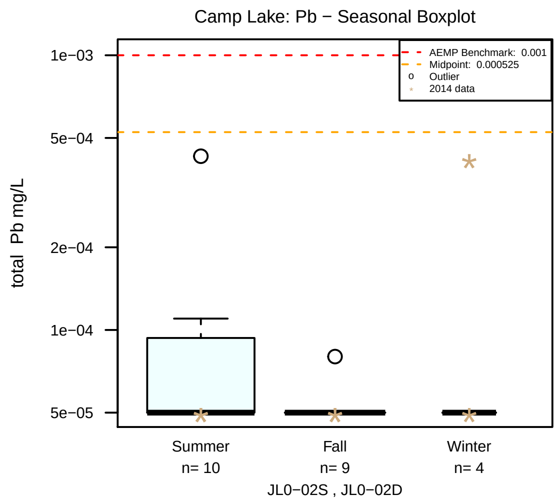

Camp Lake: Pb − Total Boxplot on log scale
AEMP Benchmark: 0.001
Midpoint: 0.000525
Outlier
2014 data
total Pb mg/L − log axis
5e−04
2e−04
1e−04
5e−05
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

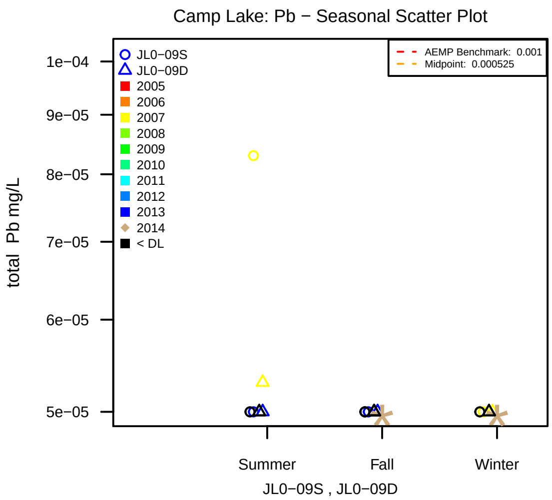

Camp Lake: Pb − Total Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.000525
Outlier
2014 data
total Pb mg/L
5e−04
4e−04
3e−04
2e−04
1e−04
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

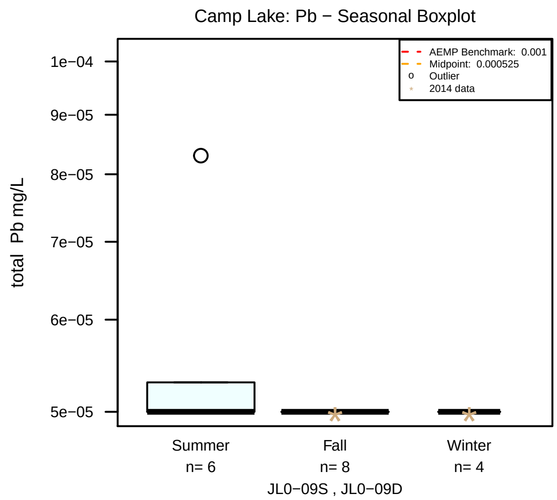

Camp Lake: Pb − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.000525
total Pb mg/L
5e−04
2e−04
1e−04
5e−05
Summer
Fall
Winter
JL0−01S , JL0−01D

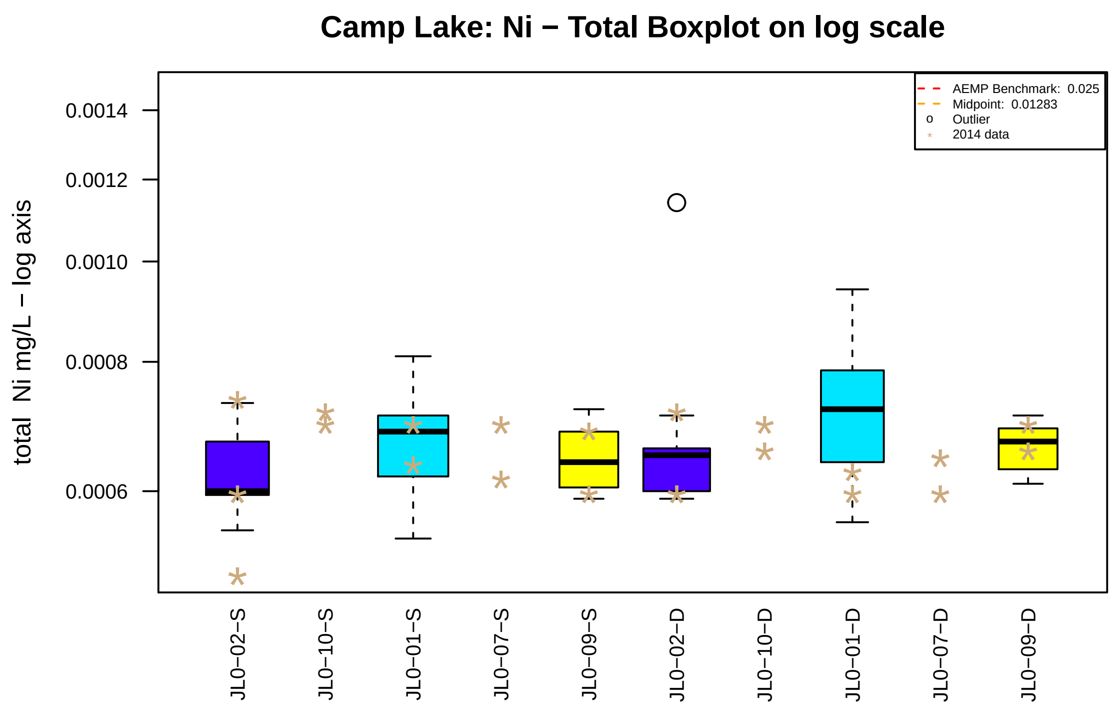

Camp Lake: Pb − Seasonal Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.000525
Outlier
2014 data
total Pb mg/L
5e−04
2e−04
1e−04
5e−05
Summer
n= 7
Fall
n= 7
Winter
n= 8
JL0−01S , JL0−01D

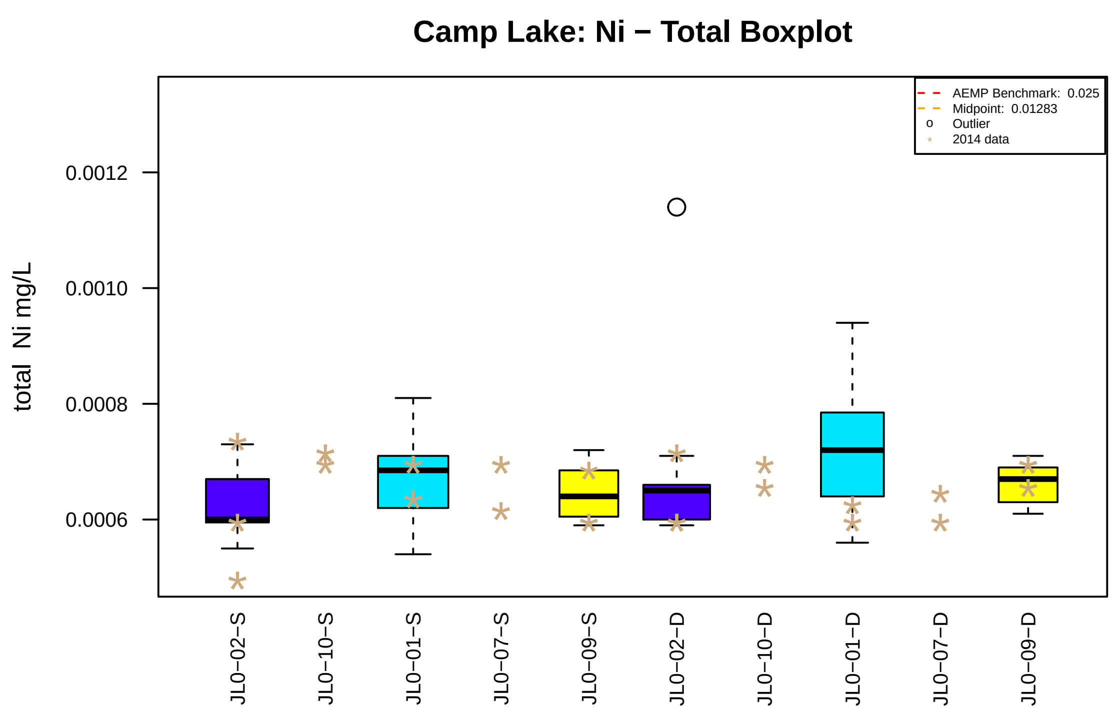

Camp Lake: Pb − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.000525
total Pb mg/L
1e−03
5e−04
2e−04
1e−04
5e−05
Summer
Fall
Winter
JL0−02S , JL0−02D

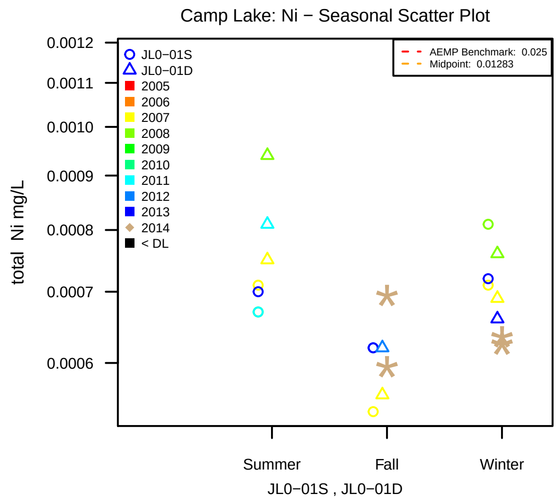

Camp Lake: Pb − Seasonal Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.000525
Outlier
2014 data
total Pb mg/L
1e−03
5e−04
2e−04
1e−04
5e−05
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

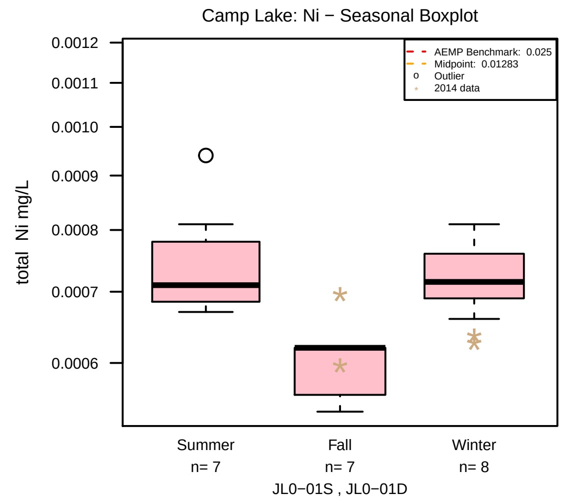

Camp Lake: Pb − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.000525
total Pb mg/L
1e−04
9e−05
8e−05
7e−05
6e−05
5e−05
Summer
Fall
Winter
JL0−09S , JL0−09D

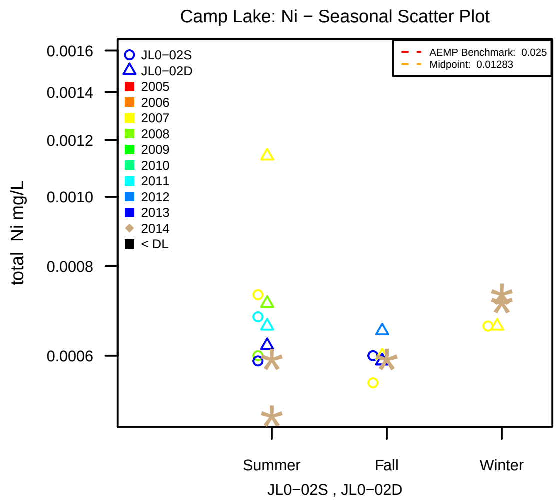

Camp Lake: Pb − Seasonal Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.000525
Outlier
2014 data
total Pb mg/L
1e−04
9e−05
8e−05
7e−05
6e−05
5e−05
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

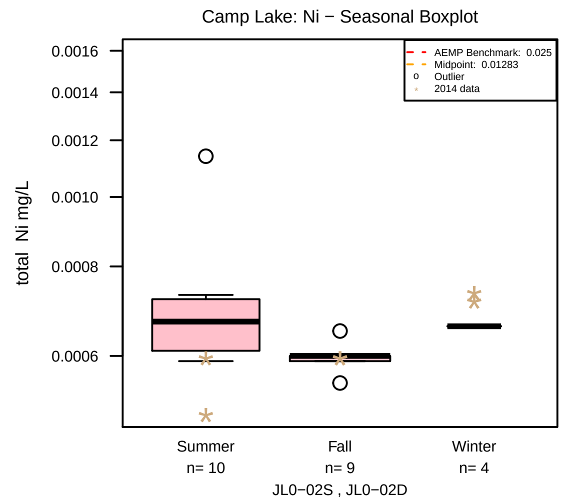

Camp Lake: Ni – Total Boxplot on log scale
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
total Ni mg/L – log axis
0.0014
0.0012
0.0010
0.0008
0.0006
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

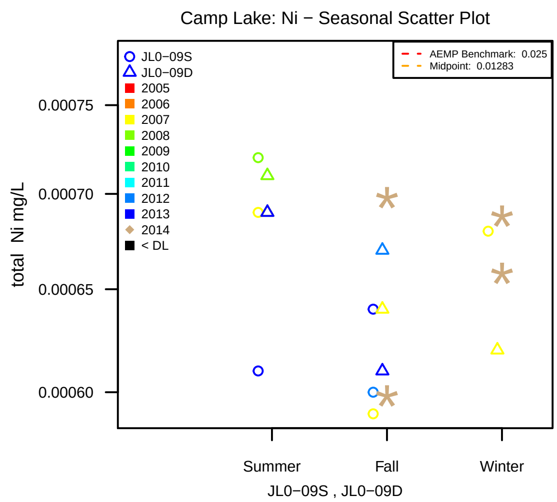

Camp Lake: Ni – Total Boxplot
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
total Ni mg/L
0.0012
0.0010
0.0008
0.0006
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

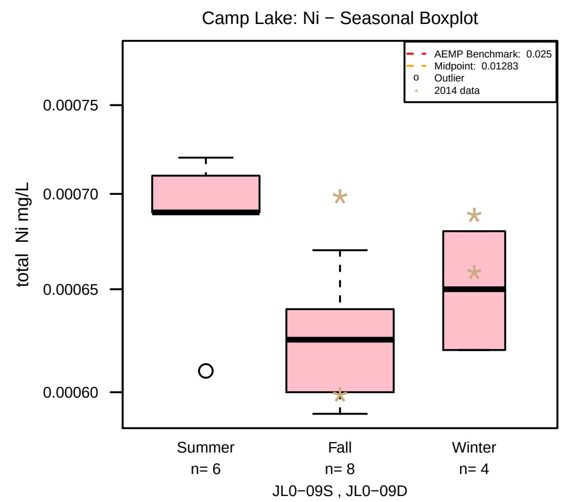

Camp Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01283
Summer
Fall
Winter
JL0−01S , JL0−01D

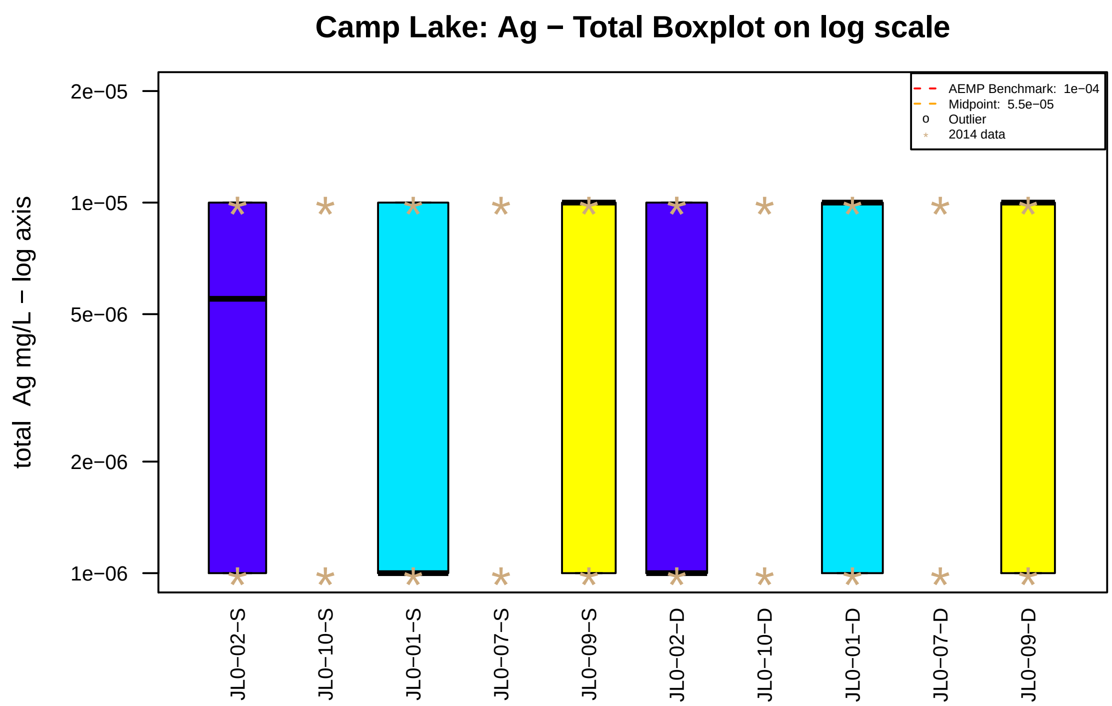

Camp Lake: Ni − Seasonal Boxplot
total Ni mg/L
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
Summer n= 7
Fall n= 7
Winter n= 8
JL0−01S , JL0−01D

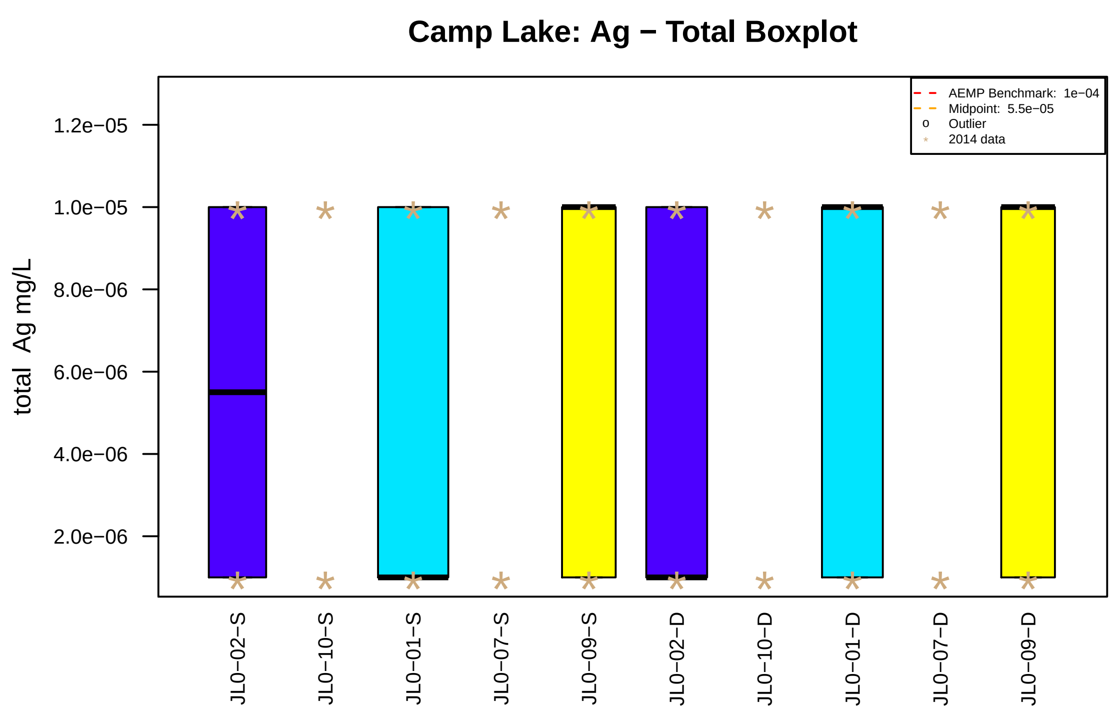

Camp Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01283
Summer
Fall
Winter
JL0−02S , JL0−02D

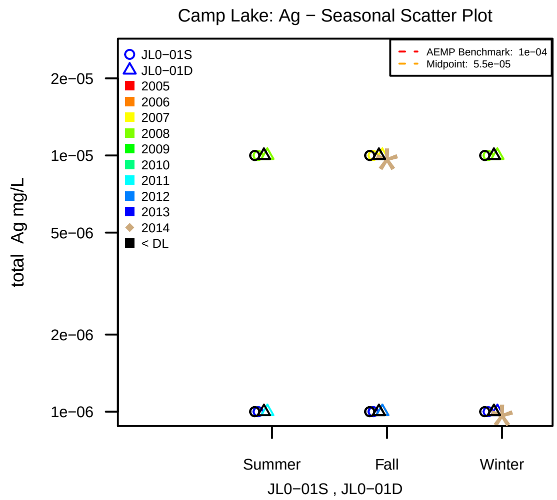

Camp Lake: Ni − Seasonal Boxplot
total Ni mg/L
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
Summer n= 10
Fall n= 9
Winter n= 4
JL0−02S , JL0−02D

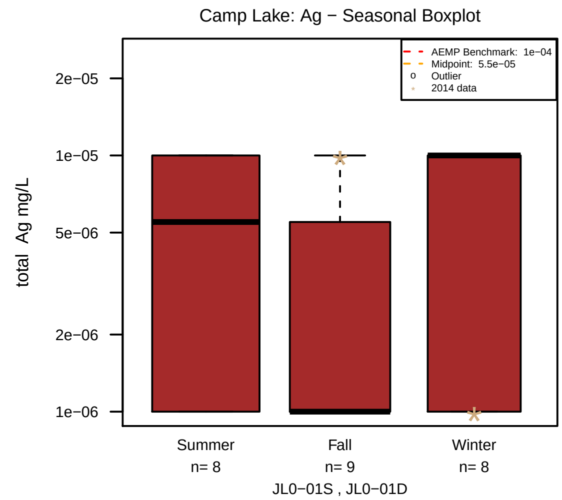

Camp Lake: Ni − Seasonal Scatter Plot
total Ni mg/L
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01283
Summer
Fall
Winter
JL0−09S , JL0−09D

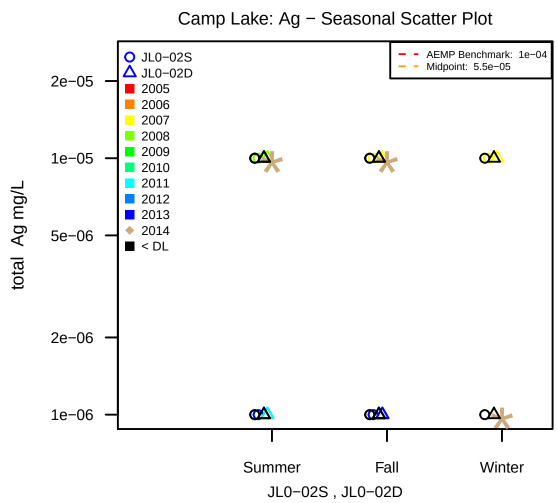

Camp Lake: Ni − Seasonal Boxplot
total Ni mg/L
AEMP Benchmark: 0.025
Midpoint: 0.01283
Outlier
2014 data
Summer n= 6
Fall n= 8
Winter n= 4
JL0−09S , JL0−09D

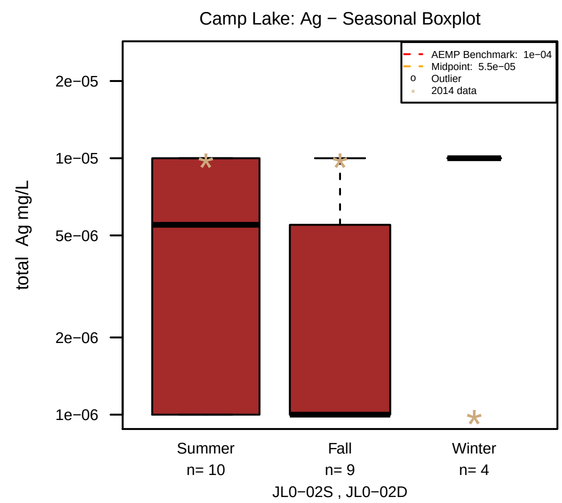

Camp Lake: Ag − Total Boxplot on log scale
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L − log axis
2e−05
1e−05
5e−06
2e−06
1e−06
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

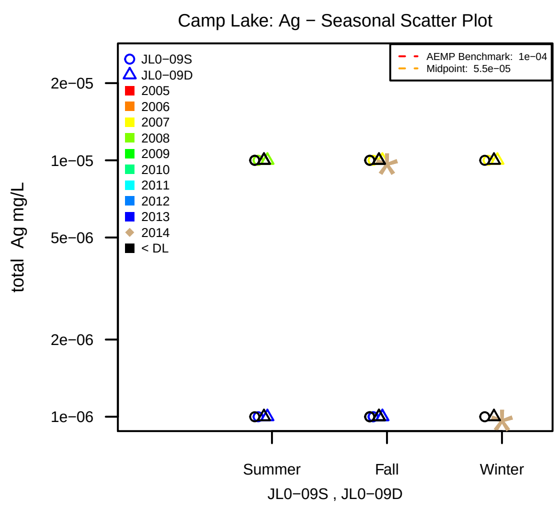

Camp Lake: Ag − Total Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L
1.2e−05
1.0e−05
8.0e−06
6.0e−06
4.0e−06
2.0e−06
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

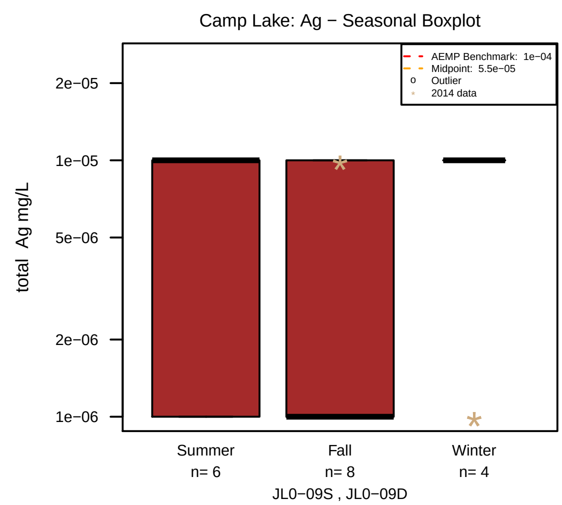

Camp Lake: Ag − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
JL0−01S , JL0−01D

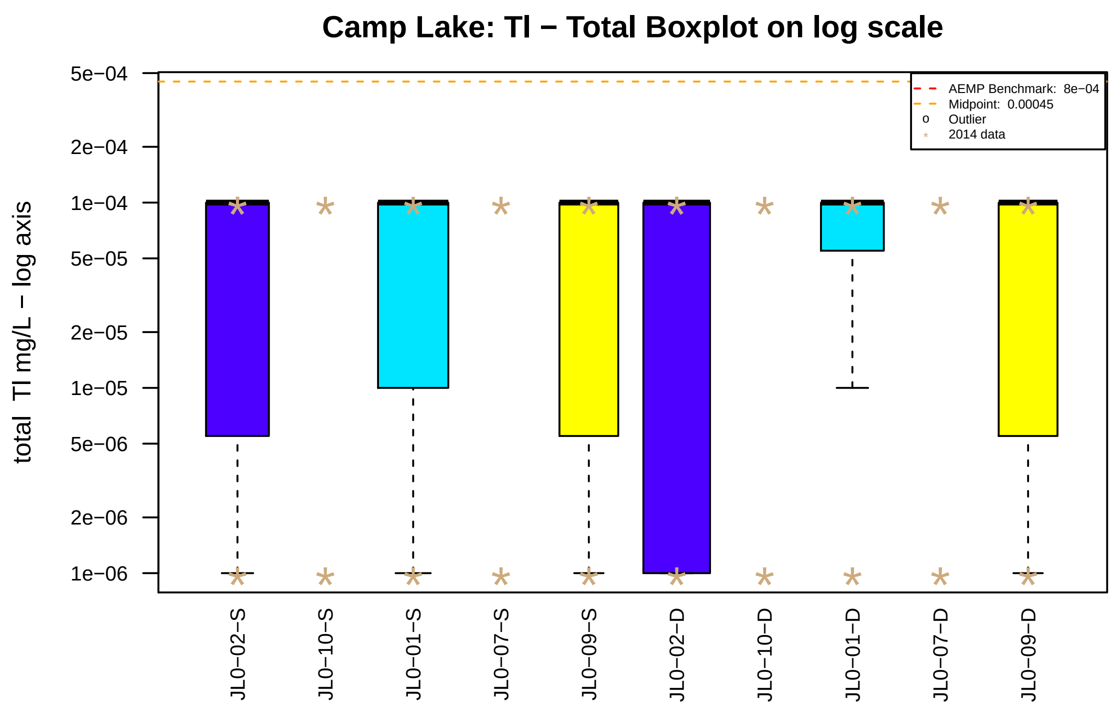

Camp Lake: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

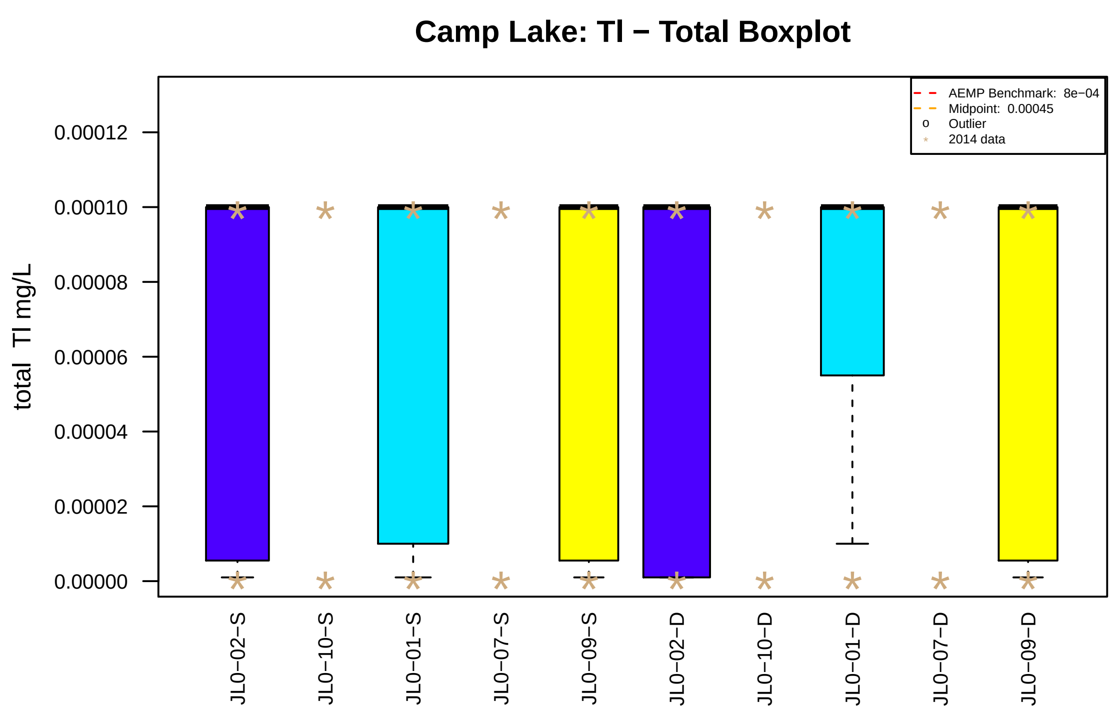

Camp Lake: Ag − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
JL0−02S , JL0−02D

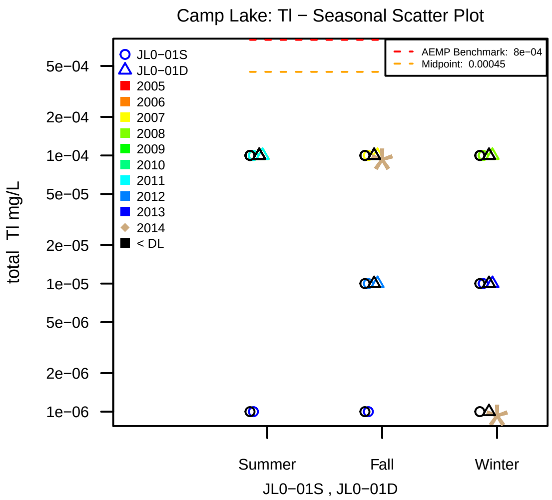

Camp Lake: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

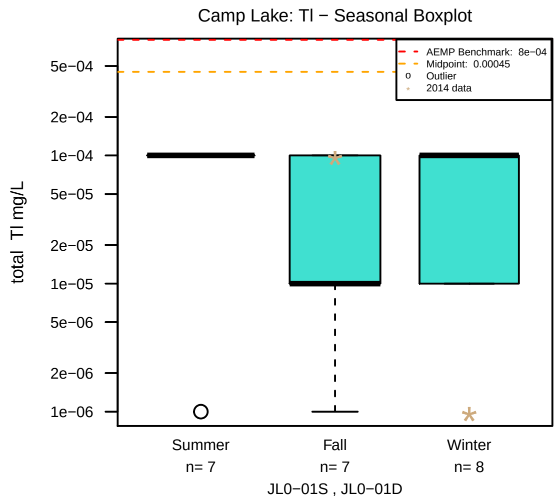

Camp Lake: Ag − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
JL0−09S , JL0−09D

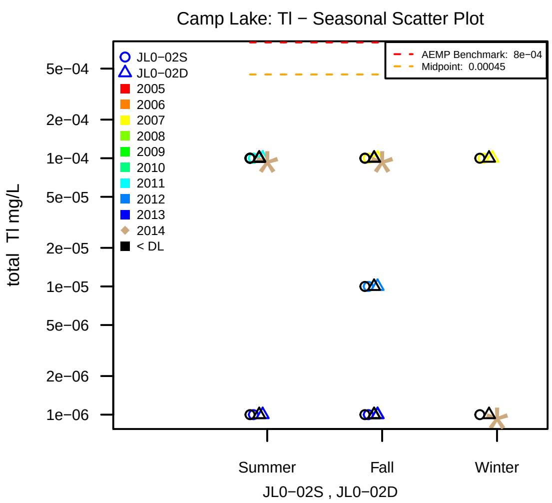

Camp Lake: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 5.5e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

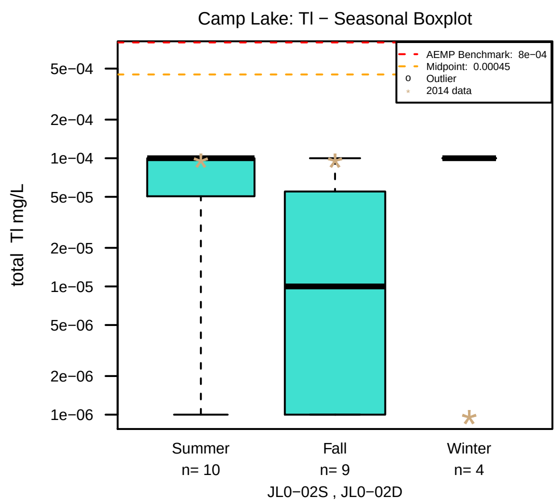

Camp Lake: Tl − Total Boxplot on log scale
total Tl mg/L − log axis
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

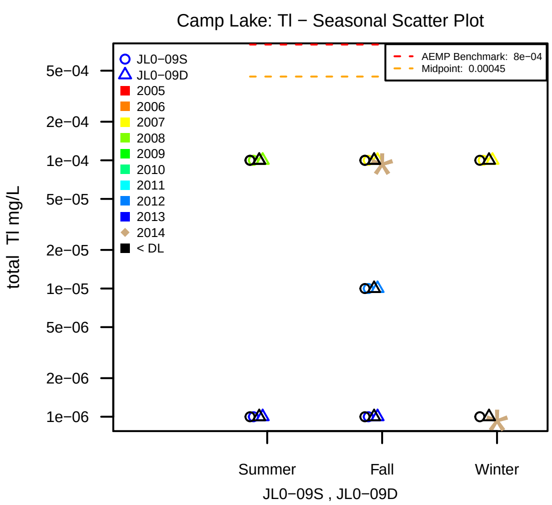

Camp Lake: Tl − Total Boxplot
total Tl mg/L
0.00012
0.00010
0.00008
0.00006
0.00004
0.00002
0.00000
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

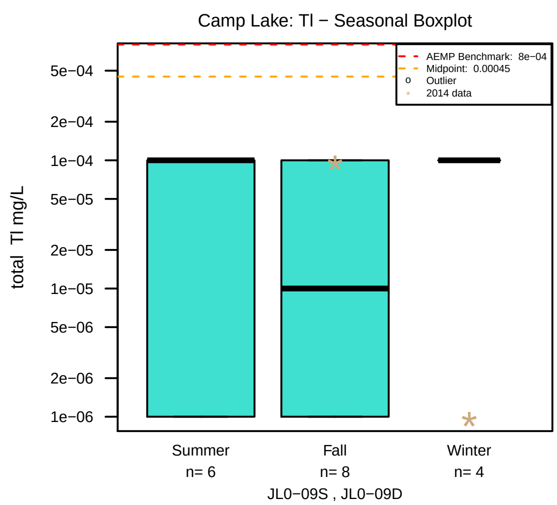

Camp Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
JL0−01S , JL0−01D

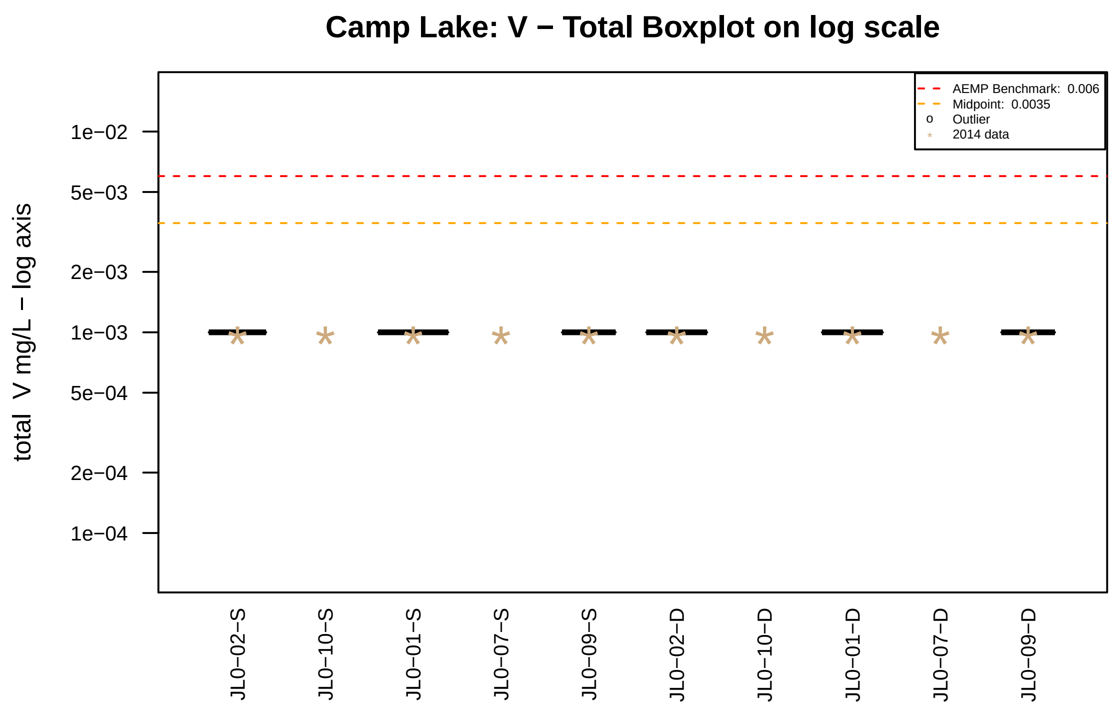

Camp Lake: Tl − Seasonal Boxplot
total Tl mg/L
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer n= 7
Fall n= 7
Winter n= 8
JL0−01S , JL0−01D

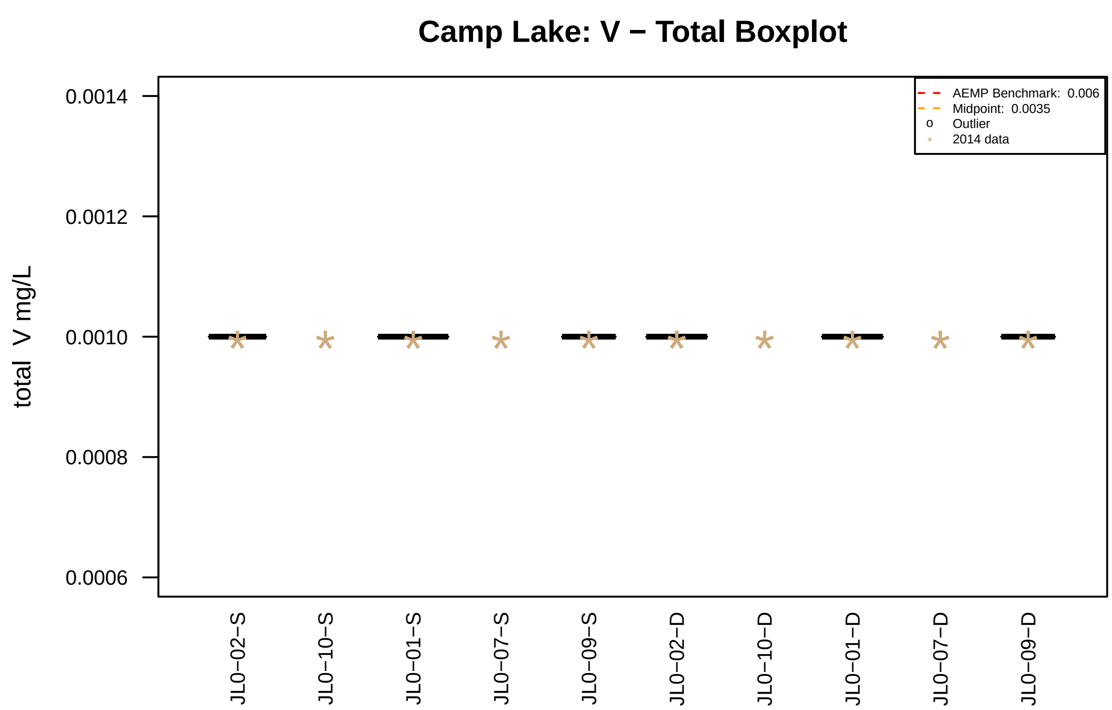

Camp Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
JL0−02S , JL0−02D

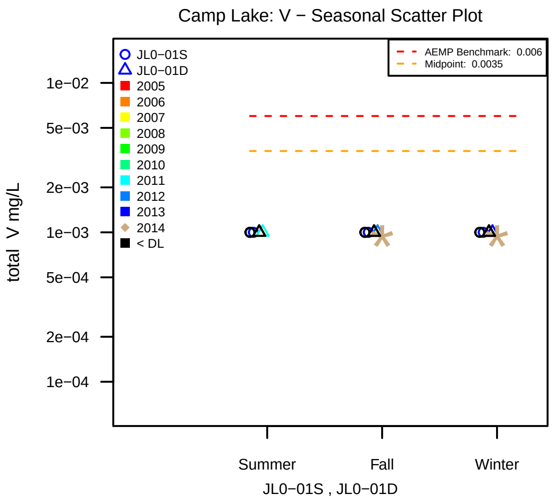

Camp Lake: Tl − Seasonal Boxplot
total Tl mg/L
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer n= 10
Fall n= 9
Winter n= 4
JL0−02S , JL0−02D

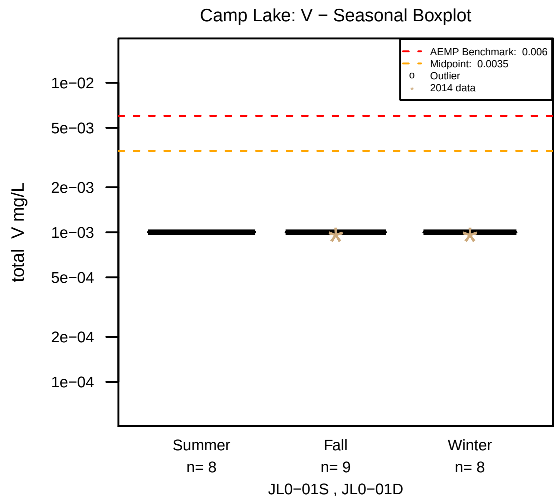

Camp Lake: Tl − Seasonal Scatter Plot
total Tl mg/L
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Summer
Fall
Winter
JL0−09S , JL0−09D

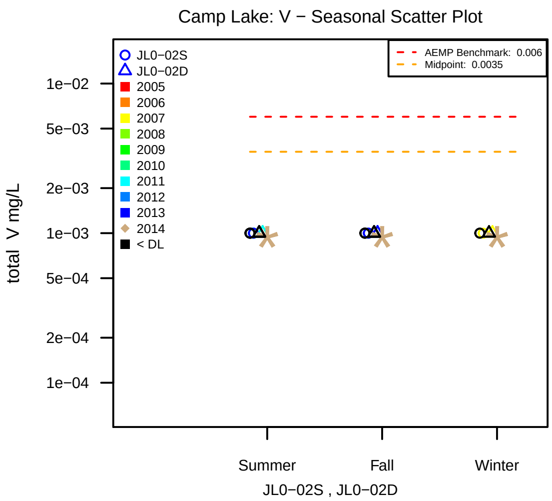

Camp Lake: Tl − Seasonal Boxplot
total Tl mg/L
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
Summer n= 6
Fall n= 8
Winter n= 4
JL0−09S , JL0−09D

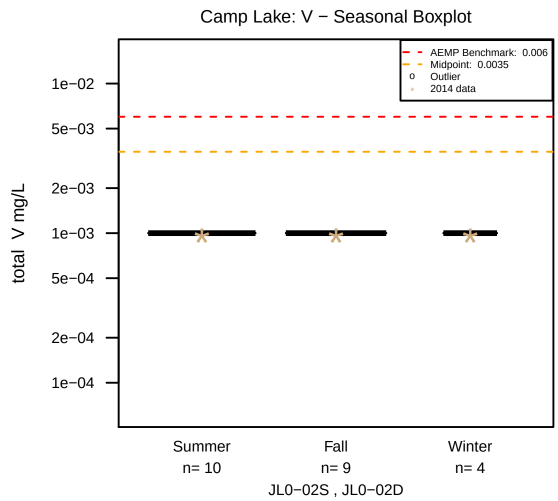

Camp Lake: V − Total Boxplot on log scale
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L − log axis
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

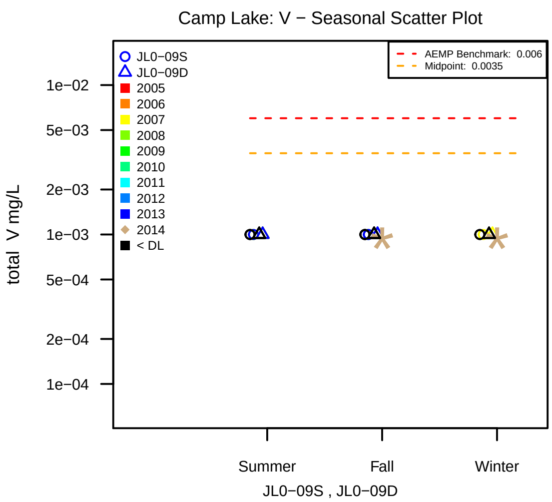

Camp Lake: V − Total Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
0.0014
0.0012
0.0010
0.0008
0.0006
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

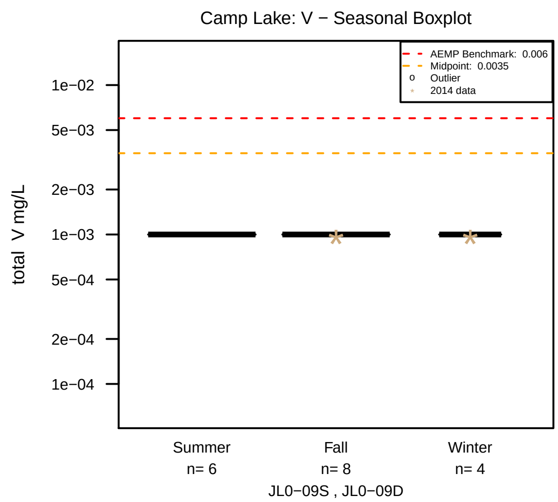

Camp Lake: V − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
total V mg/L
Summer
Fall
Winter
JL0−01S , JL0−01D

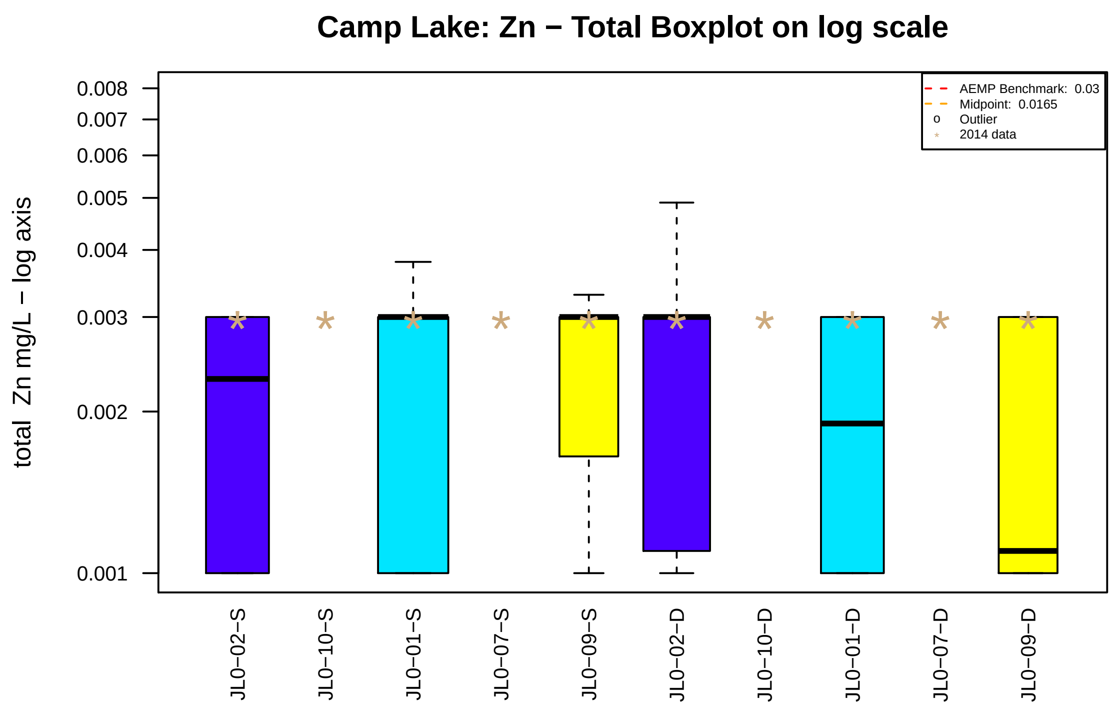

Camp Lake: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
total V mg/L
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

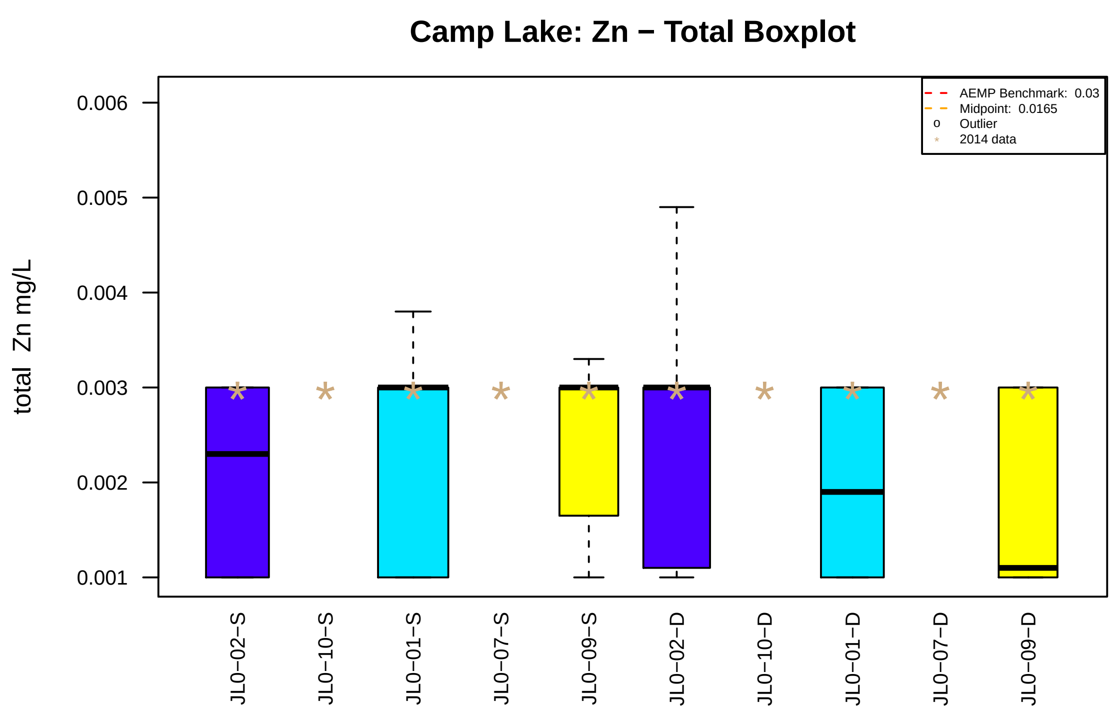

Camp Lake: V − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
total V mg/L
Summer
Fall
Winter
JL0−02S , JL0−02D

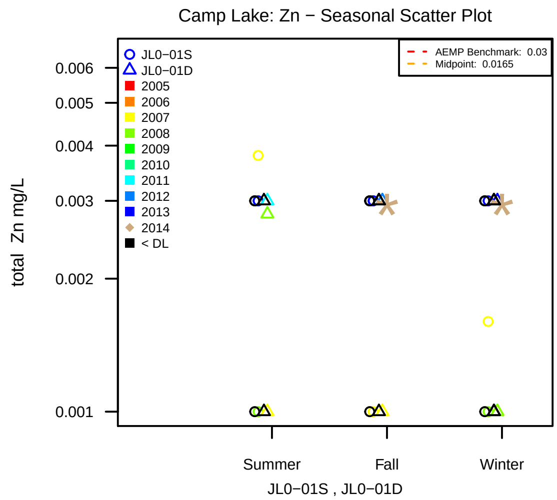

Camp Lake: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
total V mg/L
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

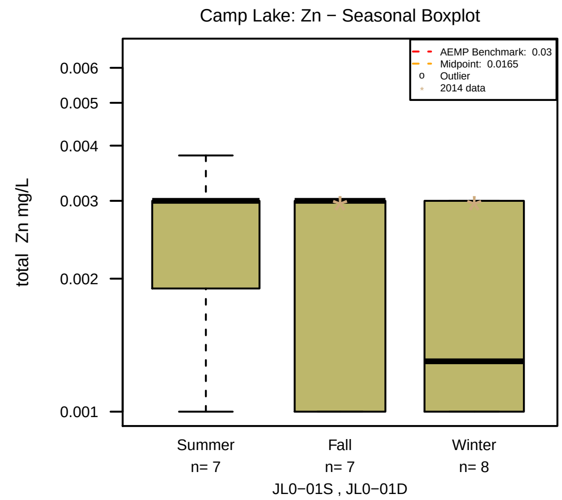

Camp Lake: V − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
total V mg/L
Summer
Fall
Winter
JL0−09S , JL0−09D

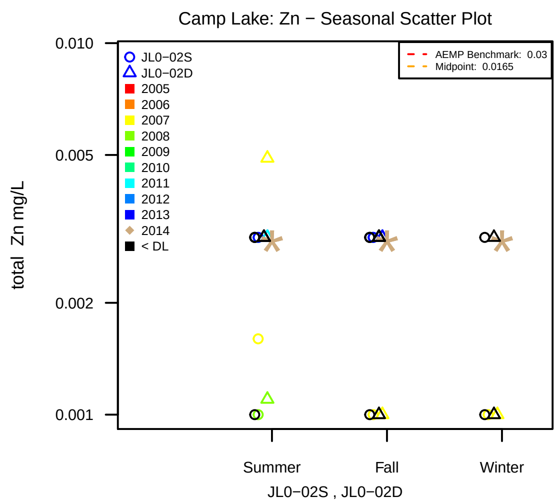

Camp Lake: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
total V mg/L
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

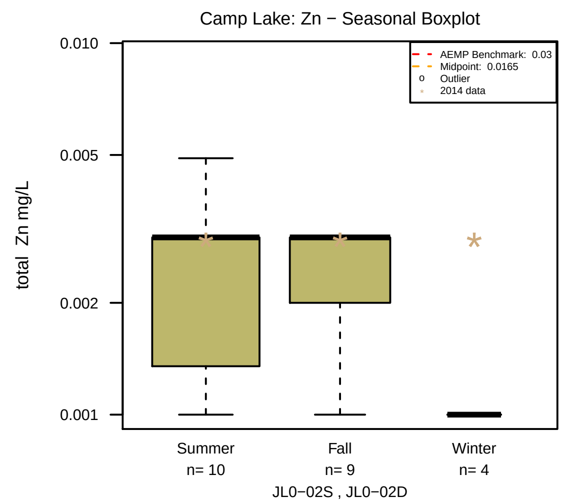

Camp Lake: Zn − Total Boxplot on log scale
total Zn mg/L − log axis
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

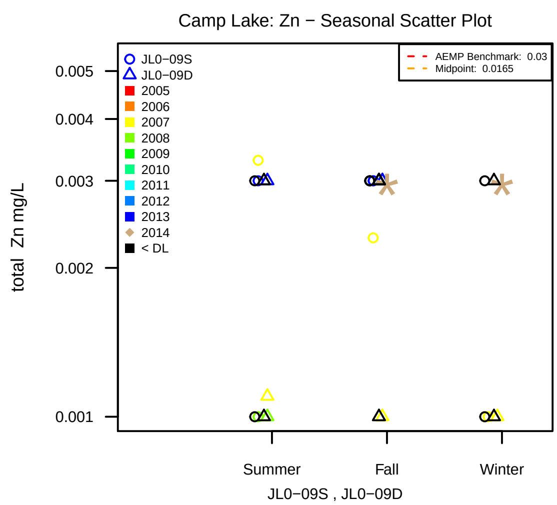

Camp Lake: Zn − Total Boxplot
total Zn mg/L
0.006
0.005
0.004
0.003
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

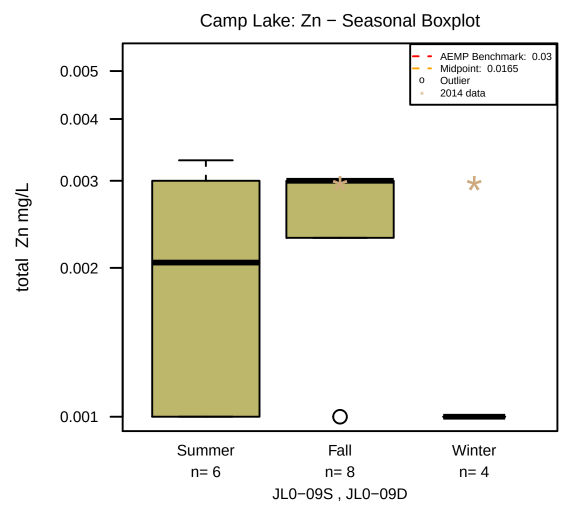

Camp Lake: Zn − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.006
0.005
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
JL0−01S , JL0−01D

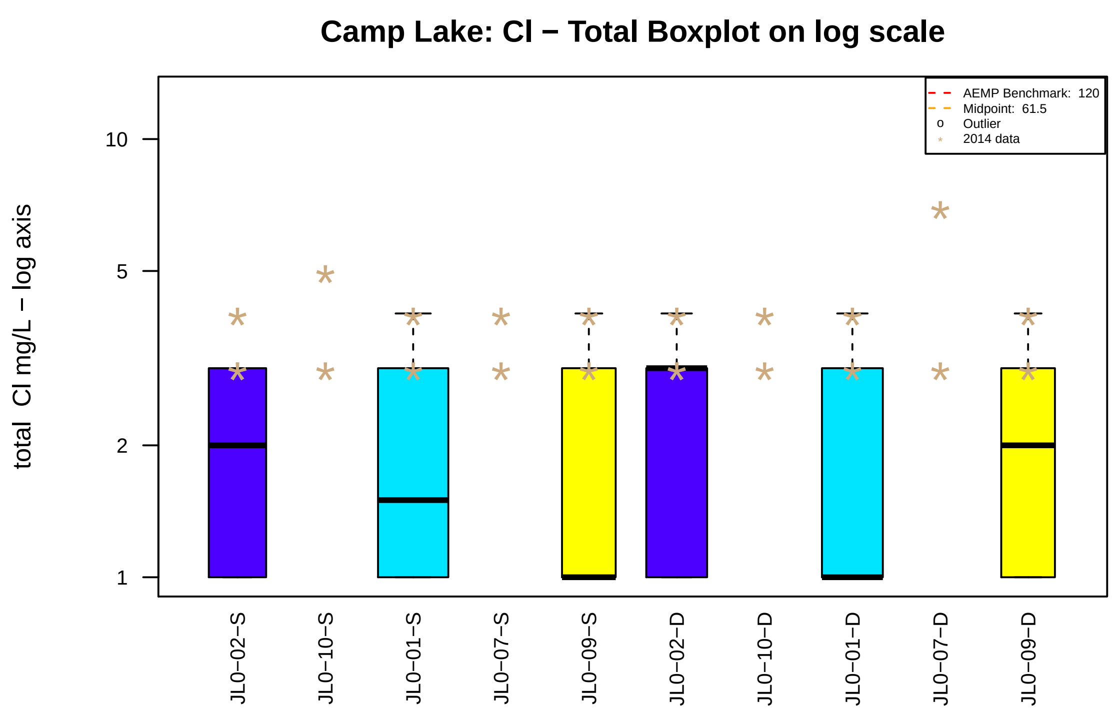

Camp Lake: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.006
0.005
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
n= 7
Fall
n= 7
Winter
n= 8
JL0−01S , JL0−01D

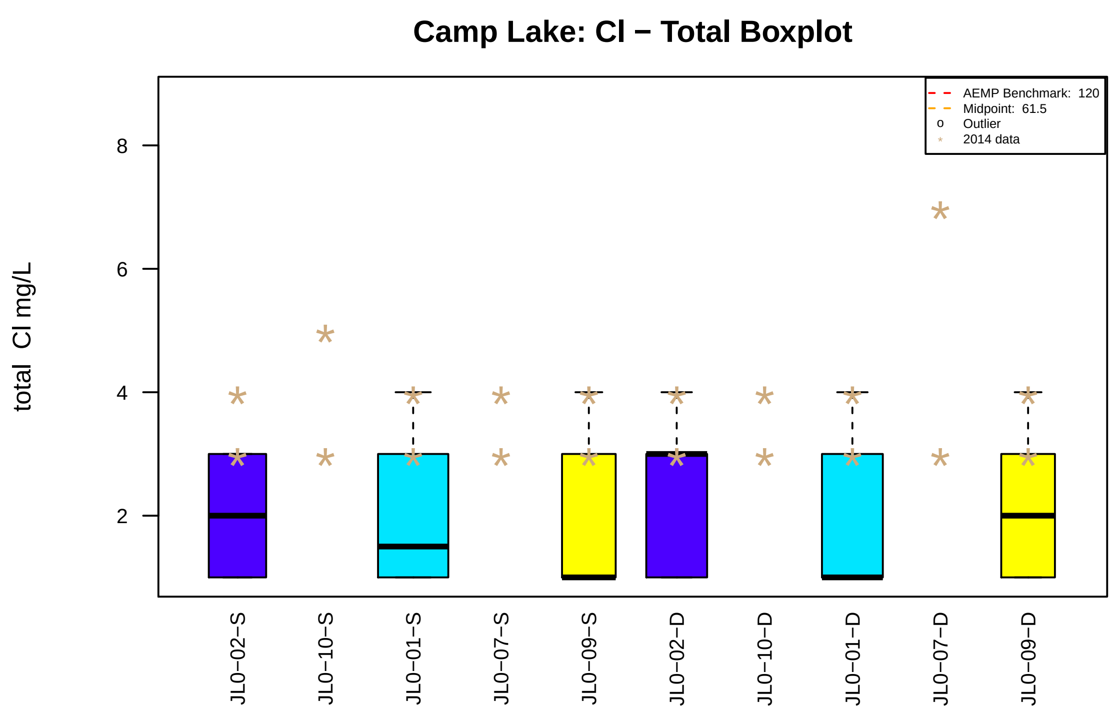

Camp Lake: Zn − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.010
0.005
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
JL0−02S , JL0−02D

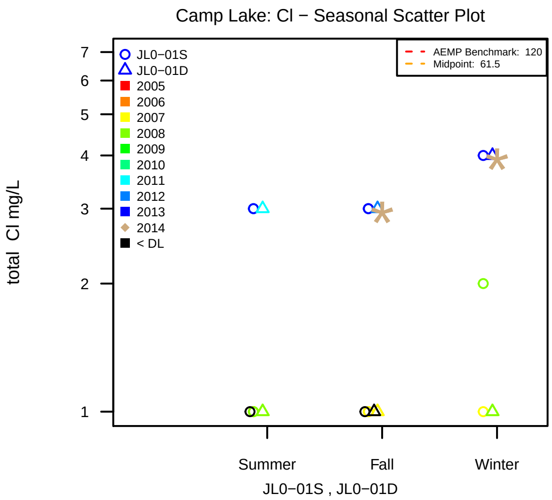

Camp Lake: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.010
0.005
0.002
0.001
total Zn mg/L
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

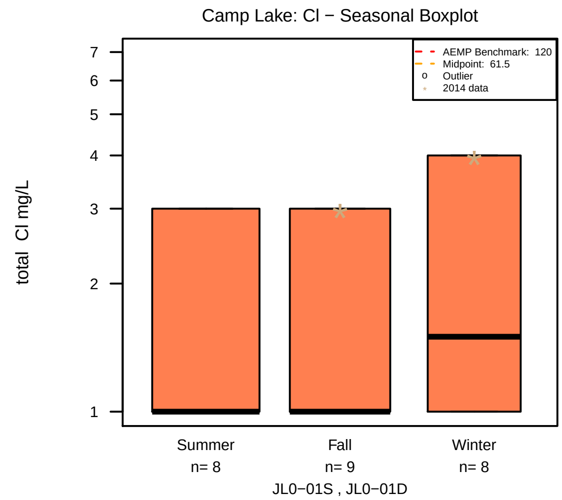

Camp Lake: Zn − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.005
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
JL0−09S , JL0−09D

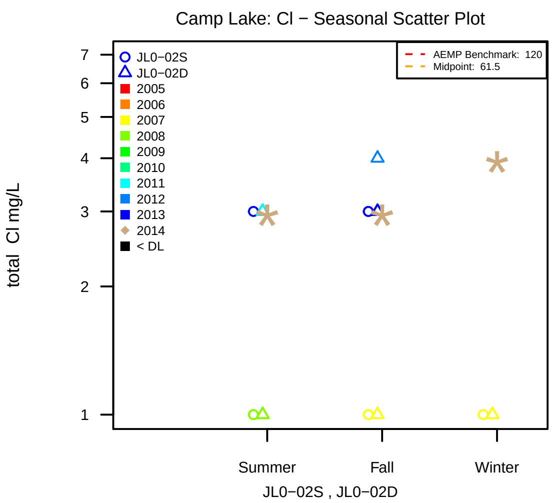

Camp Lake: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.005
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

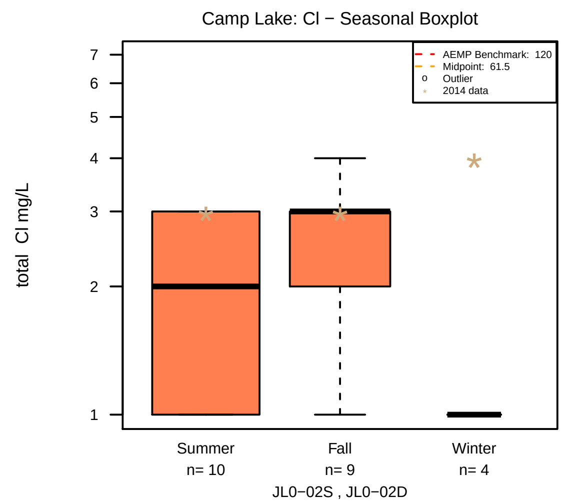

Camp Lake: Cl – Total Boxplot on log scale
total Cl mg/L – log axis
10
5
2
1
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

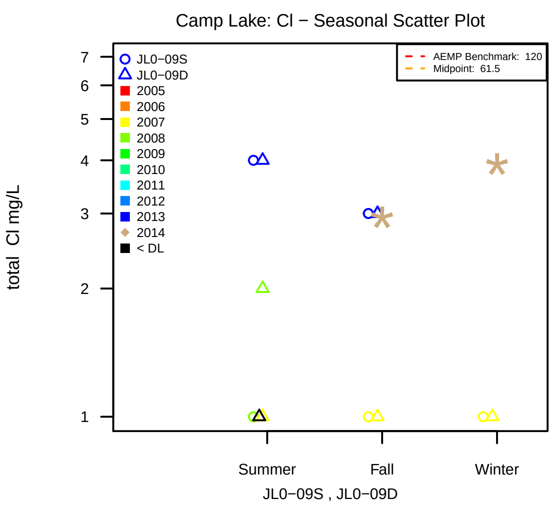

Camp Lake: Cl – Total Boxplot
total Cl mg/L
8
6
4
2
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

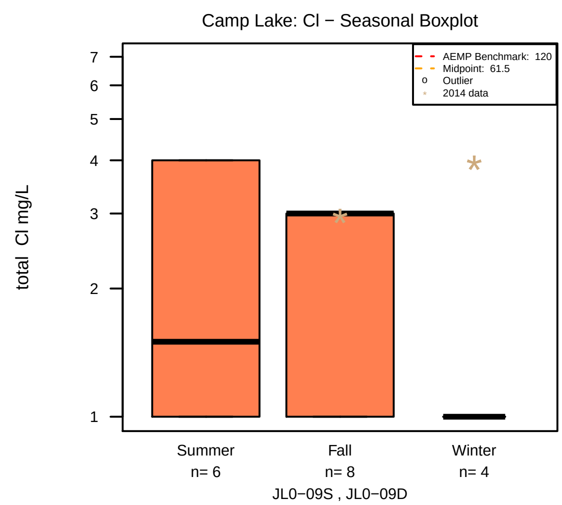

Camp Lake: Cl – Seasonal Scatter Plot
JL0–01S
JL0–01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
total Cl mg/L
7
6
5
4
3
2
1
Summer
Fall
Winter
JL0–01S , JL0–01D

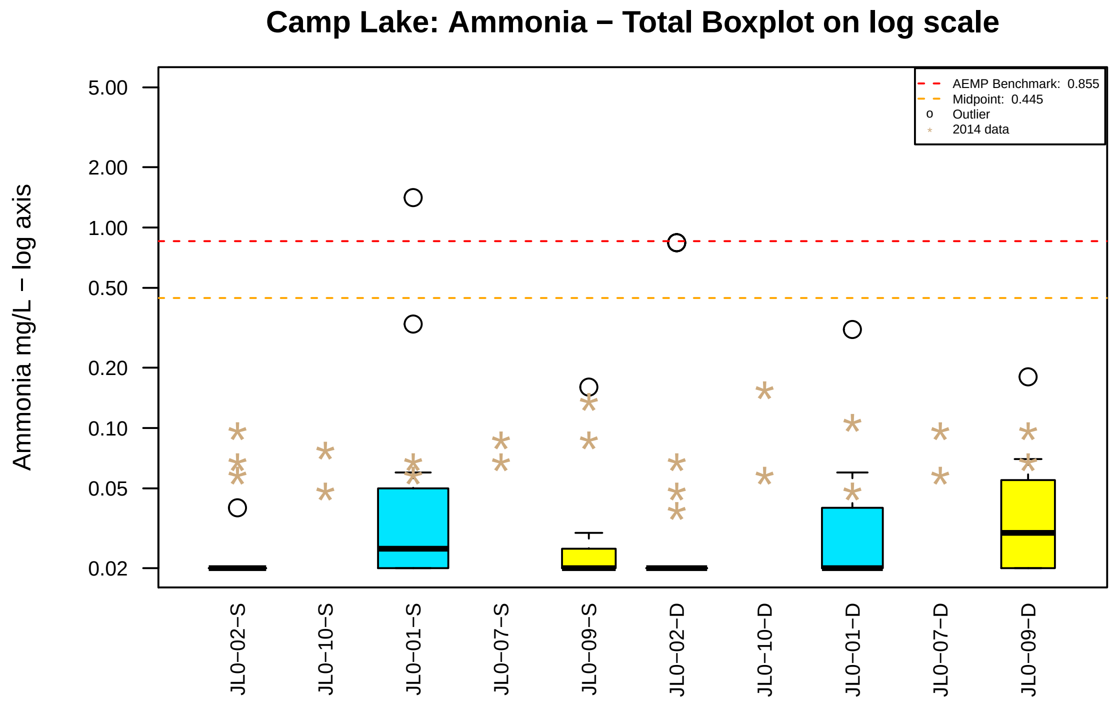

Camp Lake: Cl – Seasonal Boxplot
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L
7
6
5
4
3
2
1
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0–01S , JL0–01D

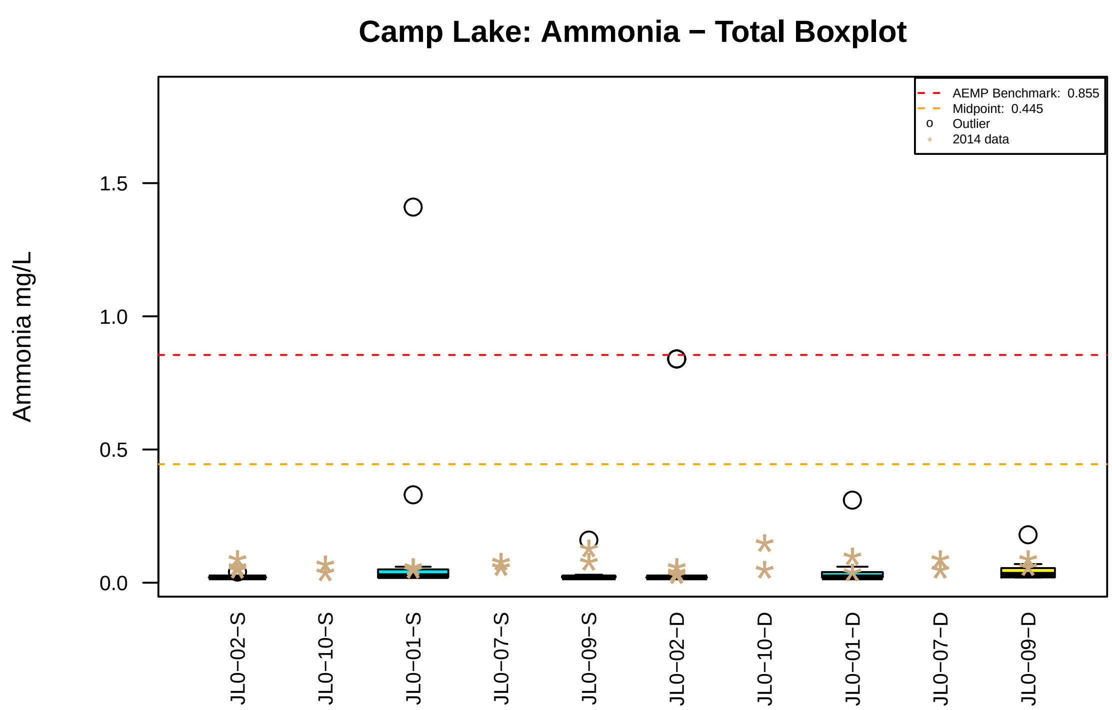

Camp Lake: Cl – Seasonal Scatter Plot
JL0–02S
JL0–02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
total Cl mg/L
7
6
5
4
3
2
1
Summer
Fall
Winter
JL0–02S , JL0–02D


Camp Lake: Cl – Seasonal Boxplot
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L
7
6
5
4
3
2
1
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0–02S , JL0–02D

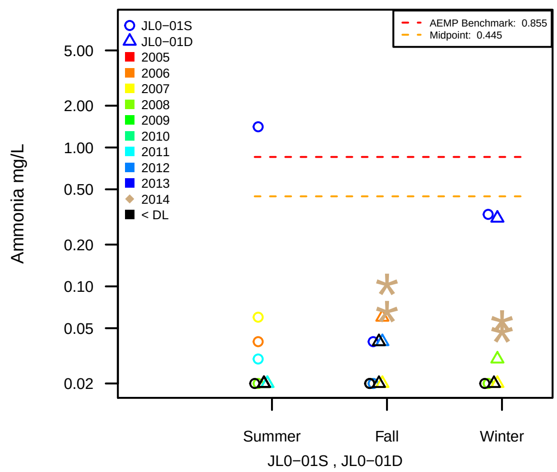

Camp Lake: Cl – Seasonal Scatter Plot
JL0–09S
JL0–09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
total Cl mg/L
7
6
5
4
3
2
1
Summer
Fall
Winter
JL0–09S , JL0–09D


Camp Lake: Cl – Seasonal Boxplot
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L
7
6
5
4
3
2
1
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0–09S , JL0–09D

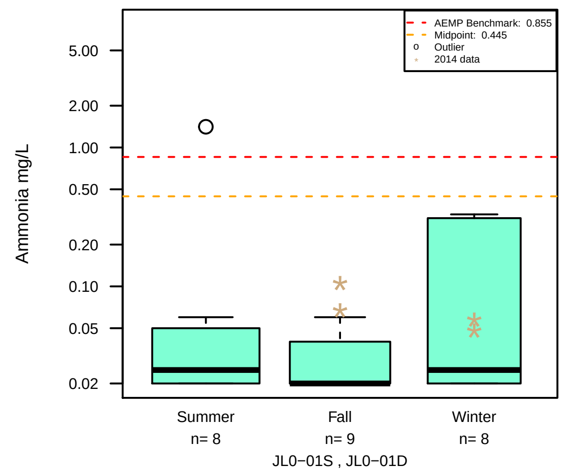

Camp Lake: Ammonia – Total Boxplot on log scale
Ammonia mg/L – log axis
5.00
2.00
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
JL0–02–S
JL0–10–S
JL0–01–S
JL0–07–S
JL0–09–S
JL0–02–D
JL0–10–D
JL0–01–D
JL0–07–D
JL0–09–D


Camp Lake: Ammonia – Total Boxplot
Ammonia mg/L
1.5
1.0
0.5
0.0
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
JL0–02–S
JL0–10–S
JL0–01–S
JL0–07–S
JL0–09–S
JL0–02–D
JL0–10–D
JL0–01–D
JL0–07–D
JL0–09–D

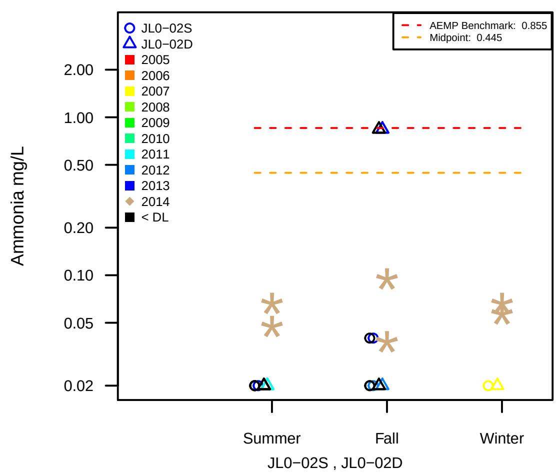
Camp Lake: Ammonia − Seasonal Scatter Plot



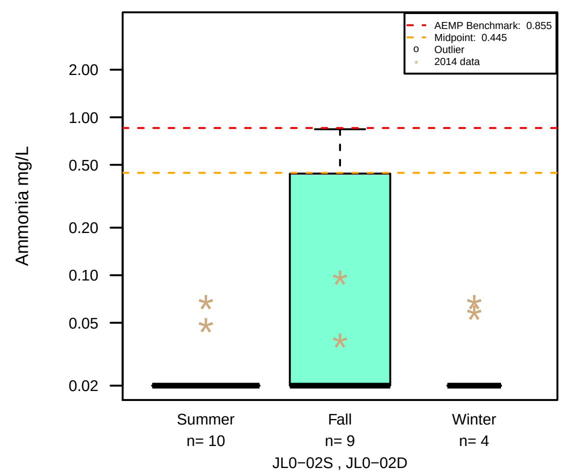
Camp Lake: Ammonia − Seasonal Boxplot



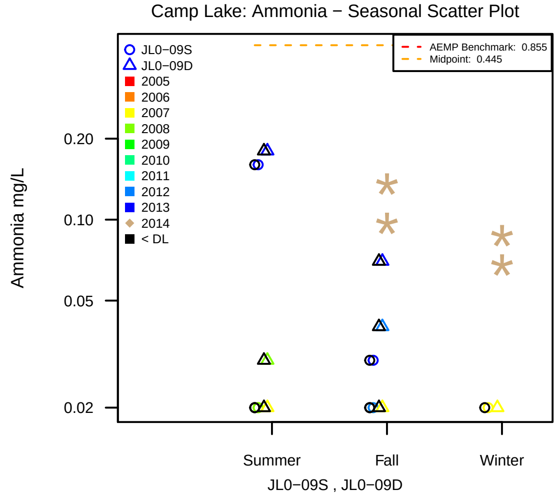
Camp Lake: Ammonia − Seasonal Scatter Plot



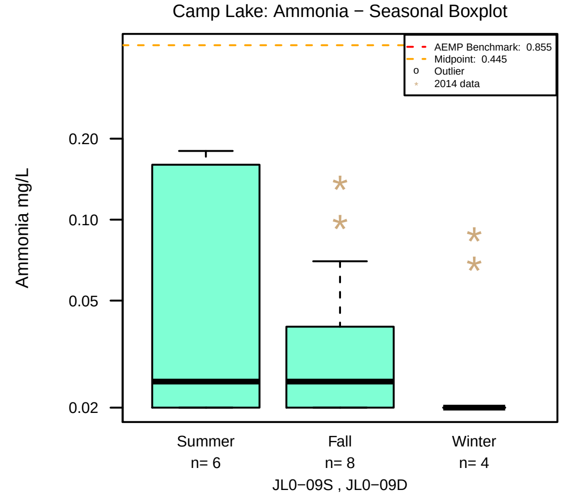
Camp Lake: Ammonia − Seasonal Boxplot

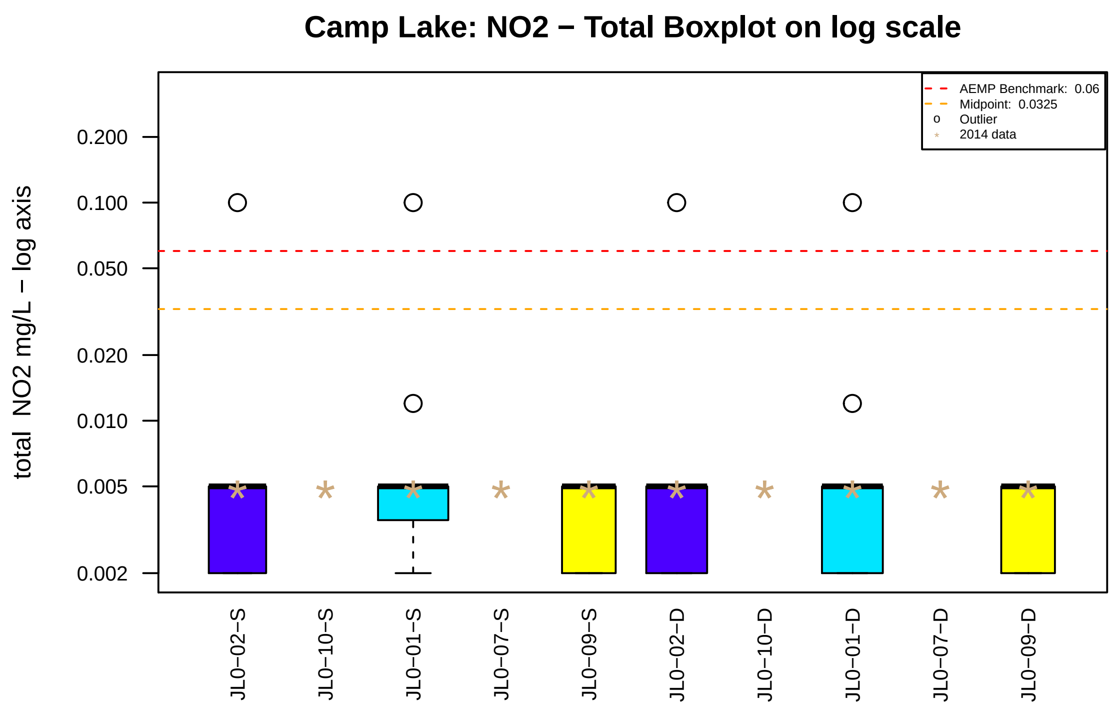


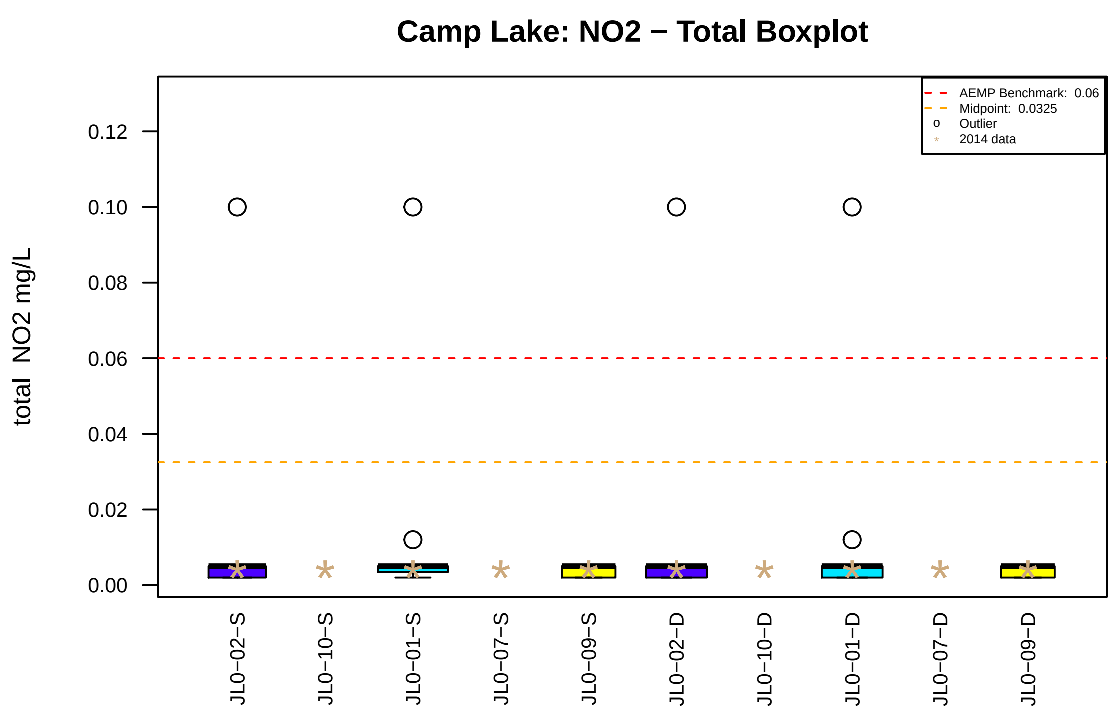
Camp Lake: Ammonia − Seasonal Scatter Plot

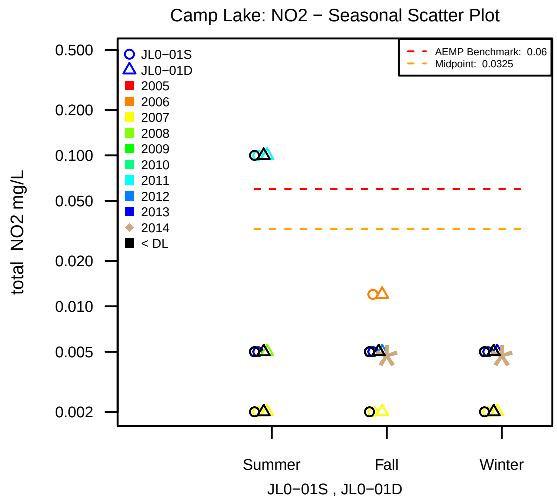


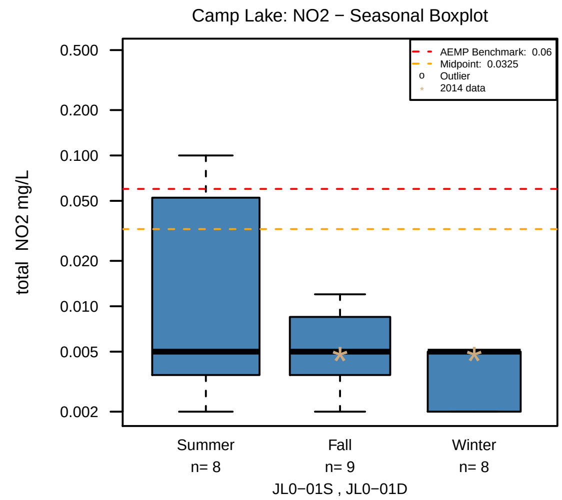
Camp Lake: Ammonia − Seasonal Boxplot

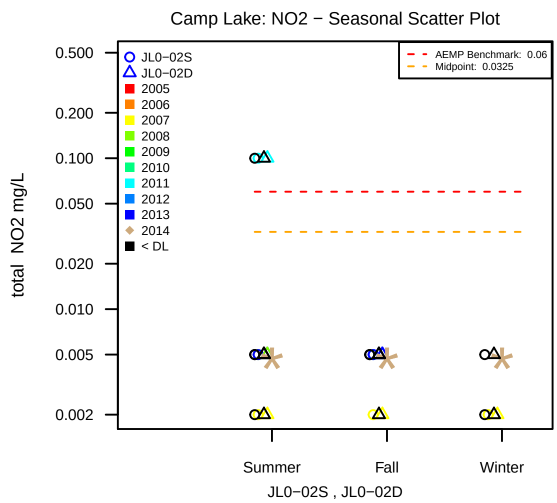


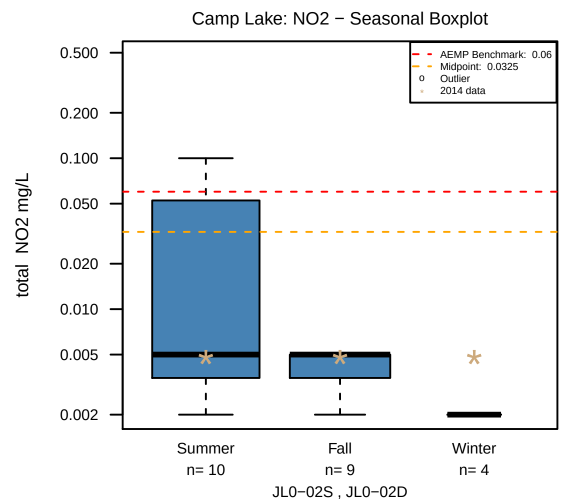

Camp Lake: NO2 − Total Boxplot on log scale
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L − log axis
0.200
0.100
0.050
0.020
0.010
0.005
0.002
JLO−02−S
JLO−10−S
JLO−01−S
JLO−07−S
JLO−09−S
JLO−02−D
JLO−10−D
JLO−01−D
JLO−07−D
JLO−09−D

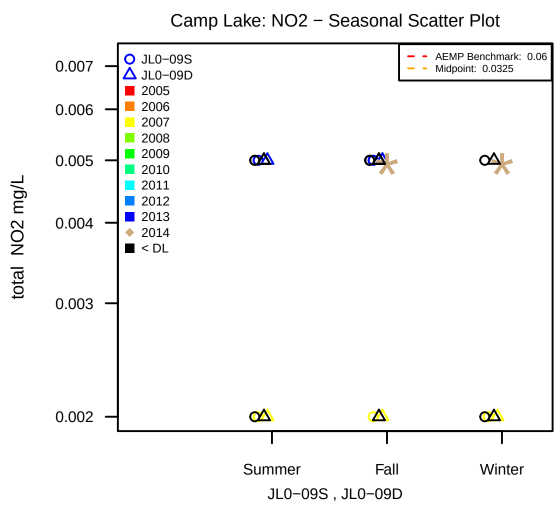

Camp Lake: NO2 − Total Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.12
0.10
0.08
0.06
0.04
0.02
0.00
JLO−02−S
JLO−10−S
JLO−01−S
JLO−07−S
JLO−09−S
JLO−02−D
JLO−10−D
JLO−01−D
JLO−07−D
JLO−09−D

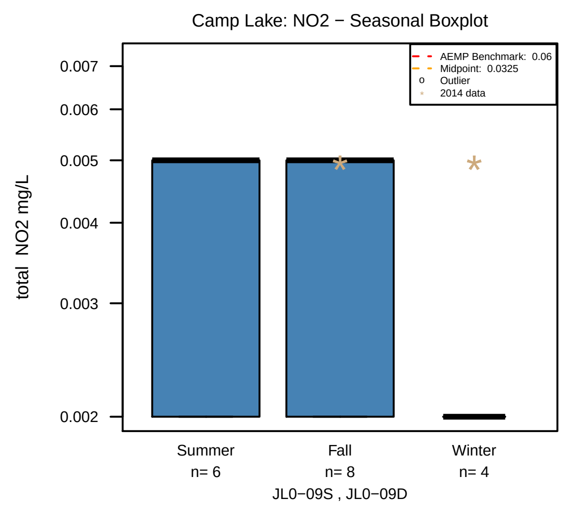

Camp Lake: NO2 − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Summer
Fall
Winter
JL0−01S , JL0−01D

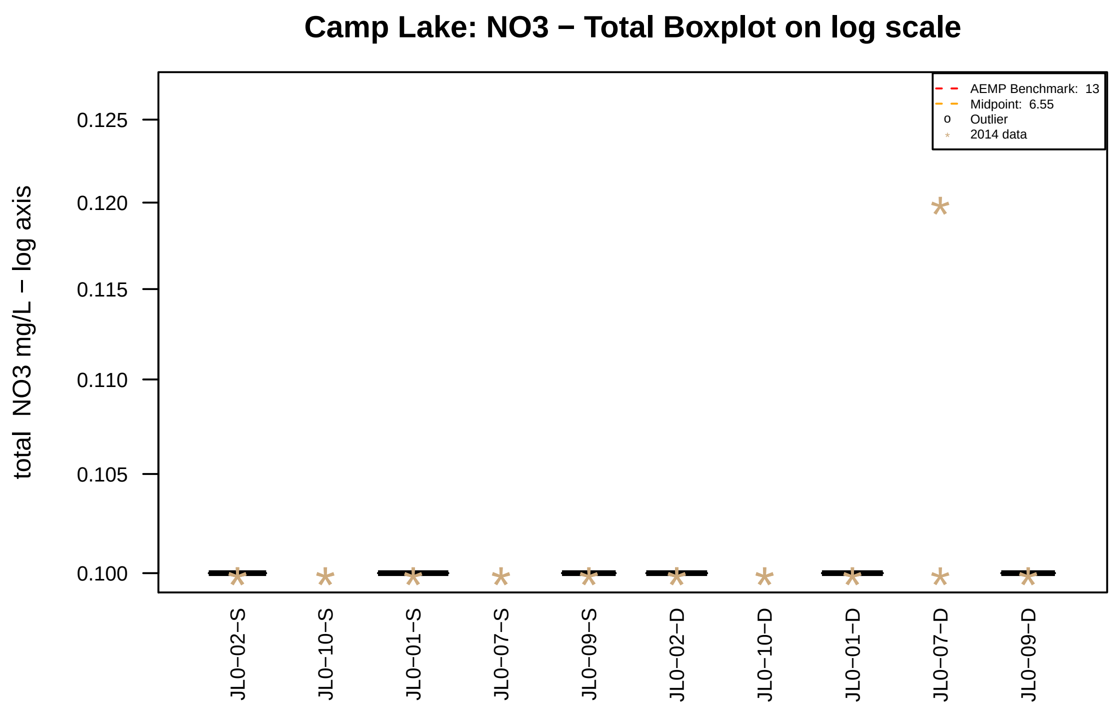

Camp Lake: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

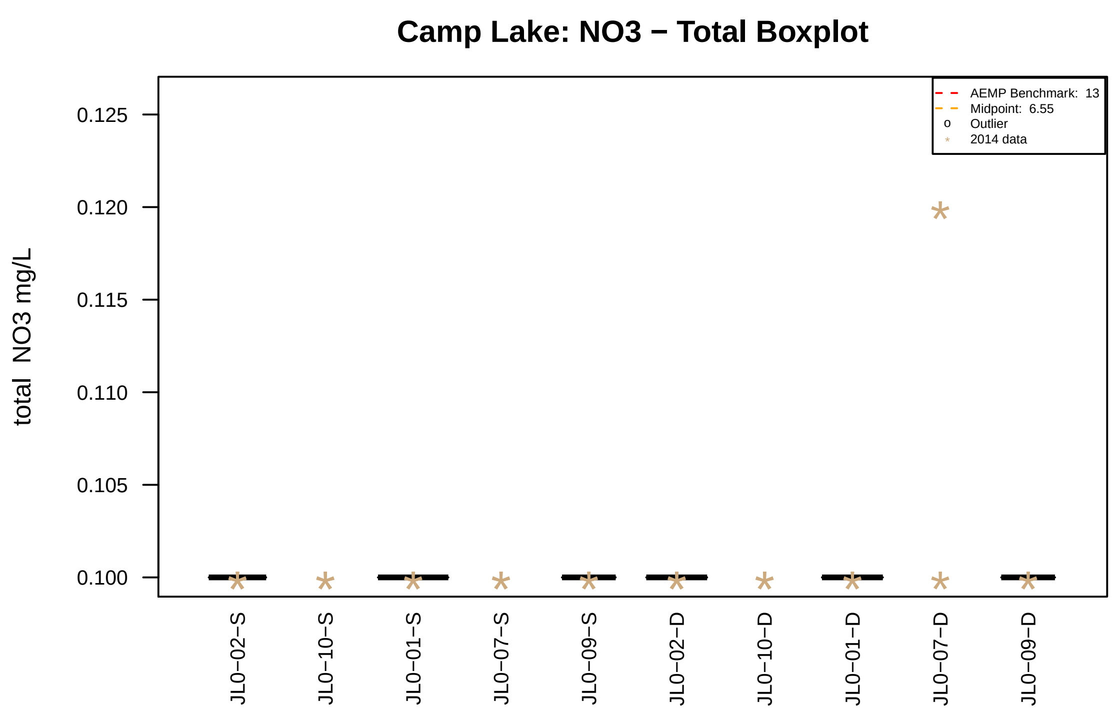

Camp Lake: NO2 − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Summer
Fall
Winter
JL0−02S , JL0−02D

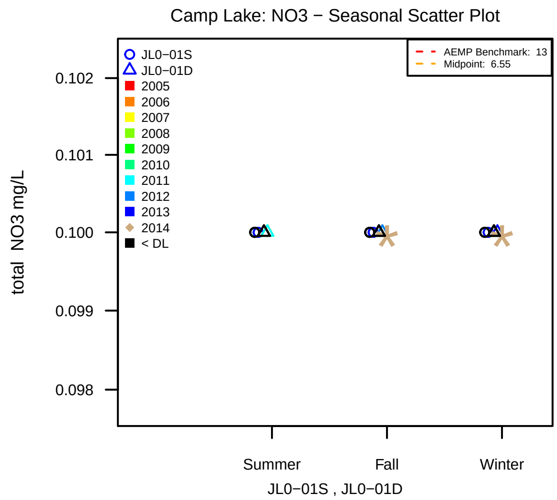

Camp Lake: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

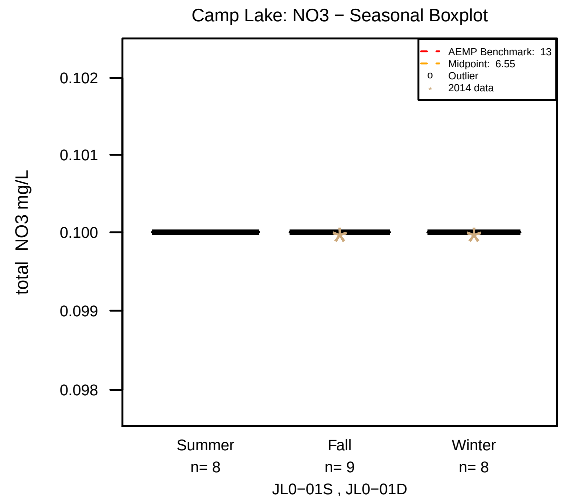

Camp Lake: NO2 − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
0.007
0.006
0.005
0.004
0.003
0.002
Summer
Fall
Winter
JL0−09S , JL0−09D

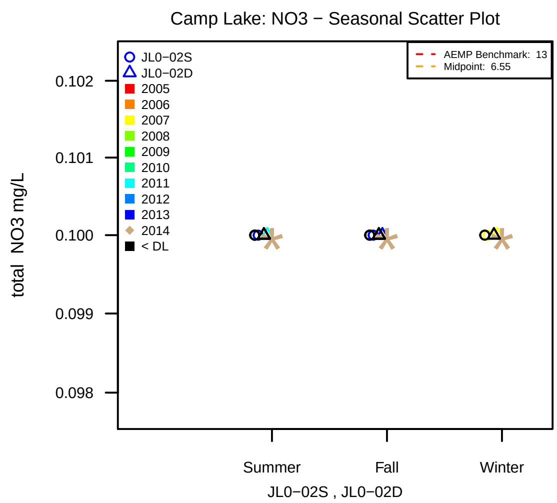

Camp Lake: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.007
0.006
0.005
0.004
0.003
0.002
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

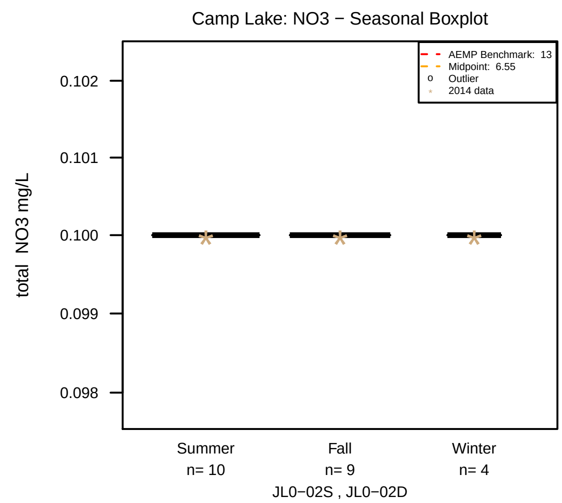

Camp Lake: NO3 − Total Boxplot on log scale
total NO3 mg/L − log axis
0.125
0.120
0.115
0.110
0.105
0.100
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

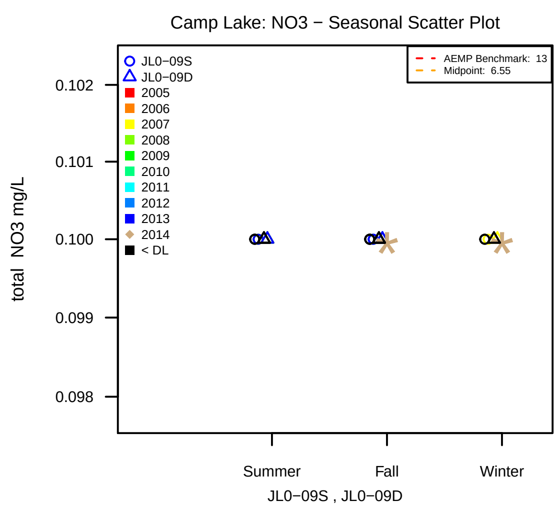

Camp Lake: NO3 − Total Boxplot
total NO3 mg/L
0.125
0.120
0.115
0.110
0.105
0.100
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

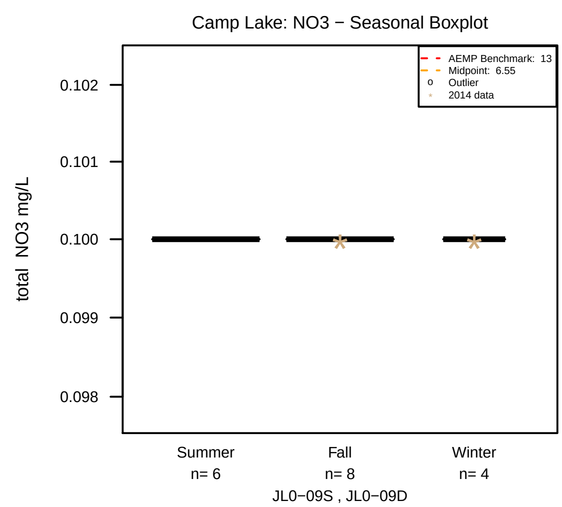

Camp Lake: NO3 − Seasonal Scatter Plot
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
Fall
Winter
JL0−01S , JL0−01D

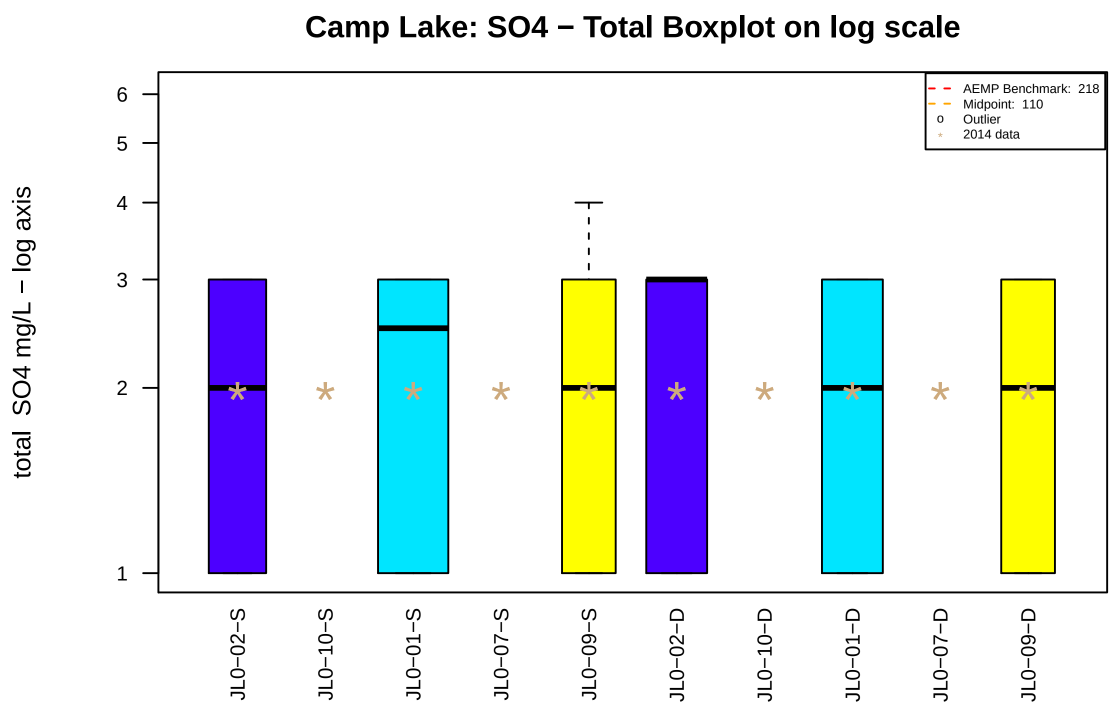

Camp Lake: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D

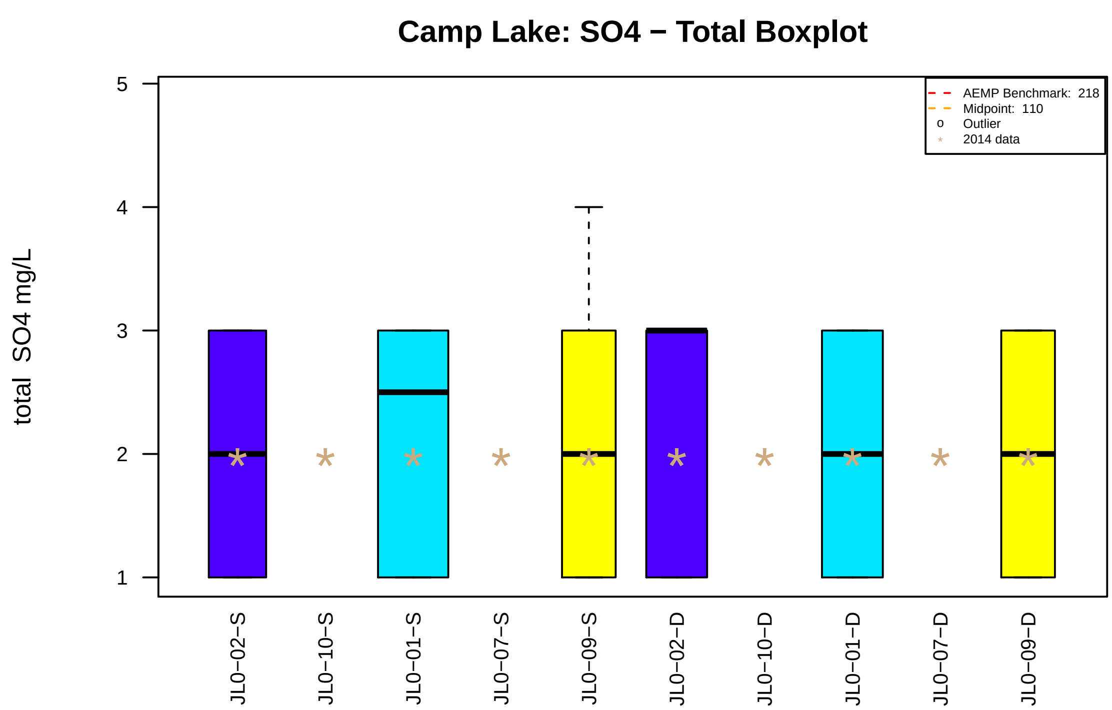

Camp Lake: NO3 − Seasonal Scatter Plot
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
Fall
Winter
JL0−02S , JL0−02D

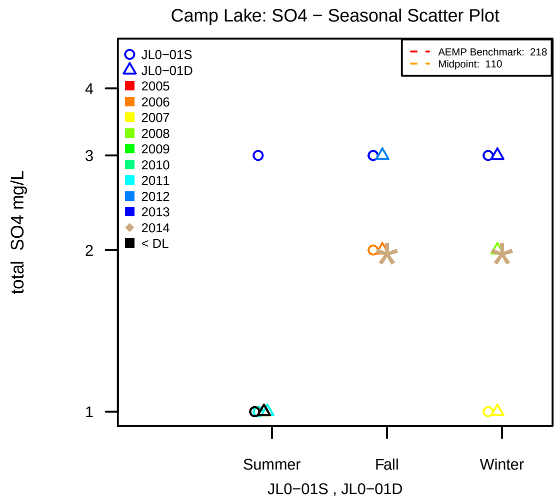

Camp Lake: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D

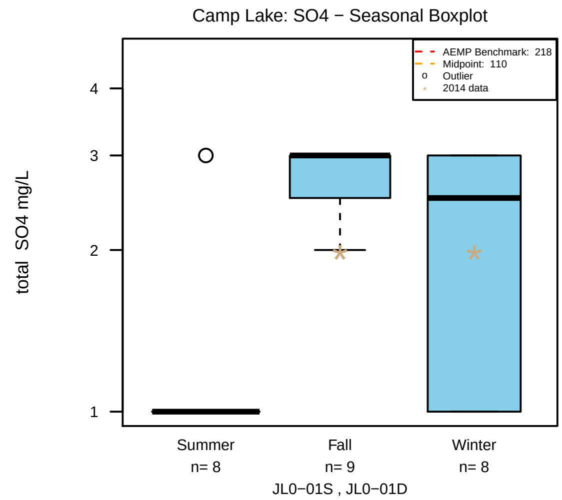

Camp Lake: NO3 − Seasonal Scatter Plot
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
Fall
Winter
JL0−09S , JL0−09D

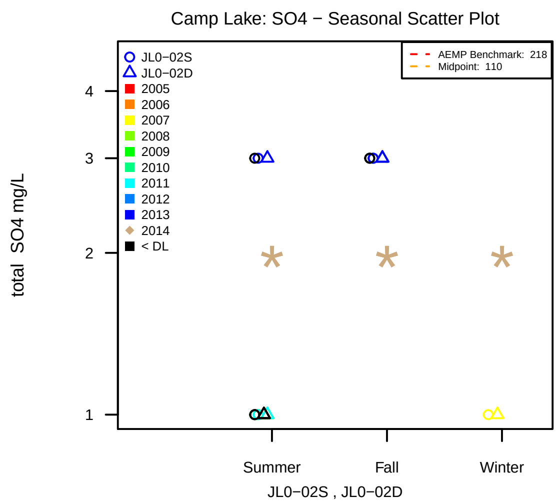

Camp Lake: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

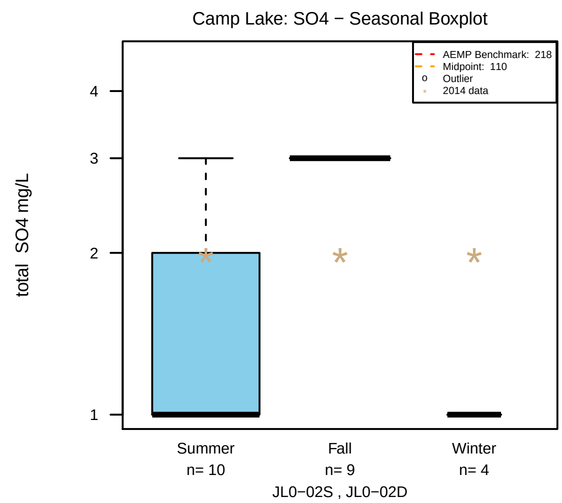

Camp Lake: SO4 − Total Boxplot on log scale
total SO4 mg/L − log axis
6
5
4
3
2
1
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

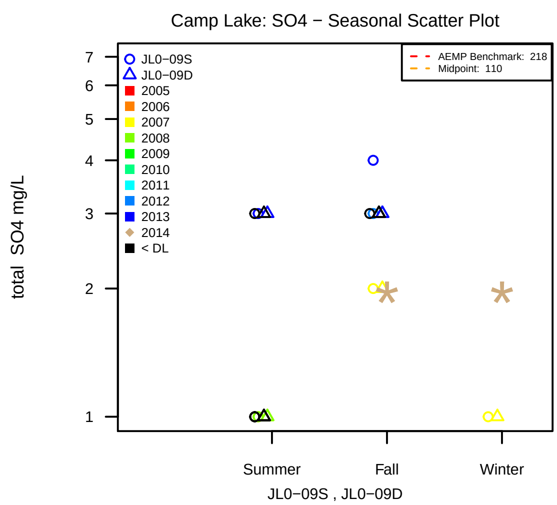

Camp Lake: SO4 − Total Boxplot
total SO4 mg/L
5
4
3
2
1
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
JL0−02−S
JL0−10−S
JL0−01−S
JL0−07−S
JL0−09−S
JL0−02−D
JL0−10−D
JL0−01−D
JL0−07−D
JL0−09−D

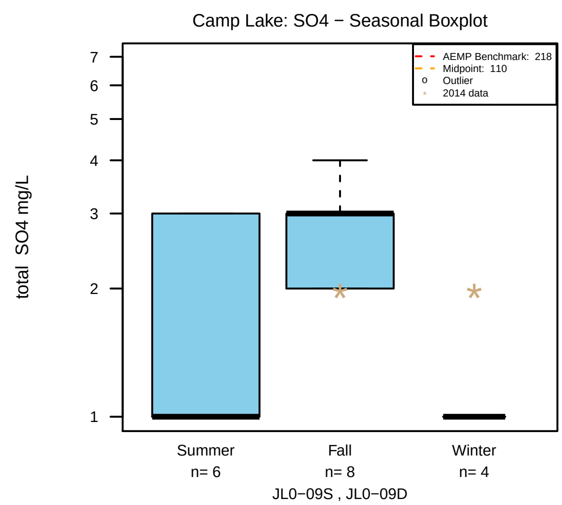

Camp Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
JL0−01S
JL0−01D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
JL0−01S , JL0−01D


Camp Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 8
Fall
n= 9
Winter
n= 8
JL0−01S , JL0−01D


Camp Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
JL0−02S
JL0−02D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
JL0−02S , JL0−02D


Camp Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 10
Fall
n= 9
Winter
n= 4
JL0−02S , JL0−02D


Camp Lake: SO4 − Seasonal Scatter Plot
total SO4 mg/L
JL0−09S
JL0−09D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
JL0−09S , JL0−09D


Camp Lake: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 6
Fall
n= 8
Winter
n= 4
JL0−09S , JL0−09D

APPENDIX A6

GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - SHEARDOWN LAKE NW

(Pages A6-1 to A6-67)

Knight Piésold CONSULTING

APPENDIX A6
GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - SHEARDOWN LAKE NW

The Appendix A6 tables and graphs were generated using the R (2014) statistical package as follows:

Table 1: AEMP Benchmarks and Midpoint Concentrations of Parameters of Interest
Table 2: Sheardown Lake NW Sample Size by Year and Season
Table 3: Sheardown Lake NW Sample Size by Location and Season

Sheardown Lake NW Sample Distributions:

Data have been presented in graphs by Month, Season, Year and Station.

Total Boxplot on Log Scale and Total Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Seasonal Scatter Plot and Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Reference:

R Development Core Team, 2014. *R: A language and environment for statistical computing*. R. Foundation for Statistical Computing, Vienna, Austria. Retrieved from: http://www.R-project.org.

Appendix A6 - Sheardown Lake NW

Table 1: Sheardown Lake NW: AEMP Benchmarks and Midpoints

	AEMP Benchmark	Midpoint	Minimum MDL	Maximum MDL
Al	0.173	0.09205	0.001	0.003
As	0.005	0.00255	1e-04	1e-04
Cd	9e-05	5e-05	1e-05	1.7e-05
Cr	0.000642	0.00037	2e-05	5e-04
Co	0.004	0.00205	1e-04	2e-04
Cu	0.0024	0.00165	all > MDL	all > MDL
Fe	0.3	0.165	0.003	0.03
Pb	0.001	0.00052	5e-05	5e-05
Ni	0.025	0.01284	all > MDL	all > MDL
Ag	1e-04	6e-05	1e-06	1e-04
Tl	8e-04	0.00045	1e-06	1e-04
V	0.006	0.0035	0.001	0.001
Zn	0.03	0.0165	0.001	0.003
Cl	120	61.5	all > MDL	all > MDL
Ammonia	0.855	0.4425	0.02	0.38
NO2	0.06	0.0325	0.002	0.1
NO3	13	6.55	0.1	0.1
SO4	218	110.5	all > MDL	all > MDL

Table 2: Sheardown Lake NW Sample Size by Year and Season

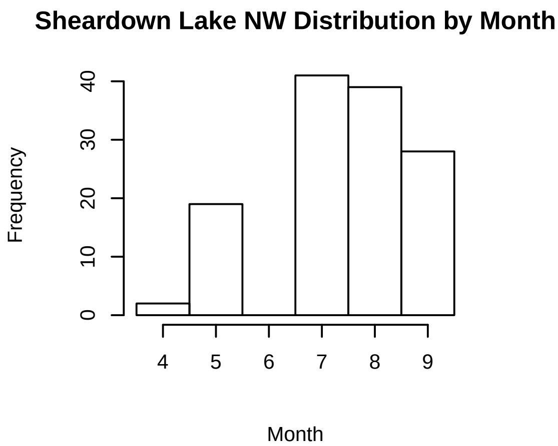
	Spring	Summer	Fall
2006	2	2	0
2007	10	10	4
2008	11	10	2
2011	6	6	0
2012	0	6	2
2013	13	8	1
2014	12	12	12

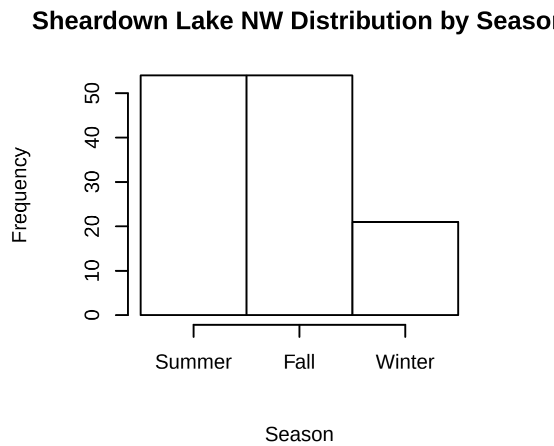
Table 3: Sheardown Lake NW Sample Size by Location and Season

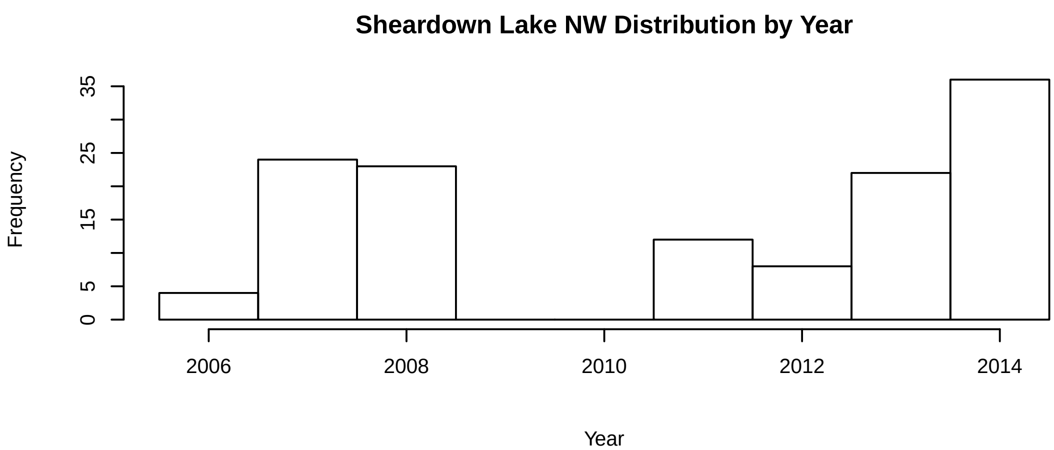
	Spring	Summer	Fall
DL0-01-5-S	5	6	3
DL0-01-1-S	6	7	3
DD-HAB9-1-S	1	1	1
DL0-01-2-S	4	4	1
DL0-01-4-S	6	3	1
DL0-01-7-S	5	6	1
DL0-01-5-D	5	6	3
DL0-01-1-D	6	7	3
DD-HAB9-1-D	1	1	1
DL0-01-2-D	4	4	1
DL0-01-4-D	3	4	1
DL0-01-7-D	8	5	1

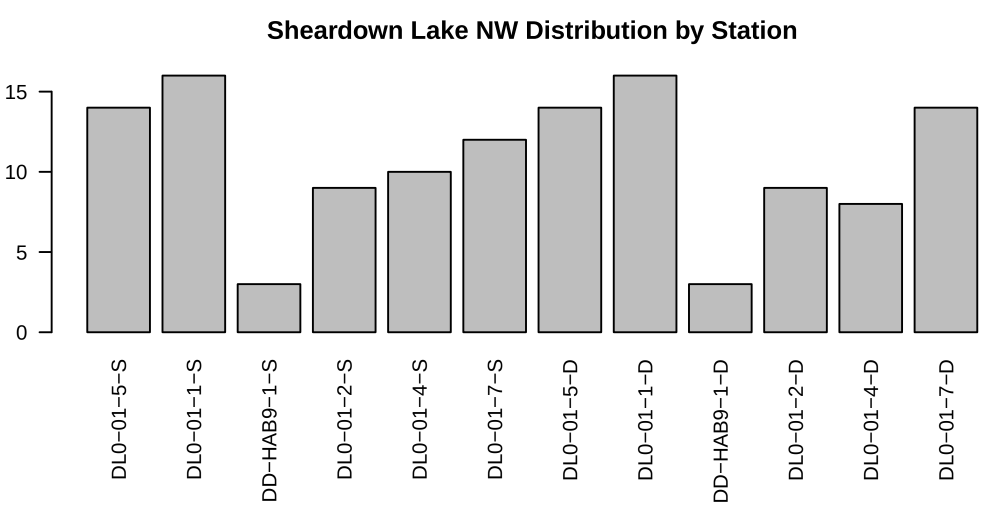
Table 4: 2014 Values Greater than Maximum of Sheardown Lake NW Baseline Data

	Parameter	Baseline Max	Station	Value
1	pH	8.33	DL0-01-7-D	8.99
2	CaCO3	77.6	DL0-01-7-S	78
3	Alkalinity	72	DL0-01-4-D	73

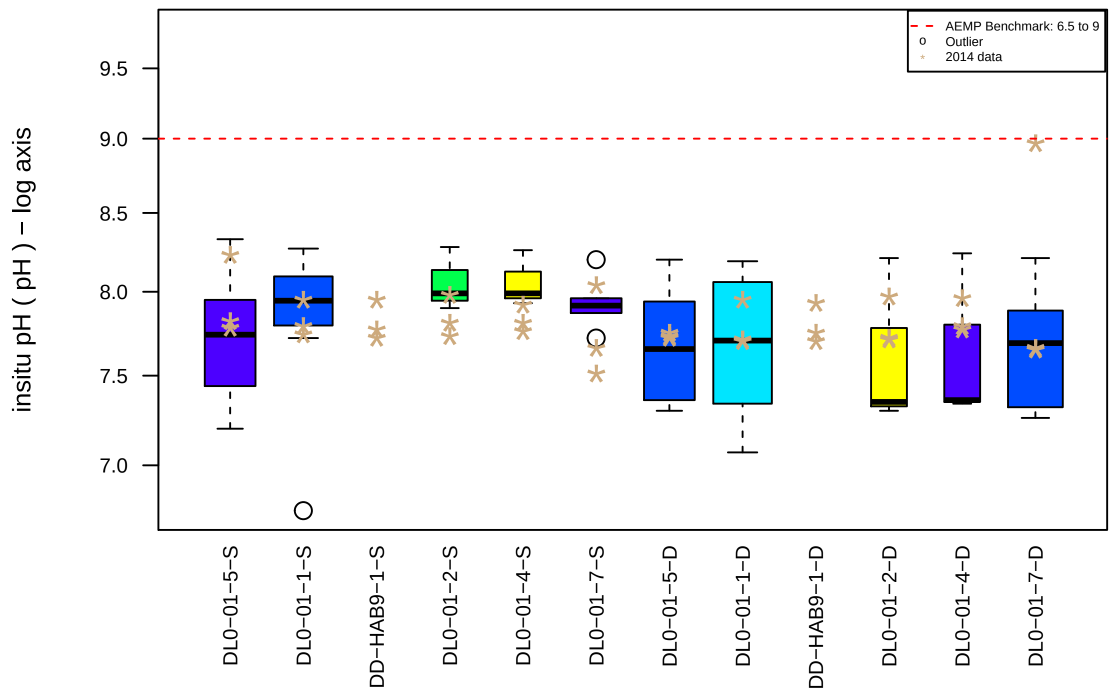

Sheardown Lake NW Distribution by Month
Frequency
0
10
20
30
40
4
5
6
7
8
9
Month


Sheardown Lake NW Distribution by Season
Frequency
0
10
20
30
40
50
Summer
Fall
Winter
Season

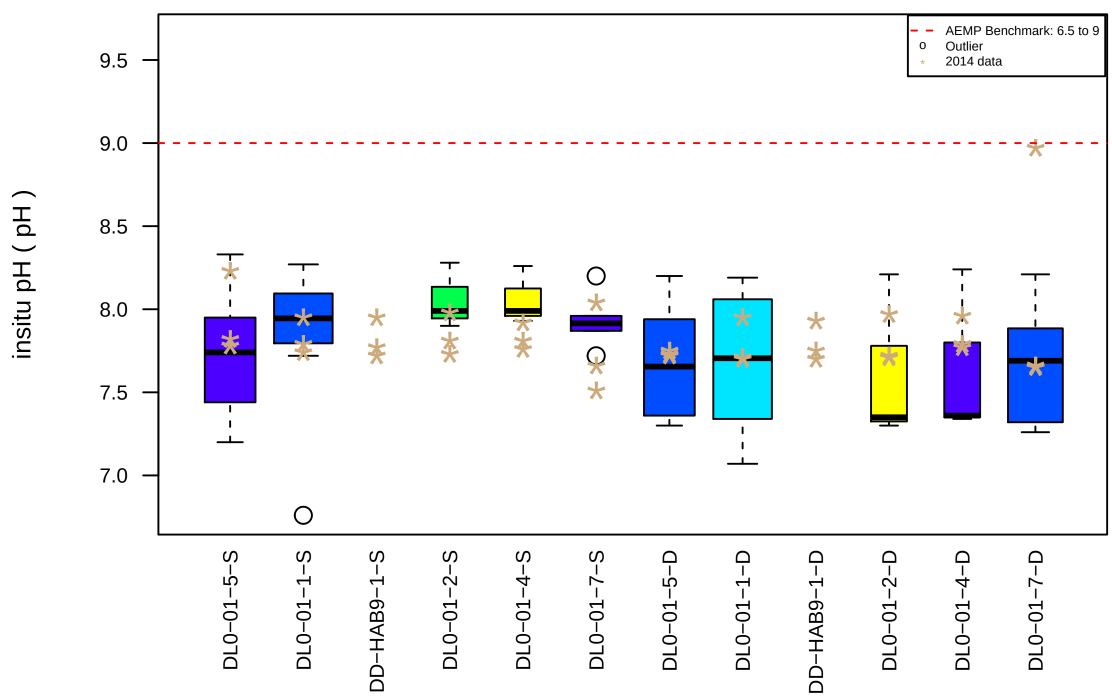

Sheardown Lake NW Distribution by Year
Frequency
0
5
15
25
35
2006
2008
2010
2012
2014
Year

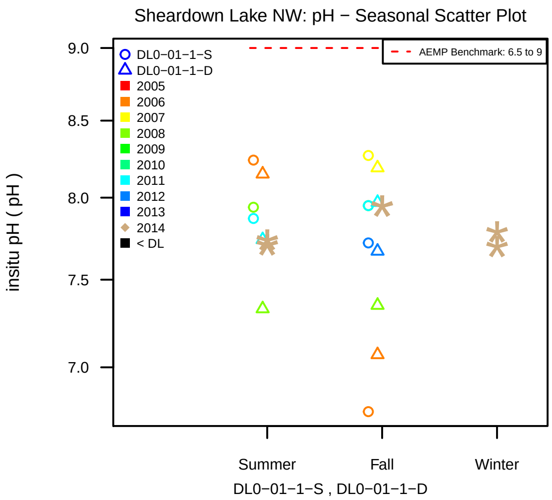

Sheardown Lake NW Distribution by Station
0
5
10
15
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

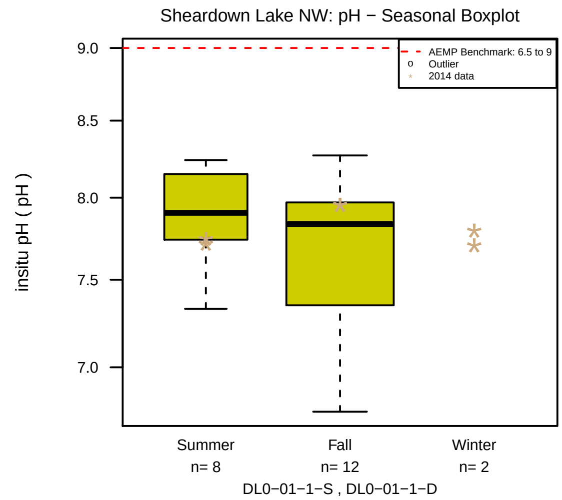
Sheardown Lake NW: pH – Total Boxplot on log scale

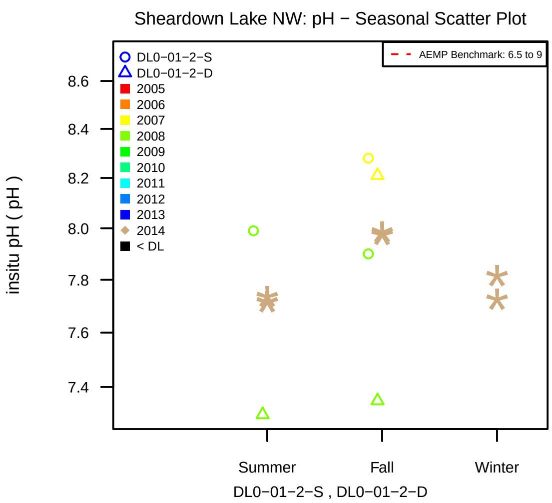


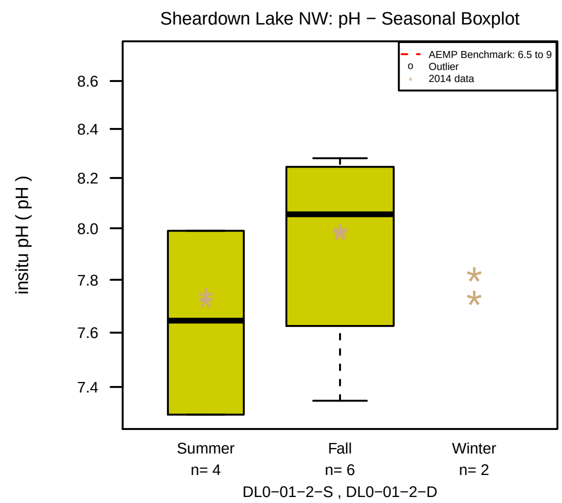
Sheardown Lake NW: pH – Total Boxplot

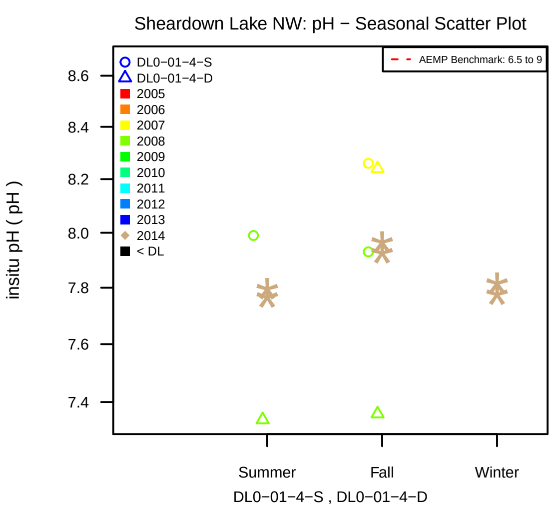


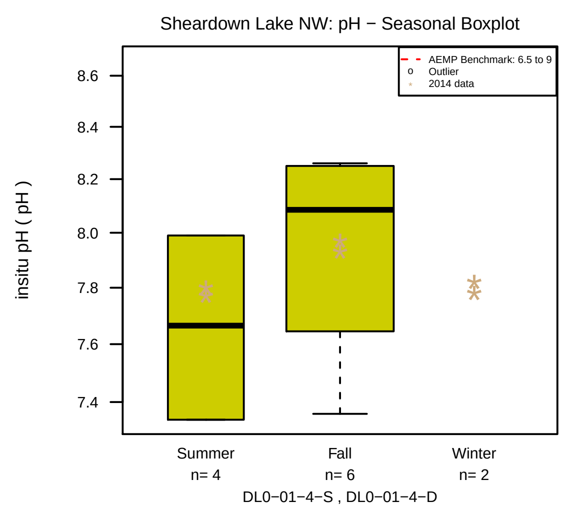

Sheardown Lake NW: pH − Seasonal Scatter Plot
insitu pH (pH)
9.0
8.5
8.0
7.5
7.0
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

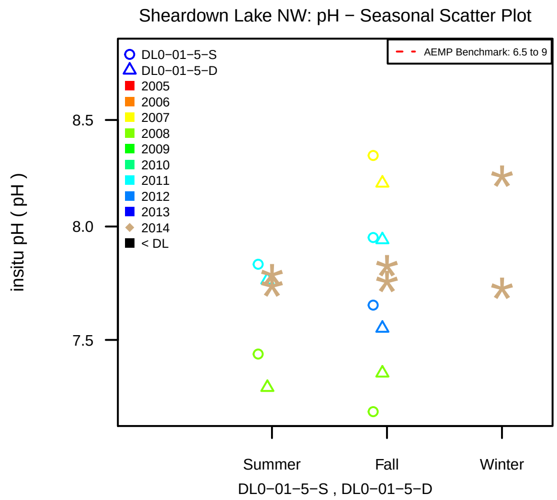

Sheardown Lake NW: pH − Seasonal Boxplot
insitu pH (pH)
9.0
8.5
8.0
7.5
7.0
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
Summer
n= 8
Fall
n= 12
Winter
n= 2
DL0−01−1−S , DL0−01−1−D

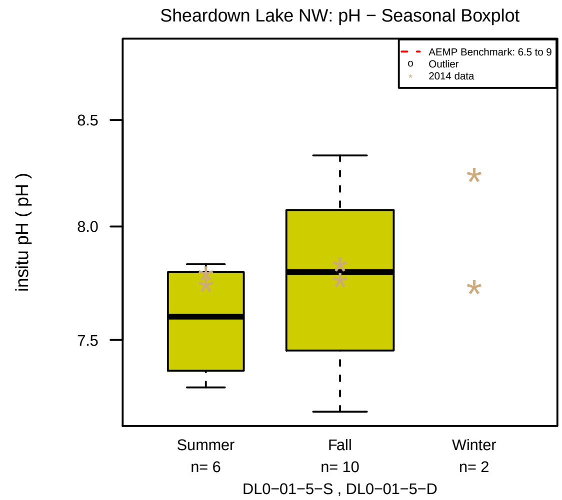

Sheardown Lake NW: pH − Seasonal Scatter Plot
insitu pH (pH)
8.6
8.4
8.2
8.0
7.8
7.6
7.4
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

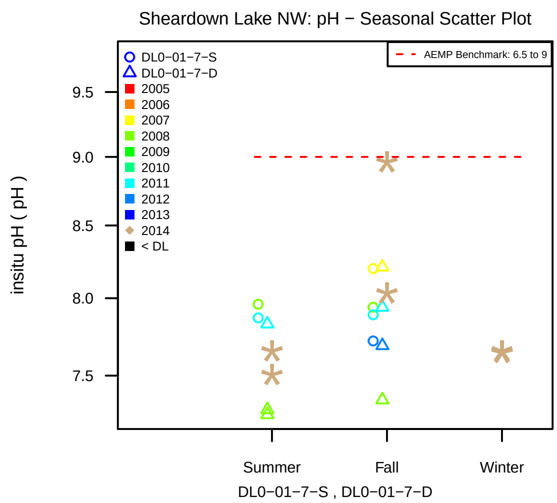

Sheardown Lake NW: pH − Seasonal Boxplot
insitu pH (pH)
8.6
8.4
8.2
8.0
7.8
7.6
7.4
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
Summer
n= 4
Fall
n= 6
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

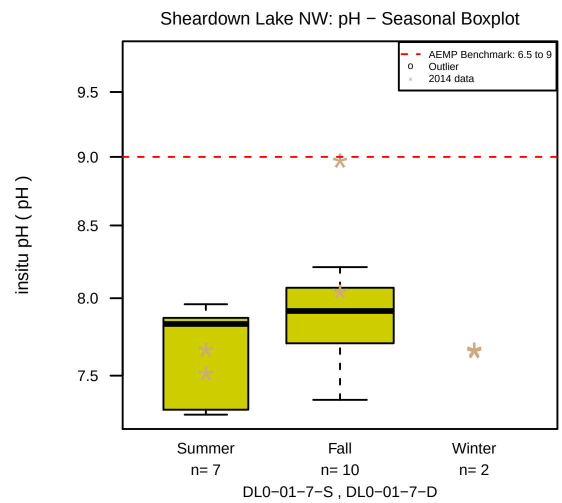

Sheardown Lake NW: pH − Seasonal Scatter Plot
insitu pH (pH)
8.6
8.4
8.2
8.0
7.8
7.6
7.4
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

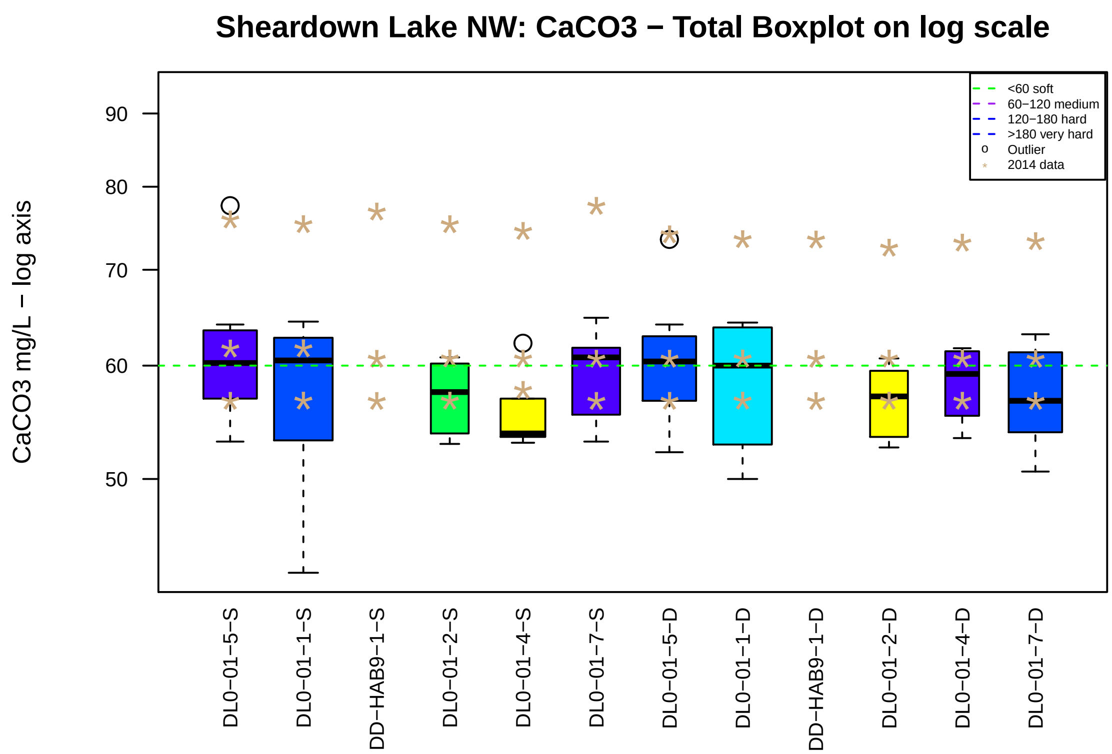

Sheardown Lake NW: pH − Seasonal Boxplot
insitu pH (pH)
8.6
8.4
8.2
8.0
7.8
7.6
7.4
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
Summer
n= 4
Fall
n= 6
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

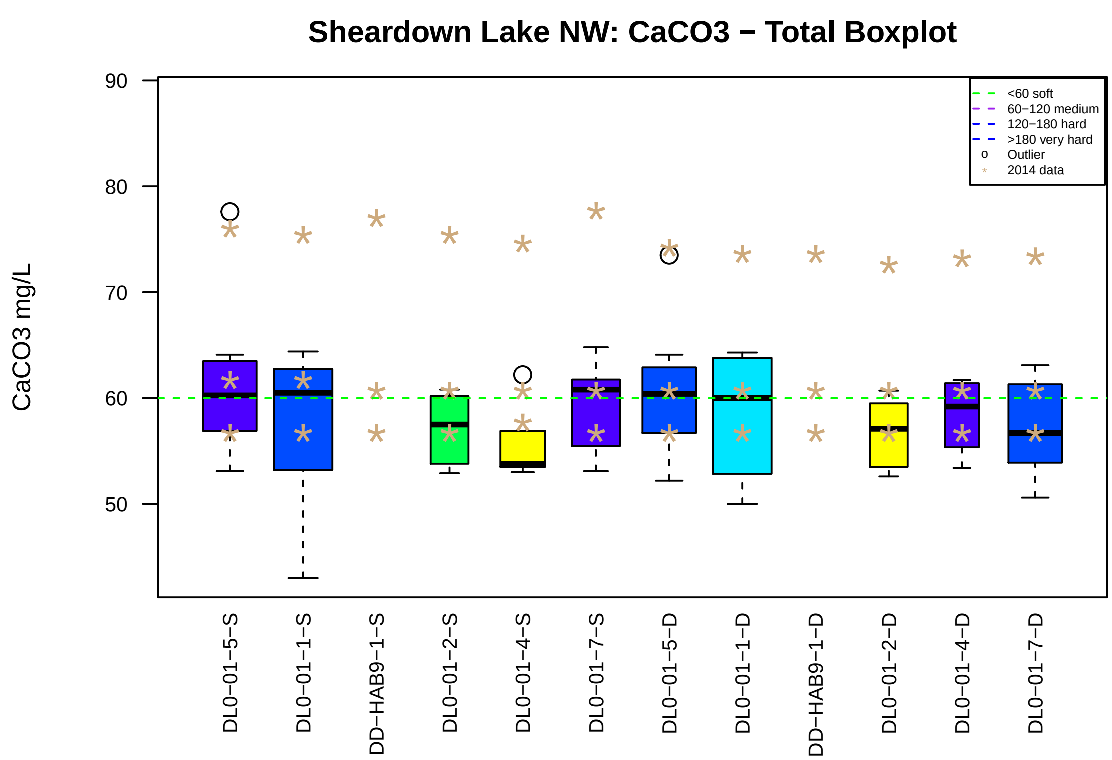

Sheardown Lake NW: pH − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
insitu pH (pH)
8.5
8.0
7.5
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

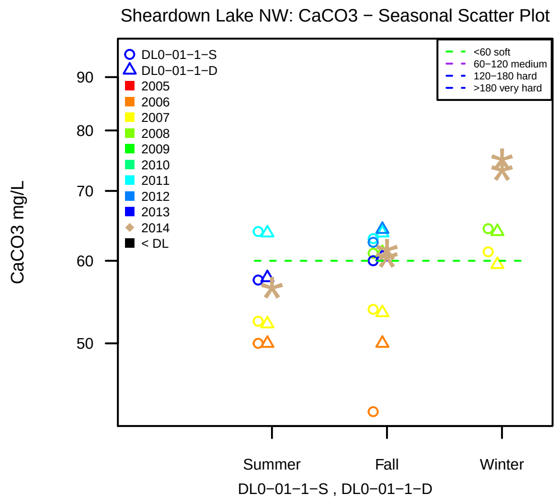

Sheardown Lake NW: pH − Seasonal Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
8.5
8.0
7.5
Summer
n= 6
Fall
n= 10
Winter
n= 2
DL0−01−5−S , DL0−01−5−D

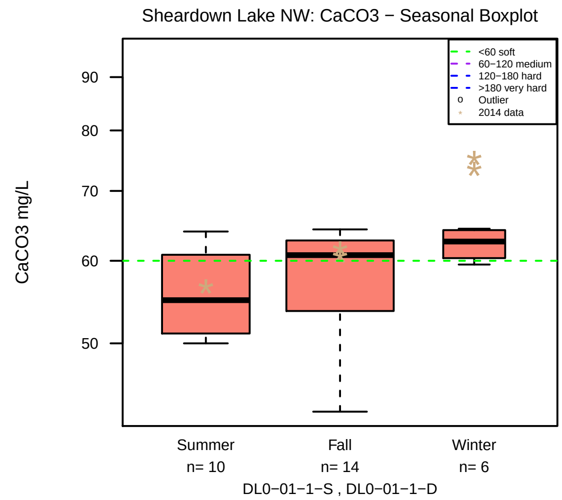

Sheardown Lake NW: pH − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
insitu pH (pH)
9.5
9.0
8.5
8.0
7.5
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

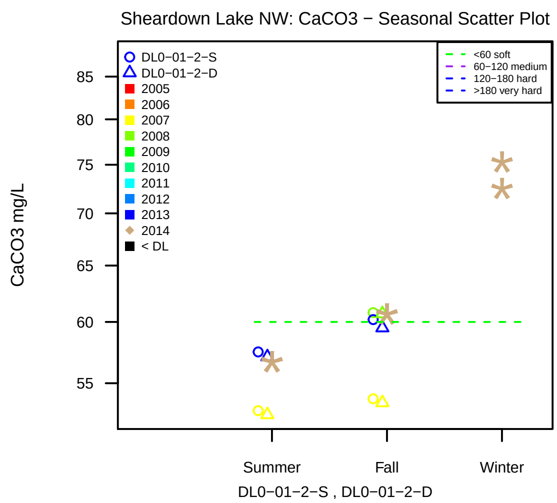

Sheardown Lake NW: pH − Seasonal Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
9.5
9.0
8.5
8.0
7.5
Summer
n= 7
Fall
n= 10
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

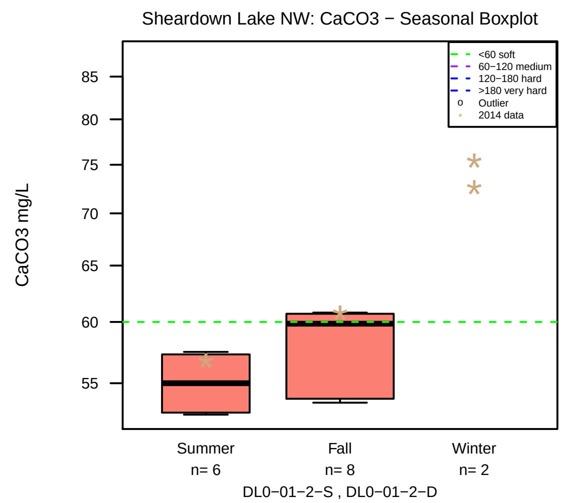

Sheardown Lake NW: CaCO3 − Total Boxplot on log scale
CaCO3 mg/L − log axis
90
80
70
60
50
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

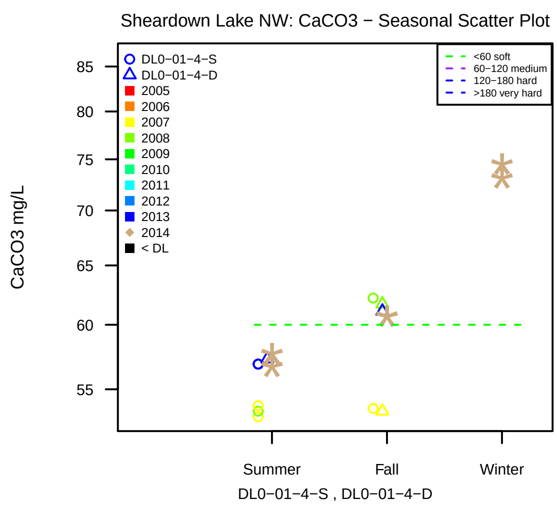

Sheardown Lake NW: CaCO3 − Total Boxplot
CaCO3 mg/L
90
80
70
60
50
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

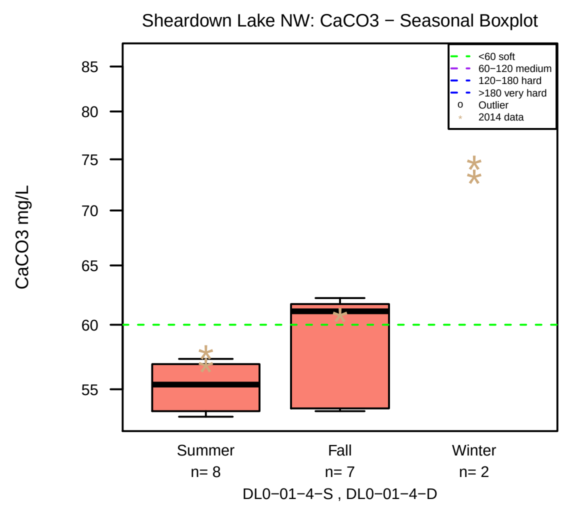

Sheardown Lake NW: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

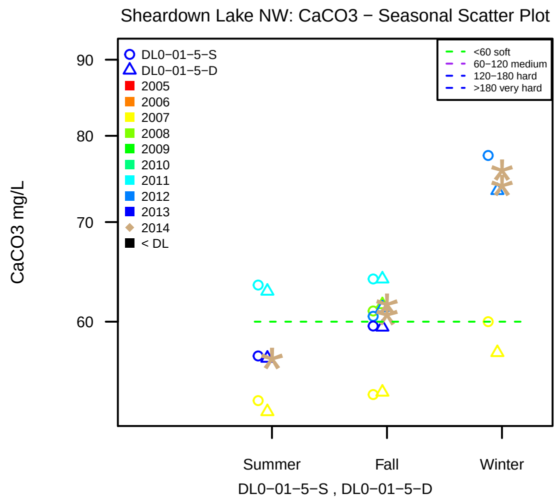

Sheardown Lake NW: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Summer n= 10
Fall n= 14
Winter n= 6
DL0−01−1−S , DL0−01−1−D

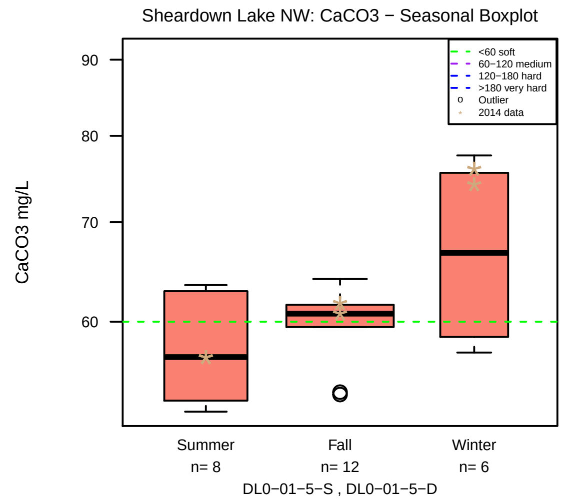

Sheardown Lake NW: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

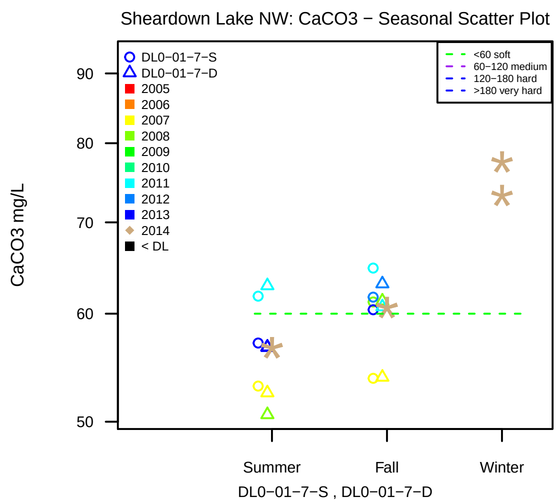

Sheardown Lake NW: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Summer n= 6
Fall n= 8
Winter n= 2
DL0−01−2−S , DL0−01−2−D

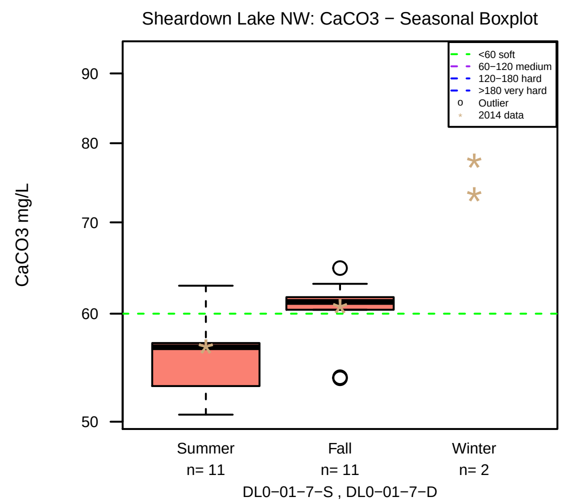

Sheardown Lake NW: CaCO3 − Seasonal Scatter Plot
CaCO3 mg/L
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

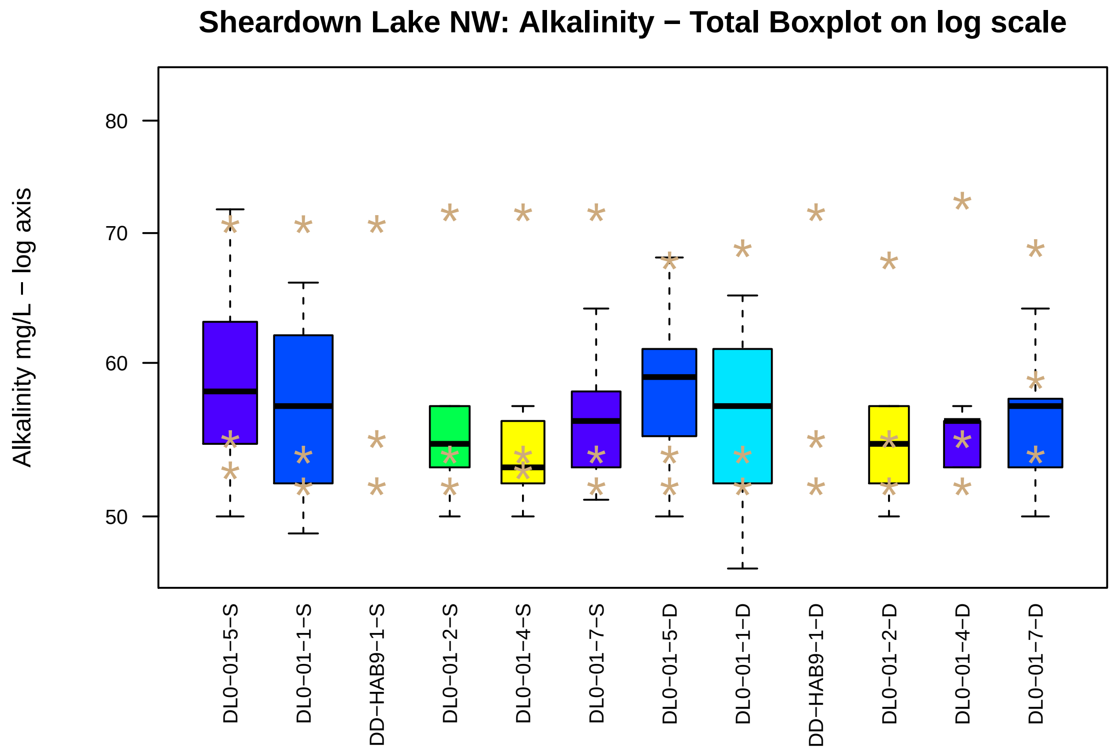

Sheardown Lake NW: CaCO3 − Seasonal Boxplot
CaCO3 mg/L
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
Summer n= 8
Fall n= 7
Winter n= 2
DL0−01−4−S , DL0−01−4−D

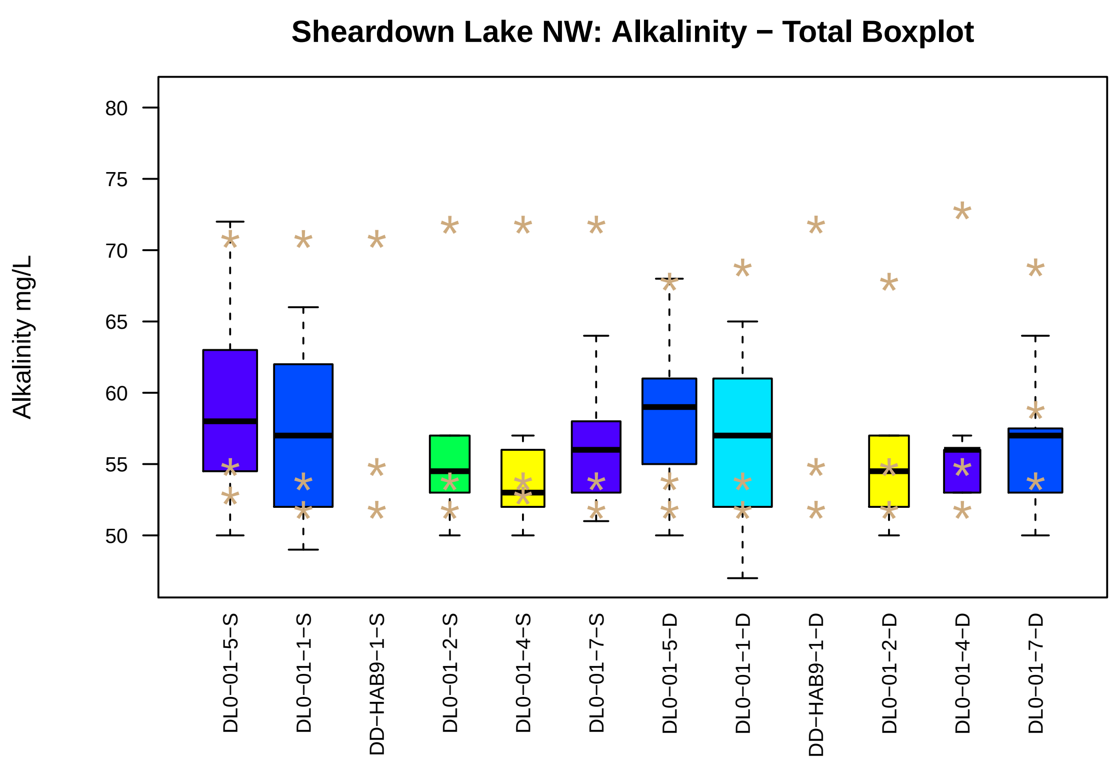

Sheardown Lake NW: CaCO3 − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
CaCO3 mg/L
90
80
70
60
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

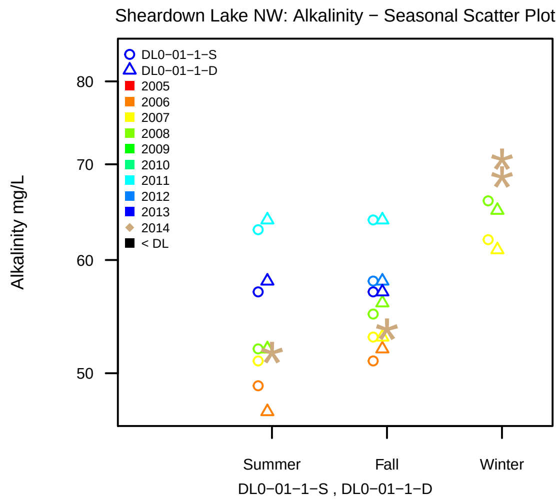

Sheardown Lake NW: CaCO3 − Seasonal Boxplot
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
CaCO3 mg/L
90
80
70
60
Summer
n= 8
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

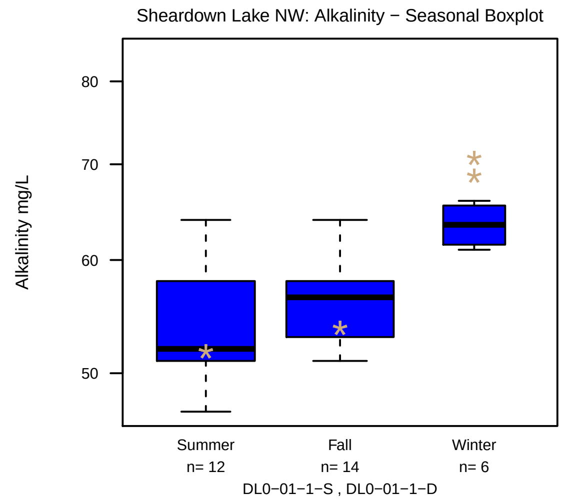

Sheardown Lake NW: CaCO3 − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
<60 soft
60−120 medium
120−180 hard
>180 very hard
CaCO3 mg/L
90
80
70
60
50
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

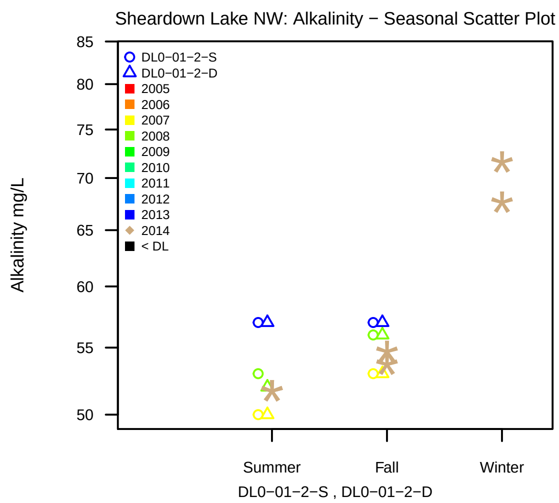

Sheardown Lake NW: CaCO3 − Seasonal Boxplot
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
CaCO3 mg/L
90
80
70
60
50
Summer
n= 11
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

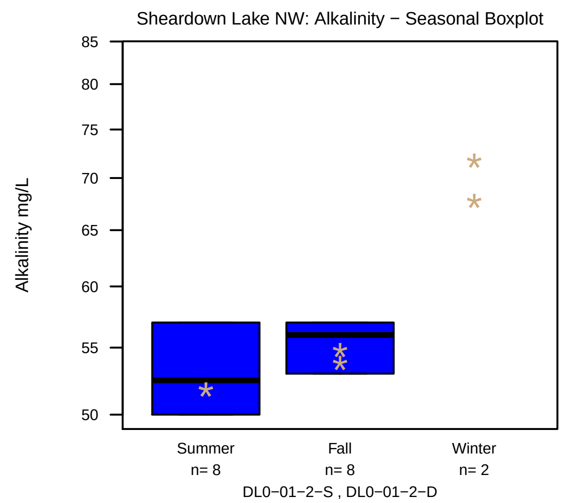

Sheardown Lake NW: Alkalinity − Total Boxplot on log scale
Alkalinity mg/L − log axis
80
70
60
50
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

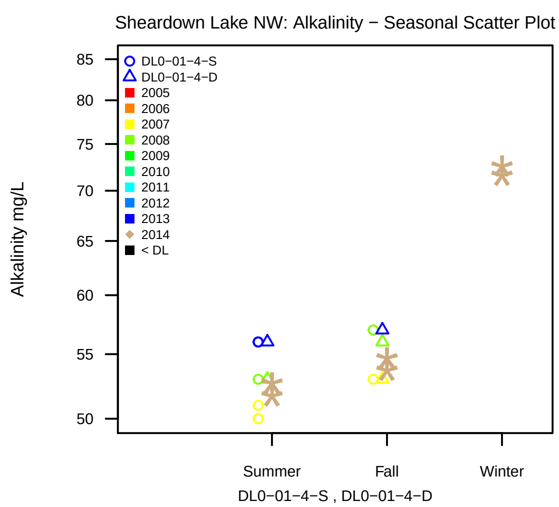

Sheardown Lake NW: Alkalinity − Total Boxplot
Alkalinity mg/L
80
75
70
65
60
55
50
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

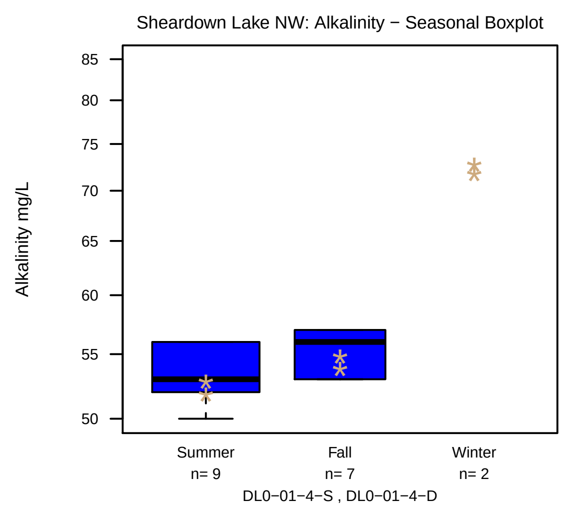

Sheardown Lake NW: Alkalinity − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

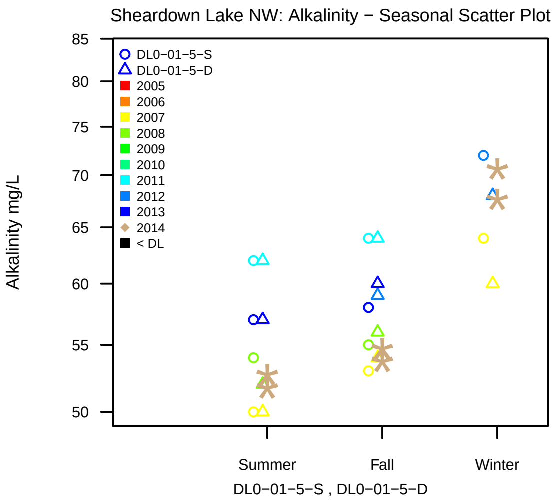

Sheardown Lake NW: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

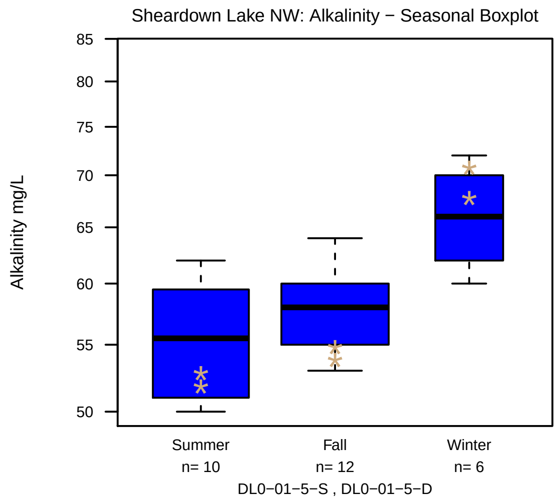

Sheardown Lake NW: Alkalinity − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

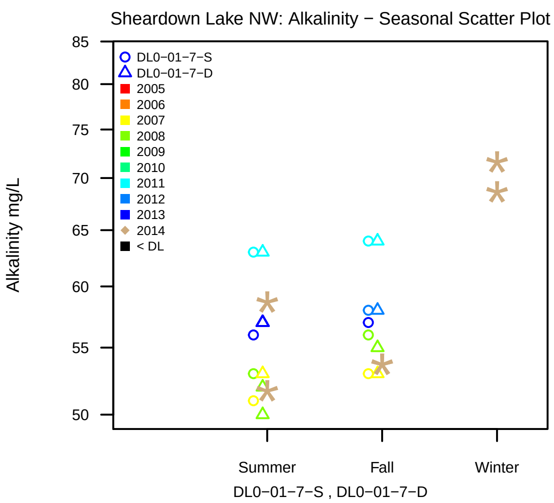

Sheardown Lake NW: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

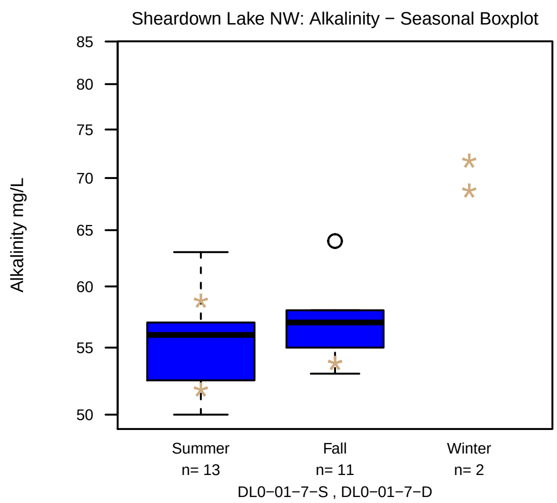

Sheardown Lake NW: Alkalinity − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

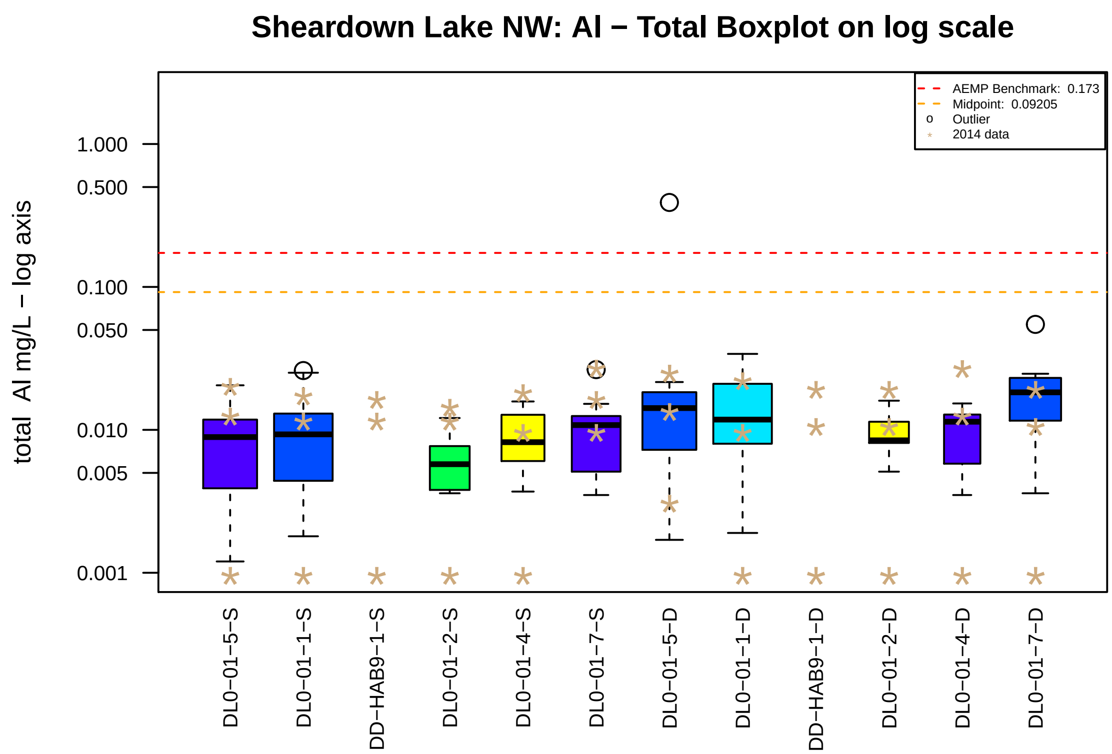

Sheardown Lake NW: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

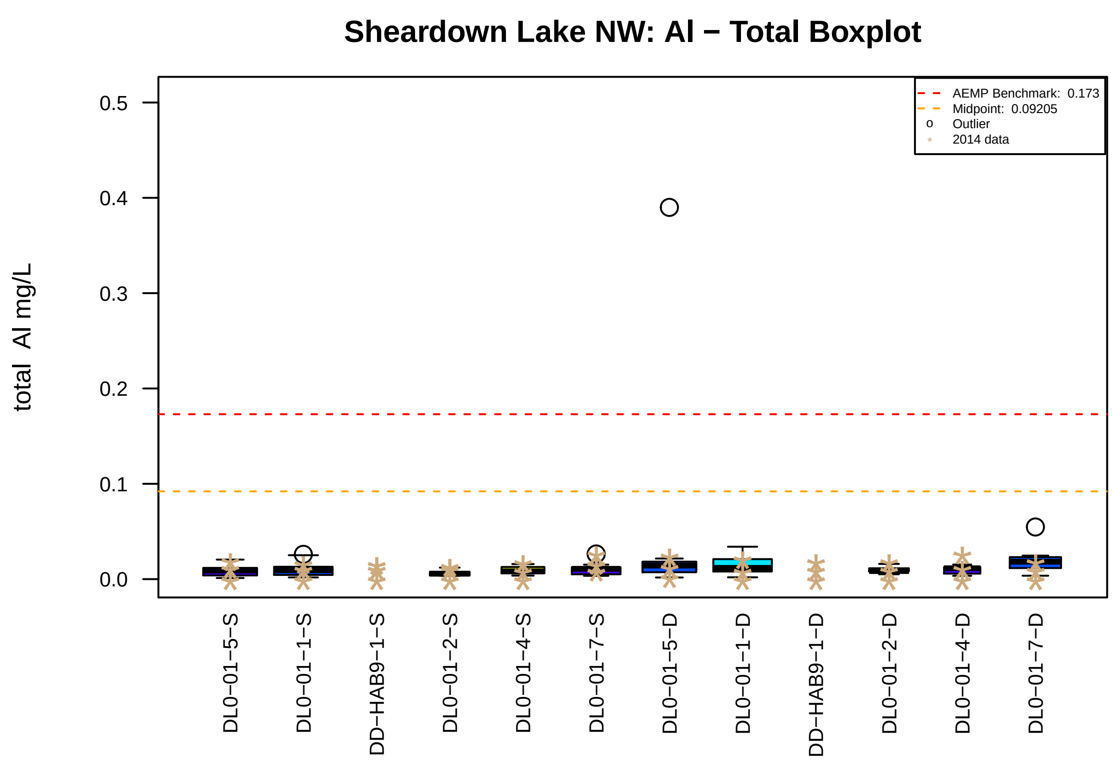

Sheardown Lake NW: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

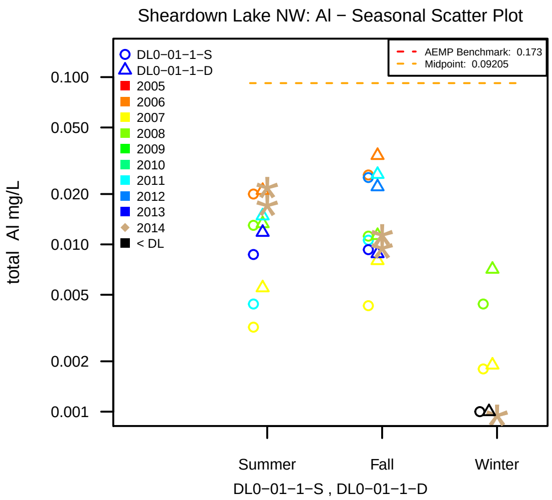

Sheardown Lake NW: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

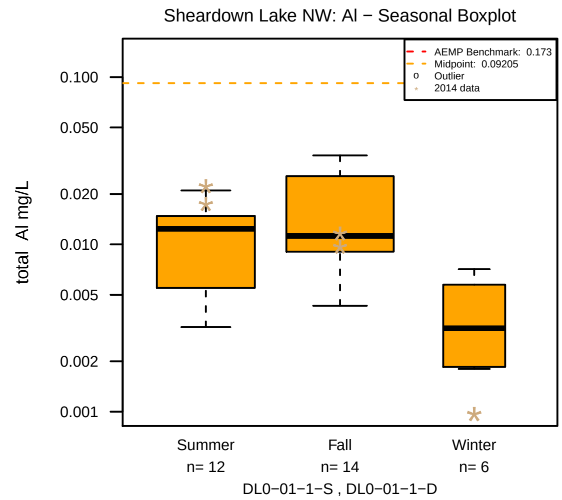

Sheardown Lake NW: Alkalinity − Seasonal Scatter Plot
Alkalinity mg/L
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

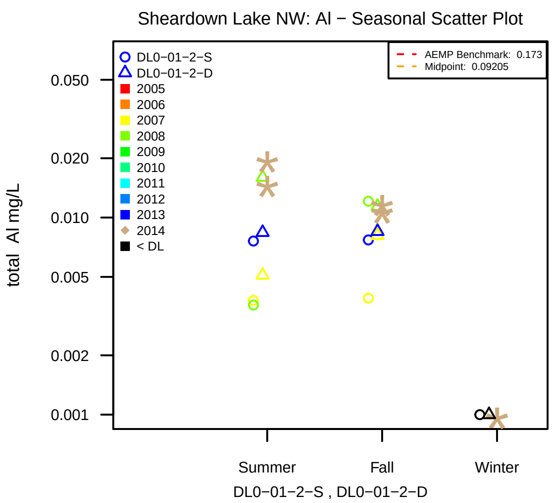

Sheardown Lake NW: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 13
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

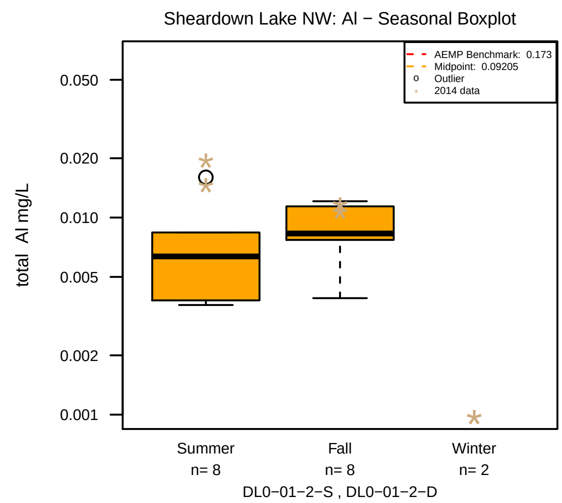

Sheardown Lake NW: Al – Total Boxplot on log scale
AEMP Benchmark: 0.173
Midpoint: 0.09205
Outlier
2014 data
total Al mg/L – log axis
1.000
0.500
0.100
0.050
0.010
0.005
0.001
DL0–01–5–S
DL0–01–1–S
DD–HAB9–1–S
DL0–01–2–S
DL0–01–4–S
DL0–01–7–S
DL0–01–5–D
DL0–01–1–D
DD–HAB9–1–D
DL0–01–2–D
DL0–01–4–D
DL0–01–7–D

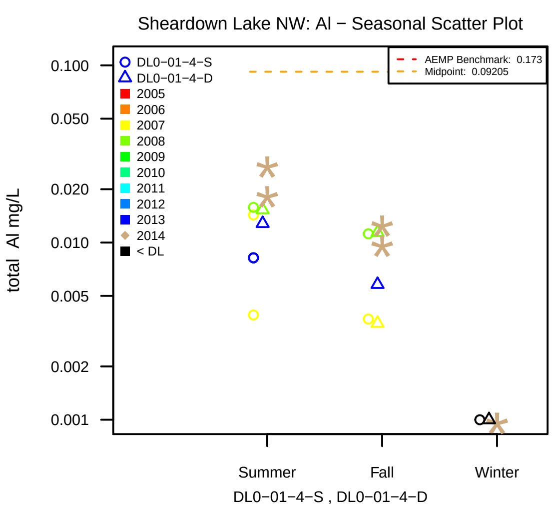

Sheardown Lake NW: Al – Total Boxplot
AEMP Benchmark: 0.173
Midpoint: 0.09205
Outlier
2014 data
total Al mg/L
0.5
0.4
0.3
0.2
0.1
0.0
DL0–01–5–S
DL0–01–1–S
DD–HAB9–1–S
DL0–01–2–S
DL0–01–4–S
DL0–01–7–S
DL0–01–5–D
DL0–01–1–D
DD–HAB9–1–D
DL0–01–2–D
DL0–01–4–D
DL0–01–7–D

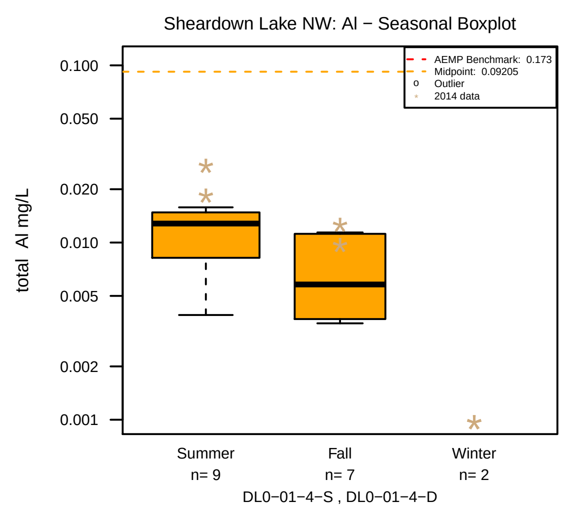

Sheardown Lake NW: Al − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.173
Midpoint: 0.09205
0.100
0.050
0.020
0.010
0.005
0.002
0.001
total Al mg/L
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

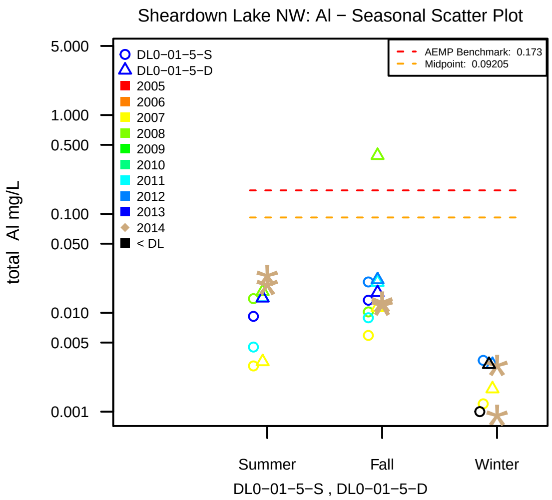

Sheardown Lake NW: Al − Seasonal Boxplot
AEMP Benchmark: 0.173
Midpoint: 0.09205
Outlier
2014 data
0.100
0.050
0.020
0.010
0.005
0.002
0.001
total Al mg/L
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

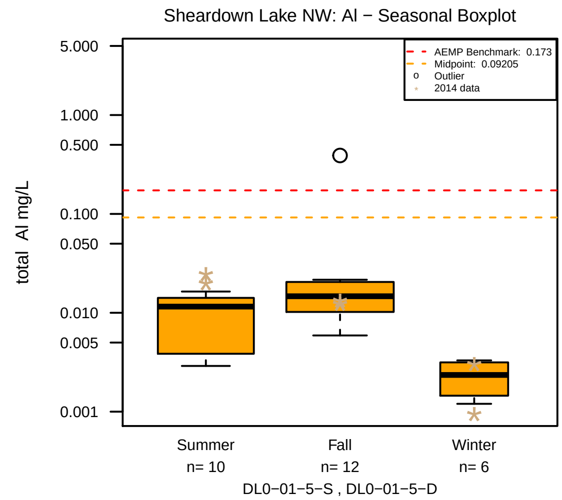

Sheardown Lake NW: Al − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.173
Midpoint: 0.09205
0.050
0.020
0.010
0.005
0.002
0.001
total Al mg/L
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

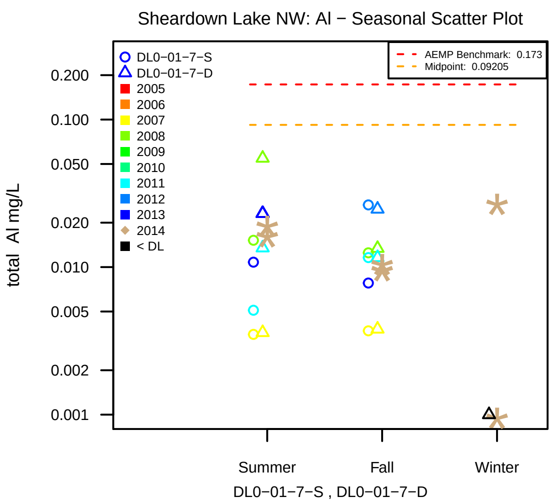

Sheardown Lake NW: Al − Seasonal Boxplot
AEMP Benchmark: 0.173
Midpoint: 0.09205
Outlier
2014 data
0.050
0.020
0.010
0.005
0.002
0.001
total Al mg/L
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

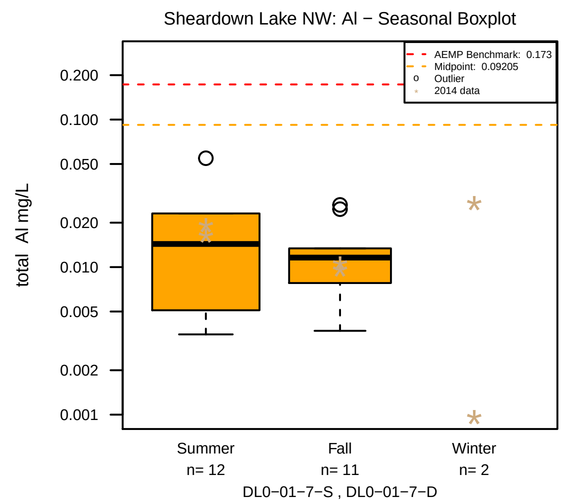

Sheardown Lake NW: Al − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.173
Midpoint: 0.09205
0.100
0.050
0.020
0.010
0.005
0.002
0.001
total Al mg/L
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

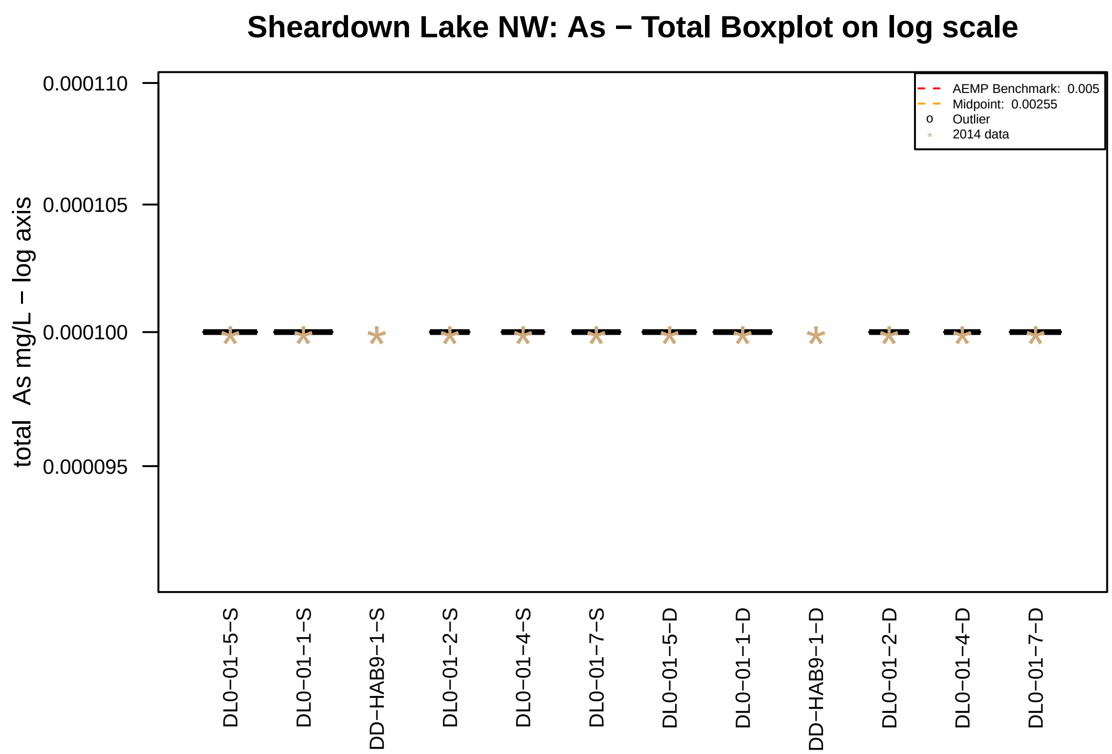

Sheardown Lake NW: Al − Seasonal Boxplot
AEMP Benchmark: 0.173
Midpoint: 0.09205
Outlier
2014 data
0.100
0.050
0.020
0.010
0.005
0.002
0.001
total Al mg/L
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

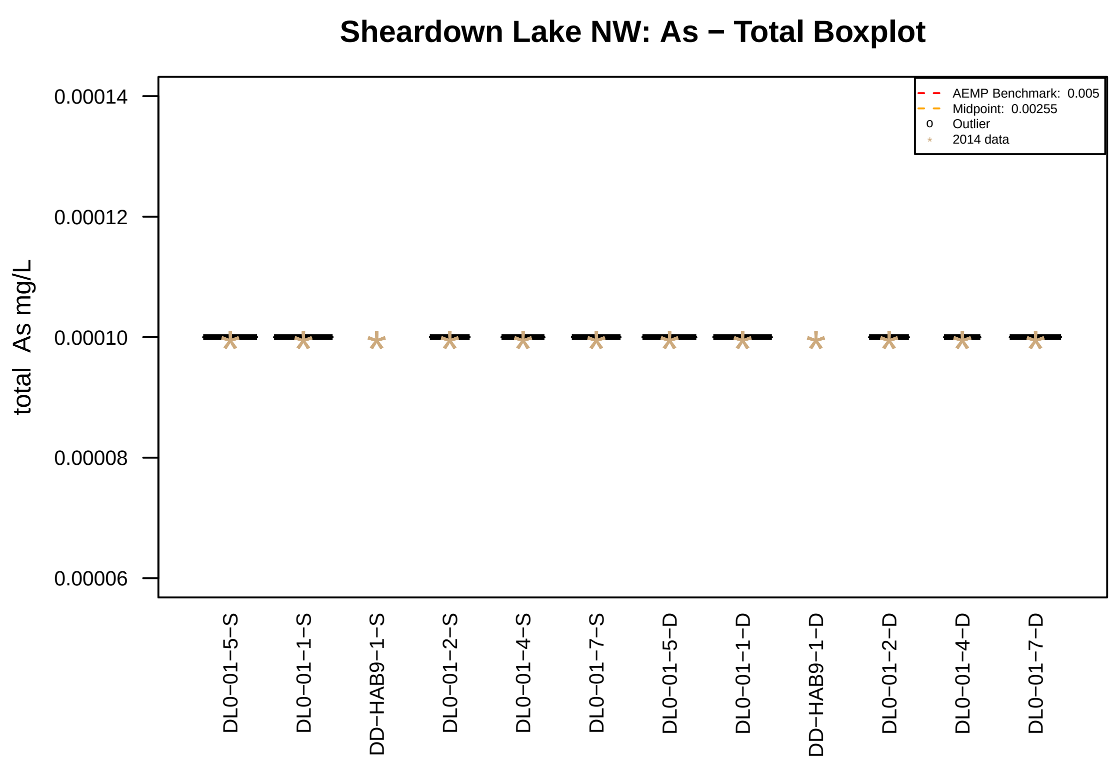

Sheardown Lake NW: Al − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.173
Midpoint: 0.09205
total Al mg/L
5.000
1.000
0.500
0.100
0.050
0.010
0.005
0.001
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

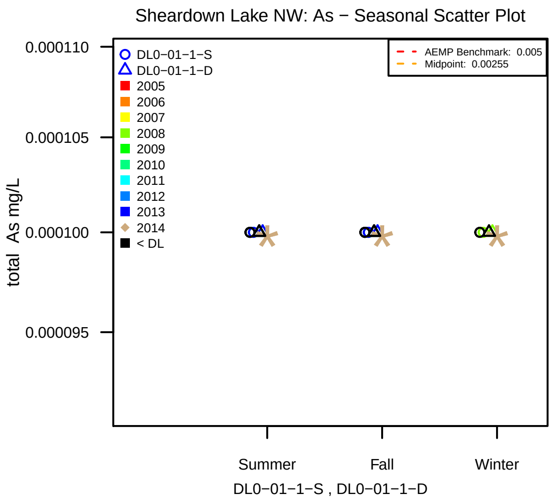

Sheardown Lake NW: Al − Seasonal Boxplot
AEMP Benchmark: 0.173
Midpoint: 0.09205
Outlier
2014 data
total Al mg/L
5.000
1.000
0.500
0.100
0.050
0.010
0.005
0.001
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

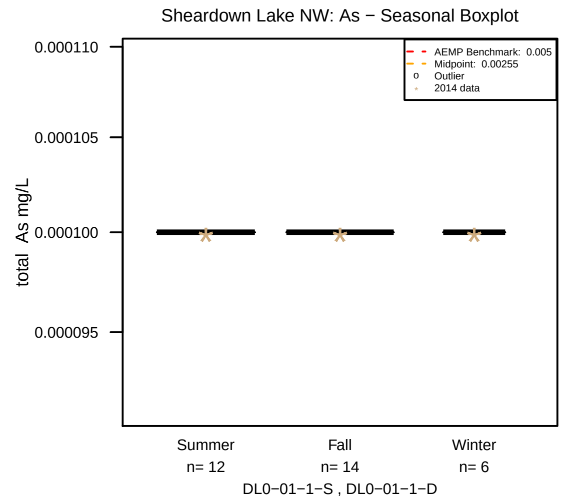

Sheardown Lake NW: Al − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.173
Midpoint: 0.09205
total Al mg/L
0.200
0.100
0.050
0.020
0.010
0.005
0.002
0.001
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

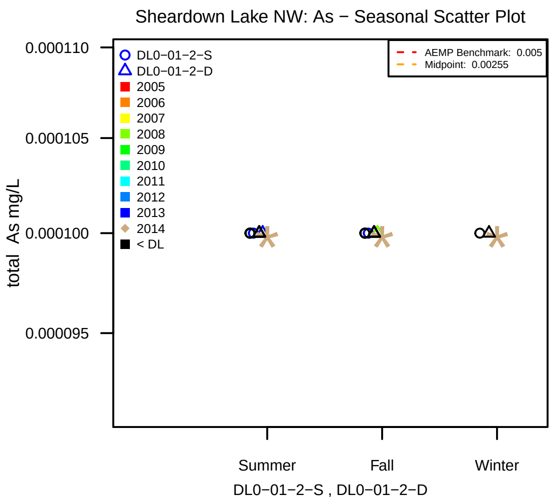

Sheardown Lake NW: Al − Seasonal Boxplot
AEMP Benchmark: 0.173
Midpoint: 0.09205
Outlier
2014 data
total Al mg/L
0.200
0.100
0.050
0.020
0.010
0.005
0.002
0.001
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

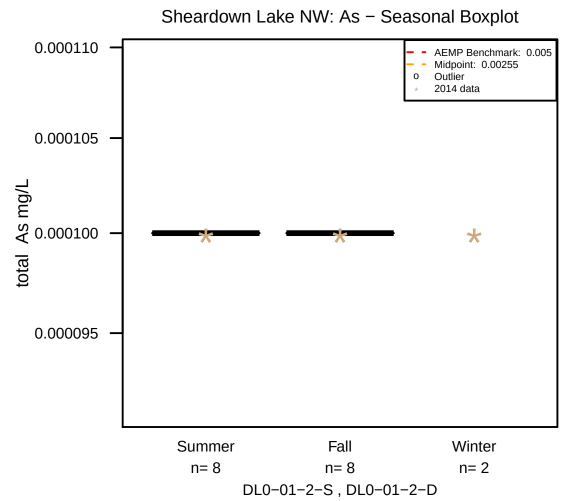

Sheardown Lake NW: As − Total Boxplot on log scale
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L − log axis
0.000110
0.000105
0.000100
0.000095
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

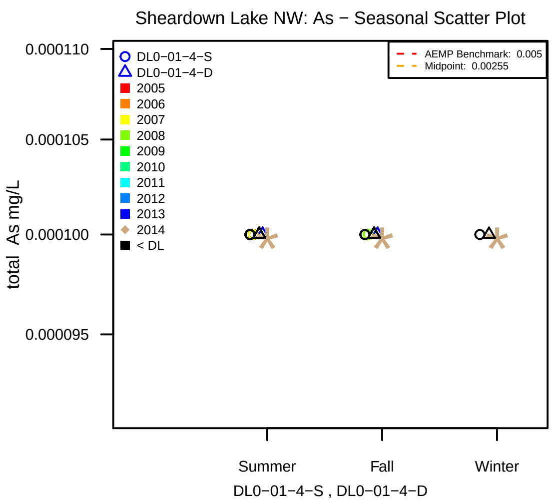

Sheardown Lake NW: As − Total Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L
0.00014
0.00012
0.00010
0.00008
0.00006
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

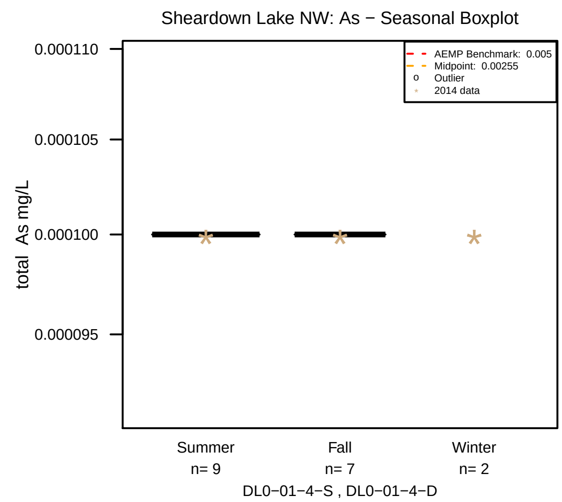

Sheardown Lake NW: As − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

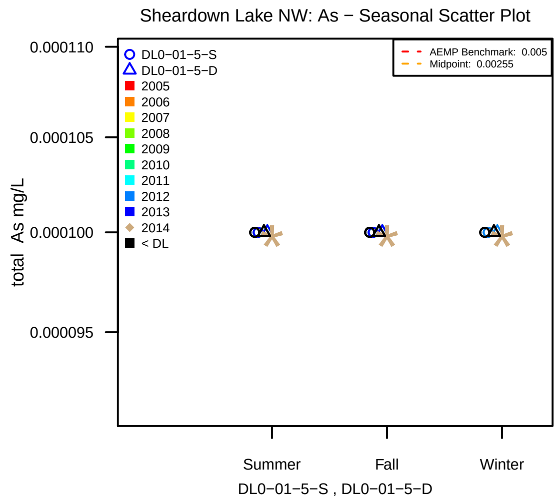

Sheardown Lake NW: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

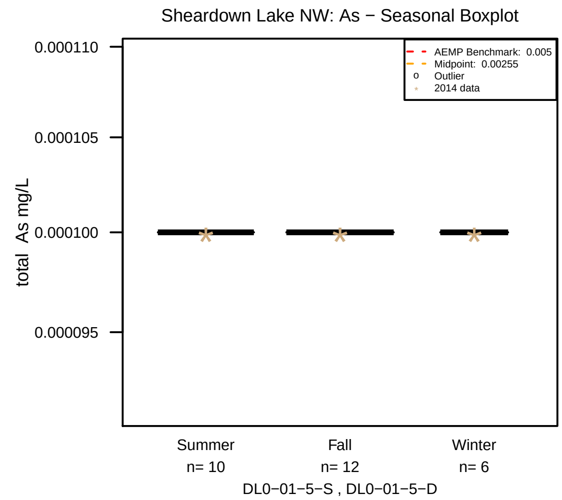

Sheardown Lake NW: As − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

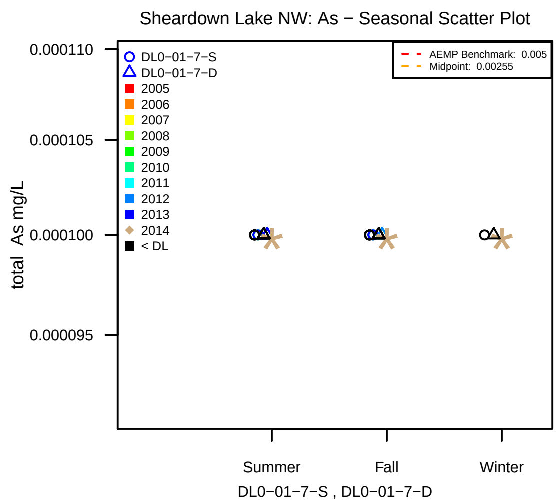

Sheardown Lake NW: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

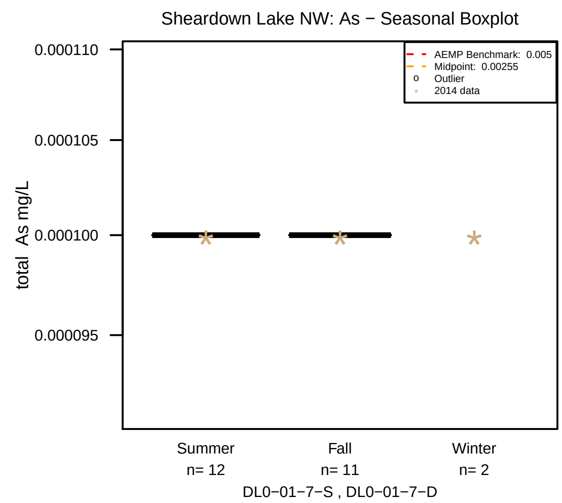

Sheardown Lake NW: As − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

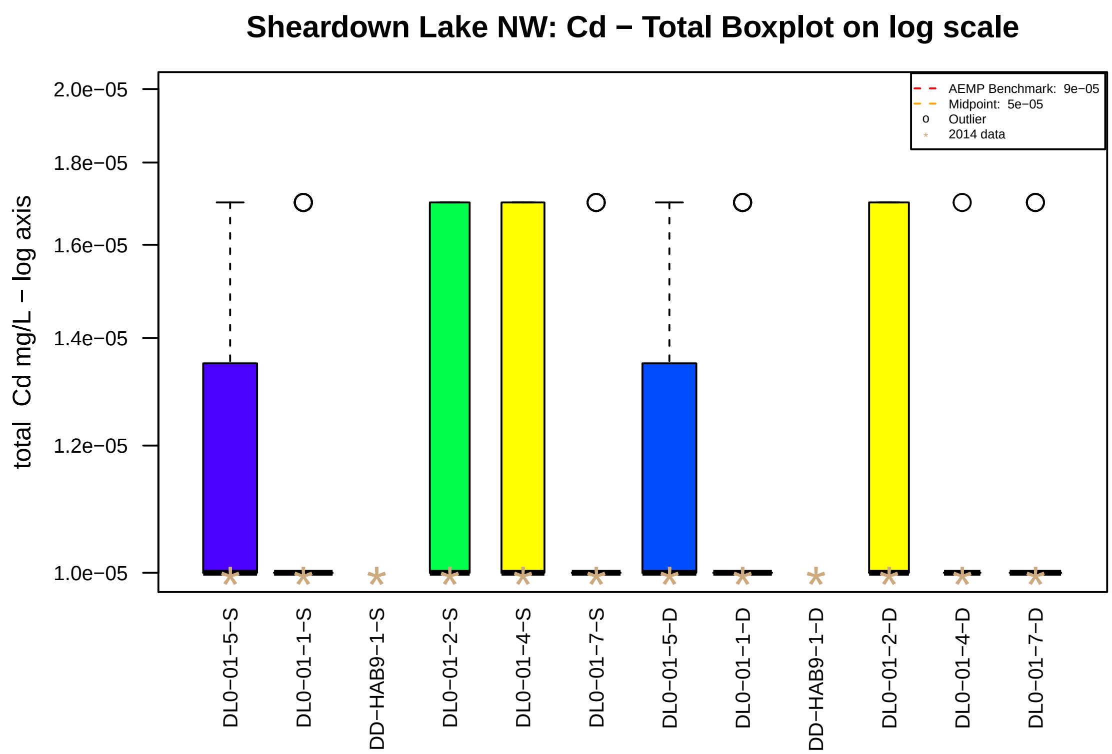

Sheardown Lake NW: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

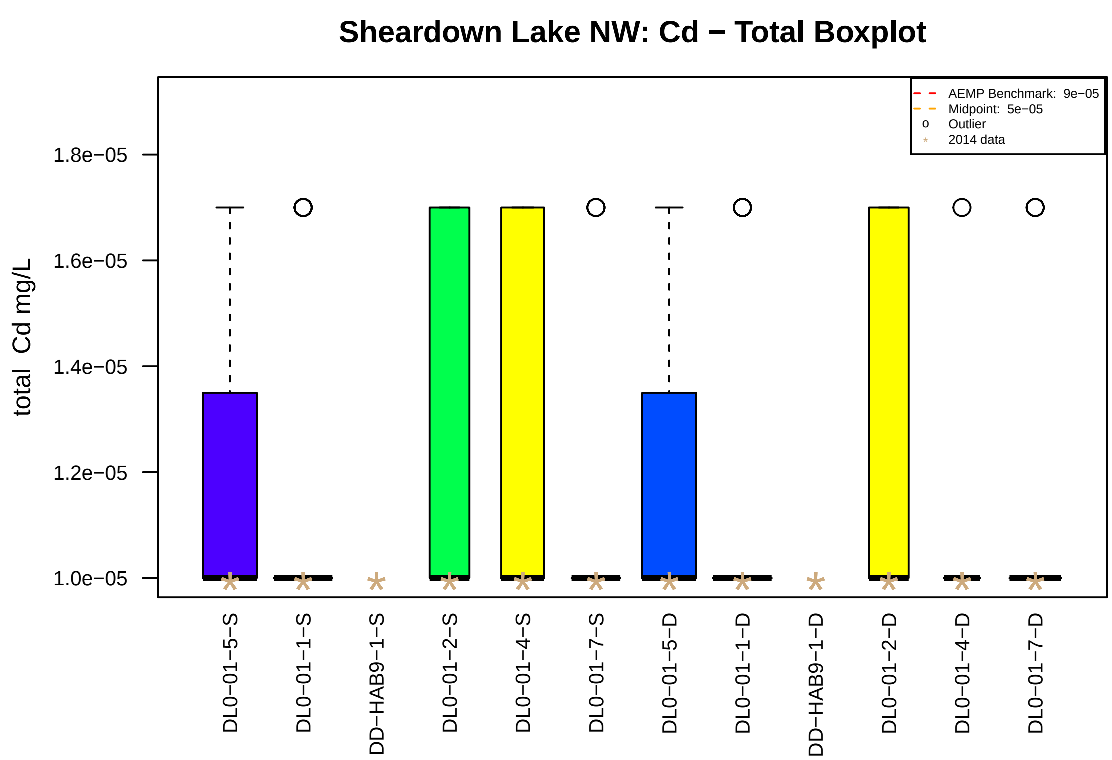

Sheardown Lake NW: As − Seasonal Scatter Plot
total As mg/L
0.000110
0.000105
0.000100
0.000095
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

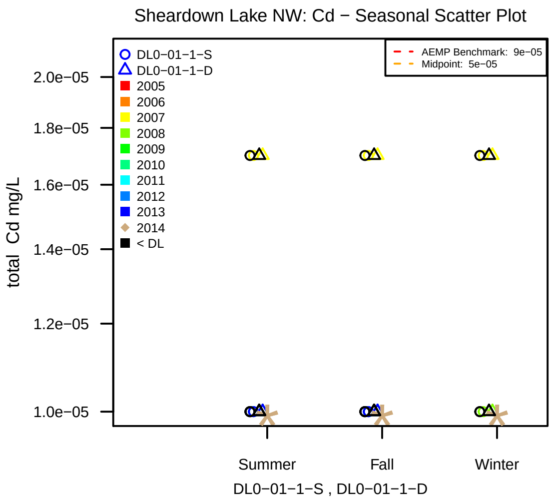

Sheardown Lake NW: As − Seasonal Boxplot
total As mg/L
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

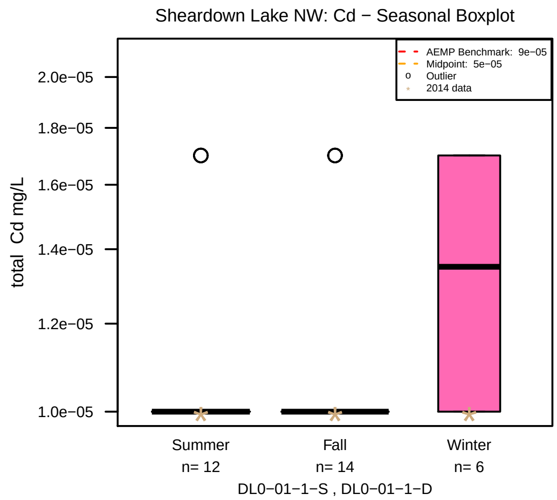

Sheardown Lake NW: As − Seasonal Scatter Plot
total As mg/L
0.000110
0.000105
0.000100
0.000095
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

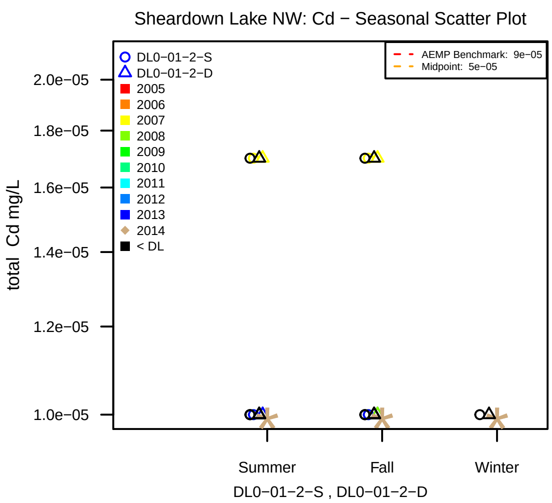

Sheardown Lake NW: As − Seasonal Boxplot
total As mg/L
0.000110
0.000105
0.000100
0.000095
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

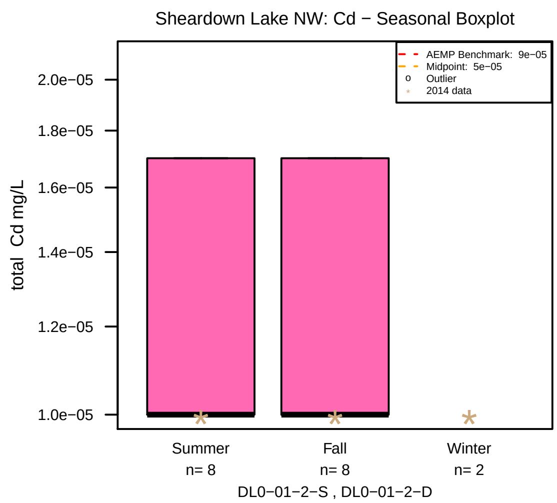

Sheardown Lake NW: Cd − Total Boxplot on log scale
total Cd mg/L − log axis
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

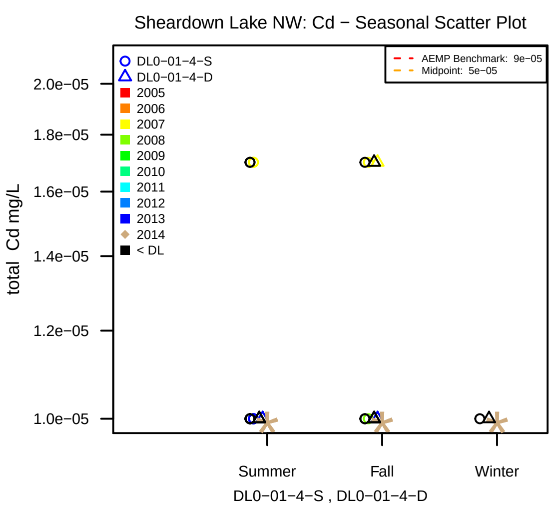

Sheardown Lake NW: Cd − Total Boxplot
total Cd mg/L
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

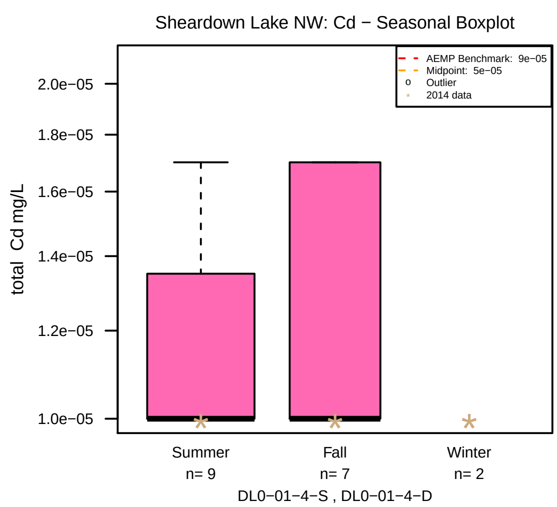

Sheardown Lake NW: Cd − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 9e−05
Midpoint: 5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

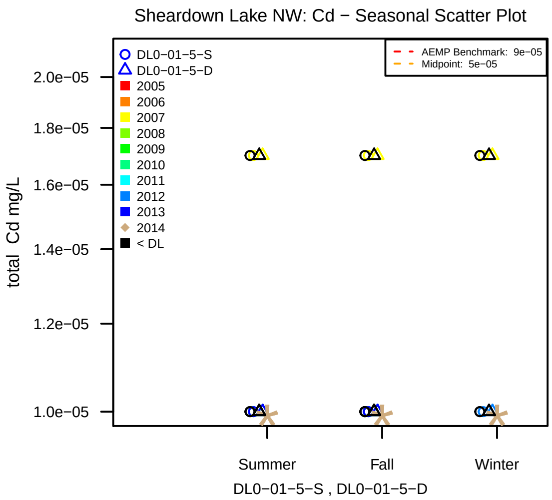

Sheardown Lake NW: Cd − Seasonal Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

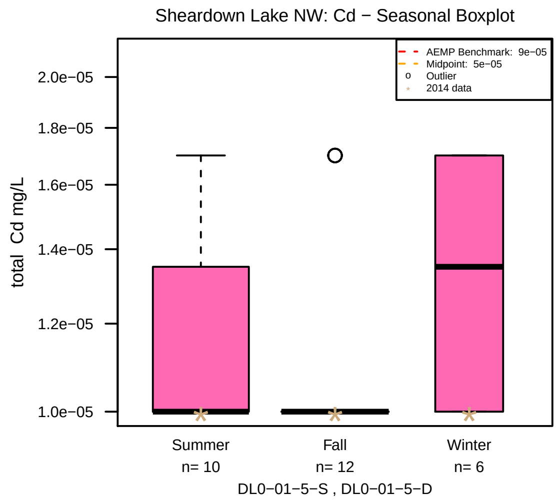

Sheardown Lake NW: Cd − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 9e−05
Midpoint: 5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

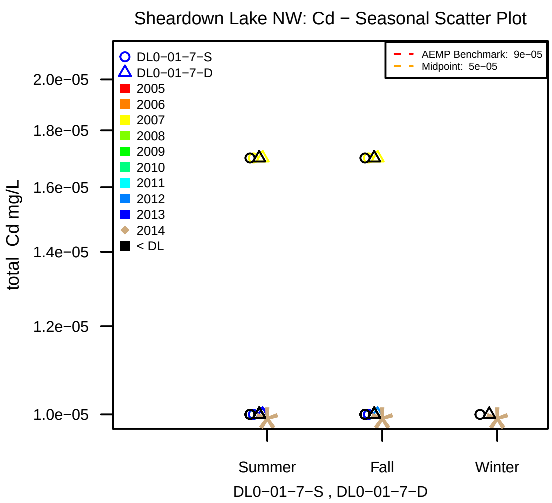

Sheardown Lake NW: Cd − Seasonal Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

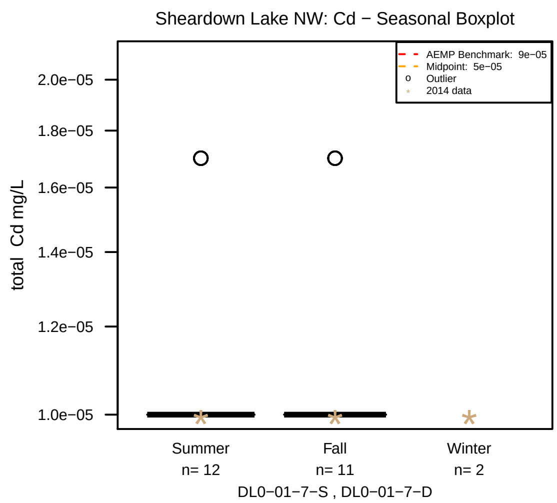

Sheardown Lake NW: Cd − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 9e−05
Midpoint: 5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

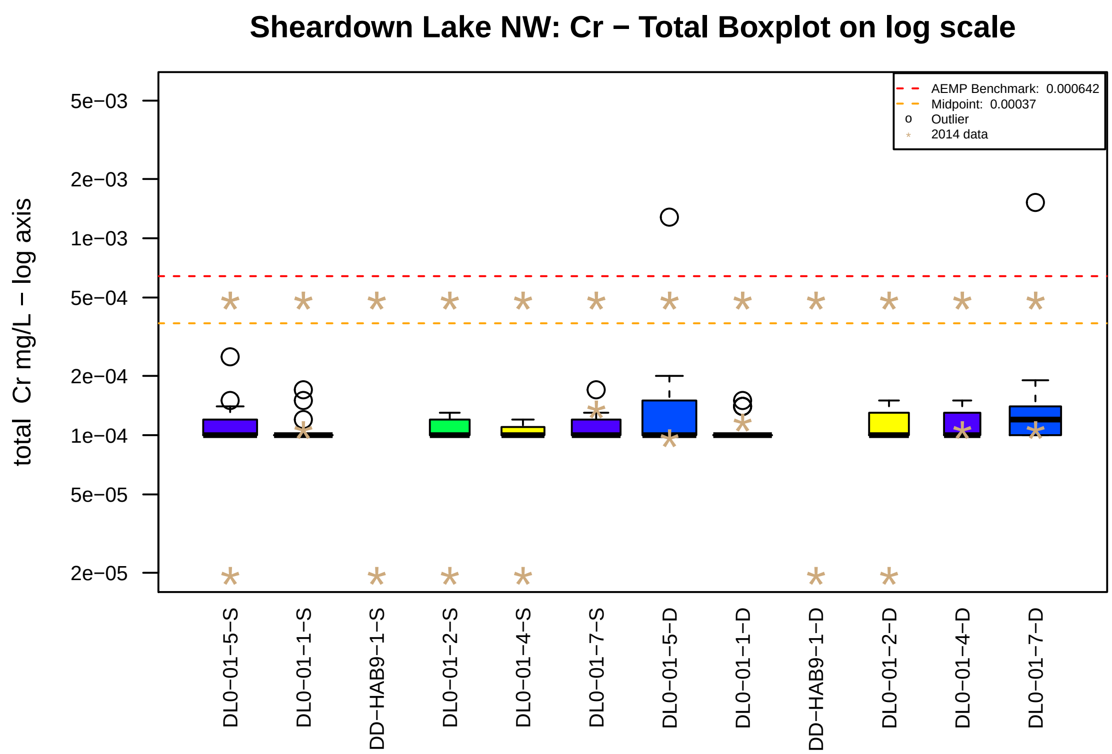

Sheardown Lake NW: Cd − Seasonal Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

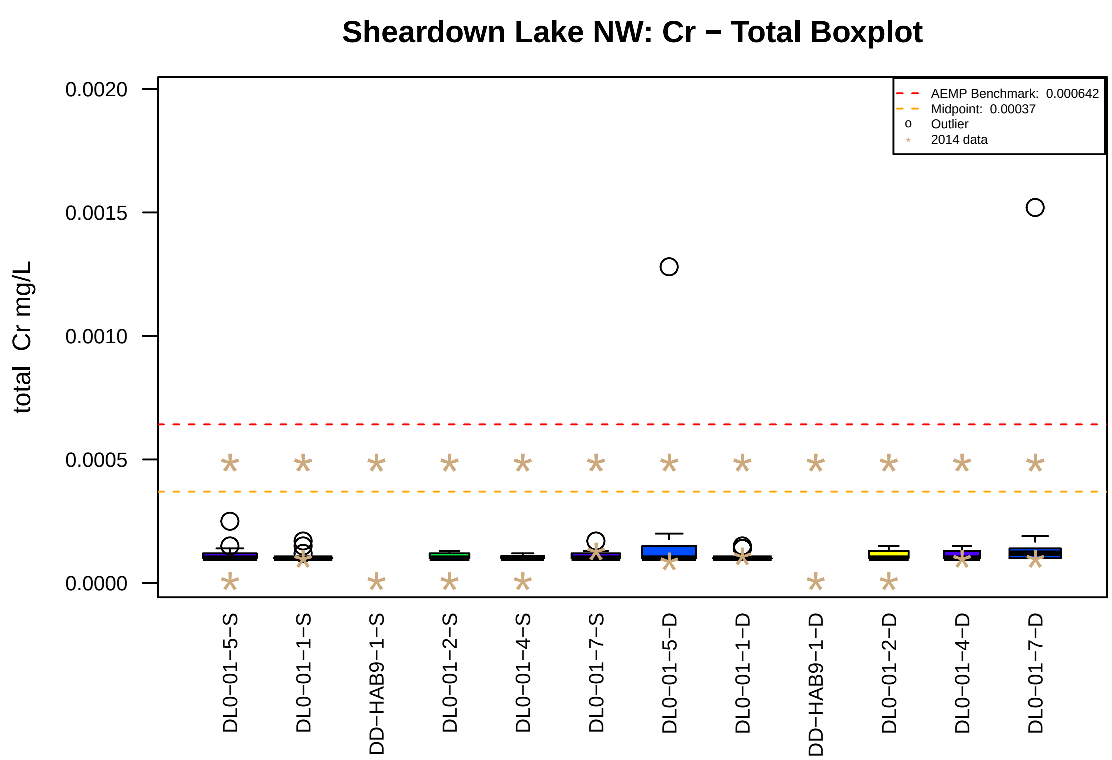

Sheardown Lake NW: Cd − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 9e−05
Midpoint: 5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

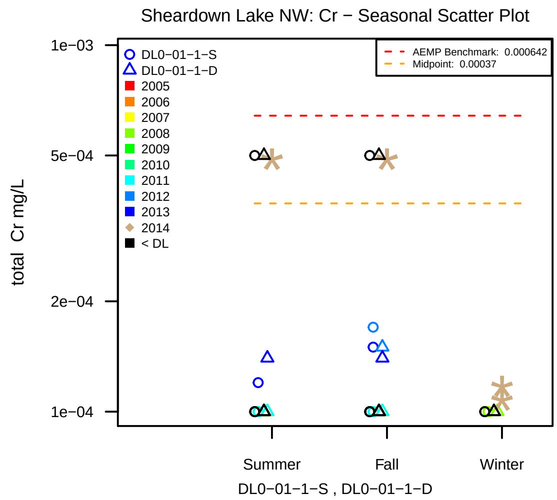

Sheardown Lake NW: Cd − Seasonal Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

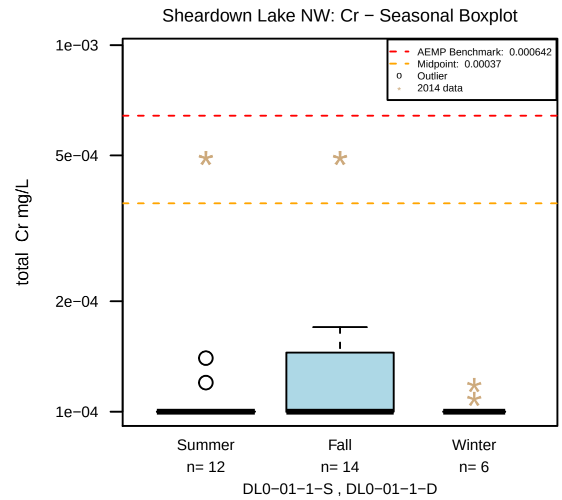

Sheardown Lake NW: Cd − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 9e−05
Midpoint: 5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

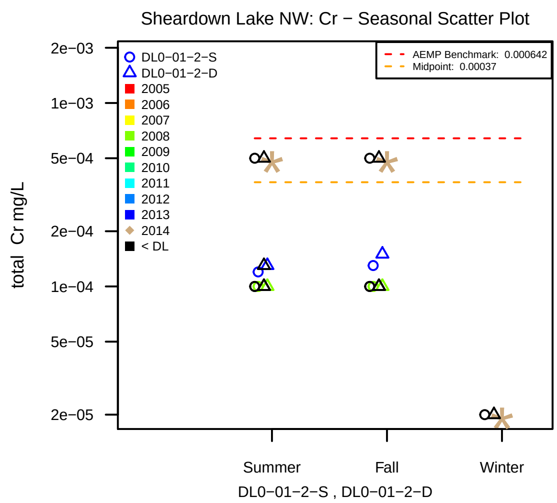

Sheardown Lake NW: Cd − Seasonal Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

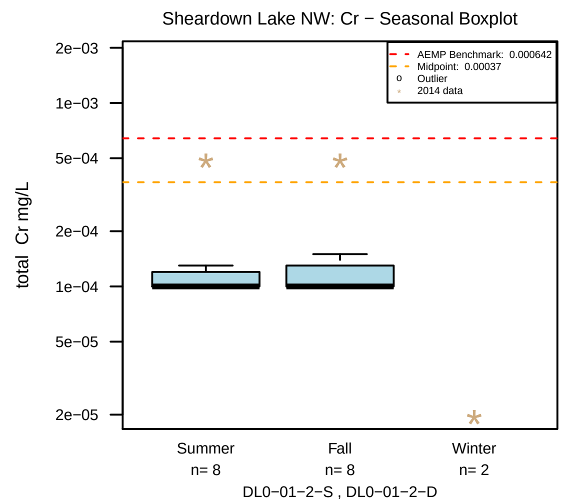

Sheardown Lake NW: Cr − Total Boxplot on log scale
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
total Cr mg/L − log axis
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

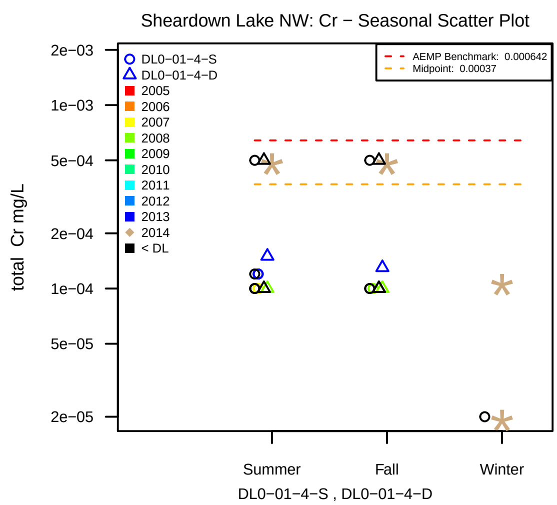

Sheardown Lake NW: Cr − Total Boxplot
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
total Cr mg/L
0.0020
0.0015
0.0010
0.0005
0.0000
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

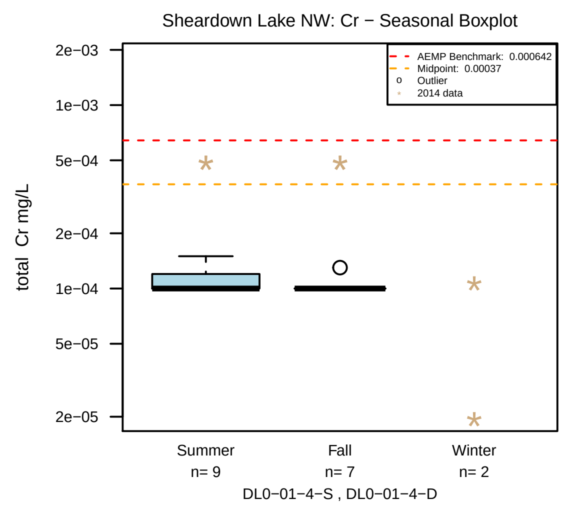

Sheardown Lake NW: Cr − Seasonal Scatter Plot
total Cr mg/L
1e−03
5e−04
2e−04
1e−04
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

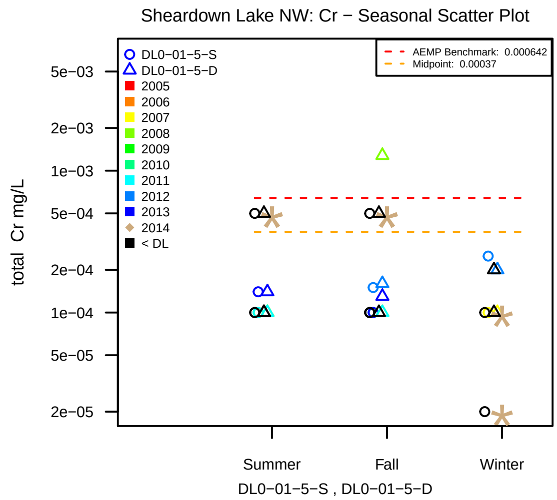

Sheardown Lake NW: Cr − Seasonal Boxplot
total Cr mg/L
1e−03
5e−04
2e−04
1e−04
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

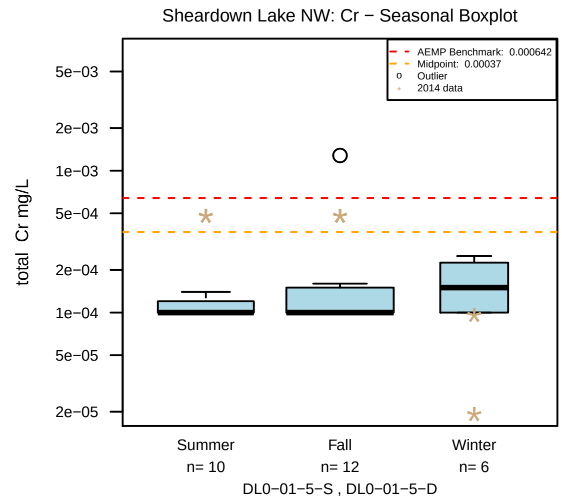

Sheardown Lake NW: Cr − Seasonal Scatter Plot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

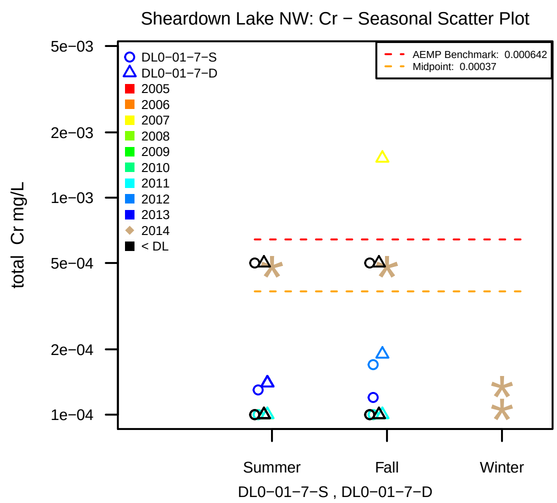

Sheardown Lake NW: Cr − Seasonal Boxplot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

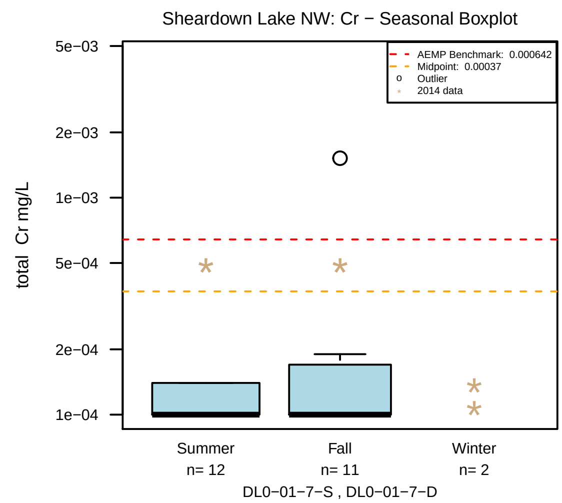

Sheardown Lake NW: Cr − Seasonal Scatter Plot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

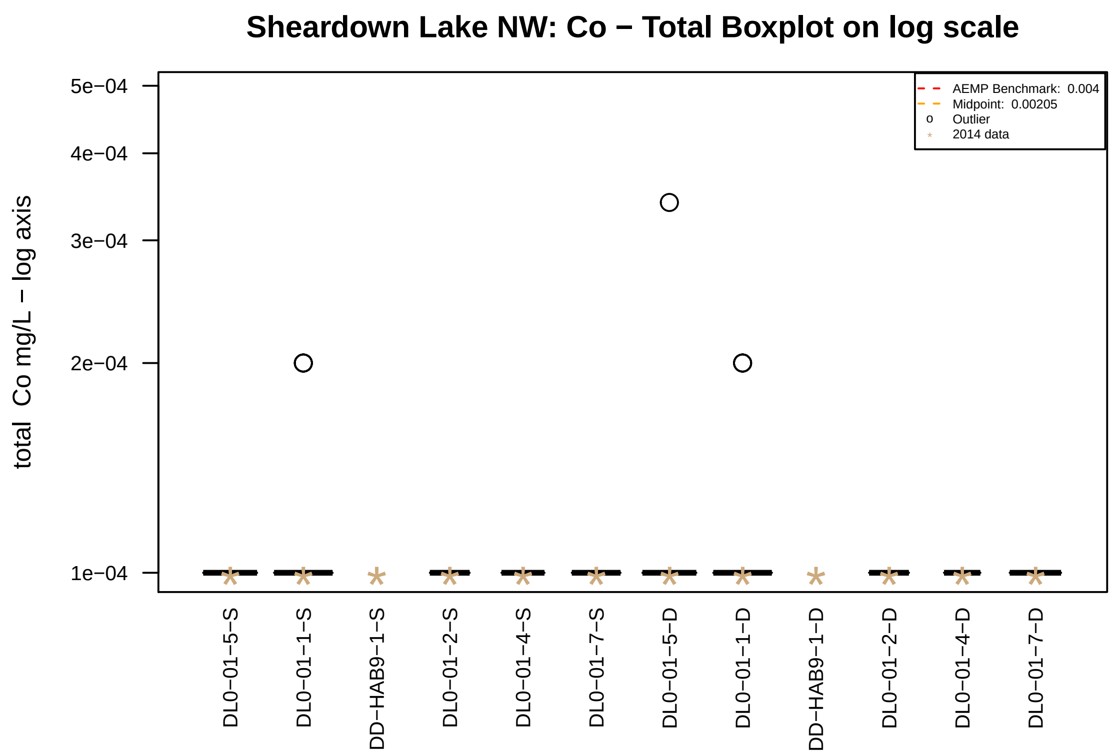

Sheardown Lake NW: Cr − Seasonal Boxplot
total Cr mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

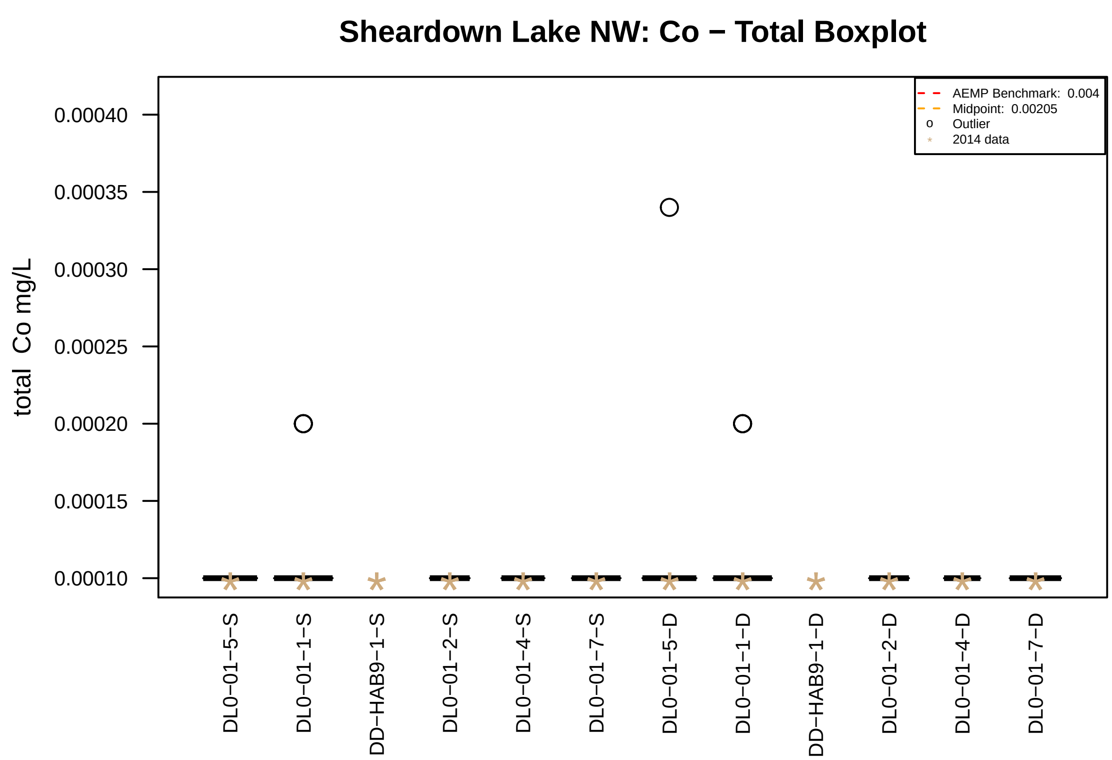

Sheardown Lake NW: Cr − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.000642
Midpoint: 0.00037
total Cr mg/L
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

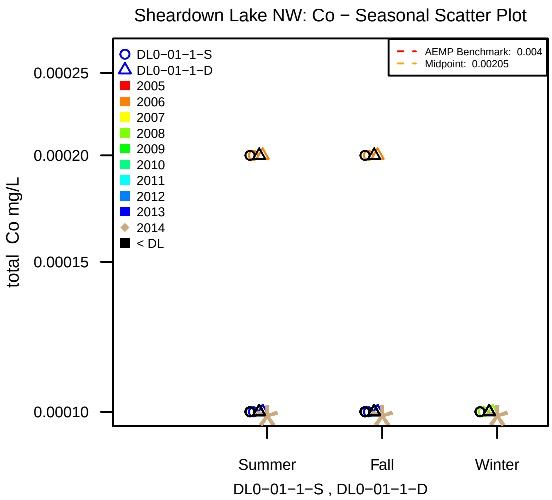

Sheardown Lake NW: Cr − Seasonal Boxplot
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
total Cr mg/L
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

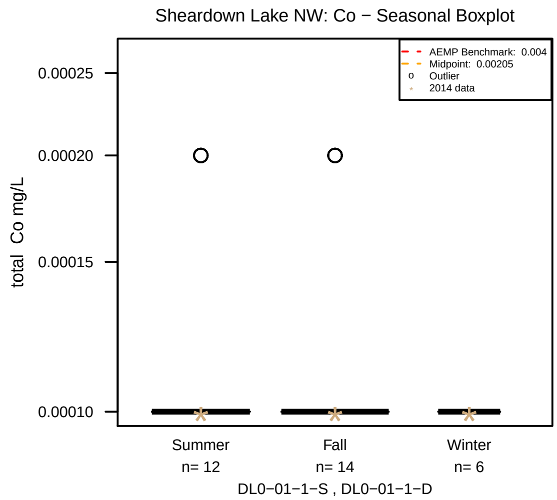

Sheardown Lake NW: Cr − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.000642
Midpoint: 0.00037
total Cr mg/L
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

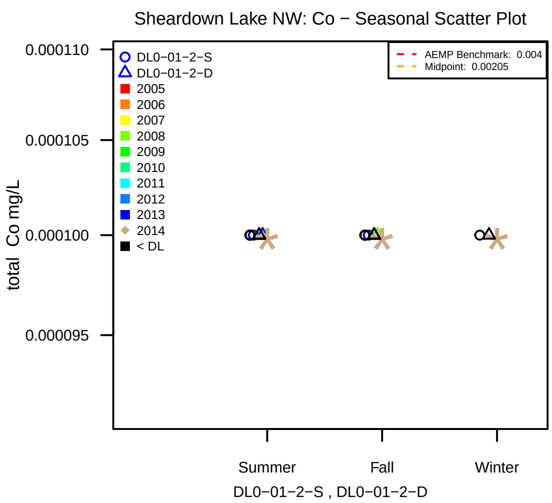

Sheardown Lake NW: Cr − Seasonal Boxplot
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
total Cr mg/L
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

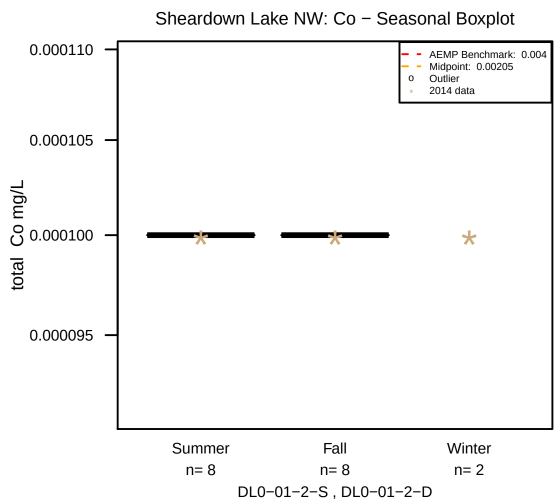

Sheardown Lake NW: Co − Total Boxplot on log scale
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L − log axis
5e−04
4e−04
3e−04
2e−04
1e−04
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

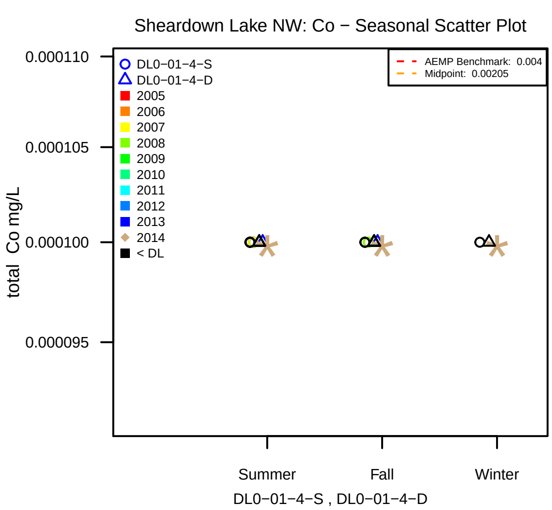

Sheardown Lake NW: Co − Total Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.00040
0.00035
0.00030
0.00025
0.00020
0.00015
0.00010
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

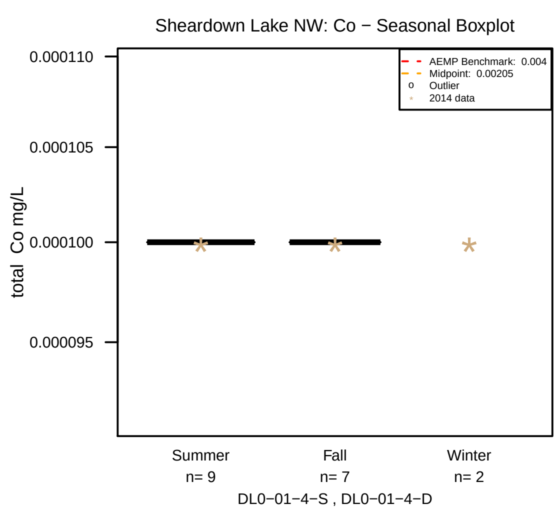

Sheardown Lake NW: Co − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
total Co mg/L
0.00025
0.00020
0.00015
0.00010
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

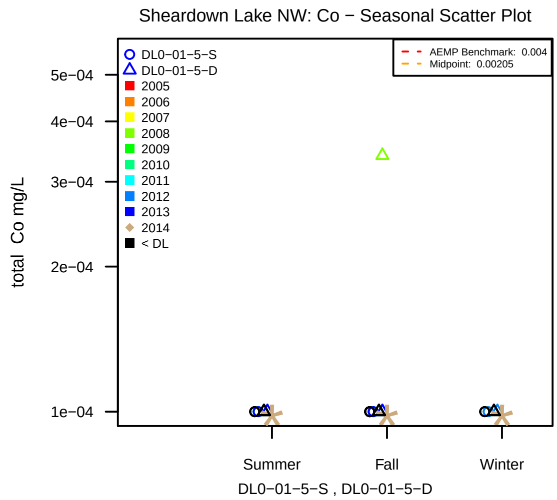

Sheardown Lake NW: Co − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.00025
0.00020
0.00015
0.00010
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

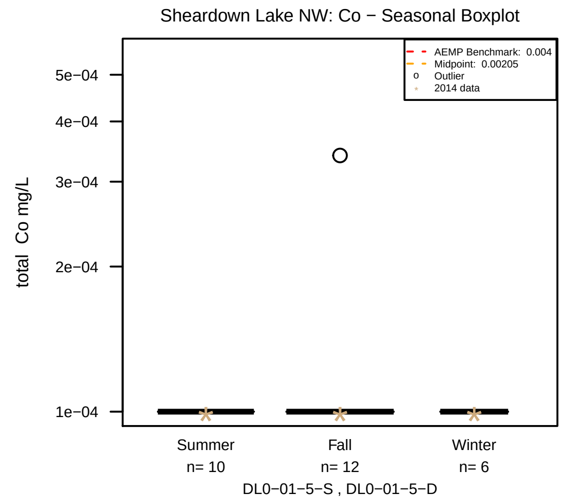

Sheardown Lake NW: Co − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
total Co mg/L
0.000110
0.000105
0.000100
0.000095
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

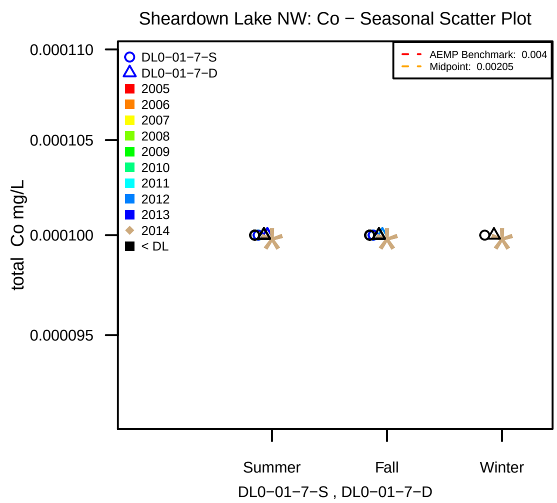

Sheardown Lake NW: Co − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.000110
0.000105
0.000100
0.000095
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

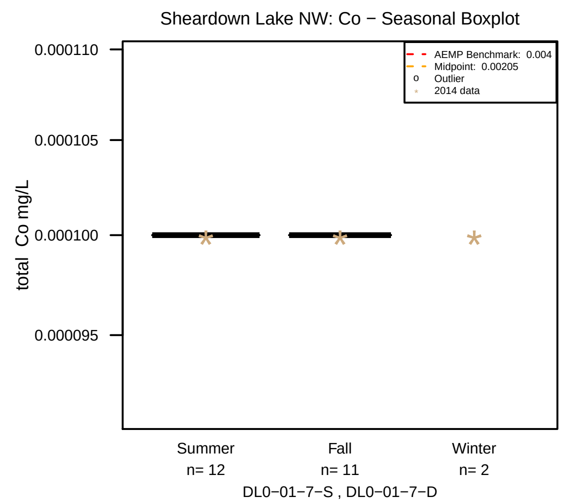

Sheardown Lake NW: Co − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
total Co mg/L
0.000110
0.000105
0.000100
0.000095
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

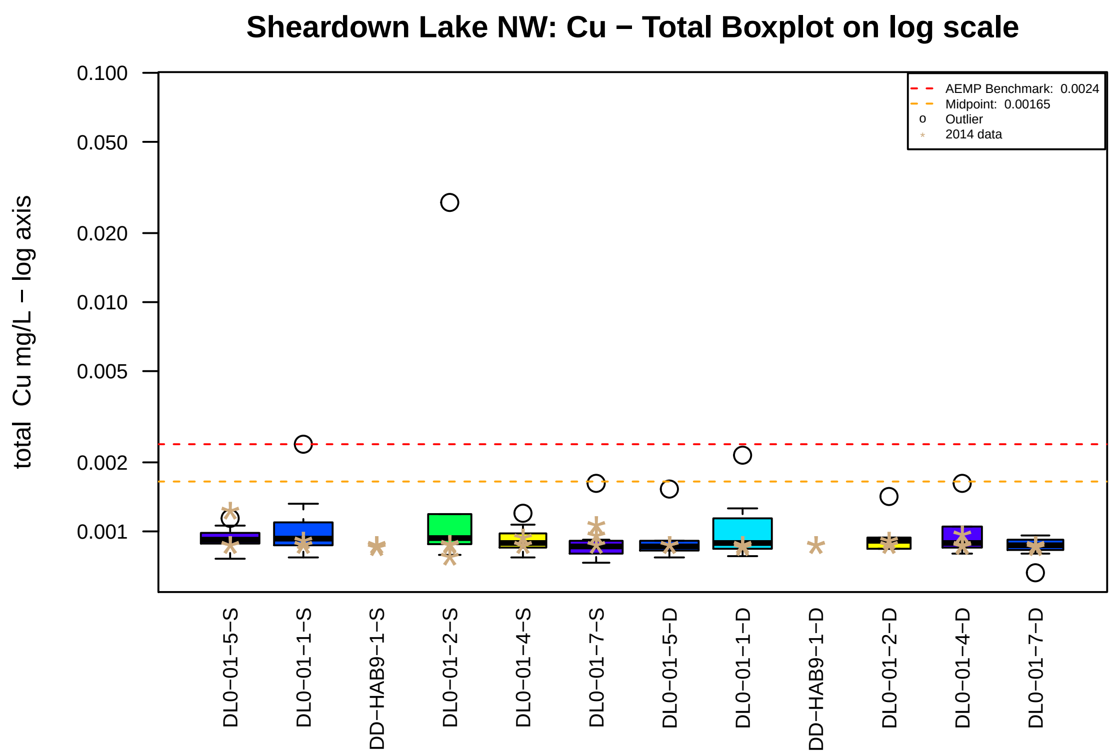

Sheardown Lake NW: Co − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.000110
0.000105
0.000100
0.000095
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

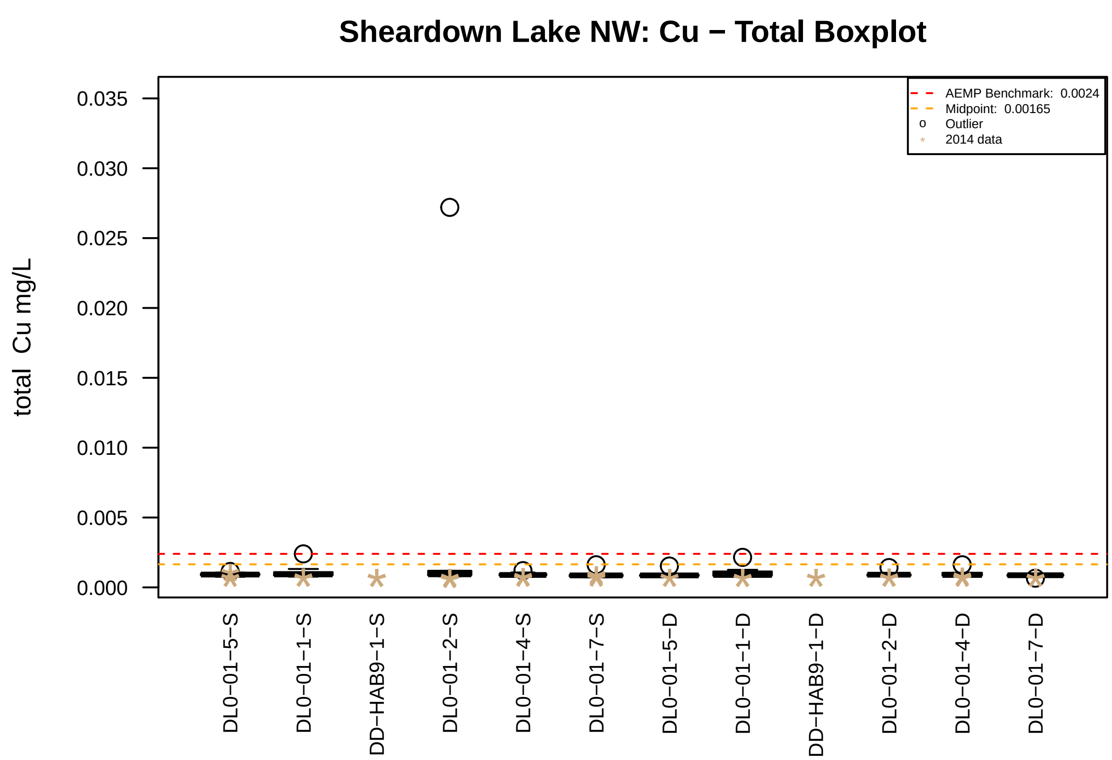

Sheardown Lake NW: Co − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
total Co mg/L
5e−04
4e−04
3e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

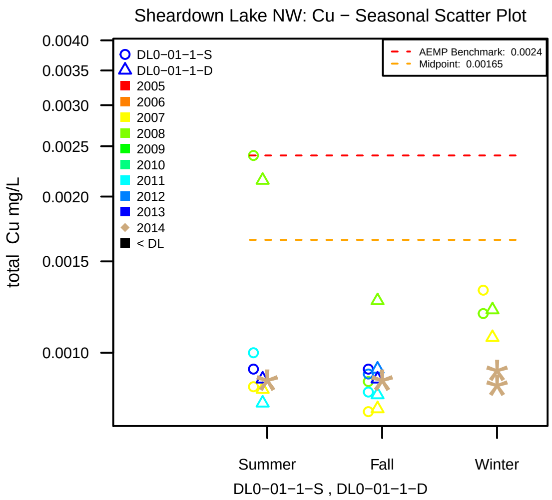

Sheardown Lake NW: Co − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
5e−04
4e−04
3e−04
2e−04
1e−04
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

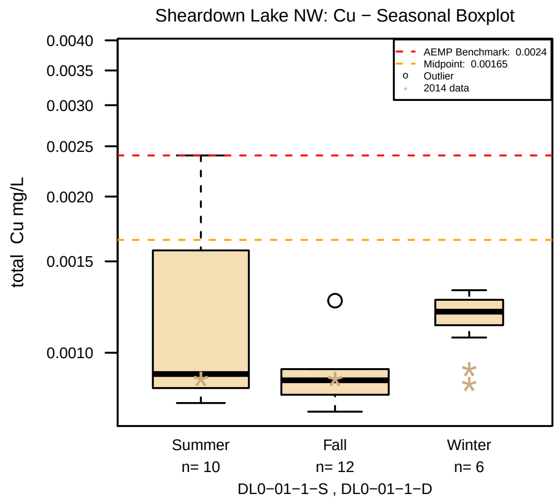

Sheardown Lake NW: Co − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
total Co mg/L
0.000110
0.000105
0.000100
0.000095
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

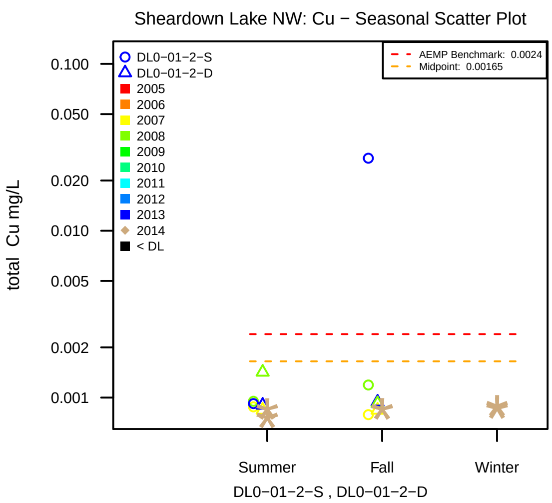

Sheardown Lake NW: Co − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.000110
0.000105
0.000100
0.000095
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

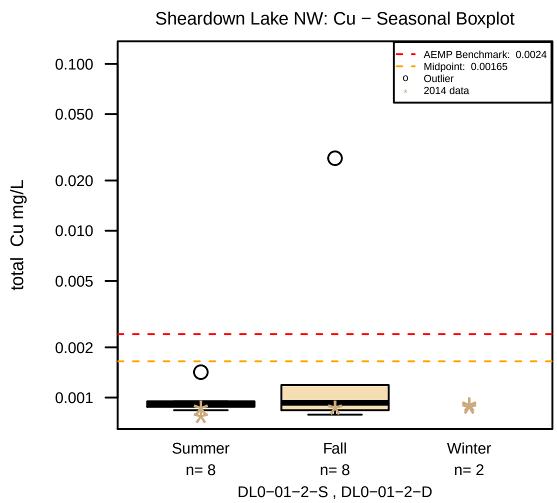

Sheardown Lake NW: Cu − Total Boxplot on log scale
total Cu mg/L − log axis
0.100
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

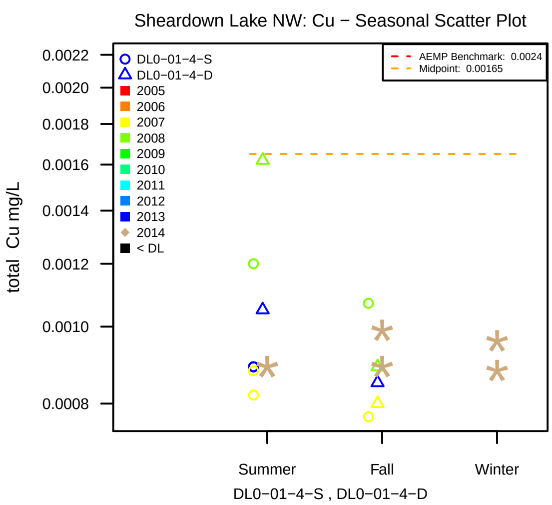

Sheardown Lake NW: Cu − Total Boxplot
total Cu mg/L
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

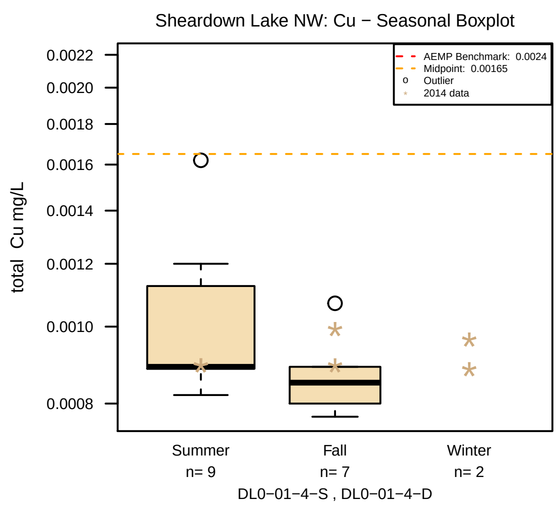

Sheardown Lake NW: Cu − Seasonal Scatter Plot
total Cu mg/L
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

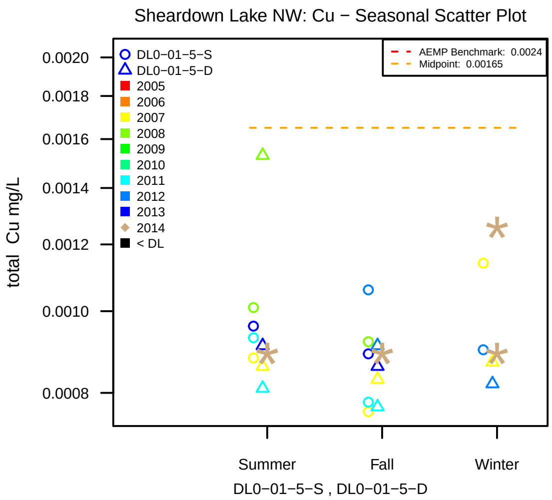

Sheardown Lake NW: Cu − Seasonal Boxplot
total Cu mg/L
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Outlier
2014 data
Summer n= 10
Fall n= 12
Winter n= 6
DL0−01−1−S , DL0−01−1−D

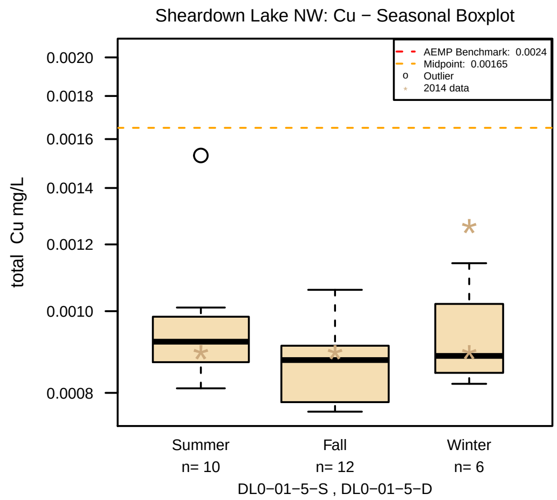

Sheardown Lake NW: Cu − Seasonal Scatter Plot
total Cu mg/L
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

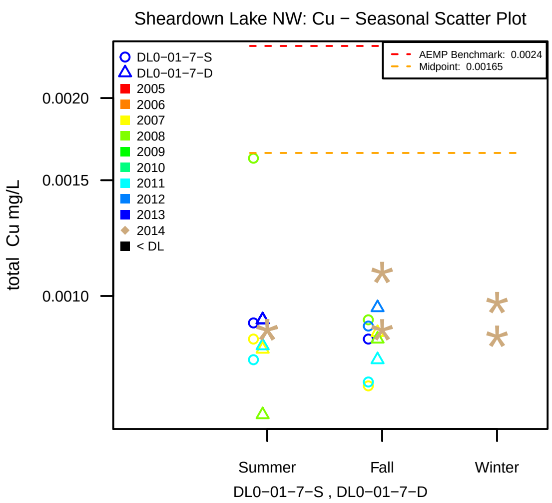

Sheardown Lake NW: Cu − Seasonal Boxplot
total Cu mg/L
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Outlier
2014 data
Summer n= 8
Fall n= 8
Winter n= 2
DL0−01−2−S , DL0−01−2−D

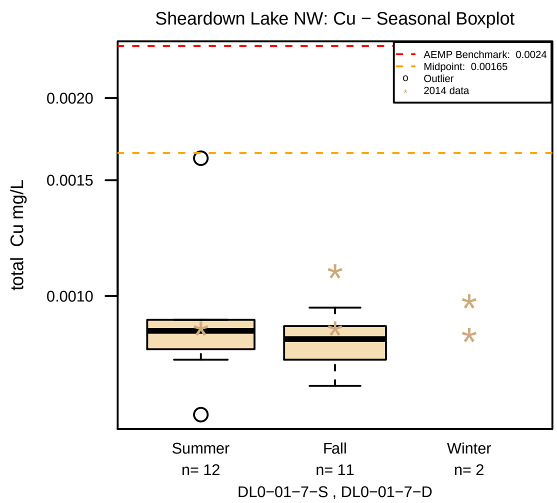

Sheardown Lake NW: Cu − Seasonal Scatter Plot
total Cu mg/L
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

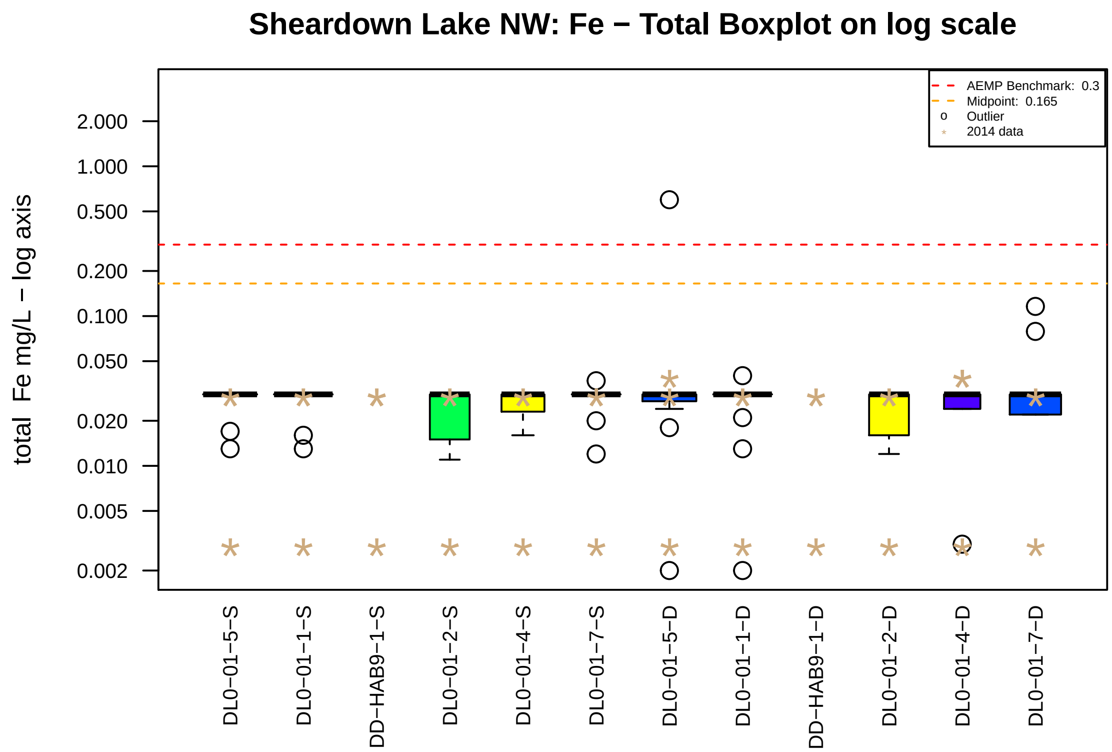

Sheardown Lake NW: Cu − Seasonal Boxplot
total Cu mg/L
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Outlier
2014 data
Summer n= 9
Fall n= 7
Winter n= 2
DL0−01−4−S , DL0−01−4−D

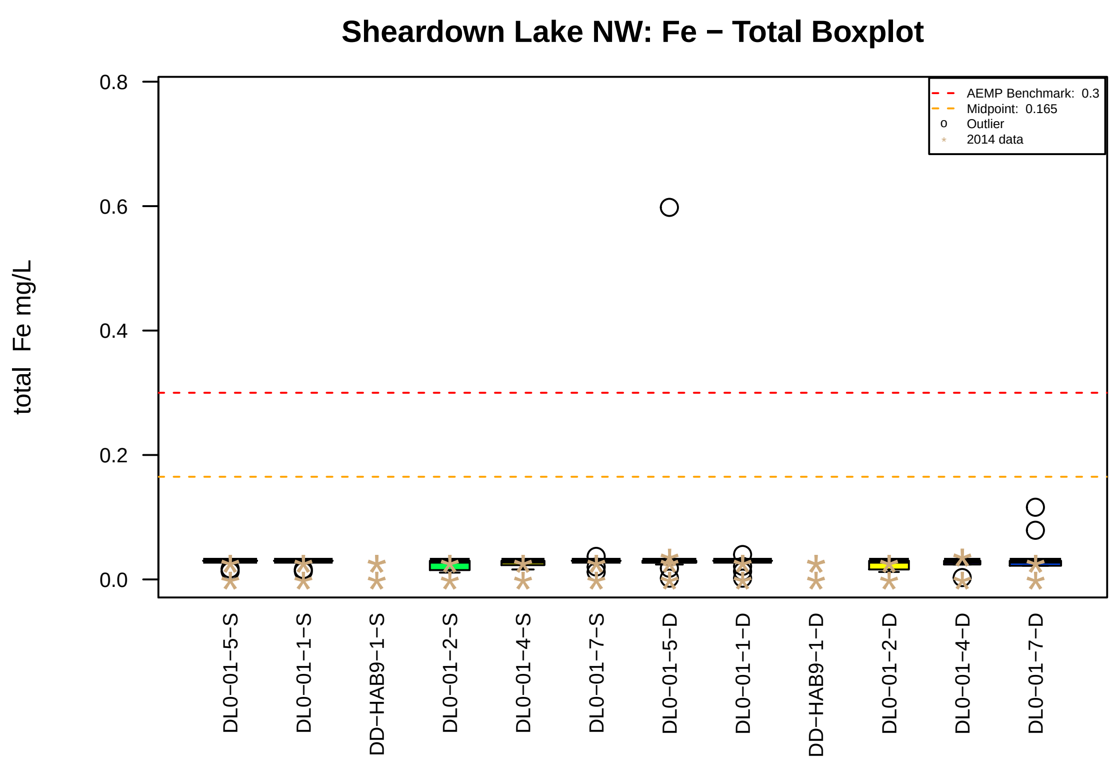

Sheardown Lake NW: Cu − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.00165
total Cu mg/L
0.0020
0.0018
0.0016
0.0014
0.0012
0.0010
0.0008
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

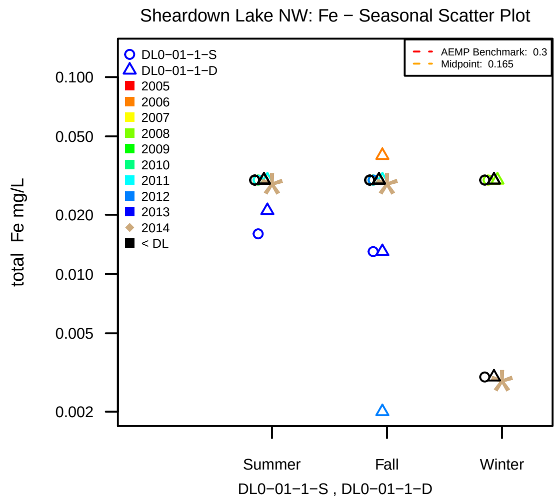

Sheardown Lake NW: Cu − Seasonal Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Outlier
2014 data
total Cu mg/L
0.0020
0.0018
0.0016
0.0014
0.0012
0.0010
0.0008
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

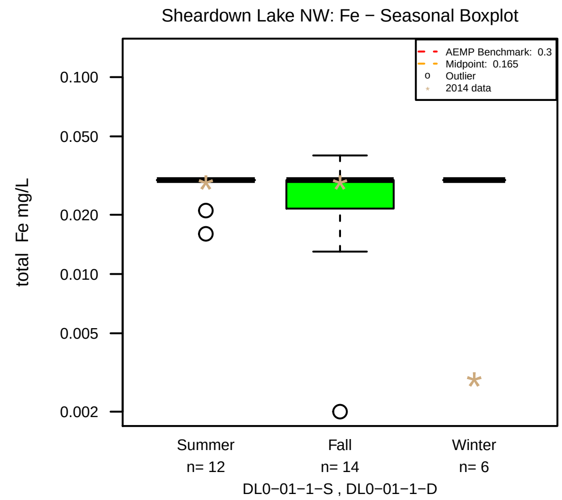

Sheardown Lake NW: Cu − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.00165
total Cu mg/L
0.0020
0.0015
0.0010
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

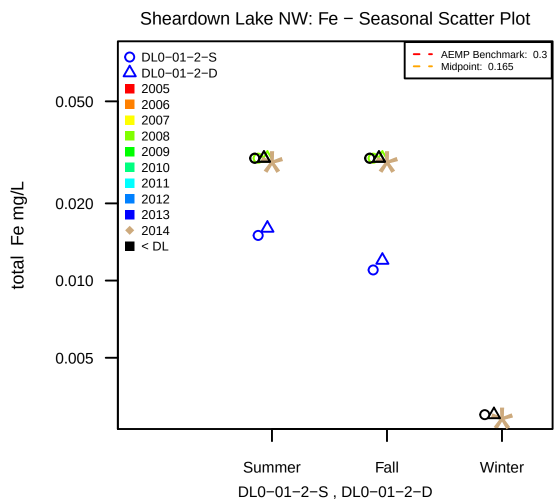

Sheardown Lake NW: Cu − Seasonal Boxplot
AEMP Benchmark: 0.0024
Midpoint: 0.00165
Outlier
2014 data
total Cu mg/L
0.0020
0.0015
0.0010
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

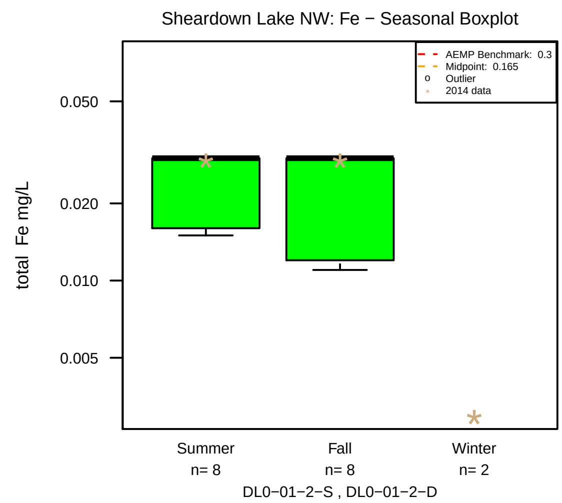

Sheardown Lake NW: Fe − Total Boxplot on log scale
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L − log axis
2.000
1.000
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

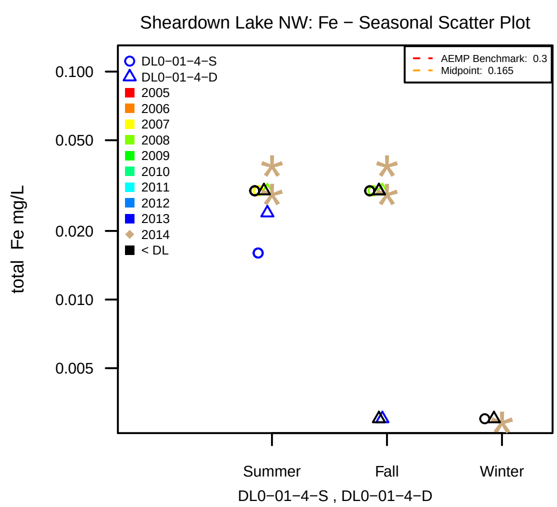

Sheardown Lake NW: Fe − Total Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L
0.8
0.6
0.4
0.2
0.0
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

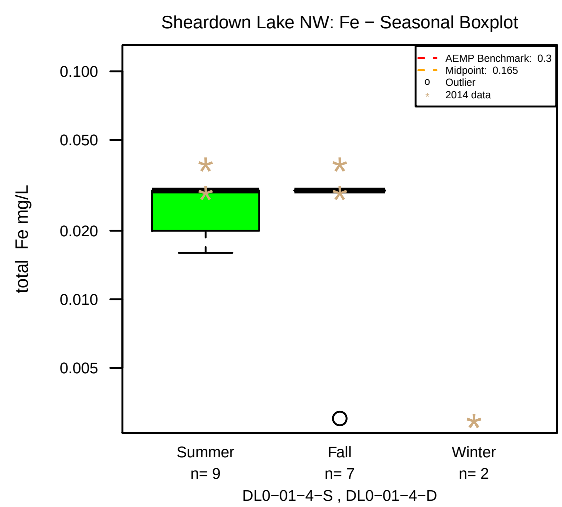

Sheardown Lake NW: Fe − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
total Fe mg/L
0.100
0.050
0.020
0.010
0.005
0.002
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

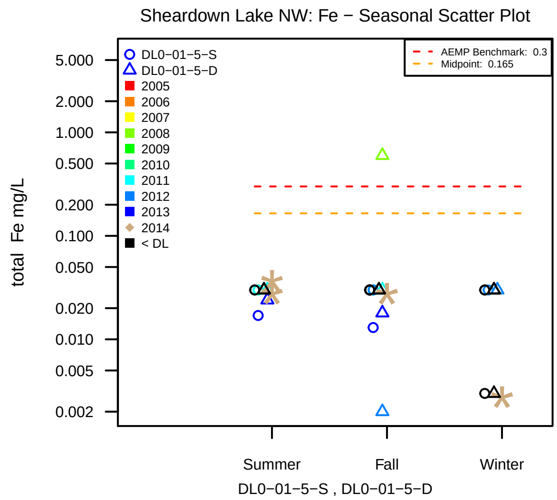

Sheardown Lake NW: Fe − Seasonal Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L
0.100
0.050
0.020
0.010
0.005
0.002
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

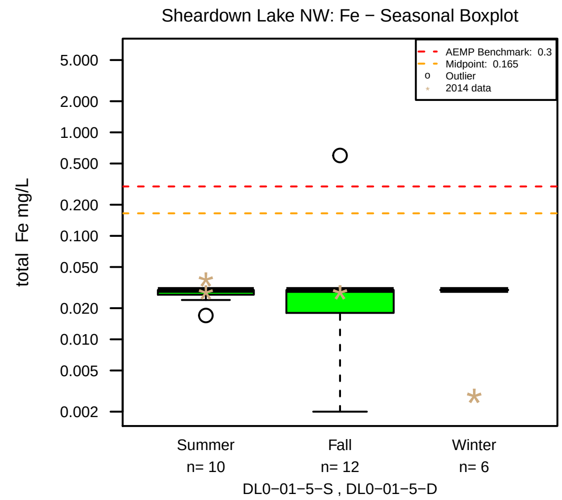

Sheardown Lake NW: Fe − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
total Fe mg/L
0.050
0.020
0.010
0.005
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

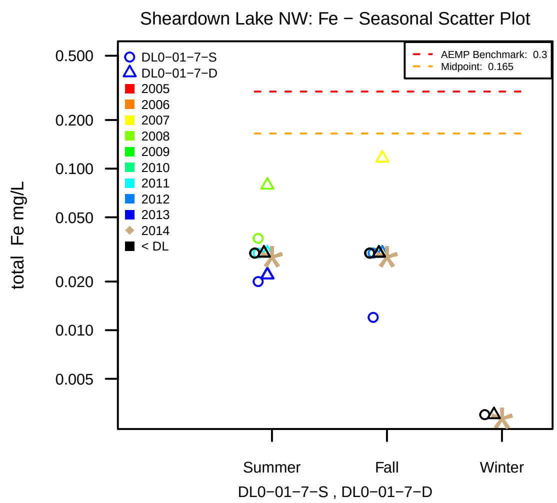

Sheardown Lake NW: Fe − Seasonal Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L
0.050
0.020
0.010
0.005
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

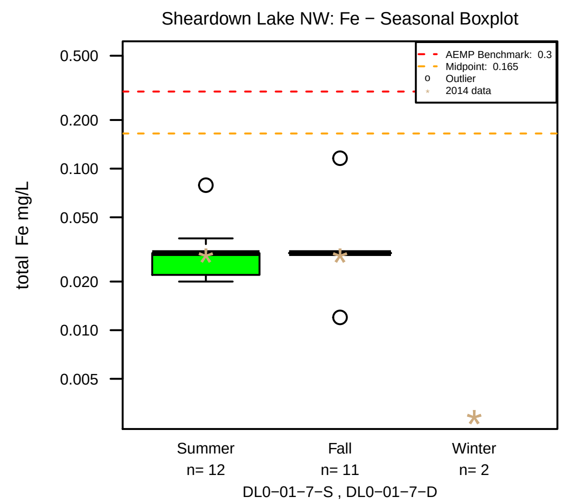

Sheardown Lake NW: Fe − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
total Fe mg/L
0.100
0.050
0.020
0.010
0.005
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

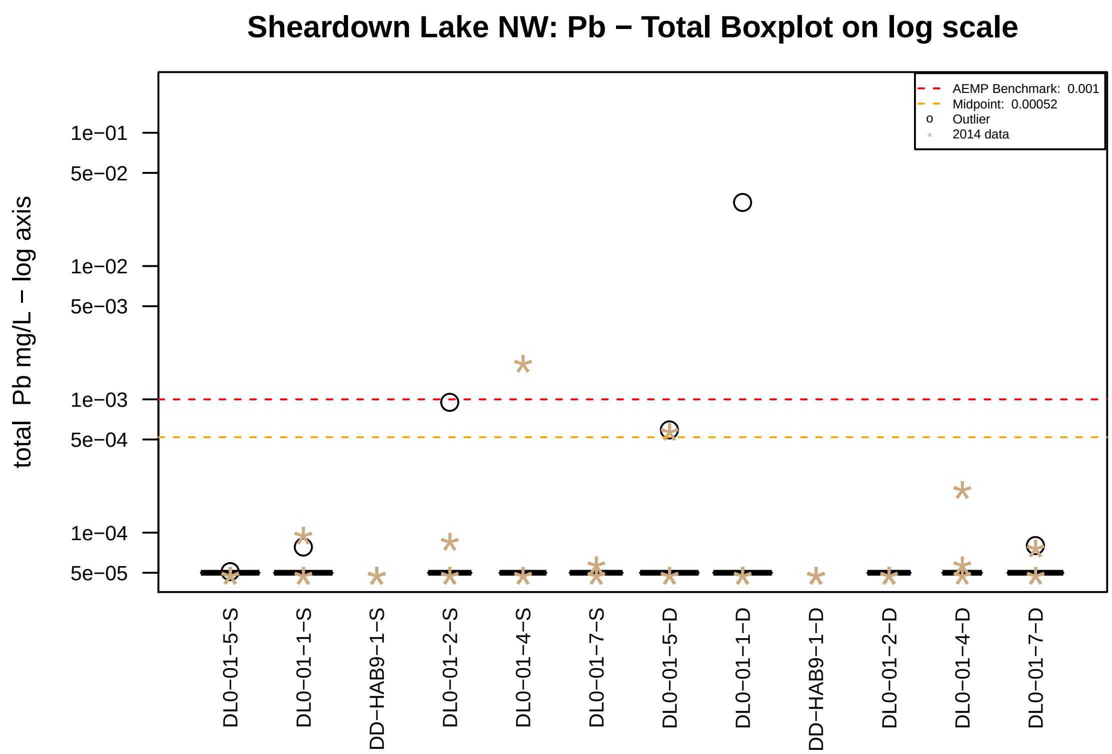

Sheardown Lake NW: Fe − Seasonal Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L
0.100
0.050
0.020
0.010
0.005
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

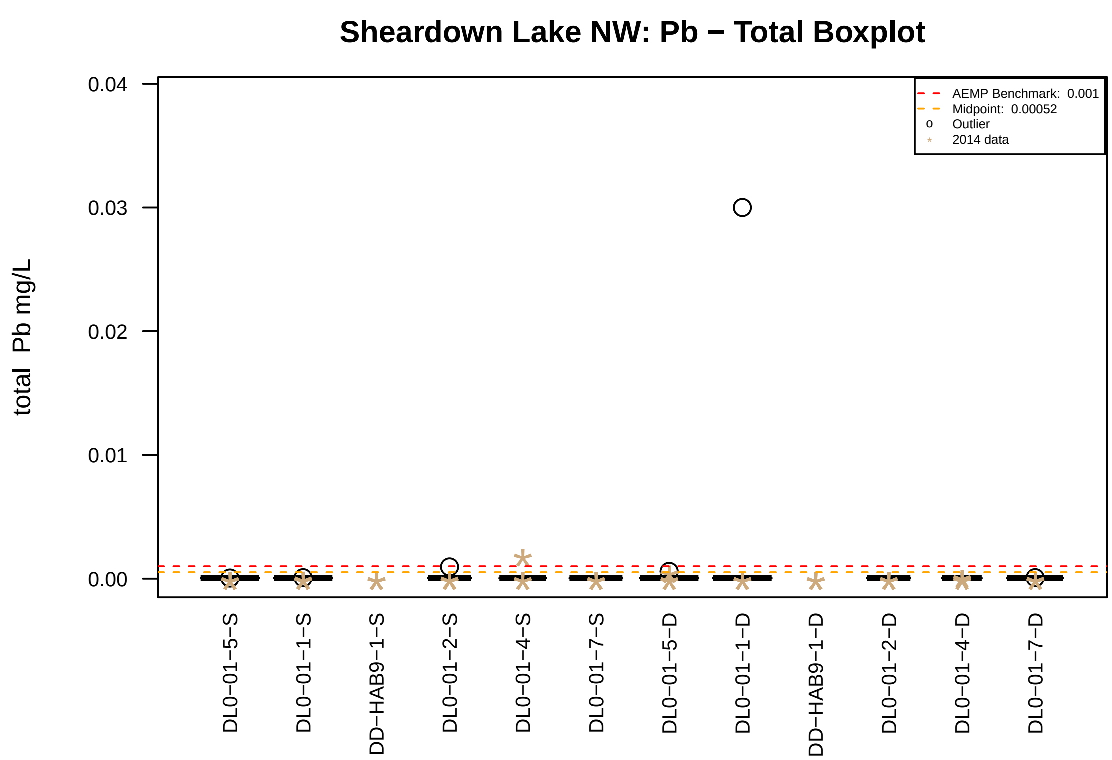

Sheardown Lake NW: Fe − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
total Fe mg/L
5.000
2.000
1.000
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

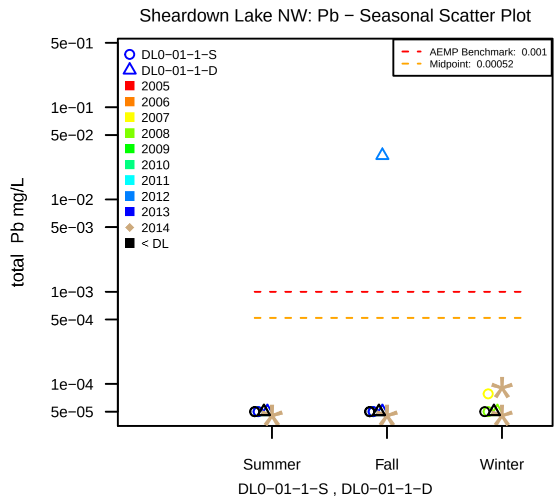

Sheardown Lake NW: Fe − Seasonal Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L
5.000
2.000
1.000
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

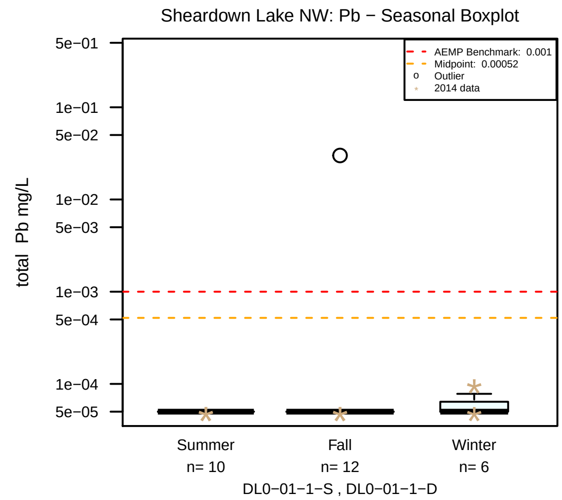

Sheardown Lake NW: Fe − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.165
total Fe mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

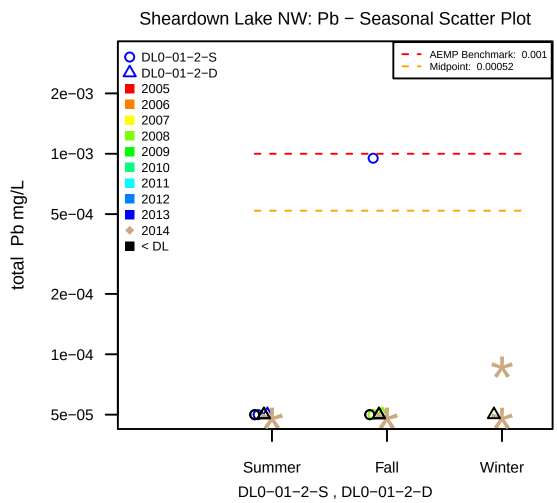

Sheardown Lake NW: Fe − Seasonal Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.165
Outlier
2014 data
total Fe mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

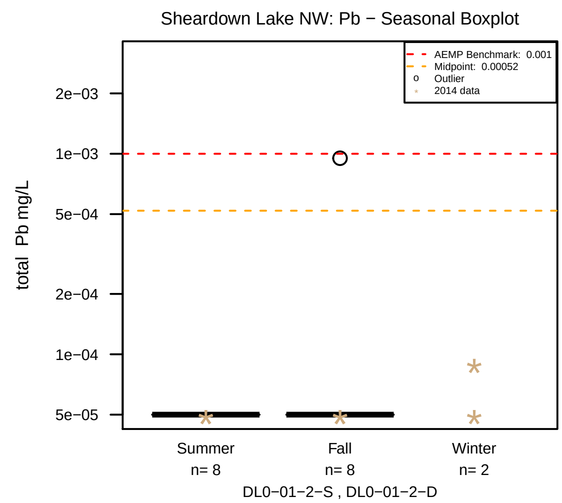

Sheardown Lake NW: Pb − Total Boxplot on log scale
AEMP Benchmark: 0.001
Midpoint: 0.00052
Outlier
2014 data
total Pb mg/L − log axis
1e−01
5e−02
1e−02
5e−03
1e−03
5e−04
1e−04
5e−05
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

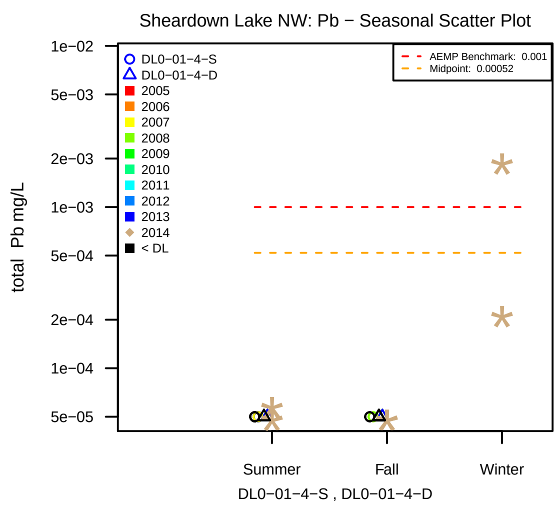

Sheardown Lake NW: Pb − Total Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.00052
Outlier
2014 data
total Pb mg/L
0.04
0.03
0.02
0.01
0.00
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

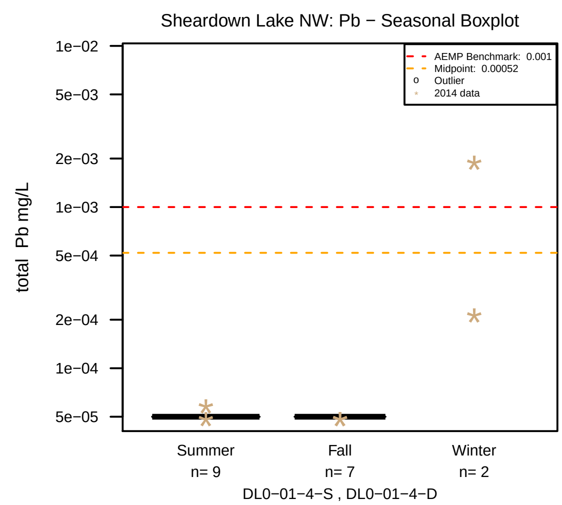

Sheardown Lake NW: Pb − Seasonal Scatter Plot
total Pb mg/L
5e−01
1e−01
5e−02
1e−02
5e−03
1e−03
5e−04
1e−04
5e−05
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00052
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

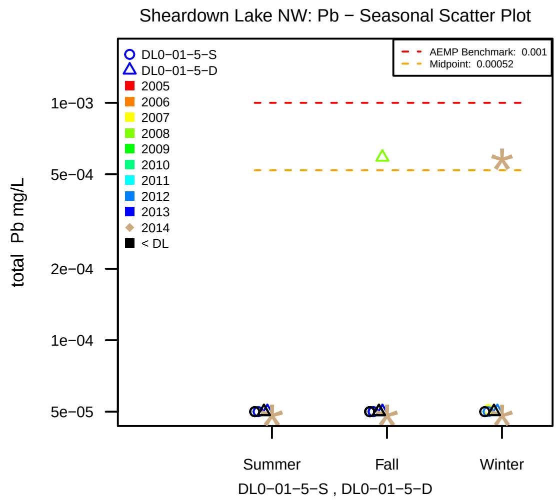

Sheardown Lake NW: Pb − Seasonal Boxplot
total Pb mg/L
5e−01
1e−01
5e−02
1e−02
5e−03
1e−03
5e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00052
Outlier
2014 data
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

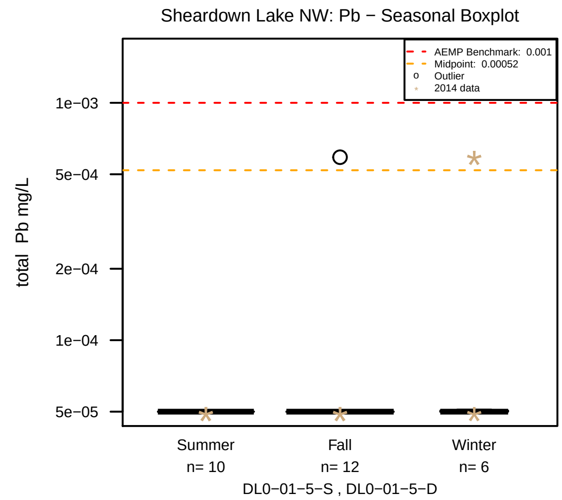

Sheardown Lake NW: Pb − Seasonal Scatter Plot
total Pb mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00052
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

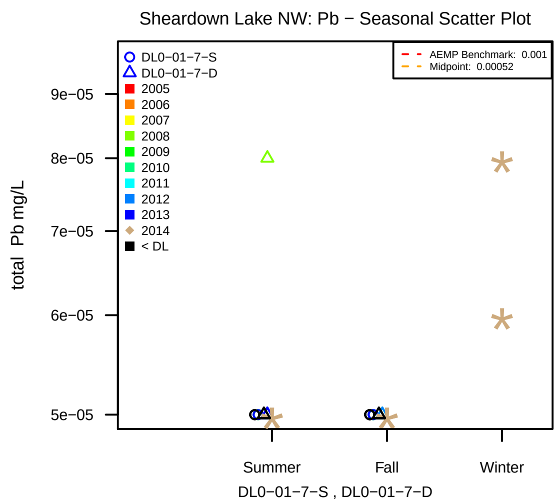

Sheardown Lake NW: Pb − Seasonal Boxplot
total Pb mg/L
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00052
Outlier
2014 data
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

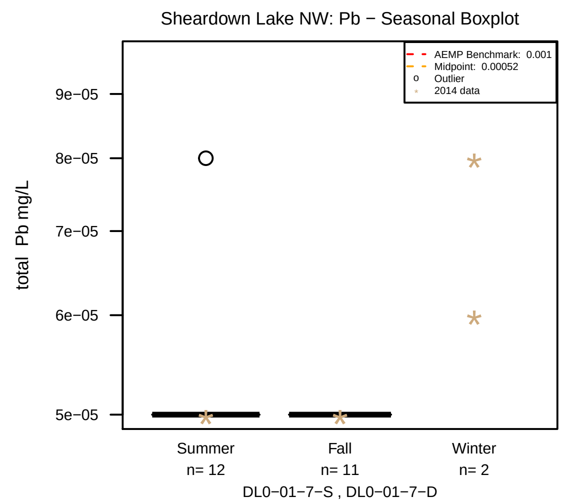

Sheardown Lake NW: Pb − Seasonal Scatter Plot
total Pb mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00052
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

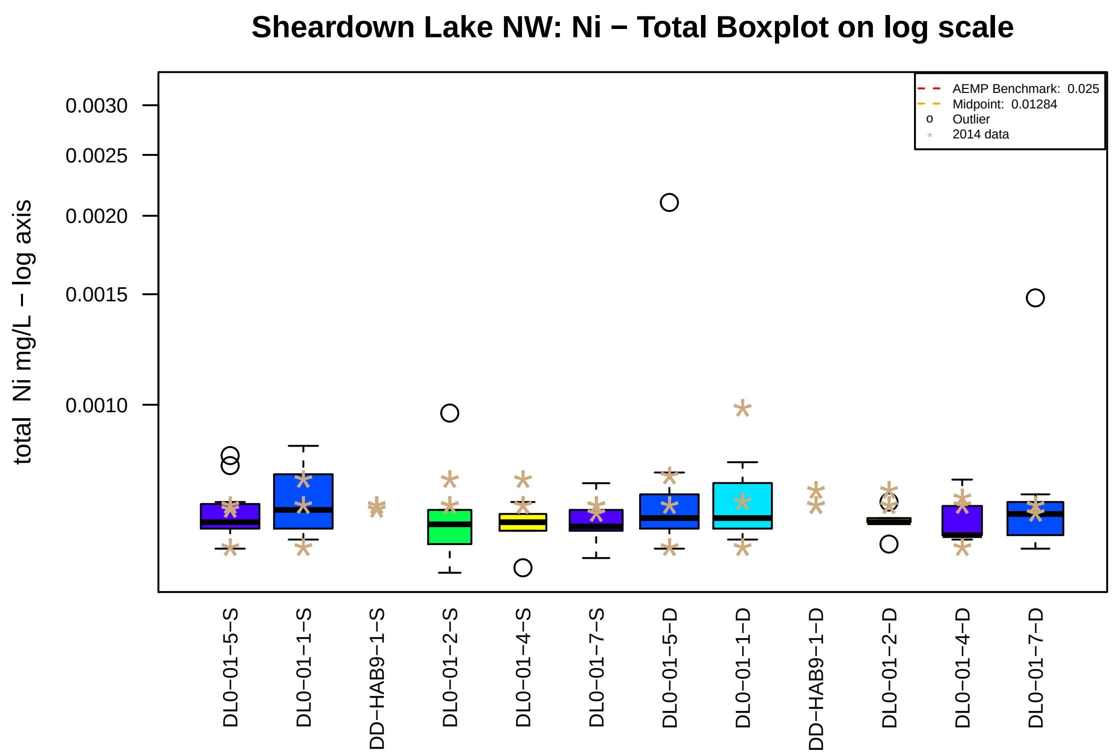

Sheardown Lake NW: Pb − Seasonal Boxplot
total Pb mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00052
Outlier
2014 data
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

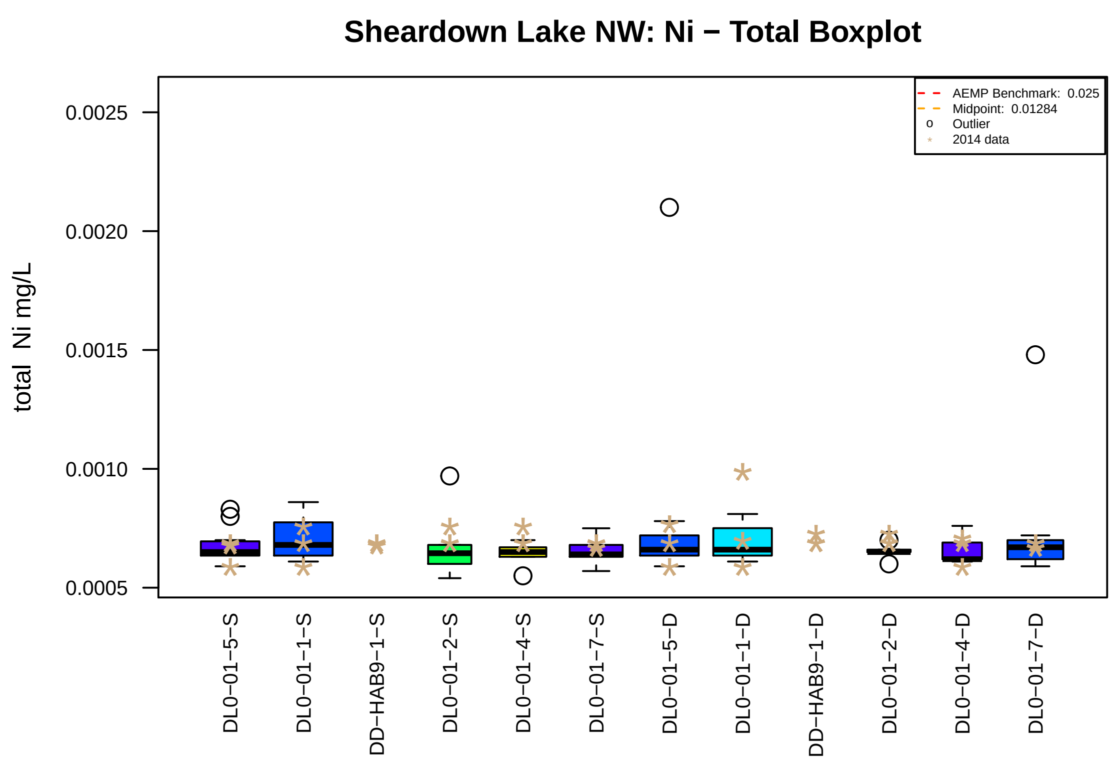

Sheardown Lake NW: Pb − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00052
total Pb mg/L
1e−03
5e−04
2e−04
1e−04
5e−05
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

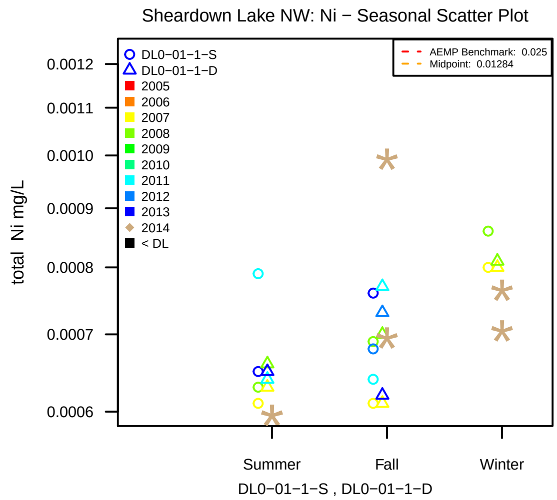

Sheardown Lake NW: Pb − Seasonal Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.00052
Outlier
2014 data
total Pb mg/L
1e−03
5e−04
2e−04
1e−04
5e−05
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

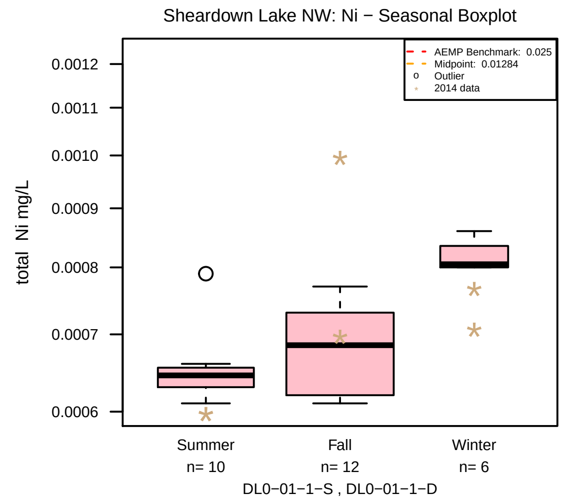

Sheardown Lake NW: Pb − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00052
total Pb mg/L
9e−05
8e−05
7e−05
6e−05
5e−05
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

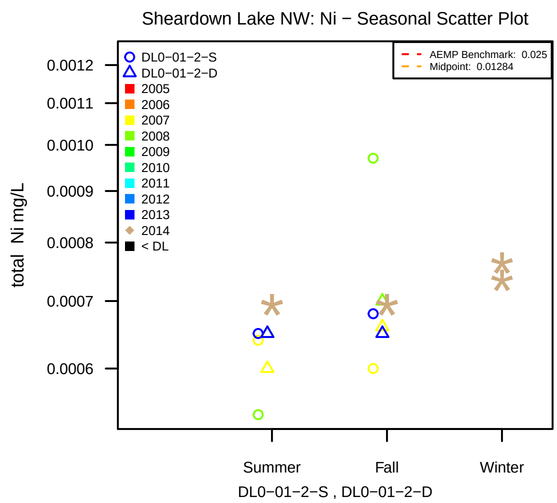

Sheardown Lake NW: Pb − Seasonal Boxplot
AEMP Benchmark: 0.001
Midpoint: 0.00052
Outlier
2014 data
total Pb mg/L
9e−05
8e−05
7e−05
6e−05
5e−05
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

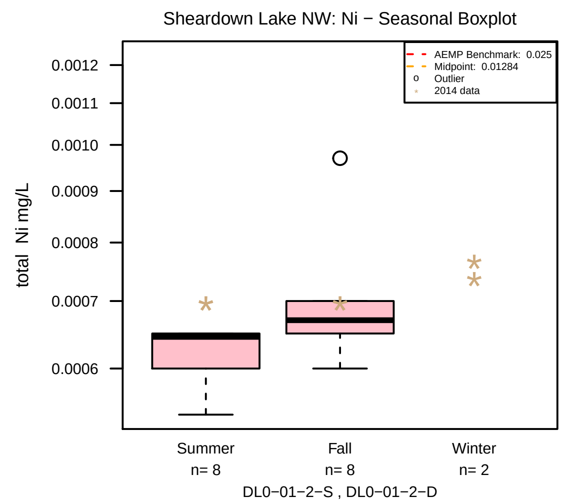

Sheardown Lake NW: Ni – Total Boxplot on log scale
total Ni mg/L – log axis
0.0030
0.0025
0.0020
0.0015
0.0010
AEMP Benchmark: 0.025
Midpoint: 0.01284
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

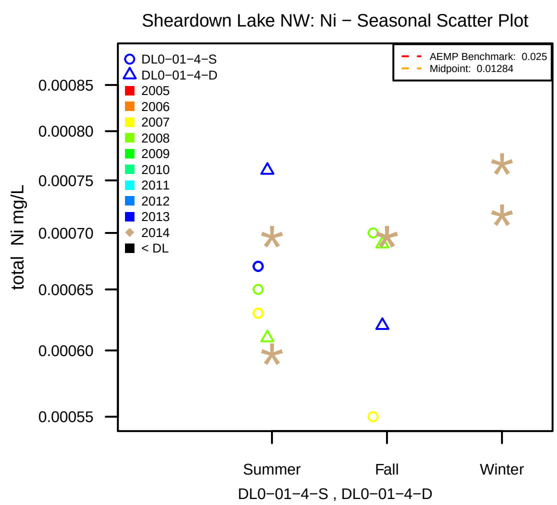

Sheardown Lake NW: Ni – Total Boxplot
total Ni mg/L
0.0025
0.0020
0.0015
0.0010
0.0005
AEMP Benchmark: 0.025
Midpoint: 0.01284
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

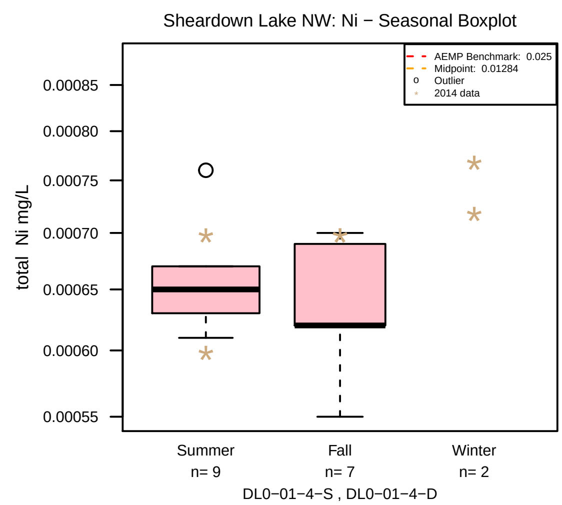

Sheardown Lake NW: Ni − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01284
total Ni mg/L
0.0012
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

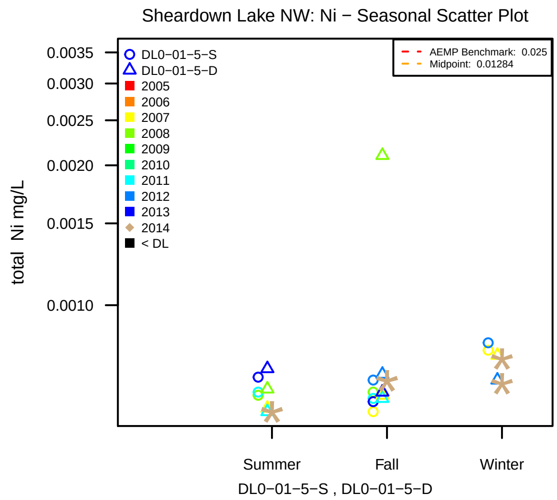

Sheardown Lake NW: Ni − Seasonal Boxplot
AEMP Benchmark: 0.025
Midpoint: 0.01284
Outlier
2014 data
total Ni mg/L
0.0012
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

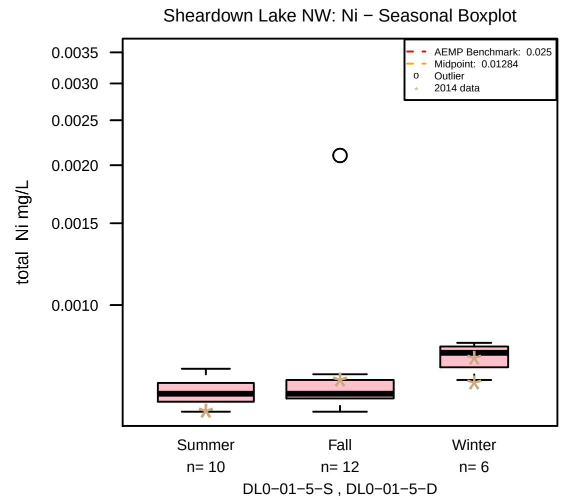

Sheardown Lake NW: Ni − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01284
total Ni mg/L
0.0012
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

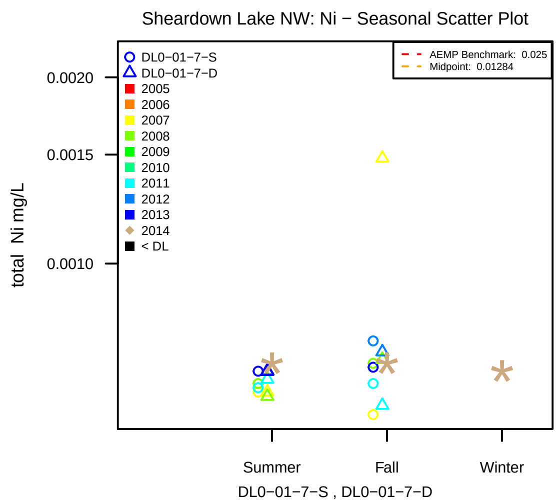

Sheardown Lake NW: Ni − Seasonal Boxplot
AEMP Benchmark: 0.025
Midpoint: 0.01284
Outlier
2014 data
total Ni mg/L
0.0012
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

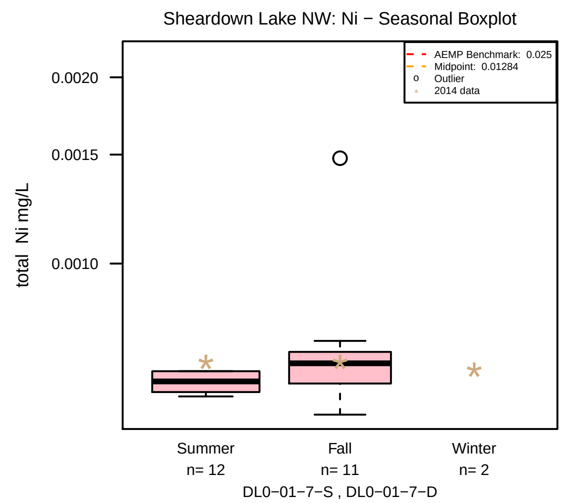

Sheardown Lake NW: Ni − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01284
total Ni mg/L
0.00085
0.00080
0.00075
0.00070
0.00065
0.00060
0.00055
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

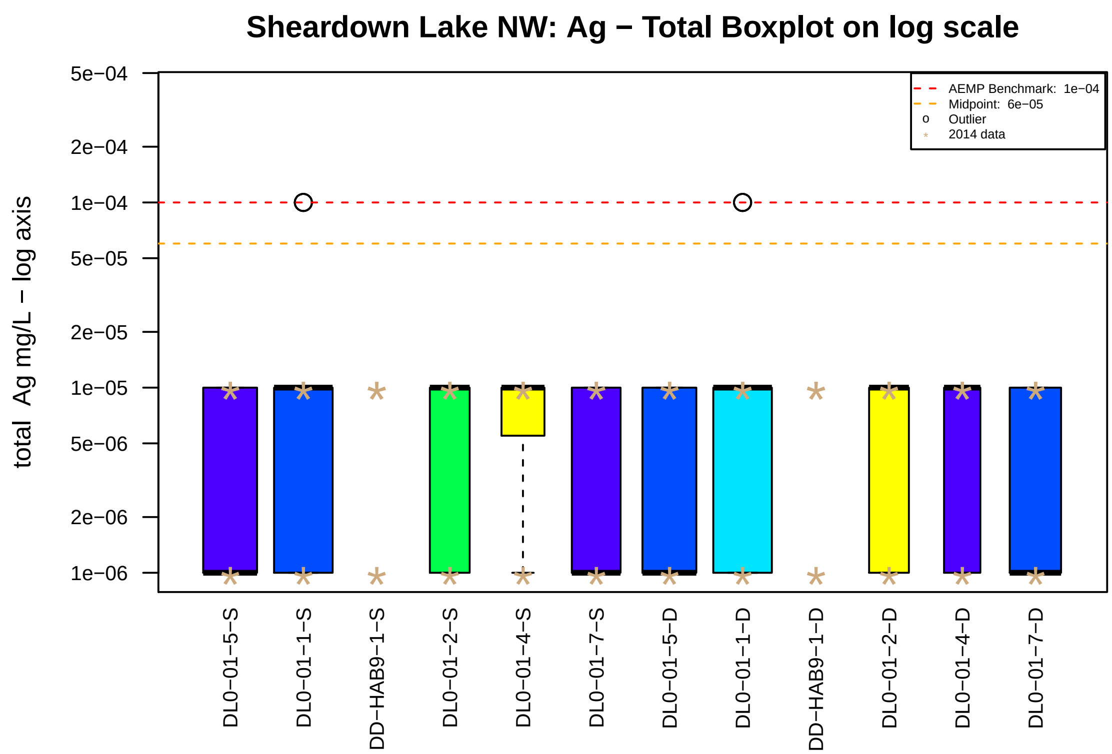

Sheardown Lake NW: Ni − Seasonal Boxplot
AEMP Benchmark: 0.025
Midpoint: 0.01284
Outlier
2014 data
total Ni mg/L
0.00085
0.00080
0.00075
0.00070
0.00065
0.00060
0.00055
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

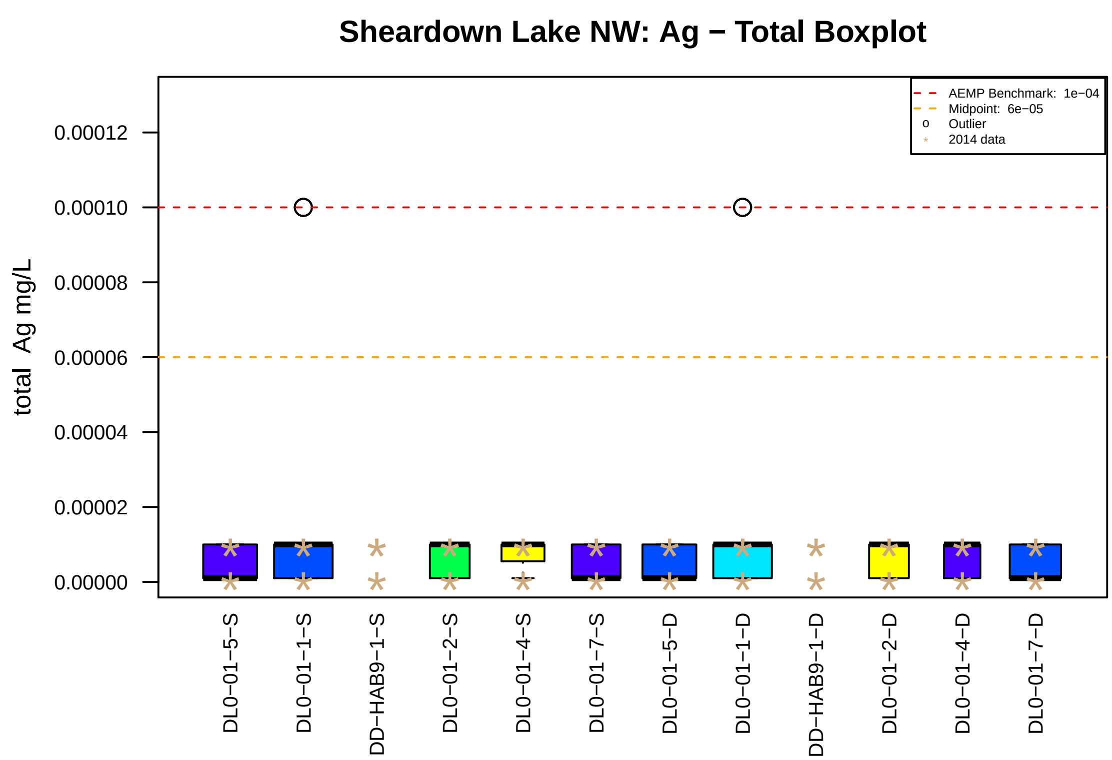

Sheardown Lake NW: Ni − Seasonal Scatter Plot
total Ni mg/L
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01284
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

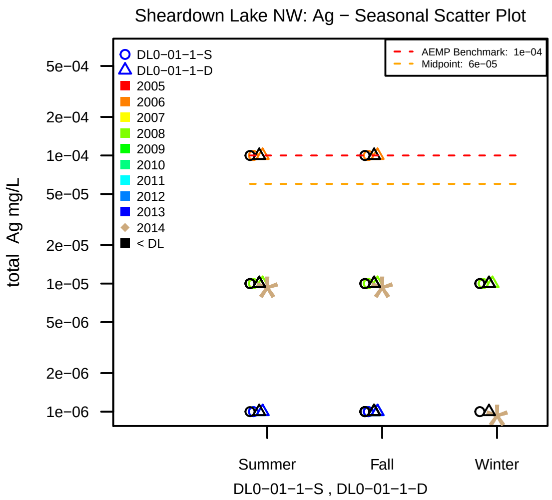

Sheardown Lake NW: Ni − Seasonal Boxplot
total Ni mg/L
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
AEMP Benchmark: 0.025
Midpoint: 0.01284
Outlier
2014 data
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

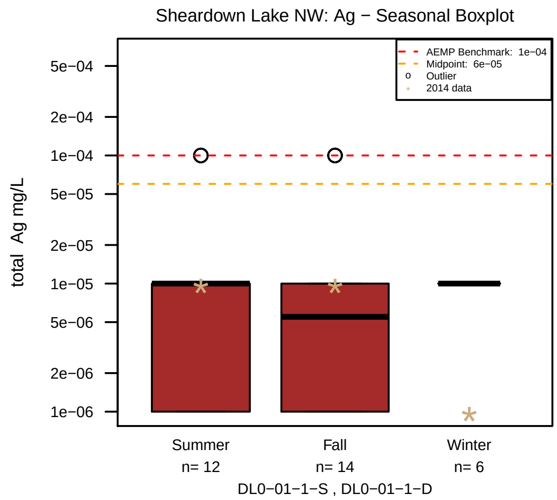

Sheardown Lake NW: Ni − Seasonal Scatter Plot
total Ni mg/L
0.0020
0.0015
0.0010
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01284
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

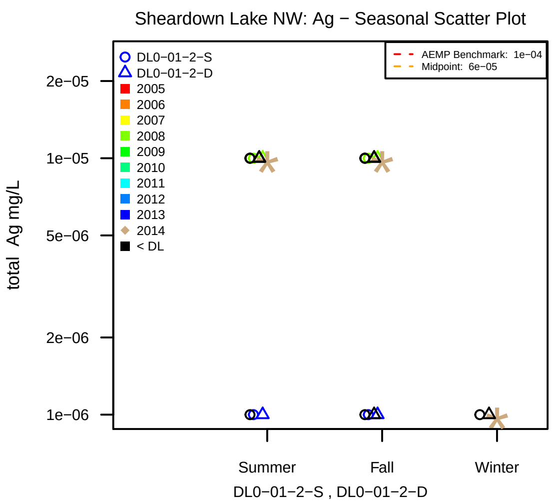

Sheardown Lake NW: Ni − Seasonal Boxplot
total Ni mg/L
0.0020
0.0015
0.0010
AEMP Benchmark: 0.025
Midpoint: 0.01284
Outlier
2014 data
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

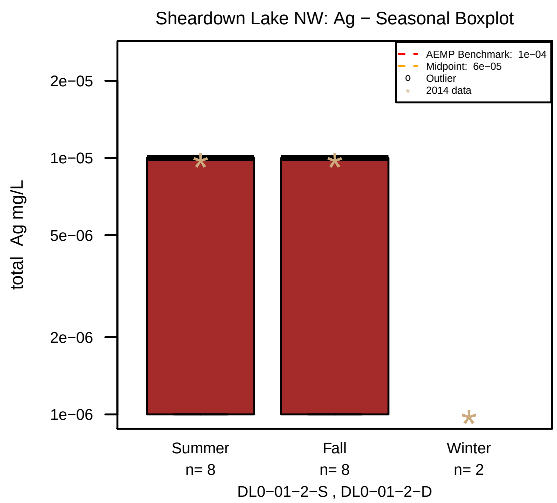

Sheardown Lake NW: Ag − Total Boxplot on log scale
total Ag mg/L − log axis
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

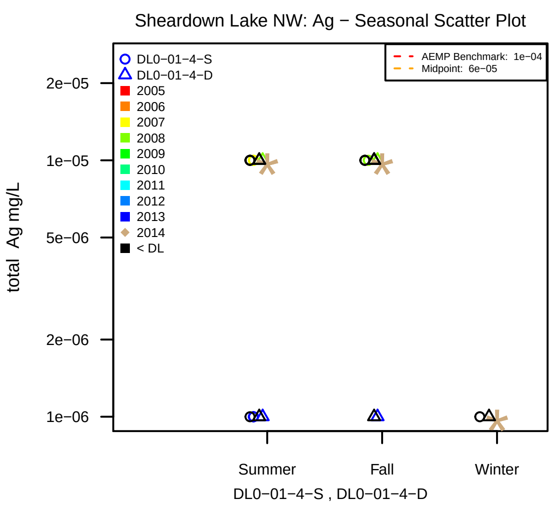

Sheardown Lake NW: Ag − Total Boxplot
total Ag mg/L
0.00012
0.00010
0.00008
0.00006
0.00004
0.00002
0.00000
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

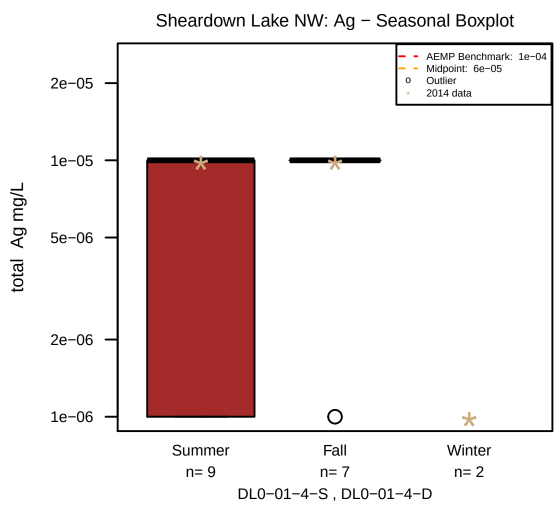

Sheardown Lake NW: Ag − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
total Ag mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

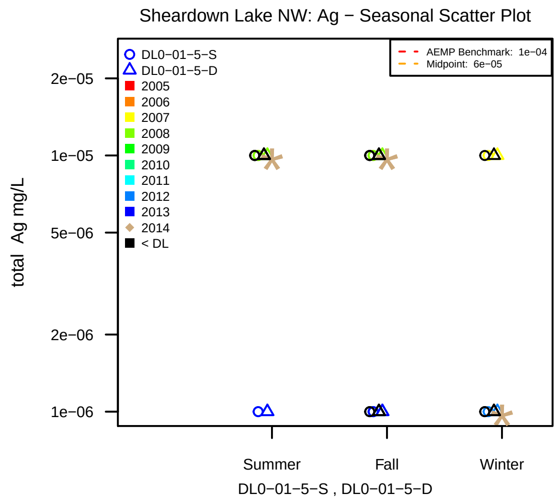

Sheardown Lake NW: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

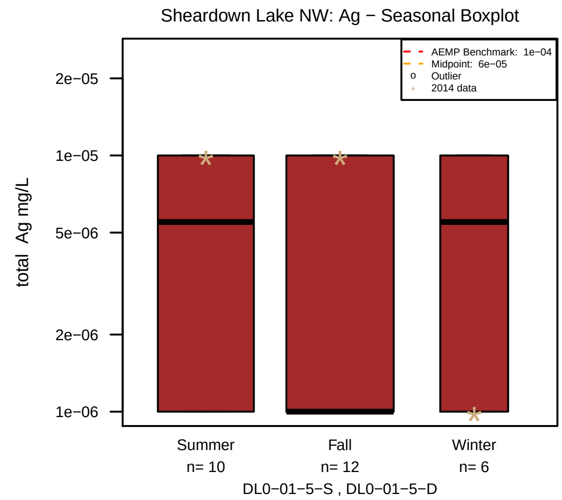

Sheardown Lake NW: Ag − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

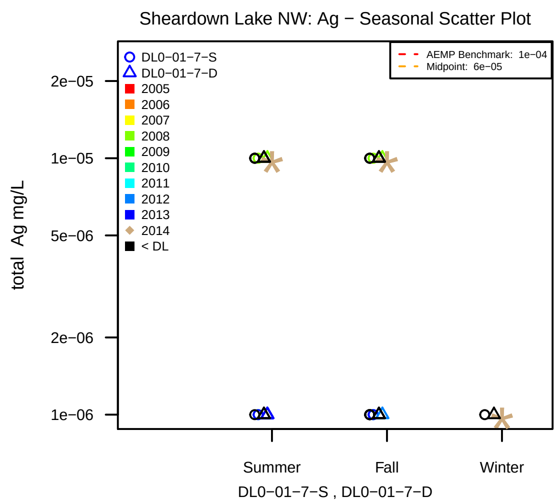

Sheardown Lake NW: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

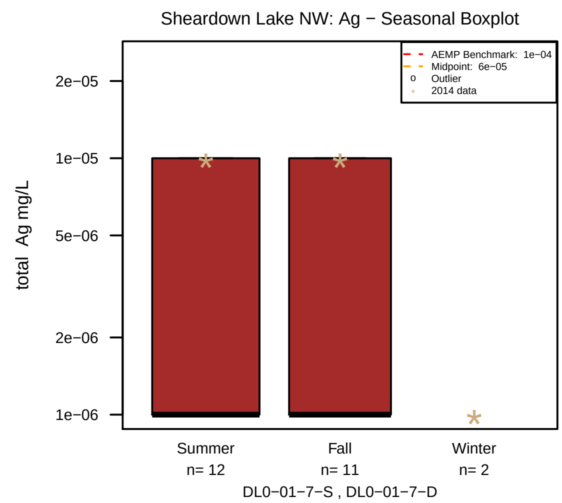

Sheardown Lake NW: Ag − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

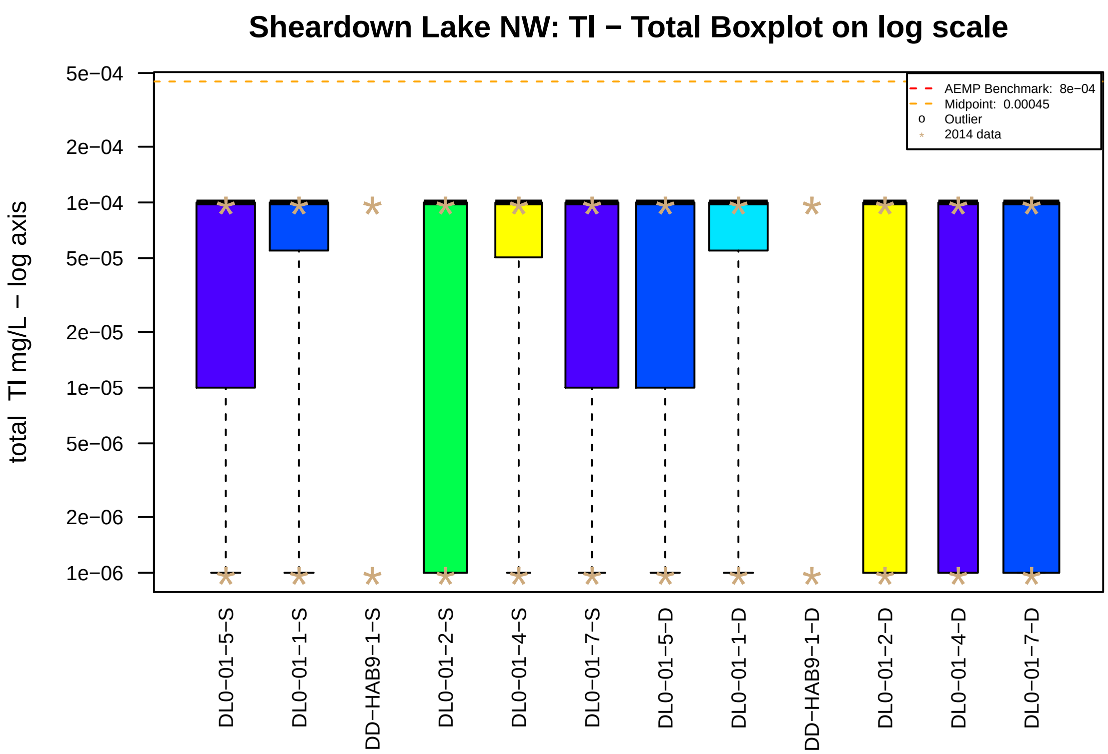

Sheardown Lake NW: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

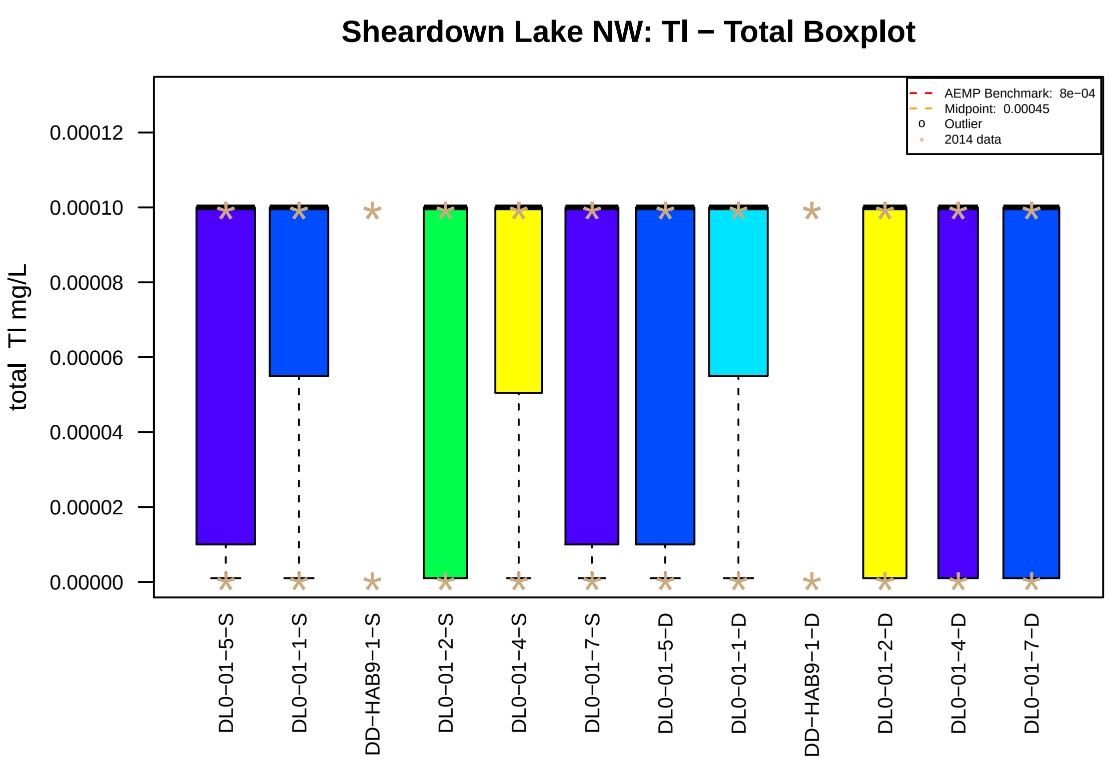

Sheardown Lake NW: Ag − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D


Sheardown Lake NW: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

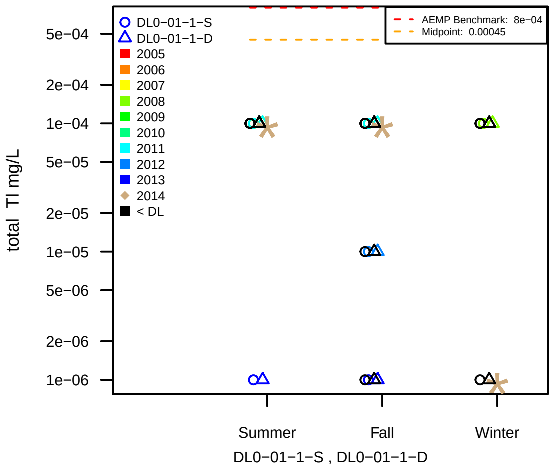

Sheardown Lake NW: Ag − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D


Sheardown Lake NW: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

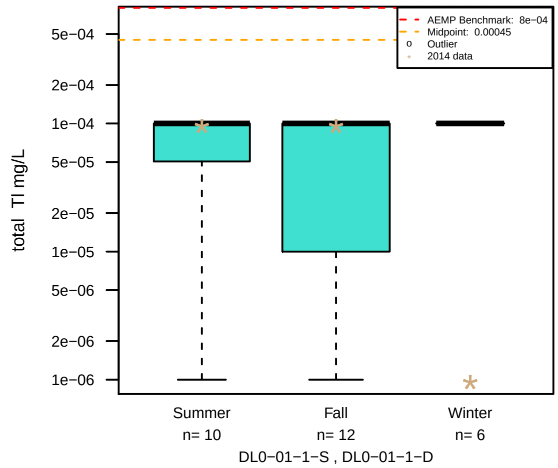

Sheardown Lake NW: Tl – Total Boxplot on log scale
total Tl mg/L – log axis
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D


Sheardown Lake NW: Tl – Total Boxplot
total Tl mg/L
0.00012
0.00010
0.00008
0.00006
0.00004
0.00002
0.00000
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

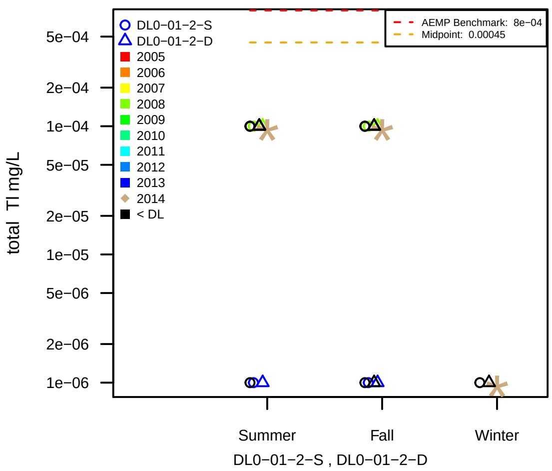
Sheardown Lake NW: Tl − Seasonal Scatter Plot



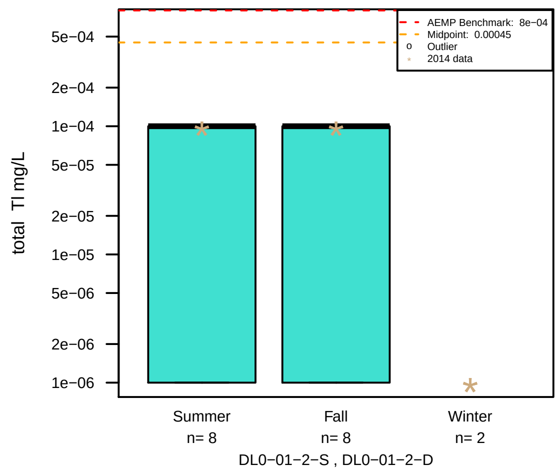
Sheardown Lake NW: Tl − Seasonal Boxplot



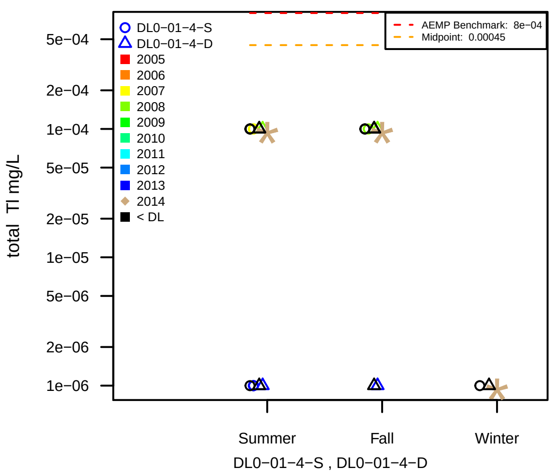
Sheardown Lake NW: Tl − Seasonal Scatter Plot



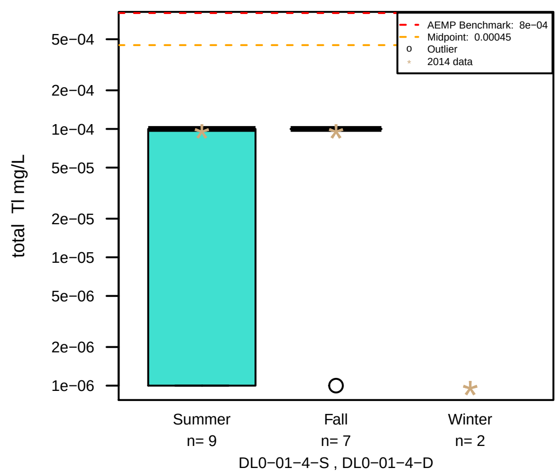
Sheardown Lake NW: Tl − Seasonal Boxplot

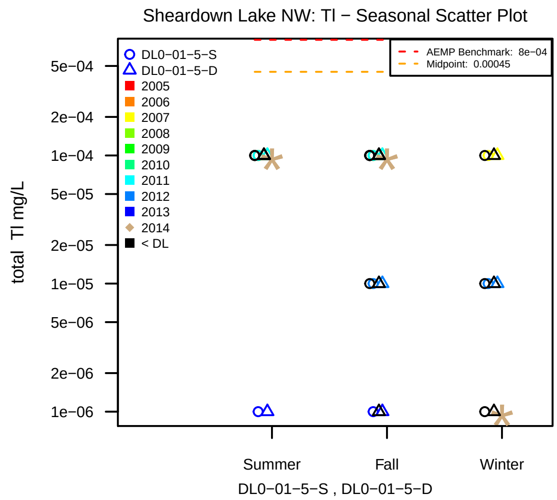


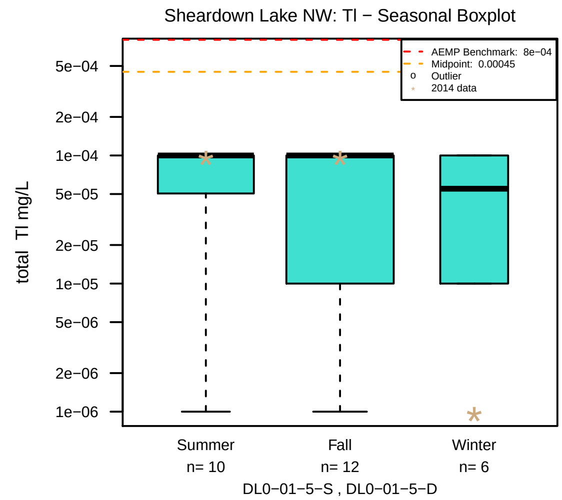
Sheardown Lake NW: Tl − Seasonal Scatter Plot

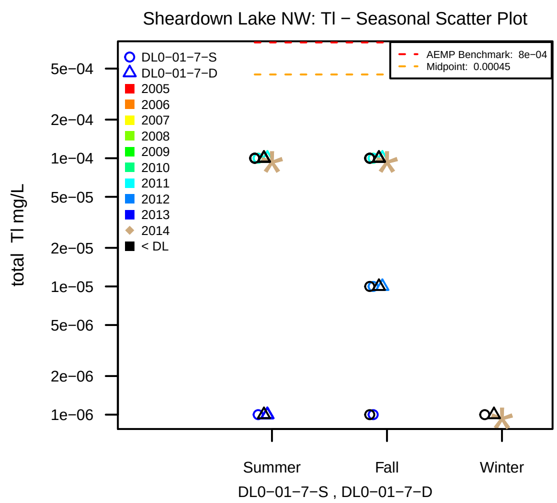


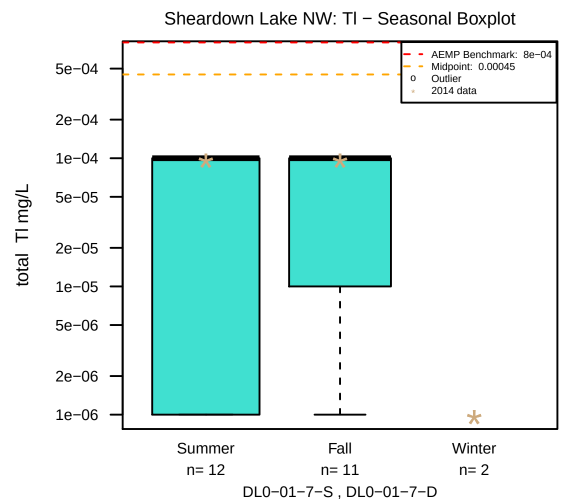
Sheardown Lake NW: Tl − Seasonal Boxplot

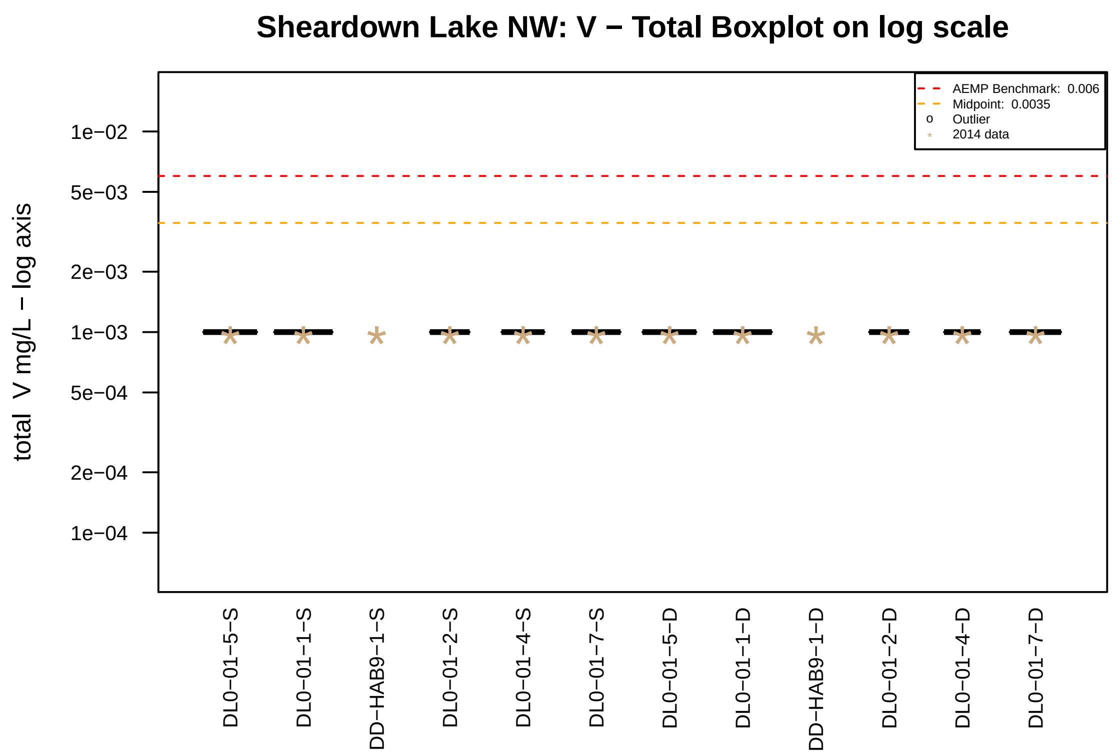


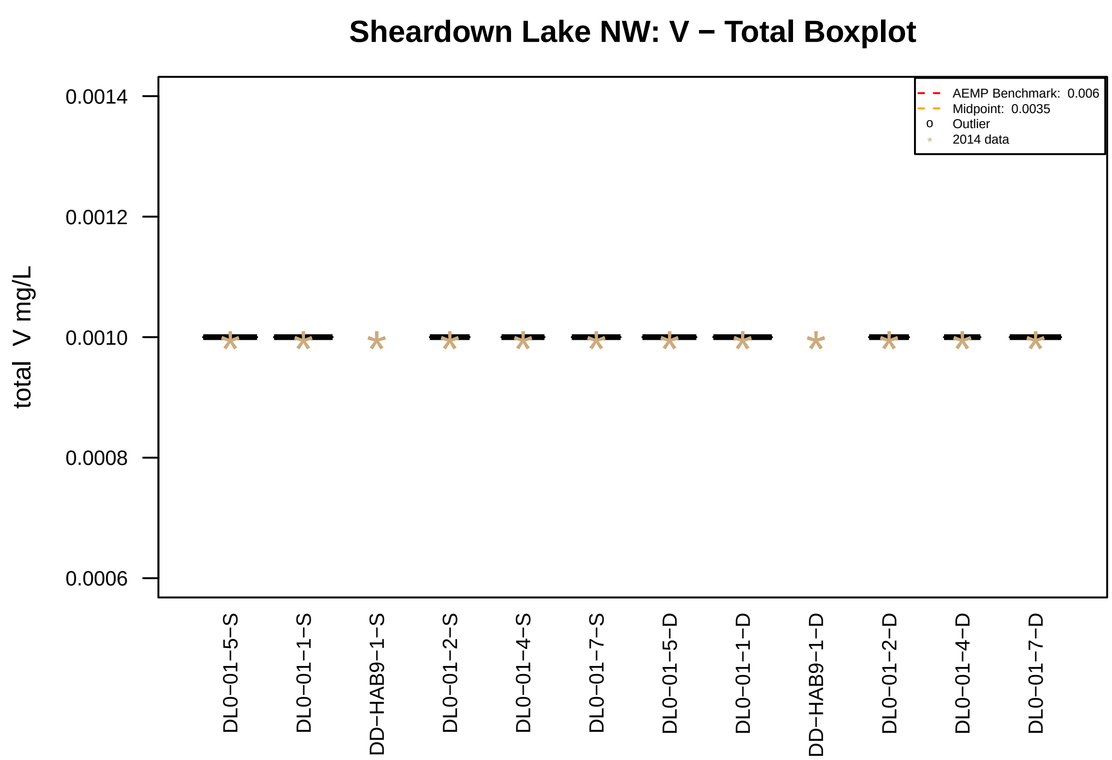

Sheardown Lake NW: Tl − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

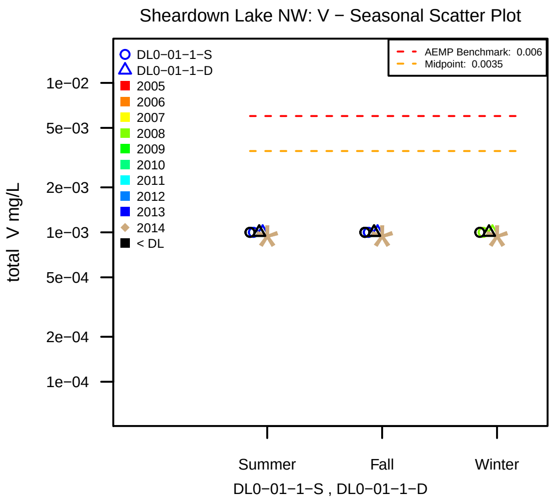

Sheardown Lake NW: Tl − Seasonal Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

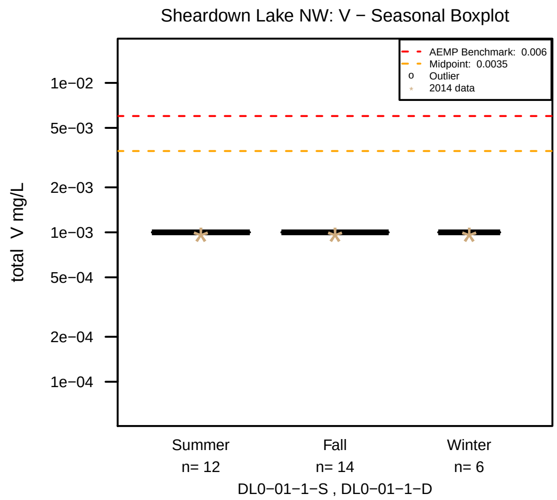

Sheardown Lake NW: Tl − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

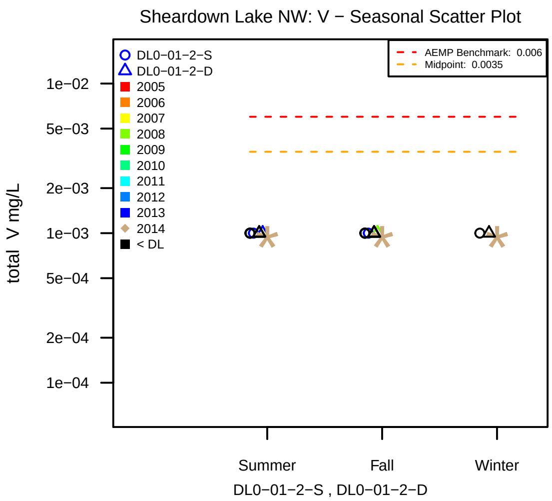

Sheardown Lake NW: Tl − Seasonal Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

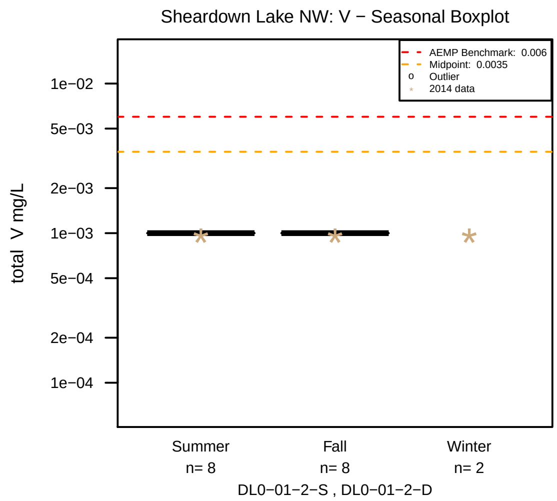

Sheardown Lake NW: V − Total Boxplot on log scale
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L − log axis
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

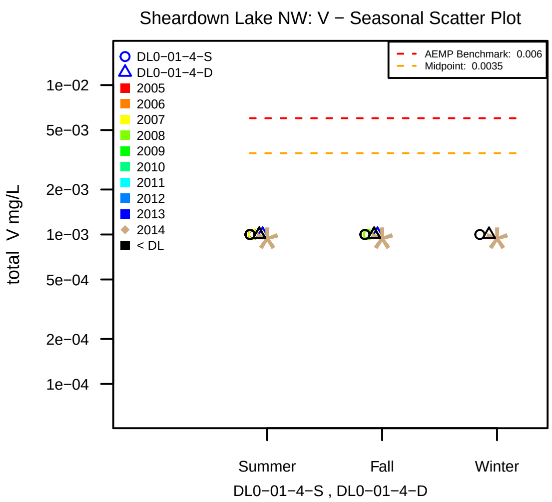

Sheardown Lake NW: V − Total Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
0.0014
0.0012
0.0010
0.0008
0.0006
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

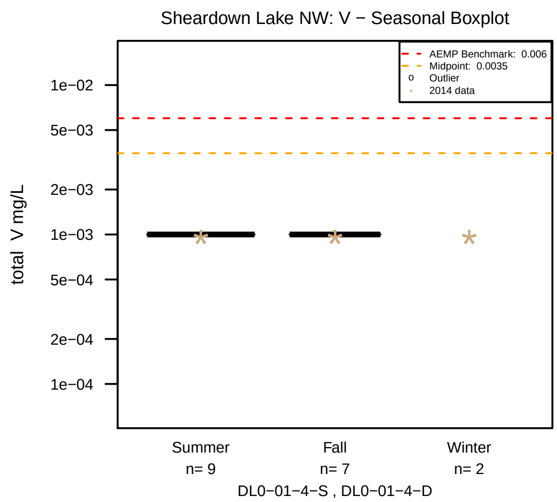

Sheardown Lake NW: V − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

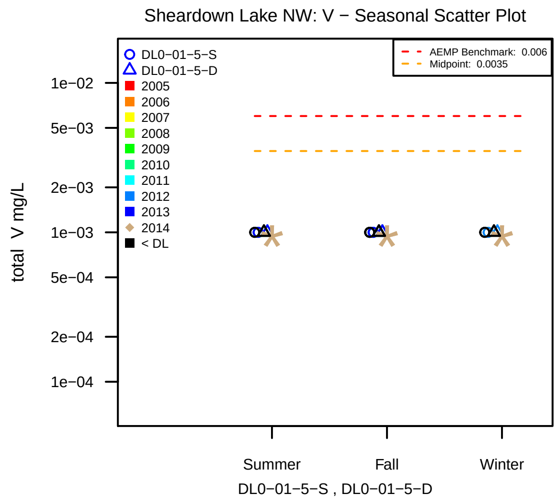

Sheardown Lake NW: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

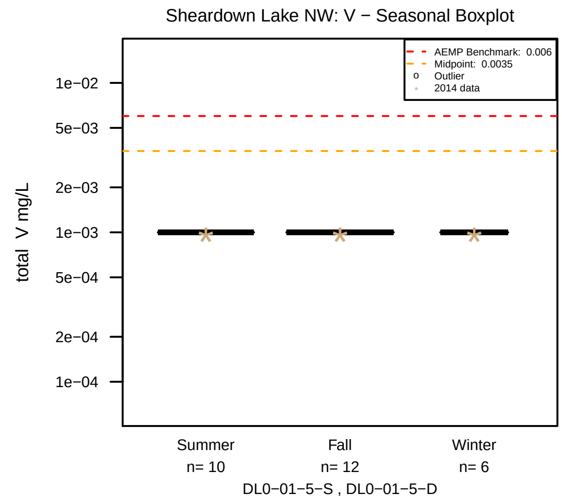

Sheardown Lake NW: V − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

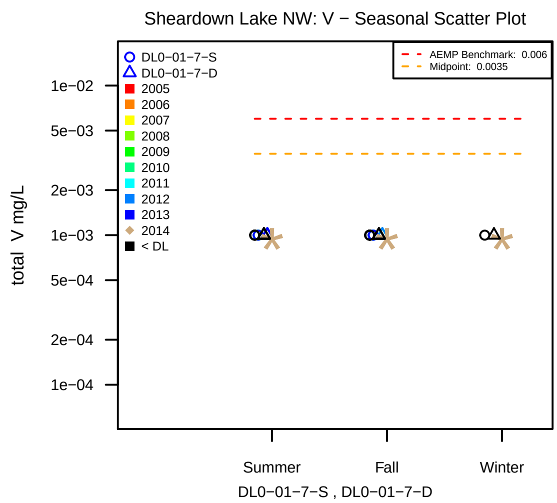

Sheardown Lake NW: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

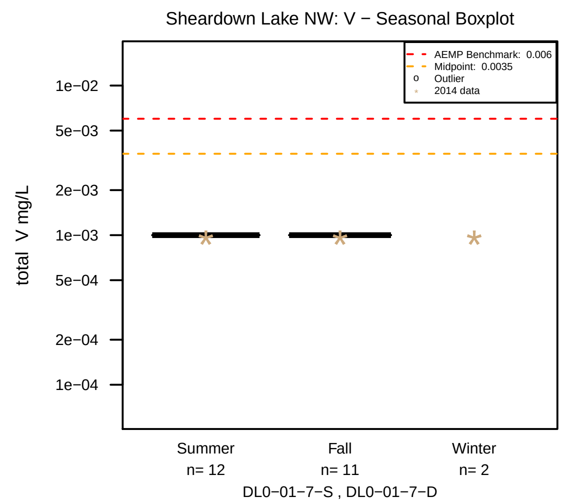

Sheardown Lake NW: V − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

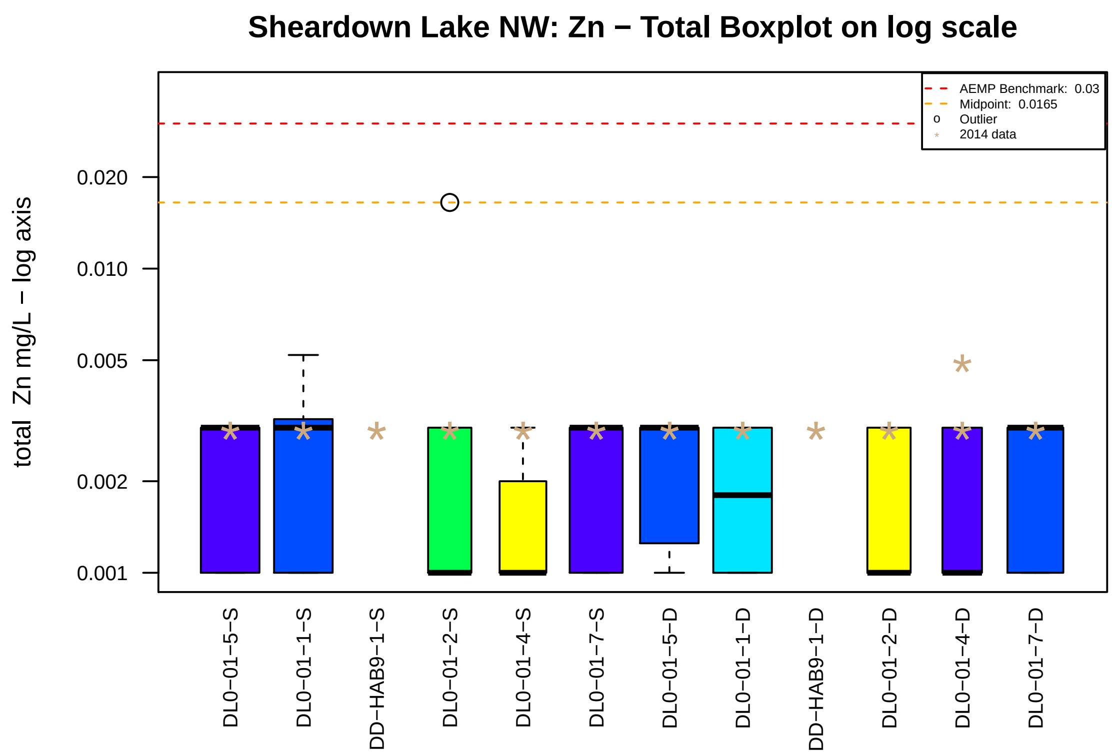

Sheardown Lake NW: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

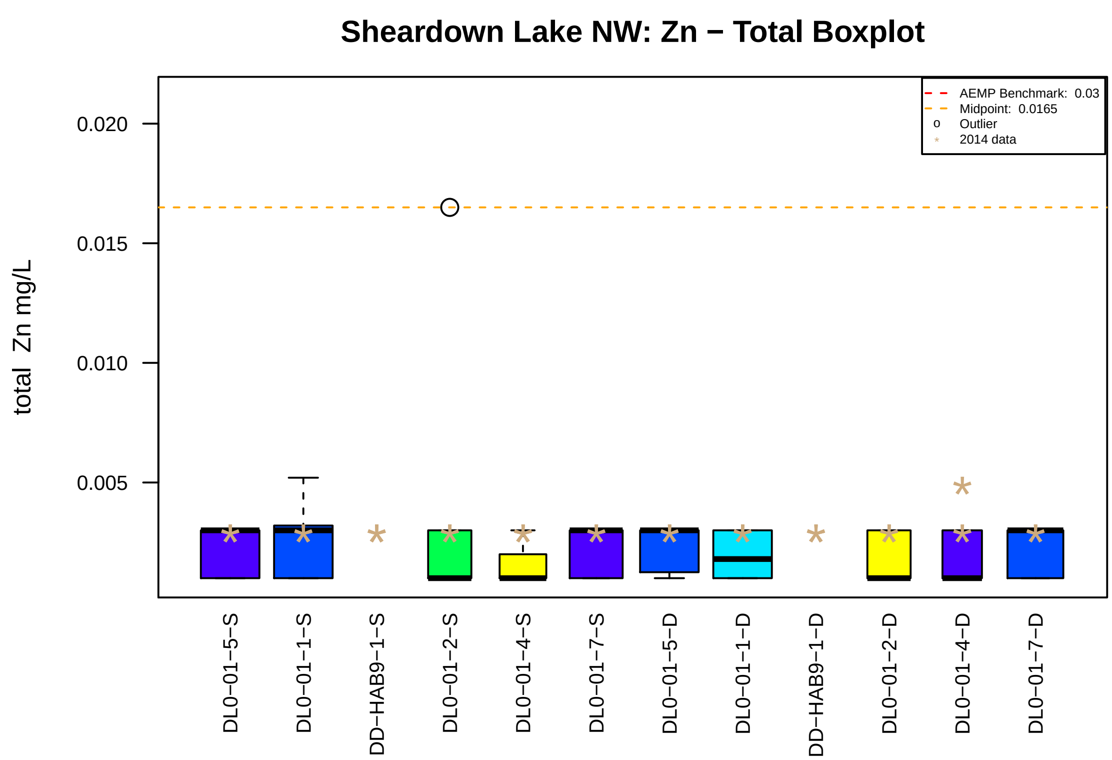

Sheardown Lake NW: V − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

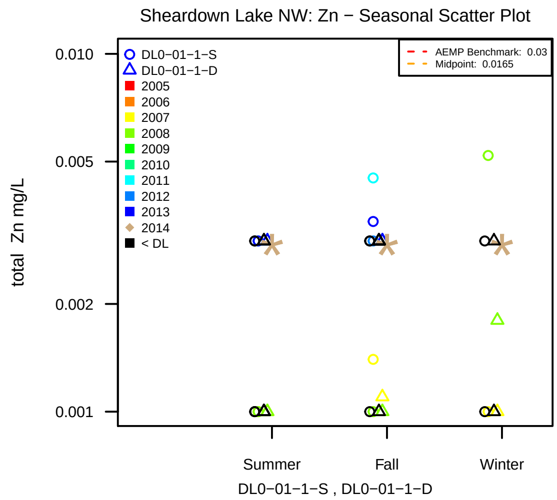

Sheardown Lake NW: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

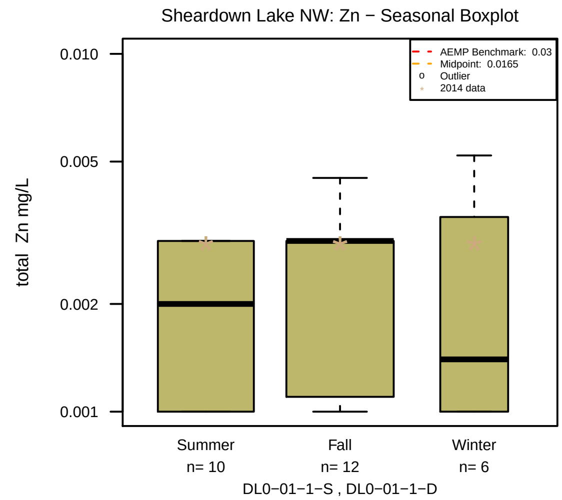

Sheardown Lake NW: V − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

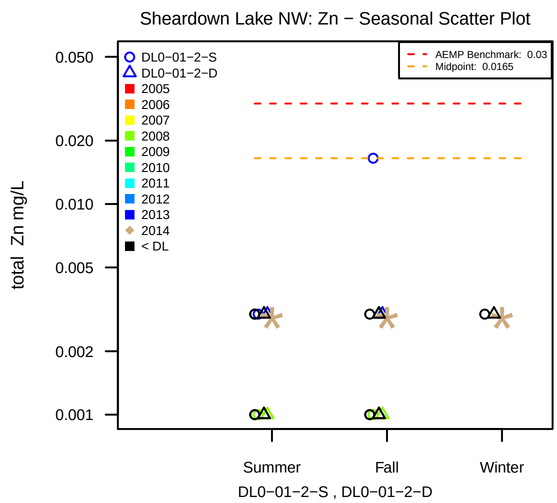

Sheardown Lake NW: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

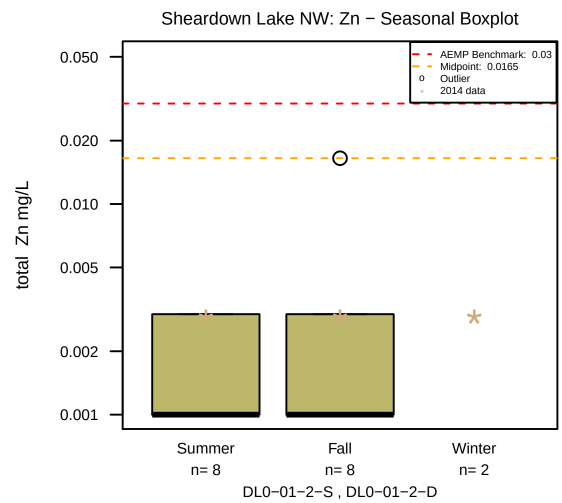

Sheardown Lake NW: Zn − Total Boxplot on log scale
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
total Zn mg/L − log axis
0.020
0.010
0.005
0.002
0.001
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

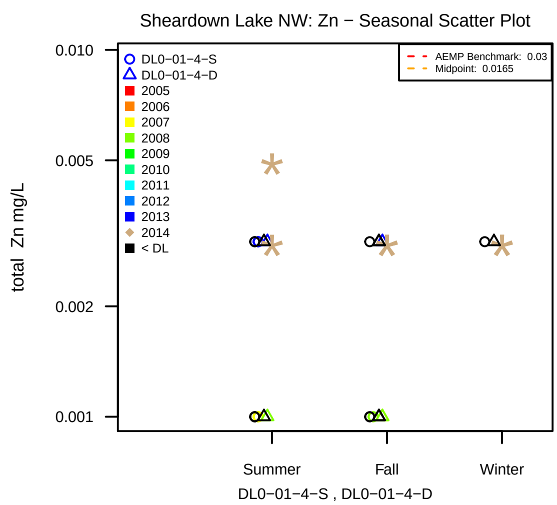

Sheardown Lake NW: Zn − Total Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
total Zn mg/L
0.020
0.015
0.010
0.005
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

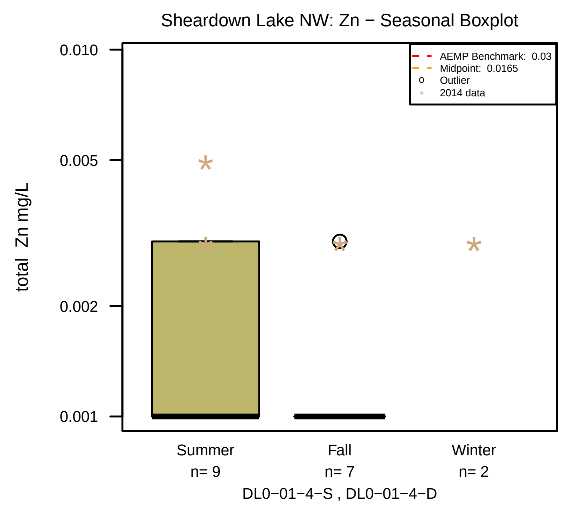

Sheardown Lake NW: Zn − Seasonal Scatter Plot
total Zn mg/L
0.010
0.005
0.002
0.001
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

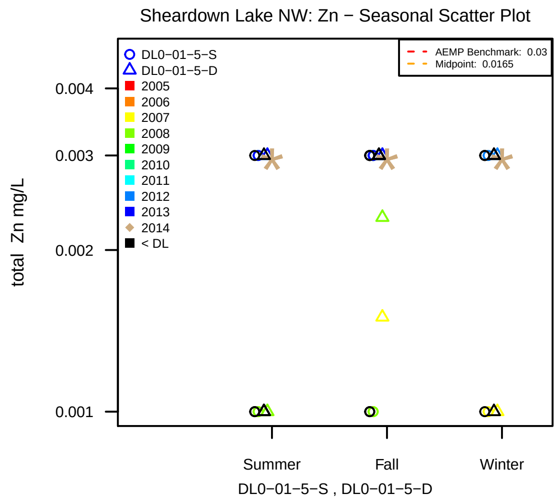

Sheardown Lake NW: Zn − Seasonal Boxplot
total Zn mg/L
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

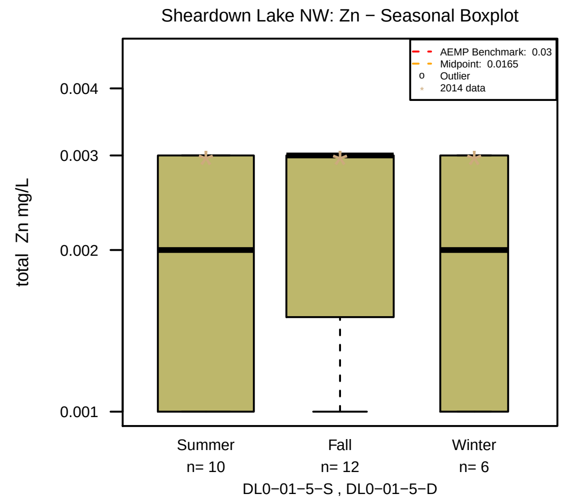

Sheardown Lake NW: Zn − Seasonal Scatter Plot
total Zn mg/L
0.050
0.020
0.010
0.005
0.002
0.001
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

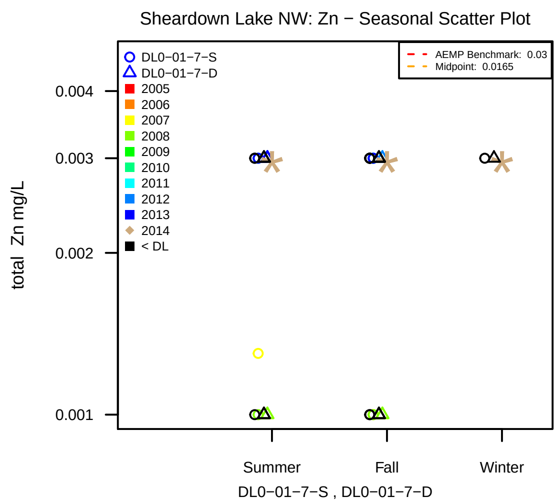

Sheardown Lake NW: Zn − Seasonal Boxplot
total Zn mg/L
0.050
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

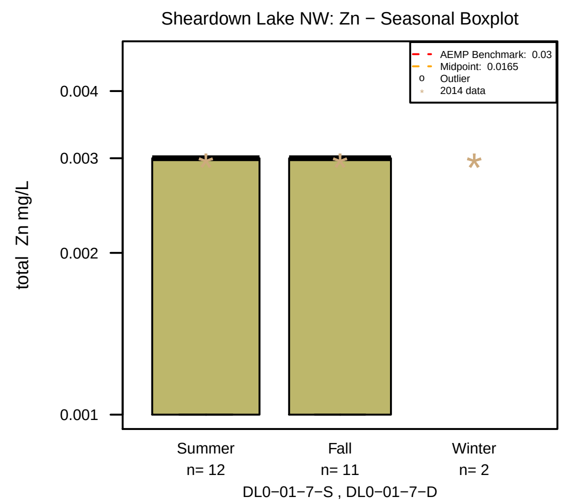

Sheardown Lake NW: Zn − Seasonal Scatter Plot
total Zn mg/L
0.010
0.005
0.002
0.001
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

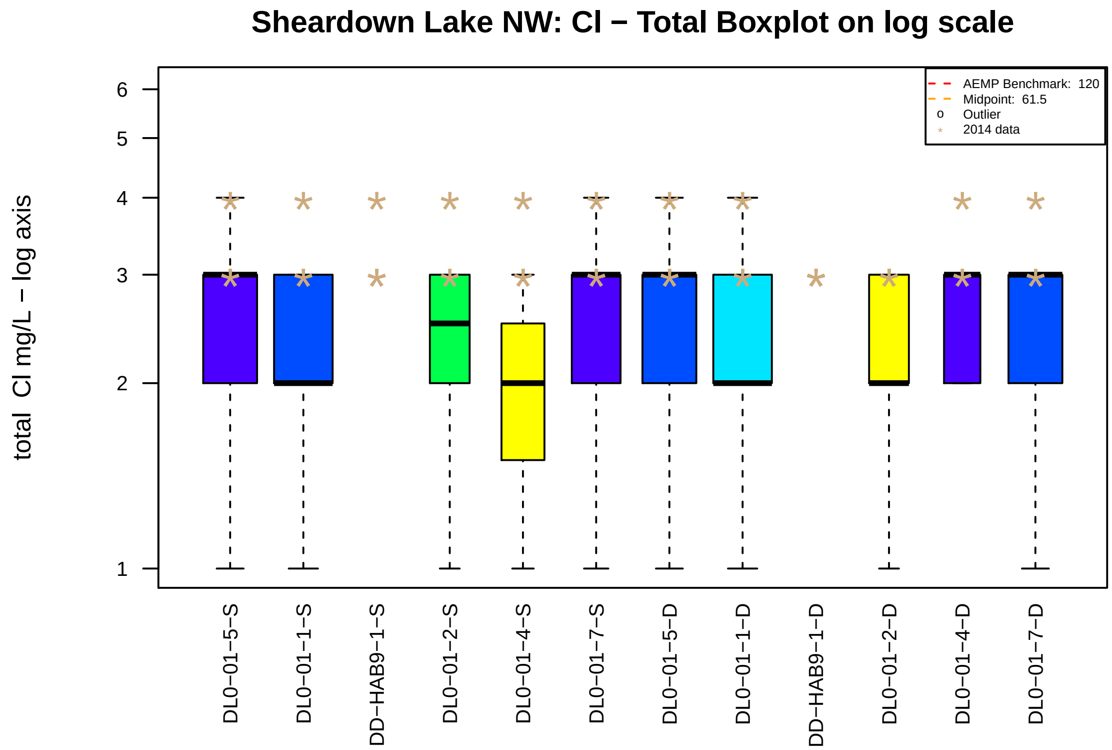

Sheardown Lake NW: Zn − Seasonal Boxplot
total Zn mg/L
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
Summer
n= 9
Fall
n= 7
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

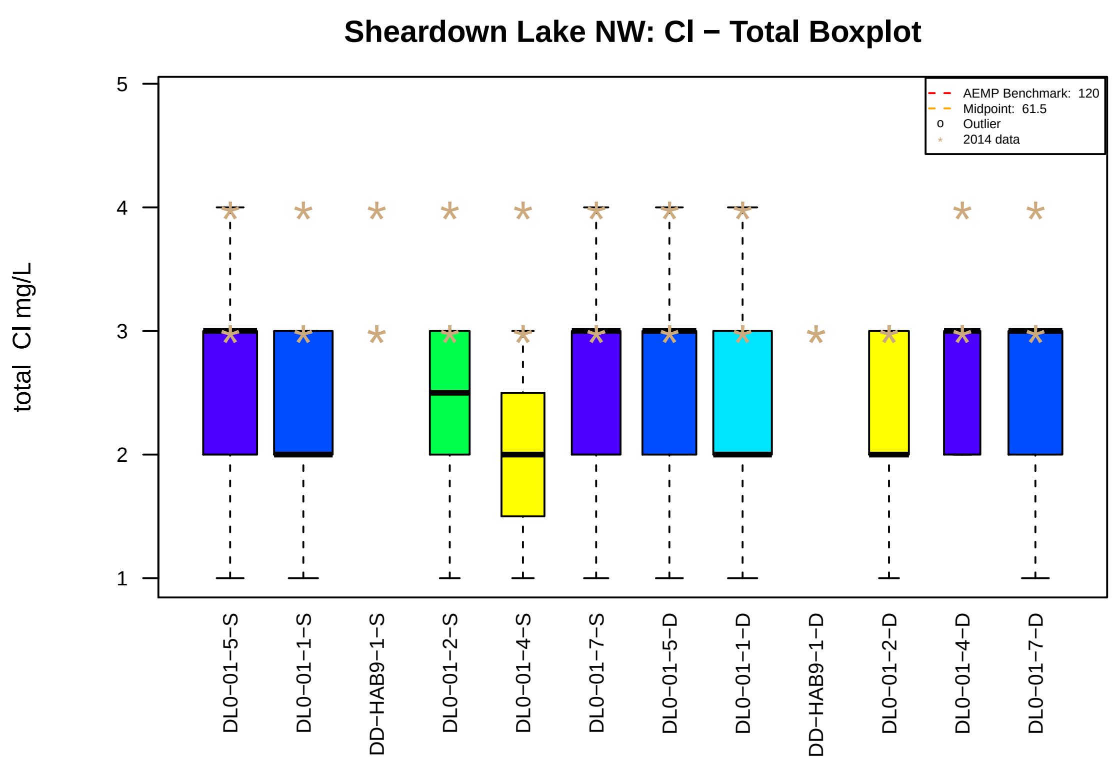

Sheardown Lake NW: Zn − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
total Zn mg/L
0.004
0.003
0.002
0.001
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D


Sheardown Lake NW: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
total Zn mg/L
0.004
0.003
0.002
0.001
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

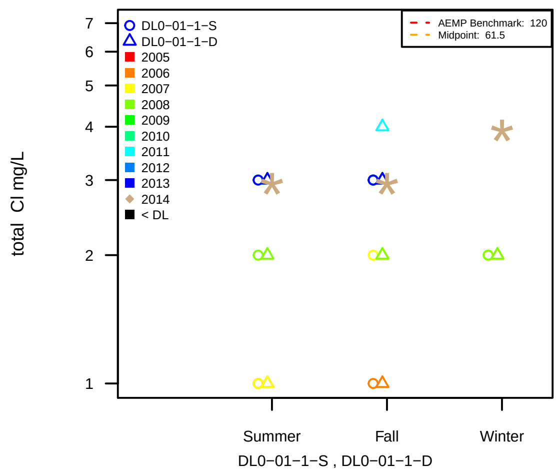

Sheardown Lake NW: Zn − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
total Zn mg/L
0.004
0.003
0.002
0.001
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D


Sheardown Lake NW: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
total Zn mg/L
0.004
0.003
0.002
0.001
Summer
n= 12
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

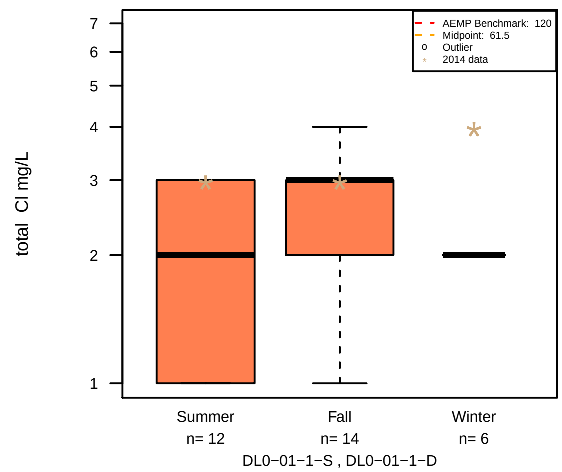

Sheardown Lake NW: Cl − Total Boxplot on log scale
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L − log axis
1
2
3
4
5
6
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D


Sheardown Lake NW: Cl − Total Boxplot
AEMP Benchmark: 120
Midpoint: 61.5
Outlier
2014 data
total Cl mg/L
1
2
3
4
5
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

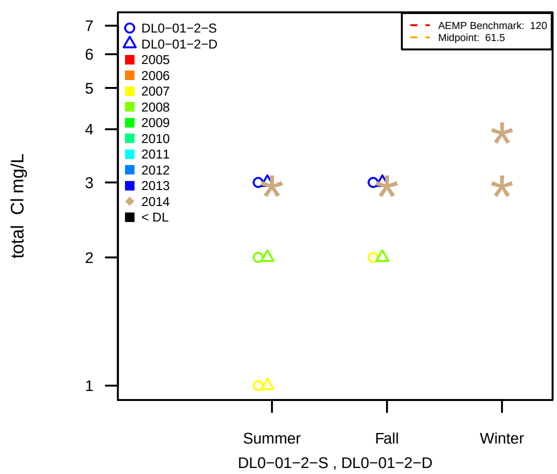
Sheardown Lake NW: Cl − Seasonal Scatter Plot



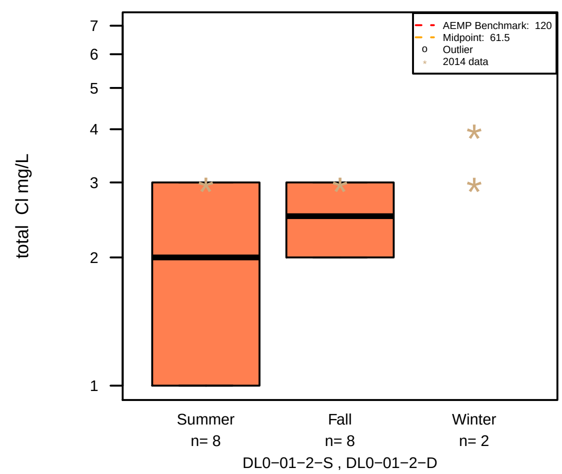
Sheardown Lake NW: Cl − Seasonal Boxplot



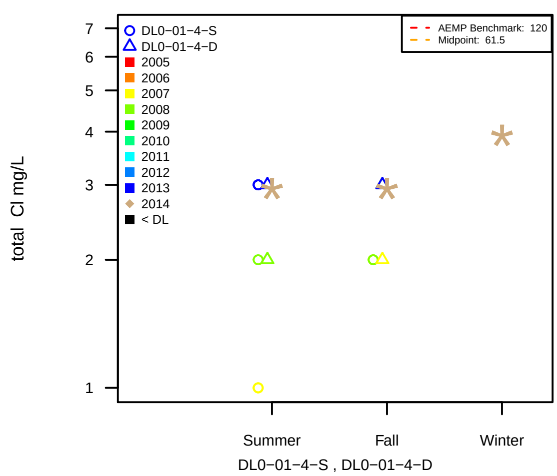
Sheardown Lake NW: Cl − Seasonal Scatter Plot



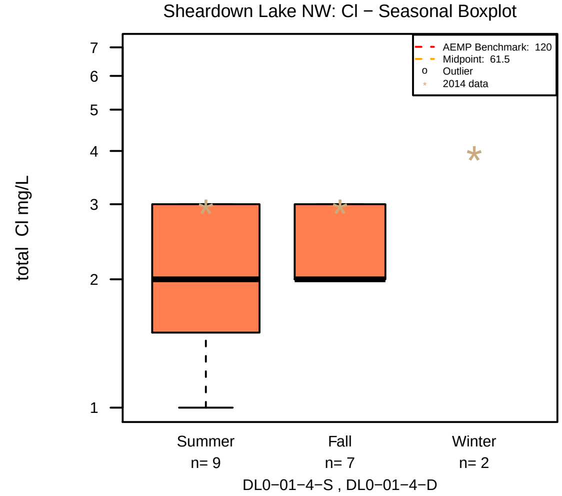
Sheardown Lake NW: Cl − Seasonal Boxplot

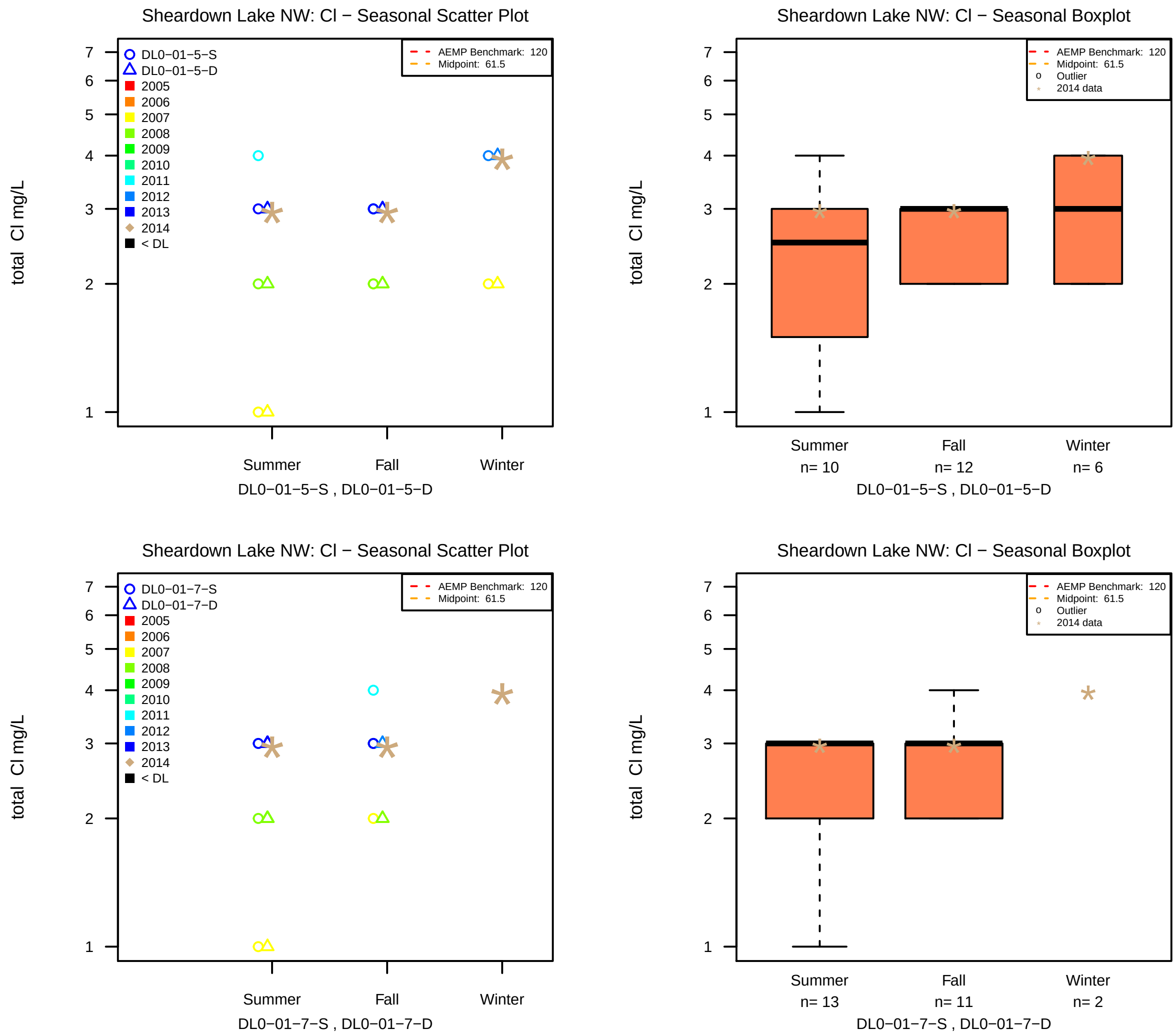


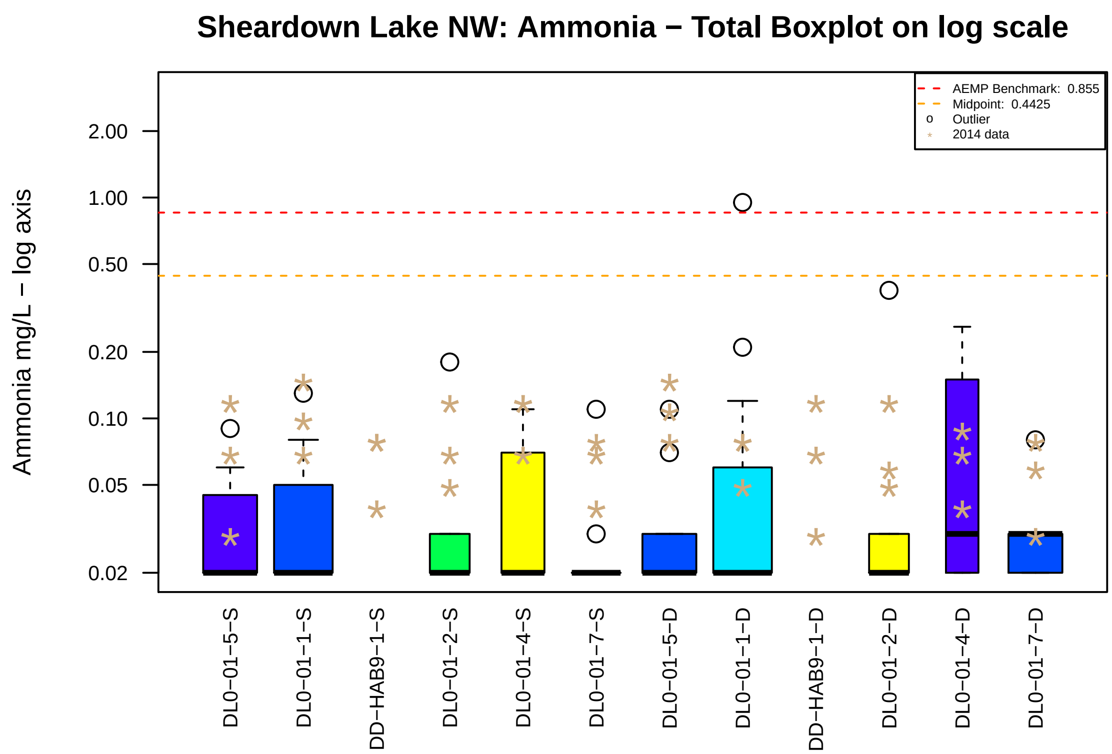
Sheardown Lake NW: Cl − Seasonal Scatter Plot

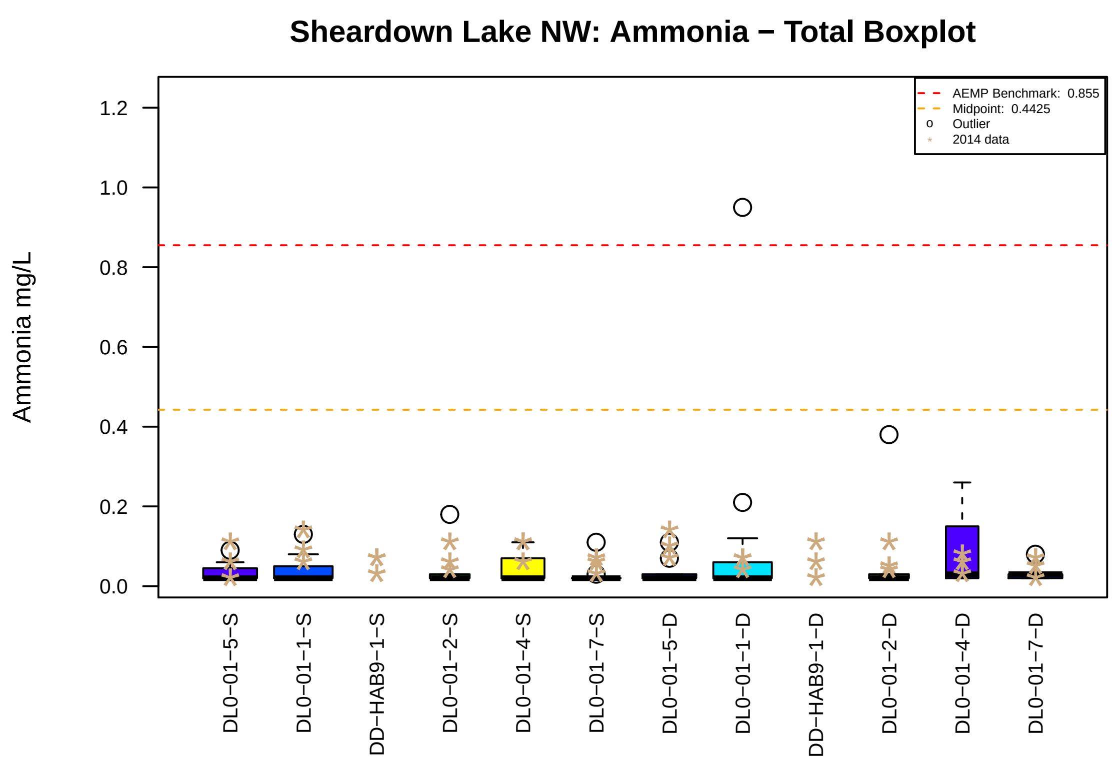


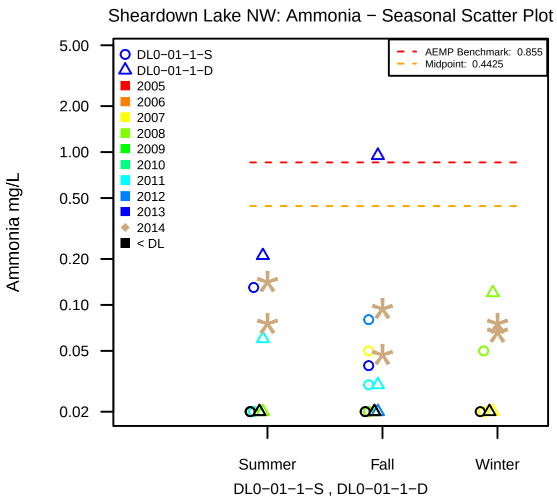
Sheardown Lake NW: Cl − Seasonal Boxplot

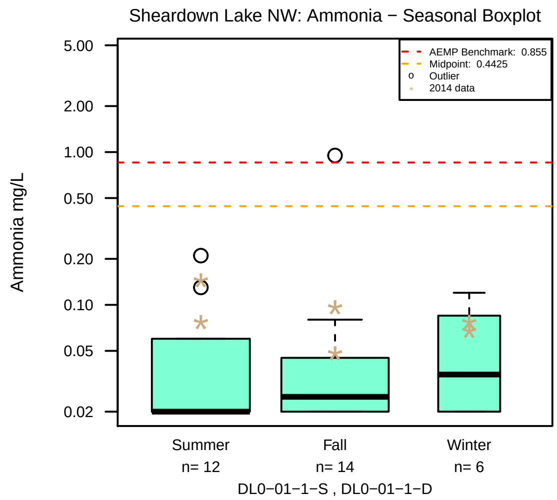


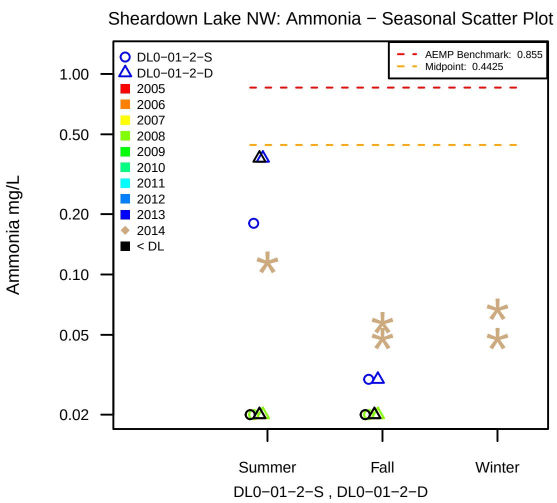

Sheardown Lake NW: Cl − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61.5
total Cl mg/L
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D
Sheardown Lake NW: Cl − Seasonal Boxplot
Outlier
2014 data
Summer n= 10
Fall n= 12
Winter n= 6
Sheardown Lake NW: Cl − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
DL0−01−7−S , DL0−01−7−D
Sheardown Lake NW: Cl − Seasonal Boxplot
Summer n= 13
Fall n= 11
Winter n= 2

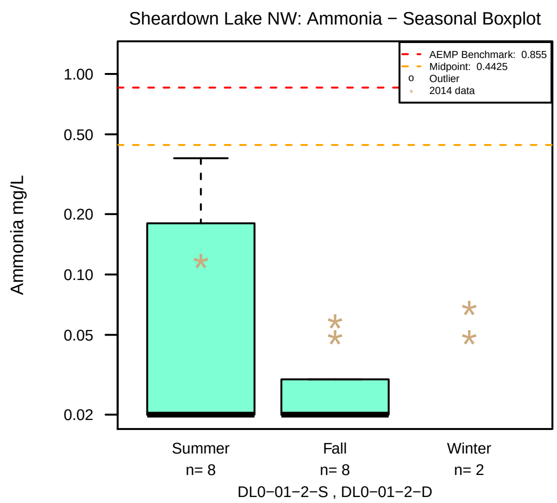

Sheardown Lake NW: Ammonia − Total Boxplot on log scale
AEMP Benchmark: 0.855
Midpoint: 0.4425
Outlier
2014 data
Ammonia mg/L − log axis
2.00
1.00
0.50
0.20
0.10
0.05
0.02
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

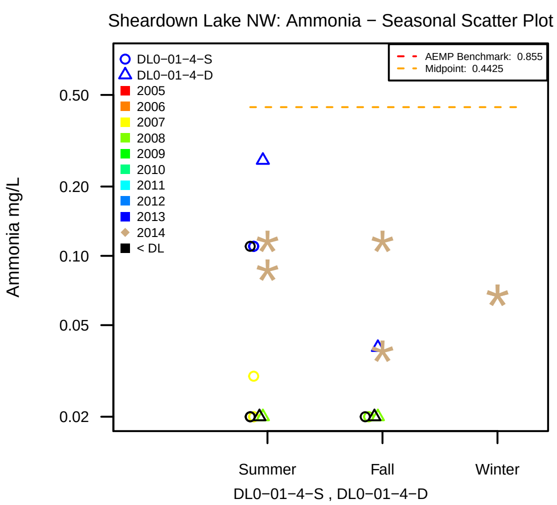

Sheardown Lake NW: Ammonia − Total Boxplot
AEMP Benchmark: 0.855
Midpoint: 0.4425
Outlier
2014 data
Ammonia mg/L
1.2
1.0
0.8
0.6
0.4
0.2
0.0
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

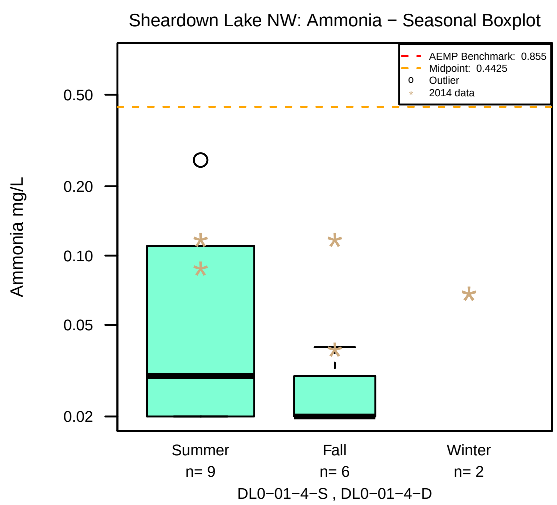

Sheardown Lake NW: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.4425
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D


Sheardown Lake NW: Ammonia − Seasonal Boxplot
Ammonia mg/L
AEMP Benchmark: 0.855
Midpoint: 0.4425
Outlier
2014 data
Summer n= 12
Fall n= 14
Winter n= 6
DL0−01−1−S , DL0−01−1−D

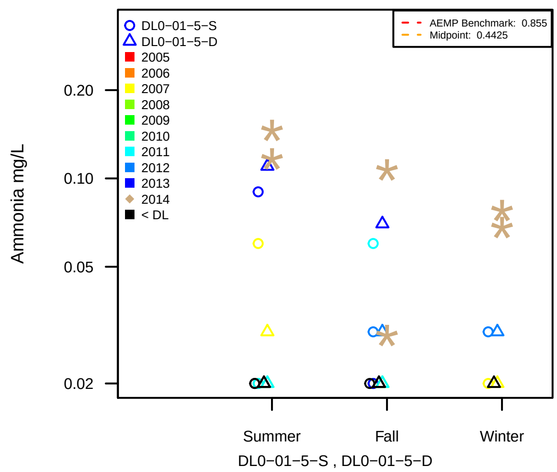

Sheardown Lake NW: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
DL0−01−2−S
DL0−01−2−D
AEMP Benchmark: 0.855
Midpoint: 0.4425
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D


Sheardown Lake NW: Ammonia − Seasonal Boxplot
Ammonia mg/L
Summer n= 8
Fall n= 8
Winter n= 2
DL0−01−2−S , DL0−01−2−D

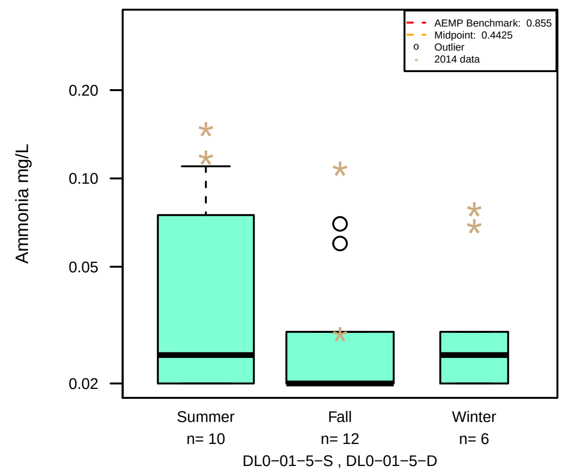

Sheardown Lake NW: Ammonia − Seasonal Scatter Plot
Ammonia mg/L
DL0−01−4−S
DL0−01−4−D
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D


Sheardown Lake NW: Ammonia − Seasonal Boxplot
Ammonia mg/L
Summer n= 9
Fall n= 6
Winter n= 2
DL0−01−4−S , DL0−01−4−D

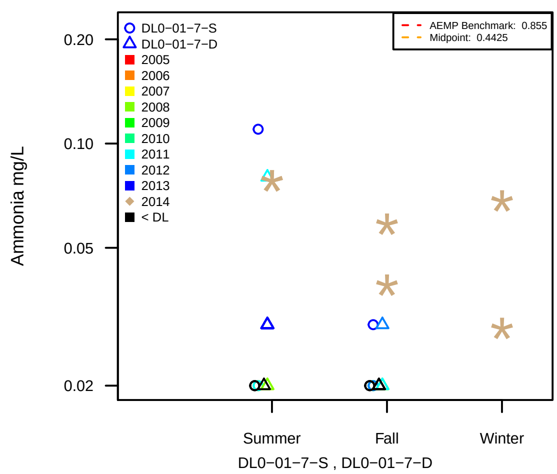
Sheardown Lake NW: Ammonia − Seasonal Scatter Plot



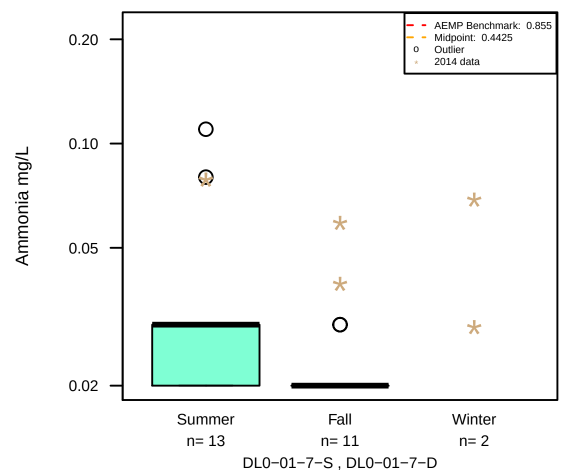
Sheardown Lake NW: Ammonia − Seasonal Boxplot

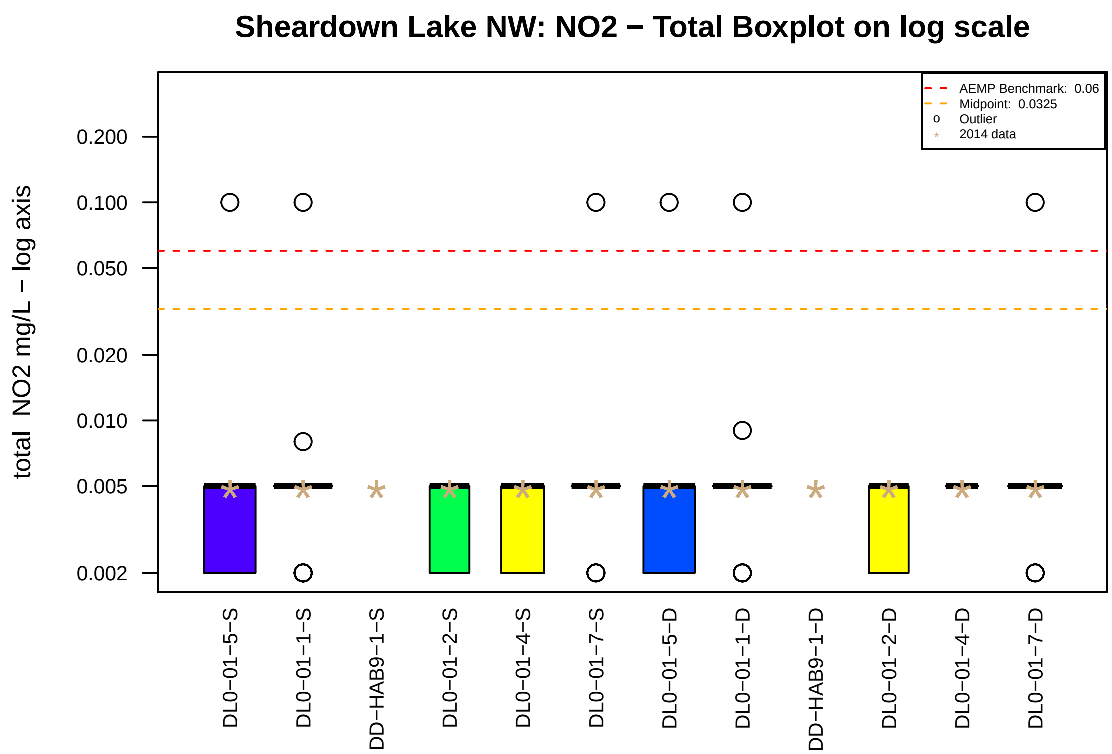


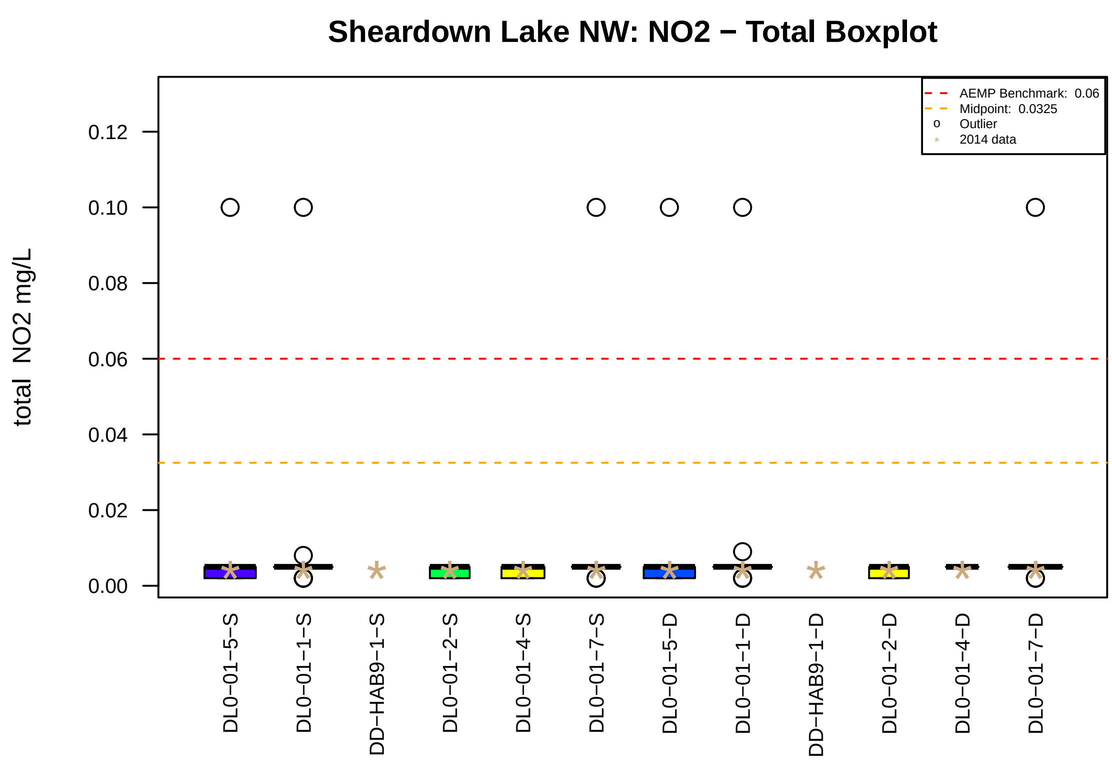
Sheardown Lake NW: Ammonia − Seasonal Scatter Plot

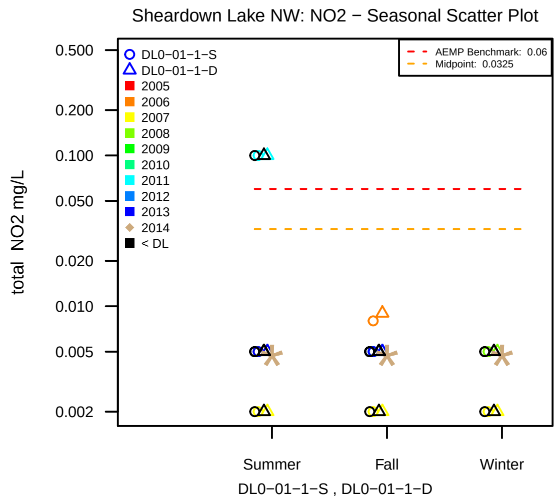


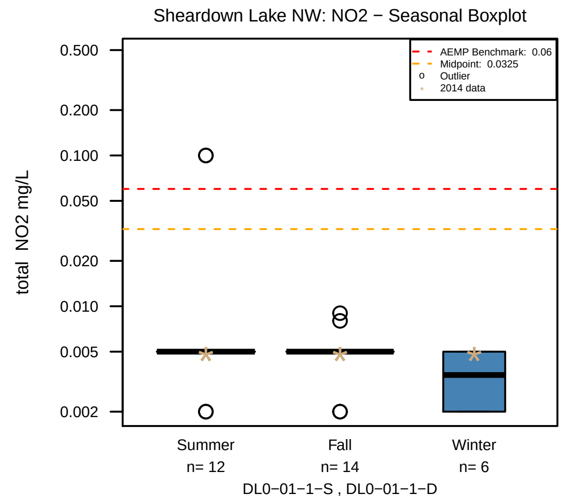
Sheardown Lake NW: Ammonia − Seasonal Boxplot

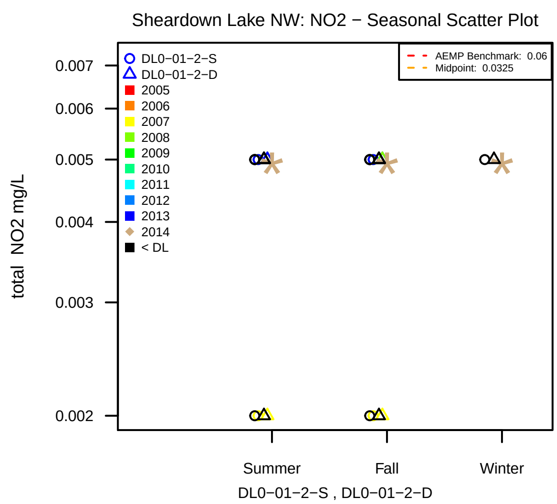


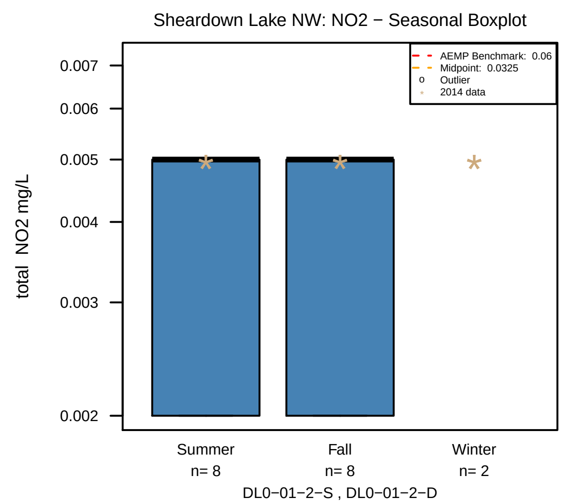

Sheardown Lake NW: NO2 − Total Boxplot on log scale
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L − log axis
0.200
0.100
0.050
0.020
0.010
0.005
0.002
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

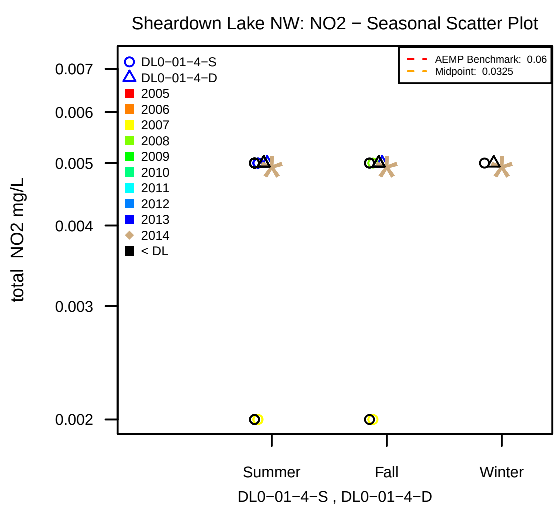

Sheardown Lake NW: NO2 − Total Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.12
0.10
0.08
0.06
0.04
0.02
0.00
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

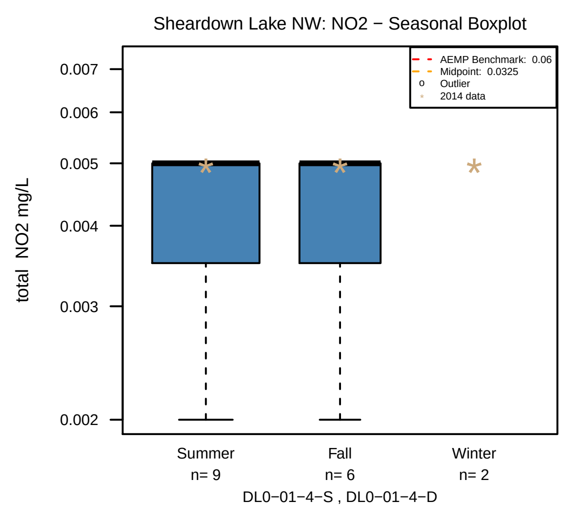

Sheardown Lake NW: NO2 − Seasonal Scatter Plot
total NO2 mg/L
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

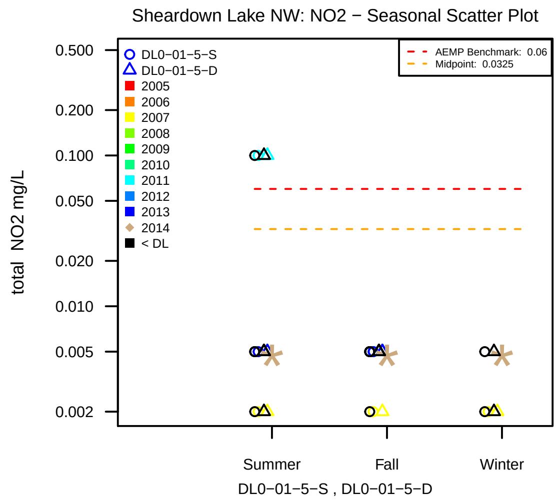

Sheardown Lake NW: NO2 − Seasonal Boxplot
total NO2 mg/L
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer n= 12
Fall n= 14
Winter n= 6
DL0−01−1−S , DL0−01−1−D

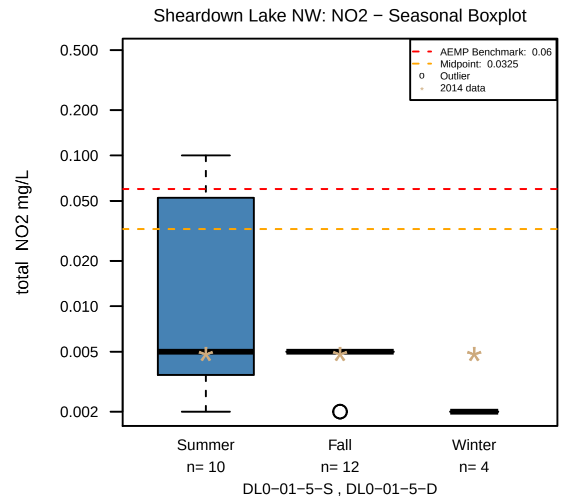

Sheardown Lake NW: NO2 − Seasonal Scatter Plot
total NO2 mg/L
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

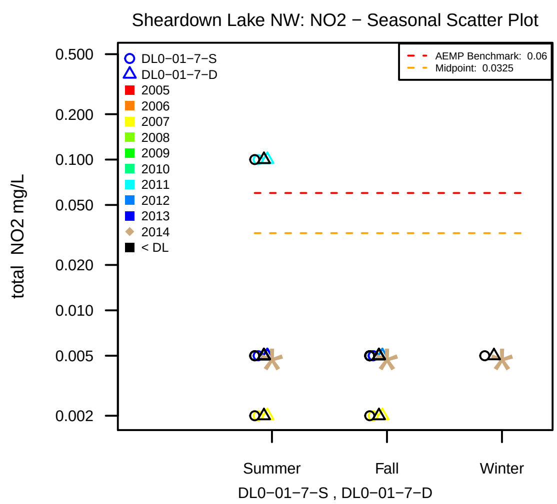

Sheardown Lake NW: NO2 − Seasonal Boxplot
total NO2 mg/L
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer n= 8
Fall n= 8
Winter n= 2
DL0−01−2−S , DL0−01−2−D

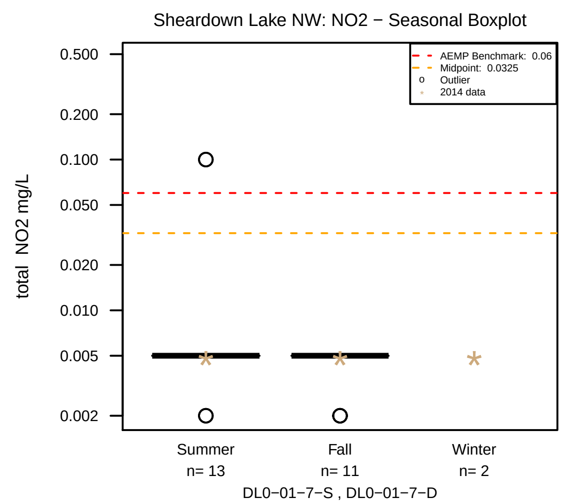

Sheardown Lake NW: NO2 − Seasonal Scatter Plot
total NO2 mg/L
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

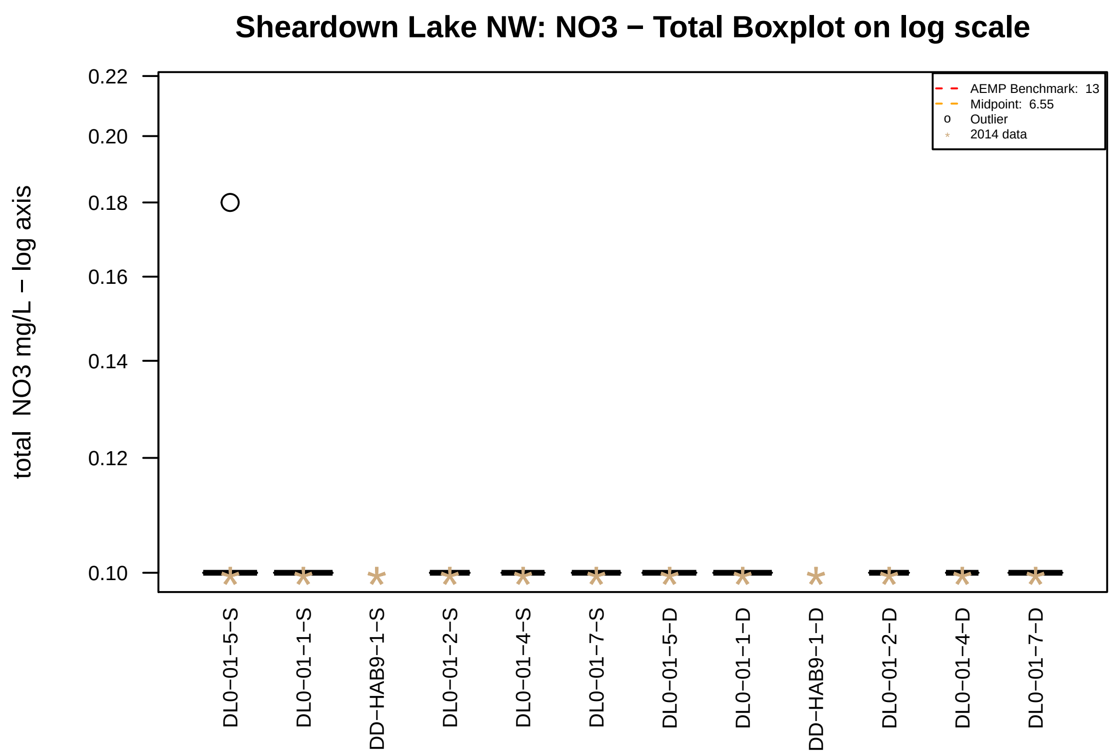

Sheardown Lake NW: NO2 − Seasonal Boxplot
total NO2 mg/L
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer n= 9
Fall n= 6
Winter n= 2
DL0−01−4−S , DL0−01−4−D

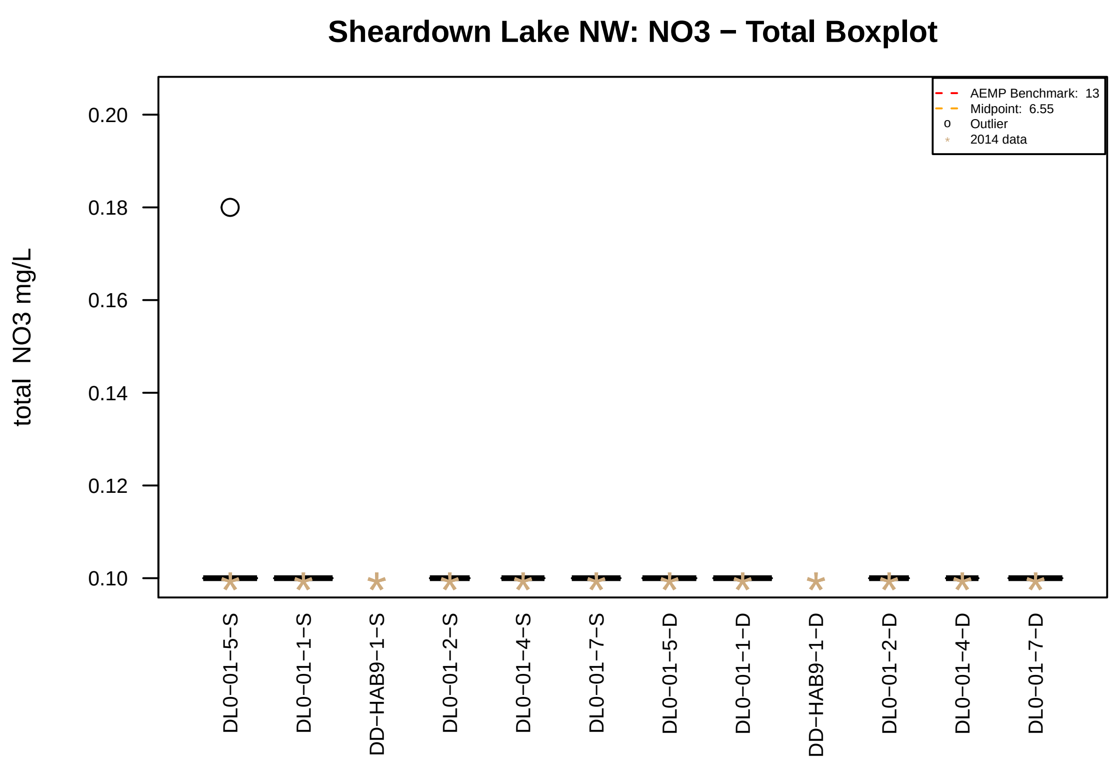

Sheardown Lake NW: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D

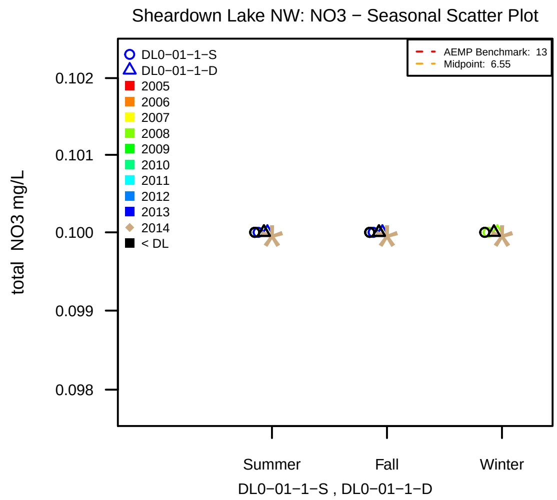

Sheardown Lake NW: NO2 − Seasonal Boxplot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 10
Fall
n= 12
Winter
n= 4
DL0−01−5−S , DL0−01−5−D

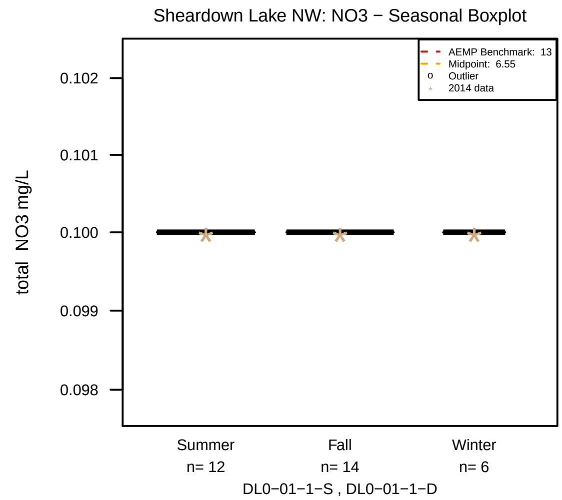

Sheardown Lake NW: NO2 − Seasonal Scatter Plot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D

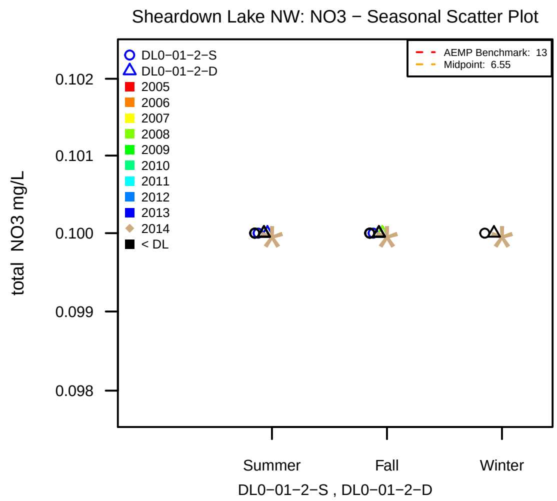

Sheardown Lake NW: NO2 − Seasonal Boxplot
total NO2 mg/L
0.500
0.200
0.100
0.050
0.020
0.010
0.005
0.002
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
Summer
n= 13
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

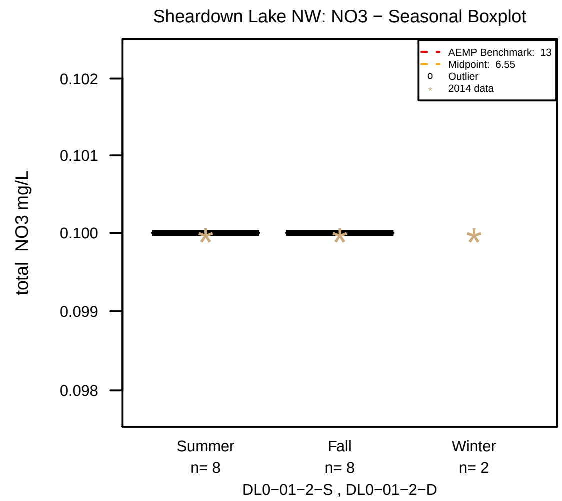

Sheardown Lake NW: NO3 − Total Boxplot on log scale
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L − log axis
0.22
0.20
0.18
0.16
0.14
0.12
0.10
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

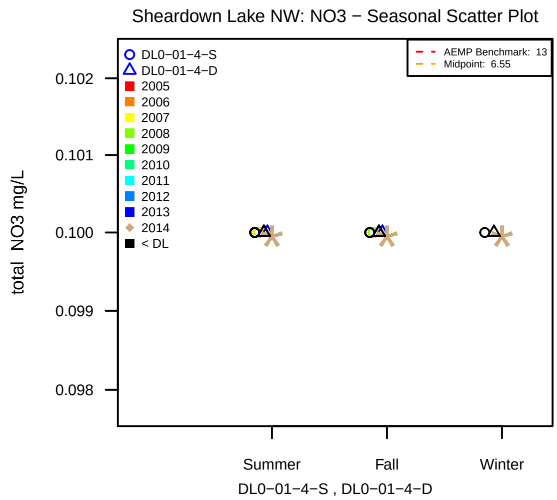

Sheardown Lake NW: NO3 − Total Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.20
0.18
0.16
0.14
0.12
0.10
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

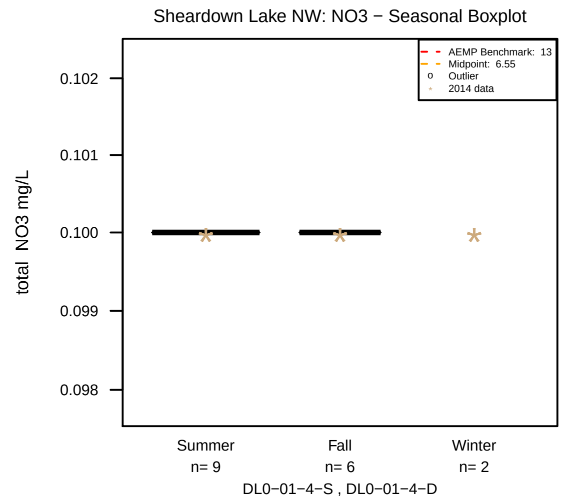

Sheardown Lake NW: NO3 − Seasonal Scatter Plot
DL0−01−1−S
DL0−01−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
Fall
Winter
DL0−01−1−S , DL0−01−1−D

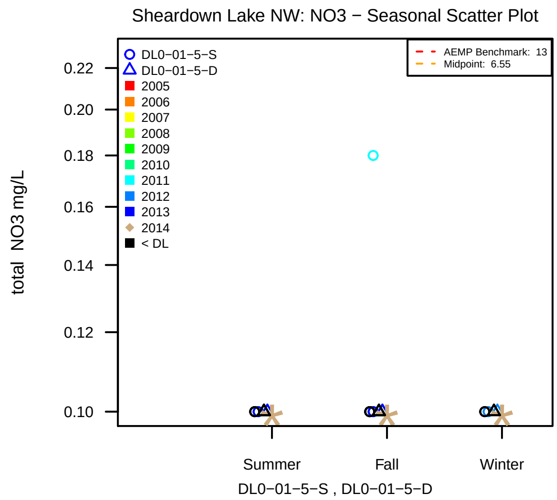

Sheardown Lake NW: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
n= 12
Fall
n= 14
Winter
n= 6
DL0−01−1−S , DL0−01−1−D

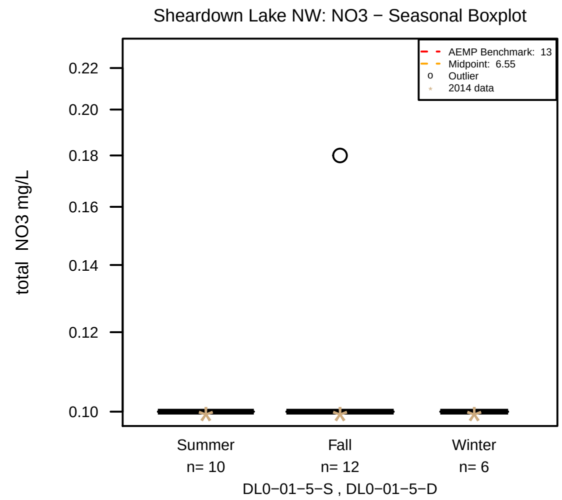

Sheardown Lake NW: NO3 − Seasonal Scatter Plot
DL0−01−2−S
DL0−01−2−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
Fall
Winter
DL0−01−2−S , DL0−01−2−D

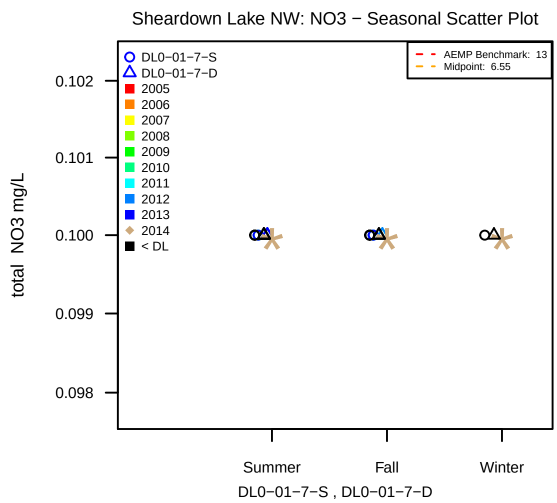

Sheardown Lake NW: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
n= 8
Fall
n= 8
Winter
n= 2
DL0−01−2−S , DL0−01−2−D

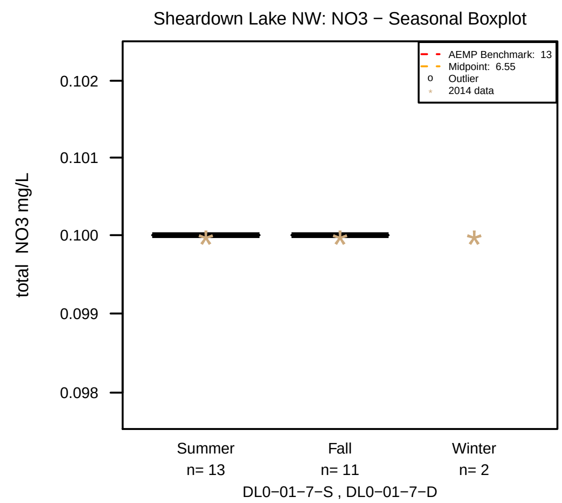

Sheardown Lake NW: NO3 − Seasonal Scatter Plot
DL0−01−4−S
DL0−01−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
Fall
Winter
DL0−01−4−S , DL0−01−4−D

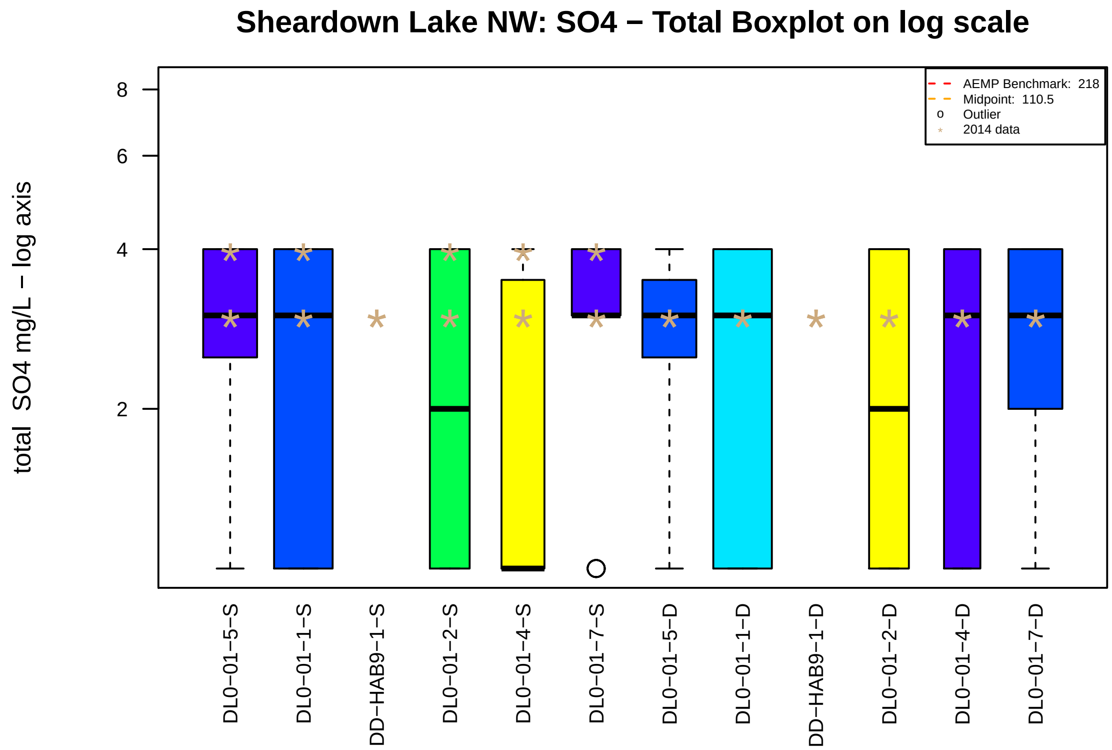

Sheardown Lake NW: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
n= 9
Fall
n= 6
Winter
n= 2
DL0−01−4−S , DL0−01−4−D

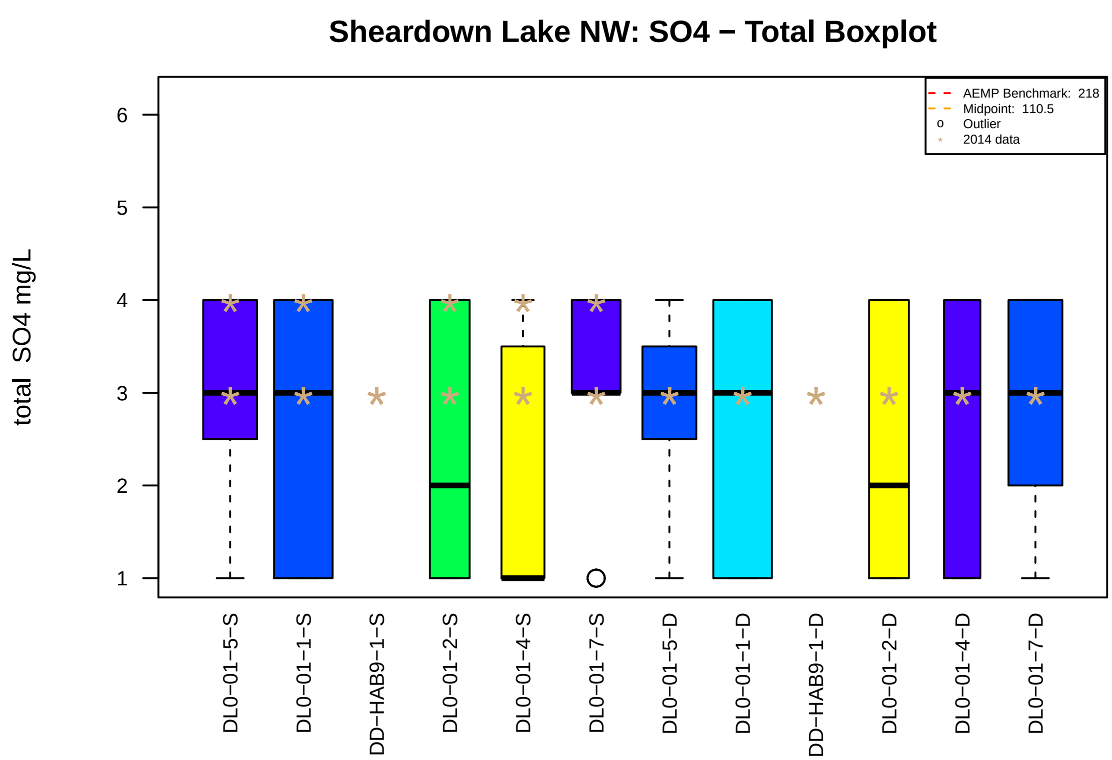

Sheardown Lake NW: NO3 − Seasonal Scatter Plot
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
total NO3 mg/L
0.22
0.20
0.18
0.16
0.14
0.12
0.10
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D


Sheardown Lake NW: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.22
0.20
0.18
0.16
0.14
0.12
0.10
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D

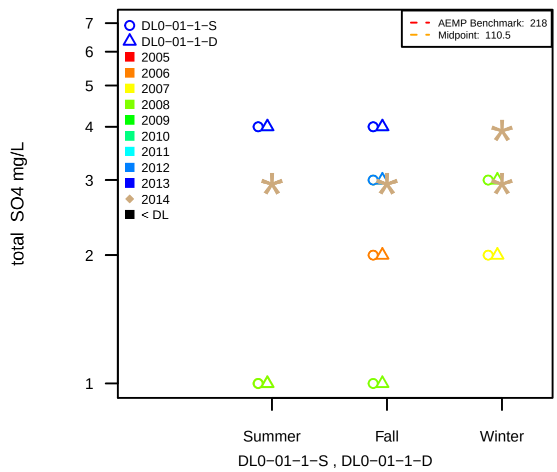

Sheardown Lake NW: NO3 − Seasonal Scatter Plot
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 13
Midpoint: 6.55
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D


Sheardown Lake NW: NO3 − Seasonal Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.102
0.101
0.100
0.099
0.098
Summer
n= 13
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

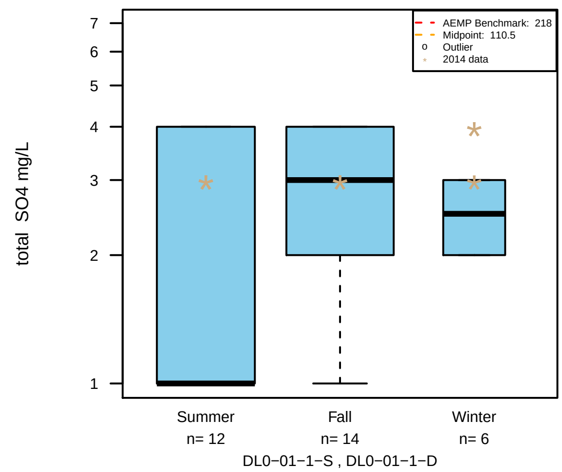

Sheardown Lake NW: SO4 − Total Boxplot on log scale
AEMP Benchmark: 218
Midpoint: 110.5
Outlier
2014 data
total SO4 mg/L − log axis
8
6
4
2
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D


Sheardown Lake NW: SO4 − Total Boxplot
AEMP Benchmark: 218
Midpoint: 110.5
Outlier
2014 data
total SO4 mg/L
6
5
4
3
2
1
DL0−01−5−S
DL0−01−1−S
DD−HAB9−1−S
DL0−01−2−S
DL0−01−4−S
DL0−01−7−S
DL0−01−5−D
DL0−01−1−D
DD−HAB9−1−D
DL0−01−2−D
DL0−01−4−D
DL0−01−7−D

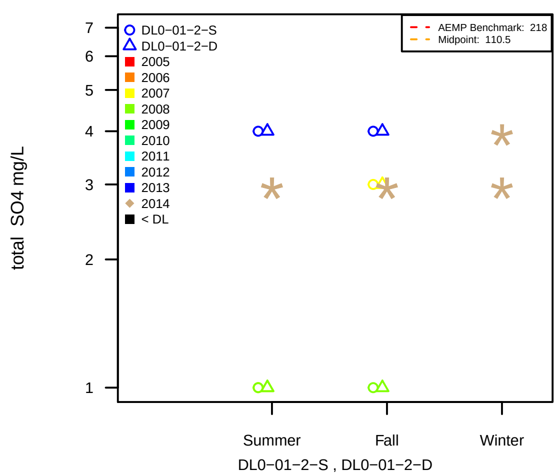
Sheardown Lake NW: SO4 − Seasonal Scatter Plot



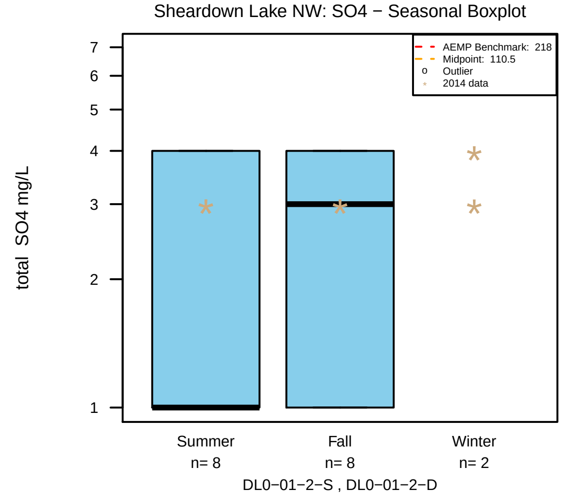
Sheardown Lake NW: SO4 − Seasonal Boxplot



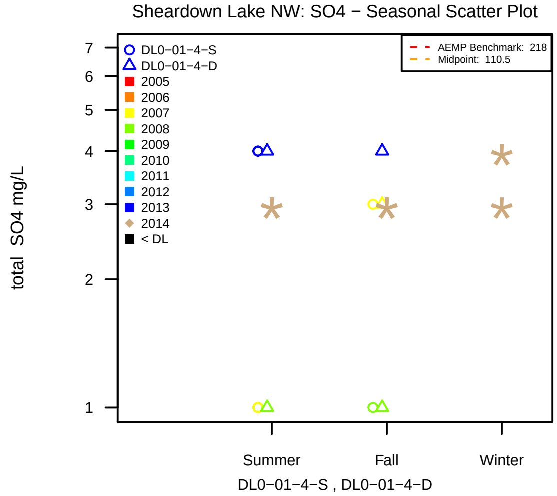
Sheardown Lake NW: SO4 − Seasonal Scatter Plot



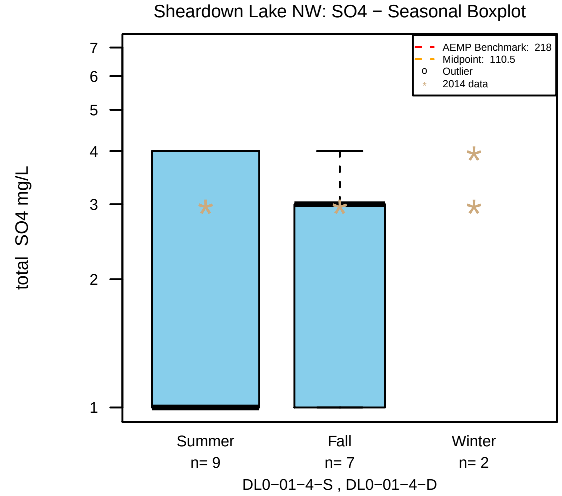
Sheardown Lake NW: SO4 − Seasonal Boxplot

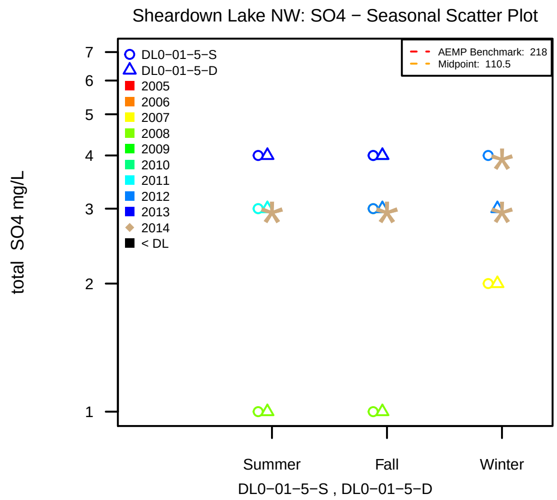


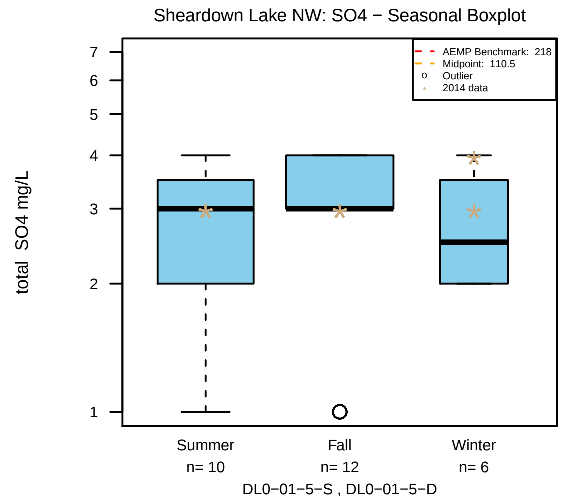
Sheardown Lake NW: SO4 − Seasonal Scatter Plot

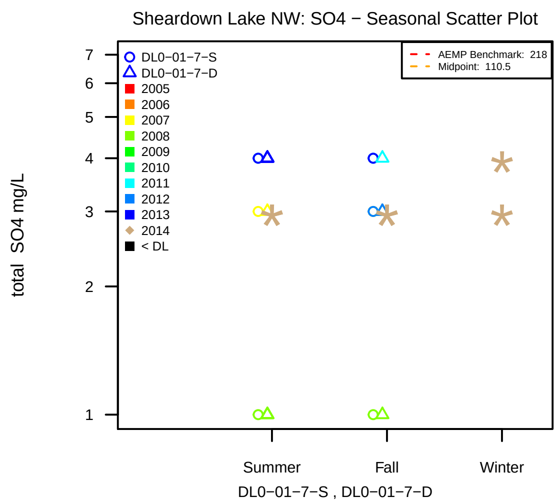


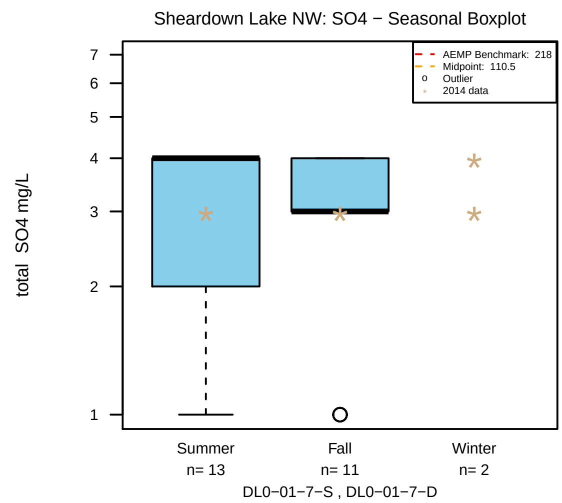
Sheardown Lake NW: SO4 − Seasonal Boxplot




Sheardown Lake NW: SO4 − Seasonal Scatter Plot
total SO4 mg/L
DL0−01−5−S
DL0−01−5−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110.5
Summer
Fall
Winter
DL0−01−5−S , DL0−01−5−D


Sheardown Lake NW: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110.5
Outlier
2014 data
Summer
n= 10
Fall
n= 12
Winter
n= 6
DL0−01−5−S , DL0−01−5−D


Sheardown Lake NW: SO4 − Seasonal Scatter Plot
total SO4 mg/L
DL0−01−7−S
DL0−01−7−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110.5
Summer
Fall
Winter
DL0−01−7−S , DL0−01−7−D


Sheardown Lake NW: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110.5
Outlier
2014 data
Summer
n= 13
Fall
n= 11
Winter
n= 2
DL0−01−7−S , DL0−01−7−D

APPENDIX A7

GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - SHEARDOWN LAKE SE

(Pages A7-1 to A7-46)

APPENDIX A7
GRAPHICAL ANALYSIS OF 2014 WATER QUALITY - SHEARDOWN LAKE SE

The Appendix A7 tables and graphs were generated using the R (2014) statistical package as follows:

Table 1: AEMP Benchmarks and Midpoint Concentrations of Parameters of Interest
Table 2: Sheardown Lake SE Sample Size by Year and Season
Table 3: Sheardown Lake SE Sample Size by Location and Season

Sheardown Lake SE Sample Distributions:

Data have been presented in graphs by Month, Season, Year and Station.

Total Boxplot on Log Scale and Total Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Seasonal Scatter Plot and Boxplot:

Data have been presented with parameter concentrations on y axis and individual stations on x axis.

Reference:

R Development Core Team, 2014. *R: A language and environment for statistical computing*. R. Foundation for Statistical Computing, Vienna, Austria. Retrieved from: http://www.R-project.org.

Appendix A7 - Sheardown Lake SE

Table 1: Sheardown Lake SE: AEMP Benchmarks and Midpoints

	AEMP Benchmark	Midpoint	Minimum MDL	Maximum MDL
Al	0.173	0.1105	0.001	0.003
As	0.005	0.00255	1e-04	1e-04
Cd	9e-05	5e-05	1e-05	1.7e-05
Cr	0.000642	0.00037	2e-05	5e-04
Co	0.004	0.00205	1e-04	2e-04
Cu	0.0024	0.0016	all > MDL	all > MDL
Fe	0.3	0.1765	0.03	0.03
Pb	0.001	0.00054	5e-05	5e-05
Ni	0.025	0.01281	5e-04	5e-04
Ag	1e-04	6e-05	1e-06	1e-05
Tl	8e-04	0.00045	1e-06	1e-04
V	0.006	0.0035	0.001	0.001
Zn	0.03	0.0165	0.001	0.003
Cl	120	61	all > MDL	all > MDL
Ammonia	0.855	0.445	0.02	0.12
NO2	0.06	0.0325	0.002	0.1
NO3	13	6.55	0.1	0.1
SO4	218	110	1	1

Table 2: Sheardown Lake SE Sample Size by Year and Season

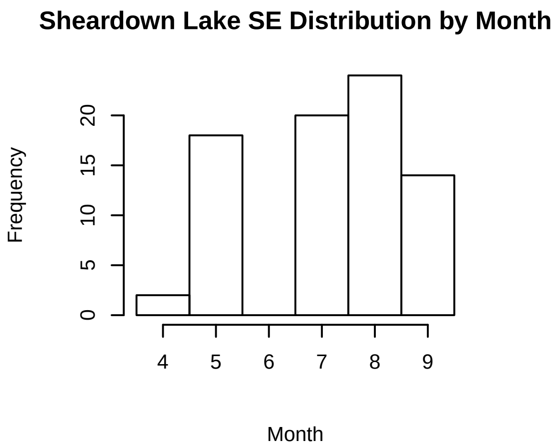
	Spring	Summer	Fall
2006	2	2	0
2007	6	6	4
2008	8	6	2
2011	2	0	0
2012	0	2	2
2013	2	2	2
2014	10	10	10

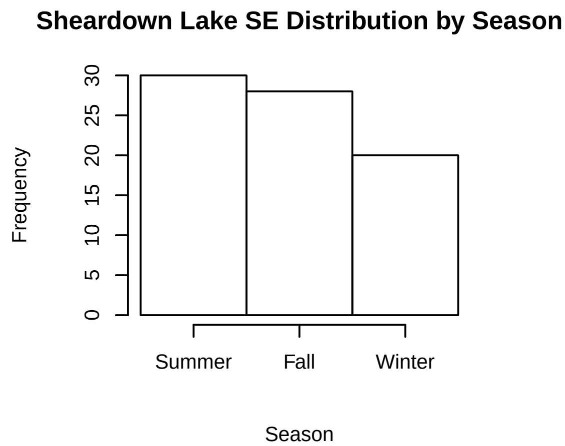
Table 3: Sheardown Lake SE Sample Size by Location and Season

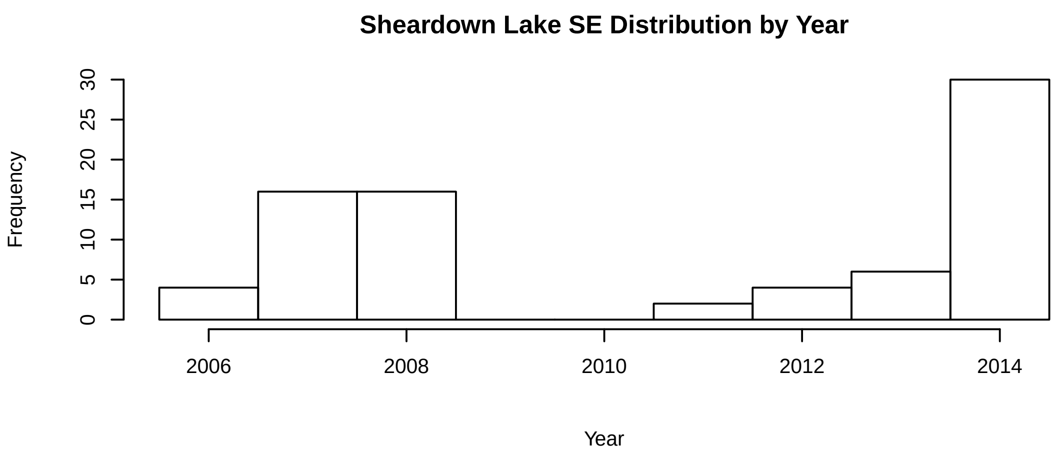
	Spring	Summer	Fall
DL0-02-6-S	1	1	2
DL0-02-1-S	4	3	1
DL0-02-7-S	1	1	1
DL0-02-3-S	4	5	4
DL0-02-8-S	1	1	1
DL0-02-4-S	4	3	1
DL0-02-6-D	1	1	2
DL0-02-1-D	5	3	1
DL0-02-7-D	1	1	1
DL0-02-3-D	4	5	4
DL0-02-8-D	1	1	1
DL0-02-4-D	3	3	1

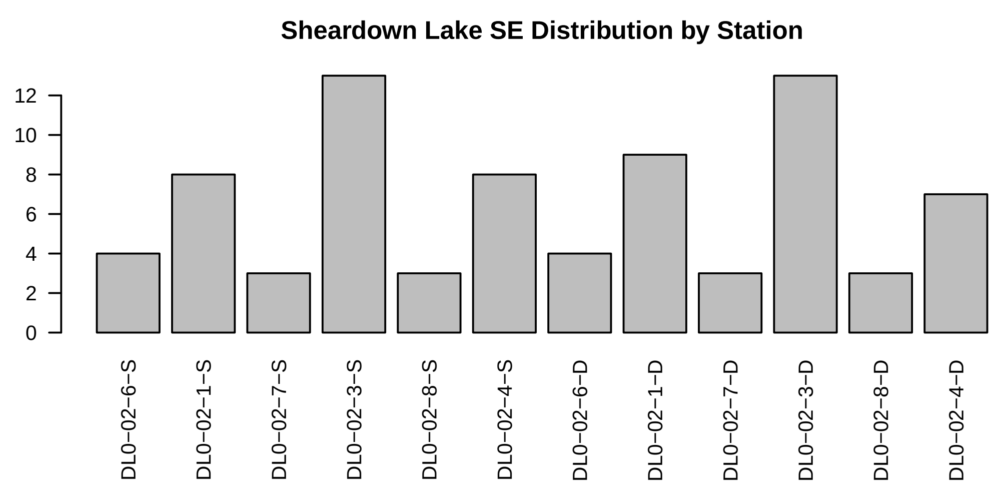
Table 4: 2014 Values Greater than Maximum of Sheardown Lake SE Baseline Data

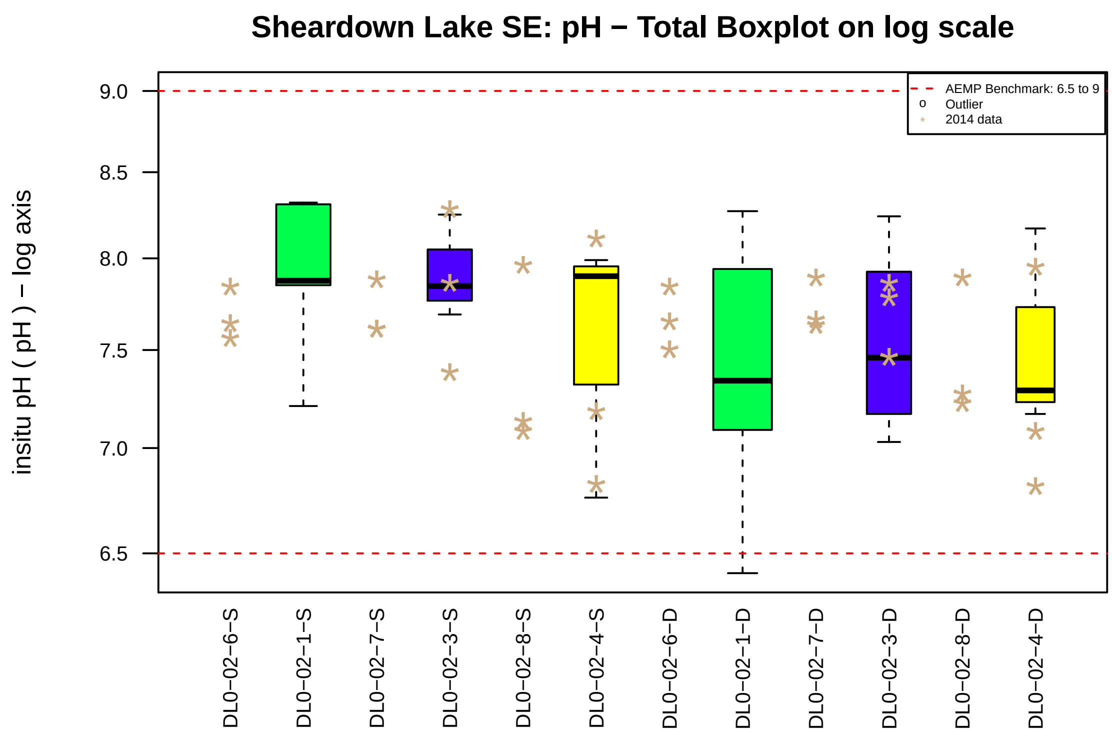
	Parameter	Baseline Max	Station	Value
1	CaCO3	82.2	DL0-02-7-S	84
2	Pb	0.000286	DL0-02-4-S	0.00061
3	Pb	0.000286	DL0-02-7-S	0.00032
4	Pb	0.000286	DL0-02-7-D	0.00084
5	Pb	0.000286	DL0-02-8-S	0.00029

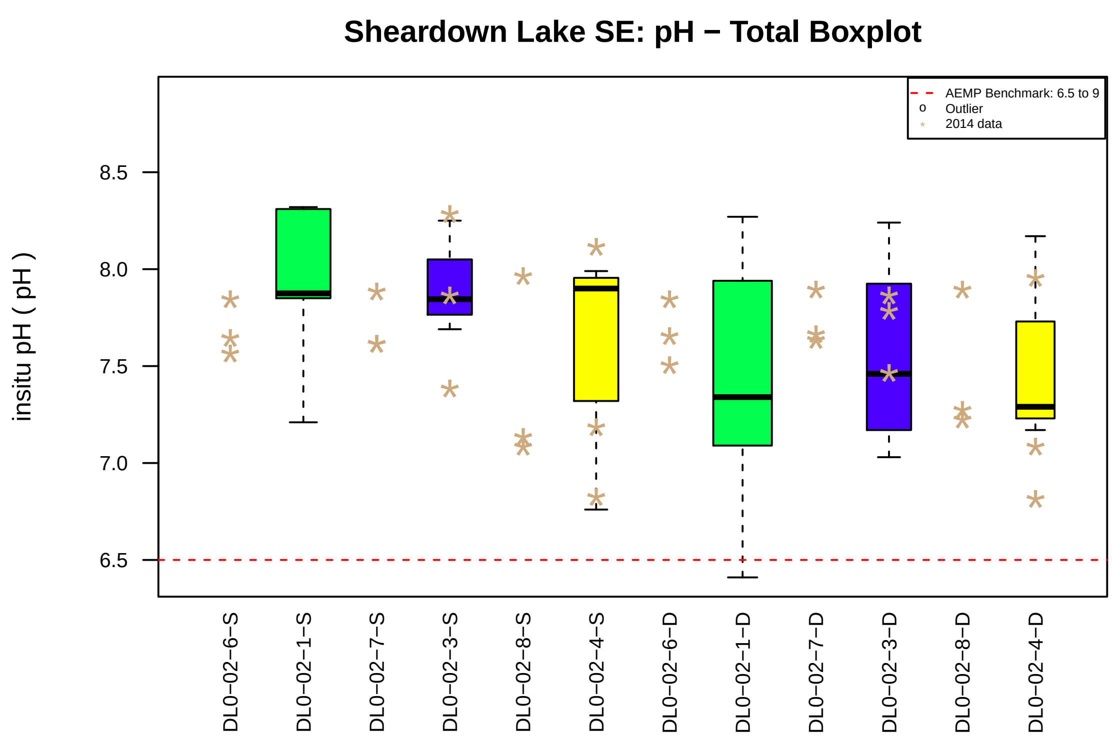

Sheardown Lake SE Distribution by Month
Frequency
0
5
10
15
20
4
5
6
7
8
9
Month

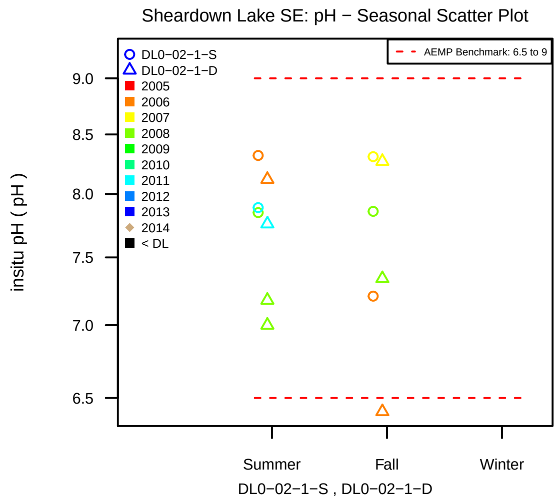

Sheardown Lake SE Distribution by Season
Frequency
0
5
10
15
20
25
30
Summer
Fall
Winter
Season

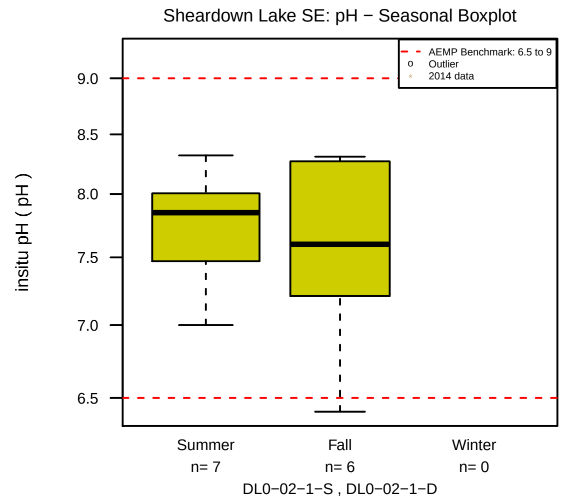

Sheardown Lake SE Distribution by Year
Frequency
0
5
10
15
20
25
30
2006
2008
2010
2012
2014
Year

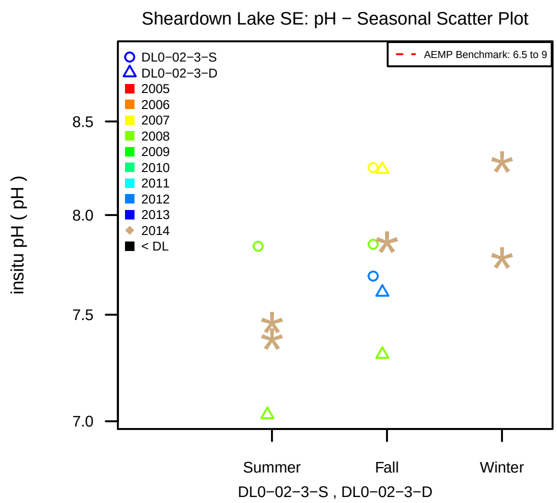

Sheardown Lake SE Distribution by Station
0
2
4
6
8
10
12
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

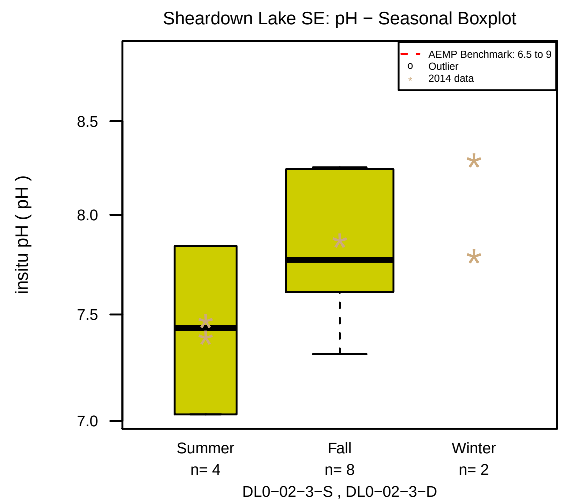

Sheardown Lake SE: pH − Total Boxplot on log scale
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH) − log axis
9.0
8.5
8.0
7.5
7.0
6.5
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

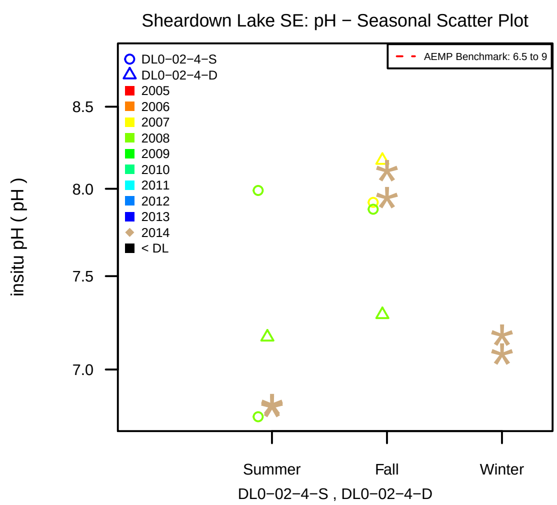

Sheardown Lake SE: pH − Total Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
8.5
8.0
7.5
7.0
6.5
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

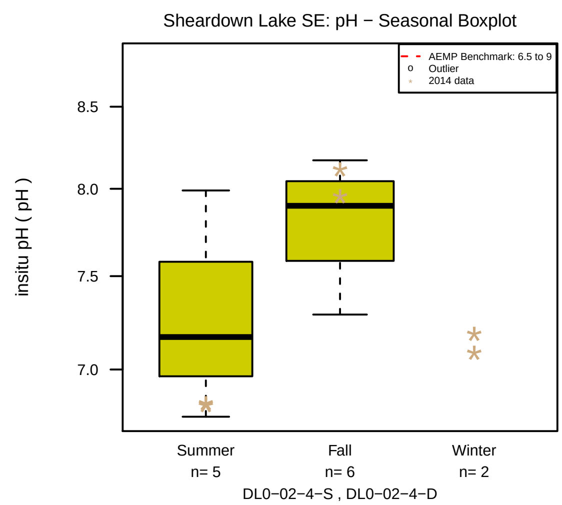

Sheardown Lake SE: pH − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
insitu pH (pH)
9.0
8.5
8.0
7.5
7.0
6.5
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

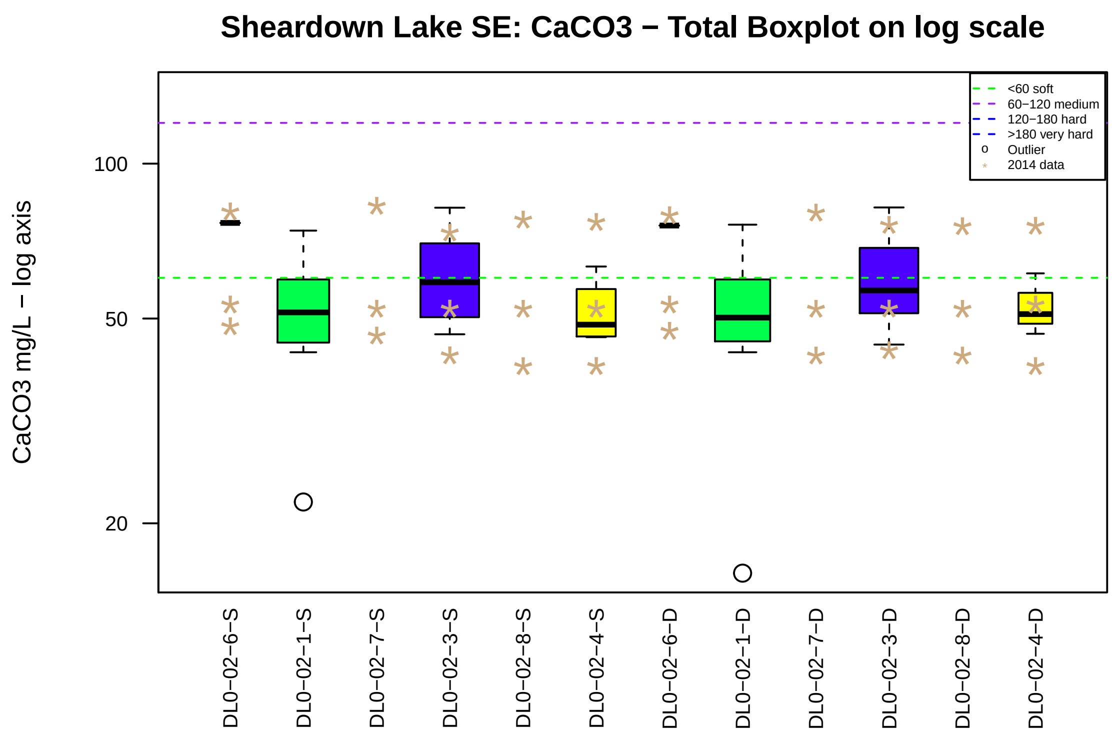

Sheardown Lake SE: pH − Seasonal Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
9.0
8.5
8.0
7.5
7.0
6.5
Summer
n= 7
Fall
n= 6
Winter
n= 0
DL0−02−1−S , DL0−02−1−D

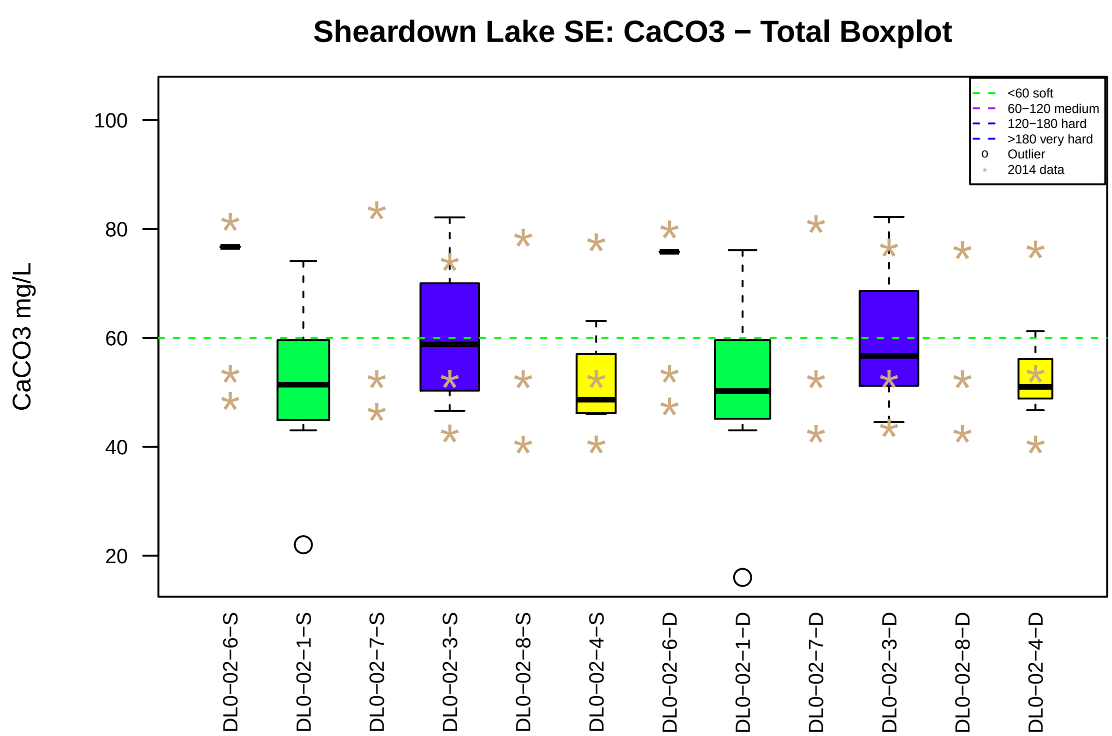

Sheardown Lake SE: pH − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
insitu pH (pH)
8.5
8.0
7.5
7.0
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D


Sheardown Lake SE: pH − Seasonal Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
8.5
8.0
7.5
7.0
Summer
n= 4
Fall
n= 8
Winter
n= 2
DL0−02−3−S , DL0−02−3−D

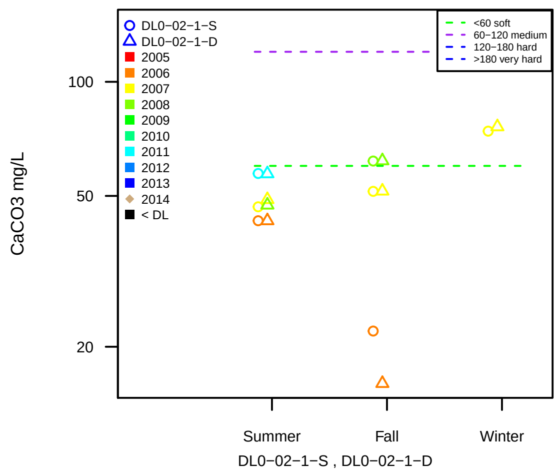

Sheardown Lake SE: pH − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 6.5 to 9
insitu pH (pH)
8.5
8.0
7.5
7.0
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D


Sheardown Lake SE: pH − Seasonal Boxplot
AEMP Benchmark: 6.5 to 9
Outlier
2014 data
insitu pH (pH)
8.5
8.0
7.5
7.0
Summer
n= 5
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

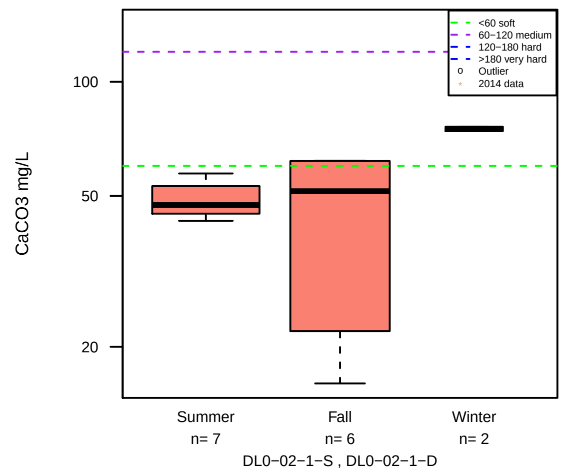

Sheardown Lake SE: CaCO3 − Total Boxplot on log scale
CaCO3 mg/L − log axis
100
50
20
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D


Sheardown Lake SE: CaCO3 − Total Boxplot
CaCO3 mg/L
100
80
60
40
20
<60 soft
60−120 medium
120−180 hard
>180 very hard
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

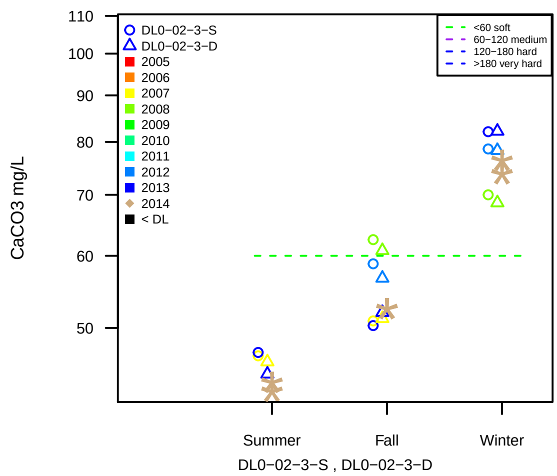
Sheardown Lake SE: CaCO3 − Seasonal Scatter Plot



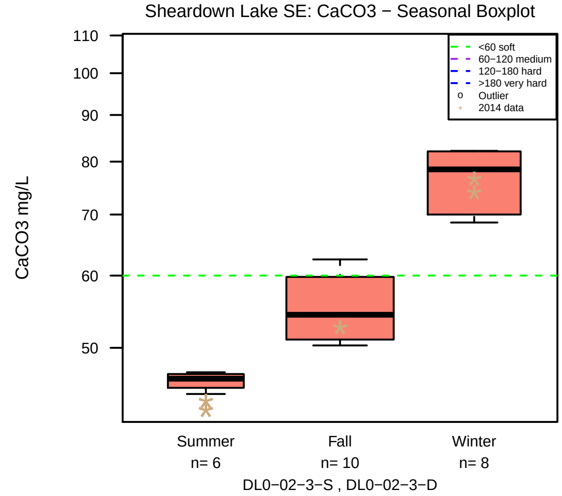
Sheardown Lake SE: CaCO3 − Seasonal Boxplot



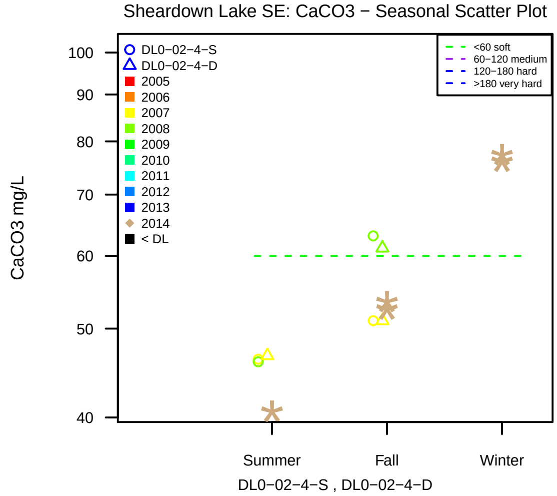
Sheardown Lake SE: CaCO3 − Seasonal Scatter Plot



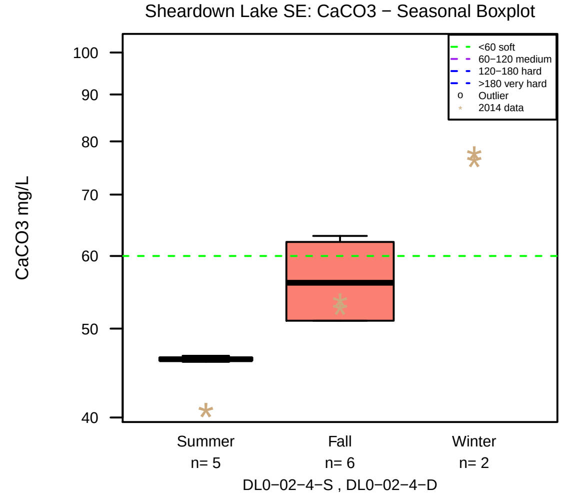
Sheardown Lake SE: CaCO3 − Seasonal Boxplot

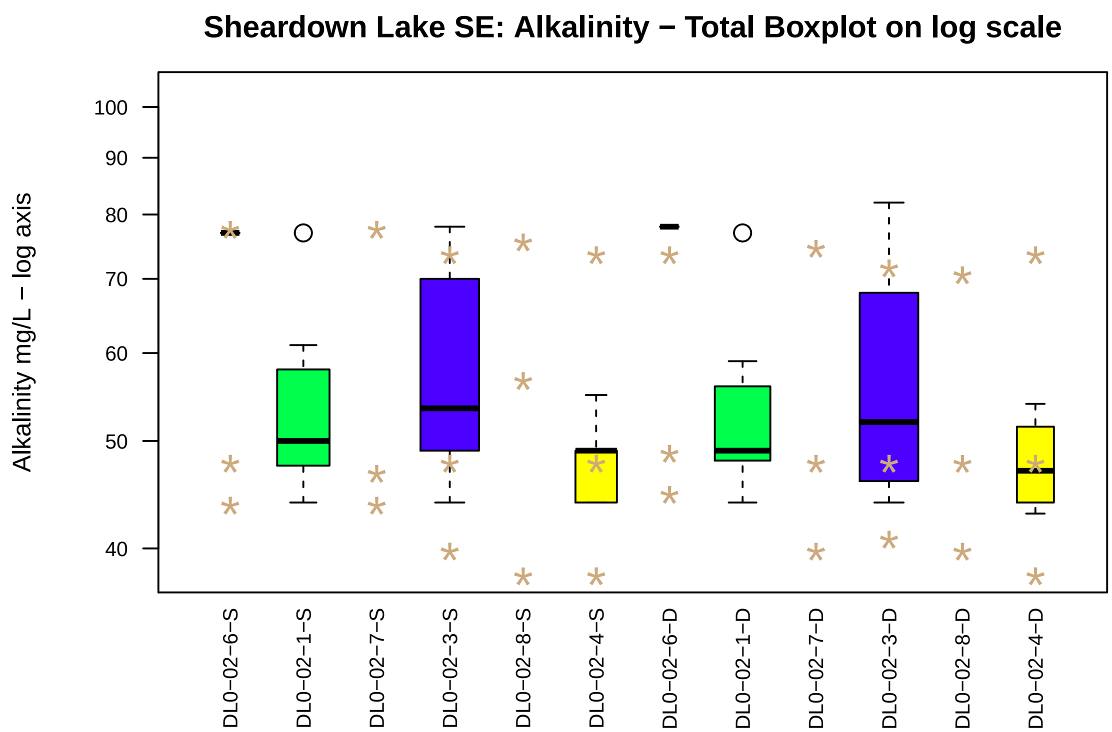


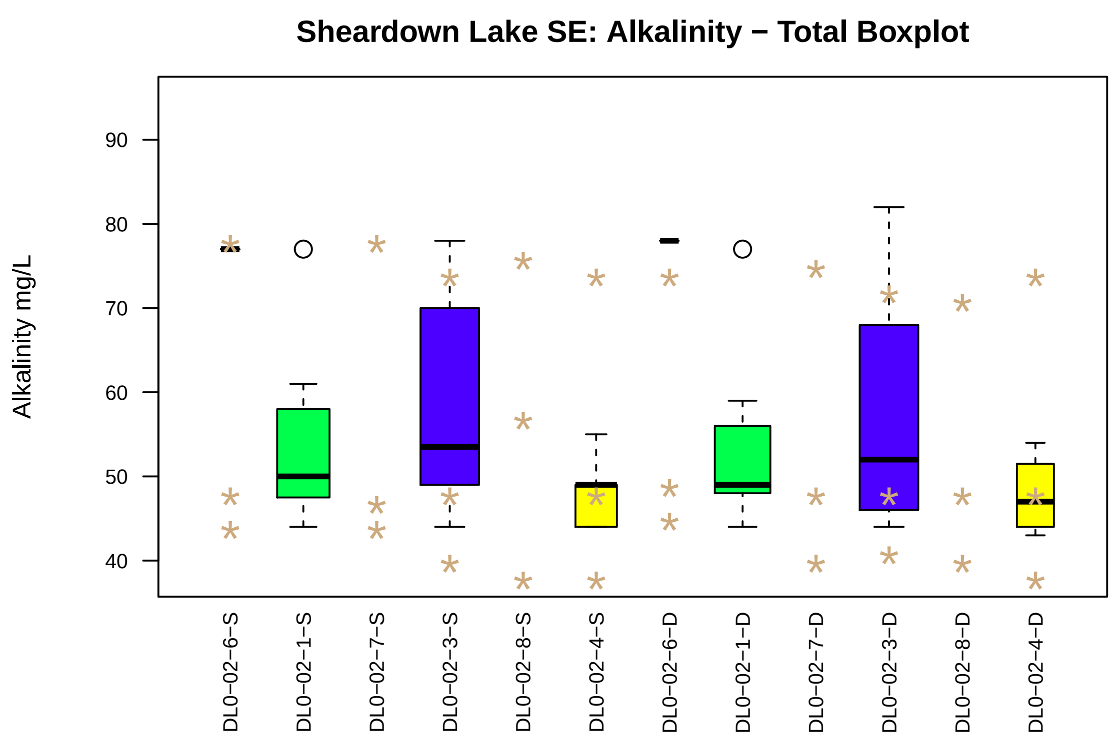
Sheardown Lake SE: CaCO3 − Seasonal Scatter Plot

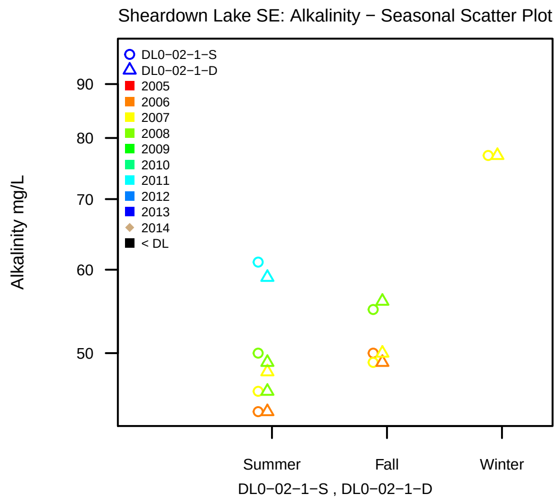


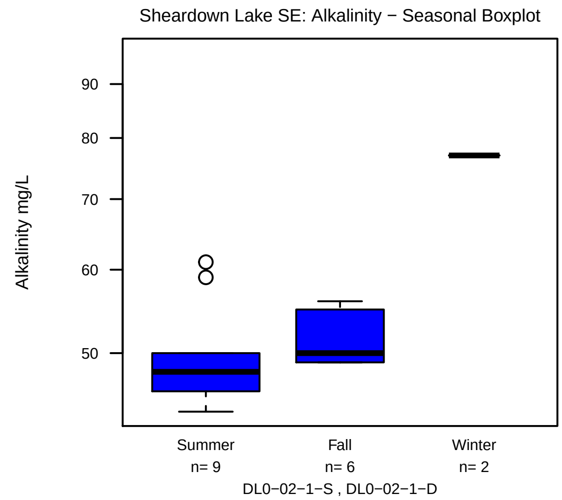
Sheardown Lake SE: CaCO3 − Seasonal Boxplot

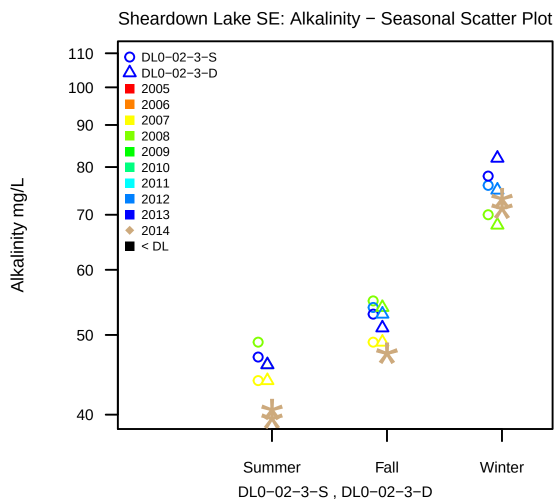


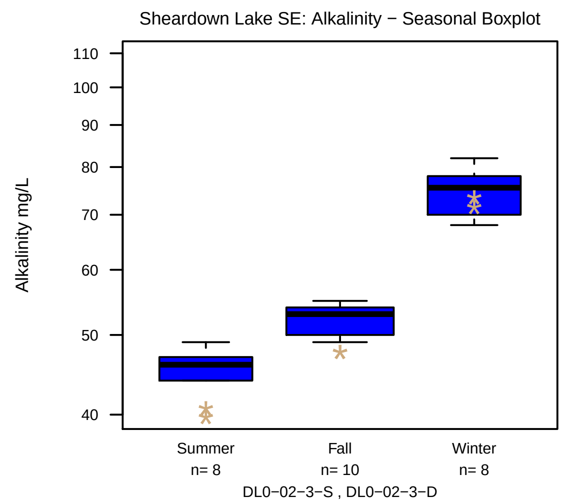

Sheardown Lake SE: Alkalinity − Total Boxplot on log scale
Alkalinity mg/L − log axis
100
90
80
70
60
50
40
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

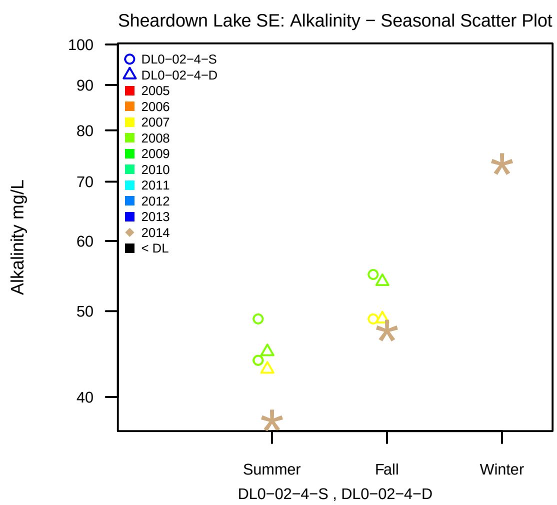

Sheardown Lake SE: Alkalinity − Total Boxplot
Alkalinity mg/L
90
80
70
60
50
40
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

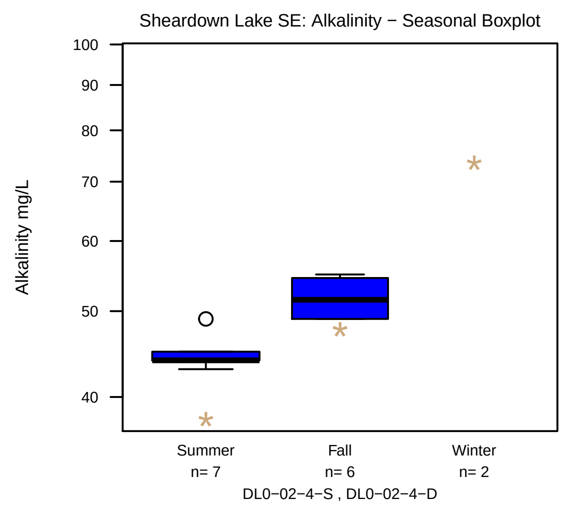

Sheardown Lake SE: Alkalinity − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

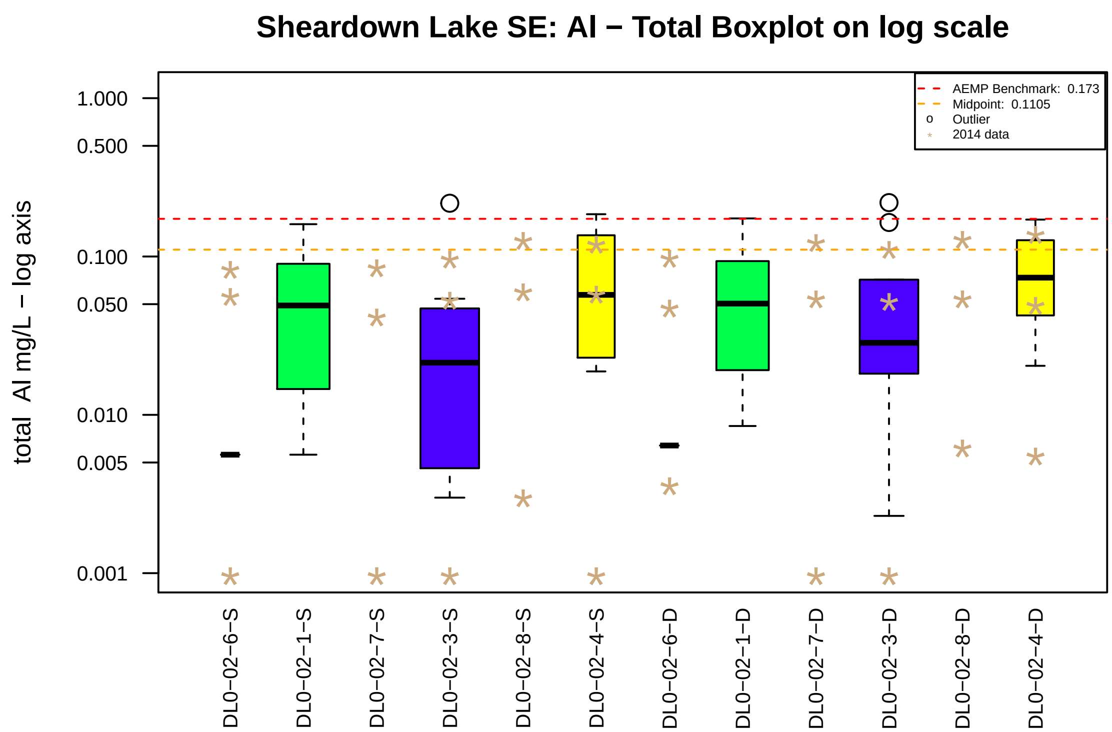

Sheardown Lake SE: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 9
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

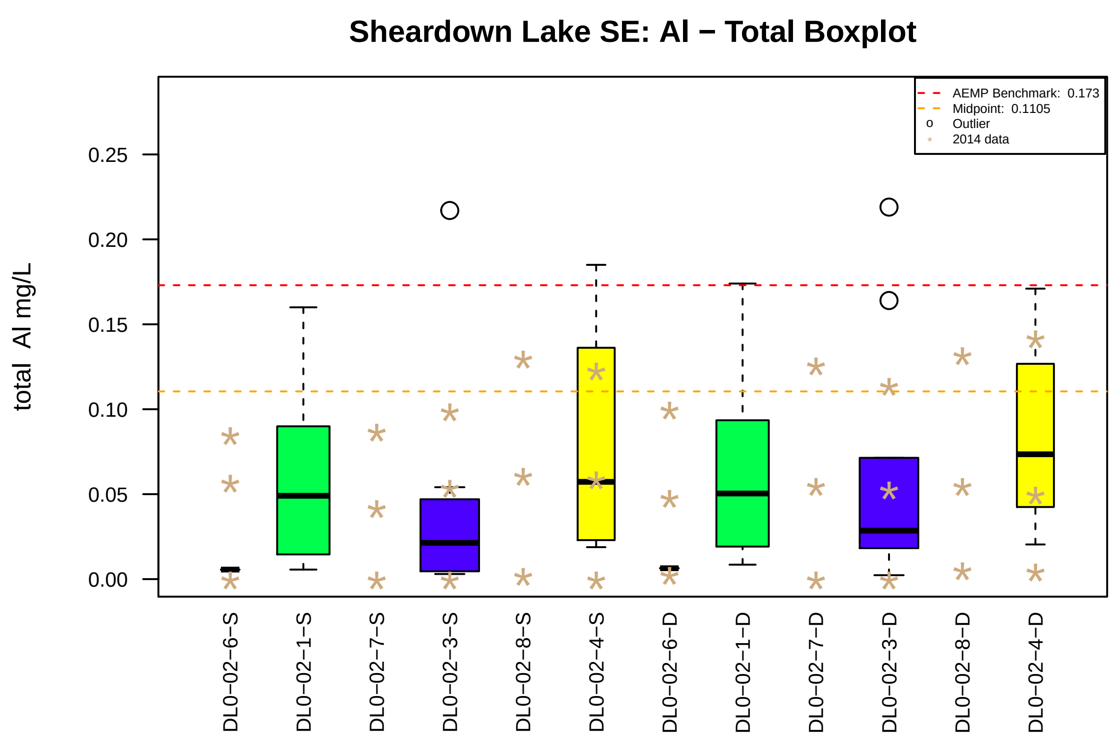

Sheardown Lake SE: Alkalinity − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D


Sheardown Lake SE: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

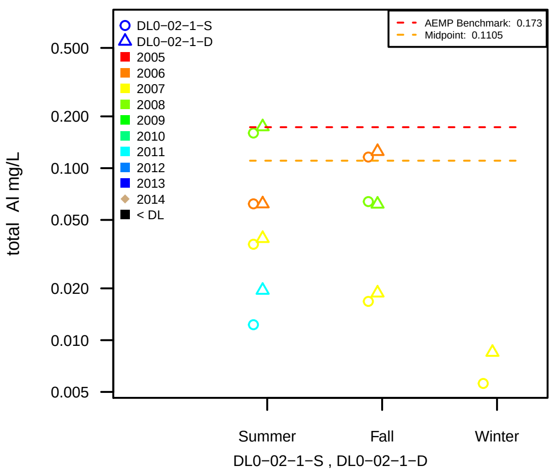

Sheardown Lake SE: Alkalinity − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
Alkalinity mg/L
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D


Sheardown Lake SE: Alkalinity − Seasonal Boxplot
Alkalinity mg/L
Summer
n= 7
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

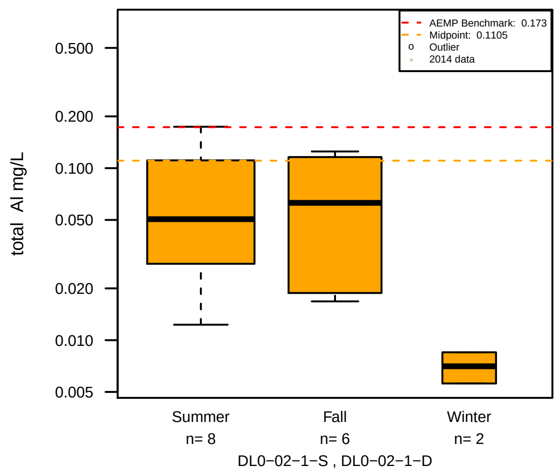

Sheardown Lake SE: Al − Total Boxplot on log scale
total Al mg/L − log axis
1.000
0.500
0.100
0.050
0.010
0.005
0.001
AEMP Benchmark: 0.173
Midpoint: 0.1105
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D


Sheardown Lake SE: Al − Total Boxplot
total Al mg/L
0.25
0.20
0.15
0.10
0.05
0.00
AEMP Benchmark: 0.173
Midpoint: 0.1105
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

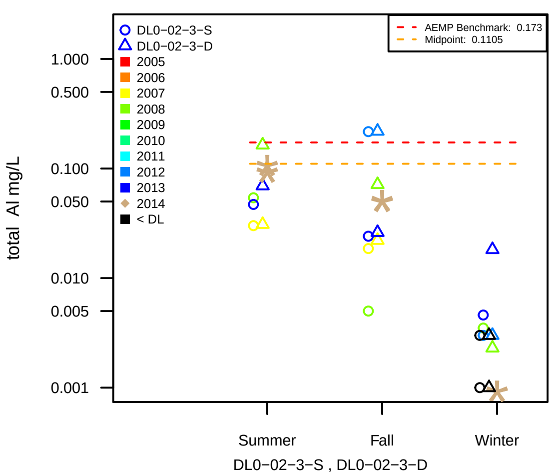
Sheardown Lake SE: Al − Seasonal Scatter Plot



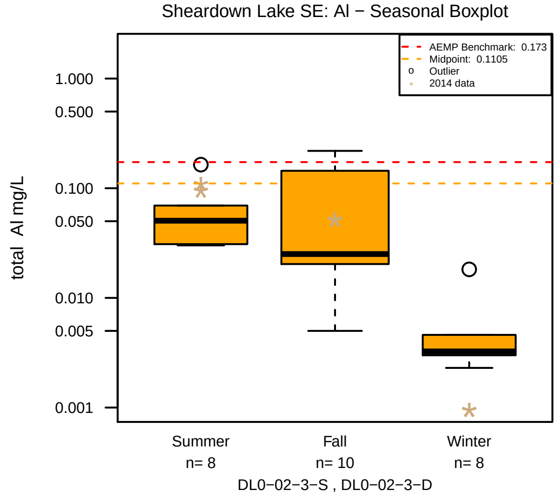
Sheardown Lake SE: Al − Seasonal Boxplot



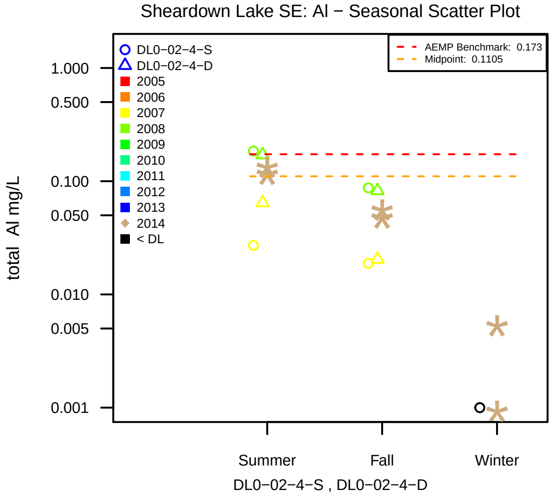
Sheardown Lake SE: Al − Seasonal Scatter Plot



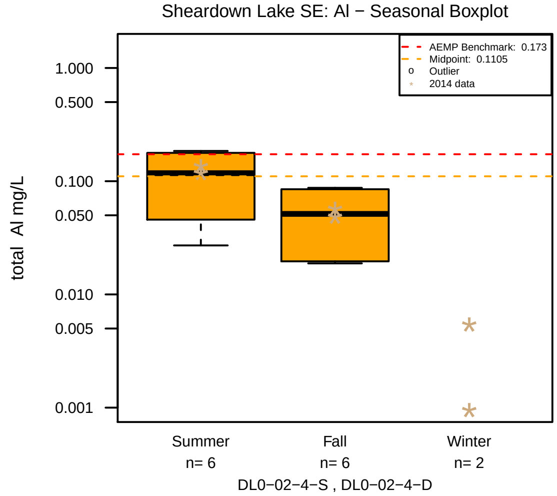
Sheardown Lake SE: Al − Seasonal Boxplot

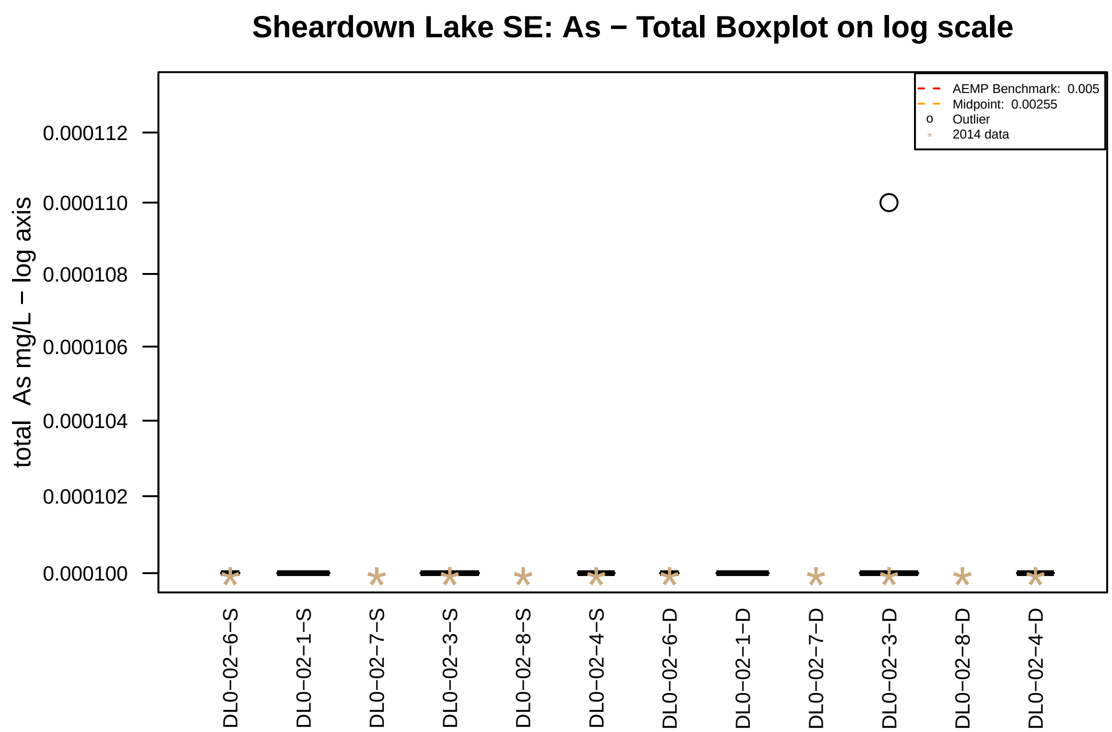


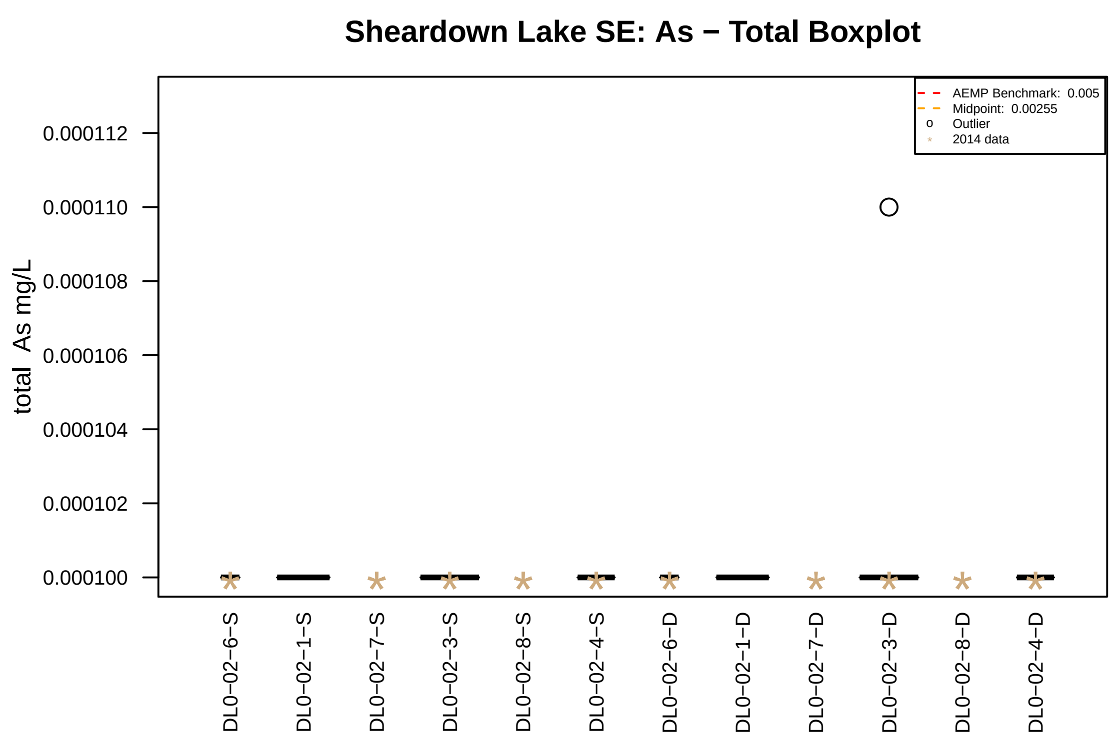
Sheardown Lake SE: Al − Seasonal Scatter Plot

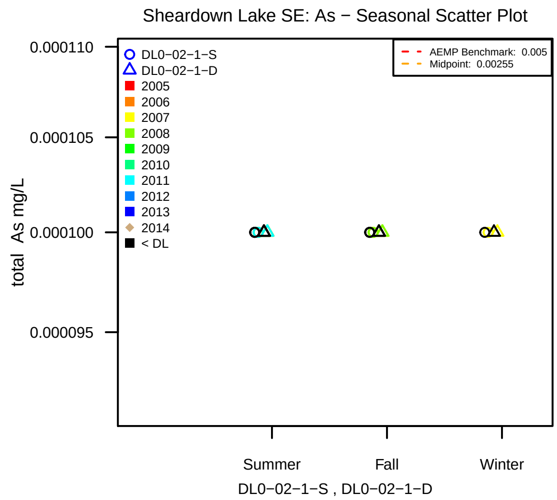


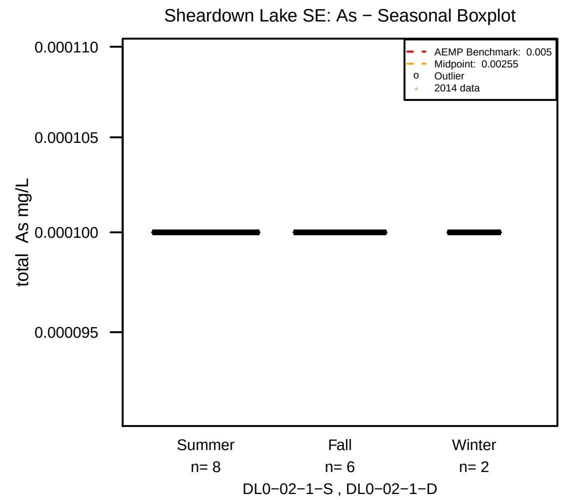
Sheardown Lake SE: Al − Seasonal Boxplot

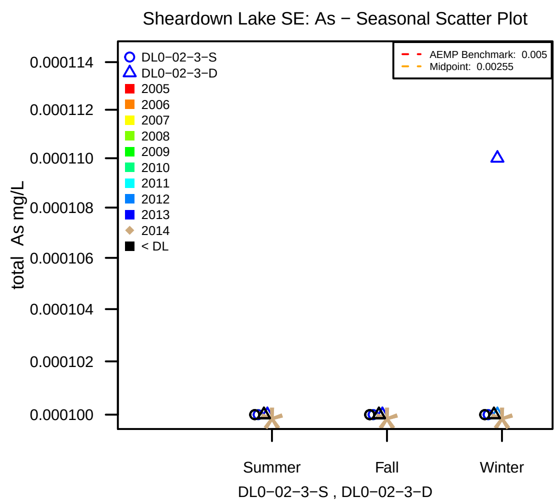


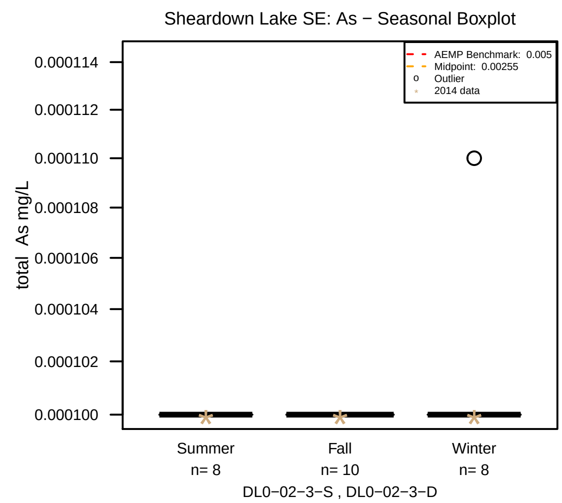

Sheardown Lake SE: As − Total Boxplot on log scale
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L − log axis
0.000112
0.000110
0.000108
0.000106
0.000104
0.000102
0.000100
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

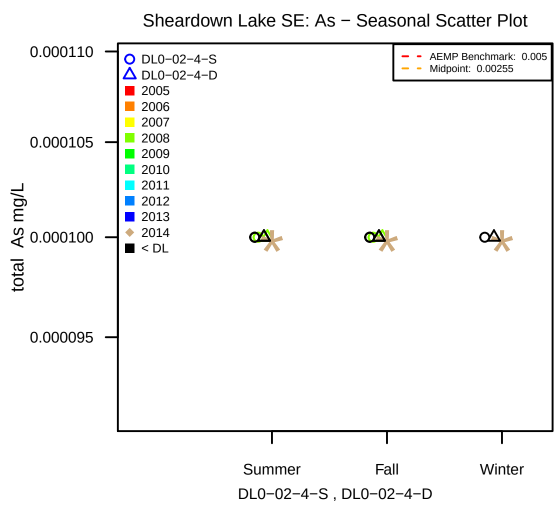

Sheardown Lake SE: As − Total Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
total As mg/L
0.000112
0.000110
0.000108
0.000106
0.000104
0.000102
0.000100
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

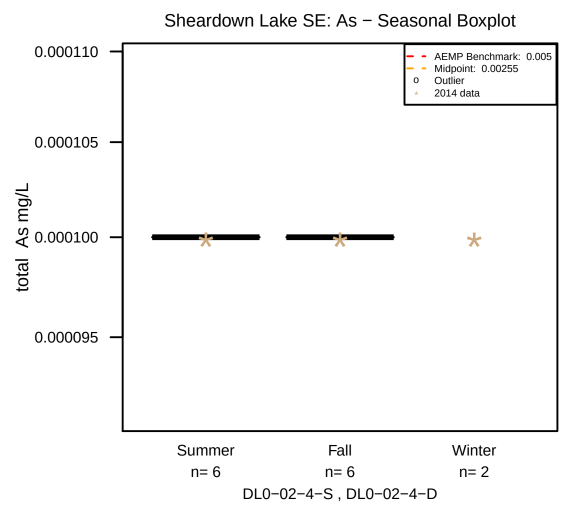

Sheardown Lake SE: As − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

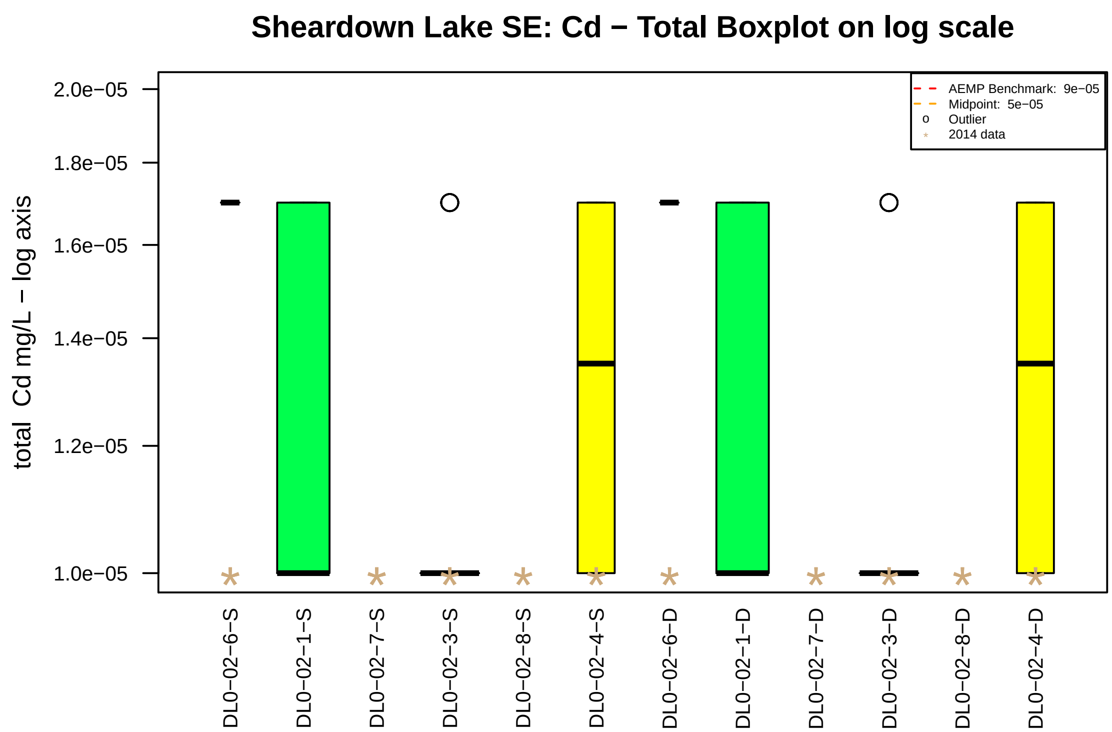

Sheardown Lake SE: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer n= 8
Fall n= 6
Winter n= 2
DL0−02−1−S , DL0−02−1−D

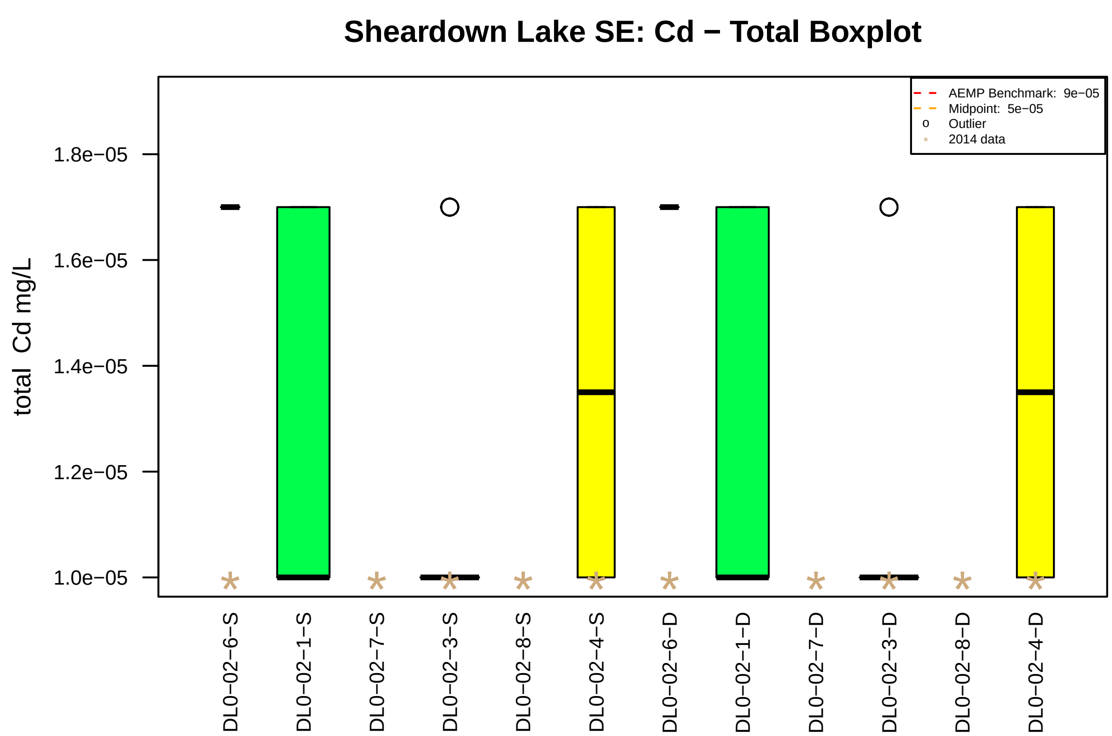

Sheardown Lake SE: As − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
0.000114
0.000112
0.000110
0.000108
0.000106
0.000104
0.000102
0.000100
total As mg/L
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

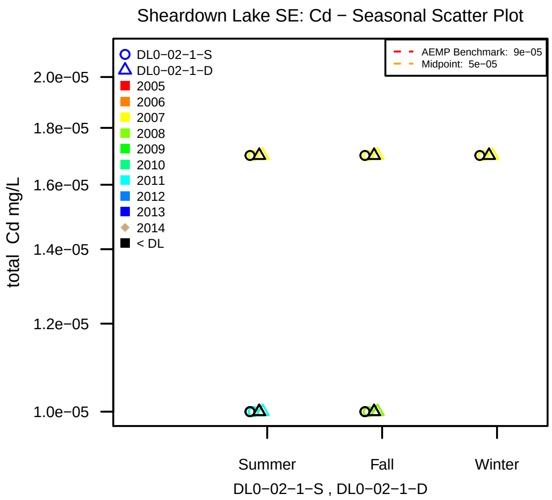

Sheardown Lake SE: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
0.000114
0.000112
0.000110
0.000108
0.000106
0.000104
0.000102
0.000100
total As mg/L
Summer n= 8
Fall n= 10
Winter n= 8
DL0−02−3−S , DL0−02−3−D

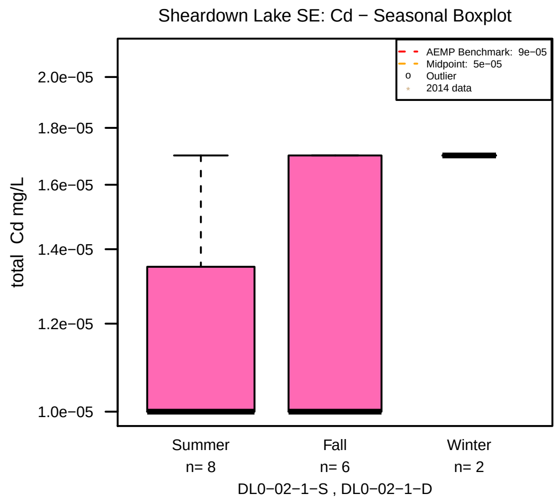

Sheardown Lake SE: As − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.005
Midpoint: 0.00255
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

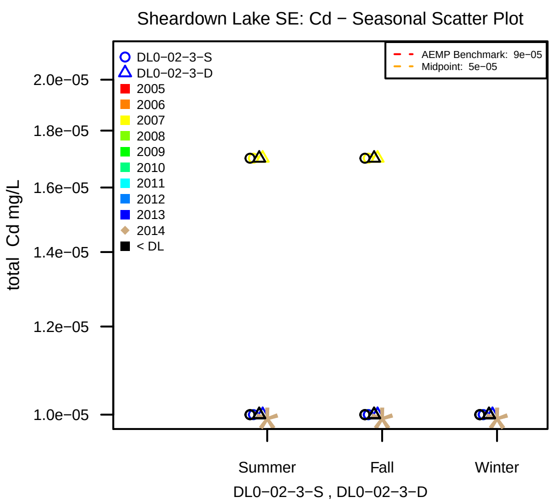

Sheardown Lake SE: As − Seasonal Boxplot
AEMP Benchmark: 0.005
Midpoint: 0.00255
Outlier
2014 data
0.000110
0.000105
0.000100
0.000095
total As mg/L
Summer n= 6
Fall n= 6
Winter n= 2
DL0−02−4−S , DL0−02−4−D

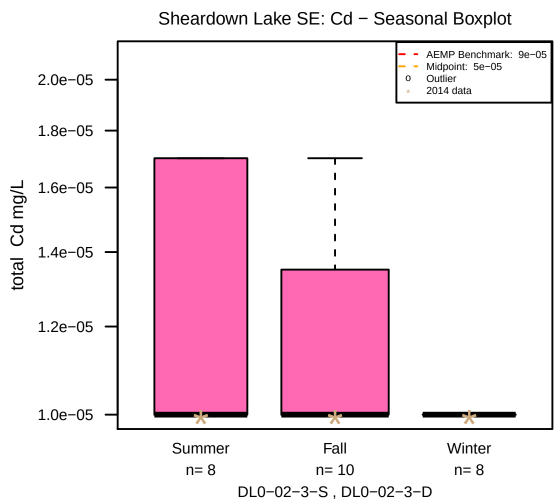

Sheardown Lake SE: Cd − Total Boxplot on log scale
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L − log axis
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

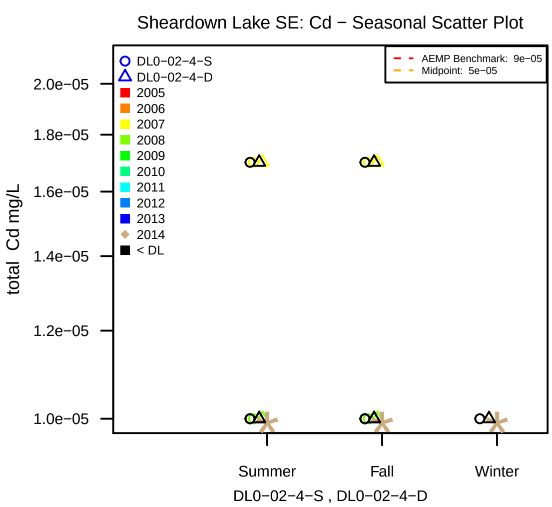

Sheardown Lake SE: Cd − Total Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

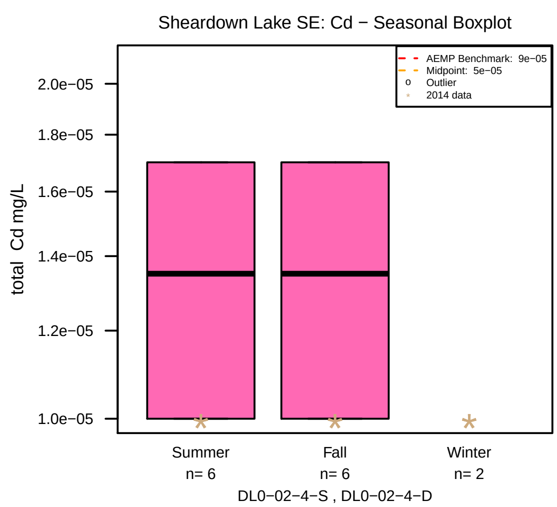

Sheardown Lake SE: Cd − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 9e−05
Midpoint: 5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

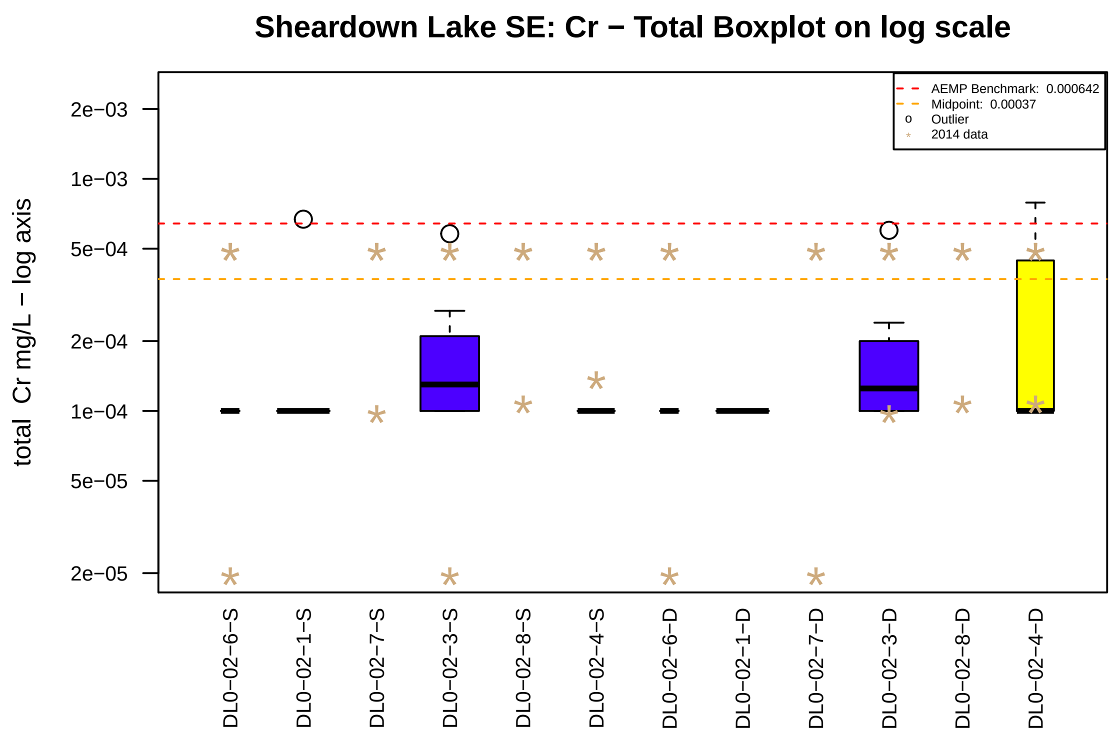

Sheardown Lake SE: Cd − Seasonal Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
n= 8
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

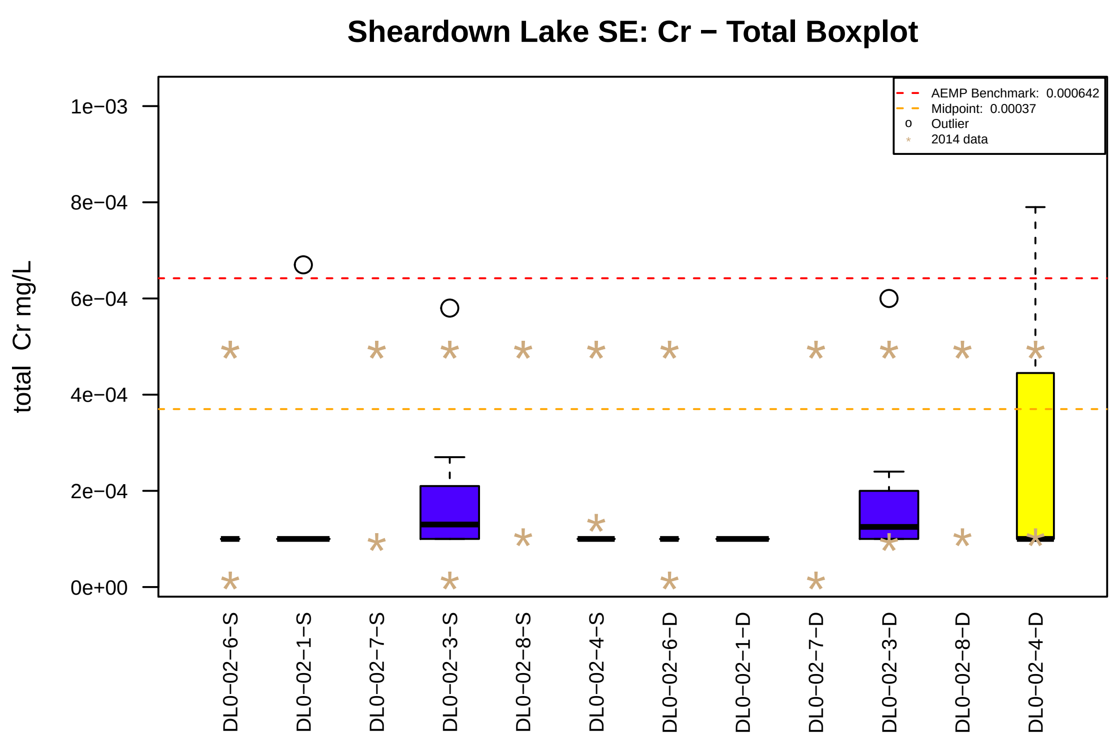

Sheardown Lake SE: Cd − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 9e−05
Midpoint: 5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

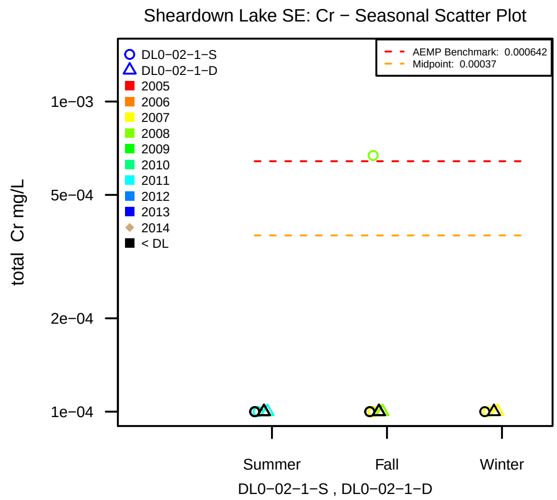

Sheardown Lake SE: Cd − Seasonal Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

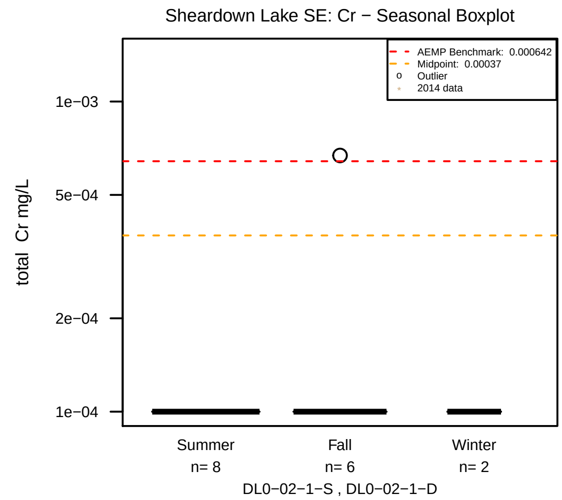

Sheardown Lake SE: Cd − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 9e−05
Midpoint: 5e−05
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

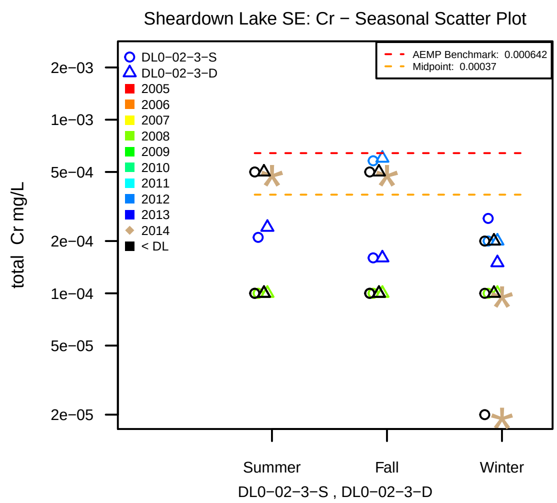

Sheardown Lake SE: Cd − Seasonal Boxplot
AEMP Benchmark: 9e−05
Midpoint: 5e−05
Outlier
2014 data
total Cd mg/L
2.0e−05
1.8e−05
1.6e−05
1.4e−05
1.2e−05
1.0e−05
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

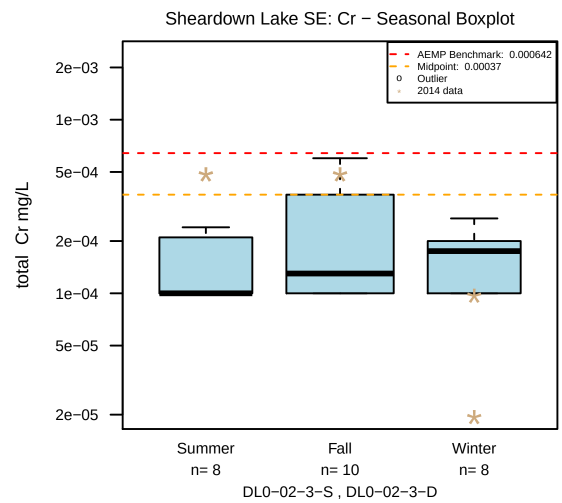

Sheardown Lake SE: Cr − Total Boxplot on log scale
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
total Cr mg/L − log axis
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

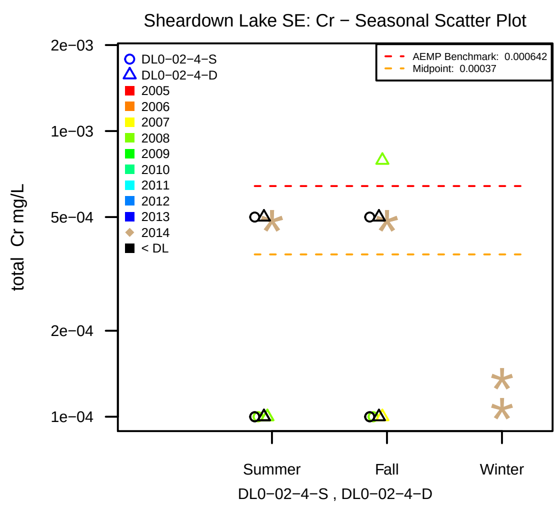

Sheardown Lake SE: Cr − Total Boxplot
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
total Cr mg/L
1e−03
8e−04
6e−04
4e−04
2e−04
0e+00
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

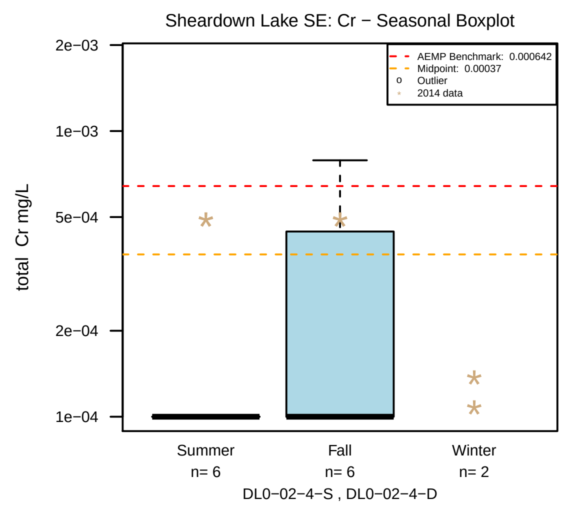

Sheardown Lake SE: Cr − Seasonal Scatter Plot
total Cr mg/L
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.000642
Midpoint: 0.00037
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

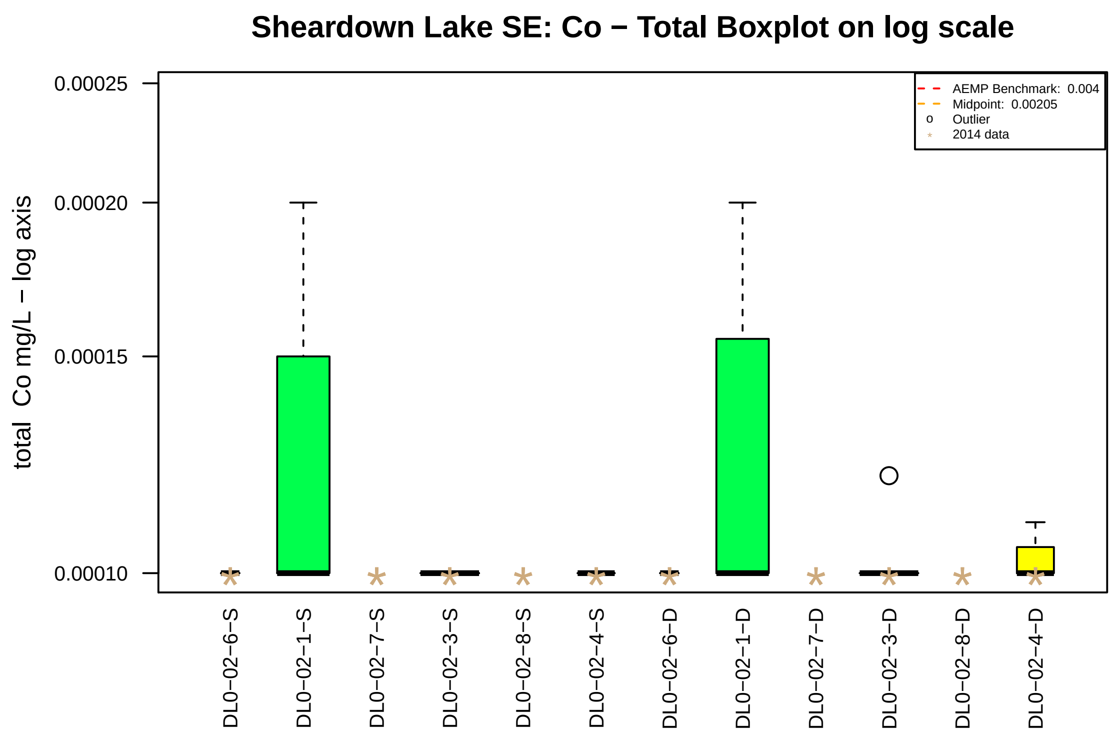

Sheardown Lake SE: Cr − Seasonal Boxplot
total Cr mg/L
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
1e−03
5e−04
2e−04
1e−04
Summer
n= 8
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

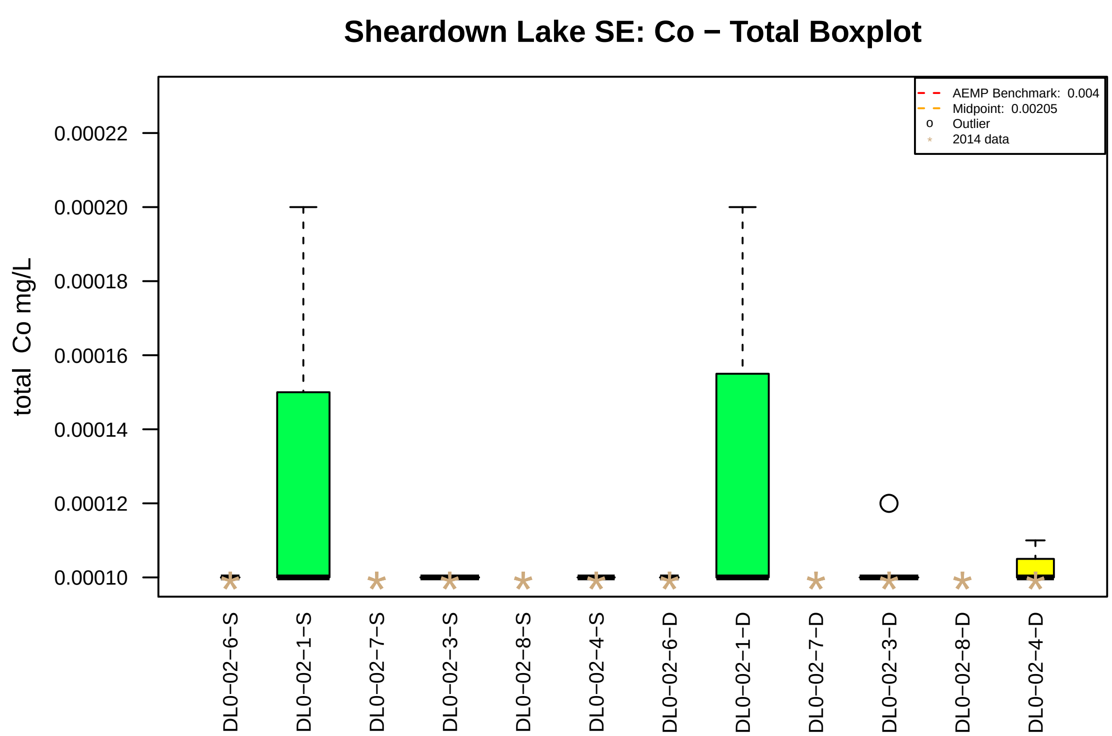

Sheardown Lake SE: Cr − Seasonal Scatter Plot
total Cr mg/L
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.000642
Midpoint: 0.00037
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

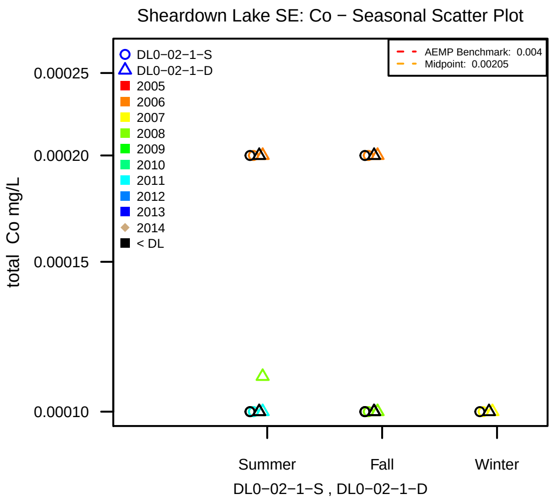

Sheardown Lake SE: Cr − Seasonal Boxplot
total Cr mg/L
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
2e−05
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

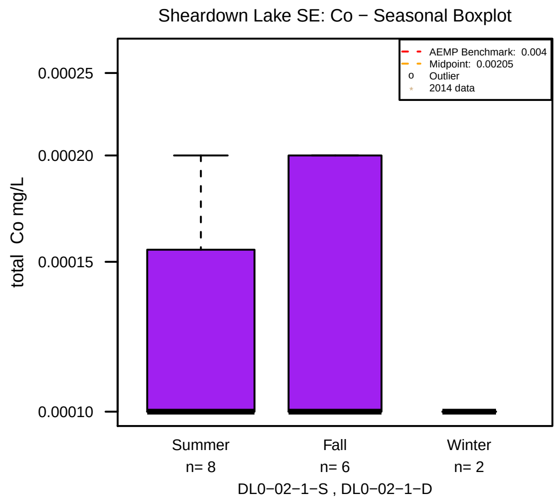

Sheardown Lake SE: Cr − Seasonal Scatter Plot
total Cr mg/L
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.000642
Midpoint: 0.00037
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

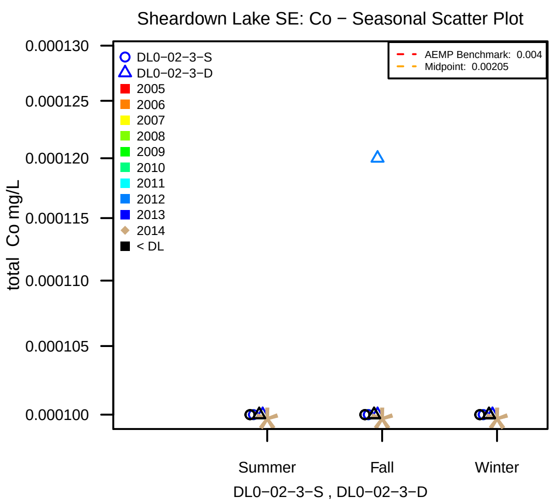

Sheardown Lake SE: Cr − Seasonal Boxplot
total Cr mg/L
AEMP Benchmark: 0.000642
Midpoint: 0.00037
Outlier
2014 data
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

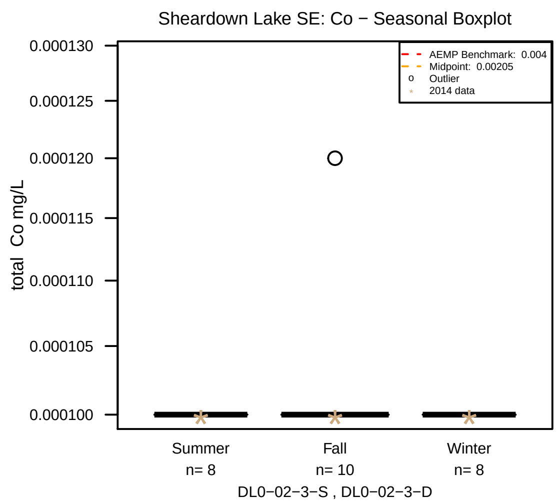

Sheardown Lake SE: Co − Total Boxplot on log scale
total Co mg/L − log axis
0.00025
0.00020
0.00015
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

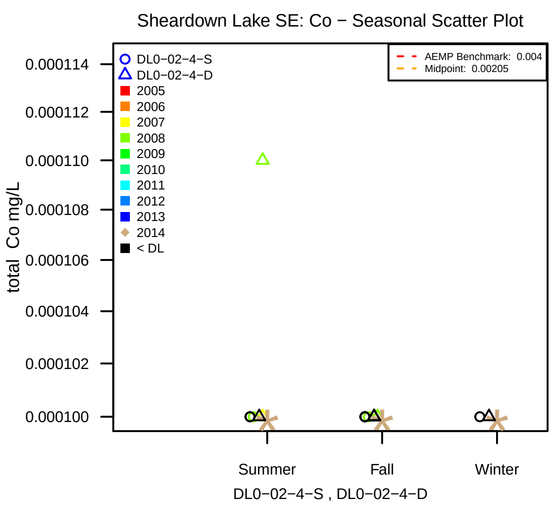

Sheardown Lake SE: Co − Total Boxplot
total Co mg/L
0.00022
0.00020
0.00018
0.00016
0.00014
0.00012
0.00010
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

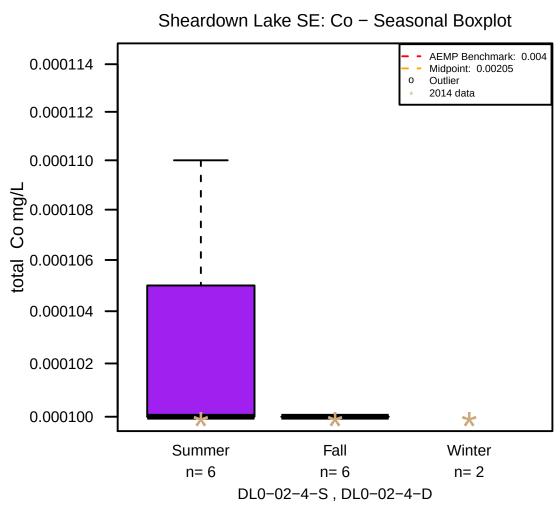

Sheardown Lake SE: Co − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
total Co mg/L
0.00025
0.00020
0.00015
0.00010
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

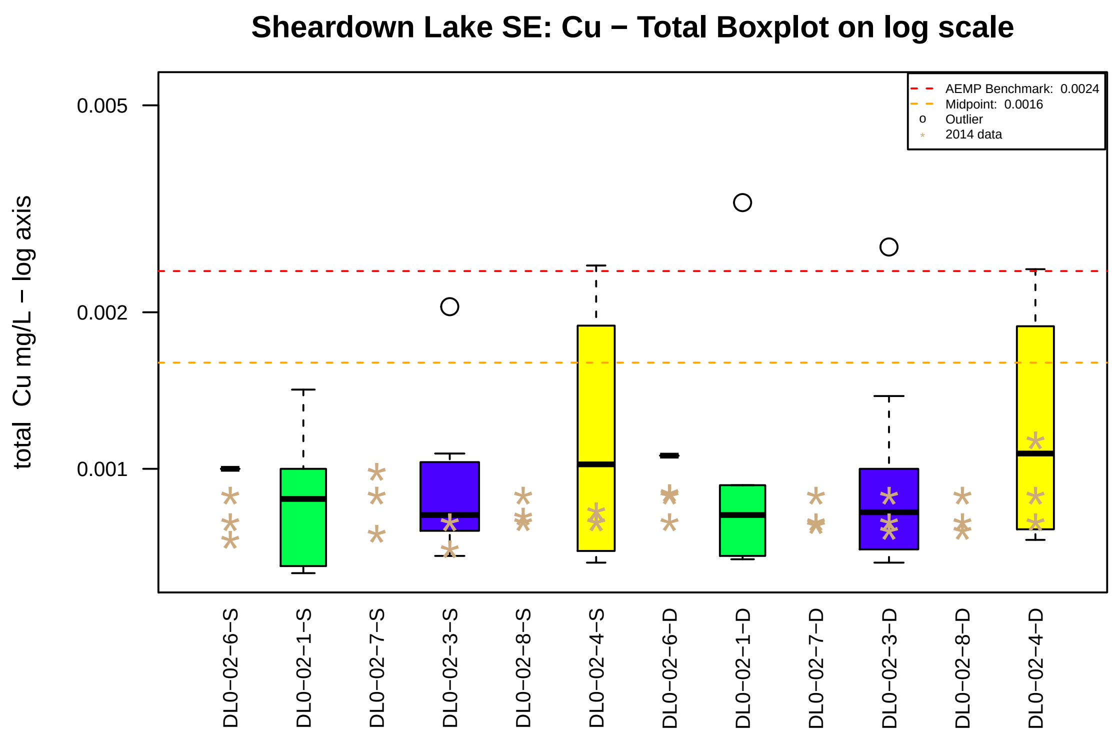

Sheardown Lake SE: Co − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.00025
0.00020
0.00015
0.00010
Summer
n= 8
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

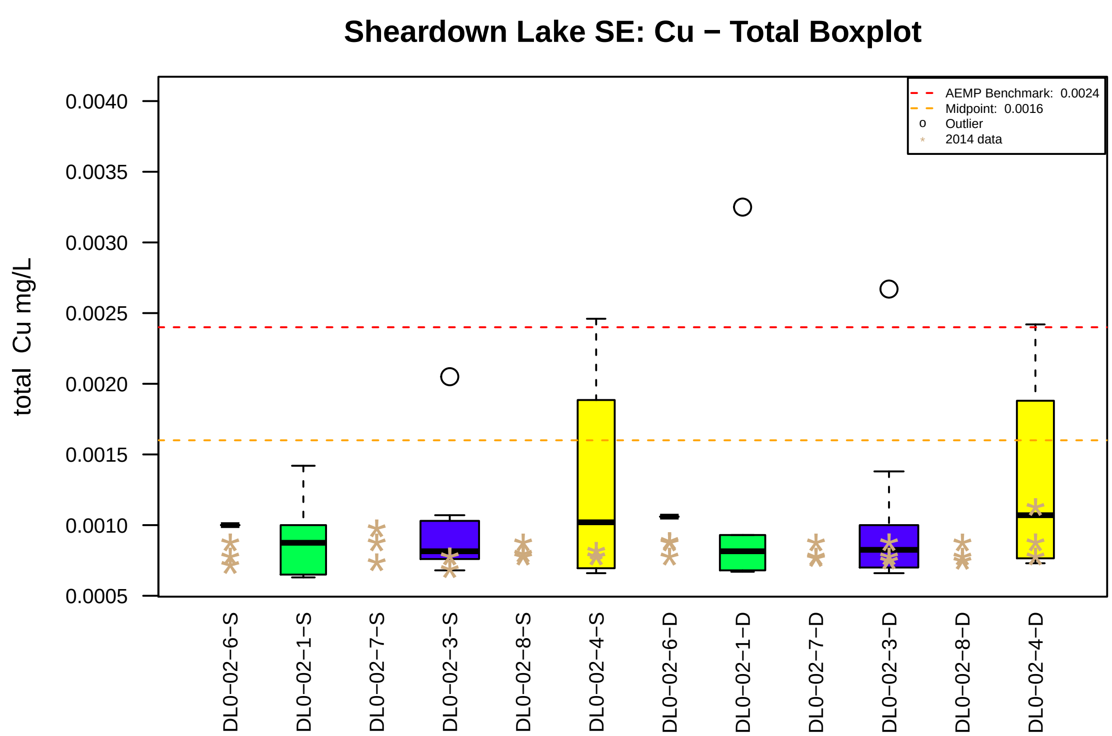

Sheardown Lake SE: Co − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
total Co mg/L
0.000130
0.000125
0.000120
0.000115
0.000110
0.000105
0.000100
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

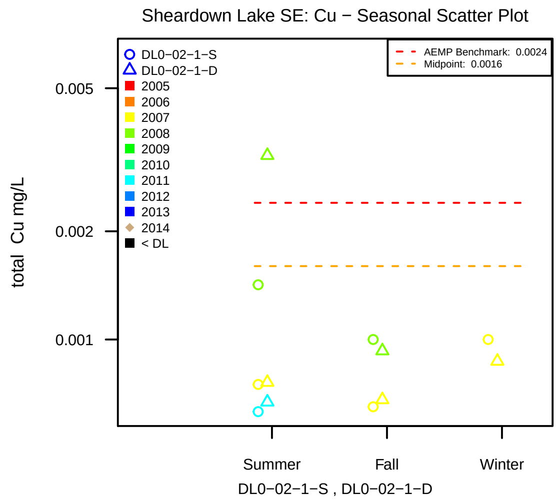

Sheardown Lake SE: Co − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.000130
0.000125
0.000120
0.000115
0.000110
0.000105
0.000100
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

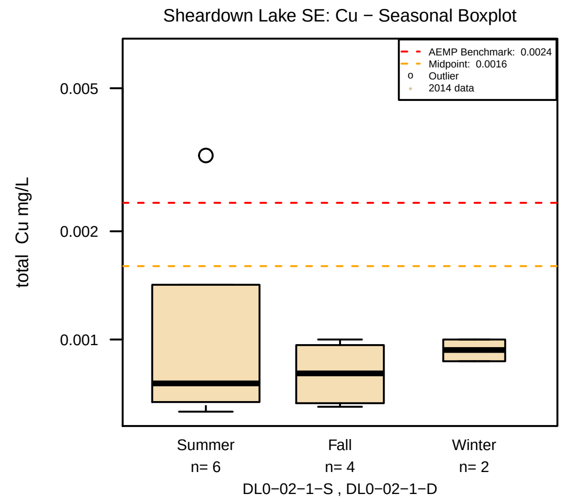

Sheardown Lake SE: Co − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.004
Midpoint: 0.00205
total Co mg/L
0.000114
0.000112
0.000110
0.000108
0.000106
0.000104
0.000102
0.000100
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

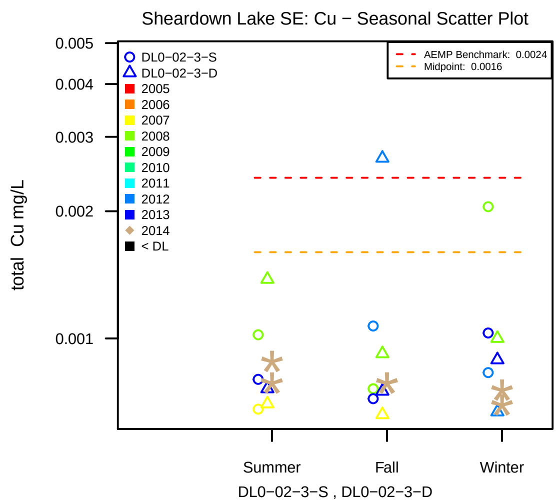

Sheardown Lake SE: Co − Seasonal Boxplot
AEMP Benchmark: 0.004
Midpoint: 0.00205
Outlier
2014 data
total Co mg/L
0.000114
0.000112
0.000110
0.000108
0.000106
0.000104
0.000102
0.000100
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

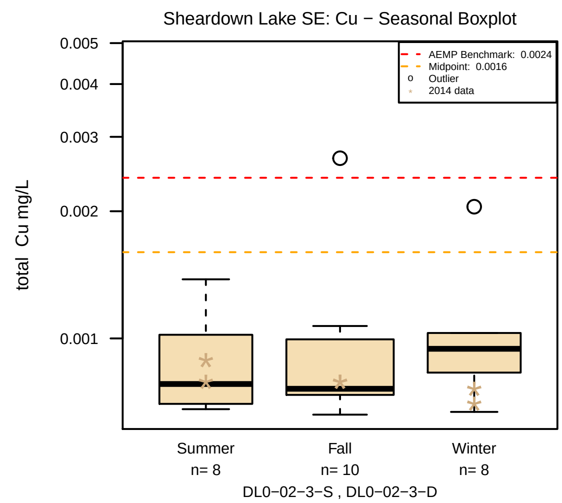

Sheardown Lake SE: Cu − Total Boxplot on log scale
total Cu mg/L − log axis
0.005
0.002
0.001
AEMP Benchmark: 0.0024
Midpoint: 0.0016
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

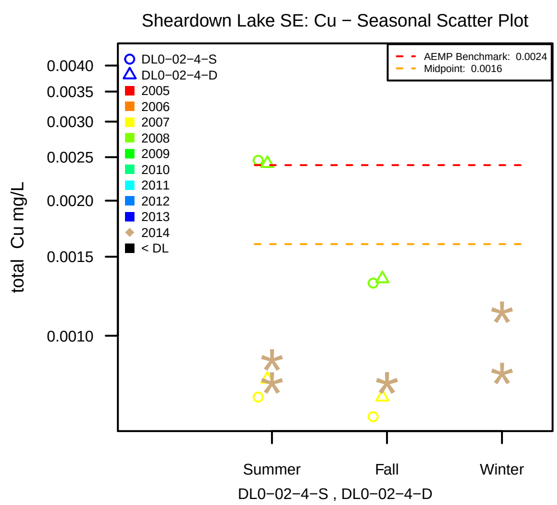

Sheardown Lake SE: Cu − Total Boxplot
total Cu mg/L
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
AEMP Benchmark: 0.0024
Midpoint: 0.0016
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

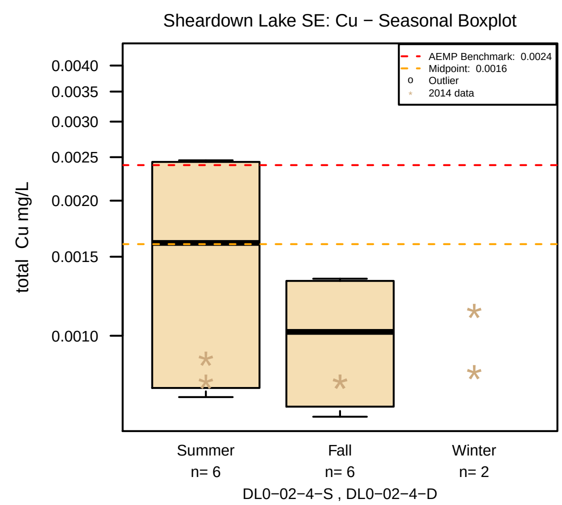

Sheardown Lake SE: Cu − Seasonal Scatter Plot
total Cu mg/L
0.005
0.002
0.001
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.0016
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

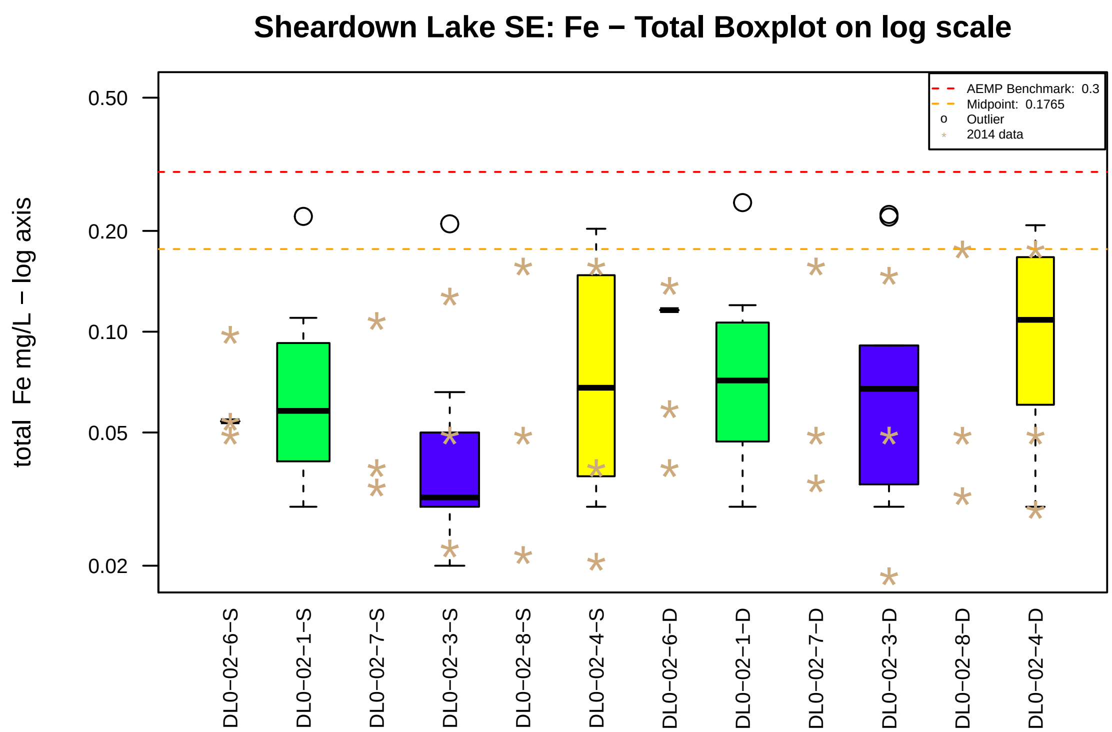

Sheardown Lake SE: Cu − Seasonal Boxplot
total Cu mg/L
0.005
0.002
0.001
AEMP Benchmark: 0.0024
Midpoint: 0.0016
Outlier
2014 data
Summer
n= 6
Fall
n= 4
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

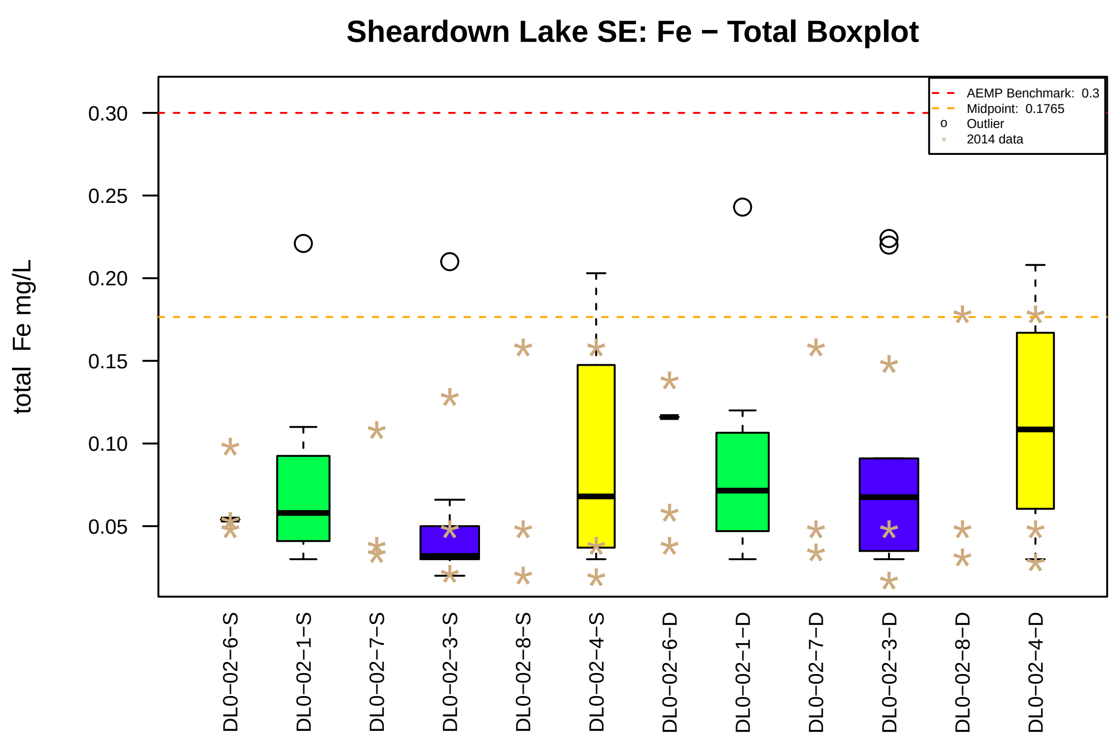

Sheardown Lake SE: Cu − Seasonal Scatter Plot
total Cu mg/L
0.005
0.004
0.003
0.002
0.001
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.0016
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

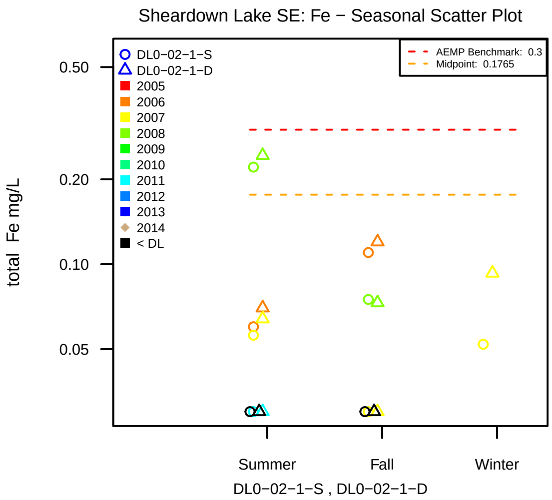

Sheardown Lake SE: Cu − Seasonal Boxplot
total Cu mg/L
0.005
0.004
0.003
0.002
0.001
AEMP Benchmark: 0.0024
Midpoint: 0.0016
Outlier
2014 data
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

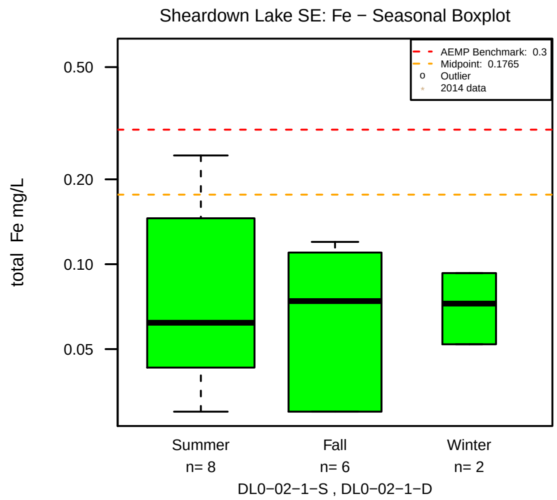

Sheardown Lake SE: Cu − Seasonal Scatter Plot
total Cu mg/L
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.0024
Midpoint: 0.0016
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

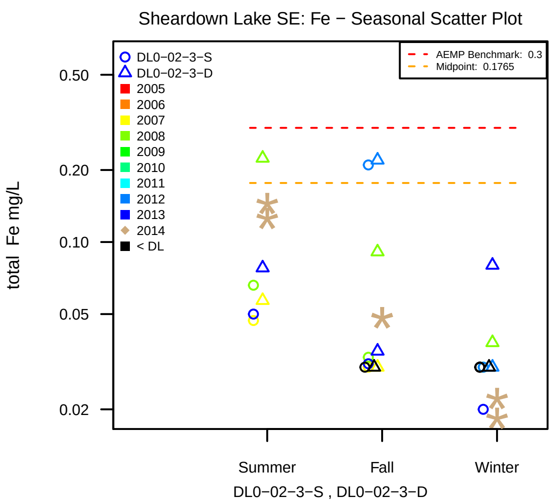

Sheardown Lake SE: Cu − Seasonal Boxplot
total Cu mg/L
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
AEMP Benchmark: 0.0024
Midpoint: 0.0016
Outlier
2014 data
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

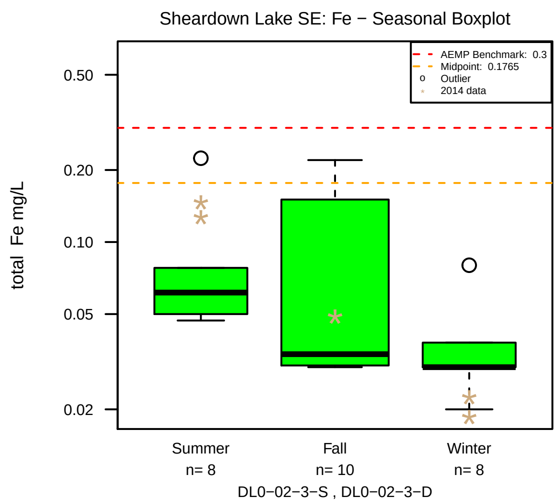

Sheardown Lake SE: Fe − Total Boxplot on log scale
AEMP Benchmark: 0.3
Midpoint: 0.1765
Outlier
2014 data
total Fe mg/L − log axis
0.50
0.20
0.10
0.05
0.02
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

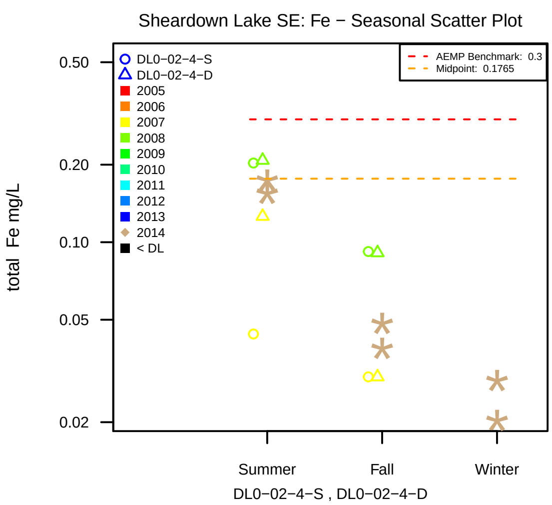

Sheardown Lake SE: Fe − Total Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.1765
Outlier
2014 data
total Fe mg/L
0.30
0.25
0.20
0.15
0.10
0.05
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

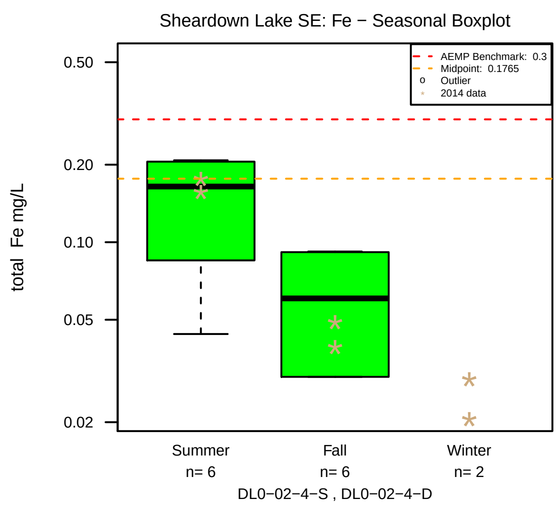

Sheardown Lake SE: Fe − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.1765
total Fe mg/L
0.50
0.20
0.10
0.05
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

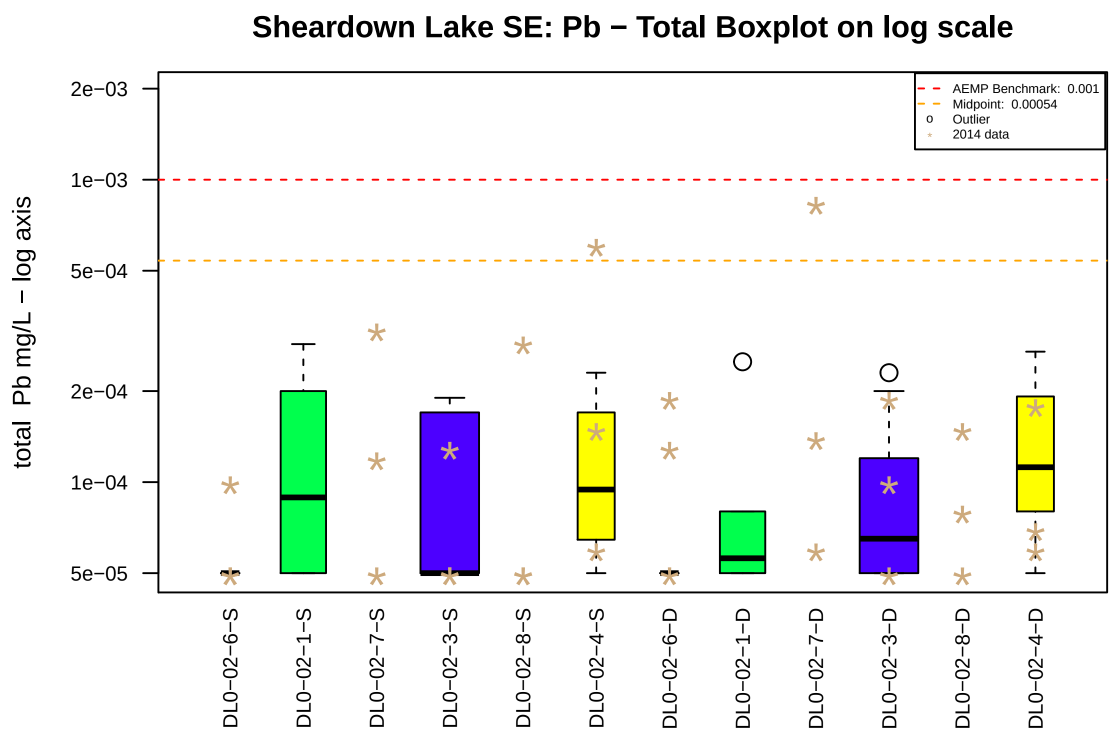

Sheardown Lake SE: Fe − Seasonal Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.1765
Outlier
2014 data
total Fe mg/L
0.50
0.20
0.10
0.05
Summer
n= 8
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

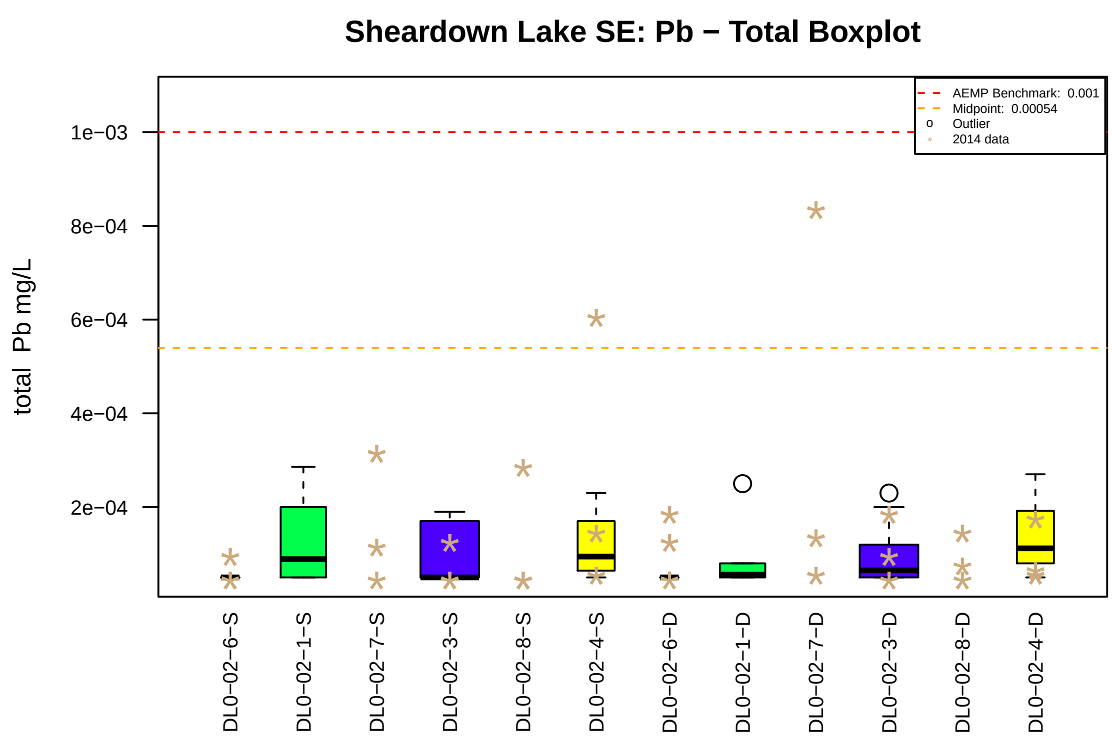

Sheardown Lake SE: Fe − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.1765
total Fe mg/L
0.50
0.20
0.10
0.05
0.02
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

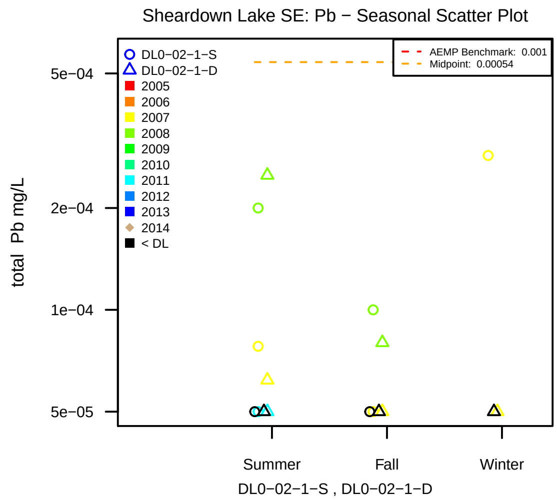

Sheardown Lake SE: Fe − Seasonal Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.1765
Outlier
2014 data
total Fe mg/L
0.50
0.20
0.10
0.05
0.02
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

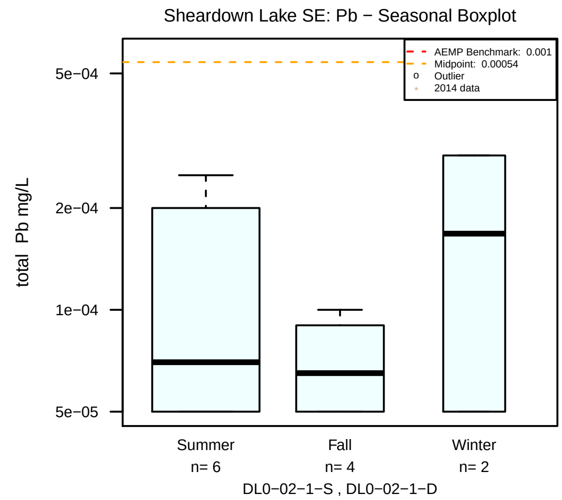

Sheardown Lake SE: Fe − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.3
Midpoint: 0.1765
total Fe mg/L
0.50
0.20
0.10
0.05
0.02
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

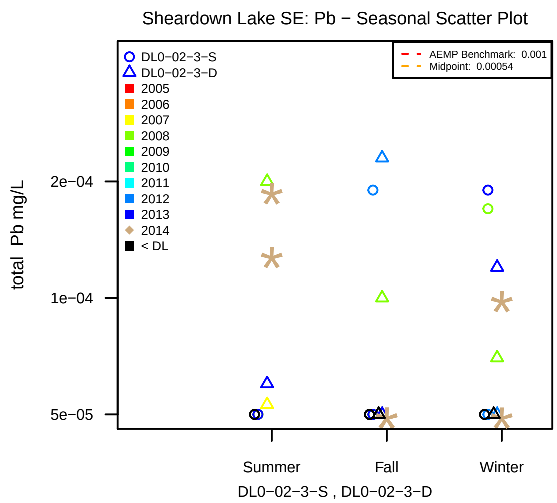

Sheardown Lake SE: Fe − Seasonal Boxplot
AEMP Benchmark: 0.3
Midpoint: 0.1765
Outlier
2014 data
total Fe mg/L
0.50
0.20
0.10
0.05
0.02
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

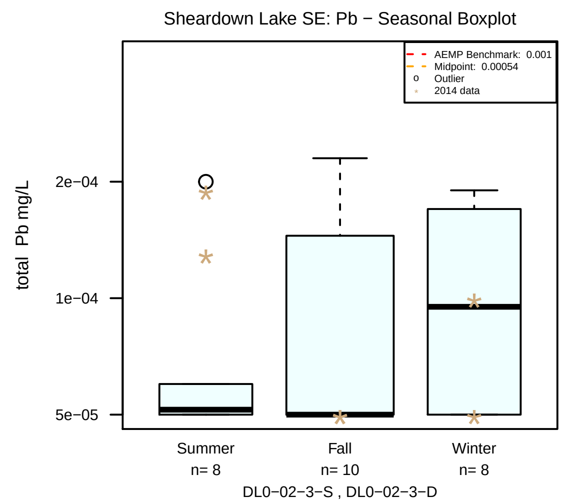

Sheardown Lake SE: Pb − Total Boxplot on log scale
total Pb mg/L − log axis
2e−03
1e−03
5e−04
2e−04
1e−04
5e−05
AEMP Benchmark: 0.001
Midpoint: 0.00054
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

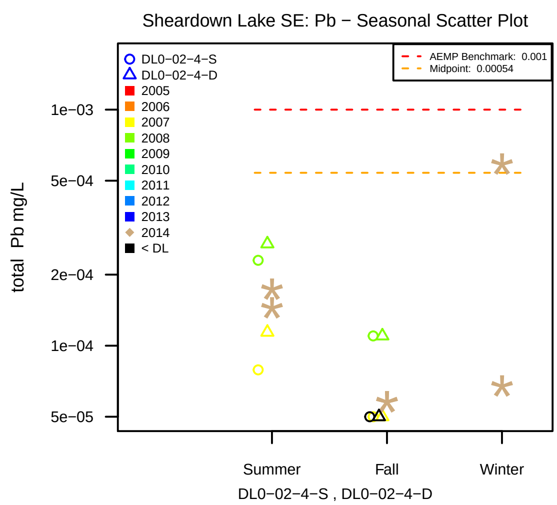

Sheardown Lake SE: Pb − Total Boxplot
total Pb mg/L
1e−03
8e−04
6e−04
4e−04
2e−04
AEMP Benchmark: 0.001
Midpoint: 0.00054
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

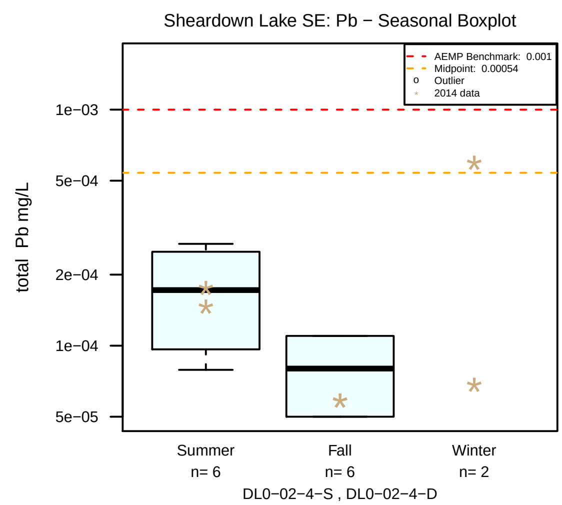

Sheardown Lake SE: Pb − Seasonal Scatter Plot
total Pb mg/L
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00054
5e−04
2e−04
1e−04
5e−05
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

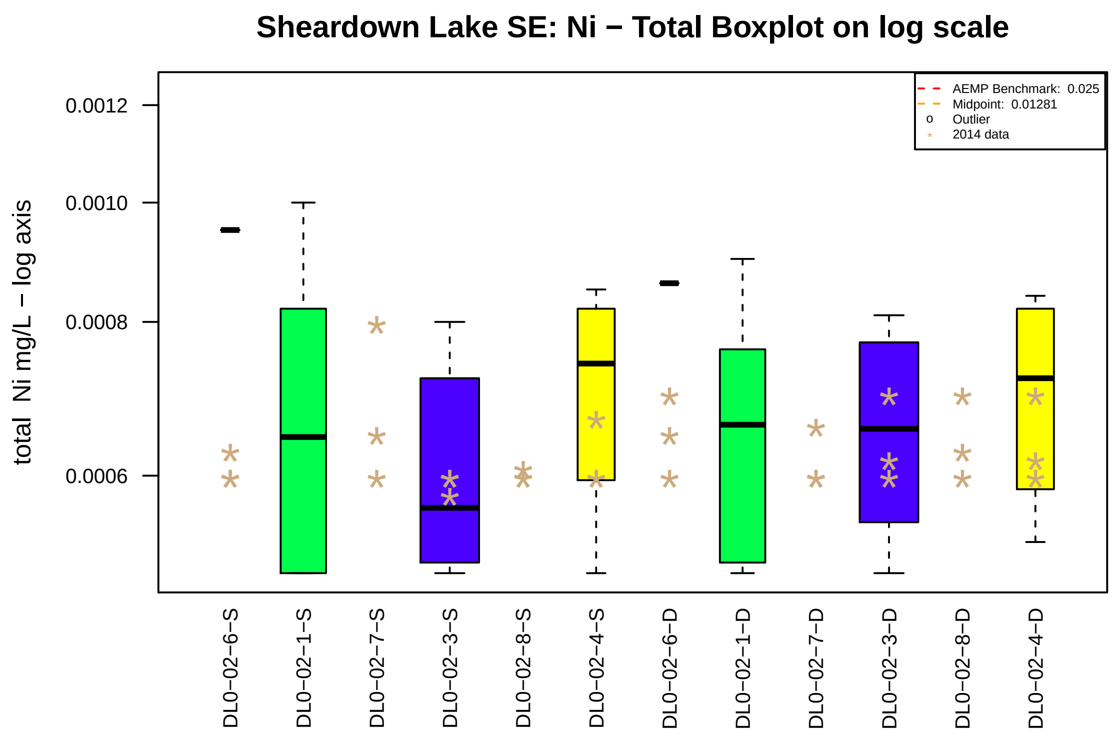

Sheardown Lake SE: Pb − Seasonal Boxplot
total Pb mg/L
AEMP Benchmark: 0.001
Midpoint: 0.00054
Outlier
2014 data
5e−04
2e−04
1e−04
5e−05
Summer
n= 6
Fall
n= 4
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

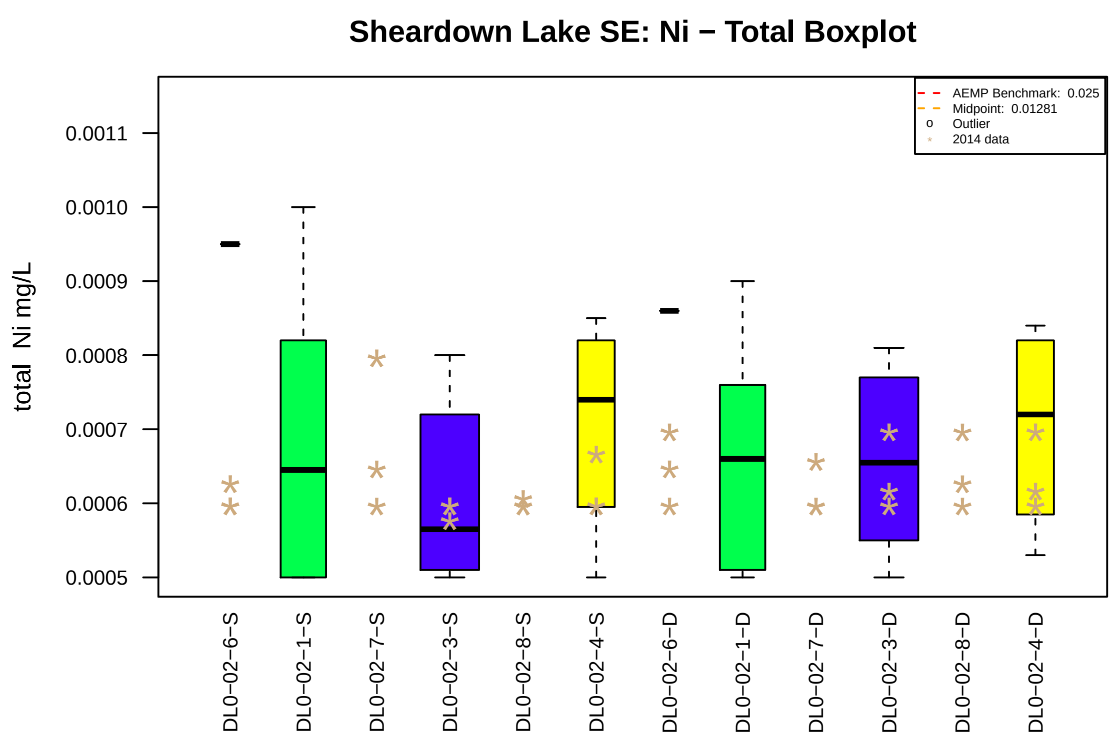

Sheardown Lake SE: Pb − Seasonal Scatter Plot
total Pb mg/L
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00054
2e−04
1e−04
5e−05
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

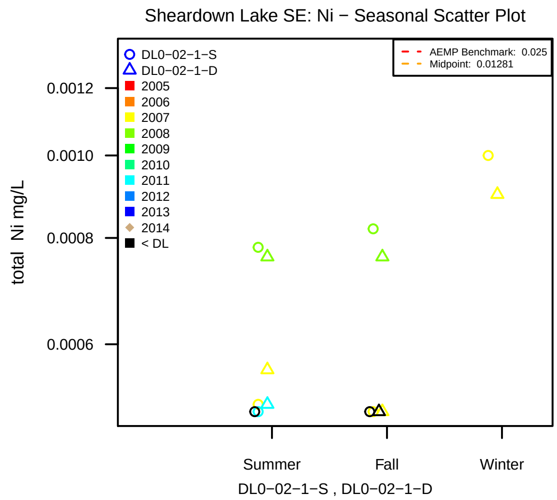

Sheardown Lake SE: Pb − Seasonal Boxplot
total Pb mg/L
AEMP Benchmark: 0.001
Midpoint: 0.00054
Outlier
2014 data
2e−04
1e−04
5e−05
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

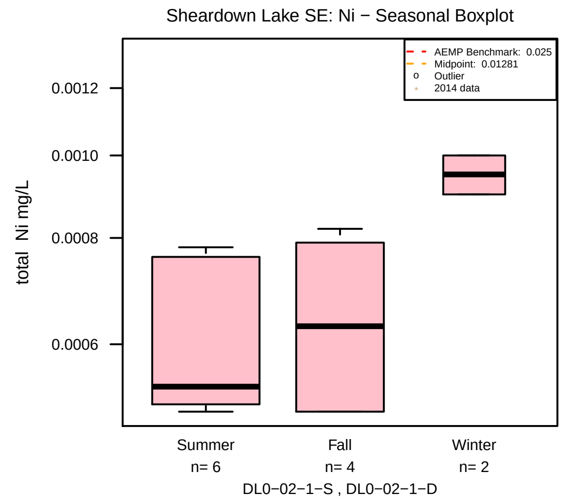

Sheardown Lake SE: Pb − Seasonal Scatter Plot
total Pb mg/L
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.001
Midpoint: 0.00054
1e−03
5e−04
2e−04
1e−04
5e−05
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

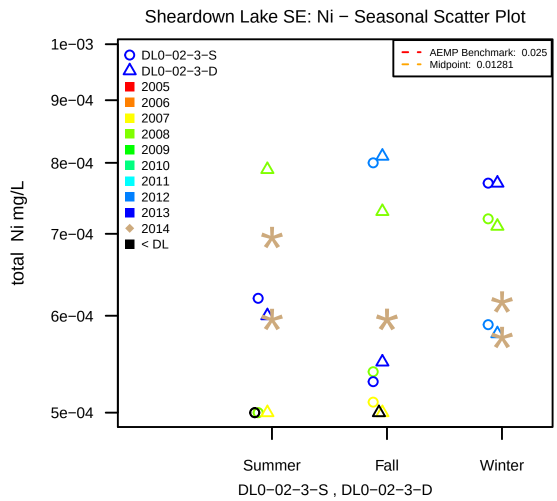

Sheardown Lake SE: Pb − Seasonal Boxplot
total Pb mg/L
AEMP Benchmark: 0.001
Midpoint: 0.00054
Outlier
2014 data
1e−03
5e−04
2e−04
1e−04
5e−05
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

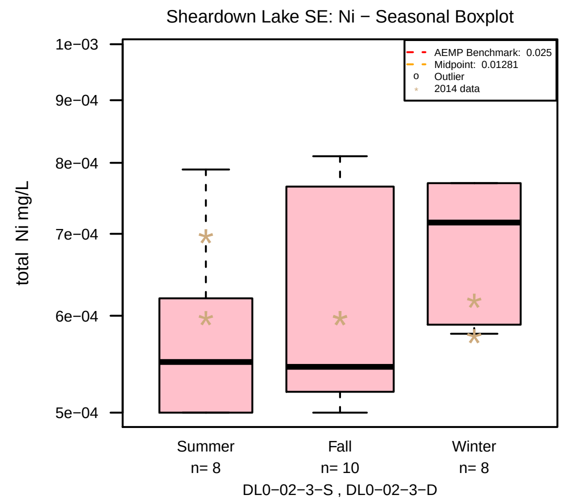

Sheardown Lake SE: Ni − Total Boxplot on log scale
total Ni mg/L − log axis
0.0012
0.0010
0.0008
0.0006
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

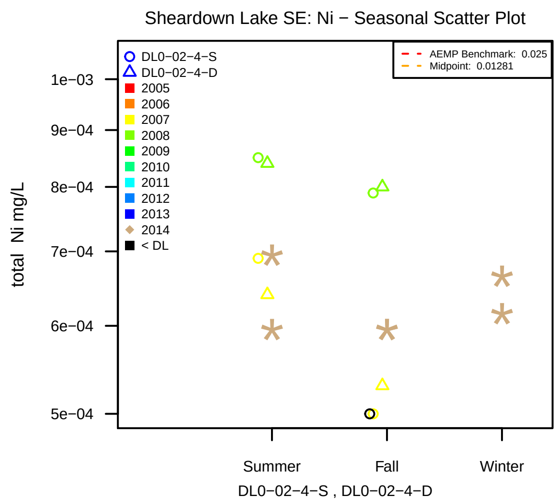

Sheardown Lake SE: Ni − Total Boxplot
total Ni mg/L
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0.0005
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

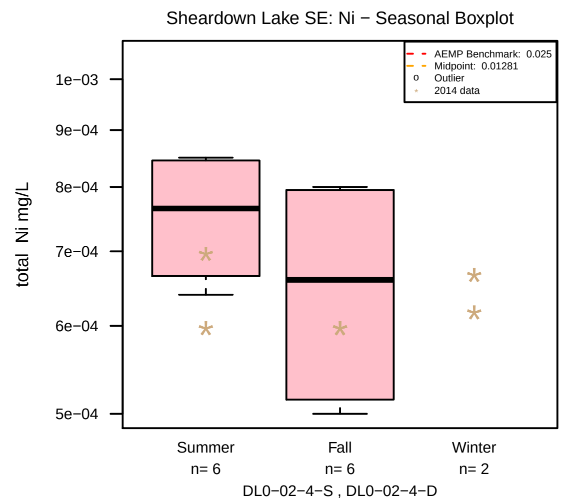

Sheardown Lake SE: Ni − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01281
total Ni mg/L
0.0012
0.0010
0.0008
0.0006
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

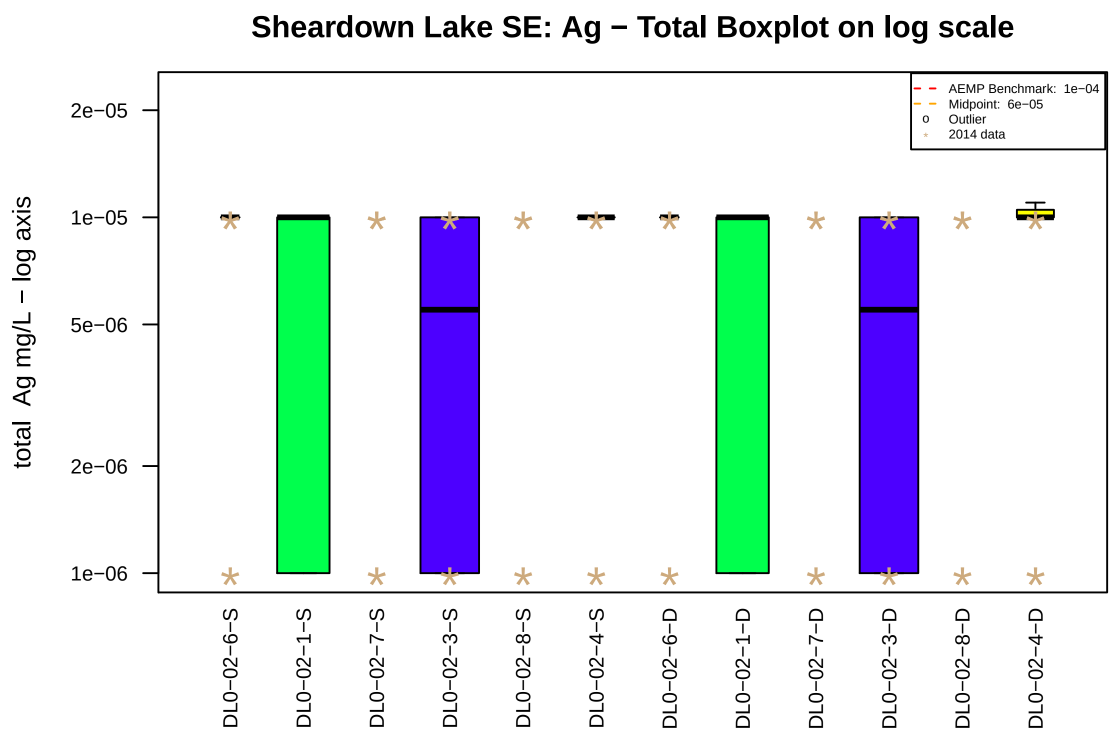

Sheardown Lake SE: Ni − Seasonal Boxplot
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
total Ni mg/L
0.0012
0.0010
0.0008
0.0006
Summer
n= 6
Fall
n= 4
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

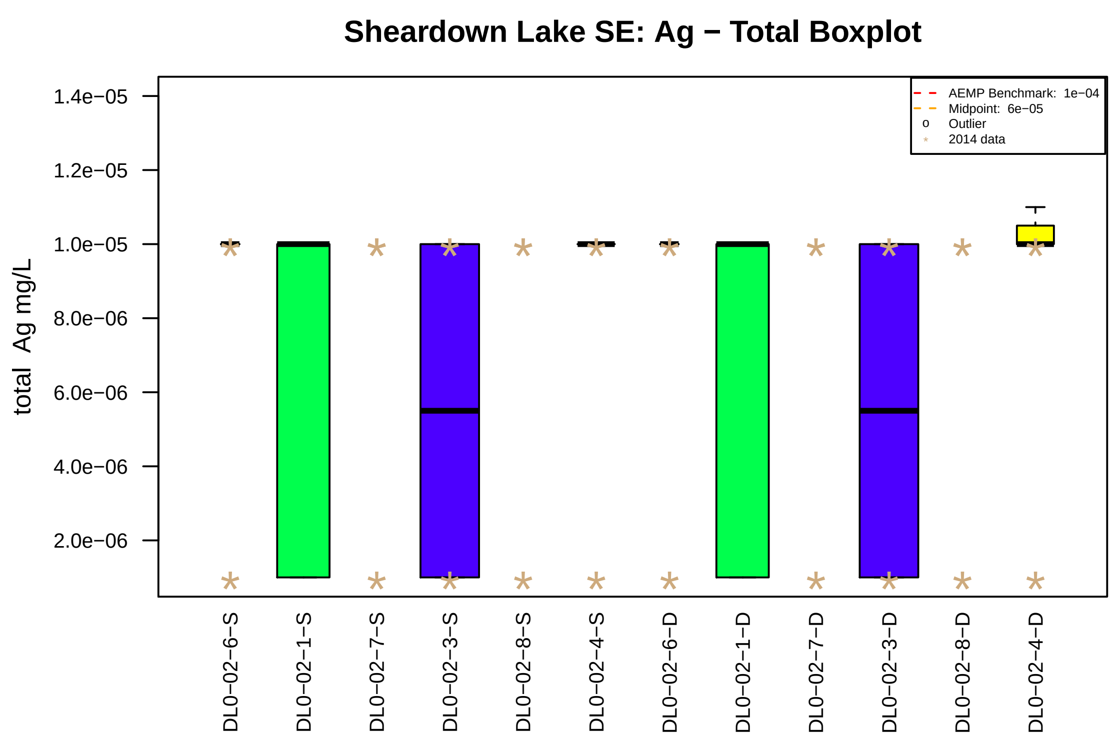

Sheardown Lake SE: Ni − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01281
total Ni mg/L
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

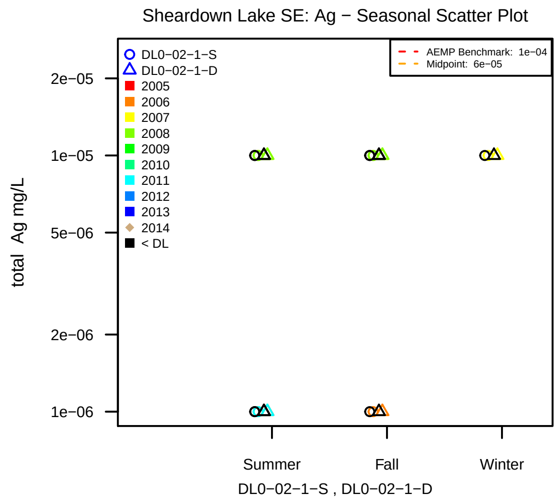

Sheardown Lake SE: Ni − Seasonal Boxplot
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
total Ni mg/L
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

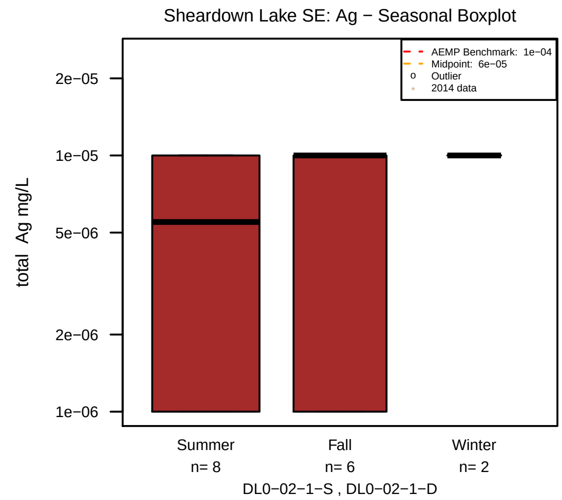

Sheardown Lake SE: Ni − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.025
Midpoint: 0.01281
total Ni mg/L
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

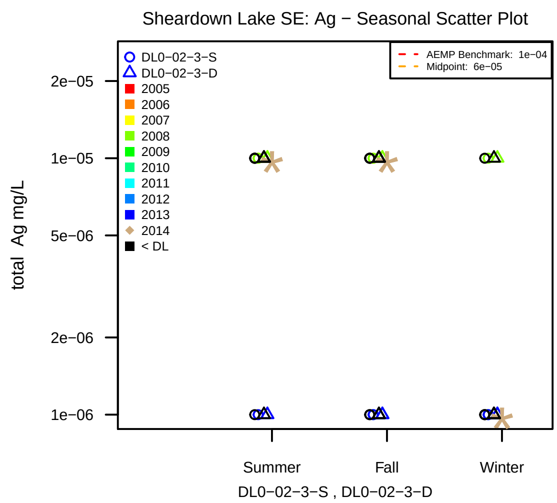

Sheardown Lake SE: Ni − Seasonal Boxplot
AEMP Benchmark: 0.025
Midpoint: 0.01281
Outlier
2014 data
total Ni mg/L
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

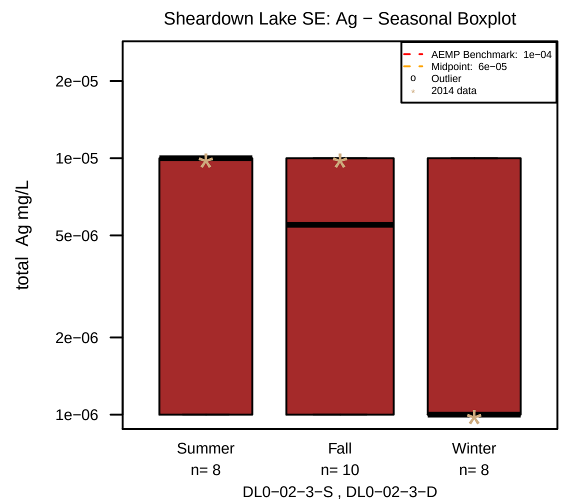

Sheardown Lake SE: Ag − Total Boxplot on log scale
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L − log axis
2e−05
1e−05
5e−06
2e−06
1e−06
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

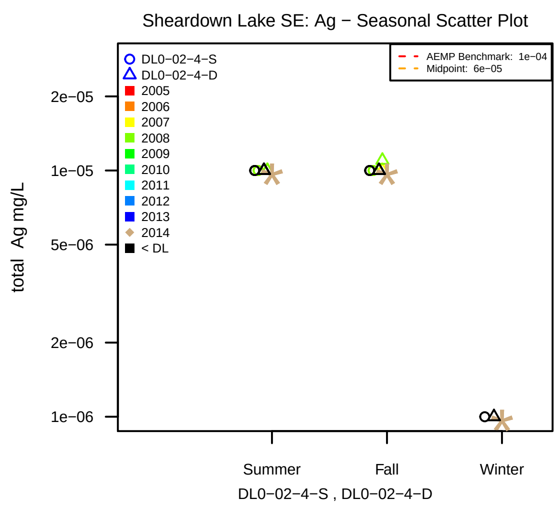

Sheardown Lake SE: Ag − Total Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
1.4e−05
1.2e−05
1.0e−05
8.0e−06
6.0e−06
4.0e−06
2.0e−06
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

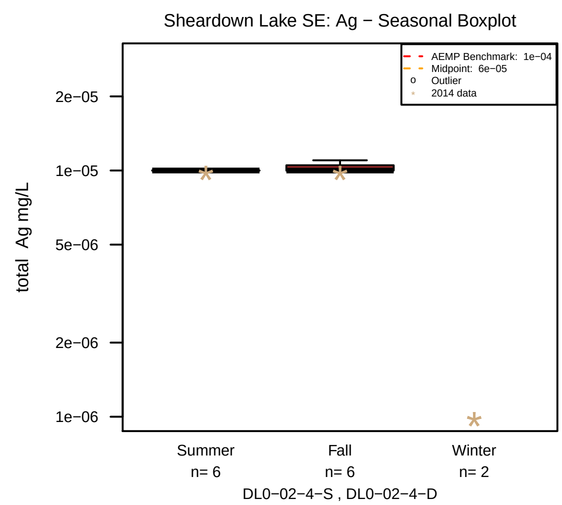

Sheardown Lake SE: Ag − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

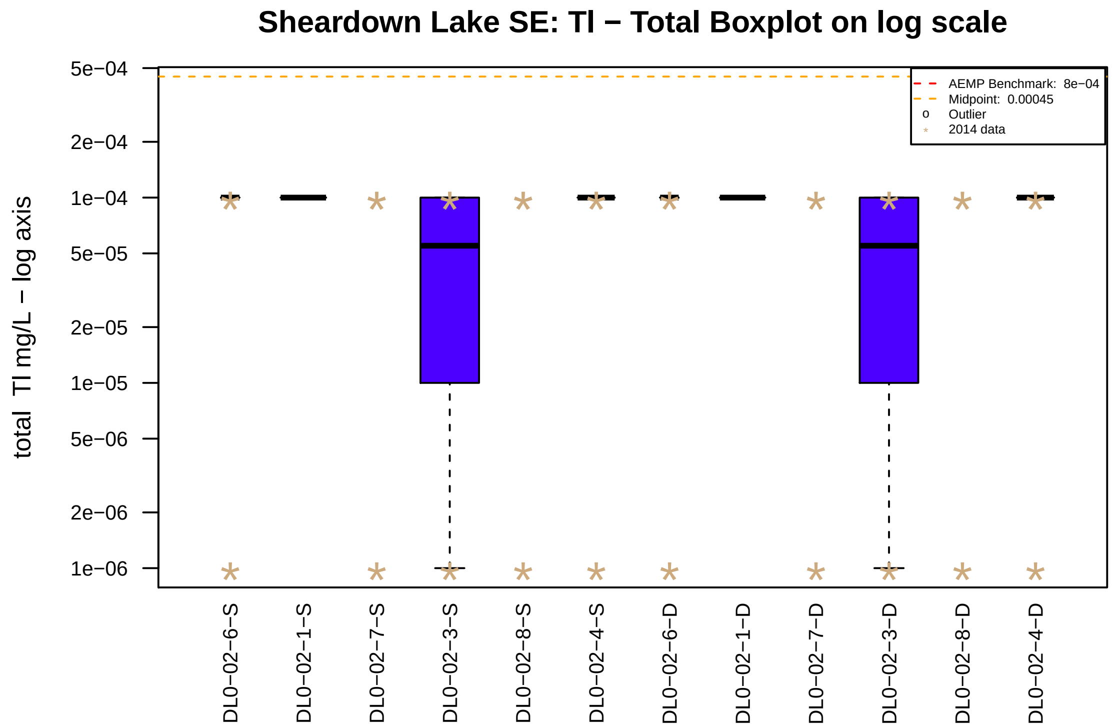

Sheardown Lake SE: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 8
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

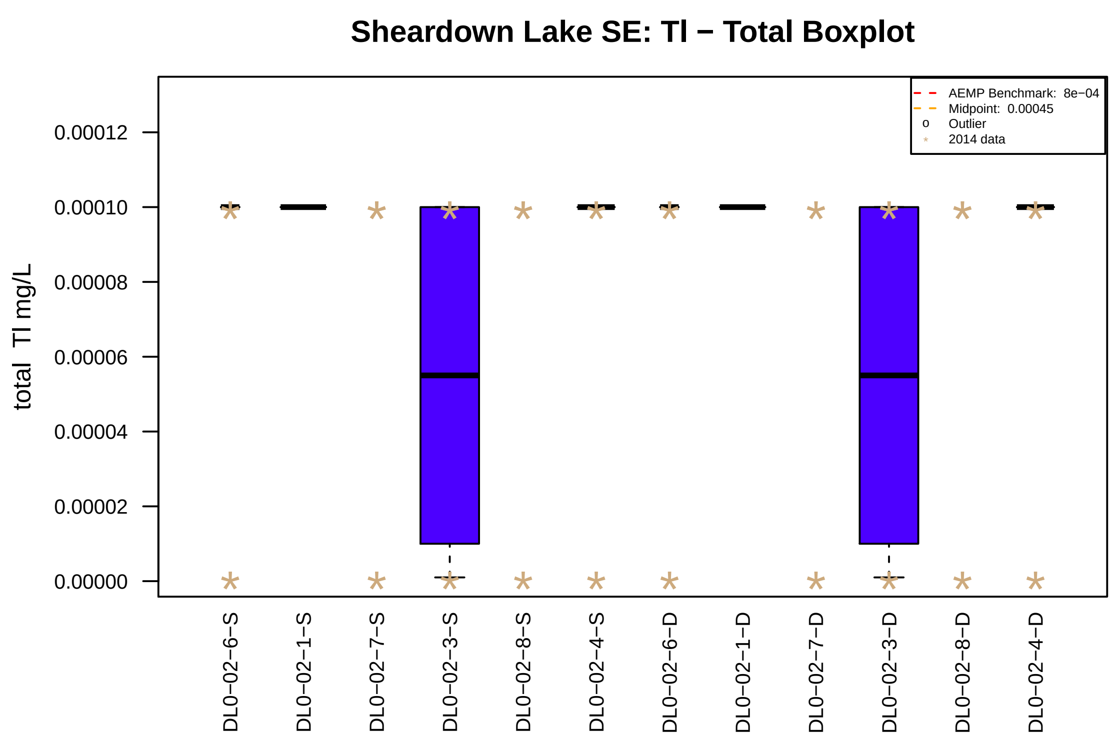

Sheardown Lake SE: Ag − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

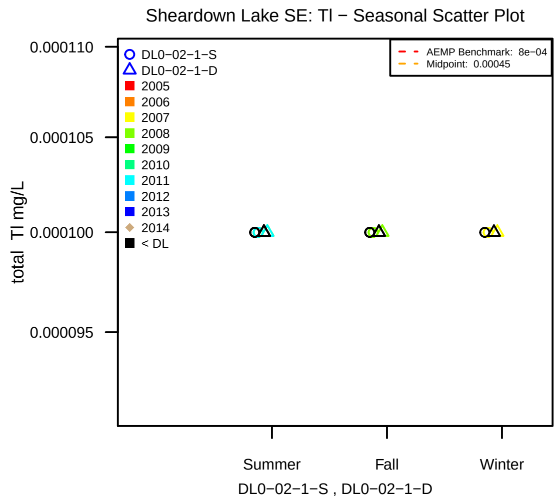

Sheardown Lake SE: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

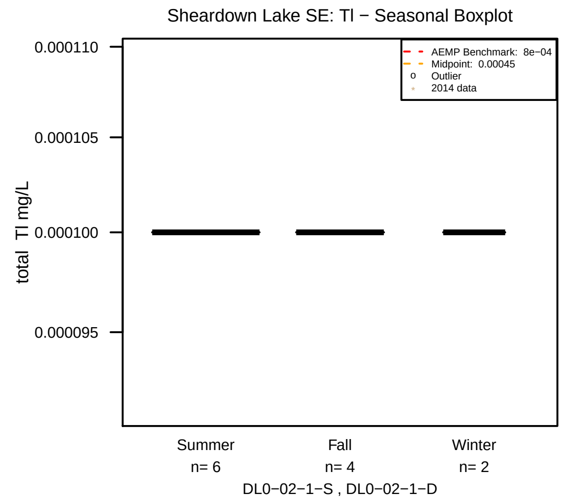

Sheardown Lake SE: Ag − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 1e−04
Midpoint: 6e−05
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

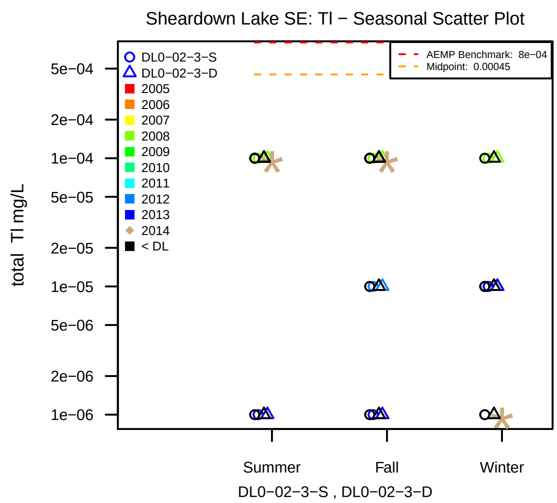

Sheardown Lake SE: Ag − Seasonal Boxplot
AEMP Benchmark: 1e−04
Midpoint: 6e−05
Outlier
2014 data
total Ag mg/L
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

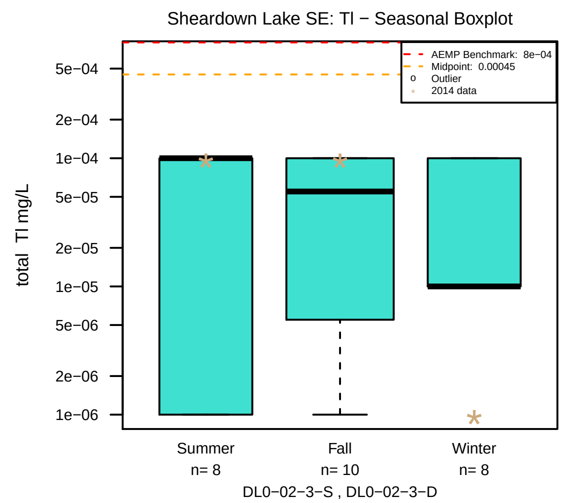

Sheardown Lake SE: Tl − Total Boxplot on log scale
total Tl mg/L − log axis
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

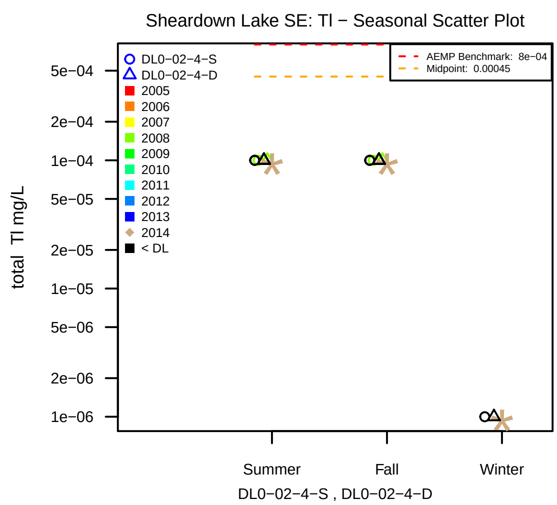

Sheardown Lake SE: Tl − Total Boxplot
total Tl mg/L
0.00012
0.00010
0.00008
0.00006
0.00004
0.00002
0.00000
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

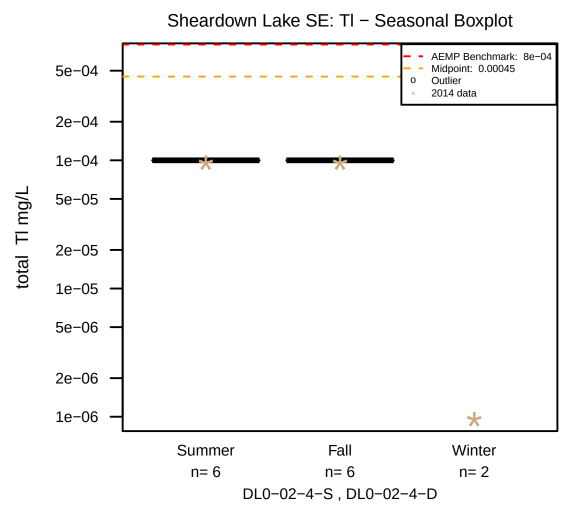

Sheardown Lake SE: Tl − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
total Tl mg/L
0.000110
0.000105
0.000100
0.000095
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D


Sheardown Lake SE: Tl − Seasonal Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
0.000110
0.000105
0.000100
0.000095
Summer
n= 6
Fall
n= 4
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

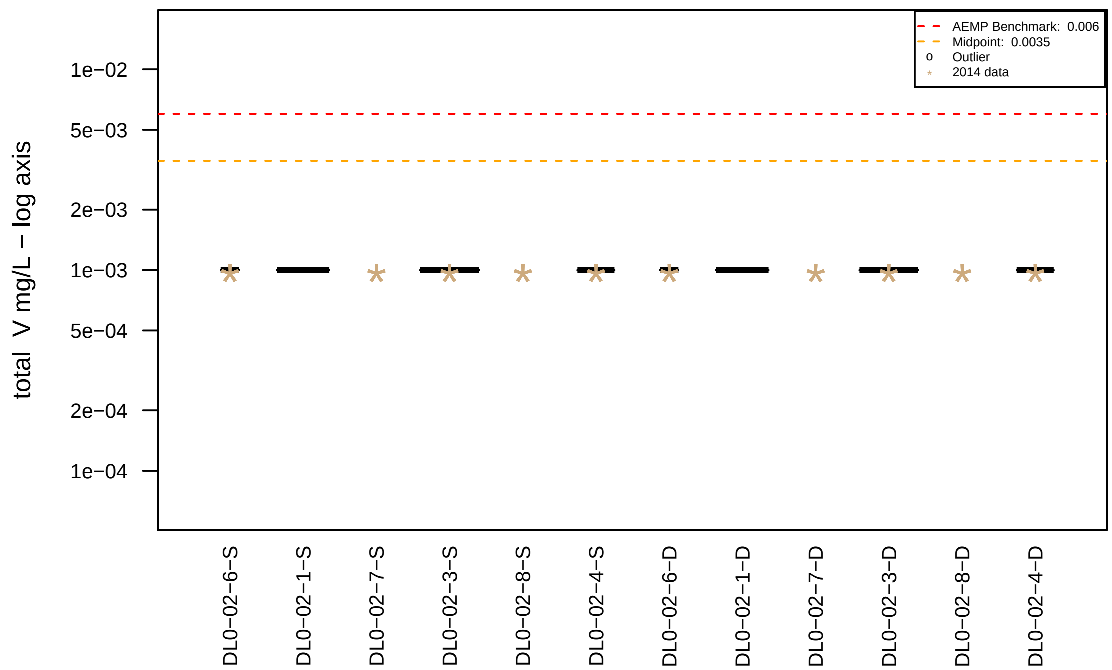

Sheardown Lake SE: Tl − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D


Sheardown Lake SE: Tl − Seasonal Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

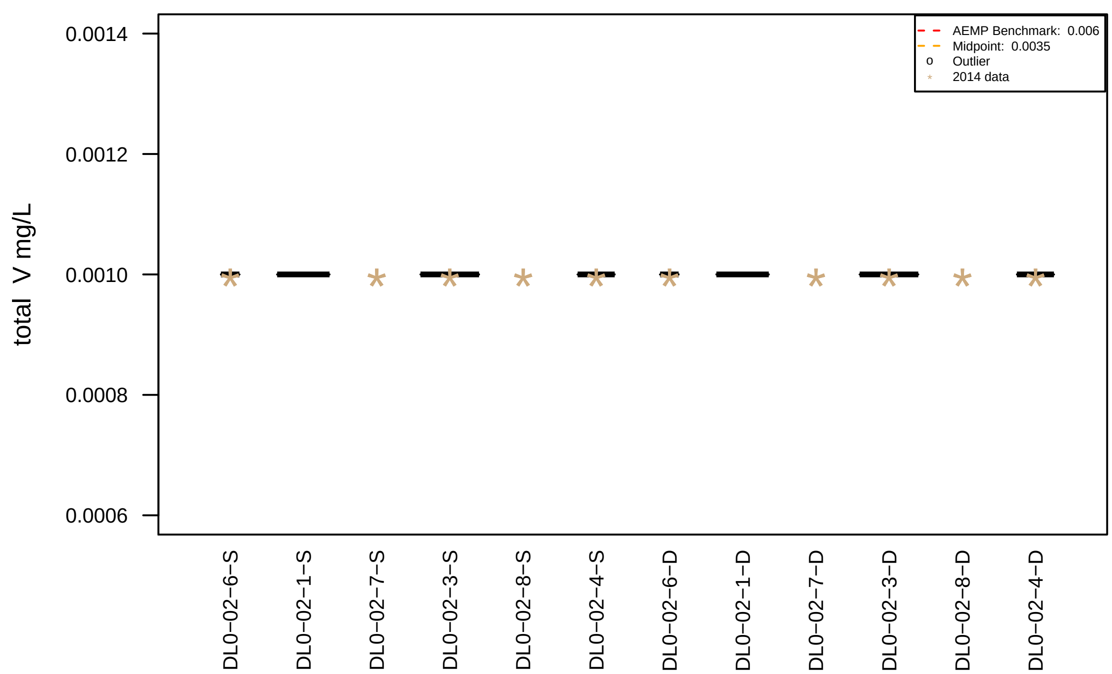

Sheardown Lake SE: Tl − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 8e−04
Midpoint: 0.00045
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

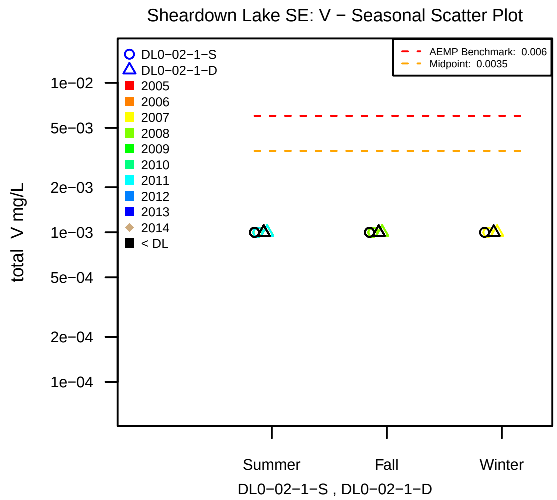

Sheardown Lake SE: Tl − Seasonal Boxplot
AEMP Benchmark: 8e−04
Midpoint: 0.00045
Outlier
2014 data
total Tl mg/L
5e−04
2e−04
1e−04
5e−05
2e−05
1e−05
5e−06
2e−06
1e−06
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

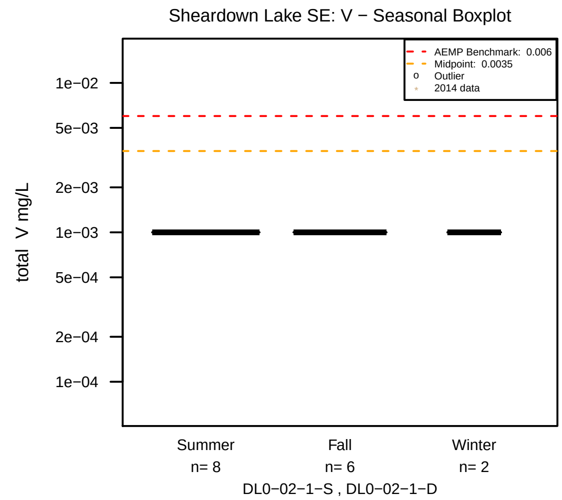
Sheardown Lake SE: V − Total Boxplot on log scale

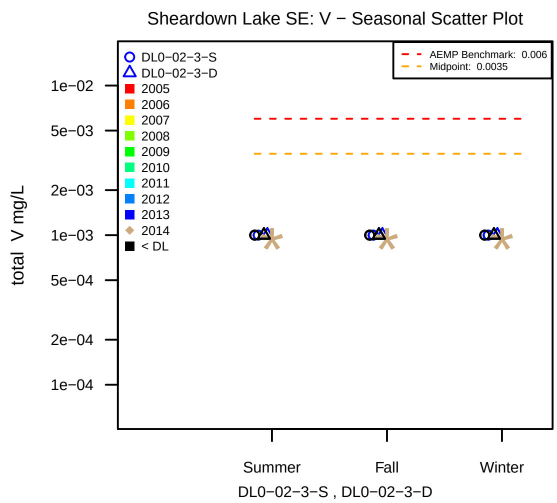


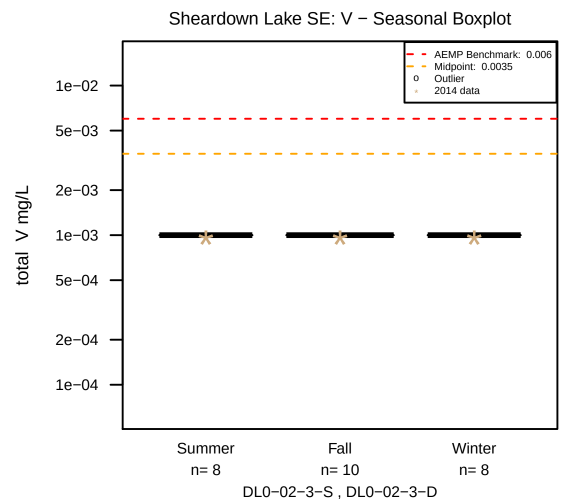
Sheardown Lake SE: V − Total Boxplot

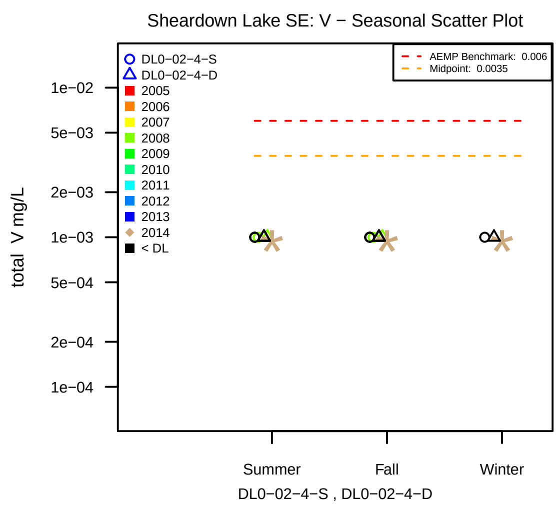


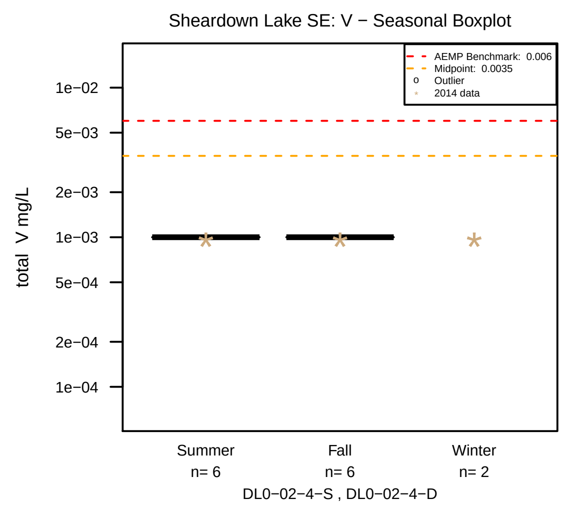

Sheardown Lake SE: V − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

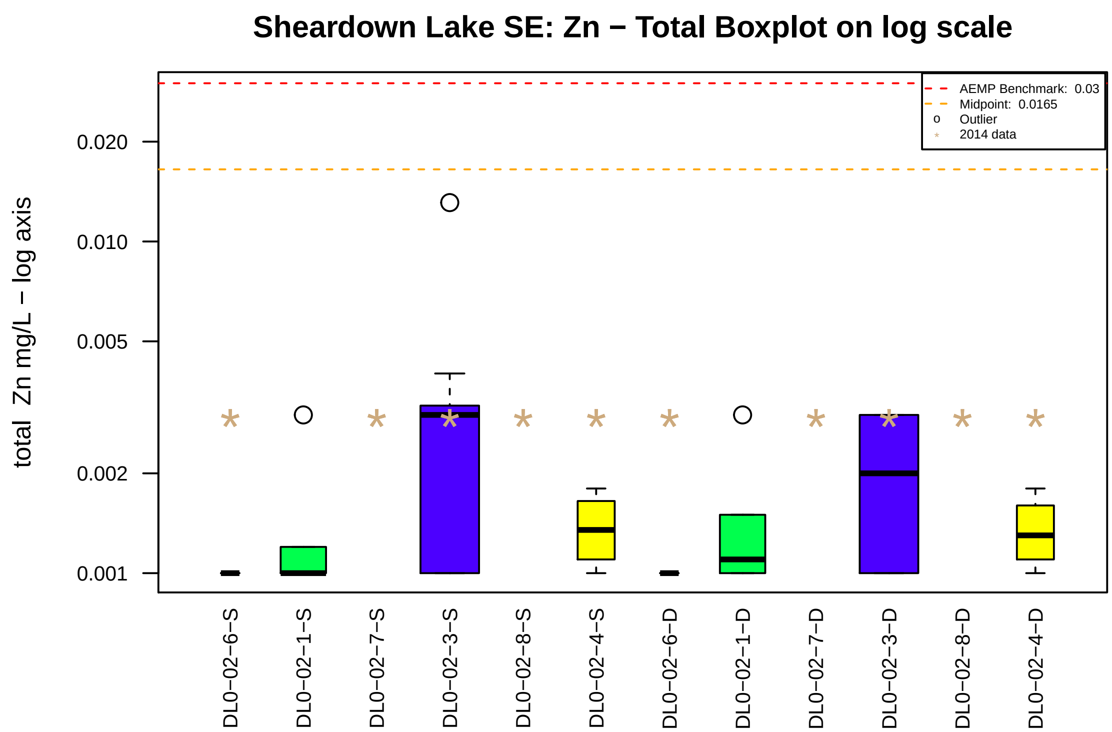

Sheardown Lake SE: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 8
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

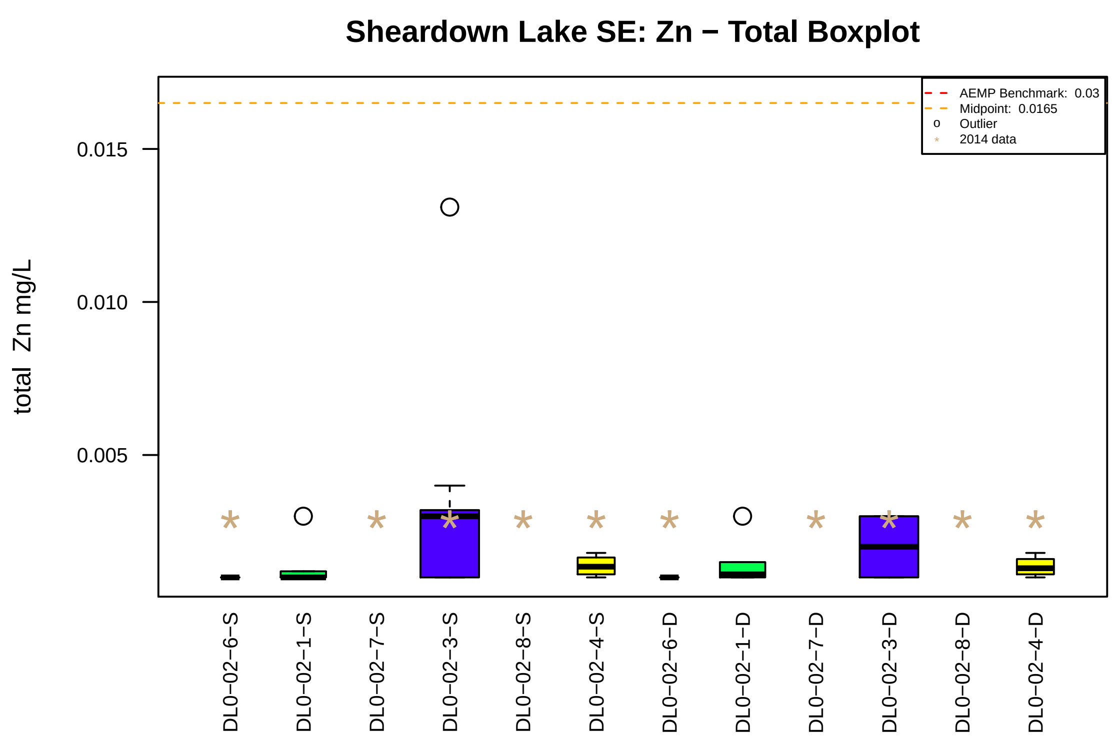

Sheardown Lake SE: V − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

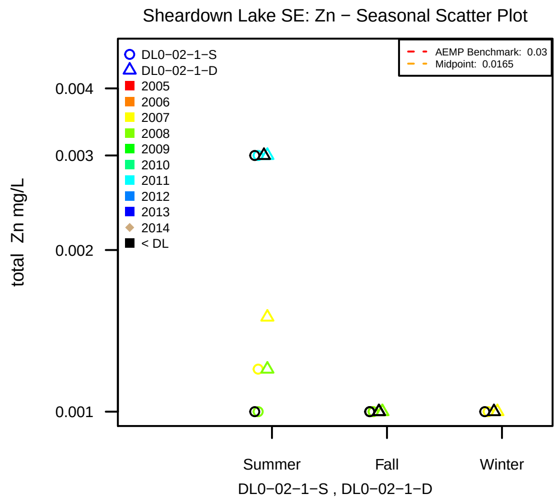

Sheardown Lake SE: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

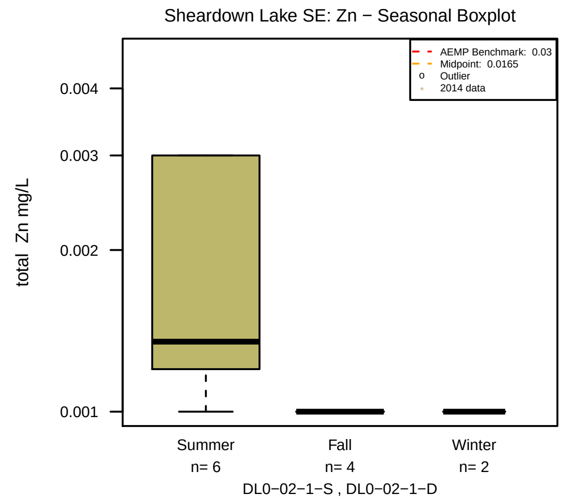

Sheardown Lake SE: V − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.006
Midpoint: 0.0035
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

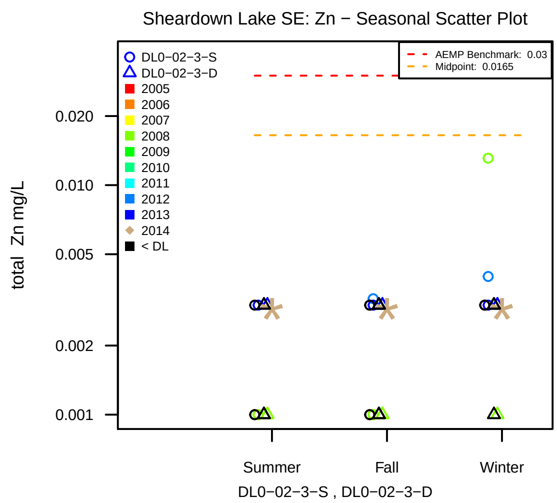

Sheardown Lake SE: V − Seasonal Boxplot
AEMP Benchmark: 0.006
Midpoint: 0.0035
Outlier
2014 data
total V mg/L
1e−02
5e−03
2e−03
1e−03
5e−04
2e−04
1e−04
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

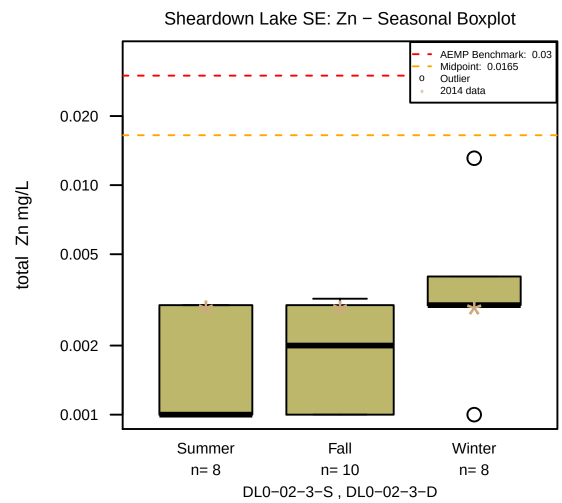

Sheardown Lake SE: Zn − Total Boxplot on log scale
total Zn mg/L − log axis
0.020
0.010
0.005
0.002
0.001
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

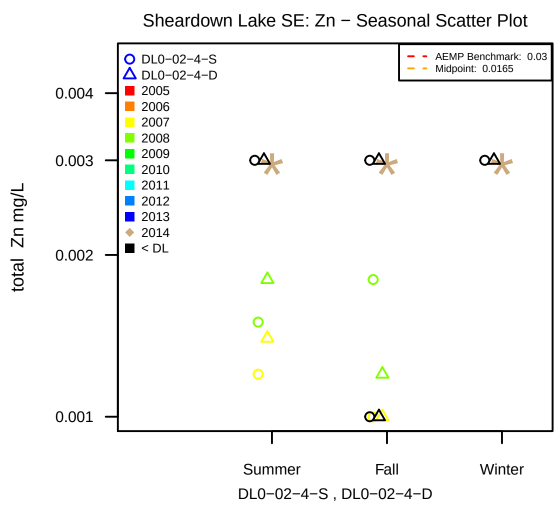

Sheardown Lake SE: Zn − Total Boxplot
total Zn mg/L
0.015
0.010
0.005
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

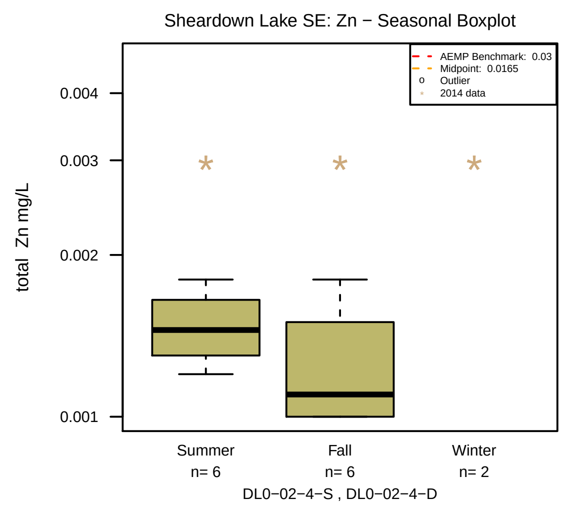

Sheardown Lake SE: Zn − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

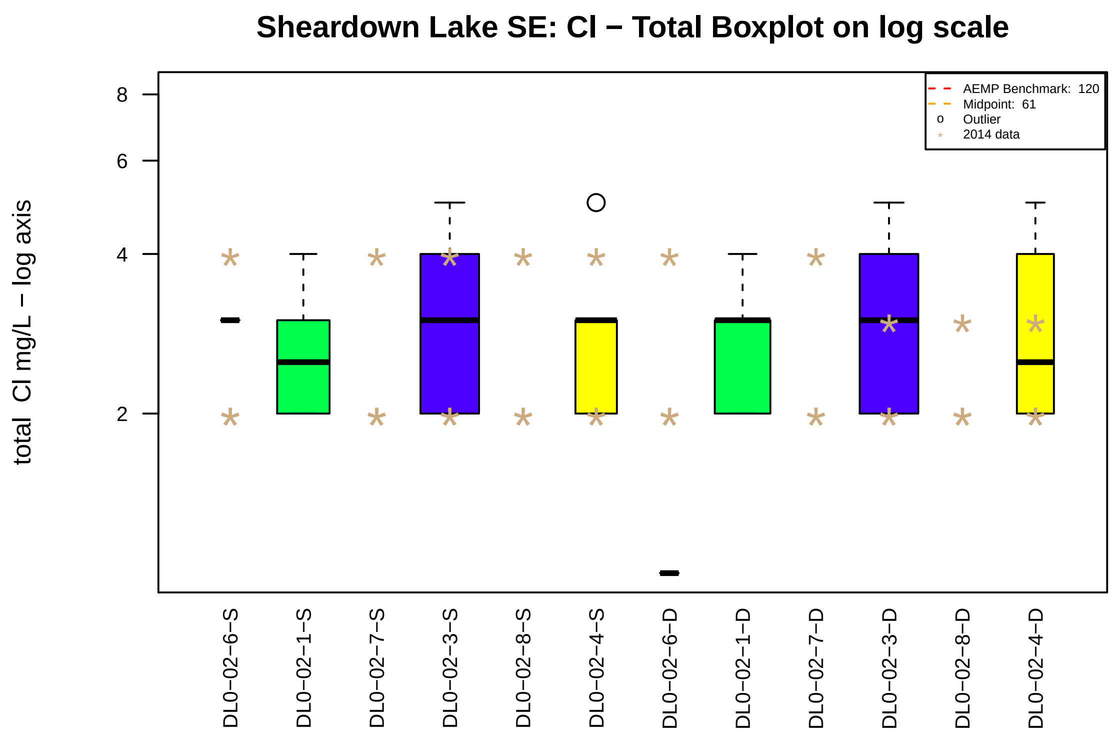

Sheardown Lake SE: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
n= 6
Fall
n= 4
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

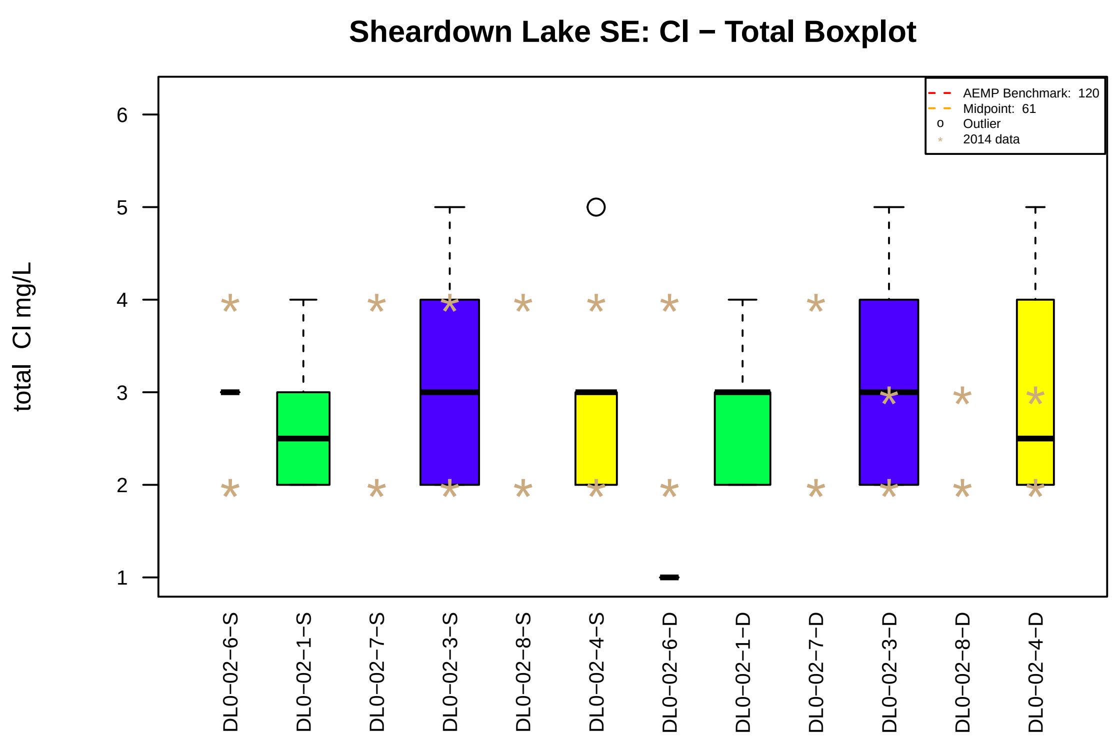

Sheardown Lake SE: Zn − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.020
0.010
0.005
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

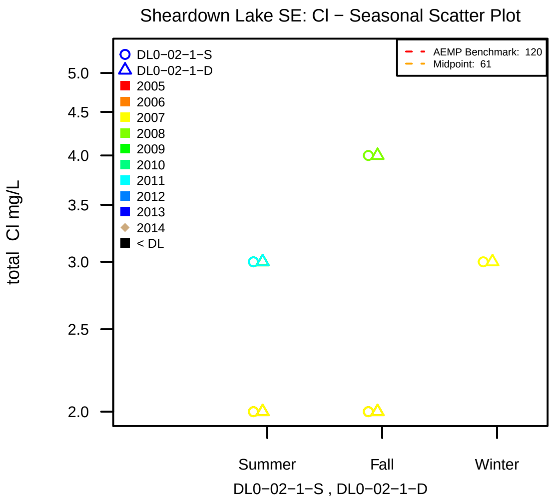

Sheardown Lake SE: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.020
0.010
0.005
0.002
0.001
total Zn mg/L
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

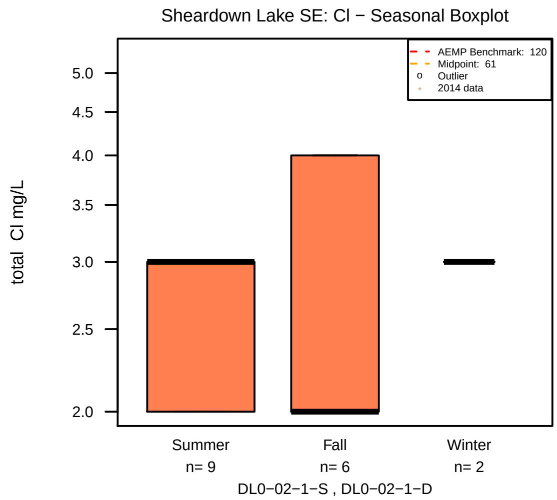

Sheardown Lake SE: Zn − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.03
Midpoint: 0.0165
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

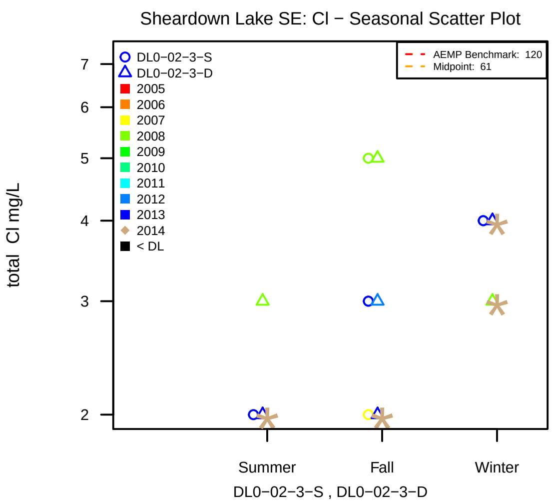

Sheardown Lake SE: Zn − Seasonal Boxplot
AEMP Benchmark: 0.03
Midpoint: 0.0165
Outlier
2014 data
0.004
0.003
0.002
0.001
total Zn mg/L
Summer
n= 6
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

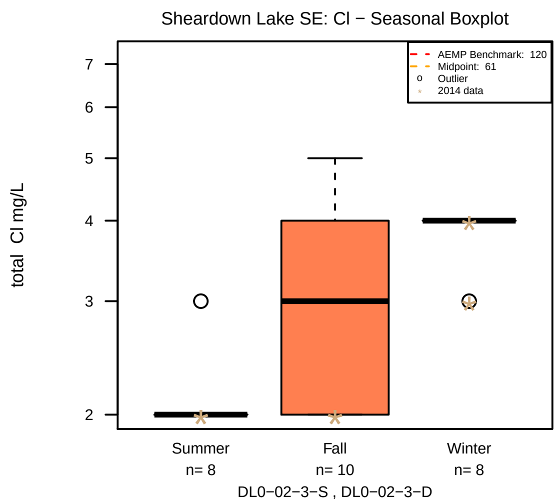

Sheardown Lake SE: Cl − Total Boxplot on log scale
total Cl mg/L − log axis
8
6
4
2
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

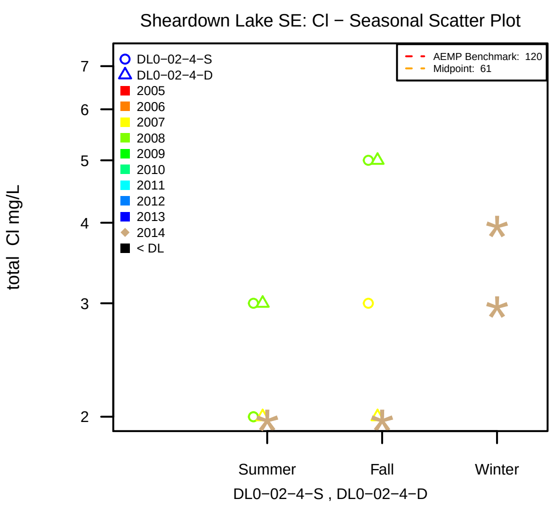

Sheardown Lake SE: Cl − Total Boxplot
total Cl mg/L
6
5
4
3
2
1
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

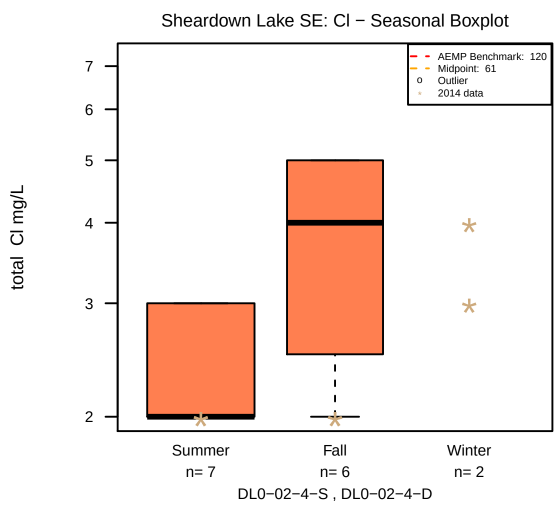

Sheardown Lake SE: Cl − Seasonal Scatter Plot
total Cl mg/L
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

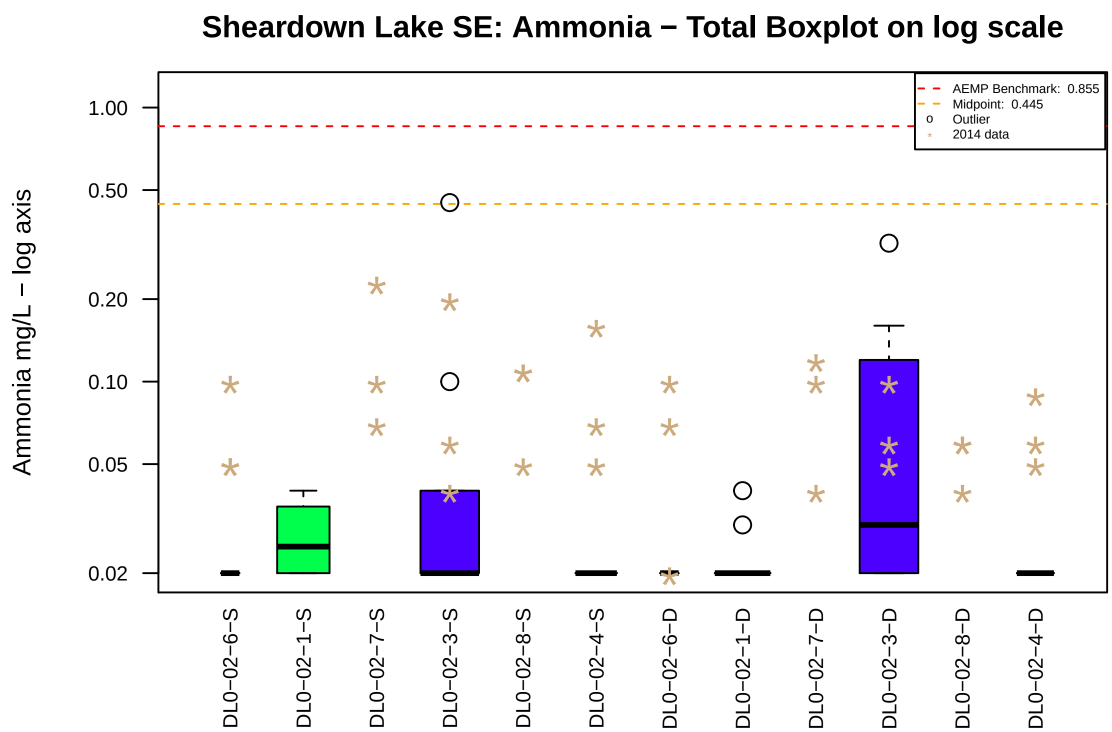

Sheardown Lake SE: Cl − Seasonal Boxplot
total Cl mg/L
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
Summer n= 9
Fall n= 6
Winter n= 2
DL0−02−1−S , DL0−02−1−D

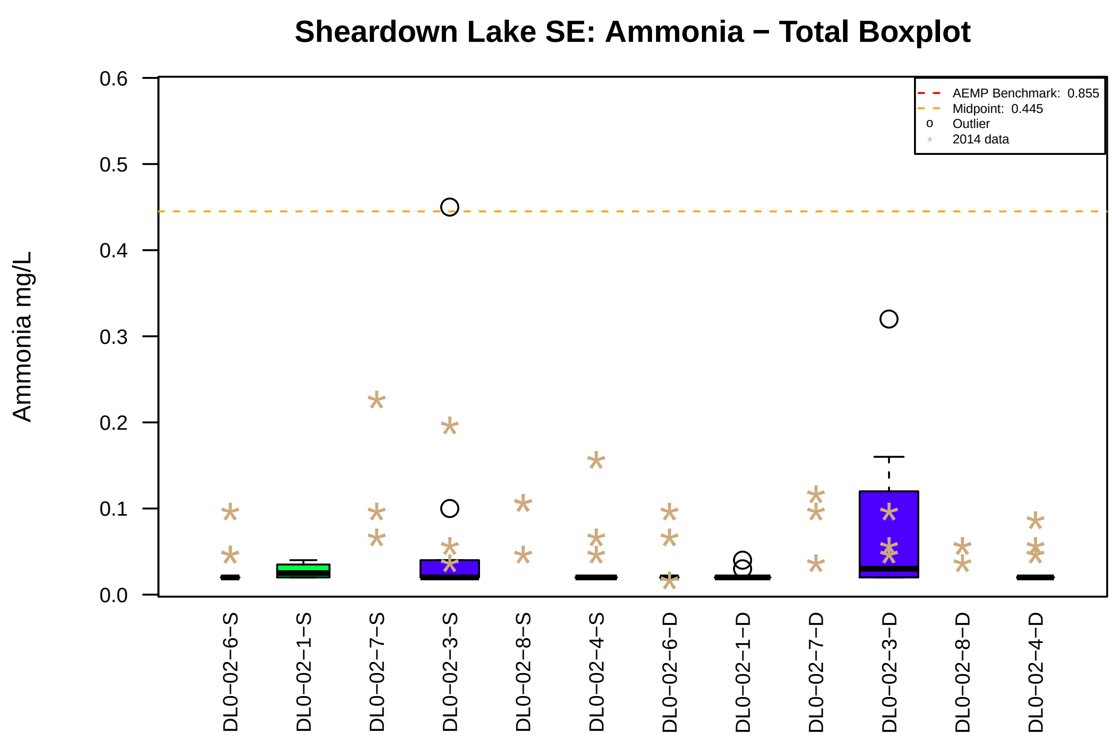

Sheardown Lake SE: Cl − Seasonal Scatter Plot
total Cl mg/L
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

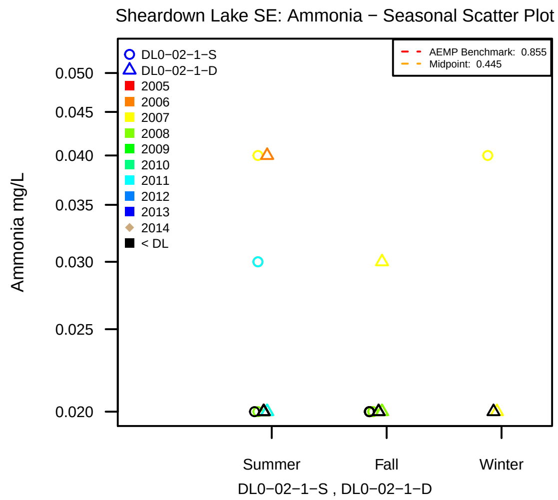

Sheardown Lake SE: Cl − Seasonal Boxplot
total Cl mg/L
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
Summer n= 8
Fall n= 10
Winter n= 8
DL0−02−3−S , DL0−02−3−D

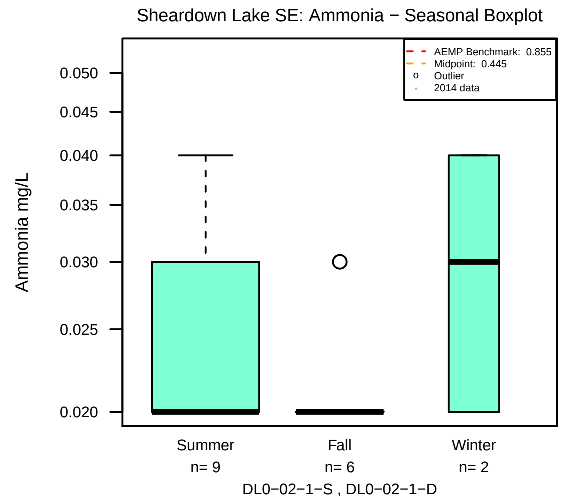

Sheardown Lake SE: Cl − Seasonal Scatter Plot
total Cl mg/L
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 120
Midpoint: 61
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

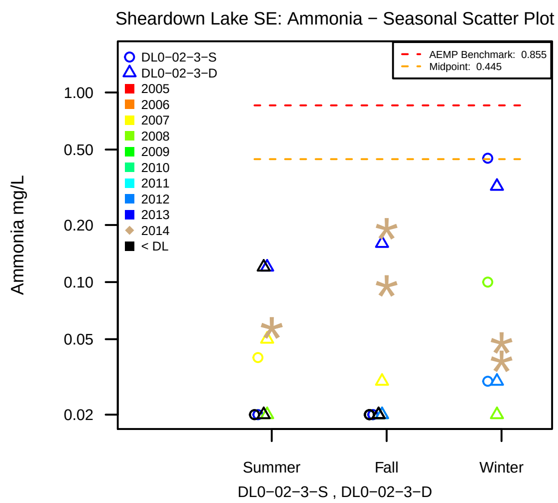

Sheardown Lake SE: Cl − Seasonal Boxplot
total Cl mg/L
AEMP Benchmark: 120
Midpoint: 61
Outlier
2014 data
Summer n= 7
Fall n= 6
Winter n= 2
DL0−02−4−S , DL0−02−4−D

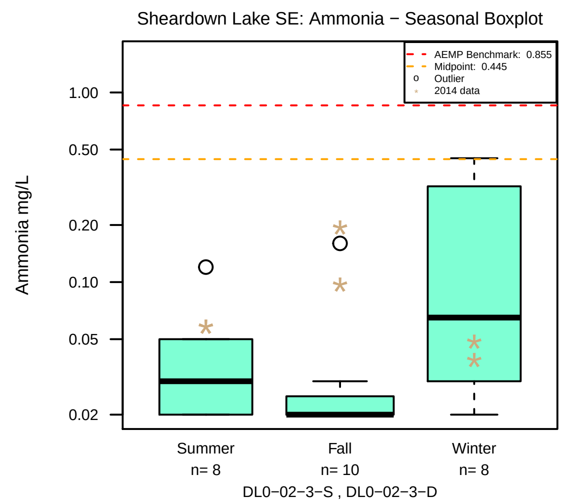

Sheardown Lake SE: Ammonia – Total Boxplot on log scale
Ammonia mg/L – log axis
1.00
0.50
0.20
0.10
0.05
0.02
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
DL0–02–6–S
DL0–02–1–S
DL0–02–7–S
DL0–02–3–S
DL0–02–8–S
DL0–02–4–S
DL0–02–6–D
DL0–02–1–D
DL0–02–7–D
DL0–02–3–D
DL0–02–8–D
DL0–02–4–D

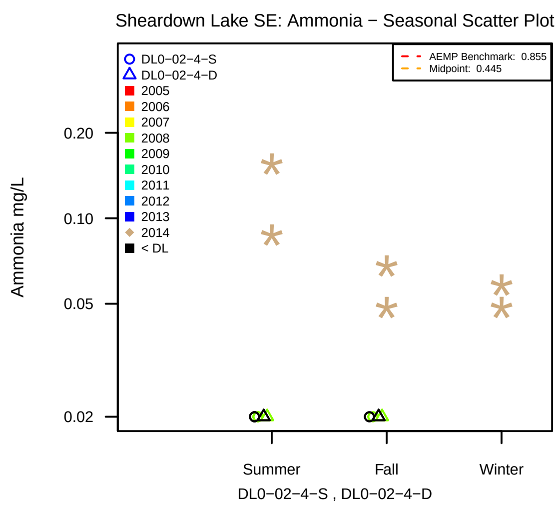

Sheardown Lake SE: Ammonia – Total Boxplot
Ammonia mg/L
0.6
0.5
0.4
0.3
0.2
0.1
0.0
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
DL0–02–6–S
DL0–02–1–S
DL0–02–7–S
DL0–02–3–S
DL0–02–8–S
DL0–02–4–S
DL0–02–6–D
DL0–02–1–D
DL0–02–7–D
DL0–02–3–D
DL0–02–8–D
DL0–02–4–D

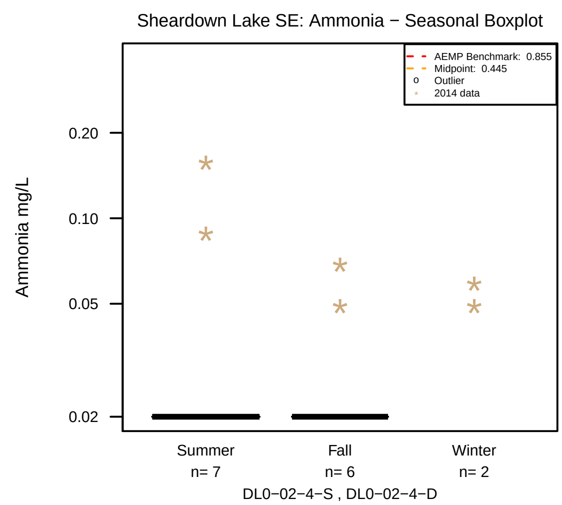

Sheardown Lake SE: Ammonia − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.445
Ammonia mg/L
0.050
0.045
0.040
0.035
0.030
0.025
0.020
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

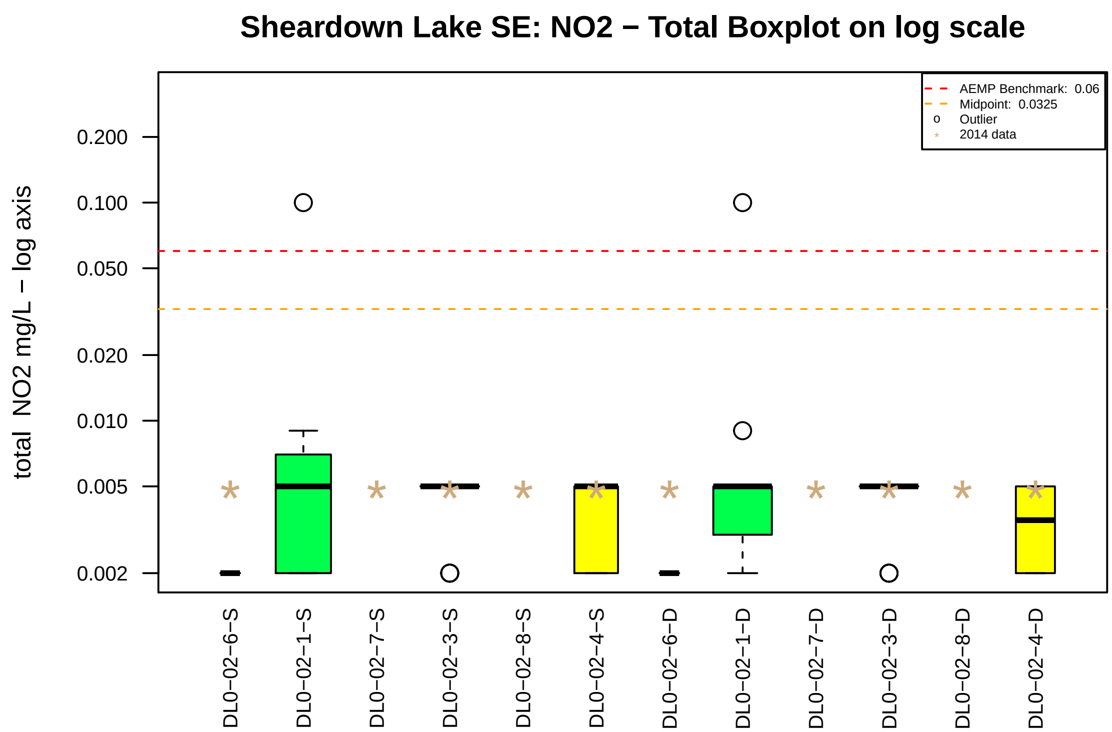

Sheardown Lake SE: Ammonia − Seasonal Boxplot
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
Ammonia mg/L
0.050
0.045
0.040
0.035
0.030
0.025
0.020
Summer
n= 9
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D

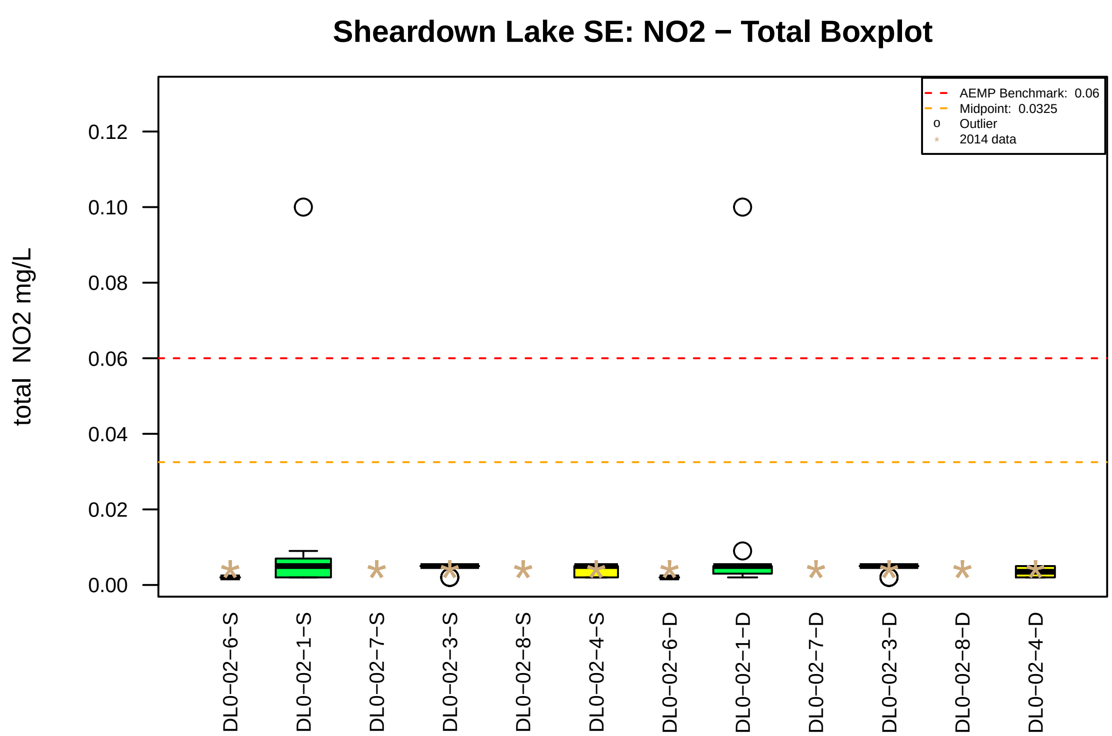

Sheardown Lake SE: Ammonia − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.445
Ammonia mg/L
1.00
0.50
0.20
0.10
0.05
0.02
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D

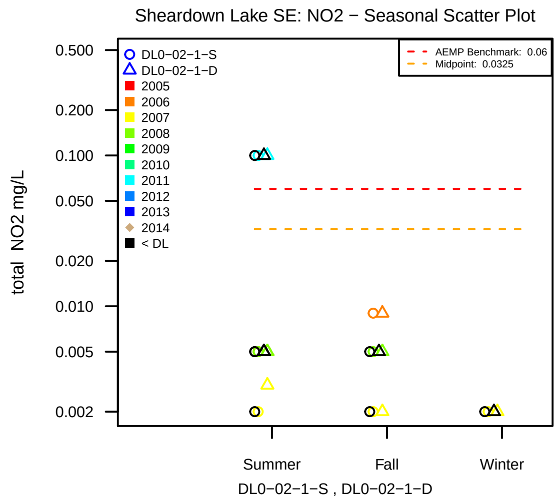

Sheardown Lake SE: Ammonia − Seasonal Boxplot
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
Ammonia mg/L
1.00
0.50
0.20
0.10
0.05
0.02
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D

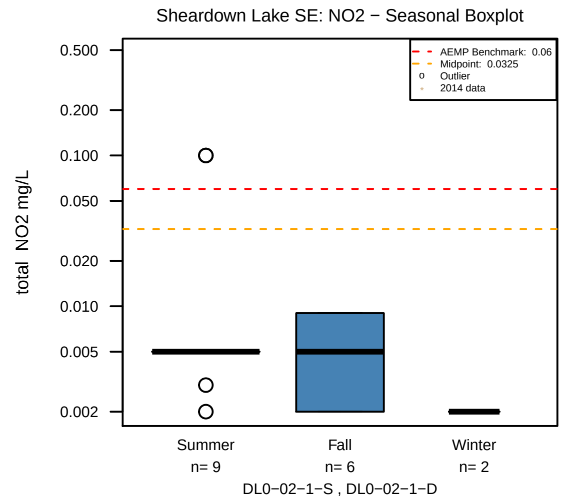

Sheardown Lake SE: Ammonia − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.855
Midpoint: 0.445
Ammonia mg/L
0.20
0.10
0.05
0.02
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D

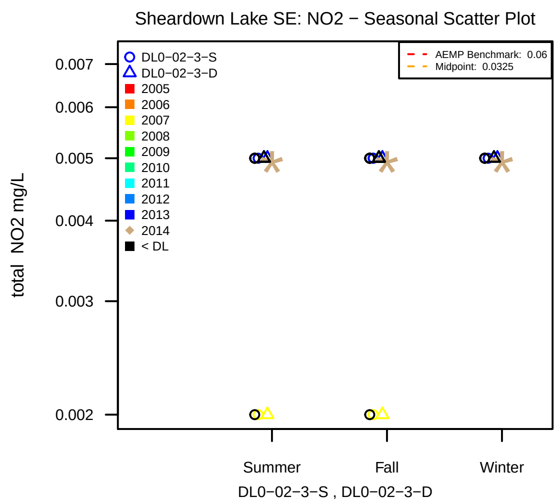

Sheardown Lake SE: Ammonia − Seasonal Boxplot
AEMP Benchmark: 0.855
Midpoint: 0.445
Outlier
2014 data
Ammonia mg/L
0.20
0.10
0.05
0.02
Summer
n= 7
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

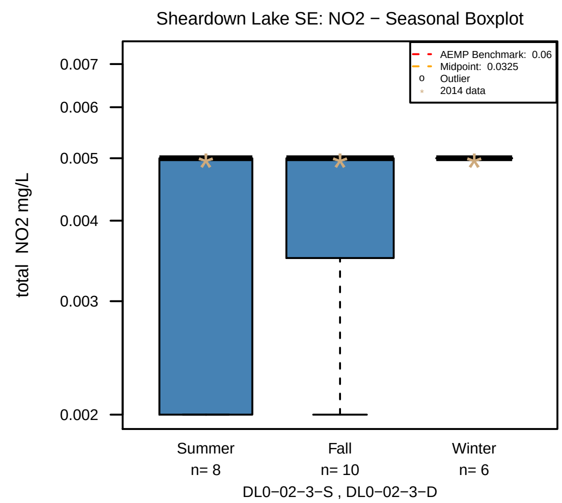

Sheardown Lake SE: NO2 − Total Boxplot on log scale
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L − log axis
0.200
0.100
0.050
0.020
0.010
0.005
0.002
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

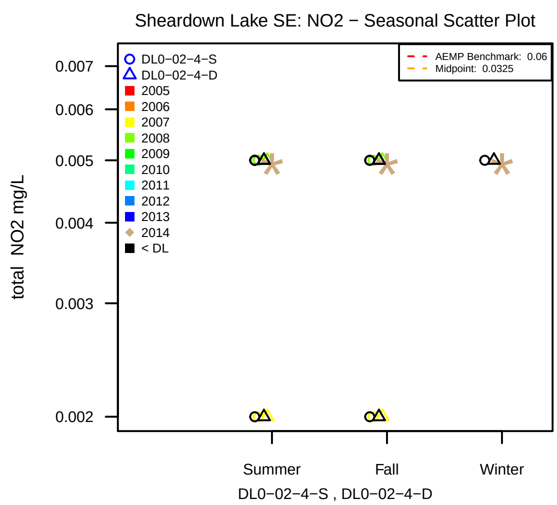

Sheardown Lake SE: NO2 − Total Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
0.12
0.10
0.08
0.06
0.04
0.02
0.00
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

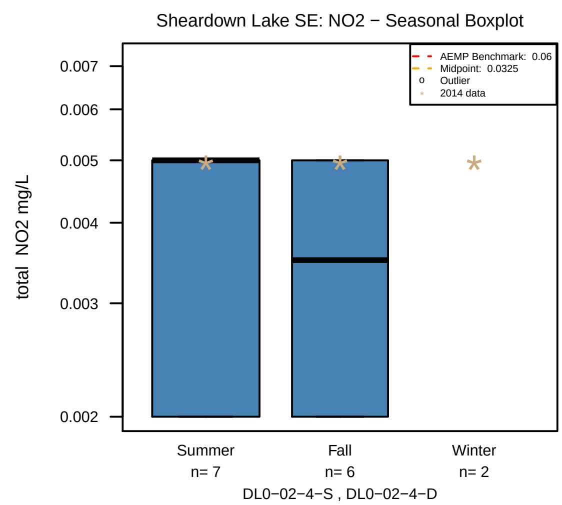

Sheardown Lake SE: NO2 − Seasonal Scatter Plot
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D

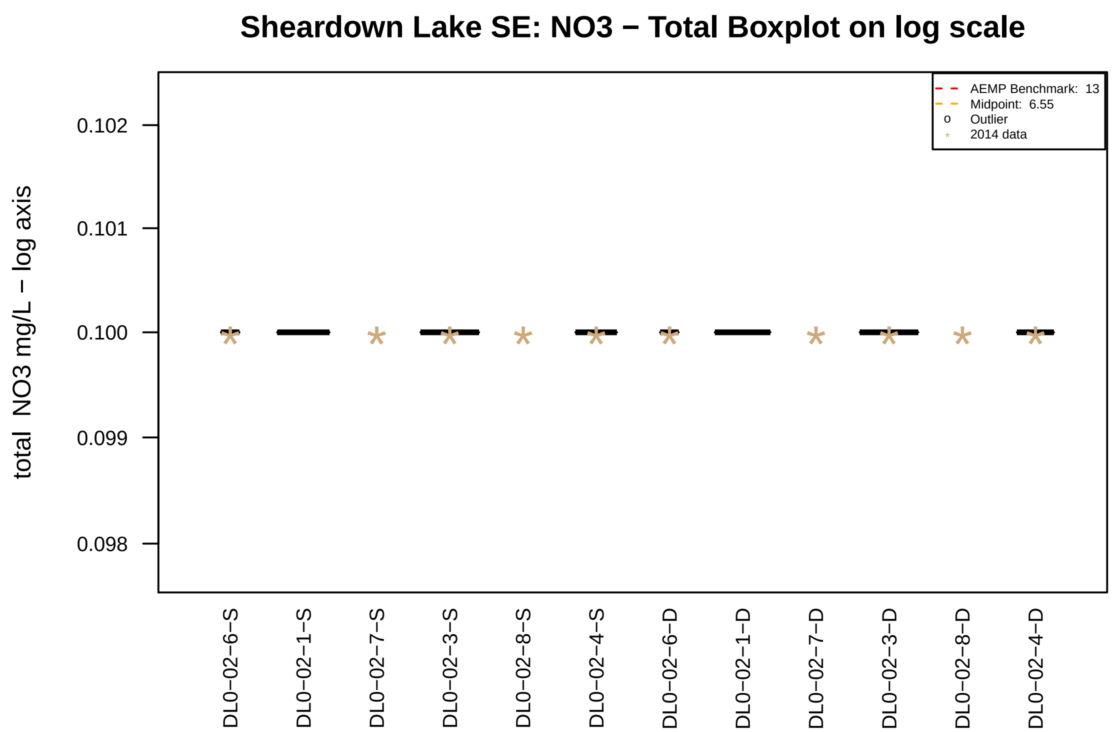

Sheardown Lake SE: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
Summer n= 9
Fall n= 6
Winter n= 2
DL0−02−1−S , DL0−02−1−D

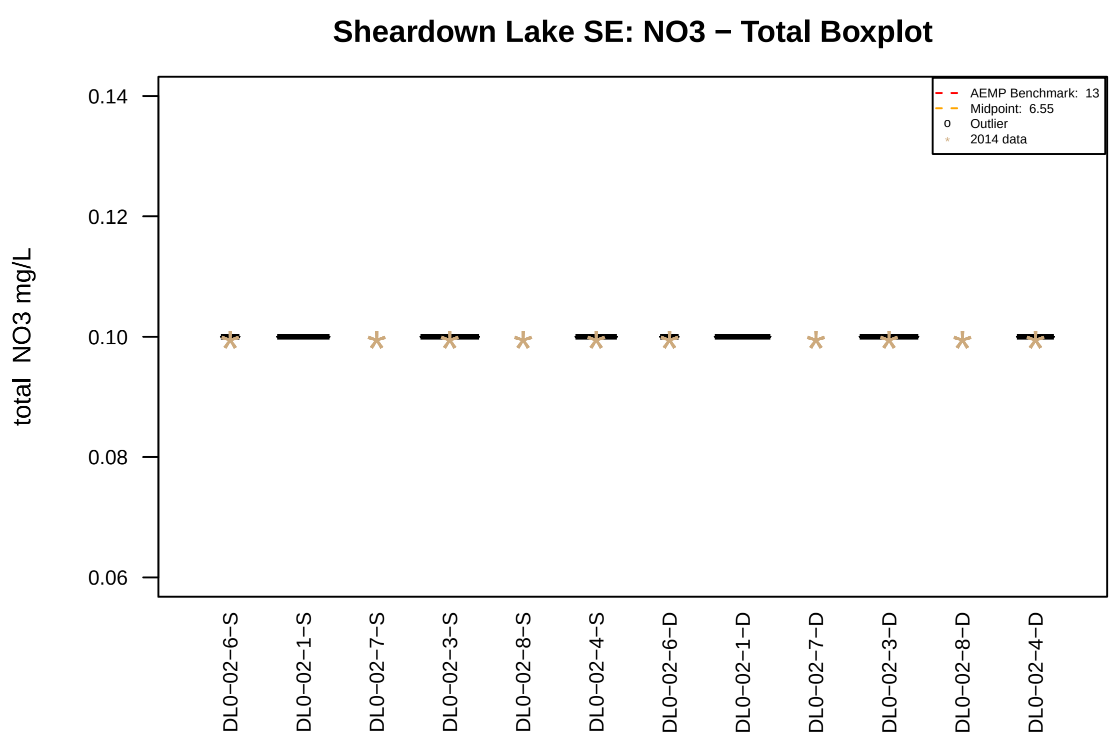

Sheardown Lake SE: NO2 − Seasonal Scatter Plot
DL0−02−3−S
DL0−02−3−D
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D


Sheardown Lake SE: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
Summer n= 8
Fall n= 10
Winter n= 6
DL0−02−3−S , DL0−02−3−D

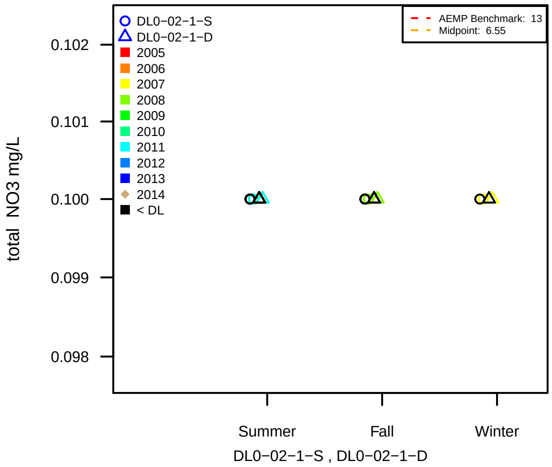

Sheardown Lake SE: NO2 − Seasonal Scatter Plot
DL0−02−4−S
DL0−02−4−D
AEMP Benchmark: 0.06
Midpoint: 0.0325
total NO2 mg/L
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D


Sheardown Lake SE: NO2 − Seasonal Boxplot
AEMP Benchmark: 0.06
Midpoint: 0.0325
Outlier
2014 data
total NO2 mg/L
Summer n= 7
Fall n= 6
Winter n= 2
DL0−02−4−S , DL0−02−4−D

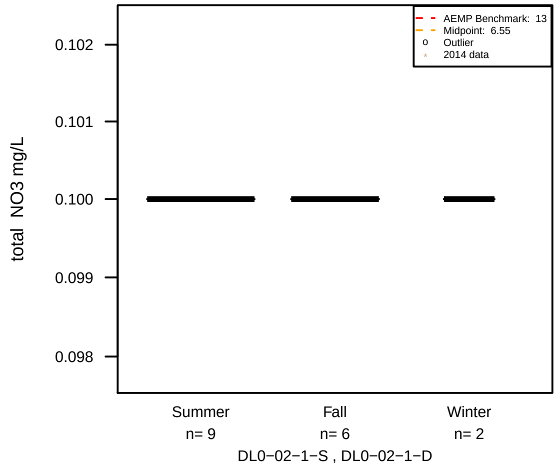

Sheardown Lake SE: NO3 − Total Boxplot on log scale
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L − log axis
0.102
0.101
0.100
0.099
0.098
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D


Sheardown Lake SE: NO3 − Total Boxplot
AEMP Benchmark: 13
Midpoint: 6.55
Outlier
2014 data
total NO3 mg/L
0.14
0.12
0.10
0.08
0.06
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

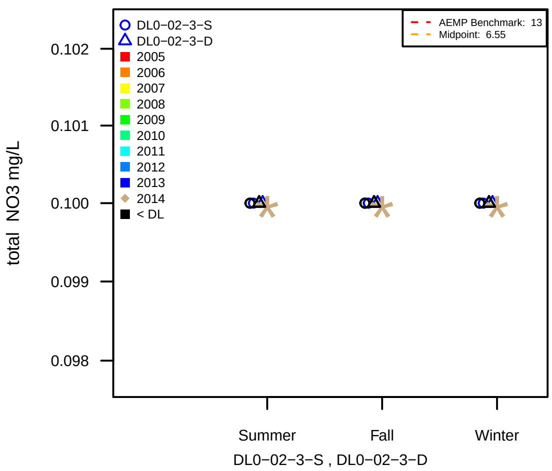
Sheardown Lake SE: NO3 − Seasonal Scatter Plot



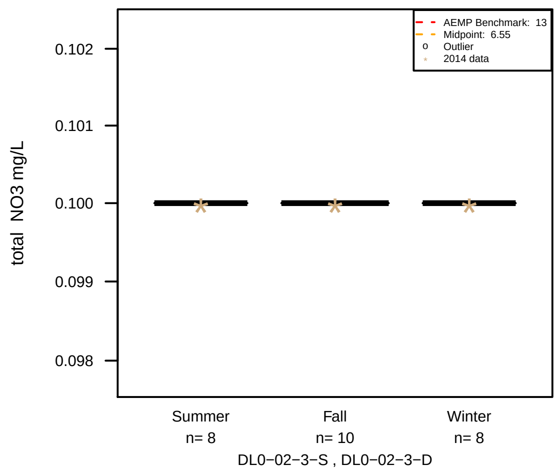
Sheardown Lake SE: NO3 − Seasonal Boxplot



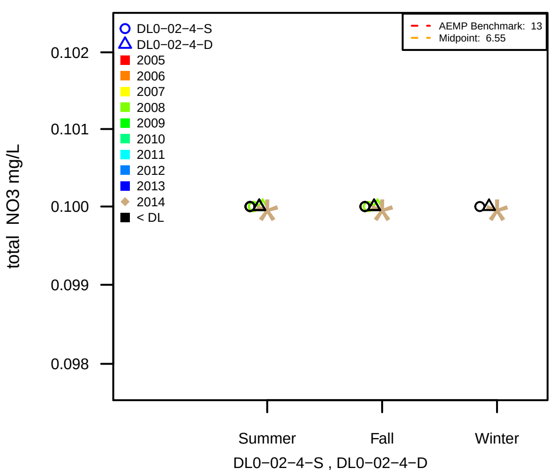
Sheardown Lake SE: NO3 − Seasonal Scatter Plot



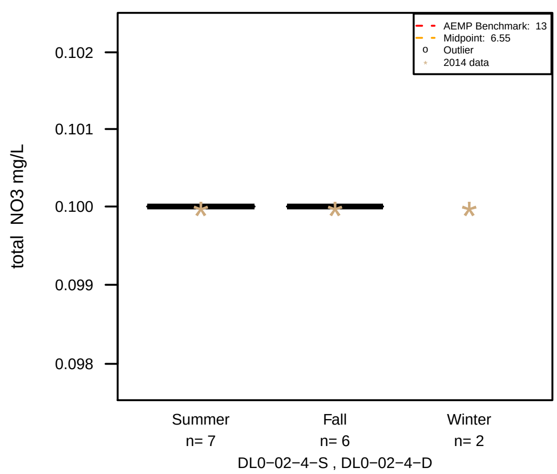
Sheardown Lake SE: NO3 − Seasonal Boxplot

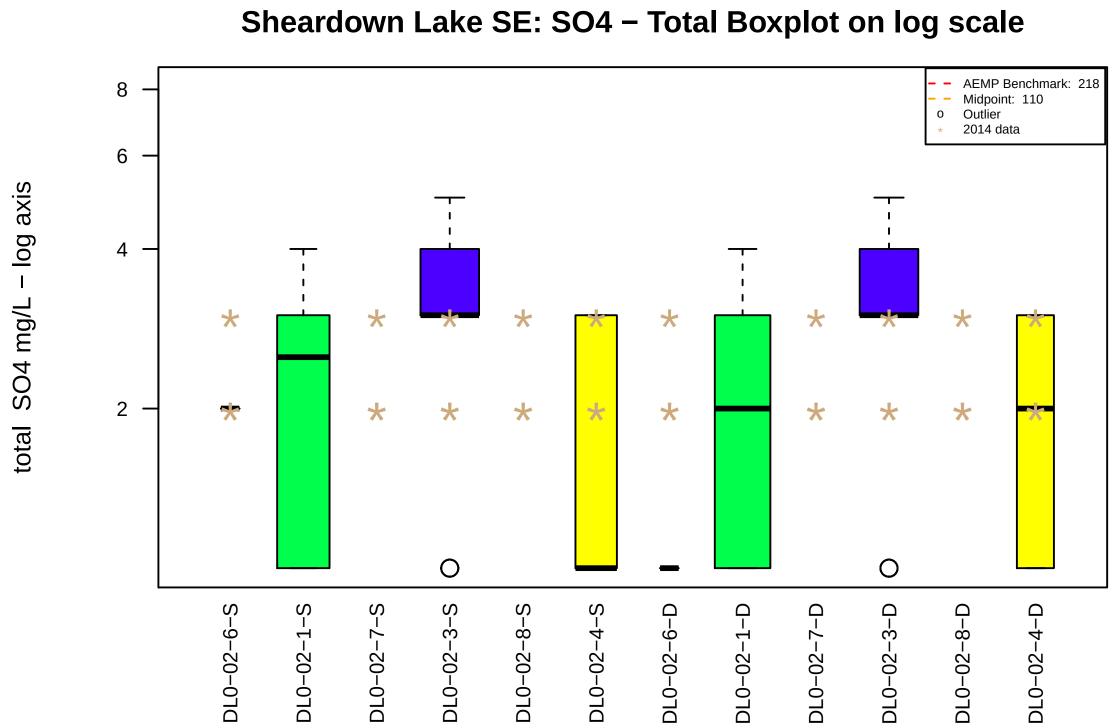


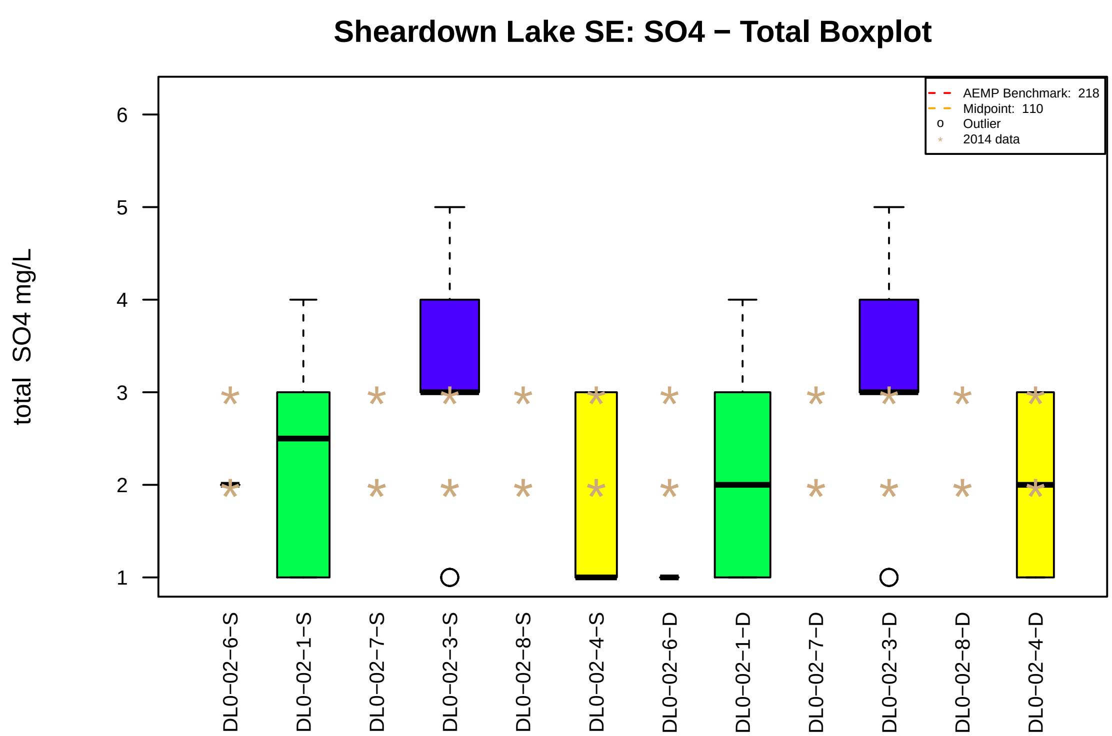
Sheardown Lake SE: NO3 − Seasonal Scatter Plot

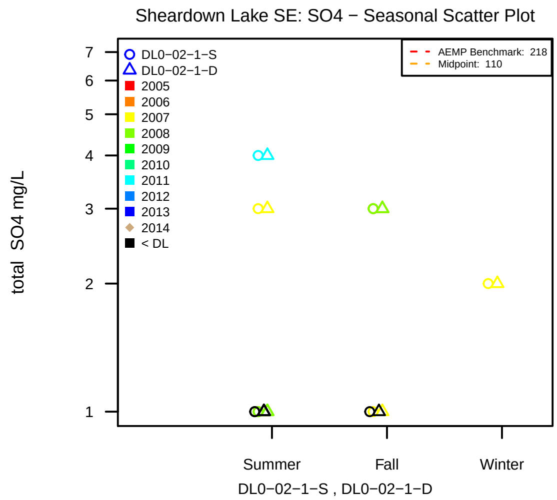


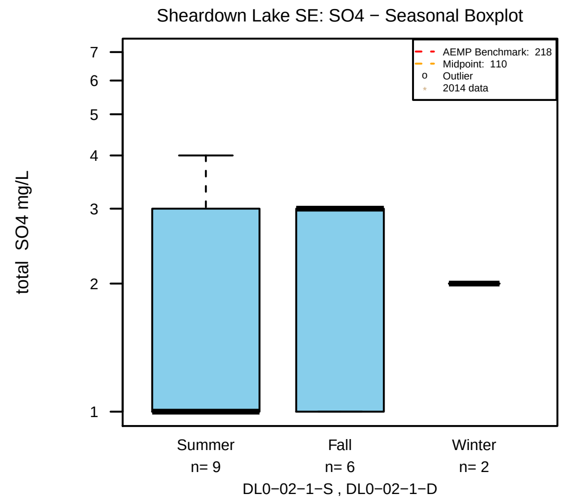
Sheardown Lake SE: NO3 − Seasonal Boxplot

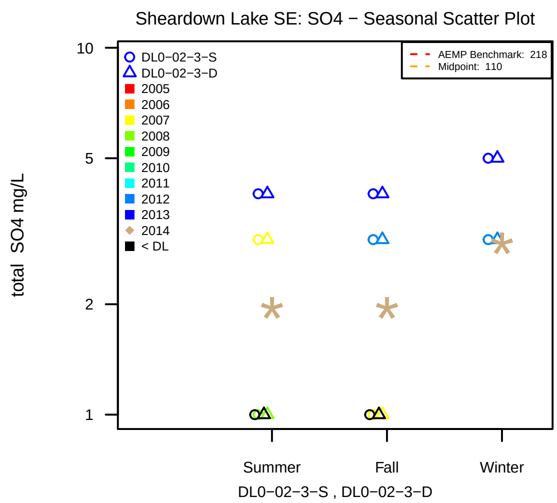


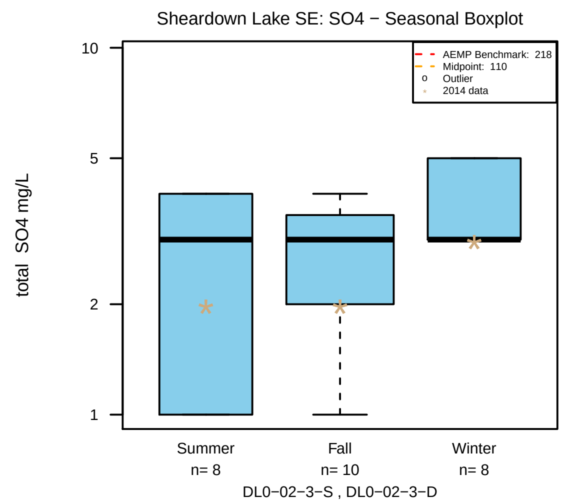

Sheardown Lake SE: SO4 − Total Boxplot on log scale
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
total SO4 mg/L − log axis
8
6
4
2
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

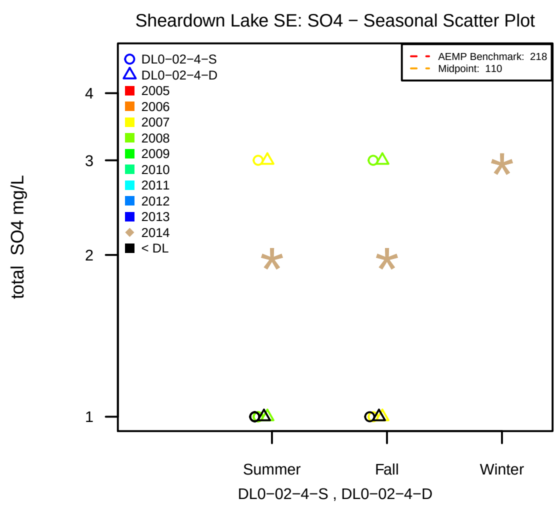

Sheardown Lake SE: SO4 − Total Boxplot
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
total SO4 mg/L
6
5
4
3
2
1
DL0−02−6−S
DL0−02−1−S
DL0−02−7−S
DL0−02−3−S
DL0−02−8−S
DL0−02−4−S
DL0−02−6−D
DL0−02−1−D
DL0−02−7−D
DL0−02−3−D
DL0−02−8−D
DL0−02−4−D

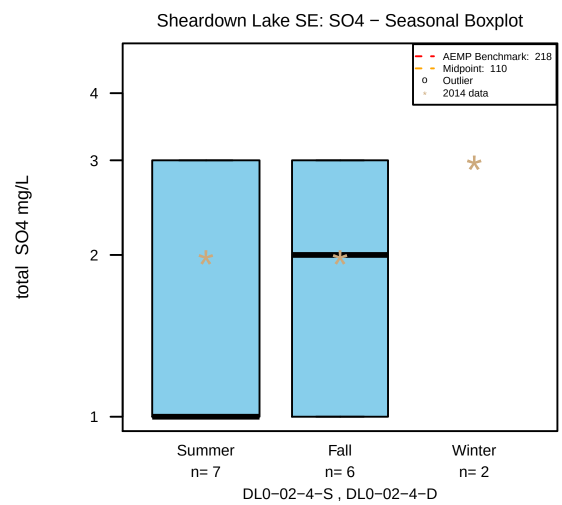

Sheardown Lake SE: SO4 − Seasonal Scatter Plot
total SO4 mg/L
DL0−02−1−S
DL0−02−1−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
DL0−02−1−S , DL0−02−1−D


Sheardown Lake SE: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 9
Fall
n= 6
Winter
n= 2
DL0−02−1−S , DL0−02−1−D


Sheardown Lake SE: SO4 − Seasonal Scatter Plot
total SO4 mg/L
DL0−02−3−S
DL0−02−3−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
DL0−02−3−S , DL0−02−3−D


Sheardown Lake SE: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 8
Fall
n= 10
Winter
n= 8
DL0−02−3−S , DL0−02−3−D


Sheardown Lake SE: SO4 − Seasonal Scatter Plot
total SO4 mg/L
DL0−02−4−S
DL0−02−4−D
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
< DL
AEMP Benchmark: 218
Midpoint: 110
Summer
Fall
Winter
DL0−02−4−S , DL0−02−4−D


Sheardown Lake SE: SO4 − Seasonal Boxplot
total SO4 mg/L
AEMP Benchmark: 218
Midpoint: 110
Outlier
2014 data
Summer
n= 7
Fall
n= 6
Winter
n= 2
DL0−02−4−S , DL0−02−4−D

APPENDIX B

2014 SEDIMENT QUALITY

APPENDIX B1

2014 SEDIMENT QUALITY RESULTS

(Page B-1)

Knight Piésold CONSULTING

TABLE B1.1

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 WATER AND SEDIMENT CREMP MONITORING REPORT
2014 SEDIMENT QUALITY SUMMARY STATISTICS

Print Mar/20/15 8:17:15

Sample ID	Sample Date	Moisture	TKN	NO2	NO3	NO2+NO3	Hg	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	TP	Pb	Sb	Se	Sn	Sr	Ti	Tl	V	Zn	TOC	Sand	Silt	Clay
Units		%	%	µg/g as N	µg/g as N	as N %	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	%	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	%	(>0.050 mm) %	(>0.002-0.050 mm) %	(<=0.002 mm) %
Method Detection Limit		0.1	0.01	1	1	1	0.1	0.2	5	1.00	0.5	1	1		100	0.5	1	1	1	5	100	100	1	1	100	1			1	1	1		1		1	2	2	0.01	1	1	1
Mary Lake																																									
AEMP Benchmark - Mary Lake										**5.9**						**1.5**		**98**	**50**	**52400**			**4370**			**72**	**1580**		**35**								**135**				
BL0-01	2014-08-25	46.2	0.12	*1*	*1*	*1*	*0.1*	*0.2*	13100	3	*0.5*	65	*1*		11900	*0.5*	14	72	31	29900	3200	15900	872	*1*	300	58			15	*1*	*1*		14		*1*	50	60	1.7	20	66	14
BL0-04	2014-08-23	53.5	0.07	*1*	*1*	*1*	*0.1*	*0.2*	16700	2	*0.5*	80	*1*		3500	*0.5*	15	76	30	36300	4700	12200	1930	*1*	200	55			18	*1*	*1*		11		*1*	53	93	0.88	17	60	23
BL0-06	2014-08-23	56.4	0.10	*1*	*1*	*1*	*0.1*	*0.2*	23500	2	*0.5*	88	1		3600	*0.5*	16	85	33	43000	5800	14700	852	*1*	400	54			20	*1*	*1*		13		*1*	66	101	0.92	25	52	23
BL0-08	2014-08-23	57.0	0.09	*1*	*1*	*1*	*0.1*	*0.2*	21500	3	*0.5*	93	*1*		3600	*0.5*	18	88	36	44200	5400	14500	2950	2	400	58			20	*1*	*1*		13		*1*	66	107	0.87	26	49	25
BL0-09	2014-08-25	55.0	0.10	*1*	*1*	*1*	*0.1*	*0.2*	20100	3	*0.5*	97	1		4400	*0.5*	17	89	32	45500	5000	13900	4280	1	500	64			20	*1*	*1*		16		*1*	58	83	0.9	17	57	26
BL0-10	2014-08-25	56.0	0.09	*1*	*1*	*1*	*0.1*	*0.2*	22700	2	*0.5*	91	1		3900	*0.5*	16	86	35	42200	5800	14600	1140	*1*	500	57			21	*1*	*1*		13		*1*	63	89	1.1	9	57	34
BL0-12	2014-08-25	42.8	0.07	*1*	*1*	*1*	*0.1*	*0.2*	14400	2	*0.5*	59	*1*		5000	*0.5*	13	97	25	31800	3400	11600	1300	1	300	71			14	*1*	*1*		10		*1*	44	58	1.24	33	52	15
BL0-14	2014-08-23	60.0	0.10	*1*	2	2	*0.1*	*0.2*	21700	3	*0.5*	99	1		3400	*0.5*	18	99	40	38900	6000	15100	939	*1*	300	67			24	*1*	*1*		14		*1*	72	142	0.91	30	43	27
BL0-16	2014-08-23	65.6	0.07	*1*	*1*	*1*	*0.1*	*0.2*	20300	3	0.5	103	1		3000	*0.5*	17	95	38	38600	5400	13900	474	1	400	65			24	*1*	*1*		20		*1*	66	132	1.3	56	23	21
Minimum		42.8	0.07	1	1	1	0.1	0.2	13100	2.0	0.50	59	1	-	3000	0.5	13	72	25	29900	3200	11600	474	1	200	54	-	-	14	1	1	-	10	-	1	44	58	1	9	23	14
25th Percentile / Quartile 1		49.9	0.07	1	1	1	0.1	0.2	16700	2.0	0.50	80	1	-	3500	0.5	15	85	31	36300	4700	13900	872	1	300	57	-	-	18	1	1	-	13	-	1	53	83	1	17	49	21
Median / 50th Percentile		56.0	0.09	1	1	1	0.1	0.2	20300	3.0	0.50	91	1	-	3600	0.5	16	88	33	38900	5400	14500	1140	1	400	58	-	-	20	1	1	-	13	-	1	63	93	1	25	52	23
Mean		54.7	0.09	1	1	1	0.1	0.2	19333	2.6	0.50	86	1	-	4700	0.5	16	87	33	38933	4967	14044	1637	1	367	61	-	-	20	1	1	-	14	-	1	60	96	1	26	51	23
75th Percentile / Quartile 3		58.5	0.10	1	1	1	0.1	0.2	21700	3.0	0.50	97	1	-	4400	0.5	17	95	36	43000	5800	14700	1930	1	400	65	-	-	21	1	1	-	14	-	1	66	107	1	30	57	26
Maximum		65.6	0.12	1	2	2	0.1	0.2	23500	3.0	0.50	103	1	-	11900	0.5	18	99	40	45500	6000	15900	4280	2	500	71	-	-	24	1	1	-	20	-	1	72	142	2	56	66	34
Standard Deviation		6.8	0.02	0	0	0	0.0	0.0	3719	0.5	0.00	15	0	-	2764	0.0	2	9	5	5450	1030	1366	1235	0	100	6	-	-	3	0	0	-	3	-	0	9	29	0	13	12	6
Inter-Quartile Range		3.5	0.03	0	0	0	0.0	0.0	5000	1.0	0.00	17	0	-	900	0.0	2	10	5	6700	1100	800	1058	0	100	8	-	-	3	0	0	-	1	-	0	13	24	0	13	8	5
Samples Not Meeting TOC and %Sand Cuttoffs (not included in statistics)																																									
BL0-03	2014-08-23	33.1	0.07	*1*	*1*	*1*	*0.1*	*0.2*	8580	1	*0.5*	42	*1*		1900	*0.5*	7	33	15	20200	2400	6000	839	*1*	*100*	25			10	*1*	*1*		6		*1*	28	40	0.4	88	4	8
BL0-03 DUP	2014-08-23	31.5	0.04	*1*	*1*	*1*	*0.1*	*0.2*	8480	1	*0.5*	41	*1*		1800	*0.5*	7	34	15	19700	2200	5700	859	*1*	*100*	25			9	*1*	*1*		6		*1*	29	39	0.33	86	6	8
Sheardown NW																																									
AEMP Benchmark - SDL NW										**6.4**						**1.5**		**96**	**62**	**53000**			**4300**			**84**	**1100**		**35**								**123**				
DD-HAB9-STN2	2014-08-24	78.2	0.32	*1*	*1*	*1*	*0.1*	*0.2*	14700	6	1.0	160	*1*		3800	*0.5*	14	65	50	51300	3800	9700	1300	6	200	77			18	*1*	*1*		8		*1*	48	72	3.31	71	19	10
DL0-01	2014-08-24	66.1	0.19	*1*	2	2	*0.1*	*0.2*	18400	3	*0.5*	86	*1*		3800	*0.5*	16	90	50	36500	4800	12400	1040	2	300	73			20	*1*	*1*		11		*1*	59	96	1.54	51	31	18
DL0-01-13	2014-08-24	71.2	0.20	*1*	*1*	*1*	*0.1*	*0.2*	17500	7	*0.5*	113	*1*		3700	*0.5*	17	77	47	55200	4500	12100	4670	5	300	68			20	*1*	*1*		11		*1*	57	88	1.45	37	36	27
DL0-01-9	2014-08-24	84.6	0.56	*1*	*1*	*1*	*0.1*	0.2	16000	3	1.2	88	*1*		5300	*0.5*	13	81	60	41500	4400	11100	302	4	200	81			18	*1*	*1*		10		*1*	55	80	4.78	48	22	30
DL0-01-9 DUP	2014-08-24	84.0	0.51	*1*	*1*	*1*	*0.1*	0.2	16600	3	1.3	91	*1*		4800	*0.5*	13	77	61	42300	4600	11100	306	5	300	81			18	*1*	*1*		10		*1*	55	80	5.21	37	27	36
DLO-01-2	2014-08-24	71.0	0.17	*1*	*1*	*1*	*0.1*	*0.2*	16100	3	*0.5*	95	*1*		3700	*0.5*	16	88	45	36100	4500	11800	3350	5	200	74			19	*1*	*1*		10		*1*	55	80	1.52	32	48	20
DLO-01-5	2014-08-24	74.2	0.30	*2*	4	4	*0.1*	0.2	18800	2	0.7	83	*1*		3900	*0.5*	15	85	51	34300	4900	13200	418	2	300	69			22	*1*	*1*		12		*1*	59	122	2.42	48	24	28
DLO-01-8	2014-08-24	66.9	0.22	*1*	*1*	*1*	*0.1*	*0.2*	16200	2	*0.5*	68	*1*		3400	*0.5*	16	86	58	29600	4200	11100	804	2	200	82			19	*1*	*1*		8		*1*	56	81	1.77	41	30	29
Minimum		66.1	0.17	1	1	1	0.1	0.2	14700	2	0.50	68	1	-	3400	0.5	13	65	45	29600	3800	9700	302	2	200	68	-	-	18	1	1	-	8	-	1	48	72	1	32	19	10
25th Percentile / Quartile 1		67.9	0.19	1	1	1	0.1	0.2	16025	2	0.50	84	1	-	3700	0.5	13	77	48	34750	4250	11100	334	2	200	70	-	-	18	1	1	-	9	-	1	55	80	2	37	23	19
Median / 50th Percentile		72.7	0.26	1	1	1	0.1	0.2	16400	3	0.60	90	1	-	3800	0.5	16	83	51	39000	4500	11450	922	5	250	76	-	-	19	1	1	-	10	-	1	56	81	2	45	29	28
Mean		74.5	0.31	1	2	2	0.1	0.2	16788	4	0.78	98	1	-	4050	0.5	15	81	53	40850	4463	11563	1524	4	250	76	-	-	19	1	1	-	10	-	1	56	87	3	46	30	25
75th Percentile / Quartile 3		82.6	0.46	1	2	2	0.1	0.2	18175	5	1.15	109	1	-	4575	0.5	16	88	60	49050	4750	12325	2838	5	300	81	-	-	20	1	1	-	11	-	1	59	94	4	50	35	30
Maximum		84.6	0.56	2	4	4	0.1	0.2	18800	7	1.30	160	1	-	5300	0.5	17	90	61	55200	4900	13200	4670	6	300	82	-	-	22	1	1	-	12	-	1	59	122	5	71	48	36
Standard Deviation		7.1	0.15	0	1	1	0.0	0.0	1362	2	0.34	28	0	-	648	0.0	2	8	6	8690	346	1058	1614	2	53	6	-	-	1	0	0	-	1	-	0	3	16	2	12	9	8
Inter-Quartile Range		9.7	0.17	0	0	0	0.0	0.0	1650	1	0.55	14	0	-	425	0.0	2	10	9	8900	300	1075	1423	3	100	9	-	-	2	0	0	-	2	-	0	3	10	2	12	9	10
Samples Not Meeting TOC and %Sand Cuttoffs (not included in statistics)																																									
DL0-01-10	2014-08-24	17.0	0.03	*1*	2	2	*0.1*	*0.2*	2050	*1*	*0.5*	10	*1*		1600	*0.5*	2	17	5	6480	600	2200	51	*1*	*100*	12			3	*1*	*1*		3		*1*	11	10	0.28	92	2	6
Sheardown SE																																									
AEMP Benchmark - SDL SE							**0.17**			**5.9**						**1.5**		**79**	**56**	**34400**			**657**			**66**	**1278**		**35**								**123**				
DLO-02-1	2014-07-23	39.9	0.07	*1*	*1*	*1*	*0.1*	*0.2*	10900	*1*	*0.5*	48	*1*		8600	*0.5*	10	55	20	21900	2600	12600	284	*1*	200	49			11	*1*	*1*		10		*1*	34	39	0.74	35	51	14
DLO-02-10	2014-07-23	56.4	0.12	*1*	*1*	*1*	*0.1*	1.0	16500	2	*0.5*	87	*1*		6300	*1*	14	74	64	34500	4400	13700	655	*1*	500	60			17	*1*	*1*		13		*1*	53	64	1.01	15	63	22
DLO-02-2	2014-07-23	41.0	0.08	*1*	*1*	*1*	*0.1*	*0.2*	13900	1	*0.5*	66	*1*		9100	*0.5*	12	71	27	27700	3500	15200	394	*1*	300	62			14	*1*	*1*		12		*1*	45	52	0.88	26	56	18
DLO-02-3	2014-07-23	40.1	0.08	*1*	*1*	*1*	*0.1*	*0.2*	12700	1	*0.5*	58	*1*		9600	*0.5*	12	67	24	26000	3000	14200	327	*1*	300	58			13	*1*	*1*		11		*1*	42	48	0.85	30	52	18
DLO-02-4	2014-07-23	57.2	0.11	*1*	*1*	*1*	*0.1*	*0.2*	16000	2	*0.5*	85	*1*		5000	*0.5*	12	68	28	34100	4100	12300	657	1	400	53			16	*1*	*1*		11		*1*	51	59	0.97	15	63	22
Minimum		39.9	0.07	1	1	1	0.1	0.2	10900	1	0.50	48	1	-	5000	0.5	10	55	20	21900	2600	12300	284	1	200	49	-	-	11	1	1	-	10	-	1	34	39	1	15	51	14
25th Percentile / Quartile 1		40.0	0.08	1	1	1	0.1	0.2	11800	1	0.50	53	1	-	5650	0.5	11	61	22	23950	2800	12450	306	1	250	51	-	-	12	1	1	-	11	-	1	38	44	1	15	52	16
Median / 50th Percentile		41.0	0.08	1	1	1	0.1	0.2	13900	1	0.50	66	1	-	8600	0.5	12	68	27	27700	3500	13700	394	1	300	58	-	-	14	1	1	-	11	-	1	45	52	1	26	56	18
Mean		46.9	0.09	1	1	1	0.1	0.4	14000	1	0.50	69	1	-	7720	0.6	12	67	33	28840	3520	13600	463	1	340	56	-	-	14	1	1	-	11	-	1	45	52	1	24	57	19
75th Percentile / Quartile 3		56.8	0.12	1	1	1	0.1	0.6	16250	2	0.50	86	1	-	9350	0.8	13	73	46	34300	4250	14700	656	1	450	61	-	-	17	1	1	-	13	-	1	52	62	1	33	63	22
Maximum		57.2	0.12	1	1	1	0.1	1.0	16500	2	0.50	87	1	-	9600	1.0	14	74	64	34500	4400	15200	657	1	500	62	-	-	17	1	1	-	13	-	1	53	64	1	35	63	22
Standard Deviation		9.0	0.02	0	0	0	0.0	0.4	2322	1	0.00	17	0	-	1977	0.2	1	7	18	5414	746	1185	180	0	114	5	-	-	2	0	0	-	1	-	0	8	10	0	9	6	3
Inter-Quartile Range		16.3	0.03	0	0	0	0.0	0.0	3300	1	0.00	27	0	-	2800	0.0	0	4	4	8100	1100	1600	328	0	100	7	-	-	3	0	0	-	1	-	0	9	11	0	15	11	4
Camp Lake																																									
AEMP Benchmark - Camp Lake										**5.9**						**1.5**		**98**	**50**	**52400**			**4370**			**72**	**1580**		**35**								**135**				
JL0-01	2014-08-22	64.6	0.18	*1*	*1*	*1*	*0.1*	*0.2*	14600	4	*0.5*	69	1		4000	*0.5*	18	72	47	30400	4400	12200	939	*1*	200	67			21	*1*	*1*		12		*1*	58	97	1.44	41	45	14
JL0-02	2014-08-22	68.0	0.18	*1*	*1*	*1*	*0.1*	*0.2*	14900	2	*0.5*	77	*1*		4200	*0.5*	15	70	39	30600	3200	14200	539	*1*	200	58			15	*1*	*1*		8		*1*	56	65	1.97	57	33	10
JL0-07	2014-08-22	67.2	0.23	*1*	*1*	*1*	*0.1*	0.2	15400	2	*0.5*	74	1		4000	*0.5*	15	85	49	24200	4800	13300	322	*1*	500	66			21	*1*	*1*		24		*1*	59	94	2.19	49	35	16
JL0-11	2014-08-22	59.2	0.14	*1*	*1*	*1*	*0.1*	*0.2*	11800	6	*0.5*	110	*1*		3300	*0.5*	17	54	33	53100	3100	9800	3010	2	200	55			14	*1*	*1*		10		*1*	42	58	1.51	53	35	12
JL0-13	2014-08-25	67.6	0.17	*1*	*1*	*1*	*0.1*	*0.2*	14000	4	*0.5*	90	*1*		3800	*0.5*	18	66	42	38500	3700	10600	3680	2	300	65			18	*1*	*1*		11		*1*	52	58	2.3	65	25	10
JL0-15	2014-08-22	49.3	0.11	*1*	*1*	*1*	*0.1*	*0.2*	10600	2	*0.5*	49	*1*		3100	*0.5*	14	59	35	23600	3100	10500	700	*1*	100	53			14	*1*	*1*		9		*1*	47	66	1.02	64	28	8
JL0-17	2014-08-22	45.3	0.10	*1*	*1*	*1*	*0.1*	*0.2*	9820	4	*0.5*	61	*1*		3000	*0.5*	13	49	29	23400	2700	8000	1150	1	200	49			13	*1*	*1*		9		*1*	38	62	0.94	61	31	8
JL0-17 DUP	2014-08-22	51.3	0.10	*1*	*1*	*1*	*0.1*	*0.2*	9150	4	*0.5*	62	*1*		3100	*0.5*	13	45	29	22300	2600	7800	1180	1	200	49			13	*1*	*1*		8		*1*	36	50	0.94	65	29	6
Minimum		45.3	0.10	1	1	1	0.1	0.2	9150	2	0.50	49	1	-	3000	0.5	13	45	29	22300	2600	7800	322	1	100	49	-	-	13	1	1	-	8	-	1	36	50	1	41	25	6
25th Percentile / Quartile 1		49.8	0.10	1	1	1	0.1	0.2	10015	2	0.50	61	1	-	3100	0.5	13	50	30	23450	2800	8450	579	1	200	50	-	-	13	1	1	-	8	-	1	39	58	1	50	28	8
Median / 50th Percentile		61.9	0.16	1	1	1	0.1	0.2	12900	4	0.50	72	1	-	3550	0.5	15	63	37	27300	3150	10550	1045	1	200	57	-	-	15	1	1	-	10	-	1	50	64	1	59	32	10
Mean		59.1	0.15	1	1	1	0.1	0.2	12534	4	0.50	74	1	-	3563	0.5	15	63	38	30763	3450	10800	1440	1	238	58	-	-	16	1	1	-	11	-	1	49	69	2	57	33	11
75th Percentile / Quartile 3		67.5	0.18	1	1	1	0.1	0.2	14825	4	0.50	87	1	-	4000	0.5	18	72	46	36525	4225	13025	2553	2	275	66	-	-	20	1	1	-	12	-	1	58	87	2	65	35	14
Maximum		68.0	0.23	1	1	1	0.1	0.2	15400	6	0.50	110	1	-	4200	0.5	18	85	49	53100	4800	14200	3680	2	500	67	-	-	21	1	1	-	24	-	1	59	97	2	65	45	16
Standard Deviation		9.2	0.05	0	0	0	0.0	0.0	2488	1	0.00	19	0	-	487	0.0	2	13	8	10550	791	2322	1224	0	119	7	-	-	3	0	0	-	5	-	0	9	17	1	9	6	3
Inter-Quartile Range		16.5	0.07	0	0	0	0.0	0.0	4270	2	0.00	19	0	-	900	0.0	4	18	11	9025	875	3125	978	0	25	13	-	-	5	0	0	-	3	-	0	16	15	1	12	6	5
Samples Not Meeting TOC and %Sand Cuttoffs (not included in statistics)																																									
JL0-12	2014-08-22	29.7	0.04	*1*	*1*	*1*	*0.1*	*0.2*	6450	2	*0.5*	43	*1*		2100	*0.5*	8	33	15	22300	1600	5800	1360	*1*	*100*	30			7	*1*	*1*		6		*1*	24	32	0.42	81	13	6
JL0-16	2014-08-22	23.3	*0.01*	*1*	*1*	*1*	*0.1*	*0.2*	2720	*1*	*0.5*	15	*1*		6500	*0.5*	3	18	7	5920	900	6800	87	*1*	*100*	20			3	*1*	*1*		4		*1*	10	12	0.12	94	*1*	6
Streams																																									
D1-05	2014-08-25	81.8	1.08	*1*	2	2	*0.1*	*0.2*	5430	*1*	*0.5*	60	*1*		13100	0.8	6	58	58	11100	1100	6800	199	2	100	47			14	*1*	*1*		13		*1*	21	72	40.4	61	12	27
SDLT-12	2014-08-25	55.2	0.32	*1*	*1*	*1*	*0.1*	*0.2*	7290	*1*	0.6	17	*1*		8600	*0.5*	6	32	18	17100	2000	12000	158	*1*	100	29			7	*1*	*1*		5		*1*	33	35	2.46	88	4	8
Samples Not Meeting TOC and %Sand Cuttoffs																																									
L2-03	2014-08-25	43.1	0.20	*1*	*1*	*1*	*0.1*	*0.2*	1930	*1*	0.6	9	*1*		1500	*0.5*	2	10	5	6180	500	2000	81	*1*	*100*	9			2	*1*	*1*		3		*1*	8	12	2.72	92	2	6

I:\1\02\00181\34\A\Report\Report 6 - 2014 CREMP Monitoring Results\Rev 0\Appendices\Appendix B\[Table B1.1 20150217 RAC.xlsx]Table B1.1

NOTES:

1. TEXT IN RED ITALICS REPLACES ALL VALUES WITH LESS THAN SIGNS.

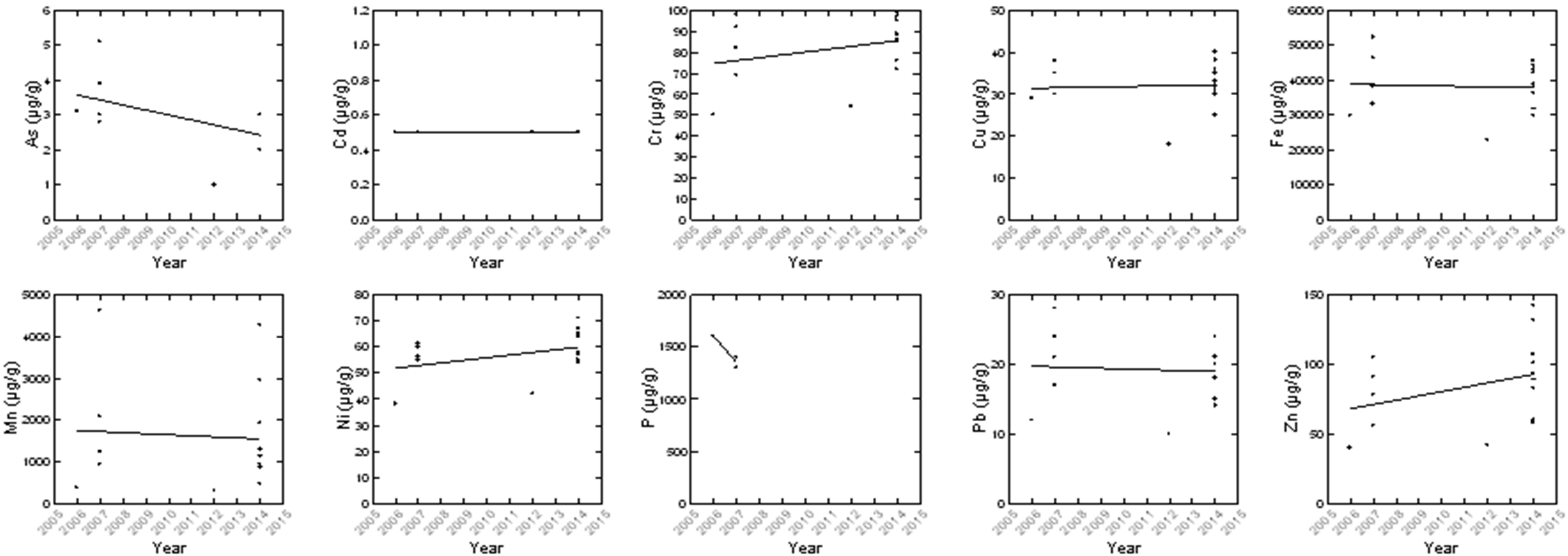
2. YELLOW HIGHLIGHT INDICATES A VALUE IS GREATER THAN THE BENCHMARK.

A	19MAR'15	ISSUED WITH REPORT NB102-181/34-6	DKK	RAC
REV	DATE	DESCRIPTION	PREP'D	REV'D

APPENDIX B2

GRAPHICAL ANALYSIS OF 2014 SEDIMENT QUALITY

(Pages B2-1 to B2-5)



BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

LINEAR REGRESSION OF KEY METALS IN MARY LAKE SEDIMENT

Knight Piésold CONSULTING

P/A NO.	REF. NO.
NB102-181/34	6

FIGURE B2.1 REV 0

0	19MAR'15	ISSUED WITH REPORT	CM	RAC
REV	DATE	DESCRIPTION	PREP'D	REV'D