



2019 North American Proficiency Testing Program
 Quarter 1 Water Report - Tuesday, April 16, 2019

Laboratory ID
General

Water		Water 2019-301			Water 2019-302			Water 2019-303			
Analysis	Units	n	Median	MAD	Lab ^{1,2}	Median	MAD	Lab ^{1,2}	Median	MAD	Lab ^{1,2}
Bulk Properties											
pH		32	7.98	0.155		7.95	0.100		8.12	0.095	
EC	dS/m	31	0.782	0.022		0.790	0.029		0.440	0.010	
Cations											
Ca	mmolc/L	30	3.59	0.225		3.36	0.094		0.480	0.026	
Mg	mmolc/L	30	3.24	0.124		1.13	0.048		0.070	0.010	
Na	mmolc/L	30	1.52	0.050		2.70	0.082		3.32	0.115	
K	mmolc/L	29	0.250	0.010		0.610	0.020		0.209	0.009	
NH4-N	mmolc/L	6	0.011	0.011		0.014	0.014		0.010	0.010	
Sum Cations	mmolc/L	12	8.85	0.371		7.82	0.285		4.14	0.285	
SAR		17	0.820	0.030		1.80	0.058		6.56	0.350	
Adj-SAR		7	1.90	0.170		3.40	0.260		6.19	0.300	
Anions											
HCO3	mmolc/L	22	6.46	0.422		2.99	0.177		2.10	0.132	
CO3	mmolc/L	11	0.000	0.000		0.000	0.000		0.000	0.000	
Cl	mmolc/L	26	1.13	0.085		2.02	0.136		1.43	0.140	
NO3	mmolc/L	27	0.070	0.010		0.004	0.001		0.003	0.000	
SO4	mmolc/L	26	0.970	0.050		2.81	0.128		0.325	0.015	
Sum Anions	mmolc/L	11	8.62	0.352		7.93	0.315		4.01	0.310	
Cation-Anion Difference		7	0.288	0.302		0.183	0.247		0.262	0.262	
Other											
Boron	mg/L	21	0.090	0.007		0.090	0.010		0.640	0.030	
PO4-P Phosphorus - Spec	mg/L	6	0.019	0.010		0.025	0.007		0.047	0.019	
Phosphorus - ICP (Total)	mg/L	9	0.024	0.005		0.020	0.003		0.010	0.002	
TKN	mg/L	3	0.200	0.165		0.200	0.082		0.200	0.090	
Nitrogen Combustion (Total)	mg/L	2	0.620	0.590		0.041	0.013		0.079	0.047	
Total Organic Carbon	mg/L	2	0.754	0.194		1.14	0.496		1.35	0.411	

1 - Values flagged exceed Warning Limits " * " 2.5 x MAD (Median Absolute Deviation) and Control Limits " ** " 4 x MAD.

2 - Limits not compared to lab data for methods with less than 7 labs reporting.