



2019 North American Proficiency Testing Program
 Quarter 3 Water Report - Monday, October 21, 2019

Laboratory ID
 General

Water Analysis	Units	n	Water 2019-307			Water 2019-308			Water 2019-309		
			Median	MAD	Lab ^{1,2}	Median	MAD	Lab ^{1,2}	Median	MAD	Lab ^{1,2}
Bulk Properties											
pH		32	7.80	0.095		7.48	0.140		8.26	0.080	
EC	dS/m	32	1.41	0.048		0.100	0.005		0.750	0.019	
Cations											
Ca	mmolc/L	29	2.37	0.080		0.270	0.018		3.20	0.127	
Mg	mmolc/L	29	4.01	0.149		0.070	0.010		4.68	0.125	
Na	mmolc/L	29	8.49	0.288		0.550	0.030		0.914	0.035	
K	mmolc/L	27	0.318	0.018		0.077	0.007		0.026	0.004	
NH4-N	mmolc/L	8	0.000	0.000		0.000	0.000		0.000	0.000	
Sum Cations	mmolc/L	15	15.0	0.467		0.990	0.070		8.90	0.285	
SAR		16	4.76	0.170		1.32	0.045		0.470	0.020	
Adj-SAR		5	8.10	2.54		0.510	0.080		1.00	0.370	
Anions											
HCO3	mmolc/L	23	3.73	0.207		0.700	0.028		6.52	0.274	
CO3	mmolc/L	11	0.000	0.000		0.000	0.000		0.400	0.085	
Cl	mmolc/L	24	0.202	0.014		0.072	0.016		0.500	0.022	
NO3	mmolc/L	23	0.022	0.004		0.009	0.002		0.009	0.001	
SO4	mmolc/L	23	11.3	0.790		0.050	0.010		1.60	0.064	
Sum Anions	mmolc/L	13	15.1	0.930		0.911	0.089		8.87	0.275	
Cation-Anion Difference		7	0.890	0.353		0.130	0.092		0.098	0.394	
Other											
Boron	mg/L	20	0.274	0.016		0.055	0.005		0.073	0.006	
PO4-P Phosphorus - Spec	mg/L	7	0.028	0.002		0.012	0.007		0.082	0.008	
Phosphorus - ICP (Total)	mg/L	11	0.039	0.007		0.015	0.002		0.080	0.009	
TKN	mg/L	5	1.00	0.100		0.300	0.120		0.400	0.110	
Nitrogen Combustion (Total)	mg/L										
Total Organic Carbon	mg/L	3	11.4	0.840		0.070	0.070		1.80	0.150	

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.