



**2020 North American Proficiency Testing Program
Quarter 4 Water Report - Friday, January 8, 2021**

Laboratory ID
General

Water Analysis	Units	n	Water 2020-310			Water 2020-311			Water 2020-312		
			Median	MAD	Lab ^{1,2}	Median	MAD	Lab ^{1,2}	Median	MAD	Lab ^{1,2}
Bulk Properties											
pH		32	8.00	0.100		8.24	0.070		8.17	0.102	
EC	dS/m	30	1.15	0.030		0.392	0.009		0.623	0.018	
Cations											
Ca	mmolc/L	29	6.50	0.263		2.76	0.086		3.09	0.150	
Mg	mmolc/L	29	3.78	0.180		1.11	0.054		2.79	0.139	
Na	mmolc/L	29	2.50	0.128		0.260	0.010		0.930	0.030	
K	mmolc/L	28	0.090	0.010		0.029	0.004		0.080	0.006	
NH4-N	mmolc/L	13	0.003	0.001		0.005	0.001		0.001	0.000	
Sum Cations	mmolc/L	14	12.7	0.450		4.20	0.130		6.96	0.216	
SAR		17	1.09	0.020		0.190	0.010		0.530	0.030	
Adj-SAR		8	1.40	0.175		0.210	0.010		0.650	0.075	
Anions											
HCO3	mmolc/L	22	4.06	0.262		2.68	0.159		5.33	0.353	
CO3	mmolc/L	13	0.000	0.000		0.400	0.061		0.520	0.080	
Cl	mmolc/L	26	0.780	0.055		0.091	0.014		0.978	0.086	
NO3	mmolc/L	25	0.190	0.020		0.005	0.001		0.049	0.004	
SO4	mmolc/L	24	7.71	0.238		1.33	0.045		0.350	0.029	
Sum Anions	mmolc/L	14	12.8	0.655		4.23	0.205		6.80	0.192	
Cation-Anion Difference		9	0.060	0.011		0.148	0.022		0.149	0.031	
Other											
Boron	mg/L	20	0.082	0.011		0.015	0.001		0.060	0.009	
PO4-P Phosphorus - Spec	mg/L	7	0.020	0.010		0.031	0.007		0.024	0.004	
Phosphorus - ICP (Total)	mg/L	11	0.010	0.002		0.030	0.004		0.034	0.005	
TKN	mg/L	1	0.338	0.000		0.107	0.000		0.192	0.108	
Nitrogen Combustion (Total)	mg/L	1	29.8	0.000		2.60	0.000		8.80	0.000	
Total Organic Carbon	mg/L	4	1.02	0.070		2.49	0.140		1.53	0.330	

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.