



**2016 North American Proficiency Testing Program
4th Quarter Report - January 13, 2017**

Laboratory ID
general

Water Analysis	Units	n	Water 2016-310			Water 2016-311			Water 2016-312		
			Median	MAD	Lab^{1,2}	Median	MAD	Lab^{1,2}	Median	MAD	Lab^{1,2}
pH		32	7.90	<i>0.115</i>		7.85	<i>0.150</i>		7.28	<i>0.195</i>	
EC	dS/m	30	0.800	<i>0.017</i>		0.088	<i>0.006</i>		0.045	<i>0.005</i>	
Cations											
Ca	mmolc/L	31	4.41	<i>0.120</i>		0.389	<i>0.019</i>		0.254	<i>0.014</i>	
Mg	mmolc/L	31	3.43	<i>0.150</i>		0.240	<i>0.015</i>		0.081	<i>0.008</i>	
Na	mmolc/L	31	0.752	<i>0.031</i>		0.218	<i>0.010</i>		0.100	<i>0.010</i>	
K	mmolc/L	31	0.180	<i>0.010</i>		0.040	<i>0.005</i>		0.010	<i>0.001</i>	
NH4-N	mmolc/L	10	0.000	<i>0.000</i>		0.000	<i>0.000</i>		0.003	<i>0.003</i>	
Sum Cations	mmolc/L	12	8.68	<i>0.264</i>		0.887	<i>0.025</i>		0.463	<i>0.038</i>	
SAR		14	0.390	<i>0.010</i>		0.380	<i>0.020</i>		0.220	<i>0.012</i>	
Adj-SAR		5	0.900	<i>0.030</i>		0.200	<i>0.000</i>		0.010	<i>0.010</i>	
Anions											
HCO3	mmolc/L	22	5.84	<i>0.382</i>		0.835	<i>0.052</i>		0.342	<i>0.058</i>	
CO3	mmolc/L	13	0.000	<i>0.000</i>		0.000	<i>0.000</i>		0.000	<i>0.000</i>	
Cl	mmolc/L	26	1.01	<i>0.046</i>		0.048	<i>0.018</i>		0.070	<i>0.013</i>	
NO3	mmolc/L	26	0.972	<i>0.052</i>		0.002	<i>0.002</i>		0.010	<i>0.002</i>	
SO4	mmolc/L	26	0.741	<i>0.034</i>		0.035	<i>0.005</i>		0.040	<i>0.010</i>	
Sum Anions	mmolc/L	12	8.50	<i>0.263</i>		0.915	<i>0.059</i>		0.447	<i>0.082</i>	
Cation-Anion Difference		7	0.250	<i>0.337</i>		0.060	<i>0.060</i>		0.040	<i>0.040</i>	
Other											
Boron	mg/L	16	0.010	<i>0.002</i>		0.016	<i>0.006</i>		0.008	<i>0.002</i>	
PO4-P Phosphorus - Spec	mg/L	9	0.010	<i>0.010</i>		0.030	<i>0.010</i>		0.008	<i>0.007</i>	
Phosphorus - ICP (Total)	mg/L	15	0.030	<i>0.006</i>		0.020	<i>0.010</i>		0.024	<i>0.005</i>	
TKN	mg/L	1	0.200	<i>0.000</i>		0.200	<i>0.000</i>		0.284	<i>0.016</i>	
Nitrogen Combustion (Total)	mg/L	2	14.0	<i>0.775</i>		0.157	<i>0.000</i>		0.301	<i>0.003</i>	
Total Organic Carbon	mg/L	4	0.528	<i>0.105</i>		1.08	<i>0.050</i>		6.54	<i>0.285</i>	

1 - Values flagged exceed Warning Limits " * " 2.5 x MAD (Median Absolute Deviation) and Control Limits " *** " 4 x MAD. " < " and "ND" values not recorded.

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