

# BROOKSIDE LABORATORIES, INC.

## \*\* WATER ANALYSIS

Lake Padden G.C. - Troon

File Number: 89661  
Date Received: 04/12/2023  
Date Reported: 04/13/2023

Submitted By: Troon Golf

Lab Number	0738
Sample Location	1 POND
Sample Description	#15 SIDE

pH	0.60
Hardness (ppm)	19.83
Hardness (grains/gal)	1.16
Conductivity (mmhos/cm)	0.08
Sodium Adsorp. Ratio	0.60
Adjusted SAR	0.10
Adjusted RNA	0.34
pHc	9.24
Residual Sodium Carbonate (RSC)	0.24

	(ppm)	meq/l	lbs/ac in
Calcium (Ca)	4.95	0.25	1.12
Magnesium (Mg)	1.61	0.13	0.36
Potassium (K)	0.89	0.02	0.20
Sodium (Na)	6.03	0.26	1.37
Iron (Fe)	0.47		0.11
Total Alkalinity (CaCO <sub>3</sub> )	30.80		6.99
Carbonate (CO <sub>3</sub> )	0.00		
Bicarbonate (HCO <sub>3</sub> )	37.58	0.62	8.52
Hydroxide (OH)	0.00		
Chloride (Cl)	< 2.00		
Sulfur as (SO <sub>4</sub> )	< 0.80		
Salt Concentration (TDS)	49.79		11.29
Boron (B)	< 0.05		

Manganese (Mn)	0.040		0.009
Copper (Cu)	< 0.020		
Zinc (Zn)	< 0.040		
Aluminum (Al)	0.414		0.094

Cation/Anion Ratio 1.06

NO <sub>3</sub> -N (ppm)	0.48
Total P (ppm)	< 0.20

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Lab Number	0739
Sample Location	2 #11
Sample Description	DITCH

pH	6.73
Hardness (ppm)	23.56
Hardness (grains/gal)	1.38
Conductivity (mmhos/cm)	0.08
Sodium Adsorp. Ratio	0.52
Adjusted SAR	0.15
Adjusted RNA	0.31
pHc	9.11
Residual Sodium Carbonate (RSC)	0.20

	(ppm)	meq/l	lbs/ac in
Calcium (Ca)	6.30	0.31	1.43
Magnesium (Mg)	1.65	0.14	0.37
Potassium (K)	1.01	0.03	0.23
Sodium (Na)	5.64	0.25	1.28
Iron (Fe)	0.58		0.13
Total Alkalinity (CaCO <sub>3</sub> )	32.48		7.37
Carbonate (CO <sub>3</sub> )	0.00		
Bicarbonate (HCO <sub>3</sub> )	39.63	0.65	8.99
Hydroxide (OH)	0.00		
Chloride (Cl)	< 2.00		
Sulfur as (SO <sub>4</sub> )	< 0.80		
Salt Concentration (TDS)	53.18		12.06
Boron (B)	< 0.05		

Manganese (Mn)	0.041		0.009
Copper (Cu)	< 0.020		
Zinc (Zn)	< 0.040		
Aluminum (Al)	0.529		0.120

Cation/Anion Ratio 1.10

NO <sub>3</sub> -N (ppm)	0.41
Total P (ppm)	< 0.20

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File Number: 89661  
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Lab Number	0740
Sample Location	3 OUTFLOW
Sample Description	#3 FAIRWAY

pH	6.79
Hardness (ppm)	22.40
Hardness (grains/gal)	1.31
Conductivity (mmhos/cm)	0.08
Sodium Adsorp. Ratio	0.48
Adjusted SAR	0.14
Adjusted RNA	0.28
pHc	9.10
Residual Sodium Carbonate (RSC)	0.25

	(ppm)	meq/l	lbs/ac in
Calcium (Ca)	6.10	0.30	1.38
Magnesium (Mg)	1.51	0.12	0.34
Potassium (K)	0.86	0.02	0.20
Sodium (Na)	5.11	0.22	1.16
Iron (Fe)	0.53		0.12
Total Alkalinity (CaCO <sub>3</sub> )	34.16		7.75
Carbonate (CO <sub>3</sub> )	0.00		
Bicarbonate (HCO <sub>3</sub> )	41.68	0.68	9.45
Hydroxide (OH)	0.00		
Chloride (Cl)	< 2.00		
Sulfur as (SO <sub>4</sub> )	< 0.80		
Salt Concentration (TDS)	53.70		12.18
Boron (B)	< 0.05		

Manganese (Mn)	0.037		0.008
Copper (Cu)	< 0.020		
Zinc (Zn)	< 0.040		
Aluminum (Al)	0.486		0.110

Cation/Anion Ratio 0.98

NO <sub>3</sub> -N (ppm)	0.40
Total P (ppm)	< 0.20

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File Number: 89661  
Date Received: 04/12/2023  
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Submitted By: Troon Golf

Lab Number	0741
Sample Location	4 #8
Sample Description	GREEN

pH	6.01
Hardness (ppm)	36.16
Hardness (grains/gal)	2.11
Conductivity (mmhos/cm)	0.17
Sodium Adsorp. Ratio	0.91
Adjusted SAR	0.38
Adjusted RNA	0.56
pHc	8.98
Residual Sodium Carbonate (RSC)	-0.10

	(ppm)	meq/l	lbs/ac in
Calcium (Ca)	9.43	0.47	2.14
Magnesium (Mg)	3.02	0.25	0.68
Potassium (K)	0.82	0.02	0.19
Sodium (Na)	12.51	0.54	2.84
Iron (Fe)	< 0.10		
Total Alkalinity (CaCO <sub>3</sub> )	30.80		6.99
Carbonate (CO <sub>3</sub> )	0.00		
Bicarbonate (HCO <sub>3</sub> )	37.58	0.62	8.52
Hydroxide (OH)	0.00		
Chloride (Cl)	21.62	0.61	4.90
Sulfur as (SO <sub>4</sub> )	2.67	0.06	0.60
Salt Concentration (TDS)	108.29		24.56
Boron (B)	< 0.05		

Manganese (Mn)	< 0.020
Copper (Cu)	< 0.020
Zinc (Zn)	< 0.040
Aluminum (Al)	< 0.200

Cation/Anion Ratio 0.99

NO <sub>3</sub> -N (ppm)	0.52
Total P (ppm)	< 0.20

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File Number: 89661  
Date Received: 04/12/2023  
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Submitted By: Troon Golf

Lab Number	0742
Sample Location	5 #8
Sample Description	150 YARDS

pH	6.98
Hardness (ppm)	17.25
Hardness (grains/gal)	1.01
Conductivity (mmhos/cm)	0.07
Sodium Adsorp. Ratio	0.52
Adjusted SAR	0.04
Adjusted RNA	0.28
pHc	9.33
Residual Sodium Carbonate (RSC)	0.22

	(ppm)	meq/l	lbs/ac in
Calcium (Ca)	4.41	0.22	1.00
Magnesium (Mg)	1.31	0.11	0.30
Potassium (K)	0.73	0.02	0.16
Sodium (Na)	4.85	0.21	1.10
Iron (Fe)	0.47		0.11
Total Alkalinity (CaCO <sub>3</sub> )	27.44		6.22
Carbonate (CO <sub>3</sub> )	0.00		
Bicarbonate (HCO <sub>3</sub> )	33.48	0.55	7.59
Hydroxide (OH)	0.00		
Chloride (Cl)	< 2.00		
Sulfur as (SO <sub>4</sub> )	< 0.80		
Salt Concentration (TDS)	43.20		9.80
Boron (B)	< 0.05		

Manganese (Mn)	< 0.020		
Copper (Cu)	< 0.020		
Zinc (Zn)	< 0.040		
Aluminum (Al)	0.295		0.067

Cation/Anion Ratio	1.00
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NO <sub>3</sub> -N (ppm)	0.53
Total P (ppm)	< 0.20

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Date Received: 04/12/2023  
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Lab Number	0743
Sample Location	6 #5
Sample Description	120 YARDS

pH	6.74
Hardness (ppm)	12.45
Hardness (grains/gal)	0.73
Conductivity (mmhos/cm)	0.07
Sodium Adsorp. Ratio	0.65
Adjusted SAR	0.00
Adjusted RNA	0.31
pHc	9.54
Residual Sodium Carbonate (RSC)	0.20

	(ppm)	meq/l	lbs/ac in
Calcium (Ca)	3.33	0.17	0.75
Magnesium (Mg)	0.96	0.08	0.22
Potassium (K)	< 0.60		
Sodium (Na)	5.27	0.23	1.19
Iron (Fe)	< 0.10		
Total Alkalinity (CaCO <sub>3</sub> )	22.40		5.08
Carbonate (CO <sub>3</sub> )	0.00		
Bicarbonate (HCO <sub>3</sub> )	27.33	0.45	6.20
Hydroxide (OH)	0.00		
Chloride (Cl)	< 2.00		
Sulfur as (SO <sub>4</sub> )	< 0.80		
Salt Concentration (TDS)	41.86		9.49
Boron (B)	< 0.05		

Manganese (Mn)	< 0.020
Copper (Cu)	< 0.020
Zinc (Zn)	< 0.040
Aluminum (Al)	< 0.200

Cation/Anion Ratio 1.04

NO <sub>3</sub> -N (ppm)	0.63
Total P (ppm)	< 0.20

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Lab Number	0744
Sample Location	7 (PUMP
Sample Description	STATION) LAKE DRAW

pH	7.16
Hardness (ppm)	20.90
Hardness (grains/gal)	1.22
Conductivity (mmhos/cm)	0.10
Sodium Adsorp. Ratio	0.78
Adjusted SAR	0.23
Adjusted RNA	0.47
pHc	9.11
Residual Sodium Carbonate (RSC)	0.29

	(ppm)	meq/l	lbs/ac in
Calcium (Ca)	5.86	0.29	1.33
Magnesium (Mg)	1.48	0.12	0.34
Potassium (K)	0.79	0.02	0.18
Sodium (Na)	8.20	0.36	1.86
Iron (Fe)	< 0.10		
Total Alkalinity (CaCO <sub>3</sub> )	35.28		8.00
Carbonate (CO <sub>3</sub> )	0.00		
Bicarbonate (HCO <sub>3</sub> )	43.05	0.71	9.76
Hydroxide (OH)	0.00		
Chloride (Cl)	2.72	0.08	0.62
Sulfur as (SO <sub>4</sub> )	2.70	0.06	0.61
Salt Concentration (TDS)	61.38		13.92
Boron (B)	< 0.05		

Manganese (Mn)	< 0.020
Copper (Cu)	< 0.020
Zinc (Zn)	< 0.040
Aluminum (Al)	< 0.200

Cation/Anion Ratio 0.93

NO <sub>3</sub> -N (ppm)	0.12
Total P (ppm)	< 0.20

Reviewed by: 