



SOIL AND WATER CONSULTING

Data Collection Report

Summer 2021

Date of Collection: 6/18/21

Client: Braemar Country Club



Testing Results

	<u>6/27/19</u>	<u>7/17/20</u>	<u>6/18/21</u>
Humidity/Air Temperature	50%/82°	33%/89°	40%/93°
Greens Temperature	(avg)65.56°	(avg)67.6°	(avg)69.8°
Fairway Temperature	(avg)69.1°	(avg)72.06°	(avg)74.2°

WATER	Acceptable Range For Water Sample	US Open Hole #6 <u>6/27/19</u>	Western Hole #7 <u>7/17/20</u>	Masters Hole #2 <u>6/18/21</u>
EC	<2.25 mmhos/cm	0.55	0.44	0.67
Sodium		32.24	37.78	54.62
Calcium	20 - 60 ppm	64.23	27.72	44.15
Magnesium	10 - 25 ppm	14.27	12.59	13.81
Potassium	5 - 20 ppm	3.69	6.21	3.30
Sulfur	30 - 90 ppm	132.57	61.71	95.61
Bicarbonate	<120 ppm	143.21	114.71	151.01
Boron	<0.67 ppm	0.35	0.34	0.27
Chloride	<177 ppm	30.13	33.53	54.64

US OPEN TEE	Acceptable Range For Tissue Sample	2 <u>6/18/21</u>
Nitrogen	2.49%-4.56%	4.24
Phosphorus	0.26%-0.38%	0.52
Potassium	0.95% - 1.97%	2.13
Calcium	0.50%-0.90%	0.58
Magnesium	0.13%-0.16%	0.23
Sodium	622-1709 ppm	1,570.00

US OPEN FAIRWAY	Acceptable Range For Tissue Sample	2 <u>6/18/21</u>
Nitrogen	2.49%-4.56%	3.96
Phosphorus	0.26%-0.38%	0.62
Potassium	0.95% - 1.97%	2.46
Calcium	0.50%-0.90%	0.55
Magnesium	0.13%-0.16%	0.25
Sodium	622-1709 ppm	1,420.00

US OPEN GREEN	Acceptable Range For Tissue Sample	2 <u>6/18/21</u>
Nitrogen	3.0%-6.5%	4.05
Phosphorus	0.2%-0.55%	0.73
Potassium	0.86%-2.55%	2.85
Calcium	0.21%-0.50%	0.70
Magnesium	0.09%-0.22%	0.27
Sodium	506- 2264 ppm	2,040.00

TEES	Acceptable Range For Alkaline Soils Sample	6(avg) 6/27/19	7(avg) 7/17/20	2(avg) 6/18/21
Organic Matter (Humus)	2 - 3%	1.65	5.46	2.12
Sulfur	12 - 16 ppm	30.00	45.67	56.67
Olsen - Phosphorus	13 - 20 ppm	13.50	49.00	24.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,597.00	3,631.33	3,020.67
Magnesium	>7% base saturation or at least 200 lbs/acre	12.63%/345	19.12%/648.66	15.26%/377.33
Potassium - TEC of 0 - 35	100 ppm	132.00	172.33	111.00
Manganese	50-80 ppm	35.50	11.67	19.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	6(avg) 6/27/19	7(avg) 7/17/20	2(avg) 6/18/21
Organic Matter (Humus)	2 - 3%	7.49	8.94	8.19
Sulfur	12 - 16 ppm	801.00	61.67	97.33
Olsen - Phosphorus	13 - 20 ppm	43.50	32.00	51.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	6,527.00	4,678.00	5,369.33
Magnesium	>7% base saturation or at least 200 lbs/acre	25.60%/1,683	21.22%/944	19.68%/954
Potassium - TEC of 0 - 35	100 ppm	456.50	390.00	428.67
Manganese	50-80 ppm	19.50	17.00	9.67

GREENS	Acceptable Range For Alkaline Soils Sample	6(avg) 6/27/19	7(avg) 7/17/20	2(avg) 6/18/21
Organic Matter (Humus)	2 - 3%	1.16	0.99	1.21
Sulfur	12 - 16 ppm	60.00	44.00	27.00
Olsen - Phosphorus	13 - 20 ppm	8.00	3.33	11.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,488.67	1,624.67	1,487.33
Magnesium	>7% base saturation or at least 200 lbs/acre	18.73%/244.6	17.28%/227.33	15.8%/188.66
Potassium - TEC of 0 - 35	150 ppm	61.33	59.67	44.67
Manganese	50-80 ppm	51.67	37.67	54.00

US OPEN TEE	Acceptable Range For Saturated Paste Sample	6 6/27/19	7 7/17/20	2 6/18/21
Nitrate - Bermudagrass	10-15 ppm	<0.5	<0.5	<0.5
Phosphorus	2 - 10 ppm	1.85	3.13	3.67
Potassium	40 - 100 ppm	29.36	33.76	22.10
Calcium	60 - 200 ppm	59.98	78.90	66.70
Magnesium	20 - 70 ppm	16.21	37.85	17.91
Sodium	0 - 30 ppm	37.07	58.03	68.52
Soluble Salts	<1,920 ppm	394.00	525.00	463.00
Bicarbonate	<60 ppm	165.95	97.80	104.96
Chloride	<1,000 ppm	44.00	85.00	66.00
SAR	<4%	1.10	1.34	1.92

US OPEN FAIRWAY	Acceptable Range For Saturated Paste Sample	6 6/27/19	7 7/17/20	2 6/18/21
Nitrate - Bermudagrass	10-15 ppm	2.90	<0.5	<0.5
Phosphorus	2 - 10 ppm	2.60	2.22	2.33
Potassium	40 - 100 ppm	43.25	31.54	44.10
Calcium	60 - 200 ppm	81.78	37.15	115.33
Magnesium	20 - 70 ppm	25.95	18.54	34.27
Sodium	0 - 30 ppm	61.39	38.20	114.72
Soluble Salts	<1,920 ppm	550.00	317.00	786.00
Bicarbonate	<60 ppm	151.30	86.53	91.06
Chloride	<1,000 ppm	76.00	47.00	133.00
SAR	<4%	1.51	1.28	2.41

US OPEN GREEN	Acceptable Range For Saturated Paste Sample	6 6/27/19	7 7/17/20	2 6/18/21
Nitrate - Bentgrass/Poa	1-3 ppm	<0.5	0.70	<0.5
Phosphorus	2 - 7 ppm	1.02	2.29	1.47
Potassium	25-40 ppm	18.55	19.93	14.93
Calcium	50- 75 ppm	42.82	35.88	49.00
Magnesium	15-30 ppm	11.36	14.22	12.12
Sodium	0 - 30 ppm	51.42	49.13	53.54
Soluble Salts	<1,000 ppm	328.00	323.00	353.00
Bicarbonate	<60 ppm	104.94	78.75	95.62
Chloride	<200 ppm	39.00	47.00	50.00
SAR	<4%	1.80	1.76	1.77