



SOIL AND WATER CONSULTING

Data Collection Report

Summer 2020

Date of Collection: 7/17/20

Client: Braemar Country Club



Testing Results

	<u>6/26/18</u>	<u>6/27/19</u>	<u>7/17/20</u>
Humidity/Air Temperature	50%/87°	50%/82°	33%/89°
Greens Temperature	(avg)65.95°	(avg)65.56°	(avg)67.6°
Fairway Temperature	70°	(avg)69.1°	(avg)72.06°

WATER	Acceptable Range For Water Sample	Masters Hole #5 <u>6/26/18</u>	US Open Hole #6 <u>6/27/19</u>	Western Hole #7 <u>7/17/20</u>
EC	<2.25 mmhos/cm	0.71	0.55	0.44
Sodium		39.76	32.24	37.78
Calcium	20 - 60 ppm	75.22	64.23	27.72
Magnesium	10 - 25 ppm	15.04	14.27	12.59
Potassium	5 - 20 ppm	9.80	3.69	6.21
Sulfur	30 - 90 ppm	144.51	132.57	61.71
Bicarbonate	<120 ppm	168.44	143.21	114.71
Boron	<0.67 ppm	0.41	0.35	0.34
Chloride	<177 ppm	38.98	30.13	33.53

WESTERN TEE	Acceptable Range For Tissue Sample	7 <u>7/17/20</u>
Nitrogen	2.49%-4.56%	3.66
Phosphorus	0.26%-0.38%	0.44
Potassium	0.95% - 1.97%	2.00
Calcium	0.50%-0.90%	0.90
Magnesium	0.13%-0.16%	0.34
Sodium	622-1709 ppm	1,640.00

WESTERN FAIRWAY	Acceptable Range For Tissue Sample	7 <u>7/17/20</u>
Nitrogen	2.49%-4.56%	3.55
Phosphorus	0.26%-0.38%	0.45
Potassium	0.95% - 1.97%	1.79
Calcium	0.50%-0.90%	0.52
Magnesium	0.13%-0.16%	0.27
Sodium	622-1709 ppm	774.00

WESTERN GREEN	Acceptable Range For Tissue Sample	7 <u>7/17/20</u>
Nitrogen	3.0%-6.5%	3.68
Phosphorus	0.2%-0.55%	0.57
Potassium	0.86%-2.55%	1.60
Calcium	0.21%-0.50%	0.66
Magnesium	0.09%-0.22%	0.26
Sodium	506- 2264 ppm	1,070.00

TEES	Acceptable Range For Alkaline Soils Sample	5(avg) 6/26/18	6(avg) 6/27/19	7(avg) 7/17/20
Organic Matter (Humus)	2 - 3%	5.19	1.65	5.46
Sulfur	12 - 16 ppm	76.33	30.00	45.67
Olsen - Phosphorus	13 - 20 ppm	48.33	13.50	49.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,594.00	3,597.00	3,631.33
	>7% base saturation or at least 200 lbs/acre	19.49%/633.33	12.63%/345	19.12%/648.66
Magnesium	100 ppm	196.00	132.00	172.33
Potassium - TEC of 0 - 35	50-80 ppm	13.00	35.50	11.67
Manganese				

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	5(avg) 6/26/18	6(avg) 6/27/19	7(avg) 7/17/20
Organic Matter (Humus)	2 - 3%	8.68	7.49	8.94
Sulfur	12 - 16 ppm	166.67	801.00	61.67
Olsen - Phosphorus	13 - 20 ppm	32.00	43.50	32.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,650.67	6,527.00	4,678.00
	>7% base saturation or at least 200 lbs/acre	20.24%/1,076.66	25.60%/1,683	21.22%/944
Magnesium	100 ppm	519.00	456.50	390.00
Potassium - TEC of 0 - 35	50-80 ppm	18.67	19.50	17.00
Manganese				

GREENS	Acceptable Range For Alkaline Soils Sample	5(avg) 6/26/18	6(avg) 6/27/19	7(avg) 7/17/20
Organic Matter (Humus)	2 - 3%	1.18	1.16	0.99
Sulfur	12 - 16 ppm	54.33	60.00	44.00
Olsen - Phosphorus	13 - 20 ppm	7.00	8.00	3.33
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,468.00	1,488.67	1,624.67
	>7% base saturation or at least 200 lbs/acre	15.43%/184.66	18.73%/244.6	17.28%/227.33
Magnesium	150 ppm	45.33	61.33	59.67
Potassium - TEC of 0 - 35	50-80 ppm	41.33	51.67	37.67
Manganese				

WESTERN TEE	Acceptable Range For Saturated Paste Sample	5 6/26/18	6 6/27/19	7 7/17/20
Nitrate - Bermudagrass	10-15 ppm	25.30	<0.5	<0.5
Phosphorus	2 - 10 ppm	2.19	1.85	3.13
Potassium	40 - 100 ppm	29.29	29.36	33.76
Calcium	60 - 200 ppm	147.52	59.98	78.90
Magnesium	20 - 70 ppm	64.89	16.21	37.85
Sodium	0 - 30 ppm	108.46	37.07	58.03
Soluble Salts	<1,920 ppm	1,005.00	394.00	525.00
Bicarbonate	<60 ppm	63.45	165.95	97.80
Chloride	<1,000 ppm	146.00	44.00	85.00
SAR	<4%	1.87	1.10	1.34

WESTERN FAIRWAY	Acceptable Range For Saturated Paste Sample	5 6/26/18	6 6/27/19	7 7/17/20
Nitrate - Bermudagrass	10-15 ppm	21.10	2.90	<0.5
Phosphorus	2 - 10 ppm	2.19	2.60	2.22
Potassium	40 - 100 ppm	44.67	43.25	31.54
Calcium	60 - 200 ppm	104.68	81.78	37.15
Magnesium	20 - 70 ppm	46.60	25.95	18.54
Sodium	0 - 30 ppm	89.12	61.39	38.20
Soluble Salts	<1,920 ppm	800.00	550.00	317.00
Bicarbonate	<60 ppm	112.26	151.30	86.53
Chloride	<1,000 ppm	94.00	76.00	47.00
SAR	<4%	1.82	1.51	1.28

WESTERN GREEN	Acceptable Range For Saturated Paste Sample	5 6/26/18	6 6/27/19	7 7/17/20
Nitrate - Bentgrass/Poa	1-3 ppm	6.20	<0.5	0.70
Phosphorus	2 - 7 ppm	2.69	1.02	2.29
Potassium	25-40 ppm	86.04	18.55	19.93
Calcium	50- 75 ppm	51.21	42.82	35.88
Magnesium	15-30 ppm	16.91	11.36	14.22
Sodium	0 - 30 ppm	58.53	51.42	49.13
Soluble Salts	<1,000 ppm	589.00	328.00	323.00
Bicarbonate	<60 ppm	43.93	104.94	78.75
Chloride	<200 ppm	129.00	39.00	47.00
SAR	<4%	1.81	1.80	1.76