



SOIL AND WATER CONSULTING

Data Collection Report

Spring 2020

Date of Collection: 3/4/20

Client: The Summit Club



Testing Results

	<u>3/11/19</u>	<u>3/4/20</u>
Humidity/Air Temperature	30%/66°	19%/70°
Greens Temperature	(avg)53.3°	(avg)59°
Fairway Temperature	(avg)54.6°	(avg)56.5°

WATER	Acceptable Range For Water Sample	Hole #5 3/11/19	Hole #1 3/27/20
EC	<2.25 mmhos/cm	0.98	0.84
Sodium		80.35	84.95
Calcium	20 - 60 ppm	77.87	77.90
Magnesium	10 - 25 ppm	22.97	23.66
Potassium	5 - 20 ppm	7.47	7.21
Sulfur	30 - 90 ppm	233.10	235.17
Bicarbonate	<120 ppm	169.12	177.15
Boron	<0.67 ppm	0.11	0.14
Chloride	<177 ppm	76.76	79.83

TEE	Acceptable Range For Tissue Sample	1 3/4/20
Nitrogen	3.34%-5.10%	4.94
Phosphorus	0.35% - 0.55%	0.55
Potassium	2.0% - 3.42%	2.71
Calcium	0.25%-0.5%	0.60
Magnesium	0.16%-0.32%	0.26
Sodium	229-1107 ppm	1,240.00

FAIRWAY	Acceptable Range For Tissue Sample	1 3/4/20
Nitrogen	3.34%-5.10%	4.12
Phosphorus	0.35% - 0.55%	0.46
Potassium	2.0% - 3.42%	2.39
Calcium	0.25%-0.5%	0.47
Magnesium	0.16%-0.32%	0.23
Sodium	229-1107 ppm	945.00

GREENS	Acceptable Range For Tissue Sample	1.10(avg) 3/4/20
Nitrogen	3.0%-6.5%	4.05
Phosphorus	0.2%-0.55%	0.41
Potassium	0.86%-2.55%	2.05
Calcium	0.21%-0.50%	0.66
Magnesium	0.09%-0.22%	0.23
Sodium	506- 2264 ppm	1,315.00

TEES	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/11/19	1,10(avg) 3/4/20
Organic Matter (Humus)	2 - 3%	0.75	0.46
Sulfur	12 - 16 ppm	16.67	78.50
Olsen - Phosphorus	13 - 20 ppm	17.33	32.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,665.33	2,228.00
Magnesium	>7% base saturation or at least 200 lbs/acre	13.71%/260	11.98%/206
Potassium - TEC of 0 - 35	100 ppm	47.67	70.50
Manganese	>50 ppm	11.33	16.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/11/19	1 3/4/20
Organic Matter (Humus)	2 - 3%	0.97	2.39
Sulfur	12 - 16 ppm	24.00	367.00
Olsen - Phosphorus	13 - 20 ppm	22.50	59.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,950.00	3,882.00
Magnesium	>7% base saturation or at least 200 lbs/acre	14.18%/214	12.71%/380
Potassium - TEC of 0 - 35	100 ppm	66.50	110.00
Manganese	>50 ppm	16.00	12.00

GREENS	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/11/19	1,10(avg) 3/4/20
Organic Matter (Humus)	2 - 3%	0.85	0.65
Sulfur	12 - 16 ppm	5.00	44.00
Olsen - Phosphorus	13 - 20 ppm	8.00	13.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,499.00	1,909.00
Magnesium	>7% base saturation or at least 200 lbs/acre	14.18%/166	12.48%/184
Potassium - TEC of 0 - 35	150 ppm	61.00	59.00
Manganese	>50 ppm	16.50	18.00

TEES	Acceptable Range For Saturated Paste Sample	5 3/11/19	1 3/4/20
Nitrate - Ryegrass	10 -15 ppm	0.70	<0.5
Phosphorus	2 - 10 ppm	3.82	2.88
Potassium	40 - 100 ppm	32.63	28.03
Calcium	60 - 200 ppm	108.48	76.63
Magnesium	20 - 70 ppm	35.75	28.84
Sodium	0 - 30 ppm	24.46	68.50
Soluble Salts	<1,920 ppm	520.00	529.00
Bicarbonate	<60 ppm	212.31	89.91
Chloride	<1,000 ppm	26.00	54.00
SAR	<4%	0.52	1.69

FAIRWAYS	Acceptable Range For Saturated Paste Sample	5 3/11/19	1 3/4/20
Nitrate - Ryegrass	10 -15 ppm	<0.5	<0.5
Phosphorus	2 - 10 ppm	2.21	3.48
Potassium	40 - 100 ppm	23.68	64.48
Calcium	60 - 200 ppm	67.93	399.33
Magnesium	20 - 70 ppm	24.63	93.82
Sodium	0 - 30 ppm	32.47	125.93
Soluble Salts	<1,920 ppm	366.00	1,424.00
Bicarbonate	<60 ppm	178.15	229.99
Chloride	<1,000 ppm	21.00	89.00
SAR	<4%	0.86	1.47

GREENS	Acceptable Range For Saturated Paste Sample	5,14(avg) 3/11/19	1,10(avg) 3/4/20
Nitrate - Dominator Bentgrass	1-3 ppm	<0.5	<0.5
Phosphorus	2 - 7 ppm	3.73	3.36
Potassium	25-40 ppm	22.51	17.67
Calcium	50- 75 ppm	26.65	56.97
Magnesium	15-30 ppm	9.45	15.55
Sodium	0 - 30 ppm	24.22	65.81
Soluble Salts	<1,000 ppm	219.00	404.50
Bicarbonate	<60 ppm	137.88	114.59
Chloride	<200 ppm	5.50	34.00
SAR	<4%	1.03	1.99