



SOIL AND WATER CONSULTING

Data Collection Report

Spring 2021

Date of Collection: 3/24/21

Client: The Summit Club



Testing Results

	<u>3/11/19</u>	<u>3/4/20</u>	<u>3/24/21</u>
Humidity/Air Temperature	30%/66°	19%/70°	20%/63°
Greens Temperature	(avg)53.3°	(avg)59°	(avg)49.8°
Fairway Temperature	(avg)54.6°	(avg)56.5°	(avg)52.7°

WATER	Acceptable Range For Water Sample	Hole #5 3/11/19	Hole #1 3/27/20	Hole #9 3/24/21
EC	<2.25 mmhos/cm	0.98	0.84	0.83
Sodium		80.35	84.95	84.47
Calcium	20 - 60 ppm	77.87	77.90	59.31
Magnesium	10 - 25 ppm	22.97	23.66	26.46
Potassium	5 - 20 ppm	7.47	7.21	4.69
Sulfur	30 - 90 ppm	233.10	235.17	201.33
Bicarbonate	<120 ppm	169.12	177.15	124.92
Boron	<0.67 ppm	0.11	0.14	0.11
Chloride	<177 ppm	76.76	79.83	83.57

TEE	Acceptable Range For Tissue Sample	9 3/24/21
Nitrogen	3.34%-5.10%	4.80
Phosphorus	0.35% - 0.55%	0.54
Potassium	2.0% - 3.42%	2.75
Calcium	0.25%-0.5%	0.77
Magnesium	0.16%-0.32%	0.34
Sodium	229-1107 ppm	1,090.00

FAIRWAY	Acceptable Range For Tissue Sample	9 3/24/21
Nitrogen	3.34%-5.10%	4.62
Phosphorus	0.35% - 0.55%	0.62
Potassium	2.0% - 3.42%	3.18
Calcium	0.25%-0.5%	0.62
Magnesium	0.16%-0.32%	0.29
Sodium	229-1107 ppm	1,630.00

GREENS	Acceptable Range For Tissue Sample	9,18(avg) 3/24/21
Nitrogen	3.0%-6.5%	3.18
Phosphorus	0.2%-0.55%	0.45
Potassium	0.86%-2.55%	2.02
Calcium	0.21%-0.50%	1.15
Magnesium	0.09%-0.22%	0.31
Sodium	506- 2264 ppm	2,850.00

TEES	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/11/19	1,10(avg) 3/4/20	9,18(avg) 3/24/21
Organic Matter (Humus)	2 - 3%	0.75	0.46	0.84
Sulfur	12 - 16 ppm	16.67	78.50	44.50
Olsen - Phosphorus	13 - 20 ppm	17.33	32.00	17.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,665.33	2,228.00	2,327.00
Magnesium	>7% base saturation or at least 200 lbs/acre	13.71%/260	11.98%/206	13.11%/235
Potassium - TEC of 0 - 35	100 ppm	47.67	70.50	67.50
Manganese	>50 ppm	11.33	16.00	16.50

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/11/19	1 3/4/20	9,18(avg) 3/24/21
Organic Matter (Humus)	2 - 3%	0.97	2.39	0.50
Sulfur	12 - 16 ppm	24.00	367.00	173.00
Olsen - Phosphorus	13 - 20 ppm	22.50	59.00	19.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,950.00	3,882.00	2,600.00
Magnesium	>7% base saturation or at least 200 lbs/acre	14.18%/214	12.71%/380	11.06%/219
Potassium - TEC of 0 - 35	100 ppm	66.50	110.00	91.00
Manganese	>50 ppm	16.00	12.00	15.50

GREENS	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/11/19	1,10(avg) 3/4/20	9,18(avg) 3/24/21
Organic Matter (Humus)	2 - 3%	0.85	0.65	0.64
Sulfur	12 - 16 ppm	5.00	44.00	49.00
Olsen - Phosphorus	13 - 20 ppm	8.00	13.50	5.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,499.00	1,909.00	1,583.00
Magnesium	>7% base saturation or at least 200 lbs/acre	14.18%/166	12.48%/184	14.48%/182
Potassium - TEC of 0 - 35	150 ppm	61.00	59.00	48.50
Manganese	>50 ppm	16.50	18.00	13.50

TEE	Acceptable Range For Saturated Paste Sample	1 3/4/20	9 3/24/21
Nitrate - Ryegrass	10 -15 ppm	<0.5	10.30
Phosphorus	2 - 10 ppm	2.88	3.80
Potassium	40 - 100 ppm	28.03	48.76
Calcium	60 - 200 ppm	76.63	92.64
Magnesium	20 - 70 ppm	28.84	29.83
Sodium	0 - 30 ppm	68.50	89.00
Soluble Salts	<1,920 ppm	529.00	639.00
Bicarbonate	<60 ppm	89.91	169.83
Chloride	<1,000 ppm	54.00	95.00
SAR	<4%	1.69	2.06

FAIRWAY	Acceptable Range For Saturated Paste Sample	1 3/4/20	9 3/24/21
Nitrate - Ryegrass	10 -15 ppm	<0.5	<0.5
Phosphorus	2 - 10 ppm	3.48	2.58
Potassium	40 - 100 ppm	64.48	74.73
Calcium	60 - 200 ppm	399.33	169.88
Magnesium	20 - 70 ppm	93.82	55.20
Sodium	0 - 30 ppm	125.93	129.24
Soluble Salts	<1,920 ppm	1,424.00	1,011.00
Bicarbonate	<60 ppm	229.99	212.62
Chloride	<1,000 ppm	89.00	125.00
SAR	<4%	1.47	2.20

GREEN	Acceptable Range For Saturated Paste Sample	1,10(avg) 3/4/20	9,18(avg) 3/24/21
Nitrate - Dominator Bentgrass	1-3 ppm	<0.5	<0.5
Phosphorus	2 - 7 ppm	3.36	2.66
Potassium	25-40 ppm	17.67	23.60
Calcium	50- 75 ppm	56.97	72.23
Magnesium	15-30 ppm	15.55	22.23
Sodium	0 - 30 ppm	65.81	92.28
Soluble Salts	<1,000 ppm	404.50	573.50
Bicarbonate	<60 ppm	114.59	100.79
Chloride	<200 ppm	34.00	62.50
SAR	<4%	1.99	2.43