



SOIL AND WATER CONSULTING

Data Collection Report

Spring 2019

Date of Collection: 3/11/19

Client: The Summit Club



Testing Results

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

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

	For Tissue Sample	3/11/19
Nitrogen	3.34%-5.10%	4.76
Phosphorus	0.35% - 0.55%	0.55
Potassium	2.0% - 3.42%	2.70
Calcium	0.25%-0.5%	0.60
Magnesium	0.16%-0.32%	0.22
Sodium	229-1107 ppm	0.66

FAIRWAY	Acceptable Range For Tissue Sample	5 3/11/19
Nitrogen	3.34%-5.10%	4.88
Phosphorus	0.35% - 0.55%	0.64
Potassium	2.0% - 3.42%	2.91
Calcium	0.25%-0.5%	0.55
Magnesium	0.16%-0.32%	0.23
Sodium	229-1107 ppm	868.00

GREENS	Acceptable Range For Tissue Sample	5,14(avg) 3/11/19
Nitrogen	3.0%-6.5%	4.55
Phosphorus	0.2%-0.55%	0.44
Potassium	0.86%-2.55%	1.88
Calcium	0.21%-0.50%	0.98
Magnesium	0.09%-0.22%	0.25
Sodium	506- 2264 ppm	573.00

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

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

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

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

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

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