



SOIL AND WATER CONSULTING

Data Collection Report

Fall 2018

Date of Collection: 9/28/18

Client: The Summit Club



Testing Results

	<u>9/20/17</u>	<u>9/28/18</u>
Humidity/Air Temperature	20%/95°	10%/97°
Greens Temperature	62°	(avg) 71°
Fairway Temperature	70°	(avg) 76.2°

GREENS	Acceptable Range For Tissue Sample	2,8,11 (avg) <u>9/28/18</u>
Nitrogen	3.0%-6.5%	3.94
Phosphorus	0.2%-0.55%	0.56
Potassium	0.86%-2.55%	2.13
Calcium	0.21%-0.50%	0.80
Magnesium	0.09%-0.22%	0.28
Sodium	506- 2264 ppm	2,800.00

WATER	Acceptable Range For Water Sample	Green #13 <u>9/20/17</u>	Green #11 <u>8/18/18</u>	Green #8 <u>9/28/18</u>	Wet Well <u>9/28/18</u>
EC	<2.25 mmhos/cm	0.94	0.95	0.94	0.82
Sodium		88.66	87.81	82.92	57.24
Calcium	20 - 60 ppm	81.32	69.66	66.69	67.76
Magnesium	10 - 25 ppm	22.05	20.72	19.60	24.99
Potassium	5 - 20 ppm	4.34	4.32	4.92	5.20
Nitrate	10 - 25 ppm	0.47	0.62	0.49	0.75
Phosphorus	5 - 20 ppm	<0.20	<0.20	<0.20	<0.20
Sulfur	30 - 90 ppm	222.57	190.17	178.89	160.32
Bicarbonate	<120 ppm	139.40	177.87	173.50	199.42
Boron	<0.67 ppm	0.11	0.12	0.11	0.09
Chloride	<177 ppm	85.96	86.30	89.36	60.25



TEES	Acceptable Range For Alkaline Soils Sample	Jean Material 4/17/15	8 9/20/17	2,5,6(avg) 8/18/18
Organic Matter (Humus)	2 - 3%	<0.19	0.25	0.61
Sulfur	12 - 16 ppm	15.00	90.00	59.67
Olsen - Phosphorus	13 - 20 ppm	1.00	12.00	16.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,090.00	2,718.00	2,108.67
Magnesium	>7% base saturation or at least 200 lbs/acre	14.47%/552	7.40%/146	12.36%/198.66
Potassium - TEC of 0 - 35	100 ppm	71.00	83.00	77.33
Manganese	>50 ppm	n/r	n/r	10.67

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	Jean Material 4/17/15	8 9/20/17	3,8,12(avg) 8/18/18
Organic Matter (Humus)	2 - 3%	<0.19	0.29	0.55
Sulfur	12 - 16 ppm	15.00	90.00	33.00
Olsen - Phosphorus	13 - 20 ppm	1.00	16.00	21.33
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,090.00	2,280.00	2,538.67
Magnesium	>7% base saturation or at least 200 lbs/acre	14.47%/552	8.92%/154	10.76%/204
Potassium - TEC of 0 - 35	100 ppm	71.00	80.00	74.33
Manganese	>50 ppm	n/r	n/r	6.67

GREENS	Acceptable Range For Alkaline Soils Sample	1,8,13,15 (avg) 11/5/16	8 9/20/17	2,8,11(avg) 9/28/18
Organic Matter (Humus)	2 - 3%	0.62	0.72	0.74
Sulfur	12 - 16 ppm	38.00	36.00	29.00
Olsen - Phosphorus	13 - 20 ppm	14.50	10.00	10.33
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,132.00	1,914.00	1,916.67
Magnesium	>7% base saturation or at least 200 lbs/acre	11.37%/182.5	14.09%/212	13.17%/195.33
Potassium - TEC of 0 - 35	150 ppm	66.75	66.00	69.67
Manganese	>50 ppm	n/r	n/r	14.67

TEES	Acceptable Range For Saturated Paste Sample	Jean Material 4/17/15	8,17 (avg) 9/19/17	2,5,6(avg) 8/18/18
Nitrate - Bermudagrass	10 -15 ppm		21.80	25.22
Phosphorus	2 - 10 ppm	0.06	5.38	4.97
Potassium	40 - 100 ppm	5.54	43.12	54.09
Calcium	60 - 200 ppm	44.21	119.30	153.26
Magnesium	20 - 70 ppm	23.23	26.50	45.43
Sodium	0 - 30 ppm	29.66	111.75	80.48
Soluble Salts	<1,920 ppm	360.00	884.00	892.67
Bicarbonate	<60 ppm	73.21	179.37	218.01
Chloride	<1,000 ppm	25.00	120.50	88.67
SAR	<4%	0.90	2.42	1.48

FAIRWAYS	Acceptable Range For Saturated Paste Sample	Jean Material 4/17/15	8,17 (avg) 9/19/17	3,8,12(avg) 8/18/18
Nitrate - Bermudagrass	10 -15 ppm		<0.5	<0.6
Phosphorus	2 - 10 ppm	0.06	5.38	2.82
Potassium	40 - 100 ppm	5.54	40.01	48.94
Calcium	60 - 200 ppm	44.21	95.47	167.54
Magnesium	20 - 70 ppm	23.23	21.11	48.16
Sodium	0 - 30 ppm	29.66	91.18	99.07
Soluble Salts	<1,920 ppm	360.00	724.50	902.00
Bicarbonate	<60 ppm	73.21	176.93	230.21
Chloride	<1,000 ppm	25.00	99.00	90.33
SAR	<4%	0.90	2.20	1.70

GREENS	Acceptable Range For Saturated Paste Sample	1,8,13,15(avg) 11/5/16	8,17 (avg) 9/19/17	2,8,11(avg) 9/28/18
Nitrate - Dominator Bentgrass	1-3 ppm	4.78	<0.5	<0.5
Phosphorus	2 - 7 ppm	11.24	2.12	6.84
Potassium	25-40 ppm	48.32	24.35	39.11
Calcium	50- 75 ppm	105.96	38.85	76.37
Magnesium	15-30 ppm	28.64	15.94	23.87
Sodium	0 - 30 ppm	64.85	75.28	85.73
Soluble Salts	<1,000 ppm	738.25	574.50	593.00
Bicarbonate	<60 ppm	217.20	143.99	224.52
Chloride	<200 ppm	79.50	52.00	57.33
SAR	<4%	1.45	2.56	2.20