



SOIL AND WATER CONSULTING

Data Collection Report

Fall 2018

Date of Collection: 9/28/18

Client: Coyote Springs Golf Club



Testing Results

	<u>9/22/16</u>	<u>9/19/17</u>	<u>9/28/18</u>
Humidity/Air Temperature	33%/85°	25%/85°	12%/95°
Greens Temperature	72°	62°	(avg) 59.1°
Fairway Temperature	72°	64°	(avg) 62.2°

	<u>Acceptable Range For Water Sample</u>	<u>Hole #6 9/22/16</u>	<u>Hole #8 9/19/17</u>	<u>Hole #2 9/28/18</u>
pH	6.3-6.5	n/r	8.14	7.79
EC	<2.25 mmhos/cm	0.77	0.75	0.76
Sodium		81.08	84.04	84.64
Calcium	20 - 60 ppm	47.39	49.19	40.74
Magnesium	10 - 25 ppm	21.23	20.39	18.73
Potassium	5 - 20 ppm	13.63	12.15	13.22
Sulfur	30 - 90 ppm	100.80	105.54	94.86
Bicarbonate	<120 ppm	236.13	271.53	313.88
Boron	<0.67 ppm	0.33	0.31	0.33
Chloride	<177 ppm	36.59	25.70	35.49

TEE	Acceptable Range For Tissue Sample	2 9/28/18
Nitrogen	3.34%-5.10%	3.63
Phosphorus	0.35% - 0.55%	0.56
Potassium	2.0% - 3.42%	2.41
Calcium	0.25%-0.5%	0.46
Magnesium	0.16%-0.32%	0.26
Sodium	229-1107 ppm	1,430.00

FAIRWAY	Acceptable Range For Tissue Sample	2 9/28/18
Nitrogen	3.34%-5.10%	4.14
Phosphorus	0.35% - 0.55%	0.53
Potassium	2.0% - 3.42%	2.43
Calcium	0.25%-0.5%	0.47
Magnesium	0.16%-0.32%	0.28
Sodium	229-1107 ppm	1,740.00

GREENS	Acceptable Range For Tissue Sample	11 9/28/18
Nitrogen	3.0%-6.5%	4.22
Phosphorus	0.2%-0.55%	0.57
Potassium	0.86%-2.55%	2.15
Calcium	0.21%-0.50%	0.41
Magnesium	0.09%-0.22%	0.21
Sodium	506- 2264 ppm	1,430.00

TEES	Acceptable Range For Alkaline Soils Sample	6 9/22/16	8 9/19/17	2,11(avg) 9/28/18
Organic Matter (Humus)	2 - 3%	1.04	0.76	0.94
Sulfur	12 - 16 ppm	22.00	26.00	31.00
Olsen - Phosphorus	13 - 20 ppm	16.00	13.00	16.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,230.00	4,746.00	4,449.00
Magnesium	>7% base saturation or at least 200 lbs/acre	16.67%/614	15.12%/606	15.12%/560
Potassium - TEC of 0 - 35	100 ppm	434.00	447.00	328.00
Manganese	>50 ppm	n/r	n/r	16.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	6 9/22/16	8 9/19/17	2,11(avg) 9/28/18
Organic Matter (Humus)	2 - 3%	1.32	0.57	0.89
Sulfur	12 - 16 ppm	49.00	38.00	69.00
Olsen - Phosphorus	13 - 20 ppm	59.00	22.00	25.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,964.00	4,514.00	4,423.00
Magnesium	>7% base saturation or at least 200 lbs/acre	17.28%/628	15.64%/624	15.72%/608
Potassium - TEC of 0 - 35	100 ppm	471.00	498.00	412.50
Manganese	>50 ppm	n/r	n/r	21.00

GREENS	Acceptable Range For Alkaline Soils Sample	6 9/22/16	8 9/19/17	2,11(avg) 9/28/18
Organic Matter (Humus)	2 - 3%	0.72	0.68	0.71
Sulfur	12 - 16 ppm	21.00	22.00	20.00
Olsen - Phosphorus	13 - 20 ppm	22.00	12.00	17.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,664.00	3,552.00	3,250.00
Magnesium	>7% base saturation or at least 200 lbs/acre	12.27%/340	13.375/376	12.06%/298
Potassium - TEC of 0 - 35	150 ppm	141.00	223.00	128.00
Manganese	>50 ppm	n/r	n/r	26.00

TEE	Acceptable Range For Saturated Paste Sample	8,17 (avg) 9/19/17	2 9/28/18
Nitrate - Ryegrass	5 - 10 ppm	12.60	<0.5
Phosphorus	2 - 10 ppm	3.08	3.04
Potassium	40 - 100 ppm	49.77	34.53
Calcium	60 - 200 ppm	48.51	47.06
Magnesium	20 - 70 ppm	24.36	21.37
Sodium	0 - 30 ppm	131.86	151.33
Soluble Salts	<1,920 ppm	719.00	623.00
Bicarbonate	<60 ppm	344.10	244.04
Chloride	<1,000 ppm	62.50	51.00
SAR	<4%	3.86	4.59

FAIRWAY	Acceptable Range For Saturated Paste Sample	8,17 (avg) 9/19/17	2 9/28/18
Nitrate - Ryegrass	5 - 10 ppm	17.80	<0.5
Phosphorus	2 - 10 ppm	3.50	2.85
Potassium	40 - 100 ppm	50.38	29.66
Calcium	60 - 200 ppm	43.79	37.11
Magnesium	20 - 70 ppm	20.77	16.70
Sodium	0 - 30 ppm	146.22	136.65
Soluble Salts	<1,920 ppm	686.00	525.00
Bicarbonate	<60 ppm	322.14	244.04
Chloride	<1,000 ppm	55.00	39.00
SAR	<4%	4.61	4.68

GREENS	Acceptable Range For Saturated Paste Sample	8,17 (avg) 9/19/17	2,11 (avg) 9/28/18
Nitrate - A-1 Bentgrass	1-3 ppm	19.80	<0.5
Phosphorus	2 - 7 ppm	4.60	3.53
Potassium	25-40 ppm	41.33	16.22
Calcium	50- 75 ppm	39.16	35.07
Magnesium	15-30 ppm	17.08	13.02
Sodium	0 - 30 ppm	69.25	51.36
Soluble Salts	<1,000 ppm	570.00	258.00
Bicarbonate	<60 ppm	261.13	104.94
Chloride	<200 ppm	49.00	18.50
SAR	<4%	2.33	1.93