



SOIL AND WATER CONSULTING

Data Collection Report

Fall 2019

Date of Collection: 9/23/19

Client: Coyote Springs Golf Club



Testing Results

	<u>9/19/17</u>	<u>9/28/18</u>	<u>9/23/19</u>
Humidity/Air Temperature	25%/85°	12%/95°	15%/83°
Greens Temperature	62°	(avg) 59.1°	(avg) 60°
Fairway Temperature	64°	(avg) 62.2°	(avg) 62°

	Acceptable Range For Water Sample	Hole #8 9/19/17	Hole #2 9/28/18	Hole #7 9/23/19
pH	6.3-6.5	8.14	7.79	7.97
EC	<2.25 mmhos/cm	0.75	0.76	0.77
Sodium		84.04	84.64	79.19
Calcium	20 - 60 ppm	49.19	40.74	48.13
Magnesium	10 - 25 ppm	20.39	18.73	22.59
Potassium	5 - 20 ppm	12.15	13.22	12.21
Sulfur	30 - 90 ppm	105.54	94.86	108.18
Bicarbonate	<120 ppm	271.53	313.88	306.76
Boron	<0.67 ppm	0.31	0.33	0.33
Chloride	<177 ppm	25.70	35.49	30.47

TEE	Acceptable Range For Tissue Sample	16 9/23/19
Nitrogen	3.34%-5.10%	3.60
Phosphorus	0.35% - 0.55%	0.67
Potassium	2.0% - 3.42%	2.75
Calcium	0.25%-0.5%	0.61
Magnesium	0.16%-0.32%	0.32
Sodium	229-1107 ppm	1,060.00

FAIRWAY	Acceptable Range For Tissue Sample	16 9/23/19
Nitrogen	3.34%-5.10%	4.07
Phosphorus	0.35% - 0.55%	0.65
Potassium	2.0% - 3.42%	2.82
Calcium	0.25%-0.5%	0.55
Magnesium	0.16%-0.32%	0.33
Sodium	229-1107 ppm	1,750.00

GREENS	Acceptable Range For Tissue Sample	16 9/23/19
Nitrogen	3.0%-6.5%	3.57
Phosphorus	0.2%-0.55%	0.65
Potassium	0.86%-2.55%	1.96
Calcium	0.21%-0.50%	0.82
Magnesium	0.09%-0.22%	0.34
Sodium	506- 2264 ppm	2,300.00

TEES	Acceptable Range For Alkaline Soils Sample	8 9/19/17	2,11(avg) 9/28/18	7,16(avg) 9/23/19
Organic Matter (Humus)	2 - 3%	0.76	0.94	1.69
Sulfur	12 - 16 ppm	26.00	31.00	21.00
Olsen - Phosphorus	13 - 20 ppm	13.00	16.00	16.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,746.00	4,449.00	4,991.00
Magnesium	>7% base saturation or at least 200 lbs/acre	15.12%/606	15.12%/560	15.6%/633
Potassium - TEC of 0 - 35	100 ppm	447.00	328.00	324.00
Manganese	>50 ppm	n/r	16.00	18.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	8 9/19/17	2,11(avg) 9/28/18	7,16(avg) 9/23/19
Organic Matter (Humus)	2 - 3%	0.57	0.89	1.73
Sulfur	12 - 16 ppm	38.00	69.00	32.00
Olsen - Phosphorus	13 - 20 ppm	22.00	25.00	33.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,514.00	4,423.00	4,724.00
Magnesium	>7% base saturation or at least 200 lbs/acre	15.64%/624	15.72%/608	15.9%/616
Potassium - TEC of 0 - 35	100 ppm	498.00	412.50	292.50
Manganese	>50 ppm	n/r	21.00	13.00

GREENS	Acceptable Range For Alkaline Soils Sample	8 9/19/17	2,11(avg) 9/28/18	7,16(avg) 9/23/19
Organic Matter (Humus)	2 - 3%	0.68	0.71	1.04
Sulfur	12 - 16 ppm	22.00	20.00	41.00
Olsen - Phosphorus	13 - 20 ppm	12.00	17.50	22.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,552.00	3,250.00	2,836.00
Magnesium	>7% base saturation or at least 200 lbs/acre	13.375/376	12.06%/298	12.84%/283
Potassium - TEC of 0 - 35	150 ppm	223.00	128.00	116.50
Manganese	>50 ppm	n/r	26.00	61.50

TEE	Acceptable Range For Saturated Paste Sample	2 9/28/18	16 9/23/19
Nitrate - Ryegrass	5 - 10 ppm	<0.5	<0.5
Phosphorus	2 - 10 ppm	3.04	2.56
Potassium	40 - 100 ppm	34.53	34.06
Calcium	60 - 200 ppm	47.06	60.38
Magnesium	20 - 70 ppm	21.37	27.49
Sodium	0 - 30 ppm	151.33	89.21
Soluble Salts	<1,920 ppm	623.00	515.00
Bicarbonate	<60 ppm	244.04	209.87
Chloride	<1,000 ppm	51.00	49.00
SAR	<4%	4.59	2.39

FAIRWAY	Acceptable Range For Saturated Paste Sample	2 9/28/18	16 9/23/19
Nitrate - Ryegrass	5 - 10 ppm	<0.5	<0.5
Phosphorus	2 - 10 ppm	2.85	3.03
Potassium	40 - 100 ppm	29.66	36.19
Calcium	60 - 200 ppm	37.11	56.84
Magnesium	20 - 70 ppm	16.70	24.70
Sodium	0 - 30 ppm	136.65	116.01
Soluble Salts	<1,920 ppm	525.00	550.00
Bicarbonate	<60 ppm	244.04	236.72
Chloride	<1,000 ppm	39.00	48.00
SAR	<4%	4.68	3.23

GREENS	Acceptable Range For Saturated Paste Sample	2,11 (avg) 9/28/18	7,16(avg) 9/23/19
Nitrate - A-1 Bentgrass	1-3 ppm	<0.5	<0.5
Phosphorus	2 - 7 ppm	3.53	1.57
Potassium	25-40 ppm	16.22	36.46
Calcium	50- 75 ppm	35.07	54.58
Magnesium	15-30 ppm	13.02	24.75
Sodium	0 - 30 ppm	51.36	141.99
Soluble Salts	<1,000 ppm	258.00	666.50
Bicarbonate	<60 ppm	104.94	270.89
Chloride	<200 ppm	18.50	87.00
SAR	<4%	1.93	4.01