



SOIL AND WATER CONSULTING

Data Collection Report

Summer 2019

Date of Collection: 6/17/19

Client: Coyote Springs Golf Club



Testing Results

	<u>6/28/17</u>	<u>6/22/18</u>	<u>6/17/19</u>
Humidity/Air Temperature	9%/105°	8%/108°	20%/94°
Greens Temperature	73°	65.6°	75.85°
Fairway Temperature	75°	69.2°	74.55°

WATER	Acceptable Range For Water Sample	Hole #4 6/28/17	Hole #3 6/22/18	Hole #15 6/17/19
EC	<2.25 mmhos/cm	0.79	0.77	0.76
Sodium		82.81	83.65	82.30
Calcium	20 - 60 ppm	43.43	41.84	47.37
Magnesium	10 - 25 ppm	21.22	19.12	21.71
Potassium	5 - 20 ppm	11.87	14.81	11.84
Sulfur	30 - 90 ppm	102.81	93.42	106.65
Bicarbonate	<120 ppm	258.46	325.98	295.29
Boron	<0.67 ppm	0.35	0.35	0.33
Chloride	<177 ppm	31.15	31.32	33.36

TEE	Acceptable Range For Tissue Sample	15 6/17/19
Nitrogen	3.34%-5.10%	2.09
Phosphorus	0.35% - 0.55%	0.45
Potassium	2.0% - 3.42%	1.74
Calcium	0.25%-0.5%	0.67
Magnesium	0.16%-0.32%	0.35
Sodium	229-1107 ppm	1,670.00

FAIRWAY	Acceptable Range For Tissue Sample	15 6/17/19
Nitrogen	3.34%-5.10%	2.90
Phosphorus	0.35% - 0.55%	0.61
Potassium	2.0% - 3.42%	2.12
Calcium	0.25%-0.5%	0.70
Magnesium	0.16%-0.32%	0.36
Sodium	229-1107 ppm	2,150.00

GREENS	Acceptable Range For Tissue Sample	6,15 (avg) 6/17/19
Nitrogen	3.0%-6.5%	3.34
Phosphorus	0.2%-0.55%	0.64
Potassium	0.86%-2.55%	1.87
Calcium	0.21%-0.50%	0.68
Magnesium	0.09%-0.22%	0.33
Sodium	506- 2264 ppm	1,595.00

TEES	Acceptable Range For Alkaline Soils Sample	4 6/2/17	3,12(avg) 6/22/18	6,15 (avg) 6/17/19
Organic Matter (Humus)	2 - 3%	2.49	1.30	3.02
Sulfur	12 - 16 ppm	35.00	43.00	31.50
Olsen - Phosphorus	13 - 20 ppm	14.00	24.00	21.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,572.00	4,355.00	5,164.00
Magnesium	>7% base saturation or at least 200 lbs/acre	8.24%/286	16.25%/587	18.00%/809
Potassium - TEC of 0 - 35	100 ppm	193.00	250.00	462.50
Manganese	>50 ppm	n/a	14.00	21.50

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	4 6/2/17	3,12(avg) 6/22/18	6,15 (avg) 6/17/19
Organic Matter (Humus)	2 - 3%	3.64	1.36	2.14
Sulfur	12 - 16 ppm	53.00	59.00	49.00
Olsen - Phosphorus	13 - 20 ppm	27.00	16.00	35.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,394.00	4,426.00	5,117.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.31%/290	16.262%/606	16.28%/693
Potassium - TEC of 0 - 35	100 ppm	269.00	280.00	340.00
Manganese	>50 ppm	n/a	23.50	18.00

GREENS	Acceptable Range For Alkaline Soils Sample	4 6/2/17	3,12(avg) 6/22/18	6,15 (avg) 6/17/19
Organic Matter (Humus)	2 - 3%	0.62	0.64	0.94
Sulfur	12 - 16 ppm	11.00	22.00	31.00
Olsen - Phosphorus	13 - 20 ppm	11.00	22.50	17.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,232.00	3,407.00	3,990.00
Magnesium	>7% base saturation or at least 200 lbs/acre	8.62%/162	12.35%/324	12.60%/383
Potassium - TEC of 0 - 35	150 ppm	370.00	172.00	151.50
Manganese	>50 ppm	n/a	24.50	55.50

TEE	Acceptable Range For Saturated Paste Sample	3 6/22/18	15 6/17/19
Nitrate -Ryegrass	5 - 10 ppm	<0.5	<0.5
Phosphorus	2 - 10 ppm	3.03	2.72
Potassium	40 - 100 ppm	43.90	44.32
Calcium	60 - 200 ppm	57.85	65.87
Magnesium	20 - 70 ppm	22.82	34.74
Sodium	0 - 30 ppm	127.22	123.56
Soluble Salts	<1,920 ppm	675.00	522.00
Bicarbonate	<60 ppm	307.49	180.59
Chloride	<1,000 ppm	68.00	24.00
SAR	<4%	3.58	3.06

FAIRWAY	Acceptable Range For Saturated Paste Sample	3 6/22/18	15 6/17/19
Nitrate - Ryegrass	5 - 10 ppm	<0.5	<0.5
Phosphorus	2 - 10 ppm	1.19	3.80
Potassium	40 - 100 ppm	44.79	36.74
Calcium	60 - 200 ppm	48.00	70.00
Magnesium	20 - 70 ppm	23.72	34.83
Sodium	0 - 30 ppm	161.78	107.92
Soluble Salts	<1,920 ppm	740.00	625.00
Bicarbonate	<60 ppm	287.97	287.97
Chloride	<1,000 ppm	70.00	40.00
SAR	<4%	4.77	2.63

GREENS	Acceptable Range For Saturated Paste Sample	3,12 (avg) 6/22/18	6,15 (avg) 6/17/19
Nitrate-A1 Bentgrass	1-3 ppm	<0.5	<0.5
Phosphorus	2 - 7 ppm	5.83	1.93
Potassium	25-40 ppm	34.15	26.45
Calcium	50- 75 ppm	39.27	51.23
Magnesium	15-30 ppm	12.44	19.79
Sodium	0 - 30 ppm	63.17	82.35
Soluble Salts	<1,000 ppm	393.00	373.50
Bicarbonate	<60 ppm	212.32	120.80
Chloride	<200 ppm	30.00	34.50
SAR	<4%	2.26	2.48