



Client: Coyote Springs Golf Club

Fall 2024 Report

	<u>9/28/24</u>	<u>10/3/24</u>
Humidity/Air Temperature	12%/95°	20%/100°
Greens Temperature	(avg)59.1°	(avg)63°
Fairway Temperature	(avg)62.2°	(avg)65°

WATER	Acceptable Range For Water Sample	Hole #2 9/28/18	Hole #11 10/3/24
EC	<2.25 mmhos/cm	0.76	0.72
Sodium		84.64	86.16
Calcium	20 - 60 ppm	40.74	41.25
Magnesium	10 - 25 ppm	18.73	19.93
Potassium	5 - 20 ppm	13.22	10.73
Sulfur	30 - 90 ppm	94.86	91.85
Bicarbonate	<120 ppm	313.88	316.03
Boron	<0.67 ppm	0.33	0.36
Chloride	<177 ppm	35.49	37.28



SOIL AND WATER CONSULTING

TEE	Acceptable Range For Tissue Sample	2 10/3/24
Nitrogen	3.34%-5.10%	3.91
Phosphorus	0.35% - 0.55%	0.20
Potassium	2.0% - 3.42%	0.80
Calcium	0.25%-0.5%	0.25
Magnesium	0.16%-0.32%	0.13
Sodium	229-1107 ppm	588.70

FAIRWAY	Acceptable Range For Tissue Sample	2 10/3/24
Nitrogen	3.34%-5.10%	4.76
Phosphorus	0.35% - 0.55%	0.22
Potassium	2.0% - 3.42%	0.93
Calcium	0.25%-0.5%	0.27
Magnesium	0.16%-0.32%	0.12
Sodium	229-1107 ppm	775.90

GREENS	Acceptable Range For Tissue Sample	11 10/3/24
Nitrogen	3.0%-6.5%	1.18
Phosphorus	0.2%-0.55%	0.06
Potassium	0.86%-2.55%	0.18
Calcium	0.21%-0.50%	3.49
Magnesium	0.09%-0.22%	0.33
Sodium	506- 2264 ppm	413.90

TEES	Acceptable Range For Alkaline Soils Sample	2,11(avg) 9/28/18	2,11(avg) 10/3/24
Organic Matter (Humus)	2 - 3%	0.94	2.19
Sulfur	12 - 16 ppm	31.00	43.00
Olsen - Phosphorus	13 - 20 ppm	16.00	23.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,449.00	4,683.00
Magnesium	>7% base saturation or at least 200 lbs/acre	15.12%/560	17.93%/743
Potassium - TEC of 0 - 35	100 ppm	328.00	371.50
Manganese	>50 ppm	16.00	20.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	2,11(avg) 9/28/18	2,11(avg) 10/3/24
Organic Matter (Humus)	2 - 3%	0.89	1.52
Sulfur	12 - 16 ppm	69.00	39.50
Olsen - Phosphorus	13 - 20 ppm	25.00	19.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,423.00	4,518.00
Magnesium	>7% base saturation or at least 200 lbs/acre	15.72%/608	16.83%/661
Potassium - TEC of 0 - 35	100 ppm	412.50	370.50
Manganese	>50 ppm	21.00	18.50

GREENS	Acceptable Range For Alkaline Soils Sample	2,11(avg) 9/28/18	2,11(avg) 10/3/24
Organic Matter (Humus)	2 - 3%	0.71	1.15
Sulfur	12 - 16 ppm	20.00	39.50
Olsen - Phosphorus	13 - 20 ppm	17.50	11.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,250.00	3,101.00
Magnesium	>7% base saturation or at least 200 lbs/acre	12.06%/298	12.58%/309
Potassium - TEC of 0 - 35	150 ppm	128.00	149.50
Manganese	>50 ppm	26.00	49.50

TEE	Acceptable Range For Saturated Paste Sample	2 9/28/18	2 10/3/24
Nitrate - Ryegrass	10 -15 ppm	<0.5	2.70
Phosphorus	2 - 10 ppm	3.04	2.19
Potassium	40 - 100 ppm	34.53	28.13
Calcium	60 - 200 ppm	47.06	47.54
Magnesium	20 - 70 ppm	21.37	18.95
Sodium	0 - 30 ppm	151.33	128.14
Soluble Salts	<1,920 ppm	623.00	556.00
Bicarbonate	<60 ppm	244.04	298.57
Chloride	<1,000 ppm	51.00	66.00
SAR	<4%	4.59	3.97

FAIRWAY	Acceptable Range For Saturated Paste Sample	2 9/28/18	2 10/3/24
Nitrate - Ryegrass	10 -15 ppm	<0.5	5.00
Phosphorus	2 - 10 ppm	2.85	2.20
Potassium	40 - 100 ppm	29.66	24.38
Calcium	60 - 200 ppm	37.11	40.55
Magnesium	20 - 70 ppm	16.70	16.03
Sodium	0 - 30 ppm	136.65	106.43
Soluble Salts	<1,920 ppm	525.00	486.00
Bicarbonate	<60 ppm	244.04	257.05
Chloride	<1,000 ppm	39.00	53.00
SAR	<4%	4.68	3.58

GREEN	Acceptable Range For Saturated Paste Sample	2,11(avg) 9/28/18	2,11(avg) 10/3/24
Nitrate -A-1/A-4 Bentgrass	1-3 ppm	<0.5	<0.5
Phosphorus	2 - 7 ppm	3.53	2.58
Potassium	25-40 ppm	16.22	30.28
Calcium	50- 75 ppm	35.07	35.74
Magnesium	15-30 ppm	13.02	12.20
Sodium	0 - 30 ppm	51.36	91.07
Soluble Salts	<1,000 ppm	258.00	475.50
Bicarbonate	<60 ppm	104.94	230.98
Chloride	<200 ppm	18.50	48.50
SAR	<4%	1.93	3.36



No applications are needed currently.

Comments and Next Level Cultural Practices

- The Organic Matter increase in the greens compared to 6 years ago, is something I would be concerned with. Although the percentage is not high, it all seems to be in the top couple of inches. A-1/A-4 are thatchy bentgrasses. They are difficult to keep control of. However, I would increase verti-cutting and topdressing in 2025. even something more aggressive like a Graden with sand injection.
- I did notice black layer in a few greens plugs, during sample collection- always a sign of poor drainage and things getting “stuck” in that layer. I would recommend we do core sampling on 1 or 2 greens. I have no record of them being done previously. They would help in evaluating any layers in the green’s profile and look at your current topdressing sand to make sure it is still the correct one to use.
- I did sample one cart path edge area on #2. I believe most areas around the cart path edges are traffic/compaction related and tree issues. In most of the thinner areas, a mesquite tree was nearby. I think roto-tilling the areas, amending with a gypsum based organic material and root pruning nearby will all positively change those cart path edge issues. We did discuss using bermudagrass. There are some areas of bermudagrass contamination on the course already. I lean towards staying with ryegrass where areas are repaired. The sodium levels in the “Rough 2” sample is nearly double the fairways and tees. That is another sign of compaction where the soil structure is compromised and either grass type may struggle.

