Client: El Caballero Country Club

Spring 2025 Report

	3/18/24	4/23/25
Humidity/Air Temperature	30%/75°	50%/65°
Green Temperature	(avg)58°	(avg)60°
Fairway Temperature	(avg)60°	(avg)60°

WATER	**Acceptable Range For Water Sample**	**Hole #14 3/18/24**	**Hole #5 4/23/25**
pH	6.0-6.5	7.78	8.03
EC	<2.25 mmhos/cm	0.46	0.49
Sodium		46.94	45.47
Calcium	20 - 60 ppm	33.51	32.38
Magnesium	10 - 25 ppm	8.75	12.68
Potassium	5 - 20 ppm	4.33	3.00
Sulfur	30 - 90 ppm	68.02	77.99
Bicarbonate	<120 ppm	138.48	110.58
Boron	<0.67 ppm	0.37	0.27
Chloride	<177 ppm	37.96	41.02

SOIL AND WATER CONSULTING

TEES	Acceptable Range For Alkaline Soils Sample	3/10/16	5,13(avg) 4/23/25
Organic Matter (Humus)	2 - 3%	n/r	2.32
Sulfur	12 - 16 ppm	n/r	85.50
Olsen - Phosphorus	13 - 20 ppm	n/r	24.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	n/r	3,192.00
Magnesium	>7% base saturation or at least 200 lbs/acre	n/r	8.63%/206
Potassium - TEC of 0 - 35	100 ppm	n/r	168.50
Manganese	>50 ppm	n/r	29.50

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	5 3/10/16	5,13(avg) 4/23/25
Organic Matter (Humus)	2 - 3%	7.43	5.80
Sulfur	12 - 16 ppm	60.00	62.00
Olsen - Phosphorus	13 - 20 ppm	76.00	40.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,234.00	4,954.00
Magnesium	>7% base saturation or at least 200 lbs/acre	12.86%/564	12.42%/498
Potassium - TEC of 0 - 35	100 ppm	466.00	363.00
Manganese	>50 ppm	n/r	29.50

GREENS	Acceptable Range For Alkaline Soils Sample	5 3/10/16	1,5,13,15, PG(avg) 4/23/25
Organic Matter (Humus)	2 - 3%	0.81	0.68
Sulfur	12 - 16 ppm	16.00	13.00
Olsen - Phosphorus	13 - 20 ppm	21.00	9.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,242.00	1,298.00
Magnesium	>7% base saturation or at least 200 lbs/acre	17.702%/198	132.00
Potassium - TEC of 0 - 35	150 ppm	113.00	70.50
Manganese	>50 ppm	n/r	24.50

TEES	Acceptable Range For Saturated Paste Sample	4 3/18/24	5 4/23/25
Nitrate-Bermudagrass	10 -15 ppm	<0.5	11.90
Phosphorus	2 - 10 ppm	2.15	1.48
Potassium	40 - 100 ppm	23.98	49.08
Calcium	60 - 200 ppm	84.77	154.01
Magnesium	20 - 70 ppm	18.54	19.78
Sodium	0 - 30 ppm	25.27	54.65
Soluble Salts	<1,920 ppm	364.00	638.00
Bicarbonate	<60 ppm	201.76	154.26
Chloride	<1,000 ppm	22.00	40.00
SAR	<4%	0.65	1.10

FAIRWAYS	Acceptable Range For Saturated Paste Sample	4 3/18/24	5 4/23/25
Nitrate-Bermudagrass	10 -15 ppm	38.30	14.10
Phosphorus	2 - 10 ppm	3.09	2.33
Potassium	40 - 100 ppm	48.55	49.07
Calcium	60 - 200 ppm	125.02	76.27
Magnesium	20 - 70 ppm	20.75	13.09
Sodium	0 - 30 ppm	20.78	44.00
Soluble Salts	<1,920 ppm	566.00	444.00
Bicarbonate	<60 ppm	217.12	169.86
Chloride	<1,000 ppm	18.00	35.00
SAR	<4%	0.45	1.22

GREENS	Acceptable Range For Saturated Paste Sample	4,14(avg) 3/18/24	5,13(avg) 4/23/25
Nitrate - Pure Destinction Bentgrass	1-3 ppm	<0.5	0.95
Phosphorus	2 - 7 ppm	1.83	4.30
Potassium	25-40 ppm	9.97	24.48
Calcium	50- 75 ppm	22.31	20.80
Magnesium	15-30 ppm	3.19	4.22
Sodium	0 - 30 ppm	7.40	31.45
Soluble Salts	<1,000 ppm	109.00	214.00
Bicarbonate	<60 ppm	59.14	63.97
Chloride	<200 ppm	4.50	23.00
SAR	<4%	0.40	1.65

Nutrient Deficiencies

		P	Mg	K	Mn
GREEN	5	7	124	74	20
GREEN	13	11	140	67	29
GREEN	15	6	116	56	31
GREEN	1	9	116	76	30
GREEN	ENTERTAIN	10	146	64	28

Potassium/Magnesium can be added in the form of 0-0-22 at a rate of 4 pounds of product 1,000 sq ft monthly

Manganese can be added in the form of Manganese Oxide or sulfate at a rate of 3 pounds of product per 1,000 sq ft

Comments and Next Level Cultural Practices

- Manganese is something to work on with the greens. The best time to do it in your area is October through May. There is also a current shortage of granular products. Spraying something like Tech-magnum and watering in could be done in the Summer but not when the air temperatures are much above 80 degrees.
- The entertainment green was sampled just to compare with the greens on the course. It is going to be renovated soon, but the 0-0-22 applications could be used until that time. The manganese would be a moot point.
- We discussed that the greens seem to have a hard time taking in irrigation cycles. There is a top “layer” (sort of like a sponge) that when too dry, it will be hard to get the water to penetrate. I mentioned that more aggressive cultural practices will be needed as the greens age, in order to keep them as good as they are currently. Drill and Fill(to have channels of coarse sand at the top of the green’s surface)and Graden(for the top layer)
- My opinion is, the greens got off to a slow start during the grow-in. If the occasional major disruption to the profile or turf itself is pushed to another time, there could be issues that you would not expect for younger greens.