EL DORADO GOLF & BEACH CLUB

Client: El Dorado Golf and Beach Club

Spring 2024 Report

	4/19/22	3/6/23	2/19/24
Humidity/Air Temperature	75%/75°	35%/83°	40%/80°
Greens Temperature	(avg)70.7°	(avg)62.3°	(avg)60°
Fairways Temperature	(avg)73.8°	(avg)64°	(avg)62°

WATER	Acceptable Range For Water Sample	Hole #17 5/1/22	Hole #10 3/6/23	Hole #14 2/19/24
pH	6.50	6.11	6.99	6.51
EC	<2.25 mmhos/cm	1.46	1.04	0.88
Sodium		195.50	130.71	126.10
Calcium	20 - 60 ppm	41.95	38.30	38.81
Magnesium	10 - 25 ppm	17.16	9.08	9.13
Potassium	5 - 20 ppm	17.17	19.68	17.58
Phosphorus	0.1 - 0.4 ppm	5.08	4.79	6.41
Nitrate	5 - 50 ppm	16.93	17.11	13.86
Sulfur	30 - 90 ppm	82.50	97.58	88.88
Bicarbonate	<120 ppm	169.18	181.88	141.34
Boron	<0.67 ppm	0.34	0.20	0.23
Chloride	<177 ppm	259.06	142.80	123.91

TEES	Acceptable Range For Alkaline Soils Sample	2,6,15(avg) 4/19/22	4,10,13(avg) 3/6/23	7,12(avg) 2/19/24
Organic Matter (Humus)	2 - 3%	1.51	1.10	1.74
Sulfur	12 - 16 ppm	22.00	41.67	19.00
Olsen - Phosphorus	13 - 20 ppm	31.67	24.33	39.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,725.33	1,662.00	1,645.00
Magnesium	>7% base saturation or at least 200 lbs/acre	15.11%/230.67	15.56%/240	12.83%/188
Potassium - TEC of 0 - 35	100 ppm	102.67	91.33	93.50
Manganese	>50 ppm	99.00	142.67	150.50

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	2,6,15(avg) 4/19/22	4,10,13(avg) 3/6/23	7,12,14(avg) 2/19/24
Organic Matter (Humus)	2 - 3%	1.82	2.24	2.09
Sulfur	12 - 16 ppm	65.67	80.00	76.33
Olsen - Phosphorus	13 - 20 ppm	51.33	54.00	63.33
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,826.67	3,005.33	2,714.00
Magnesium	>7% base saturation or at least 200 lbs/acre	11.87%/290.66	13.78%/380.66	13.55%/316
Potassium - TEC of 0 - 35	100 ppm	135.33	189.00	155.33
Manganese	>50 ppm	105.33	165.00	159.33

GREENS	Acceptable Range For Alkaline Soils Sample	2,6(avg) 4/19/22	4,10,13(avg) 3/6/23	7,12,14(avg) 2/19/24
Organic Matter (Humus)	2 - 3%	1.36	1.46	1.61
Sulfur	12 - 16 ppm	40.00	70.50	44.33
Olsen - Phosphorus	13 - 20 ppm	48.00	47.50	62.33
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,403.00	1,596.00	1,580.67
Magnesium	>7% base saturation or at least 200 lbs/acre	14.23%/198	17.56%/270.66	11.54%/161.33
Potassium - TEC of 0 - 35	150 ppm	161.50	170.50	114.00
Manganese	>50 ppm	127.00	187.00	239.67

TEE	Acceptable Range For Saturated Paste Sample	2 4/19/22	4 3/6/23	12,14(avg) 2/19/24
Nitrate - 419 bermudagrass	10 -15 ppm	6.40	4.20	4.35
Phosphorus	2 - 10 ppm	1.53	2.85	4.55
Potassium	40 - 100 ppm	19.71	41.90	11.69
Calcium	60 - 200 ppm	25.77	52.10	20.03
Magnesium	20 - 70 ppm	6.14	19.47	5.02
Sodium	0 - 30 ppm	99.15	269.84	79.95
Soluble Salts	<1,920 ppm	384.00	1,023.00	326.50
Bicarbonate	<60 ppm	107.53	48.33	71.48
Chloride	<1,000 ppm	77.00	278.00	67.50
SAR	<4%	4.56	8.10	4.15

FAIRWAY	Acceptable Range For Saturated Paste Sample	2 4/19/22	4,13(avg) 3/6/23	12,14(avg) 2/19/24
Nitrate - 419 bermudagrass	10 -15 ppm	9.80	1.45	9.45
Phosphorus	2 - 10 ppm	1.67	2.65	4.26
Potassium	40 - 100 ppm	42.86	32.43	57.88
Calcium	60 - 200 ppm	79.56	57.55	93.45
Magnesium	20 - 70 ppm	19.40	15.28	23.90
Sodium	0 - 30 ppm	299.24	246.20	380.63
Soluble Salts	<1,920 ppm	1,107.00	844.50	1,334.50
Bicarbonate	<60 ppm	180.15	146.63	224.08
Chloride	<1,000 ppm	330.00	272.50	505.50
SAR	<4%	7.80	7.19	9.03

GREENS	Acceptable Range For Saturated Paste Sample	2 4/19/22	4,13(avg) 3/6/23	12,14(avg) 2/19/24
Nitrate - Tifeagle Bermudagrass	1-3 ppm	2.50	2.15	4.70
Phosphorus	2 - 7 ppm	0.95	2.87	5.07
Potassium	25-40 ppm	46.73	48.56	20.90
Calcium	50- 75 ppm	41.95	54.08	27.50
Magnesium	15-30 ppm	10.90	18.06	5.04
Sodium	0 - 30 ppm	221.03	301.83	101.29
Soluble Salts	<1,000 ppm	799.00	1,053.50	449.00
Bicarbonate	<60 ppm	38.34	117.62	38.26
Chloride	<200 ppm	221.00	251.00	83.00
SAR	<4%	7.86	8.96	4.66

SOIL AND WATER CONSULTING

	Green #1 0-6.5"	Green #9 0-6.5"	Green #4 0-6.5"	Green #10 0-6.5"	Green #18 0-6.5"	Green #6/13(avg) 2022	Topdressing Sand 4/19/2022
Clay	3.00	2.90	4.60	2.60	1.50	3.55	0.60
Silt	1.80	2.70	2.50	5.00	3.70	2.95	1.10
Sand	94.40	94.30	92.80	92.20	94.10	92.70	98.30
Gravel	0.80	0.10	0.10	0.20	0.70	0.80	0.00
Organic Material	2.21	1.38	1.78	1.77	1.79	1.65	<0.10
Sieve #:							
Fine Gravel 10	0.80	0.10	0.10	0.20	0.70	0.80	0.00
Very Coarse Sand 18	2.50	3.10	3.30	3.00	4.30	2.65	0.30
Coarse Sand 35	21.50	24.30	21.80	23.20	22.00	22.35	26.10
Medium Sand 60	58.60	49.30	53.80	55.20	57.50	56.50	70.70
Fine Sand 100	7.60	10.80	8.00	7.60	6.90	7.05	1.00
Very Fine Sand 140	2.40	3.70	3.60	2.70	2.00	2.50	0.10
Very Fine Sand 270	1.80	3.00	2.40	0.50	1.40	1.60	0.10

Green #1

Green #9

Nutrient Issues

		Ca(%)	Mg(%)	K(%)	Na(%)
TEE	7	66.64	10.11	4.67	6.18
TEE	12	69.30	15.56	3.33	7.77
TEE	14	72.45	13.55	2.64	7.02
FAIRWAY	7	67.40	16.17	4.58	8.55
FAIRWAY	12	69.15	12.42	3.96	11.04
FAIRWAY	14	65.24	11.54	3.51	16.51
GREEN	7	69.04	12.25	4.92	9.69
GREEN	12	68.54	12.00	5.31	9.79
GREEN	14	67.53	10.37	4.95	9.56
Desired		**68%**	**15%**	**5%**	**<2.5%**

Calcium can be added to the greens in the form of gypsum at a rate of 10 pounds of product per 1,000 sq ft in March, April and May.
Followed each time by
Potassium can be added to the greens in the form of 0-0-50 at a rate of 2 pounds of product per 1,000 sq ft in March, April and May.

Comments and Next Level Cultural Practices

- Sodium in the soil is still the main concern on the lab tests. However, When the weather and soil temperatures are prime for growing bermudagrass, you have little to be worried about with regards to nutrient levels
- I want to discuss Manganese levels rising. Probably no downside there, but I would like to know what may be applied that changes it
- The Physical analysis of the greens does show a slightly higher sand content in the top 6.5”. We have collected core samples on 7 of the greens. They do seem consistent which makes decisions easier to make for summer time cultural practices