



Client: Los Robles Greens Golf Course
 Spring 2024 Report

	<u>3/9/22</u>	<u>3/9/23</u>	<u>3/19/24</u>
Humidity/Air Temperature	40%/69°	50%/65°	50%/71°
Greens Temperature	(avg)42.41°	(avg)45.8°	(avg)58°
Fairway Temperature	(avg)47.95°	(avg)47.3°	(avg)57°

WATER	Acceptable Range For Water Sample	Hole #11 3/9/22	Hole #14 3/9/23	Hole #12 3/19/24
pH	6.50	8.71	7.23	7.34
EC	<2.25 mmhos/cm	0.53	0.82	0.66
Sodium		72.89	54.59	44.97
Calcium	20 - 60 ppm	34.04	62.23	50.83
Magnesium	10 - 25 ppm	9.79	40.94	28.95
Potassium	5 - 20 ppm	2.52	14.73	4.68
Sulfur	30 - 90 ppm	85.77	203.92	134.88
Bicarbonate	<120 ppm	96.47	207.36	182.74
Boron	<0.67 ppm	0.17	0.12	0.12
Chloride	<177 ppm	66.55	74.55	59.91

TEE	Acceptable Range For Tissue Sample	12 3/19/24
Nitrogen	3.34%-5.10%	4.66
Phosphorus	0.35% - 0.55%	0.54
Potassium	2.0% - 3.42%	2.86
Calcium	0.25%-0.5%	0.44
Magnesium	0.16%-0.32%	0.22
Sodium	229-1107 ppm	467.80

FAIRWAY	Acceptable Range For Tissue Sample	12 3/19/24
Nitrogen	3.34%-5.10%	4.45
Phosphorus	0.35% - 0.55%	0.45
Potassium	2.0% - 3.42%	2.59
Calcium	0.25%-0.5%	0.38
Magnesium	0.16%-0.32%	0.23
Sodium	229-1107 ppm	500.90

GREENS	Acceptable Range For Tissue Sample	12 3/19/24
Nitrogen	3.0%-6.5%	4.63
Phosphorus	0.2%-0.55%	0.59
Potassium	0.86%-2.55%	2.44
Calcium	0.21%-0.50%	0.55
Magnesium	0.09%-0.22%	0.22
Sodium	506- 2264 ppm	264.20

TEES	Acceptable Range For Alkaline Soils Sample	12,13(avg) 3/16/21	12 3/19/24
Organic Matter (Humus)	2 - 3%	n/r	4.27
Sulfur	12 - 16 ppm	n/r	23.00
Olsen - Phosphorus	13 - 20 ppm	n/r	53.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	n/r	5,052.00
Magnesium	>7% base saturation or at least 200 lbs/acre	n/r	24.31%/1,108
Potassium - TEC of 0 - 35	100 ppm	n/r	157.00
Manganese	>50 ppm	n/r	44.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	12,13(avg) 3/16/21	12,13(avg) 3/19/24
Organic Matter (Humus)	2 - 3%	7.72	10.24
Sulfur	12 - 16 ppm	104.50	25.50
Olsen - Phosphorus	13 - 20 ppm	26.50	22.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,818.00	4,998.00
Magnesium	>7% base saturation or at least 200 lbs/acre	29.05%/1,784	27.54%/1,438
Potassium - TEC of 0 - 35	100 ppm	517.50	425.50
Manganese	50-80 ppm	81.00	54.00

GREENS	Acceptable Range For Alkaline Soils Sample	12,13(avg) 3/16/21	12,13(avg) 3/19/24
Organic Matter (Humus)	2 - 3%	1.19	1.47
Sulfur	12 - 16 ppm	18.75	18.50
Olsen - Phosphorus	13 - 20 ppm	19.50	20.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,537.00	1,422.00
Magnesium	>7% base saturation or at least 200 lbs/acre	15.75%/200.5	25.95%/340
Potassium - TEC of 0 - 35	150 ppm	95.25	57.00
Manganese	50-80 ppm	56.50	104.00

TEE	Acceptable Range For Saturated Paste Sample	12 3/16/21	12 3/19/24
Nitrate - Ryegrass	5 - 10 ppm	n/r	1.00
Phosphorus	2 - 10 ppm	n/r	2.98
Potassium	40 - 100 ppm	n/r	13.57
Calcium	60 - 200 ppm	n/r	50.00
Magnesium	20 - 70 ppm	n/r	18.79
Sodium	0 - 30 ppm	n/r	56.55
Soluble Salts	<1,920 ppm	n/r	351.00
Bicarbonate	<60 ppm	n/r	151.80
Chloride	<1,000 ppm	n/r	32.00
SAR	<4%	n/r	1.74

FAIRWAY	Acceptable Range For Saturated Paste Sample	12 3/16/21	12 3/19/24
Nitrate	10 -15 ppm	22.90	13.50
Phosphorus	2 - 10 ppm	2.64	4.46
Potassium	40 - 100 ppm	80.83	47.61
Calcium	60 - 200 ppm	58.03	33.93
Magnesium	20 - 70 ppm	29.13	17.22
Sodium	0 - 30 ppm	75.82	26.91
Soluble Salts	<1,920 ppm	586.00	349.00
Bicarbonate	<60 ppm	174.00	93.24
Chloride	<1,000 ppm	118.00	49.00
SAR	<4%	2.03	0.94

GREENS	Acceptable Range For Saturated Paste Sample	2,13(avg) 3/16/21	12,13(avg) 3/19/24
Nitrate- Bentgrass/poa	1-3 ppm	<0.5	<0.5
Phosphorus	2 - 7 ppm	1.54	6.52
Potassium	25-40 ppm	43.17	11.83
Calcium	50- 75 ppm	54.71	38.54
Magnesium	15-30 ppm	15.79	19.83
Sodium	0 - 30 ppm	46.78	19.10
Soluble Salts	<1,000 ppm	357.50	249.00
Bicarbonate	<60 ppm	153.27	81.66
Chloride	<200 ppm	35.75	17.50
SAR	<4%	1.44	0.62

Nutrient Deficiencies

		P	K
TEE	12	53	157
TEE	13	7	73
GREEN	12	19	60
GREEN	13	22	54
GREEN	NURSERY	20	28

Potassium can be added in the form of 0-0-50 at a rate of 2 pounds of product per 1,000 sq ft two times in the next four months.

Comments and Next Level Cultural Practices

- The Nursery green can be treated the same as the greens on the course with regards to their need for Potassium. I sampled that because we have never tested it before.
- Phosphorus levels on the greens has increased on all testing and shows acceptable levels.
- As we have discussed, you will spray more nutrients than apply with by spreader, due to time and staffing. Continue with the program you are on, but as far as Potassium, the best product is still 0-0-50. Spraying that can give the plant what it needs in a “sprots drink” sort of way, but the granular applications will be more “meat and potato” as far as the turf’s food.
- The course was far ahead of where it usually is for this time of year due to the rainy Winter. Too much does cause problems but, its benefits do give an early green-up and I saw that all throughout my trip.