



SOIL AND WATER CONSULTING

Data Collection Report

Spring 2023

Date of Collection: 3/7/23

Client: Seven Oaks Country Club



Testing Results

	<u>3/7/22</u>	<u>3/7/23</u>
Humidity/Air Temperature	40%/66°	60%/57°
Greens Temperature	(avg)42.65°	(avg)50°
Fairway Temperature	(avg)48.06°	(avg)51°

WATER	Acceptable Range For Water Sample	Lakes Hole #6 <u>3/7/22</u>	Islands Hole #8 <u>3/7/23</u>
pH	6.3-6.5	6.90	6.87
EC	<2.25 mmhos/cm	0.19	0.22
Sodium		20.30	19.11
Calcium	20 - 60 ppm	21.44	24.00
Magnesium	10 - 25 ppm	0.77	<0.20
Potassium	5 - 20 ppm	1.47	2.41
Sulfur	30 - 90 ppm	13.51	13.60
Bicarbonate	<120 ppm	99.35	104.74
Boron	<0.67 ppm	0.12	0.11
Chloride	<177 ppm	9.19	6.98

TEES	Acceptable Range For Alkaline Soils Sample	Oaks 8 3/10/17	Oaks 8 3/7/23	Lakes8 3/10/17	Lakes 8 3/7/23	Islands 8 3/10/17	Islands 8 3/7/23
Organic Matter (Humus)	2 - 3%	n/r	4.06	n/r	2.98	n/r	3.30
Sulfur	12 - 16 ppm	n/r	15.00	n/r	19.00	n/r	15.00
Olsen - Phosphorus	13 - 20 ppm	n/r	7.00	n/r	4.00	n/r	11.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	n/r	3,222.00	n/r	3,252.00	n/r	3,260.00
Magnesium	>7% base saturation or at least 200 lbs/acre	n/r	9.07%/220	n/r	11.19%/280	n/r	10.99%/276
Potassium - TEC of 0 - 35	100 ppm	n/r	165.00	n/r	143.00	n/r	136.00
Manganese	>50 ppm	n/r	31.00	n/r	22.00	n/r	35.00
FAIRWAYS	Acceptable Range For Standard Soil Sample	Oaks 8 3/10/17	Oaks 8 3/7/23	Lakes 8 3/10/17	Lakes 8 3/7/23	Islands 8 3/10/17	Islands 8 3/7/23
Organic Matter (Humus)	2 - 3%	4.07	3.74	2.74	3.40	1.62	3.09
Sulfur	50 - 100 ppm	36.00	38.00	15.00	31.00	15.00	19.00
Mehlich III - Phosphorus	350 lbs/acre	453.00	385.00	92.00	197.00	417.00	627.00
Calcium	68%	68.13	67.49	76.64	72.49	71.55	67.63
Magnesium	15%	6.96	12.00	12.69	12.58	10.87	10.81
Potassium	5%	7.02	6.50	2.67	2.93	9.66	7.01
Sodium	<2%	2.27	3.24	3.85	2.77	3.95	2.11
Boron	1 - 1.5 ppm	0.79	1.56	0.76	1.08	0.76	1.09
Iron	120 ppm	293.00	514.00	179.00	405.00	253.00	345.00
Manganese	50 ppm	19.00	19.00	32.00	22.00	17.00	21.00
GREENS	Acceptable Range For Alkaline Soils Sample	Oaks 8 3/10/17	Oaks 8 3/7/23	Lakes8 3/10/17	Lakes 8 3/7/23	Islands 8 3/10/17	Islands 8 3/7/23
Organic Matter (Humus)	2 - 3%	1.10	1.08	0.59	0.62	1.00	1.19
Sulfur	12 - 16 ppm	7.00	8.00	8.00	5.00	10.00	8.00
Olsen - Phosphorus	13 - 20 ppm	25.00	28.00	19.00	4.00	39.00	14.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,714.00	2,028.00	1,080.00	848.00	2,346.00	2,414.00
Magnesium	>7% base saturation or at least 200 lbs/acre	14.49%/200	8.21%/128	17.06%/158	24.88%/200	12.85%/240	6.22%/112
Potassium - TEC of 0 - 35	150 ppm	115.00	206.00	92.00	64.00	196.00	194.00
Manganese	>50 ppm	n/r	95.00	n/r	195.00	n/r	85.00

TEES	Acceptable Range For Saturated Paste Sample	Lakes 8 3/7/23		
Nitrate -Ryegrass	5 - 10 ppm	<0.5		
Phosphorus	2 - 10 ppm	0.72		
Potassium	40 - 100 ppm	15.91		
Calcium	60 - 200 ppm	52.37		
Magnesium	20 - 70 ppm	8.88		
Sodium	0 - 30 ppm	42.00		
Soluble Salts	<1,920 ppm	306.00		
Bicarbonate	<60 ppm	107.36		
Chloride	<1,000 ppm	24.00		
SAR	<4%	1.41		
FAIRWAYS	Acceptable Range For Saturated Paste Sample	Lakes 8 3/7/23		
Nitrate - Ryegrass	10-15 ppm	<0.5		
Phosphorus	2 - 10 ppm	0.43		
Potassium	40 - 100 ppm	14.22		
Calcium	60 - 200 ppm	52.99		
Magnesium	20 - 70 ppm	8.59		
Sodium	0 - 30 ppm	37.49		
Soluble Salts	<1,920 ppm	329.00		
Bicarbonate	<60 ppm	112.79		
Chloride	<1,000 ppm	25.00		
SAR	<4%	1.26		
GREENS	Acceptable Range For Saturated Paste Sample	Lakes 8 3/7/23	Oaks 8 3/7/23	Islands 8 3/7/23
Nitrate -Dominator Bentgrass	1-3 ppm	<0.5	<0.5	<0.5
Phosphorus	2 - 7 ppm	1.43	4.90	2.99
Potassium	25-40 ppm	11.92	35.98	23.90
Calcium	50- 75 ppm	10.85	24.02	23.49
Magnesium	15-30 ppm	5.63	3.85	4.27
Sodium	0 - 30 ppm	7.36	15.92	20.71
Soluble Salts	<1,000 ppm	130.00	221.00	205.00
Bicarbonate	<60 ppm	55.75	92.08	80.33
Chloride	<200 ppm	4.00	7.00	6.00
SAR	<4%	0.45	0.80	1.03