

	<u>5/11/23</u>	<u>5/17/24</u>
Humidity/Air Temperature	40%/80°	80%/68°
Green Temperature	(avg)60.1°	(avg)70°
Fairway Temperature	(avg)57.7°	(avg)70°

WATER	Acceptable Range For Water Sample	Hole #13 <u>5/11/23</u>	Wet Well <u>5/17/24</u>
EC	<2.25 mmhos/cm	0.32	0.38
Sodium		32.28	36.31
Calcium	20 - 60 ppm	24.62	23.05
Magnesium	10 - 25 ppm	5.47	6.20
Potassium	5 - 20 ppm	3.47	2.26
Sulfur	30 - 90 ppm	7.82	8.49
Bicarbonate	<120 ppm	105.23	107.07
Boron	<0.67 ppm	<0.05	0.10
Chloride	<177 ppm	46.13	68.25



TEES	Acceptable Range For Standard Soil Sample	3,6,10,13(avg) 5/11/23	2,9,11,16(avg) 5/17/24
Organic Matter (Humus)	2 - 3%	1.24	1.79
Sulfur	50 - 100 ppm	11.25	14.75
Mehlich III - Phosphorus	150 lbs/acre	234.75	208.25
Calcium	68%	73.82	69.48
Magnesium	15%	11.95	8.67
Potassium	5%	1.92	2.41
Sodium	<2%	2.72	2.26
Boron	1 - 1.5 ppm	0.23	0.31
Iron	120 ppm	201.25	165.75
Manganese	50 ppm	9.50	6.50

FAIRWAYS	Acceptable Range For Standard Soil Sample	3,6,10,13(avg) 5/11/23	2,9,11,16(avg) 5/17/24
Organic Matter (Humus)	2 - 3%	5.62	5.33
Sulfur	50 - 100 ppm	49.25	28.00
Mehlich III - Phosphorus	150 lbs/acre	187.75	189.00
Calcium	68%	66.97	71.36
Magnesium	15%	11.85	11.62
Potassium	5%	1.68	2.29
Sodium	<2%	1.93	1.52
Boron	1 - 1.5 ppm	0.61	0.74
Iron	120 ppm	216.25	224.00
Manganese	50 ppm	37.50	32.25

GREENS	Acceptable Range For Standard Soil Sample	6,13(avg) 5/11/23	2,9(avg) 5/17/24	11,16(avg) 5/17/24
Organic Matter (Humus)	2 - 3%	0.74	1.28	2.66
Sulfur	50 - 100 ppm	6.00	8.50	14.00
Mehlich III - Phosphorus	150 lbs/acre	128.50	400.50	950.00
Calcium	68%	69.88	70.52	74.82
Magnesium	15%	17.09	9.06	10.39
Potassium	5%	1.89	1.87	1.64
Sodium	<2%	4.40	2.26	1.56
Boron	1 - 1.5 ppm	<0.20	0.33	0.63
Iron	120 ppm	89.00	196.50	338.00
Manganese	50 ppm	7.00	12.50	12.50

TEE	Acceptable Range For Saturated Paste Sample	13 5/11/23	2 5/17/24
Nitrate-Cool season	5 - 10 ppm	<0.5	1.00
Phosphorus	2 - 10 ppm	1.44	1.79
Potassium	40 - 100 ppm	11.20	12.94
Calcium	60 - 200 ppm	24.25	19.56
Magnesium	20 - 70 ppm	4.84	3.87
Sodium	0 - 30 ppm	10.86	11.41
Soluble Salts	<1,920 ppm	140.00	148.00
Bicarbonate	<60 ppm	48.04	79.95
Chloride	<1,000 ppm	16.00	16.00
SAR	<4%	0.53	0.62

FAIRWAY	Acceptable Range For Saturated Paste Sample	13 5/11/23	2 5/17/24
Nitrate-Cool season	5 - 10 ppm	<0.5	0.60
Phosphorus	2 - 10 ppm	0.24	0.43
Potassium	40 - 100 ppm	5.86	4.50
Calcium	60 - 200 ppm	70.29	22.05
Magnesium	20 - 70 ppm	11.54	4.89
Sodium	0 - 30 ppm	20.17	11.65
Soluble Salts	<1,920 ppm	301.00	166.00
Bicarbonate	<60 ppm	53.34	36.18
Chloride	<1,000 ppm	34.00	10.00
SAR	<4%	0.59	0.58

GREENS	Acceptable Range For Saturated Paste Sample	6,13(avg) 5/11/23	2 5/17/24
Nitrate - Bentgrass/Poa	1-3 ppm	1.35	<0.5
Phosphorus	2 - 7 ppm	1.23	1.56
Potassium	25-40 ppm	4.69	4.99
Calcium	50- 75 ppm	10.39	6.20
Magnesium	15-30 ppm	2.93	1.38
Sodium	0 - 30 ppm	8.35	5.24
Soluble Salts	<1,000 ppm	73.00	59.00
Bicarbonate	<60 ppm	24.03	12.28
Chloride	<200 ppm	5.00	5.00
SAR	<4%	0.60	0.50

Nutrient Deficiencies

		Mg	K	Mn
TEE	2	94	40	8
TEE	9	72	34	6
TEE	11	72	37	7
TEE	18	80	33	5
FAIRWAY	2	264	88	24
FAIRWAY	9	288	98	21
FAIRWAY	11	432	154	26
FAIRWAY	18	324	82	58
GREEN	2	80	29	15
GREEN	9	82	25	10
GREEN	11	162	47	13
GREEN	18	196	44	12

Magnesium/Potassium can be added in the form of 0-0-22 at a rate of 4 pounds of product per 1,000 sq ft for the next four months.

Manganese can be added in the form of Manganese Oxide at a rate of 3 pounds of product per 1,000 sq ft in June, September, October and November.

Comments and Next Level Cultural Practices

- The Potassium levels have raised some on the fairways since last May. I would consider another application to the fairways during the Summer.
- Interesting to note the difference between Greens 2,9 and Greens 11,18. The sandier greens hold about half as much key nutrients as the older greens. It may be easier to apply 0-0-22 to all the greens but if you have the time, you could do 0-0-50 on the older greens only.
- The new way of mowing rough close to the fairways is a great idea! I have many clients whose main complaint from golfers is how long the rough can get by Monday morning.