



Client: Iron Wolf Golf & Country Club
Spring 2025 Report

<u>3/17/25</u>	
Humidity/Air Temperature	15%/70°
Greens Temperature	(avg)50°
Fairway Temperature	(avg)49°

WATER	Acceptable Range For Water Sample	Hole #5 3/17/25
EC	<2.25 mmhos/cm	1.76
Sodium		291.96
Calcium	20 - 60 ppm	45.60
Magnesium	10 - 25 ppm	15.92
Potassium	5 - 20 ppm	9.31
Sulfur	30 - 90 ppm	198.70
Bicarbonate	<120 ppm	161.07
Boron	<0.67 ppm	0.74
Chloride	<177 ppm	370.54



SOIL AND WATER CONSULTING

TEE	Acceptable Range For Tissue Sample	5,15(avg) 3/17/25
Nitrogen	3.34%-5.10%	4.45
Phosphorus	0.35% - 0.55%	0.57
Potassium	2.0% - 3.42%	2.24
Calcium	0.25%-0.5%	0.85
Magnesium	0.16%-0.32%	0.31
Sodium	229-1107 ppm	5,139.20

FAIRWAY	Acceptable Range For Tissue Sample	5 3/17/25
Nitrogen	3.34%-5.10%	n/r
Phosphorus	0.35% - 0.55%	n/r
Potassium	2.0% - 3.42%	n/r
Calcium	0.25%-0.5%	n/r
Magnesium	0.16%-0.32%	n/r
Sodium	229-1107 ppm	n/r

GREENS	Acceptable Range For Tissue Sample	11,14(avg) 3/17/25
Nitrogen	3.0%-6.5%	4.16
Phosphorus	0.2%-0.55%	0.75
Potassium	0.86%-2.55%	2.83
Calcium	0.21%-0.50%	0.49
Magnesium	0.09%-0.22%	0.26
Sodium	506- 2264 ppm	5,017.40

TEES	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/17/25
Organic Matter (Humus)	2 - 3%	2.08
Sulfur	12 - 16 ppm	204.50
Olsen - Phosphorus	13 - 20 ppm	72.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,797.00
Magnesium	>7% base saturation or at least 200 lbs/acre	11.24%/539
Potassium - TEC of 0 - 35	100 ppm	178.50
Manganese	>50 ppm	27.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/17/25
Organic Matter (Humus)	2 - 3%	2.09
Sulfur	12 - 16 ppm	87.50
Olsen - Phosphorus	13 - 20 ppm	97.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,823.00
Magnesium	>7% base saturation or at least 200 lbs/acre	11.75%/469
Potassium - TEC of 0 - 35	100 ppm	207.50
Manganese	>50 ppm	31.50

GREENS	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/17/25
Organic Matter (Humus)	2 - 3%	1.32
Sulfur	12 - 16 ppm	37.00
Olsen - Phosphorus	13 - 20 ppm	16.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,558.00
Magnesium	>7% base saturation or at least 200 lbs/acre	14.24%/315
Potassium - TEC of 0 - 35	150 ppm	114.50
Manganese	>50 ppm	48.50

TEE	Acceptable Range For Saturated Paste Sample	5 3/17/25
Nitrate - Ryegrass	10 -15 ppm	45.90
Phosphorus	2 - 10 ppm	3.35
Potassium	40 - 100 ppm	59.47
Calcium	60 - 200 ppm	314.90
Magnesium	20 - 70 ppm	85.60
Sodium	0 - 30 ppm	795.84
Soluble Salts	<1,920 ppm	2,737.00
Bicarbonate	<60 ppm	451.65
Chloride	<1,000 ppm	1,236.00
SAR	<4%	10.26

FAIRWAY	Acceptable Range For Saturated Paste Sample	5 3/17/25
Nitrate-328/419 Bermudagrass	10 -15 ppm	3.30
Phosphorus	2 - 10 ppm	7.45
Potassium	40 - 100 ppm	30.94
Calcium	60 - 200 ppm	62.62
Magnesium	20 - 70 ppm	18.06
Sodium	0 - 30 ppm	385.98
Soluble Salts	<1,920 ppm	1,078.00
Bicarbonate	<60 ppm	347.05
Chloride	<1,000 ppm	152.00
SAR	<4%	11.05

GREEN	Acceptable Range For Saturated Paste Sample	5,14(avg) 3/17/25
Nitrate-Tifeagle/Poa Trivialis	1-3 ppm	9.15
Phosphorus	2 - 7 ppm	3.36
Potassium	25-40 ppm	16.82
Calcium	50- 75 ppm	28.27
Magnesium	15-30 ppm	8.87
Sodium	0 - 30 ppm	201.00
Soluble Salts	<1,000 ppm	647.00
Bicarbonate	<60 ppm	128.97
Chloride	<200 ppm	116.00
SAR	<4%	8.36



Nutrient Deficiencies

		K ppm	Na ppm	Na %
TEE	5	119	483	10.84
TEE	14	238	500	10.56
FAIRWAY	5	168	329	9.74
FAIRWAY	14	247	390	9.17
GREEN	5	109	199	9.36
GREEN	14	120	238	11.26
Desired Value		100-150	<50	2.5% or less

Calcium can be added in the form of Gypsum at a rate of 5 pounds of product per 1,000 sq ft monthly

Potassium can be added in the form of 0-0-50 at a rate of 2 pounds of product per 1,000 sq ft monthly

Comments and Next Level Cultural Practices

- I highlighted the Sodium and Potassium levels in the soil again, just to be a reminder to you that the focus for the soils, is to work on the sodium load from the irrigation water. The recommendations above are for the greens to be flushed monthly. Add the gypsum and then, a day or so later, apply the 0-0-50.
- If we haven't discussed spraying acids, let's do that when we can. I believe one of them would be beneficial to the greens and you may be able to expand a program to the tees and fairways.
- The property is really growing, and I was happy to hear how well the new driving range is doing. The day I was there you were busy preparing an area for more improvements. We also discussed possible improvements to the golf course in the future. As that conversation continues, keep me posted. I would be able to help with that. Let's go over the report in more detail when you have time.

