



SOIL AND WATER CONSULTING

Data Collection Report

Spring 2022

Date of Collection: 3/15/22

Client: Tucson Country Club



Testing Results

	<u>2/29/20</u>	<u>3/21/21</u>	<u>3/15/22</u>
Humidity/Air Temperature	20%/75°	10%/79°	5%/85°
Greens Temperature	44°	(avg)54°	(avg)55.6°
Fairway Temperature	45°	(avg)54.85°	(avg)52.7°

WATER	Acceptable Range For Water Sample	Hole #10 <u>2/29/20</u>	Hole #9 <u>3/21/21</u>	Hole #14 <u>3/15/22</u>
EC	<2.25 mmhos/cm	0.35	0.48	0.28
Sodium		38.89	78.52	26.80
Calcium	20 - 60 ppm	29.97	24.68	28.55
Magnesium	10 - 25 ppm	2.04	1.34	2.48
Potassium	5 - 20 ppm	2.47	1.67	1.80
Sulfur	30 - 90 ppm	25.61	35.91	24.43
Bicarbonate	<120 ppm	130.63	172.06	125.99
Boron	<0.67 ppm	0.06	0.09	0.06
Chloride	<177 ppm	15.66	43.06	17.02

TEE	Acceptable Range For Tissue Sample	14 <u>3/15/22</u>
Nitrogen	3.34%-5.10%	3.78
Phosphorus	0.35% - 0.55%	0.48
Potassium	2.0% - 3.42%	2.63
Calcium	0.25%-0.5%	0.56
Magnesium	0.16%-0.32%	0.21
Sodium	229-1107 ppm	2,420.00

FAIRWAY	Acceptable Range For Tissue Sample	14 <u>3/15/22</u>
Nitrogen	3.34%-5.10%	4.41
Phosphorus	0.35% - 0.55%	0.41
Potassium	2.0% - 3.42%	2.62
Calcium	0.25%-0.5%	0.73
Magnesium	0.16%-0.32%	0.22
Sodium	229-1107 ppm	2,560.00

GREENS	Acceptable Range For Tissue Sample	5,14(avg) <u>3/15/22</u>
Nitrogen	3.0%-6.5%	4.27
Phosphorus	0.2%-0.55%	0.49
Potassium	0.86%-2.55%	2.54
Calcium	0.21%-0.50%	0.71
Magnesium	0.09%-0.22%	0.39
Sodium	506- 2264 ppm	1,210.00

TEES	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/4/19	1,10(avg) 2/29/20	9,18(avg) 3/21/21	5,14(avg) 3/15/22
Organic Matter (Humus)	2 - 3%	3.31	1.79	3.46	3.19
Sulfur	12 - 16 ppm	17.50	8.00	20.50	20.50
Olsen - Phosphorus	13 - 20 ppm	11.50	5.50	13.00	9.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,508.00	1,601.00	3,786.00	3,553.00
Magnesium	>7% base saturation or at least 200 lbs/acre	8.51%/286	7.73%/180	7.50%/214	9.26%/249
Potassium - TEC of 0 - 35	100 ppm	183.00	84.00	179.50	148.50
Manganese	>50 ppm	42.50	22.00	35.00	38.50

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/4/19	1,10(avg) 2/29/20	9,18(avg) 3/21/21	5,14(avg) 3/15/22
Organic Matter (Humus)	2 - 3%	4.61	1.32	3.44	3.73
Sulfur	12 - 16 ppm	14.50	10.00	24.50	18.50
Olsen - Phosphorus	13 - 20 ppm	24.00	13.00	27.50	11.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,923.00	1,894.00	3,072.00	3,063.00
Magnesium	>7% base saturation or at least 200 lbs/acre	9.79%/305	9.43%/250	8.9%/223	10.25%/254
Potassium - TEC of 0 - 35	100 ppm	283.00	125.00	258.00	246.00
Manganese	>50 ppm	21.50	22.50	30.00	26.50

GREENS	Acceptable Range For Alkaline Soils Sample	5,14(avg) 3/4/19	1,10(avg) 2/29/20	9,18(avg) 3/21/21	5,14(avg) 3/15/22
Organic Matter (Humus)	2 - 3%	0.79	0.50	0.86	0.82
Sulfur	12 - 16 ppm	10.00	10.00	13.50	20.00
Olsen - Phosphorus	13 - 20 ppm	17.00	16.00	14.00	11.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,126.00	2,141.00	1,939.00	1,906.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.88%/204	10.72%/201	10.07%/166	12.23%/202
Potassium - TEC of 0 - 35	150 ppm	387.50	375.00	245.50	288.50
Manganese	>50 ppm	65.00	91.50	65.00	57.00

TEE	Acceptable Range For Saturated Paste Sample	9 3/21/21	14 3/15/22
Nitrate - Ryegrass	5 - 10 ppm	7.60	<0.5
Phosphorus	2 - 10 ppm	1.26	2.99
Potassium	40 - 100 ppm	9.80	24.37
Calcium	60 - 200 ppm	22.10	38.61
Magnesium	20 - 70 ppm	4.29	7.05
Sodium	0 - 30 ppm	2.83	77.85
Soluble Salts	<1,920 ppm	267.00	358.00
Bicarbonate	<60 ppm	89.09	155.66
Chloride	<1,000 ppm	33.00	33.00
SAR	<4%	3.20	3.02

FAIRWAY	Acceptable Range For Saturated Paste Sample	9 3/21/21	14 3/15/22
Nitrate - Ryegrass	5 - 10 ppm	15.60	0.70
Phosphorus	2 - 10 ppm	1.23	1.64
Potassium	40 - 100 ppm	18.05	15.81
Calcium	60 - 200 ppm	22.16	51.28
Magnesium	20 - 70 ppm	4.14	8.28
Sodium	0 - 30 ppm	89.66	44.10
Soluble Salts	<1,920 ppm	406.00	320.00
Bicarbonate	<60 ppm	79.60	102.89
Chloride	<1,000 ppm	46.00	35.00
SAR	<4%	4.58	1.51

GREENS	Acceptable Range For Saturated Paste Sample	9,18(avg) 3/21/21	5,14(avg) 3/15/22
Nitrate - Bentgrass/Poa	1-3 ppm	1.50	<0.8
Phosphorus	2 - 7 ppm	3.11	1.81
Potassium	25-40 ppm	13.03	26.91
Calcium	50- 75 ppm	13.92	58.04
Magnesium	15-30 ppm	2.91	9.17
Sodium	0 - 30 ppm	55.46	65.26
Soluble Salts	<1,000 ppm	234.00	408.50
Bicarbonate	<60 ppm	47.36	166.33
Chloride	<200 ppm	42.00	33.50
SAR	<4%	3.53	2.03