



SOIL AND WATER CONSULTING

Data Collection Report

Spring 2021

Date of Collection: 3/21/21

Client: Tucson Country Club



Testing Results

	<u>3/4/19</u>	<u>2/29/20</u>	<u>3/21/21</u>
Humidity/Air Temperature	35%/74°	20%/75°	10%/79°
Greens Temperature	52.15°	44°	(avg)54°
Fairway Temperature	52.5°	45°	(avg)54.85°

WATER	Acceptable Range For Water Sample	Hole #5 <u>3/4/19</u>	Hole #10 <u>2/29/20</u>	Hole #9 <u>3/21/21</u>
EC	<2.25 mmhos/cm	0.41	0.35	0.48
Sodium		59.34	38.89	78.52
Calcium	20 - 60 ppm	20.61	29.97	24.68
Magnesium	10 - 25 ppm	1.50	2.04	1.34
Potassium	5 - 20 ppm	2.28	2.47	1.67
Sulfur	30 - 90 ppm	28.10	25.61	35.91
Bicarbonate	<120 ppm	138.37	130.63	172.06
Boron	<0.67 ppm	0.08	0.06	0.09
Chloride	<177 ppm	32.00	15.66	43.06

TEE	Acceptable Range For Tissue Sample	9 <u>3/20/21</u>
Nitrogen	3.34%-5.10%	3.59
Phosphorus	0.35% - 0.55%	0.46
Potassium	2.0% - 3.42%	2.90
Calcium	0.25%-0.5%	0.63
Magnesium	0.16%-0.32%	0.22
Sodium	229-1107 ppm	2,160.00

FAIRWAY	Acceptable Range For Tissue Sample	9 <u>3/20/21</u>
Nitrogen	3.34%-5.10%	4.82
Phosphorus	0.35% - 0.55%	0.59
Potassium	2.0% - 3.42%	4.06
Calcium	0.25%-0.5%	0.41
Magnesium	0.16%-0.32%	0.25
Sodium	229-1107 ppm	2,270.00

GREENS	Acceptable Range For Tissue Sample	9,18(avg) <u>3/20/21</u>
Nitrogen	3.0%-6.5%	3.77
Phosphorus	0.2%-0.55%	0.53
Potassium	0.86%-2.55%	2.46
Calcium	0.21%-0.50%	0.47
Magnesium	0.09%-0.22%	0.18
Sodium	506- 2264 ppm	2,435.00

TEES	Acceptable Range For Alkaline Soils Sample	9,18(avg) 3/3/18	5,14(avg) 3/4/19	1,10(avg) 2/29/20	9,18(avg) 3/21/21
Organic Matter (Humus)	2 - 3%	3.07	3.31	1.79	3.46
Sulfur	12 - 16 ppm	23.50	17.50	8.00	20.50
Olsen - Phosphorus	13 - 20 ppm	11.00	11.50	5.50	13.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,518.00	4,508.00	1,601.00	3,786.00
Magnesium	>7% base saturation or at least 200 lbs/acre	6.9%/227	8.51%/286	7.73%/180	7.50%/214
Potassium - TEC of 0 - 35	100 ppm	172.50	183.00	84.00	179.50
Manganese	>50 ppm	50.00	42.50	22.00	35.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	9,18(avg) 3/3/18	5,14(avg) 3/4/19	1,10(avg) 2/29/20	9,18(avg) 3/21/21
Organic Matter (Humus)	2 - 3%	3.61	4.61	1.32	3.44
Sulfur	12 - 16 ppm	28.00	14.50	10.00	24.50
Olsen - Phosphorus	13 - 20 ppm	29.00	24.00	13.00	27.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,699.00	3,923.00	1,894.00	3,072.00
Magnesium	>7% base saturation or at least 200 lbs/acre	8.92%/261	9.79%/305	9.43%/250	8.9%/223
Potassium - TEC of 0 - 35	100 ppm	278.00	283.00	125.00	258.00
Manganese	>50 ppm	41.00	21.50	22.50	30.00

GREENS	Acceptable Range For Alkaline Soils Sample	9,18(avg) 3/3/18	5,14(avg) 3/4/19	1,10(avg) 2/29/20	9,18(avg) 3/21/21
Organic Matter (Humus)	2 - 3%	0.91	0.79	0.50	0.86
Sulfur	12 - 16 ppm	4.00	10.00	10.00	13.50
Olsen - Phosphorus	13 - 20 ppm	18.50	17.00	16.00	14.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,105.00	2,126.00	2,141.00	1,939.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.33%/179	10.88%/204	10.72%/201	10.07%/166
Potassium - TEC of 0 - 35	150 ppm	276.00	387.50	375.00	245.50
Manganese	>50 ppm	60.50	65.00	91.50	65.00

TEE	Acceptable Range For Saturated Paste Sample	10 2/29/20	9 3/21/21
Nitrate - Ryegrass	5 - 10 ppm	8.60	7.60
Phosphorus	2 - 10 ppm	1.29	1.26
Potassium	40 - 100 ppm	16.92	9.80
Calcium	60 - 200 ppm	40.15	22.10
Magnesium	20 - 70 ppm	5.79	4.29
Sodium	0 - 30 ppm	56.84	2.83
Soluble Salts	<1,920 ppm	325.00	267.00
Bicarbonate	<60 ppm	102.29	89.09
Chloride	<1,000 ppm	46.00	33.00
SAR	<4%	2.22	3.20

FAIRWAY	Acceptable Range For Saturated Paste Sample	10 2/29/20	9 3/21/21
Nitrate - Ryegrass	5 - 10 ppm	13.10	15.60
Phosphorus	2 - 10 ppm	2.29	1.23
Potassium	40 - 100 ppm	26.89	18.05
Calcium	60 - 200 ppm	32.13	22.16
Magnesium	20 - 70 ppm	5.83	4.14
Sodium	0 - 30 ppm	59.11	89.66
Soluble Salts	<1,920 ppm	336.00	406.00
Bicarbonate	<60 ppm	91.98	79.60
Chloride	<1,000 ppm	37.00	46.00
SAR	<4%	2.52	4.58

GREENS	Acceptable Range For Saturated Paste Sample	1,10(avg) 3/4/19	9,18(avg) 3/21/21
Nitrate - Bentgrass/Poa	1-3 ppm	<1.65	1.50
Phosphorus	2 - 7 ppm	4.34	3.11
Potassium	25-40 ppm	22.59	13.03
Calcium	50- 75 ppm	25.26	13.92
Magnesium	15-30 ppm	4.40	2.91
Sodium	0 - 30 ppm	37.94	55.46
Soluble Salts	<1,000 ppm	205.00	234.00
Bicarbonate	<60 ppm	90.49	47.36
Chloride	<200 ppm	15.50	42.00
SAR	<4%	1.82	3.53