



SOIL AND WATER CONSULTING

Data Collection Report

Summer 2022

Date of Collection: 6/7/22

Client: Tucson Country Club



Testing Results

	<u>7/11/20</u>	<u>6/14/21</u>	<u>6/7/22</u>
Humidity/Air Temperature	30%/107°	5%/110°	20%/103°
Greens Temperature	(avg)76.35°	(avg)86.75°	(avg)88.55°
Fairway Temperature	(avg)79.6°	(avg)81.9°	(avg)87.1°

WATER	Acceptable Range For Water Sample	Lake fill 6/16/20	Hole #3 6/14/21	Hole #6 6/7/22
EC	<2.25 mmhos/cm	1.20	0.38	0.32
Sodium		129.20	64.16	39.15
Calcium	20 - 60 ppm	90.36	15.22	24.15
Magnesium	10 - 25 ppm	16.77	1.75	1.74
Potassium	5 - 20 ppm	9.62	1.72	1.37
Sulfur	30 - 90 ppm	182.37	36.15	23.91
Bicarbonate	<120 ppm	270.81	117.62	140.38
Boron	<0.67 ppm	0.26	0.09	0.07
Chloride	<177 ppm	129.02	37.62	13.45

TEE	Acceptable Range For Tissue Sample	15 6/7/22
Nitrogen	2.49%-4.56%	4.35
Phosphorus	0.26%-0.38%	0.40
Potassium	0.95% - 1.97%	2.02
Calcium	0.50%-0.90%	0.60
Magnesium	0.13%-0.16%	0.18
Sodium	622-1709 ppm	2,620.00

FAIRWAY	Acceptable Range For Tissue Sample	15 6/7/22
Nitrogen	2.49%-4.56%	3.73
Phosphorus	0.26%-0.38%	0.39
Potassium	0.95% - 1.97%	1.81
Calcium	0.50%-0.90%	0.51
Magnesium	0.13%-0.16%	0.15
Sodium	622-1709 ppm	3,570.00

GREENS	Acceptable Range For Tissue Sample	6,15(avg) 6/7/22
Nitrogen	3.0%-6.5%	3.48
Phosphorus	0.2%-0.55%	0.57
Potassium	0.86%-2.55%	1.92
Calcium	0.21%-0.50%	0.53
Magnesium	0.09%-0.22%	0.17
Sodium	506- 2264 ppm	1,875.00

TEES	Acceptable Range For Alkaline Soils Sample	6,15(avg) 6/20/19	4,13(avg) 7/11/20	3,12(avg) 6/14/21	6,15(avg) 6/7/22
Organic Matter (Humus)	2 - 3%	2.75	3.37	3.72	3.45
Sulfur	12 - 16 ppm	34.00	43.00	53.50	46.50
Olsen - Phosphorus	13 - 20 ppm	14.00	14.50	12.50	3.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,942.00	4,852.00	4,194.50	4,718.00
Magnesium	>7% base saturation or at least 200 lbs/acre	9.62%/226	8.53%/157.5	13.12%/479	7.08%/248
Potassium - TEC of 0 - 35	100 ppm	203.00	241.50	280.25	162.00
Manganese	>50 ppm	52.50	48.50	57.50	58.50

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	6,15(avg) 6/20/19	4,13(avg) 7/11/20	3,12(avg) 6/14/21	6,15(avg) 6/7/22
Organic Matter (Humus)	2 - 3%	3.52	3.89	4.62	3.59
Sulfur	12 - 16 ppm	28.00	83.50	63.25	54.50
Olsen - Phosphorus	13 - 20 ppm	16.00	17.50	22.75	9.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,988.00	3,855.00	4,568.00	4,724.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.59%/270	9.89%/326	13.6%/587	8.15%/285
Potassium - TEC of 0 - 35	100 ppm	367.00	308.00	316.25	321.00
Manganese	>50 ppm	42.50	22.00	34.50	48.50

GREENS	Acceptable Range For Alkaline Soils Sample	6,15(avg) 6/20/19	4,13(avg) 7/11/20	3,12(avg) 6/14/21	6,15(avg) 6/7/22
Organic Matter (Humus)	2 - 3%	0.73	1.03	1.35	0.89
Sulfur	12 - 16 ppm	12.50	21.00	30.75	24.50
Olsen - Phosphorus	13 - 20 ppm	11.50	11.50	15.00	9.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,083.00	2,573.00	2,560.50	2,638.00
Magnesium	>7% base saturation or at least 200 lbs/acre	11.38%/229	11.67%/263	16.81%/416	10.46%/234
Potassium - TEC of 0 - 35	150 ppm	253.50	410.00	353.25	326.00
Manganese	>50 ppm	55.00	74.50	86.00	89.50

TEE	Acceptable Range For Saturated Paste Sample	3 6/14/21	15 6/7/22
Nitrate - Bermudagrass	5 - 10 ppm	23.30	1.60
Phosphorus	2 - 10 ppm	0.76	1.65
Potassium	40 - 100 ppm	21.24	19.23
Calcium	60 - 200 ppm	55.13	107.01
Magnesium	20 - 70 ppm	7.60	15.84
Sodium	0 - 30 ppm	163.41	268.72
Soluble Salts	<1,920 ppm	614.00	942.00
Bicarbonate	<60 ppm	121.45	190.85
Chloride	<1,000 ppm	99.00	150.00
SAR	<4%	5.47	6.41

FAIRWAY	Acceptable Range For Saturated Paste Sample	3 6/14/21	15 6/7/22
Nitrate - Bermudagrass	5 - 10 ppm	27.60	2.00
Phosphorus	2 - 10 ppm	3.07	1.72
Potassium	40 - 100 ppm	24.72	21.40
Calcium	60 - 200 ppm	53.11	62.14
Magnesium	20 - 70 ppm	8.02	9.64
Sodium	0 - 30 ppm	215.07	167.45
Soluble Salts	<1,920 ppm	719.00	593.00
Bicarbonate	<60 ppm	96.49	65.87
Chloride	<1,000 ppm	137.00	109.00
SAR	<4%	7.27	5.22

GREENS	Acceptable Range For Saturated Paste Sample	3,12(avg) 6/14/21	6,15(avg) 6/7/22
Nitrate - Bentgrass/Poa	1-3 ppm	7.00	<.08
Phosphorus	2 - 7 ppm	3.15	1.02
Potassium	25-40 ppm	21.45	11.00
Calcium	50- 75 ppm	30.05	20.19
Magnesium	15-30 ppm	5.13	3.65
Sodium	0 - 30 ppm	129.98	34.41
Soluble Salts	<1,000 ppm	481.00	167.50
Bicarbonate	<60 ppm	62.60	36.00
Chloride	<200 ppm	110.50	22.00
SAR	<4%	5.74	1.31