



SOIL AND WATER CONSULTING

Data Collection Report

Fall 2021

Date of Collection: 9/25/21

Client: Tucson Country Club



Testing Results

	<u>9/18/19</u>	<u>10/21/20</u>	<u>9/25/21</u>
Humidity/Air Temperature	30%/97°	10%/96°	29%/90°
Greens Temperature	(avg)75°	(avg)52°	(avg)82.25°
Fairway Temperature	(avg)78°	(avg)61°	(avg)79°

	Acceptable Range For Water Sample	Hole #7 9/18/19	Hole #8 10/21/20	Hole #2 9/25/21
EC	<2.25 mmhos/cm	0.38	0.37	0.39
Sodium		60.38	52.30	63.25
Calcium	20 - 60 ppm	24.78	26.12	21.19
Magnesium	10 - 25 ppm	2.21	1.53	1.94
Potassium	5 - 20 ppm	1.75	5.10	1.93
Sulfur	30 - 90 ppm	26.83	32.04	31.38
Bicarbonate	<120 ppm	163.26	136.49	154.06
Boron	<0.67 ppm	0.12	0.07	0.11
Chloride	<177 ppm	27.91	30.81	27.91

TEE	Acceptable Range For Tissue Sample	2 9/25/21
Nitrogen	3.34%-5.10%	3.34
Phosphorus	0.35% - 0.55%	0.28
Potassium	2.0% - 3.42%	0.77
Calcium	0.25%-0.5%	0.51
Magnesium	0.16%-0.32%	0.90
Sodium	229-1107 ppm	1,050.00

FAIRWAY	Acceptable Range For Tissue Sample	2 9/25/21
Nitrogen	3.34%-5.10%	3.54
Phosphorus	0.35% - 0.55%	0.36
Potassium	2.0% - 3.42%	1.40
Calcium	0.25%-0.5%	0.56
Magnesium	0.16%-0.32%	0.14
Sodium	229-1107 ppm	952.00

GREENS	Acceptable Range For Tissue Sample	2,11(avg) 9/25/21
Nitrogen	3.0%-6.5%	3.79
Phosphorus	0.2%-0.55%	0.52
Potassium	0.86%-2.55%	1.81
Calcium	0.21%-0.50%	0.42
Magnesium	0.09%-0.22%	0.18
Sodium	506- 2264 ppm	961.00

TEES	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/18/19	8,17(avg) 10/21/20	2,11(avg) 9/25/21
Organic Matter (Humus)	2 - 3%	2.73	2.13	2.58
Sulfur	12 - 16 ppm	51.50	13.50	32.00
Olsen - Phosphorus	13 - 20 ppm	8.00	4.50	10.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,633.00	2,727.00	4,672.00
Magnesium	>7% base saturation or at least 200 lbs/acre	7.95%/218	7.56%/155	7.15%/239
Potassium - TEC of 0 - 35	100 ppm	151.50	167.50	206.00
Manganese	50-80 ppm	45.00	32.50	67.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/18/19	8,17(avg) 10/21/20	2,11(avg) 9/25/21
Organic Matter (Humus)	2 - 3%	3.07	2.78	3.29
Sulfur	12 - 16 ppm	42.50	28.50	31.50
Olsen - Phosphorus	13 - 20 ppm	16.00	10.50	15.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,365.00	3,229.00	4,152.00
Magnesium	>7% base saturation or at least 200 lbs/acre	9.14%/251	8.47%/216	7.83%/248
Potassium - TEC of 0 - 35	100 ppm	330.50	265.50	316.00
Manganese	50-80 ppm	43.50	41.00	57.50

GREENS	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/18/19	8,17(avg) 10/21/20	2,11(avg) 9/25/21
Organic Matter (Humus)	2 - 3%	0.68	0.65	0.98
Sulfur	12 - 16 ppm	7.50	8.00	58.50
Olsen - Phosphorus	13 - 20 ppm	10.00	6.50	14.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,008.00	1,856.00	1,810.00
Magnesium	>7% base saturation or at least 200 lbs/acre	11.38%/206	10.81%/170	10.92%/176
Potassium - TEC of 0 - 35	150 ppm	398.00	268.50	289.50
Manganese	50-80 ppm	79.50	58.50	91.00

TEE	Acceptable Range For Saturated Paste Sample	17 10/21/20	2 9/25/21
Nitrate - Ryegrass	5-10 ppm	21.20	1.20
Phosphorus	2 - 10 ppm	2.39	0.89
Potassium	40 - 100 ppm	30.65	12.46
Calcium	60 - 200 ppm	55.66	40.24
Magnesium	20 - 70 ppm	9.03	6.35
Sodium	0 - 30 ppm	100.20	69.66
Soluble Salts	<1,920 ppm	455.00	324.00
Bicarbonate	<60 ppm	179.73	169.18
Chloride	<1,000 ppm	53.00	30.00
SAR	<4%	3.28	2.69

FAIRWAY	Acceptable Range For Saturated Paste Sample	17 10/21/20	2 9/25/21
Nitrate - Ryegrass	5-10 ppm	34.00	15.60
Phosphorus	2 - 10 ppm	1.77	1.54
Potassium	40 - 100 ppm	45.74	35.65
Calcium	60 - 200 ppm	41.91	58.63
Magnesium	20 - 70 ppm	7.30	8.59
Sodium	0 - 30 ppm	136.89	85.50
Soluble Salts	<1,920 ppm	527.00	443.00
Bicarbonate	<60 ppm	203.72	232.43
Chloride	<1,000 ppm	46.00	26.00
SAR	<4%	5.13	2.76

GREENS	Acceptable Range For Saturated Paste Sample	8,17(avg) 10/21/20	2,11(avg) 9/25/21
Dominant Plus Bentgrass	1-3 ppm	4.30	<1.6
Phosphorus	2 - 7 ppm	2.91	1.61
Potassium	25-40 ppm	25.81	39.71
Calcium	50- 75 ppm	18.28	72.67
Magnesium	15-30 ppm	4.08	12.48
Sodium	0 - 30 ppm	57.40	96.07
Soluble Salts	<1,000 ppm	270.50	563.50
Bicarbonate	<60 ppm	127.18	146.35
Chloride	<200 ppm	26.50	40.00
SAR	<4%	3.14	2.78