



SOIL AND WATER CONSULTING

Data Collection Report

Fall 2021

Date of Collection: 9/20/21

Client: Canyon Gate Country Club



Testing Results

	<u>9/24/19</u>	<u>10/16/20</u>	<u>9/20/21</u>
Humidity/Air Temperature	16%/90°	15%/85°	10%/86°
Greens Temperature	(avg)60°	(avg)51°	(avg)60.3°
Fairway Temperature	(avg)63°	(avg)56°	(avg)64.05°

WATER	Acceptable Range For Water Sample	Hole #7 9/24/19	Hole #17 10/16/20	Hole #2 9/20/21
pH	6.0-6.5	7.90	7.88	8.26
EC	<2.25 mmhos/cm	0.90	0.68	0.58
Sodium		78.31	23.73	20.42
Calcium	20 - 60 ppm	69.95	57.89	54.18
Magnesium	10 - 25 ppm	23.43	29.21	29.35
Potassium	5 - 20 ppm	4.50	5.34	2.58
Nitrate	10 - 25 ppm	0.22	1.37	n/t
Phosphorus	5 - 20 ppm	<0.20	<0.20	n/t
Sulfur	30 - 90 ppm	196.53	93.78	88.53
Bicarbonate	<120 ppm	168.93	224.34	210.22
Boron	<0.67 ppm	0.11	<0.05	<0.05
Chloride	<177 ppm	72.51	34.38	36.59

TEE	Acceptable Range For Tissue Sample	2 10/22/21
Nitrogen	3.34%-5.10%	4.23
Phosphorus	0.35% - 0.55%	0.60
Potassium	2.0% - 3.42%	2.97
Calcium	0.25%-0.5%	0.74
Magnesium	0.16%-0.32%	0.37
Sodium	229-1107 ppm	1,220.00

FAIRWAY	Acceptable Range For Tissue Sample	2 10/22/21
Nitrogen	3.34%-5.10%	4.96
Phosphorus	0.35% - 0.55%	0.63
Potassium	2.0% - 3.42%	3.20
Calcium	0.25%-0.5%	0.88
Magnesium	0.16%-0.32%	0.41
Sodium	229-1107 ppm	617.00

GREENS	Acceptable Range For Tissue Sample	2,11(avg) 10/22/21
Nitrogen	3.0%-6.5%	4.62
Phosphorus	0.2%-0.55%	0.59
Potassium	0.86%-2.55%	2.49
Calcium	0.21%-0.50%	0.95
Magnesium	0.09%-0.22%	0.40
Sodium	506- 2264 ppm	393.50

TEES	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/24/19	8,17(avg) 10/16/20	2,11(avg) 9/20/21
Organic Matter (Humus)	2 - 3%	4.25	1.95	3.81
Sulfur	12 - 16 ppm	41.50	20.50	36.50
Olsen - Phosphorus	13 - 20 ppm	33.50	12.50	25.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,919.00	1,980.00	4,416.00
Magnesium	>7% base saturation or at least 200 lbs/acre	17.42%/693	22.33%/886	17.47%/673
Potassium - TEC of 0 - 35	100 ppm	203.00	292.00	288.50
Manganese	>50 ppm	16.00	20.00	21.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/24/19	8,17(avg) 10/16/20	2,11(avg) 9/20/21
Organic Matter (Humus)	2 - 3%	6.18	3.04	6.14
Sulfur	12 - 16 ppm	160.50	39.00	80.50
Olsen - Phosphorus	13 - 20 ppm	68.50	36.00	74.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,901.00	2,706.00	5,700.00
Magnesium	>7% base saturation or at least 200 lbs/acre	17.18%/818	21.69%/1,035	19.11%/902
Potassium - TEC of 0 - 35	100 ppm	252.00	312.50	215.50
Manganese	>50 ppm	23.00	16.50	15.50

GREENS	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/24/19	8,17(avg) 10/16/20	2,11(avg) 9/20/21
Organic Matter (Humus)	2 - 3%	0.29	0.49	0.43
Sulfur	12 - 16 ppm	32.00	16.00	44.50
Olsen - Phosphorus	13 - 20 ppm	7.00	3.50	7.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,620.00	1,751.00	1,653.00
Magnesium	>7% base saturation or at least 200 lbs/acre	12.32%/150	16.59%/228	15.27%/196
Potassium - TEC of 0 - 35	150 ppm	54.50	59.00	72.00
Manganese	>50 ppm	27.00	32.50	17.50

TEES	Acceptable Range For Saturated Paste Sample	8 10/16/20	2 9/20/21
Nitrate - Ryegrass	5-10 ppm	70.50	1.40
Phosphorus	2 - 10 ppm	3.63	2.85
Potassium	40 - 100 ppm	21.16	12.27
Calcium	60 - 200 ppm	109.60	57.44
Magnesium	20 - 70 ppm	50.85	22.22
Sodium	0 - 30 ppm	45.80	30.03
Soluble Salts	<1,920 ppm	723.00	331.00
Bicarbonate	<60 ppm	89.09	135.88
Chloride	<1,000 ppm	65.00	28.00
SAR	<4%	0.91	0.85

FAIRWAYS	Acceptable Range For Saturated Paste Sample	8 10/16/20	2 9/20/21
Nitrate - Ryegrass	5-10 ppm	105.10	8.10
Phosphorus	2 - 10 ppm	3.46	2.38
Potassium	40 - 100 ppm	52.51	22.52
Calcium	60 - 200 ppm	150.75	83.65
Magnesium	20 - 70 ppm	59.19	32.73
Sodium	0 - 30 ppm	36.84	33.35
Soluble Salts	<1,920 ppm	980.00	457.00
Bicarbonate	<60 ppm	103.06	191.66
Chloride	<1,000 ppm	57.00	40.00
SAR	<4%	0.64	0.78

GREENS	Acceptable Range For Saturated Paste Sample	8,17(avg) 10/16/20	2,11(avg) 9/20/21
rate - Dominator Bentgrass	1-3 ppm	<0.65	0.70
Phosphorus	2 - 7 ppm	2.14	2.74
Potassium	25-40 ppm	27.48	34.89
Calcium	50- 75 ppm	62.99	63.53
Magnesium	15-30 ppm	27.35	25.04
Sodium	0 - 30 ppm	24.24	25.56
Soluble Salts	<1,000 ppm	433.50	382.50
Bicarbonate	<60 ppm	86.90	87.94
Chloride	<200 ppm	26.50	20.00