



SOIL AND WATER CONSULTING

Data Collection Report

Fall 2022 Date of Collection: 9/12/22

Client: Canyon Gate Country Club



Testing Results

	<u>9/24/19</u>	<u>9/12/22</u>
Humidity/Air Temperature	16%/90°	59%/83°
Greens Temperature	(avg)60°	(avg)78.3°
Fairway Temperature	(avg)63°	(avg)76.9°

WATER	Acceptable Range For Water Sample	Hole #7 <u>9/24/19</u>	Pond <u>9/12/22</u>
pH	6.0-6.5	7.90	7.74
EC	<2.25 mmhos/cm	0.90	0.60
Sodium		78.31	16.22
Calcium	20 - 60 ppm	69.95	58.42
Magnesium	10 - 25 ppm	23.43	30.00
Potassium	5 - 20 ppm	4.50	1.75
Nitrate	10 - 25 ppm	0.22	1.78
Phosphorus	5 - 20 ppm	<0.2	0.25
Sulfur	30 - 90 ppm	196.53	81.54
Bicarbonate	<120 ppm	168.93	221.17
Boron	<0.67 ppm	0.11	0.06
Chloride	<177 ppm	72.51	32.51

TEES	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/24/19	7,16(avg) 9/12/22
Organic Matter (Humus)	2 - 3%	4.25	4.02
Sulfur	12 - 16 ppm	41.50	131.50
Olsen - Phosphorus	13 - 20 ppm	33.50	35.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,919.00	5,014.00
Magnesium	>7% base saturation or at least 200 lbs/acre	17.42%/693	18.98%/791
Potassium - TEC of 0 - 35	100 ppm	203.00	214.50
Manganese	>50 ppm	16.00	18.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/24/19	7,16(avg) 9/12/22
Organic Matter (Humus)	2 - 3%	6.18	5.15
Sulfur	12 - 16 ppm	160.50	97.50
Olsen - Phosphorus	13 - 20 ppm	68.50	41.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,901.00	5,280.00
Magnesium	>7% base saturation or at least 200 lbs/acre	17.18%/818	18.05%/780
Potassium - TEC of 0 - 35	100 ppm	252.00	233.00
Manganese	>50 ppm	23.00	18.50

GREENS	Acceptable Range For Alkaline Soils Sample	7,16(avg) 9/24/19	1,7,16,PG(avg) 9/12/22
Organic Matter (Humus)	2 - 3%	0.29	0.53
Sulfur	12 - 16 ppm	32.00	28.50
Olsen - Phosphorus	13 - 20 ppm	7.00	7.25
Calcium - TEC of 6 - 12	1,000 lbs/acre	1,620.00	2,055.00
Magnesium	>7% base saturation or at least 200 lbs/acre	12.32%/150	14.87%/237.5
Potassium - TEC of 0 - 35	150 ppm	54.50	84.75
Manganese	>50 ppm	27.00	42.75

TEES	Acceptable Range For Saturated Paste Sample	7 9/24/19	7 9/12/22
Nitrate - Bermudagrass	10 - 15 ppm	9.30	3.10
Phosphorus	2 - 10 ppm	1.88	2.17
Potassium	40 - 100 ppm	19.47	11.33
Calcium	60 - 200 ppm	89.39	59.24
Magnesium	20 - 70 ppm	36.32	26.74
Sodium	0 - 30 ppm	48.14	26.36
Soluble Salts	<1,920 ppm	570.00	351.00
Bicarbonate	<60 ppm	139.10	161.14
Chloride	<1,000 ppm	78.00	27.00
SAR	<4%	1.08	0.71

FAIRWAYS	Acceptable Range For Saturated Paste Sample	7 9/24/19	7 9/12/22
Nitrate - Bermudagrass	10 - 15 ppm	42.90	7.40
Phosphorus	2 - 10 ppm	2.30	3.10
Potassium	40 - 100 ppm	30.92	20.72
Calcium	60 - 200 ppm	112.92	58.78
Magnesium	20 - 70 ppm	41.33	24.62
Sodium	0 - 30 ppm	50.71	22.28
Soluble Salts	<1,920 ppm	671.00	371.00
Bicarbonate	<60 ppm	146.42	148.58
Chloride	<1,000 ppm	85.00	28.00
SAR	<4%	1.04	0.62

GREENS	Acceptable Range For Saturated Paste Sample	7,16(avg) 9/24/19	7,16, PG(avg) 9/12/22
Nitrate - Dominator Bentgrass	1-3 ppm	<2.0	<0.5
Phosphorus	2 - 7 ppm	2.73	3.86
Potassium	25-40 ppm	14.57	31.44
Calcium	50- 75 ppm	24.67	38.98
Magnesium	15-30 ppm	8.58	18.98
Sodium	0 - 30 ppm	26.87	19.55
Soluble Salts	<1,000 ppm	238.00	320.33
Bicarbonate	<60 ppm	85.41	110.10
Chloride	<200 ppm	27.00	34.00
SAR	<4%	1.20	0.64