



SOIL AND WATER CONSULTING

Data Collection Report

Fall 2019

Date of Collection: 9/24/19

Client: Canyon Gate Country Club



Testing Results

<u>9/24/19</u>		
Humidity/Air Temperature	16%/90°	
Greens Temperature	(avg)60°	
Fairway Temperature	(avg)63°	

WATER	Acceptable Range For Water Sample	Hole #7 9/24/19
pH	6.0-6.5	7.90
EC	<2.25 mmhos/cm	0.90
Sodium		78.31
Calcium	20 - 60 ppm	69.95
Magnesium	10 - 25 ppm	23.43
Potassium	5 - 20 ppm	4.50
Nitrate	10 - 25 ppm	0.22
Phosphorus	5 - 20 ppm	<0.2
Sulfur	30 - 90 ppm	196.53
Bicarbonate	<120 ppm	168.93
Boron	<0.67 ppm	0.11
Chloride	<177 ppm	72.51

TEE	Acceptable Range For Tissue Sample	7 9/24/19
Nitrogen	3.34%-5.10%	3.87
Phosphorus	0.35% - 0.55%	0.57
Potassium	2.0% - 3.42%	2.47
Calcium	0.25%-0.5%	0.95
Magnesium	0.16%-0.32%	0.44
Sodium	229-1107 ppm	2,400.00

FAIRWAY	Acceptable Range For Tissue Sample	7 9/24/19
Nitrogen	3.34%-5.10%	4.79
Phosphorus	0.35% - 0.55%	0.55
Potassium	2.0% - 3.42%	2.68
Calcium	0.25%-0.5%	0.62
Magnesium	0.16%-0.32%	0.30
Sodium	229-1107 ppm	1,250.00

GREENS	Acceptable Range For Tissue Sample	7,16(avg) 9/24/19
Nitrogen	3.0%-6.5%	4.27
Phosphorus	0.2%-0.55%	0.60
Potassium	0.86%-2.55%	2.49
Calcium	0.21%-0.50%	0.66
Magnesium	0.09%-0.22%	0.27
Sodium	506- 2264 ppm	1,520.00

TEES	Acceptable Range For Alkaline Soils Sample	7 9/30/11	7,16(avg) 9/24/19
Organic Matter (Humus)	2 - 3%	3.49	4.25
Sulfur	12 - 16 ppm	41.00	41.50
Olsen - Phosphorus	13 - 20 ppm	36.00	33.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,160.00	4,919.00
Magnesium	>7% base saturation or at least 200 lbs/acre	14.62%/510	17.42%/693
Potassium - TEC of 0 - 35	100 ppm	282.00	203.00
Manganese	>50 ppm	n/t	16.00

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	7 9/30/11	7,16(avg) 9/24/19
Organic Matter (Humus)	2 - 3%	6.28	6.18
Sulfur	12 - 16 ppm	88.00	160.50
Olsen - Phosphorus	13 - 20 ppm	78.00	68.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,056.00	5,901.00
Magnesium	>7% base saturation or at least 200 lbs/acre	15.78%/680	17.18%/818
Potassium - TEC of 0 - 35	100 ppm	331.00	252.00
Manganese	>50 ppm	n/t	23.00

GREENS	Acceptable Range For Alkaline Soils Sample	7 9/30/11	7,16(avg) 9/24/19
Organic Matter (Humus)	2 - 3%	0.54	0.29
Sulfur	12 - 16 ppm	41.00	32.00
Olsen - Phosphorus	13 - 20 ppm	20.00	7.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,910.00	1,620.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.56%/222	12.32%/150
Potassium - TEC of 0 - 35	150 ppm	52.00	54.50
Manganese	>50 ppm	n/t	27.00

TEES	Acceptable Range For Saturated Paste Sample	7 9/30/11	7 9/24/19
Nitrate - Bermudagrass	10 -15 ppm	58.30	9.30
Phosphorus	2 - 10 ppm	3.44	1.88
Potassium	40 - 100 ppm	31.20	19.47
Calcium	60 - 200 ppm	101.50	89.39
Magnesium	20 - 70 ppm	36.85	36.32
Sodium	0 - 30 ppm	148.60	48.14
Soluble Salts	<1,920 ppm	1,029.00	570.00
Bicarbonate	<60 ppm	149.61	139.10
Chloride	<1,000 ppm	183.00	78.00
SAR	<4%	3.21	1.08

FAIRWAYS	Acceptable Range For Saturated Paste Sample	7 9/30/11	7 9/24/19
Nitrate - Bermudagrass	10 -15 ppm	71.40	42.90
Phosphorus	2 - 10 ppm	4.58	2.30
Potassium	40 - 100 ppm	53.07	30.92
Calcium	60 - 200 ppm	160.00	112.92
Magnesium	20 - 70 ppm	52.29	41.33
Sodium	0 - 30 ppm	183.90	50.71
Soluble Salts	<1,920 ppm	1,363.00	671.00
Bicarbonate	<60 ppm	105.46	146.42
Chloride	<1,000 ppm	181.00	85.00
SAR	<4%	3.23	1.04

GREENS	Acceptable Range For Saturated Paste Sample	7,16(avg) 9/30/11	7,16(avg) 9/24/19
Nitrate - Dominator Bentgrass	1-3 ppm	5.50	<2.0
Phosphorus	2 - 7 ppm	1.60	2.73
Potassium	25-40 ppm	30.35	14.57
Calcium	50- 75 ppm	51.51	24.67
Magnesium	15-30 ppm	21.58	8.58
Sodium	0 - 30 ppm	80.12	26.87
Soluble Salts	<1,000 ppm	540.00	238.00
Bicarbonate	<60 ppm	131.22	85.41
Chloride	<200 ppm	76.00	27.00
SAR	<4%	2.38	1.20