



SOIL AND WATER CONSULTING

Data Collection Report

Summer 2020

Date of Collection: 7/27/20

Client: The Las Vegas Country Club



Testing Results

	<u>6/19/18</u>	<u>6/19/19</u>	<u>7/27/20</u>
Humidity/Air Temperature	10%/101°	15%/107°	15%/107°
Greens Temperature	71.35°	(avg)85.4°	(avg)75.33°
Fairway Temperature	72.3°	(avg)86.2°	(avg)77.65°

WATER	Acceptable Range For Water Sample	Hole #3 6/19/18	Hole #6 6/19/19	Hole #13 7/27/20
EC	<2.25 mmhos/cm	0.77	0.67	0.78
Sodium		17.64	16.16	18.28
Calcium	20 - 60 ppm	74.17	70.61	71.40
Magnesium	10 - 25 ppm	37.65	38.91	43.59
Potassium	5 - 20 ppm	6.32	3.84	5.75
Sulfur	30 - 90 ppm	175.71	183.12	202.47
Bicarbonate	<120 ppm	222.89	219.99	216.35
Boron	<0.67 ppm	0.09	0.09	0.10
Chloride	<177 ppm	21.11	15.32	21.11

TEE	Acceptable Range For Tissue Sample	13 7/27/20
Nitrogen	2.49%-4.56%	2.65
Phosphorus	0.26%-0.38%	0.41
Potassium	0.95% - 1.97%	1.37
Calcium	0.50%-0.90%	0.85
Magnesium	0.13%-0.16%	0.35
Sodium	622-1709 ppm	1,100.00

FAIRWAY	Acceptable Range For Tissue Sample	13 7/27/20
Nitrogen	2.49%-4.56%	2.81
Phosphorus	0.26%-0.38%	0.42
Potassium	0.95% - 1.97%	1.57
Calcium	0.50%-0.90%	0.76
Magnesium	0.13%-0.16%	0.32
Sodium	622-1709 ppm	609.00

GREENS	Acceptable Range For Tissue Sample	4,13 (avg) 7/27/20
Nitrogen	3.0%-6.5%	3.14
Phosphorus	0.2%-0.55%	0.56
Potassium	0.86%-2.55%	1.84
Calcium	0.21%-0.50%	0.75
Magnesium	0.09%-0.22%	0.38
Sodium	506- 2264 ppm	367.50

TEES	Acceptable Range For Alkaline Soils Sample	3,12(avg) 6/19/18	6,15(avg) 6/19/19	4,13(avg) 7/27/20
Organic Matter (Humus)	2 - 3%	3.23	4.83	2.80
Sulfur	12 - 16 ppm	396.00	72.00	345.00
Olsen - Phosphorus	13 - 20 ppm	31.50	20.50	15.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,941.00	4,606.00	4,175.00
	>7% base saturation or at least 200 lbs/acre	20.76%/876	24.76%/1,017	20.75%/761
Magnesium				
Potassium - TEC of 0 - 35	100 ppm	334.50	224.50	240.50
Manganese	>50 ppm	21.50	23.00	28.50

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	3,12(avg) 6/19/18	6,15(avg) 6/19/19	4,13(avg) 7/27/20
Organic Matter (Humus)	2 - 3%	5.26	5.34	5.62
Sulfur	12 - 16 ppm	5,597.50	2,209.50	4,648.00
Olsen - Phosphorus	13 - 20 ppm	30.00	24.50	33.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	18,390.00	9,704.00	15,227.00
	>7% base saturation or at least 200 lbs/acre	11.78%/1,128	16.86%/1,084	12.57%/1,266
Magnesium				
Potassium - TEC of 0 - 35	100 ppm	210.50	203.00	276.00
Manganese	>50 ppm	15.50	11.50	24.50

GREENS	Acceptable Range For Alkaline Soils Sample	3,12(avg) 6/19/18	6,15(avg) 6/19/19	4,13(avg) 7/27/20
Organic Matter (Humus)	2 - 3%	1.11	1.14	0.88
Sulfur	12 - 16 ppm	221.00	159.00	306.00
Olsen - Phosphorus	13 - 20 ppm	77.00	91.00	68.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,236.00	3,121.00	2,843.00
	>7% base saturation or at least 200 lbs/acre	16.39%/418	18.40%/472	17.59%/398
Magnesium				
Potassium - TEC of 0 - 35	150 ppm	111.00	139.00	85.00
Manganese	>50 ppm	29.50	57.00	47.50

TEE	Acceptable Range For Saturated Paste Sample	15 6/19/19	13 7/27/20
Nitrate - Ryegrass	5 - 10 ppm	1.00	90.50
Phosphorus	2 - 10 ppm	2.42	1.20
Potassium	40 - 100 ppm	47.59	36.15
Calcium	60 - 200 ppm	136.61	136.46
Magnesium	20 - 70 ppm	83.66	72.58
Sodium	0 - 30 ppm	38.57	49.90
Soluble Salts	<1,920 ppm	780.00	909.00
Bicarbonate	<60 ppm	244.04	82.41
Chloride	<1,000 ppm	61.00	68.00
SAR	<4%	0.64	0.86

FAIRWAY	Acceptable Range For Saturated Paste Sample	15 6/19/19	13 7/27/20
Nitrate - Ryegrass	5 - 10 ppm	19.90	155.70
Phosphorus	2 - 10 ppm	1.36	0.92
Potassium	40 - 100 ppm	75.89	102.57
Calcium	60 - 200 ppm	481.73	605.89
Magnesium	20 - 70 ppm	215.40	259.60
Sodium	0 - 30 ppm	63.95	112.32
Soluble Salts	<1,920 ppm	1,924.00	2,995.00
Bicarbonate	<60 ppm	224.52	82.96
Chloride	<1,000 ppm	93.00	221.00
SAR	<4%	0.61	0.96

GREENS	Acceptable Range For Saturated Paste Sample	6,15 (avg) 6/19/19	4,13(avg) 7/27/20
Nitrate - Bentgrass	1-3 ppm	<0.5	11.10
Phosphorus	2 - 7 ppm	2.37	1.39
Potassium	25-40 ppm	100.98	93.93
Calcium	50- 75 ppm	211.08	339.47
Magnesium	15-30 ppm	107.34	161.85
Sodium	0 - 30 ppm	54.36	71.38
Soluble Salts	<1,000 ppm	1,287.00	1,725.50
Bicarbonate	<60 ppm	292.85	128.20
Chloride	<200 ppm	84.00	103.50
SAR	<4%	0.75	0.81