



SOIL AND WATER CONSULTING

Data Collection Report

Summer 2022

Date of Collection: 6/17/22

Client: The Las Vegas Country Club



Testing Results

	<u>6/19/19</u>	<u>7/27/20</u>	<u>6/17/22</u>
Humidity/Air Temperature	15%/107°	15%/107°	5%/104°
Greens Temperature	(avg)85.4°	(avg)75.33°	n/r
Fairway Temperature	(avg)86.2°	(avg)77.65°	n/r

WATER	Acceptable Range For Water Sample	Hole #6 6/19/19	Hole #13 7/27/20	Hole #6 6/17/22
EC	<2.25 mmhos/cm	0.67	0.78	0.68
Sodium		16.16	18.28	14.75
Calcium	20 - 60 ppm	70.61	71.40	68.75
Magnesium	10 - 25 ppm	38.91	43.59	37.98
Potassium	5 - 20 ppm	3.84	5.75	2.60
Sulfur	30 - 90 ppm	183.12	202.47	159.51
Bicarbonate	<120 ppm	219.99	216.35	241.89
Boron	<0.67 ppm	0.09	0.10	0.08
Chloride	<177 ppm	15.32	21.11	21.79

TEE	Acceptable Range For Tissue Sample	15 6/17/22
Nitrogen	2.49%-4.56%	2.65
Phosphorus	0.26%-0.38%	0.30
Potassium	0.95% - 1.97%	10.00
Calcium	0.50%-0.90%	1.18
Magnesium	0.13%-0.16%	0.30
Sodium	622-1709 ppm	400.00

FAIRWAY	Acceptable Range For Tissue Sample	15 6/17/22
Nitrogen	2.49%-4.56%	3.53
Phosphorus	0.26%-0.38%	0.43
Potassium	0.95% - 1.97%	2.38
Calcium	0.50%-0.90%	0.81
Magnesium	0.13%-0.16%	0.41
Sodium	622-1709 ppm	654.00

GREENS	Acceptable Range For Tissue Sample	6,15 (avg) 6/17/22
Nitrogen	3.0%-6.5%	4.78
Phosphorus	0.2%-0.55%	0.49
Potassium	0.86%-2.55%	2.31
Calcium	0.21%-0.50%	0.89
Magnesium	0.09%-0.22%	0.47
Sodium	506- 2264 ppm	586.00

TEES	Acceptable Range For Alkaline Soils Sample	6,15(avg) 6/19/19	4,13(avg) 7/27/20	6,15(avg) 6/17/22
Organic Matter (Humus)	2 - 3%	4.83	2.80	2.99
Sulfur	12 - 16 ppm	72.00	345.00	546.50
Olsen - Phosphorus	13 - 20 ppm	20.50	15.50	10.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	4,606.00	4,175.00	5,542.00
Magnesium	>7% base saturation or at least 200 lbs/acre	24.76%/1,017	20.75%/761	19.36%/852
Potassium - TEC of 0 - 35	100 ppm	224.50	240.50	165.50
Manganese	>50 ppm	23.00	28.50	18.50

FAIRWAYS	Acceptable Range For Alkaline Soils Sample	6,15(avg) 6/19/19	4,13(avg) 7/27/20	6,15(avg) 6/17/22
Organic Matter (Humus)	2 - 3%	5.34	5.62	4.99
Sulfur	12 - 16 ppm	2,209.50	4,648.00	3,213.50
Olsen - Phosphorus	13 - 20 ppm	24.50	33.50	17.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	9,704.00	15,227.00	12,593.00
Magnesium	>7% base saturation or at least 200 lbs/acre	16.86%/1,084	12.57%/1,266	12.67%/1,080
Potassium - TEC of 0 - 35	100 ppm	203.00	276.00	202.50
Manganese	>50 ppm	11.50	24.50	14.00

GREENS	Acceptable Range For Alkaline Soils Sample	6,15(avg) 6/19/19	4,13(avg) 7/27/20	6,15(avg) 6/17/22
Organic Matter (Humus)	2 - 3%	1.14	0.88	0.79
Sulfur	12 - 16 ppm	159.00	306.00	417.50
Olsen - Phosphorus	13 - 20 ppm	91.00	68.00	69.50
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,121.00	2,843.00	3,493.00
Magnesium	>7% base saturation or at least 200 lbs/acre	18.40%/472	17.59%/398	18.22%/529
Potassium - TEC of 0 - 35	150 ppm	139.00	85.00	178.00
Manganese	>50 ppm	57.00	47.50	47.00

TEE	Acceptable Range For Saturated Paste Sample	13 7/27/20	15 6/17/22
Nitrate -Bermudagrass	10-15 ppm	90.50	<0.5
Phosphorus	2 - 10 ppm	1.20	0.48
Potassium	40 - 100 ppm	36.15	30.11
Calcium	60 - 200 ppm	136.46	495.57
Magnesium	20 - 70 ppm	72.58	218.61
Sodium	0 - 30 ppm	49.90	75.82
Soluble Salts	<1,920 ppm	909.00	1,841.00
Bicarbonate	<60 ppm	82.41	182.38
Chloride	<1,000 ppm	68.00	73.00
SAR	<4%	0.86	0.71

FAIRWAY	Acceptable Range For Saturated Paste Sample	13 7/27/20	15 6/17/22
Nitrate -Bermudagrass	10-15 ppm	155.70	8.70
Phosphorus	2 - 10 ppm	0.92	0.98
Potassium	40 - 100 ppm	102.57	53.64
Calcium	60 - 200 ppm	605.89	485.81
Magnesium	20 - 70 ppm	259.60	209.72
Sodium	0 - 30 ppm	112.32	88.42
Soluble Salts	<1,920 ppm	2,995.00	1,889.00
Bicarbonate	<60 ppm	82.96	149.23
Chloride	<1,000 ppm	221.00	115.00
SAR	<4%	0.96	0.84

GREENS	Acceptable Range For Saturated Paste Sample	4,13(avg) 7/27/20	6,15(avg) 6/17/22
Nitrate - Bentgrass	1-3 ppm	11.10	5.05
Phosphorus	2 - 7 ppm	1.39	1.08
Potassium	25-40 ppm	93.93	217.14
Calcium	50- 75 ppm	339.47	397.91
Magnesium	15-30 ppm	161.85	237.17
Sodium	0 - 30 ppm	71.38	130.28
Soluble Salts	<1,000 ppm	1,725.50	2,158.50
Bicarbonate	<60 ppm	128.20	155.19
Chloride	<200 ppm	103.50	147.50
SAR	<4%	0.81	1.27