



SOIL AND WATER CONSULTING

Data Collection Report

Spring 2018

Date of Collection: 3/1/18

Client: Revere Golf Club



Testing Results

	<u>3/24/16</u>	<u>3/23/17</u>	<u>3/1/18</u>
Humidity/Air Temperature	15%/75°	38%/54°	35%/64°
Greens Temperature	43.1°	56°	41.7°
Fairway Temperature	46.5°	58°	44.2°

WATER	Acceptable Range For Water Sample	Hole #14 3/24/16	Hole #1 3/23/17	Hole #9 Green 3/1/18
EC	<2.25 mmhos/cm	2.13	2.16	1.03
Sodium		293.60	287.00	87.58
Calcium	20 - 60 ppm	94.61	97.76	76.76
Magnesium	10 - 25 ppm	26.70	30.23	21.99
Potassium	5 - 20 ppm	20.80	28.11	20.91
Phosphorus	0.1 - 0.4 ppm	0.80	2.29	<0.20
Nitrate	5 - 50 ppm	8.78	11.99	0.59
Sulfur	30 - 90 ppm	275.76	281.49	204.15
Bicarbonate	<120 ppm	177.10	159.82	136.49
Boron	<0.67 ppm	0.40	0.34	0.15
Chloride	<177 ppm	469.77	369.01	108.93

TEE	Acceptable Range For Tissue Sample	9 3/1/18
Nitrogen	2.49%-4.56%	3.09
Phosphorus	0.26% - 0.38%	0.35
Potassium	0.95% - 1.97%	1.68
Calcium	0.50%-0.90%	0.78
Magnesium	0.13%-0.16%	0.22
Sodium	622-1709 ppm	4,750.00

FAIRWAY	Acceptable Range For Tissue Sample	9 3/1/18
Nitrogen	2.49%-4.56%	3.44
Phosphorus	0.26% - 0.38%	0.36
Potassium	0.95% - 1.97%	1.69
Calcium	0.50%-0.90%	0.81
Magnesium	0.13%-0.16%	0.21
Sodium	622-1709 ppm	5,320.00

GREENS	Acceptable Range For Tissue Sample	Greens 9,9,18 (avg) 3/1/18
Nitrogen	3.0%-6.5%	2.74
Phosphorus	0.2%-0.55%	0.28
Potassium	0.86%-2.55%	1.55
Calcium	0.21%-0.50%	0.82
Magnesium	0.09%-0.22%	0.22
Sodium	506- 2264 ppm	2,706.60

LEXINGTON TEES	Acceptable Range For Alkaline Soils Sample	14 3/24/16	1 3/23/17	9,18(avg) 3/1/18
Organic Matter (Humus)	2 - 3%	3.34	3.64	3.58
Sulfur	12 - 16 ppm	104.00	74.00	73.00
Olsen - Phosphorus	13 - 20 ppm	18.00	28.00	22.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	5,332.00	3,918.00	3,981.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.76%/474	12.56%/464	13.57%/489
Potassium - TEC of 0 - 35	100 ppm	364.00	457.00	393.00
Manganese	>50 ppm	n/a	n/a	18.00

LEXINGTON FAIRWAYS	Acceptable Range For Alkaline Soils Sample	14 3/24/16	1 3/23/17	9,18(avg) 3/1/18
Organic Matter (Humus)	2 - 3%	3.79	5.21	3.90
Sulfur	12 - 16 ppm	604.00	5,337.00	3,765.50
Olsen - Phosphorus	13 - 20 ppm	38.00	25.00	43.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	6,854.00	18,232.00	14,163.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.95%/642	4.09%/530	7.49%/656
Potassium - TEC of 0 - 35	100 ppm	517.00	569.00	909.00
Manganese	>50 ppm	n/a	n/a	27.00

LEXINGTON GREENS	Acceptable Range For Alkaline Soils Sample	14 3/24/16	1 3/23/17	9,18(avg) 3/1/18
Organic Matter (Humus)	2 - 3%	1.77	2.26	2.41
Sulfur	12 - 16 ppm	81.00	111.00	57.00
Olsen - Phosphorus	13 - 20 ppm	8.00	6.00	7.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,100.00	2,824.00	2,801.00
Magnesium	>7% base saturation or at least 200 lbs/acre	8.05%/246	8.16%/238	8.65%/250
Potassium - TEC of 0 - 35	150 ppm	726.00	731.00	857.50
Manganese	>50 ppm	n/a	n/a	35.00

LEXINGTON TEE	Acceptable Range For Saturated Paste Sample	1,10 (avg) 3/23/17	9 3/1/18
Nitrate - Ryegrass	5 - 10 ppm	18.85	<0.5
Phosphorus	2 - 10 ppm	3.78	2.88
Potassium	40 - 100 ppm	36.73	26.01
Calcium	60 - 200 ppm	113.08	55.06
Magnesium	20 - 70 ppm	32.89	16.61
Sodium	0 - 30 ppm	329.96	233.09
Soluble Salts	<1,920 ppm	1,456.00	966.00
Bicarbonate	<60 ppm	255.02	204.99
Chloride	<1,000 ppm	324.00	206.00
SAR	<4%	7.01	7.07

LEXINGTON FAIRWAY	Acceptable Range For Saturated Paste Sample	1,10 (avg) 3/23/17	9 3/1/18
Nitrate - Ryegrass	5 - 10 ppm	7.90	<0.5
Phosphorus	2 - 10 ppm	1.53	1.50
Potassium	40 - 100 ppm	70.73	44.28
Calcium	60 - 200 ppm	508.25	407.89
Magnesium	20 - 70 ppm	93.34	78.88
Sodium	0 - 30 ppm	579.18	422.54
Soluble Salts	<1,920 ppm	2,998.50	2,509.00
Bicarbonate	<60 ppm	223.30	229.40
Chloride	<1,000 ppm	543.00	325.00
SAR	<4%	6.20	5.01

LEXINGTON GREENS	Acceptable Range For Saturated Paste Sample	1,10 (avg) 3/23/17	9,18(avg) 3/1/18
Nitrate - Bentgrass/Poa	1-3 ppm	<0.6	<0.5
Phosphorus	2 - 7 ppm	0.84	0.65
Potassium	25-40 ppm	16.65	10.94
Calcium	50- 75 ppm	69.26	40.06
Magnesium	15-30 ppm	18.35	10.58
Sodium	0 - 30 ppm	153.07	88.20
Soluble Salts	<1,000 ppm	650.50	447.50
Bicarbonate	<60 ppm	125.68	130.56
Chloride	<200 ppm	77.00	47.00
SAR	<4%	4.21	3.18

CONCORD TEE	Acceptable Range For Alkaline Soils Sample	18 3/18/15	9 3/1/18
Organic Matter (Humus)	2 - 3%	1.60	1.80
Sulfur	12 - 16 ppm	46.00	67.00
Olsen - Phosphorus	13 - 20 ppm	14.00	12.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,994.00	2,520.00
Magnesium	>7% base saturation or at least 200 lbs/acre	11.72%/388	10.49%/216
Potassium - TEC of 0 - 35	100 ppm	249.00	110.00
Manganese	>50 ppm	n/a	29.00

CONCORD FAIRWAY	Acceptable Range For Alkaline Soils Sample	18 3/18/15	9 3/1/18
Organic Matter (Humus)	2 - 3%	3.20	3.25
Sulfur	12 - 16 ppm	2,312.00	7,648.00
Olsen - Phosphorus	13 - 20 ppm	15.00	9.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	9,374.00	24,984.00
Magnesium	>7% base saturation or at least 200 lbs/acre	7.62%/574	4.13%/740
Potassium - TEC of 0 - 35	100 ppm	683.00	903.00
Manganese	>50 ppm	n/a	32.00

CONCORD GREEN	Acceptable Range For Alkaline Soils Sample	18 3/18/15	9 3/1/18
Organic Matter (Humus)	2 - 3%	1.00	1.59
Sulfur	12 - 16 ppm	71.00	80.00
Olsen - Phosphorus	13 - 20 ppm	8.00	9.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,362.00	3,112.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.17%/228	10.95%/310
Potassium - TEC of 0 - 35	150 ppm	438.00	529.00
Manganese	>50 ppm	n/a	45.00

CONCORD GREEN	Acceptable Range For Saturated Paste Sample	9 3/1/18
Nitrate - Bentgrass/Poa	1-3 ppm	<0.5
Phosphorus	2 - 7 ppm	1.14
Potassium	25-40 ppm	13.83
Calcium	50- 75 ppm	37.70
Magnesium	15-30 ppm	10.91
Sodium	0 - 30 ppm	88.82
Soluble Salts	<1,000 ppm	463.00
Bicarbonate	<60 ppm	143.98
Chloride	<200 ppm	43.00
SAR	<4%	3.28

