

SPRING 2016
Data Collection Report
Soil & Water Consulting



Jumping Brook Country Club



SOIL and WATER CONSULTING

Course Name: Jumping Brook Country Club

Date of Visit: April 23, 2016

	<u>9/23/15</u>	<u>4/23/15</u>
Humidity/Air Temperature	60%/75°	100%/65°
Greens Temperature	(avg) 62.3°	(avg) 58.9°

WATER	Acceptable Range For Water Sample	Pond <u>9/23/15</u>	Sprinkler head <u>4/23/16</u>
EC	<2.25 mmhos/cm	0.23	0.28
Sodium		10.23	29.05
Calcium	20 - 60 ppm	29.99	15.21
Magnesium	10 - 25 ppm	2.45	3.17
Potassium	5 - 20 ppm	3.17	3.85
Phosphorus	0.1 - 0.4 ppm	<0.20	n/t
Nitrate	5 - 50 ppm	0.29	n/t
Sulfur	30 - 90 ppm	10.55	33.30
Bicarbonate	<120 ppm	97.45	21.60
Boron	<0.67 ppm	<0.05	<0.50
Chloride	<177 ppm	11.57	38.30



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GREENS	Acceptable Range For Standard Soil Sample	1,2,8,12,17 (avg) 9/23/15	3,6,10,13,18 (avg) 4/23/16
Organic Matter (Humus)	2 - 3%	4.19	4.49
Sulfur	50 - 100 ppm	41.80	26.80
Mehlich III - Phosphorus	350 lbs/acre	1,247.60	1,430.80
Calcium	68%	71.36	71.26
Magnesium	15%	10.98	9.84
Potassium	5%	4.16	3.69
Sodium	<2%	1.42	1.86
Boron	1 - 1.5 ppm	0.70	0.59
Iron	120 ppm	362.20	374.00
Manganese	50 ppm	10.40	8.00

GREENS	Acceptable Range For Saturated Paste Sample	1,2,8,12,17 (avg) 9/23/15	3,6,10,13,18 (avg) 4/23/16
Nitrate - Bentgrass/Poa	1-3 ppm	12.74	<0.5
Phosphorus	2 - 7 ppm	1.76	2.86
Potassium	25-40 ppm	47.21	26.34
Calcium	50- 75 ppm	55.98	24.86
Magnesium	15-30 ppm	11.26	5.22
Sodium	0 - 30 ppm	17.36	8.86
Soluble Salts	<1,000 ppm	391.60	165.60
Bicarbonate	<60 ppm	23.43	34.17
Chloride	<200 ppm	27.40	6.20
SAR	<4%	0.56	0.42

GREENS	Acceptable Range For Tissue Sample	1,2,8,12,17 9/23/15	3,6,10,13,18 (avg) 4/23/16
Nitrogen	3.0%-6.5%	5.69	4.21
Phosphorus	0.2%-0.55%	0.74	0.69
Potassium	0.86%-2.55%	3.07	2.98
Calcium	0.21%-0.50%	0.48	0.59
Magnesium	0.09%-0.22%	0.14	0.21
Sulfur	0.23%-0.39%	0.49	0.52
Boron	5-24 ppm	7.26	11.10
Iron	99-500 ppm	219.40	472.80
Manganese	30-160 ppm	81.00	260.20
Copper	9-40 ppm	19.74	16.62
Zinc	5-60 ppm	65.42	64.92
Aluminum	63- 408 ppm	303.40	220.20
Sodium	506- 2264 ppm	390.20	203.40



RECOMMENDATIONS



Thoughts on the course visit

You will note that the actual fertilizer recommendations below are not significantly different than in the Fall. Your Nitrate Nitrogen levels are better, in my opinion, and with the recent rain and hopefully warmer temperatures next week (May 9-16), you should see a natural increase in growth where more nitrogen won't be necessary. Overall, I thought the greens had good color and Nitrogen is not a limiting factor in health of the turf right now. I do expect to see Nitrate nitrogen lower coming out of winter and when soil temperatures are cooler. You still haven't seen a "flush" of growth from warmer temperatures yet. As that happens, any of you slow release or organic material based products will start to do their thing and you should be getting a lot of clippings.

My main thought is that, in the soil, you are feeding the turf from a small plate of food. The plate is well balanced nutritionally and full, but it is a small plate. Some of the things you describe about the greens and watering in the Summer are a direct result of not having enough to eat, so to speak. They are healthy but can't sustain themselves long enough before they become dehydrated or lack reserves to draw from under stress. Much like you and I when we eat a nice salad for noon lunch, but we are hungry by 3 pm. We can't wait until dinner before we have to eat again. So, by using the fertility recommendations monthly, you will make a bigger plate of food for the grass to eat from!



Notes from the visit

- Mowing height is 0.120"
- Staff of 11 in full Summer.
- 1/4" of rain night before samples collected.
- Aerification completed on 3/14.
- Went over spray program for 2016.
- Played 18 holes with Tom and Ron on 4/16/16.
- Color is very good. Still some healing to be completed from aerification.

Fertilizer and Product Recommendations

Greens (Monthly applications)

Phosphorus- Spray pHacid during dry periods.

Calcium- 10 pounds of product per 1,000 square feet. (Gypsum)

Magnesium- 3 pounds of product per 1,000 square feet. (Pro-Mag)

Potassium- 2 pounds of product per 1,000 square feet (0-0-50)

Manganese- 2 pounds of product per 1,000 square feet (Manganese Sulfate-"Tech-Magnum")