FALL 2017

Data Collection Report

Soil & Water Consulting

SILVERLAKES

Fields Name: Athletic Fields and Landscape

Date & Time of Visit: September 13, 2017

	9/14/16	3/9/17	9/13/17
Humidity/Air Temperature	75%/80°	51%/85°	65%/80°
Field Temperature	n/t	65	80°

WATER	Acceptable Range For Water Sample	Hose 9/14/16	Stadium 3/9/17	The Quad 9/13/17
pH	6.50	8.10	7.50	7.52
EC	<2.25 mmhos/cm	1.00	1.00	0.78
Sodium		93.14	87.89	71.80
Calcium	20 - 60 ppm	93.49	84.21	69.45
Magnesium	10 - 25 ppm	16.72	15.94	13.55
Potassium	5 - 20 ppm	6.04	6.11	3.90
Phosphorus	0.1 - 0.4 ppm	0.28	0.23	n/t
Nitrate	5 - 50 ppm	0.20	2.27	n/t
Sulfur	30 - 90 ppm	97.53	160.50	54.06
Bicarbonate	<120 ppm	295.89	198.70	223.61
Boron	<0.67 ppm	0.23	0.22	0.14
Chloride	<177 ppm	119.82	117.78	141.44

FIELDS	Acceptable Range For Alkaline Soils Sample	The Six Plus 3/9/17	The Stadium 3/9/17	9-13 3/9/17	The Quad 3/9/17	The Six Plus 9/13/17	The Stadium 9/13/17	9-13 9/13/17	The Quad 9/13/17
Organic Matter (Humus)	2 - 3%	0.78	0.76	0.74	1.63	1.27	1.81	1.34	2.46
Sulfur	12 - 16 ppm	38.00	66.00	48.00	59.00	75.00	92.00	84.00	221.00
Olsen - Phosphorus	13 - 20 ppm	12.00	35.00	19.00	18.00	5.00	84.00	10.00	14.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	2,944.00	2,841.00	2,835.00	3,423.00	5,272.00	5,014.00	5,226.00	4,618.00
Magnesium	>7% base saturation or at least 200 lbs/acre	10.11%/217	11.67%/251	10.51%/219	22.58%/692	8.21%/312	9.35%/352	8.53%/324	20.90%/876
Potassium - TEC of 0 - 35	150 ppm	136.00	152.00	110.00	146.00	183.00	227.00	159.00	127.00
Copper	>0.8 ppm	0.21	0.27	0.30	0.40	2.39	3.77	2.77	3.18
Manganese	4 ppm or more	2.00	3.00	2.00	4.00	3.00	4.00	4.00	3.00
Zinc	>1 - 2 ppm	0.43	0.63	0.75	0.69	0.51	2.26	0.84	1.20

FIELDS	Acceptable Range For Saturated Paste Sample	The Six Plus 3/9/17	The Stadium 3/9/17	9-13 3/9/17	The Quad 3/9/17	The Six Plus 9/13/17	The Stadium 9/13/17	9-13 9/13/17	The Quad 9/13/17
Nitrate - Bandera Bermuda	5-10 ppm	30.40	9.70	<0.5	<0.5	7.60	5.70	3.30	<0.5
Phosphorus	2 - 7 ppm	1.35	1.86	1.45	0.82	0.33	1.43	0.31	0.88
Potassium	25-40 ppm	44.17	41.86	32.14	17.55	76.20	70.12	41.15	20.32
Calcium	50- 75 ppm	140.03	123.40	141.98	123.89	153.62	114.23	170.35	271.41
Magnesium	15-30 ppm	28.48	24.42	29.12	37.28	29.90	23.06	32.80	83.14
Sodium	0 - 30 ppm	46.08	53.76	66.03	117.34	122.02	121.79	158.57	323.85
Soluble Salts	<1,000 ppm	70.00	68.00	71.00	99.00	999.00	924.00	1,065.00	1,773.00
Bicarbonate	<60 ppm	202.55	263.56	295.29	222.08	280.65	256.24	307.49	300.17
Chloride	<200 ppm	769.00	693.00	753.00	855.00	134.00	137.00	157.00	295.00
SAR	<4%	0.93	1.16	1.32	2.37	2.36	2.72	2.91	4.41

RECOMMENDATIONS

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Thoughts on the visit

The picture below is showing some plugs of black layer I found on some areas of the engineered fields. This was not found in the Quad area native fields. It is something to keep in the back of your mind as you discuss programs for the upcoming year. Although I was able to sample at the normal 6" depth this time, I still find varying depths of the sand mix. When you have shallower depths on the fields they won't drain well. Black layer is sulfur that is "hung up" in the profile. Because we know sulfur is a very mobile element, it is not the sulfurs fault (or your applications of sulfur based amendments) it is the poor drainage of certain areas on certain fields. The reason that this is important is because you did a great thing this Summer with the deep aerification and sand topdressing!! It is what I consider necessary and routine maintenance to achieve quality playing surfaces. I understand it comes at a significant cost. However, because of the varying depths of the sand mix, it is even more important to prioritize the aerification and sand topdressing process every Summer.

You also made excellent strides in fertility levels in 2017. As long as you can continue with the acid injection, I have only recommended 0-0-50 applications to be completed before Thanksgiving. We also discussed the use of pigments and that will not only make things look attractive as Winter hits, but will also draw some extra heat that may help with a quicker Spring green-up.

Notes from the visit

- Took a tissue sample from #12.
- Using heavy rates of the acid each time it's injected.
- Sprayed Ferrous sulfate and growth regular each month his Summer.
- Aerified using 1 ¼'' deep tines.
- Verti-cut in 2 directions.
- 25 tons per acre of topdressing sand used.
- Applied a pre-emergence herbicide at the end of August.
- Removed the 11-55-00 (MAP) applications from the program..
- Applied a 1 pound rate of K in April and August.

Fertilizer and Product Recommendations

Engineered Fields

Potassium- 75 pounds of product per acre. (0-0-50)

Native Soil Fields

Potassium- 150 pounds of product per acre. (0-0-50)

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