

SPRING 2017

Data Collection Report

Soil & Water Consulting

SILVERLAKES



SOIL and WATER CONSULTING

Fields Name: Athletic Fields and Landscape

Date & Time of Visit: March 9, 2017

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

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



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FIELDS	Acceptable Range For Alkaline Soils Sample	Original Construction Mix 9/14/16	The Six Plus 3/9/17	The Stadium 3/9/17	9-13 3/9/17	The Quad 3/9/17
Organic Matter (Humus)	2 - 3%	0.24	0.78	0.76	0.74	1.63
Sulfur	12 - 16 ppm	40.00	38.00	66.00	48.00	59.00
Olsen - Phosphorus	13 - 20 ppm	<1	12.00	35.00	19.00	18.00
Calcium - TEC of 6 - 12	1,000 lbs/acre	3,334.00	2,944.00	2,841.00	2,835.00	3,423.00
Magnesium	>7% base saturation or at least 200 lbs/acre	9.05%/218	10.11%/217	11.67%/251	10.51%/219	22.58%/692
Potassium - TEC of 0 - 35	150 ppm	37.00	136.00	152.00	110.00	146.00
Copper	>0.8 ppm	<0.2	0.21	0.27	0.30	0.40
Manganese	4 ppm or more	2.00	2.00	3.00	2.00	4.00
Zinc	>1 - 2 ppm	<0.4	0.43	0.63	0.75	0.69

FIELDS	Acceptable Range For Saturated Paste Sample	Original Construction Mix 9/14/16	The Six Plus 3/9/17	The Stadium 3/9/17	9-13 3/9/17	The Quad 3/9/17
Nitrate - Bandera Bermuda	5-10 ppm	8.80	30.40	9.70	<0.5	<0.5
Phosphorus	2 - 7 ppm	0.07	1.35	1.86	1.45	0.82
Potassium	25-40 ppm	32.50	44.17	41.86	32.14	17.55
Calcium	50- 75 ppm	105.43	140.03	123.40	141.98	123.89
Magnesium	15-30 ppm	18.39	28.48	24.42	29.12	37.28
Sodium	0 - 30 ppm	113.60	46.08	53.76	66.03	117.34
Soluble Salts	<1,000 ppm	733.00	70.00	68.00	71.00	99.00
Bicarbonate	<60 ppm	70.77	202.55	263.56	295.29	222.08
Chloride	<200 ppm	195.00	769.00	693.00	753.00	855.00



RECOMMENDATIONS



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Thoughts on the visit

The first thing to notice is that this water sample *is* better with regards to pH and bicarbonates due to your acid injection. You mentioned the day of my visit that every time a head comes on that acid is being pumped. So, we did catch some acid in the line as I collected from a sprinkler head on the Stadium field. My recommendation would be to inject higher volumes of acid. So, if that means only injecting at night time irrigation then do that. If you can afford to inject higher volumes of acid all the time then do that. What we are looking for is 6.5 pH out of a sprinkler head. That should get the bicarbonates in a decent range for you.

We did speak at length about the lab data and where I thought you should go with fertility. So rely on those notes you took and read the recommendations for fertility (below) with that talk in mind. These samples are only my first "routine" visit where we sampled each section of the property. When I put this data together with the initial data I collected in the Fall, you can see that the focus should be on accessing the nutrients already naturally in each soil type (ie. Acidification) and doing things that promote quick recovery. (ie. Potassium)

If someone were to look at this data without knowing your specific situation they may not recommend much fertility. However, knowing the demand placed on the fields all year around, we need to have the soil ready to give the plant what it needs when it requires it.



Notes from the visit

- All Fields mowing height- .750"
- 3.5" of rain in February.
- Sulfur application of 150 pounds per acre in December.
- 18-0-10 with Dimension applied to fields week of my visit.
- 15-15-15 applied to landscape areas.
- No acid injection in the Winter due to rain.
- First year sodded at 80,000 sq. ft. (looking to do 60,000 sq. ft. this year)
- First full sampling of all fields. (made a map)

Fertilizer and Product Recommendations

Engineered Fields

Potassium- (2) 100 pounds of product per acre. (0-0-50)

*** Sulfur application probably helped significantly with the rain you had this winter.**

Native Soil Fields

Potassium- (2) 100 pounds of product per acre. (0-0-50)

*** Focus on June 15th through October 15th for Nitrogen applications.**