

FALL 2017

Data Collection Report
Soil & Water Consulting



Randall's Island Park Alliance



SOIL and WATER CONSULTING

Course Name: Randall's Island Park Alliance

Date of Visit: October 19, 2017

	<u>10/19/17</u>
Humidity/Air Temperature	38%/70°
Ground Temperature	62°

WATER	Acceptable Range For Water Sample	Irrigation <u>10/19/17</u>
pH	6.0-6.5	7.84
EC	<2.25 mmhos/cm	0.10
Sodium		11.70
Calcium	20 - 60 ppm	6.76
Magnesium	10 - 25 ppm	1.04
Potassium	5 - 20 ppm	0.66
Phosphorus	0.1 - 0.4 ppm	0.69
Nitrate	5 - 50 ppm	<0.10
Sulfur	30 - 90 ppm	3.76
Bicarbonate	<120 ppm	36.91
Boron	<0.67 ppm	<0.05
Chloride	<177 ppm	5.11



SAND BASED FIELDS



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<i>Sand Based Fields</i>	Acceptable Range For Standard Soil Sample	Sunken Meadows Fields <u>10/19/17</u>	Central Fields <u>10/19/17</u>	East River #71 <u>10/19/17</u>	East River #80 <u>10/19/17</u>	East River #81 <u>10/19/17</u>	Hells Gate Fields #62 & #63 <u>10/19/17</u>	Ichan Stadium <u>10/19/17</u>
pH	6.3-6.5	6.60	7.20	7.40	6.60	7.70	7.50	6.00
Organic Matter (Humus)	2 - 3%	1.04	1.28	1.07	1.31	1.04	6.00	1.64
Sulfur	50 - 100 ppm	14.00	14.00	11.00	11.00	11.00	59.00	8.00
Mehlich III - Phosphorus	350 lbs/acre	884.00	1,163.00	1,168.00	1,319.00	1,168.00	522.00	568.00
Calcium	68%	67.52	63.90	62.58	62.54	58.74	75.16	55.51
Magnesium	15%	13.34	18.66	19.57	16.09	21.00	14.39	16.71
Potassium	5%	4.88	8.51	9.98	7.24	11.78	4.09	4.49
Sodium	<2%	3.53	4.87	3.94	3.26	4.95	2.45	2.95
Boron	1 - 1.5 ppm	0.29	0.42	0.42	0.45	0.40	0.83	<0.20
Iron	120 ppm	327.00	519.00	477.00	494.00	532.00	340.00	236.00
Manganese	50 ppm	17.00	12.00	14.00	12.00	13.00	21.00	9.00
Nitrogen	50 ppm	9.10	6.80	10.10	7.10	6.60	12.00	5.00



Sands		Field #22	Field #80	90/10 Topdressing
	Clay	2.70	1.60	0.20
	Silt	0.10	2.50	1.50
	Sand	95.10	94.10	97.10
	Gravel	2.10	1.80	1.20
	Organic Material	0.54	1.00	1.15
	<u>Sieve #:</u>			
	Fine Gravel 10	2.10	1.80	1.20
	Very Coarse Sand 18	7.20	8.30	5.20
	Coarse Sand 35	28.60	29.70	26.50
	Medium Sand 60	43.60	41.60	51.10
	Fine Sand 100	11.00	10.40	11.80
	Very Fine Sand 140	3.40	2.60	1.90
	Very Fine Sand 270	1.50	1.40	0.60



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SOIL BASED FIELDS



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<i>Soil Based Fields</i>	Acceptable Range For Standard Soil Sample	Bronx Shore Fields <u>10/19/17</u>	Hells Gate Fields #60 & #61 <u>10/19/17</u>	Events Area <u>10/19/17</u>
pH	6.3-6.5	7.20	6.30	6.80
Organic Matter (Humus)	2 - 3%	4.98	1.67	4.02
Sulfur	50 - 100 ppm	22.00	12.00	14.00
Mehlich III - Phosphorus	350 lbs/acre	710.00	1,031.00	1,012.00
Calcium	68%	70.57	61.58	73.58
Magnesium	15%	17.14	13.42	12.59
Potassium	5%	5.84	6.23	4.93
Sodium	<2%	2.24	3.19	1.27
Boron	1 - 1.5 ppm	0.69	0.40	0.79
Iron	120 ppm	354.00	449.00	368.00
Manganese	50 ppm	35.00	8.00	50.00
Nitrogen	50 ppm	16.00	6.60	22.30



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INFIELD MIX



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<i>Infield Mix</i>	Field #21	Field #22	Field #41	Parks Clay
Clay	0.90	0.20	2.50	0.20
Silt	13.90	14.40	9.80	17.30
Sand	78.60	81.00	84.00	76.50
Gravel	6.60	4.40	3.70	6.00
Organic Material	0.34	0.45	0.47	0.34
<u>Sieve #:</u>				
Fine Gravel 10	6.60	4.40	3.70	6.00
Very Coarse Sand 18	7.60	7.40	7.50	10.20
Coarse Sand 35	15.10	14.90	14.10	19.40
Medium Sand 60	26.70	25.10	20.50	28.80
Fine Sand 100	14.10	14.70	16.50	8.60
Very Fine Sand 140	7.70	11.30	17.00	4.30
Very Fine Sand 270	7.40	7.60	8.40	5.20



RECOMMENDATIONS



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Monthly Applications for Fields:	6 pounds of product / 1,000 sq. ft. (0-0-22)	10 pounds of product / 1,000 sq. ft. (Gypsum)	2 pounds of product / 1,000 sq.ft. (TechMagnum)
Sunken Meadows Fields	Yes	No	Yes
Bronx Shore Fields	No	No	Yes
Central Fields	Yes	Yes	Yes
East River Fields #71	No	Yes	Yes
East River Fields #80	No	Yes	Yes
East River Fields #81	No	Yes	Yes
Hells Gate Fields #60 and #61	Yes	Yes	Yes
Hells Gate Fields #62 and #63	No	No	Yes
Harlem River Events Area	No	No	No
Icahn Field	Yes	Yes	Yes



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Thoughts on the course visit

Firstly, thank you very much for the opportunity to work with you and for your time the day of my visit. As this is my first time collecting samples and having the lab analyze things for us, I won't make any "end-all-be-all" statements. As we discussed, I see my value to you as a long term help by looking at the turf and soils on a seasonal basis. So, my recommendations after this first visit will focus on where the soils are deficient combining that with what I saw the day I was there.

Clearly you have some areas that get more use than others and yet all the fields showed usual wear and tear after a long season. One of my first thoughts is that not much is needed to be done with regards to fertility at this point, to the Harlem River Events area. Because it needs to be repaired after each event, that area is essentially temporary. Because it has no tree/shade issues and the soil is very mineral rich, the sod can grow on that with little more than regular aerification.

The sand based areas seem to drain well and I was surprised at the lack of layering on fields of this age. The organic levels are low on the sand based fields so using the 90/10 sand/Dakota Peat is good at aerification and topdressing. However, if you every wanted to do a very aggressive topdressing program, the money you save by removing the Dakota Peat from the mix would be ok.

You have seen on the previous page the fertilizer recommendations on a field by field basis. Preferably, you would work on these over the next month or so, weather depending. The main deficiency on most of the fields is Manganese. Manganese can act as a natural fungicide and give the grass a great color as well. I think that fits into your programs that try to avoid any chemical use. Almost any turf can use potassium this time of the year, I tried to be as specific as possible and save some budget money. The areas that could use calcium would be best treated with Gypsum. It is a near neutral pH product and will lower the higher pH fields and slowly raise the fields with lower or in range pH.

When you have time, let's go over the report in more details. There is more to talk about than I can write. The infield mix situation is a topic that we can discuss in more detail- the Parks Clay may work- I just need a little more information.

