



Soil Test Results

March 2022- Greens

Analysis & Interpretation

Superintendent

Testing Performed by:  **LOGAN LABS**
SOIL TESTING SERVICES

Analysis & Interpretation by:  **PLANT
FOOD
COMPANY, INC.**
The Liquid Fertilizer Source

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Breakdown

Soil Report

Job Name: Stansbury Park GC

Date: April 11, 2022

Company: Murdock Turf Products LLC

Submitted by: Murdock Turf Products LLC

Sample Location			Green 10	Green 6	Average	
Sample ID			342449	282737		
Lab Number			45	46		
Sample Depth in inches			3	3		
Total Exchange Capacity (M. E.)			12.81	11.08	11.95	
pH of Soil Sample			7.8	7.9	7.85	
Organic Master, Percent			4.25	4.28	4.27	
ANION S	SULFUR:	p.p.m.	13	14	13.5	
	Mehlich III Phosphorous:	ppm	17	16	16.5	
EXCHANGEABLE CATIONS	CALCIUM: ppm	Desired Value	1742	1506	1624	
		Value Found	2042	1684	1863	
		Deficit				
	MAGNESIUM: ppm	Desired Value	184	159	171.5	
		Value Found	223	238	230.5	
		Deficit				
	POTASSIUM: ppm	Desired Value	199	172	185.5	
		Value Found	57	56	56.5	
		Deficit	-142	-116	-129	
	SODIUM:	ppm	32	33	32.5	
	BASE SATURATION %	Calcium (60 to 70%)		79.69	76	77.84
		Magnesium (10 to 20%)		14.5	17.9	16.2
Potassium (2 to 5%)		1.14	1.3	1.22		
Sodium (.5 to 3%)		1.09	1.3	1.19		
Other Bases (Variable)		3.6	3.5	3.55		
Exchangeable Hydrogen (10 to 15%)		0	0	0		
TRACE ELEMENTS	Boron (p.p.m.)		1.18	1.21	1.19	
	Iron (p.p.m.)		124	123	123.5	
	Manganese (p.p.m.)		14	11	12.5	
	Copper (p.p.m.)		2.67	2.78	2.72	
	Zinc (p.p.m.)		3.48	3.81	3.64	
	Aluminium (p.p.m.)		46	55	50.5	
OTHER	Estimated Nitrogen Release #N		93	93	93	

- Should not be below 133

Saturated Paste Report

Job Name: Stansbury Park GC

Date: April 11, 2022

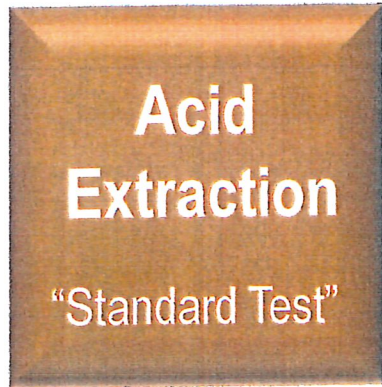
Company: Murdock Turf Products LLC

Submitted by: Murdock Turf Products LLC

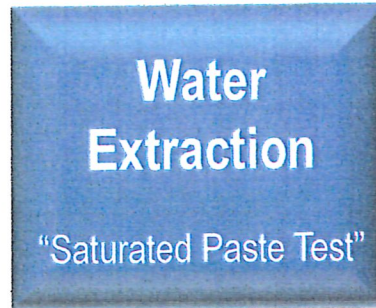
Sample Location		Green 10	Green 6	Average	
Sample ID		342449	282737		
Lab Number		179081	179082		
Water Used		DI	DI		
pH		7.8	7.9	7.85	
Soluble Salts ppm		77	72	74.5	
Chloride (Cl) ppm		7	7	7	
Bicarbonate (HCO ₃) ppm		95	63	79	
ANIONS	SULFUR ppm	1.46	1.65	1.56	
	PHOSPHORUS ppm	0.22	0.2	0.21	
SOLUBLE CATIONS	CALCIUM	ppm	11.1	10.45	10.77
		meq/l	0.56	0.52	0.54
	MAGNESIUM	ppm	4.45	4.27	4.36
		meq/l	0.37	0.36	0.36
	POTASSIUM	ppm	3.06	2.59	2.82
		meq/l	0.08	0.07	0.07
	SODIUM	ppm	4.3	4.14	4.22
		meq/l	0.19	0.18	0.18
PERCENT	Calcium		46.55	46.43	46.49
	Magnesium		31.1	31.59	31.34
	Potassium		6.66	5.98	6.32
	Sodium		15.7	16.01	15.85
TRACE ELEMENTS	Boron (p.p.m.)		0.13	0.08	0.1
	Iron (p.p.m.)		0.86	0.56	0.71
	Manganese (p.p.m.)		0.06	0.04	0.05
	Copper (p.p.m.)		0.03	0.02	0.02
	Zinc (p.p.m.)		< 0.02	< 0.02	0.02
	Aluminum (p.p.m.)		0.37	0.21	0.29



Index to Color Codes



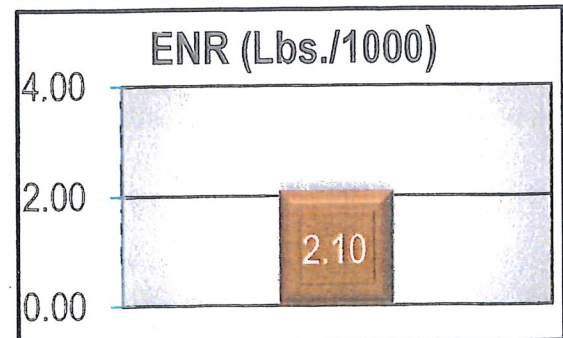
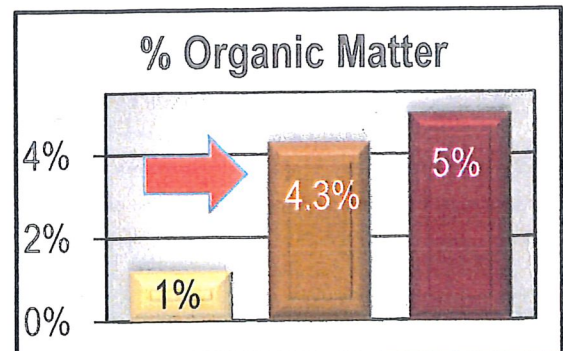
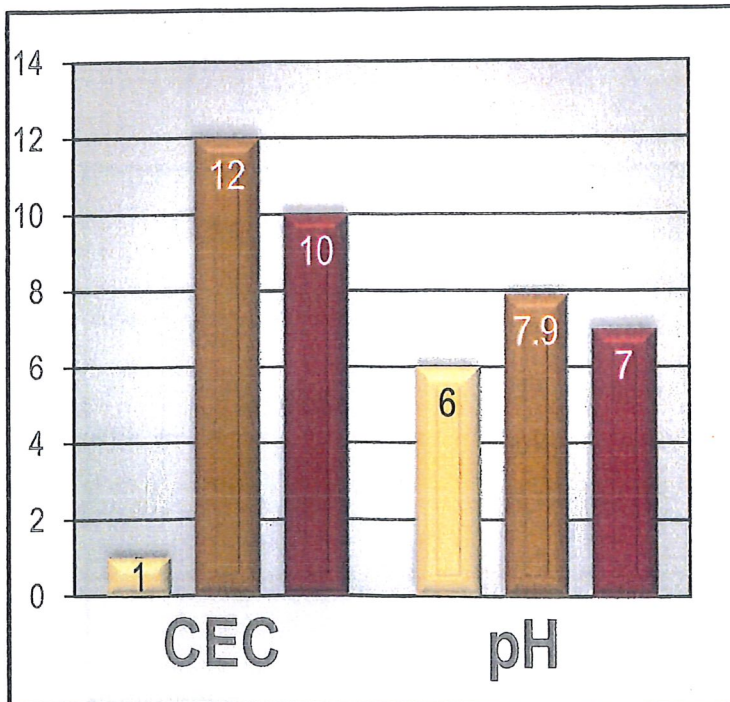
*What has the potential
to become available
in the soil*



*What is currently available
in the soil solution*

General Information

Low Target Actual High Target



Base Cation – PERCENTAGES Standard Test

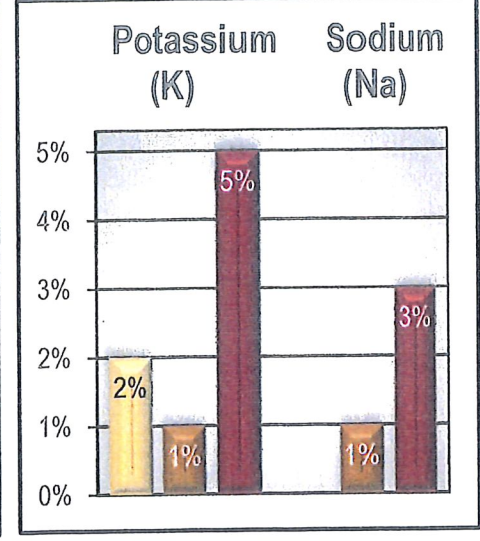
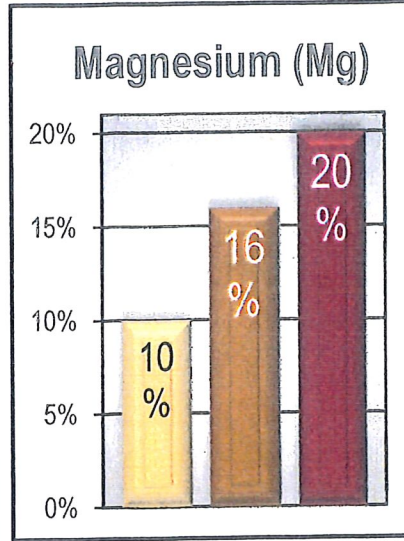
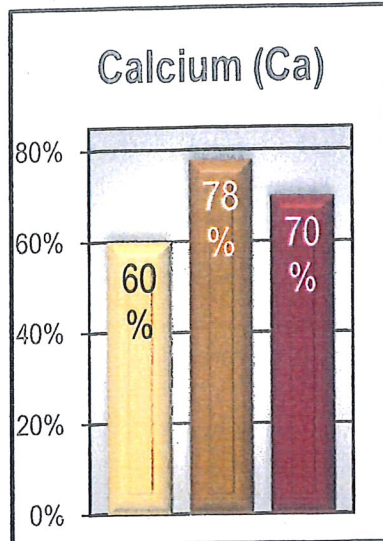
Low Target



Actual



High Target



Base Cation - PERCENTAGES Saturated Paste Test (ppm)

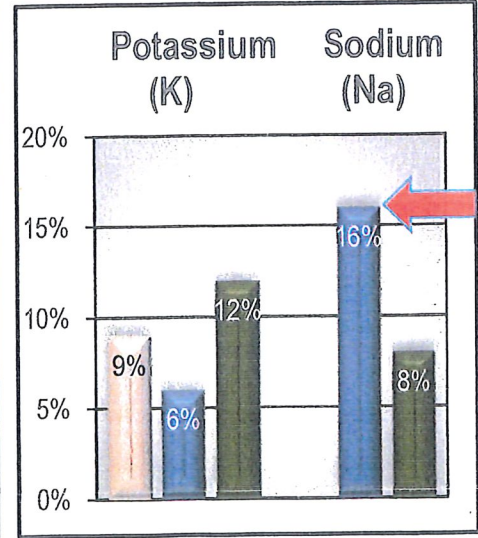
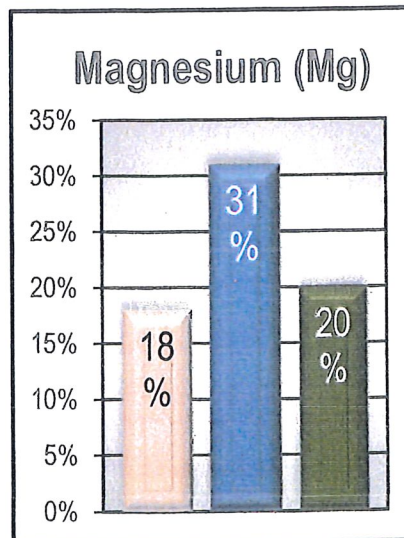
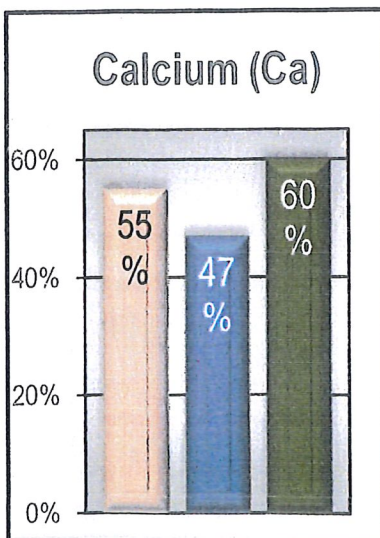
Low Target



Actual

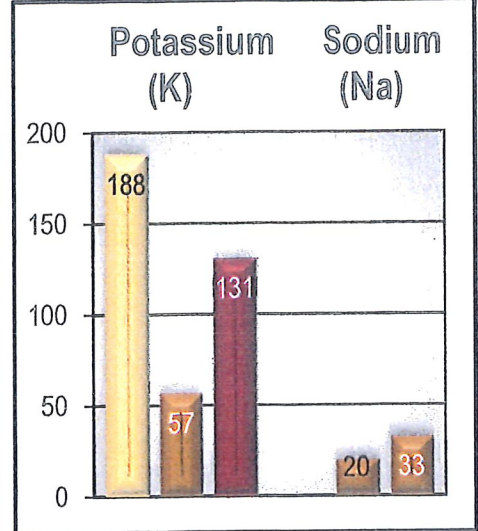
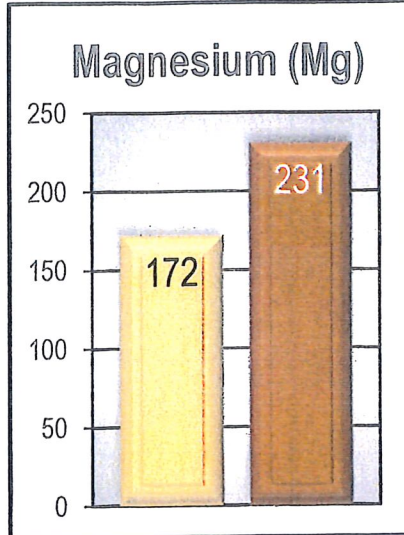
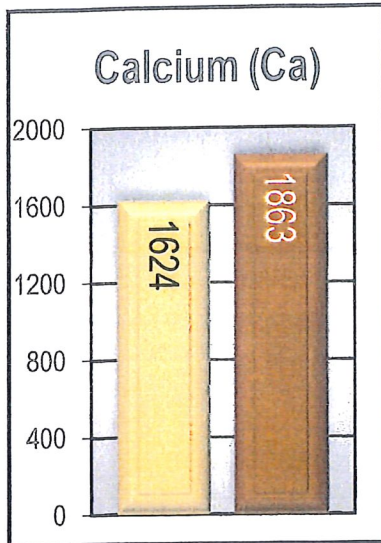


High Target



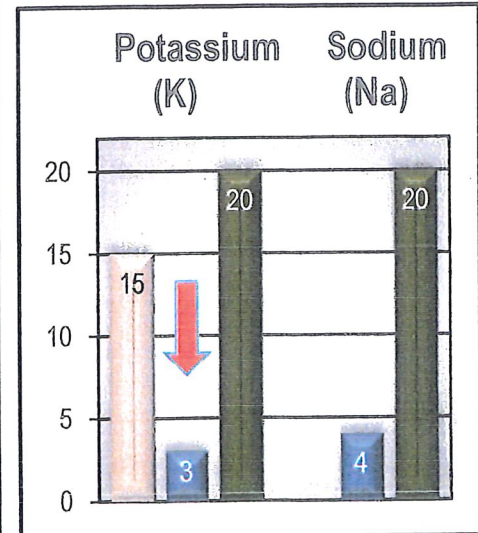
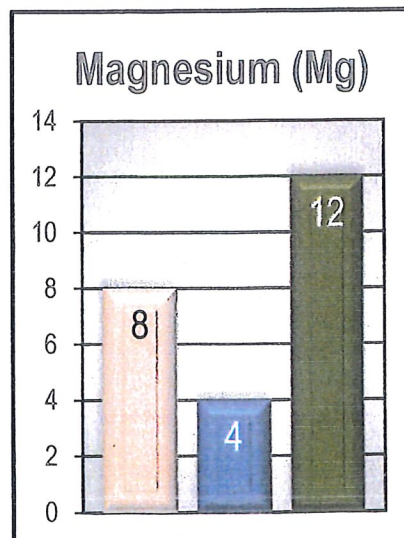
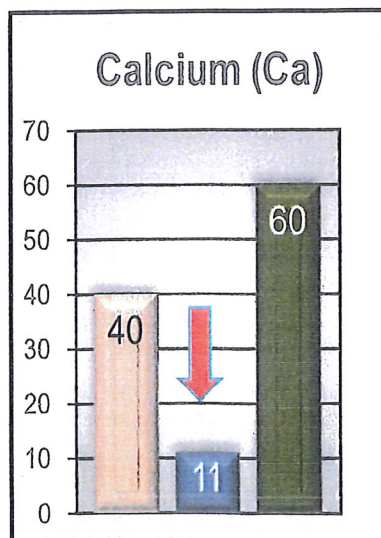
Base Cation - CONTENT

Standard Test (ppm)



Base Cation - CONTENT

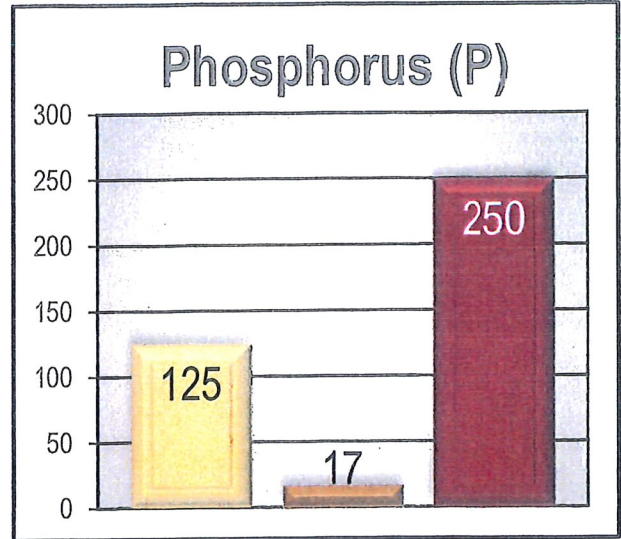
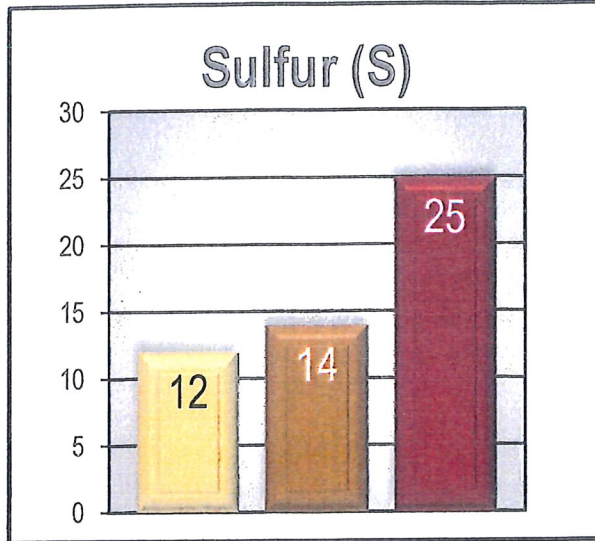
Saturated Paste Test (ppm)



Anion CONTENT

Standard Test (ppm)

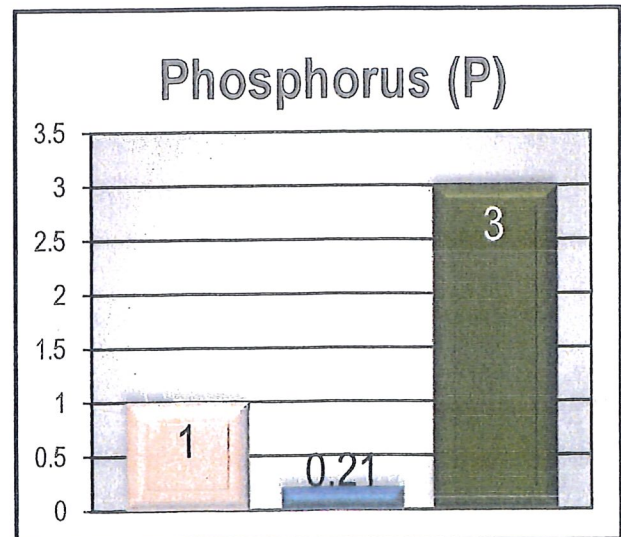
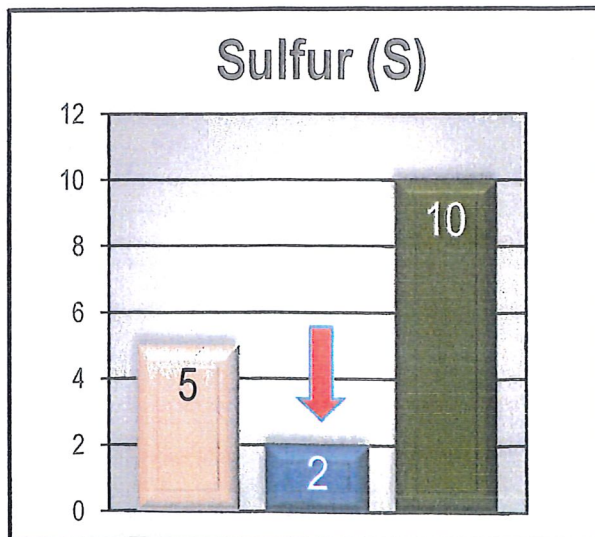
Low Target Actual High Target



Anion CONTENT

Paste Test (ppm)

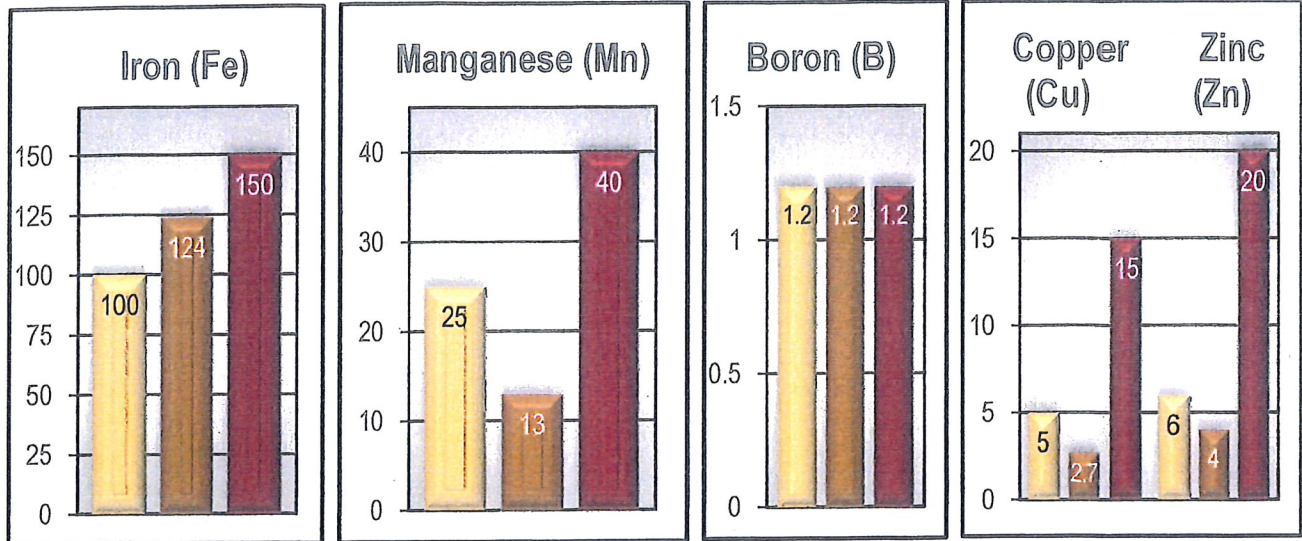
Low Target Actual High Target



Micronutrient - CONTENT

Standard Test (ppm)

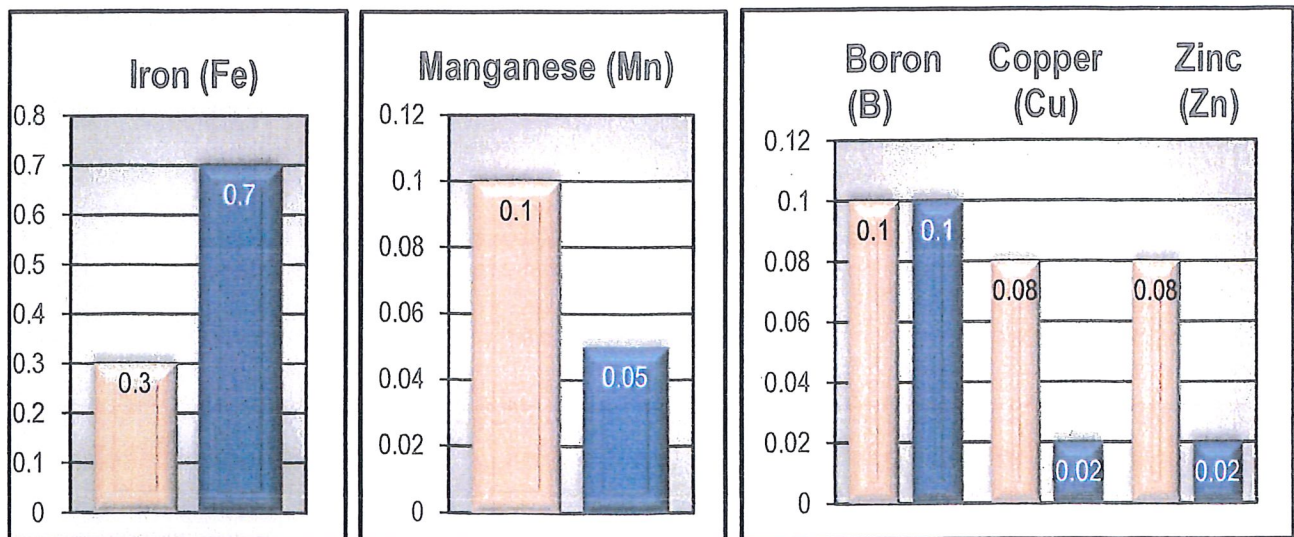
Low Target  Actual  High Target 



Micronutrient - CONTENT

Saturated Paste Test (ppm)

Target  Actual 



Solutions with Options

Superintendent's Major Challenges	Superintendent's Key Playability Concerns
Thatch	Uneven, slower speed
Dry Spots	Uneven

Agronomic Issues from Soil Test Potentially Affecting the Above	Science behind these Issues
High Organic Matter	Reduced percolation, increased disease pressure, puffy turf, scalping
Low Available Calcium	Reduced plant strength, tie up of other nutrients
Low Available Potassium	Reduced tolerance to wear and tear, weakened stomata control. Greater potential for sodium uptake
High Bicarbonates	Tie-up of Ca and Mg as well as other cations

Agronomic Issue	Product Option (s)
High Organic Matter	KelPlant, Adams Earth, Sugar Worm
Low Available Calcium	30 Cal, Sugar Cal
Low Available Potassium	PP30, 0-0-50
High Bicarbonates	Flo Thru A+, Gypsum

Stansbury Golf Course

(Greens - Cost and Coverage Calculations)

9	Monthly Liquid Applications
3	Granular Applications
2	Acres of Greens

LIQUID PRODUCTS	
Cost per Application - Liquids	\$449
Cost per Application per Acre - Liquids	\$224
Total Cost of the Liquid Applications	\$4,040

GRANULAR PRODUCTS	
Cost per Application - Granulars	\$320
Cost per Application per Acre - Granulars	\$160
Total Cost of the Granular Applications	\$960

TOTAL COST	
Cost per Acre of the Entire Program	\$1,184
Total Cost of the Entire Program	\$5,000