

Section 3

INTERPRETATIONS AND RECOMMENDATIONS

Water	
Total Soil Digestion	
Available Soil Nutrition	
Infiltration	
Biology / O2	
Recommendations	
Interpretations	
Other	

Detailed Interpretations and Recommendations.

Section 4

Product Costs and Volumes, Remediation and On-going Treatment Thereafter

Soil Remediation Costs:	Curative at			gl.	0.00	ppm	\$ -	per million gallons of water	Container Size, gl	
	BC at			gl.	0.00	ppm	\$ -	per million gallons of water	Container Size, gl.	
	Total						\$ -	per million gallons of water		
Soil Sustainability Costs:	Curative at	\$ -		gl.	0.00	ppm	\$ -	per million gallons of water		
	BC at	\$ -		gl.	0.00	ppm	\$ -	per million gallons of water		
	Total						\$ -	per million gallons of water		
Per Water Amount Designated:										
Water Use, million gl.	0.00	15%	Water Demand Reduction							
Water use, acre ft.	0.00									
Remediation Demand				Product	gl.	Cost	LBS/acre			
				Curative	-	\$ -	0			
				BC	-	\$ -	0			
				Totals	-	\$ -				
				Cost Per Acre		#DIV/0!				
				Cost per acre inch of water		#DIV/0!				
Sustainability Demand				Product	gl.	Cost	LBS/acre			
				Curative	0	\$ -	0			
				BC	0	\$ -	0			
				Totals	0	\$ -				
				Cost Per Acre		#DIV/0!				
				Cost per acre inch of water		#DIV/0!				

Product Costs and Volumes, Remediation and On-going Treatment Thereafter

Section 5

Analytical Methods:

Irrigation Water & Bac T - Standard
 Available Soil Nutrition - Legacy Method
 Total Soil Composition - Legacy Method

Standard methods for analyzing irrigation water. HCT originated the use of Bac T testing of irrigation water. Developed solely by HCT. Utilizes growers actual, treated, water - 4:1 water to soil ratio versus 1:1 and 72 hours soak time versus 12 to 18 hours. More accurate results. Helps prevent adding nutrition that is already present in the soil but not available. Developed by Dr. Dave York, Robert Oppold of ISTRC, Denis Barron and Todd Eden of HCT. Where pore space is essential, the accumulation of unconsumed salts and nutrition, must be minimized to acceptable levels.

Test Methods

Test	Method	Description
IWS	Conventional	Standard irrigation water suitability analysis, all primary elements, excluding aluminum.
IWS - Bac T	Legacy	Irrigation water total bacteria (Bac T) colony forming units.
ASN-C	Conventional	Deionized water, 1:1 soil to water ratio - 12 to 24 hour chemical retention, extract solute, report elements.
ASN-G, GT, S	Legacy	Grower, Grower Treated, Spiked (HCT pHix)
Exchangeable - Exch.	Conventional	Similar to ASN Conventional, using reagents that "emulate" roots acid production to break down soils for uptake. HCT does not subscribe to this test method or the data thereof.
Total Soil Digestion - TSD	Legacy	Similar to quantifying nutrition or manure, total digestion of soils to see all that is there. Usually multiple times more elements than what "exchangeables" exhibit. Key words - infiltration, pore space, bulk density, available versus complexed nutrients.

Pump Settings

Products	Curative	BC
Treatment Rate, ppm		
Pump Station Flow Rate, gpm		
Pump Station Pressure, psi		
Pump Output, GPH		
	#DIV/0!	#DIV/0!
	3712 mls/gl	3712
	0.000 gl./A ft.	0.000
	0 mls/A ft.	0
	0.0	0.0
fl. ounces / A FL	#DIV/0!	#DIV/0!
mls/min	#DIV/0!	#DIV/0!
	0.00000	0.00000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
Chemical Need	GPH	GPH
	GPD	GPD
Percent Pump Setting(s)	#DIV/0!	#DIV/0!
Mls/100 gl. of water	0.000	0.000

Turf	High Pressure	Smart Pump	Output	Pressure		SPM
		PD741-A28H (HCT)	0.30 GPH	250 PSI	BC	
		PD741-823Si (HCT)	0.52 GPH	250 PSI	Curative / Fertilizer	160
Turf/Landscape	High Pressure	Manual Pumps	Output	Pressure		
		PD041-A28H (HCT)	0.30 GPH	250 PSI	BC	
		PD041-823Si (HCT)	0.52 GPH	250 PSI	Curative / Fertilizer	
Landscape / AG	Low Pressure	Manual Pumps	Output	Pressure		
		PD051-A38H (HCT)	0.7 GPH	150 PSI	BC	
		PD051-833Si (HCT)	1.0 GPH	150 PSI	Curative / Fertilizer	
Landscape / AG	Low Pressure	Smart Pumps	Output	Pressure		
		PD751-A38H (HCT)	0.7 GPH	150 PSI	BC	
		PD751-833Si (HCT)	1.0 GPH	150 PSI	Curative / Fertilizer	

GPM Flow Rate	
GPH Flow Rate	0
GPH Application Rate	
ppm Treatment	#DIV/0!

THIS NUMBER HAS TO BE UNDER 100% OR THE PUMP CANNOT HANDLE THE DESIRED VOL. OF PRODUCT OUTPUT
 (29 mls = 1 fl. ounce - 928 mls = 1 fl. quart)

In the Know

Liberating minerals and metals in soils, increase pH and in most cases reduce the soluble sodium percentage - making the essential nutrients just as available/soluble for plant uptake as the toxic sodium. None of these tests directly identify bio exudates; bio-films or H2S. Infiltration rate, depth, management of bio-food sources, all play a role in the balance of soil between aerobic versus anaerobic conditions. 1/2 gl of pool acid, into a average size residential pool 30,000 gl. equates to 8.3 ppm. Total solids (TS) is the sum of both the total suspended solids (TSS - filterable) and total dissolved solids (TDS - unfilterable) in the process of water. [See Terms](#)
 TSS (mg/l) = ECe x 640
 mg/l = ppm

Supporting Tools; Analytical Methods, Test Methods, Pump Settings, In-the-Know.