



Soil & Plant Laboratory, Inc.

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SOIL ANALYSIS

Send To : L.H. Voss Materials, Inc. 2445 Del Vista Monte Concord CA 94520	Project : Bioswale Mix	Report No : 09-239-0030 Cust No : 00420 Date Printed : 09/01/2009 Date Received : 08/27/2009 Page : 1 of 1 Lab Number : 21137
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Sample Id : **Bioswale Mix**

SATURATION EXTRACT - PLANT SUITABILITY

Test	Result	Effect on Plant Growth				
		Negligible	Sensitive Crops Restricted	Many Crops Restricted	Only Tolerant Crops Satisfactory	Few Crops Survive
Salinity (ECe)	3.1 dS/m					
Sodium Adsorption Ratio (SAR) *	1.19					
Boron (B)	0.70 ppm					
Sodium (Na)	5.2 meq/L					
Chloride (Cl)						
Carbonate (CO3)						
Bicarbonate (HCO3)						
Fluoride (F)						

* Structure and water infiltration of mineral soils potentially adversely affected at SAR values higher than 6.

Test	Result	Strongly Acidic	Moderately Acidic	Slightly Acidic	Neutral	Slightly Alkaline	Moderately Alkaline	Strongly Alkaline	Qualitative Lime	
pH	6.5 s.u.									None

EXTRACTABLE NUTRIENTS

Test	Result	Sufficiency Factor	SOIL TEST RATINGS					NO3-N
			Very Low	Low	Medium	Optimum	Very High	
Available-N	24 ppm	0.5						13 ppm
Phosphorus (P) - Olsen	19 ppm	0.7						NH4-N
Potassium (K)	119 ppm	1.0						11 ppm
Potassium - sat. ext.	4.0 meq/L							Total Exchangeable Cations(TEC)
Calcium (Ca)	1055 ppm	1.1						55 meq/kg
Calcium - sat. ext.	25.5 meq/L							
Magnesium (Mg)	199 ppm	1.5						
Magnesium - sat. ext.	12.2 meq/L							
Copper (Cu)	1.9 ppm	2.7						
Zinc (Zn)	13 ppm	4.7						
Manganese (Mn)	13 ppm	2.1						
Iron (Fe)	60 ppm	2.2						
Boron (B) - sat. ext.	0.70 ppm	2.3						
Sulfate - sat. ext.	43.9 meq/L	14.6						
Exch Aluminum								

Cu, Zn, Mn and Fe were analyzed by DTPA extract.

PARTICLE SIZE ANALYSIS

Half Sat	Organic Matter	Weight Percent of Sample Passing 2mm Screen							USDA Soil Classification
		Gravel		Sand			Silt	Clay	
		Coarse 5-12	Fine 2-5	Very Coarse 1-2	Coarse 0.5-1	Med. to Very Fine 0.05-0.5	.002-.05	0-.002	
22 %									

Graphical interpretation is a general guide. Optimum levels will vary by crop and objectives.