WALLACE LABS
365 Coral Circle
El Segundo, CA 90245
(310) 615-0116

SOILS REPORT Print Date Oct. 28, 2013 Receive Date 10/28/13

Location Ohlone College, Newark

Requester Steve, SBCA Tree Consulting

graphic interpretation: * very low, ** low, *** moderate

ammonium bicarbonate/DTPA

* * * * high, * * * * * very high

extractable - mg/kg soil

Interpretation of data		Sample ID Number	13-301-13		13-301-14		13-301-15		13-301-16	
		Sample Description	#1 Surface 8"		#2 Surface 8"		#3 Subsoil 12-24"		#4 Subsoil 6-12"	
low	medium	high	**elements**		graphic		graphic		graphic	
0 - 7	8-15	over 15	**phosphorus**	9.11	***	12.01	****	9.65	***	9.04	***
0-60	60 -120	121-180	**potassium**	130.25	****	63.96	***	80.00	***	84.24	***
0 - 4	4 - 10	over 10	**iron**	18.29	*****	18.40	*****	7.34	***	9.85	***
0- 0.5	0.6- 1	over 1	**manganese**	3.76	****	1.55	****	0.50	**	1.56	****
0 - 1	1 - 1.5	over 1.5	**zinc**	11.83	*****	6.54	****	0.57	**	1.37	***
0- 0.2	0.3- 0.5	over 0.5	**copper**	3.40	*****	3.13	*****	3.19	*****	2.43	****
0- 0.2	0.2- 0.5	over 1	**boron**	0.52	****	0.58	****	4.28	*****	0.86	****
			calcium	305.25	***	355.32	***	252.42	***	268.68	***
			magnesium	191.07	*****	195.69	*****	583.09	*****	517.97	*****
			sodium	199.01	***	154.20	***	######	*****	343.77	****
			sulfur	174.28	***	16.71	*	117.83	**	37.79	**
			molybdenum	0.11	****	0.09	***	0.10	***	0.08	***
			nickel	1.08	**	0.54	*	0.51	*	0.61	*
The following trace			**aluminum**	n d	*	n d	*	n d	*	n d	*
elements may be toxic			**arsenic**	0.03	*	0.07	*	0.08	*	0.08	*
The degree of toxicity			**barium**	0.85	*	1.33	*	0.98	*	1.11	*
depends upon the pH of			**cadmium**	0.07	*	0.03	*	0.02	*	0.02	*
the soil, soil texture,			**chromium**	0.03	*	0.02	*	n d	*	n d	*
organic matter, and the			**cobalt**	0.09	*	0.05	*	0.06	*	0.05	*
concentrations of the			**lead**	13.87	***	20.71	***	1.56	**	1.93	**
individual elements as well			**lithium**	0.24	*	0.26	*	0.23	*	0.21	*
as to their interactions			**mercury**	n d	*	n d	*	n d	*	n d	*
			selenium	n d	*	n d	*	0.27	*	n d	*

The pH optimum depends upon soil organic matter and clay content- for clay and loam soils: under 5.2 is too acidic 6.5 to 7 is ideal over 8.0 is too alkaline	**silver**	n d	*		n d	*		n d	*		n d	*	
	strontium	1.64	*		1.75	*		4.19	*		2.34	*	
	tin	n d	*		n d	*		n d	*		n d	*	
	vanadium	0.41	*		0.35	*		0.43	*		0.48	*	
	Saturation Extract												
	pH value	7.68	****		7.91	****		8.19	****		8.15	****	
The ECe is a measure of the soil salinity: 1-2 affects a few plants 2-4 affects some plants, > 4 affects many plants.	**ECe (milli-mho/cm)**	1.82	***		1.14	***		3.76	****		1.40	***	
				millieq/l			millieq/l			millieq/l			millieq/l
	calcium	96.1		4.8	50.6		2.5	39.0		2.0	36.6		1.8
	magnesium	34.1		2.8	19.4		1.6	29.5		2.4	23.9		2.0
	sodium	197.5		8.6	141.6		6.2	635.6		27.6	182.2		7.9
	potassium	15.2		0.4	6.5		0.2	9.5		0.2	3.9		0.1
	cation sum			16.6			10.5			32.3			11.8
problems over 150 ppm	**chloride**	335		9.4	225		6.3	821		23.1	261		7.3
good 20 - 30 ppm	**nitrate as N**	27		1.9	2		0.2	6		0.4	3		0.2
	phosphorus as P	0.8		0.0	0.4		0.0	0.6		0.0	0.3		0.0
toxic over 800	**sulfate as S**	51.6		3.2	26.8		1.7	158.1		9.9	59.4		3.7
	anion sum			14.6			8.2			33.5			11.3
toxic over 1 for many plants	**boron as B**	0.67	***		0.57	***		3.94	*****		1.02	*****	
increasing problems start at 3	**SAR**	4.4	***		4.3	***		18.7	*****		5.8	***	
est. gypsum requirement-lbs./1000 sq. ft.		34			26			328			147		
	relative infiltration rate	slow/fair			slow			very slow			slow		
	estimated soil texture	sandy loam			sandy loam			clay loam			sandy loam		
	lime (calcium carbonate)	no			no			yes			slight		
	organic matter	fair/good			fair			low			fair/low		
	moisture content of soil	10.7%			6.4%			10.2%			8.4%		
	half saturation percentage	19.2%			17.1%			29.0%			22.0%		

Elements are expressed as mg/kg dry soil or mg/l for saturation extract.

pH and ECe are measured in a saturation paste extract. nd means not detected.

Analytical data determined on soil fraction passing a 2 mm sieve.