

BROOKSIDE LABORATORIES, INC.

SATURATED SOIL ANALYSIS

Boulder City Municipal Golf Course
1 Clubhouse Drive
Boulder City, NV 89005

File Number: 48318
Date Received: 9/24/2009
Date Reported: 9/25/2009

Submitted By: Soil and Water Consulting

Lab Number	8078			8079		
Description	FAIRWAY			FAIRWAY		
	1			9		
pH	7.4			7.3		
	(ppm)	meq/l	%	(ppm)	meq/l	%
Soluble Salts *	627			704		
Chloride	67			69		
Nitrate (NO3-N)	29.8			33.0		
Bicarbonate	109.33			155.80		
Sulfur	59.49			70.28		
Phosphorus	4.28			4.24		
Calcium	63.51	3.17	34.08	71.45	3.57	35.00
Magnesium	19.95	1.64	17.64	24.17	1.99	19.51
Potassium	18.00	0.46	4.95	21.21	0.54	5.32
Sodium	92.71	4.03	43.34	94.11	4.09	40.17
TOTAL		9.30	100		10.19	100
Boron	0.22			0.27		
Iron	1.83			1.88		
Manganese	0.05			0.06		
Copper	0.03			0.03		
Zinc	0.05			0.05		
Aluminum	3.36			3.34		
Ammonium (NH4-N)	0.3			0.3		
ESP (calculated)	2.51			2.31		
SAR (calculated)	2.60			2.46		

* Soluble Salts: mmhos/cm = ppm / 640

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Submitted By: Soil and Water Consulting

Lab Number	8080
Description	FAIRWAY
	18

pH	7.5
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	(ppm)	meq/l	%	(ppm)	meq/l	%
Soluble Salts *	589					
Chloride	58					
Nitrate (NO ₃ -N)	30.5					
Bicarbonate	142.13					

Sulfur	52.53					
Phosphorus	3.23					
Calcium	61.39	3.06	35.41			
Magnesium	19.72	1.62	18.75			
Potassium	14.53	0.37	4.29			
Sodium	82.66	3.59	41.55			
TOTAL		8.65	100			

Boron	0.27					
Iron	1.58					
Manganese	0.04					
Copper	0.03					
Zinc	0.05					
Aluminum	2.93					
Ammonium (NH ₄ -N)	1.1					

ESP (calculated)	2.16					
SAR (calculated)	2.35					

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Submitted By: Soil and Water Consulting

Lab Number	8081			8082			
Description	GREEN			GREEN			
	1			9			
pH	7.4			7.5			
	(ppm)	meq/l	%	(ppm)	meq/l	%	
Soluble Salts *	397			314			
Chloride	32			26			
Nitrate (NO ₃ -N)	9.7			7.6			
Bicarbonate	62.86			50.57			
Sulfur	47.60			38.66			
Phosphorus	0.94			0.75			
Calcium	45.66	2.28	41.19	34.76	1.73	38.28	
Magnesium	12.32	1.01	18.31	9.87	0.81	17.91	
Potassium	7.50	0.19	3.47	5.97	0.15	3.37	
Sodium	47.13	2.05	37.04	42.16	1.83	40.44	
TOTAL		5.53	100		4.53	100	
Boron	0.17			0.17			
Iron	0.88			0.52			
Manganese	0.03			0.03			
Copper	0.02			0.02			
Zinc	0.05			0.04			
Aluminum	0.97			0.64			
Ammonium (NH ₄ -N)	< 0.1			< 0.1			
ESP (calculated)	1.08			1.12			
SAR (calculated)	1.60			1.62			

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Lab Number	8083
Description	GREEN
	18

pH	7.6
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	(ppm)	meq/l	%	(ppm)	meq/l	%
Soluble Salts *	390					
Chloride	31					
Nitrate (NO3-N)	6.8					
Bicarbonate	53.30					

Sulfur	54.24					
Phosphorus	1.13					
Calcium	45.57	2.27	39.04			
Magnesium	12.70	1.04	17.92			
Potassium	9.22	0.24	4.05			
Sodium	52.24	2.27	38.99			
TOTAL		5.82	100			

Boron	0.20
Iron	0.90
Manganese	0.04
Copper	0.02
Zinc	0.06
Aluminum	1.00
Ammonium (NH4-N)	< 0.1

ESP (calculated)	1.32
SAR (calculated)	1.76

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Submitted By: Soil and Water Consulting

Lab Number	8084			8085			
Description	TEE			TEE			
	1			9			
pH	7.6			7.8			
	(ppm)	meq/l	%	(ppm)	meq/l	%	
Soluble Salts *	346			390			
Chloride	41			45			
Nitrate (NO3-N)	5.2			6.5			
Bicarbonate	71.06			97.03			
Sulfur	35.86			38.73			
Phosphorus	2.22			2.67			
Calcium	33.86	1.69	32.63	39.38	1.97	32.39	
Magnesium	11.64	0.96	18.49	13.52	1.11	18.33	
Potassium	8.18	0.21	4.04	11.43	0.29	4.82	
Sodium	53.42	2.32	44.85	62.02	2.70	44.45	
TOTAL		5.18	100		6.07	100	
Boron	0.19			0.20			
Iron	1.88			2.40			
Manganese	0.05			0.07			
Copper	0.03			0.03			
Zinc	0.04			0.05			
Aluminum	2.94			4.09			
Ammonium (NH4-N)	0.2			0.4			
ESP (calculated)	1.69			1.91			
SAR (calculated)	2.02			2.17			

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Lab Number	8086
Description	TEE
	18

pH	7.8
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	(ppm)	meq/l	%	(ppm)	meq/l	%
Soluble Salts *	467					
Chloride	51					
Nitrate (NO ₃ -N)	5.6					
Bicarbonate	121.63					
Sulfur	47.18					
Phosphorus	2.43					
Calcium	48.88	2.44	33.59			
Magnesium	16.38	1.35	18.55			
Potassium	12.74	0.33	4.49			
Sodium	72.46	3.15	43.38			
TOTAL		7.26	100			
Boron	0.19					
Iron	2.18					
Manganese	0.05					
Copper	0.03					
Zinc	0.04					
Aluminum	3.78					
Ammonium (NH ₄ -N)	0.5					
ESP (calculated)	2.07					
SAR (calculated)	2.29					

* Soluble Salts: mmhos/cm = ppm / 640