

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

Name East Orange Golf Course City Milburn State NJ

Independent Consultant Soil and Water Consulting Date 10/30/2019

Sample Location	TEE	5	13	14		
Sample Identification						
Lab Number		0080-1	0081-1	0082-1		
Total Exchange Capacity (ME/100 g)		3.46	10.48	11.65		
pH	Buffer (SMP/Sikora)	7.5	7.2	7.3		
	H ₂ O (1:1)	7.0	6.6	6.4		
Organic Matter (360°C LOI) %		0.68	3.69	3.72		
Estimated Nitrogen Release	lb/A	27	87	87		
ANIONS	SOLUBLE SULFUR*					
	ppm	16	18	27		
	MEHLICH III lb/A P as P ₂ O ₅	518	829	889		
	ppm of P	113	181	194		
	BRAY II lb/A P as P ₂ O ₅					
EXCHANGEABLE CATIONS	ppm of P					
	OLSEN lb/A P as P ₂ O ₅					
	ppm of P					
	CALCIUM* lb/A	908	2888	3072		
	ppm	454	1444	1536		
BASE SATURATION PERCENT	MAGNESIUM* lb/A	176	382	408		
	ppm	88	191	204		
	POTASSIUM* lb/A	164	326	406		
	ppm	82	163	203		
	SODIUM* lb/A	42	56	56		
EXTRACTABLE MINORS	ppm	21	28	28		
	Calcium %	65.61	68.89	65.92		
	Magnesium %	21.19	15.19	14.59		
	Potassium %	6.08	3.99	4.47		
	Sodium %	2.64	1.16	1.04		
OTHER TESTS	Other Bases %	4.40	4.80	5.00		
	Hydrogen %	0.00	6.00	9.00		
	Boron* (ppm)	0.43	0.75	0.63		
	Iron* (ppm)	258	265	309		
	Manganese* (ppm)	20	13	18		
OTHER TESTS	Copper* (ppm)	1.53	4.63	4.22		
	Zinc* (ppm)	3.58	6.53	9.58		
	Aluminum* (ppm)	385	717	645		
	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					
OTHER TESTS	NO ₃ -N (ppm)	2.5	4.9	10.4		
	NH ₄ -N (ppm)	1.4	3.5	3.6		

* Mehlich III Extractable

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Sample Location <u>FAIRWAY</u>		5	13	14		
Sample Identification						
Lab Number		0083-1	0084-1	0085-1		
Total Exchange Capacity (ME/100 g)		11.77	10.51	20.12		
pH	Buffer (SMP/Sikora)	7.2	7.3	7.1		
	H ₂ O (1:1)	6.4	6.5	6.5		
Organic Matter (360°C LOI) %		4.77	4.84	7.92		
Estimated Nitrogen Release lb/A		98	98	115		
ANIONS	SOLUBLE SULFUR*	ppm	19	19	21	
	PHOSPHORUS	MEHLICH III lb/A P as P ₂ O ₅ ppm of P	165	183	133	
			36	40	29	
	BRAY II	lb/A P as P ₂ O ₅ ppm of P				
	OLSEN	lb/A P as P ₂ O ₅ ppm of P				
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	3070	2802	5462	
		ppm	1535	1401	2731	
	MAGNESIUM*	lb/A	488	418	834	
		ppm	244	209	417	
	POTASSIUM*	lb/A	204	262	236	
		ppm	102	131	118	
	SODIUM*	lb/A	70	56	88	
		ppm	35	28	44	
BASE SATURATION PERCENT						
Calcium %		65.21	66.65	67.87		
Magnesium %		17.28	16.57	17.27		
Potassium %		2.22	3.20	1.50		
Sodium %		1.29	1.16	0.95		
Other Bases %		5.00	4.90	4.90		
Hydrogen %		9.00	7.50	7.50		
EXTRACTABLE MINORS						
Boron* (ppm)		0.81	0.82	0.90		
Iron* (ppm)		183	188	216		
Manganese* (ppm)		22	40	31		
Copper* (ppm)		2.43	3.17	2.75		
Zinc* (ppm)		2.28	3.25	4.62		
Aluminum* (ppm)		577	613	523		
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					
	NO ₃ -N (ppm)	6.5	12.7	11.6		
	NH ₄ -N (ppm)	2.2	4.7	3.3		

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Sample Location <u>GREEN</u>		5	13	14		
Sample Identification						
Lab Number		0086-1	0087-1	0088-1		
Total Exchange Capacity (ME/100 g)		9.16	9.51	13.93		
pH	Buffer (SMP/Sikora)	7.4	7.3	7.4		
	H ₂ O (1:1)	7.0	7.0	6.9		
Organic Matter (360°C LOI) %		3.58	3.88	4.62		
Estimated Nitrogen Release lb/A		86	89	96		
ANIONS	SOLUBLE SULFUR*	ppm	23	16	27	
	PHOSPHORUS	MEHLICH III lb/A P as P ₂ O ₅ ppm of P	1044	1035	1072	
			228	226	234	
		BRAY II lb/A P as P ₂ O ₅ ppm of P				
		OLSEN lb/A P as P ₂ O ₅ ppm of P				
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	2664	2820	4098	
		ppm	1332	1410	2049	
	MAGNESIUM*	lb/A	354	380	482	
		ppm	177	190	241	
	POTASSIUM*	lb/A	392	268	552	
		ppm	196	134	276	
	SODIUM*	lb/A	54	54	60	
		ppm	27	27	30	
BASE SATURATION PERCENT						
	Calcium	%	72.71	74.13	73.55	
	Magnesium	%	16.10	16.65	14.42	
	Potassium	%	5.49	3.61	5.08	
	Sodium	%	1.28	1.23	0.94	
	Other Bases	%	4.40	4.40	4.50	
	Hydrogen	%	0.00	0.00	1.50	
EXTRACTABLE MINORS						
	Boron* (ppm)		0.69	0.85	0.86	
	Iron* (ppm)		347	317	360	
	Manganese* (ppm)		19	16	21	
	Copper* (ppm)		9.98	9.33	13.10	
	Zinc* (ppm)		16.34	22.56	21.01	
	Aluminum* (ppm)		485	446	530	
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					
	NO ₃ -N (ppm)		3.3	4.0	6.6	
	NH ₄ -N (ppm)		2.9	3.7	1.8	

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