

lb/A

BROOKSIDE LABORATORIES, INC.

80046-38

SOIL AUDIT AND INVENTORY REPORT

Name Western Golf Properties City Lake Forest State CAIndependent Consultant Soil and Water Consulting Date 6/28/2024

Sample Location				TEE	TEE	TEE	FAIRWAY	FAIRWAY
BIRCH HILLS GC								
Sample Identification				1	9	18	1	9
Lab Number				0174-1	0175-1	0176-1	0177-1	0178-1
Total Exchange Capacity (ME/100 g)				10.33	9.21	10.00	20.32	24.28
pH (H ₂ O 1:1)				a 7.7	7.2	7.2	a 7.7	a 7.6
Organic Matter (360°C LOI) %				2.28	2.21	2.28	5.31	5.84
Estimated Nitrogen Release lb/A				66	64	66	102	104
ANIONS	SOLUBLE SULFUR* ppm			64	41	46	48	53
	PHOSPHORUS	MEHLICH III lb/A P as P ₂ O ₅ ppm of P						
		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	110 24	78 17	87 19	46 10	32 7	
EXCHANGEABLE CATIONS	CALCIUM*		lb/A	3038	2728	2926	6268	7402
			ppm	1519	1364	1463	3134	3701
	MAGNESIUM*		lb/A	368	332	380	714	890
			ppm	184	166	190	357	445
	POTASSIUM*		lb/A	322	244	238	330	538
			ppm	161	122	119	165	269
	SODIUM*		lb/A	188	142	172	230	208
			ppm	94	71	86	115	104
BASE SATURATION PERCENT								
Calcium %				73.52	74.05	73.15	77.12	76.21
Magnesium %				14.84	15.02	15.83	14.64	15.27
Potassium %				4.00	3.40	3.05	2.08	2.84
Sodium %				3.96	3.35	3.74	2.46	1.86
Other Bases %				3.70	4.20	4.20	3.70	3.80
Hydrogen %				0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS								
Boron** (ppm)				0.72	0.80	0.82	0.84	1.04
Iron** (ppm)				366	178	363	177	124
Manganese** (ppm)				32	33	40	32	56
Copper** (ppm)				1.29	0.66	0.93	1.93	2.13
Zinc** (ppm)				6.10	5.31	8.53	3.98	6.28
Aluminum** (ppm)				138	134	144	96	106
OTHER TESTS	Soluble Salts (mmhos/cm)							
	Chlorides (ppm)							
	NO3-N (ppm)			9.6	9.3	14.2	5.4	9.6
	NH4-N (ppm)			4.1	3.6	3.7	6.3	6.2

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable

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Sample Location				BIRCH HILLS GC	FAIRWAY	GREEN	GREEN	GREEN	GREEN
Sample Identification					18	1	9	12	18
Lab Number					0179-1	0180-1	0181-1	0182-1	0183-1
Total Exchange Capacity (ME/100 g)					25.82	4.30	4.55	4.45	4.82
pH (H ₂ O 1:1)					a 7.6	a 7.6	a 7.5	a 7.5	a 7.5
Organic Matter (360°C LOI) %					3.57	0.75	1.16	0.70	1.30
Estimated Nitrogen Release lb/A					86	30	43	28	46
ANIONS	SOLUBLE SULFUR* ppm				363	39	33	32	41
	PHOSPHORUS	MEHLICH III	lb/A	P as P ₂ O ₅ ppm of P					
		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	32 7	50 11	55 12	60 13	46 10
EXCHANGEABLE CATIONS	CALCIUM*		lb/A		7770	1238	1376	1338	1408
			ppm		3885	619	688	669	704
	MAGNESIUM*		lb/A		956	120	126	104	136
			ppm		478	60	63	52	68
	POTASSIUM*		lb/A		278	252	160	226	222
			ppm		139	126	80	113	111
	SODIUM*		lb/A		494	102	92	98	120
			ppm		247	51	46	49	60
BASE SATURATION PERCENT									
Calcium %					75.23	71.98	75.60	75.17	73.03
Magnesium %					15.43	11.63	11.54	9.74	11.76
Potassium %					1.38	7.51	4.51	6.51	5.90
Sodium %					4.16	5.16	4.40	4.79	5.41
Other Bases %					3.80	3.80	3.90	3.90	3.90
Hydrogen %					0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS									
Boron** (ppm)					0.62	0.41	0.79	0.51	0.73
Iron** (ppm)					121	115	179	132	190
Manganese** (ppm)					58	42	45	51	67
Copper** (ppm)					1.65	1.22	1.86	1.70	1.77
Zinc** (ppm)					3.67	6.60	9.25	9.64	9.95
Aluminum** (ppm)					153	183	113	184	164
OTHER TESTS	Soluble Salts (mmhos/cm)								
	Chlorides (ppm)								
	NO3-N (ppm)				12.2	1.1	1.3	1.9	0.5
	NH4-N (ppm)				3.7	1.9	1.0	0.9	0.8

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable