

lb/A

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

80046-32

Name Western Golf Properties City Lake Forest State CAIndependent Consultant Soil and Water Consulting Date 10/26/2023

Sample Location <u>ASHWOOD GC</u>			TEE	TEE	TEE	FAIRWAY	FAIRWAY
Sample Identification			B7	M7	S7	B7	M7
Lab Number			1086-1	1087-1	1088-1	1089-1	1090-1
Total Exchange Capacity (ME/100 g)			7.10	11.31	8.36	5.36	7.16
pH (H ₂ O 1:1)			a 8.0	a 7.7	a 7.5	a 7.9	7.2
Organic Matter (360°C LOI) %			1.62	2.81	3.29	1.07	1.94
Estimated Nitrogen Release lb/A			52	76	83	41	59
ANIONS	SOLUBLE SULFUR* ppm		13	9	12	13	14
	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	73 16	14 3	27 6	55 12	18 4
EXCHANGEABLE CATIONS	CALCIUM* lb/A ppm		2210 1105	3608 1804	2690 1345	1630 815	2218 1109
	MAGNESIUM* lb/A ppm		232 116	362 181	248 124	186 93	246 123
	POTASSIUM* lb/A ppm		148 74	158 79	74 37	126 63	102 51
	SODIUM* lb/A ppm		82 41	76 38	82 41	76 38	72 36
	BASE SATURATION PERCENT						
	Calcium	%	77.82	79.75	80.44	76.03	77.44
	Magnesium	%	13.62	13.34	12.36	14.46	14.32
	Potassium	%	2.67	1.79	1.13	3.01	1.83
	Sodium	%	2.51	1.46	2.13	3.08	2.19
	Other Bases	%	3.40	3.70	3.90	3.50	4.20
	Hydrogen	%	0.00	0.00	0.00	0.00	0.00
	EXTRACTABLE MINORS						
	Boron** (ppm)		1.08	0.75	0.64	0.48	0.61
	Iron** (ppm)		108	232	375	183	234
	Manganese** (ppm)		36	23	11	22	15
	Copper** (ppm)		0.79	0.70	1.01	0.27	0.43
	Zinc** (ppm)		2.07	3.09	7.59	1.64	2.23
	Aluminum** (ppm)		161	186	132	159	135
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						
	NO ₃ -N (ppm)		< 0.5	1.1	7.0	< 0.5	0.6
	NH ₄ -N (ppm)		< 0.5	1.8	2.1	1.7	0.9

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable

lb/A

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Sample Location				ASHWOOD GC	FAIRWAY	GREEN	GREEN	GREEN	GREEN
Sample Identification					S7	B7	B8	M7	S7
Lab Number					1091-1	1092-1	1093-1	1094-1	1095-1
Total Exchange Capacity (ME/100 g)					8.16	4.12	5.50	4.22	4.92
pH (H ₂ O 1:1)					7.3	a 7.5	a 8.0	a 7.5	7.3
Organic Matter (360°C LOI) %					2.82	0.88	0.53	1.10	1.26
Estimated Nitrogen Release lb/A					76	35	21	42	45
ANIONS	SOLUBLE SULFUR* ppm				16	24	27	18	29
	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		18 4	23 5	37 8	14 3	5 1
EXCHANGEABLE CATIONS	CALCIUM*		lb/A		2654	1318	1854	1356	1572
			ppm		1327	659	927	678	786
	MAGNESIUM*		lb/A		222	96	100	98	120
			ppm		111	48	50	49	60
	POTASSIUM*		lb/A		94	132	126	122	120
			ppm		47	66	63	61	60
	SODIUM*		lb/A		66	44	46	46	62
			ppm		33	22	23	23	31
BASE SATURATION PERCENT									
Calcium %					81.31	79.98	84.27	80.33	79.88
Magnesium %					11.34	9.71	7.58	9.68	10.16
Potassium %					1.48	4.11	2.94	3.71	3.13
Sodium %					1.76	2.32	1.82	2.37	2.74
Other Bases %					4.10	3.90	3.40	3.90	4.10
Hydrogen %					0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS									
Boron** (ppm)					0.74	0.61	0.51	0.54	0.48
Iron** (ppm)					226	148	67	99	134
Manganese** (ppm)					19	24	19	29	37
Copper** (ppm)					0.26	0.44	0.57	0.52	0.69
Zinc** (ppm)					2.98	2.12	2.31	4.24	3.60
Aluminum** (ppm)					81	63	40	73	64
OTHER TESTS	Soluble Salts (mmhos/cm)								
	Chlorides (ppm)								
	NO3-N (ppm)				1.8	0.6	0.5	1.6	0.9
	NH4-N (ppm)				1.0	< 0.5	< 0.5	< 0.5	0.7

a - alkaline soil

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** Mehlich III Extractable