

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

Name Western Golf Properties City Lake Forest State CA

Independent Consultant Soil and Water Consulting Date 10/7/2021

Sample Location	TRI-PALM CC	TEE	TEE	TEE	FAIRWAY	FAIRWAY
Sample Identification		1	9	18	1	9
Lab Number		0260-1	0261-1	0262-1	0263-1	0264-1
Total Exchange Capacity (ME/100 g)		14.06	14.84	12.68	17.33	13.71
pH (H ₂ O 1:1)		a 7.9	a 8.5	a 8.0	a 8.0	a 8.4
Organic Matter (360°C LOI) %		4.19	2.77	3.42	4.63	2.02
Estimated Nitrogen Release lb/A		92	75	84	96	60
ANIONS	SOLUBLE SULFUR* ppm	40	67	40	78	42
	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	41 9	78 17	18 4	64 14	37 8
EXCHANGEABLE CATIONS	CALCIUM* lb/A	4420	4760	4038	5328	4436
	ppm	2210	2380	2019	2664	2218
	MAGNESIUM* lb/A	380	344	342	442	330
	ppm	190	172	171	221	165
	POTASSIUM* lb/A	380	420	296	734	404
	ppm	190	210	148	367	202
	SODIUM* lb/A	208	246	162	292	146
	ppm	104	123	81	146	73
BASE SATURATION PERCENT						
	Calcium %	78.59	80.19	79.61	76.86	80.89
	Magnesium %	11.26	9.66	11.24	10.63	10.03
	Potassium %	3.47	3.63	2.99	5.43	3.78
	Sodium %	3.22	3.60	2.78	3.66	2.32
	Other Bases %	3.50	2.90	3.40	3.40	3.00
	Hydrogen %	0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS						
	Boron** (ppm)	0.72	0.63	0.65	1.05	0.65
	Iron** (ppm)	197	100	137	163	140
	Manganese** (ppm)	23	42	32	32	35
	Copper** (ppm)	2.21	1.34	1.78	2.11	1.62
	Zinc** (ppm)	7.79	6.89	5.38	6.45	1.77
	Aluminum** (ppm)	123	63	140	52	79
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					
	NO ₃ -N (ppm)	21.5	15.2	12.6	18.6	4.3
	NH ₄ -N (ppm)	36.0	< 0.5	21.5	8.8	< 0.5

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable

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Sample Location		TRI-PALM CC	FAIRWAY	GREEN	GREEN	GREEN	GREEN
Sample Identification			18	1	2	9	18
Lab Number			0265-1	0266-1	0267-1	0268-1	0269-1
Total Exchange Capacity (ME/100 g)			17.95	7.59	6.37	6.98	6.21
pH (H ₂ O 1:1)			a 8.4	a 8.1	a 7.7	a 8.2	a 7.9
Organic Matter (360°C LOI) %			3.84	1.71	1.47	1.88	1.93
Estimated Nitrogen Release lb/A			88	54	49	58	59
ANIONS	SOLUBLE SULFUR*	ppm	53	29	22	25	25
	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	50 11	50 11	41 9	69 15
EXCHANGEABLE CATIONS	CALCIUM*	lb/A ppm	5694 2847	2312 1156	1938 969	2104 1052	1878 939
	MAGNESIUM*	lb/A ppm	464 232	260 130	226 113	248 124	210 105
	POTASSIUM*	lb/A ppm	592 296	206 103	156 78	232 116	200 100
	SODIUM*	lb/A ppm	222 111	98 49	70 35	76 38	76 38
BASE SATURATION PERCENT							
	Calcium	%	79.30	76.15	76.06	75.36	75.60
	Magnesium	%	10.77	14.27	14.78	14.80	14.09
	Potassium	%	4.23	3.48	3.14	4.26	4.13
	Sodium	%	2.69	2.81	2.39	2.37	2.66
	Other Bases	%	3.00	3.30	3.70	3.20	3.50
	Hydrogen	%	0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS							
	Boron** (ppm)		0.86	0.61	0.42	0.50	0.72
	Iron** (ppm)		121	267	222	268	360
	Manganese** (ppm)		35	41	39	37	39
	Copper** (ppm)		1.80	1.85	1.59	2.18	2.20
	Zinc** (ppm)		4.13	14.82	13.86	12.73	15.83
	Aluminum** (ppm)		62	159	161	152	161
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						
	NO ₃ -N (ppm)		32.8	5.0	4.4	21.2	18.3
	NH ₄ -N (ppm)		125.6	6.8	0.7	95.7	46.1

a - alkaline soil

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** Mehlich III Extractable