

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

Name Rio Verde Country Club City Rio Verde State AZ

Independent Consultant Soil and Water Consulting Date 3/14/2025

Sample Location			WHITE WING COURSE	TEE	TEE	TEE	FAIRWAY	FAIRWAY
Sample Identification				4	9	13	4	9
Lab Number				0262-1	0263-1	0264-1	0265-1	0266-1
Total Exchange Capacity (ME/100 g)				9.94	9.68	10.23	12.06	13.02
pH (H ₂ O 1:1)				a 7.8	a 8.1	a 8.2	a 7.5	a 7.7
Organic Matter (360°C LOI) %				2.59	2.54	2.45	3.75	4.29
Estimated Nitrogen Release lb/A				72	71	69	88	93
ANIONS	SOLUBLE SULFUR* ppm			73	88	71	130	131
	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		< 9 < 2	< 9 < 2	< 9 < 2	32 7	69 15
EXCHANGEABLE CATIONS	CALCIUM* lb/A ppm			2228 1114	2310 1155	2488 1244	3010 1505	3440 1720
	MAGNESIUM* lb/A ppm			246 123	244 122	226 113	290 145	270 135
	POTASSIUM* lb/A ppm			598 299	694 347	546 273	580 290	572 286
	SODIUM* lb/A ppm			1022 511	772 386	938 469	972 486	956 478
	BASE SATURATION PERCENT							
	Calcium	%		56.04	59.66	60.80	62.40	66.05
	Magnesium	%		10.31	10.50	9.20	10.02	8.64
	Potassium	%		7.71	9.19	6.84	6.17	5.63
	Sodium	%		22.35	17.34	19.93	17.52	15.96
	Other Bases	%		3.60	3.30	3.20	3.90	3.70
	Hydrogen	%		0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS								
Boron** (ppm)				2.36	2.02	2.23	2.26	2.59
Iron** (ppm)				85	88	76	175	158
Manganese** (ppm)				29	20	17	20	20
Copper** (ppm)				0.63	0.53	0.55	1.27	1.39
Zinc** (ppm)				4.46	3.01	3.22	8.02	10.17
Aluminum** (ppm)				74	67	56	74	76
OTHER TESTS	Soluble Salts (mmhos/cm)							
	Chlorides (ppm)							
	NO ₃ -N (ppm)			16.6	15.9	42.8	24.8	14.9
	NH ₄ -N (ppm)			5.2	3.2	4.7	4.5	4.2

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable

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Sample Location	WHITE WING COURSE	FAIRWAY	GREEN	GREEN	GREEN	
Sample Identification		13	4	9	13	
Lab Number		0267-1	0268-1	0269-1	0270-1	
Total Exchange Capacity (ME/100 g)		13.34	6.83	6.77	7.73	
pH (H ₂ O 1:1)		a 8.0	a 7.9	a 8.2	a 8.1	
Organic Matter (360°C LOI) %		3.45	1.47	1.14	1.06	
Estimated Nitrogen Release lb/A		84	49	43	41	
ANIONS	SOLUBLE SULFUR*	ppm	120	26	16	29
	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	23 5	< 9 < 2	23 5	27 6
EXCHANGEABLE CATIONS	CALCIUM*	lb/A ppm	3470 1735	1880 940	1750 875	2028 1014
	MAGNESIUM*	lb/A ppm	306 153	142 71	132 66	184 92
	POTASSIUM*	lb/A ppm	572 286	412 206	592 296	524 262
	SODIUM*	lb/A ppm	1014 507	354 177	400 200	446 223
BASE SATURATION PERCENT						
	Calcium	%	65.03	68.81	64.62	65.59
	Magnesium	%	9.56	8.66	8.12	9.92
	Potassium	%	5.50	7.73	11.21	8.69
	Sodium	%	16.52	11.27	12.84	12.54
	Other Bases	%	3.40	3.50	3.20	3.30
	Hydrogen	%	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS						
	Boron** (ppm)		2.47	0.92	1.02	1.10
	Iron** (ppm)		113	88	93	115
	Manganese** (ppm)		25	39	44	49
	Copper** (ppm)		1.29	0.94	0.83	1.00
	Zinc** (ppm)		7.69	6.51	7.06	5.05
	Aluminum** (ppm)		65	75	84	80
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					
	NO ₃ -N (ppm)		12.3	1.9	3.8	3.8
	NH ₄ -N (ppm)		2.6	< 0.5	1.1	0.7

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SOIL AUDIT AND INVENTORY REPORT

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Sample Location <u>QUAIL RUN COURSE</u>			TEE	TEE	TEE	FAIRWAY	FAIRWAY
Sample Identification			5	9	13	5	9
Lab Number			0252-1	0253-1	0254-1	0256-1	0257-1
Total Exchange Capacity (ME/100 g)			8.66	10.08	8.98	13.80	12.78
pH (H ₂ O 1:1)			a 8.4	a 8.4	a 8.5	a 8.0	a 8.1
Organic Matter (360°C LOI) %			1.36	1.33	1.18	1.87	3.54
Estimated Nitrogen Release lb/A			47	47	44	57	85
ANIONS	SOLUBLE SULFUR* ppm		38	71	39	153	135
	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		14 3	< 9 < 2	< 9 < 2	60 13	32 7
EXCHANGEABLE CATIONS	CALCIUM* lb/A ppm		1866 933	2374 1187	2108 1054	3466 1733	3260 1630
	MAGNESIUM* lb/A ppm		174 87	224 112	214 107	302 151	274 137
	POTASSIUM* lb/A ppm		524 262	438 219	442 221	580 290	528 264
	SODIUM* lb/A ppm		1074 537	1082 541	914 457	1224 612	1100 550
	BASE SATURATION PERCENT						
	Calcium %		53.87	58.88	58.69	62.79	63.77
	Magnesium %		8.37	9.26	9.93	9.12	8.93
	Potassium %		7.76	5.57	6.31	5.39	5.30
	Sodium %		26.96	23.34	22.13	19.28	18.71
	Other Bases %		3.00	3.00	2.90	3.40	3.30
	Hydrogen %		0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS							
Boron** (ppm)			1.18	1.29	1.33	3.01	2.30
Iron** (ppm)			123	152	120	120	114
Manganese** (ppm)			47	53	42	34	21
Copper** (ppm)			1.54	1.50	2.17	2.00	1.68
Zinc** (ppm)			3.39	5.18	5.51	8.62	7.56
Aluminum** (ppm)			189	84	86	72	71
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						
	NO ₃ -N (ppm)		4.1	5.5	3.6	23.4	8.8
	NH ₄ -N (ppm)		0.8	1.9	5.5	3.0	2.0

a - alkaline soil

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** Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

90696-5

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Sample Location			QUAIL RUN COURSE	FAIRWAY	GREEN	GREEN	GREEN	
Sample Identification				13	5	9	13	
Lab Number				0258-1	0259-1	0260-1	0261-1	
Total Exchange Capacity (ME/100 g)				13.81	6.72	6.30	5.85	
pH (H ₂ O 1:1)				a 7.9	a 8.7	a 8.5	a 8.7	
Organic Matter (360°C LOI) %				4.07	0.37	0.42	0.34	
Estimated Nitrogen Release lb/A				91	15	17	14	
ANIONS	SOLUBLE SULFUR* ppm			132	39	56	26	
	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	55 12	< 9 < 2	37 8	23 5		
EXCHANGEABLE CATIONS	CALCIUM*		lb/A	3584	1958	1672	1604	
			ppm	1792	979	836	802	
	MAGNESIUM*		lb/A	300	138	134	128	
			ppm	150	69	67	64	
	POTASSIUM*		lb/A	628	278	350	340	
			ppm	314	139	175	170	
	SODIUM*		lb/A	1064	326	430	330	
			ppm	532	163	215	165	
BASE SATURATION PERCENT								
Calcium %				64.88	72.84	66.35	68.55	
Magnesium %				9.05	8.56	8.86	9.12	
Potassium %				5.83	5.30	7.12	7.45	
Sodium %				16.75	10.55	14.84	12.26	
Other Bases %				3.50	2.70	2.90	2.70	
Hydrogen %				0.00	0.00	0.00	0.00	
EXTRACTABLE MINORS								
Boron** (ppm)				2.99	0.61	0.76	0.51	
Iron** (ppm)				121	50	39	44	
Manganese** (ppm)				30	14	10	10	
Copper** (ppm)				2.25	0.89	0.90	0.75	
Zinc** (ppm)				7.17	1.04	1.11	1.09	
Aluminum** (ppm)				64	114	102	115	
OTHER TESTS	Soluble Salts (mmhos/cm)							
	Chlorides (ppm)							
	NO3-N (ppm)			22.9	< 0.5	3.1	2.9	
	NH4-N (ppm)			7.0	1.4	1.3	3.9	

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