

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

Name Anthem Country Club City Phoenix State AZ

Independent Consultant Soil and Water Consulting Date 7/13/2021

Sample Location		IRONWOOD COURSE	FAIRWAY	GREEN	FAIRWAY	GREEN	FAIRWAY
Sample Identification			3	13	16	3	13
Lab Number			0092-1	0093-1	0094-1	0095-1	0096-1
Total Exchange Capacity (ME/100 g)			28.31	4.45	39.53	5.74	24.49
pH (H ₂ O 1:1)			a 7.6	a 8.1	a 7.7	a 8.2	a 7.7
Organic Matter (360°C LOI) %			5.27	0.42	5.32	0.54	5.51
Estimated Nitrogen Release lb/A			101	17	102	22	103
ANIONS	SOLUBLE SULFUR*	ppm	897	25	3080	46	654
	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	82 18	27 6	105 23	5 1	124 27
EXCHANGEABLE CATIONS	CALCIUM*	lb/A ppm	7910 3955	1142 571	11508 5754	1588 794	6652 3326
	MAGNESIUM*	lb/A ppm	864 432	164 82	972 486	188 94	778 389
	POTASSIUM*	lb/A ppm	824 412	304 152	1102 551	320 160	826 413
	SODIUM*	lb/A ppm	1290 645	174 87	1766 883	182 91	1220 610
BASE SATURATION PERCENT							
Calcium %			69.85	64.16	72.78	69.16	67.91
Magnesium %			12.72	15.36	10.25	13.65	13.24
Potassium %			3.73	8.76	3.57	7.15	4.32
Sodium %			9.91	8.50	9.71	6.89	10.83
Other Bases %			3.80	3.30	3.70	3.20	3.70
Hydrogen %			0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS							
Boron** (ppm)			2.37	1.26	3.93	2.01	4.67
Iron** (ppm)			76	45	74	61	104
Manganese** (ppm)			40	16	50	19	48
Copper** (ppm)			2.20	0.48	2.62	0.62	2.59
Zinc** (ppm)			5.18	1.55	3.52	2.41	4.62
Aluminum** (ppm)			8	62	8	50	42
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						
	NO ₃ -N (ppm)		10.3	1.5	13.3	2.1	7.8
	NH ₄ -N (ppm)		4.4	1.4	3.9	1.7	5.5

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable

lb/A

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85330-4

Name Anthem Country Club City Phoenix State AZIndependent Consultant Soil and Water Consulting Date 7/13/2021

Sample Location		IRONWOOD COURSE	GREEN				
Sample Identification			16				
Lab Number			0097-1				
Total Exchange Capacity (ME/100 g)			5.05				
pH (H ₂ O 1:1)			a 8.1				
Organic Matter (360°C LOI) %			0.54				
Estimated Nitrogen Release lb/A			22				
ANIONS	SOLUBLE SULFUR*	ppm	30				
	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	37 8				
EXCHANGEABLE CATIONS	CALCIUM*	lb/A ppm	1306 653				
	MAGNESIUM*	lb/A ppm	186 93				
	POTASSIUM*	lb/A ppm	326 163				
	SODIUM*	lb/A ppm	196 98				
	BASE SATURATION PERCENT						
	Calcium %		64.65				
	Magnesium %		15.35				
	Potassium %		8.28				
	Sodium %		8.44				
	Other Bases %		3.30				
	Hydrogen %		0.00				
EXTRACTABLE MINORS							
	Boron** (ppm)		3.17				
	Iron** (ppm)		66				
	Manganese** (ppm)		23				
	Copper** (ppm)		0.83				
	Zinc** (ppm)		2.93				
	Aluminum** (ppm)		84				
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						
	NO ₃ -N (ppm)		1.8				
	NH ₄ -N (ppm)		2.3				

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Sample Location		PERSIMMON COURSE	BACK RAN	BACK RAN	FAIRWAY	FAIRWAY	FAIRWAY
Sample Identification			GREEN E	GREEN W	5	8	16
Lab Number			0098-1	0099-1	0100-1	0101-1	0102-1
Total Exchange Capacity (ME/100 g)			7.52	8.03	30.78	24.09	25.71
pH (H ₂ O 1:1)			a 7.9	a 7.8	7.3	7.2	7.3
Organic Matter (360°C LOI) %			1.34	1.18	3.90	6.63	5.04
Estimated Nitrogen Release lb/A			47	44	89	108	100
ANIONS	SOLUBLE SULFUR*	ppm	40	81	1939	909	1097
	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	14 3	307 67	215 47	243 53
EXCHANGEABLE CATIONS	CALCIUM*	lb/A ppm	1978 989	2032 1016	9334 4667	6960 3480	7668 3834
	MAGNESIUM*	lb/A ppm	300 150	314 157	686 343	680 340	654 327
	POTASSIUM*	lb/A ppm	340 170	356 178	752 376	576 288	638 319
	SODIUM*	lb/A ppm	290 145	414 207	1086 543	970 485	892 446
BASE SATURATION PERCENT							
	Calcium	%	65.76	63.26	75.81	72.23	74.56
	Magnesium	%	16.62	16.29	9.29	11.76	10.60
	Potassium	%	5.80	5.68	3.13	3.07	3.18
	Sodium	%	8.38	11.21	7.67	8.75	7.54
	Other Bases	%	3.50	3.60	4.10	4.20	4.10
	Hydrogen	%	0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS							
	Boron** (ppm)		0.69	0.84	1.62	1.60	1.56
	Iron** (ppm)		86	107	189	155	112
	Manganese** (ppm)		40	45	50	31	35
	Copper** (ppm)		1.97	2.54	2.51	2.04	1.93
	Zinc** (ppm)		5.20	7.90	10.27	8.64	8.20
	Aluminum** (ppm)		111	96	53	21	21
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						
	NO ₃ -N (ppm)		2.0	1.9	14.3	11.1	14.7
	NH ₄ -N (ppm)		2.1	2.1	3.7	3.7	3.5

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Sample Location		PERSIMMON COURSE	GREEN 1	GREEN	GREEN	GREEN	GREEN
Sample Identification			FRONT	1 BACK	5	8	16
Lab Number			0103-1	0104-1	0105-1	0106-1	0107-1
Total Exchange Capacity (ME/100 g)			7.66	7.98	8.58	8.59	7.49
pH (H ₂ O 1:1)			a 7.8	a 7.9	a 7.8	a 7.7	a 7.8
Organic Matter (360°C LOI) %			1.19	1.17	1.80	2.41	1.61
Estimated Nitrogen Release lb/A			44	43	56	68	52
ANIONS	SOLUBLE SULFUR*	ppm	89	55	57	72	61
	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	41 9	69 15	50 11	41 9
EXCHANGEABLE CATIONS	CALCIUM*	lb/A	1854	1938	2102	2122	1728
		ppm	927	969	1051	1061	864
	MAGNESIUM*	lb/A	308	330	386	368	300
		ppm	154	165	193	184	150
	POTASSIUM*	lb/A	398	412	426	398	428
		ppm	199	206	213	199	214
	SODIUM*	lb/A	438	438	398	426	508
		ppm	219	219	199	213	254
BASE SATURATION PERCENT							
Calcium		%	60.51	60.71	61.25	61.76	57.68
Magnesium		%	16.75	17.23	18.75	17.85	16.69
Potassium		%	6.66	6.62	6.37	5.94	7.33
Sodium		%	12.43	11.93	10.08	10.78	14.74
Other Bases		%	3.60	3.50	3.60	3.70	3.60
Hydrogen		%	0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS							
Boron** (ppm)			0.82	0.86	0.65	0.69	0.85
Iron** (ppm)			108	105	97	119	118
Manganese** (ppm)			39	49	51	45	50
Copper** (ppm)			2.37	2.82	2.37	2.94	3.09
Zinc** (ppm)			6.95	7.69	6.52	9.06	9.56
Aluminum** (ppm)			145	158	136	157	170
OTHER TESTS	Soluble Salts (mmhos/cm)						
	Chlorides (ppm)						
	NO ₃ -N (ppm)		1.7	3.1	2.7	3.0	2.1
	NH ₄ -N (ppm)		2.3	2.0	2.0	2.1	4.2

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