

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 10/3/2023

Sample Location	QUAIL RUN COURSE	TEE	TEE	TEE	FAIRWAY	FAIRWAY
Sample Identification		2	6	12	2	6
Lab Number		0850-1	0851-1	0852-1	0853-1	0854-1
Total Exchange Capacity (ME/100 g)		11.39	12.26	16.10	15.48	17.87
pH (H ₂ O 1:1)		a 8.5	a 8.6	a 8.3	a 8.2	a 8.0
Organic Matter (360°C LOI) %		2.60	2.33	2.83	3.38	3.25
Estimated Nitrogen Release lb/A		72	67	77	84	82
ANIONS	SOLUBLE SULFUR* ppm	134	227	537	332	544
	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	5 1	23 5	151 33	23 5
EXCHANGEABLE CATIONS	CALCIUM* lb/A	2600	2502	3366	3520	4222
	ppm	1300	1251	1683	1760	2111
	MAGNESIUM* lb/A	262	290	328	322	372
	ppm	131	145	164	161	186
	POTASSIUM* lb/A	430	460	614	564	690
	ppm	215	230	307	282	345
	SODIUM* lb/A	1340	1776	2314	1894	1966
	ppm	670	888	1157	947	983
BASE SATURATION PERCENT						
	Calcium %	57.07	51.02	52.27	56.85	59.07
	Magnesium %	9.58	9.86	8.49	8.67	8.67
	Potassium %	4.84	4.81	4.89	4.67	4.95
	Sodium %	25.58	31.49	31.24	26.60	23.92
	Other Bases %	2.90	2.80	3.10	3.20	3.40
	Hydrogen %	0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS						
	Boron** (ppm)	4.57	3.61	4.75	4.51	4.05
	Iron** (ppm)	123	109	100	209	147
	Manganese** (ppm)	39	33	31	30	52
	Copper** (ppm)	1.46	1.08	1.08	3.51	2.03
	Zinc** (ppm)	5.42	3.32	4.67	15.43	8.50
	Aluminum** (ppm)	106	84	82	76	101
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					
	NO ₃ -N (ppm)	12.4	17.7	13.0	11.8	28.9
	NH ₄ -N (ppm)	1.6	0.8	0.9	2.6	2.1

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

SOIL AUDIT AND INVENTORY REPORT

90696-1

Name Rio Verde Country Club City Rio Verde State AZIndependent Consultant Soil and Water Consulting Date 10/3/2023

Sample Location			QUAIL RUN COURSE	FAIRWAY	GREEN	GREEN	GREEN	
Sample Identification				12	2	6	12	
Lab Number				0855-1	0856-1	0857-1	0858-1	
Total Exchange Capacity (ME/100 g)				23.05	7.18	7.78	7.03	
pH (H ₂ O 1:1)				a 8.1	7.1	7.0	7.2	
Organic Matter (360°C LOI) %				3.87	1.18	1.18	1.17	
Estimated Nitrogen Release lb/A				89	44	44	43	
ANIONS	SOLUBLE SULFUR* ppm			929	49	37	33	
	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	82 18	5 1	18 4	< 5 < 1		
EXCHANGEABLE CATIONS	CALCIUM*		lb/A	4996	1832	2012	1838	
			ppm	2498	916	1006	919	
	MAGNESIUM*		lb/A	446	174	178	180	
			ppm	223	87	89	90	
	POTASSIUM*		lb/A	808	438	458	422	
			ppm	404	219	229	211	
	SODIUM*		lb/A	3178	464	498	390	
			ppm	1589	232	249	195	
BASE SATURATION PERCENT								
Calcium %				54.19	63.79	64.65	65.36	
Magnesium %				8.06	10.10	9.53	10.67	
Potassium %				4.49	7.82	7.55	7.70	
Sodium %				29.97	14.05	13.92	12.06	
Other Bases %				3.30	4.30	4.40	4.20	
Hydrogen %				0.00	0.00	0.00	0.00	
EXTRACTABLE MINORS								
Boron** (ppm)				6.16	0.89	0.74	0.88	
Iron** (ppm)				159	106	101	107	
Manganese** (ppm)				46	55	43	53	
Copper** (ppm)				3.36	1.51	1.49	1.91	
Zinc** (ppm)				12.44	8.49	5.66	10.33	
Aluminum** (ppm)				89	104	110	108	
OTHER TESTS	Soluble Salts (mmhos/cm)							
	Chlorides (ppm)							
	NO3-N (ppm)			32.6	42.7	37.9	38.0	
	NH4-N (ppm)			2.8	4.0	4.9	2.7	

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

90696-1

SOIL AUDIT AND INVENTORY REPORT

Name Rio Verde Country Club City Rio Verde State AZIndependent Consultant Soil and Water Consulting Date 10/3/2023

Sample Location	WHITE WING COURSE	TEE	TEE	TEE	FAIRWAY	FAIRWAY
Sample Identification		3	6	18	3	6
Lab Number		0859-1	0860-1	0861-1	0862-1	0863-1
Total Exchange Capacity (ME/100 g)		14.12	11.70	11.19	15.64	17.71
pH (H ₂ O 1:1)		a 8.5	a 7.9	a 8.7	a 8.1	a 7.8
Organic Matter (360°C LOI) %		2.46	2.89	1.93	3.06	3.17
Estimated Nitrogen Release lb/A		69	78	59	81	82
ANIONS	SOLUBLE SULFUR* ppm	332	311	181	388	657
	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	27 6	41 9	18 4	82 18	9 2
EXCHANGEABLE CATIONS	CALCIUM* lb/A	3150	2474	2262	3992	3964
	ppm	1575	1237	1131	1996	1982
	MAGNESIUM* lb/A	350	318	398	348	410
	ppm	175	159	199	174	205
	POTASSIUM* lb/A	708	634	682	694	770
	ppm	354	317	341	347	385
	SODIUM* lb/A	1596	1366	1244	1288	2054
	ppm	798	683	622	644	1027
BASE SATURATION PERCENT						
	Calcium %	55.77	52.86	50.54	63.81	55.96
	Magnesium %	10.33	11.32	14.82	9.27	9.65
	Potassium %	6.43	6.95	7.81	5.69	5.57
	Sodium %	24.57	25.38	24.17	17.90	25.21
	Other Bases %	2.90	3.50	2.70	3.30	3.60
	Hydrogen %	0.00	0.00	0.00	0.00	0.00
EXTRACTABLE MINORS						
	Boron** (ppm)	5.36	3.54	3.07	3.37	3.29
	Iron** (ppm)	93	153	91	172	162
	Manganese** (ppm)	39	33	39	28	26
	Copper** (ppm)	1.10	0.92	0.73	1.73	1.16
	Zinc** (ppm)	4.15	5.66	3.28	10.37	7.86
	Aluminum** (ppm)	77	69	80	73	84
OTHER TESTS	Soluble Salts (mmhos/cm)					
	Chlorides (ppm)					
	NO ₃ -N (ppm)	7.0	22.4	6.2	11.4	20.3
	NH ₄ -N (ppm)	0.7	1.8	0.8	3.3	1.6

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable

lb/A

BROOKSIDE LABORATORIES, INC.

90696-1

SOIL AUDIT AND INVENTORY REPORT

Name Rio Verde Country Club City Rio Verde State AZIndependent Consultant Soil and Water Consulting Date 10/3/2023

Sample Location			WHITE WING COURSE	FAIRWAY	GREEN	GREEN	GREEN	
Sample Identification				18	3	6	18	
Lab Number				0864-1	0865-1	0866-1	0868-1	
Total Exchange Capacity (ME/100 g)				12.11	6.50	5.79	6.47	
pH (H ₂ O 1:1)				a 7.7	a 7.4	a 7.4	6.9	
Organic Matter (360°C LOI) %				3.33	0.88	0.95	1.11	
Estimated Nitrogen Release lb/A				83	35	38	42	
ANIONS	SOLUBLE SULFUR* ppm			311	26	21	25	
	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	23 5	< 5 < 1	27 6	< 5 < 1	
EXCHANGEABLE CATIONS	CALCIUM*		lb/A	2884	1660	1414	1636	
			ppm	1442	830	707	818	
	MAGNESIUM*		lb/A	290	186	180	176	
			ppm	145	93	90	88	
	POTASSIUM*		lb/A	522	440	420	366	
			ppm	261	220	210	183	
	SODIUM*		lb/A	1184	346	336	364	
			ppm	592	173	168	182	
BASE SATURATION PERCENT								
Calcium %				59.54	63.85	61.05	63.21	
Magnesium %				9.98	11.92	12.95	11.33	
Potassium %				5.53	8.68	9.30	7.25	
Sodium %				21.25	11.57	12.62	12.23	
Other Bases %				3.70	4.00	4.00	4.50	
Hydrogen %				0.00	0.00	0.00	1.50	
EXTRACTABLE MINORS								
Boron** (ppm)				3.19	0.69	0.62	0.66	
Iron** (ppm)				180	97	104	113	
Manganese** (ppm)				29	37	44	50	
Copper** (ppm)				1.34	1.13	1.06	1.33	
Zinc** (ppm)				7.09	7.15	7.71	6.24	
Aluminum** (ppm)				65	99	94	95	
OTHER TESTS	Soluble Salts (mmhos/cm)							
	Chlorides (ppm)							
	NO3-N (ppm)			13.0	10.6	10.8	18.3	
	NH4-N (ppm)			2.7	2.1	0.9	3.2	

a - alkaline soil

* Ammonium Acetate Extractable (pH of 8.1)

** Mehlich III Extractable