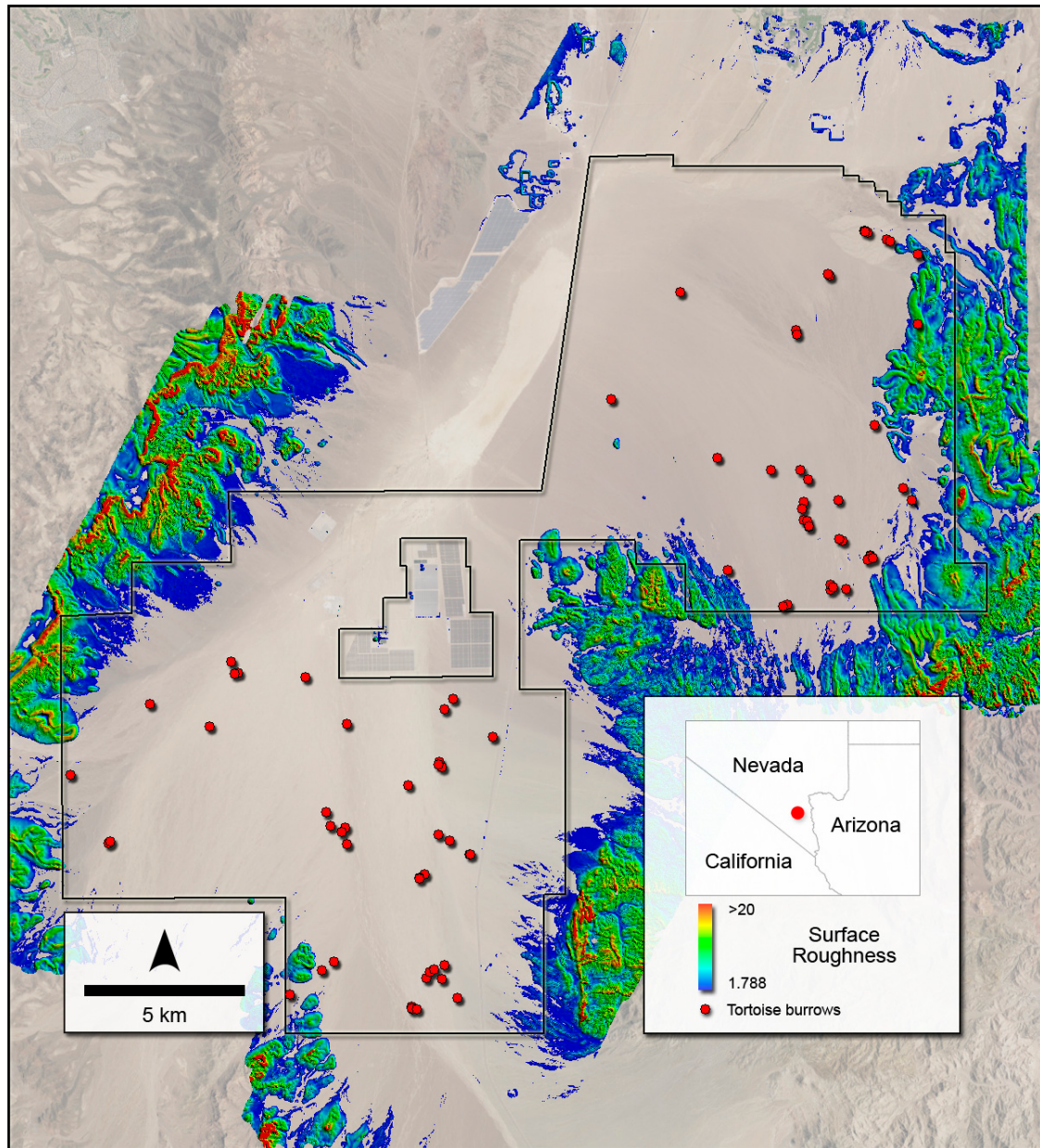


Supplementary Materials: Airborne LiDAR and Aerial Imagery to Assess Potential Burrow Locations for the Desert Tortoise (*Gopherus agassizii*)

Michael H. Young, John H. Andrews, Todd G. Caldwell and Kutalmis Saylam



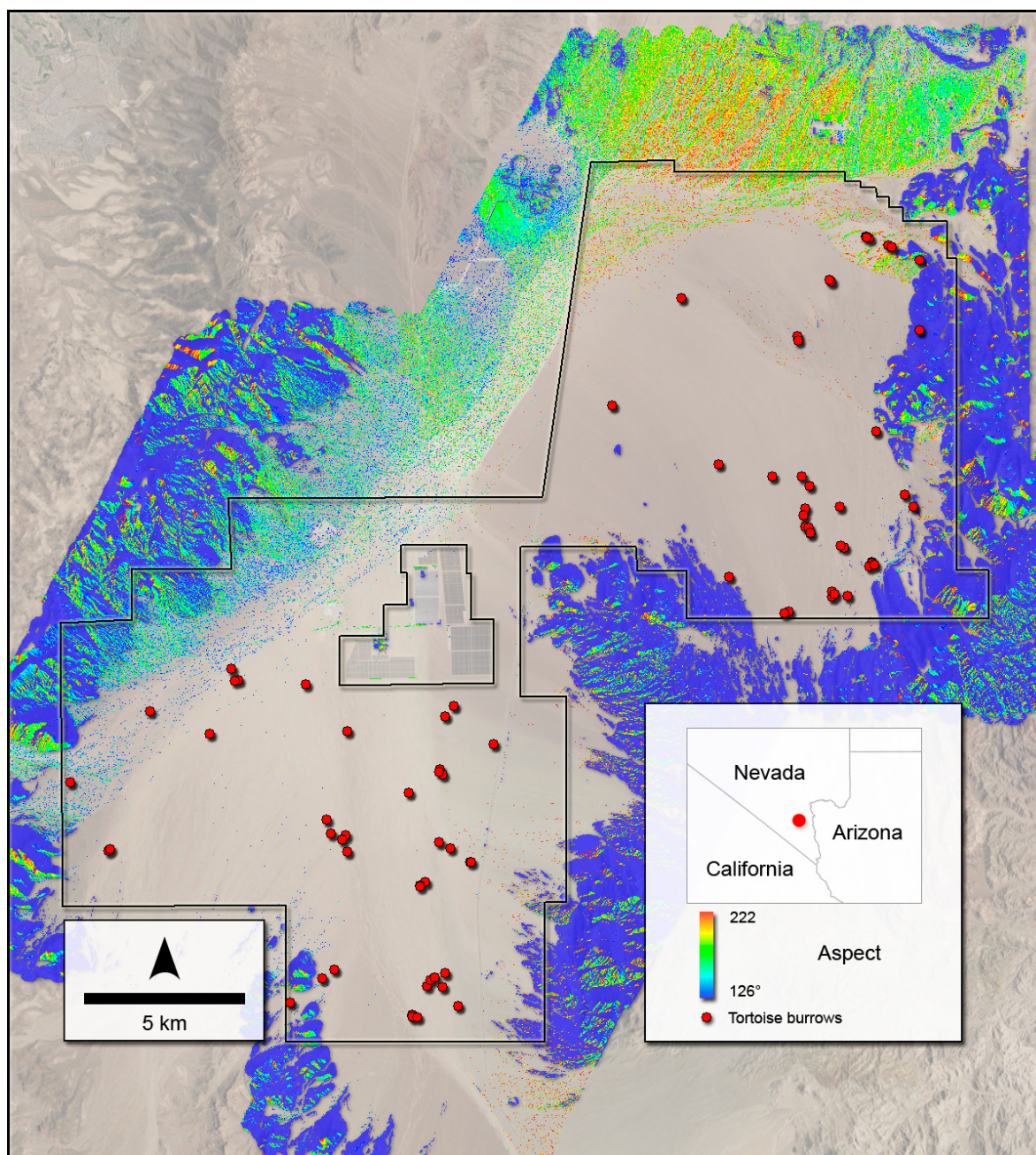


Figure S2. Map showing a double overlay of surface roughness and aspect overlain atop the field site. Colored areas include those with roughness > 1.788 and aspect between 126° and 222° . The BCCE is shown in a dark outline and red dots indicate locations with visual confirmation of tortoise habitats.

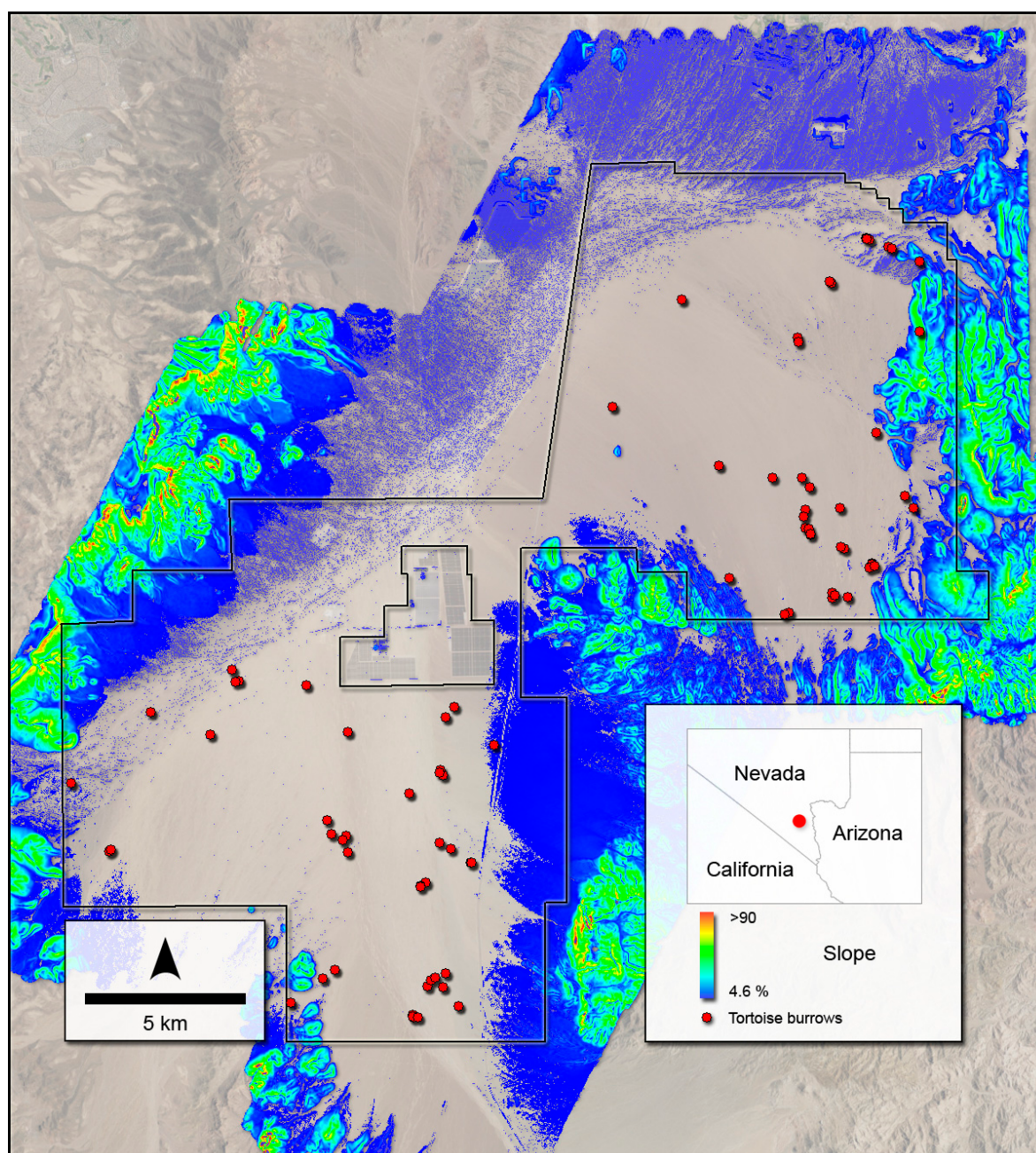


Figure S3. Map showing a cumulative overlay of surface roughness, aspect and slope, overlain atop the field site. Colored areas include those with roughness > 1.788 , aspect between 126° and 222° , and slope $> 4.6\%$. The BCCE is shown in a dark outline and red dots indicate locations with visual confirmation of tortoise habitats.

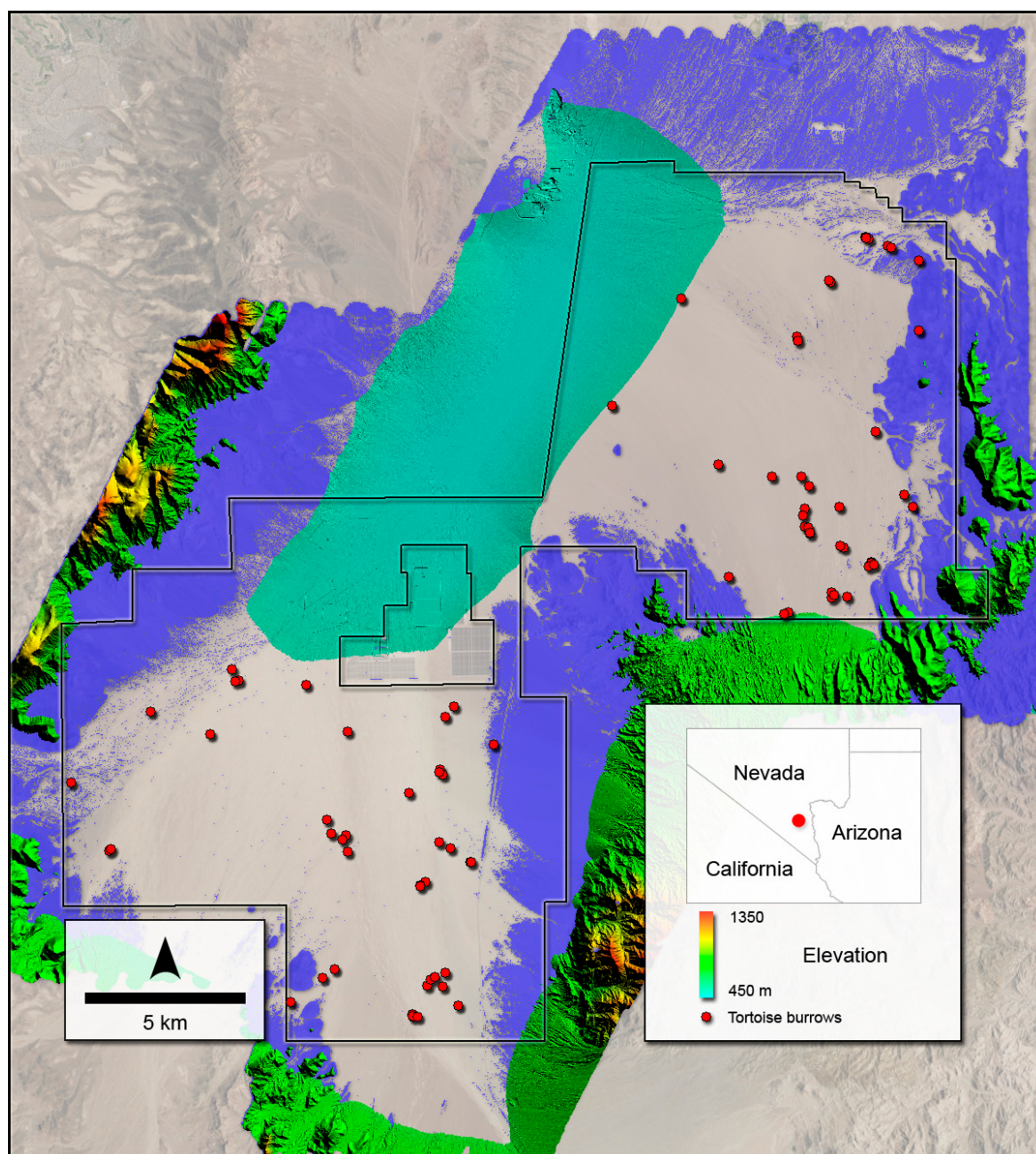


Figure S4. Map showing a cumulative overlay of surface roughness, aspect, slope, and elevation, overlain atop the field site. Colored areas include those with roughness > 1.788, aspect between 126° and 222° , slope > 4.6%, and elevation between 450 and 1350 m a.s.l. The BCCE is shown in a dark outline and red dots indicate locations with visual confirmation of tortoise habitats.

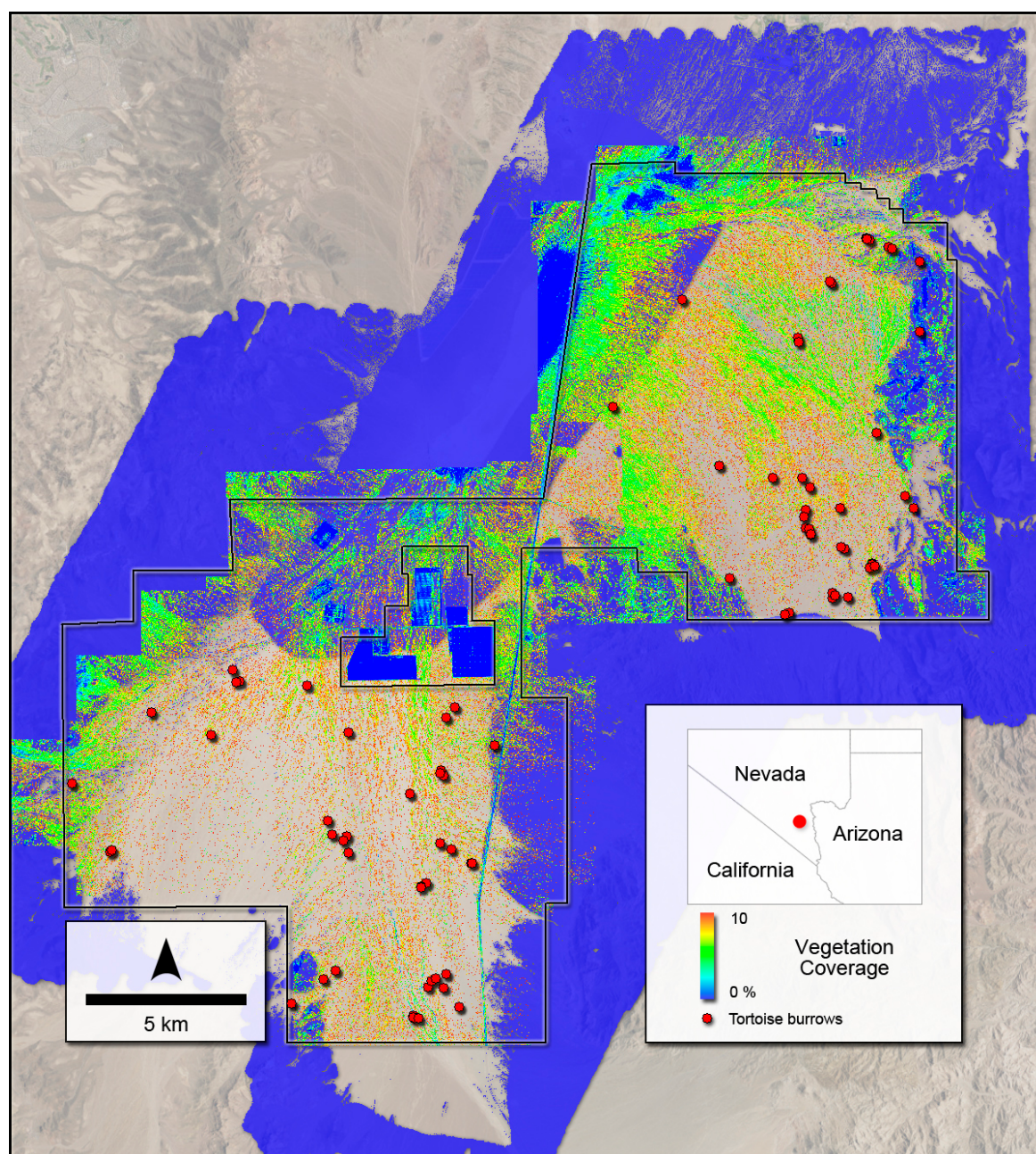


Figure S5. Map showing a cumulative overlay of surface roughness, aspect, slope, elevation, and percent ground cover, overlain atop the field site. Colored areas include those with roughness > 1.788, aspect between 126° and 222°, slope > 4.6%, elevation between 450 and 1350 m a.s.l., and vegetation cover > 10%. The BCCE is shown in a dark outline and red dots indicate locations with visual confirmation of tortoise habitats.

Table S1. General description of observed tortoise burrows.

Latitude	Longitude	Type	Location	Substrate	Soil Class	Geomorphic Description
35.88287530	-114.8878381	Burrow	Vegetation	Gravel	Searchlight	fan piedmonts, fan remnants
35.85352238	-114.9121645	Burrow	Vegetation	Gravel	Searchlight	fan piedmonts, fan remnants
35.77750935	-115.0183698	Burrow	Vegetation	Sand	Hypoint	fan skirts, piedmonts
35.78241932	-115.0434144	Burrow	Vegetation	Sand	Hypoint	fan skirts, piedmonts
35.77936215	-115.0412126	Burrow	Open	Sand	Hypoint	fan skirts, piedmonts
35.77901485	-115.0423159	Burrow	Vegetation	Sand	Hypoint	fan skirts, piedmonts
35.76461222	-115.0046096	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.76806385	-114.9710301	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.77069857	-114.9681727	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.88678919	-114.8371883	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants

35.88684765	-114.8371418	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.89852754	-114.8241697	Den	Rock	Caliche	Nickel	fan remnants, fan piedmonts
35.88624466	-114.8364779	Burrow	Vegetation	Gravel	Tonopah	fan piedmonts, fan remnants
35.89852385	-114.8241896	Den	Rock	Caliche	Nickel	fan remnants, fan piedmonts
35.89852088	-114.8240784	Den	Rock	Caliche	Nickel	fan remnants, fan piedmonts
35.89866693	-114.8244468	Den	Rock	Caliche	Nickel	fan remnants, fan piedmonts
35.89811318	-114.8230951	Burrow	Open	Sand	Nickel	fan remnants, fan piedmonts
35.76449760	-115.0512044	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.75334623	-114.9732006	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.75256852	-114.9735806	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.75219711	-114.9717576	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.89618283	-114.8168575	Burrow	Open	Sand	Nickel	fan remnants, fan piedmonts
35.74710205	-114.9839204	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.89553658	-114.8156192	Burrow	Open	Sand	Nickel	fan remnants, fan piedmonts
35.77118249	-115.0713347	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.87139855	-114.8483856	Burrow	Vegetation	Gravel	Tonopah	fan piedmonts, fan remnants
35.89217916	-114.8069495	Burrow	Vegetation	Sand	Nickel	fan remnants, fan piedmonts
35.87021293	-114.8484281	Burrow	Vegetation	Gravel	Tonopah	fan piedmonts, fan remnants
35.86981227	-114.8501886	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.74009494	-115.0121337	Burrow	Open	Sand	Arizo	fan aprons, fan piedmonts
35.73587658	-115.0057141	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.73620352	-115.0107299	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.73614786	-115.0107584	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.73614950	-115.0107128	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.73436037	-115.0071759	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.73331583	-114.9741520	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.73114235	-115.0052987	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.73157495	-114.9702103	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.76004547	-114.9548219	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.96916600	-114.9049248	Burrow	Open	Sand	Searchlight	fan piedmonts, fan remnants
35.72219931	-114.9790189	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.72752850	-114.9634752	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.72758807	-114.9634370	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.72162148	-114.9807544	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.72101710	-114.9807485	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.72134107	-114.9808080	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.72134434	-114.9808070	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.72110520	-114.9807927	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.87237640	-114.8068845	Burrow	Other	Rocky		
35.84451095	-114.8224510	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.83280969	-114.8579561	Burrow	Open	Sand	Searchlight	fan piedmonts, fan remnants
35.83245790	-114.8480589	Burrow	Open	Sand	Searchlight	fan piedmonts, fan remnants
35.75165309	-115.0991943	Burrow	Open	Sand	Arizo	fan piedmonts, inset fans
35.82991018	-114.8455773	Burrow	Open	Gravel	Searchlight	fan piedmonts, fan remnants
35.69852343	-115.0105119	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.73313360	-115.0859839	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.82679534	-114.8131291	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.82680095	-114.8131113	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.73252450	-115.0867447	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.69686071	-114.9730512	Burrow	Open	Sand	Arizo	fan aprons, fan piedmonts
35.73253740	-115.0866658	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.69687064	-114.9730419	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.69595727	-114.9763221	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.69524782	-114.9778724	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.82344853	-114.8103655	Burrow	Rock	Caliche	Tonopah	fan piedmonts, fan remnants
35.69342266	-114.9791474	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.69633647	-115.0147139	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.82385078	-114.8471081	Burrow	Vegetation	Gravel	Tonopah	fan piedmonts, fan remnants
35.69309179	-114.9738982	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.82397982	-114.8353882	Burrow	Vegetation	Gravel	Tonopah	fan piedmonts, fan remnants
35.82165338	-114.8478302	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.68558248	-114.9843650	Burrow	Open	Sand	Arizo	fan aprons, fan piedmonts
35.68521489	-114.9843769	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.68503514	-114.9840018	Burrow	Open	Sand	Arizo	fan aprons, fan piedmonts
35.68481290	-114.9827229	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts

35.68483117	-114.9827073	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.68792983	-114.9687815	Burrow	Vegetation	Sand	Arizo	fan aprons, fan piedmonts
35.81863083	-114.8475469	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.81859495	-114.8472993	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.81858476	-114.8472229	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.81840790	-114.8462967	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.81835786	-114.8461470	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.81840589	-114.8460827	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.81692024	-114.8455205	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.81671673	-114.8455415	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.68972247	-115.0256957	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.81305208	-114.8349607	Den	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.81923746	-114.8262469	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.80513629	-114.8736465	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.80827518	-114.8247051	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.80800300	-114.8244302	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.80761607	-114.8238469	Burrow	Vegetation	Gravel	Tonopah	fan piedmonts, fan remnants
35.80753766	-114.8238692	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.80724455	-114.8255183	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.80009621	-114.8385048	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.79884208	-114.8333991	Burrow	Open	Gravel	Tonopah	fan piedmonts, fan remnants
35.79942910	-114.8377969	Burrow	Open	Sand	Tonopah	fan piedmonts, fan remnants
35.79870276	-114.8387862	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.79496910	-114.8534929	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants
35.79434824	-114.8549969	Burrow	Vegetation	Sand	Tonopah	fan piedmonts, fan remnants

Table S2. Soil and landscape attributes in immediate vicinity of observed tortoise burrows.

Latitude	Longitude	Slope	Aspect	Roughness	Wetness	Curvature	Elevation
		%	Degree				m a.s.l.
35.88287530	-114.8878381	1.63	276.37	0.42	-0.49	0.00	558.94
35.85352238	-114.9121645	2.74	330.87	0.67	-1.01	0.00	561.89
35.77750935	-115.0183698	1.24	18.09	0.32	-0.22	-0.01	566.74
35.78241932	-115.0434144	1.25	2.95	0.59	0.47	-0.03	575.71
35.77936215	-115.0412126	1.61	43.55	0.43	-0.48	0.02	579.34
35.77901485	-115.0423159	1.60	37.76	0.48	-0.47	0.03	580.73
35.76461222	-115.0046096	1.49	295.72	0.54	5.08	-0.04	588.89
35.76806385	-114.9710301	2.85	312.78	0.74	-1.05	0.01	595.84
35.77069857	-114.9681727	3.33	299.73	0.82	-1.20	0.01	599.13
35.88678919	-114.8371883	1.57	351.68	0.41	-0.45	0.01	606.10
35.88684765	-114.8371418	1.57	351.68	0.41	-0.45	0.01	606.10
35.89852754	-114.8241697	2.98	7.11	1.44	1.85	-0.09	606.86
35.88624466	-114.8364779	1.75	306.28	0.45	-0.56	0.01	607.33
35.89852385	-114.8241896	3.27	22.85	1.05	-1.18	-0.03	607.59
35.89852088	-114.8240784	2.81	9.89	0.98	-0.34	-0.02	607.82
35.89866693	-114.8244468	2.92	0.80	1.19	-0.38	0.04	608.35
35.89811318	-114.8230951	2.03	63.20	0.56	-0.71	0.02	610.49
35.76449760	-115.0512044	2.30	37.72	0.59	-0.83	-0.01	613.17
35.75334623	-114.9732006	2.40	304.60	0.60	-0.88	0.01	613.39
35.75256852	-114.9735806	2.23	329.00	0.58	-0.80	-0.01	613.98
35.75219711	-114.9717576	2.37	318.65	0.63	-0.86	0.02	616.82
35.89618283	-114.8168575	1.51	222.52	0.38	-0.42	0.01	619.22
35.74710205	-114.9839204	1.66	322.04	0.44	1.10	0.00	619.85
35.89553658	-114.8156192	1.58	265.60	0.39	1.33	0.00	620.31
35.77118249	-115.0713347	2.55	22.57	0.76	-0.94	0.01	621.12
35.87139855	-114.8483856	2.01	40.46	0.67	-0.70	-0.01	624.39
35.89217916	-114.8069495	1.22	126.83	1.79	1.88	-0.16	626.51
35.87021293	-114.8484281	1.91	349.49	0.55	3.63	0.02	627.18
35.86981227	-114.8501886	1.91	349.49	0.55	3.63	0.02	627.18
35.74009494	-115.0121337	2.34	323.65	0.59	-0.85	-0.01	636.13
35.73587658	-115.0057141	1.97	54.70	0.58	0.71	-0.03	640.85
35.73620352	-115.0107299	2.35	16.75	0.60	-0.85	0.00	643.07
35.73614786	-115.0107584	2.44	36.09	0.63	3.88	-0.02	643.08
35.73614950	-115.0107128	2.44	36.09	0.63	3.88	-0.02	643.08
35.73436037	-115.0071759	2.02	37.97	0.57	5.14	-0.02	643.70

35.73331583	−114.9741520	1.84	325.21	0.49	−0.61	0.02	649.58
35.73114235	−115.0052987	1.66	35.73	0.45	0.59	0.00	650.25
35.73157495	−114.9702103	2.09	289.39	0.53	−0.74	0.00	654.45
35.76004547	−114.9548219	4.61	307.54	1.18	−1.53	0.02	661.60
35.96916600	−114.9049248	3.43	338.58	0.87	1.48	0.00	671.82
35.72219931	−114.9790189	2.22	328.14	0.55	−0.80	0.01	672.17
35.72752850	−114.9634752	2.60	302.75	0.71	0.43	0.01	672.84
35.72758807	−114.9634370	2.74	330.18	0.72	−1.01	0.00	673.07
35.72162148	−114.9807544	2.07	77.82	0.58	1.47	−0.02	674.13
35.72101710	−114.9807485	1.97	34.39	0.71	3.57	−0.04	674.22
35.72134107	−114.9808080	1.97	34.39	0.71	3.57	−0.04	674.22
35.72134434	−114.9808070	2.03	80.42	0.55	1.37	−0.01	674.24
35.72110520	−114.9807927	1.99	291.84	0.60	−0.69	−0.02	674.28
35.87237640	−114.8068845	36.76	281.45	9.33	−2.91	−0.01	687.97
35.84451095	−114.8224510	2.44	224.99	0.60	−0.89	−0.04	693.62
35.83280969	−114.8579561	3.24	336.86	0.82	−1.18	0.01	706.32
35.83245790	−114.8480589	2.99	350.65	0.74	0.00	0.00	715.39
35.75165309	−115.0991943	4.27	57.32	1.02	0.63	0.04	719.46
35.82991018	−114.8455773	2.97	331.81	0.79	0.52	0.01	725.90
35.69852343	−115.0105119	2.71	105.28	0.74	−0.31	−0.04	727.54
35.73313360	−115.0859839	3.70	65.82	0.94	−1.31	−0.01	732.45
35.82679534	−114.8131291	3.19	55.25	0.92	2.21	−0.01	733.37
35.82680095	−114.8131113	3.19	55.25	0.92	2.21	−0.01	733.37
35.73252450	−115.0867447	3.84	291.60	1.09	5.21	−0.05	734.72
35.69686071	−114.9730512	2.26	341.12	0.57	−0.81	0.00	735.76
35.73253740	−115.0866658	3.64	288.22	1.07	−1.29	0.05	735.79
35.69687064	−114.9730419	2.24	323.81	0.58	−0.81	0.01	735.85
35.69595727	−114.9763221	2.22	334.43	0.67	−0.80	0.00	736.29
35.69524782	−114.9778724	2.37	2.02	0.59	2.88	0.01	737.45
35.82344853	−114.8103655	0.75	266.85	0.74	0.29	−0.04	739.48
35.69342266	−114.9791474	2.37	36.51	0.59	−0.86	0.00	740.65
35.69633647	−115.0147139	2.99	46.33	0.80	−1.10	0.01	741.03
35.82385078	−114.8471081	3.10	46.25	0.81	−1.13	0.02	743.90
35.69309179	−114.9738982	2.28	3.21	0.59	6.73	−0.01	744.44
35.82397982	−114.8353882	2.45	11.92	0.65	−0.90	−0.01	748.57
35.82165338	−114.8478302	3.28	66.90	0.86	−1.19	−0.01	750.85
35.68558248	−114.9843650	2.04	48.34	0.59	−0.71	−0.01	754.71
35.68521489	−114.9843769	2.23	23.62	0.69	−0.80	0.03	755.91
35.68503514	−114.9840018	2.12	313.35	0.64	−0.75	0.02	756.49
35.68481290	−114.9827229	2.29	295.92	0.59	−0.13	0.02	757.95
35.68483117	−114.9827073	2.29	295.92	0.59	−0.13	0.02	757.95
35.68792983	−114.9687815	1.93	322.03	0.66	−0.66	0.06	759.81
35.81863083	−114.8475469	3.07	30.29	0.77	−1.12	−0.02	761.16
35.81859495	−114.8472993	3.07	30.29	0.77	−1.12	−0.02	761.16
35.81858476	−114.8472229	3.02	347.60	0.77	−1.10	−0.02	761.18
35.81840790	−114.8462967	3.30	310.62	0.89	−0.50	0.05	762.47
35.81835786	−114.8461470	3.30	310.62	0.89	−0.50	0.05	762.47
35.81840589	−114.8460827	3.11	319.92	0.92	−1.14	0.06	762.58
35.81692024	−114.8455205	2.80	39.47	0.86	−1.03	−0.03	766.94
35.81671673	−114.8455415	3.04	69.45	0.87	−1.11	0.03	767.99
35.68972247	−115.0256957	3.85	43.69	1.04	−1.35	0.02	777.80
35.81305208	−114.8349607	3.13	303.85	0.93	−1.14	0.02	781.01
35.81923746	−114.8262469	2.44	343.93	0.77	−0.89	0.09	782.29
35.80513629	−114.8736465	3.60	300.83	0.95	−1.28	−0.02	790.01
35.80827518	−114.8247051	2.99	47.73	0.98	−1.10	0.08	793.20
35.80800300	−114.8244302	2.47	99.86	0.81	−0.90	0.04	793.40
35.80761607	−114.8238469	3.61	303.85	0.92	−1.29	−0.01	793.96
35.80753766	−114.8238692	3.61	303.85	0.92	−1.29	−0.01	793.96
35.80724455	−114.8255183	2.76	343.25	0.72	−1.02	−0.02	795.54
35.80009621	−114.8385048	2.98	66.98	0.83	0.01	0.00	822.81
35.79884208	−114.8333991	2.65	51.89	0.80	−0.97	0.04	824.12
35.79942910	−114.8377969	2.85	354.28	0.75	−1.05	−0.04	824.40
35.79870276	−114.8387862	3.27	19.27	0.80	2.75	0.01	827.67
35.79496910	−114.8534929	3.45	41.85	0.93	1.25	0.02	843.49
35.79434824	−114.8549969	3.00	71.04	0.98	−1.10	−0.02	845.33

Table S3. Vegetation characteristics in immediate vicinity of observed tortoise burrows.

Latitude	Longitude	ALL Shrub Height	LATR Height	AMDU Height	% Veg-ALL	% Veg-LATR	% Veg-AMDU
		m	m	m			
35.88287530	-114.8878381	0.343	0.410	0.251	14.10%	11.60%	2.50%
35.85352238	-114.9121645	0.467	0.603	0.196	9.90%	9.50%	0.33%
35.77750935	-115.0183698	0.478	0.546	0.238	16.90%	16.40%	0.51%
35.78241932	-115.0434144	0.558	0.619	0.315	12.40%	11.70%	0.72%
35.77936215	-115.0412126	0.320	0.388	0.207	12.10%	10.90%	1.10%
35.77901485	-115.0423159	0.329	0.446	0.189	8.10%	7.30%	0.72%
35.76461222	-115.0046096	0.652	0.851	0.254	28.00%	16.00%	1.00%
35.76806385	-114.9710301	0.307	0.539	0.211	15.60%	12.10%	3.50%
35.77069857	-114.9681727	0.391	0.437	0.207	9.80%	9.40%	0.37%
35.88678919	-114.8371883	0.318	0.424	0.197	10.30%	8.90%	1.40%
35.88684765	-114.8371418	0.318	0.424	0.197	10.30%	8.90%	1.40%
35.89852754	-114.8241697	0.308	0.471	0.226	23.60%	17.10%	4.90%
35.88624466	-114.8364779	0.475	0.647	0.327	20.70%	17.00%	3.60%
35.89852385	-114.8241896	0.358	0.385	0.245	33.50%	31.90%	1.60%
35.89852088	-114.8240784	0.288	0.274	0.219	27.20%	14.20%	1.70%
35.89866693	-114.8244468	0.455	0.560	0.224	27.00%	25.80%	1.20%
35.89811318	-114.8230951	0.336	0.336	0.279	9.00%	9.00%	0.00%
35.76449760	-115.0512044	0.375	0.446	0.184	9.40%	8.90%	0.44%
35.75334623	-114.9732006	0.303	0.346	0.196	8.00%	7.30%	0.65%
35.75256852	-114.9735806	0.325	0.474	0.221	12.20%	9.90%	2.30%
35.75219711	-114.9717576	0.291	0.386	0.196	9.20%	7.80%	1.40%
35.89618283	-114.8168575	0.417	0.417	0.246	12.40%	12.40%	0.00%
35.74710205	-114.9839204	0.279	0.297	0.227	13.60%	12.00%	1.60%
35.89553658	-114.8156192	0.388	0.388	0.216	9.10%	9.10%	0.00%
35.77118249	-115.0713347	0.321	0.392	0.232	10.80%	8.80%	1.90%
35.87139855	-114.8483856	0.306	0.383	0.235	14.70%	11.30%	3.50%
35.89217916	-114.8069495	0.331	0.351	0.196	21.80%	21.10%	0.65%
35.87021293	-114.8484281	0.283	0.419	0.211	10.60%	7.60%	3.00%
35.86981227	-114.8501886	0.283	0.419	0.211	10.60%	7.60%	3.00%
35.74009494	-115.0121337	0.336	0.457	0.226	19.70%	16.70%	3.00%
35.73587658	-115.0057141	0.569	0.717	0.270	22.40%	12.80%	1.50%
35.73620352	-115.0107299	0.390	0.349	0.251	22.50%	12.40%	1.20%
35.73614786	-115.0107584	0.390	0.349	0.251	22.50%	12.40%	1.20%
35.73614950	-115.0107128	0.390	0.349	0.251	22.50%	12.40%	1.20%
35.73436037	-115.0071759	0.600	0.638	0.257	26.00%	25.70%	0.30%
35.73331583	-114.9741520	0.268	0.297	0.247	7.40%	4.70%	2.70%
35.73114235	-115.0052987	0.640	0.585	0.177	34.30%	9.90%	0.26%
35.73157495	-114.9702103	0.314	0.314	0.207	7.50%	7.50%	0.00%
35.76004547	-114.9548219	0.386	0.443	0.213	9.70%	9.30%	0.39%
35.96916600	-114.9049248	0.393	0.477	0.199	11.80%	11.20%	0.51%
35.72219931	-114.9790189	0.351	0.360	0.197	13.40%	13.30%	0.16%
35.72752850	-114.9634752	0.388	0.495	0.199	11.10%	10.50%	0.67%
35.72758807	-114.9634370	0.249	0.272	0.204	7.90%	6.80%	1.10%
35.72162148	-114.9807544	0.478	0.363	0.219	19.60%	5.60%	0.21%
35.72101710	-114.9807485	0.533	0.533	0.280	9.00%	4.10%	0.00%
35.72134107	-114.9808080	0.533	0.533	0.280	9.00%	4.10%	0.00%
35.72134434	-114.9808070	0.478	0.363	0.219	19.60%	5.60%	0.21%
35.72110520	-114.9807927	0.440	0.440	0.264	21.30%	18.10%	0.00%
35.87237640	-114.8068845	0.369	0.384	0.295	16.20%	14.60%	1.60%
35.84451095	-114.8224510	0.298	0.393	0.231	7.30%	4.60%	2.80%
35.83280969	-114.8579561	0.374	0.687	0.186	11.10%	10.40%	0.77%
35.83245790	-114.8480589	0.319	0.483	0.203	13.80%	12.00%	1.80%
35.75165309	-115.0991943	0.312	0.430	0.213	7.10%	5.70%	1.40%
35.82991018	-114.8455773	0.348	0.508	0.242	11.80%	9.50%	2.20%
35.69852343	-115.0105119	0.379	0.415	0.258	11.20%	10.50%	0.74%
35.73313360	-115.0859839	0.268	0.417	0.222	12.30%	8.80%	3.50%
35.82679534	-114.8131291	0.306	0.331	0.190	13.20%	12.60%	0.65%
35.82680095	-114.8131113	0.306	0.331	0.190	13.20%	12.60%	0.65%
35.73252450	-115.0867447	0.617	0.466	0.328	19.90%	7.70%	0.49%
35.69686071	-114.9730512	0.303	0.347	0.193	8.60%	7.90%	0.63%

35.73253740	−115.0866658	0.617	0.466	0.328	19.90%	7.70%	0.49%
35.69687064	−114.9730419	0.337	0.394	0.196	10.60%	10.00%	0.65%
35.69595727	−114.9763221	0.391	0.445	0.193	18.50%	18.00%	0.46%
35.69524782	−114.9778724	0.276	0.295	0.226	11.70%	10.30%	1.40%
35.82344853	−114.8103655	0.378	0.548	0.251	32.20%	27.50%	4.70%
35.69342266	−114.9791474	0.443	0.443	0.230	18.10%	18.10%	0.00%
35.69633647	−115.0147139	0.250	0.443	0.229	6.50%	1.60%	5.00%
35.82385078	−114.8471081	0.307	0.438	0.257	12.00%	8.00%	3.90%
35.69309179	−114.9738982	0.382	0.393	0.208	16.50%	16.30%	0.19%
35.82397982	−114.8353882	0.326	0.468	0.199	16.60%	14.90%	1.70%
35.82165338	−114.8478302	0.346	0.428	0.251	7.80%	6.00%	1.80%
35.68558248	−114.9843650	0.287	0.369	0.237	10.10%	6.60%	3.40%
35.68521489	−114.9843769	0.339	0.404	0.273	9.00%	6.80%	2.20%
35.68503514	−114.9840018	0.357	0.509	0.274	17.40%	13.10%	4.30%
35.68481290	−114.9827229	0.325	0.576	0.257	11.80%	8.30%	3.50%
35.68483117	−114.9827073	0.325	0.576	0.257	11.80%	8.30%	3.50%
35.68792983	−114.9687815	0.310	0.461	0.214	14.70%	12.30%	2.40%
35.81863083	−114.8475469	0.380	0.388	0.281	11.80%	11.30%	0.44%
35.81859495	−114.8472993	0.380	0.388	0.281	11.80%	11.30%	0.44%
35.81858476	−114.8472229	0.380	0.388	0.281	11.80%	11.30%	0.44%
35.81840790	−114.8462967	0.348	0.371	0.211	14.90%	14.40%	0.53%
35.81835786	−114.8461470	0.348	0.371	0.211	14.90%	14.40%	0.53%
35.81840589	−114.8460827	0.395	0.395	0.212	8.50%	8.50%	0.00%
35.81692024	−114.8455205	0.300	0.310	0.239	8.40%	8.00%	0.44%
35.81671673	−114.8455415	0.371	0.382	0.257	9.40%	9.10%	0.26%
35.68972247	−115.0256957	777.800	777.800	777.800	0.00%	0.00%	0.00%
35.81305208	−114.8349607	0.370	0.370	0.219	13.50%	13.50%	0.00%
35.81923746	−114.8262469	0.412	0.469	0.223	14.40%	13.60%	0.77%
35.80513629	−114.8736465	0.290	0.657	0.205	9.90%	7.30%	2.60%
35.80827518	−114.8247051	0.363	0.363	0.225	9.90%	9.90%	0.00%
35.80800300	−114.8244302	0.401	0.433	0.227	13.10%	12.60%	0.46%
35.80761607	−114.8238469	0.336	0.453	0.219	10.40%	8.80%	1.60%
35.80753766	−114.8238692	0.336	0.453	0.219	10.40%	8.80%	1.60%
35.80724455	−114.8255183	0.286	0.381	0.209	13.50%	10.50%	3.00%
35.80009621	−114.8385048	0.348	0.582	0.221	14.70%	12.40%	2.40%
35.79884208	−114.8333991	0.412	0.485	0.252	19.90%	18.30%	1.60%
35.79942910	−114.8377969	0.529	0.709	0.170	13.40%	9.50%	0.12%
35.79870276	−114.8387862	0.527	0.732	0.253	15.30%	14.10%	1.20%
35.79496910	−114.8534929	0.303	0.337	0.208	15.80%	14.50%	1.30%
35.79434824	−114.8549969	0.432	0.432	0.245	13.40%	13.40%	0.00%