DOCKETED

Docket Number:	09-AFC-08C
Project Title:	Genesis Solar Energy Project
TN #:	235826
Document Title:	Designated Botanist 2019 Annual Report
Description:	N/A
Filer:	Glen T King
Organization:	NextEra Energy
Submitter Role:	Applicant
Submission Date:	12/2/2020 8:50:25 AM
Docketed Date:	12/2/2020

Genesis Solar Energy Project

Summary Report for Botanical Conservation Measures
Year 2019

Prepared by:

Alice E. Karl, Ph.D.
P.O. Box 74006
Davis, CA 95617
heliophile@mindspring.com

Prepared for:

Genesis Solar, LLC
700 Universe Blvd.
Juno Beach, FL 33408

and

The California Energy Commission
1516 Ninth St.
Sacramento, CA 95814

November 2020

TABLE OF CONTENTS

List of Figures

List of Tables

Appendices

GENESIS SOLAR ENERGY PROJECT
SUMMARY REPORT FOR BOTANICAL CONSERVATION MEASURES
YEAR 2019

1.0 INTRODUCTION

The Genesis Solar Energy Project (GSEP or Project) began construction in January 2011 and became fully operational in Spring 2014. Condition of Certification (COC) BIO-19 from the Project license[1], the approved Project Revegetation Plan[2], the Weed Management Plan[3], and the U.S. Bureau of Land Management (BLM) Right-of-Way (ROW) Grant[4] required that several conservation measures be completed during Project construction and operation to protect and minimize impacts to special-status plant populations and natural vegetation communities and processes. Year 2019 was the fifth year of monitoring revegetation success, required in Years 2, 3, 4, 5, and 10 per BIO-24 and the Revegetation Plan. This report also addresses weed management. Per BIO-14 and the Weed Management Plan, monitoring and managing weed populations in areas disturbed by the Project along the access road and transmission line are continuous.

2.0 CONSERVATION MEASURES COMPLETED IN 2019

2.1 BIO-24 and the Revegetation Plan: Revegetation and Restoration

2.1.1 Background of Restoration Methods

Restoration of temporarily disturbed areas outside the fenced power plant was conducted on the access road shoulders, the 230 kV transmission line tower pads and pulling sites, and minor early access areas. The turnarounds along the access road, initially constructed as temporary turnouts for construction, were not restored, but instead were kept to provide places for personnel and delivery trucks to pull off the access road without disturbing the restored road shoulders.

2.1.1.1 Revegetation Along the Access Road and Associated Tower Pads

Restoration proceeded in phases at GSEP because of phased construction. After the access road was paved in 2011, no further work was planned for the southern (western) disturbed road shoulder except for the future 230 kV transmission line. Accordingly, we

---

[1] California Energy Commission (CEC). 2010. Commission decision on the Genesis Solar Energy Project. Docket No.09-AFC-8. 710 pp.
[2] Karl, A. and TetraTech EC, Inc. 2010. Revegetation Plan for the Genesis Solar Energy Project. Prepared for Genesis Solar, LLC. 21 pp.
[3] TetraTech EC, Inc. 2011. Weed Management Plan for the Genesis Solar Energy Project. Prepared for Genesis Solar, LLC. 48 pp.
[4] U.S. Bureau of Land Management. 2010. Genesis Solar Energy Project Right-of-Way Lease/Grant. CACA-048880.

restored that side of the road in Fall 2011. It was de-compacted, harrowed, contoured and drill-seeded[5]. Unfortunately, no precipitation fell during the next winter or throughout the following spring and early summer, resulting in negligible germination. I attempted to water with water trucks each month when there was no rain, beginning in Fall 201l. However, this proved to be unsuccessful, most likely due to the application methods and difficulty prioritizing this task for the water truck. Monsoonal floods occurred in July 2012, by which time it was doubtful that much of the planted seed remained. Most likely, it had been blown away in the heavy spring winds, washed away in the monsoonal floods in July, and/or consumed by granivores.

Beginning in January 2013, the 230 kV transmission line was constructed along the southern (western) access road shoulder. While Genesis Solar, LLC, minimized additional disturbance to native habitats outside the road shoulder during the pole construction, the pole height and short distance between the poles resulted in substantial disturbance to the already-restored road shoulder. As a result, revegetation activities began anew in Fall 2013. I experimented using a box scraper to create patches of swales that varied in shape and size, attending to hydrology. The swales were seeded with mixture of the following, primarily colonizing, species, with the specific mix varying by soil type and hydrology:

Ambrosia dumosa (white bursage)
Ambrosia salsola (cheesebush)
Atriplex polycarpa (allscale)
Encelia farinosa (brittlebush)
Hilaria rigida (big galleta grass)
Lupinus arizonicus (Arizona lupine)
Sphaeralcea angustifolia (globemallow)

The seed was broadcast with a hand-seeder and manually raked in. This was immediately followed by watering with the water truck to crust the soil surface and minimize loss of seed and soil to wind. Comstock Seed (Gardnerville, Nevada), who was previously approved by BLM[6] for the initial seed collection in 2011, provided the seed. They collected it locally in Spring 2013, primarily in the Bradshaw Trail area south of the site. The seed was tested for germination before delivery. Remnant seed from the 2011 revegetation effort was also used.

In 2014 and after much debate, Genesis Solar, LLC, decided to leave the wooden pole distribution line in place in the northern (eastern) road shoulder. Restoration of this side of the road originally had been postponed until after the poles were removed. After the decision to leave the poles in place, I began restoration in March 2014 on this side of the

[5] Karl, A. 2013. Genesis Solar Energy Project summary report for botanical measures and issues associated with pre-construction and construction to January 2013. Prepared for Genesis Solar, LLC, and the California Energy Commission. 46 pp.
[6] E-mail from Larry LaPre, BLM California Desert District Wildlife Biologist, to Christina Lund, BLM State Botanist. April 25, 2011.

road. Based on the very successful experimental techniques employed the previous fall, I created a highly roughened surface of swales, depressions and furrows (see earlier annual reports for a more detailed description and photographs). These microtopographical features attended to hydrology and soil types, and were varied to create a more natural, heterogeneous outcome. I also created more swales and roughened areas in a few areas on the southern shoulder where no restoration had been done. Primarily, this included ripping pole pads and depositing cobble riprap in multiple locations where runoff across the road tended repeatedly wash out the road shoulder. Because this restoration on both the north side and minor areas on the south was accomplished in March, no seeding was implemented on the newly contoured areas[7]. Seeding is best accomplished in autumn for spring-blooming (i.e., winter) annuals and, arguably, summer for woody species. Few species germinate when seeded in spring.

No additional restoration has occurred since 2014.

2.1.1.2 Tower Pads from Wiley Well Rest Area to the Colorado River Substation (i.e., Beyond the Access Road).

Along most of the remainder of the transmission line alignment, major surface disturbance was limited to pole pads and stringing/pulling sites. A road was not graded for access for most of the alignment and vehicle damage was generally low, with minimal compaction. Each pad and disturbed area was individually evaluated to determine the best method for restoration. Tower pads in the dunes and very loose-sandy areas were not restored because it was highly likely that greater damage would have resulted from restoration activities than had occurred from the transmission line construction. These surfaces are extremely dynamic and will restore naturally. For tower pads and pulling sites outside these areas, restoration was limited to re-contouring to restore natural drainage, and shallow ripping. Seeding was not implemented because the tower pads comprised small patches of disturbance in generally depauperate habitat.

2.1.2 Monitoring Methods

Quantitative transects to determine perennial plant growth and habitat functioning began in Year 2 and continued through Year 5, with a final effort in Year 10[2]. Because of the staggered restoration efforts, I standardized them to a single starting point: March 2014, when the final major restoration activities were conducted. Year 5 was 2019, during which we conducted quantitative data collection from 9 to 12 March. Because of the relatively cool weather and limited faunal activity in early March, we repeated the faunal transects (see below) on 15 and 16 April.

I evaluated perennial growth based on percent cover, density, frequency, and plant height along 100 meter-long by one meter-wide transects (Table 1). To measure percent cover,

[7] Project management wanted to finish all construction activities in Spring 2014, requiring road restoration to be completed in spring.

we used a standard line intercept method to measure the intersection of all shrub foliage along a measuring tape, by species. The height of each intersecting plant was measured as an indicator of robustness. Each transect belt was divided into 10, 1 by 10 meter quadrats in which density and frequency was measured by species. Representative photographs were taken at each transect end.

We measured habitat functioning by counting ant mounds and rodent holes within a two meter belt centered on the transect tape; lizards were counted in a 4 meter belt centered on the tape. We also recorded the percent cover of annuals, by species and in total, in ten, random, one by one meter plots, one in each 10 meters of the belt. Congeners (e.g., *Cryptantha* spp.) were generally combined. While annual plant growth is highly variable among years and seasons, annuals are indicators of soil fertility, organic material, and biological functioning.

In 2015, I incorporated a few modifications into the original, baseline transects set walked prior to access road construction. These:

- attended to changes in hydrology due to monsoonal overland flow in July 2011
- compared different restoration techniques
- represented different habitats
- provided replicates of each factor

No additional modifications were made from 2016 through 2019.

Metrics were compared among the road shoulder and control transects using simple two-tailed T tests and Analysis of Variance (ANOVA) using the EXCEL Data Analysis add-in; variances were assumed to be unequal.

Rainfall was assessed during each year based on a combination of information from the National Oceanic and Atmospheric Administration [NOAA] website for the Blythe airport[8], two rain gauges installed along the road shoulder in October 2016, and onsite input from Charlyn Mosley (former Genesis Senior Environmental Specialist).

[8] Available online at https://www.ncdc.noaa.gov/

TABLE 1. Locations of transects for perennials growth and habitat functioning.

Transect Number	Side of Shoulder		UTM (NAD 83)		Mile	Control Transects				
			East End Easting	West End Easting		Transect Number	East End Easting	Northing	West End Easting	Northing
A	N		opposite		1	C1	693802	3721225	693702	3721220
	S		693745							
B	N		opposite							
	S_1	Two, 50m-long transects	693344	693286						
	S_2		693275	693218						
C	N			692950		C2	693060	3721353		
	S		693004							
D	N		opposite		2	C3	692574	3721734		
	S_1	Two, 50m-long transects	692880							
	S_2		692715							
E	N		opposite							
	S_1	Two, 50m-long transects		692239						
	S_2		692204							
F	N		opposite			C4			692095	3722202
	S		692018							
G	N		opposite			C5			691937	3722328
	S		691804							
H	N		opposite							
	S			691249						
I	N		opposite		3	C6	690949	3723113		
	S		690925							
J	N		opposite			C7	690735	3723227		
	S		690634							
K	N		opposite		4	C8	689461	3724089		
	S_1	Two, 50m-long transects	50 m east of Pole 32 and 50 m west.							
	S_2									
L	N	Note: Not opposite each other		689590						
	S			689365						
M	N		opposite							
	S			689165						
N	N		opposite		5	C9	688651	3724940		
	S		688634							
O	S	1 transect, S side only	688562			C10	688578	3725018		
P	N		opposite			C11	688411	3725201		
	S		688356							
Q	N		opposite			C12	688259	3725337		
	S		688270							

2.1.3 Habitat Restoration Results in 2019

2.1.3.1 Woody Perennials and Bunch Grasses

In 2019, shrub density for all species combined was not statistically different between the northern and southern shoulders ($T_{0.05,35}$= 2.03, P=0.764; Table 2), so the data for both shoulders were combined when comparing to the control transects. However, there were significantly more *Atriplex polycarpa* and *Ambrosia salsola* individuals on the south side than the north ($T_{0.05,20}$= 2.09, P=0.027 and $T_{0.05,21}$= 2.08, P=0.041, respectively). While both are natural colonizers of disturbed sites and therefore expected on both shoulders, these species were actively seeded on the south side during 2011 and 2013 restoration while no seed of any species was distributed on the north side. *A. dumosa*, another strong colonizer, was also seeded on the south side but is naturally occurring in the *undisturbed* native habitat, so densities were not different between the shoulders. Densities of *Larrea tridentata* and *Hilaria rigida*, the most frequently encountered species in the native habitat along with *A. dumosa* (Table 3), were not significantly different between the two road shoulders.

Shrub density was almost four times higher on the combined road shoulders than on the undisturbed control transects ($T_{0.05,47}$= 2.01, P=0.005; Table 2). Unlike the comparison between the northern and southern shoulders, this difference was not due to the relatively dense *A. polycarpa* and *A. salsola* on the southern shoulder. When only the three species frequently encountered in the undisturbed native habitat were considered in the calculation (*A. dumosa*, *L. tridentata* and *H. rigida*), there were still more plants per square meter growing in the road shoulders ($T_{0.05,47}$= 2.01, P=0.013). The greater plant density on the road shoulders was due to the colonizer *A. dumosa* ($T_{0.05,46}$= 2.03, P=0.001), which grew abundantly on both road shoulders (Table 3). Densities of *L. tridentata* and *H. rigida* were not statistically different between the road shoulders and control ($T_{0.05,37}$= 2.03, P=0.218 and $T_{0.05,36}$= 2.03, P=0.602, respectively).

The percent cover of woody perennials and bunch grasses combined was not statistically different between the northern and southern road shoulders ($T_{0.05,26}$= 2.06, P=0.065; Table 2), so the data for both shoulders were combined when comparing to the control. Again, however, differences occurred among species. Both *A. polycarpa* and *A. salsola* had significantly higher cover on the south versus north sides ($T_{0.05,20}$= 2.09, P=0.038 and $T_{0.05,21}$= 2.08, P=0.010, respectively) because their densities were higher (see above) and because individuals of these species were substantially larger (Table 3), at least in part because they had a full winter's head-start over the north side.

The overall percent cover was not significantly different between the road shoulders and the surrounding, undisturbed habitat ($T_{0.05,46}$= 2.01, P=0.387; Table 2). On a species level, *A. dumosa*, *A. polycarpa* and *A. salsola* had significantly higher cover on road shoulders than controls simply because their densities and frequency - and robustness for *A. polycarpa* and *A. salsola* - were much higher on the road shoulders (Table 3). *L. tridentata* cover was higher in the native habitat ($T_{0.05,14}$= 2.15, P=0.002), which is

Table 2. Density ($\#/m^2$) and percent cover of woody perennials and bunch grasses on the restored road shoulders and natural control transects.

		Density			Percent Cover		
		Mean	Variance	n	Mean	Variance	n
Access Road Shoulder							
	North	1.35	3.27	16	4.23	10.10	16
	South	1.18	2.65	21	8.46	88.54	21
	Combined	1.25	2.84	37	6.72	57.02	37
Control		0.35	0.23	12	5.44	7.51	12

Table 3. Frequency percent and plant robustness of the major woody and bunch grass species. Frequency is percentage of plots on the transects in which the species grew. Plant height (cm) is a measure of plant robustness.

	Species:	***Ambrosia dumosa***	***A. dumosa seedlings***	***Larrea tridentata***	***Hilaria rigida***	***Ambrosia salsola***	***A. salsola seedlings***	***Atriplex polycarpa***	***Olneya tesota***
Frequency Percent									
Access Road Shoulder									
	North	100.0	68.8	68.8	50.0	37.5	18.8	12.5	31.3
	South	81.0	76.2	47.6	47.6	52.4	38.1	38.1	14.3
	Combined	89.2	73	56.80	48.60	45.90	29.7	27	21.6
Control		50.0	58.3	66.7	50.0	0.0	8.3	0.0	0.0
Height [1]									
Access Road Shoulder									
	North	22.10	---	107.4	42.30	26.30	---	23	31
	South	23.00	---	72.3	29.00	56.80	---	58.5	24.9
	Combined	22.6	---	91.4	37.9	49.6	---	51.4	27.9
Control		22.5	---	153.9	65.2	not present	---	not present	190

1. Average height of plants observed.

expected due to the much larger size of the mature plants in the undisturbed habitat (Table 3).

In summary, five years after active restoration, shrub and bunch grass regrowth, based on density and percent cover of the combined species, is as high or higher on the restored road shoulders than in the surrounding native habitat (Figure 1). While colonizers dominate the road shoulders, all species found in the native habitat also grow in the road shoulders. Densities for *L. tridentata* and *H. rigida*, the two later-successional species dominating the undisturbed native habitat, were not statistically different. Large, mature individuals of *L. tridentata* still have higher cover than the younger plants on the road shoulders.

Figure 1. Examples of the high growth in aggressively created berms and swales, from Fall 2013 and Spring 2014 restoration. The upper photos are the road shoulders prior to restoration; the southern shoulder is on the left and the northern shoulder is on the right. The lower photos are from 2015, showing high growth and obvious surface contouring; the southern shoulder is on the left and the northern is on the right. By 2019, the contours were less obvious and plants were more robust.

2.1.3.2 Herbaceous (Perennials and Annuals) Growth

ANOVA revealed highly significant differences in total herbaceous cover among the road shoulder and control transects ($F_{0.05,17}$= 17.75, P<<0.001; Table 4). Post-hoc tests identified significantly greater cover on the northern road shoulder than either the southern shoulder or the control. Percent cover was not different between the southern shoulder or controls ($T_{0.05,26}$= 2.06, P<<0.078). The genus *Cryptantha* was the only taxon with >2% mean cover on both shoulder and control transects (Table 4, Appendix 4). Again, the northern shoulder had significantly more cover than the control ($T_{0.05,18}$= 2.10, P<<0.001) and the southern shoulder ($T_{0.05,21}$= 2.08 P=0.003). Cover was not significantly different between the southern shoulder and control, but the significance was marginal ($T_{0.05,31}$= 2.04, P=0.051); the trend was for greater cover on the shoulder.

Species composition was similar between the road shoulders and control (Appendix 4).

Table 4. Mean percent cover of herbaceous species. "Total" includes all species observed in plots. *Cryptantha* spp. was the only taxon with >2% mean cover overall on both road shoulders and control transects. The remaining species can be found in Appendix 4.

		TOTAL			Cryptantha spp.		
		Mean	*Variance*	*n*	*Mean*	*Variance*	*n*
Access Road Shoulder							
	North	19.4	58.7	16	13.6	65.4	16
	South	10.9	14.7	21	6.2	16.1	21
Control		8.5	10.8	12	3.9	5.7	12

2.1.3.3 Ant and Rodent Activity

Only one lizard was observed in March, and eight in April, so lizard fauna could not be evaluated. There was more rodent and ant activity in March, but the differences between the months were not significant on either the road shoulders ($T_{0.05,36}$= 2.03, P=0.335 and $T_{0.05,36}$= 2.03, P=0.267, respectively; Table 5) or the control ($T_{0.05,11}$= 2.20, P=0.167 and $T_{0.05,11}$= 2.20, P=0.243, respectively). Accordingly, the months were combined to evaluate differences between the road shoulders and control. There was also no statistical difference between the two road shoulders ($T_{0.05,41}$= 2.02, P=0.262 and $T_{0.05,41}$= 2.02, P=0.361, respectively), so data from the two shoulders was further combined.

There was no statistical difference between the combined road shoulders and control transects in the number of rodent holes nor ant colonies ($T_{0.05,73}$= 1.99, P=0.311 and $T_{0.05,73}$= 1.99, P=0.283, respectively), although the trend was for greater activity on the road shoulders (Table 5).

Table 5. Density of rodent holes and ant colonies (#/m^2) on the restored road shoulders and controls. March and April were not significantly different, so were combined for each assessment site.

		Rodent Holes			Ant Colonies		
		Mean	*Variance*	*n*	*Mean*	*Variance*	*n*
Access Road Shoulder							
	North	0.01	0.00	32	0.01	0.00	32
	South	0.33	3.40	42	0.40	3.40	42
	Combined	0.19	1.94	74	0.25	3.02	74
Control		0.03	0.00	24	0.04	0.00	24

2.2 BIO-14 and the Weed Management Plan: Weed Management

2.2.1 Background of Monitoring Methods

The primary noxious weeds at the site are Sahara mustard (*Brassica tournefortii*) and Russian thistle (*Salsola tragus*); a second mustard, London rocket (*Sisymbrium* spp.) is occasional. While all are winter annuals (i.e., they germinate in response to winter rains), Sahara mustard has been observed to respond to large summer rains as well and may have a second spring germination pulse when the soil warms and/or following late winter rains. Sahara mustard also germinates and grows earlier than Russian thistle. Hence, two weeding sessions in spring are often necessary, one in early February and potentially one in late March to early April. Every year when there is winter rain, we survey the access road, surrounding area, and transmission line south of Interstate 10 to evaluate the growth of mustard and the phenology (i.e., growth stage) in late January or early February. During these surveys we remove mustard species and Russian thistle along the access road. In 2019, we checked for weeds from 5 to 8 February.

2.2.2 Weed Observations in 2019

Over 400 plants, mostly Sahara mustard, were removed from the road shoulders. About 80% were in the immature fruiting stage; the remainder were either more or less mature. Along the transmission line south of I-10, approximately 80 plants were removed from a few concentrated locations. Another 325 were removed from the area around the enclosed facility's entrance. We also observed many, often larger, plants in the diversion ditch there, along with several small tamarisk (*Tamarix* sp.). Weed control in the ditch is managed by the facility, so I notified Ms. Mosley.

Weeding was successful, Sahara mustard was observed on only two of the 490 road shoulder and control plots in March; both plants were small. No additional weeding that spring was determined to be necessary, based on these observations.

3.0 SUMMARY AND RECOMMENDATIONS

3.1 BIO-24 and the Revegetation Plan

3.1.1 Revegetation and Habitat Functioning Success

The site has experienced substantial drought since restoration began in Fall 2013. Three of six winters have been dry and three summers have had only minor and patchy rainfall. Despite this, the combined restoration approaches of aggressive surface re-contouring to capture seed, sediment, and water, and to a lesser extent active seeding (on the southern shoulder), have successfully resulted in robust germination (initial recruitment) and continued growth toward a mature, functioning community. The restored road shoulders have significantly higher density of shrubs and bunch grasses than the undisturbed, adjacent community; herbaceous growth is greater on the northern road shoulder than in the undisturbed habitat. Ant and rodent activity are similar among the restored shoulders and the undisturbed habitat. These results strongly indicate that revegetation processes are successfully proceeding on the restored area, increasing both the organic matter and biological activity. Soil functioning, water capture and seed capture appear to be sufficient to support continued passive restoration of the road shoulders. No additional efforts are currently recommended.

3.1.2 Future Monitoring

We will monitor revegetation success again in 2024 (Year 10).

3.2 BIO-14 and the Weed Management Plan

Weed monitoring and control has been ongoing and successful. The recommendation is to continue with annual weed control, monitoring with the BIO-24 monitoring unless increases in weeds between Years 5 and 10 indicate additional monitoring.

This report has been prepared by me and is accurate to the best of my knowledge.

Alice E. Karl, Ph.D.
November 26, 2020

APPENDICES

Appendix 1. Density (#/m^2) of shrubs and bunch grasses in 2019.

	TRANSECT	TOTAL	*Ambrosia dumosa*	*A. dumosa* seedlings	*Larrea tridentata*	*L. tridentata* seedlings	*Hilaria rigida*	*Ambrosia salsola*	*A. salsola* seedlings	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Restored Road Shoulder	A-S	2.65	0.26	2.18		0.06	0.13	0.01	0.01				
	A-N	0.65	0.05	0.59		0.01							
	B-S1	0.44	0.16	0.28									
	B-S2	0.46	0.02					0.12		0.32			
	B-N	0.13	0.03	0.08	0.01		0.01						
	C-S	0.41	0.08	0.07			0	0.22	0.01	0.03			
	C-N	0.85	0.19	0.51			0	0.06	0.09				
	D-S1	0.88	0.1				0.22			0.1	0.46		
	D-S2	0.3	0.14	0.14	0.02								
	D-N	0.04	0.02			0.01		0.01					
	E-S1	0.28	0.14	0.14									
	E-S2	0.62		0.14				0.12	0.26	0.1			
	E-N	0.34	0.08		0.02		0.01		0.01		0.17		
	F-S	0.63	0.03	0.01			0.01	0.01		0.57			
	F-N	0.18	0.14	0.02				0.02					
	G-S	1.31	0.08	0.18				0.47	0.12	0.44			0.02
	G-N	2.95	0.9		0.02			0.04		0.03			
	H-S	6.6	0.35	5.36	0.02	0.03		0.02	0.82				
	H-N	0.28	0.1	0.14	0.02		0.02						
	I-S	0.31	0.09	0.21	0.01								
	I-N	1.94	0.46	1.39	0.02	0.01	0.01			0.02	0.01	0.02	
	J-S	0.26	0.26	3.55	0.26	0.02	0.26	0.26	0.31	0.26			
	J-N	0.04	0.01	4.83	0.75		0.01		0.01			0.02	
	K-S1	3.98	0.38	3.54	0.04		0.02						
	K-S2	2.86	0.18	2.52				0.08	0.02	0.06			
	K-N	5.83	0.35	5.44			0.01	0.03					
	L-S	0.12	0.09	0.01	0.02								
	L-N	4.41	0.25	4.05	0.04		0.06				0.01		
	M-S	1.81	0.18	1.59	0.03		0.01						
	M-N	3.28	0.27	3	0.01								

Appendix 1, continued.

	TRANSECT	TOTAL	*Ambrosia dumosa*	*A. dumosa* seedlings	*Larrea tridentata*	*L. tridentata* seedlings	*Hilaria rigida*	*Ambrosia salsola*	*A. salsola* seedlings	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Restored Road Shoulder	N-S	0.34	0.06	0.13	0.02		0.04	0.09					
	N-N	0.23	0.02	0.09	0.01		0.11						
	O-S	0.06				0.04	0.02						
	P-S	0.21			0.01	0.01	0.01				0.18		
	P-N	0.27	0.03		0.1						0.13	0.01	
	Q-S	0.23			0.01		0.01	0.03	0.04		0.14		
	Q-N	0.19	0.01		0.01			0.01			0.16		
	MEAN	**1.253**	**0.149**	**1.086**	**0.039**	**0.005**	**0.026**	**0.043**	**0.046**	**0.052**	**0.034**	**0.001**	**0.001**

	TRANSECT	TOTAL	*Ambrosia dumosa*	*A. dumosa* seedlings	*Larrea tridentata*	*L. tridentata* seedlings	*Hilaria rigida*	*Ambrosia salsola*	*A. salsola* seedlings	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Control	C-1	0.23	0.01	0.16	0.02	0.03	0.01						
	C-2	0.01			0.01								
	C-3	0.06				0.06							
	C-4	0.24	0.06	0.13	0.03		0.02						
	C-5	0.55	0.13	0.37	0.02		0.02		0.01				
	C-6	1.1	0.09	0.88	0.02		0.11						
	C-7	1.5	0.03	1.47	0								
	C-8	0.03		0.01	0.02								
	C-9	0.39	0.07	0.28	0		0.04						
	C-10	0.03	0		0		0.03						
	C-11	0.02			0.02								
	C-12	0.01			0.01								
	MEAN	**0.348**	**0.033**	**0.275**	**0.013**	**0.008**	**0.019**	**0.000**	**0.001**	**0.000**	**0.000**	**0.000**	**0.000**

Appendix 2. Percent cover of woody perennials and bunch grasses in 2019.

	TRANSECT	TOTAL	Overlap	*Ambrosia dumosa*	*Larrea tridentata*	*Hilaria rigida*	*Ambrosia salsola*	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Restored Road Shoulder	A-S	7	0	4.89		1.65	0.46				
	A-N	3.06	0	1.57	1.43	0.06					
	B-S1	3.44	0	3.44	0.4						
	B-S2	18	0				0.82	17.18			
	B-N	6.79	0	2.7	4.09						
	C-S	14.04	0	2.89			9.56	1.97			
	C-N	2.46	0	2.06			0.4				
	D-S1	33.76	0	3.3			2.94	28.72			
	D-S2	0.86	0	0.86							
	D-N	0	0								
	E-S1	3.36	0	3.02					0.34		
	E-S2	8.42	0				1.64	6.78			
	E-N	3.04	0	0.57	0.41				1.04	1.22	
	F-S	32.18	0				2.56	29.72			
	F-N	0.87	0	0.62			0.25				
	G-S	5.92	0	3.94	2.19		0.68	0.06			0.1
	G-N	5.92	0	3.94	2.19		0.68	0.06			
	H-S	9.02	0	5.43	0.47		3.16				
	H-N	3.25	0	0.05	3.2						
	I-S	1.23	0	0.83	0.4						
	I-N	7.16	0	6.01	1.22	0.04		0.02		0.65	
	J-S	12.89	0	2.84	0.23		1.65	8.17			
	J-N	6.33	0	3.84	1.79		0.57			0.23	
	K-S1	2.66	0	1.66	1						
	K-S2	6.44	0	0.74			4.24	1.46			
	K-N	0.83	0	0.83							
	L-S	4	0		4						
	L-N	9.77	0	7.02	1.66	1.76					
	M-S	6.72	0	3.89	1.95		0.88				
	M-N	4.84	0	3.84	1						

Appendix 2, continued

	TRANSECT	TOTAL	Overlap	*Ambrosia dumosa*	*Larrea tridentata*	*Hilaria rigida*	*Ambrosia salsola*	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Restored Road Shoulder	N-S	6.37	0	0.1	3.16	0.02	3.09				
	N-N	4.88	0	0.29	0.85	3.74					
	O-S	0	0								
	P-S	0.69	0		0.37				0.32		
	P-N	9.57	0		8.82				0.9	0.05	
	Q-S	0.76	0		0.27		0.4		0.09		
	Q-N	2.11	0		1.3				0.81		
	MEAN	**6.720**	**0.000**	**1.924**	**1.146**	**0.196**	**0.918**	**2.544**	**0.095**	**0.058**	**0.003**

	TRANSECT	TOTAL	Overlap	*Ambrosia dumosa*	*Larrea tridentata*	*Hilaria rigida*	*Ambrosia salsola*	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Control	C-1	3.75	0		3.75						
	C-2	4.02	0		4.02						
	C-3	2.54	0		2.54						
	C-4	8.59	0	0.51	7.17				0.91		
	C-5	5.09	0	1.69	2.1	1.3					
	C-6	7.13	0	1.17	3.43	2.53					
	C-7	5.36	0	0.06	5.3						
	C-8	2.67	0		2.67						
	C-9	8.74	0	2.74	3.04	2.96					
	C-10	1.59	0		0.7	0.89					
	C-11	10.24	0		10.24						
	C-12	5.51	0		5.51						
	MEAN	**5.436**	**0.000**	**0.514**	**4.206**	**0.640**	**0.000**	**0.000**	**0.076**	**0.000**	**0.000**

Appendix 3. Average height (cm) of shrubs, trees and bunch grasses growing in plots.

	TRANSECT	*Ambrosia dumosa*	*Larrea tridentata*	*Hilaria rigida*	*Ambrosia salsola*	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Restored Road Shoulder	A-S	29		49	43				
	A-N	21	192	47					
	B-S1	30	25						
	B-S2				53	67			
	B-N	32	247						
	C-S	37			61	58			
	C-N	27			43				
	D-S1	35			52	51			
	D-S2	21							
	D-N								
	E-S1	20					16		
	E-S2				47	58			
	E-N	15	73				26	160	
	F-S				62	64			
	F-N	27			30				
	G-S	23			58	52			17
	G-N	14	87		31	24			
	H-S	21	68		55				
	H-N	10	131						
	I-S	24	49						
	I-N	20	85	30		22		25	
	J-S	29	18		61	41			
	J-N	4	2		1			124	
	K-S1	12	59						
	K-S2	11			102	78			
	K-N	37							
	L-S		139						
	L-N	43	70	44					
	M-S	22	117		66				
	M-N	23	150						
	N-S	9	146	9	34				

Appendix 3, continued.

	TRANSECT	*Ambrosia dumosa*	*Larrea tridentata*	*Hilaria rigida*	*Ambrosia salsola*	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Restored Road Shoulder	N-N	15	87	49					
	O-S								
	P-S		51				30		
	P-N		59				37	30	
	Q-S		52		45		29		
	Q-N		107				30		
	AVERAGE *	**23**	**91**	**38**	**50**	**51**	**28**	**85**	**17**

	TRANSECT	*Ambrosia dumosa*	*Larrea tridentata*	*Hilaria rigida*	*Ambrosia salsola*	*Atriplex polycarpa*	*Olneya tesota*	*Parkinsonia florida*	*Encelia farinosa*
Control	C-1		174						
	C-2		138						
	C-3		170						
	C-4	29	181				190		
	C-5	26	130	77					
	C-6	23	122	51					
	C-7	4	153						
	C-8		114						
	C-9	31	185	71					
	C-10		160	62					
	C-11		181						
	C-12		142						
	AVERAGE *	**22**	**154**	**65**	**---**	**---**	**190**	**---**	**---**

***Average height of plants observed.**

Appendix 4. Mean percent cover of herbaceous taxa on 2019 plots.

	TRANSECT	Biocrust	TOTAL	*Cryptantha* spp.	*Plantago ovata*	*Geraea canescens*	*Palafoxia arida*	*Aristida purpurea*	*Abronia villosa*	*Lepidium lasiocarpum*	Unknowns	*Dalea mollis* and *D. mollissima*	*Chaenactis* spp.	*Chamaesyce polycarpa*	*C. polycarpa* (Dead)	*Oenothera deltoides*	*Camissonia* spp.	*Allionia incarnata*
Restored Road Shoulder	A-S	0	14	2.5	2.9		1.5	0.3	2.8			1.1	0.5			0.5		
	A-N	0	15.3	3.2	9.8	<1	0.2		0.1		<<1	0.2	0.9			<1		
	B-S1	0	9.2	0.4	6.2		1.2		1				<1					
	B-S2	0	6.8	1.2	2.6		0.4		1.8				<1					
	B-N	0	12.6	1.8	5.7		2.5	0.1	0.7			0.8	<1				<1	
	C-S	0	6.1	4.4	1.1	<<1		<<1		<<1	<<1		<<1					
	C-N	0	21.5	15.6	1.3			1.9		<1		0.3		0.1	0.6			<<1
	D-S1	0	8.4	5.2	0.2			2.2		<1			<1					
	D-S2	0	11.4	4.2	3.8		2		<1			<1	0.2	<1				
	D-N	0	18.1	13.6	1.7		<1	1.1		<1		0.1	0.5		<1		<1	0.3
	E-S1	0	10.6	7.8	2.4								<<1		<1		<<1	
	E-S2	0	13	12.6						<<1								
	E-N	0	22.4	16.9	<1					2.6	<1		0.3	<1	0.1			
	F-S	0	7.6	7	0.1			0.1			<1		<1			<1		
	F-N	0	22.3	22.7	<1			0.9					<<1	<1	0.1			
	G-S	0	5.6	4.9	0.1	<1	<1	<1					<1				<1	
	G-N	0	19.6	17.2	0.5	<1	0.1	0.5		<1		<1	0.1	0.1	0.5		<1	
	H-S	0	18.3	7.6	3.2	5.8		0.4					0.1				<1	
	H-N	0	6	3	1.4	0.2	<1	0.4		<1			<1				<1	
	I-S	0	12.4	9.5	0.7			0.1		0.3			0.6	<1			<1	0.3
	I-N	0	21.3	16.7	0.8	0.3	<1	0.2		0.3			0.2	<1	<1		<1	
	J-S	0	13.3	6.1	0.5	0.4	<1	3		0.1	0.2		0.7	<1			0.2	<1
	J-N	0	34.3	26.5	0.2	0.4		1.7		0.6	0.6		0.2	1.2	0.9		<1	
	K-S1	0	10.8	4.2	1.6	2.2		1					<1	<1				<1
	K-S2	0	7.2	4	0.6			<1		<1	0.8		<1	0.2				
	K-N	0	34.4	25.4	0.7			1.1		1.5	2		0.5	0.5	1.5		<1	<1
	L-S	0	5.1	0.6	3.5	0.5				<<1		<1	<1				<1	
	L-N	0	20.1	9.3	5.5		<1	1.2	<1	<<1	0.3		0.3	0.1	1.9		<1	
	M-S	0	8.4	2.3	2.4	2				<1			0.8				<1	
	M-N	0	14.4	5.1	3.9	4	<1			0.2			0.6	<<1			<1	
	N-S	0	12.4	7.8	0.2	0.3	0.9		1.2			<1	0.4	<1			0.4	
	N-N	0	8.6	5.7	<1	<1	0.4	<<1	0.3				<1	<1	0.1	0.1	<1	
	O-S	0	15	9.6	1.6		2.1		0.5	<<1	<1		0.1			0.6	<1	
	P-S	0	15.4	12.8	1.7	<<1	0.1		<1	<<1			0.1			<1	<<1	
	P-N	0	16.8	14.1	1.4		<1		0.1	<1			0.3			0.1	<<1	
	Q-S	0	16.9	14.5	0.3	<1	0.9	<<1					<1	<<1		<1	<1	
	Q-N	0	23.2	20.1	0.1		1.4	<1	0.3	<<1		<<1	0.3	<<1			<<1	
	MEAN	**0.000**	**14.562**	**9.354**	**1.857**	**0.435**	**0.370**	**0.438**	**0.238**	**0.151**	**0.105**	**0.068**	**0.208**	**0.059**	**0.154**	**0.035**	**0.016**	**0.016**

Appendix 4, continued.

	TRANSECT	*Schismus* sp.	*Hesperocallis undulata*	*Lupinus* sp.	*Streptanthella longirostris*	*Pectis papposa*	*Dithyrea californica*	*Bouteloua* spp.	*Chorizanthe brevicornu*	*Eriogonum* spp.	*Mentzelia* spp.	*Oligomeris linifolia*	*Phacelia* sp.	*Achyronychia cooperi*	*Astragalus* sp.	*Baileya* spp.	*Chorizanthe rigida*	*Croton californica*
Restored Road Shoulder	A-S	0.1	0.2	0.2														
	A-N	<1																
	B-S1	<1																
	B-S2	<1																
	B-N	<<1						<<1										
	C-S								0.1									
	C-N	0.1						<1										
	D-S1	<1						<1										
	D-S2						<1	<1										
	D-N					<<1	0.1	<1										
	E-S1					<1		<1										
	E-S2					<1										<<1		
	E-N	0.1			0.4	0.3												
	F-S	<1		<<1	0.1													
	F-N	<1		<<1	<<1	<1		<1										
	G-S					<1	<1	<<1										
	G-N	0.1			<<1	<1		<<1	<1									
	H-S							0.1	<<1	0.1								
	H-N					<1		<1	<1								<1	
	I-S				<1	0.1		<1	<1	<1		<1		<<1			<1	
	I-N	0.8			0.2	0.1	0.1	<1						<<1				
	J-S	<1					0.2	<1					0.1	<1			<<1	
	J-N	<1				<1		<1	<1	<1		<1					<1	
	K-S1							<1	<1					<1			<1	
	K-S2	<1			<1	<1		<1		<1		<1	<1	<1			<1	
	K-N	0.1			<1	0.1	<1	<1	<1	<<1		<1	<1					
	L-S							<<1				<1						
	L-N	<1			<<1			<1				<<1		<<1				
	M-S	<1				<<1	0.1	<<1		<<1		<1						
	M-N	<<1				<<1	<<1	<<1		<<1		0.1					<1	
	N-S	0.2			<<1	<1	<1	<<1		<<1								
	N-N	0.1			0.1	<1	0.2	<<1										
	O-S	<1				<<1	<1	<<1			0.1							
	P-S	<1				<<1	<1	<<1										
	P-N	<<1				<1	<1	<<1										
	Q-S	<1	<1	<1		<<1		<<1						<<1				
	Q-N	<<1				<1	<1	<1										
	MEAN	**0.043**	**0.005**	**0.005**	**0.022**	**0.016**	**0.019**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**0.003**	**<1**	**0**	**<1**	**<1**	**<1**

Appendix 4, continued.

	TRANSECT	*Ditaxis spp.*	*Erodium texanum*	*Linanthus* sp.	*Loeseliastrum mathewsii*	*Marina parryi*	*Nama* sp.	*Perityle emoryi*	*Rafinesquia neomexicana*	*Tiquilia plicata*
Restored Road Shoulder	A-S									
	A-N				<1					<1
	B-S1									
	B-S2									
	B-N									
	C-S									
	C-N									
	D-S1									
	D-S2									<1
	D-N									
	E-S1									
	E-S2									
	E-N			<<1						
	F-S									
	F-N									
	G-S								<1	
	G-N								<1	
	H-S				<<1				<1	
	H-N				<1					
	I-S				<1				<1	
	I-N				<1				<1	
	J-S			<<1			<1		<1	
	J-N						<1		<1	
	K-S1		<1							
	K-S2						<<1			
	K-N	<1	<1				<1		<1	
	L-S									
	L-N				<<1		<1			<1
	M-S				<1		<<1			
	M-N						<<1		<1	
	N-S									
	N-N									
	O-S									
	P-S					<1				
	P-N									
	Q-S									
	Q-N									
	MEAN	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**0**	**<1**	**<1**

Appendix 4, continued.

	TRANSECT	Biocrust	TOTAL	*Cryptantha* spp.	*Plantago ovata*	*Geraea canescens*	*Palafoxia arida*	*Aristida purpurea*	*Abronia villosa*	*Lepidium lasiocarpum*	Unknowns	*Dalea mollis* and *D. mollissima*	*Chaenactis* spp.	*Chamaesyce polycarpa*	*C. polycarpa* (Dead)	*Oenothera deltoides*	*Camissonia* spp.	*Allionia incarnata*
Control	C-1	0	7.3	0.9	3.1		1.3		1				<1				<1	
	C-2	0	10.6	4.5	6							<1						
	C-3	0	16	3.9	4.1		5.5		1.5			0.1	<1			0.5	<1	
	C-4	0	5.9	3.3	0.9			0.1		<1			0.1	<1			0.3	
	C-5	0	6.2	4.3	1	<1				<1			0.2				0.1	
	C-6	0	13.7	9.9	0.3					0.1	<1	<1	<1		<1		0.4	
	C-7	0	5.1	3.6	<1	0.1					0.1		0.3				0.1	
	C-8	0	7.6	1.7	4.4								0				0	
	C-9	0	7.8	4.3	0.6	0.2	<1		0.5	0.1			0.6			0.1	0.4	
	C-10	0	7.9	2	3				0.8				0.3			1.2	<1	
	C-11	0	7.7	2.2	4.7		<1				<1		<1				0.1	
	C-12	0	6.6	6.1	<1								<<1				<<1	
	MEAN	**0.000**	**8.533**	**3.892**	**2.342**	**0.025**	**0.567**	**0.008**	**0.317**	**0.017**	**0.008**	**0.008**	**0.125**	**<1**	**<1**	**0.150**	**0.117**	**0.000**

	TRANSECT	*Schismus* sp	*Hesperocallis undulata*	*Lupinus* sp.	*Streptanthella longirostris*	*Pectis papposa*	*Dithyrea californica*	*Bouteloua* spp.	*Chorizanthe brevicornu*	*Eriogonum* spp.	*Mentzelia* spp.	*Oligomeris linifolia*	*Phacelia* sp.	*Achyronychia cooperi*	*Astragalus* sp.	*Baileya* spp.	*Chorizanthe rigida*	*Croton californica*
Control	C-1																	
	C-2																	
	C-3														0.1	<1		
	C-4	<1			<1	0.3		<1	<1	<1							<1	
	C-5		<1					<<1		<<1		<1						
	C-6	1			0.8	1.1		<1		<<1		0.1		<1			<1	
	C-7	0.1	0.1			<1			<1			<1		<1			<1	
	C-8					0						<1						
	C-9	0.7	0.2		<<1	<<1						<<1	<1					
	C-10	<1				<<1		<<1				<1				<1		
	C-11	<1						<<1										
	C-12					<<1												
	MEAN	**0.150**	**0.025**	**0.000**	**0.800**	**0.117**	**0.000**	**<1**	**<1**	**<1**	**0.000**	**0.008**	**<1**	**<1**	**0.008**	**<1**	**<1**	**0.000**

Appendix 4, continued.

	TRANSECT	*Ditaxis spp.*	*Erodium texanum*	*Linanthus* sp.	*Loeseliastrum mathewsii*	*Marina parryi*	*Nama* sp.	*Perityle emoryi*	*Rafinesquia neomexicana*	*Tiquilia plicata*
Control	C-1				<1					
	C-2									
	C-3				<1					0.1
	C-4									
	C-5									
	C-6						<<1	<1		
	C-7									
	C-8									
	C-9		<<1		<<1		<<1			
	C-10									
	C-11									
	C-12				<<1					
	MEAN	**0.000**	**<1**	**0.000**	**<1**	**0.000**	**<1**	**<1**	**0.000**	**0.008**

Appendix 5. Density of fauna (#/m^2) on 2019 transects.

	TRANSECT	LIZARDS					RODENT HOLES						ANT COLONIES					
		April					March			April			March			April		
		Uta stansburiana	Callisaurus draconoides	Aspidocelus tigris	Dipsosaurus dorsalis	TOTAL	Active	Inactive	Active + Inactive	Active	Inactive	Active + Inactive	Active	Inactive	Active + Inactive	Active	Inactive	Active + Inactive
Restored Road Shoulder	A-S			0.005		0.005		0.02	0.02		0.04	0.04	0.005	0.155	0.16		0.045	0.045
	A-N					0	0.005		0.005		0.025	0.025	0.01	0.315	0.325	0.01	0.055	0.065
	B-S1					0	0.04	0.1	0.14	0.09	0.18	0.27		0.13	0.13		0.02	0.02
	B-S2					0	0.04	0.1	0.14	0.05	0.19	0.24		0.13	0.13			0
	B-N					0		0.025	0.025	0.015	0.035	0.05	0.03	0.085	0.115	0.01	0.04	0.05
	C-S				0.01	0.01	1	11	12		0.015	0.015	1	14	15		0.01	0.01
	C-N					0		0.05	0.05		0.01	0.01	0.035	0.165	0.2		0.105	0.105
	D-S1					0		0.2	0.2	0.01	0.11	0.12		0.02	0.02		0.02	0.02
	D-S2					0		0.01	0.01		0.04	0.04	0.02	0.17	0.19	0.02	0.01	0.03
	D-N	0.005				0.005			0		0.005	0.005	0.01	0.06	0.07		0.02	0.02
	E-S1					0	0.01		0.01		0.05	0.05		0.09	0.09			0
	E-S2					0		0.01	0.01	0.02	0.06	0.08		0.02	0.02		0.01	0.01
	E-N					0			0			0		0.08	0.08		0.015	0.015
	F-S*					0		0.01	0.01		0.095	0.095	0.01	0.045	0.055	0.005		0.005
	F-N					0			0			0	0.045	0.165	0.21		0.05	0.05
	G-S					0		0.035	0.035	0.005	0.065	0.07	0.005	0.015	0.02			0
	G-N					0			0			0	0.02	0.035	0.055	0.065	0.005	0.07
	H-S					0		0.03	0.03	0.005	0.025	0.03	0.005	0.085	0.09		0.005	0.005
	H-N					0			0		0.005	0.005	0.02	0.035	0.055	0.005	0.02	0.025
	I-S					0		0.005	0.005	0.005	0.005	0.01	0.005	0.02	0.025	0.005		0.005
	I-N					0			0			0		0.04	0.04	0.01		0.01
	J-S					0			0		0.005	0.005		0.005	0.005		0.005	0.005
	J-N					0		0.015	0.015			0	0.03	0.085	0.115	0.02	0.02	0.04
	K-S1					0			0			0	0.03	0.01	0.04	0.01		0.01
	K-S2					0		0.01	0.01			0	0.03	0.1	0.13	0.03	0.03	0.06
	K-N					0			0	0.005	0.005	0.01	0.04	0.095	0.135	0.045	0.075	0.12
	L-S					0		0.01	0.01		0.025	0.025	0.01	0.045	0.055	0.02	0.015	0.035
	L-N					0		0.04	0.04		0.015	0.015	0.005	0.015	0.02	0.005		0.005
	M-S					0		0.07	0.07		0.03	0.03	0.035	0.005	0.04	0.005	0.025	0.03
	M-N					0		0.005	0.005	0.005	0.015	0.02	0.015	0.05	0.065		0.02	0.02
	N-S					0		0.04	0.04		0.005	0.005	0.01	0.02	0.03	0.01	0.005	0.015
	N-N					0		0.015	0.015		0.01	0.01		0.01	0.01			0
	O-S					0	0.005	0.095	0.1			0	0.015	0.02	0.035	0.01	0.01	0.02
	P-S					0		0.02	0.02			0	0.005	0.035	0.04		0.015	0.015
	P-N					0		0.005	0.005		0.025	0.025		0.005	0.005	0.005		0.005
	Q-S					0		0.025	0.025		0.02	0.02	0.005		0.005		0.005	0.005
	Q-N					0			0			0	0.02	0.005	0.025	0.01	0.025	0.035
	MEAN	**0.0001**	**0.0000**	**0.0001**	**0.0003**	**0.0005**	**0.0297**	**0.3228**	**0.3526**	**0.0057**	**0.0300**	**0.0357**	**0.0397**	**0.4423**	**0.4820**	**0.0081**	**0.0184**	**0.0265**

*One *C. draconoides* observed in March, on this transect.

Appendix 5, continued.

	TRANSECT	LIZARDS					RODENT HOLES						ANT COLONIES					
		April					March			April			March			April		
		Uta stansburiana	*Callisaurus draconoides*	*Aspidocelus tigris*	*Dipsosaurus dorsalis*	TOTAL	Active	Inactive	Active + Inactive	Active	Inactive	Active + Inactive	Active	Inactive	Active + Inactive	Active	Inactive	Active + Inactive
Control	C-1		0.005			0.005	0.01		0.01		0.005	0.005		0.04	0.04	0.01	0.075	0.085
	C-2					0.00		0.125	0.13			0.00		0.035	0.04	0.015	0.1	0.12
	C-3					0.00	0.005	0.01	0.02	0.005	0.02	0.03	0.02	0.175	0.20		0.005	0.01
	C-4					0.00	0.005	0.03	0.04		0.02	0.02	0.01	0.025	0.04	0.005	0.005	0.01
	C-5					0.00		0.035	0.04		0.005	0.01		0.065	0.07		0.015	0.02
	C-6					0.00		0.015	0.02			0.00	0.03	0.005	0.04			0.00
	C-7					0.00	0.005	0.02	0.03	0.005	0.01	0.02		0.005	0.01		0.01	0.01
	C-8					0.00	0.015	0.07	0.09		0.01	0.01	0.015	0.025	0.04			0.00
	C-9					0.00		0.01	0.01	0.005	0.04	0.05		0.005	0.01			0.00
	C-10	0.005				0.01	0.01	0.03	0.04	0.005	0.04	0.05	0.025	0.03	0.06			0.00
	C-11					0.00		0.025	0.03		0.035	0.04	0.025	0.015	0.04	0.005	0.025	0.03
	C-12					0.00		0.035	0.04		0.03	0.03	0.005	0.01	0.02		0.015	0.02
	MEAN	**0.0004**	**0.0004**	**0.0000**	**0.0000**	**0.001**	**0.004**	**0.034**	**0.038**	**0.002**	**0.018**	**0.020**	**0.011**	**0.036**	**0.047**	**0.003**	**0.021**	**0.024**