REVEGETATION PLAN
FOR THE
IRON AGE MINE

SAN BERNARDINO COUNTY, CALIFORNIA

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August 2012
Updated July 2014

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1.0 INTRODUCTION

This Revegetation Plan is designed to meet the Surface Mining and Reclamation Act (SMARA) performance guidelines for revegetation (Article 9, Section 3709) and soil salvage (Article 9, Section 3711) for the proposed removal of iron tailings stockpiled historically by a previous mining operation at the Iron Age Mine. The Iron Age Mine is an iron ore deposit that has been extensively mined prior to the enactment of the SMARA. The Proposed Project area is 97 acres of which 76 acres are currently disturbed. The 60.6 acres of patented land is currently owned and the surrounding unpatented claims are controlled by Iron Age Mine, LLC. The company intends to remove, screen, and sell existing tailings and reclaim the site during a 15-year operation period. The goal of the revegetation program is to establish the guidelines to monitor, maintain, and assess the results of the completed revegetation program through comparison to the established baseline data and recommended success criteria.

1.1 PROJECT LOCATION

The Iron Mine Site is located in the Dale Mining District within the Pinto Mountain Range, San Bernardino County, California, and is approximately 18 miles east/southeast of the City of Twentynine Palms (see Figure 1). The mine is located south of State Route 62 (SR 62) and is accessible by an unnamed road approximately one and a half miles east of Ironage Road (see Figure 2).

The Iron Age Mine holdings relevant to this plan consist of 60.6 acres of patented land (private land) within portions of Sections 20 and 29, San Bernardino Base and Meridian (SBBM), USGS New Dale 7.5-minute quadrangle), and 330 acres of unpatented claims (public land) managed by the Bureau of Land Management (BLM Barstow office) within portions of Sections 7, 17, 18, 20 and 29, SBBM. The project also includes two 5-acre mill site claims in Section 7. The mine road alignment extends 3.4 miles (approximately 17 acres) into additional unpatented placer claims within Sections 7, 17, 18 and 20, SBBM. The site is located in an unincorporated area of San Bernardino County.

1.2 PROJECT DESCRIPTION

Existing conditions at the Iron Age Mine site include a pre-SMARA quarry area, access roads, and tailings disposal areas from historic mining of the site. The site was active until the mid-1960s. The proposed Iron Age Mine is planned to include a total of 97 acres: approximately 34 patented acres, 37.5 acres of the unpatented claims, 8.5 acres of the 10-acre mill site claims and approximately 17 acres of roadway (Iron Age Mine Road) that connects the mine site to SR 62 over a distance of 3.4 miles.

The total project area is approximately 97 acres including the existing and planned roadway of which 76 acres are considered disturbed from historic mining activities. Approximately 78 of the 97-acre project area will be reclaimed of which approximately 70 acres will be revegetated (46 acres of BLM and 24 acres of patented lands). The existing access road (17 acres), partly eroded away, will be re-constructed as part of the Proposed Project. The access road and the onsite access roads (2 acres) will remain in place. The approximately 8 acres of backfilling on

Regional Vicinity

Iron Age Mine Revegetation Plan
San Bernardino County, California

Figure 1

N

0 5

Approximate Miles

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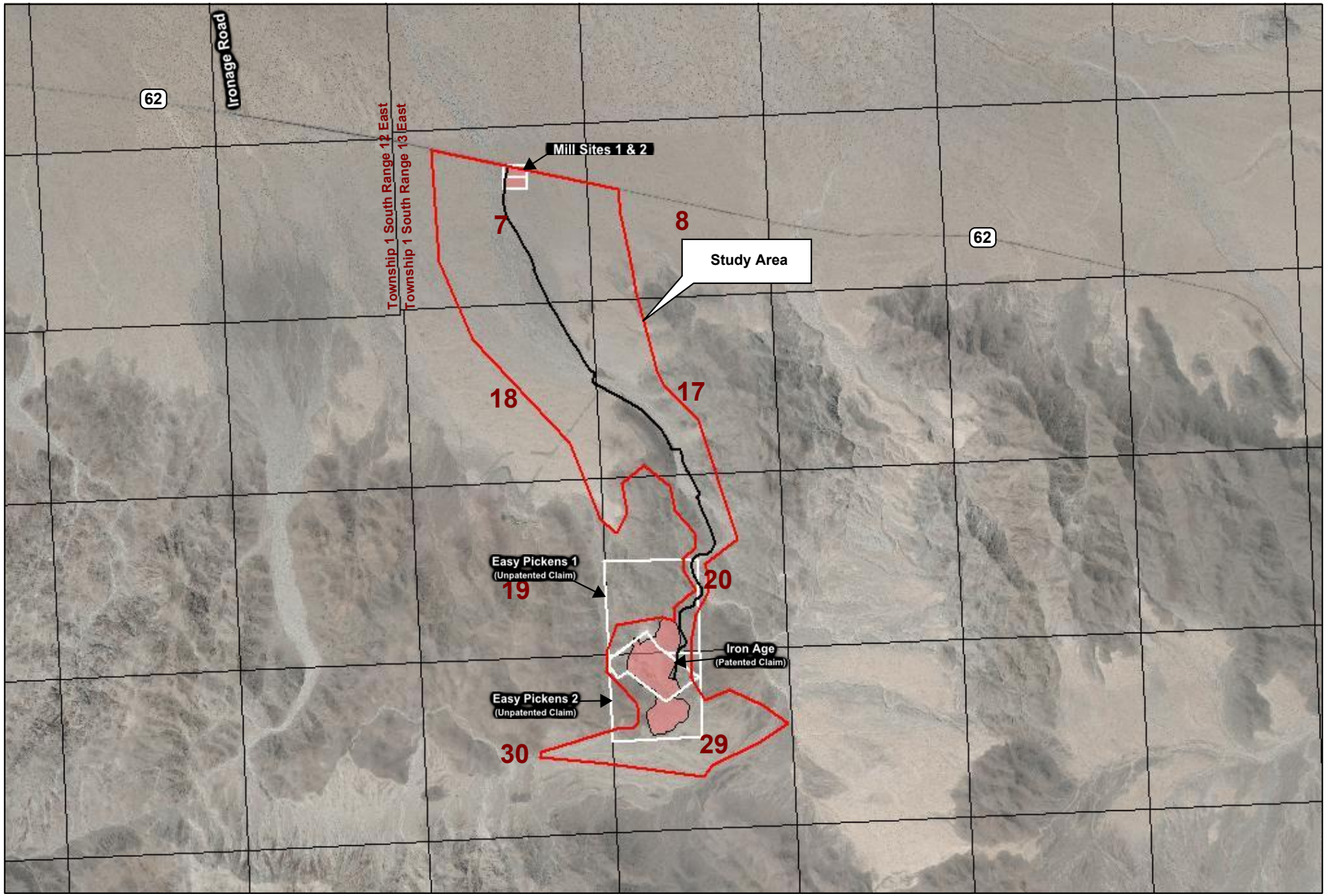

Project Location

Iron Age Mine Revegetation Plan
San Bernardino County, California
Figure 2

Project Area - 97 acres

N

0 0.65

Approximate Miles

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patented land will not be conducive for revegetation due to the iron ore surface and lack of topsoil available. Approximately 26 acres of the patented land will not be disturbed by this Plan, much of which has been disturbed by pre-SMARA activities and left as is.

Unlike most reclamation plans which reclaim areas planned for mining, this Reclamation Plan will reclaim approximately 58 acres covered with iron ore tailings deposited historically prior to the enactment of SMARA. The removal of the tailings will provide a marketable product and a heavily disturbed area will subsequently be reclaimed back to open space. The tailings area will be graded back to the original surface and revegetated. Waste rock and low quality iron ore will be backfilled into the existing Iron Age Quarry on approximately 8 acres. A total of 70 acres altogether will be reclaimed and revegetated returning currently disturbed areas back to open space habitat.

Proposed operations would occur in four phases; generally trending from the western limits of the tailings area to the northwest and eventually to the northeast. The operation would consist of excavating and loading the broken iron tailings into a feeder, screen, and magnetic separator. Upon separation, off-road haul trucks will transport the iron ore via a re-built mine haul road to a proposed mill site facility located on SR 62. The mill site would be located approximately 3.4 miles north of the tailings area; iron ore transported from the tailings area to the mill site would be stockpiled and ultimately transferred to market.

Based on reconnaissance analysis of the existing stockpile reserves, the site is anticipated to have an estimated operating life of 15 years. This report describes the planned revegetation of the tailings following their removal and revegetation of the proposed mill site at the conclusion of project activities.

2.0 ENVIRONMENTAL SETTING

The Iron Age Mine site is situated in the north eastern portion of the Pinto Range of mountains in San Bernardino County California. The Pinto Mountains rise sharply up from the northern edge of the Pinto Basin, an alluvial plain located within Joshua Tree National Park; roughly half of the Pinto Range occurs within the Park and is managed as the Joshua Tree Wilderness. Elevation at the site ranges from 1,975 to 2,250 feet above mean sea level. Annual temperatures range from 35°F to 105°F and annual precipitation is approximately 0.9 inches.

2.1 EXISTING VEGETATION

The baseline inventory of flora was conducted on May 1, 2012 by Lilburn Corporation. The survey was conducted to provide data upon which to base the revegetation plan of the mining site after the removal of the tailings, and the success criteria for the site. The Biological Resources Assessment (BRA) for the subject site identified six habitat types within the BRA survey area; these include: brittlebush series, big galleta series, creosote bush series, catclaw acacia series, streambed, and disturbed habitat (series based on Sawyer retrieved 2012). The location of the tailings and overburden mounds and the impacted quarry area were identified as disturbed habitat and was described as generally void of vegetation. Vegetation communities occurring adjacent to the tailings and overburden mounds and at the location of the proposed mill site

include: brittlebush series, creosote bush series, and catclaw acacia series. Vegetation reference sites were established in each of the three communities to gather baseline cover, density, and species richness data. The study area vegetation and anticipated project impacts are mapped on Figure 3.

A comprehensive list of observed flora and fauna species is included as Appendix A. Representative site photos of the habitat areas are included as Appendix B. Field data sheets are included as Appendix C.

2.2 BASELINE VEGETATION

The BRA documents project impacts to three homogeneous vegetation communities and to existing disturbed habitat. In order to collect data needed to establish revegetation criteria, the site was stratified into three sample unit areas corresponding to the three vegetation communities that will be impacted by the proposed project. Random reference sites within the sample unit areas were surveyed for shrub cover, density, and species richness. Transect endpoint locations were recorded on a handheld GPS. To evaluate vegetative cover, a series of 50-meter point-intercept transects were established; a vertical point was projected at each 0.5-meter interval and any plant, stem, or canopy intercepting the point was recorded. Shrub density and species richness were recorded in 100 square meter (m^2) plots located along the edge of the 50-meter transects and extending 2 meters out from its edge; all shrubs rooted in the plots and the number of different shrub species were recorded. Transects and plot locations were chosen randomly within the reference area. A total of 10 transects in each sample unit area were surveyed to provide baseline data needed to determine seed types and seeding rates, and to establish the success criteria for future revegetation efforts.

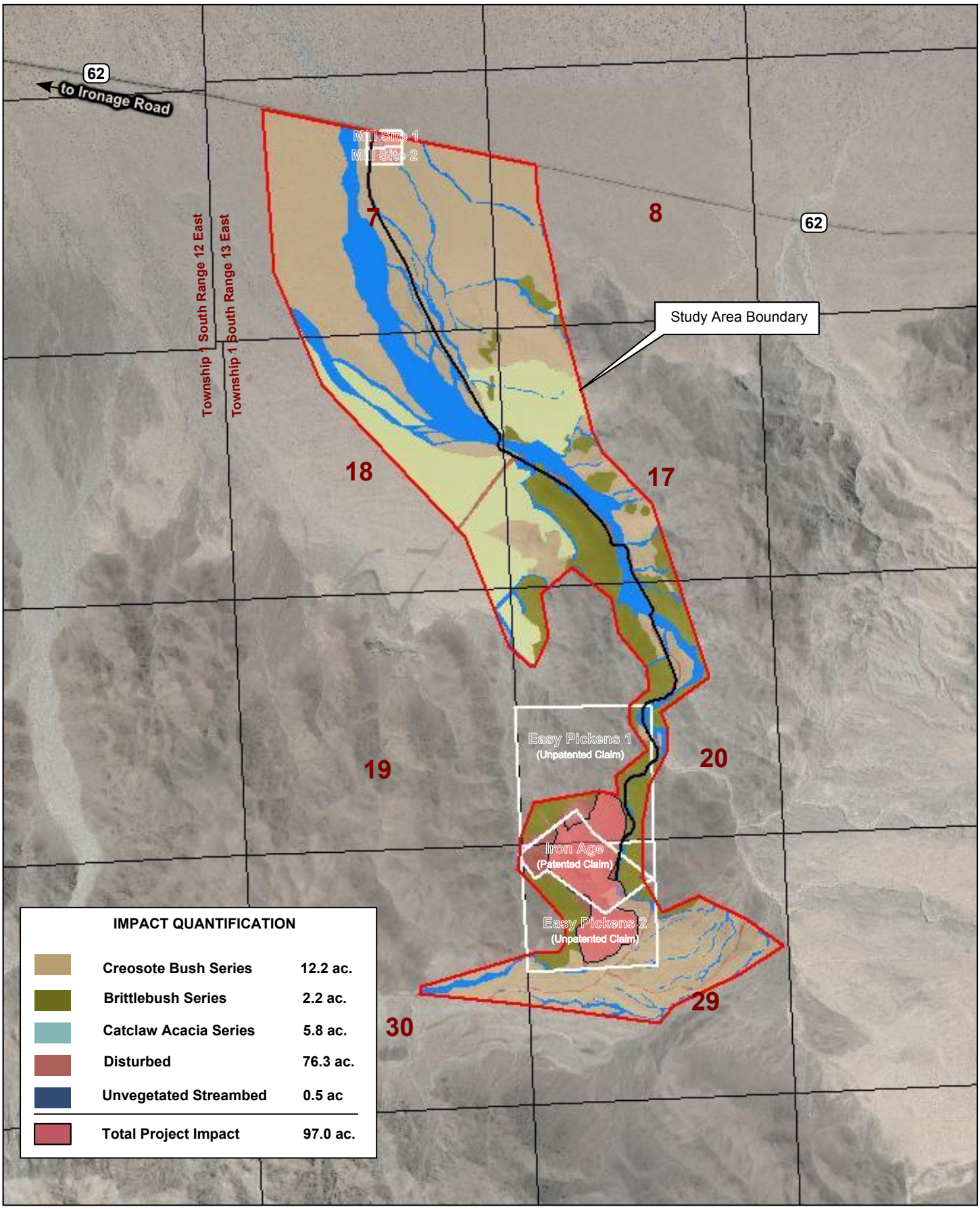
For purposes of reclamation, SMARA requires that a sampled area be of adequate size to accurately represent the vegetative cover, density, and richness in a vegetation community. To determine the minimum number of samples required to achieve a minimum of 80% confidence, the following statistical formula is applied, where n is the sample size needed, t^2 is the statistical t value for the sample, s^2 is the variance, and x is the statistical average.

$$n = \frac{t^2 s^2}{(0.2x)^2}$$

2.2.1 BASELINE SURVEY RESULTS

Reference Site 1 – Brittlebush Series

Brittlebush (*encelia farinosa*) was identified as the dominant vegetation type at Reference Site 1. Average absolute shrub cover measured a mean of 10%; average shrub density measured 8.8 shrubs per 100 m^2 plot; and an average of 2.5 species was observed to occur per 100 m^2 plot. Baseline cover results are summarized in Table 1; density and species richness results are summarized in Table 2.



0 0.5
Approximate Miles

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Vegetation and Impact Areas

Iron Age Mine Revegetation Plan
San Bernardino County, California

Figure 3

Table 1
Reference Site 1-Brittlebush Series
Baseline Cover Results

Transect	1	2	3	4	5	6	7	8	9	10	Total	Mean	Var.
Encelia farinosa	4	2	4	0	7	1	0	3	0	0	21	2.1	
Larrea tridentata	0	4	1	7	3	4	13	7	17	12	68	6.8	
Ambrosia dumosa	0	0	0	0	2	2	0	0	0	0	4	0.4	
Krameria bicolor	0	0	0	0	0	3	0	0	0	0	0	0.3	
Cylindropuntia ramosissima	0	0	0	1	0	3	0	0	0	0	4	0.4	
Absolute Shrub Cover Percentage	**4**	**6**	**5**	**8**	**12**	**13**	**13**	**10**	**17**	**12**	**100**	**10.00**	**17.33**
% Bare Ground	96	94	95	92	88	87	87	90	83	88	900	90	

Minimum Number of Transects Required to Achieve Confidence									
Sample Size Calculations for Shrub Cover	**S^2**	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**
	17.33	1.38	1.83	2.26	10	4.00	**9.80**	**7.94**	**5.99**

* Cover values for individual shrub species will not necessarily equal absolute shrub cover due to overlapping vegetation at transect points.
s^2 = variance, t^2 = Students' t value for sample, x = sample average

Table 2
Reference Site 1-Brittlebush Series
Baseline Density and Species Richness Results

Transect	1	2	3	4	5	6	7	8	9	10	Total	Mean	Variance
Encelia farinosa	7	9	6	1	5	1	0	11	1	0	41	4.10	
Larrea tridentata	2	2	2	2	3	2	6	4	6	7	36	3.60	
Ambrosia dumosa	0	0	0	0	1	3	0	0	0	0	4	0.40	
Krameria bicolor	0	0	0	0	0	2	0	0	0	0	2	0.20	
Ericameria linearfolia	0	1	0	0	0	0	0	0	0	0	1	0.18	
Cylindropuntia ramosissima	0	0	0	1	1	2	0	0	0	0	4	0.40	
Total Shrub Density	**9**	**12**	**8**	**4**	**10**	**10**	**6**	**15**	**7**	**7**	**88**	**8.80**	**9.96**
Total Species Richness	**2**	**3**	**2**	**3**	**4**	**5**	**1**	**2**	**2**	**1**	**25**	**2.50**	**1.61**

Minimum Number of Transects Required to Achieve Confidence									
Sample Size Calculations for Species Richness	**S^2**	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**
	9.96	1.383	1.833	2.262	8.8	3.10	**7.27**	**5.89**	**4.45**
Sample Size Calculations for Species Richness	**S^2**	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**
	1.61	1.38	1.83	2.26	2.5	0.25	**14.57**	**11.80**	**8.91**

s^2 = variance, t^2 = Students' t value for sample, x = sample average

Reference Site 2 – Creosote Bush Series

The dominant vegetation at Reference Site 2 is creosote bush (*Larrea tridentata*). Average absolute shrub cover was measured at 9.6%; average species richness measured 6.4 shrubs per 100 m^2 plot; and an average of 1.1 species was observed to occur per 100 m^2 plot. Baseline cover results are summarized in Table 3; density and species richness results are summarized in Table 4.

Table 3
Reference Site 2- Creosote Bush Series
Baseline Cover Results

Transect	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total**	**Mean**	**Var.**
Larrea tridentata	16	14	6	10	6	15	5	10	10	3	95	9.5	
Ambrosia dumosa	0	0	0	0	0	0	0	0	0	1	1	0.1	
Absolute Shrub Cover Percentage	**16**	**14**	**6**	**10**	**6**	**15**	**5**	**10**	**10**	**4**	**96**	**9.60**	**18.71**
% Bare Ground	84	86	94	90	94	85	95	90	90	96	904	90.4	
Minimum Number of Transects Required to Achieve Confidence													
Sample Size Calculations for Shrub Cover	**S^2**	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**				
	18.71	1.38	1.83	2.26	9.6	3.96	**11.48**	**9.30**	**7.02**				

* Cover values for individual shrub species will not necessarily equal absolute shrub cover due to overlapping vegetation at transect points.
s^2 = variance, t^2 = Students' t value for sample, x = sample average

Table 4
Reference Site 2-Creosote Bush Series
Baseline Density and Species Richness Results

Transect	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total**	**Mean**	**Variance**
Larrea tridentata	7	7	6	7	5	12	4	6	6	3	63	6.30	
Ambrosia dumosa	0	0	0	0	0	0	0	0	0	1	1	0.10	
Total Shrub Density	**7**	**7**	**6**	**7**	**5**	**12**	**4**	**6**	**6**	**4**	**64**	**6.40**	**5.16**
Total Species Richness	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**11**	**1.10**	**0.10**
Minimum Number of Transects Required to Achieve Confidence													
Sample Size Calculations for Shrub Density	**S^2**	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**				
	5.16	1.383	1.83	2.26	6.4	1.64	**7.12**	**5.77**	**4.36**				
Sample Size Calculations for Species Richness	**S^2**	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**				
	0.1	1.383	1.83	2.26	1.1	0.05	**4.67**	**3.79**	**2.86**				

s^2 = variance, t^2 = Students' t value for sample, x = sample average

Reference Site 3 –Catclaw Acacia Series

The dominant vegetation at Reference Site 3 is catclaw acacia (*Acacia greggii*); creosote bush (*Larrea tridentata*) and white bursage (*ambrosia* dumosa) were observed to be important species. Average absolute shrub cover was measured at 21.9%; average shrub density measured

17.3 shrubs per 100 m^2 plot; and an average of 5.5 species was observed to occur per 100 m^2 plot. Baseline cover results are summarized in Table 5; density and species richness results are summarized in Table 6.

Table 5
Reference Site 3 – Catclaw Acacia Series
Baseline Cover Results

Transect	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total**	**Mean**	**Var.**
Acacia greggii	10	2	12	19	2	5	2	0	24	5	81	8.1	
Bebbia juncea	0	0	0	0	0	0	3	0	0	0	3	0.3	
Larrea tridentata	7	6	0	0	0	6	10	8	5	1	43	4.3	
Ambrosia dumosa	0	0	3	0	0	1	0	0	0	0	4	0.4	
Ambrosia salsola	0	9	0	0	1	2	6	0	0	0	18	1.8	
Krameria bicolor	3	0	7	0	0	0	8	1	1	0	20	2	
Senna armata	4	0	0	0	0	0	0	0	0	0	4	0.4	
Ericameria sp.	0	4	6	0	0	0	0	4	7	2	23	2.3	
Ephedra sp.	0	0	0	8	5	2	4	0	0	0	19	1.9	
Psorothamnus spinosa	0	0	0	5	6	12	0	0	0	0	23	2.3	
Cylindropuntia ramosissima	0	0	0	4	0	0	0	0	0	0	4	0.4	
Absolute Shrub Cover Percentage	**19**	**19**	**23**	**31**	**14**	**32**	**28**	**13**	**32**	**8**	**219**	**21.90**	**75.21**
% Bare Ground	81	81	77	69	86	68	72	87	68	92	781	78.1	
Minimum Number of Transects Required to Achieve Confidence													
Sample Size Calculations for Shrub Cover					**S^2**	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**
					75.21	1.38	1.83	2.26	21.9	19.18	**8.87**	**7.19**	**5.42**

* Cover values for individual shrub species will not necessarily equal absolute shrub cover due to overlapping vegetation at transect points.
s^2 = variance, t^2 = Students' t value for sample, x = sample average

Table 6
Reference Site 3 – Catclaw Acacia Series
Baseline Density and Species Richness Results

Transect	1	2	3	4	5	6	7	8	9	10	Total	Mean	Variance
Acacia greggii	2	2	8	6	1	1	1	2	6	1	30	3.00	
Bebbia juncea	0	0	0	0	0	0	1	0	0	0	1	0.10	
Larrea tridentata	2	3	0	0	1	2	5	3	2	1	19	1.90	
Ambrosia dumosa	3	1	7	6	3	5	1	2	2	0	30	3.00	
Ambrosia salsola	0	6	1	0	4	2	2	1	2	0	18	1.80	
Krameria bicolor	1	0	4	0	0	0	2	5	3	1	16	1.60	
Senna armata	4	0	0	0	0	0	0	0	0	0	4	0.40	
Ericameria sp.	0	1	1	0	0	1	1	0	0	1	5	0.50	
Ephedra sp.	0	0	0	13	15	15	1	0	0	0	44	4.40	
Psorothamnus spinosa	0	1	0	0	1	2	0	0	0	0	4	0.40	
Cylindropuntia ramosissima	1	0	0	1	0	0	0	0	0	0	2	0.20	
Total Shrub Density	**13**	**14**	**21**	**26**	**25**	**28**	**14**	**13**	**15**	**4**	**173**	**17.30**	**56.01**
Total Species Richness	**6**	**6**	**5**	**4**	**6**	**7**	**7**	**5**	**5**	**4**	**55**	**5.50**	**1.17**

Minimum Number of Transects Required to Achieve Confidence									
	S^2	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**
Sample Size Calculations for Shrub Density	56.01	1.383	1.833	2.262	17.3	11.97	**10.58**	**8.58**	**6.47**
	S^2	**t^2 (80%)**	**t^2 (90%)**	**t^2 (95%)**	**x**	**(0.2x)^2**	**95%**	**90%**	**80%**
Sample Size Calculations for Species Richness	1.17	1.38	1.83	2.26	5.5	1.21	**2.19**	**1.77**	**1.34**

s^2 = variance, t^2 = Students' t value for sample, x = sample average

3.0 REVEGETATION

Revegetation of the site upon removal of the tailings would follow a series of steps. These steps may be modified or changed should new information or techniques that would improve the results of the revegetation activities become available. The removal of the tailings allows the site

to be reclaimed and revegetated back to its natural conditions. The currently disturbed tailings site would be reclaimed to approximately 26.8 acres of creosote bush series vegetation, 33.8 acres of brittlebush series vegetation, and 0.90 acres of catclaw acacia series vegetation. At the proposed mill site, 8.5 acres of creosote bush series habitat would be revegetated at the end of operations (see Figure 4). Success criteria and revegetation strategies were designed specifically to meet the needs of the vegetative communities and environmental conditions at the site.

3.1 SOIL SALVAGE

The proposed activities would remove the existing iron ore tailings at the site which have no soil cover. Prior to ore extraction, any available soils onsite from the mill sites, plant area and other on-site areas will be stockpiled in separate identified stockpiles for use as a seed bank during revegetation. Soil stockpiles will be located in the southwestern portion of the patented lands and on the southern and eastern perimeter of the mill sites. The soil stockpiles will be clearly marked and covered with rock or seeded with a native erosion control cover to limit wind and water erosion. In addition, fines from the tailings processing will be assessed for use as soil augmentation and stockpiled in the northwestern portion of Phase 1B.

3.2 SEED COLLECTION

The goal of seed collection is to preserve the local genetic diversity of the existing plant community while providing seed that is well suited for growth at the site. Seed collection must be undertaken and monitored by a professional seed collecting firm or a qualified botanist. When seed collection is not possible, a certified weed free seed mix may be used in lieu of seed collected at the site. Certified weed free seed mixes are available and may be purchased from professional nurseries.

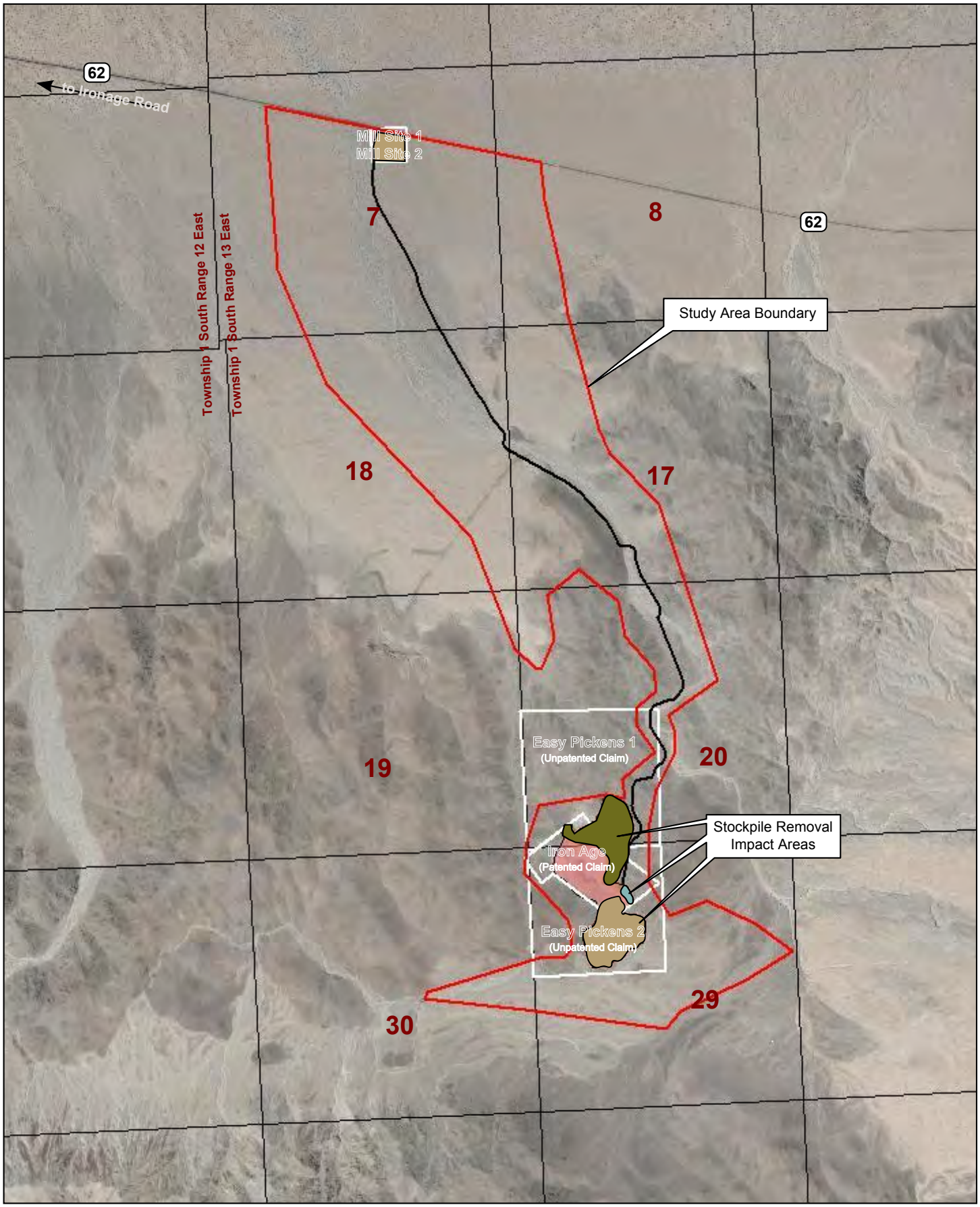
3.3 SITE PREPARATION

The proposed operation would involve the removal of tailings left behind by a previous mining operation. As tailings are loosened and removed for processing the surfaces to be revegetated would be returned to their original land contours. Where possible, revegetation surfaces would be ripped to about 18 to 36 inches in depth to break up compacted areas and would be left in a textured or rough condition with shallow rills and furrows to create optimal conditions for revegetation with a native seed mix. Any available soils and fines will be deposited in random “islands” up to one-foot thick and seeded.

Quick-growing, shallow-rooted species will be included in the seed mix to provide short-term erosion control. By providing short-term erosion control, more favorable growing conditions will be created for climax species that will provide long-term erosion control.

3.4 IRRIGATION

The plant palette proposed for the mine site consists of primarily drought-tolerant plants species that should perform well without additional water. The average precipitation in the area should be sufficient for seed germination and root establishment of native species.



0 0.5
Approximate Miles

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	Creosote Bush Series	35.3 acres
	Brittlebush Series	33.8 acres
	Catclaw Acacia Series	0.90 acres
	Quarry Area / Roads (no revegetation)	27.0 acres

Revegetation Areas

Iron Age Mine Revegetation Plan
San Bernardino County, California
Figure 4

Planting in the fall, prior to the winter rains, will be sufficient for seed germination and root establishment and reduce weed growth that is typically associated with supplemental irrigation. Scarification of the soil and the creation of surface rills and furrows will allow for maximized collection of water from rain events and run-off.

3.5 FERTILIZATION

No fertilization of the site is recommended. The native seeds used for revegetation will be tolerant of existing soil conditions. Additionally, the mechanical loosening, and creation of surface rills and furrows, will create conditions favorable for seed germination and root establishment by native species. Widespread use of fertilizers on desert sites appears to benefit non-native weedy species and not the native species sought as the goal of the revegetation plan (Clary, 1987).

3.6 WEED CONTROL

The purpose of the non-native invasive species control plan is to reduce or eliminate the occurrence of non-native invasive plant species that may invade the site where active and natural revegetation is taking place. Non-native invasive species (weeds) can compete with native plant species for available moisture and nutrients and consequently interfere with revegetation of the site.

The occurrence of non-native invasive species on-site shall be monitored by visual inspection. The goal is to prevent non-native invasive species from becoming established and depositing seeds in revegetated areas. No areas will be allowed to have more than 10 percent of the ground cover provided by non-native invasive species. If inspections reveal that non-native invasive species are becoming or have established on-site, then removal will be initiated. Inspections shall be made in conjunction with revegetation monitoring.

Non-native invasive species removal will be accomplished through manual, mechanical or chemical methods depending on the specific circumstances. For example, solitary or limited numbers of non-native invasive shrub species will be manually removed (chopped) and the stumps sprayed with an approved weed killer such as Round-Up. Smaller plants (wild oats and bromes) that cover more area may be sprayed, scraped with a tractor, or chopped by hand, depending upon the size of the area of infestation and the number of desired native plants in proximity or mixed in with the non-native invasive species.

Reports of inspections and weed control implementation shall be part of the annual revegetation monitoring and kept on file by the operator.

3.7 SEEDING METHODS AND RATES

The revegetation area will be seeded with a certified weed-free seed mix using a broadcast method. Following seeding, the area will be raked in order to cover the seeds and protect them from desiccation and predation. Unique seed mixes were developed for each of the vegetation series occurring in the project impact area. The recommended seed mix and seeding rate for each

of the vegetation series is outlined in Table 7 and may be modified or species re-placed due to availability of the seed that year and seed costs.

Table 7
Iron Age Mine
Recommended Seed Mix and Rates

Species	PLS LBS/ Acre
Brittle Bush Series	
Encelia farinose (Brittlebush)	2
Larrea tridentate (creosote bush)	5
Ambrosia dumosa (white bursage)	4
Vulpia octoflora (six-weeks fescue)	1
Lupinus sparciflorus (Mojave lupine)	1
Sphaeralcea ambigua (Desert globemallow)	2
Baileya multiradiata (Desert marigold)	1
Lasthenia californica (California goldfields)	0.5
Ambrosia or Hymenoclea salsola (chessebush)	1
Simmondsia chinensis (coffeeberry)	1
Creosote Bush Series	
Larrea tridentate (creosote bush)	8
Ambrosia dumosa (white bursage)	6
Vulpia octoflora (six-weeks fescue)	1
Lupinus sparciflorus (Mojave lupine)	1
Baileya multiradiata (Desert marigold)	1
Lasthenia californica (California goldfields)	0.5
Malacothrix glabrata (desert dandelion)	0.1
Catclaw Acacia Series	
Acacia greggii (catclaw acacia)	1.
Bebbia juncea (sweet bush)	0.1
Larrea tridentate (creosote bush)	4
Ambrosia dumosa (white bursage)	3
Senna armata (spiny senna)	2
Ephedra californica (California jointfir)	1
Psorothamnus spinosa (smoketree)	1
Vulpia octoflora (six-weeks fescue)	1
Lupinus sparciflorus (Mojave lupine)	1
Hymenoclea salsola (chessebush)	1
Lasthenia californica (California goldfields)	0.5

Per OMR comments in November 2012, the following successional species and grasses will be added to the seed mix at a rate of 1 to 2 pounds of pure live seed: big galleta, six-weeks grama, six weeks three awn, strigose lotus, black-banded rabbitbrush, and wire lettuce.

3.8 SCHEDULE OF REVEGETATION

Seeding of the revegetation area shall occur at the appropriate time of the year and at an application rate for optimum seed sprouting and growth. Seeding is recommended to occur in the fall after the first substantial rains but prior to winter rains. Following the initial seeding, revegetation areas will be monitored annually, and as necessary, appropriate remediation action such as reseeding and weed removal will be determined at the time of monitoring.

3.9 TEST PLOTS

The operator shall establish at a minimum, seven 100 meter^2 test plots representative of an area where the tailings are removed. The test plots will be located in the southwestern portion of the site where tailings will be removed within the first two years and within a drainage to be reclaimed for the catclaw seed mixture to be determined. Test plots will include surface ripping/no seeding (control plot); surface ripping and seeding as described above with each of the three seed mixtures; and surface ripping, placement of fines, and seeding as described with each of the three seed mixtures. Additional tests will be conducted if the initial tests and any active revegetation are not successful and may include various types and amounts of seeds and different surface/soil preparation.

4.0 REVEGETATION MONITORING

4.1 SUCCESS CRITERIA

Successful revegetation will be achieved when a self-sustaining native plant cover is established in the disturbed areas of the proposed mining activity. The revegetated site must resemble and blend into the natural surrounding environment. The success of the revegetation effort will be determined through statistical comparison of the revegetated areas to the baseline inventory.

Acceptable performance standards for mine reclamation are based on a percentage of cover, density, and species richness when compared with the baseline. An acceptable standard at the Iron Age Mine would measure success at 45% of the baseline cover, 45% of the baseline density, and 40% of the baseline species richness five years after reclamation. The revegetation success criterion for each of the sampled habitat types is outlined in Table 8.

4.2 TECHNICAL ASSESSMENT

The permanence and sustainability of the revegetated plant communities will be determined annually after the initial seeding. Annual assessments of the reclamation area will be conducted by a qualified botanist to determine the success of the revegetation effort. Interim success standards may be used as thresholds for annual monitoring and to ensure the success of revegetation.

Table 8
Iron Age Mine
Recommended Success Criteria

	Baseline Mean	Standard Success Percentage	Success Criteria
Brittlebush Series			
Cover	10.0%	45%	5% cover of native perennials
Shrub Density	8.8*	45%	3 native perennials per 100 m^2
Species Richness	2.5*	40%	2 native perennials per 100 m^2
Creosote Bush Series			
Cover	9.6%	45%	4% cover of native perennials
Shrub Density	6.4*	45%	3 native perennials per 100 m^2
Species Richness	1.1*	40%	1 native perennial per 100 m^2
Catclaw Acacia Series			
Cover	21.9%	45%	10% cover of native perennials
Shrub Density	17.3*	45%	8 native perennials per 100 m^2
Species Richness	5.5*	40%	2 native perennials per 100 m^2

*per 100 m^2 plot

The plant species will be evaluated for relative success as determined by the cover, density, and species richness success criteria. Remedial actions include removing non-native invasive species and reseeding based on annual assessment results. An evaluation of the surviving species will be repeated annually following initial seeding for five years or until the success criteria are achieved.

Annual monitoring will include random transect sampling within the revegetation area. The number of transects and plots will vary in order to produce the 80% confidence level required under SMARA's Performance Standards for Revegetation. The following data will be collected within transects and plots:

a. Survivorship: assessed by absolute counts
b. Plant density
c. Species richness
d. Cover per specified area

All data will be recorded on a standard form and copies will be submitted as an appendix to each Annual Report. Photo documentation will also be included for representative transects in order to visually document annual vegetation changes and community development.

4.3 REPORTING

Iron Age Mine will document the progress of the revegetation effort and submit Annual Maintenance and Monitoring reports to the County of San Bernardino. Annual reports are due by December 31st of each year.

5.0 CONCLUSION

As tailings are removed, the site will be prepared for revegetation concurrently by returning the surface to its original natural contours and scarifying to create conditions optimal for seeding. The revegetation areas including the tailings, plant, mill sites and miscellaneous areas will be covered with available surface materials in "islands," broadcast seeded, and raked to cover seeds and protect them from desiccation and predation. Seeding would occur following the first rain of the fall season and before the winter rains.

The acceptable performance standards for at the Iron Age Mine would measure success at 45% of the baseline cover, 45% of the baseline density, and 40% of the baseline species richness five years after reclamation until success criteria achieved. Accordingly successful revegetation in the brittlebush series revegetation area would be achieved at 5% cover by native perennials, three native perennials per 100 m^2 plot, and one species per 100 m^2 plot. Similarly, successful revegetation in the creosote bush series revegetation area would be achieved at 4% cover by native perennials, three native perennials per 100 m^2 plot, and one native perennial species per 100 m^2 plot. Successful revegetation in the acacia catclaw series would be achieved at 10% cover by native perennials, eight native perennials per 100 m^2 plot, and two native perennial species per 100 m^2 plot.

Annual assessments of the reclamation area will be conducted by a revegetation specialist to determine the success of the revegetation effort until said criteria are achieved. Remedial action would occur per the recommendation of the revegetation specialist.

6.0 REFERENCES

Clary, R.F. 1987. Roadside revegetation in the Mojave Desert. *Restoration and Management Notes,* Vol. 5:2 page 97.

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APPENDIX A
OBSERVED SPECIES LIST

List of Plants Observed at Iron Age Mine Haul Road, Mill Site, and Quarry Study Area	
EPHEDRACEAE	**JOINT-FIR FAMILY**
Ephedra californica	California joint-fir
AMARANTHACEAE	**AMARANTH FAMILY**
Tidestromia suffruticosa var. *oblongifolia*	Arizona honeysweet
APOCYNACEAE	**DOGBANE FAMILY**
Asclepias subulata	Milkweed
Funastrum hirtellum	Hairy milkweed
ASTERACEAE	**COMPOSITE FAMILY**
Adenophyllum porophylloides	San Felipe dyssodia
Ambrosia acanthicarpa	Annual bur-sage
Ambrosia dumosa	White bursage, Burrobush
Ambrosia salsola v. *salsola*	Cheeseweed
Baileya pauciradiata	Colorado desert marigold
Baileya multiradiata	Desert marigold
Bebbia juncea var. *aspera*	Sweetbush
Chaenactis carphoclinia var. *carphoclinia*	Pebble pincushion
Encelia farinosa	Brittlebush
Encelia frutescens	Rayless encelia
Ericameria paniculata	Black-banded rabbitbrush
Geraea canescens	Desert Sunflower
Malacothrix glabrata	Desert dandelion
Monoptilon bellioides	Mojave desert star
Palafoxia arida var. *arida*	Spanish needles
Perityle emoryi	Rock-daisy
Peucephyllum schottii	Pygmy-cedar
Pleurocoronis pleuriseta	Arrow-leaf
Rafinesquia neomexicana	Desert chicory
Stephanomeria pauciflora	Wire lettuce
Trichoptilium incisum	Yellow dome
BIGNONIACEAE	**BIGNONIA FAMILY**
Chilopsis linearis ssp. *arcuata*	Desert willow
BORAGINACEAE	**BORAGE FAMILY**
Amsinckia tessellata var. *tessellata*	Devil's lettuce
Cryptantha angustifolia	Narrow-leaved cryptantha
Cryptantha barbigera	Bearded cryptantha

	Cryptantha circumcissa		Cushion cryptantha
	Cryptantha decipiens		Gravel cryptantha
	Cryptantha maritima		Guadalupe cryptantha
	Cryptantha pterocarya		Winged cryptantha
	Cryptantha racemosa		Shrubby cryptantha
	Pectocarya platycarpa		Broadfruit combseed
	Phacelia crenulata var. *ambigua*		Notch-leaved phacelia
	Phacelia pedicellata		Specter phacelia
	Tiquilia plicata		Fanleaf crinklemat
BRASSICACEAE		**MUSTARD FAMILY**	
	*Brassica tournefortii**		African mustard*
	Lepidium lasiocarpum ssp. *lasiocarpum*		Pepperweed
	Streptanthella longirostris		Longbeak fiddle mustard
CACTACEAE		**CACTUS FAMILY**	
	Cylindropuntia echinocarpa		Silver cholla
	Cylindropuntia ramosissima		Diamond cholla
	Opuntia basilaris var. *basilaris*		Beavertail cactus
CARYOPHYLLACEAE		**PINK FAMILY**	
	Achyronychia cooperi		Onyx flower, Frost-mat
EUPHORBIACEAE		**SPURGE FAMILY**	
	Chamaesyce micromeria		Sonoran sand mat
	Ditaxis neomexicana		Common ditaxis
FABACEAE		**LEGUME FAMILY**	
	Dalea mollis		Hairy prairie clover
	Lotus strigosus		Strigose lotus
	Lupinus arizonicus		Arizona lupine
	Marina parryi		Parry dalea
	Psorothamnus emoryi		Emory indigobush
	Psorothamnus spinosus		Smoke tree
	Senegalia greggii		Catclaw acacia
	Senna armata		Desert senna
GERANIACEAE		**GERANIUM FAMILY**	
	*Erodium cicutarium**		Red-stem filaree*
KRAMERIACEAE		**RHATANY FAMILY**	
	Krameria grayi		White rhatany

LAMIACEAE		**MINT FAMILY**	
	Hyptis emoryi		Desert lavender
	Salvia columbariae		Chia
LOASACEAE		**LOASA FAMILY**	
	Mentzelia involucrata		White bract stickleaf
MALVACEAE		**MALLOW FAMILY**	
	Eremalche rotundifolia		Desert five-spot
	Sphaeralcea ambigua var. *ambigua*		Globe mallow
NYCTAGINACEAE		**FOUR-O'CLOCK FAMILY**	
	Allionia incarnata		Windmills
	Mirabilis laevis var. *retrorsa*		Desert wishbone bush
ONAGRACEAE		**EVENING-PRIMROSE FAMILY**	
	Chylismia brevipes ssp. *brevipes*		Yellow cups
	Chylismia cardiophylla ssp. *cardiophylla*		Heart-leaved suncup
	Chylismia claviformis ssp. *aurantiaca*		Brown-eyed evening-primrose
	Oenothera deltoides ssp. *deltoides*		Bird-cage evening-primrose
PAPAVERACEAE		**POPPY FAMILY**	
	Eschscholzia minutiflora		Pygmy goldenpoppy
PLANTAGINACEAE		**PLANTAIN FAMILY**	
	Mohavea confertiflora		Ghost flower
	Plantago ovata		Woolly plantain
POLEMONIACEAE		**PHLOX FAMILY**	
	*Alciella latifolia s*sp. *latifolia*		Broadleaf gilia
	Langloisia setosissima ssp. *punctata*		Lilac sunbonnet
POLYGONACEAE		**BUCKWHEAT FAMILY**	
	Chorizanthe brevicornu var. brevicornu		Brittle spineflower
	Chorizanthe rigida		Rigid spineflower
	Eriogonum deflexum ssp. *deflexum*		Flat-topped skeleton weed
	Eriogonum inflatum		Desert trumpet
	Eriogonum thomasii		Thomas buckwheat
	Eriogonum trichopes		Little trumpet
RESEDACEAE		**MIGNONETTE FAMILY**	

	Oligomeris linifolia		Lineleaf whitepuff
SOLANACEAE		**NIGHTSHADE FAMILY**	
	Lycium andersonii		Anderson wolfberry
	Nicotiana obtusifolia		Desert tobacco
	Physalis crassifolia		Thick-leaved ground cheery
VISCACEAE		**MISTLETOE FAMILY**	
	Phoradendron californicum		Desert mistletoe
ZYGOPHYLLACEAE		**CALTROP FAMILY**	
	Fagonia laevis		California fagonbush
	Larrea tridentata		Creosote bush
AGAVACEAE		**CENTURY PLANT FAMILY**	
	Yucca brevifolia		Joshua tree
	Yucca schidigera		Mojave cholla
POACEAE		**GRASS FAMILY**	
	Aristida adscensionis		Six weeks three awn
	Bouteloua barbata var. *barbata*		Six weeks grama
	Dasyochloa pulchella		Fluff grass
	Hilaria rigida		Big galleta
	Muhlenbergia microsperma		Little seed muhly
	*Schismus arabicus**		Mediterranean grass*
* denotes non-native species		** Taxonomy follows Baldwin 2012,	

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List of Wildlife Observed at Iron Age Mine Haul Road, Mill Site, and Quarry Study Area

LATIN NAME	COMMON NAME
BIRDS	
CATHARTIDAE	**NEW WORLD VULTURES**
Cathartes aura	Turkey Vulture
ACCIPITRIDAE	**HAWK FAMILY**
Buteo jamaicensis	Red-tailed Hawk
Buteo swainsoni	Swainson's Hawk
COLUMBIDAE	**PIGEON AND DOVE FAMILY**
Zenaida macroura	Mourning Dove
Columba livia	Rock Dove*
CAPRIMULGIDAE	**GOATSUCKER FAMILY**
Phalaenoptilus nuttallii	Common Poorwill
APODIDAE	**SWIFT FAMILY**
Aeronautes saxatalis	White-throated Swift
TROCHILIDAE	**HUMMINGBIRD FAMILY**
Calypte anna	Anna's Hummingbird
Calypte costae	Costa's Hummingbird
TYRANNIDAE	**TYRANT FLYCATCHER FAMILY**
Sayornis nigricans	Black Phoebe
Sayornis sayi	Say's Phoebe
Empidonax wrightii	Gray Flycatcher
Myiarchus cinerascens	Ash-throated flycatcher
Tyrannus verticalis	Western kingbird
CORVIDAE	**JAY AND CROW FAMILY**
Corvus brachyrhynchos	American Crow
Corvus corax	Common Raven
ALAUDIDAE	**LARK FAMILY**

Eremophila alpestris	Horned Lark**
Lanius ludovicianus	Loggerhead Shrike**
REMIZIDAE	**VERDIN FAMILY**
Auriparus falviceps	Verdin
VIREONIDAE	**VIREO FAMILY**
Vireo gilvus	Warbling Vireo
TROGLODYTIDAE	**WREN FAMILY**
Thryomanes bewickii	Bewick's Wren
Campylorhynchus brunneicapillus	Cactus Wren
Salpinctes obsoletus	Rock Wren
SYLVIIDAE	**GNATCATCHER FAMILY**
Polioptila melaneura	Black-tailed Gnatcatcher**
PTILOGONATIDAE	**SILKY-FLYCATCHER FAMILY**
Phainopepla nitens	Phainopepla
PARULIDAE	**WOOD-WARBLER FAMILY**
Dendroica coronata	Yellow-rummped Warbler
Oreothlypis celata	Orange-crowned Warbler
Wilsonia pusilla	Wilson's Warbler
EMBERIZIDAE	**SPARROW FAMILY**
Amphispiza bilineata	Black-throated Sparrow
Junco hyemalis	Dark-eyed Junco
Spizella breweri	Brewer's Sparrow
Zonotrichia leucophrys	White-crowned Sparrow
ODONTOPHORIDAE	
Callipepla gambelii	Gambel's Quail
PICIDAE	
Picoides scalaris	Ladder-backed Woodpecker
Colaptes auratus	Northern Flicker
HIRUNDINIDAE	
Petrochenlidon pyrrhonota	Cliff Swallow
Hirundo rustica	Barn Swallow

FRINGILLIDAE	
Carpodacus mexicanus	House Finch
MIMIDAE	**MOCKINGBIRDS AND THRASHERS**
Mimus polyglottis	Northern mockingbird
STURNIDAE	**STARLINGS**
Sturnus vulgaris	European Starling
PARULIDAE	**WOOD WARBLERS**
Dendroica petechia	Yellow Warbler**
Dendroica coronate	Yellow-rumped warbler
Dendroica nigrescens	Black-throated gray warbler
THRAUPIDAE	**TANAGER FAMILY**
Piranga ludoviciana	Western Tanager
PASSERIDAE	**OLD WORLD SPARROWS**
Passer domesticus	House sparrow*
Spizella breweri	Brewer's sparrow
Amphispiza bilineata	Black-throated sparrow
Amphispiza belli	Sage sparrow
Zonotrichia leucophrys	White-crowned sparrow
OTHER BIRDS	
Sturnella neglecta	Western Meadowlark
MAMMALS	
LEPORIDAE	**HARE, RABBIT FAMILY**
Lepus californicus	Black-tailed Jackrabbit**
Sylvialagus audobonii	Desert cottontail
SCIURIDAE	**SQUIRREL FAMILY**
Ammospermophilus leucurus	White-tailed Antelope Squirrel
Spermophilus leucurus	California Ground Squirrel
MURIDAE	**MOUSE AND RAT FAMILY**
Neotoma sp.	Woodrat
HETEROMYIDAE	**KANGAROO RAT FAMILY**

Dipodomys sp.	Kangaroo Rat
Neotoma lepida	Desert Woodrat
CANIDAE	**DOGS/WOLVES/FOXES**
Canis familiarus	Domestic dog
Canis latrans	Coyote
BOVIDAE	**BOVIDS**
Ovis canadensis nelsoni	Nelson's bighorn sheep
OTHER MAMMALS	
Thomomys bottae	Botta pocket gopher
REPTILES AND AMPHIBIANS	
CROTAPHYTIDAE	**COLLARED, LEOPARD LIZARD FAMILY**
Gambelia wislizenii	Long-nosed Leopard Lizard
IGUANIDAE	**IGUANA AND CHUCKWALLA FAMILY**
Diposaurus dorsalis dorsalis	Northern Desert Iguana
Gambelia wislizenii wislizenii	Large-spotted Leopard Lizard
Urosaurus graciosus	Long-tailed Brush Lizard
Phrynosoma platyrhinos	Desert Horned Lizard
PHRYNOSOMATIDAE	**PHRYNOSOMATID LIZARD FAMILY**
Callisaurus draconoides rhodostictus	Western Zebra-tailed Lizard
Phrynosama platyrhinos calidiarum	Southern Desert Horned Lizard
Uta stansburiana	Common Side-blotched Lizard
TEIIDAE	**WHIPTAIL FAMILY**
Aspidoscelis tigris tigris	Great Basin Whiptail
Cnemidophorus tigris	Western whiptail Lizard
* denotes non-native species	
** denotes sensitive species	

APPENDIX B
SITE PHOTOS

US Iron Age Mine Site
San Bernardino County, California
Representative Site Photos

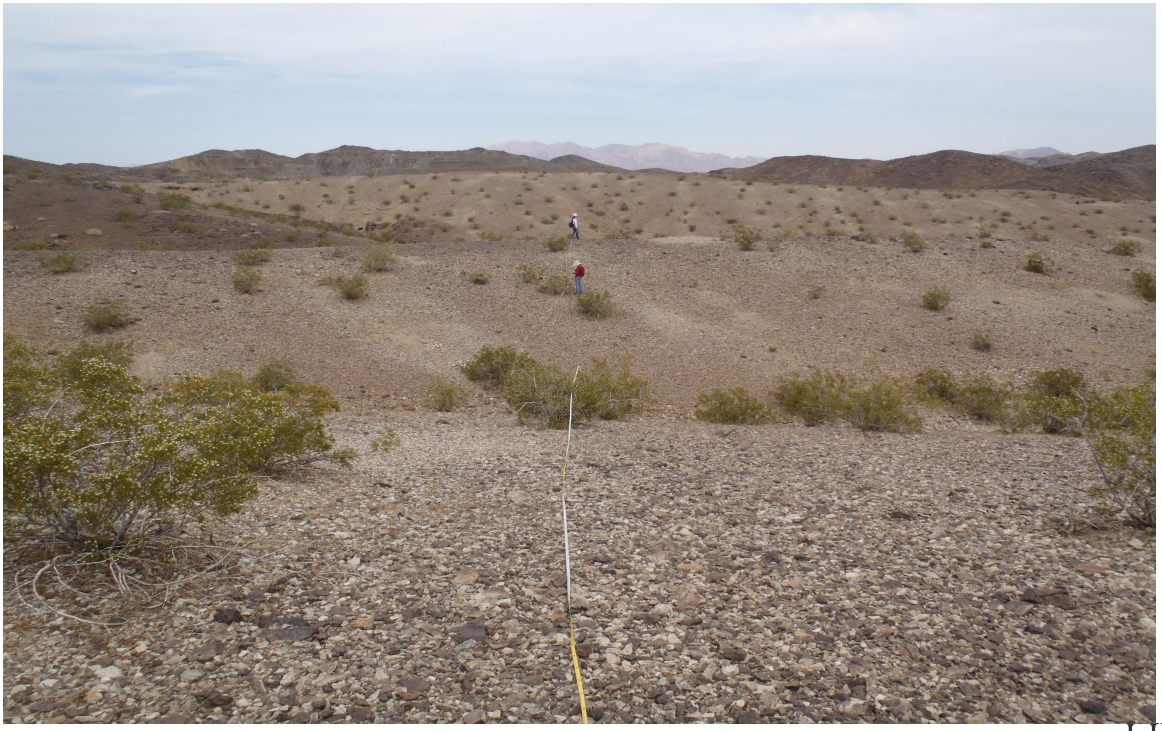
Catclaw acacia series ephemeral drainage.

Creosote bush series vegetation.

LILBURN CORPORATION

US Iron Age Mine Site
San Bernardino County, California
Representative Site Photos

Disturbed existing haul road that will be used as part of the proposed haul road right-of-way.

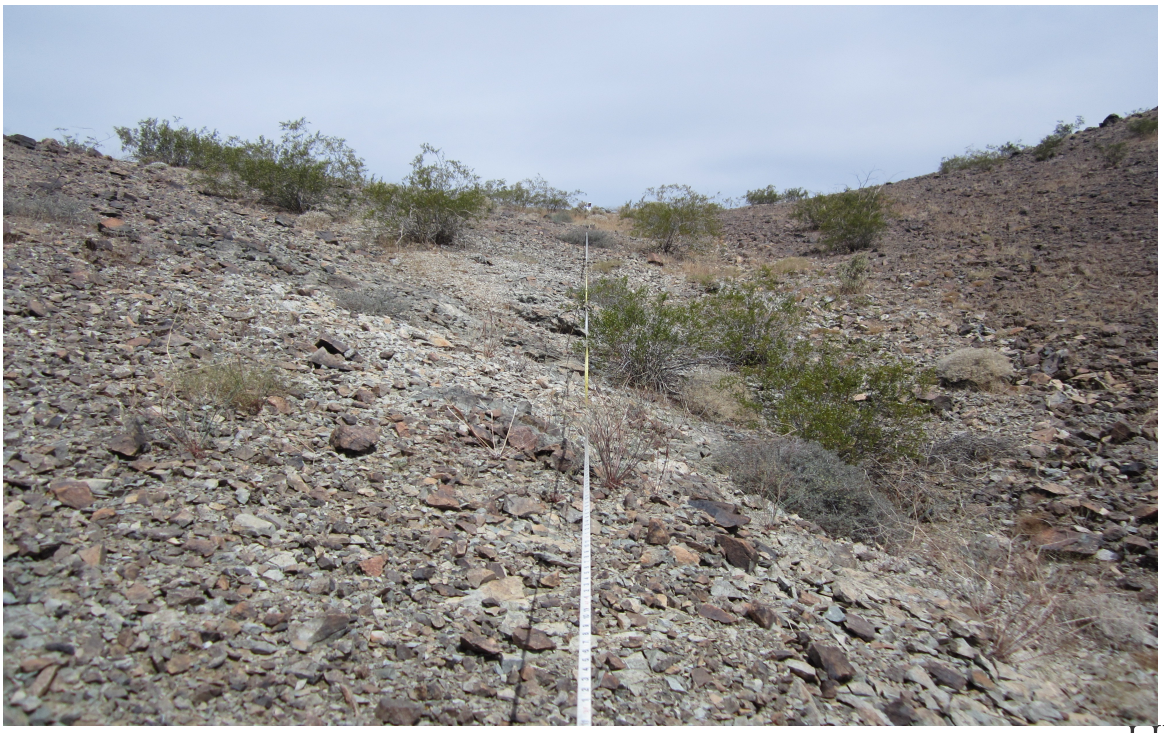


Creosote bush series vegetation sample transect.

LILBURN CORPORATION

US Iron Age Mine Site
San Bernardino County, California
Representative Site Photos

Sample transect in catclaw acacia series survey area.



Brittlebush series vegetation.

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APPENDIX C
DATA SHEETS

Project Iron Age Mine **Transect** 1E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50	x								
1.00	x								
1.50	x								
2.00	x								
2.50	x								
3.00	x								
3.50	x								
4.00	x								
4.50	x								
5.00	x								
5.50	x								
6.00	x								
6.50	x								
7.00	x								
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10.00	x								
10.50	x								
11.00	x								
11.50	x								
12.00	x								
12.50	x								
13.00	x								
13.50	x								
14.00	x								
14.50	x								
15.00	x								
15.50	x								
16.00	x								
16.50	x								
17.00	x								

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Encelia farinosa	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50	x								
18.00	x								
18.50	x								
19.00	x								
19.50	x								
20.00	x								
20.50	x								
21.00	x								
21.50	x								
22.00	x								
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29.00	x								
29.50	x								
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30.50	x								
31.00	x								
31.50	x								
32.00	x								
32.50	x								
33.00	x								
33.50	x								
34.00	x								
34.50	x								
35.00	x								

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Encelia farinosa	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50	x								
36.00	x								
36.50	x								
37.00	x								
37.50	x								
38.00	x								
38.50	x								
39.00	x								
39.50	x								
40.00	x								
40.50	x								
41.00		x							
41.50	x								
42.00	x								
42.50	x								
43.00		x							
43.50	x								
44.00	x								
44.50	x								
45.00	x								
45.50	x								
46.00	x								
46.50		x							
47.00		x							
47.50	x								
48.00	x								
48.50	x								
49.00	x								
49.50	x								
50.00	x								

Percent Cover:	4	**4%**

Transect : E1
Plot Size: 100 square meters
Total Density: 9
Total Diversity: 2

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	7
Larrea tridentata	2

Project Iron Age Mine **Transect** 2E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
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6.00									
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8.00									
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9.00									
9.50									
10.00			x						
10.50			x						
11.00			x						
11.50									
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15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	**Bare Ground,Rocks, Debris**	**Plant:** Encelia farinosa	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50			x						
44.00									
44.50									
45.00									
45.50									
46.00									
46.50		x							
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	1	4	**5%**

Transect : E2
Plot Size: 100 square meters
Total Density: 12
Total Diversity: 3

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	9
Larrea tridentata	2
Ericameria linearifolia	1

Project Iron Age Mine **Transect** 3E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentat	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00			x						
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Encelia farnosa	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Encelia farinosa	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50		x							
44.00									
44.50									
45.00									
45.50		x							
46.00		x							
46.50									
47.00		x							
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	4	1	**5%**

Transect : E3
Plot Size: 100 square meters
Total Density: 8
Total Diversity: 2

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	6
Larrea tridentata	2

Project Iron Age Mine **Transect** 4E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:	Plant:	Plant:
0.50			x						
1.00			x						
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00			x						
15.50			x						
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farnosa	Plant: Larrea tridentata	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:	Plant:	Plant:
17.50				x					
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:	Plant:	Plant:
35.50			x						
36.00			x						
36.50			x						
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:		7	1						**8%**

Transect : E4
Plot Size: 100 square meters
Total Density: 4
Total Diversity: 3

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	1
Larrea tridentata	2
Cylindropuntia ramosissima	1

Project Iron Age Mine **Transect** 5E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant:	Plant:	Plant:	Plant:	Plant:
0.50			x						
1.00			x						
1.50			x						
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00		x							
11.50		x							
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farnosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant:	Plant:	Plant:	Plant:	Plant:
17.50									
18.00									
18.50				x					
19.00				x					
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00		x							
27.50		x							
28.00		x							
28.50		x							
29.00		x							
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	**Bare Ground,Rocks, Debris**	**Plant:** Encelia farinosa	**Plant:** Larrea tridentata	**Plant:** Ambrosia dumosa	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	7	3	2		**12%**

Transect : E5
Plot Size: 100 square meters
Total Density: 10
Total Diversity: 4

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	5
Larrea tridentata	3
Ambrosia dumosa	1
Cylindropuntia ramosissima	1

Project Iron Age Mine **Transect** 6E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50			x						
8.00			x						
8.50			x						
9.00									
9.50									
10.00									
10.50					x				
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00					x				
16.50					x				
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farnosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00				x					
26.50				x					
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00		x							
33.50									
34.00									
34.50						x			
35.00						x			

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
35.50						x			
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50			x						
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									
Percent Cover:		1	4	2	3	3			**13%**

Transect : E6
Plot Size: 100 square meters
Total Density: 10
Total Diversity: 5

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	1
Larrea tridentata	2
Ambrosia dumosa	3
Cylindropuntia ramosissima	2
Krameria bicolor	2

Project Iron Age Mine **Transect** 7E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
0.50									
1.00									
1.50			x						
2.00			x						
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00			x						
8.50			x						
9.00			x						
9.50			x						
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50			x						
14.00			x						
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farnosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00			x						
26.50			x						
27.00			x						
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00			x						
34.50			x						
35.00									

Point # Meters	**Bare Ground,Rocks, Debris**	**Plant:** Encelia farinosa	**Plant:** Larrea tridentata	**Plant:** Ambrosia dumosa	**Plant:** Krameria bicolor	**Plant:** Cylindropuntia ramosissima	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	13	**13%**

Transect : E7
Plot Size: 100 square meters
Total Density: 6
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	
Larrea tridentata	6
Ambrosia dumosa	
Cylindropuntia ramosissima	
Krameria bicolor	

Project Iron Age Mine **Transect** 8E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00		x							
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00		x							
13.50									
14.00			x						
14.50									
15.00		x	x						
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farnosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50			x						
25.00			x						
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00			x						

Point # Meters	**Bare Ground,Rocks, Debris**	**Plant:** Encelia farinosa	**Plant:** Larrea tridentata	**Plant:** Ambrosia dumosa	**Plant:** Krameria bicolor	**Plant:** Cylindropuntia ramosissima	**Plant:**	**Plant:**	**Plant:**
35.50			x						
36.00			x						
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	3	7	0	0	0		**10%**

Transect : E8
Plot Size: 100 square meters
Total Density: 15
Total Diversity: 2

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	11
Larrea tridentata	4
Ambrosia dumosa	
Cylindropuntia ramosissima	
Krameria bicolor	

Project Iron Age Mine **Transect** 9E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
0.50									
1.00			x						
1.50			x						
2.00			x						
2.50			x						
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50			x						
8.00			x						
8.50			x						
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farnosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50			x						
20.00			x						
20.50			x						
21.00			x						
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00			x						
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	**Bare Ground,Rocks, Debris**	**Plant:** Encelia farinosa	**Plant:** Larrea tridentata	**Plant:** Ambrosia dumosa	**Plant:** Krameria bicolor	**Plant:** Cylindropuntia ramosissima	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00			x						
41.50			x						
42.00			x						
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50			x						
46.00			x						
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	17	**17%**

Transect : E9
Plot Size: 100 square meters
Total Density: 7
Total Diversity: 2

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	1
Larrea tridentata	6
Ambrosia dumosa	
Cylindropuntia ramosissima	
Krameria bicolor	

Project Iron Age Mine **Transect** 10E **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
0.50			x						
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50			x						
8.00			x						
8.50			x						
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farnosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50									
20.00			x						
20.50			x						
21.00			x						
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00			x						
29.50			x						
30.00			x						
30.50			x						
31.00			x						
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Encelia farinosa	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Cylindropuntia ramosissima	Plant:	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									
Percent Cover:		0	12	0	0	0			**12%**

Transect : E10
Plot Size: 100 square meters
Total Density: 7
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Encelia farinosa	
Larrea tridentata	7
Ambrosia dumosa	
Cylindropuntia ramosissima	
Krameria bicolor	

Project Iron Age Mine **Transect** 1C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50	x								
1.00	x								
1.50	x								
2.00	x								
2.50	x								
3.00	x								
3.50	x								
4.00	x								
4.50	x								
5.00	x								
5.50	x								
6.00	x								
6.50	x								
7.00	x								
7.50	x								
8.00	x								
8.50	x								
9.00	x								
9.50	x								
10.00	x								
10.50	x								
11.00	x								
11.50	x								
12.00	x								
12.50	x								
13.00		x							
13.50		x							
14.00	x								
14.50	x								
15.00	x								
15.50	x								
16.00	x								
16.50	x								
17.00	x								

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Encelia farinosa	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50	x								
18.00	x								
18.50	x								
19.00	x								
19.50	x								
20.00	x								
20.50		x							
21.00		x							
21.50		x							
22.00		x							
22.50	x								
23.00	x								
23.50	x								
24.00	x								
24.50	x								
25.00	x								
25.50	x								
26.00	x								
26.50	x								
27.00		x							
27.50		x							
28.00		x							
28.50		x							
29.00		x							
29.50	x								
30.00	x								
30.50	x								
31.00	x								
31.50	x								
32.00	x								
32.50	x								
33.00	x								
33.50	x								
34.00	x								
34.50	x								
35.00	x								

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Encelia farinosa	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50	x								
36.00	x								
36.50	x								
37.00		x							
37.50		x							
38.00		x							
38.50	x								
39.00	x								
39.50	x								
40.00	x								
40.50	x								
41.00	x								
41.50	x								
42.00	x								
42.50	x								
43.00	x								
43.50	x								
44.00	x								
44.50	x								
45.00		x							
45.50		x							
46.00	x								
46.50	x								
47.00	x								
47.50	x								
48.00	x								
48.50	x								
49.00	x								
49.50	x								
50.00	x								

Percent Cover:	16	**16%**

Transect : C1
Plot Size: 100 square meters
Total Density: 7
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	7

Project Iron Age Mine **Transect** 2C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00		x							
2.50									
3.00									
3.50		x							
4.00		x							
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00		x							
14.50		x							
15.00		x							
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
17.50									
18.00									
18.50		x							
19.00		x							
19.50		x							
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00		x							
23.50		x							
24.00		x							
24.50		x							
25.00		x							
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	14	**14%**

Transect : C3
Plot Size: 100 square meters
Total Density: 7
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	7

Project Iron Age Mine **Transect** 3C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50		x							
4.00		x							
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50		x							
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
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24.50									
25.00									
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27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00		x							
47.50		x							
48.00		x							
48.50									
49.00									
49.50									
50.00									

Percent Cover:	6	**6%**

Transect : 3C
Plot Size: 100 square meters
Total Density: 6
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	6

Project Iron Age Mine **Transect** 4C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00		x							
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00		x							
8.50		x							
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00		x							
27.50		x							
28.00		x							
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00		x							
33.50		x							
34.00		x							
34.50		x							
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
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41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	10	**10%**

Transect : 4C
Plot Size: 100 square meters
Total Density: 7
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	7

Project Iron Age Mine **Transect** 5C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50		x							
8.00		x							
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
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25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50		x							
30.00		x							
30.50		x							
31.00		x							
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
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42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	6	**6%**

Transect : 5C
Plot Size: 100 square meters
Total Density: 5
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	5

Project Iron Age Mine **Transect** 6C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00		x							
8.50		x							
9.00		x							
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00		x							
15.50		x							
16.00		x							
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50		x							
28.00		x							
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50		x							
33.00		x							
33.50		x							
34.00		x							
34.50		x							
35.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00		x							
37.50		x							
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	15	**15%**

Transect : 6C
Plot Size: 100 square meters
Total Density: 12
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	12

Project Iron Age Mine **Transect** 7C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50									
18.00									
18.50									
19.00									
19.50									
20.00		x							
20.50		x							
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50		x							
29.00		x							
29.50		x							
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	5	**5%**

Transect : 7C
Plot Size: 100 square meters
Total Density: 4
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	4

Project Iron Age Mine **Transect** 8C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00		x							
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50		x							
11.00		x							
11.50		x							
12.00		x							
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00		x							
29.50		x							
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50		x							
45.00		x							
45.50		x							
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	10	0	0	0	0		**10%**

Transect : 8C
Plot Size: 100 square meters
Total Density: 6
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	6

Project Iron Age Mine **Transect** 9C **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50		x							
9.00		x							
9.50		x							
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
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24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50		x							
32.00		x							
32.50									
33.00									
33.50		x							
34.00		x							
34.50		x							
35.00		x							

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50		x							
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	10	**10%**

Transect : 9C
Plot Size: 100 square meters
Total Density: 6
Total Diversity: 1

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	6

Project Iron Age Mine	**Transect** 10C	**Date** 5-1-2012	
Point Intercept Data Sheet-Cover, Density, Diversity	**Page**	**of**	

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant: Ambrosia dumosa	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00		x							
12.50		x							
13.00		x							
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant: Dumosa ambrosia	Plant:	Plant:	Plant:	Plant:	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00			x						
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	**Plant:** Larrea tridentata	**Plant:** Ambrosia dumoasa	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**	**Plant:**
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	3	1	**4%**

Transect : 10C
Plot Size: 100 square meters
Total Density: 4
Total Diversity: 2

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	3
Ambrosia dumosa	1

Project Iron Age Mine **Transect** 1W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: acacia gregii	Plant: Larrea tridentata	Plant: Psorothamnus spinosus	Plant: Senna armata	Plant: Krameria bicolor	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00		x							
16.50		x							
17.00		x							

Point # Meters	Bare Ground,Rocks, Debris	Plant: acacia gregii	Plant: Larrea tridentata	Plant: Psorothamnus spinosus	Plant: Senna armata	Plant: Krameria bicolor	Plant:	Plant:	Plant:
17.50		x							
18.00		x							
18.50		x							
19.00		x							
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50					x				
29.00					x				
29.50		x			x				
30.00		x			x	x			
30.50		x	x			x			
31.00			x			x			
31.50			x						
32.00									
32.50									
33.00									
33.50									
34.00			x						
34.50			x						
35.00			x						

Point # Meters	Bare Ground,Rocks, Debris	Plant: acacia gregii	Plant: Larrea tridentata	Plant: Psorothamnus spinosus	Plant: Senna armata	Plant: Krameria bicolor	Plant:	Plant:	Plant:
35.50			x						
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:		10	7		4	3			**19%**

Transect : 1W
Plot Size: 100 square meters
Total Density: 13
Total Diversity: 6

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Cylindropuntia ramosissima	1
Ambrosia dumosa	3
Larrea tridentata	2
Senna armata	4
Acacia gregii	2
Krameria bicolor	1

Project Iron Age Mine **Transect** 2W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Ambrosia salsosa	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50		x							
15.00		x							
15.50		x							
16.00		x							
16.50		x							
17.00		x							

Point # Meters	Bare Ground,Rocks, Debris	Plant: Ambrosia salsosa	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:
17.50		x							
18.00		x	x						
18.50		x	x						
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50				x					
26.00				x					
26.50				x					
27.00				x					
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Ambrosia salsosa	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50					x				
45.00					x				
45.50									
46.00									
46.50					x				
47.00					x				
47.50					x				
48.00					x				
48.50									
49.00									
49.50									
50.00									
Percent Cover:		9	2	4	6				**19%**

Transect : 2W
Plot Size: 100 square meters
Total Density: 14
Total Diversity: 6

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	3
Ambrosia dumosa	1
Ambosia salsosa	6
Ericameria sp.	1
Psorothamnus spinosus	1
Acacia gregii	2

Project Iron Age Mine **Transect** 3W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant: Ambrosia dumosa	Plant: Ericameria sp.	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant: Ambrosia dumosa	Plant: Ericameria sp.	Plant:
17.50									
18.00				x					
18.50				x					
19.00				x					
19.50				x					
20.00				x				x	
20.50				x				x	
21.00				x				x	
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50				x					
28.00				x		x			
28.50				x		x			
29.00				x					
29.50				x					
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00							x		
33.50							x		
34.00							x		
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant: Ambrosia dumosa	Plant: Ericameria sp.	Plant:
35.50									
36.00								x	
36.50								x	
37.00								x	
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00						x			
44.50						x			
45.00						x			
45.50						x			
46.00						x			
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									
Percent Cover:		0	0	12	0	7	3	6	**23%**

Transect : 3W
Plot Size: 100 square meters
Total Density: 21
Total Diversity: 5

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Ambrosia dumosa	7
Krameria bicolor	4
Acacia gregii	8
Ericameria sp.	1
Ambrosia salsola	1

Project Iron Age Mine **Transect** 4W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Psorothamnus spinosus	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Ephedra sp.	Plant: cylindropuntia ramosissima	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00		x							
14.50		x							
15.00		x	x						
15.50		x	x						
16.00		x	x						
16.50		x	x						
17.00		x	x						

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Psorothamnus spinosus	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Ephedra sp.	Plant: cylindropuntia ramosissima	Plant:	Plant:
17.50		x							
18.00		x							
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00		x							
22.50		x							
23.00		x							
23.50		x							
24.00		x							
24.50		x							
25.00		x							
25.50		x							
26.00		x				x			
26.50		x				x			
27.00						x			
27.50						x			
28.00						x			
28.50						x			
29.00						x			
29.50						x			
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Psorothamnus spinosus	Plant: Ambrosia dumosa	Plant: Krameria bicolor	Plant: Ephedra sp.	Plant: cylindropuntia ramosissima	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00							x		
47.50							x		
48.00							x		
48.50							x		
49.00									
49.50									
50.00									
Percent Cover:		19	5			8	4		**31%**

Transect : 4W
Plot Size: 100 square meters
Total Density: 26
Total Diversity: 4

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Cylindropuntia ramosissima	1
Ambrosia dumosa	6
Ephedra sp.	13
Acacia gregii	6

Project Iron Age Mine **Transect** 5W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Ephedra sp.	Plant:	Plant:	Plant:	Plant:
0.50		x							
1.00		x							
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50			x						
10.00			x						
10.50			x						
11.00			x						
11.50			x						
12.00			x						
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Ephedra sp.	Plant:	Plant:	Plant:	Plant:
17.00									
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50				x					
24.00					x				
24.50					x				
25.00					x				
25.50					x				
26.00					x				
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Ephedra sp.	Plant:	Plant:	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									
Percent Cover:		2	6	1	5				**14%**

Transect : 5W
Plot Size: 100 square meters
Total Density: 25
Total Diversity: 6

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Ambrosia dumosa	3
Larrea tridentata	1
Ephedra sp.	15
Ambrosia salsola	4
Psorothamnus spinosus	1
Acacia gregii	1

Project Iron Age Mine **Transect** 6W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Ephedra sp.	Plant: Ambrosia dumosa	Plant:	Plant:
0.50		x							
1.00		x							
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00			x						
14.50			x						
15.00			x						
15.50			x						
16.00			x						
16.50									
17.00			x						

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Ephedra sp.	Plant: Ambrosia dumosa	Plant:	Plant:
17.50			x						
18.00			x						
18.50			x						
19.00			x						
19.50			x						
20.00			x						
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00				x					
28.50				x		x			
29.00					x	x			
29.50					x	x			
30.00					x	x			
30.50					x	x			
31.00					x	x			
31.50									
32.00									
32.50									
33.00									
33.50									
34.00						x			
34.50						x			
35.00						x			

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant: Psorothamnus spinosus	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Ephedra sp.	Plant: Ambrosia dumosa	Plant:	Plant:
35.50						x			
36.00		x				x			
36.50		x							
37.00									
37.50									
38.00									
38.50									
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00							x		
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									
Percent Cover:		4	12	2	5	11	1		**32%**

Transect : 6W
Plot Size: 100 square meters
Total Density: 28
Total Diversity: 7

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Ambrosia dumosa	5
Ephedra sp.	15
Larrea tridentata	2
Acacia gregii	1
Ambrosia salsola	2
Psorothamnus spinosus	2
Ericameria sp.	1

Project Iron Age Mine **Transect** 7W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant: Bebbia juncea	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Ephedra sp.	Plant: Krameria bicolor	Plant:	Plant:
0.50									
1.00		x							
1.50		x							
2.00									
2.50									
3.00			x						
3.50			x						
4.00			x						
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00				x	x				
10.50				x	x				
11.00				x	x				
11.50				x	x				
12.00				x	x				
12.50				x	x				
13.00					x				
13.50					x				
14.00					x				
14.50					x				
15.00					x				
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant: Bebbia juncea	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Ephedra sp.	Plant: Krameria bicolor	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
24.00									
24.50									
25.00									
25.50									
26.00									
26.50									
27.00									
27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00		x				x	x		
33.50		x				x	x		
34.00		x				x	x		
34.50		x				x	x		
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Larrea tridentata	Plant: Bebbia juncea	Plant: Ambrosia salsola	Plant: Acacia gregii	Plant: Ephedra sp.	Plant: Krameria bicolor	Plant:	Plant:
35.50									
36.00									
36.50									
37.00									
37.50							x		
38.00							x		
38.50							x		
39.00							x		
39.50		x							
40.00		x							
40.50		x							
41.00		x							
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									
Percent Cover:		10	3	6	11	4	8		**28%**

Transect : 7W
Plot Size: 100 square meters
Total Density: 14
Total Diversity: 7

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	5
Krameria bicolor	2
Ephedra sp.	1
Acacia gregii	1
Ambrosia dumosa	1
Ericameria sp.	1
Ambrosia salsola	1

Project Iron Age Mine **Transect** 8W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
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10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant:	Plant:	Plant:	Plant:	Plant:
17.50									
18.00									
18.50									
19.00									
19.50									
20.00									
20.50									
21.00									
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27.50									
28.00									
28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00		x							
34.50		x							
35.00		x							

Point # Meters	Bare Ground,Rocks, Debris	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant:	Plant:	Plant:	Plant:	Plant:
35.50		x							
36.00									
36.50									
37.00									
37.50									
38.00									
38.50			x						
39.00			x						
39.50			x						
40.00			x						
40.50			x						
41.00									
41.50									
42.00									
42.50				x					
43.00									
43.50									
44.00			x						
44.50			x						
45.00			x						
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									
Percent Cover:		4	8	1					**13%**

Transect : 8W
Plot Size: 100 square meters
Total Density: 13
Total Diversity: 5

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Krameria bicolor	5
Ambrosia dumosa	2
Larrea tridentata	3
Ericameria sp.	1
Acacia gregii	2

Project Iron Age Mine **Transect** 9W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00		x							
3.50		x							
4.00		x							
4.50		x							
5.00		x							
5.50		x							
6.00									
6.50									
7.00									
7.50									
8.00									
8.50									
9.00									
9.50									
10.00									
10.50									
11.00									
11.50									
12.00									
12.50									
13.00									
13.50									
14.00									
14.50		x							
15.00		x							
15.50		x							
16.00		x							
16.50		x							
17.00		x	x						

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant:	Plant:	Plant:	Plant:
17.50		x	x						
18.00		x	x						
18.50		x							
19.00		x							
19.50		x							
20.00		x							
20.50									
21.00									
21.50									
22.00									
22.50									
23.00									
23.50									
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27.50									
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28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant: Krameria bicolor	Plant:	Plant:	Plant:	Plant:
35.50									
36.00									
36.50			x	x					
37.00			x	x					
37.50			x	x					
38.00			x	x					
38.50		x		x					
39.00		x							
39.50		x							
40.00		x							
40.50		x							
41.00		x							
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50					x				
49.00									
49.50									
50.00									

Percent Cover:		24	7	5	1				**32%**

Transect : 9W
Plot Size: 100 square meters
Total Density: 15
Total Diversity: 5

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Krameria bicolor	3
Ambrosia dumosa	2
Acacia gregii	6
Larrea tridentata	2
Ericameria sp.	2

Project Iron Age Mine **Transect** 10W **Date** 5-1-2012

Point Intercept Data Sheet-Cover, Density, Diversity **Page** **of**

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:
0.50									
1.00									
1.50									
2.00									
2.50									
3.00									
3.50									
4.00									
4.50									
5.00									
5.50									
6.00									
6.50									
7.00									
7.50									
8.00									
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9.00									
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13.00									
13.50									
14.00									
14.50									
15.00									
15.50									
16.00									
16.50									
17.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:
17.50									
18.00									
18.50		x							
19.00		x							
19.50		x							
20.00		x							
20.50		x							
21.00									
21.50									
22.00									
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28.50									
29.00									
29.50									
30.00									
30.50									
31.00									
31.50									
32.00									
32.50									
33.00									
33.50									
34.00									
34.50									
35.00									

Point # Meters	Bare Ground,Rocks, Debris	Plant: Acacia gregii	Plant: Ericameria sp.	Plant: Larrea tridentata	Plant:	Plant:	Plant:	Plant:	Plant:
35.50			x						
36.00			x						
36.50									
37.00									
37.50									
38.00									
38.50				x					
39.00									
39.50									
40.00									
40.50									
41.00									
41.50									
42.00									
42.50									
43.00									
43.50									
44.00									
44.50									
45.00									
45.50									
46.00									
46.50									
47.00									
47.50									
48.00									
48.50									
49.00									
49.50									
50.00									

Percent Cover:	5	2	1	**8%**

Transect : 10W
Plot Size: 100 square meters
Total Density: 4
Total Diversity: 4

Plant Count/Density (#Shrubs per plant): **Herbs Recorded:**

Plant Name	Plant Count
Larrea tridentata	1
Krameria bicolor	1
Ericameria sp.	1
Acacia gregii	1