



# UtahAmerican Energy, Inc.

August 24, 2004

Pam Grubaugh-Littig  
Permit Supervisor  
Utah Division of Oil, Gas & Mining  
Coal Program  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

*Incoming  
C/007/0013  
Task ID#2022*

Re: 04-006 HORSE CANYON REVEGATION STANDARDS CLAIRIFICATION,  
ADDRESS CHANGE, LIABILITY INSURANCE UPDATE

Dear Ms. Grubaugh-Littig,

Enclosed you will find (4) copies of changes UEI would like to make in the Horse Canyon Permit C/007/013.

Copies of the updated certificate of liability insurance has been submitted for review. Revisions to the revegetation standards, as suggested by the Phase II bond release, have also been submitted for review. The Corporate Office address has been changed and is reflected in the changed text. .

Should you have any questions please call.

Sincerely,

*R. Jay Marshall*  
R. Jay Marshall  
Project Manager

File in:

- Confidential
- Shelf
- Expandable

Refer to Record No. 0043, Date 08242004  
In C 0070013.2004 Incoming  
For additional information

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AUG 26 2004

DIV. OF OIL, GAS & MINING

**APPLICATION FOR COAL PERMIT PROCESSING**

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

**Permittee:** UtahAmerican Energy, Inc.

**Line:** Horse Canyon

**Permit Number:** C/007/013

**Title:** Horse Canyon Revegetation Standards Clarification, Address Change, Liability Insurance Update

**Description:** Include reason for application and timing required to implement:

Phase III bond release items needed to be cleaned up, corporate address change, liability insurance update

**Instructions:** If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- Yes  No 1. Change in the size of the Permit Area? Acres: \_\_\_\_\_ Disturbed Area: \_\_\_\_\_  increase  decrease.
- Yes  No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_
- Yes  No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes  No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes  No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes  No 6. Does the application require or include public notice publication?
- Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- Yes  No 10. Is the application submitted as a result of other laws or regulations or policies?  
*Explain:* Addresses Phase II bond release comments
- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes  No 13. Does the application require or include collection and reporting of any baseline information?
- Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes  No 15. Does the application require or include soil removal, storage or placement?
- Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes  No 19. Does the application require or include certified designs, maps or calculation?
- Yes  No 20. Does the application require or include subsidence control or monitoring?
- Yes  No 21. Have reclamation costs for bonding been provided?
- Yes  No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

**Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you.** (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

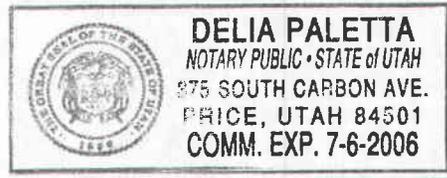
R. Jay Marshall  
Print Name

R. Jay Marshall Project Manager 8/27/04  
Sign Name, Position, Date

Subscribed and sworn to before me this 24<sup>th</sup> day of AUGUST, 2004

Delia Paletta  
Notary Public

My commission Expires: 7-6, 2004  
Attest: State of UTAH } ss:  
County of CARBON



|                                    |   |  |
|------------------------------------|---|--|
| <p><b>For Office Use Only:</b></p> | <p><b>Assigned Tracking Number:</b></p> | <p><b>Received by Oil, Gas &amp; Mining</b></p> <p align="center"><b>RECEIVED</b></p> <p align="center"><b>AUG 26 2004</b></p> <p align="center">DIV. OF OIL, GAS &amp; MINING</p> |
|------------------------------------|---|--|





October 11, 1996

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NOV 10 2004

William W. Engels  
Department of Water and Power  
City of Los Angeles  
111 No. Hope Street, Room 1164  
Los Angeles, California 90012

DIV. OF OIL, GAS & MINING

RE: Horse Canyon Revegetation Monitoring Report

Dear Bill:

The revegetation monitoring report for Year 5 at Horse Canyon has been completed. I have enclosed three copies for you and also mailed a copy to Chris Hansen of Earth Fax. Chris will need this information for the Phase II Bond Release.

The results of the survey indicate that while this was a dry year, the revegetation at Horse Canyon is doing well and exceeds the goals for final bond release. The total vegetative cover in the revegetated areas ranged from 47 to 55 percent, well above the 33 percent required for bond release. The shrub density ranged from 2,744 to 6,181 plants per acre which compares favorably with the bond release goal of 3,000 plants per acre. The monitoring in Year 5 also establishes that the shrubs have persisted for five years and probably should be present for Year 9 when the next monitoring is due.

The data for the reference area is also included in this report.

Sincerely,

*Joseph M. Jarvis* *sm*

Joseph M. Jarvis  
President

cc: Chris Hansen, Earth Fax

**INTERMOUNTAIN POWER AGENCY  
HORSE CANYON REFERENCE AREA AND  
REVEGETATION AREAS  
VEGETATION STUDY**

**October 11, 1996**

**Prepared for:**

**Department of Water and Power  
City of Los Angeles  
111 North Hope Street, RM 1161  
Los Angeles, CA 90012**

**Prepared by:**

**JBR Consultants Group  
8160 So. Highland Dr. #A-4  
Sandy, UT 84093**

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# HORSE CANYON REFERENCE AREA AND REVEGETATION AREAS VEGETATION STUDY

## 1.0 Introduction

A vegetation study was conducted by JBR Consultants Group at the Horse Canyon reclamation treatment area and the vegetation reference area in August, 1996. Reclamation of mining related disturbances was done in the fall, 1991. The reference area was established as part of the Utah Division of Oil, Gas and Mining (DOG M) permitting requirements in 1985. The purpose of the study was to quantitatively and qualitatively sample the pinyon-juniper woodland within the reference area and representative revegetated sites with respect to plant species composition, cover, and woody species density. This study was completed to fulfill the sampling requirement for year five of reclamation and to substantiate that the vegetation reclamation requirements were met for Phase II bond release.

Vegetation sampling methods were designed in accordance with the February, 1992 Revised DOGM Vegetation Information Guidelines, and with the prior vegetation study done at the reference area in 1985, 1991 and 1993. These methods are described below. Results of the study are presented as well.

Precipitation information for the Horse Canyon area was obtained from monthly records for the closest weather station at the USDI Bureau of Land Management, Price Office. The average annual precipitation for 1996 was 7.94 inches and monthly precipitation for the 1996 water year, October, 1995 through September, 1996 was as follows:

|               |             |           |             |
|---------------|-------------|-----------|-------------|
| October, 1995 | 0.02 inches | April     | 0.33 inches |
| November      | 0.00        | May       | 1.58        |
| December      | 0.42        | June      | 0.45        |
| January, 1996 | 0.73        | July      | 0.34        |
| February      | 0.32        | August    | 0.02        |
| March         | 1.46        | September | 2.27        |

Annual precipitation for 1996 was 79 percent of the 30 year average. The 30 year average annual precipitation is 9.99 inches.

## 2.0 Vegetation Sampling

### 2.1 Location of Sample Sites

Transects were located randomly throughout the 3.4-acre reference area and six revegetated areas. Each transect was considered to represent one sample.

The revegetation areas chosen for sampling were selected on the basis of revegetation treatment, slope, aspect and general topographic similarities. The sampled revegetated areas correspond to reclamation treatment areas identified in the Reclamation Plan as follows:

|                    |                                      |
|--------------------|--------------------------------------|
| Areas 15 and 17    | Former refuse pile and landfill area |
| Area 16            | Borrow pit area                      |
| Areas 11,13,and 14 | Flat topography near canyon mouth    |
| Area 3             | North facing slope                   |
| Area 6             | South facing slope                   |
| Area 7             | Rabbitbrush treatment area           |

Fifteen samples were taken in each area for a total of 75 samples within the revegetation area. This combined data, excluding Area 7 data, was used to determine the overall success of the revegetation area. Sample adequacy was met at the 90% confidence level with a 10% change in the mean as required by DOGM.

### 2.2 Quantitative Sample Types

The point-intercept method was used to sample cover. Points were observed every two feet along a transect 100 feet in length. Vegetation species, or presence of rock, litter, or bare ground was recorded at each point. Dead, mostly decayed organic matter that was still attached to the ground was counted as litter rather than as live vegetation; organic matter that was dried, attached, but not decayed was counted as vegetation. The fifty-point sample was then used to calculate percent cover statistics for the site. Fifteen cover transects were sampled in each of the revegetation sites, for a total of 90 samples. A total of 31 cover transects was sampled in the reference area.

Shrub densities were estimated using a 0.05-acre macroplot within the revegetation area. These macroplots were in the shape of a Lindsey elbow, with two 10 x 100 foot plots at a right angle

to each other. All individual shrubs rooted in the plots were counted. Fifteen Lindsey elbows were sampled in each of the revegetated sites, (except for Area 7, rabbitbrush treatment area) a total of 90 in the entire revegetation area. The total number of shrub plants per acre was calculated.

### 2.3 Qualitative Sample Types

Observations were made at each of the six revegetation sampling areas. Notes were made recording growth, species success, soil conditions, erosion, livestock or wildlife use, insect damage, and/or other special conditions. Photo stations were also visited.

### 2.4 Data Analysis

All data obtained from cover and density sampling were checked for completeness, and statistical information was generated. The Jaccard's Community Coefficient was used to compare similarity of each of the revegetated sites with the reference area.

For each transect sampled, percent cover was recorded separately for each vegetative species, and the ground cover components of litter, rock and bare ground. Additionally, presence of cryptogamic soil was recorded within the reference area. The 50 points along a transect were considered to represent one sample. The data for all transects within the reference area and revegetated sites were averaged to provide mean cover values.

### 3.0 Discussion of the Results

Appendix I provides color photos of photo stations. Appendix II provides location maps of sample transects. Appendices III-V provide sampling results for both cover and shrub density for the revegetation area and cover data for the reference area, as listed below. Following is a summary of these results.

|              |  |
|--------------|--|
| Appendix I   | Photo Stations   |
| Appendix II  | Horse Canyon Revegetation and Reference Areas - Sample Location Maps |
| Appendix III | Horse Canyon Revegetation Areas - Percent Cover Data                 |
| Appendix IV  | Horse Canyon Reference Area - Percent Cover Data                     |
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### 3.1 Revegetation Areas

The average vegetation cover in the six revegetation areas ranged from 47 to 55 percent, with species makeup generally quite consistent among the six sites. Grasses were the dominant plant form, followed by shrubs. Forbs were very low in numbers due to the abnormally low precipitation during the early growing season. Also, introduced species such as *Melilotus officinalis* and *Medicago sativa* have been reduced greatly as expected under native range climatic conditions. It should be noted that Area 7 was left out of combined data calculations due to the different treatment of this area. Area 7 is the rabbitbrush treatment area and was handled separately when calculations were combined for an overall cover and shrub density figure for the revegetation area.

*Atriplex canescens* and *Artemisia tridentata tridentata* shared dominance as the shrub species. *Agropyron spicatum* was the dominant grass.

Shrub density ranged from 2744-6181 plants per acre with a mean of 4773 plants per acre. Dominant shrubs did have young recruitment, *Artemisia tridentata tridentata* and *Atriplex canescens* plants.

#### Area 15-17

Total vegetation cover averaged 53.5 percent for the 15 sample sites within Area 15-17. Of this amount grasses comprised of 61 percent of total vegetation, shrubs 39 percent and forbs <1 percent.

Shrub density averaged 5248 plants/acre, with the dominance being shared by *Artemisia tridentata* and *Atriplex canescens*.

#### Area 16

Total vegetation cover averaged 53.4 percent for the 15 sample sites within Area 16. Of this amount, grasses comprised of 72 percent of the total vegetation, shrubs 27 and forbs 1 percent.

Shrub density averaged 5116 plants/acre, with the dominance being shared by *Artemisia tridentata* and *Atriplex canescens*.

### Area 3

Total vegetation cover averaged 54.5 percent for the 15 sample sites within Area 3. Of this amount grasses comprised 59 percent of the total vegetation, shrubs 40 percent and forbs 1 percent.

Shrub density average 2744 plants/acre, with the dominant being *Atriplex canescens*.

### Area 6

Total vegetation cover averaged 47.1 percent for the 15 sample sites within Area 6. Of this amount, grasses comprised 63 of the total vegetation, shrubs 35 percent and forbs 2 percent.

Shrub density averaged 6181 plants/acre, with the dominant being *Artemisia tridentata tridentata*.

### Area 7

Total vegetation cover averaged 51.2 percent for the 15 sample sites within Area 7. Of this amount, shrubs comprised of 65 percent of the total vegetation, grasses 35 percent and shrubs < 1 percent.

### Areas 11, 13 & 14

Total vegetation cover averaged 47.5 percent for the 15 sample sites within Areas 11, 13 & 14. Of this amount, grasses comprised of 54 percent of the total vegetation, shrubs 44 percent and forbs 2 percent.

Shrub density averaged 4144 plants/acre, with the dominant being *Atriplex canescens*.

## **3.2 Reference Area**

Total vegetation cover at the reference area averaged 36.3 percent. Of this amount, trees comprised 56.4 percent, shrubs 5.6 percent, forbs 1.8 percent, grasses 36.0 percent and succulents 0.4 percent. *Juniperus osteosperma* was the dominant tree species, *Xanthocephalum sarothrae* was the dominant shrub species, and *Elymus salinus* was the dominant grass species recorded during the survey. There was no dominant forb or succulent species.

As a target of 3000 shrub plants per acre was established for the reference area, it was not necessary to sample shrub/tree density as an index for comparison with revegetation areas.

### 3.3 Comparison of Revegetation Areas with Reference Area

The Jaccard's Community Coefficient was calculated as a measure of the similarity of each of the revegetated sites with the reference area. The index can range from 1 to 100, with an index of 0 representing sites with no species in common and thus very dissimilar, and an index of 100 representing sites that have all the same species and thus are very similar. As the data table shows, the similarity ranged from 6.9 to 14.3, indicating that the sites have some species in common, but not a majority. This is expected given the differences in species in the recently seeded area with those present in the native reference area.

A comparison of vegetative cover in the six revegetated sites (ranging from 47.1 to 54.5 percent) with the 1996 reference area survey (36.3 percent) shows that a much greater cover is present on the revegetated sites. As specified in the reclamation plan, the revegetation will be considered successful when vegetative cover and diversity are within 90% of the undisturbed communities at a 90% statistical confidence. The vegetative cover mean for the reference area at the 90% confidence level is 36.3 percent cover. The vegetative cover mean for the combined data for the revegetated areas at the 90% confidence level is 51.4 percent cover.

$$36.3\% \times (90\%) = 32.7\%$$

The 51.4 percent vegetative cover in the revegetation areas is greater than the required 32.7 percent vegetative cover in the reference area (90 percent of the undisturbed communities). Therefore vegetation cover has been met by the reclamation effort on the revegetation areas at Horse Canyon.

A comparison of shrub density in the six revegetated sites (ranging from 2744 to 6181 plants/acre, with a mean of 4773 plants/acre) with the target of 3000 plants per acre in the reclamation plan indicates that the target has been met for shrub density in the reclamation site, except for Area 3 (2,744 plants/acre). Further, success of this site is illustrated by the establishment for five years, the majority of the plants are mature, producing seed and plants have survived both good and poor precipitation years. Shrub density on the revegetated sites met the goal of 3,000 plants/acre at a 90% statistical confidence in order to be considered successful.

### 3.4 Qualitative Samples

Overall qualitative observations indicate that there is little or no soil movement due to erosion. This is due to the high percentage of ground cover, soil binding plants that have been established such as grasses and the relatively low precipitation that has taken place during the previous spring and summer months.

For the most part grasses and shrubs have very little seed production due to the drought over the growing season. Few shrubs have been able to produce seed, however these are isolated plants that have a microclimate that would have concentrated any available moisture. Overall, grass and shrub species are healthy and stable. Due to the lack of moisture and the present drought year, plants have very low annual production.

The forbs are for the most part absent. The low precipitation eliminated much of the introduced species over the last couple of years, such as *Melilotus officinalis* and *Medicago sativa*. *Melilotus officinalis* is generally a part of a revegetation mixture for quick establishment and site stabilization, however, as a biannual, is soon eliminated and out competed by natives and more adapted introduced species. *Medicago sativa* is a long-lived species and its decline may be due to the dense grass cover.

Shrub density has been greatly reduced over the years, as expected. The early establishment years were high in seedling numbers, however, stronger individuals out competed and established fewer mature plants on the site.

Overall there has been a decrease in *Chrysothamnus viscidiflorus* and *Chrysothamnus nauseosus*, the leaves show signs of some sort of insect damage, however this is not conclusive. Further, these sites are not typical *Chrysothamnus* spp. sites and these plants are apparently out competed by better adapted species such as *Artemisia tridentata tridentata* and *Atriplex canescens*.

Litter is lower in some areas due to the lack of annual production. In past years *Bromus tectorum* contributed significantly to annual litter production.

## Area 6

An odd utilization pattern that follows the old road in this site indicates that grazing has taken place by a feral cow and/or calf. Cow manure is present on site as well.

### 3.5 Sample Adequacy Calculations

To determine the number of transects required to adequately sample the vegetation in the reference area, the formula presented in the DOGM guidelines was used.

A 90 percent confidence level, with a 10 percent change in the mean was used to determine sample adequacy levels for both cover and density parameters. Results of the adequacy tests are shown in the following tables. Only the vegetation cover values were used in the cover parameter sample adequacy calculations.

| SAMPLE ADEQUACY INFORMATION<br>HORSE CANYON REVEGETATION AREA 15-17 |    |        |        |           |
|---|----|--------|--------|-----------|
| Parameter   | n  | Mean   | Std    | $n_{min}$ |
| Cover   | 15 | 53.5   | 10.8   | 6.4       |
| Shrub Density   | 15 | 5247.5 | 2293.9 | 34.9      |

| SAMPLE ADEQUACY INFORMATION<br>HORSE CANYON REVEGETATION AREA 16 |    |        |        |           |
|--|----|--------|--------|-----------|
| Parameter  | n  | Mean   | Std    | $n_{min}$ |
| Cover  | 15 | 53.4   | 6.8    | 2.9       |
| Shrub Density  | 15 | 5115.6 | 2744.3 | 54.3      |

| SAMPLE ADEQUACY INFORMATION<br>HORSE CANYON REVEGETATION AREA 3 |    |        |        |           |
|---|----|--------|--------|-----------|
| Parameter   | n  | Mean   | Std    | $n_{min}$ |
| Cover   | 15 | 54.5   | 14.2   | 12.4      |
| Shrub Density   | 15 | 2744.4 | 1169.2 | 32.8      |

| SAMPLE ADEQUACY INFORMATION<br>HORSE CANYON REVEGETATION AREA 6 |    |        |        |           |
|---|----|--------|--------|-----------|
| Parameter   | n  | Mean   | Std    | $n_{min}$ |
| Cover   | 15 | 47.1   | 13.4   | 14.5      |
| Shrub Density   | 15 | 6181.2 | 1626.5 | 12.6      |

| SAMPLE ADEQUACY INFORMATION<br>HORSE CANYON REVEGETATION AREA 7 |      |      |     |           |
|---|------|------|-----|-----------|
| Parameter   | n    | Mean | Std | $n_{min}$ |
| Cover   | 15   | 51.2 | 9.2 | 5.8       |
| Shrub Density   | None | n/a  | n/a | n/a       |

| SAMPLE ADEQUACY INFORMATION<br>HORSE CANYON REVEGETATION AREA 11,13,14 |    |        |        |           |
|--|----|--------|--------|-----------|
| Parameter  | n  | Mean   | Std    | $n_{min}$ |
| Cover  | 15 | 47.5   | 13.2   | 13.8      |
| Shrub Density  | 15 | 4144.0 | 3217.8 | 110.5     |

| SAMPLE ADEQUACY INFORMATION<br>HORSE CANYON REVEGETATION AREA<br>COMBINED DATA |    |        |        |                  |
|--|----|--------|--------|------------------|
| Parameter  | n  | Mean   | Std    | n <sub>min</sub> |
| Cover  | 75 | 51.4   | 12.1   | 13.8             |
| Shrub Density  | 75 | 4773.0 | 2549.6 | 50.3             |

| SAMPLE ADEQUACY INFORMATION<br>HORSE CANYON REFERENCE AREA |      |      |      |                  |
|--|------|------|------|------------------|
| Parameter  | n    | Mean | Std  | n <sub>min</sub> |
| Cover  | 31   | 36.3 | 12.4 | 19.7             |
| Tree/Shrub   | None | n/a  | n/a  | n/a              |

### 3.6 Similarity Index

The Jaccard's Community Coefficient was used to compare similarity of each of the revegetated sites with the reference area.

| JACCARD'S COMMUNITY COEFFICIENT<br>Horse Canyon Revegetation |    |    |   |                  |
|--|----|----|---|------------------|
| Revegetation Community                                       | a  | b  | c | Similarity Index |
| Area 15-17   | 16 | 16 | 3 | 10.3             |
| Area 16  | 12 | 16 | 2 | 7.7              |
| Area 3   | 12 | 16 | 2 | 7.7              |
| Area 6   | 15 | 16 | 2 | 6.9              |
| Area 7   | 16 | 16 | 4 | 14.3             |
| Area 11, 13, & 14  | 11 | 16 | 2 | 8.0              |
| Combined Data  | 20 | 16 | 3 | 9.1              |

Jaccard's Community Coefficient:

$$\text{Similarity Index} = \frac{\text{common species}}{\text{total species}} \times 100 \quad \text{or} \quad \text{SI} = \frac{c}{a + b - c} \times 100$$

Where:      SI = Similarity Index

a = Total number of species in revegetated community

b = Total number of species in reference community

c = Number of species common to both communities

**APPENDIX I**

**Horse Canyon  
1996 Photo Stations**

# HORSE CANYON AREA 3



# HORSE CANYON AREA 6



# HORSE CANYON AREA 10



# HORSE CANYON BORROW PIT SLOPE

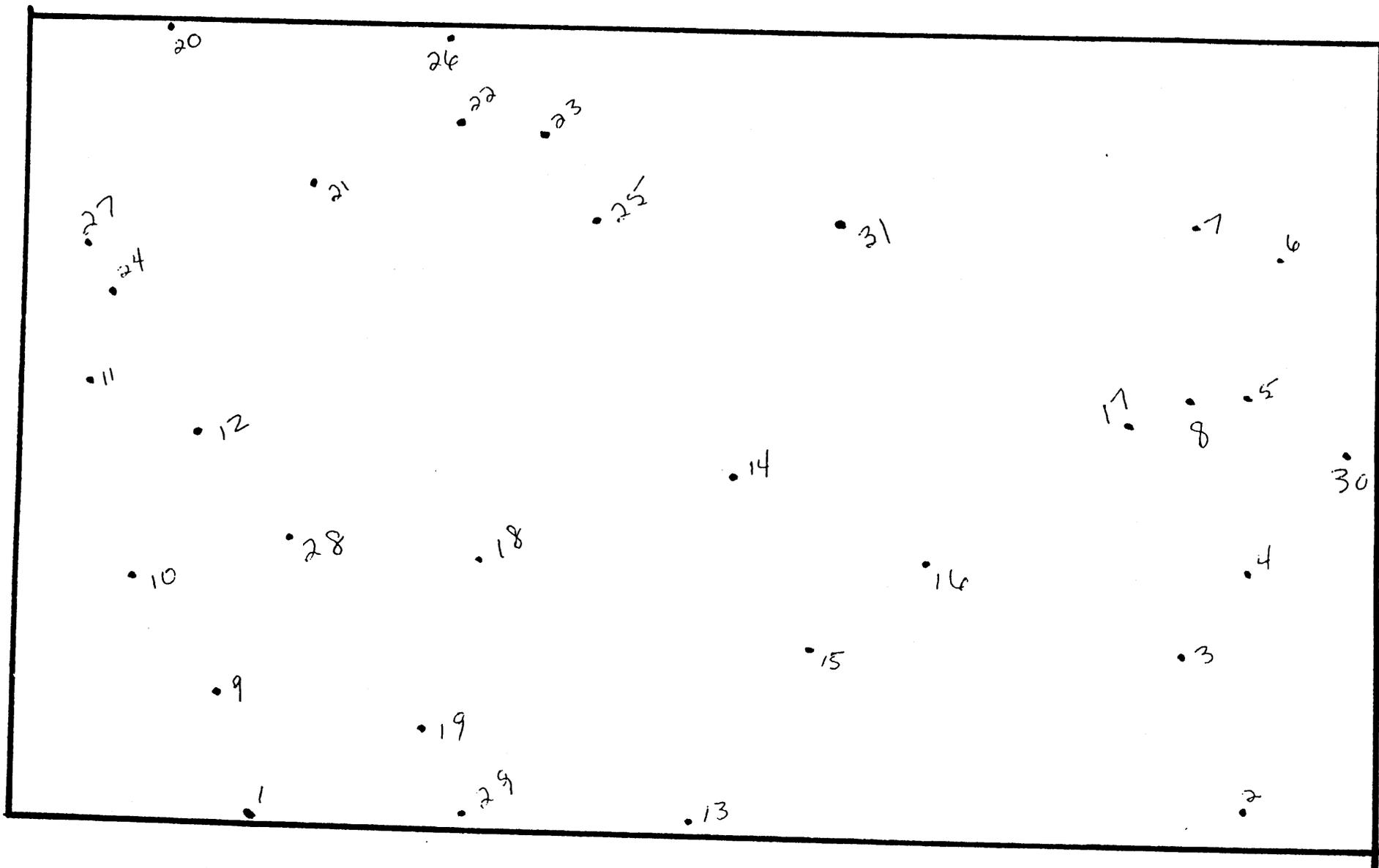


# HORSE CANYON BORROW PIT FLAT



**APPENDIX II**

**Horse Canyon Reference Area and Revegetation Area  
Sample Location Maps**



HORSE CANYON  
REFERENCE AREA

1996 SAMPLE SITES

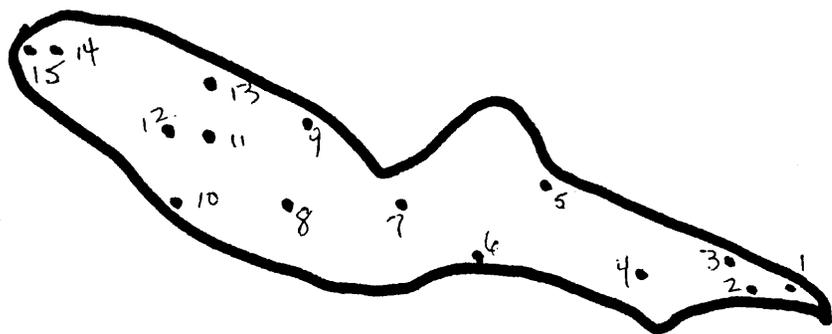
RECOLLECTION AREA 3

Alfred Canyon

N ↓



1996 Summer Points

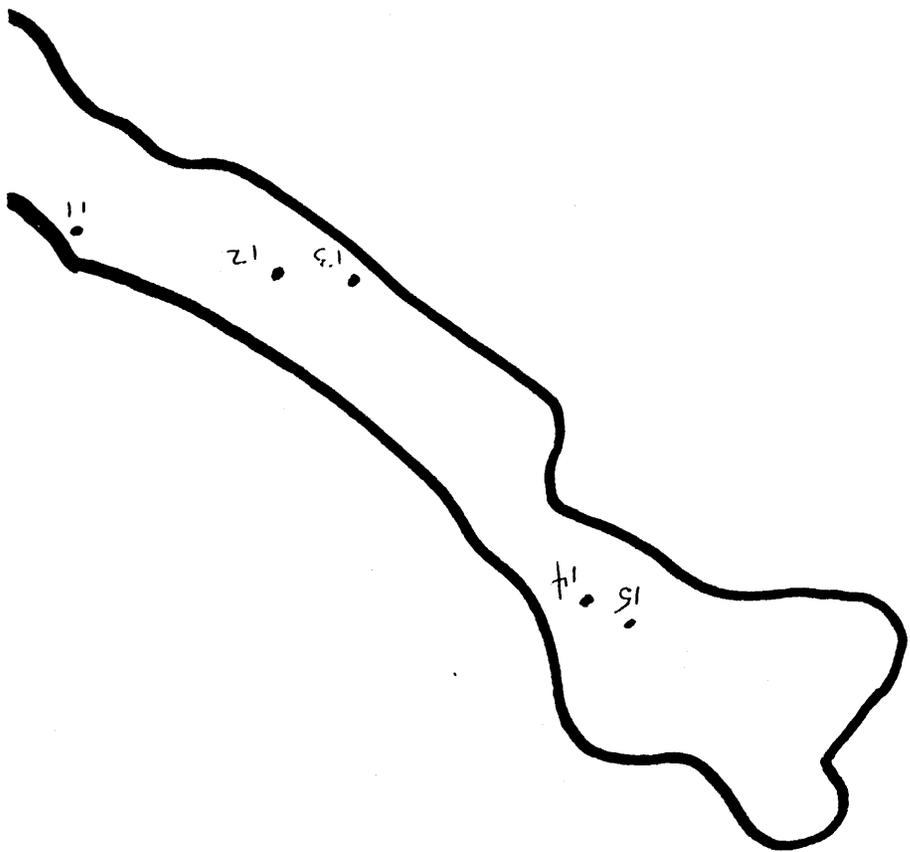


Horst Canyon  
REVEGETATION AREA 6  
1996 SAMPLE SITES

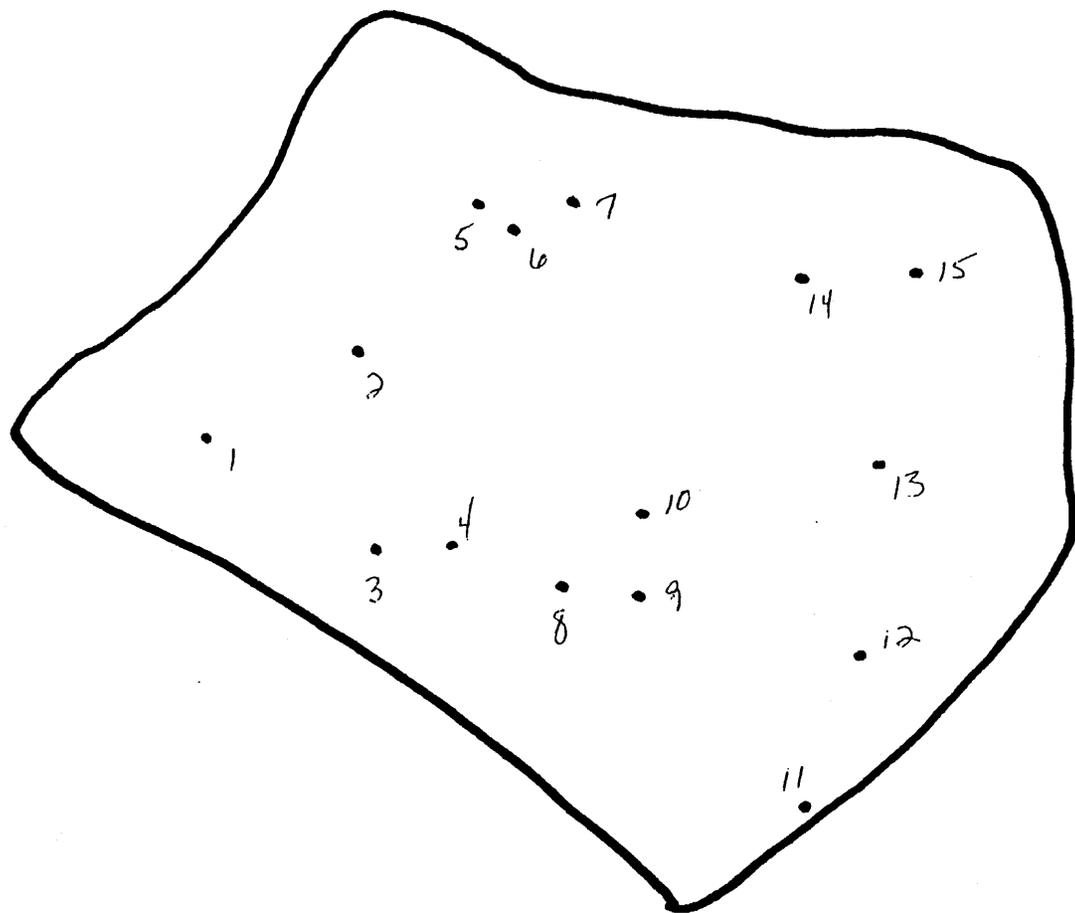


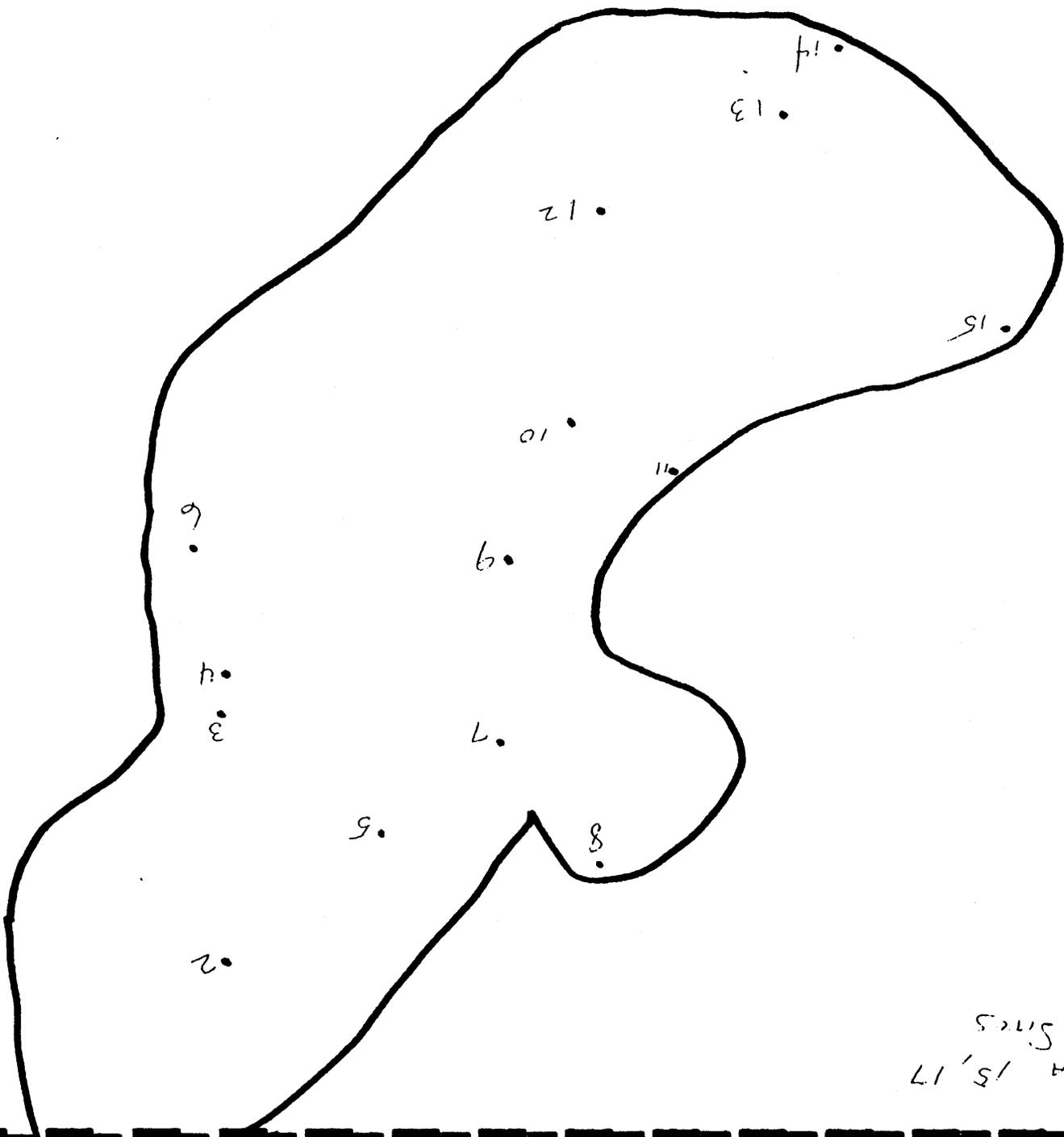
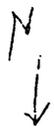
HORSE CANYON  
REVEGETATION AREA 11, 13 & 14  
1996 SAMPLE SITES



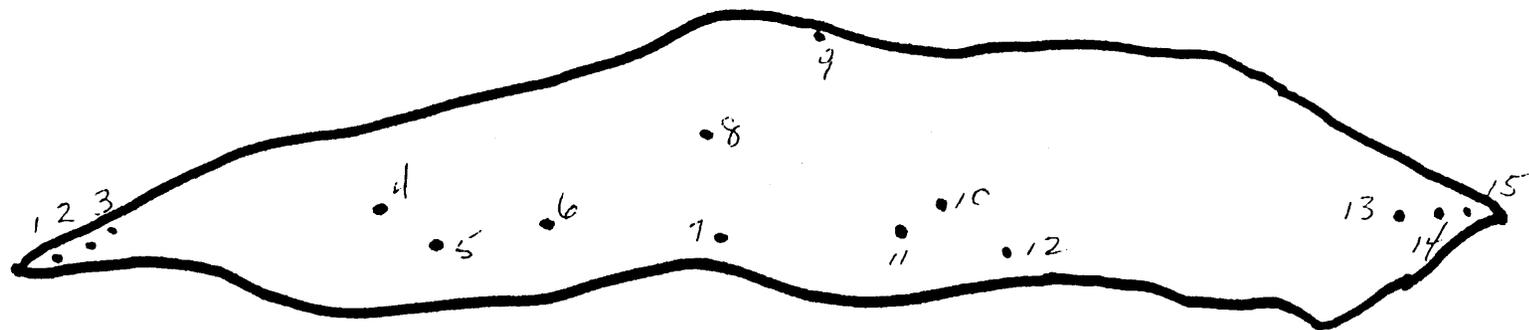


REVEGETATION AREA 16  
1996 SAMPLE SITES





Alfred Canyon  
Revegetation Area 15, 17  
1996 Sample Sites



HERSE CANYON

REVEGETATION AREA 7

RABBIT BRUSH TREATMENT AREA

1996 SAMPLE SITES

**APPENDIX III**

**Horse Canyon Revegetation Areas  
Percent Cover Data**

Horse Canyon Revegetation Area  
Percent Cover Data (Area 11, 13 & 14)

| PLANT SPECIES                   | STAND     |           |           |           |           |           |           |           |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                 | 1         | 2         | 3         | 4         | 5         | 6         | 7         | 8         |
| <b>Shrubs</b>                   |           |           |           |           |           |           |           |           |
| Atriplex canescens              | 14        | 22        | 34        | 18        | 12        | 4         | 8         | 18        |
| Artemisia tridentata tridentata | 0         | 0         | 2         | 0         | 6         | 0         | 0         | 0         |
| Chrysothamnus nauseosus         | 0         | 2         | 2         | 0         | 0         | 0         | 0         | 0         |
| Chrysothamnus viscidiflorus     | 0         | 0         | 0         | 0         | 0         | 4         | 0         | 0         |
| <b>Total Shrubs Cover</b>       | <b>14</b> | <b>24</b> | <b>38</b> | <b>18</b> | <b>18</b> | <b>8</b>  | <b>8</b>  | <b>18</b> |
| <b>Forbs</b>                    |           |           |           |           |           |           |           |           |
| Melilotus officinalis           | 0         | 0         | 4         | 0         | 2         | 4         | 0         | 0         |
| <b>Total Forb Cover</b>         | <b>0</b>  | <b>0</b>  | <b>4</b>  | <b>0</b>  | <b>2</b>  | <b>4</b>  | <b>0</b>  | <b>0</b>  |
| <b>Graminoid</b>                |           |           |           |           |           |           |           |           |
| Agropyron spicatum              | 26        | 30        | 6         | 24        | 6         | 4         | 44        | 22        |
| Agropyron cristatum             | 0         | 2         | 0         | 0         | 0         | 0         | 0         | 0         |
| Agropyron trachycaulum          | 0         | 0         | 0         | 0         | 0         | 0         | 2         | 0         |
| Elymus cinereus                 | 0         | 0         | 0         | 0         | 2         | 0         | 0         | 4         |
| Oryzopsis hymenoides            | 2         | 0         | 0         | 2         | 0         | 0         | 0         | 0         |
| Sitanion hystrix                | 2         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Graminoid Cover</b>    | <b>30</b> | <b>32</b> | <b>6</b>  | <b>26</b> | <b>8</b>  | <b>4</b>  | <b>46</b> | <b>26</b> |
| <b>Total Vegetation Cover</b>   | <b>44</b> | <b>56</b> | <b>48</b> | <b>44</b> | <b>28</b> | <b>16</b> | <b>54</b> | <b>44</b> |
| Litter                          | 46        | 30        | 50        | 42        | 68        | 80        | 42        | 52        |
| Rock                            | 0         | 2         | 0         | 0         | 0         | 2         | 0         | 0         |
| Bare Ground                     | 10        | 12        | 2         | 14        | 4         | 2         | 4         | 4         |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 11, 13 & 14)

| PLANT SPECIES                   | STAND     |           |           |           |           |           |           |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                 | 9         | 10        | 11        | 12        | 13        | 14        | 15        |
| <b>Shrubs</b>                   |           |           |           |           |           |           |           |
| Atriplex canescens              | 6         | 28        | 26        | 24        | 24        | 26        | 10        |
| Artemisia tridentata tridentata | 6         | 0         | 0         | 4         | 0         | 2         | 12        |
| Chrysothamnus nauseosus         | 0         | 0         | 0         | 2         | 0         | 0         | 2         |
| Chrysothamnus viscidiflorus     | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Shrubs Cover</b>       | <b>12</b> | <b>28</b> | <b>26</b> | <b>30</b> | <b>24</b> | <b>28</b> | <b>24</b> |
| <b>Forbs</b>                    |           |           |           |           |           |           |           |
| Melilotus officinalis           | 0         | 0         | 0         | 0         | 2         | 0         | 0         |
| <b>Total Forb Cover</b>         | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>2</b>  | <b>0</b>  | <b>0</b>  |
| <b>Graminoid</b>                |           |           |           |           |           |           |           |
| Agropyron spicatum              | 28        | 16        | 42        | 34        | 12        | 30        | 32        |
| Agropyron cristatum             | 2         | 2         | 0         | 0         | 0         | 0         | 0         |
| Agropyron trachycaulum          | 0         | 2         | 0         | 0         | 2         | 0         | 0         |
| Elymus cinereus                 | 0         | 0         | 0         | 0         | 2         | 0         | 0         |
| Oryzopsis hymenoides            | 2         | 0         | 0         | 0         | 0         | 0         | 0         |
| Sitanion hystrix                | 2         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Graminoid Cover</b>    | <b>34</b> | <b>20</b> | <b>42</b> | <b>34</b> | <b>16</b> | <b>30</b> | <b>32</b> |
| <b>Total Vegetation Cover</b>   | <b>46</b> | <b>48</b> | <b>68</b> | <b>64</b> | <b>42</b> | <b>58</b> | <b>56</b> |
| Litter                          | 52        | 56        | 30        | 32        | 44        | 22        | 34        |
| Rock                            | 0         | 0         | 0         | 2         | 6         | 16        | 10        |
| Bare Ground                     | 2         | 6         | 2         | 2         | 8         | 4         | 0         |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 15, 17)

| PLANT SPECIES                          | STAND     |           |           |           |           |           |           |           |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | 1         | 2         | 3         | 4         | 5         | 6         | 7         | 8         |
| <b>Shrubs</b>                          |           |           |           |           |           |           |           |           |
| <i>Atriplex canescens</i>              | 6         | 12        | 26        | 26        | 18        | 6         | 24        | 18        |
| <i>Atriplex confertifolia</i>          | 0         | 0         | 0         | 0         | 0         | 0         | 2         | 0         |
| <i>Atriplex corrugata</i>              | 0         | 0         | 0         | 0         | 0         | 2         | 0         | 0         |
| <i>Artemisia tridentata tridentata</i> | 10        | 4         | 0         | 0         | 2         | 2         | 0         | 0         |
| <i>Chrysothamnus nauseosus</i>         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Chrysothamnus viscidiflorus</i>     | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 2         |
| <i>Ceratoides lanata</i>               | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Sarcobatus vermiculatus</i>         | 0         | 4         | 0         | 0         | 0         | 0         | 0         | 2         |
| <b>Total Shrubs Cover</b>              | <b>16</b> | <b>20</b> | <b>26</b> | <b>26</b> | <b>20</b> | <b>10</b> | <b>26</b> | <b>22</b> |
| <b>Forbs</b>                           |           |           |           |           |           |           |           |           |
| <i>Melilotus officinalis</i>           | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 2         |
| <b>Total Forb Cover</b>                | <b>0</b>  | <b>2</b>  |
| <b>Graminoid</b>                       |           |           |           |           |           |           |           |           |
| <i>Agropyron spicatum</i>              | 16        | 32        | 38        | 44        | 42        | 44        | 40        | 18        |
| <i>Agropyron cristatum</i>             | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Agropyron trachycaulum</i>          | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Elymus cinereus</i>                 | 0         | 0         | 2         | 0         | 0         | 0         | 0         | 0         |
| <i>Oryzopsis hymenoides</i>            | 0         | 0         | 0         | 0         | 2         | 0         | 0         | 2         |
| <i>Poa species</i>                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 2         |
| <i>Sitanion histrix</i>                | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Graminoid Cover</b>           | <b>16</b> | <b>32</b> | <b>40</b> | <b>44</b> | <b>44</b> | <b>44</b> | <b>40</b> | <b>22</b> |
| <b>Total Vegetation Cover</b>          | <b>32</b> | <b>52</b> | <b>66</b> | <b>70</b> | <b>64</b> | <b>54</b> | <b>66</b> | <b>46</b> |
| Litter                                 | 38        | 24        | 26        | 24        | 26        | 46        | 24        | 30        |
| Rock                                   | 26        | 2         | 4         | 0         | 0         | 0         | 0         | 10        |
| Bare Ground                            | 4         | 22        | 4         | 6         | 10        | 0         | 10        | 14        |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 15, 17)

| PLANT SPECIES                   | STAND |    |    |    |    |    |    |
|---------------------------------|-------|----|----|----|----|----|----|
|                                 | 9     | 10 | 11 | 12 | 13 | 14 | 15 |
| <b>Shrubs</b>                   |       |    |    |    |    |    |    |
| Atriplex canescens              | 20    | 18 | 2  | 12 | 16 | 10 | 14 |
| Atriplex confertifolia          | 2     | 0  | 0  | 0  | 0  | 0  | 0  |
| Atriplex corrugata              | 0     | 0  | 0  | 0  | 0  | 0  | 0  |
| Artemisia tridentata tridentata | 0     | 4  | 6  | 10 | 6  | 12 | 2  |
| Chrysothamnus nauseosus         | 0     | 2  | 0  | 0  | 0  | 0  | 0  |
| Chrysothamnus viscidiflorus     | 0     | 2  | 0  | 2  | 0  | 2  | 0  |
| Ceratoides lanata               | 0     | 2  | 0  | 0  | 0  | 0  | 0  |
| Sarcobatus vermiculatus         | 2     | 0  | 0  | 0  | 0  | 0  | 0  |
| Total Shrubs Cover              | 24    | 28 | 8  | 24 | 22 | 24 | 16 |
| <b>Forbs</b>                    |       |    |    |    |    |    |    |
| Melilotus officinalis           | 0     | 0  | 0  | 0  | 0  | 0  | 0  |
| Total Forb Cover                | 0     | 0  | 0  | 0  | 0  | 0  | 0  |
| <b>Graminoid</b>                |       |    |    |    |    |    |    |
| Agropyron spicatum              | 32    | 22 | 32 | 30 | 30 | 10 | 26 |
| Agropyron cristatum             | 2     | 0  | 0  | 0  | 0  | 0  | 0  |
| Agropyron trachycaulum          | 0     | 0  | 2  | 0  | 0  | 0  | 0  |
| Elymus cinereus                 | 0     | 2  | 0  | 0  | 2  | 0  | 4  |
| Oryzopsis hymenoides            | 0     | 0  | 0  | 0  | 2  | 0  | 4  |
| Poa species                     | 0     | 0  | 2  | 0  | 2  | 0  | 0  |
| Sitanion hystrix                | 0     | 2  | 2  | 0  | 0  | 0  | 0  |
| Total Graminoid Cover           | 34    | 26 | 38 | 30 | 36 | 10 | 34 |
| Total Vegetation Cover          | 58    | 54 | 46 | 54 | 58 | 34 | 50 |
| Litter                          | 36    | 32 | 42 | 44 | 34 | 60 | 32 |
| Rock                            | 0     | 6  | 4  | 2  | 2  | 4  | 0  |
| Bare Ground                     | 6     | 8  | 8  | 0  | 6  | 2  | 18 |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 16)

| PLANT SPECIES                          | STAND    |    |    |    |    |    |    |    |
|--|----------|----|----|----|----|----|----|----|
|  | 1        | 2  | 3  | 4  | 5  | 6  | 7  | 8  |
| <b>Shrubs</b>                          |          |    |    |    |    |    |    |    |
| <i>Atriplex canescens</i>              | 14       | 16 | 14 | 14 | 2  | 4  | 4  | 4  |
| <i>Atriplex confertifolia</i>          | 0        | 0  | 0  | 0  | 0  | 6  | 2  | 0  |
| <i>Artemisia tridentata tridentata</i> | 4        | 2  | 0  | 4  | 6  | 2  | 0  | 0  |
| <i>Chrysothamnus nauseosus</i>         | 0        | 0  | 0  | 0  | 0  | 0  | 2  | 0  |
| <i>Chrysothamnus viscidiflorus</i>     | 0        | 0  | 0  | 0  | 0  | 4  | 8  | 2  |
| <i>Ceratoides lanata</i>               | 4        | 0  | 4  | 0  | 0  | 0  | 0  | 0  |
| Total Shrubs Cover                     | 221<br>8 | 18 | 18 | 18 | 8  | 16 | 16 | 6  |
| <b>Forbs</b>                           |          |    |    |    |    |    |    |    |
| <i>Melilotus officinalis</i>           | 0        | 2  | 0  | 0  | 10 | 0  | 0  | 0  |
| Total Forb Cover                       | 0        | 2  | 0  | 0  | 10 | 0  | 0  | 0  |
| <b>Graminoid</b>                       |          |    |    |    |    |    |    |    |
| <i>Agropyron spicatum</i>              | 38       | 20 | 28 | 22 | 30 | 38 | 40 | 28 |
| <i>Agropyron cristatum</i>             | 0        | 0  | 0  | 4  | 0  | 0  | 0  | 0  |
| <i>Agropyron trachycaulum</i>          | 0        | 0  | 0  | 0  | 0  | 0  | 0  | 18 |
| <i>Elymus cinereus</i>                 | 0        | 0  | 2  | 0  | 0  | 2  | 2  | 0  |
| <i>Oryzopsis hymenoides</i>            | 0        | 0  | 2  | 0  | 2  | 2  | 4  | 0  |
| Total Graminoid Cover                  | 38       | 20 | 32 | 26 | 32 | 42 | 46 | 46 |
| Total Vegetation Cover                 | 60       | 40 | 50 | 44 | 50 | 58 | 62 | 52 |
| Litter                                 | 28       | 32 | 18 | 44 | 32 | 26 | 26 | 24 |
| Rock                                   | 0        | 14 | 4  | 2  | 8  | 2  | 0  | 6  |
| Bare Ground                            | 12       | 14 | 28 | 10 | 10 | 14 | 12 | 18 |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 16)

| PLANT SPECIES                          | STAND     |           |           |           |           |           |           |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | 9         | 10        | 11        | 12        | 13        | 14        | 15        |
| <b>Shrubs</b>                          |           |           |           |           |           |           |           |
| <i>Atriplex canescens</i>              | 10        | 10        | 8         | 0         | 0         | 22        | 14        |
| <i>Atriplex confertifolia</i>          | 2         | 0         | 0         | 0         | 6         | 0         | 0         |
| <i>Artemisia tridentata tridentata</i> | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Chrysothamnus nauseosus</i>         | 0         | 0         | 2         | 2         | 8         | 0         | 0         |
| <i>Chrysothamnus viscidiflorus</i>     | 2         | 0         | 2         | 0         | 2         | 2         | 0         |
| <i>Ceratoides lanata</i>               | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Shrubs Cover</b>              | <b>14</b> | <b>10</b> | <b>12</b> | <b>2</b>  | <b>16</b> | <b>24</b> | <b>14</b> |
| <b>Forbs</b>                           |           |           |           |           |           |           |           |
| <i>Melilotus officinalis</i>           | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Forb Cover</b>                | <b>0</b>  |
| <b>Graminoid</b>                       |           |           |           |           |           |           |           |
| <i>Agropyron spicatum</i>              | 22        | 40        | 40        | 38        | 40        | 42        | 24        |
| <i>Agropyron cristatum</i>             | 2         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Agropyron trachycaulum</i>          | 2         | 0         | 0         | 2         | 0         | 0         | 8         |
| <i>Elymus cinereus</i>                 | 6         | 0         | 0         | 2         | 2         | 0         | 4         |
| <i>Oryzopsis hymenoides</i>            | 4         | 2         | 2         | 6         | 0         | 0         | 4         |
| <b>Total Graminoid Cover</b>           | <b>36</b> | <b>42</b> | <b>42</b> | <b>48</b> | <b>42</b> | <b>42</b> | <b>40</b> |
| <b>Total Vegetation Cover</b>          | <b>50</b> | <b>52</b> | <b>54</b> | <b>50</b> | <b>58</b> | <b>66</b> | <b>54</b> |
| Litter                                 | 30        | 38        | 18        | 34        | 24        | 22        | 18        |
| Rock                                   | 0         | 6         | 2         | 0         | 6         | 0         | 6         |
| Bare Ground                            | 20        | 4         | 26        | 16        | 12        | 12        | 22        |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 3)

| PLANT SPECIES                   | STAND |    |    |    |    |    |    |    |
|---------------------------------|-------|----|----|----|----|----|----|----|
|                                 | 1     | 2  | 3  | 4  | 5  | 6  | 7  | 8  |
| <b>Shrubs</b>                   |       |    |    |    |    |    |    |    |
| Atriplex canescens              | 14    | 20 | 22 | 2  | 16 | 4  | 10 | 2  |
| Artemisia tridentata tridentata | 2     | 6  | 0  | 2  | 0  | 0  | 0  | 0  |
| Chrysothamnus nauseosus         | 0     | 0  | 4  | 0  | 0  | 0  | 0  | 0  |
| Chrysothamnus viscidiflorus     | 2     | 0  | 2  | 4  | 12 | 12 | 14 | 10 |
| Total Shrubs Cover              | 18    | 26 | 28 | 8  | 28 | 16 | 24 | 12 |
| <b>Forbs</b>                    |       |    |    |    |    |    |    |    |
| Melilotus officinalis           | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 2  |
| Penstemon palmeri               | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Total Forb Cover                | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 2  |
| <b>Graminoid</b>                |       |    |    |    |    |    |    |    |
| Agropyron spicatum              | 34    | 22 | 38 | 24 | 38 | 10 | 28 | 12 |
| Agropyron cristatum             | 0     | 0  | 0  | 0  | 0  | 0  | 4  | 0  |
| Agropyron trachycaulum          | 2     | 0  | 2  | 12 | 6  | 2  | 4  | 0  |
| Elymus cinereus                 | 0     | 6  | 2  | 0  | 4  | 2  | 0  | 2  |
| Elymus giganteus                | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Oryzopsis hymenoides            | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Total Graminoid Cover           | 36    | 28 | 42 | 36 | 48 | 14 | 36 | 14 |
| Total Vegetation Cover          | 54    | 54 | 70 | 44 | 76 | 30 | 60 | 28 |
| Litter                          | 26    | 44 | 26 | 50 | 22 | 58 | 32 | 60 |
| Rock                            | 18    | 0  | 2  | 0  | 0  | 2  | 0  | 0  |
| Bare Ground                     | 2     | 2  | 2  | 6  | 2  | 10 | 8  | 12 |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 3)

| PLANT SPECIES                   | STAND     |           |           |           |           |           |           |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                 | 9         | 10        | 11        | 12        | 13        | 14        | 15        |
| <b>Shrubs</b>                   |           |           |           |           |           |           |           |
| Atriplex canescens              | 0         | 14        | 10        | 20        | 28        | 8         | 2         |
| Artemisia tridentata tridentata | 0         | 0         | 12        | 4         | 0         | 8         | 2         |
| Chrysothamnus nauseosus         | 0         | 0         | 4         | 4         | 0         | 0         | 0         |
| Chrysothamnus viscidiflorus     | 26        | 22        | 0         | 4         | 0         | 0         | 0         |
| <b>Total Shrubs Cover</b>       | <b>26</b> | <b>36</b> | <b>26</b> | <b>32</b> | <b>28</b> | <b>16</b> | <b>4</b>  |
| <b>Forbs</b>                    |           |           |           |           |           |           |           |
| Melilotus officinalis           | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Penstemon palmeri               | 0         | 0         | 0         | 0         | 0         | 0         | 2         |
| <b>Total Forb Cover</b>         | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>2</b>  |
| <b>Graminoid</b>                |           |           |           |           |           |           |           |
| Agropyron spicatum              | 10        | 20        | 28        | 36        | 26        | 38        | 38        |
| Agropyron cristatum             | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Agropyron trachycaulum          | 0         | 0         | 2         | 0         | 0         | 2         | 6         |
| Elymus cinereus                 | 0         | 0         | 0         | 0         | 6         | 8         | 8         |
| Elymus giganteus                | 0         | 0         | 0         | 0         | 0         | 0         | 2         |
| Oryzopsis hymenoides            | 0         | 0         | 0         | 0         | 2         | 0         | 0         |
| <b>Total Graminoid Cover</b>    | <b>10</b> | <b>20</b> | <b>30</b> | <b>36</b> | <b>34</b> | <b>48</b> | <b>54</b> |
| <b>Total Vegetation Cover</b>   | <b>36</b> | <b>56</b> | <b>56</b> | <b>68</b> | <b>62</b> | <b>64</b> | <b>60</b> |
| Litter                          | 44        | 28        | 30        | 16        | 34        | 28        | 32        |
| Rock                            | 2         | 4         | 10        | 8         | 0         | 2         | 4         |
| Bare Ground                     | 18        | 12        | 4         | 8         | 4         | 6         | 4         |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 6)

| PLANT SPECIES                          | STAND |    |    |    |    |    |    |    |
|--|-------|----|----|----|----|----|----|----|
|  | 1     | 2  | 3  | 4  | 5  | 6  | 7  | 8  |
| <b>Shrubs</b>                          |       |    |    |    |    |    |    |    |
| <i>Atriplex canescens</i>              | 8     | 16 | 2  | 12 | 6  | 12 | 2  | 12 |
| <i>Artemisia tridentata tridentata</i> | 0     | 2  | 2  | 4  | 4  | 0  | 4  | 4  |
| <i>Chrysothamnus nauseosus</i>         | 0     | 0  | 0  | 2  | 0  | 0  | 0  | 0  |
| <i>Chrysothamnus viscidiflorus</i>     | 2     | 2  | 4  | 14 | 0  | 2  | 0  | 0  |
| <i>Ceratoides lanata</i>               | 0     | 0  | 2  | 0  | 0  | 0  | 4  | 4  |
| Total Shrubs Cover                     | 10    | 20 | 10 | 32 | 10 | 14 | 10 | 20 |
| <b>Forbs</b>                           |       |    |    |    |    |    |    |    |
| <i>Medicago sativa</i>                 | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 2  |
| <i>Melilotus officinalis</i>           | 2     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| <i>Penstemon palmeri</i>               | 0     | 2  | 0  | 0  | 0  | 0  | 0  | 2  |
| <i>Salsola kali</i>                    | 0     | 2  | 2  | 0  | 0  | 2  | 0  | 0  |
| Total Forb Cover                       | 2     | 4  | 2  | 0  | 0  | 2  | 0  | 42 |
| <b>Graminoid</b>                       |       |    |    |    |    |    |    |    |
| <i>Agropyron spicatum</i>              | 28    | 26 | 10 | 6  | 30 | 14 | 18 | 24 |
| <i>Agropyron cristatum</i>             | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| <i>Agropyron trachycaulum</i>          | 0     | 2  | 2  | 0  | 0  | 0  | 0  | 0  |
| <i>Elymus cinereus</i>                 | 0     | 0  | 0  | 0  | 4  | 0  | 0  | 2  |
| <i>Oryzopsis hymenoides</i>            | 0     | 0  | 0  | 4  | 0  | 0  | 0  | 0  |
| <i>Sitanion histrix</i>                | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Total Graminoid Cover                  | 28    | 28 | 12 | 10 | 34 | 14 | 18 | 26 |
| Total Vegetation Cover                 | 40    | 52 | 24 | 42 | 44 | 28 | 28 | 50 |
| Litter                                 | 42    | 32 | 38 | 30 | 42 | 36 | 26 | 20 |
| Rock                                   | 6     | 4  | 2  | 4  | 0  | 4  | 28 | 18 |
| Bare Ground                            | 12    | 12 | 36 | 24 | 14 | 32 | 18 | 12 |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 7)

| PLANT SPECIES                          | STAND     |           |           |           |           |           |           |           |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | 1         | 2         | 3         | 4         | 5         | 6         | 7         | 8         |
| <b>Shrubs</b>                          |           |           |           |           |           |           |           |           |
| <i>Atriplex canescens</i>              | 18        | 10        | 14        | 10        | 12        | 24        | 18        | 26        |
| <i>Artemisia tridentata tridentata</i> | 4         | 4         | 6         | 4         | 10        | 6         | 10        | 2         |
| <i>Chrysothamnus nauseosus</i>         | 0         | 2         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Chrysothamnus viscidiflorus</i>     | 0         | 12        | 18        | 16        | 16        | 14        | 14        | 12        |
| <i>Ceratoides lanata</i>               | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Shrubs Cover</b>              | <b>22</b> | <b>28</b> | <b>38</b> | <b>30</b> | <b>38</b> | <b>44</b> | <b>42</b> | <b>40</b> |
| <b>Forbs</b>                           |           |           |           |           |           |           |           |           |
| <i>Machaeranthera canescens</i>        | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 2         |
| <i>Penstemon palmeri</i>               | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Forb Cover</b>                | <b>0</b>  | <b>2</b>  |
| <b>Graminoid</b>                       |           |           |           |           |           |           |           |           |
| <i>Agropyron spicatum</i>              | 24        | 18        | 10        | 20        | 22        | 10        | 4         | 12        |
| <i>Agropyron cristatum</i>             | 2         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Bromus tectorum</i>                 | 2         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Elymus cinereus</i>                 | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Oryzopsis hymenoides</i>            | 2         | 6         | 2         | 0         | 6         | 0         | 0         | 0         |
| <i>Poa species</i>                     | 4         | 0         | 0         | 0         | 0         | 0         | 0         | 2         |
| <i>Sitanion hystrix</i>                | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Sporobolus cryptandrus</i>          | 0         | 2         | 0         | 0         | 4         | 6         | 6         | 2         |
| <i>Stipa comata</i>                    | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Graminoid Cover</b>           | <b>34</b> | <b>26</b> | <b>12</b> | <b>20</b> | <b>32</b> | <b>16</b> | <b>10</b> | <b>16</b> |
| <b>Total Vegetation Cover</b>          | <b>56</b> | <b>54</b> | <b>50</b> | <b>50</b> | <b>70</b> | <b>60</b> | <b>52</b> | <b>58</b> |
| Litter                                 | 44        | 44        | 42        | 0         | 0         | 0         | 42        | 34        |
| Rock                                   | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Bare Ground                            | 0         | 2         | 8         | 50        | 30        | 40        | 6         | 8         |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 7)

| PLANT SPECIES                          | STAND     |           |           |           |           |           |           |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | 9         | 10        | 11        | 12        | 13        | 14        | 15        |
| <b>Shrubs</b>                          |           |           |           |           |           |           |           |
| <i>Atriplex canescens</i>              | 0         | 10        | 8         | 6         | 0         | 0         | 0         |
| <i>Artemisia tridentata tridentata</i> | 6         | 12        | 12        | 14        | 14        | 10        | 12        |
| <i>Chrysothamnus nauseosus</i>         | 0         | 0         | 2         | 0         | 0         | 0         | 0         |
| <i>Chrysothamnus viscidiflorus</i>     | 26        | 4         | 16        | 16        | 18        | 12        | 16        |
| <i>Ceratoides lanata</i>               | 0         | 0         | 0         | 2         | 0         | 0         | 0         |
| <b>Total Shrubs Cover</b>              | <b>32</b> | <b>26</b> | <b>38</b> | <b>38</b> | <b>32</b> | <b>22</b> | <b>28</b> |
| <b>Forbs</b>                           |           |           |           |           |           |           |           |
| <i>Machaeranthera canescens</i>        | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Penstemon palmeri</i>               | 0         | 2         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Forb Cover</b>                | <b>0</b>  | <b>2</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  |
| <b>Graminoid</b>                       |           |           |           |           |           |           |           |
| <i>Agropyron spicatum</i>              | 0         | 8         | 12        | 16        | 12        | 8         | 6         |
| <i>Agropyron cristatum</i>             | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Bromus tectorum</i>                 | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Elymus cinereus</i>                 | 0         | 0         | 0         | 0         | 2         | 0         | 0         |
| <i>Oryzopsis hymenoides</i>            | 0         | 6         | 2         | 0         | 4         | 6         | 2         |
| <i>Poa species</i>                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <i>Sitanion hystrix</i>                | 0         | 8         | 0         | 0         | 2         | 0         | 2         |
| <i>Sporobolus cryptandrus</i>          | 0         | 0         | 0         | 0         | 0         | 0         | 2         |
| <i>Stipa comata</i>                    | 2         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Graminoid Cover</b>           | <b>2</b>  | <b>22</b> | <b>14</b> | <b>16</b> | <b>20</b> | <b>14</b> | <b>12</b> |
| <b>Total Vegetation Cover</b>          | <b>34</b> | <b>50</b> | <b>52</b> | <b>54</b> | <b>52</b> | <b>36</b> | <b>40</b> |
| <b>Litter</b>                          | <b>60</b> | <b>44</b> | <b>38</b> | <b>44</b> | <b>32</b> | <b>40</b> | <b>40</b> |
| <b>Rock</b>                            | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>10</b> | <b>12</b> | <b>0</b>  |
| <b>Bare Ground</b>                     | <b>6</b>  | <b>6</b>  | <b>10</b> | <b>2</b>  | <b>6</b>  | <b>12</b> | <b>20</b> |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 11, 13 & 14)

| PLANT SPECIES                   | STATISTICS  |             |                   |           |
|---------------------------------|-------------|-------------|-------------------|-----------|
|                                 | Mean        | Std         | Relative<br>Cover | Constancy |
| <b>Shrubs</b>                   |             |             |                   |           |
| Atriplex canescens              | 18.1        | 8.9         | 38.1              | 100       |
| Artemisia tridentata tridentata | 2.1         | 3.5         | 4.5               | 40        |
| Chrysothamnus nauseosus         | 0.5         | 0.9         | 1.1               | 26.7      |
| Chrysothamnus viscidiflorus     | 0.3         | 1           | 0.6               | 6.7       |
| <b>Total Shrubs Cover</b>       | <b>21</b>   | <b>8.5</b>  | <b>44.3</b>       |           |
| <b>Forbs</b>                    |             |             |                   |           |
| Melilotus officinalis           | 0.8         | 1.5         | 1.7               | 26.7      |
| <b>Total Forb Cover</b>         | <b>0.8</b>  | <b>1.5</b>  | <b>1.7</b>        |           |
| <b>Graminoid</b>                |             |             |                   |           |
| Agropyron spicatum              | 23.7        | 12.7        | 49.9              | 100       |
| Agropyron cristatum             | 0.4         | 0.8         | 0.8               | 20        |
| Agropyron trachycaulum          | 0.4         | 0.8         | 0.8               | 20        |
| Elymus cinereus                 | 0.5         | 1.2         | 1.1               | 20        |
| Oryzopsis hymenoides            | 0.4         | 0.8         | 0.8               | 20        |
| Sitanion hystrix                | 0.3         | 0.7         | 0.6               | 13.3      |
| <b>Total Graminoid Cover</b>    | <b>25.7</b> | <b>12.6</b> | <b>54</b>         |           |
| <b>Total Vegetation Cover</b>   | <b>47.5</b> | <b>13.2</b> |                   |           |
| Litter                          | 44.7        | 15          |                   |           |
| Rock                            | 2.5         | 4.7         |                   |           |
| Bare Ground                     | 5.1         | 4.1         |                   |           |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 15-17)

| PLANT SPECIES                   | STATISTICS  |             |                   |           |
|---------------------------------|-------------|-------------|-------------------|-----------|
|                                 | Mean        | Std         | Relative<br>Cover | Constancy |
| <b>Shrubs</b>                   |             |             |                   |           |
| Atriplex canescens              | 15.2        | 7.3         | 28.4              | 100       |
| Atriplex confertifolia          | 0.3         | 0.7         | 0.5               | 13.3      |
| Atriplex corrugata              | 0.1         | 0.5         | 0.2               | 6.7       |
| Artemisia tridentata tridentata | 3.9         | 4.1         | 7.2               | 66.7      |
| Chrysothamnus nauseosus         | 0.1         | 0.5         | 0.2               | 6.7       |
| Chrysothamnus viscidiflorus     | 0.5         | 0.9         | 1                 | 26.7      |
| Ceratoides lanata               | 0.1         | 0.5         | 0.2               | 6.7       |
| Sarcobatus vermiculatus         | 0.5         | 1.2         | 1                 | 20        |
| <b>Total Shrubs Cover</b>       | <b>20.7</b> | <b>5.9</b>  | <b>38.7</b>       |           |
| <b>Forbs</b>                    |             |             |                   |           |
| Melilotus officinalis           | 0.1         | 0.5         | 0.2               | 6.7       |
| <b>Total Forb Cover</b>         | <b>0.1</b>  | <b>0.5</b>  | <b>0.2</b>        |           |
| <b>Graminoid</b>                |             |             |                   |           |
| Agropyron spicatum              | 30.4        | 10.6        | 56.7              | 100       |
| Agropyron cristatum             | 0.1         | 0.5         | 0.2               | 6.7       |
| Agropyron trachycaulum          | 0.1         | 0.5         | 0.2               | 6.7       |
| Elymus cinereus                 | 0.7         | 1.2         | 1.3               | 26.7      |
| Oryzopsis hymenoides            | 0.7         | 1.2         | 1.3               | 26.7      |
| Poa species                     | 0.4         | 0.8         | 0.8               | 20        |
| Sitanion hystrix                | 0.3         | 0.7         | 0.5               | 13.3      |
| <b>Total Graminoid Cover</b>    | <b>32.7</b> | <b>10.3</b> | <b>61</b>         |           |
| <b>Total Vegetation Cover</b>   | <b>53.5</b> | <b>10.8</b> |                   |           |
| <b>Litter</b>                   | <b>34.5</b> | <b>10.2</b> |                   |           |
| <b>Rock</b>                     | <b>4.3</b>  | <b>6.7</b>  |                   |           |
| <b>Bare Ground</b>              | <b>7.6</b>  | <b>6.4</b>  |                   |           |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 16)

| PLANT SPECIES                   | STATISTICS  |            |                   |           |
|---------------------------------|-------------|------------|-------------------|-----------|
|                                 | Mean        | Std        | Relative<br>Cover | Constancy |
| <b>Shrubs</b>                   |             |            |                   |           |
| Atriplex canescens              | 9.1         | 6.67       | 17                | 86.7      |
| Atriplex confertifolia          | 1.1         | 2.1        | 2                 | 26.7      |
| Artemisia tridentata tridentata | 1.2         | 2          | 2.3               | 33.3      |
| Chrysothamnus nauseosus         | 0.9         | 2.1        | 1.7               | 26.7      |
| Chrysothamnus viscidiflorus     | 1.5         | 2.2        | 2.8               | 46.7      |
| Ceratoides lanata               | 0.5         | 1.4        | 1                 | 13.3      |
| <b>Total Shrubs Cover</b>       | <b>14.3</b> | <b>5.9</b> | <b>26.8</b>       |           |
| <b>Forbs</b>                    |             |            |                   |           |
| Melilotus officinalis           | 0.8         | 2.6        | 1.5               | 13.3      |
| <b>Total Forb Cover</b>         | <b>0.8</b>  | <b>2.6</b> | <b>1.5</b>        |           |
| <b>Graminoid</b>                |             |            |                   |           |
| Agropyron spicatum              | 32.7        | 8          | 61.3              | 100       |
| Agropyron cristatum             | 0.4         | 1.1        | 0.8               | 13.3      |
| Agropyron trachycaulum          | 2           | 4.9        | 3.8               | 26.7      |
| Elymus cinereus                 | 1.3         | 1.8        | 2.5               | 46.7      |
| Oryzopsis hymenoides            | 1.9         | 1.9        | 3.5               | 60        |
| <b>Total Graminoid Cover</b>    | <b>38.3</b> | <b>7.8</b> | <b>71.9</b>       |           |
| <b>Total Vegetation Cover</b>   | <b>53.4</b> | <b>6.8</b> |                   |           |
| Litter                          | 28.9        | 8.9        |                   |           |
| Rock                            | 3.7         | 4          |                   |           |
| Bare Ground                     | 15.3        | 6.4        |                   |           |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 3)

| PLANT SPECIES                   | STATISTICS |      |                |           |
|---------------------------------|------------|------|----------------|-----------|
|                                 | Mean       | Std  | Relative Cover | Constancy |
| Shrubs                          |            |      |                |           |
| Atriplex canescens              | 11.5       | 8.6  | 21             | 93.3      |
| Artemisia tridentata tridentata | 2.4        | 3.6  | 4.4            | 46.7      |
| Chrysothamnus nauseosus         | 0.8        | 1.7  | 1.5            | 20        |
| Chrysothamnus viscidiflorus     | 7.2        | 8.5  | 13.2           | 10        |
| Total Shrubs Cover              | 21.9       | 8    | 40.1           |           |
| Forbs                           |            |      |                |           |
| Melilotus officinalis           | 0.1        | 0.5  | 0.2            | 6.7       |
| Penstemon palmeri               | 0.1        | 0.5  | 0.2            | 6.7       |
| Total Forb Cover                | 0.2        | 0.7  | 0.4            |           |
| Graminoid                       |            |      |                |           |
| Agropyron spicatum              | 26.9       | 10.5 | 49.3           | 100       |
| Agropyron cristatum             | 0.3        | 1    | 0.5            | 6.7       |
| Agropyron trachycaulum          | 2.5        | 3.3  | 4.6            | 60        |
| Elymus giganteous               | 0.1        | 0.5  | 0.2            | 6.7       |
| Elymus cinereus                 | 2.5        | 3.1  | 4.6            | 53.3      |
| Oryzopsis hymenoides            | 0.1        | 0.5  | 0.2            | 6.7       |
| Total Graminoid Cover           | 32.4       | 13.2 | 59.4           |           |
| Total Vegetation Cover          | 54.5       | 14.2 |                |           |
| Litter                          | 35.3       | 13   |                |           |
| Rock                            | 3.5        | 5    |                |           |
| Bare Ground                     | 6.7        | 4.7  |                |           |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 7)

| PLANT SPECIES                          | STATISTICS  |            |                |           |
|--|-------------|------------|----------------|-----------|
|  | Mean        | Std        | Relative Cover | Constancy |
| <b>Shrubs</b>                          |             |            |                |           |
| <i>Atriplex canescens</i>              | 10.3        | 8.4        | 20.1           | 73.3      |
| <i>Artemisia tridentata tridentata</i> | 8.4         | 4          | 16.4           | 100       |
| <i>Chrysothamnus nauseosus</i>         | 0.3         | 0.7        | 0.5            | 13.3      |
| <i>Chrysothamnus viscidiflorus</i>     | 14          | 6          | 27.3           | 93.3      |
| <i>Ceratoides lanata</i>               | 0.1         | 0.5        | 0.3            | 6.7       |
| <b>Total Shrubs Cover</b>              | <b>33.1</b> | <b>7.1</b> | <b>64.6</b>    |           |
| <b>Forbs</b>                           |             |            |                |           |
| <i>Machaeranthera canescens</i>        | 0.1         | 0.5        | 0.3            | 6.7       |
| <i>Penstemon palmeri</i>               | 0.1         | 0.5        | 0.2            | 6.7       |
| <b>Total Forb Cover</b>                | <b>0.2</b>  | <b>0.7</b> | <b>0.5</b>     |           |
| <b>Graminoid</b>                       |             |            |                |           |
| <i>Agropyron spicatum</i>              | 12.1        | 6.8        | 23.7           | 93.3      |
| <i>Agropyron cristatum</i>             | 0.3         | 0.7        | 0.5            | 13.3      |
| <i>Bromus tectorum</i>                 | 0.1         | 0.5        | 0.3            | 6.7       |
| <i>Oryzopsis hymenoides</i>            | 2.4         | 2.5        | 4.7            | 60        |
| <i>Poa species</i>                     | 0.4         | 1.1        | 0.8            | 13.3      |
| <i>Sitanion hystrix</i>                | 0.8         | 2.1        | 1.6            | 30        |
| <i>Sporobolus cryptandrus</i>          | 1.5         | 2.2        | 2.9            | 40        |
| <i>Stipa comata</i>                    | 0.3         | 0.7        | 0.5            | 13.3      |
| <b>Total Graminoid Cover</b>           | <b>17.9</b> | <b>8.3</b> | <b>35</b>      |           |
| <b>Total Vegetation Cover</b>          | <b>51.2</b> | <b>9.2</b> |                |           |
| Litter                                 | 41.6        | 7.3        |                |           |
| Rock                                   | 1.5         | 3.9        |                |           |
| Bare Ground                            | 5.7         | 5.6        |                |           |

Horse Canyon Revegetation Area  
Percent Cover Data (Area 6)

| PLANT SPECIES                   | STATISTICS  |             |                |           |
|---------------------------------|-------------|-------------|----------------|-----------|
|                                 | Mean        | Std         | Relative Cover | Constancy |
| <b>Shrubs</b>                   |             |             |                |           |
| Atriplex canescens              | 10.5        | 6.3         | 22.4           | 100       |
| Artemisia tridentata tridentata | 2.3         | 1.5         | 4.8            | 80        |
| Chrysothamnus nauseosus         | 0.3         | 0.7         | 0.6            | 20        |
| Chrysothamnus viscidiflorus     | 2.9         | 4.1         | 6.2            | 53.3      |
| Ceratoides lanata               | 0.7         | 1.5         | 1.4            | 20        |
| <b>Total Shrubs Cover</b>       | <b>16.7</b> | <b>7.7</b>  | <b>35.4</b>    |           |
| <b>Forbs</b>                    |             |             |                |           |
| Medicago sativa                 | 0.1         | 0.5         | 0.3            | 6.7       |
| Melilotus officinalis           | 0.1         | 0.5         | 0.3            | 6.7       |
| Penstemon palmeri               | 0.3         | 0.7         | 0.6            | 13.3      |
| Salsola kali                    | 0.4         | 0.8         | 0.9            | 20        |
| <b>Total Forb Cover</b>         | <b>0.9</b>  | <b>1.5</b>  | <b>2.1</b>     |           |
| <b>Graminoid</b>                |             |             |                |           |
| Agropyron spicatum              | 27.2        | 11.1        | 58             | 100       |
| Agropyron cristatum             | 0.1         | 0.5         | 0.3            | 6.7       |
| Agropyron trachycaulum          | 0.4         | 0.8         | 0.9            | 20        |
| Elymus cinereus                 | 0.4         | 0.8         | 0.9            | 20        |
| Oryzopsis hymenoides            | 1.3         | 1.8         | 2.8            | 40        |
| Sitanion hystrix                | 0.1         | 0.5         | 0.3            | 6.7       |
| <b>Total Graminoid Cover</b>    | <b>29.5</b> | <b>11.6</b> | <b>63.2</b>    |           |
| <b>Total Vegetation Cover</b>   | <b>47.1</b> | <b>13.4</b> |                |           |
| Litter                          | 33.7        | 7.3         |                |           |
| Rock                            | 4.4         | 8           |                |           |
| Bare Ground                     | 15.2        | 9           |                |           |

Horse Canyon Revegetation Area  
Percent Cover Data Combined Data  
(Excluding Area 7 Data)

| PLANT SPECIES                   | STATISTICS  |             |                   |           |
|---------------------------------|-------------|-------------|-------------------|-----------|
|                                 | Mean        | Std         | Relative<br>Cover | Constancy |
| <b>Shrubs</b>                   |             |             |                   |           |
| Atriplex canescens              | 12.9        | 8.2         | 25.1              | 96        |
| Atriplex confertifolia          | 0.3         | 1.2         | 0.5               | 8         |
| Atriplex corrugata              | <0.1        | 0.2         | <0.1              | 1.3       |
| Artemisia tridentata tridentata | 2.4         | 3.2         | 4.7               | 53.3      |
| Chrysothamnus nauseosus         | 0.6         | 1.3         | 1.1               | 20        |
| Chrysothamnus viscidiflorus     | 2.5         | 5           | 4.8               | 40        |
| Ceratoides lanata               | 0.3         | 1           | 0.5               | 8         |
| Sarcobatus vermiculatus         | 0.1         | 0.6         | 0.2               | 4         |
| <b>Total Shrubs Cover</b>       | <b>19.1</b> | <b>8.3</b>  | <b>36.9</b>       |           |
| <b>Forbs</b>                    |             |             |                   |           |
| Medicago sativa                 | <0.1        | 0.2         | <0.1              | 1.3       |
| Melilotus officinalis           | 0.4         | 1.4         | 0.8               | 12        |
| Penstemon palmeri               | 0.1         | 0.4         | 0.2               | 4         |
| Salsola kali                    | 0.1         | 0.4         | 0.2               | 4         |
| <b>Total Forb Cover</b>         | <b>0.6</b>  | <b>1.5</b>  | <b>1.2</b>        |           |
| <b>Graminoid</b>                |             |             |                   |           |
| Agropyron spicatum              | 28.2        | 10.8        | 54.9              | 100       |
| Agropyron cristatum             | 0.3         | 0.8         | 0.5               | 10.7      |
| Agropyron trachycaulum          | 1.1         | 2.8         | 2.1               | 26.7      |
| Elymus cinereus                 | 1.1         | 2           | 2.2               | 33.3      |
| Elymus giganteous               | <0.1        | 0.2         | <0.1              | 1.33      |
| Oryzopsis hymenoides            | 0.9         | 1.5         | 1.7               | 30.7      |
| Poa species                     | <0.1        | 0.4         | 0.2               | 4         |
| Sitanion hystrix                | 0.1         | 0.5         | 0.3               | 6.7       |
| <b>Total Graminoid Cover</b>    | <b>31.7</b> | <b>11.7</b> | <b>61.9</b>       |           |
| <b>Total Vegetation Cover</b>   | <b>51.4</b> | <b>12.1</b> |                   |           |
| Litter                          | 35.4        | 12.1        |                   |           |
| Rock                            | 3.7         | 5.8         |                   |           |
| Bare Ground                     | 10          | 7.6         |                   |           |

**APPENDIX IV**

**Horse Canyon Reference Area  
Percent Cover Data**

Horse Canyon Reference Area  
Percent Cover Data

| PLANT SPECIES                      | STAND |    |    |    |    |    |    |    |
|------------------------------------|-------|----|----|----|----|----|----|----|
|                                    | 1     | 2  | 3  | 4  | 5  | 6  | 7  | 8  |
| <b>Trees</b>                       |       |    |    |    |    |    |    |    |
| Juniperus osteoperma               | 28    | 4  | 16 | 0  | 2  | 20 | 44 | 24 |
| Pinus edulis                       | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 28 |
| Total Tree Cover                   | 28    | 4  | 16 | 0  | 2  | 20 | 44 | 52 |
| <b>Shrubs and Subshrubs</b>        |       |    |    |    |    |    |    |    |
| Atriplex canescens                 | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Ephedra viridis                    | 2     | 2  | 0  | 0  | 0  | 0  | 0  | 0  |
| Xanthocephalum sarothra            | 0     | 0  | 4  | 10 | 2  | 2  | 2  | 0  |
| Total Shrubs/Subshrubs cover       | 2     | 2  | 4  | 10 | 2  | 2  | 2  | 0  |
| <b>Forbs</b>                       |       |    |    |    |    |    |    |    |
| Hackelia spp.                      | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Phlox spp.                         | 2     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Astragalus spp.                    | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Haplopappus acaulis                | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Total Forb Cover                   | 2     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| <b>Graminoid</b>                   |       |    |    |    |    |    |    |    |
| Boutelous gracilis                 | 0     | 0  | 0  | 4  | 0  | 2  | 0  | 0  |
| Elymus salinus                     | 12    | 26 | 12 | 14 | 6  | 4  | 2  | 2  |
| Hilaria jamesii                    | 0     | 2  | 0  | 0  | 2  | 0  | 0  | 0  |
| Oryzopsis hymenoides               | 0     | 0  | 4  | 12 | 0  | 0  | 0  | 0  |
| Poa species                        | 2     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Stipa comata                       | 0     | 0  | 0  | 0  | 2  | 0  | 0  | 0  |
| Total Graminoid Cover              | 14    | 28 | 16 | 30 | 10 | 6  | 2  | 2  |
| <b>Echinocereus trilochidiatus</b> |       |    |    |    |    |    |    |    |
| Echinocereus trilochidiatus        | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Total Succulent Cover              | 0     | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| <b>Total Vegetation Cover</b>      |       |    |    |    |    |    |    |    |
| Total Vegetation Cover             | 46    | 34 | 36 | 40 | 14 | 28 | 48 | 54 |
| Litter                             | 10    | 2  | 14 | 10 | 2  | 18 | 12 | 6  |
| Cryptogamic soil                   | 10    | 28 | 16 | 6  | 2  | 12 | 6  | 4  |
| Rock                               | 22    | 8  | 24 | 12 | 50 | 24 | 16 | 30 |
| Bare Ground                        | 12    | 28 | 10 | 32 | 32 | 18 | 18 | 6  |

Horse Canyon Reference Area  
Percent Cover Data

| PLANT SPECIES                       | STAND     |           |           |           |           |           |           |           |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                     | 9         | 10        | 11        | 12        | 13        | 14        | 15        | 16        |
| <b>Trees</b>                        |           |           |           |           |           |           |           |           |
| Juniperus osteoperma                | 6         | 38        | 8         | 24        | 34        | 26        | 16        | 0         |
| Pinus edulis                        | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Tree Cover</b>             | <b>6</b>  | <b>38</b> | <b>8</b>  | <b>24</b> | <b>34</b> | <b>26</b> | <b>16</b> | <b>0</b>  |
| <b>Shrubs and Subshrubs</b>         |           |           |           |           |           |           |           |           |
| Atriplex canescens                  | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Ephedra viridis                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Xanthocephalum sarothra             | 2         | 0         | 4         | 2         | 0         | 2         | 0         | 16        |
| <b>Total Shrubs/Subshrubs cover</b> | <b>2</b>  | <b>0</b>  | <b>4</b>  | <b>2</b>  | <b>0</b>  | <b>2</b>  | <b>0</b>  | <b>16</b> |
| <b>Forbs</b>                        |           |           |           |           |           |           |           |           |
| Hackelia spp.                       | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Phlox spp.                          | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Astragalus spp.                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Haplopappus acaulis                 | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Forb Cover</b>             | <b>0</b>  |
| <b>Graminoid</b>                    |           |           |           |           |           |           |           |           |
| Boutelous gracilis                  | 0         | 0         | 10        | 0         | 0         | 0         | 0         | 0         |
| Elymus salinus                      | 14        | 20        | 12        | 22        | 2         | 16        | 16        | 4         |
| Hilaria jamesii                     | 2         | 0         | 0         | 2         | 0         | 0         | 0         | 0         |
| Oryzopsis hymenoides                | 6         | 0         | 0         | 0         | 0         | 0         | 0         | 6         |
| Poa species                         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Stipa comata                        | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Graminoid Cover</b>        | <b>22</b> | <b>20</b> | <b>22</b> | <b>24</b> | <b>2</b>  | <b>16</b> | <b>16</b> | <b>10</b> |
| Echinocereus trilochidiatus         | 0         | 0         | 0         | 2         | 0         | 0         | 0         | 2         |
| <b>Total Succulent Cover</b>        | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>2</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>2</b>  |
| <b>Total Vegetation Cover</b>       | <b>30</b> | <b>58</b> | <b>34</b> | <b>52</b> | <b>36</b> | <b>44</b> | <b>32</b> | <b>28</b> |
| Litter                              | 22        | 20        | 12        | 10        | 12        | 10        | 16        | 24        |
| Cryptogamic soil                    | 6         | 2         | 10        | 2         | 12        | 2         | 4         | 10        |
| Rock                                | 18        | 16        | 26        | 20        | 22        | 24        | 34        | 22        |
| Bare Ground                         | 24        | 4         | 18        | 16        | 18        | 20        | 14        | 16        |

Horse Canyon Reference Area  
Percent Cover Data

| PLANT SPECIES                       | STAND     |           |           |           |           |           |           |           |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                     | 17        | 18        | 19        | 20        | 21        | 22        | 23        | 24        |
| <b>Trees</b>                        |           |           |           |           |           |           |           |           |
| Juniperus osteoperma                | 4         | 10        | 34        | 26        | 12        | 10        | 8         | 4         |
| Pinus edulis                        | 0         | 0         | 0         | 18        | 0         | 8         | 0         | 8         |
| <b>Total Tree Cover</b>             | <b>4</b>  | <b>10</b> | <b>34</b> | <b>44</b> | <b>12</b> | <b>18</b> | <b>8</b>  | <b>12</b> |
| <b>Shrubs and Subshrubs</b>         |           |           |           |           |           |           |           |           |
| Atriplex canescens                  | 4         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Ephedra viridis                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Xanthocephalum sarothra             | 2         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Shrubs/Subshrubs cover</b> | <b>6</b>  | <b>0</b>  |
| <b>Forbs</b>                        |           |           |           |           |           |           |           |           |
| Hackelia spp.                       | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Phlox spp.                          | 0         | 0         | 2         | 0         | 2         | 4         | 0         | 0         |
| Astragalus spp.                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 4         |
| Haplopappus acaulis                 | 0         | 0         | 0         | 0         | 0         | 6         | 0         | 0         |
| <b>Total Forb Cover</b>             | <b>0</b>  | <b>0</b>  | <b>2</b>  | <b>0</b>  | <b>2</b>  | <b>10</b> | <b>0</b>  | <b>4</b>  |
| <b>Graminoid</b>                    |           |           |           |           |           |           |           |           |
| Boutelous gracilis                  | 0         | 6         | 6         | 0         | 0         | 0         | 0         | 0         |
| Elymus salinus                      | 4         | 28        | 14        | 0         | 10        | 4         | 6         | 10        |
| Hilaria jamesii                     | 2         | 0         | 0         | 0         | 0         | 0         | 4         | 0         |
| Oryzopsis hymenoides                | 6         | 0         | 0         | 0         | 0         | 2         | 2         | 0         |
| Poa species                         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Stipa comata                        | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Graminoid Cover</b>        | <b>12</b> | <b>34</b> | <b>20</b> | <b>0</b>  | <b>10</b> | <b>6</b>  | <b>12</b> | <b>10</b> |
| Echinocereus trilochidiatus         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Succulent Cover</b>        | <b>0</b>  |
| <b>Total Vegetation Cover</b>       | <b>22</b> | <b>44</b> | <b>56</b> | <b>44</b> | <b>24</b> | <b>34</b> | <b>20</b> | <b>26</b> |
| Litter                              | 10        | 20        | 10        | 8         | 6         | 18        | 2         | 20        |
| Cryptogamic soil                    | 8         | 6         | 14        | 2         | 2         | 0         | 6         | 2         |
| Rock                                | 34        | 20        | 12        | 38        | 54        | 32        | 42        | 44        |
| Bare Ground                         | 26        | 10        | 8         | 8         | 14        | 16        | 30        | 8         |

Horse Canyon Reference Area  
Percent Cover Data

| PLANT SPECIES                       | STAND     |           |           |           |           |           |           |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                     | 25        | 26        | 27        | 28        | 29        | 30        | 31        |
| <b>Trees</b>                        |           |           |           |           |           |           |           |
| Juniperus osteoperma                | 28        | 26        | 32        | 46        | 10        | 20        | 8         |
| Pinus edulis                        | 0         | 0         | 0         | 0         | 0         | 10        | 0         |
| <b>Total Tree Cover</b>             | <b>28</b> | <b>26</b> | <b>32</b> | <b>46</b> | <b>10</b> | <b>30</b> | <b>8</b>  |
| <b>Shrubs and Subshrubs</b>         |           |           |           |           |           |           |           |
| Atriplex canescens                  | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Ephedra viridis                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Xanthocephalum sarothra             | 0         | 2         | 0         | 2         | 2         | 0         | 0         |
| <b>Total Shrubs/Subshrubs cover</b> | <b>0</b>  | <b>2</b>  | <b>0</b>  | <b>2</b>  | <b>2</b>  | <b>0</b>  | <b>0</b>  |
| <b>Forbs</b>                        |           |           |           |           |           |           |           |
| Hackelia spp.                       | 0         | 0         | 0         | 0         | 2         | 0         | 2         |
| Phlox spp.                          | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Astragalus spp.                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Haplopappus acaulis                 | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Forb Cover</b>             | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>2</b>  | <b>0</b>  | <b>2</b>  |
| <b>Graminoid</b>                    |           |           |           |           |           |           |           |
| Boutelous gracilis                  | 2         | 0         | 0         | 4         | 0         | 0         | 2         |
| Elymus salinus                      | 6         | 8         | 8         | 8         | 10        | 2         | 2         |
| Hilaria jamesii                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Oryzopsis hymenoides                | 4         | 2         | 0         | 2         | 0         | 0         | 0         |
| Poa species                         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Stipa comata                        | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Graminoid Cover</b>        | <b>12</b> | <b>10</b> | <b>8</b>  | <b>14</b> | <b>10</b> | <b>2</b>  | <b>4</b>  |
| Echinocereus trilochidiatus         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| <b>Total Succulent Cover</b>        | <b>0</b>  |
| <b>Total Vegetation Cover</b>       | <b>40</b> | <b>38</b> | <b>40</b> | <b>62</b> | <b>24</b> | <b>32</b> | <b>14</b> |
| Litter                              | 14        | 6         | 12        | 14        | 14        | 28        | 8         |
| Cryptogamic soil                    | 10        | 8         | 0         | 4         | 24        | 2         | 20        |
| Rock                                | 14        | 28        | 38        | 12        | 24        | 24        | 50        |
| Bare Ground                         | 22        | 20        | 10        | 8         | 14        | 14        | 8         |

Horse Canyon Reference Area  
Percent Cover Data

| PLANT SPECIES              | STATISTICS |      |                |           |
|----------------------------|------------|------|----------------|-----------|
|                            | Mean       | Std  | Relative Cover | Constancy |
| <b>Trees</b>               |            |      |                |           |
| Juniperus osteosperma      | 17.9       | 13.0 | 49.6           | 90.3      |
| Pinus edulis               | 2.5        | 6.6  | 6.8            | 12.9      |
| Total Tree Cover           | 20.4       | 14.9 | 56.4           |           |
| <b>Shrubs</b>              |            |      |                |           |
| Atriplex canescens         | 0.1        | 0.7  | 0.4            | 3.2       |
| Ephedra viridis            | 0.1        | 0.5  | 0.4            | 6.5       |
| Xanthocephalum sarothrae   | 1.7        | 3.3  | 4.8            | 45.2      |
| Total Shrubs Cover         | 1.9        | 3.4  | 5.6            |           |
| <b>Forbs</b>               |            |      |                |           |
| Astragalus spp.            | 0.1        | 0.7  | 0.4            | 3.2       |
| Hackelia spp.              | 0.3        | 1.1  | 0.7            | 6.5       |
| Haplopappus acaulis        | 0.2        | 1.1  | 0.5            | 3.2       |
| Phlox spp.                 | 0.1        | 0.4  | 0.2            | 3.2       |
| Total Forb Cover           | 0.7        | 2.0  | 1.8            |           |
| <b>Graminoid</b>           |            |      |                |           |
| Bouteloua gracilis         | 1.2        | 2.4  | 3.2            | 22.6      |
| Elymus salinus             | 9.8        | 7.3  | 27.1           | 96.8      |
| Hilaria jamesii            | 0.5        | 1.0  | 1.2            | 19.4      |
| Oryzopsis hymenoides       | 1.5        | 2.8  | 4.1            | 32.3      |
| Poa species                | 0.1        | 0.4  | 0.2            | 3.2       |
| Stipa comata               | 0.1        | 0.4  | 0.2            | 3.2       |
| Total Graminoid Cover      | 13.2       | 8.7  | 36.0           |           |
| <b>Succulents</b>          |            |      |                |           |
| Echinocereus trilochiditus | 0.1        | 0.5  | 0.4            | 3.2       |
| Total Succulent Cover      | 0.1        | 0.5  | 0.4            | 3.2       |
| Total Vegetation Cover     | 36.3       | 12.4 |                |           |
| Cryptogamic soil           | 7.7        | 6.9  |                |           |
| Litter                     | 12.5       | 6.3  |                |           |
| Rock                       | 26.9       | 12.1 |                |           |
| Bare Ground                | 16.2       | 7.8  |                |           |

**APPENDIX V**

**Horse Canyon Revegetation Areas  
Shrub Density Data**

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 15-17

| PLANT SPECIES                   | STAND |      |      |      |      |      |
|---------------------------------|-------|------|------|------|------|------|
|                                 | 1     | 2    | 3    | 4    | 5    | 6    |
| Shrubs and Subshrubs            |       |      |      |      |      |      |
| Atriplex canescens              | 915   | 719  | 5075 | 1481 | 3637 | 4639 |
| Atriplex confertifolia          | 0     | 0    | 0    | 0    | 0    | 65   |
| Atriplex corrugata              | 0     | 0    | 0    | 0    | 0    | 0    |
| Artemisia nova                  | 0     | 0    | 0    | 0    | 0    | 0    |
| Artemisia tridentata tridentata | 1307  | 1764 | 588  | 871  | 1851 | 3027 |
| Chrysothamnus nauseosus         | 87    | 65   | 22   | 87   | 0    | 0    |
| Chrysothamnus viscidiflorus     | 436   | 283  | 22   | 370  | 109  | 0    |
| Ceratoides lanata               | 65    | 65   | 131  | 174  | 305  | 370  |
| Sarcobatus vermiculatus         | 109   | 131  | 44   | 1764 | 22   | 131  |
| Xanthocephalum sarothrae        | 0     | 0    | 0    | 0    | 0    | 0    |
| Total Shrubs                    | 2919  | 3027 | 5882 | 4747 | 5924 | 8232 |
|                                 |       |      |      |      |      |      |
|                                 | 7     | 8    | 9    | 10   | 11   | 12   |
| Shrubs and Subshrubs            |       |      |      |      |      |      |
| Atriplex canescens              | 2723  | 937  | 1045 | 2418 | 2047 | 1154 |
| Atriplex confertifolia          | 22    | 0    | 87   | 0    | 0    | 0    |
| Atriplex corrugata              | 0     | 0    | 0    | 0    | 0    | 0    |
| Artemisia nova                  | 0     | 22   | 0    | 0    | 0    | 0    |
| Artemisia tridentata tridentata | 3746  | 2243 | 2853 | 2788 | 6447 | 893  |
| Chrysothamnus nauseosus         | 109   | 22   | 261  | 0    | 44   | 44   |
| Chrysothamnus viscidiflorus     | 675   | 196  | 436  | 109  | 218  | 196  |
| Ceratoides lanata               | 588   | 348  | 65   | 131  | 152  | 44   |
| Sarcobatus vermiculatus         | 697   | 0    | 240  | 0    | 109  | 0    |
| Xanthocephalum sarothrae        | 0     | 0    | 22   | 0    | 65   | 44   |
| Total Shrubs                    | 8560  | 3768 | 5009 | 5446 | 9082 | 2375 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 15-17

| PLANT SPECIES                   | STAND |      |      | STATISTICS |        |
|---------------------------------|-------|------|------|------------|--------|
|                                 | 13    | 14   | 15   | Mean       | Std    |
| Shrubs and Subshrubs            |       |      |      |            |        |
| Atriplex canescens              | 2810  | 2069 | 2352 | 2268.0     | 1345.6 |
| Atriplex confertifolia          | 65    | 0    | 0    | 16.0       | 30.3   |
| Atriplex corrugata              | 131   | 44   | 0    | 11.6       | 34.9   |
| Artemisia nova                  | 0     | 0    | 0    | 1.5        | 5.7    |
| Artemisia tridentata tridentata | 4443  | 980  | 261  | 2270.9     | 1674.9 |
| Chrysothamnus nauseosus         | 0     | 0    | 0    | 47.9       | 70.4   |
| Chrysothamnus viscidiflorus     | 44    | 87   | 43   | 214.9      | 192.8  |
| Ceratoides lanata               | 240   | 65   | 65   | 183.0      | 151.8  |
| Sarcobatus vermiculatus         | 87    | 22   | 0    | 223.6      | 460.9  |
| Xanthocephalum sarothrae        | 22    | 0    | 0    | 10.1       | 20.0   |
| Total Shrubs                    | 7842  | 3267 | 2721 | 5247.5     | 2293.9 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 11, 13 & 14

| PLANT SPECIES                   | STAND |      |      |      |      |       |
|---------------------------------|-------|------|------|------|------|-------|
|                                 | 1     | 2    | 3    | 4    | 5    | 6     |
| Shrubs and Subshrubs            |       |      |      |      |      |       |
| Atriplex canescens              | 2875  | 1742 | 1024 | 3354 | 3833 | 3964  |
| Artemisia tridentata tridentata | 3267  | 1241 | 218  | 1307 | 2047 | 9322  |
| Chrysothamnus nauseosus         | 22    | 22   | 109  | 0    | 0    | 240   |
| Chrysothamnus viscidiflorus     | 196   | 22   | 22   | 22   | 22   | 370   |
| Ceratoides lanata               | 196   | 240  | 22   | 152  | 152  | 632   |
| Sarcobatus vermiculatus         | 0     | 0    | 0    | 196  | 0    | 0     |
| Xanthocephalum sarothrae        | 0     | 22   | 0    | 0    | 0    | 0     |
| Total Shrubs                    | 6556  | 3289 | 1395 | 5031 | 6054 | 14528 |
|                                 | 7     | 8    | 9    | 10   | 11   | 12    |
| Shrubs and Subshrubs            |       |      |      |      |      |       |
| Atriplex canescens              | 1133  | 2069 | 2069 | 1503 | 457  | 1590  |
| Artemisia tridentata tridentata | 545   | 2069 | 893  | 1111 | 196  | 1590  |
| Chrysothamnus nauseosus         | 22    | 87   | 65   | 196  | 0    | 65    |
| Chrysothamnus viscidiflorus     | 109   | 65   | 0    | 22   | 0    | 22    |
| Ceretoides lanata               | 152   | 0    | 0    | 22   | 22   | 22    |
| Sarcobatus vermiculatus         | 0     | 0    | 0    | 22   | 0    | 44    |
| Xanthocephalum sarothrae        | 0     | 0    | 22   | 0    | 0    | 0     |
| Total Shrubs                    | 1961  | 4290 | 3049 | 2876 | 675  | 3333  |

Horse Canyon Revegetation Area  
 Density Data for Shrubs/Subshrubs Plants per Acre  
 Area 11, 13 & 14

| PLANT SPECIES                          | STAND |      |      | STATISTICS |        |
|--|-------|------|------|------------|--------|
|  | 13    | 14   | 15   | Mean       | Std    |
| Shrubs and Subshrubs                   |       |      |      |            |        |
| <i>Atriplex canescens</i>              | 1786  | 2069 | 1938 | 2111.1     | 993.6  |
| <i>Artemisia tridentata tridentata</i> | 1241  | 588  | 523  | 1743.2     | 2248.6 |
| <i>Chrysothamnus nauseosus</i>         | 44    | 0    | 22   | 59.5       | 73.0   |
| <i>Chrysothamnus viscidiflorus</i>     | 109   | 22   | 65   | 73.4       | 98.2   |
| <i>Ceratoides lanata</i>               | 22    | 44   | 22   | 113.3      | 164.0  |
| <i>Sarcobatus vermiculatus</i>         | 87    | 261  | 0    | 40.7       | 81.0   |
| <i>Xanthocephalum sarothrae</i>        | 0     | 0    | 0    | 2.8        | 7.6    |
| Total Shrubs                           | 3289  | 2984 | 2570 | 4144.0     | 3217.8 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 16

| PLANT SPECIES                   | STAND |      |      |      |      |      |
|---------------------------------|-------|------|------|------|------|------|
|                                 | 1     | 2    | 3    | 4    | 5    | 6    |
| Shrubs and Subshrubs            |       |      |      |      |      |      |
| Atriplex canescens              | 1176  | 3485 | 2178 | 2222 | 370  | 457  |
| Atriplex confertifolia          | 0     | 109  | 87   | 152  | 174  | 545  |
| Atriplex corrugata              | 0     | 22   | 0    | 0    | 0    | 0    |
| Artemisia tridentata tridentata | 327   | 3528 | 697  | 2897 | 958  | 0    |
| Chrysothamnus nauseosus         | 283   | 0    | 0    | 958  | 915  | 1568 |
| Chrysothamnus viscidiflorus     | 218   | 22   | 44   | 1721 | 762  | 697  |
| Ceratoides lanata               | 22    | 87   | 44   | 370  | 87   | 152  |
| Xanthocephalum sarothrae        | 0     | 0    | 0    | 0    | 0    | 0    |
| Total Shrubs                    | 2026  | 7253 | 3050 | 8320 | 3266 | 3419 |
|                                 |       |      |      |      |      |      |
|                                 |       |      |      |      |      |      |
|                                 | 7     | 8    | 9    | 10   | 11   | 12   |
| Shrubs and Subshrubs            |       |      |      |      |      |      |
| Atriplex canescens              | 3855  | 2984 | 3267 | 1960 | 2004 | 1917 |
| Atriplex confertifolia          | 0     | 65   | 44   | 131  | 588  | 828  |
| Atriplex corrugata              | 0     | 0    | 0    | 0    | 0    | 0    |
| Artemisia tridentata tridentata | 5728  | 2287 | 2439 | 3115 | 715  | 457  |
| Chrysothamnus nauseosus         | 44    | 87   | 152  | 44   | 327  | 414  |
| Chrysothamnus viscidiflorus     | 261   | 261  | 348  | 523  | 1176 | 544  |
| Ceratoides lanata               | 762   | 283  | 893  | 566  | 152  | 305  |
| Xanthocephalum sarothrae        | 22    | 0    | 0    | 0    | 0    | 0    |
| Total Shrubs                    | 10672 | 5967 | 7143 | 6339 | 4962 | 4465 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 16

| PLANT SPECIES                   | STAND |      |      | STATISTICS |        |
|---------------------------------|-------|------|------|------------|--------|
|                                 | 13    | 14   | 15   | Mean       | Std    |
| Shrubs and Subshrubs            |       |      |      |            |        |
| Atriplex canescens              | 1721  | 849  | 44   | 1899.2     | 1168.1 |
| Atriplex confertifolia          | 566   | 414  | 370  | 271.6      | 260.1  |
| Atriplex corrugata              | 0     | 0    | 0    | 1.5        | 5.7    |
| Artemisia tridentata tridentata | 109   | 22   | 0    | 1565.3     | 1697.8 |
| Chrysothamnus nauseosus         | 1481  | 283  | 1481 | 535.8      | 583.7  |
| Chrysothamnus viscidiflorus     | 632   | 370  | 849  | 561.9      | 448.0  |
| Ceratoides lanata               | 196   | 87   | 174  | 278.8      | 265.1  |
| Xanthocephalum sarothrae        | 0     | 0    | 0    | 1.5        | 5.7    |
| Total Shrubs                    | 4705  | 2025 | 2918 | 5115.6     | 2744.3 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 3

| PLANT SPECIES                   | STAND |      |      |      |      |      |
|---------------------------------|-------|------|------|------|------|------|
|                                 | 1     | 2    | 3    | 4    | 5    | 6    |
| Shrubs and Subshrubs            |       |      |      |      |      |      |
| Atriplex canescens              | 283   | 937  | 1285 | 1089 | 1154 | 479  |
| Artemisia nova                  | 0     | 0    | 22   | 0    | 0    | 0    |
| Artemisia tridentata tridentata | 479   | 1503 | 436  | 1394 | 2156 | 240  |
| Chrysothamnus nauseosus         | 44    | 44   | 87   | 218  | 349  | 196  |
| Chrysothamnus viscidiflorus     | 22    | 0    | 87   | 218  | 501  | 1764 |
| Ceratoides lanata               | 0     | 0    | 0    | 22   | 0    | 0    |
| Total Shrubs                    | 828   | 2484 | 1917 | 2941 | 4160 | 2679 |
|                                 |       |      |      |      |      |      |
|                                 | 7     | 8    | 9    | 10   | 11   | 12   |
| Shrubs and Subshrubs            |       |      |      |      |      |      |
| Atriplex canescens              | 1154  | 305  | 653  | 327  | 719  | 588  |
| Artemisia nova                  | 0     | 0    | 0    | 0    | 0    | 0    |
| Artemisia tridentata tridentata | 1089  | 153  | 131  | 349  | 153  | 240  |
| Chrysothamnus nauseosus         | 174   | 174  | 65   | 22   | 65   | 22   |
| Chrysothamnus viscidiflorus     | 1372  | 1242 | 1982 | 1895 | 436  | 523  |
| Ceretoides lanata               | 0     | 0    | 0    | 0    | 0    | 0    |
| Total Shrubs                    | 3789  | 1874 | 2831 | 2593 | 1373 | 1373 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 3

| PLANT SPECIES                   | STAND |      |      | STATISTICS |        |
|---------------------------------|-------|------|------|------------|--------|
|                                 | 13    | 14   | 15   | Mean       | Std    |
| Shrubs and Subshrubs            |       |      |      |            |        |
| Atriplex canescens              | 2309  | 1546 | 2243 | 1004.8     | 643.0  |
| Artemisia nova                  | 0     | 0    | 0    | 1.5        | 5.7    |
| Artemisia tridentata tridentata | 719   | 2134 | 2047 | 881.4      | 772.8  |
| Chrysothamnus nauseosus         | 44    | 65   | 65   | 108.9      | 93.2   |
| Chrysothamnus viscidiflorus     | 174   | 218  | 523  | 730.4      | 715.8  |
| Ceratoides lanata               | 65    | 87   | 87   | 17.4       | 33.1   |
| Total Shrubs                    | 3311  | 4050 | 4965 | 2744.4     | 1169.2 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 6

| PLANT SPECIES                   | STAND |      |      |      |      |      |
|---------------------------------|-------|------|------|------|------|------|
|                                 | 1     | 2    | 3    | 4    | 5    | 6    |
| Shrubs and Subshrubs            |       |      |      |      |      |      |
| Atriplex canescens              | 1721  | 1525 | 958  | 1830 | 1655 | 327  |
| Artemisia nova                  | 0     | 44   | 65   | 44   | 0    | 44   |
| Artemisia tridentata tridentata | 3964  | 2069 | 2243 | 1786 | 1590 | 1525 |
| Chrysothamnus nauseosus         | 65    | 131  | 22   | 87   | 0    | 44   |
| Chrysothamnus viscidiflorus     | 348   | 566  | 479  | 1307 | 893  | 1045 |
| Ceratoides lanata               | 1525  | 327  | 3354 | 1133 | 741  | 2352 |
| Sarcobatus vermiculatus         | 0     | 0    | 0    | 0    | 0    | 0    |
| Xanthocephalum sarothrae        | 65    | 196  | 65   | 0    | 0    | 44   |
| Total Shrubs                    | 7688  | 4858 | 7186 | 6187 | 4879 | 5381 |
|                                 |       |      |      |      |      |      |
|                                 |       |      |      |      |      |      |
|                                 | 7     | 8    | 9    | 10   | 11   | 12   |
| Shrubs and Subshrubs            |       |      |      |      |      |      |
| Atriplex canescens              | 1568  | 1721 | 2222 | 1873 | 2047 | 1655 |
| Artemisia nova                  | 87    | 22   | 0    | 0    | 22   | 0    |
| Artemisia tridentata tridentata | 2265  | 1350 | 4291 | 1481 | 3681 | 1721 |
| Chrysothamnus nauseosus         | 152   | 22   | 261  | 22   | 131  | 0    |
| Chrysothamnus viscidiflorus     | 240   | 370  | 958  | 174  | 1938 | 1481 |
| Ceretooides lanata              | 5140  | 3637 | 196  | 392  | 131  | 152  |
| Sarcobatus vermiculatus         | 22    | 22   | 0    | 0    | 0    | 0    |
| Xanthocephalum sarothrae        | 0     | 0    | 22   | 0    | 0    | 0    |
| Total Shrubs                    | 9474  | 7144 | 7950 | 3942 | 7950 | 5009 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 6

| PLANT SPECIES                          | STAND |      |      | STATISTICS |        |
|--|-------|------|------|------------|--------|
|  | 13    | 14   | 15   | Mean       | Std    |
| Shrubs and Subshrubs                   |       |      |      |            |        |
| <i>Atriplex canescens</i>              | 2352  | 2592 | 2897 | 1796.1     | 623.6  |
| <i>Artemisia nova</i>                  | 0     | 0    | 0    | 21.9       | 28.5   |
| <i>Artemisia tridentata tridentata</i> | 1634  | 1263 | 1721 | 2172.2     | 985.1  |
| <i>Chrysothamnus nauseosus</i>         | 44    | 22   | 0    | 66.8       | 73.8   |
| <i>Chrysothamnus viscidiflorus</i>     | 1634  | 240  | 152  | 788.4      | 584.8  |
| <i>Ceratoides lanata</i>               | 196   | 152  | 174  | 1306.8     | 1590.2 |
| <i>Sarcobatus vermiculatus</i>         | 0     | 0    | 0    | 2.9        | 7.7    |
| <i>Xanthocephalum sarothrae</i>        | 0     | 0    | 0    | 26.1       | 52.8   |
| Total Shrubs                           | 5860  | 4269 | 4944 | 6181.2     | 1626.5 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 7

| PLANT SPECIES                   | STAND |       |       |       |       |       |
|---------------------------------|-------|-------|-------|-------|-------|-------|
|                                 | 1     | 2     | 3     | 4     | 5     | 6     |
| Shrubs and Subshrubs            |       |       |       |       |       |       |
| Atriplex canescens              | 2026  | 1067  | 1416  | 1634  | 1634  | 1568  |
| Atriplex confertifolia          | 0     | 0     | 0     | 0     | 0     | 0     |
| Artemisia nova                  | 0     | 0     | 0     | 0     | 0     | 0     |
| Artemisia tridentata tridentata | 4356  | 3202  | 4704  | 4922  | 4704  | 4269  |
| Chrysothamnus nauseosus         | 22    | 87    | 0     | 0     | 44    | 22    |
| Chrysothamnus viscidiflorus     | 784   | 1568  | 1002  | 1024  | 1394  | 1503  |
| Ceratoides lanata               | 0     | 0     | 44    | 65    | 44    | 65    |
| Xanthocephalum sarothrae        | 0     | 174   | 0     | 0     | 0     | 0     |
| Total Shrubs                    | 7188  | 5924  | 7166  | 7645  | 7820  | 7427  |
|                                 | 7     | 8     | 9     | 10    | 11    | 12    |
| Shrubs and Subshrubs            |       |       |       |       |       |       |
| Atriplex canescens              | 1024  | 2004  | 1045  | 1394  | 784   | 726   |
| Atriplex confertifolia          | 0     | 0     | 0     | 22    | 0     | 0     |
| Artemisia nova                  | 0     | 0     | 0     | 22    | 22    | 87    |
| Artemisia tridentata tridentata | 7253  | 6098  | 7166  | 11434 | 14941 | 16945 |
| Chrysothamnus nauseosus         | 324   | 283   | 283   | 109   | 305   | 261   |
| Chrysothamnus viscidiflorus     | 1568  | 1786  | 2113  | 1590  | 1546  | 1525  |
| Ceratoides lanata               | 44    | 0     | 0     | 0     | 0     | 22    |
| Xanthocephalum sarothrae        | 109   | 22    | 261   | 348   | 370   | 44    |
| Total Shrubs                    | 10325 | 10193 | 10868 | 14919 | 17986 | 19610 |

Horse Canyon Revegetation Area  
Density Data for Shrubs/Subshrubs Plants per Acre  
Area 7

| PLANT SPECIES                   | STAND |       |       | STATISTICS |        |
|---------------------------------|-------|-------|-------|------------|--------|
|                                 | 13    | 14    | 15    | Mean       | Std    |
| Shrubs and Subshrubs            |       |       |       |            |        |
| Atriplex canescens              | 937   | 370   | 414   | 1205.2     | 516.6  |
| Atriplex confertifolia          | 0     | 0     | 0     | 2.90       | 7.6    |
| Artemisia nova                  | 0     | 65    | 0     | 13.1       | 27.0   |
| Artemisia tridentata tridentata | 16531 | 18557 | 18644 | 9583.2     | 5892.1 |
| Chrysothamnus nauseosus         | 436   | 327   | 87    | 172.8      | 148.1  |
| Chrysothamnus viscidiflorus     | 2831  | 2047  | 3942  | 1748.2     | 783.2  |
| Ceratoides lanata               | 44    | 0     | 22    |            |        |
| Xanthocephalum sarothrae        | 305   | 0     | 22    | 23.2       | 25.3   |
| Total Shrubs                    | 21084 | 22041 | 23915 |            | 6215.8 |

Horse Canyon Revegetation Area  
 Density Data for Shrubs/Subshrubs Plants per Acre  
 Combined Data (excluding Area 7)

| PLANT SPECIES                   | STATISTICS |        |
|---------------------------------|------------|--------|
|                                 | Mean       | Std    |
| Shrubs and Subshrubs            |            |        |
| Atriplex canescens              | 1816.0     | 1064.6 |
| Atriplex confertifolia          | 57.5       | 156.8  |
| Atriplex corrugata              | 2.6        | 15.9   |
| Artemisia nova                  | 109.1      | 15.5   |
| Artemisia tridentata tridentata | 1726.7     | 1606.1 |
| Chrysothamnus nauseosus         | 163.8      | 323.4  |
| Chrysothamnus viscidiflorus     | 466.8      | 541.0  |
| Ceratoides lanata               | 369.2      | 842.7  |
| Sarcobatus vermiculatus         | 53.5       | 221.5  |
| Xanthocephalum sarothrae        | 7.8        | 26.6   |
| Total Shrubs                    | 4773.0     | 2549.6 |