

SOIL PROFILES OF MOUNDS ON PLUTONIUM-CONTAMINATED  
AREAS OF THE NEVADA TEST RANGE COMPLEX

Exposure Assessment Division  
Environmental Monitoring Systems Laboratory  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
Las Vegas, NV 89114

January 1980

This study performed under a Memorandum  
of Understanding No. EY-76-A-08-0539  
for the  
DEPARTMENT OF ENERGY

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AREAS OF THE NEVADA TEST RANGE COMPLEX

by  
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## ABSTRACT

This report describes soil profiles of the surface soils in mounds in two areas located on the Test Range Complex, Nye County, Nevada. Both areas have been the sites of aboveground nuclear safety tests. These areas are contaminated with plutonium and are the object of investigations regarding the movement of plutonium in the environment.

Most of the surface soils in the two plutonium-contaminated sites of the Test Range Complex have gravelly texture and are typically classified as gravelly sandy loam. Most of the land sampled is either floodplain or alluvial fan with deep soils having well-developed profiles and platy or subangular blocky structure.

In the areas sampled, the wind has a dominant influence on the surface texture of the soil. It has moved the fine-textured soils around individual plants or plant clumps, thus leaving the coarse soil particles in low areas between the plants.

All of the soils are alkaline and range in pH from 7 to 9. The color of the surface soil ranges from light gray to very pale brown dry and from brown to dark grayish brown moist. Most of the soils are potentially agricultural if water were available. The soil drainage is well to very well drained.

The vegetation is classified as high desert grass and shrubs. The grass and shrubs are predominately winter fat (Eurotia lanata), fourwing saltbush (Atriplex canescens), shadscale (Atriplex confertifolia), bud sagebrush (Artemisia spinescens), galleta grass (Hilaria jamesii), and Indian ricegrass (Oryzopsis hymenoides).

Domestic livestock prefer the above vegetation to any other that grows on the desert range. Because a large portion of the land sampled could be cultivated for crops or is potentially good winter range, these findings should be considered in any "cleanup" decision.



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## I. INTRODUCTION

In the early stages of the Nevada Applied Ecology Group (NAEG) soil sampling program, a plutonium inventory was started for the various areas on the Nevada Test Range Complex in which soil samples had been taken generally in the open spaces between the desert plants.

It was recently established by Tamura (1975) that the plutonium activity in soils at the Test Range Complex is associated with different soil particle sizes of which the coarse silt fraction (53 to 20 micrometers) contained the highest percentage of activity (about 65%). These particle sizes are readily subjected to movement by wind and collect at the base of plants, developing into hummocks around the desert vegetation.

Because it does get windy on the Test Range Complex, fine soil particles can accumulate around the plant by wind action. Essington and Fowler (1976) reported that plutonium had migrated even further down in the soil they sampled in 1973 than it had in soil sampled from the same area 15 years earlier. Therefore, the mounding of plutonium-contaminated soil and the observed ability of plutonium to migrate to deeper layers of the soil with time together pose a situation of greater exposure to the roots and probably a higher uptake of plutonium by the plant.

The information reported by Tamura (1975) and Essington and Fowler (1976) points to the importance and necessity of a soil-mound sampling program. Before such a program could be implemented, the soil mounds around the plants needed to be characterized and their profiles described. The study reported here was undertaken to describe the soil profiles of the mounds.

Data from the sampling of the soils and descriptions of their physical properties provide guidance to investigators as to those soil characteristics which could have an impact on the movement of plutonium through the soil and on the uptake of plutonium by plants.

In a previous study (Leavitt, 1974), 127 sites were sampled to determine soil type of the Clean Slate 3 area and Area 13 on the Test Range Complex\*. This work was done at the request of the NAEG, U.S. Department of Energy (DOE), under the requirements of the National Environmental Policy Act of 1969. One of NAEG's goals is to develop techniques for the cleanup or treatment of actinide-contaminated soils. This mound study is one of several studies needed by the Group to accomplish this goal.

The soil samples were taken from the mounds of Area 13 and the Clean Slate 3 area and were described as to their texture, structure, pH, and permeability. The soil descriptions provide a basis for other researchers to

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\*Test Range Complex includes the Tonopah Test Range (TTR), Nuclear Rocket Development Station (NRDS), Nevada Test Site (NTS), and Nellis Air Force Range (NAFR).

determine the plutonium activity that is associated with the different soil fractions found in the mounds around native plants.

This report covers three different types of soil and vegetation sampling sites. They are soils and shrubs, soils and grass, and animal mounds or burrows.

## II. AREA DESCRIPTIONS

This work covered areas in the south-central and eastern parts of Nye County in southern Nevada (Figure 1). These areas are semiarid with precipitation ranging from 10 to 30 centimeters (4 to 12 inches) (Maxey and Jameson, 1948). All of these areas provide only limited grazing for livestock; however, about three-fourths of the acreage sampled would be classified as potential agricultural land if water were available.

### CLEAN SLATE 3 AREA

The Clean Slate 3 area, located in Area 52, was sampled on the Tonopah Test Range. The Clean Slate 3 area, in what is commonly known as Cactus Flat, is a desert grassland site with an elevation of about 1,650 meters (5,400 feet) along the floodplain of Cactus Flat. Most of the soils sampled in this area are of cropland quality. The vegetation there is dominated by galleta grass (Hilaria jamesii) and Indian ricegrass (Oryzopsis hymenoides), which would make this area very good desert range for livestock. The soils and vegetation found here are similar to those in Area 13 of the NTS.

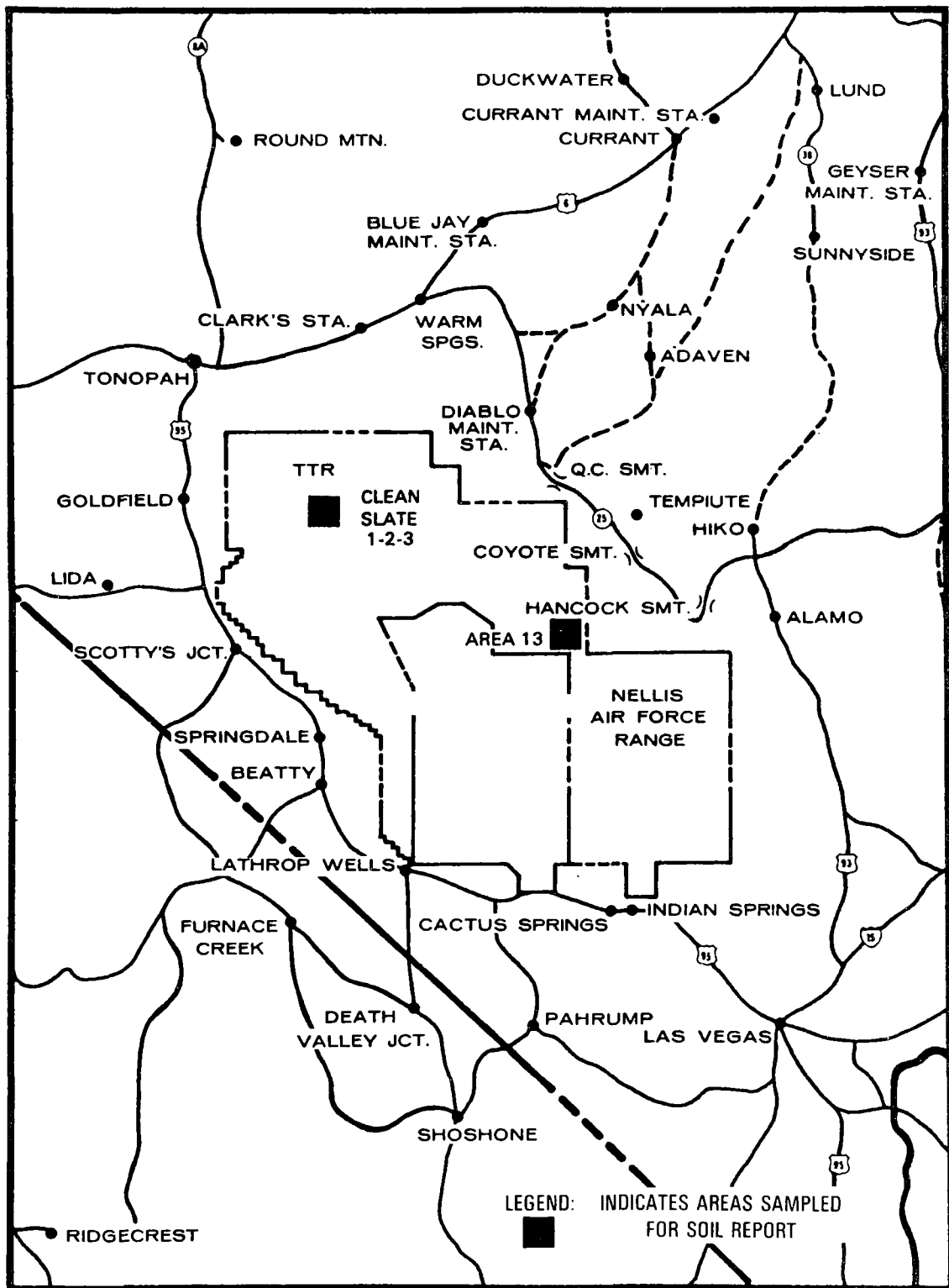
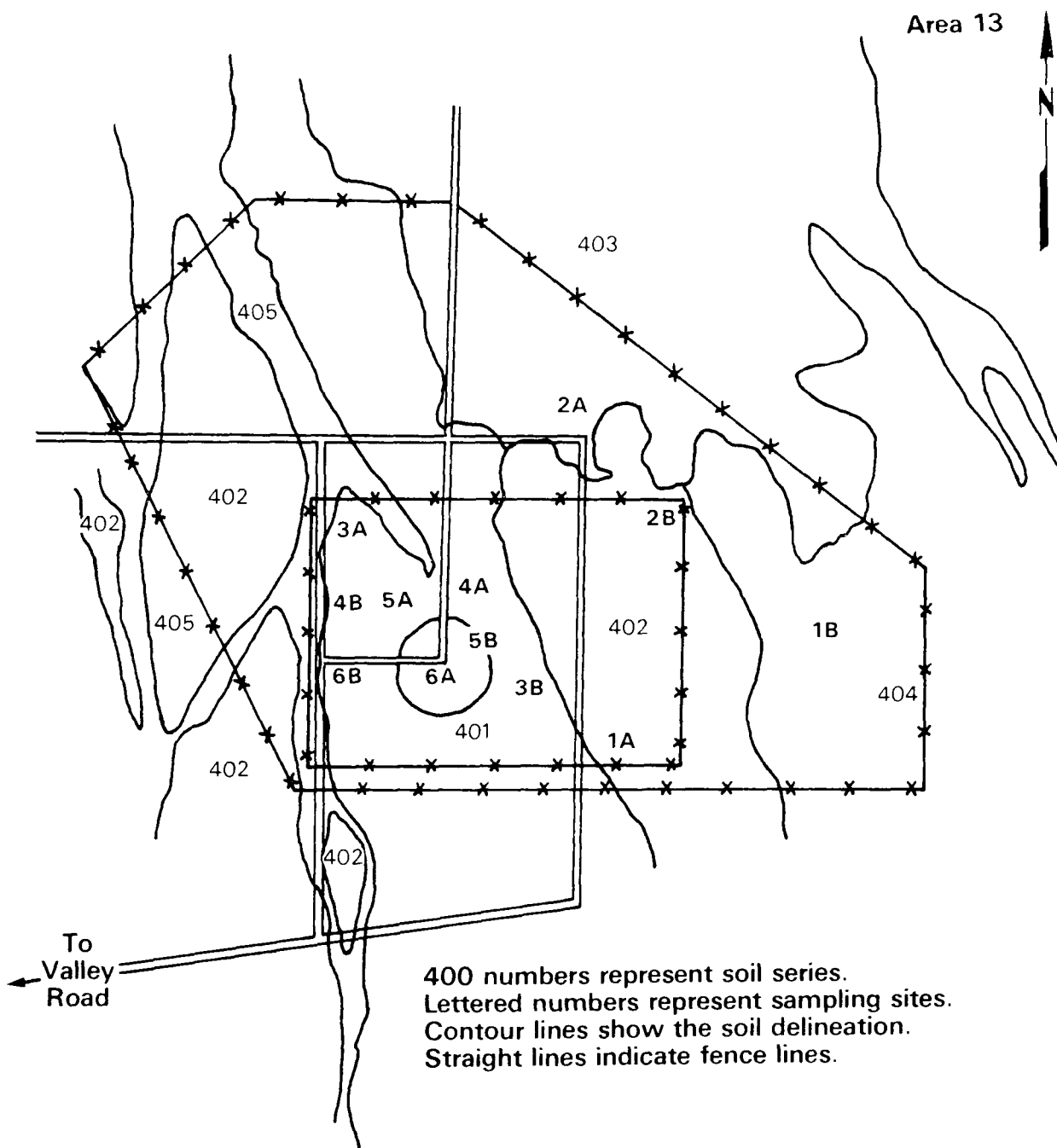


Figure 1. The areas sampled on the Nevada Test Range Complex.

## AREA 13

Area 13 is in the northeastern corner of the Test Range Complex. It is in the bottom of a wide alluvial valley about 1,317 meters (4,500 feet) in elevation. It is bounded on the east by the Groom Range and on the west by the Belted Range. Most of its land is classified as potential agricultural cropland. Its soils and vegetation are similar to those in the Clean Slate 3 area of the Tonopah Test Range. The soils are deep and very productive. NAEG investigators have conducted various types of research studies in this area ranging from greenhouse soil and plant experiments to large animal grazing studies (Au et al., 1976, 1977; Smith, 1976). The locations in Area 13 from which soil samples were taken are shown in Figure 2.



Scale:  
 1" = 1733'  
 3.1" = 1 Mile

Figure 2. The locations of soil samples taken in Area 13.

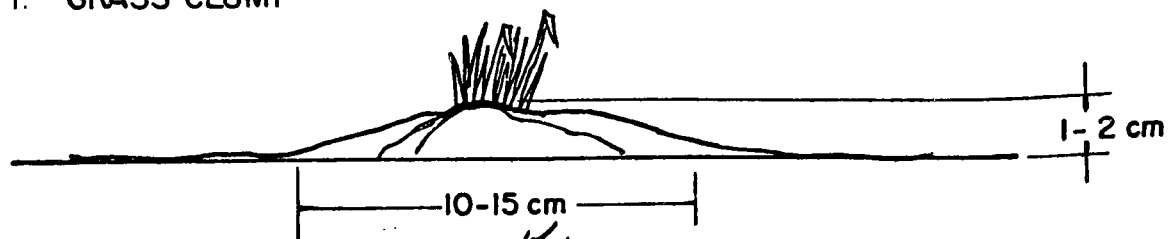
### III. PROFILE SAMPLING

Soil and vegetation samples were taken at each sampling site by Reynolds Electrical and Engineering Company, Inc. personnel (Essington and Fowler, 1976). The samples were taken at random in a systematic manner according to plot, quadrant, quadrat, mound, and whether the mound had a single plant or a complex of two or more plants. Sketches of the different types of soil mounds sampled are presented in Figure 3. A very shallow pit was dug to a depth of 5 cm at each sampling site, and the soil profile was determined by visual inspection. All characterizations of the soil were performed on site at the time of sampling.

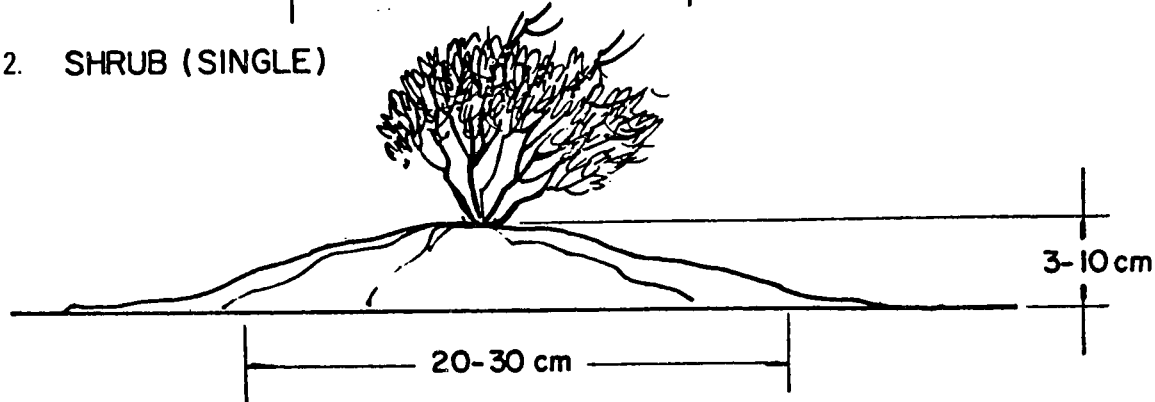
The field sampling procedure was to cut or saw the aboveground vegetation level with the top of the mound without disturbing the mound soil. Each mound was then photographed with a stereo camera at an angle perpendicular to the vertical axis of the mound at a distance just far enough away to include the whole mound and part of the desert pavement surrounding the mound. From three to six radials were selected for profile sampling depending on the uniformity of the mound. Samples were collected by Reynolds Electrical and Engineering Company, Inc. personnel using a technique that prevents cross-contamination of samples (Essington and Fowler, 1976). Briefly, this was accomplished using

a specially constructed scoop which removed a sample 10 cm x 1 cm and 2-1/2 cm deep. A second 2-1/2-cm deep sample was removed separately following the first so that a profile was obtained to a depth of 5 cm. Samples from each mound were taken as close to the vegetation clump as practical.

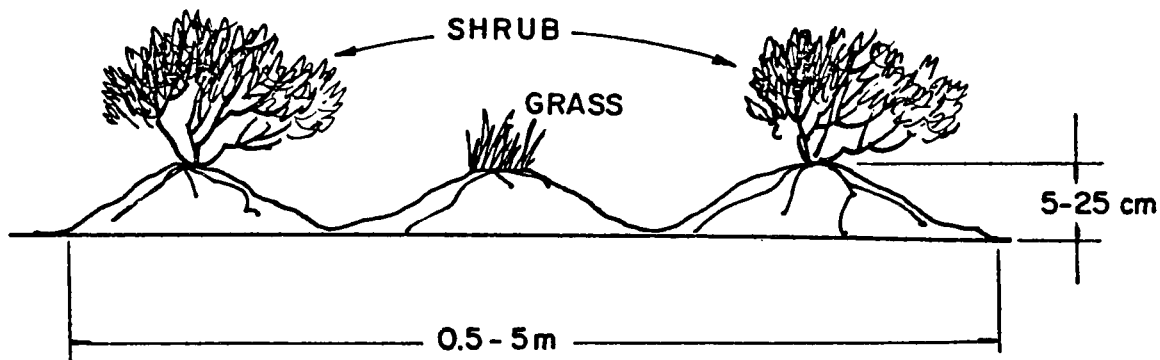
1. GRASS CLUMP



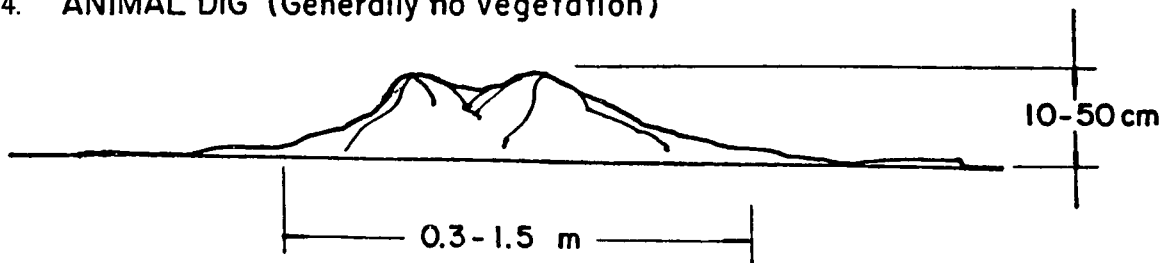
2. SHRUB (SINGLE)



3. SHRUB COMPLEX



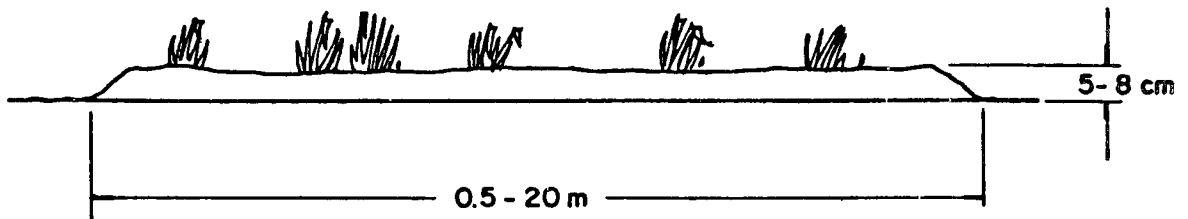
4. ANIMAL DIG (Generally no vegetation)



MOUND TYPES

Figure 3. Sketches of the different types of soil mounds.

5. DIFFUSE GRASS



6. LARGE ANIMAL DIG (Generally colony of small diggings,  
no vegetation)

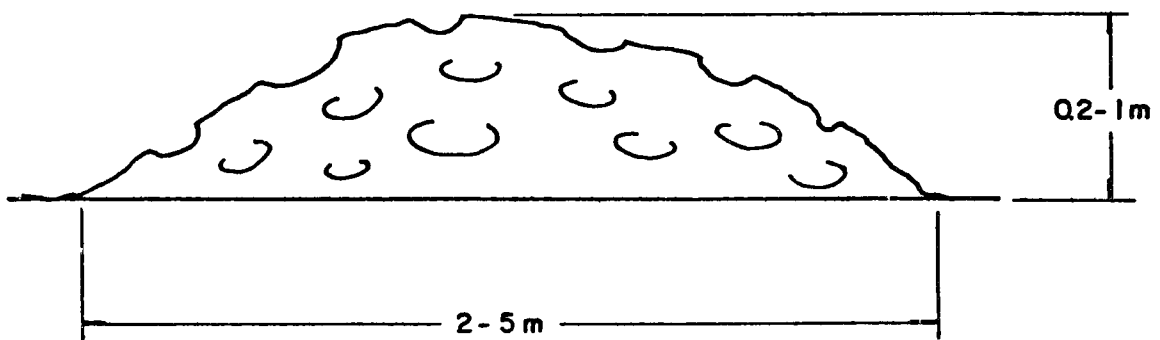


Figure 3. Sketches of the different types of soil mounds. (Continued)

#### IV. SOIL PROFILE CHARACTERIZATION PROCEDURES

Soil colors were determined by comparing the sample with the Munsell Soil Color Chart (Munsell Color Company, Inc., 1954). The method requires visual matching of the soil sample to an appropriate color chip. The standardized color chips include designators for hue, value, and chroma. Hue is the dominant spectral color. Value refers to the relative lightness of color and is a function of the total amount of reflected light. Chroma, or the saturation, is the relative purity or strength of the spectral color and increases with decreasing grayness. Colors are for air-dried soil unless otherwise noted.

Soil structure, pH, and effervescence were determined by procedures described by the U.S. Soil Conservation Service (1951). Soil texture was determined by rolling the moistened soil sample between the thumb and index finger. Soil structure was determined visually from the aggregability of the primary soil particles into compound particles. Soil pH was determined by placing enough indicator dye solution to cover the soil sample in the spot plate. Cresol red was used between pH 7.2 and 8.8, and thymol blue was used between pH 8.0 and 9.6.

Effervescence was determined by adding a few drops of 0.1N HCl to the soil as an indication of the occurrence of certain salts in various crystalline

forms. The effervescent reaction was correlated to the relative concentrations of carbonates of calcium, magnesium, and sodium present in the soil.

## V. RESULTS AND DISCUSSION

Most of the surface soils in the two plutonium-contaminated sites of the Test Range Complex have gravelly texture and are typically classified as gravelly sandy loam. The majority of land sampled is either floodplain or alluvial fan with deep soils having well-developed profiles and platy or subangular blocky structure.

In the areas sampled, the wind has a dominant influence on the surface texture of the soil. It has moved the fine-textured soils around individual plants or plant clumps, thus leaving the coarse soil particles in low areas between the plants. It was found that the size of the soil mound increased with the size of the plant because of the plant biomass acting as a barrier for the deposition of soil by the wind.

It has been established by Tamura (1975) that the highest plutonium activity in soils at the NTS is associated with the coarse silt particle size fraction (53 to 20 micrometers). This particle size is easily moved by the wind.

In the soil profile mound study, it was generally found that the soil around the brush was finer textured than that found in the animal diggings.

This difference is due to the burrowing and continuous foraging habits of the animals which cause a mixing of the coarse and fine soils resulting in a coarser soil texture found at the animal mounds.

All of the soils are alkaline and range in pH from 7 to 9. The color of the surface soil ranges from light gray to very pale brown dry and from brown to dark grayish brown moist. Most of the soils are potentially agricultural if water were available. The soil drainage is well to very well drained.

The vegetation is classified as high desert grass and shrubs. The grass and shrubs are predominately winter fat (Eurotia lanata), fourwing saltbush (Atriplex canescens), shadscale (Atriplex confertifolia), bud sagebrush (Artemisia spinescens), galleta grass (Hilaria jamesii), and Indian ricegrass (Oryzopsis hymenoides). The scientific and common names of the vegetation occurring in the mound study areas are given in Table 1.

Domestic livestock prefer the above vegetation to any other that grows on the desert range. Because a large portion of the land sampled could be cultivated for crops or is potentially good winter range, these findings should be considered in any "cleanup" decision.

TABLE 1. SCIENTIFIC AND COMMON NAMES OF VEGETATION IN MOUND STUDY AREAS

Scientific Name	Common Name
<u>Artemisia spinescens</u>	Bud sagebrush
<u>Atriplex canescens</u>	Fourwing saltbush
<u>Atriplex confertifolia</u>	Shadscale
<u>Chrysothamnus viscidiflorus</u> (subspecies <u>stenophyllus</u> )	Small rabbitbrush
<u>Eurotia lanata</u>	Winter fat
<u>Hilaria jamesii</u>	Galleta grass
<u>Oryzopsis hymenoides</u>	Indian ricegrass
<u>Lycium andersonii</u>	Wolfberry
<u>Tetradymia glabrata</u>	Horsebrush

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## APPENDIX A

ARE 52 TR CLEAN SLATE 3:  
(1) CLUMP GRASS

### Legend:

(1)	=	Clump grass
L 15609	=	Library number
Lab 66033	=	Laboratory soil sample number
(5 YR 6/3)	=	Munsell soil color chart identification
5 YR	=	Hue designator
6/	=	Value designator
/3	=	Chroma designator

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	1A	1	3	13
	DEPTH	DESCRIPTION			
	2.7 to 0 cm L 15609 Lab 66033	Light reddish brown (5YR 6/3) dry; gravelly loamy sand, loose dry and moist, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15610 Lab 62034	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, reddish brown (5YR 4/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	1A	1	1	4
	DEPTH	DESCRIPTION			
	1.1 to 0 cm L 15612 Lab 62036	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15613 Lab 62037	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	2A	1	4	7
	DEPTH	DESCRIPTION			
	2.6 to 0 cm L 15615 Lab 62039	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15616 Lab 62040	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, reddish brown (5YR 4/3) moist; soft, friable, nonsticky, nonplastic; violently effervescent; moderately alkaline (pH 8.0).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	2A	1	1	3
	DEPTH	DESCRIPTION			
	3.0 to 0 cm L 15618 Lab 62042	Reddish brown (5YR 5/3) dry; gravelly sand, dark reddish brown (5YR 3/3) moist; loose dry and moist; nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15619 Lab 62043	Light reddish brown (5YR 6/3) dry; gravelly loamy sand, dark reddish brown (5YR 3/3) moist; loose dry and moist; nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	3A	2	2	33
	DEPTH	DESCRIPTION			
	1.9 to 0 cm L 15621 Lab 62045	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15622 Lab 62046	Reddish brown (5YR 5/3) dry; gravelly loamy sand, dark reddish brown (5YR 3/3) moist; loose dry and moist; nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	3A	2	5	96
	DEPTH	DESCRIPTION			
	2.2 to 0 cm L 15624 Lab 62048	Light reddish brown (5YR 6/3) dry; gravelly loamy sand, reddish brown (5YR 4/3) moist; loose dry and moist; nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15625 Lab 62049	Light reddish brown (5YR 6/3) dry; gravelly fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	4A	1	1	7
	DEPTH	DESCRIPTION			
	3.0 to 0 cm L 15627 Lab 62051	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15628 Lab 62052	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	4A	1	5	90
	DEPTH	DESCRIPTION			
	3.2 to 0 cm L 15630 Lab 62054	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, reddish brown (5YR 4/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent, mildly alkaline (pH 7.8).			
	0 to 5 cm L 15631 Lab 62055	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	1B	3	3	25
	DEPTH	DESCRIPTION			
	1.0 to 0 cm L 15633 Lab 62057	Light reddish brown (5YR 6/3) dry; gravelly sand, dark reddish brown (5YR 3/3) moist; loose dry and moist; nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15634 Lab 62058	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; mildly alkaline (pH 7.6).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	1B	3	5	53
	DEPTH	DESCRIPTION			
	2.3 to 0 cm L 15636 Lab 62060	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15637 Lab 62061	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	2B	1	2	24
	DEPTH	DESCRIPTION			
	0.4 to 0 cm L 15639 Lab 62063	Light reddish brown (5YR 6/3) dry; gravelly loamy sand, dark reddish brown (5YR 3/4) moist; loose, dry and moist; nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15640 Lab 62064	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	2B	1	2	21
	DEPTH	DESCRIPTION			
	2.4 to 0 cm L 15642 Lab 62066	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15643 Lab 62067	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	3B	1	1	4
	DEPTH	DESCRIPTION			
	2.8 to 0 cm L 15645 Lab 62069	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15646 Lab 62070	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	3B	1	4	35
	DEPTH	DESCRIPTION			
	1.5 to 0 cm L 15648 Lab 62072	Reddish brown (5YR 5/3) dry; gravelly loamy sand, dark reddish brown (5YR 3/3) moist; loose dry and moist; nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15649 Lab 62073	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	4B	4	4	61
	DEPTH	DESCRIPTION			
	2.8 to 0 cm L 15651 Lab 62075	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15652 Lab 62076	Light reddish brown (5YR 5/3) dry; sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## CLUMP GRASS (1) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Indian Ricegrass, <u>Oryzopsis hymenoides</u>	4B	4	2	35
	DEPTH	DESCRIPTION			
	1.5 to 0 cm L 15654 Lab 62078	Light reddish brown (5YR 6/3) dry; gravelly loamy sand, reddish brown (5YR 4/3) moist; loose dry and moist; nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15655 Lab 62079	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonstick, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## APPENDIX B

AREA 52 TTR CLEAN SLATE 3:  
(2) SINGLE SHRUB

### Legend

(2) = Single shrub  
L 15561 = Library number  
Lab 61985 = Laboratory number

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Shadscale, <u>Atriplex confertifolia</u>	1A	1	5	51
	DEPTH	DESCRIPTION			
	0.9 to 0 cm L 15561 Lab 61985	Reddish brown (5YR 5/3) dry; gravelly loamy sand, dark reddish brown (5YR 3/4) moist; loose dry and moist; nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15562 Lab 61986	Reddish brown (5YR 5/3) dry; sandy loam, dark reddish brown (5 YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Shadscale, <u>Atriplex confertifolia</u>	1A	1	4	32
	DEPTH	DESCRIPTION			
	0.9 to cm L 15564 Lab 61988	Reddish brown (5YR 5/3) dry; sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15565 Lab 61989	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Shadscale, <u>Atriplex confertifolia</u>	2A	1	1	8
	DEPTH	DESCRIPTION			
	3.1 to 0 cm L 15567 Lab 61991	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15568 Lab 61992	Light reddish brown, (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u>	2A	1	2	19
	DEPTH	DESCRIPTION			
	4.5 to 0 cm L 15570 Lab 61994	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15571 Lab 61995	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Winter Fat, <u>Eurotia lanata</u>	3A	2	1	12
	DEPTH	DESCRIPTION			
	1.0 to 0 cm L 15573 Lab 61997	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15574 Lab 61998	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Shadscale, <u>Atriplex confertifolia</u>	3A	2	4	37
	DEPTH	DESCRIPTION			
	1.6 to 0 cm L 15576 Lab 62000	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15577 Lab 62001	Reddish brown (5YR 5/3) dry; gravelly fine sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Shadscale, <u>Atriplex confertifolia</u>	4A	1	4	103
	DEPTH	DESCRIPTION			
	3.0 to 0 cm L 15579 Lab 62003	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15580 Lab 62004	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.4).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Shadscale, <u>Atriplex confertifolia</u>	4A	1	2	43
	DEPTH	DESCRIPTION			
	0.9 to 0 cm L 15582 Lab 62006	Reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15583 Lab 62007	Light reddish brown (5YR 6/3) dry; loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u>	1B	3	3	28
	DEPTH	DESCRIPTION			
	4.1 to 0 cm L 15585 Lab 62009	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15586 Lab 62010	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.4).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Winter Fat <u>Eurotia lanata</u>	1B	3	4	49
	DEPTH	DESCRIPTION			
	1.9 to 0 cm L 15588 Lab 62012	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	L 15589 Lab 62013	No soil in bottle.			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Bud Sagebrush, <u>Artemisia spinescens</u>	2B	1	2	26
	DEPTH	DESCRIPTION			
	1.6 to 0 cm L 15591 Lab 62015	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15592 Lab 62016	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Bud Sagebrush, <u>Artemisia spinescens</u>	2B	1	3	41
	DEPTH	DESCRIPTION			
	0.9 to 0 cm L 15594 Lab 62018	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15595 Lab 62019	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.2).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Shadscale, <u>Atriplex confertifolia</u>	3B	1	5	67
	DEPTH	DESCRIPTION			
	1.8 to 0 cm L 15597 Lab 62021	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15598 Lab 62022	Reddish brown (5YR 5/3) dry; sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u>	3B	1	2	27
	DEPTH	DESCRIPTION			
	1.8 to 0 cm L 15600 Lab 62024	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15601 Lab 62025	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Shadscale, <u>Atriplex confertifolia</u>	4B	4	3	48
	DEPTH	DESCRIPTION			
	2.0 to 0 cm L 15603 Lab 62027	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15604 Lab 62028	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.4).			

## SINGLE SHRUB (2) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Winter Fat, <u>Eurotia lanata</u>	4B	4	5	89
	DEPTH	DESCRIPTION			
	1.9 to 0 cm L 15606 Lab 62030	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, non-sticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.6).			
	0 to 5 cm L 15607 Lab 62031	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

## APPENDIX C

AREA 52 TTR CLEAN SLATE 3:  
(3) SHRUB COMPLEX

### Legend:

(3)	=	Complex of two or more shrubs on the mound
L 15465	=	Library number
Lab 61937	=	Laboratory soil sample number

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u> Bud Sagebrush, <u>Artemisia spinescens</u> Winter Fat, <u>Eurotia lanata</u>	1B	3	2	36
	DEPTH	DESCRIPTION			
	3.5 to 0 cm L 15465 Lab 61937	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15466 Lab 61938	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u>	1B	3	5	120
	DEPTH	DESCRIPTION			
	4.0 to 0 cm L 15468 Lab 61940	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15469 Lab 61941	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u> Shadscale, <u>Atriplex confertifolia</u> Indian Ricegrass, <u>Oryzopsis hymenoides</u>	3B	1	4	82
	DEPTH	DESCRIPTION			
	4.5 to 0 cm L 15477 Lab 61949	Reddish brown (5YR 5/3) dry; sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15478 Lab 61950	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u> Shadscale, <u>Atriplex confertifolia</u> Winter Fat, <u>Eurotia lanata</u>	2B	1	1	25
	DEPTH	DESCRIPTION			
	4.0 to 0 cm L 15471 Lab 61943	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15472 Lab 61944	Reddish brown (5YR 5/3) dry; gravelly fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.4).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Winter Fat, <u>Eurotia lanata</u>	2B	1	1	15
	DEPTH	DESCRIPTION			
	2.5 to 0 cm L 15474 Lab 61946	Light reddish brown (SYR 6/3) dry; sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			
	0 to 5 cm L 15475 Lab 61947	Light reddish brown (SYR 6/3) dry; sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u> Shadscale, <u>Atriplex confertifolia</u>	3B	1	3	57
	DEPTH	DESCRIPTION			
	2.1 to 0 cm L 15480 Lab 61952	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15481 Lab 61953	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent, moderately alkaline (pH 8.2).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u> Shadscale, <u>Atriplex confertifolia</u>	4B	4	4	57
	DEPTH	DESCRIPTION			
	3.8 to 0 cm L 15483 Lab 61955	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15484 Lab 61956	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u> Winter fat, <u>Eurotia lanata</u> Indian Ricegrass, <u>Oryzopsis hymenoides</u>	4B	4	2	33
	DEPTH	DESCRIPTION			
	1.5 to 0 cm L 15486 Lab 61958	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15487 Lab 61959	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.4).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u>	1A	1	1	16
	DEPTH	DESCRIPTION			
	7.7 to 0 cm L 15489 Lab 61961	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15490 Lab 61962	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.4).			

SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u>	1A	1	5	83
	DEPTH	DESCRIPTION			
	3.5 to 0 cm L 15492 Lab 61964	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15493 Lab 61965	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u> Winter Fat, <u>Eurotia lanata</u> Bud Sagebrush, <u>Artemisia spinescens</u>	2A	1	2	32
	DEPTH	DESCRIPTION			
	3.1 to 0 cm L 15495 Lab 61967	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.4).			
	0 to 5 cm L 15496 Lab 61968	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; violently effervescent; moderately alkaline (pH 8.4).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u> Indian Ricegrass, <u>Oryzopsis hymenoides</u> Bud Sagebrush <u>Artemisia spinescens</u>	2A	1	1	4
	DEPTH	DESCRIPTION			
	1.9 to 0 cm L 15498 Lab 61970	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15499 Lab 61971	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u> Winter Fat, <u>Eurotia lanata</u>	3A	2	1	9
	DEPTH	DESCRIPTION			
	1.4 to 0 cm L 15501 Lab 61973	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15502 Lab 61974	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft; friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

## SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Bud Sagebrush, <u>Artemisia spinescens</u> Winter Fat, <u>Eurotia lanata</u> Shadscale <u>Atriplex confertifolia</u>	3A	2	3	52
	DEPTH	DESCRIPTION			
	1.3 to 0 cm L 15504 Lab 61976	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft; friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15505 Lab 61977	Light reddish brown (5YR 6/3) dry; gravelly fine sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u>	4A	1	1	1
	DEPTH	DESCRIPTION			
	2.0 to 0 cm L 15507 Lab 61979	Light reddish brown (5YR 6/3 dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15508 Lab 61980	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

## SHRUB COMPLEX (3) CLEAN SLATE

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Shadscale, <u>Atriplex confertifolia</u> Winter Fat, <u>Eurotia lanata</u>	4A	1	4	66
	DEPTH	DESCRIPTION			
	1.9 to 0 cm L 15510 Lab 61982	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15511 Lab 61983	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/4) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

## APPENDIX D

AREA 52 TTR CLEAN SLATE 3:  
(4) Animal Mounds

### Legend:

(4) = Animal mound number  
L 15078 = Library number

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		1B	3	3	1
	DEPTH	DESCRIPTION			
	1.1 to 0 cm L 15078	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 5/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15079	Very pale brown (10YR 7/3) dry; gravelly sandy loam, grayish brown (10YR 5/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		2B	1	4	1
	DEPTH	DESCRIPTION			
	5.0 to 0 cm L 15081	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 5/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15082	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 5/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		2B	1	5	2
	DEPTH	DESCRIPTION			
	4.3 to 0 cm L 15084	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15085	Light gray (10YR 7/2) dry; sandy loam, brown (10YR 4/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		3B	1	1	1
	DEPTH	DESCRIPTION			
	4.4 to 0 cm L 15087	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15088	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		3B	1	5	2
	DEPTH	DESCRIPTION			
	3.2 to 0 cm L 15090	Pink (5YR 7/3) dry; sandy loam, reddish brown (5YR 4/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15091	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 8.0).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52		4B	4	4	1
	DEPTH	DESCRIPTION			
	2.7 to 0 cm L 15093	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15094	Pink (5YR 7/3) dry; gravelly sandy loam, reddish brown (5YR 4/3) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.0).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		4B	4	4	3
	DEPTH	DESCRIPTION			
	2.8 to 0 cm L 15096	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15097	Pink (5YR 7/3) dry; gravelly sandy loam, reddish brown (5YR 4/3) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		1A	1	1	1
	DEPTH	DESCRIPTION			
	6.6 to 0 cm L 15099	Pink (5YR 7/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15100	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; mildly alkaline (pH 7.8).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		1A	1	2	2
	DEPTH	DESCRIPTION			
	4.0 to 0 cm L 15102	Pink (5YR 7/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; violently effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15103	Pinkish gray (5YR 7/2) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic, violently effervescent; mildly alkaline (pH 7.8).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		2A	1	4	1
	DEPTH	DESCRIPTION			
	2.2 to 0 cm L 15105	Reddish brown (5YR 5/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, non-sticky, nonplastic; strongly effervescent; mildly alkaline (pH 7.8).			
	0 to 5 cm L 15106	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, non-sticky, nonplastic; strongly effervescent; mildly alkaline (pH 7.8).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		2A	1	5	2
	DEPTH	DESCRIPTION			
	3.3 to 0 cm L 15108	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; violently effervescent; moderately alkaline (pH 8.0).			
	0 to 5 cm L 15109	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.0).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52		3A	2	4	3
	DEPTH	DESCRIPTION			
	3.7 to 0 cm L 15112	Pink (5YR 7/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.2).			
	0 to 5 cm L 15113	Pinkish gray (5YR 7/2) dry; fine sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; strongly effervescent; moderately alkaline (pH 8.2).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		3A	2	5	5
	DEPTH	DESCRIPTION			
	5.3 to 0 cm L 15114	Pinkish gray (5YR 7/2) dry; fine sandy loam, reddish brown (5YR 4/3) moist; soft, friable, nonsticky, nonplastic; violently effervescent; moderately alkaline (pH 8.4).			
	0 to 5 cm L 15115	Pinkish gray (5YR 7/2) dry; sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; violently effervescent; moderately alkaline (pH 8.4).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		4A	1	1	1
	DEPTH	DESCRIPTION			
	3.0 to 0 cm L 15117	Pinkish gray (5YR 7/2) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			
	0 to 5 cm L 15118	Pinkish gray (5YR 7/2) dry; sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

## ANIMAL MOUND (4) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52		4A	1	5	3
	DEPTH	DESCRIPTION			
	4.9 to 0 cm L 15120	Pinkish gray (5YR 7/2) dry; fine sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			
	0 to 5 cm L 15121	Pinkish gray (5YR 7/2) dry; fine sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.2).			

## APPENDIX E

AREA 52 TTR CLEAN SLATE 3:

(5) DIFFUSED GRASS, GALLETA GRASS (HILARIA JAMESII)

### Legend:

(5) = Diffused grass

L 15162 = Library number

1st 0 to 5 cm is for 5 cm under the mound

2nd 0 to 5 cm is for 5 cm in base area between mounds

A<sub>1</sub> horizon. - This is a surface mineral soil horizon, usually dark in color, which has a relatively high content of organic matter mixed with mineral matter.

A<sub>2</sub> horizon. - This surface or subsurface horizon, usually lighter in color than the underlying horizon, has lost clay minerals, iron, or aluminum, or all three, with the resultant concentration of the more resistant minerals. It is a horizon of eluviation - of leaching of materials out in solution and suspension.

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Galleta Grass, <u>Hilaria jamesii</u>	1A	1	3	4
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	5.3 to 0 cm L 15162	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.6).			
A <sub>1</sub>	0 to 5 cm L 15166	Pink (5YR 7/3) dry; very fine sandy loam, reddish brown (5YR 4/3) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).			
A <sub>1</sub>	0 to 5 cm L 15170	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic, few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	1A	1	4	5
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.0 to 0 cm L 15173	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.6).			
A <sub>1</sub>	0 to 5 cm L 15177	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.6).			
A <sub>1</sub>	0 to 5 cm L 15181	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.6).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	2A	1	4	2
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.6 to 0 cm L 15185	Light reddish brown (5YR 6/3) dry; very fine sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 5 cm L 15189	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15193	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; strongly effervescent; mildly alkaline (pH 7.8).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Galleta Grass, <u>Hilaria jamesii</u>	2A	1	1	1
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.5 to 0 cm L 15198	Light reddish brown (5YR 6/3) dry; very fine sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, non-plastic; few fine interstitial pores; slightly effervescent; mildly alkaline ( pH 7.6).			
A <sub>1</sub>	0 to 5 cm L 15201	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, non-plastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15205	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, non-plastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	3A	2	5	7
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	.9 to 0 cm L 15211	Light reddish brown (5YR 6/3) dry, gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft to loose, friable to loose, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15215	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 5 cm L 15219	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	3A	2	2	3
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.0 to 0 cm L 15222	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, non-plastic; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15226	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, non-plastic; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15230	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, non-plastic; slightly effervescent; moderately alkaline (pH 8.0).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	4A	1	2	1
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.0 to 0 cm L 15233	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15237	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 5 cm L 15241	Light reddish brown (5YR 6/3) dry; gravelly sandy loam to gravelly loamy sand, reddish brown (5YR 4/3) moist; soft to loose, loose, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	4A	1	5	2
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.0 to 0 cm L 15247	Light reddish brown (5YR 6/3) dry; gravelly sandy loam to gravelly loamy sand, reddish brown (5YR 4/3) moist; soft to loose, loose, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15251	Light reddish brown (5YR 6/3) dry; gravelly sandy loam to gravelly loamy sand, dark reddish brown (5YR 3/2) to very dark grayish brown (10YR 3/2) moist; soft to loose, loose, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 5 cm L 15255	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

DIFFUSED GRASS (5) CLEAN SLAT 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	1B	3	5	9
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	0.8 to 0 cm L 15258	Light reddish brown (5YR 6/3) dry; gravelly sandy loam to gravelly loamy sand, dark reddish brown (5YR 3/2) moist; soft to loose, loose, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 5 cm L 15260	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) to dark grayish brown (10YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 5 cm L 15262	Light reddish brown (5YR 6/3) dry; gravelly sandy loam to gravelly loamy sand, dark reddish gray (5YR 4/2) moist; soft to loose, loose, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	1B	3	4	3
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	0.1 to 0 cm L 15264	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15268	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 5 cm L 15272	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; slightly effervescent; mildly alkaline (pH 7.8).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	2B	1	1	1
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.0 to 0 cm L 15276	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15277	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
52	Galleta Grass, <u>Hilaria jamesii</u>	2B	1	2	2
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.0 to 0 cm L 15278	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 5 cm L 15282	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15286	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galetta Grass, <u>Hilaria jamesii</u>	3B	1	1	4
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.0 to 0 cm L 15290	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15291	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15292	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	3B	1	2	6
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.5 to 0 cm L 15293	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15295	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15297	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	4B	4	1	1
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.0 to 0 cm L 15300	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish brown (5YR 3/3) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15304	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5 YR 3/3) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15308	Light reddish brown (5YR 6/3) dry; gravelly sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			

DIFFUSED GRASS (5) CLEAN SLATE 3

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
52	Galleta Grass, <u>Hilaria jamesii</u>	4B	4	1	2
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.5 to 0 cm L 15311	Reddish brown (5YR 5/3) dry; fine sandy loam, dark reddish brown (5YR 3/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline.			
A <sub>1</sub>	0 to 5 cm L 15315	Light reddish brown (5YR 6/3) dry; fine sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			
A <sub>1</sub>	0 to 5 cm L 15319	Light reddish brown (5YR 6/3) dry; sandy loam, dark reddish gray (5YR 4/2) moist; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; mildly alkaline (pH 7.8).			

## APPENDIX F

AREA 13:  
(2) FOR SINGLE SHRUB

### Legend:

(2) = Single shrub on the mound  
L 15697 = Library number  
Lab 62247 = Laboratory soil sample number  
Soil profile #402 is taken from Area 13 Soil Survey Map

It should be pointed out that some of the soil horizons in this Appendix F were assigned no numbers by Reynolds Electrical and Engineering Co. personnel when the work was done in the field.

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	1A	3	4	6
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.4 to 0 cm L 15697 Lab 62247	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5 cm	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	1A	3	1	1
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.3 to 0 cm L 15700 Lab 62250	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	2A	3	4	16
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.9 to 0 cm L 15703 Lab 62253	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft to loose, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u>	2A	3	1	5
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1 to 0 cm L 15706 Lab 62256	Pale brown (10YR 6/3) dry; fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winterfat, <u>Eurotia lanata</u>	3A	1	3	4
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.3 to 0 cm L 15709 Lab 62259	Brown (10YR 5/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).*			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Shadscale, <u>Atriplex confertifolia</u>	3A	1	5	10
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.8 to 0 cm L 15712 Lab 62262	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u>	4A	1	2	7
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.1 to 0 cm L 15715 Lab 62265	Brown (10YR 5/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; moderate medium platy; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Shadscale, <u>Atriplex confertifolia</u>	4A	1	5	20
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.8 to 0 cm L 15718 Lab 62268	Brown (10YR 5/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u>	5A	2	2	16
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.4 to 0 cm L 15721 Lab 62271	Pale brown (10YR 6/3) dry; gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2).			

SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u>	5A	2	4	25
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.5 to 0 cm L 15724 Lab 62274	Brown (10YR 5/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Brown (10YR 5/3) dry; fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Brown (10YR 5/3) dry; fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	6A	1	1	1
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.0 to 0 cm L 15727 Lab 62277	Brown (10YR 5/3) dry; gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; violently effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; violently effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u>	6A	1	3	21
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.0 to 0 cm I 15730 Lab 62280	Brown (10YR 5/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 4/3) moist; moderate coarse platy structure; soft friable, nonsticky, nonplastic; common fine and medium vesicular pores; violently effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 4/3) moist; moderate coarse platy structure; soft friable, nonsticky, nonplastic; common fine and medium vesicular pores; violently effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES		PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Bud Sagebrush, <u>Artemisia spinescens</u>		1B	3	1	4
Horizon	DEPTH	DESCRIPTION				
A <sub>1</sub>	2.5 to 0 cm L 15733 Lab 62283	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure, soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).				
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).				
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).				

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Bud Sagebrush, <u>Artemisia spinescens</u>	1B	3	2	6
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.7 to 0 cm L 15736 Lab 62286	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Small Rabbitbrush, <u>Chrysothamnus viscidiflorus</u>	2B	1	3	13
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	5 to 0 cm L 15739 Lab 62289	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Small Rabbitbrush, <u>Chrysothamnus viscidiflorus</u>	2B	1	5	39
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.3 to 0 cm L 15742 Lab 62292	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u>	3B	4	1	2
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	1.8 to 0 cm L 15796 Lab 62343	Pale brown (10YR 6/3) dry; fine sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).			

SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat <u>Eurotia lanata</u>	3B	4	1	4
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.6 to 0 cm L 15799 Lab 62346	Pale brown (10YR 6/3) dry; fine sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/5) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.2).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u>	4B	2	1	7
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.8 to 0 cm L 15802 Lab 62349	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; very weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; very weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; weak medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Fourwing Saltbush, <u>Atriplex canescens</u>	4B	2	4	47
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	5 to 0 cm L 15805 Lab 62352	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; very weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 5/3) moist; very weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 5/3) moist; very weak fine platy structure; soft, friable, nonsticky, nonplastic; few fine vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
i3	Fourwing Saltbush, <u>Atriplex canescens</u>	5B	2	2	4
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	5.7 to 0 cm L 15808 Lab 62355	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many medium and fine vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Shadscale, <u>Atriplex confertifolia</u>	5B	2	4	8
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.2 to 0 cm L 15811 Lab 62358	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many medium and fine vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	6B	3	2	13
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.6 to 0 cm L 15814 Lab 62361	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine platy structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

SHRUB SINGLE (2)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Fourwing Saltbush, <u>Atriplex canescens</u>	6B	3	3	29
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3 to 0 cm L 15817 Lab 62364	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## APPENDIX G

### AREA 13: (3) FOR SHRUB COMPLEX

#### Legend:

(3) = Complex of two or more shrubs on the mound  
L 15745 = Library number  
Lab 62295 = Laboratory soil sample number  
Soil Profile number 402 is taken from Area 13 Soil Survey Map

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <i>Eurotia lanata</i> Small Rabbitbrush, <i>Chrysothamnus viscidiflorus</i>	1A	3	1	1
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	4.6 to 0 cm L 15745 Lab 62295	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; strong medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Shadscale, <u>Atriplex confertifolia</u> Bud Sagebrush, <u>Artemisia spinescens</u>	3B	4	2	31
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	4.2 to 0 cm L 15820 Lab 62367	Pale brown (10YR 6/3) dry; fine sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u> ; Shadscale, <u>Atriplex confertifolia</u> ; Bud Sagebrush, <u>Artemisia spinescens</u>	3B	4	3	37
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	8.2 to 0 cm L 15823 Lab 62370	Pale brown (10YR 6/3) dry; fine sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; weak medium platy structure; soft, friable, nonsticky, nonplastic; common fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; weak medium platy structure; soft, friable, nonsticky, nonplastic; common fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Shadscale, <u>Atriplex confertifolia</u> Winter Fat, <u>Eurotia lanata</u> Bud Sagebrush, <u>Artemisia spinescens</u>	4B	2	1	13
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	5 to 0 cm L 15826 Lab 62373	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; many fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u> ; Bud Sagebrush, <u>Artemisia spinescens</u> Fourwing Saltbrush, <u>Atriplex canescens</u>	4B	2	5	58
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	5.2 to 0 cm L 15829 Lab 62376	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; very weak subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; very weak subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; many fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; weak medium platy structure; soft friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	5B	2	2	17
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	7.2 to 0 cm L 15832 Lab 62379	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many medium and fine vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	5B	2	5	48
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	7.6 to 0 cm L 15835 Lab 62382	Brown (10YR 5/3) dry; fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many medium and fine vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u> Fourwing Saltbush, <u>Atriplex canescens</u>	6B	3	1	4
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	2.9 to 0 cm L 15838 Lab 62385	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine platy structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Shadscale, <u>Atriplex confertifolia</u> Winter Fat, <u>Eurotia lanata</u> Bud Sagebrush, <u>Artemisia spinescens</u>	6B	3	2	17
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	9.8 to 0 cm L 15841 Lab 62388	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Light gray (10YR 7/2) dry; fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u> Small Rabbitbrush, <u>Chrysothamnus viscidiflorus</u>	1A	3	1	29
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	4.3 to 0 cm L 15748 Lab 62298	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Horsebrush, <u>Tetradymia glabrata</u> Winter Fat, <u>Eurotia lanata</u>	2A	3	1	7
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	5.4 to 0 cm L 15751 Lab 62301	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; many fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	2A	3	4	41
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	4.4 to 0 cm L 15754 Lab 62304	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Wolfberry, <u>Lycium andersonii</u> Fourwing Saltbush, <u>Atriplex canescens</u> Winter Fat, <u>Eurotia lanata</u>	3A	1	4	99
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	6.3 to 0 cm L 15757 Lab 62307	Brown (10YR 5/3) dry; fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Fourwing Saltbush, <u>Atriplex canescens</u>	3A	1	3	83
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	7.2 to 0 cm L 15760 Lab 62310	Pale brown (10YR 6/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable; nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u> Shadscale, <u>Atriplex confertifolia</u>	4A	1	3	33
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	6.4 to 0 cm L 15763 Lab 62313	Brown (10YR 5/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine sub-angular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	4A	1	1	10
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	7.6 to 0 cm L 15766 Lab 62316	Brown (10YR 5/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; moderate medium platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Fourwing Saltbush, <u>Atriplex canescens</u> Bud Sagebrush, <u>Artemisia spinescens</u> Winter Fat, <u>Eurotia lanata</u>	5A	2	5	49
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	5.0 to 0 cm L 15769 Lab 62319	Brown (10YR 5/3) dry; very fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Brown (10YR 5/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Brown (10YR 5/3) dry; fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Fourwing Saltbush, <u>Atriplex canescens</u> Bud Sagebrush, <u>Artemisia spinescens</u>	5A	2	2	22
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	4.5 to 0 cm L 15772 Lab 62322	Pale brown (10YR 6/3) dry; gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	2.5 to 5.0 cm	Pale brown (10YR 6/3) dry; fine sandy loam, weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	Winter Fat, <u>Eurotia lanata</u>	6A	1	4	52
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.0 to 0 cm L 15775 Lab 62325	Brown (10YR 5/3) dry; fine sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 4/5) moist; moderate coarse platy structure; soft, friable, nonsticky, nonplastic; few fine and medium vesicular pores; violently effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; sandy loam, brown (10YR 4/3) moist; moderate coarse platy structure; soft, friable, nonsticky, nonplastic; few fine and medium vesicular pores; violently effervescent; moderately alkaline (pH 8.2).			

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO
13	<u>Shadscale,</u> <u>Atriplex confertifolia</u> <u>Winter Fat,</u> <u>Eurotia lanata</u> <u>Bud Sagebrush,</u> <u>Artemisia spinescens</u> <u>Fourwing Saltbush,</u> <u>Atriplex canescens</u>	6A	1	2	17
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	7.5 to 0 cm L 15778 Lab 62328	Brown (10YR 5/3) dry; gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	0 to 2.5 cm	Brown (10YR 5/3) dry; sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Brown (10YR 5/3) dry; sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2).			

## SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Shadscale, <u>Atriplex confertifolia</u>	1B	3	1	6
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.2 to 0 cm L 15781 Lab 62331	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Winter Fat, <u>Eurotia lanata</u>	1B	3	3	22
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	3.5 to 0 cm L 15784 Lab 62334	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, non-sticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few interstitial pores; slightly effervescent; moderately alkaline (pH 8.2).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure, soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.2).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Bud Sagebrush, <u>Artemisia spinescens</u> Small Rabbitbrush, <u>Chrysothamnus viscidiflorus</u>	2B	1	1	16
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	4.2 to 0 cm L 15787 Lab 62337	Pale brown (10YR 6/3) dry; gravelly sandy loam, dark grayish brown (10YR 4/2) moist; very weak fine subangular blocky breaking to single grain structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Very pale brown (10YR 7/3) dry; gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; strong coarse platy structure; soft, friable, nonsticky, nonplastic; many fine and medium vesicular pores; strongly effervescent; moderately alkaline (pH 8.4).			

SHRUB COMPLEX (3)

AREA	SPECIES	PLOT	QUADRANT	QUADRATE	MOUND NO.
13	Shadscale, <u>Atriplex confertifolia</u> Small Rabbitbrush, <u>Chrysothamnus viscidiflorus</u>	2B	1	2	40
Horizon	DEPTH	DESCRIPTION			
A <sub>1</sub>	8 to 0 cm L 15790 Lab 62340	Brown (10YR 5/3) dry; fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; few fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>1</sub>	0 to 2.5 cm	Pale brown (10YR 6/3) dry; fine sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			
A <sub>2</sub>	2.5 to 5.0 cm	Very pale brown (10YR 7/3) dry; loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky, nonplastic; common fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).			

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