

**UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R041XA004NM

Site Name: Gravelly Slopes

Precipitation or Climate Zone: 12 to 16 inches

Phase: _____

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on upland positions such as fans, terraces, and rolling plains. Slopes range from nearly level to slopes less than 30 percent. Direction of slope is not site differentiating. Elevations range from 4,500 to 6,000 feet above sea level, with the majority being found between 5,100 and 5,400 feet.

Land Form:

1. Fan

2. Terrace

3. Plain

Aspect:

1. N/A

- 2.

- 3.

	Minimum	Maximum
Elevation (feet)	4,500	6,000
Slope (percent)	1	<30
Water Table Depth (inches)	N/A	N/A
	Minimum	Maximum
Flooding:		
Frequency	N/A	N/A
Duration	N/A	N/A
	Minimum	Maximum
Ponding:		
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Precipitation ranges from 12 to 16 inches annually. More than half of this falls during July, August, and September in brief, but often-heavy thunderstorms. The rest of the moisture comes in the form of light rain or snow that falls slowly for a day or more. Snow rarely lasts more than a day. May and June are usually the driest months of the year. Humidity is usually very low.

Temperatures are usually mild. Freezing temperatures are common at night from December through April; however, temperatures during the day are usually above 50 degrees F.

Occasionally in December to February brief 0 degrees F temperatures may be witnessed some nights. During June and rarely during July and August, some days may exceed 105 degrees F. Frost-free days range from 170 to 220 days.

The cool-season plants start growth in early spring and mature in early summer. The warm-season plants take advantage of the summer rains and are growing and nutritious from July through September. Warm-season grasses may remain green throughout the year.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	167	187
Freeze-free period (days):	197	203
Mean annual precipitation (inches):	12	16

Monthly moisture (inches) and temperature (⁰F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.68	.89	24.0	61.0
February	.36	.59	26.9	65.0
March	.12	.45	25.5	71.5
April	.00	.23	34.7	78.7
May	.00	.20	25.5	87.0
June	.10	.55	40.0	95.1
July	1.26	2.33	46.4	95.7
August	2.28	3.15	48.5	92.6
September	.90	1.72	50.0	87.9
October	.43	1.12	36.1	80.0
November	.19	.69	31.3	67.6
December	.00	1.10	26.6	61.3

Climate Stations:

		Period					
Station ID	<u>290417</u>	Location	<u>Animas, NM</u>	From:	<u>1961</u>	To:	<u>1990</u>
Station ID	<u>292757</u>	Location	<u>Eicks Ranch, NM</u>	From:	<u>1961</u>	To:	<u>1990</u>
Station ID	<u>297534</u>	Location	<u>Rodeo, NM</u>	From:	<u>1961</u>	To:	<u>1990</u>

INFLUENCING WATER FEATURES**Narrative:**

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES**Narrative:**

The surface soils are usually gravelly loam or loamy mixed with stones and gravel. Plant and soil moisture relationship is good. These soils are well drained with a moderate available water-holding capacity. Water intake rates are very slow.

Parent Material Kind: Alluvium

Parent Material Origin: Mixed

Surface Texture:

- | |
|-----------------------|
| 1. Gravelly loam |
| 2. Very Gravelly loam |
| 3. |

Surface Texture Modifier:

1. Gravel
2. Stone
3.

Subsurface Texture Group: Loamy

Surface Fragments <=3" (% Cover): 15 to 60

Surface Fragments >3" (% Cover): 15 to 35

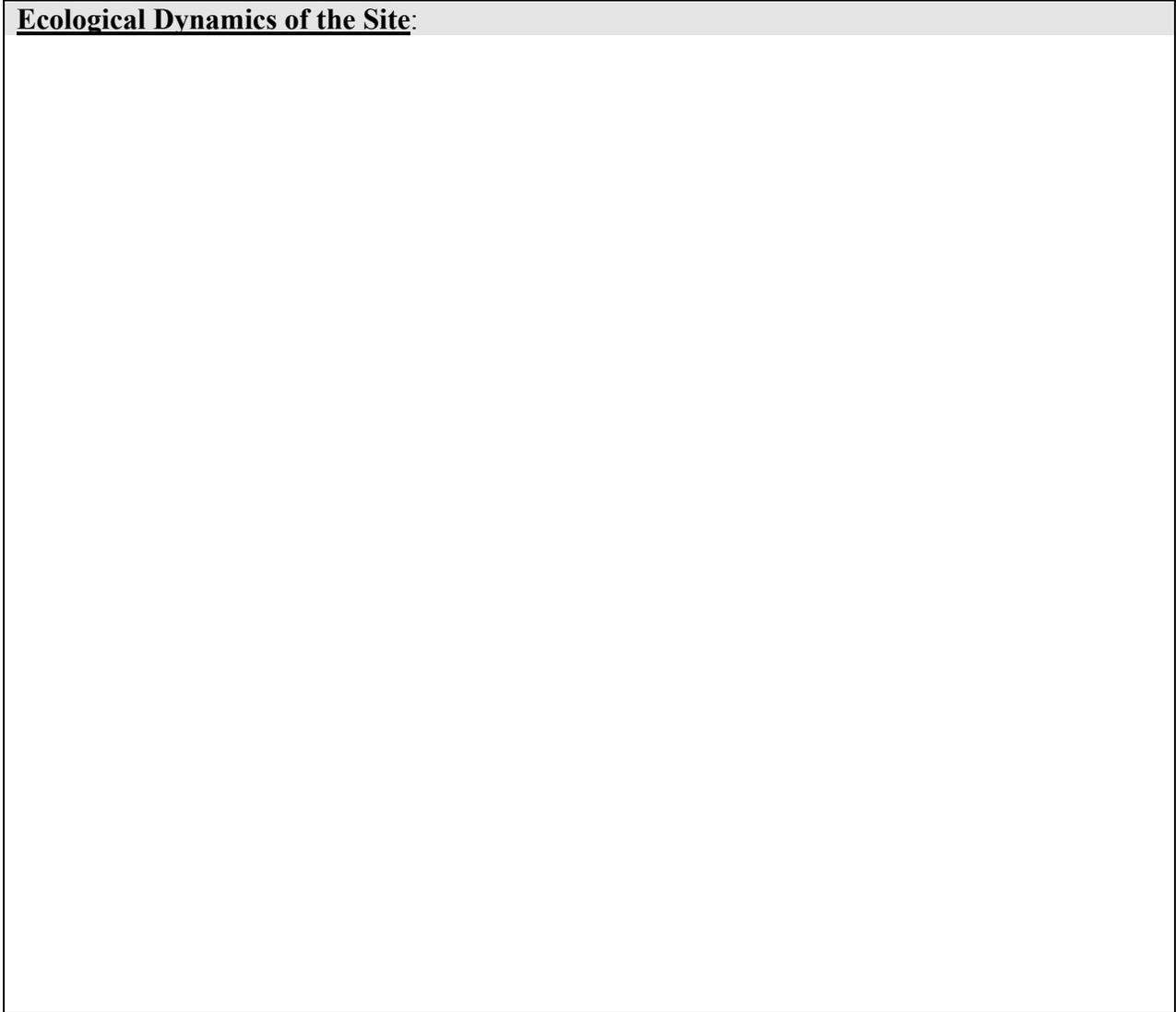
Subsurface Fragments <=3" (%Volume): 35 to 60

Subsurface Fragments >=3" (%Volume): 15 to 35

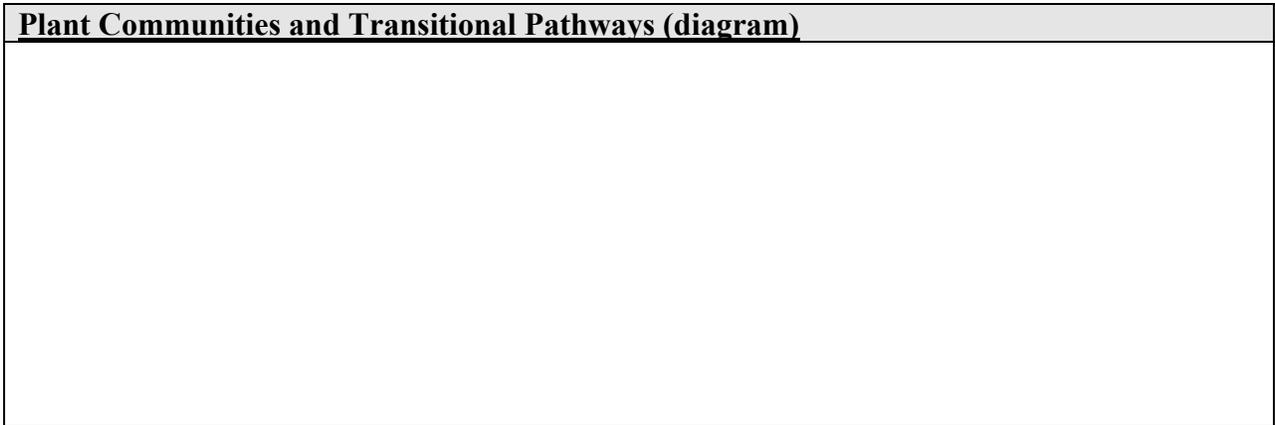
	Minimum	Maximum
Drainage Class:	<u>Well</u>	<u>Well</u>
Permeability Class:	<u>Very slow</u>	<u>Very slow</u>
Depth (inches):	<u>60</u>	<u>>72</u>
Electrical Conductivity (mmhos/cm):	<u>0.00</u>	<u>4.00</u>
Sodium Absorption Ratio:	<u>1.00</u>	<u>13.00</u>
Soil Reaction (1:1 Water):	<u>6.6</u>	<u>8.4</u>
Soil Reaction (0.1M CaCl2):	<u>N/A</u>	<u>N/A</u>
Available Water Capacity (inches):	<u>3</u>	<u>6</u>
Calcium Carbonate Equivalent (percent):	<u>N/A</u>	<u>N/A</u>

PLANT COMMUNITIES

Ecological Dynamics of the Site:

A large, empty rectangular box with a black border, intended for a detailed description of the site's ecological dynamics.

Plant Communities and Transitional Pathways (diagram)

A large, empty rectangular box with a black border, intended for a diagram illustrating plant communities and their transitional pathways.

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label:** HCPC

Plant Community Narrative: Historic Climax Plant Community

This site has a plant community made up of short grasses, a few mid-grasses and a small percentage of shrubs and forbs. Plant species most likely to increase on this site are sacahuista, yucca, and annuals. The list of plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon abnormal precipitation or other climatic factors. The potential climax plant community has been determined by study of range relict areas, or areas protected from excessive grazing. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures and historical accounts have also been used.

Canopy Cover:

Trees	Unknown
Shrubs and half shrubs	Unknown
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	Unknown
Bare ground	Unknown
Surface cobble and stone	Unknown
Litter (percent)	Unknown
Litter (average depth in cm.)	Unknown

Plant Community Annual Production (by plant type): _____

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	385	630	910
Forb	33	54	78
Tree/Shrub/Vine	83	135	195
Lichen			
Moss			
Microbiotic Crusts			
Total	550	900	1,300

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	BOCU	Sideoats Grama	225 – 315	225 – 315
2	BOER4	Black Grama	180 – 270	180 – 270
3	BOGR2	Blue Grama	45 – 90	45 – 90
4	BOHI2	Hairy Grama	45 – 90	45 – 90
5	ARIST TRIDE BOBA2 PLMU2 ELEL5 HESPE	Threeawn spp. Tridens spp. Cane Bluestem Tobosa Bottlebrush Squirreltail Hesperostipa spp.	45 – 135	45 – 135
6	LYPH PAHA DICOA DAPU7 SEVU2 BORA ERIN SPCR MUHLE ENDE	Wolftail Halls Panicum Fall Witchgrass Fluffgrass Plains Bristlegrass Purple Grama Plains Lovegrass Sand Dropseed Muhlenbergia spp. Spike Pappusgrass	9 – 45	9 - 45

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
7	2FP	Perennial Forbs	45 – 90	45 – 90
8	2FA	Annual Forbs	9 – 45	9 - 45

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
9	MIACB	Catclaw Mimosa	9 – 45	9 – 45
10	EPHED KRLA2	Mormon-tea spp. Winterfat	9 – 45	9 – 45
11	CROTON	Croton spp.	9 – 27	9 – 27
13	YUEL DAWH2	Soaptree Yucca Sotol	9 – 45	9 – 45
14	NOMI	Sacahuista	9 – 45	9 – 45
15	OPUNT AGAVE ACCO2	Cacti Agave Whitethorn	9 – 45	9 - 45

Plant Type - Lichen

Group	Scientific	Species Annual	Group Annual
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Number	Plant Symbol	Common Name	Production	Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Growth Curves

Growth Curve ID 1904NM

Growth Curve Name: HCPC

Growth Curve Description: Mixed short/mid-grassland with minor shrub and forb component.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	5	7	10	15	25	25	8	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

The variety of plants and proximity to washed containing riparian vegetation makes this site attractive to wildlife. The abundant grass is used for food and cover by ground nesting birds and small mammals. Competition with cattle may be high in spring when new green growth appears. Water in the form of springs and seeps may be found in the drainages adjacent to the site but not on the site itself. Wildlife species include: pronghorn antelope, white-tailed deer, mule deer, Arizona gray squirrel, javelina, scaled quail, Gambel's quail.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations

Soil Series	Hydrologic Group
Eba	C
Nickel	C

Recreational Uses:

Grassland with few shrubs and forbs scattered throughout makes this site esthetically pleasing. Few winter days are cold and some summer days are hot, most of the year is very comfortable outdoors. Horseback riding, wildlife observation, hunting and hiking are the main activities on this site.

Wood Products:

No Data

Other Products:

Grazing:

This site is suitable for grazing throughout most of the year. All classes of livestock are well adapted to the site. Grazing systems can easily be designed. Stocking rates should be evaluated and livestock numbers adjusted based on actual experience and climatic fluctuations.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	4.5 – 7.0
75 – 51	7.3 – 10.0
50 – 26	10.1 – 14.5
25 – 0	14.5+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Plant Preference by Animal Kind:

Animal Kind: Livestock

Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Sideoats Grama	<i>Bouteloua curtipendula</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Black Grama	<i>Bouteloua eriopoda</i>	EP	P	P	P	D	D	D	D	D	D	D	P	P
Blue Grama	<i>Bouteloua gracilis</i>	EP	D	D	D	D	P	P	P	P	P	D	D	D
Hairy Grama	<i>Bouteloua hirsuta</i>	EP	D	D	D	D	P	P	P	P	P	D	D	D
Threeawn spp.	<i>Aristida</i> spp.	L	U	U	D	D	D	U	U	U	U	U	U	U
Tridens spp.	<i>Tridens</i> spp.	EP	U	U	U	U	D	D	D	U	U	U	U	U
Cane Bluestem	<i>Bothriochloa barbinodis</i>	EP	U	U	U	U	U	P	P	D	U	U	U	U
Tobosa	<i>Pleuraphis mutica</i>	EP	U	U	U	U	U	D	D	D	D	D	U	U
Bottlebrush Squirreltail	<i>Elymus elymoides</i>	EP	U	U	D	D	D	U	U	U	D	D	D	U
Hesperostipa spp.	<i>Hesperostipa</i> spp.	EP	D	D	P	P	P	D	D	D	D	D	D	D
Perennial Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Annual Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Catclaw Mimosa	<i>Mimosa aculeaticarpa</i>	L/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Mormon-tea	<i>Ephedra</i> spp.	L/S	D	D	D	D	D	D	D	D	D	D	P	P
Winterfat	<i>Krascheninnikovia lanata</i>	L/S	D	D	P	P	P	P	P	P	P	D	D	D
Soaptree Yucca	<i>Yucca elata</i>	F/L	D	D	D	D	P	P	U	U	U	U	U	D
Sotol	<i>Dasyliion wheeleri</i>	L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Sacahuista	<i>Nolina microcarpa</i>	F	U	U	U	U	P	P	U	U	U	U	U	U
Cactus spp.	<i>Opuntia</i> spp.	EP	E	E	E	E	E	E	E	E	E	E	E	E
Agave spp.	<i>Agave</i> spp.	F	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Whitethorn	<i>Acacia constricta</i>	L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

Animal Kind: Wildlife

Animal Type: Antelope

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Sideoats Grama	<i>Bouteloua curtipendula</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Black Grama	<i>Bouteloua eriopoda</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Blue Grama	<i>Bouteloua gracilis</i>	EP	U	U	U	D	D	D	D	D	U	U	U	U
Hairy Grama	<i>Bouteloua hirsuta</i>	EP	U	U	U	D	D	D	D	D	U	U	U	U
Threeawn spp.	<i>Aristida</i> spp.	L	U	U	D	D	D	U	U	U	U	U	U	U
Tridens spp.	<i>Tridens</i> spp.	EP	U	U	U	U	U	U	D	D	D	U	U	U
Cane Bluestem	<i>Bothriochloa barbinodis</i>	EP	U	U	U	U	U	U	P	P	D	U	U	U
Tobosa	<i>Pleuraphis mutica</i>	EP	U	U	U	U	U	D	D	D	D	D	U	U
Bottlebrush Squirreltail	<i>Elymus elymoides</i>	EP	U	U	D	D	D	U	U	U	U	U	U	U
Hesperostipa spp.	<i>Hesperostipa</i> spp.	EP	U	U	D	D	D	U	U	U	D	D	D	U
Perennial Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Annual Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Catclaw mimosa	<i>Mimosa aculeaticarpa</i>	L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Mormon-tea	<i>Ephedra</i> spp.	EP	D	D	D	D	D	D	D	D	D	D	P	P
Winterfat	<i>Krascheninnikovia lanata</i>	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Soaptree Yucca	<i>Yucca elata</i>	F/L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Sotol	<i>Dasyilirion wheeleri</i>	L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Sacahuista	<i>Nolina microcarpa</i>	F	U	U	U	U	P	P	U	U	U	U	U	U
Cactus spp.	<i>Opuntia</i> spp.	L	E	E	E	E	E	E	E	E	E	E	E	E
Agave	<i>Agave</i> spp.	F	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Whitethorn	<i>Acacia constricta</i>	L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: New Mexico

County: Hidalgo

Latitude: _____

Longitude: _____

Township: 31 S

Range: 20 W

Section: S ½ section 14

Is the type locality sensitive? Yes No

General Legal Description: _____

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the SE Arizona Basin and Range 41 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Hidalgo

Characteristic Soils Are:

Eba | Nickel

Other Soils included are:

Site Description Approval:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester	07/21/80	Don Sylvester	07/21/80

Site Description Revision:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	07/12/02	George Chavez	2/12/03