UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R042XC008NM

Site Name: Draw

Precipitation or Climate Zone: 10- to 13 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs as desert drainageways or draws which disect plains or hills. This site receives and transports runoff water from both remote higher elevations and adjacent sites to closed basins or larger water courses. Slopes are nearly level, usually less than 3 percent. Direction of slope varies and is not significant. Elevation range from 2,842 to 4,500 feet.

Land Form:

1. Drainageway
2. Draw
3.

Aspect:

1. Not Significant
2.
3.

	Minimum	Maximum
Elevation (feet)	2,842	2,500
Slope (percent)	0	3
Water Table Depth (inches)	N/A	N/A

Flooding:	Minimum	Maximum
Frequency	rare	occasional
Duration	extremely brief	very brief

Ponding:	Minimum	Maximum
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

CLIMATIC FEATURES

Narrative:

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity - short duration thunderstorms.

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero tin the winter to 112 degrees in the summer.

The average frost-free season is 207 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November.

Both temperatures and precipitation favor warm season perennial growth. However, this site is cooler and more moist than adjacent sites due to the cold air drainage, a higher rate of evapotranspiration and the increased moisture opportunity from adjacent area runoff results in a greater potential for trees, shrubs and cool season grasses.

	Minimum	Maximum
Frost-free period (days):	180	221
Freeze-free period (days):	199	240
Mean annual precipitation (inches):	10.0	13.0

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	0.40	0.42	20.6	59.7
February	0.40	0.41	25.2	65.6
March	0.41	0.43	31.4	72.7
April	0.58	0.63	40.4	81.5
May	1.28	1.35	49.6	88.7
June	1.40	1.46	59.1	95.4
July	1.62	1.64	63.3	96.4
August	1.79	1.84	61.6	94.8
September	1.81	2.20	54.1	88.5
October	1.16	1.41	40.7	80.4
November	0.43	0.47	28.4	68.7
December	0.48	0.51	20.9	61.1

Climate Stations:

Station ID	NM0600	Location	Artesia, NM	Period From:	1961	To:	1990
Station ID	NM0992	Location	Bitter Lakes WL Refuge, NM	Period From:	1961	To:	1990
Station ID	NM1469	Location	Carlsbad, NM	Period From:	1961	To:	1990
Station ID	NM293792	Location	Hagerman, NM	Period From:	1920	To:	1960
Station ID	NM299569	Location	Waste Isolation Plant, NM	Period From:	1986	To:	2000
Station ID	NM4346	Location	Jal, NM	Period From:	1961	To:	1990

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by wetlands or streams.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:
The soils are deep, well drained and occasionally flooded. They include mixed alluvial land, and the following textures may be gravelly, cobbly or stony. The surface layers are loams, silt loams, clay loams, and very fine sandy loams. The underlying layers are stratified silt loams, clay loams, silty caly loam, loams and sandy loams. Permeability is moderate to slow and water holding capacity is moderate to high.

Parent Material Kind: Slope Alluvium
Parent Material Origin: Mixed-ig/ded/met

Surface Texture:

1. loam
2. silt loams
3. clay loam
4. very fine sandy loams

Surface Texture Modifier:

1. gravelly
2. cobbly
3. stony

Subsurface Texture Group: loamy
Surface Fragments <=3" (% Volume): N/A
Surface Fragments >3" (% Volume): N/A
Subsurface Fragments <=3" (%Volume): N/A
Subsurface Fragments >=3" (%Volume): N/A

	Minimum	Maximum
Drainage Class:	N/A	N/A
Permeability Class:	N/A	N/A
Depth (inches):	N/A	N/A
Electrical Conductivity (mmhos/cm):	N/A	N/A
Sodium Absorption Ratio:	N/A	N/A
Soil Reaction (1:1 Water):	N/A	N/A
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	N/A	N/A
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

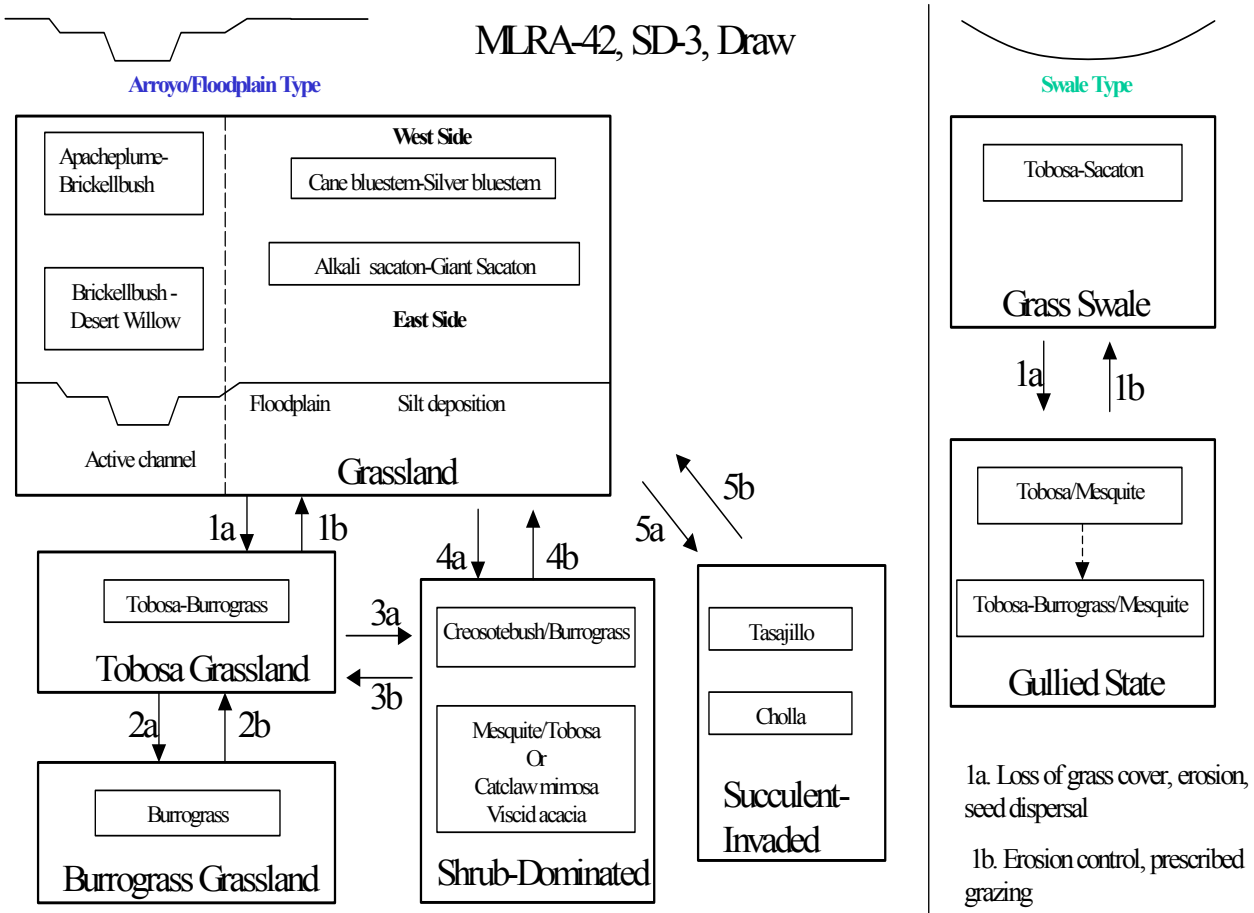
Ecological Dynamics of the Site:

Overview

The Draw site occurs in two distinct forms, The Arroyo/Floodplain, and the Swale. The arroyo form has a channel, typically loams or gravelly/cobbly loams and an associated floodplain with loam, silt loam, or clay loam soils. It occurs as desert drainageways that dissects hills and transports run-off water from remote higher elevations and adjacent sites to larger watercourses or closed basins. Woody vegetation, such as mesquite, apache plume, brickellbush, and desert willow dominate the edge of the arroyo, with Alkali sacaton and giant sacaton dominating the adjacent floodplain.
The swale form occurs in slightly concave positions dissecting low hills and uplands from which it receives and transports run-in water to bottomlands. Soils are loams, silt loams, and clay loams. Grasses such as tobosa, giant sacaton, and alkali sacaton typically dominate this form, with a few woody species scattered across the site.

Information on landscape positions and vegetation dynamics stated in this model are in part taken from personal communications recorded at -State & Transition model meeting, Carlsbad, NM. 2003.

Plant Communities and Transitional Pathways (diagram)



1a. Channel incision or widening, decreased soil moisture. 1b.Fill, reshape channel

2a. Loss of grass cover, surface soil sealing, erosion and drying. 2b.Erosion control, prescribed grazing.

3a, 4a. Lack of fire, seed dispersal, loss of grass cover, reduced competition by grasses. 3b, 4b. Brush control, range seeding ?, prescribed grazing.

5a. Flood events, seed dissemination, lack of fire. 5b. Prescribed fire, brush control.

1a. Loss of grass cover, erosion, seed dispersal

1b. Erosion control, prescribed grazing

Plant Communities Photo Display & Description Diagnosis

MLRA 42; SD-3; Draw

Swale Type

Grass Swale

•Alkali sacaton-Silver bluestem community,
•Giant sacaton is absent
•Cover of grasses high

Gullied State

•Tobosa / Mesquite community
•Cover of grasses moderate to low
•Large inter connected bare patches

Arroyo/Flood plain Type

Active Channel

Floodplain

•At Left channel border
•Mesquite-Desert willow-Brickellbush community

•At right floodplain
•Tobosa Grassland
•Cover of grasses moderate
•Large inter connected bare patches

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 Narrative Label: HCPC

Plant Community Narrative:

The Arroyo/Floodplain type consists of two separate elements, the arroyo channel and its associated floodplain. This site is an ephemeral stream floodplain with a gently sloping surface, broad enough that the channel covers only a part of the surface. Vegetation on the site varies dynamically with parent material, distance away from the channel, and amount of gravel and cobble in the soil profile. Trees and shrubs are typically dominant along the channel border, but grasses dominate the floodplain. A wide variety of woody species can occur on this site including, Apache plume, brickellbush, desert willow, mesquite, catclaw mimosa, viscid acacia, and New Mexico walnut. Dominant grass species tend to vary somewhat moving East to West across the resource unit. Cane bluestem and silver bluestem are typical dominants on the western side of the resource unit. Alkali sacaton and giant sacaton tend to dominate more on the eastern side. Other important grasses common to both areas include vine mesquite, sideoats grama, tobosa, Arizona cottontop, and twoflower trichloris. Total annual production on this site is high averaging up to 3500 pounds per acre during years with favorable rainfall. Overgrazing may cause an increase in tobosa, and a decrease in vine mesquite, sideoats grams, Arizona cottontop, and twoflower trichloris.

Diagnosis: Trees and shrubs tend to dominate along the channel border, with patches of grass supported by silt accumulation around cobbles, stones, shrubs and trees.
Across the floodplain, bluestems, or alkali sacaton and giant sacaton are typically the dominant grasses. Grass and litter cover is high. Trees and shrubs are infrequent and scattered. Bare patches are small, typically less than 1-2 meters across.

Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	20 – 30
Bare ground	6 – 10
Surface gravel	
Surface cobble and stone	10 – 12
Litter (percent)	40 – 50
Litter (average depth in cm.)	4
Survace Gravel (% cover)	

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	864	1692	2520
Forb	96	188	280
Tree/Shrub/Vine	240	470	700
Lichen			
Moss			
Microbiotic Crusts			
Totals	1200	2350	3500

Plant Community Composition and Group Annual Production: Plant species are grouped by annual production **not** by functional groups.

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	BOBA3	cane bluestem	235	352
1	BOSA	silver bluestem		
2	DICA8	Arizona cottontop	235	352
2	CHCR	twoflower trichloris		
3	SPAI	alkali sacaton	71	118
4	PAOB	vine mesquite	235	352
4	BOCU	sideoats grama		
5	SEVU2	plains bristlegrass	118	235
5	BOGR2	blue grama		
6	CHCU2	hooded windmillgrass	71	118
7	MUPO2	bush muhly	71	118
8	LEDU	green sprangletop	118	235
9	2GP	other perennial grasses	0	118

Plant Type - Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	ATCA2	fourwing saltbush	235	353
10	PRRE2	tornillo		
10	PRGL2	mesquite (honey)		
10	MIACB	catclaw mimosa		
10	ACNE4	viscid acacia		
11	COSP3	knifeleaf condalia	71	118
11	FAPA	Apacheplume		
12	CHLI2	desertwillow	118	188
12	JUMA	New Mexico walnut		
12	CLLI2	virginsbower		
13	2SHRUB	other shrubs	0	118

Plant Type – Forb

14	SPHAE	globemallow	0	71
14	GAPU	indian blanket		
15	MIRU5	sensitive briar	0	71
15	NIAT	wild rabbit tabaco		
16	HEAN3	sunflower	118	188
16	ERODI	filaree spp		
17	2FORB	other annual forbs	0	71

Plant Type - Lichen

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

Other grasses that could appear on this site could include: white tridens, giant sacaton, tobosa, slim tridens, black grama, burrograss, mat muhly, buffalograss, western wheatgrass, Indiangrass, Indian ricegrass and wolftail.

Other shrubs include: brickelbush, tarbush, littleleaf sumac, creosote bush, cottonwood, pale wolfberry and Juniper.

Other forbs include: berbena, half-shrub sundrop, scorpionweed, desert holly, Mexican sagewort, fleabane, aster, mustard, wooly Indianwheat, jimsonweed and buffalobur.

Plant Growth Curves
Growth Curve ID NM2808
Growth Curve Name: HCPC
Growth Curve Description: SD-3 Draw - Shrub dominated warm season plant community.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	3	5	8	12	10	20	25	12	5	0	0

Additional States:

1.State Containing Historic Plant Community

Swale Type

Grass Swale: The historic plant community has a grassland aspect with a few shrubs scattered across the site. This site is associated with the Bottomland ecological site. It occurs as narrow to broad areas, with a sinuous linear slightly concave shape, dissecting adjacent upland, and transporting run-in water to lower Bottomland sites. The draw site stands out in relation to the adjacent uplands, due to the extra water and high production. Tobosa is the dominant grass species, with alkali sacaton and giant sacaton as sub-dominants. Other important species include vine mesquite, blue grama, cane bluestem, and sideoats grama. Mesquite, catclaw mimosa, and fourwing saltbush are common shrubs. This site is resistant to state change unless grass cover on site or surrounding uplands is reduced to the point that accelerated erosion takes place. Severe loss of grass cover due to extended periods of drought or overgrazing may initiate the transition to a gullied state and an increase in shrubs.

Diagnosis: Tobosa is the dominant grass species. Grass cover is continuous and uniform. Bare ground is minimal. Shrubs are sparse and evenly distributed. Slopes are nearly level; usually less than three percent, and usually display limited evidence of active rill or gully formation if grass cover remains intact. Litter movement associated with overland flow is limited to smaller size class litter and short distances.

Additional States:

Gullied State: Loss of grass cover, accelerated erosion, and gully formation characterize this state. Tobosa is the dominant grass species. Vine mesquite, blue grama, cane bluestem, sideoats grama, giant sacaton and alkali sacaton decrease or are extirpated. Burrograss increases and may become sub-dominant to tobosa. Shrub densities may increase especially mesquite, facilitated by increased bare patches.

Diagnosis: Tobosa is dominant. Burrograss may be the sub-dominant grass species. Mesquite and other shrubs may be found at increased densities relative to the historic plant community. Grass cover is no longer uniformly distributed, instead tending to be patchy with large areas of bare ground present. Erosion is evident by the presence of water flow patterns, litter dams, rills, and gullies.

Transition to the Gullied State (1a): Transitions to the gullied state may occur in response to a loss of grass cover (on or off site), erosion, and changes in hydrology. As grass cover decreases, organic matter and surface soil stability decrease[4, 5] Erosion ensues due to increased flow rates and decreased soil stability. The formation of gullies effectively changes the hydrology, and the site dries. Bare patch size increases providing competition free areas for shrub expansion.

Key indicators of approach to transition:

- Reduction in grass cover (on site, or on surrounding uplands) and increase in size and frequency of bare patches.
- Evidence of litter movement—indicating loss or redistribution of organic matter, and decreased surface soil stability.
- Presence of litter dams, water flow patterns, rills and gullies.

Transition back to Grass Swale (1b) Erosion control structures or shaping and filling gullies may help regain natural flow patterns and allow natural revegetation to take place. Prescribed grazing will help ensure proper forage utilization and reduce grass loss due to grazing.

2.State Containing Historic Plant Community

Arroyo/Floodplain Type

The Arroyo/Floodplain type consists of two separate elements, the arroyo channel and its associated floodplain. This site is an ephemeral stream floodplain with a gently sloping surface, broad enough that the channel covers only a part of the surface. Vegetation on the site varies dynamically with parent material, distance away from the channel, and amount of gravel and cobble in the soil profile. Trees and shrubs are typically dominant along the channel border, but grasses dominate the floodplain. A wide variety of woody species can occur on this site including, Apache plume, brickellbush, desert willow, mesquite, catclaw mimosa, viscid acacia, and New Mexico walnut. Dominant grass species tend to vary somewhat moving East to West across the resource unit. Cane bluestem and silver bluestem are typical dominants on the western side of the resource unit. Alkali sacaton and giant sacaton tend to dominate more on the eastern side. Other important grasses common to both areas include vine mesquite, sideoats grama, tobosa, Arizona cottontop, and twoflower trichloris. Total annual production on this site is high averaging up to 3500 pounds per acre during years with favorable rainfall. Overgrazing may cause an increase in tobosa, and a decrease in vine mesquite, sideoats grams, Arizona cottontop, and twoflower trichloris.

Diagnosis: Trees and shrubs tend to dominate along the channel border, with patches of grass supported by silt accumulation around cobbles, stones, shrubs and trees.
Across the floodplain, bluestems, or alkali sacaton and giant sacaton are typically the dominant grasses. Grass and litter cover is high. Trees and shrubs are infrequent and scattered. Bare patches are small, typically less than 1-2 meters across.

Additional States:

Tobosa Grassland: This state is characterized by decreased available soil moisture and the dominance of tobosa. Burrograss is typically a component of this state and depending on the degree of soil moisture loss, may become sub-dominant to tobosa.

Diagnosis: Grass cover is variable ranging from uniform and continuous to patchy, with increased bare areas. Tobosa is the dominant grass. Tall grasses such as giant sacaton, and bluestems may occur in small patches occupying small, moister micro-sites, or are absent. Burrograss is found at increased densities relative to the HCPC. Shrubs are infrequent and scattered.

Transition to the Tobosa Grassland (1a): Decreased available soil moisture due to deepening of the channel may cause the loss of more mesic grasses such as bluestems, giant sacaton, and alkali sacaton, resulting in a tobosa-dominated grassland.

Key indicators of approach to transition: Indicators prior to this transition are few and not readily observable. By the time changes in the channel width or steepness or height of channel banks is observable the transition has already begun.

- Decreases in overall grass heights throughout the water shed.
- Increases in sediment loading.

Transition back to HCPC Grassland (1b) The natural hydrology of the site must be restored to enable the transition back to the HCPC Grassland. Filling or reshaping of the channel may help to restore natural overland flow patterns on to the floodplain, providing the additional run-on water necessary for the establishment and survival of the more mesic grass species.

Burrograss Grassland: This state is characterized by the dominance of burrograss and increased soil surface sealing. Burrograss favors calcareous fine textured soils and spreads by seed and stolons. It produces large amounts of seed with wiry awns that help in dissemination, and in auguring the hardened callus (tip of the seed) into the soil. The ability of burrograss to auger into soils enables it to establish and expand on bare soils prone to crust over with physical and biological crusts.

Diagnosis: Grass cover is patchy with large bare areas present. Burrograss is the dominant grass species. Tobosa may be present in scattered patches. Soil surface sealing is evident on most of the exposed bare ground. Erosion is apparent by the presence of water flow patterns, rills, litter dams, and pedestalling of plants.

Transition to the Burrograss Grassland (2a) Loss of deep-rooted grasses and overall grass cover due to overgrazing or extended periods of drought may initiate this transition. As grass cover declines, resistance to water flow decreases and erosion increases, causing surface soils to seal. As surface soils seal, infiltration and permeability decrease. This transition may be soil determined. [3]

Key indicators of approach to transition:

- Decrease in cover of tobosa
- Increased amount of bare ground
- Increased evidence of physical and biological crusts.

Transition back to Tobosa Grassland (2b) Erosion control structures or shaping and filling gullies may help regain natural flow patterns and establish vegetation if the flow has been

channeled. Prescribed grazing will help establish proper forage utilization and maintain grass cover and litter necessary to protect the site from accelerated erosion.

Shrub Dominated: Increased cover of shrubs characterizes this state. Mesquite, catclaw mimosa, viscid acacia or creosotebush are typically the dominant shrub species. Grass cover is typically patchy with large bare areas present, however in some instances grass cover may remain relatively high for extended periods when associated with light to moderate infestations of mesquite, catclaw mimosa, or viscid acacia. Variations in soil characteristics may determine which shrub species increase. Mesquite is well adapted to a wide range of soil types, but increases more often on draw sites that exhibit fine textured, deep soils low in carbonates. Catclaw mimosa and viscid acacia prefer gravelly soils and tend to form thickets along the edges of the channel. Creosotebush is less tolerant of fine textured soils, perhaps due to its high oxygen demand, and tends to occur more often on limestone derived calcareous soils that have some rock fragments in the soil profile.

Diagnosis: Mesquite, catclaw mimosa, viscid acacia, or creosotebush are the dominant shrubs. Cover of bluestems, alkali sacaton, and giant sacaton is low or absent. Tobosa or burrograss are the dominant grasses. Typically grass cover is patchy with large interconnected bare areas present. Physical soil crusts are present, especially on silt loam surface soils.

Transition to Shrub-Dominated (3a, 4a) Reduction of fire, due to either fire suppression policy or loss of adequate fine fuels may increase the probability of shrub encroachment.[6] Flood events, livestock and wildlife can transport and disperse shrub seed. Persistent loss of grass cover due to overgrazing or drought can cause large bare patches, providing competition free areas for shrub seedling establishment. As shrub cover increases, competition for soil resources, especially water, becomes a major factor in further reducing grass cover.

Key indicators of approach to transition:

- Decreased grass and litter cover.
- Increased bare patch size.
- Increase in amount of shrub seedlings.

Transition back Grassland (3b, 4b) **Brush control will be necessary to remove shrubs and eliminate competition for resources necessary for grass establishment or reproduction. Range seeding may be necessary if inadequate desired grass species remain in the system. Prescribed grazing will help ensure adequate time is elapsed before grazing is allowed, and proper forage utilization following grass establishment.**

Succulent-Invaded: Succulents, especially tasajillo and cholla may invade the Draw site. Dense stands of tasajillo or cholla are recognized as a management concern, but their impact on grass production is unclear. Light to medium infestations of these succulents does not seem to greatly reduce grass production, however they can reduce access to available forage and interfere with livestock movement and handling.

Diagnosis: Cholla and/or tasajillo are present. Grass cover is variable, typically relatively uniform with light infestations of succulents, and becoming patchier with increased amounts of

bare ground as succulent densities increase. Tobosa is the dominant grass if from transition **3a**. Bluestems or alkali sacaton and giant sacaton are the dominant grasses, if from transition **4a**.

Transition to Succulent-Invaded (3a, 4a) Succulents may invade and increase on Draw sites due to dispersal of seed and stem parts by flood events, livestock and wildlife. If fire was historically a part of desert grassland ecosystem and played a role in suppressing seedlings of shrubs and succulents, then fire suppression may favor the increase of succulents.[1]

Key indicators of approach to transition:

- Decrease or change in distribution of grass cover.
- Presence of succulents on site.

Transition back to Grassland (3b, 4b) Fire is an effective means of controlling cholla and tasajillo if adequate grass cover remains to carry fire.[2] Chemical control is effective in controlling cholla and tasajillo; apply when growth starts in May. For light infestations, hand grubbing is also effective if cholla or tasajillo is severed 2-4 inches below ground and care is taken not to let broken joints take root. Stacking and burning piles and grubbing during winter or drought help keeps broken joints and pads from rooting.

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

This range site provides habitats which support a resident animal community that is characterized by desert cottontail, spotted ground squirrel, yellow faced gopher, southern plains woodrat, gray fox, bobcat, roadrunner, ladder-backed woodpecker, loggerhead shrike, mockingbird, crissal thrasher, ferruginous hawk, mourning dove, Gambel's quail, tree lizard, eastern fence lizard, western spadefoot toad, and western diamondback rattlesnake. In some areas, mule deer and golden eagles utilize this site.

Hydrology Functions:

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

Hydrologic Interpretations			
Soil Series		Hydrologic Group	
Alama	C	Reyab	B
Gageby	B	Rockhouse	C
Hodgins	B	Toyah	B
Pima	B	Vinton	B

Recreational Uses:

This site offers recreation potential for hiking, horseback riding, picnicking, camping, outdoor classrooms, nature observation, photography, upland gamebird hunting and trapping for fur bearing animals. Colorful wildflowers bloom in spring. Because of extra water received, this site has an "oasis" aspect.

Wood Products:

This site has a fairly abundant supply of driftwood. Wood is also available from willow, walnut and mesquite for use as curiosities and furniture, and for fence material and fuelwood.

Other Products:

This site is suitable for grazing by all kinds and classes of livestock during all seasons of the year. It is especially suited for winter and early spring grazing, due to the high protein levels in the forage. Under retrogression, reproduction of many of the tree species will stop and species like Arizona cottontop, vine-mesquite, sideoats grama, and plains bristlegrass will decrease. An increase in mesquite, catclaw mimosa and viscid acacia will follow. This site responds well to a system of grazing that utilizes the protein source and allows for alternate rest.

Other Information:	
Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month	
Similarity Index	Ac/AUM
100 - 76	2.0 – 3.7
75 – 51	3.0 – 5.0
50 – 26	4.8 – 6.8
25 – 0	6.9 - +

Plant Preference by Animal Kind:

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

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
cane bluestem	Bothriochloa barbinodis	EP	D	D	D	D	D	P	P	P	D	D	D	D
Arizona cottontop	Digitaria californica	EP	D	D	D	D	D	P	P	P	D	D	D	D
alkali sacaton	Sporobolus airoides	EP	U	U	U	D	D	D	P	P	D	D	U	U
vine mesquite	Panicum obtusum	EP	D	D	D	D	D	D	P	P	P	D	D	D
siedoats grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
plains bristlegrass	Setaria vulpiseta	EP	D	D	D	D	D	P	P	P	P	D	D	D
twoflower trichloris	Chloris crinita	EP	U	U	U	U	D	D	D	D	U	U	U	U
blue grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
silver bluestem	Bothriochloa saccharoides	EP	U	U	U	U	D	D	P	P	D	U	U	U
bush muhly	Muhlenbergia porteri	EP	P	P	P	P	P	P	P	P	P	P	P	P
filaree	Erodium cicutarium	EP	NC	P	P	P	D	NC	NC	NC	NC	NC	NC	NC
fourwing saltbush	Atriplex canescens	P	P	P	P	P	P	D	D	D	D	D	P	P

Supporting Information

Associated Sites:

Site Name	Site ID	Site Narrative
Bottomland	R042XC017NM	

Similiar Sites:

Site Name	Site ID	Site Narrative

State Correlation:
This site has been correlated with the following states: Texas

Inventory Data References:

Data Source	Number of Records	Sample Period	State	County

Type Locality:

Relationship to Other Established Classifications:

Other References:
Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains (SD-2) Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Lea, Chavez, and Eddy Counties.

Characteristic Soils Are:	
Alma loam	Gageby silt loam
Hodgins silty clay loam, depressed	Pecos silty clay loam, non-saline
Pima clay loam	Reyab silt loam
Reyab very fine sandy loam	Rockhouse loam
Toyah loam	Toyah clay loam
Vinton soils	Mixed alluvial

Other Soils included are:	

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Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	06/05/80	Don Sylvester	06/05/80

Site Description Revision:

Author	Date	Approval	Date
George Chavez	5/14/02	George Chavez	5/2/03
David Trujillo	4/30/03		