

NEBRASKA RANGE SITE DESCRIPTION

The following sections on climatic features and major uses apply to all Nebraska range site descriptions prepared for Vegetative Zone I.

A. Climatic Features

1. The mean average annual precipitation in Vegetative Zone I varies from 14 to 16 inches, but has varied from 10 to 30 inches in the driest to wettest seasons. Approximately 60 percent of the annual precipitation occurs during the growing season of early May to late September. The average annual snowfall varies from about 30 inches near the Platte River to about 50 inches in the Pine Ridge Area.
2. The wind velocity is high throughout the year, averaging 10 to 12 miles per hour. Maximum wind velocities generally occur in the spring.
3. The average length of the growing season is 130 days, but the growing season has varied from 120 to 200 days. The average date of first frost in the fall ranges from September 20 and the last frost in the spring is May 25. July is the hottest month (70° F normal), and January is the coldest (23° F normal). It is not uncommon for the temperature to reach 100° F during the summer. Summer humidity is low and evaporation is high. The winters are characterized with frequent northerly winds, producing severe cold with temperatures dropping to as low as -30° F.

B. Major Uses

1. Grazing by domestic livestock is one of the major income-producing industries in western Nebraska. Rangeland in this area may provide year-long forage for cattle, sheep, or horses. During the dormant period, the forage for livestock use needs to be supplemented with protein because the quality does not meet minimum livestock requirements.

The wet land, wet subirrigated, subirrigated, and saline subirrigated range sites may be used for native hay production, yielding 0.75 to 1.25 tons per acre. Native meadows are commonly grazed in the fall after hay harvest.

2. Wildlife Habitat

Rangeland in western Nebraska provides a wide variation in kinds of vegetation for food and cover. This is ideal habitat for a wide variety of wildlife such as

antelope, deer (mule and whitetail), wild turkey, prairie grouse, coyotes, bobcats, prairie dogs, cottontail rabbit, etc. The mule deer, antelope, coyotes, prairie dogs, and prairie grouse prefer the open type cover; whereas, the whitetail deer, wild turkey, bobcat, and cottontail rabbit prefer some tree and/or shrub cover.

3. Recreation and Natural Beauty

The Pine Ridge Escarpment Area lends itself well to a variety of users, including hikers, horseback riders, birdwatchers, campers, hunters, naturalists, plant collectors, and rock hunters.

In addition, there is a great variety of trees, shrubs, grasses, grasslike plants, and wildflowers. The wide variety of plants which bloom from spring until fall have an esthetic value that appeals to visitors.

4. Hydrologic Characteristics

Water is the principal factor limiting forage production of rangelands. Thus it is essential for maximum production, as well as for flood prevention of adjacent lands, that as much precipitation as possible be held on the site where it falls. This can best be done by maintaining the vegetative cover in as high a range condition as possible. Soils in the range sites have inherent hydrologic characteristics. The hydrologic characteristics of the soils included in each range site are as follows:

Range Site	Runoff	Permeability	Hydrologic Group
Wet Land	Slow to ponded	Mod. rapid to rapid	D
Wet Subirrigated	Slow	Mod, to mod. rapid	D
Subirrigated	Very slow to medium	Mod. slow to very rapid	A,B,C, or D
Saline Subirrigated	Slow to ponded	Very slow to mod. rapid	B, C or D
Silty Overflow	Slow to medium	Mod. to mod. rapid	B
Clayey Overflow	Very slow to ponded	Very slow	D
Sandy Lowland	Slow to very slow	Mod. to very rapid	A or B
Silty Lowland	Slow	Moderate	B
Saline Lowland	Slow to medium	Mod. slow to moderate	B
Sands	Slow to very slow	Rapid to very rapid	A
Sandy	Slow to rapid	Mod. to rapid	A or B
Savannah	Slow to rapid	Mod. to very rapid	B or D
Silty	Slow to rapid	Mod. slow to rapid	B
Clayey	Slow to rapid	Mod. slow to very slow	C or D
Choppy Sands	Slow	Very rapid	A
Limy Upland	Slow to rapid	Moderately slow to mod rapid	A or B
Shallow Clay	Medium to very rapid	Slow	D
Shallow to Gravel	Slow to medium	Rapid to very rapid	A
Shallow Limy	Slow to rapid	Mod. to mod. rapid	D
Thin Loess	Medium to rapid	Moderate	B
Saline Upland	Slow to rapid	Very slow	D
Panspots	Slow to medium	Very slow	D

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Wet Land (WL)

MLRAs: 64, 65, 67, and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level areas of bottom lands, sandhill valleys, and depressions. A few areas may occur on very gently sloping land.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES,

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 80 percent grasses, 15 percent grasslike plants, and 5 percent forbs, based upon total annual production, air-dry weight. Bluejoint reedgrass, northern reedgrass, prairie cordgrass, and various members of the sedge family (sedges, rushes, bulrushes, and spikesedges) are the dominant species making up 75 percent or more of the total annual production. Plains bluegrass, slender wheatgrass and some forbs are also important plants to the site.

b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (80 to 90 percent)	%	Grazing Response ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Bluejoint reedgrass	10-15	D	I	I
Foxtail barley ^{2/}	0-5	I	I	I
Green muhly	0-5	I	I	I
Northern reedgrass	10-15	D	I	I
Plains bluegrass	5-10	I	I	I
Prairie cordgrass	40-60	D	I	I
Reed canarygrass	0-5	D	I	I
Slender wheatgrass	5-10	D	I	I
 <u>Grasslike Plants</u> (10 to 15 percent)				
Bulrushes	0-5	I	I	I
Common spikesedge	0-5	I	I	I
Fox sedge	0-5	I	I	I
Golden sedge	0-5	I	I	I
Hairyseed sedge	0-5	I	I	I
Nebraska sedge	0-5	I	I	I
Needle spikesedge	0-5	I	I	I
Rushes (other)	0-5	I	I	I
Sedges (other)	0-5	I	I	I
Toad rush	0-5	I	I	I
Tussock sedge	0-5	I	I	I
 <u>Forbs</u> (0 to 5 percent)				
False boneset	T ^{3/}	I	D	D
Giant goldenrod	T	I	D	D
Heath aster	T	I	D	D
Illinois bundleflower	T	I	D	D
Pennsylvania smartweed	T	I	D	D
Sulfur potentilla	T	I	D	D
Swamp milkweed	T	I	D	D
Wild strawberry	T	I	D	D

- ^{1/} "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
^{2/} Naturalized introduced plant
^{3/} Trace species or producing less than 2.5 percent of potential annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	1.8	.6
Good	51 to 75	1.35	.7
Fair	26 to 50	.9	1.1
Poor	0 to 25	.45	2.2

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 4,000 pounds per acre, air-dry weight, in unfavorable years, to a high of 5,000 pounds in favorable years.

5. Soils

The feature common to all soils in this site is a seasonal high water table that ranges from over the surface in wet years to a depth of 1 foot below the surface in dry years.

a. Characteristics

The soils in this site are poorly and very poorly drained. Alluvium and eolian sand are the most common parent materials. The soils are generally deep, but some are shallow over gravelly coarse sand. A layer of partially decayed organic matter covers the soil in many places. The surface soil is generally darker colored and ranges from 3 to 24 inches thick. Texture ranges from silty clay loam to fine sand. Mottling and gleying are common. The underlying material is lighter colored than the surface soil and ranges from loam to gravelly coarse sand. These soils are calcareous at the surface in some places.

b. Major soil taxonomic units associated with this site are:

Barney fine sandy loam
Barney sandy loam
Barney very fine sandy loam

Gannett fine sandy loam, wet
Gannett loam, wet

Loup fine sandy loam, wet

Tryon fine sandy loam (very poorly drained)
Tryon fine sandy loam, wet

Soil series descriptions are available in the county soil survey handbook or published soil survey.

- 6. Range Site Type Location
- B. Major Uses and Interpretations For:
SEE DISCUSSION FOR ALL RANGE SITES.
- C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Wet Subirrigated (WS)

MLRAs: 64 and 65

A. Physical Characteristics

1. Physiographic Features

This site occurs on nearly level bottom lands of major stream valleys and wet valleys of sandhills.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES.

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 80 percent grasses, 10 percent grasslike plants, and 10 percent forbs, based upon total annual production, air-dry weight. Big bluestem, indiangrass, prairie cordgrass, switchgrass, and various members of the sedge family (sedges, rushes, bulrushes, and spikesedges) are the dominant species making up 75 percent or more of the total annual production. Plains bluegrass, slender wheatgrass and some forbs are also important plants to the site.
- b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (80 to 90 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	5-15	D	D	I
Bluejoint reedgrass	5-10	D	I	I
Canada wildrye	0-5	D	I	I
Foxtail barley <u>2/</u>	0-5	I	I	I
Green muhly	0-5	I	I	I
Indiangrass	5-10	D	D	I
Northern reedgrass	5-10	D	I	I
Plains bluegrass	5-10	I	I	I
Prairie cordgrass	20-35	D	I	I
Reed canarygrass	0-5	D	I	I
Scribner panicum	0-5	I	I	I
Slender wheatgrass	5-10	I	I	I
Switchgrass	10-20	D	I	I
Western wheatgrass	0-5	I	I	I
<u>Grasslike Plants</u> (5 to 10 percent)				
Bulrushes	0-5	I	I	I
Common spikesedge	0-5	I	I	I
Needle spikesedge	0-5	I	I	I
Rushes	0-5	I	I	I
Sedges	0-5	I	I	I
Tussock sedge	0-5	I	I	I
<u>Forbs</u> (5 to 10 percent)				
American licorice	T <u>3/</u>	I	I	I
Blackeyesdusan	T	I	D	D
Blue verbena	T	I	D	D
Giant goldenrod	T	I	D	D
Heath aster	T	I	D	D
Illinois bundleflower	T	I	D	D
Pennsylvania smartweed	T	I	D	D
Prairie onion	T	I	D	D
Scouringrush	T	I	D	D
Sulfur potentilla	T	I	D	D
Thickspike gayfeather	T	I	D	D
Western ragweed	T	I	D	D
Wild strawberry	T	I	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
2/ Naturalized introduced plant
3/ Trace species or producing less than 2.5 percent of potential annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent</u>		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	1.7	.6
Good	51	to 75	1.28	.8
Fair	26	to 50	.85	1.2
Poor	0	to 25	.43	2.3

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 3,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,750 pounds in favorable years.

5. Soils

The feature common to all soils in this site is a seasonal high water table that ranges from near the surface in wet years to a depth of 2 feet in dry years.

a. Characteristics

The soils in this site are poorly drained. They formed in alluvium (stream valleys) or in eolian sands (sandhill areas). These are deep loamy soils. In places, a thin layer of organic matter is on the surface of the mineral soil. The surface soil is generally darker colored, ranging from 4 to 24 inches thick. It is mainly loam or silt loam, but ranges to include loamy fine sand. The underlying material is lighter colored than the surface soil and is mottled in the upper part. Texture, to a depth of more than 60 inches, ranges widely from place to place and includes loam, silt loam, very fine sandy loam, clay loam, fine sand, coarse sand, and gravelly sand.

b. Major soil taxonomic unit associated with this site is:

Lamo Variant loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES.

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Subirrigated (Sb)

MLRAs: 64, 65, 67, and 72

A. Physical Characteristics

1. Physiographic Features

This site occurs on nearly level and very gently sloping areas of bottom lands and sandhill valleys. A few areas are in swales, stream terraces and on foot slopes.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES.

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 75 percent grasses, 10 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Big bluestem, indiangrass, little bluestem, prairie cordgrass, switchgrass, and various members of the sedge family (sedges, rushes, bulrushes, and spikesedges) are the dominant species making up 70 percent or more of the total annual production. Needleandthread, plains bluegrass, slender wheatgrass, and some forbs are also important plants to the site.
- b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses (75 to 85 percent)</u>	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	15-25	D	D	I
Canada wildrye	0-5	D	I	I
Foxtail barley <u>2/</u>	0-5	I	I	I
Green muhly	0-5	I	I	I
Indiangrass	10-20	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	15-30	D	D	I
Needleandthread	0-10	I	I	I
Plains bluegrass	0-5	I	I	I
Prairie cordgrass	10-20	D	I	I
Prairie junegrass	0-5	D	I	I
Prairie wedgescale	0-5	D	I	I
Purple lovegrass	0-5	I	I	I
Reed canarygrass	0-5	D	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	0-5	I	I	I
Slender wheatgrass	0-5	I	I	I
Switchgrass	5-10	D	I	I
Western wheatgrass	0-5	I	I	I

Grasslike Plants (5 to 10 percent)

Baltic rush	0-5	I	I	I
Bulrushes	0-5	I	I	I
Common spikesedge	0-5	I	I	I
Rushes	0-5	I	I	I
Sedges	0-5	I	I	I
Tussock sedge	0-5	I	I	I

<u>Forbs</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
American licorice	T <u>3/</u>	I	I	I
Blackeyesdusan	T	I	D	D
Blue verbena	T	I	D	D
Cudweed sagewort	T	I	D	D
False boneset	T	I	D	D
Giant goldenrod	T	I	D	D
Heath aster	T	I	D	D
Illinois bundleflower	T	I	D	D
Maximilian sunflower	T	D	D	D
Pennsylvania smartweed	T	I	D	D
Prairie onion	T	I	D	D
Purple prairieclover	T	D	D	D
Scouringrush	T	I	D	D
Stiff goldenrod	T	I	D	D
Stiff sunflower	T	D	D	D
Thickspike gayfeather	T	I	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D
White prairieclover	T	D	D	D
Wild strawberry	T	I	D	D

Shrubs (0 to 5 percent)

Arkansas rose	0-5	I	D	D
Leadplant	0-5	D	D	D
Poisonivy	0-5	D	D	D
Western snowberry	0-5	I	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
2/ Naturalized introduced plant
3/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	Percent		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	1.5	.7
Good	51	to 75	1.13	.9
Fair	26	to 50	.75	1.3
Poor	0	to 25	.38	2.6

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 3,250 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,500 pounds in favorable years.

5. Soils

The feature common to all soils in this site is a seasonal high water table that ranges from a depth of about 1.5 feet in wet years to a depth of 3.5 feet in dry years.

a. Characteristics

The soils in this site are somewhat poorly to poorly drained. Alluvium and eolian sands are common parent materials. These soils are generally deep, but some are shallow over gravelly coarse sand. The surface soil is generally darker colored and ranges from 6 to 24 inches thick. Less commonly are light colored soils with a surface soil less than 6 inches thick. Texture of the surface soil ranges widely from silt loam to fine sand. The underlying material is lighter colored than the surface soil, and is commonly mottled in some part. It ranges widely in texture from loam to gravelly coarse sand. Some soils in this site are calcareous to the surface.

b. Major soil taxonomic units associated with this site are:

Caruso loam

Els fine sand

Elsmere loamy fine sand

Gannett fine sandy loam (poorly drained)

Gering loam

Las loam

Las Animas loam

Las Animas very fine sandy loam

Las Animas fine sandy loam

Lewellen loamy fine sand

Loup fine sandy loam

McGrew fine sandy loam

McGrew loam

Mitchell silt loam, wet

Platte loam

Tryon fine sandy loam

Yockey loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Saline Subirrigated (SS)

MLRAs: 65 and 67

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level bottom lands of the North Platte River valley and smaller tributary stream valleys. Also, in low areas of sandhill valleys.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 85 percent grasses, 10 percent grasslike plants, and 5 percent forbs, based upon total annual production, air-dry weight. Alkali sacaton, inland saltgrass, western wheatgrass, and plains bluegrass are the dominant species making up 70 percent or more of the total annual production. Alkali cordgrass, little bluestem, foxtail barley, slender wheatgrass, grasslike plants, and forbs are also important to the site.
- b. Relative percentages of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (80 to 90 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Alkali cordgrass	5-10	D	I	I
Alkali muhly	0-5	I	I	I
Alkali sacaton	30-45	D	I	I
Blue grama	0-5	I	I	I
Buffalograss	0-5	I	I	I
Canada wildrye	0-5	D	I	I
Foxtail barley <u>2/</u>	5-10	I	I	I
Inland saltgrass	15-20	I	I	I
Little bluestem	0-5	D	I	I
Plains bluegrass	5-15	D	I	I
Sand dropseed	5-10	I	I	I
Slender wheatgrass	5-10	D	I	I
Switchgrass	0-5	D	I	I
Western wheatgrass	10-20	D	I	I
<u>Grasslike Plants</u> (5 to 15 percent)				
Baltic rush	0-5	I	I	I
Rushes (other)	0-5	I	I	I
Sedges	5-10	I	I	I
Spikerushes	0-5	I	I	I
<u>Forbs</u> (0 to 5 percent)				
Arrowgrass	T <u>3/</u>	I	D	D
Common pricklypear	T	I	I	D
Cudweed sagewort	T	I	D	D
Dandelion	T	I	D	D
Heath aster	T	I	D	D
Prairie pussytoes	T	I	D	D
Pursh seepweed	T	I	D	D
Scouringrush	T	I	D	D
Western ragweed	T	I	D	D

1/ "D" implies plant decreases under grazing pressure

"I" implies plant increases under grazing pressure

2/ Naturalized introduced plant

3/ Trace species or producing less than 2.5 percent of potential total annual yield

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.8	1.3
Good	51 to 75	.6	1.7
Fair	26 to 50	.4	2.5
Poor	0 to 25	.2	5.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 2,000 pounds per acre, air-dry weight, in unfavorable years, to a high of 3,250 pounds in favorable years.

5. Soils

The features common to all soils in this site are a seasonal high water table that ranges from a depth of 1.5 feet in wet years to a depth of 3.5 feet in dry years. These soils are moderately to very strongly affected by salinity and/or alkali characteristics.

a. Characteristics

The soils in this site are somewhat poorly drained or poorly drained. The parent material is alluvium on the bottom lands of stream valleys and eolian sand in the sandhill valleys. The surface soil is generally calcareous and ranges from 1 to 12 inches thick. Texture ranges widely from silty clay loam to fine sand. The sites in the Platte River valley have a subsoil that ranges in texture from loamy fine sand to clay. The site in the sandhills valleys has subsoils that range in texture from fine sandy loam to fine sand. The underlying material ranges widely from clay to gravelly coarse sand. The salinity and alkalinity can occur in any part of the soil profile depending on the soil texture and seasonal fluctuations of the water table. Concentrations of salts are generally highest in early spring and late fall. Many areas have white crusts on the soil surface.

b. Major soil taxonomic units associated with this site are:

Els fine sand, alkali
Els loamy fine sand, alkali

Gering loam, alkali

Janise loam

Janise silt loam

Las Animas fine sandy loam, alkali
Lewellen loamy fine sand, alkali
Lisco very fine sandy loam, alkali

McGrew loam, alkali
Minatare loam

Selia loamy sand

Yockey very fine sandy loam, alkali

Soil series descriptions are available in the county
soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Silty Overflow (SiO)

MLRAs: 64, 67, and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on bottom lands of stream valleys and in depressions, drainageways and draws of the uplands. The areas are generally nearly level but a few are very gently sloping.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 90 percent grasses, 5 percent grasslike plants, and 5 percent forbs, based upon total annual production, air-dry weight. Blue grama, needleandthread, and western wheatgrass are the dominant species making up 50 percent or more of the total annual production. Big bluestem, buffalograss, green needlegrass, little bluestem, sideoats grama, sedges and forbs are also important plants to the site.

b. Relative percentage of total plant community, by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (80 to 90 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	5-10	D	D	I	I
Blue grama	10-15	I	I	I	I
Buffalograss	0-5	I	I	I	I
Green needlegrass	0-5	D	I	I	I
Little bluestem	5-10	D	D	I	I
Needleandthread	15-20	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Sand dropseed	0-5	I	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Sideoats grama	0-5	D	D	I	I
Western wheatgrass	25-35	D	I	I	I

<u>Grasslike Plants</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I
<u>Forbs</u> (5 to 10 percent)					
Common blue-eyedgrass	T <u>2/</u>	D	D	D	D
Dotted gayfeather	T	I	D	D	D
False boneset	T	I	D	D	D
Heath astert	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Rush skeletonplant	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	Percent	<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
	<u>Climax Vegetation</u>		
Excellent	76 to 100	.8	1.3
Good	51 to 75	.6	1.7
Fair	26 to 50	.4	2.5
Poor	0 to 25	.2	5.0

4. Total Annual Production

The total annual production when the site is in excellent range condition ranges from a low of 1,500 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,500 pounds in favorable years.

5. Soils

The features common to all soils in this site are the soils are very fine sandy loam to silty clay loam in texture and are susceptible to occasional or frequent overflow. The overflow can come from flooding of streams or as a result of water that is runoff from soils on higher elevations.

a. Characteristics

The soils in this site are deep and well drained or somewhat poorly drained. The surface soil is stratified with lighter and darker colored layers of silty clay loam, silt loam, loam, or very fine sandy loam. On bottom lands the soils are calcareous, but in upland depressions they commonly are not calcareous. The underlying material has a similar range in texture as the surface layer, but is lighter colored. On bottom lands, the soil material below 40 inches is commonly coarser textured than material above this depth.

b. Major soil taxonomic units associated with this site are:

Craft very fine sandy loam

Duroc loam, overflow

Yockey very fine sandy loam, channeled

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Clayey Overflow (CyO)

MLRAs: 60A and 64

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level and very gently sloping bottom lands.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 75 percent grasses, 10 percent grasslike plants, 10 percent forbs, and 5 percent shrubs based upon total annual production, air-dry weight. Blue grama, buffalograss, green needlegrass, and western wheatgrass are the dominant species making up 70 percent or more of the total annual production. Sandberg bluegrass, sedges, and numerous forbs are also important plants to the site.

b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (75 to 85 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue grama	10-15	I	I	I	I
Buffalograss	5-10	I	I	I	I
Green needlegrass	10-15	D	I	I	I
Inland saltgrass	0-5	I	I	I	I
Sand dropseed	0-5	I	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Western wheatgrass	25-40	D	I	I	I
 <u>Grasslike Plants</u> (5 to 10 percent)					
Sedges (other)	5-10	I	I	I	I
Threadleaf sedge	0-5	I	I	I	I

<u>Forbs</u> (5 to 10 percent)	%	Grazing Response 1/ <u>Cattle</u> <u>Sheep</u> <u>Deer</u> <u>Antelope</u>			
Dotted gayfeather	T	I	D	D	D
False boneset	T	I	D	D	D
Hoods phlox	T	I	D	D	D
Lomatium	T	I	D	D	D
Lambert crazyweed	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Rush skeletonplant	T	I	D	D	D
Scarlet gaura	J	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Showy peavine	T				
Silverleaf scurfpea	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D

Shrubs (0 to 5 percent)

Arkansas rose	0-5	I	D	D	D
Common pricklypear	0-5	I	I	D	D
Fringed sagewort	0-5	I	D	D	D
Rabbitbrush	0-5	I	I	I	D
Silver sagebrush	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
"I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	Percent		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	.5	2.0
Good	51	to 75	.8	2.6
Fair	26	to 50	.25	4.0
Poor	0	to 25	.13	7.7

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,000 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,000 pounds in favorable years,

5. Soils

The features common to all soils in this site are the clayey textures. Flooding is occasional. The flooding comes from water that is runoff from soils on higher elevations.

a. Characteristics

The soils in this site are deep and well drained. They formed in calcareous alluvium. The surface layer is silty clay loam and ranges from 4 to 10 inches thick. The underlying material range from silty clay loam to silty clay.

b. Major soil taxonomic units associated with this site are:

Lohmiller silty clay loam, channeled

Lohmiller silty clay loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Silty Lowland (SiL)

MLRAs: 67 and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to very gently sloping bottom land areas of stream valleys.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 85 percent grasses, 5 percent grasslike plants, and 10 percent forbs, based upon total annual production, air-dry weight. Blue grama, needleandthread, and western wheatgrass are the dominant species making up 50 percent or more of the total annual production. Big bluestem, green needlegrass, sedges and forbs are also important plants to the site.
- b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (80 to 90 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	5-10	D	D	I	I
Blue grama	10-15	I	I	I	I
Buffalograss	0-5	I	I	I	I
Green needlegrass	5-10	D	I	I	I
Little bluestem	0-5	D	D	I	I
Needleandthread	15-20	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Sideoats grama	0-5	D	D	I	I
Western wheatgrass	20-30	D	I	I	I

Grasslike Plants (5 to 10 percent)

Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I

Forbs (5 to 10 percent)

Dotted gayfeather	T <u>2/</u>	I	D	D	D
False boneset	T	I	D	D	D
Heath aster	T	I	D	D	D
Ironplant	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Rocky Mountain pussytoes	T	I	D	D	D
Rush skeletonplant	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM's/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.8	1.3
Good	51 to 75	.6	1.7
Fair	26 to 50	.4	2.5
Poor	0 to 25	.2	5.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,500 pounds per acre, air-

dry weight, in unfavorable years, to a high of 2,750 pounds in favorable years.

5. Soils

The features common to all soils in this site are the loamy and silty textured surface layers and a water table at a depth of 6 to 15 feet or deeper.

a. Characteristics

The soils formed in alluvium are deep and well drained. The surface soil ranges in texture from silt loam to very fine sandy loam and from 10 to 20 inches thick. The underlying material is silt loam, loam, or very fine sandy loam. In some areas gravelly sand may be below a depth of 40 inches. The soils are calcareous at or near the surface.

b. Major soil taxonomic units associated with this site are:

Duroc loam, occasionally flooded

McCook loam

McCook very fine sandy loam

McCook silt loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Sandy Lowland (SyL)

MLRAs: 65, 67, and 70

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to very gently sloping bottom land areas of stream valleys.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 85 percent grasses, 5 percent grasslike plants, 5 percent forbs, and 5 percent shrubs based upon total annual production, air-dry weight. Blue grama, little bluestem, needleandthread, prairie sandreed, and sand bluestem are the dominant species making up 70 percent or more of the total annual production. Prairie junegrass, sand dropseed, Scribner panicum, switchgrass, and numerous forbs are also important to the site.
- b. Relative percentage of total plant community, by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (80 to 95 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue grama	5-10	I	I	I	I
Little bluestem	20-30	D	D	I	I
Needleandthread	10-15	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	20-35	I	I	I	I
Sand bluestem	20-30	D	D	I	I
Sand dropseed	0-5	I	I	I	I
Scribner panicum	0-5	I	I	I	I
Switchgrass	0-10	D	I	I	I

<u>Grasslike Plants</u> (0 to 5 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Sedges	0-5	I	I	I	I
<u>Forbs</u> (5to10percent)					
Cudweed sagewort	T <u>2/</u>	I	D	D	D
Dotted gayfeather	T	I	D	D	D
False boneset	T	I	D	D	D
Heath aster	T	I	D	D	D
Ironplant	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Plains larkspur	T	I	D	D	D
Platte thistle	T	I	D	D	D
Prairie groundsel	T	I	D	D	D
Prairie onion	T	I	D	D	D
Riddell groundsel	T	I	D	D	D
Scouringrush	T	I	D	D	D
Serrateleaf eveningprimrose	T	I	D	D	D
Shellleaf penstemon	T	I	D	D	D
Silky prairieclover	T	I	D	D	D
Stiff sunflower	T	D	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D
<u>Shrubs</u> (0 to 5 percent)					
Arkansas rose	0-5	I	D	D	D
Brittle pricklypear	0-5	I	I	I	D
Common pricklypear	0-5	I	I	D	D
Leadplant	0-5	D	D	D	D
Sand sagebrush	0-5	I	I	I	D
Sunshine rose	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
"I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.8	1.3
Good	51 to 75	.6	1.7
Fair	26 to 50	.4	2.5
Poor	0 to 25	.2	5.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,250 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,750 pounds in favorable years.

5. Soils

The features common to all soils in this site are a very fine sandy loam to loamy fine sand surface layer and a water table at a 5 to 8 foot depth.

a. Characteristics

The soils in this site are deep and range from well drained to somewhat excessively drained. The parent material is alluvium derived from stream overflow. The surface soil is from 4 to 20 inches thick and ranges from very fine sandy loam to loamy fine sand in texture. The underlying material is lighter colored than the surface soil and ranges from very fine sandy loam to fine sand. A few areas have gravelly sand or gravelly coarse sand below a depth of 40 inches. Many areas of these soils are calcareous at or near the surface.

b. Major soil taxonomic units associated with this site are:

Bankard very fine sandy loam
Bankard loamy fine sand

Craft loamy very fine sand
Craft very fine sandy loam

Glenberg fine sandy loam
Glenberg loamy fine sand

Haverson fine sandy loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Saline Lowland (SL)

MLRAs: 64 and 67

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level or very gently sloping stream terraces, foot slopes, and uplands.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 85 percent grasses, 5 percent grasslike plants, 5 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Alkali sacaton, inland saltgrass, blue grama, and western wheatgrass are the dominant species making up 65 percent or more of the total production. Buffalograss, plains bluegrass, and slender wheatgrass, grasslike plants, and forbs are also important to the site.

b. Relative percentages of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (80 to 90 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Alkali sacaton	20-30	D	I	I	I
Blue grama	10-15	I	I	I	I
Buffalograss	5-10	I	I	I	I
Inland saltgrass	10-15	I	I	I	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I	I
Plains bluegrass	5-10	D	I	I	I
Sand dropseed	0-5	I	I	I	I
Slender wheatgrass	0-5	D	I	I	I
Western wheatgrass	15-20	D	I	I	I

<u>Grasslike Plants</u> (5 to 10 percent)	<u>Grazing Response</u> ^{1/}				
	<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>	
	%				
Baltic rush	0-5	I	I	I	I
Douglas sedge	0-5	I	I	I	I
Rushes (other)	0-5	I	I	I	I
Sedges (other)	5-10	I	I	I	I
Spikerushes	0-5	I	I	I	I

Forbs (0 to 5 percent)

Common pricklypear	T ^{3/}	I	I	D	D
Cudweed sagewort	T	I	D	D	D
Dandelion	T	I	D	D	D
Flodman thistle	T	I	D	D	D
Heath aster	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Skeletonplant	T	I	D	D	D
Western ragweed	T	I	D	D	D

Shrubs (0 to 5 percent)

Broom snakeweed	0-5	I	I	I	D
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- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
 2/ Naturalized introduced plant
 3/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent</u>		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	.5	2.0
Good	51	to 75	.38	2.6
Fair	26	to 50	.25	4.0
Poor	0	to 25	.13	7.7

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 750 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,250 pounds in favorable years.

5. Soils

The feature common to all soils in this site are the moderate to strong saline-alkali soil condition. In

addition there is a water table at a depth of 6 feet or deeper, or the area receives additional moisture that runs off higher lying adjacent soils.

a. Characteristics

The soils in this site are deep. The parent material is alluvium. The surface soil is from 6 to 20 inches thick. The soil material ranges from loamy fine sand to very fine sandy loam. Most areas are calcareous at the surface.

b. Major soil taxonomic units associated with this site are:

Craft very fine sandy loam, alkali

Janise loamy fine sand, drained, overblown

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTIONS

Range Site: Savannah (Sv)

MLRAs: 64 and 67

A. Physical Characteristics

1. Physiographic Features

The site occurs on steep and very steep slopes. It occurs on dissected upland landscapes where ridgetops alternate with drainageways and ravines. In places narrow bottom lands and foot slopes are included.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 60 percent grasses, 10 percent grasslike plants, 5 percent forbs, 10 percent shrubs, and 15 percent trees, based upon total annual production, air-dry weight. Little bluestem, ponderosa pine, prairie sandreed, sand bluestem, sideoats grama, and threadleaf sedge are the dominant species making up 50 percent or more of the total annual production. Big bluestem, blue grama, slender wheatgrass, and numerous forbs and shrubs are also important plants to the site.

b. Relative percentages of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (55 to 70 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Bearded wheatgrass	0-5	D	I	I
Big bluestem	0-10	D	D	I
Blue grama	5-10	I	I	I
Canada wildrye	0-5	D	I	I
Green needlegrass	5-15	D	I	I
Hairy grama	0-5	I	I	I
Indian ricegrass	0-10	D	I	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	10-2	D	D	I
Plains muhly	0-5	I	I	I
Prairie junegrass	0-5	D	I	I
Prairie sandreed	5-15	I	I	I
Sand bluestem	5-15	D	D	I
Sideoats grama	10-15	D	D	I
Slender wheatgrass	0-10	I	I	I
Spikefescue	0-5	I	I	I
Western wheatgrass	0-5	I	I	I
 <u>Grasslike Plants</u> (10 to 15 percent)				
Sedges (other)	0-5	I	I	I
Threadleaf sedge	10-15	I	I	I
 <u>Forbs</u> (5 to 10 percent)				
Black samson	T <u>3/</u>	D	D	D
Cinquefoil	T	I	D	D
Dotted gayfeather	T	I	D	D
Fringed sagewort	T	I	D	D
Heath aster	T	I	D	D
Ironplant	T	I	D	D
Lambert crazyweed	T	I	D	D
Missouri goldenrod	T	I	D	D
Nebraska lupine	T	I	D	D
Purple prairieclover	T	D	D	D
Rush skeletonplant	T	I	D	D
Serrateleaf eveningprimrose	T	I	D	D
Shellleaf penstemon	T	I	D	D
Shorts milkvetch	T	D	D	D
Showy peavine	T	I	D	D
Silverleaf scurfpea	T	I	D	D
Slender dalea	T	I	D	D
Slimflower scurfpea	T	I	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D
White prairieclover	T	D	D	D

<u>Shrubs</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Arkansas rose	0-5	I	D	D
Broom snakeweed	0-5	I	D	D
Common chokecherry	0-5	I	D	D
Common pricklypear	0-5	I	D	D
Gooseberry	0-5	I	I	I
Leadplant	0-5	D	D	D
Oregon-grape	0-5	I	D	D
Poisonivy	0-5	D	D	D
Silver sage	0-5	I	D	D
Skunkbush sumac	0-5	I	D	D
Small soapweed	0-5	I	D	D
Western snowberry	0-5	I	D	D
Woods rose	0-5	I	D	D

Trees (10 to 15 percent)

Ponderosa pine	10-15	I	I	I
Rocky Mountain juniper	0-5	I	I	I

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
 2/ Naturalized introduced plant
 3/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.3	3.3
Good	51 to 75	.23	4.3
Fair	26 to 50	.15	6.7
Poor	0 to 25	.08	12.5

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 750 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,000 pounds in favorable years.

5. Soils

The features common to this site are the steep and very steep soils on a landscape where the vegetation consists primarily of mixed grasses and scattered trees.

a. Characteristics

The soils in this site range from shallow to deep. The parent material is weathered mainly from fine grained sandstone. Texture ranges from silt loam to loamy very fine sand. The shallow soils have bedrock between a depth of 6 to 20 inches. Bedrock is exposed in many places. Deep, darker soils are on bottom lands and foot slopes of the narrow drainageways.

b. Major soil taxonomic unit associated with this site is:

Canyon-Bridget-Rock Outcrop Association, Steep (Canyon and Bridget portion)

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Sandy (Sy)

MLRAs: 64, 65, 67, and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to steep slopes. It occurs on stream terraces, foot slopes, and uplands.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 75 percent grasses, 10 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Prairie sandreed, needleandthread, and blue grama are the dominant species making up 65 percent or more of the total annual production. Indian ricegrass, little bluestem, sand dropseed, and western wheatgrass, threadleaf sedge, and numerous forbs are also important plants to the site.

b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (70 to 85 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue grama	10-20	I	I	I	I
Indian ricegrass	5-10	D	D	I	I
Little bluestem	10-15	D	D	I	I
Needleandthread	10-20	I	I	I	I
Plains muhly	0-5	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	20-35	I	I	I	I
Red threeawn	0-5	I	I	I	I
Sand bluestem	5-15	D	D	I	I
Sand dropseed	0-5	I	I	I	I
Sand paspalum	0-5	I	I	I	I
Scribner panicum	0-5	I	I	I	I
Sideoats grama	0-5	D	D	I	I
Switchgrass	0-5	D	I	I	I
Western wheatgrass	0-5	D	I	I	I
Wilcox panicum	0-5	I	I	I	I

<u>Grasslike Plants</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Narrowleaf sedge	0-5	I	I	I	I
Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I
<u>Forbs</u> (5 to 10 percent)					
Bush morningglory	T <u>2/</u>	I	D	D	D
Dotted gayfeather	T	I	D	D	D
False boneset	T	I	D	D	D
Flodman thistle	T	I	D	D	D
Hairy goldaster	T	I	D	D	D
Heath aster	T	I	D	D	D
Ironplant	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Plains larkspur	T	I	D	D	D
Platte thistle	T	I	D	D	D
Prairie groundsel	T	I	D	D	D
Prairie onion	T	I	D	D	D
Riddell groundsel	T	I	D	D	D
Rush skeletonplant	T	I	D	D	D
Scaly gayfeather	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Serrateleaf eveningprimrose	T	I	D	D	D
Shellleaf penstemon	T	I	D	D	D
Silky prairieclover	T	I	D	D	D
Silverleaf scurfpea	T	I	D	D	D
Spiderwort	T	I	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D
Yarrow	T	I	D	D	D
<u>Shrubs</u> (0 to 5 percent)					
Arkansas rose	0-5	I	D	D	D
Common pricklypear	0-5	I	I	D	D
Fringed sagewort	0-5	I	D	D	D
Purple mammillaria	0-5	I	I	I	I
Western sandcherry	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
 2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent</u>		
	<u>Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.5	2.0
Good	51 to 75	.38	2.6
Fair	26 to 50	.25	4.0
Poor	0 to 25	.13	7.7

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,250 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,250 pounds in favorable years.

5. Soils

The features common to all soils in this site are the fine sandy loam to fine sand surface soils. Those soils that have fine sand surface soils are only on slopes of 0 to 3 percent.

a. Characteristics

The soils in this site are deep and well drained to excessively drained. The parent material includes loess, eolian sand, alluvium, colluvium, and materials weathered from bedrock. The surface soil is 4 to 20 inches thick. Textures of the surface layers range from fine sandy loam to fine sand. The subsoil ranges mainly from fine sandy loam to fine sand. The underlying material ranges from silt loam to gravelly coarse sand.

b. Major soil taxonomic units associated with this site are:

Alice fine sandy loam
Alice loamy fine sand
Altvan fine sandy loam
Anselmo fine sandy loam

Bayard fine sandy loam
Broadwater very fine sandy loam
Broadwater loamy fine sand
Busher loamy very fine sand

Chappell sandy loam

Dailey loamy fine sand
Dwyer loamy fine sand, 0 to 6 percent
Dunday loamy fine sand

Jayem fine sandy loam
Jayem loamy very fine sand

Jayem loamy fine sand
Jayem loamy sand
Julesburg fine sandy loam

Manter fine sandy loam

Sarben loamy very fine sand
Satanta fine sandy loam

Tripp fine sandy loam

Valent loamy fine sand, 0 to 3 percent
Vetal fine sandy loam

Soil series descriptions are available in the county
soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Sands (Sa)

MLRAs: 64, 65, 67, and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on gently undulating to rolling land. It occupies sandhills that are part of upland landscapes.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 80 percent grasses, 5 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Blue grama, little bluestem, needleandthread, prairie sandreed, and sand bluestem are the dominant species making up 75 percent or more of the total annual production. Hairy grama, Indian ricegrass, Scribner panicum, sand dropseed, switchgrass, and numerous forbs are also important to the site.

b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (70 to 85 percent)	%	<u>Grazing Response</u> <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue grama	10-15	I	I	I	I
Hairy grama	0-5	I	I	I	I
Indian ricegrass	0-5	D	D	I	I
Little bluestem	15-20	D	D	I	I
Needleandthread	15-20	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	30-40	I	I	I	I
Red threeawn	0-5	I	I	I	I
Sand bluestem	15-25	D	D	I	I
Sand dropseed	5-10	I	I	I	I
Sand lovegrass	0-5	D	D	I	I
Sand paspalum	0-5	I	I	I	I
Scribner panicum	0-5	I	I	I	I
Switchgrass	0-10	D	I	I	I
Wilcox panicum	0-5	I	I	I	I

<u>Grasslike Plants</u> (0 to 5 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Narrowleaf sedge	0-5	I	I	I	I
Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	0-5	I	I	I	I
<u>Forbs</u> (5 to 10 percent)					
Bush morningglory	T <u>2/</u>	I	D	D	D
Carolina granwell	T	I	D	D	D
Dotted gayfeather	T	I	D	D	D
False boneset	T	I	D	D	D
Flodman thistle	T	I	D	D	D
Heath aster	T	I	D	D	D
Ironplant	T	I	D	D	D
Lemon scurfpea	T	I	D	D	D
Missouri goldenrod	T	I	D	I	D
Plains larkspur	T	I	D	D	D
Platte thistle	T	I	D	D	D
Prairie groundsel	T	I	D	D	D
Prairie onion	T	I	D	D	D
Riddell groundsel	T	I	D	D	D
Scaly gayfeather	T	I	D	D	D
Serrateleaf eveningprimrose	T	I	D	D	D
Shellleaf pemstemon	T	I	D	D	D
Showy peavine	T	I	D	D	D
Silky prairieclover	T	I	D	D	D
Spideraort	T	I	D	D	D
Stiff sunflower	T	D	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D
Whiteflower gilia	T	I	D	D	D
Woollywhite	T	I	D	D	D
Yarrow	T	I	D	D	D
<u>Shrubs</u> (0 to 5 percent)					
Arkansas rose	0-5	I	I	D	D
Brittle pricklypear	0-5	I	I	I	D
Common pricklypear	0-5	I	I	D	D
Leadplant	0-5	D	D	D	D
Purple mammillaria	0-5	I	I	I	I
Sand sagebrush	0-5	I	I	I	D
Small soapweed	0-5	I	I	D	D
Sunshine rose	0-5	I	D	D	D
Western sandcherry	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
"I" implies plant increases under grazing pressure
- 2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.5	2.0
Good	51 to 75	.38	2.6
Fair	26 to 50	.25	4.0
Poor	0 to 25	.13	7.7

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,000 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,250 pounds in favorable years.

5. Soils

The features common to all soils in this site are the sandy textured surface soils and slopes are 3 to 17 percent.

a. Characteristics

The soils in this site are excessively drained and formed in eolian sand. The surface layer is 3 to 10 inches thick. The texture of the profile is loamy fine sand or fine sand. The soils may be calcareous or noncalcareous.

b. Major soil taxonomic units associated with this site are:

Dwyer loamy fine sand, 6 to 17 percent
Dwyer loamy fine sand, rolling
Dwyer loamy sand

Valent loamy fine sand, 3 to 17 percent
Valent loamy fine sand, rolling
Valent fine sand, 3 to 17 percent
Valent fine sand, rolling
Valentine fine sand, 3 to 17 percent
Valentine fine sand, rolling

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Choppy Sands (CS)

MLRA: 65

A. Physical Characteristics

1. Physiographic Features

This site occurs on steep hilly irregular slopes. There are many narrow ridges, sharp peaks, catsteps, and small blow-outs associated with this site.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 85 percent grasses, 5 percent grasslike plants, 5 percent forbs, and 5 percent shrubs. Little bluestem, needleandthread, prairie sandreed, sand bluestem, and switchgrass are the dominant species making up 60 percent or more of the total annual production. Blowoutgrass, blue grama, hairy grama, sand lovegrass, sandhill muhly, and some forbs and shrubs are also important to the site.
- b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (70 to 85 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blowoutgrass	0-5	D	I	I	I
Blue grama	5-10	I	I	I	I
Hairy grama	5-10	I	I	I	I
Indiangrass	0-5	D	D	I	I
Little bluestem	10-15	D	D	I	I
Needleandthread	10-15	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	20-35	I	I	I	I
Sand bluestem	15-30	D	D	I	I
Sand dropseed	0-5	I	I	I	I
Sand lovegrass	5-10	D	D	I	I
Sand paspalum	0-5	I	I	I	I
Sandhill muhly	0-5	I	I	I	I
Scribner panicum	0-5	I	I	I	I
Switchgrass	5-15	D	I	I	I
Wilcox panicum	0-5	I	I	I	I
<u>Grasslike Plants</u> (0 to 5 percent)					
Sedges	0-5	I	I	I	I
<u>Forbs</u> (5 to 10 percent)					
Birdegg milkvetch	T <u>2/</u>	D	D	D	D
Bush morningglory	T	I	D	D	D
Carolina gromwell	T	I	D	D	D
Hairy goldaster	T	I	D	D	D
Ironplant	T	I	D	D	D
Lemon scurfpea	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Showy peavine	T	I	D	D	D
Silky prairieclover	T	I	D	D	D
Spiderwort	T	I	D	D	D
Stiff sunflower	T	D	D	D	D
Tenpetal mentzelia	T	I	D	D	D
Western ragweed	T	I	D	D	D
Whiteflower gilea	T	I	D	D	D
Woollywhite	T	I	D	D	D

Shrubs (5 to 10 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Arkansas rose	0-5	I	D	D	D
Brittle pricklypear	0-5	I	I	I	D
Common pricklypear	0-5	I	I	D	D
Inland ceanothus	0-5	D	D	D	D
Poisonivy	0-5	D	D	D	D
Sand sagebrush	0-5	I	I	I	D
Small soapweed	0-5	I	D	D	D
Western sandcherry	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.4	2.5
Good	51 to 75	.3	3.3
Fair	26 to 50	.2	5.0
Poor	0 to 25	.1	10.0

4. Total Annual Production

The total annual production when the site is in excellent range condition ranges from a low of 750 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,250 pounds in favorable years.

5. Soils

The features common to the soils in this site are the sandy textures throughout the soil and they occur on irregular slopes over 17 percent.

a. Characteristics

The soils in this site are excessively drained and formed in eolian sand. The surface layer is 2 to 10 inches thick and the texture is fine sand or sand. The soils are non-calcareous.

- b. Major soil taxonomic units associated with this site are:

Valent fine sand, hilly
Valentine fine sand, hilly

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

- B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

- C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Clayey (Cy)

MLRAs: 60A and 64

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to steep slopes of uplands and foot slopes. A few areas are in swales of the uplands.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 75 percent grasses, 10 percent grasslike plants, 10 percent forbs, and 5 percent shrubs based upon total annual production, air-dry weight. Blue grama, buffalograss, green needlegrass, and western wheatgrass are the dominant species making up 70 percent or more of the total annual production. Sand dropseed, Sandberg bluegrass, threadleaf sedge, and numerous forbs are also important plants to the site.

b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (75 to 85 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue grama	15-20	I	I	I	I
Buffalograss	5-10	I	I	I	I
Green needlegrass	10-20	D	I	I	I
Sand dropseed	0-5	I	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Western wheatgrass	40-60	D	I	I	I
Wilcox panicum	0-5	I	I	I	I

Grazing Response 1/

Grasslike Plants (5 to 10 percent) Cattle Sheep Deer Antelope

%

Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I

Forbs (5 to 10 percent)

Black samson	T <u>2/</u>	D	D	D	D
Catclaw sensitivebriar	T	D	D	D	D
Dotted gayfeather	T	I	D	D	D
False boneset	T	I	D	D	D
Ironplant	T	I	D	D	D
Lambert crazyweed	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Rush skeletonplant	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Silverleaf scurfpea	T	I	D	D	D
Slender greenthread	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Stiff sunflower	T	D	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D

Shrubs (0 to 5 percent)

Arkansas rose	0-5	I	D	D	D
Broom snakeweed	0-5	I	D	D	D
Common pricklypear	0-5	I	I	D	D
Fringed sagewort	0-5	I	D	D	D
Rabbitbrush	0-5	I	I	I	D
Small soapweed	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
"I" implies plant increases under grazing pressure
- 2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to suggestive initial stocking rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.4	2.5
Good	51 to 75	.3	3.3
Fair	26 to 50	.2	5.0
Poor	0 to 25	.1	10.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 750 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the clayey subsoils.

a. Characteristics

The soils in this site are well drained. They were formed in material that weathered from shale of the Pierre and Chadron formations. The surface layer is loam to silty clay and ranges from 3 to 10 inches thick. The subsoil and underlying material range from silty clay loam to clay. In some areas the shale is at a depth of 20 to 40 inches.

b. Major soil taxonomic units associated with this site are:

Buffington silty clay

Norrest loam

Soil series descriptions are available in the county soil survey handbook or published soil survey,

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Silty (Si)

MLRAs: 64, 67, and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to steep slopes on stream terraces, foot slopes, broad upland flats, and residual uplands.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 75 percent grasses, 10 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Blue grama, buffalograss, needleandthread, threadleaf sedge and western wheatgrass are the dominant species making up 70 percent or more of the total annual production. Green needlegrass, sideoats grama, and numerous forbs are also important plants to the site.
- b. Relative percentage of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (70 to 85 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	0-5	D	D	I	I
Blue grama	20-25	I	I	I	I
Buffalograss	5-10	I	I	I	I
Green needlegrass	5-10	D	I	I	I
Little bluestem	0-5	D	D	I	I
Needleandthread	20-30	I	I	I	I
Plains muhly	0-5	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Purple threeawn	0-5	I	I	I	I
Red threeawn	0-5	I	I	I	I
Sand dropseed	0-5	I	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Sideoats grama	0-5	D	D	I	I
Western wheatgrass	20-25	D	I	I	I

Grasslike Plants (5 to 10 percent)

Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I

Forbs (5 to 10 percent)

Black samson	T <u>2/</u>	D	D	D	D
Bush morningglory	T	I	D	D	D
Common blue-eyedgrass	T	I	D	D	D
Dotted gayfeather	T	I	D	D	D
False boneset	T	I	D	D	D
Heath aster	T	I	D	D	D
Ironplant	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Rocky mountain pussytoes	T	I	D	D	D
Rush skeletonplant	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Silverleaf scurfpea	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Stiff sunflower	T	D	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D

<u>Shrubs</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Arkansas rose	0-5	I	D	D	D
Broom snakeweed	0-5	I	D	D	D
Common pricklypear	0-5	I	I	D	D
Fringed sagewort	0-5	I	D	D	D
Leadplant	0-5	D	D	D	D
Small soapweed	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
"I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	Percent		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	.5	2.0
Good	51	to 75	.38	2.6
Fair	26	to 50	.25	4.0
Poor	0	to 25	.13	7.7

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,000 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,500 pounds in favorable years.

5. Soils

The features common to all soils in this site are the loamy textured surface layer and the lack of any moisture other than normal precipitation.

a. Characteristics

The soils in this site are well drained and are deep, moderately deep over bedrock or moderately deep over gravelly coarse sand or sand. They were formed in a wide range of materials that includes loess, colluvium-alluvium, alluvium, and material weathered from fine-grained sandstone, siltstone, and limestone. The surface soil is very fine sandy loam to silty clay loam and ranges in depth from 6 to 30 inches. The subsoil and the underlying material have a similar range in texture as the surface soil. Bedrock is found in some soils at a depth of 20 to 40 inches.

- b. Major soil taxonomic units associated with this site are:

Angora very fine sandy loam

Alliance loam
Altvan loam

Bridgeport loam
Bridgeport very fine sandy loam
Bridget very fine sandy loam
Buffington silty clay loam

Cheyenne loam
Creighton very fine sandy loam

Duroc loam

Goshen loam

Hemingford loam

Keith loam

Oglala very fine sandy loam

Rosebud loam

Tripp very fine sandy loam
Tripp loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

- B. Major Uses and Interpretations:

SEE DISCUSSION FOR ALL RANGE SITES

- C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Limy Upland (LiU)

MLRAs: 64, 67, and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to steep foot slopes and uplands.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 70 percent grasses, 15 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Blue grama, little bluestem, sideoats grama, plains muhly, needleandthread, and threadleaf sedge are the dominant species making up 70 percent or more of the total annual production. Buffalograss, prairie sandreed, western wheatgrass, numerous forbs, and some shrubs are also important plants to the site.

b. Relative percentages of the total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (60 to 80 percent)	%	<u>Grazing Response</u> ^{1/}			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	0-5	D	D	I	I
Blue grama	20-35	I	I	I	I
Buffalograss	5-15	I	I	I	I
Canby bluegrass	0-5	D	I	I	I
Green needlegrass	0-5	D	I	I	I
Hairy grama	0-5	I	I	I	I
Little bluestem	10-20	D	D	I	I
Needleandthread	10-20	I	I	I	I
Plains muhly	5-15	I	I	I	I
Prairie junegrass	0-10	D	I	I	I
Prairie sandreed	0-10	I	I	I	I
Sand dropseed	0-5	I	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Sideoats grama	15-20	D	D	I	I
Western wheatgrass	10-15	D	I	I	I

<u>Grasslike Plants</u> (5 to 15 percent) ‡		Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	10-15	I	I	I	I
<u>Forbs</u> (10 to 15 percent)					
Black samson	T <u>2/</u>	D	D	D	D
Dotted gayfeather	T	I	D	D	D
Heath aster	T	I	D	D	D
Hood phlox	T	I	D	D	D
Ironplant	T	I	D	D	D
Lambert crazyweed	T	I	D	D	D
Lemon scurfpea	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Purple prairieclover	T	D	D	D	D
Scarlet gaura	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Serrateleaf eveningprimrose	T	I	D	D	D
Silverleaf scurfpea	T	I	D	D	D
Skeletonplant	T	I	D	D	D
Slender dalea	T	I	D	D	D
Slender greenthread	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Stiff sunflower	T	D	D	D	D
Upright prairieconeflower	T	I	D	D	D
Western ragweed	T	I	D	D	D
<u>Shrubs</u> (5 to 10 percent)					
Arkansas rose	T	I	D	D	D
Brittle pricklypear	T	I	I	I	D
Broom snakeweed	T	I	D	D	D
Common pricklypear	T	I	I	D	D
Fringed sagewort	T	I	D	D	D
Leadplant	T	D	D	D	D
Small soapweed	T	I	D	D	D
Sunshine rose	T	I	D	D	D
Western snowberry	T	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.4	2.5
Good	51 to 75	.3	3.3
Fair	26 to 50	.2	5.0
Poor	0 to 25	.1	10.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 700 pounds per acre, air-dry weight, in unfavorable years, to a high of 2,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are calcareous at or near the surface and in the subsoil. They are moderately deep to deep soils, and depend upon precipitation for all moisture.

a. Characteristics

The soils in this site are well drained. They are formed in parent material that includes colluvium-alluvium, loess and materials weathered from siltstone and sandstone. The surface layer is generally calcareous within 5 inches of the surface and generally light colored. Texture ranges from silty clay loam to fine sandy loam. The underlying material texture ranges from silty clay loam to fine sandy loam.

b. Major soil taxonomic units associated with this site are:

Buffington silty clay loam
Bushman very fine sandy loam

Keota silt loam

Mitchell silt loam
Mitchell very fine sandy loam
Mitchell fine sandy loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site : Saline Upland (SU)

MLRAs: 60A, 64, and 67

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to very steep residual uplands on shale of the Chadron formation.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 90 percent grasses, 5 percent grasslike plants, and 5 percent forbs, based upon total annual production, air-dry weight. Blue grama, buffalograss, inland saltgrass, and western wheatgrass are the dominant species making up 75 percent or more of the total production. Sand dropseed, alkali sacaton, grasslike plants, and forbs are also important to the site.
- b. Relative percentages of total plant community by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (90 to 100 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Alkali sacaton	0-5	D	I	I	I
Blue grama	15-25	I	I	I	I
Buffalograss	10-15	I	I	I	I
Inland saltgrass	15-25	I	I	I	I
Sand dropseed	0-5	I	I	I	I
Western wheatgrass	35-50	D	I	I	I
<u>Grasslike Plants</u> (0 to 5 percent)					
Rushes	0-5	I	I	I	I
Sedges	0-5	I	I	I	I
Spikesedges	0-5	I	I	I	I
<u>Forbs</u> (0 to 5 percent)					
Common pricklypear	T <u>2/</u>	I	I	D	D
Scarlet globemallow	T	I	D	D	D
Skeletonplant	T	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
"I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	Percent		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	.2	5.0
Good	51	to 75	.15	6.7
Fair	26	to 50	.1	10.0
Poor	0	to 25	.05	20.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 300 pounds per acre, air-dry weight, in unfavorable years, to a high of 750 pounds in favorable years.

5. Soils

The features common to all soils in this site are moderately to strongly saline-alkaline condition and lack of moisture other than normal precipitation.

a. Characteristics

The soils in this site are well to moderately well drained. They are shallow over bedrock. They were formed in material weathered from saline-alkali shales of the Chadron formation. The calcareous surface layer is silty clay or clay and ranges from 2 to 5 inches thick. The soils are lighter colored and generally light grayish brown when dry. The underlying material is silty clay or clay, calcareous, and contains shale fragments.

b. Major soil taxonomic unit associated with this site is:

Orella clay

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Shallow Clay (SwC)

MLRA: 60A

A. Physical Characteristics

1. Physiographic Features

The site occurs on gently sloping to very steep uplands that comprise the Pierre shale formation.

2. Climatic Features:

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 75 percent grasses, 10 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Blue grama, green needlegrass, sideoats grama, threadleaf sedge, and western wheatgrass are the dominant species making up 65 percent or more of the total annual production. Buffalograss, Fendler threeawn, Sandberg bluegrass, broom snakeweed, and numerous forbs are also important plants to the site.

b. Relative percentage of total plant community, by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (75 to 90 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue grama	10-15	I	I	I	I
Buffalograss	0-5	I	I	I	I
Fendler threeawn	0-5	I	I	I	I
Green needlegrass	10-15	D	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Sideoats grama	35-50	D	D	I	I
Western wheatgrass	10-15	D	I	I	I

<u>Grasslike Plants</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Sedges	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I
<u>Forbs</u> (5 to 10 percent)					
Black samson	T <u>2/</u>	D	D	D	D
Dotted gayfeather	T	I	D	D	D
Douglas phlox	T	I	D	D	D
Flax	T	I	D	D	D
Heath aster	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Shelleaf penstemon	T	I	D	D	D
Silverleaf scurfpea	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Western ragweed	T	I	D	D	D
<u>Shrubs</u> (0 to 5 percent)					
Broom snakeweed	0-5	I	D	D	D
Rabbitbrush	0-5	I	I	I	D

- 1/ "D" implies plant decreases under grazing pressure
"I" implies plant increases under grazing pressure
- 2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.3	3.3
Good	51 to 75	.23	4.3
Fair	26 to 50	.15	6.7
Poor	0 to 25	.08	12.5

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 250 pounds per acre, air-dry weight, in unfavorable years, to a high of 1,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the clayey textured surface layer and the shallow depth of soil.

a. Characteristics

The soils in this site are well drained to excessively drained. They formed in material weathered from shale of the Pierre formation. The surface layer is silty clay or clay and 2 to 4 inches thick. The underlying material is silty clay or clay 2 to 17 inches thick. At a depth of 4 to 20 inches is the grayish bedded shale. The soils are calcareous to the surface.

b. Major soil taxonomic unit associated with this site is:

Samsil silty clay

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Shallow Limy (SwL)

MLRAs: 64, 67, and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to very steep uplands that comprise areas of sandstone, siltstone or shale bedrock.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 75 percent grasses, 10 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Blue grama, little bluestem, needleandthread, sideoats grama, threadleaf sedge, and western wheatgrass are the dominant species making up 65 percent or more of the total annual production. Buffalograss, green needlegrass, plains muhly, prairie sandreed, and numerous forbs are also important plants to the site.

b. Relative percentages of the total plant community, by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (70 to 85 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	0-5				
Blue grama	20-30	I	I	I	I
Buffalograss	5-10	I	I	I	I
Green needlegrass	0-5	D	I	I	I
Hairy grama	0-5	I	I	I	I
Little bluestem	10-20	D	D	I	I
Needleandthread	10-15	I	I	I	I
Plains muhly	0-5	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	0-5	I	I	I	I
Sand bluestem	0-5	D	D	I	I
Sandberg bluegrass	0-5	I	I	I	I
Sideoats grama	5-10	D	D	I	I
Western wheatgrass	10-15	D	I	I	I

<u>Grasslike Plants</u> (10 to 15 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	10-15	I	I	I	I
<u>Forbs</u> (5 to 10 percent)					
Black samson	T <u>2/</u>	D	D	D	D
Dotted gayfeather	T	I	D	D	D
Douglas phlox	T	I	D	D	D
Flax	T	I	D	D	D
Hairy goldaster	T	I	D	D	D
Heath aster	T	I	D	D	D
Lambert crazyweed	T	I	D	D	D
Lemon scurfpea	T	I	D	D	D
Low nailwort	T	I	D	D	D
Missouri goldenrod	T	I	D	D	D
Purple prairieclover	T	D	D	D	D
Riddell groundsel	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Shellleaf penstemon	T	I	D	D	D
Showy peavine	T	I	D	D	D
Slender greenthread	T	I	D	D	D
Western ragweed	T	I	D	D	D

Shrubs (0 to 5 percent)

Brittle pricklypear	0-5	I	I	I	D
Broom snakeweed	0-5	I	D	D	D
Common pricklypear	0-5	I	I	D	D
Fringed sagewort	0-5	I	D	D	D
Small soapweed	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	Percent <u>Climax Vegetation</u>	<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.3	3.3
Good	51 to 75	.23	4.3
Fair	26 to 50	.15	6.7
Poor	0 to 25	.08	12.5

4. Total Annual Production

The total annual production when site is in excellent condition ranges from a low of 500 pounds per acre, air-dry weight, in unfavorable years, to a high of 1,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the calcareous surface layer, shallow depth to bedrock, and lack of significant moisture other than normal precipitation.

a. Characteristics

The soils in this site are well drained or somewhat excessively drained. The parent material is weathered limestone, sandstone, siltstone, or shale. The surface layer is calcareous and ranges from 3 to 8 inches thick. The texture ranges from loamy fine sand to very fine sandy loam over calcareous bedrock at 6 to 20 inches.

b. Major soil taxonomic units associated with this site are:

Canyon loam
Canyon sandy loam

Epping silt loam
Epping very fine sandy loam

Shingle loam

Tassel fine sandy loam
Tassel loamy very fine sand

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

5. Soils

The feature common to all soils in this site is the shallow depth to gravelly sand or gravelly coarse sand.

a. Characteristics

The soils in this site are excessively drained. The parent material is coarse and very coarse alluvium. The surface soil is 5 to 20 inches of material that includes loamy fine sand, gravelly sandy loam, loam and gravelly loamy sand. The underlying material is gravelly sand and gravelly coarse sand.

b. Major soil taxonomic unit associated with this site is:

Dix loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Panspots (Ps)

MLRAs: 60A and 67

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level slopes and has irregular shaped shallow micro-depressions on upland swales.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

- a. The potential natural vegetation (climax) is about 85 percent grasses, 5 percent grasslike plants, 5 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Alkali sacaton, blue grama, inland saltgrass, Sandberg bluegrass and western wheatgrass are the dominant species making up 65 percent or more of the total annual production. Buffalograss, green needlegrass, and some forbs and shrubs are also important plants to the site.
- b. Relative percentage of total plant community, by weight and response to grazing by various kinds of animals:

<u>Grasses</u> (85 to 100 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Alkali sacaton	10-15	D	I	I	I
Blue grama	5-15	I	I	I	I
Buffalograss	0-5	I	I	I	I
Green needlegrass	0-10	D	I	I	I
Inland saltgrass	10-15	I	I	I	I
Sandberg bluegrass	5-10	I	I	I	I
Western wheatgrass	35-50	D	I	I	I

Grasslike Plants (0 to 5 percent)

Sedges	0-5	I	I	I	I
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Forbs (0 to 5 percent)

Scarlet gaura	T <u>2/</u>	I	D	D	D
Scarlet globemallow	T	I	D	D	D

Shrubs (0 to 5 percent)

Broom snakeweed	0-5	I	D	D	D
Common pricklypear	0-5	I	I	D	D

- 1/ "D" implies plant decreases under grazing pressure
"I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	Percent		<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	100	.2	5.0
Good	51	75	.15	6.7
Fair	26	50	.1	10.0
Poor	0	25	.05	20.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 150 pounds per acre, air-dry weight, in unfavorable years to a high of 750 pounds in favorable years.

5. Soils

The features common to all soils in this site are a strongly to very strongly alkali condition and the micro-depressional landscape.

a. Characteristics

The soils in this site are deep and poorly drained. The parent material is loess. The surface layer is 2 to 8 inches thick and ranges from loam to silty clay. In places there is a gray subsurface layer present over a prismatic silty clay loam subsoil. The underlying material ranges from silt loam to silty clay loam. Most areas are calcareous near the soil surface. The alkali condition is strong to very strong, but salinity varies from slight to moderate.

b. Major soil taxonomic unit associated with this site is:

Hisle silt loam

Soil series descriptions are available in the county soil survey handbook or published soil survey.

6. Range Site Type Location

B. Major Uses and Interpretations For:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Shallow to Gravel (SwG)

MLRAs: 64, 67, and 72

A. Physical Characteristics

1. Physiographic Features

The site occurs on stream terraces and uplands where gravelly sediments are deposited.

2. Climatic Features

SEE DISCUSSION FOR ALL RANGE SITES

3. Potential Natural Vegetation (Climax)

a. The potential natural vegetation (climax) is about 70 percent grasses, 5 percent grasslike plants, 10 percent forbs, and 15 percent shrubs, based upon total annual production, air-dry weight. Blue grama, Fendler threeawn, needleandthread, and sand dropseed are the dominant species making up 50 percent or more of the total annual production. Buffalograss, little bluestem, prairie sandreed, sand blue-stem, and forbs and shrubs are also important plants to the site.

b. Relative percentages of the total plant community, by weight, and response to grazing by various kinds of animals:

<u>Grasses</u> (70 to 90 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue grama	25-35	I	I	I	I
Buffalograss	0-5	I	I	I	I
Fendler threeawn	5-10	I	I	I	I
Little bluestem	0-5	D	D	I	I
Needleandthread	5-10	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	0-5	I	I	I	I
Sand bluestem	0-5	D	D	I	I
Sand dropseed	5-10	I	I	I	I

<u>Grasslike Plants</u> (0 to 5 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Sedges	0-5	I	I	I	I
<u>Forbs</u> (5 to 10 percent)					
Dotted gayfeather	T <u>2/</u>	I	D	D	D
Hairy goldaster	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Scarlet globemallow	T	I	D	D	D
Serrateleaf eveningprimrose	T	I	D	D	D
Slender greenthread	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Western ragweed	T	I	D	D	D
White prairieclover	T	D	D	D	D
Woolly loco	T	I	D	D	D
<u>Shrubs</u> (5 to 15 percent)					
Brittle pricklypear	0-5	I	I	I	D
Broom snakeweed	0-5	I	D	D	D
Common pricklypear	0-5	I	I	D	D
Fringed sagewort	5-10	I	D	D	D
Small soapweed	0-5	I	D	D	D

- 1/ "D" implies plant decreases under grazing pressure
 "I" implies plant increases under grazing pressure
2/ Trace species or producing less than 2.5 percent of potential total annual yield.

c. Guide to Suggestive Initial Stocking Rates

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.3	3.3
Good	51 to 75	.23	4.3
Fair	26 to 50	.15	6.7
Poor	0 to 25	.08	12.5

4. Total Annual Production

The total annual production when site is in excellent condition ranges from a low of 400 pounds per acre, air-dry weight, in unfavorable years, to a high of 900 pounds in favorable years.