

NEBRASKA RANGE SITE DESCRIPTION

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

A. Climatic Features

1. The mean average annual precipitation in Vegetative Zone II varies from 17 to 19 inches, but has varied from 10 to 34 inches in the driest to wettest seasons. Approximately 65 percent of the annual precipitation occurs during the growing season of mid-April to late September. The average annual snowfall varies from about 35 inches near the Platte River to about 55 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 145 days, but the growing season has varied from 120 to 205 days. The average date of first frost in the fall ranges from September 30 and the last frost in the spring is May 15. July is the hottest month and January is the coldest. 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 west-central 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 1.0 to 1.5 tons per acre. In addition, the sands, sandy, and sandy lowland sites may also be harvested for native hay in alternate years, yielding 0.4 to 0.75 ton per acre. Native meadows are commonly grazed in the fall after hay harvest.

2. Wildlife Habitat

Rangeland in west-central 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. The Nebraska sandhills, Platte River and Republican River drainage systems are used largely by hunters and fishermen.

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

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Wet Land (WL)

MLRAs: 64, 65, 66, 67,
72, and 73

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level areas of bottom lands, stream terraces, and sandhill valleys.

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	30-45	D	I	I
Reed canarygrass	0-5	D	I	I
Slender wheatgrass	5-10	I	I	I
 <u>Grasslike Plants</u> (10 to 15 percent)				
American bulrush	0-5	I	I	I
Awlfruit sedge	0-5	I	I	I
Broom sedge	0-5	I	I	I
Bulrushes (other)	0-5	I	I	I
Common spikesedge	0-5	I	I	I
Fox sedge	0-5	I	I	I
Green bulrush	0-5	I	I	I
Hairyseed sedge	0-5	I	I	I
Jointed rush	0-5	I	I	I
Nebraska sedge	0-5	I	I	I
Needle spikesedge	0-5	I	I	I
River bulrush	0-5	I	I	I
Rushes (other)	0-5	I	I	I
Sartwell sedge	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	2.0	.5
Good	51 to 75	1.5	.7
Fair	26 to 50	1.0	1.0
Poor	0 to 25	.5	2.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 4,500 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 soil ranges in depth from deep to shallow over gravelly coarse sand. A layer of partially decayed organic matter covers the soil in many places. The surface layer 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 layer 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 silty clay loam

Gannett fine sandy loam, (very poorly drained)
Gannett sandy loam, (very poorly drained)
Gannett loamy fine sand, wet

Lisco very fine sand loam (very poorly drained)

Tyron loamy fine sand (very poorly drained)
Tryon fine sandy loam (very poorly drained)

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, 65, and 66

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	10-20	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	15-30	D	I	I
Purple lovegrass	0-5	I	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)				
American bulrush	0-5	I	I	I
Awlfruit sedge	0-5	I	I	I
Bulrushes	0-5	I	I	I
Common spikesedge	0-5	I	I	I
Green bulrush	0-5	I	I	I
Jointed rush	0-5	I	I	I
Needle spikesedge	0-5	I	I	I
Rushes	0-5	I	I	I
Sartwell sedge	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
Blackeyesusan	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>	Percent		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</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 4,250 pounds per acre, air-dry weight, in unfavorable years, to a high of 5,250 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 30 inches ranges widely from place to place and includes loam, silt loam, very fine sandy loam, clay loam, and fine sand.

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

Gannett fine sandy loam
Gannett loamy fine sand

Lamo Variant loam
Loup loam
Loup fine sandy loam

Tryon loamy fine sand
Tryon 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

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Subirrigated (Sb)

MLRAs: 64, 65, 66, 67,
72, and 73

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, indiagrass, little bluestem, 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. 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</u> (75 to 85 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	20-35	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	15-20	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	15-25	D	D	I
Needleandthread	0-10	I	I	I
Plains bluegrass	0-5	I	I	I
Prairie cordgrass	10-15	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	0-10	I	I	I
Slender wheatgrass	0-5	I	I	I
Switchgrass	5-15	D	I	I
Western wheatgrass	0-5	I	I	I
<u>Grasslike Plants</u> (5 to 10 percent)				
American bulrush	0-5	I	I	I
Awlfruit sedge	0-5	I	I	I
Baltic rush	0-5	I	I	I
Bulrushes	0-5	I	I	I
Common spikesedge	0-5	I	I	I
Green bulrush	0-5	I	I	I
Jointed rush	0-5	I	I	I
River bulrush	0-5	i	I	i
Rushes	0-5	I	I	I
Sartwell sedge	0-5	I	I	I
Sedges	0-5	I	I	I

<u>Forbs</u> (5 to 10 percent)	%	<u>Grazing Response</u> ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
American licorice	T ^{3/}	I	I	I
Blackeyesusan	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>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	1.6	.6
Good	51 to 75	1.2	.8
Fair	26 to 50	.8	1.3
Poor	0 to 25	.4	2.5

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 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 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 and formed in alluvium and eolian sands. The soils are deep to shallow over gravelly coarse sand. The surface layer is generally darker colored and ranges from 6 to 24 inches thick. In places there are light colored soils with a surface layer less than 6 inches thick. Texture of the surface layer ranges widely from silt loam to loamy fine sand. The underlying material is lighter colored than the surface layer, are commonly mottled in some part, and range widely in texture from loam to mixed sand and gravel. Some soils in this site are calcareous to the surface.

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

Alda loam
Alda fine sandy loam

Bankard loamy fine sand, wet

Caruso loam
Cozad silt loam, wet

Els fine sand
Elsmere fine sandy loam
Elsmere loamy fine sand
Elsmere fine sand

Gannett fine sandy loam (poorly drained)
Gannett sandy loam (poorly drained)
Gannett fine sandy loam, drained (poorly drained)
Gannett loamy fine sand (poorly drained)
Gannett loamy fine sand, drained (poorly drained)
Gibbon silt loam

Las loam
Las sand
Las Animas fine sandy loam

Las Animas loamy sand
Las Animas loamy fine sand
Lawet silt loam,
Lawet silt loam, drained
Lawet fine sandy loam, drianed
Lex loam
Lisco fine sandy loam

McCook silt loam, wet

Ord fine sandy loam
Ovina fine sany loam

Platte loam

Silver Creek silt loam

Wann loam
Wann 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 Subirrigated (SS)

MLRAs: 65, 67, 72, and 73

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 ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Alkali cordgrass	0-5	D	I	I
Alkali muhly	0-5	I	I	I
Alkali sacaton	25-35	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 ^{2/}	0-5	I	I	I
Inland saltgrass	10-15	I	I	I
Kentucky bluegrass ^{2/}	0-5	I	I	I
Little bluestem	0-5	D	I	I
Plains bluegrass	5-10	I	I	I
Sand dropseed	0-5	I	I	I
Slender wheatgrass	5-10	D	I	I
Switchgrass	5-15	D	I	I
Western wheatgrass	10-15	D	I	I

Grasslike Plants (5 to 15 percent)

American bulrush	0-5	I	I	I
Baltic rush	0-5	I	I	I
Douglas sedge	0-5	I	I	I
Rushes (other)	0-5	I	I	I
Sedges (other)	5-10	I	I	I
Spikerushes	0-5	I	I	I

Forbs (0 to 5 percent)

Arrowgrass	T ^{3/}	I	D	D
Common pricklypear	T	I	D	I
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	.9	1.1
Good	51 to 75	.68	1.5
Fair	26 to 50	.45	2.2
Poor	0 to 25	.23	4.3

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 2,250 pounds per acre, air-dry weight, in unfavorable years, to a high of 3,750 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. The parent material is alluvium on the bottom lands of stream valleys and eolian sand in the sandhill valleys. The surface layer is sometimes darker colored, calcareous and ranges from 1 to 12 inches thick. Texture range from silt loam to sand. The sites in the Platte River valley have a subsoil to sand. The site in the sandhills valleys has subsoils that range from very fine sandy loam to fine sand. The underlying material ranges widely from clay loam 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:

Caruso loam, saline-alkali

Las loam, saline-alkali

Lawet silt loam, saline-alkali

Lisco very fine sandy loam

Silver Creek silt loam, saline-alkali

Wann fine sandy loam, saline-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, 72, and 73

A. Physical Characteristics

1. Physiographic Features

The site occurs on bottom lands of stream valleys and in swales 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. Big bluestem, blue grama, little bluestem, needleandthread, sideoats grama and western wheatgrass are the dominant species making up 60 percent or more of the total annual production. Green needlegrass, prairie junegrass, Scribner panicum, switchgrass, 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 ^{1/}			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	15-25	D	D	I	I
Blue grama	5-10	I	I	I	I
Buffalograss	0-5	I	I	I	I
Green needlegrass	0-5	D	I	I	I
Indiangrass	0-5	D	D	I	I
Kentucky bluegrass ^{2/}	0-5	I	I	I	I
Little bluestem	10-15	D	D	I	I
Needleandthread	0-10	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Sand dropseed	0-5	I	I	I	I
Scribner panicum	0-5	I	I	I	I
Sideoats grama	5-10	D	D	I	I
Switchgrass	0-10	D	I	I	I
Western wheatgrass	25-40	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)					
Blue verbena	T <u>3/</u>	I	D	D	D
Common blue-eyedgrass	T	D	D	D	D
Cudweed sagewort	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
Missouri goldenrod	T	I	D	D	D
Rush skeletonplant	T	I	D	D	D
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

- 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	.9	1.1
Good	51 to 75	.68	1.5
Fair	26 to 50	.45	2.2
Poor	0 to 25	.23	4.3

4. Total Annual Production

The total annual production when the 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 3,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the soils are silty and loamy and are susceptible to frequent overflow. The overflow can come from flooding of streams or as a result of water that is runoff from soils on higher adjacent areas.

a. Characteristics

The soils in this site are deep and well drained or moderately well drained. The surface layer can be lighter or darker colored and in many places stratified with lighter and darker colored layers of silty clay loam, silt loam, loam, fine sandy loam or very fine sandy loam. On bottom lands the soils are noncalcareous, 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 silt loam, channeled
Craft very fine sandy loam

McCook loam, overflow
McCook silt 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: Sandy Lowland (SyL)

MLRAs: 64, 65, 66, and 67

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. Little bluestem, needleandthread, prairie sandreed, sand bluestem, and switchgrass are the dominant species making up 75 percent or more of the total annual production. Blue grama, prairie junegrass, purple lovegrass, sand dropseed, Scribner panicum, sedges, 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	0-5	I	I	I	I
Hairy grama	0-5	I	I	I	I
Indiangrass	0-5	D	D	I	I
Little bluestem	20-35	D	D	I	I
Needleandthread	10-15	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	20-30	I	I	I	I
Purple lovegrass	0-5	I	I	I	I
Sand bluestem	25-45	D	D	I	I
Sand dropseed	0-5	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	10-20	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> (5 to 10percent)					
Blue verbena	T <u>2/</u>	I	D	D	D
Cudweed sagewort	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
Plains larkspur	T	I	D	D	D
Platte thistle	T	I	D	D	D
Purple Prairieclover	T	D	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>	Percent		<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76 to 100		.9	1.1
Good	51 to 75		.68	1.5
Fair	26 to 50		.45	2.2
Poor	0 to 25		.23	4.3

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 3,000 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 silt 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
Bankard loamy fine sand, loamy subsoil

Cass fine sandy loam

Glenberg fine sandy loam
Glenberg loamy very fine sand
Glenberg loamy very fine sand, occasionally flooded

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: Silty Lowland (SiL)

MLRAs: 64, 67, 72, and 73

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. Big bluestem, little bluestem, needleandthread, switchgrass, and western wheatgrass are the dominant species making up 65 percent or more of the total annual production. Blue grama, 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	10-20	D	D	I	I
Blue grama	5-15	I	I	I	I
Buffalograss	0-5	I	I	I	I
Indiangrass	0-5	D	D	I	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I	I
Little bluestem	0-5	D	D	I	I
Needleandthread	10-15	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Sideoats grama	5-10	D	D	I	I
Switchgrass	0-10	D	I	I	I
Western wheatgrass	15-25	I	I	I	I

Grasslike Plants (5 to 10 percent)

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

Forbs (5 to 10 percent)

Blue verbena	T <u>3/</u>	I	D	D	D
Cudweed sagewort	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
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/ 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>Climax Vegetation</u>	<u>AUM's/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.9	1.1
Good	51 to 75	.68	1.5
Fair	26 to 50	.45	2.2
Poor	0 to 25	.23	4.3

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 2,250 pounds per acre, air-dry weight, in unfavorable years, to a high of 3,750 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 loam and ranges from 10 to 20 inches thick. The underlying material is silt loam, loam, or very fine sandy loam. The soils are generally calcareous at or near the surface.

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

Caruso loam

Cozad silt loam, terrrace

Duroc loam, occasionally flooded

Goshen silt loam, occasionally flooded

Goshen fine sandy loam, occasionally flooded

Hall silt loam, terrace

Haverson silt loam, occasionally flooded

Haverson silty clay loam, occasionally flooded

Hord silt loam

Hord silt loam, terrace

humbarger loam, gravelly substratum

McCook loam

McCook silt loam

McCook silt loam, occasionally flooded

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, 67, and 72

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 60 percent or more of the total production. Buffalograss, 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	15-25	D	I	I	I
Blue grama	5-10	I	I	I	I
Buffalograss	0-5	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	0-5	D	I	I	I
Sand dropseed	0-5	I	I	I	I
Slender wheatgrass	5-10	D	I	I	I
Switchgrass	0-5	D	I	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>	
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 <u>3/</u>	I	I	I	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
Scouringrush	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>	Percent <u>Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.7	1.4
Good	51 to 75	.53	1.9
Fair	26 to 50	.35	2.9
Poor	0 to 25	.18	5.6

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 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 to 15 feet, or the area receives additional moisture that runs off higher lying adjacent soils.

a. Characteristics

The soils in this site are deep and moderately well drained. The parent material is alluvium. The surface soil is from 6 to 12 inches thick. The soil texture ranges from silt loam to loamy fine sand. Some areas are calcareous at or near the surface.

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

Glenberg fine sandy loam, saline-alkali

Janise loamy fine sand, drained

Laird fine sandy loam

Tripp silt loam, saline-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: Sands (Sa)

MLRAs: 64, 65, 66, 67
72, and 73

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. Little bluestem, needleandthread, prairie sandreed, and sand bluestem are the dominant species making up 75 percent or more of the total annual production. Blue grama, indiagrass, 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)	%	Grazing Response <u>1</u> /			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue grama	5-15	I	I	I	I
Hairy grama	0-5	I	I	I	I
Indiangrass	0-5	D	D	I	I
Indian ricegrass	0-5	D	D	I	I
Little bluestem	15-25	D	D	I	I
Needleandthread	10-15	I	I	I	I
Porcupinegrass	0-5	D	D	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	15-35	I	I	I	I
Purple lovegrass	0-5	I	I	I	I
Sand bluestem	20-40	D	D	I	I
Sand dropseed	0-5	I	I	I	I
Sand lovegrass	0-5	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)					
	%				
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)	%	Grazing Respons <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blue verbena	T 2/	I	D	D	D
Bush morningglory	T	I	D	D	D
Carolina granwell	T	I	D	D	D
Cleft gromwell	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
Hoary gromwell	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
Purple prairieclover	T	D	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
Silverleaf scurfpea	I	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
Woolywhite	T	I	D	D	D

Shrubs (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
Inland ceanothus	0-5	D	D	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</u>		
	<u>Climax Vegetation</u>	<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
Excellent	76 to 100	.7	1.4
Good	51 to 75	.53	1.9
Fair	26 to 50	.35	2.9
Poor	0 to 25	.18	5.6

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 3,000 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 to fine sand.

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

Valent fine sand, 3 to 17 percent
Valent fine sand, rolling
Valent sand, 3 to 17 percent
Valent loamy sand, 3 to 17 percent
Valent loamy fine sand, 3 to 17 percent
Valentine loamy fine sand, 3 to 17 percent
Valentine loamy fine sand, rolling
Valentine loamy sand, hummocky
Valentine loamy sand, eroded
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: Sandy (Sy)

MLRAs: 64, 65, 66, 67,
72, and 73

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, little bluestem, blue grama, and sand bluestem are the dominant species making up 70 percent or more of the total annual production. Switchgrass, sand dropseed, Scribner panicum, western wheatgrass, 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	10-15	I	I	I	I
Hairy grama	0-5	I	I	I	I
Indiangrass	0-5	D	D	I	I
Indian ricegrass	0-5	D	D	I	I
Little bluestem	15-20	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	20-30	I	I	I	I
Purple lovegrass	0-5	I	I	I	I
Red threeawn	0-5	I	I	I	I
Sand bluestem	15-30	D	D	I	I
Sand dropseed	0-5	I	I	I	I
Sand paspalum	0-5	I	I	I	I
Sand lovegrass	0-5	D	D	I	I
Scribner panicum	0-5	I	I	I	I
Sideoats grama	0-5	I	I	I	I
Switchgrass	0-10	D	I	I	I
Western wheatgrass	0-5	I	I	I	I
Wilcox panicum	0-5	I	I	I	I
<u>Grasslike Plants</u> (5 to 10 percent)					
	%				
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)	Grazing Response <u>1/</u>				
	<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>	
Bush morningglory	T 2/	I	D	D	D
Carolina gromwell	T	I	D	D	D
Cudweed sagewort	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
Hairy goldaster	T	I	D	D	D
Heath aster	T	I	D	D	D
Hoary gromwell	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
Prairie pussytoes	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
Stiff sunflower	T	D	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
Brittle pricklypear	0-5	I	I	I	D
Common pricklypear	0-5	I	I	D	D
Fringed sagewort	0-5	I	D	D	D
Leadplant	0-5	D	D	D	D
Purple mammillaria	0-5	I	D	D	D
Sand sagebrush	0-5	I	I	I	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</u>		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	.7	1.4
Good	51	to 75	.53	1.9
Fair	26	to 50	.35	2.9
Poor	0	to 25	.18	5.6

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 3,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are a sandy loam, fine sandy loam, loamy sand or loamy fine sand surface layers where slopes are 0 to 30 percent, and fine sand surface layer where slopes are 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 and ranges in textures from very fine sandy loam to fine sand. The subsoil ranges mainly from silty clay 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:

Anselmo fine sandy loam
Anselmo fine sandy loam, terrace
Anselmo fine sandy loam, hummocky
Anselmo sandy loam, terrace
Anselmo loamy fine sand
Ascalon fine sandy loam

Bayard fine sandy loam
Bayard loamy fine sand, hummocky
Blanche very fine sandy loam
Busher loamy very fine sand

Chappell sandy loam

Dailey loamy fine sand
Doger loamy fine sand, 0 to 3 percent

Duda loamy sand
Dunday loamy fine sand
Dunday loamy fine sand, terrace
Dwyer loamy fine sand

Goshen fine sandy loam

Haxtun fine sandy loam
Haxtun loamy fine sand
Hersh fine sandy loam
Holdrege fine sandy loam
Hord fine sandy loam

Jayem fine sandy loam
Jayem very fine sandy loam
Jayem loamy very fine sand
Jayem loamy fine sand

Keith fine sandy loam

Manter fine sandy loam

Rosebud fine sandy loam

Sarben fine sandy loam
Sarben loamy very fine sand

Tripp fine sandy loam

Valent loamy sand, 0 to 3 percent
Valentine loamy fine sand, nearly level
Valentine fine sand, level
Valentine fine sand, 0 to 3 percent
Vetal fine sandy loam
Vetal loamy very fine sand

Woodly fine sandy loam
Woodly loamy 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

NEBRASKA RANGE SITE DESCRIPTIONS

Range Site: Savannah (Sv)

MLRAs: 64, 65, and 66

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 70 percent grasses, 10 percent grasslike plants, 5 percent forbs, 5 percent shrubs, and 10 percent trees, based upon total annual production, air-dry weight. Big bluestem, little bluestem, needleandthread, ponderosa pine, sideoats grama, are the dominant species making up 50 percent or more of the total annual production. Blue grama, green needlegrass, hairy grama, plains muhly, sand bluestem, threadleaf sedge, 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> (50 to 80 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Bearded wheatgrass	0-10	D	I	I
Big bluestem	5-15	D	D	I
Blue grama	5-10	I	I	I
Canada wildrye	0-5	D	I	I
Green needlegrass	5-10	D	I	I
Hairy grama	5-10	I	I	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	15-25	D	D	I
Plains muhly	5-10	I	I	I
Prairie junegrass	0-5	D	I	I
Prairie sandreed	10-20	I	I	I
Sand bluestem	0-10	D	D	I
Sand dropseed	0-5	I	I	I
Sideoats grama	5-10	D	D	I
Slender wheatgrass	0-5	I	I	I
Spikefescue	0-5	I	I	I
Western wheatgrass	0-5	I	I	I

Grasslike Plants (5 to 15 percent)

Sedges (other)	0-5	I	I	I
Threadleaf sedge	5-15	I	I	I

Forbs (5 to 10 percent)

Black samson	T <u>3/</u>	D	D	D
Blue verbena	T	I	D	D
Catclaw sensitivebriar	T	D	D	D
Cinquefoil	T	I	D	D
Cudweed sageword	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
Platte grounsel	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
Bur oak	0-5	I	I	I
Common chokecherry	0-5	I	D	D
Common pricklyash	0-5	I	I	I
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 (5 to 15 percent)

Eastern redcedar	0-5	I	I	I
Ponderosa pine	5-15	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>	Percent <u>Climax Vegetation</u>	<u>AUM'S/Acre</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 1,500 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 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. Deep soils with dark colored surface layers 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: Silty (Si)

MLRAs: 64, 66, 67, 72,
and 73

A. Physical Characteristics

1. Physiographic Features

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

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. Big bluestem, blue grama, little bluestem, needleandthread, sideoats grama, and western wheatgrass are the dominant species making up 70 percent or more of the total annual production. Green needlegrass, buffalograss, threadleaf sedge, numerous forbs, and some 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> (70 to 85 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	5-15	D	D	I	I
Blue grama	15-20	I	I	I	I
Buffalograss	0-5	I	I	I	I
Green needlegrass	5-10	D	I	I	I
Indiangrass	0-5	D	D	I	I
Little bluestem	10-15	D	D	I	I
Needleandthread	15-25	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
Scribner panicum	0-5	I	I	I	I
Sideoats grama	5-10	D	D	I	I
Switchgrass	0-5	D	I	I	I
Western wheatgrass	15-20	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
Blue verbena	T	I	D	D	D
Bush morningglory	T	I	D	D	D
Catclaw Sensitivebriar	T	D	D	D	D
Common blue-eyedgrass	T	I	D	D	D
Cudweed sagewort	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
Prairie onion	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	.7	1.4
Good	51	to 75	.53	1.9
Fair	26	to 50	.35	2.9
Poor	0	to 25	.18	5.6

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 1,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 3,250 pounds in favorable years.

5. Soils

The feature common to all soils in this site are the loamy textured surface layer.

a. Characteristics

The soils in this site are well drained and are deep to moderately deep over sand or gravelly coarse sand. They 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 layer is silt loam, loam, clay loam, very fine sandy loam and ranged in depth from 4 to 29 inches. The subsoil and the underlying material have a similar range in texture as the surface layer but include silty clay loam to gravelly coarse sand. Bedrock occurs at a depth of 20 to 40 inches in some soils.

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

Alliance silt loam
Alliance loam
Altvan loam

Bayard loam
Bridget silt loam
Bridget very fine sandy loam
Bridgeport loam
Bridgeport silt loam

Cheyenne loam
Cozad silt loam (upland)
Creighton very fine sandy loam

Duroc loam
Duroc silt loam
Duroc very fine sandy loam

Goshen silt loam

Hall silt loam (upland)
Hemingford loam
Holdrge silt loam
Hord silt loam (upland)

Kadoka silt loam
Keith loam
Keith silt loam
Kuma silt loam

Mace silt loam
McCash very fine sandy loam

Nuckolls silt loam

Oglala loam

Richfield loam
Richfield silt loam
Rosebud loam
Rosebud silt loam

Tripp very fine sandy loam
Tripp silt loam

Uly silt loam
Ulysses silt loam
Ulysses loam
Ulysses 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:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Clayey (Cy)

MLRAs: 60A, 64, and 66

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 65 percent or more of the total annual production. Big bluestem, little bluestem, Sandberg bluegrass, sideoats grama, 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>
Big bluestem	0-5	D	D	I	I
Blue grama	15-20	I	I	I	I
Buffalograss	5-10	I	I	I	I
Green needlegrass	10-15	D	I	I	I
Little bluestem	0-5	D	D	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	35-50	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	.6	1.7
Good	51 to 75	.45	2.2
Fair	26 to 50	.3	3.3
Poor	0 to 25	.15	6.7

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 3,000 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 or moderately well drained. They were formed in material that weathered from shale of the Pierre and Chadron formations and in silty alluvium. The surface layer is silt loam to silty clay and ranges from 2 to 12 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

Kyle silty clay

Norrest silty clay loam

Pierre silty clay

Wood River 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: Choppy Sands (CS)

MLRA: 65, 66, and 72

A. Physical Characteristics

1. Physiographic Features

This site occurs on steep hilly irregular slopes. There are many narrow ridges, sharp peaks, catsteps, and small blowouts 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, prairie sandreed, sand bluestem, sand lovegrass, and switchgrass are the dominant species making up 65 percent or more of the total annual production. Blowoutgrass, blue grama, hairy grama, iniangrass, 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> (80 to 90 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Blowoutgrass	5-10	D	I	I	I
Blue grama	0-10	I	I	I	I
Hairy grama	0-5	I	I	I	I
Indiangrass	5-10	D	D	I	I
Little bluestem	10-20	D	D	I	I
Needleandthread	5-10	I	I	I	I
Porcupinegrass	0-5	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	20-30	I	I	I	I
Sand bluestem	20-35	D	D	I	I
Sand dropseed	0-5	I	I	I	I
Sand lovegrass	5-15	D	D	I	I
Sand paspalum	0-5	I	I	I	I
Sandhill muhly	0-10	I	I	I	I
Scribner panicum	0-5	I	I	I	I
Switchgrass	10-20	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
Schweinitz flatsedge	0-5	I	I	I	I
<u>Forbs</u> (0 to 5 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
Flodman thistle	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
Platte thistle	T	I	D	D	D
Prairie groundsel	T	I	D	D	D
Riddell groundsel	T	I	D	D	D
Scaly gayfeather	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 (0 to 5 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>	Percent		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	.6	1.7
Good	51	to 75	.45	2.2
Fair	26	to 50	.3	3.3
Poor	0	to 25	.15	6.7

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 2,750 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 noncalcareous.

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

Valent fine sand, hilly
Valent 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: Limy Upland (LiU)

MLRAs: 60A, 64, 66, 67,
72, and 73

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 75 percent grasses, 10 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Little bluestem, big bluestem, sideoats grama, plains muhly, western wheatgrass, and threadleaf sedge are the dominant species making up 65 percent or more of the total annual production. Buffalograss, prairie junegrass, hairy grama, needleandthread, 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> (70 to 85 percent)	%	Grazing Response 1/			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	10-20	D	D	I	I
Blue grama	15-25	I	I	I	I
Buffalograss	0-5	I	I	I	I
Green needlegrass	0-5	D	I	I	I
Hairy grama	0-5	I	I	I	I
Indiangrass	0-5	D	D	I	I
Kentucky bluegrass 2/	0-5	I	I	I	I
Little bluestem	20-30	D	D	I	I
Needleandthread	10-15	I	I	I	I
Plains muhly	5-10	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	0-5	I	I	I	I
Sand dropseed	0-5	I	I	I	I
Sandberg bluegrass	0-5	I	I	I	I
Scribner panicum	0-5	I	I	I	I
Sideoats grama	5-15	D	D	I	I
Switchgrass	0-5	D	I	I	I
Western wheatgrass	5-15	D	I	I	I
<u>Grasslike Plants</u> (5 to 10 percent)					
Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I
<u>Forbs</u> (10 to 15 percent)					
Black samson	T 3/	D	D	D	D
Catclaw sensitivebriar	T	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)	%	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
Broom snakeweed	0-5	I	D	D	D
Buckbrush	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
Sunshine rose	0-5	I	D	D	D
Western snowberry	0-5	I	D	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	.6	1.7
Good	51	to 75	.45	2.2
Fair	26	to 50	.3	3.3
Poor	0	to 25	.15	6.7

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 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 to somewhat excessively drained. They are formed in parent material that includes colluvium-alluvium and materials weathered from siltstone, limestone, and chalky shale. The surface layer is calcareous and light colored. Texture ranges from silty clay loam to very fine sandy loam. The underlying material texture ranges from silty clay

loam to fine sandy loam. In places, bedrock is at a depth of 20 to 40 inches.

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

Bushman very fine sandy loam
Bufton silty clay loam

Colby loam
Colby silt loam
Coly loam
Coly silt loam

Keota silt loam

Minnequa silty clay loam
Mitchell silt loam

Otero 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: Shallow Clay (SwC)

MLRA: 60A, 64, and 66

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> (70 to 85 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	5-10	I	I	I	I
Buffalograss	0-5	I	I	I	I
Fendler threeawn	0-5	I	I	I	I
Green needlegrass	15-20	D	I	I	I
Little bluestem	0-5	D	D	I	I
Sandberg bluegrass	0-5	I	I	I	I
Sideoats grama	20-35	D	D	I	I
Western wheatgrass	5-10	D	I	I	I

Grazing Response 1/

Grasslike Plants (10 to 15 percent) Cattle Sheep Deer Antelope
%

Sedges	0-5	I	I	I	I
Threadleaf sedge	10-15	I	I	I	I

Forbs (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
Shellleaf penstemon	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
Western ragweed	T	I	D	D	D

Shrubs (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>	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 500 pounds per acre, air-dry weight, in unfavorable years, to a high of 1,750 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 3 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 to Gravel (SWG)

MLRAs: 64, 65, 66, and 67

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, 15 percent forbs, and 10 percent shrubs, based upon total annual production, air-dry weight. Blue grama, little bluestem, needleandthread, prairie sandreed, sand bluestem, and sand dropseed are the dominant species making up 55 percent or more of the total annual production. Buffalograss, Fendler threeawn, hairy grama, prairie junegrass, sideoats grama, clubmoss, and other 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	20-30	I	I	I	I
Buffalograss	0-5	I	I	I	I
Fendler threeawn	0-5	I	I	I	I
Hairy grama	0-5	I	I	I	I
Little bluestem	5-10	D	D	I	I
Needleandthread	5-10	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	5-10	I	I	I	I
Sand bluestem	5-15	D	D	I	I
Sand dropseed	0-10	I	I	I	I
Sideoats grama	0-5	D	D	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 15 percent)					
Clubmoss	5-10	I	D	D	D
Dotted gayfeather	T <u>2/</u>	I	D	D	D
Hairy goldaster	T	I	D	D	D
Ironplant	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
Slender greenthread	T	I	D	D	D
Slimflower scurfpea	T	I	D	D	D
Western ragweed	T	I	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
Leadplant	0-5	D	D	D	D
Sand sagebrush	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	.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 condition ranges from a low of 600 pounds per acre, air-dry weight, in unfavorable years, to a high of 1,250 pounds in favorable years.

5. Soils

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

a. Characteristics

The soils in this site are somewhat excessively to excessively drained. The parent material is coarse and very coarse alluvium. The surface layer is 5 to 10 inches thick and is gravelly very fine sandy loam to loamy sand. The underlying material is sand or gravelly coarse sand.

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

Meadin loamy sand

Schamber gravelly very fine sandy loam
Simeon loamy sand PE < 44

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: 60A, 64, 66, 67,
72, and 73

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, plains muhly, sideoats grama, threadleaf sedge, and western wheatgrass are the dominant species making up 65 percent or more of the total annual production. Green needlegrass, hairy grama, prairie sandreed, sand bluestem and numerous 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 85 percent)	%	Grazing Response 1/			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	5-15	D	D	I	I
Blue grama	15-20	I	I	I	I
Buffalograss	0-5	I	I	I	I
Fendler threeawn	0-5	I	I	I	I
Green needlegrass	0-10	D	I	I	I
Hairy grama	0-5	I	I	I	I
Indiangrass	0-5	D	D	I	I
Little bluestem	15-25	D	D	I	I
Needleandthread	10-20	I	I	I	I
Plains muhly	5-10	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	0-5	I	I	I	I
Red threeawn	0-5	I	I	I	I
Sand bluestem	0-15	D	D	I	I
Sand dropseed	0-5	I	I	I	I
Scribner panicum	0-5	I	I	I	I
Sideoats grama	10-20	D	D	I	I
Western wheatgrass	5-10	I	I	I	I
Wilcox panicum	0-5	I	I	I	I
<u>Grasslike Plants</u> (5 to 10 percent)					
Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I

<u>Forbs</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Black samson	T <u>2/</u>	D	D	D	D
Breadroot scurfpea	T	D	D	D	D
Catclaw sensitivebriar	T	D	D	D	D
Cudweed sagewort	T	I	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
Ironplant	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
Rush skeletonplant	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
Showy peavine	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
Slender dalea	T	I	D	D	D
Stiff goldenrod	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
White prairieclover	T	D	D	D	D
Wooly loco	T	I	D	D	D

Shrubs (5 to 10 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
Leadplant	0-5	D	D	D	D
Sand sagebrush	0-5	I	D	D	D
Skunkbush sumac	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>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acre</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 condition ranges from a low of 750 pounds per acre, air-dry weight, in unfavorable years, to a high of 1,500 pounds in favorable years.

5. Soils

The features common to all soils in this site are the calcareous surface layer, very shallow to 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 silty clay loam over calcareous bedrock at 6 to 20 inches.

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

Canyon loam
Canyon fine sandy loam
Canyon very fine sandy loam

Epping loam
Epping silt loam

Penrose silty clay loam

Tassel fine sandy loam
Tassel loamy fine sand
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

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Thin Loess (TL)

MLRAs: 64, 72, and 73

A. Physical Characteristics

1. Physiographic Features

The site occurs on very steep uplands that have been dissected by geologic erosion.

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, 10 percent grasslike plants, 10 percent forbs, and 10 percent shrubs, based upon total annual production, air-dry weight. Big bluestem, little bluestem, plains muhly, sideoats grama, western wheatgrass, and threadleaf sedge are the dominant species making up 60 percent or more of the total annual production. Blue grama, hairy grama, needleandthread, prairie sandreed, and 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> (70 to 85 percent)	%	Grazing Response <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
Big bluestem	10-15	D	D	I	I
Blue grama	5-10	I	I	I	I
Buffalograss	0-5	I	I	I	I
Canada wildrye	0-5	D	I	I	I
Hairy grama	5-10	I	I	I	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I	I
Little bluestem	15-25	D	D	I	I
Needleandthread	0-10	I	I	I	I
Plains muhly	5-10	I	I	I	I
Prairie junegrass	0-5	D	I	I	I
Prairie sandreed	0-10	I	I	I	I
Sand dropseed	0-5	I	I	I	I
Sideoats grama	10-20	D	D	I	I
Western wheatgrass	5-10	I	I	I	I
<u>Grasslike Plants</u> (5 to 10 percent)					
Sedges (other)	0-5	I	I	I	I
Threadleaf sedge	5-10	I	I	I	I
<u>Forbs</u> (5 to 10 percent)					
Aromatic aster	T <u>3/</u>	I	D	D	D
Black samson	T	D	D	D	D
Blue verbena	T	I	I	D	D
Catclaw sensitivebriar	T	D	D	D	D
Dotted gayfeather	T	I	D	D	D
Flax	T	I	D	D	D
Fringed sagewort	T	I	D	D	D
Heath aster	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
Purple prairieclover	T	D	D	D	D
Rush skeletonplant	T	I	D	D	D
Scarlet gaura	T	I	D	D	D
Serrateleaf eveningprimrose	T	I	D	D	D
Shellleaf penstemon	T	I	D	D	D
Shorts milkvetch	T	D	D	D	D
Silverleaf scurfpea	T	I	D	D	D
Slender dalea	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
White prairieclover	T	D	D	D	D

<u>Shrubs</u> (5 to 10 percent)	%	Grazing Response 1/			
		<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
Leadplant	0-5	D	D	D	D
Poisonivy	0-5	D	D	D	D
Small soapweed	0-5	I	D	D	D
Skunkbush sumac	0-5	I	D	D	D
Western snowberry	0-5	I	D	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	.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 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 very steep slopes and lack of significant soil development in the deep silty loess material.

a. Characteristics

The soils in this site are excessively drained. The parent material is loess or colluvium-alluvium. In places there is a darkened surface layer that ranges from 3 to 8 inches thick, but in places the undeveloped parent material is at the surface. The texture is mostly silt loam but includes loam and very fine sandy loam. The soils are generally calcareous to the surface.

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

Colby silt loam, 30 to 60 percent slopes

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)	%	<u>Grazing Response</u> <u>1/</u>			
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>	<u>Antelope</u>
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>	<u>Percent</u>		<u>AUM'S/Acres</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</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 400 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 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 to 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 to 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: Panspots (Ps)

MLRAs: 60A

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 and western wheatgrass are the dominant species making up 60 percent or more of the total annual production. Buffalograss, green needlegrass, Sandberg bluegrass, 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
<u>Grasslike Plants</u> (0 to 5 percent)					
Sedges	0-5	I	I	I	I
<u>Forbs</u> (0 to 5 percent)					
Scarlet gaura	T <u>2/</u>	I	D	D	D
Scarlet globemallow	T	I	D	D	D
<u>Shrubs</u> (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>	<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 400 pounds per acre, air-dry weight, in unfavorable years to a high of 800 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, colluvium, or alluvium. The surface layer is 2 to 8 inches thick and ranges from silt 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, depending on source of sediments. 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

Slickspots

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

