

NEBRASKA RANGE SITE DESCRIPTION

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

A. Climatic Features

1. The mean average annual precipitation in Vegetative Zone IV varies from 25 to 34 inches, but has varied from 15 to 45 inches in the driest to wettest seasons. Approximately 70 percent of the annual precipitation occurs during the growing season of mid-April to early October. The average annual snowfall varies from 12 inches in the southeast area to nearly 30 inches in the northwest counties.
2. The wind velocity is quite high throughout the year, with the highest winds occurring in March and April.
3. The average length of the growing season is 160 days, but it has varied from 148 in the northern counties to over 168 in the southeast area. The average date of first frost in the fall ranges from October 1 in the northern area to October 11 in the southern counties. July is the hottest month and January is the coldest. It is not uncommon for the temperature to reach 105° F during the summer. Summer humidity is low and evaporation is high. The winters are characterized by frequent northerly winds, producing severe cold with temperatures dropping to as low as -25° F.

B. Major Uses

1. Grazing by domestic livestock is one of the major income-producing industries in eastern 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 1.25 to 1.75 tons per acre. In addition, the silty, clayey, and limy upland may also be harvested for native hay, producing 0.75 to 1.25 ton per acre. The sandy, sands, and sandy lowland may also be used, producing 0.5 to 1.0 ton per acre. Native meadows are commonly grazed in the fall after hay harvest.

2. Wildlife Habitat

Rangeland in eastern 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 whitetail deer, quail, pheasants, cottontail rabbits, etc. The deer, quail, and cottontail rabbit prefer some tree and/or shrub cover.

3. Recreation and Natural Beauty

The Missouri, Platte, and other river areas lend themselves to a variety of users, including hikers, birdwatchers, hunters, ecologists, and naturalists.

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

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Silty Overflow (SiO)

MLRAs: 75, 102B, 106, and 107

A. Physical Characteristics

1. Physiographic Features

The site occurs on bottom lands of stream valleys and in swales 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, indiangrass, little bluestem, and switchgrass are the dominant species making up 60 percent or more of the total annual production. Canada wildrye, Kentucky bluegrass, sideoats grama, western wheatgrass, 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)	%	<u>Grazing Response</u> _{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	20-35	D	D	I
Canada wildrye	0-5	D	D	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	10-20	D	D	I
Prairie junegrass	0-5	D	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	0-5	I	I	I
Switchgrass	5-15	D	I	I
Tall dropseed	0-5	I	I	I
Western wheatgrass	0-15	I	I	I

<u>Grasslike Plants</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>		<u>Deer</u>
		<u>Cattle</u>	<u>Sheep</u>	
Sedges	5-10	I	I	I
<u>Forbs</u> (5 to 10 percent)				
Blue verbena	T <u>3/</u>	I	D	D
Cudweed sagewort	T	I	D	D
False boneset	T	I	D	D
Illinois tickclover	T	I	D	D
Ironweed	T	I	D	D
Manyflower scurfpea	T	I	D	D
Prairie onion	T	I	D	D
Purple poppymallow	T	I	D	D
Purple prairieclover	T	D	D	D
Rush skeletonplant	T	I	D	D
Western ragweed	T	I	D	D
Wooly verbena	T	I	D	D
<u>Shrubs</u> (0 to 5 percent)				
Arkansas rose	0-5	I	D	D
Buckbrush	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 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	1.2	.80
Good	51 to 75	.9	1.1
Fair	26 to 50	.6	1.7
Poor	0 to 25	.3	3.3

4. Total Annual Production

The total annual production when the site is in excellent range condition ranges from a low of 2,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the loam or silt loam surface texture and susceptibility 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 deep soils in this site are deep and typically well drained or moderately well drained but range to include some poorly or very poorly drained soils. The surface layer can be light or dark colored and in many places stratified with light and dark colored layers of silty clay loam, silt loam, loam, or very fine sandy loam. On bottom lands the soils are sometimes calcareous, but in upland drainageways they commonly are noncalcareous. The underlying material has a similar range in texture as the surface layer, but is lighter colored. On bottom lands the soil material below depths of 40 inches is sometimes coarser textured than material above this depth.

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

Albaton silt loam, overwash

Eudora silt loam

Hobbs silt loam

Hobbs silt loam, channeled

Kennebec silt loam, channeled

Lamo silt loam, overwash

Luton silt loam, overwash

McPaul silt loam

Nodaway silt loam, channeled

Wabash silt loam

Zook silt loam, overwash

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: 75, 102B, 106, and 107

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level bottom lands and in upland depressions.

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, 5 percent forbs based upon total annual production, air-dry weight. Big bluestem, indiangrass, little bluestem, and switchgrass are the dominant species making up 60 percent or more of the total annual production. Kentucky bluegrass, prairie junegrass, purple lovegrass, sideoats grama, tall dropseed, western wheatgrass, 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> (85 to 95 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	25-40	D	D	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass 2/	0-5	I	I	I
Little bluestem	15-25	D	D	I
Prairie junegrass	0-5	D	I	I
Purple lovegrass	0-5	I	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	0-5	I	I	I
Switchgrass	15-25	D	I	I
Tall dropseed	0-5	I	I	I
Western wheatgrass	0-10	I	I	I

Grasslike Plants (0 to 5 percent)

Sedges	0-5	I	I	I
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<u>Forbs</u> (5 to 10 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Blue verbena	T <u>3/</u>	I	D	D
Cudweed sagewort	T	I	D	D
False boneset	T	I	D	D
Heath aster	T	I	D	D
Manyflower scurfpea	T	I	D	D
Missouri goldenrod	T	I	D	D
Purple poppymallow	T	I	D	D
Stiff goldenrod	T	I	D	D
Western ragweed	T	I	D	D
Wooly verbena	T	I	D	D
<u>Shrubs</u> (0 to 5 percent)				
Arkansas rose	0-5	I	D	D
Buckbrush	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	1.2	.8
Good	51 to 75	.9	1.1
Fair	26 to 50	.6	1.7
Poor	0 to 25	.3	3.3

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 2,500 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the clayey textures of the subsoil or upper part of the underlying material and they are susceptibility to flooding.

a. Characteristics

The soils are somewhat poorly or poorly drained. They are deep and formed in alluvium and loess on uplands, stream terraces, and bottom lands. The alluvium is derived primarily from stream overflow. The soil material consists of stratified sediments, mainly of silty clay and clay, but can include some layers of silty clay loam. Some soils include stratified sandy textures in the lower part of the soil profile. The materials are mostly grayish in color and are mostly calcareous.

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

Albaton silty clay loam
Albaton silty clay

Blencoe silty clay

Colo silty clay loam

Fillmore silt loam
Fillmore silty clay loam
Forney silt loam
Forney silty clay

Holly Spring silty clay loam

Luton silty clay loam
Luton silty clay
Luton clay

Onawa silty clay
Onawa clay
Onawa silty clay

Percival silty clay

Sarpy silty clay, overwash
Solomon silty clay

Wabash silt loam
Wabash silty clay loam
Wabash silty clay
Woodbury silty clay

Zook silt loam
Zook silty clay loam
Zook 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: Silty Lowland (SiL)

MLRAs: 75, 102B, 106, and 107

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to very gently sloping areas and on bottom lands 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, 10 percent forbs, based upon total annual production, air-dry weight. Big bluestem, little bluestem, and switchgrass are the dominant species making up 60 percent or more of the total annual production. Indiangrass, sideoates 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 95 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem ✓	30-40	D	D	I
Blue grama	0-5	I	I	I
Canada wildrye	0-5	D	D	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem ✓	25-35	D	D	I
Porcupinegrass	0-5	D	I	I
Prairie dropseed	0-5	D	I	I
Prairie junegrass	0-5	D	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	5-10	I	I	I
Switchgrass	5-15	D	I	I
Western wheatgrass	0-5	I	I	I
<u>Grasslike Plants</u> (0 to 5 percent)				
Sedges	0-5	I	I	I
<u>Forbs</u> (5 to 10 percent)				
Blue verbena	T <u>3/</u>	I	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
False boneset	T	I	D	D
Grayhead prairieconeflower	T	I	D	D
Illinois tickclover	T	I	D	D
Large blue gayfeather	T	D	D	D
Manyflower scurfpea	T	I	D	D
Maximilian sunflower	T	D	D	D
Missouri goldenrod	T	I	D	D
Pitcher sage	T	D	D	D
Prairie pussytoe	T	I	D	D
Purple poppymallow	T	I	D	D
Purple prairieclover	T	I	D	D
Stiff goldenrod	T	I	D	D
Western ragweed	T	I	D	D
Yarrow	T	I	D	D

<u>Shrubs</u> (0 to 5 percent)	%	<u>Grazing Response</u> ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Arkansas rose	0-5	I	D	D
Buckbrush	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</u>		<u>AUM's/Acre</u>	<u>Acres/AUM</u>
	<u>Climax</u>	<u>Vegetation</u>		
Excellent	76	to 100	1.2	.8
Good	51	to 75	.9	1.1
Fair	26	to 50	.6	1.7
Poor	0	to 25	.3	3.3

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 5,250 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.

a. Characteristics

The soils formed in alluvium and are deep and well drained or somewhat poorly drained. The surface layer is silt loam, silty clay loam, very fine sandy loam and loam and ranges from 7 to 20 inches thick. The underlying material ranges in texture from silty clay loam to very fine sandy loam. Some soils are calcareous at or near the surface.

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

- Blyburg silt loam
- Blyburg silty clay loam

Cass loam, occasionally flooded
Colo silt loam
Cozad silt loam (terrace)
Cozad silt loam, terrace

Detroit silt loam

Grable very fine sandy loam
Grigston silt loam

Hall silt loam, terrace
Hall silt loam (terrace)
Haynie silt loam
Hobbs silt loam, occasionally flooded
Hobbs silt loam, seldom flooded
Hord silt loam
Hord silt loam, terrace

Januade loam
Januade loam, clayey substratum
Judson silt loam

Kennebec silt loam, occasionally flooded

Modale silt loam
Muir loam
Muir silt loam
Muir silty clay loam

Napier silt loam

Omadi silt loam

Shell Variant silt loam
Shell Variant loam
Shell Variant 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: Shallow Limy (SwL)

MLRAs: 75 and 106

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to very steep uplands that comprise areas of 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, 5 percent grasslike plants, 10 percent forbs, and 10 percent shrubs, based upon total annual production, air-dry weight. Big bluestem, indiangrass, little bluestem and sideoats grama are the dominant species making up 60 percent or more of the total annual production. Hairy grama, prairie junegrass, purple lovegrass, 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> (80 to 95 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	20-30	D	D	I
Blue grama	0-5	I	I	I
Canada wildrye	0-5	D	D	I
Hairy grama	0-5	I	I	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	25-35	D	D	I
Prairie junegrass	0-5	D	I	I
Purple lovegrass	0-5	I	I	I
Sideoats grama	5-10	D	I	I
Western wheatgrass	0-5	I	I	I
<u>Grasslike Plants</u> (0 to 5 percent)				
Sedges	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>
Black samson	T <u>3/</u>	D	D	D
Blue verbena	T	I	D	D
Breadroot scurfpea	T	D	D	D
Compassplant	T	D	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
Heath aster	T	I	D	D
Low nailwort	T	I	D	D
Missouri goldenrod	T	I	D	D
Purple prairieclover	T	D	D	D
Pussytoes	T	I	D	D
Rush skeletonplant	T	I	D	D
Slimflower scurfpea	T	I	D	D
Stiff sunflower	T	D	D	D
Western ragweed	T	I	D	D

Shrubs (5 to 10 percent)

Arkansas rose	0-5	I	D	D
Brittle pricklypear	0-5	I	I	I
Common pricklypear	0-5	I	I	D
Leadplant	0-5	D	D	D
Skunkbush sumac	0-5	I	D	D
Small soapweed	0-5	I	D	D
Smooth sumac	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/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 condition ranges from a low of 2,500 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the calcareous surface layers and shallow depths.

a. Characteristics

The soils in this site are somewhat excessively drained and 4 to 20 inches over bedrock. The texture of the surface layer ranges from cherty loam to silt loam.

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

Kipson silt loam

Sogn 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: Clayey (Cy)

MLRAs: 75, 102B, and 106

A. Physical Characteristics

1. Physiographic Features

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

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, indiangrass, little bluestem, porupinegrass, and switchgrass are the dominant species making up 70 percent or more of the total annual production. Kentucky bluegrass, prairie dropseed, prairie junegrass, sideoats grama, tall dropseed, some grasslike plants and shrubs, 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>
Big bluestem	25-35	D	D	I
Blue grama	0-5	I	I	I
Canada wildrye	0-5	D	I	I
Hairy grama	0-5	I	I	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	20-30	D	D	I
Porcupinegrass	5-10	D	I	I
Prairie dropseed	0-5	D	I	I
Prairie junegrass	0-5	D	I	I
Purple lovegrass	0-5	I	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	0-5	I	I	I
Switchgrass	5-10	D	I	I
Tall dropseed	5-10	I	I	I
Wilcox panicum	0-5	I	I	I
<u>Grasslike Plants</u> (0 to 5 percent)				
Flatsedges	0-5	I	I	I
Heavy sedge	0-5	I	I	I
Mead sedge	0-5	I	I	I
Meadow sedge	0-5	I	I	I
Narrowledge sedge	0-5	I	I	I
Rigid sedge	0-5	I	I	I
Sedges (other)	0-5	I	I	I
Sun sedge	0-5	I	I	I

Forbs (5 to 10 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Aromatic aster	T 3/	I	D	D
Black samson	T	D	D	D
Blue verbena	T	I	D	D
Butterfly milkweed	T	I	D	D
Carolina anemone	T	I	D	D
Common breadroot	T	D	D	D
Compassplant	T	D	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
False boneset	T	I	D	D
Grayhead prairieoneflower	T	I	D	D
Groove flax	T	I	D	D
Groundplum milkvetch	T	D	D	D
Heath aster	T	I	D	D
Illinois tickclover	T	I	D	D
Large blue gayfeather	T	I	D	D
Manyflower scurfpea	T	I	D	D
Maximilian sunflower	T	D	D	D
Missouri goldenrod	T	I	D	D
Pitcher sage	T	D	D	D
Plains wildindigo	T	D	D	D
Prairie blue-eyedgrass	T	I	I	I
Prairie groundsel	T	I	D	D
Prairie onion	T	I	D	D
Prairie pussytoes	T	I	D	D
Purple prairieclover	T	D	D	D
Shelleaf penstemon	T	I	D	D
Silverleaf scurfpea	T	I	D	D
Stiff goldenrod	T	I	D	D
Stiff sunflower	T	D	D	D
Upright prairieconeflower	T	I	D	D
Western marbleseed	T	I	D	D
Western ragweed	T	I	D	D
White prairieclover	T	D	D	D
Wild strawberry	T	I	D	D
Wooly verbena	T	I	D	D
Yarrow	T	I	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
Buckbush	0-5	I	D	D
Jerseytea ceanothus	0-5	D	D	D
Leadplant	0-5	D	D	D
Smooth sumac	0-5	I	D	D
Sunshine rose	0-5	I	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 Vegetation</u>		
Excellent	76 to 100	1.0	1.0
Good	51 to 75	.75	1.3
Fair	26 to 50	.5	2.0
Poor	0 to 25	.25	4.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 2,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,500 pounds in favorable years.

5. Soils

The features common to all soils in this site are the clayey subsoil layers and lack of moisture other than normal precipitation..

a. Characteristics

The soils in this site are well drained to somewhat poorly drained. They were formed in a wide range of materials that include loess, glacial till, shale, limestone, and alluvium. The surface layer is silt loam to silty clay loam and ranges from 5 to 17 inches thick. The subsoil and underlying material range from silty clay loam to clay. In some places, bedrock is at a depth of 20 to 40 inches.

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

Adair clay loam

Belfore silty clay loam
Benfield silty clay loam
Butler silt loam
Butler silt loam, terrae
Butler silty clay loam

Crete silt loam
Crete silt loam, terrace
Crete silty clay loam
Crete silty clay loam, terrace

Edalgo silty clay loam

Labette silty clay loam
Lanham clay loam
Longford silty clay loam

Mayberry loam
Mayberry silty clay loam
Mayberry clay loam
Mayberry clay

Pawnee loam
Pawnee clay loam

Wood River silt loam
Wymore 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: Sandy (Sy)

MLRAs: 75, 102B, 106, and 107

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to steep slopes. It occurs along 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 80 percent grasses, 5 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production and air-dry weight. Big bluestem or sand bluestem, indiangrass, little bluestem, porcupinegrass or needleand thread, prairie sandreed, sand lovegrass, and switchgrass are the dominant species making up 70 percent or more of the total annual production. Blue grama, prairie junegrass, purple lovegrass, Scribner panicum, numerous forbs, and some 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> (75 to 85 percent)	%	Grazing Response ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big or sand Bluestem	15-20	D	D	I
Blue grama	0-5	I	I	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass ^{2/}	0-5	I	I	I
Little bluestem	10-20	D	D	I
Porcupinegrass	5-10	D	I	I
Prairie junegrass	0-5	D	I	I
Prairie sandreed	10-20	I	I	I
Purple lovegrass	0-5	I	I	I
Sand lovegrass	5-10	D	D	I
Sand dropseed	0-5	I	I	I
Sand paspalum	0-5	I	I	I
Scribner panicum	0-5	I	I	I
Switchgrass	10-15	D	I	I
Wilcox panicum	0-5	I	I	I

<u>Grasslike Plants</u> (0 to 5 percent)	%	Grazing Response ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
*Houghton flatsedge	0-5	I	I	I
*Narrowleaf sedge	0-5	I	I	I
*Schweinitz flatsedge	0-5	I	I	I
*Sedges	0-5	I	I	I
<u>Forbs</u> (5 to 10 percent)				
Blue verbena	T ^{3/}	I	D	D
Carolina gromwell	T	I	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
False boneset	T	I	D	D
Flodman thistle	T	I	D	D
Heath aster	T	I	D	D
Hoary verbena	T	I	D	D
Ironplant	T	I	D	D
Missouri goldenrod	T	I	D	D
Plains larkspur	T	I	D	D
Prairie groundsel	T	I	D	D
Prairie onion	T	I	D	D
Prairie pussytoes	T	I	D	D
Rush skeletonplant	T	I	D	D
Serrateleaf eveningprimrose	T	I	D	D
Shelleaf penstemon	T	I	D	D
Silverleaf scurfpea	T	I	D	D
Stiff Sunflower	T	D	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D
Yarrow	T	I	D	D
<u>Shrubs</u> (0 to 5 percent)				
Arkansas rose	0-5	I	D	D
Leadplant	0-5	D	D	D
Sunshine rose	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/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	1.0	1.0
Good	51 to 75	.75	1.3
Fair	26 to 50	.5	2.0
Poor	0 to 25	.25	4.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 2,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the sandy and loamy surface layer textures.

a. Characteristics

The soils in this site are deep and well drained or somewhat excessively drained. The parent material includes loess, eolian sand, glacial till, alluvium, and colluvium. The surface layer is 4 to 20 inches thick and texture ranges from loam to loamy sand in. The underlying material texture ranges from silty clay loam to fine sand. of 40 inches. The surface layer is noncalcareous.

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

Blendon loam
Blendon fine sandy loam
Boelus loamy fine sand

Dickinson fine sandy loam

Hadar loamy fine sand

Leisy fine sandy loam
Loretto fine sandy loam

Moody fine sandy loam

O'Neill fine sandy loam
Ortello fine sandy loam

Thurman loamy fine sand
Thurman loamy 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: Silty (Si)

MLRAs: 75, 102B, 106, and 107

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to steep slopes 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 80 percent grasses, 5 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Big bluestem, indiangrass, little bluestem, porcupinegrass, sideoats grama, and switchgrass are the dominant species making up 75 percent or more of the total annual production. Blue grama, Kentucky bluegrass, prairie dropseed, prairie junegrass, Scribner panicum, tall dropseed, some grasslike plants and shrubs, 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>
Big bluestem	25-35	D	D	I
Blue grama	0-5	I	I	I
Canada wildrye	0-5	D	D	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	20-30	D	D	I
Porcupinegrass	5-15	D	I	I
Prairie dropseed	0-5	D	I	I
Prairie junegrass	0-5	D	I	I
Purple lovegrass	0-5	I	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	5-10	I	I	I
Switchgrass	5-10	D	I	I
Tall dropseed	0-5	I	I	I
Western wheatgrass	0-5	I	I	I
Wilcox panicum	0-5	I	I	I
<u>Grasslike Plants</u> (5 to 10 percent)				
Flatsedges	0-5	I	I	I
Heavy sedge	0-5	I	I	I
Mead sedge	0-5	I	I	I
Meadow sedge	0-5	I	I	I
Narrowleaf sedge	0-5	I	I	I
Sedges (other)	0-5	I	I	I
Sun sedge	0-5	I	I	I

Forbs (5 to 10 percent)	%	Grazing Response 1/		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Aromatic aster	T 3/	I	D	D
Black samson	T	D	D	D
Blue verbena	T	I	D	D
Butterfly milkweed	T	I	D	D
Carolina anemone	T	I	D	D
Catclaw Sensitivebriar	T	D	D	D
Common breadroot	T	D	D	D
Compassplant	T	D	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
False boneset	T	I	D	D
Grayhead prairieconeflower	T	I	D	D
Groundplum milkvetch	T	D	D	D
Illinois tickclover	T	I	D	D
Lambert crazyweed	T	D	D	D
Large blue gayfeather	T	I	D	D
Manyflower scurfpea	T	I	D	D
Maximilian sunflower	T	D	D	D
Missouri goldenrod	T	I	D	D
Pitcher sage	T	D	D	D
Plains wildindigo	T	D	D	D
Prairie blue-eyedgrass	T	I	D	D
Prairie onion	T	I	D	D
Prairie pussytoes	T	I	D	D
Purple prairieclover	T	D	D	D
Rush skeletonplant	T	I	D	D
Silverleaf scurfpea	T	I	D	D
Stiff sunflower	T	D	D	D
Upright prairieconeflower	T	I	D	D
Western marbleseed	T	I	D	D
Western ragweed	T	I	D	D
White prairieclover	T	D	D	D
Wild strawberry	T	I	D	D
Wooly verbena	T	I	D	D
Yarrow	T	I	D	D

<u>Shrubs</u> (5 to 10 percent)	%	<u>Grazing Response 1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u> <u>Antelope</u>
Arkansas rose	0-5	I	D	D
Buckbrush	0-5	I	D	D
Jerseytea ceanothus	0-5	D	D	D
Leadplant	0-5	D	D	D
Sunshine rose	0-5	I	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	1.0	1.0
Good	51 to 75	.75	1.3
Fair	26 to 50	.5	2.0
Poor	0 to 25	.25	4.0

4. Total Annual Production

The total annual production when the site is in excellent range condition ranges from a low of 3,000 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,750 pounds in favorable years.

5. Soils

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

a. Characteristics

The soils in this site are well drained or moderately well drained and range in depth from moderately deep to deep and moderately deep over gravelly coarse sand. They were formed in a wide range of materials that includes loess, colluvium-alluvium, alluvium, glacial till, and materials weathered from fine-grained sandstone, siltstone, and limestone. The surface layer is silt loam, loam, silty clay loam, clay loam, clay, and loam and range in depth from 6 to 20 inches. The subsoil has a similar texture but includes silty clay. The underlying layer has a similar range in texture as

the surface layer but includes gravelly coarse sand in a few areas. Bedrock occurs in some areas at a depth of 20 to 40 inches.

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

Alcester silt loam

Belfore silty clay loam

Burchard loam

Burchard silt loam

Burchard clay loam

Geary silt loam

Geary silty clay loam

Hall silt loam (upland)

Hastings silt loam

Hastings silty clay loam

Holder silt loam

Jansen loam

Jansen silty clay loam

Judson silt loam

Judson silty clay loam

Judson fine sandy loam

Lancaster loam

Leisy loam

Loretto loam

Malcolm silt loam

Marshall silty clay loam

Monona silt loam

Moody silty clay loam

Morrill loam

Morrill clay loam

Nora silt loam

Nora silty clay loam

Ponca silt loam

Ponca silty clay loam

Sharpsburg silty clay loam

Shelby clay loam

Uly silt loam

Wakeen silt loam

Wakeen 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:

SEE DISCUSSION FOR ALL RANGE SITES

C. Field Office Distribution

NEBRASKA RANGE SITE DESCRIPTION

Range Site: Wet Subirrigated (WS)

MLRAs: 75 and 102B

A. Physical Characteristics

1. Physiographic Features

This site occurs on nearly level bottom lands of major stream valleys and in depressions.

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 and 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 70 percent or more of the total annual production. Bluejoint reedgrass, northern reedgrass, plains bluegrass 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	20-30	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	10-15	D	D	I
Northern reedgrass	5-10	D	I	I
Plains bluegrass	5-10	I	I	I
Prairie cordgrass	10-15	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	0-5	I	I	I
Switchgrass	15-25	D	I	I
Western wheatgrass	0-5	I	I	I

Grasslike Plants (5 to 10 percent)

Bulrushes	0-5	I	I	I
Common spikesedge	0-5	I	I	I
Green bulrush	0-5	I	I	I
Needle spikesedge	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
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
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>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 5,250 pounds per acre, air-dry weight, in unfavorable years, to a high of 6,250 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). In places, a thin layer of organic matter is on the surface of the mineral soil. The surface layer is generally darker colored, ranging from 4 to 20 inches thick. It is mainly fine sandy loam, but ranges to include loam and loamy fine sand. The underlying material is lighter colored than the surface layer and is mottled in the upper part. Texture to depth of 60 inches ranges from fine sand to loamy fine sand.

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

Loup 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: Subirrigated (Sb)

MLRAs: 75, 102B, 106, and 107

A. Physical Characteristics

1. Physiographic Features

This site occurs mainly on nearly level and very gently sloping areas on bottom lands. A few areas are in low swales of stream terraces.

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 75 percent or more of the total annual production. Plains bluegrass, slender wheatgrass, western 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	30-45	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	15-20	D	D	I
Needleandthread	0-5	I	I	I
Plains bluegrass	0-5	I	I	I
Porcupinegrass	0-5	D	I	I
Prairie cordgrass	5-10	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	5-10	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
Green bulrush	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
Tussock sedge	0-5	I	I	I

<u>Forbs</u> (5 to 10 percent)	%	Grazing Response ^{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	1.8	.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 4,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 6,250 pounds in favorable years.

5. Soils

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

a. Characteristics

The soils in this site are typically somewhat poorly drained and formed in alluvium and eolian sands. The soils are deep to shallow over gravelly coarse sand. The surface layer is dark colored and ranges from 6 to 30 inches thick. In places there are light colored soils with a surface layer less than 6 inches thick. Texture of the surface layer ranges from silty clay to loamy fine sand. The underlying material is lighter colored than the surface layer, and are commonly mottled in some part and range silty clay loam to gravelly coarse sand in texture. Some of these soils are calcareous to the surface.

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

Alda loam
Alda fine sandy loam
Alda very fine sandy loam

Boel loam
Boel silty clay loam
Boel fine sandy loam

Calco silty clay loam
Colo silty clay loam

Elsmere loamy fine sand

Gibbon loam
Gibbon silt loam
Gibbon silty clay loam
Gibbon loamy sand

Kezan silt loam

Lamo silty clay loam
Leshara silt loam
Lawet silty clay loam

Ord silt loam
Ord fine sandy loam

Platte loam
Platte fine sandy loam
Percival silty clay

Silver Creek silt loam

Wann loam
Wann fine sandy loam
Waubonsie 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 DESCRIPTION

Range Site: Saline Subirrigated (SS)

MLRAs: 75, 102B, and 106

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level bottom lands.

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. Inland saltgrass, Kentucky bluegrass, plains bluegrass, slender wheatgrass, switchgrass, and western wheatgrass are the dominant species making up 70 percent or more of the total annual production. Blue grama, Canada wildrye, foxtail barley, fowl mannagrass, 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>
Blue grama	5-10	I	I	I
Canada wildrye	0-5	D	I	I
Fowl mannagrass	0-5	D	I	I
Foxtail barley <u>2/</u>	0-5	I	I	I
Inland saltgrass	5-10	I	I	I
Kentucky bluegrass <u>2/</u>	5-10	I	I	I
Plains bluegrass	5-10	D	I	I
Slender wheatgrass	5-10	D	I	I
Switchgrass	10-15	D	I	I
Western wheatgrass	15-25	I	I	I

<u>Grasslike Plants</u> (5 to 15 percent)		<u>Grazing Response</u> <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Douglas sedge	0-5	I	I	I
Rushes	0-5	I	I	I
Sedges (other)	0-5	I	I	I
Spikerushes	0-5	I	I	I

Forbs (0 to 5 percent)

Common pricklypear	T <u>3/</u>	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 of 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	1.2	.8
Good	51 to 75	.9	1.1
Fair	26 to 50	.6	1.7
Poor	0 to 25	.3	3.3

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 3,000 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,500 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 foot in wet years to a depth of 3.5 feet in dry years. These soils have moderately to very strongly saline and/or alkali soil characteristics.

a. Characteristics

The soils in this site are somewhat poorly and poorly drained. The parent material is alluvium on the bottom

lands of stream valleys. The surface layer is dark colored, calcareous and ranges from 1 to 12 inches thick. Texture range from silty clay loam to silt loam. The underlying material ranges from clay to silt loam. 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:

Napa silt loam

Salmo silty clay loam
Saltine silt loam
Saltine silty clay loam

Zoe clay loam
Zoe 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: Sandy Lowland (SyL)

MLRAs: 75, 102B, 106, and 107

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level to very gently sloping bottom lands 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. Indiangrass, little bluestem, porcupinegrass, prairie sandreed, sand bluestem, and switchgrass are the dominant species making up 60 percent or more of the total annual production. Prairie junegrass, purple lovegrass, sand paspalum, 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>
Blue grama	0-5	I	I	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	10-20	D	D	I
Porcupinegrass	5-10	D	I	I
Prairie junegrass	0-5	D	I	I
Prairie sandreed	10-20	I	I	I
Purple lovegrass	0-5	I	I	I
Sand bluestem	20-30	D	D	I
Sand dropseed	0-5	I	I	I
Scribner panicum	0-5	I	I	I
Switchgrass	10-15	D	I	I

<u>Grasslike Plants</u> (0 to 5 percent)	%	Grazing Response ^{1/}		<u>Deer</u>
		<u>Cattle</u>	<u>Sheep</u>	
Sedges	0-5	I	I	I
<u>Forbs</u> (5 to 10 percent)				
Blue verbena	T ^{3/}	I	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
False boneset	T	I	D	D
Heath aster	T	I	D	D
Hoary verbena	T	I	D	D
Ironplant	T	I	D	D
Missouri goldenrod	T	I	D	D
Prairie onion	T	I	D	D
Purple Prairieclover	T	D	D	D
Scouringrush	T	I	D	D
Shellleaf penstemon	T	I	D	D
Stiff sunflower	T	D	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D
<u>Shrubs</u> (0 to 5 percent)				
Arkansas rose	0-5	I	D	D
Common pricklypear	0-5	I	I	D
Leadplant	0-5	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>	<u>Percent Climax Vegetation</u>	<u>AUM'S/Acre</u>	<u>Acres/AUM</u>
Excellent	76 to 100	1.2	.8
Good	51 to 75	.9	1.1
Fair	26 to 50	.6	1.7
Poor	0 to 25	.3	3.3

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 2,750 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,250 pounds in favorable years.

5. Soils

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

a. Characteristics

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

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

Carr fine sandy loam
Cass loam
Cass very fine sandy loam
Cass fine sandy loam

Darr fine sandy loam

Inavale loamy fine sand
Inavale loamy fine sand, hummocky
Inavale loamy sand

Sarpy loamy fine sand
Sarpy 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: Sands (Sa)

MLRAs: 75 and 102B

A. Physical Characteristics

1. Physiographic Features

The site occurs on gently undulating to rolling land. It occupies sandhills that are part of upland landscapes and higher elevation areas on bottom lands of major rivers.

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. Indiangrass, little bluestem, porcupinegrass, prairie sandreed, sand bluestem, sand lovegrass, and switchgrass are the dominant species making up 65 percent or more of the total annual production. Blue grama, prairie junegrass, purple lovegrass, Scribner panicum, 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 85 percent)	%	Grazing Response ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Blue grama	0-5	I	I	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass ^{2/}	0-5	I	I	I
Little bluestem	15-20	D	D	I
Porcupinegrass	5-15	D	D	I
Prairie junegrass	0-5	D	I	I
Prairie sandreed	10-20	I	I	I
Purple lovegrass	0-5	I	I	I
Sand bluestem	20-30	D	D	I
Sand dropseed	0-5	I	I	I
Sand lovegrass	5-10	D	D	I
Sand paspalum	0-5	I	I	I
Scribner panicum	0-5	I	I	I
Switchgrass	5-15	D	I	I
Wilcox panicum	0-5	I	I	I
<u>Grasslike Plants</u> (0 to 5 percent)				
	%			
Narrowleaf sedge	0-5	I	I	I
Sedges (other)	0-5	I	I	I

<u>Forbs</u> (5 to 10 percent)	%	Grazing Respons <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Blue verbena	T <u>2/</u>	I	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
False boneset	T	I	D	D
Flodman thistle	T	I	D	D
Heath aster	T	I	D	D
Hoary gromwell	T	I	D	D
Hoary verbena	T	I	D	D
Ironplant	T	I	D	D
Missouri goldenrod	T	I	D	I
Plains larkspur	T	I	D	D
Prairie groundsel	T	I	D	D
Prairie onion	T	I	D	D
Purple prairieclover	T	D	D	D
Serrateleaf eveningprimrose	T	I	D	D
Shelleaf pemstemon	T	I	D	D
Silverleaf scurfpea	I	I	D	D
Stiff sunflower	T	D	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D

Shrubs (0 to 5 percent)

Arkansas rose	0-5	I	D	D
Inland ceanothus	0-5	D	D	D
Leadplant	0-5	D	D	D
Sunshine rose	0-5	I	D	D
Western sandcherry	0-5	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	1.0	1.0
Good	51 to 75	.75	1.3
Fair	26 to 50	.5	2.0
Poor	0 to 25	.25	4.0

4. Total Annual Production

The total annual production when site is in excellent range condition ranges from a low of 2,500 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,000 pounds in favorable years.

5. Soils

The features common to all soils in this site are the loamy fine sand to fine sand textured surface layers and slopes that are 3 to 17 percent.

a. Characteristics

The soils in this site are somewhat excessively drained and were 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. The soils are typically noncalcareous.

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

Inavale loamy fine sand, 3 to 11 percent

Simeon loamy sand, PE>44, 3 or more percent

Valentine loamy fine sand, 3 to 17 percent

Valentine fine sand, 3 to 17 percent

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: 75, 102B, 106, and 107

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 80 percent grasses, 5 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Little bluestem, big bluestem, indiagrass, switchgrass, sideoats grama, and porcupinegrass are the dominant species making up 75 percent or more of the total annual production. Prairie junegrass, Scribner panicum, tall dropseed, blue grama, 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> (80 to 95 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	20-35	D	D	I
Blue grama	0-5	I	I	I
Canada wildrye	0-5	D	I	I
Hairy grama	0-5	I	I	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	25-40	D	I	I
Plains muhly	0-5	I	I	I
Porcupinegrass	5-10	D	I	I
Prairie junegrass	0-5	D	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	5-10	I	I	I
Switchgrass	5-10	D	I	I
Tall dropseed	0-5	I	I	I
Western wheatgrass	0-5	I	I	I
Wilcox panicum	0-5	I	I	I
<u>Grasslike Plants</u> (0 to 5 percent)				
Narrowleaf sedge	T	I	I	I
Sun sedge	T	I	I	I
Sedges (other)	T	I	I	I
<u>Forbs</u> (5 to 10 percent)				
Black samson	T <u>3/</u>	D	D	D
Catclaw sensitivebriar	T	D	D	D
Common yarrow	T	I	D	D
Compassplant	T	D	D	D
Dotted gayfeather	T	I	D	D
Heath aster	T	I	D	D
Manyflower surfpea	T	I	D	D
Missouri goldenrod	T	I	D	D
Pitcher sage	T	D	D	D
Platte groundsel	T	I	D	D
Platte milkvetch	T	D	D	D
Prairie blue-eyedgrass	T	D	D	D
Prairie pussytoes	T	I	D	D
Purple prairieclover	T	D	D	D
Silverleaf scurfpea	T	I	D	D
Slender greenthread	T	I	D	D
Stiff sunflower	T	D	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D
White prairieclover	T	D	D	D

<u>Shrubs</u> (0 to 5 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Arkansas rose	T	I	D	D
Broom snakeweed	T	I	D	D
Buckbrush	T	I	D	D
Common snowberry	T	I	D	D
Inland ceanothus	T	D	D	D
Leadplant	T	D	D	D
Smooth sumac	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>	Percent		<u>AUM'S/Acres</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 2,500 pounds per acre, air-dry weight, in unfavorable years, to a high of 4,000 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. The soils are deep and depend upon precipitation for all moisture.

a. Characteristics

The soils in this site are well or somewhat excessively drained. They are formed in parent material that includes loess and glacial till. The surface layer is calcareous and generally light colored. The texture ranges from silt loam to clay loam. The underlying material ranges from silt loam to clay loam.

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

Coly silt loam
Crofton silt loam

Ida silt loam

Steinauer clay loam
Steinauer 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 to Gravel (SwG)

MLRAs: 75 and 102B

A. Physical Characteristics

1. Physiographic Features

The site occurs on nearly level 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 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, and prairie sandreed are the dominant species making up 60 percent or more of the total annual production. Hairy grama, prairie junegrass, purple lovegrass, sand dropseed, Scribner panicum, 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> (75 to 90 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	10-20	D	D	I
Blue grama	5-10	I	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
Needleandthread	5-10	I	I	I
Prairie junegrass	0-5	D	I	I
Prairie sandreed	5-10	I	I	I
Purple lovegrass	0-5	I	I	I
Sand dropseed	0-5	I	I	I
Sand paspalum	0-5	I	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	5-10	I	I	I
Switchgrass	0-5	D	I	I

<u>Grasslike Plants</u> (0 to 5 percent)	%	Grazing Response ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Sedges	0-5	I	I	I
<u>Forbs</u> (5 to 10 percent)				
Blue verbena	T ^{3/}	I	D	D
Clubmoss	5-10	I	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
Heath aster	T	I	D	D
Ironplant	T	I	D	D
Missouri goldenrod	T	I	D	D
Rush skeletonplant	T	I	D	D
Shelleaf penstemon	T	I	D	D
Slender greenthread	T	I	D	D
Slimflower scurfpea	T	I	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D
<u>Shrubs</u> (5 to 10 percent)				
Brittle pricklypear	0-5	I	I	I
Common pricklypear	0-5	I	I	D
Fringed sagewort	0-5	I	D	D
Leadplant	0-5	D	D	D
Smooth sumac	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/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 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 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 outwash sandy and gravelly sediments. The surface layer is 7 to 12 inches of material that ranges from loam to gravelly loamy sand. The underlying material is gravelly coarse sand.

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

Meadin 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 Sandy (SwS)

MLRAs: 75 and 106

A. Physical Characteristics

1. Physiographic Features

The site occurs on gently sloping to very steep uplands that comprise areas of sandstone.

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, little bluestem and sideoats grama are the dominant species making up 60 percent or more of the total annual production. Canada wildrye, indiangrass, purple lovegrass, sand dropseed, Scribner panicum, switchgrass, 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> (80 to 95 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	15-25	D	D	I
Blue grama	0-5	I	I	I
Canada wildrye	0-5	D	I	I
Hairy grama	0-5	I	I	I
Indiangrass	0-5	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	20-30	D	D	I
Prairie junegrass	0-5	D	I	I
Purple lovegrass	0-5	I	I	I
Sand dropseed	0-5	I	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	5-10	I	I	I
Switchgrass	0-5	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>
Sedges (other)	0-5	I	I	I
<u>Forbs</u> (5 to 10 percent)				
Blue verbena	T <u>3/</u>	I	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
Heath aster	T	I	D	D
Missouri goldenrod	T	I	D	D
Purple prairieclover	T	D	D	D
Pussytoes	T	I	D	D
Rush skeletonplant	T	I	D	D
Shelleaf penstemon	T	I	D	D
Silverleaf scurfpea	T	I	D	D
Slimflower scurfpea	T	I	D	D
Stiff goldenrod	T	I	D	D
Stiff sunflower	T	D	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D
White prairieclover	T	D	D	D
<u>Shrubs</u> (0 to 5 percent) %				
Arkansas rose	0-5	I	D	D
Common pricklypear	0-5	I	I	D
Leadplant	0-5	D	D	D
Smooth sumac	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	.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 2,500 pounds in favorable years.

5. Soils

The features common to all soils in this site are noncalcareous surface layer, shallow depth to soft sandstone, 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 sandstone. The surface layer is noncalcareous and ranges from 3 to 12 inches thick. The texture ranges from stony loam to fine sandy loam over noncalcareous sandstone at 12 to 16 inches.

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

Hedville loam
Hedville stony loam
Hedville 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: Dense Clay (DC)

MLRAs: 106

A. Physical Characteristics

1. Physiographic Features

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

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, indiangrass, little bluestem, switchgrass and tall dropseed are the dominant species making up 65 percent or more of the total annual production. Canada wildrye, Kentucky bluegrass, prairie junegrass, sideoats grama, Scribner panicum, 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> (80 to 95 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	15-25	D	D	I
Blue grama	0-5	I	I	I
Canada wildrye	0-5	D	I	I
Indiangrass	5-10	D	D	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	10-15	D	D	I
Porcupinegrass	0-5	D	I	I
Prairie junegrass	0-5	D	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	0-5	I	I	I
Switchgrass	10-20	D	I	I
Tall dropseed	5-10	I	I	I
Western wheatgrass	0-5	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>
Flatsedges	0-5	I	I	I
Heavy sedge	0-5	I	I	I
Mead sedge	0-5	I	I	I
Meadow sedge	0-5	I	I	I
Narrowleaf sedge	0-5	I	I	I
Rigid sedge	0-5	I	I	I
Sedges (other)	0-5	I	I	I
Sun sedge	0-5	I	I	I
<u>Forbs</u> (5 to 10 percent)				
Aromatic aster	T <u>3/</u>	I	D	D
Blue verbena	T	I	D	D
Cudweed sagewort	T	I	D	D
Dotted gayfeather	T	I	D	D
False boneset	T	I	D	D
Heath aster	T	I	D	D
Illinois tickclover	T	I	D	D
Manyflower scurfpea	T	I	D	D
Missouri goldenrod	T	I	D	D
Prairie onion	T	I	D	D
Prairie pussytoes	T	I	D	D
Stiff goldenrod	T	I	D	D
Upright prairieconeflower	T	I	D	D
Western ragweed	T	I	D	D
Yarrow	T	I	D	D
<u>Shrubs</u> (0 to 5 percent) %				
Arkansas rose	0-5	I	D	D
Buckbrush	0-5	I	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	.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 2,000 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 clayey surface layer, a dense clayey subsoil, and lack of moisture other than normal precipitation.

a. Characteristics

The soils in this site are well or moderately well drained. They were formed in glacial till and loess. The surface layer is clay or silty clay, 4 to 6 inches thick, over a dense massive clay subsoil. These soils are typically severely eroded.

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

Mayberry clay, severely eroded

Pawnee clay, severely eroded

Wymore clay, severely eroded

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: Thin Loess (TL)

MLRAs: 75, 102B, and 107

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 80 percent grasses, 5 percent grasslike plants, 10 percent forbs, and 5 percent shrubs, based upon total annual production, air-dry weight. Big bluestem, indiangrass, little bluestem, and sideoats grama are the dominant species making up 60 percent or more of the total annual production. Canada wildrye, hairy grama, porcupinegrass, sedges, switchgrass, 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> (75 to 90 percent)	%	Grazing Response <u>1/</u>		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Big bluestem	20-25	D	D	I
Canada wildrye	0-5	D	I	I
Hairy grama	0-5	I	I	I
Indiangrass	5-10	D	I	I
Kentucky bluegrass <u>2/</u>	0-5	I	I	I
Little bluestem	20-30	D	D	I
Porcupinegrass	0-5	D	I	I
Prairie junegrass	0-5	D	I	I
Scribner panicum	0-5	I	I	I
Sideoats grama	5-10	D	D	I
Switchgrass	0-5	D	I	I
Tall dropseed	0-5	I	I	I
Western wheatgrass	0-5	I	I	I
<u>Grasslike Plants</u> (0 to 5 percent)				
Sedges	0-5	I	I	I
<u>Forbs</u> (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
Dotted gayfeather	T	I	D	D
Flax	T	I	D	D
Missouri goldenrod	T	I	D	D
Platte groundsel	T	I	D	D
Purple prairieclover	T	D	D	D
Rush skeletonplant	T	I	D	D
Shelleaf penstemon	T	I	D	D
Silverleaf 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 ^{1/}		
		<u>Cattle</u>	<u>Sheep</u>	<u>Deer</u>
Arkansas rose	0-5	I	D	D
Common pricklypear	0-5	I	I	D
Leadplant	0-5	D	D	D
Poisonivy	0-5	D	D	D
Small soapweed	0-5	I	D	D
Smooth sumac	0-5	I	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	.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 3,500 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 material.

a. Characteristics

The soils in this site are excessively drained. The parent material is loess. In places there is a darkened surface layer that ranges from 3 to 8 inches thick, but in places the parent material is at the surface. The texture is mostly silt loam, but also 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:

Coly silt loam, 30 to 60 percent slopes
Crofton silt loam, 30 to 60 percent slopes

Ida 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