

United States Department of Agriculture Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

Site Name: Sandy (Sy)10-14” Northern Plains Precipitation Zone,

Site ID: 058BY150WY

Major Land Resource Area: 58B – Northern Rolling High Plains

Physiographic Features

This site occurs on nearly level to 50% slopes.

Landform: Alluvial fans, hillsides, plateaus, ridges & stream terraces

Aspect: N/A

	<u>Minimum</u>	<u>Maximum</u>
Elevation (feet):	3800	5100
Slope (percent):	0	30
Water Table Depth (inches):	None within 60 inches	
Flooding:		
Frequency:	None	None
Duration:	None	None
Ponding:		
Depth (inches):	0	0
Frequency:	None	None
Duration:	None	None
Runoff Class:	negligible	high

Climatic features

Annual precipitation ranges from 10-14 inches per year. Wide fluctuations may occur in yearly precipitation and result in more drought years than those with more than normal precipitation. Temperatures show a wide range between summer and winter and between daily maximums and minimums. This is predominantly due to the high elevation and dry air, which permits rapid incoming and outgoing radiation. Cold air outbreaks from Canada in winter move rapidly from northwest to southeast and account for extreme minimum temperatures. Chinook winds may occur in winter and bring rapid rises in temperature. Extreme storms may occur during the winter, but most severely affect ranch operations during late winter and spring.

Wind speed averages about 8 mph, ranging from 10 mph during the spring to 7 mph during late summer. Daytime winds are generally stronger than nighttime and occasional strong storms may bring brief periods of high winds with gusts to more than 75 mph.

Growth of native cool season plants begins about April 1 and continues to about July 1. Native warm season plants begin growth about May 15 and continue to about August 15. Green up of cool season plants may occur in September and October of most years.

The following information is from the “Clearmont 5 SW” climate station:

Site Type: Rangeland
MLRA: 58B – Northern Rolling High Plains

**Sandy 10-14” P.Z.
R058BY150WY**

Frost-free period (32 °F): 76 - 132 days; (5 yrs. out of 10, these days will occur between May 30 – September 11)

Freeze-free period 28 °F): 110 - 145 days; (5 yrs. out of 10, these days will occur between May 16 – September 21)

Mean annual precipitation: 12.4 inches

Mean annual air temperature: 43.2 °F (28.4°F Avg. Min. – 57.9°F Avg. Max.)

For detailed information visit the Natural Resources Conservation Service National Water and Climate Center at <http://www.wcc.nrcs.usda.gov/> website. Other climate station(s) representative of this precipitation zone include: “Dull Center”

Influencing Water Features

Wetland Description:	<u>System</u>	<u>Subsystem</u>	<u>Class</u>	<u>Sub-class</u>
None	None	None	None	None

Stream Type: None

Representative Soil Features

The soils of this site are moderately deep (greater than 20” to bedrock) to very deep, well-drained soils that formed in alluvium or alluvium over residuum. These soils have moderate, moderately rapid, or rapid permeability. The surface soil will vary from 3 to 6 inches deep and have one of the following textures: fine sandy loam, sandy loam, or loamy very fine sand. Coarser topsoils may be included if underlain by finer textured subsoil. Layers of the soil most influential to the plant community vary from 3 to 6 inches thick.

Major Soil Series correlated to this site include: Bowbac, Decolney, Hargreave, Hiland, Julesburg, Keeline, Moskee, Terro, Turnercrest, Vonalee,

Other Soil Series correlated in MLRA 58B to this site include: Absted, Ascalon, Bankard, Bayard, Cambria, Clarkelen, Draknab, Forkwood, FortCollins, Garrett, Glenberg, Keyner, Jayem, Manter, Maysdorf, Noden, Nuncho, Otera, Pugsley, Satanta, Schooner, Southfork, Terry, and Vona

Parent Material Kind: alluvium, eolian deposits, residuum

Parent Material Origin: sandstone, unspecified

Surface Texture: fine sandy loam, sandy loam

Surface Texture Modifier: none

Subsurface Texture Group: sandy loam

Surface Fragments ≤ 3” (% Cover): 0

Surface Fragments > 3” (%Cover): 0

Subsurface Fragments ≤ 3” (% Volume): 0

Subsurface Fragments > 3” (% Volume): 0

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	well drained	excessively well drained
Permeability Class:	moderately rapid	rapid
Depth (inches):	20	>60
Electrical Conductivity (mmhos/cm) ≤20”:	0	4
Sodium Absorption Ratio ≤20”:	0	5

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Soil Reaction (1:1 Water) $\leq 20''$:	6.6	8.4
Soil Reaction (0.1M CaCl₂) $\leq 20''$:	NA	NA
Available Water Capacity (inches) $\leq 30''$:	2	5.1
Calcium Carbonate Equivalent (percent) $\leq 20''$:	0	5

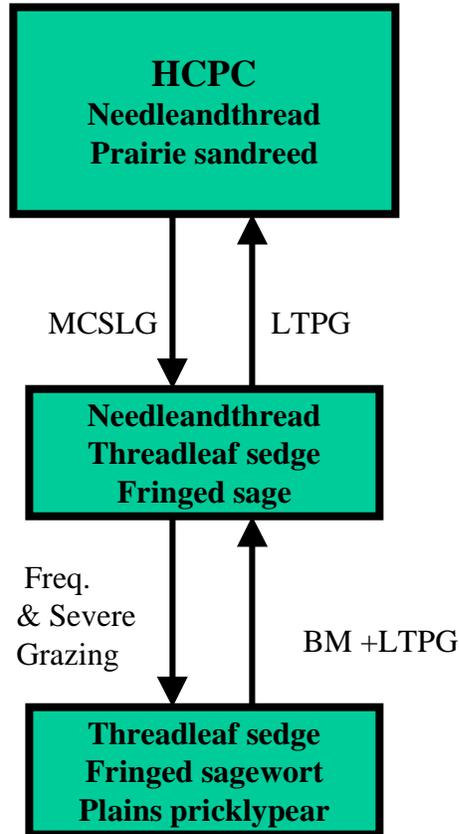
Plant Communities

Ecological Dynamics of the Site:

As this site deteriorates, species such as threadleaf sedge, needleandthread, fringed sagewort and silver sagebrush will increase. Mid grasses such as prairie sandreed and Indian ricegrass will decrease in frequency and production.

The Historic Climax Plant Community (description follows the plant community diagram) has been determined by study of rangeland relic areas, or areas protected from excessive disturbance. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures, and historical accounts have also been used.

The following is a State and Transition Model Diagram that illustrates the common plant communities (states) that can occur on the site and the transitions between these communities. The ecological processes will be discussed in more detail in the plant community narratives following the diagram.



- BM** - Brush Management (fire, chemical, mechanical)
- Freq. & Severe Grazing** - Frequent and Severe Utilization of the Cool-season Mid-grasses during the Growing Season
- GLMT** - Grazing Land Mechanical Treatment
- LTPG** - Long-term Prescribed Grazing
- MCSLG** - Moderate, Continuous Season-long Grazing
- NU, NF** - No Use and No Fire
- PG** - Prescribed Grazing (proper stocking rates with adequate recovery periods during the growing season)
- VLTPG** - Very Long-term Prescribed Grazing (could possibly take generations)
- Na** - found adjacent to a saline site

PLANT COMMUNITY DYNAMICS
REFERENCE PLANT COMMUNITY

COMMON NAME/ GROUP NAME	SCIENTIFIC NAME	SCIENTIFIC SYMBOL	Grp	Allowable Annual Production			% Comp (MAX.)
				lbs./acre			
				below normal	normal	above normal	
				750	1300	1600	
GRASSES/GRASSLIKES							
RHIZOMATOUS WHEATGRASSES:							
thickspike wheatgrass	Elymus lanceolatus	ELLAL	1	75	130	160	10%
western wheatgrass	Pascopyrum smithii	PASM	1	75	130	160	10%
OTHER GRASSES							
Indian ricegrass	Achnatherum hymenoides	ACHY	2	113	195	240	15%
little bluestem	Schizachyrium scoparium	SCSC	3	75	130	160	10%
needleandthread	Hesperostipa comata	HECO26	4	188	325	400	25%
Cusick's bluegrass	Poa cusickii	POCU3	5	75	130	160	10%
prairie sandreed	Calamovilfa longifolia	CALO	6	150	260	320	20%
threadleaf sedge	Carex filifolia	CAFI	7	75	130	160	10%
MISCELLANEOUS GRASSES/GRASSLIKES*							
needleleaf sedge	Carex duriuscula	CADU6	8	38	65	80	5%
prairie junegrass	Koeleria macrantha	KOMA	8	38	65	80	5%
Sandberg bluegrass	Poa secunda	POSE	8	38	65	80	5%
hairy grama	Bouteloua hirsuta	BOHI2	8	38	65	80	5%
blue grama	Bouteloua gracilis	BOGR2	8	38	65	80	5%
FORBS							
MISCELLANEOUS FORBS*							
American vetch	Vicia americana	VIAM	9	113	195	240	15%
prairie coneflower	Ratibida columnifera	RACO3	9	38	65	80	5%
asters	Asters	ASTER	9	38	65	80	5%
biscuitroots	Lomatium spp.	LOMAT	9	38	65	80	5%
breadroot scurfpea	Pediomelum esculentum	PEES	9	38	65	80	5%
western yarrow	Achillea lanulosa	ACHIL	9	38	65	80	5%
rosy pussytoes	Antennaria rosea	ANRO2	9	38	65	80	5%
milkvetches	Astragalus	ASTRA	9	38	65	80	5%
stemless goldenweed	Haplopappus acaulis	HAAC	9	38	65	80	5%
sulphur flower buckwheat	Eriogonum umbellatum	ERUM	9	38	65	80	5%
scarlet gaura	Gaura coccinea	GACO5	9	38	65	80	5%
purple prairie clover	Dalea purpurea	DAPU5	9	38	65	80	5%
white prairie clover	Dalea candida	DACA7	9	38	65	80	5%
bluebells	Mertensia	MERTE	9	38	65	80	5%
wild onion	Allium textile	ALTE	9	38	65	80	5%
fringed sagewort	Artemisia frigida	ARFR4	9	38	65	80	5%
hawksbeard	Crepis acuminata	CRAC2	9	38	65	80	5%
TREES, SHRUBS & HALF-SHRUBS							
big sagebrush	Artemisia tridentata	ARTR2	10	38	65	80	5%
MISC. TREES, SHRUBS & HALF-SHRUBS*							
green rabbitbrush	Chrysothamnus viscidiflorous	CHVI8	11	113	195	240	15%
silver sagebrush	Artemisia cana	ARCAC5	11	38	65	80	5%
western snowberry	Symphoricarpos occidentalis	SYOC	11	38	65	80	5%
winterfat	Krascheninnikovia lanata	KRLA2	11	38	65	80	5%
yucca	Yucca glauca	YUGL	11	38	65	80	5%

* Common native perennials are listed. Other native perennials may also be counted but no species in the group may be counted for more than 5%.

This list of plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon precipitation or other climatic factors.

Plant Community Narratives

Following are the narratives for each of the described plant communities. These plant communities may not represent every possibility, but they probably are the most prevalent and repeatable plant communities. The plant composition tables shown above have been developed from the best available knowledge at the time of this revision. As more data is collected, some of these plant communities may be revised or removed, and new ones may be added. None of these plant communities should necessarily be thought of as “Desired Plant Communities”. According to the USDA NRCS National Range and Pasture Handbook, Desired Plant Communities (DPC’s) will be determined by the decision-makers and will meet minimum quality criteria established by the NRCS. The main purpose for including any description of a plant community here is to capture the current knowledge and experience at the time of this revision.

Needleandthread, Prairie sandreed Plant Community

The interpretive plant community for this site is the Historic Climax Plant Community. This state evolved with grazing by large herbivores and is well suited for grazing by domestic livestock. Potential vegetation is about 75% grasses or grass-like plants, 15% forbs, and 10% woody plants. The state is a mix of warm and cool season midgrasses. The major grasses include needleandthread, prairie sandreed, little bluestem, and Indian ricegrass. Other grasses occurring in the state include rhizomatous wheatgrasses, Sandberg bluegrass, blue grama, and threadleaf sedge. Silver sagebrush and green rabbitbrush are conspicuous components of this state.

The total annual production (air-dry weight) of this state is about 1200 pounds per acre, but it can range from about 750 lbs./acre in unfavorable years to about 1600 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number:

Growth curve name:

Growth curve description:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	30	35	10	5	5	5	0	0

(Monthly percentages of total annual growth)

The state is stable and well adapted to the Northern Great Plains climatic conditions. The diversity in plant species allows for high drought resistance. This is a sustainable plant community (site/soil stability, watershed function, and biologic integrity).

Transitions or pathways leading to other plant communities are as follows:

- Moderate, Continuous Season-Long grazing will convert the plant community to the *Needleandthread/ Threadleaf sedge/ Fringed sagewort Vegetation State*.
- Frequent and Severe grazing will convert the plant community to the *Threadleaf sedge/ Fringed sagewort/ Plains Pricklypear Vegetation State*.

Needleandthread/ Threadleaf sedge/ Fringed sage Plant Community

This plant community is the result of moderate season long grazing. The understory of grass includes needleandthread, threadleaf sedge, and prairie junegrass. Fringed sagewort has increased. When compared to the Historic Climax Plant Community, prairie sandreed and Indian ricegrass have decreased. Threadleaf sedge, needleandthread and fringed sagewort have increased. This

community is well suited to grazing by both domestic livestock and wildlife, during the spring, summer and fall.

The total annual production (air-dry weight) of this state is about 800 pounds per acre, but it can range from about 600 lbs./acre in unfavorable years to about 1000 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number:
 Growth curve name:
 Growth curve description:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	30	35	10	5	5	5	0	0

(Monthly percentages of total annual growth)

The communities' soil biotic integrity and watershed is intact, although more than normal runoff may occur due to the sod forming vegetation.

Transitional pathways leading to other plant communities are as follows:

- Long-Term Prescribed grazing will return this state to near *Historic Climax Plant Community* condition. The sod forming nature of threadleaf sedge and needleandthread will make the transition to *Historic Climax Plant Community* difficult.
- Frequent and Severe grazing will convert this state to the *Threadleaf sedge/ Fringed sagewort/ Plains pricklypear Vegetation State*.

Threadleaf sedge/ Fringed sagewort/ Plains pricklypear Plant Community

This plant community is the result of frequent and severe grazing. A sod of threadleaf sedge and needleandthread dominates it. Pricklypear cactus can become dense enough so that livestock cannot graze forage growing within the cactus clumps. When the historic climax community is replaced by sod forming communities, grass production is reduced.

The total annual production (air-dry weight) of this state is about 650 pounds per acre, but it can range from about 500 lbs./acre in unfavorable years to about 800 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:

Growth curve number:
 Growth curve name:
 Growth curve description:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	30	35	10	5	5	5	0	0

(Monthly percentages of total annual growth)

The soil is generally well protected in this state. The biotic integrity may be reduced due to low vegetative production. The sod formed by these grasses is resistant to water infiltration. While this sod protects the site, off-site areas are affected by excessive runoff that may cause gully erosion. This sod is resistant to change and may require practices such as long-term prescribed grazing to return to a mid grass community.

Transitional pathways leading to other plant communities are as follows:

- Long-term Prescribed grazing with Brush Management will return this plant community to near *Historic Climax Plant Community*.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Historic Climax Plant Community: The predominance of grasses in this plant community favors grazers and mixed-feeders, such as bison, elk, and antelope. Suitable thermal and escape cover for deer may be limited due to the low quantities of woody plants. However, topographical variations could provide some escape cover. When found adjacent to sagebrush dominated states, this plant community may provide brood rearing/foraging areas for sage grouse, as well as lek sites. Other birds that would frequent this plant community include western meadowlarks, horned larks, and golden eagles. Many grassland obligate small mammals would occur here.

Needleandthread/Threadleaf sedge/Fringed sagewort: These communities provide foraging for antelope and other grazers. They may be used as a foraging site by sage grouse if proximal to woody cover.

Threadleaf sedge/Fringed sagewort/Cactus: These communities provide limited grazing for antelope and other herbivores due to low production. They may be used as a foraging site by sage grouse if proximal to woody cover.

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA 58B, 10-14 inch Northern Plains

COMMON NAME/ GROUP NAME	SCIENTIFIC NAME	SCIENTIFIC SYMBOL	Cattle	Sheep	Horses	Mule Deer	Antelope
GRASSES/GRASSLIKES							
alkali bluegrass	<i>Poa secunda ssp. juncifolia</i>	POSEJ	DDDD	PPPP	DDDD	PPPP	PPPP
alkali cordgrass	<i>Spartina gracilis</i>	SPGR	DDDD	UUUU	DDDD	UUUU	UUUU
alkali sacaton	<i>Sporobolus airoides</i>	SPA1	PPPP	DDDD	PPPP	DDDD	DDDD
Baltic rush	<i>Juncus balticus</i>	JUBA	DDDD	UUUU	DDDD	UUUU	UUUU
basin wildrye	<i>Leymus cinereus</i>	LEC14	PPPP	PPPP	PPPP	DDDD	DDDD
bearded wheatgrass	<i>Elymus caninus</i>	ELCA	PPPP	DDDD	PPPP	DDDD	DDDD
big bluestem	<i>Andropogon gerardii</i>	ANGE	PPPP	PPPP	PPPP	DDDD	DDDD
blue grama	<i>Bouteloua gracilis</i>	BOGR2	DDDD	DDDD	DDDD	DDDD	DDDD
bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	PSSP6	PPPP	PPPP	PPPP	DDDD	DDDD
bluejoint reedgrass	<i>Calamagrostis canadensis</i>	CACA4	PPPP	DDDD	PPPP	UUUU	UUUU
bottlebrush squirreltail	<i>Elymus elymoides</i>	ELELE	DDDD	DDDD	DDDD	UUUU	UUUU
buffalograss	<i>Buchloe dactyloides</i>	BUDA	DDDD	DDDD	DDDD	DDDD	DDDD
Canada wildrye	<i>Elymus canadensis</i>	ELCA4	PPPP	PPPP	PPPP	DDDD	DDDD
Canby bluegrass	<i>Poa canbyi (syn. to Poa secunda)</i>	POCA (POSE)	PPPP	PPPP	PPPP	PPPP	PPPP
Cusick's bluegrass	<i>Poa cusickii</i>	POCU3	PPPP	PPPP	PPPP	PPPP	PPPP
Fendler threeawn	<i>Aristida purpurea</i>	ARPUL	UUUU	UUUU	UUUU	UUUU	UUUU
green needlegrass	<i>Nassella viridula</i>	NAVI4	PPPP	PPPP	PPPP	PPPP	PPPP
hairy grama	<i>Bouteloua hirsuta</i>	BOH12	DDDD	DDDD	DDDD	DDDD	DDDD
Indian ricegrass	<i>Achnatherum hymenoides</i>	ACHY	PPPP	PPPP	PPPP	PPPP	PPPP
inland saltgrass	<i>Distichlis spicata</i>	DISP	UUUU	UUUU	UUUU	UUUU	UUUU
inland sedge	<i>Carex interior</i>	CAIN11	DDDD	DDDD	DDDD	UUUU	UUUU
little bluestem	<i>Schizachyrium scoparium</i>	SCSC	PPPP	PPPP	PPPP	DDDD	DDDD
mat muhly	<i>Muhlenbergia richardsonis</i>	MURI	UUUU	UUUU	UUUU	UUUU	UUUU
Nebraska sedge	<i>Carex nebraskensis</i>	CANE2	PPPP	PPPP	PPPP	DDDD	DDDD
needleandthread	<i>Hesperostipa comata</i>	HECO26	PPPP	PPPP	PPPP	PPPP	PPPP
needleleaf sedge	<i>Carex durivuscula</i>	CADU6	UUUU	UUUU	UUUU	UUUU	UUUU
northern reedgrass	<i>Calamagrostis stricta</i>	CAST13	PPPP	DDDD	PPPP	UUUU	UUUU
Nuttall's alkaligrass	<i>Puccinellia nuttaliana</i>	PUNU2	PPPP	PPPP	PPPP	PPPP	PPPP
plains muhly	<i>Muhlenbergia cuspidata</i>	MUCU3	DDDD	DDDD	DDDD	UUUU	UUUU
plains reedgrass	<i>Calamagrostis montanensis</i>	CAMO	DDDD	DDDD	DDDD	DDDD	DDDD
prairie cordgrass	<i>Spartina pectinata</i>	SPPE	PPPP	DDDD	PPPP	UUUU	UUUU
prairie junegrass	<i>Koeleria macrantha</i>	KOMA	DDDD	DDDD	DDDD	DDDD	DDDD
prairie sandreed	<i>Calamovilfa longifolia</i>	CALO	PPPP	DDDD	PPPP	UUUU	UUUU
sand bluestem	<i>Andropogon halli</i>	ANHA	PPPP	DDDD	PPPP	UUUU	UUUU
sand dropseed	<i>Sporobolus cryptandrus</i>	SPCR	DDDD	DDDD	DDDD	UUUU	UUUU
Sandberg bluegrass	<i>Poa secunda</i>	POSE	DDDD	DDDD	DDDD	DDDD	DDDD
sideoats grama	<i>Bouteloua curtipendula</i>	BOCU	PPPP	PPPP	PPPP	DDDD	UUUU
slender wheatgrass	<i>Elymus trachycaulus</i>	ELTR7	PPPP	DDDD	PPPP	DDDD	DDDD
spike sedge	<i>Carex nardina</i>	CANA2	DDDD	DDDD	DDDD	UUUU	UUUU
thickspike wheatgrass	<i>Elymus lanceolatus</i>	ELLAL	DDDD	DDDD	DDDD	DDDD	DDDD
threadleaf sedge	<i>Carex filifolia</i>	CAFI	DDDD	DDDD	DDDD	DDDD	PPPP
tufted hairgrass	<i>Deschampsia caespitosa</i>	DECA18	PPPP	PPPP	PPPP	DDDD	DDDD
western wheatgrass	<i>Pascopyrum smithii</i>	PASM	DDDD	DDDD	DDDD	DDDD	DDDD
FORBS							
American licorice	<i>Glycyrrhiza lepidota</i>	GLLE3	UUUU	UUUU	UUUU	UUUU	UUUU
American vetch	<i>Vicia americana</i>	VIAM	PPPP	PPPP	PPPP	PPPP	PPPP
arrowgrass	<i>Triglochin spp.</i>	TRIGL	T	T	T	T	T
asters	Asters	ASTER	UUUU	UUUU	UUUU	UUUU	UUUU
biscuitroots	<i>Lomatium spp.</i>	LOMAT	DDDD	DDDD	UUUU	DDDD	DDDD
bluebells	<i>Mertensia</i>	MERTE	DDDD	PPPP	DDDD	DDDD	DDDD
blue-eyed grass	<i>Sisyrinchium spp.</i>	SISYR	DDDD	PPPP	DDDD	DDDD	DDDD
breadroot scurfpea	<i>Pediomelum esculentum</i>	PEES	DDDD	DDDD	DDDD	DDDD	DDDD
cattail, broad-leaf	<i>Typha latifolia</i>	TYLA	DDDD	UUUU	DDDD	UUUU	UUUU
cattail, narrow-leaf	<i>Typha angustifolia</i>	TYAN	DDDD	UUUU	DDDD	UUUU	UUUU
fringed sagewort	<i>Artemisia frigida</i>	ARFR4	UUUU	UUUU	UUUU	UUUU	UUUU
green sagewort	<i>Artemisia dracunculul</i>	ARDR4	UUUU	UUUU	UUUU	UUUU	UUUU
hawkbeard	<i>Crepis acuminata</i>	CRAC2	UUUU	PPPP	UUUU	DDDD	DDDD
horsetails	<i>Equisetum spp.</i>	EQUIS	UUUU	UUUU	UUUU	UUUU	UUUU
iris	<i>Iris spp.</i>	IRIS	UUUU	UUUU	UUUU	UUUU	UUUU
milkvetches	<i>Astragalus</i>	ASTRA	DDDD	DDDD	DDDD	DDDD	DDDD
poison hemlock	<i>Conium maculatum</i>	COMA2	T	T	T	T	T
prairie coneflower	<i>Ratibida columnifera</i>	RACO3	DDDD	PPPP	DDDD	PPPP	PPPP
prairie thermopsis	<i>Thermopsis rhombifolia</i>	THRHA	UUUU	UUUU	UUUU	UUUU	UUUU
purple prairie clover	<i>Dalea purpurea</i>	DAPU5	PPPP	PPPP	PPPP	PPPP	PPPP
Pursh seepweed	<i>Suaeda calceoliformis</i>	SUCA2	UUUU	UUUU	UUUU	UUUU	UUUU
rosy pussytoes	<i>Antennaria rosea</i>	ANRO2	UUUU	UUUU	UUUU	UUUU	UUUU
scarlet gaura	<i>Gaura coccinea</i>	GACO5	UUUU	UUUU	UUUU	UUUU	UUUU
stemless goldenweed	<i>Haplopappus acaulis</i>	HAAC	UUUU	UUUU	UUUU	UUUU	UUUU
sulphur flower buckwheat	<i>Eriogonum umbellatum</i>	ERUM	UUUU	UUUU	UUUU	UUUU	UUUU
twogrooved milkvetch	<i>Astragalus bisulcatus</i>	ASB12	T	T	T	T	T
water hemlocks	<i>Cicuta spp.</i>	CICUT	T	T	T	T	T
western yarrow	<i>Achillea lanulosa</i>	ACHIL	UUUU	UUUU	UUUU	UUUU	UUUU
white prairie clover	<i>Dalea candida</i>	DACA7	PPPP	PPPP	PPPP	PPPP	PPPP
wild onion	<i>Allium textile</i>	ALTE	DDDD	DDDD	DDDD	DDDD	DDDD
TREES, SHRUBS & HALF-SHRUBS							
big sagebrush	<i>Artemisia tridentata</i>	ARTR2	UUUU	DDDD	UUUU	DDDD	DDDD
birdfoot sagebrush	<i>Artemisia pedatifida</i>	ARPE6	UUUU	UUUU	UUUU	UUUU	UUUU
black greasewood	<i>Sarcobatus vermiculatus</i>	SAVE4	DDDD	DDDD	UUUU	DDDD	DDDD
fourwing saltbush	<i>Atriplex canescens</i>	ATCA2	PPPP	PPPP	PPPP	PPPP	PPPP
Gardners saltbush	<i>Atriplex gardneri</i>	ATGA	PPPP	PPPP	DDDD	PPPP	PPPP
green rabbitbrush	<i>Chrysothamnus viscidiflorous</i>	CHV18	DDDD	DDDD	DDDD	DDDD	DDDD
junipers	<i>Juniperus scopulorum</i>	JUSC2	UUUU	UUUU	UUUU	DDDD	UUUU
plains cottonwood (sprouts)	<i>Populus deltoides</i>	PODEM	DDDD	DDDD	DDDD	DDDD	DDDD
ponderosa pine (abortion in cattle)	<i>Pinus ponderosa</i>	PIPO	UUUU	UUUU	UUUU	UUUU	UUUU
rubber rabbitbrush	<i>Ericameria nauseosa</i>	ERNA10	UUUU	DDDD	UUUU	DDDD	DDDD
silver sagebrush	<i>Artemisia cana</i>	ARCA5	DDDD	DDDD	DDDD	PPPP	PPPP
silverberry	<i>Eleagnus commutata</i>	ELCO	UUUU	UUUU	UUUU	DDDD	UUUU
skunkbush sumac	<i>Rhus trilobata</i>	RHTR	DDDD	DDDD	DDDD	DDDD	DDDD
western snowberry	<i>Symphoricarpos occidentalis</i>	SYOC	UUUU	UUUU	UUUU	DDDD	UUUU
wildrose	<i>Rosa woodsii var. woodsii</i>	ROWOW	DDDD	DDDD	UUUU	DDDD	DDDD
willows	<i>Salix L.</i>	SALIX	PPPP	PPPP	DDDD	PPPP	UUUU
winterfat	<i>Krascheninnikovia lanata</i>	KRLA2	PPPP	PPPP	PPPP	PPPP	PPPP
yucca	<i>Yucca glauca</i>	YUGL	DDDD	DDDD	DDDD	DDDD	DDDD

N = not used; U = undesirable; D = desirable; P = preferred; T = toxic

Animal Community – Grazing Interpretations

The following table lists suggested stocking rates for cattle under continuous season-long grazing under normal growing conditions. These are conservative estimates that should be used only as guidelines in the initial stages of the conservation planning process. Often, the current plant composition does not entirely match any particular plant community (as described in this ecological site description). Because of this, a field visit is recommended, in all cases, to document plant composition and production. More precise carrying capacity estimates should eventually be calculated using this information along with animal preference data, particularly when grazers other than cattle are involved. Under more intensive grazing management, improved harvest efficiencies can result in an increased carrying capacity. If distribution problems occur, stocking rates must be reduced to maintain plant health and vigor.

Plant Community	Production (lb./ac)	Carrying Capacity* (AUM/ac)
Historic Climax Plant Community	750-1600	.4
Threadleaf sedge/Needleandthread/Fringed sagewort	600-1000	.33
Threadleaf sedge/Fringed sagewort/Cactus	500-900	.2

* - Continuous, season-long grazing by cattle under average growing conditions.

Grazing by domestic livestock is one of the major income-producing industries in the area. Rangeland in this area may provide yearlong 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.

Hydrology Functions

Water is the principal factor limiting forage production on this site. This site is dominated by soils in hydrologic group B, with localized areas in hydrologic group C. Infiltration potential for this site varies from moderately rapid to rapid depending on soil hydrologic group and ground cover. Runoff varies from low to moderate. In many cases, areas with greater than 75% ground cover have the greatest potential for high infiltration and lower runoff. An example of an exception would be where short-grasses form a strong sod and dominate the site. Areas where ground cover is less than 50% have the greatest potential to have reduced infiltration and higher runoff (refer to Part 630, NRCS National Engineering Handbook for detailed hydrology information).

Rills and gullies should not typically be present. Water flow patterns should be barely distinguishable if at all present. Pedestals are only slightly present in association with bunchgrasses. Litter typically falls in place, and signs of movement are not common. Chemical and physical crusts are rare to non-existent. Cryptogamic crusts are present, but only cover 1-2% of the soil surface.

Recreational Uses

This site provides hunting opportunities for upland game species. The wide variety of plants which bloom from spring until fall have an esthetic value that appeals to visitors.

Site Type: Rangeland
MLRA: 58B – Northern Rolling High Plains

**Sandy 10-14” P.Z.
R058BY150WY**

Site Description Approval

State Range Management Specialist

Date

State Range Management Specialist

Date