

# United States Department of Agriculture Natural Resources Conservation Service

## Ecological Site Description

**Site Type:** Rangeland

**Site Name:** Clayey (Cy), 10-14" P.Z., High Plains Southeast

**Site ID:** R034AY304WY

**Major Land Resource Area:** 34A-Cool Central Desertic Basins and Plateaus

### Physiographic Features

This site occurs in valley bottoms and on gently sloping to steep mountain slopes. It is found on all exposures with a tendency toward north and east slopes at lower elevations

**Landform:** Hill sides, alluvial fans & stream terraces      **Aspect:** N/A

	<u>Minimum</u>	<u>Maximum</u>
<b>Elevation (feet):</b>	5500	7500
<b>Slope (percent):</b>	0	60
<b>Water Table Depth (inches):</b>	none within 60 inches	
<b>Flooding:</b>		
<b>Frequency:</b>	none	none
<b>Duration:</b>	none	none
<b>Ponding:</b>		
<b>Depth (inches):</b>	0	0
<b>Frequency:</b>	none	none
<b>Duration:</b>	none	none
<b>Runoff Class:</b>	low	very high

### Climatic Features

Annual precipitation ranges from 10-14 inches per year. Wide fluctuations may occur in yearly precipitation and result in more dry 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 in winter move rapidly from northwest to southeast and account for extreme minimum temperatures. Extreme storms may occur during the winter, but most severely affect ranch operations during late winter and spring.

Daytime winds are generally stronger than nighttime and occasional strong storms may bring brief periods of high winds with gusts to more than 50 mph.

Growth of native cool season plants begins about April 15 and continues to about June 15. Some green up of cool season plants usually occurs in September.

The following information is from the "Laramie" climate station:

	<u>Minimum</u>	<u>Maximum</u>	<u>5 yrs. out of 10 between</u>
<b>Frost-free period (days):</b>	57	149	June 1 – September 16
<b>Freeze-free period (days):</b>	94	183	May 15 – September 28
<b>Annual Precipitation (inches):</b>	5.8	17.34	

Mean annual precipitation: 11.53 inches

Mean annual air temperature: 42.2°F (30.4°F Avg. Min. to 53.9°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 "Dixon " and "Medicine Bow".

## 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

These are moderately deep and deep (at least 20 inches deep) well drained soils with more than 35 percent clay in the subsoil. Some soil cracking (not severe) occurs during the dry summer months, especially where the plant cover has been reduced. Water holding capacity is high, but surface intake is restricted which causes runoff and reduces effectiveness of precipitation.

### Major Soil Series correlated to this site include:

**Parent Material Kind:** alluvium, residuum

**Parent Material Origin:** sedimentary rock

**Surface Texture:** clay loam, clay , silty clay loam, fine sandy clay loam

**Surface Texture Modifier:** gravelly

**Subsurface Texture Group:** silty clay, clay, clay loam, silty clay loam

**Surface Fragments ≤ 3" (% Cover):** 0-20

**Surface Fragments >3" (%Cover):** none

**Subsurface Fragments ≤ 3" (% Volume):** 0-10

**Subsurface Fragments > 3" (% Volume):** none

	<u>Minimum</u>	<u>Maximum</u>
<b>Drainage Class:</b>	well	well
<b>Permeability Class:</b>	very slow	moderately slow
<b>Depth (inches):</b>	20	>60
<b>Electrical Conductivity (mmhos/cm) ≤20":</b>	0	8
<b>Sodium Absorption Ratio ≤20":</b>	0	5
<b>Soil Reaction (1:1 Water) ≤20":</b>	6.6	8.4
<b>Soil Reaction (0.1M CaCl2) ≤20":</b>	NA	NA
<b>Available Water Capacity (inches) ≤30":</b>	5.5	6
<b>Calcium Carbonate Equivalent (percent) ≤20":</b>	5	15

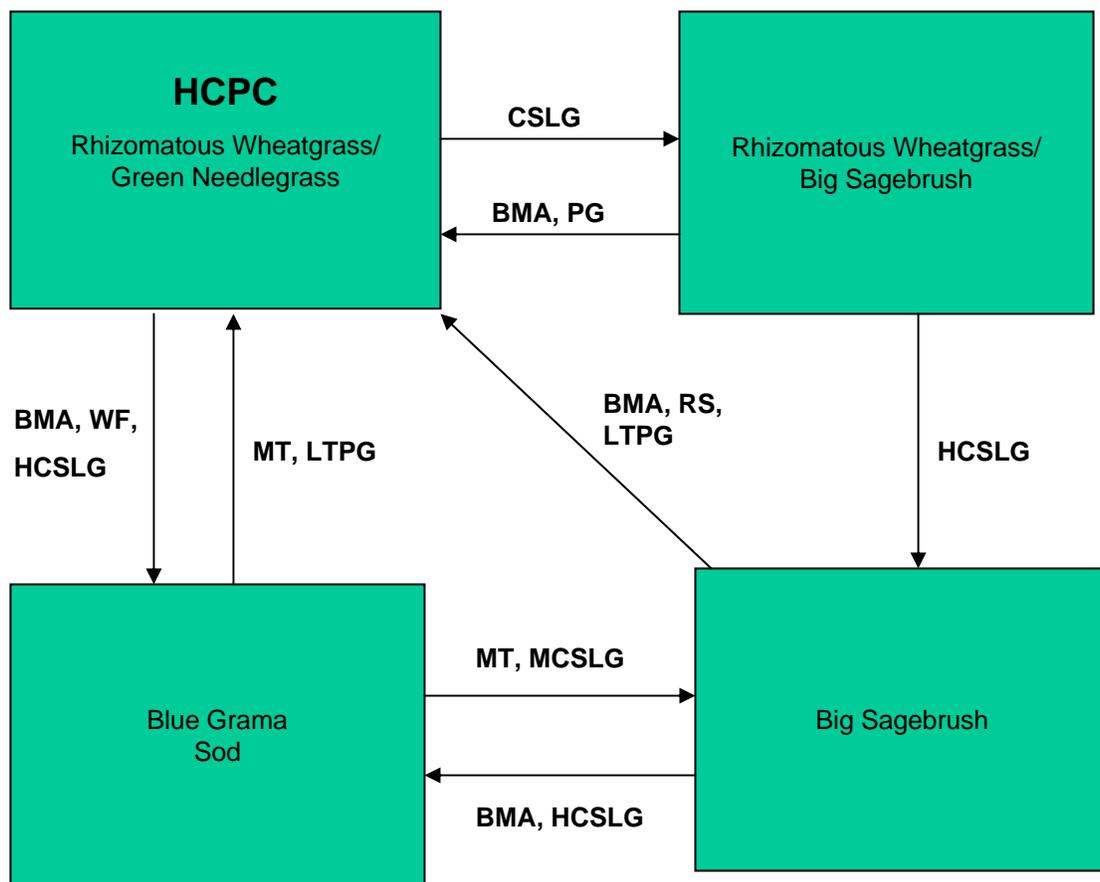
## Plant Communities

### Ecological Dynamics of the Site:

As this site deteriorates from improper grazing management, species such as big sagebrush, blue grama and unpalatable forbs will increase. Green needlegrass and rhizomatous wheatgrasses 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.



BMA – Brush Management (all methods)  
 BMC – Brush Management (chemical)  
 BMF – Brush Management (fire)  
 BMM – Brush Management (mechanical)  
 CSP – Chemical Seedbed Preparation  
 CSLG – Continuous Season-long Grazing  
 DR – Drainage  
 CSG – Continuous Spring Grazing  
 HB – Heavy Browse  
 HCSLG – Heavy Continuous Season-long Grazing  
 HI – Heavy Inundation  
 LPG – Long-term Prescribed Grazing  
 MT – Mechanical Treatment (chiseling, ripping, pitting)  
 MCSLG – Moderate Continuous Season Long Grazing

NF – No Fire  
 NS – Natural Succession  
 NWC – Noxious Weed Control  
 NWI – Noxious Weed Invasion  
 NU – Nonuse  
 P&C – Plow & Crop (including hay)  
 PG – Prescribed Grazing  
 RPT – Re-plant Trees  
 RS – Re-seed  
 SGD – Severe Ground Disturbance  
 SHC – Severe Hoof Compaction  
 WD – Wildlife Damage (Beaver)  
 WF – Wildfire

**Plant Community Composition and Group Annual Production  
 Reference Plant Community (HCPC)**

COMMON NAME/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Annual Production (Normal Year)		
			Total: 1000		
			Group	lbs./acre	% Comp.
<b>GRASSES AND GRASS-LIKES</b>					
<b>GRASSES/GRASSLIKES</b>					
Rhizomatous wheatgrasses	Pascopyrum smithii	PASM	1	400 - 500	40 - 50
Green needlegrass	Nassella viridula	NAV14	2	150 - 250	15 - 25
Bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6	3	50 - 100	5 - 10
Bottlebrush squirreltail	Elymus elymoides	ELEL5	4	50 - 100	5 - 10
<b>MISC. GRASSES/GRASSLIKES</b>			<b>5</b>	<b>50 - 150</b>	<b>5 - 15</b>
Blue grama	Bouteloua gracillis	BOGR12	5	0 - 50	0 - 5
Canby bluegrass	Poa canbyi (syn. P. secunda)	POCA (POSE)	5	0 - 50	0 - 5
Indian ricegrass	Achnatherum hymenoides	ACHY	5	0 - 50	0 - 5
Mountain muhly	Muhlenbergia montana	MUMO	5	0 - 50	0 - 5
Mutton grass	Poa fendleriana	POFE	5	0 - 50	0 - 5
Plains reedgrass	Calamagrostis montanensis	CAMO	5	0 - 50	0 - 5
Prairie junegrass	Koeleria macrantha	KOMA	5	0 - 50	0 - 5
Sandberg bluegrass	Poa secunda	POSE	5	0 - 50	0 - 5
Threadleaf sedge	Carex filifolia	CAFI	5	0 - 50	0 - 5
other perennial grasses (native)		2GP	5	0 - 50	0 - 5
<b>FORBS</b>			<b>6</b>	<b>50 - 100</b>	<b>5 - 10</b>
Clovers	Trifolium spp.	TRIFO	6	0 - 50	0 - 5
Phlox	Phlox spp.	PHLOX	6	0 - 50	0 - 5
Scarlet globemallow	Sphacelalcea coccinea	SPCO	6	0 - 50	0 - 5
Wild onion	Allium ascalonicum	ALAS2	6	0 - 50	0 - 5
Woody aster	Xylorhiza spp.	XYLOR	6	0 - 50	0 - 5
other perennial forbs (native)		2FP	6	0 - 50	0 - 5
<b>TREES/SHRUBS</b>					
Birdfoot sagebrush	Artemisia pedatifida	ARPE	7	50 - 100	5 - 10
<b>MISC. SHRUBS</b>			<b>8</b>	<b>50 - 100</b>	<b>5 - 10</b>
Big sagebrush	Artemisia tridentata	ARTR2	8	0 - 50	0 - 5
Gardner's saltbrush	Artiplex gardneri	ATGA	8	0 - 50	0 - 5
Green rabbitbrush	Chrysothamnus viscidiflorus	CHV18	8	0 - 50	0 - 5
Winterfat	Krascheninnikovia lanata	KRLA2	8	0 - 50	0 - 5
other shrubs & half shrubs (native)			8	0 - 50	0 - 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.

**Rhizomatous Wheatgrass/ Green Needlegrass Plant Community (HCPC)**

The interpretive plant community for this site is the Historic Climax Plant Community. Potential vegetation is estimated at 80% grasses or grass-like plants, 10% forbs and 10% woody plants. The major grasses include western wheatgrass, green needlegrass, bluebunch wheatgrass, and bottlebrush squirreltail. Birdfoot and big sagebrush are woody components. Other woody plants that may occur include Gardner’s saltbush and winterfat.

A typical plant composition for this state consists of western wheatgrass 40-50%, green needlegrass 15-25%, bluebunch wheatgrass 5-10%, bottlebrush squirreltail 5-10%, perennial forbs 5-10%, birdfoot sagebrush 5-10%, and 5-10% other woody species. Ground cover, by ocular estimate, varies from 30-40%.

The total annual production (air-dry weight) of this state is about 1000 pounds per acre, but it can range from about 500 lbs./acre in unfavorable years to about 1300 lbs./acre in above average years.

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

Growth curve number: WY0901

Growth curve name: 10-14SE, UPLAND SITES

Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

This state is extremely stable and well adapted to the Cool Central Desertic Basins and Plateaus climate. 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:

- Continuous Season-long Grazing will convert the plant community to the *Rhizomatous Wheatgrass/Big Sagebrush Plant Community*.
- Brush Management, Wild Fire followed by Moderate to Heavy Continuous Season-long Grazing will convert the plant community to the *Blue Grama Sod Plant Community*.

**Rhizomatous Wheatgrass/Big Sagebrush Plant Community**

This plant community is the result of moderate continuous season long grazing of the HCPC. Big sagebrush becomes 10-20% of production and rhizomatous wheatgrasses dominate. Birdfoot sagebrush remains at 5-10%. When compared to the HCPC, green needlegrass and bluebunch wheatgrass have decreased, rhizomatous wheatgrasses have increased.

The total annual production (air-dry weight) of this state is about 800 pounds per acre, but it can range from about 400 lbs. /acre in unfavorable years to about 1200 lbs. /acre in above average years.

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

Growth curve number: WY0901

Growth curve name: 10-14SE, UPLAND SITES

Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

The soil is not protected and erosion will increase if management is not changed. The biotic integrity may be reduced due to low vegetative production. The watershed is functioning at risk.

Transitional pathways leading to other plant communities are as follows:

- Brush Management followed by Prescribed Grazing or Long-term Prescribed Grazing will return this state to near *Historic Climax Plant Community (Rhizomatous Wheatgrass/ Green Needlegrass Plant Community)*.
- Heavy Continuous Season-long Grazing will convert the plant community to the *Big Sagebrush Plant Community*.

### Big Sagebrush Plant Community

This plant community is a result of heavy continuous season-long grazing. Severe hoof compaction typically occurs due to fine soil textures. Big sagebrush increases to 50-60% of the annual production. Cool season bunchgrasses are replaced with sparse short grasses such as Sandberg bluegrass, prairie junegrass, and blue grama. Rhizomatous wheatgrasses remain in the community. Annual forbs and cheatgrass become established.

The total annual production (air-dry weight) of this state is about 600 pounds per acre, but it can range from about 400 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: WY0901

Growth curve name: 10-14SE, UPLAND SITES

Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

This state is unstable and vulnerable to excessive erosion. The biotic integrity of this plant community is at risk or non-functioning. The watershed is usually at risk or non-functioning as bare ground increases.

Transitional pathways leading to other plant communities are as follows:

- Brush Management followed by Reseeding and Prescribed Grazing or Long-term Prescribed Grazing may eventually return this state to near *Historic Climax Plant Community (Rhizomatous Wheatgrass/ Green Needlegrass Plant Community)*.
- Brush Management followed by Heavy Continuous Season Long Grazing will convert this community to *Blue Grama Sod Plant Community*.

### Blue Grama Sod Plant Community

This plant community is a result of heavy continuous season-long grazing following brush management practices. Severe hoof compaction typically occurs due to fine soil textures. Blue grama

becomes the dominant species. Pricklypear, Sandberg bluegrass, woody aster, and birdfoot sagebrush are present along with rhizomatous wheatgrass.

The total annual production (air-dry weight) of this state is about 600 pounds per acre, but it can range from about 200 lbs./acre in unfavorable years to about 800bs./acre in above average years.

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

Growth curve number: WY0901

Growth curve name: 10-14SE, UPLAND SITES

Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

This state is unstable and vulnerable to excessive erosion. The biotic integrity of this plant community is at risk or non-functioning. The watershed is usually at risk or non-functioning as bare ground increases.

Transitional pathways leading to other plant communities are as follows:

- Mechanical Treatment followed by Long-term Prescribed Grazing may eventually return this state to near *Historic Climax Plant Community (Rhizomatous Wheatgrass/ Green Needlegrass Plant Community)*.
- Mechanical Treatment followed by Moderate Continuous Season Long Grazing will convert this community to *Big Sagebrush Plant Community*.

## Ecological Site Interpretations

### Animal Community – Wildlife Interpretations

**Rhizomatous Wheatgrass/Green Needlegrass Plant Community (HCPC):** The predominance of grasses in this plant community favors grazers and mixed feeders such as antelope and elk. Suitable thermal and escape cover is limited to topographical variance. When found adjacent to sagebrush dominated sites, this plant community may provide brood rearing and foraging opportunities for sage grouse, as well as lek sites. Other birds and mammals visit this site and may include meadowlarks, raptors, rabbits, and ground squirrels.

**Rhizomatous Wheatgrass/Big Sagebrush Plant Community:** This plant community may be useful for the same wildlife that would use the Historic Climax Plant Community. Additional cover is available in this community but foraging resources have been reduced.

**Blue Grama Sod Plant Community:** This plant community may be beneficial for the same wildlife that would use the Historic Climax Plant Community. However, the plant community composition is less diverse, and thus, less apt to meet the seasonal needs of these animals.

**Big Sagebrush Plant Community:** This plant community may be useful for the same wildlife that would use the Historic Climax Plant Community. Additional cover is available in this community but foraging resources have been reduced.

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA 34A, 10-14 inch High Plains Southeast

COMMON NAME/ GROUP NAME	SCIENTIFIC NAME	SCIENTIFIC SYMBOL	Cattle	Sheep	Horses	Mule Deer	Antelope	Elk
<b>GRASSES/GRASSLIKES</b>								
alkali bluegrass	Poa junifolia	POJU	UDUD	NDNU	UDUD	UDUU	UDUU	DPDD
alkali sacaton	Sporobolus airoides	SPA1	DDPU	UPDU	UPDU	UDUU	UDUU	UDPU
American mannegrass	Glyceria grandis	GLGR	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Baltic rush	Juncus balticus	JUBA	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
basin wildrye	Leymus cinereus	LEC4	DPDD	UPDU	DPDD	UDUU	UDUU	DPDD
Bloomer's ricegrass	Oryzopsis bloomeri	ORBL	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
blowout grass	Redfieldia flexuosa	REFL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
blue grama	Bouteloua gracilis	BOGR2	UDPU	UDPU	UDPU	UDUU	UDUU	UDUU
bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6	DPDD	UPDD	DPDD	UDUU	UDUU	DPDD
bluejoint reedgrass	Calamagrostis canadensis	CACA4	UPDU	UDUU	UDUU	UDUU	UDUU	UPDU
bottlebrush squirreltail	Elymus elymoides	ELELE	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Canada wildrye	Elymus canadensis	ELCA4	UDUU	NUNN	UDUU	NUNN	NUNN	UDUU
Canby bluegrass	Poa canbyi (syn. to Poa secunda)	POCA (POSE)	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
green needlegrass	Nassella viridula	NAV4	DPDD	UPDU	DPDD	UDUU	UDUU	DPDD
Indian ricegrass	Achnatherum hymenoides	ACHY	DPDD	UPDU	DPDD	UDUU	UDUU	DPDD
inland saltgrass	Distichlis spicata	DISP	NUUN	NUUN	NUUN	NUUN	NUUN	NUUN
little bluestem	Schizachyrium scoparium	SCSC	UDPU	UPDU	UDPU	UDUU	UDUU	UDPU
mat muhly	Muhlenbergia richardsonis	MURI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
mountain muhly	Muhlenbergia montana	MUMO	DDDD	DDDD	DDDD	DDDD	UUUU	DDDD
muttongrass	Poa fendleriana	POFE	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Nebraska sedge	Carex nebrascensis	CANE2	UDUD	UPND	UDUD	UPND	UPND	UDUD
needleandthread	Hesperostipa comata ssp. comata	HECO8	DPDD	UPDU	DPDD	UDUU	UDUU	DPDD
needleleaf sedge	Carex duriuscula	CADU6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
northern reedgrass	Calamagrostis stricta ssp. inexpansa	CAST3	UPDU	UDUU	UPDU	UDUU	UDUU	UPDU
Nuttall's alkaligrass	Puccinellia nuttalliana	PUNU2	DPUD	NPND	DPUD	UDUU	UDUU	DPDD
plains reedgrass	Calamagrostis montanensis	CAMO	UPDU	UDUU	UPDU	UDUU	UDUU	UPDU
prairie junegrass	Koeleria macrantha	KOMA	UUUU	NDNU	UUUU	UDUU	UDUU	UUUU
sand dropseed	Sporobolus cryptandrus	SPCR	NUUN	NUUN	NUUN	NUUN	NUUN	NUUN
Sandberg bluegrass	Poa secunda	POSE	NPUN	NPUN	NPUN	NDUN	NDUN	NPUN
slender wheatgrass	Elymus trachycaulus	ELTR7	DPDD	UPDD	DPDD	UDUU	UDUU	DPDD
thickspike wheatgrass	Elymus lanceolatus ssp. lanceolatus	ELLAL	DPDD	UPDD	DPDD	UDUU	UDUU	DPDD
threadleaf sedge	Carex filifolia	CAFI	UDUD	UPND	UDUD	UPND	UPND	UDUD
tufted hairgrass	Deschampsia caespitosa	DECA18	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
western wheatgrass	Pascopyrum smithii	PASM	DPDD	UPDD	DPDD	UDUU	UDUU	DPDD
<b>FORBS</b>								
American bistort	Polygonum bistortoides	POBI6	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
arrowgrass	Triglochin spp.	TRIGL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
aster	Eucephalus spp.	EUCEP2	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
biscuitroot	Lomatium spp.	LOMAT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
blue-eyed grass	Sisyrinchium spp.	SISYR	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
buckwheats	Eriogonum spp.	ERIOG	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
clovers	Trifolium spp.	TRIFO	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
deathcamas	Zigadenus venenosus	ZIVE	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
desert princesplume	Stanleya pinnata	STPI	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
dock	Rumex spp.	RUMEX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
fleabanes	Erigeron spp.	ERIGE2	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
fringed sagewort	Artemisia frigida	ARFR4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
hawksbeard	Crepis acuminata	CRAC2	UUUU	PPPP	UUUU	DDDD	DDDD	UUUU
Hoods phlox	Phlox hoodii	PHHO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
horsetails	Equisetum spp.	EQUIS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
iris	Iris spp.	IRIS	NUUN	NUUN	NNNN	NUUN	NUUN	NUUN
larkspur	Delphinium spp.	DELPH	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
milkvelch	Astragalus spp.	ASTRA	UDUU	UDUU	UDUU	UDUU	UDUU	UDUU
navelwort	Paronychia spp.	PARON	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
paintbrushes	Castilleja spp.	CAST	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
penstemons	Penstemon spp.	PENST	UPPU	UPPU	UPPU	UPPU	UPPU	UPPU
phlox	Phlox spp.	PHLOX	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
primrose	Primula spp.	PRIMU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
pussytoes	Antennaria spp.	ANTEN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
Rush skeletonplant	Lygodesmia juncea	LYJU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
sagebrush gilia (granite prickly phlox)	Leptodactylon pungens	LEPU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
sandwort	Arenaria spp.	ARENA	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
scarlet globemallow	Sphaeralcea coccinea	SPCO	UUUU	UPPU	UUUU	UPPU	UPPU	UPPU
scurfpea	Psoraleum spp.	PSORA2	NNNN	NUUN	NNNN	NUUN	NUUN	NUUN
stemless goldenweed	Stenotus acaulis	STAC	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
stonecrop	Sedum spp.	SEDUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
toadflax	Comandra umbellata	COUMP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
violets	Viola spp.	VIOLA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
water hemlock	Cicuta spp.	CICUT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
waterleaf	Hydrophyllum	HYDR04	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD
western ragweed	Ambrosia psilostachya	AMPS	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
western yarrow	Achillea millefolium	ACMI2	NUUN	NUUN	NNNN	NUUN	NUUN	NUUN
wild onion	Allium textile	ALTE	UDUU	UDUU	UDUU	UDUU	UDUU	UDUU
woodyaster	Xylorhiza spp.	XYLOR	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
<b>TREES, SHRUBS &amp; HALF-SHRUBS</b>								
antelope bitterbrush	Purshia tridentata	PUTR2	PDDD	PDDD	DDUD	PDDP	PDDP	PDDP
big sagebrush	Artemisia tridentata	ARTR2	UUUU	UUUU	UNNU	PPPP	PUPD	UUUU
birdfoot sagebrush	Artemisia pedatifida	ARPE6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
black sagebrush	Artemisia nova	ARNO4	UUUU	PPPP	UUUU	PPPP	PPPP	UUUU
chokecherry (toxic in large amounts)	Prunus virginiana	PRVI	DDDD	DDDD	DDDD	PPPP	DDDD	DDDD
currant	Ribes spp.	RIBES	DDDD	DDDD	DDDD	PPPP	DDDD	DDDD
dogwood	Cornus spp.	CORNU	DDDD	DDDD	DDDD	DDDD	UUUU	DDDD
fourwing saltbush	Atriplex canescens	ATCA2	PDDP	PDDP	PDDP	PDDP	PDDP	PDDP
Gardner's saltbush	Atriplex gardneri	ATGA	PDDP	PDDP	DUUD	PDDP	PDDP	PDDP
greasewood (toxic in large amounts)	Sarcobatus vermiculatus	SAVE4	DUUD	DUUD	DUUD	DUUD	DUUD	DUUD
green rabbitbrush	Chrysothamnus viscidiflorus	CHVI8	DUUD	DUUD	UNNU	PUPD	PUPD	DUUD
greennolly summercypress	Kochia americana	KOAM	UUUU	DDDD	UUUU	UUUU	UUUU	UUUU
junipers	Juniperus scopulorum	JUSC2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
limber pine	Pinus flexilis	PIFL2	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
plains cottonwood	Populus deltoides ssp. monilifera	PODEM	DUUD	DUUD	DUUD	DUUD	DUUD	DUUD
rubber rabbitbrush	Ericameria nauseosa	ERNA10	UUUU	DUUD	UUUU	UDUU	DUUD	DUUU
serviceberry	Amelanchier alnifolia	AMAL2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD
shadscale saltbush	Atriplex confertifolia	ATCO	UUUU	DDDD	UUUU	DDDD	UUUU	UUUU
shrubby cinquefoil	Dasiphora floribunda	DAFL3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
silver buffaloberry	Shepherdia argentea	SHAR	DUUU	DUUU	UUUU	UUUU	PUPD	DUUU
silver sagebrush	Artemisia cana	ARCA13	DUUD	DUUD	UNNU	PPPP	PDDP	DUUD
skunkbush sumac	Rhus trilobata	RHTR	DUUD	DUUD	UUUU	DUUD	DUUD	DUUD
spineless horsebrush	Tetradymia canescens	TECA2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
spiny horsebrush	Tetradymia spinosa	TESP2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
true mountainmahogany	Cercocarpus montanus	CEMO2	DDDD	PDDD	DDDD	UNNU	PDDP	PDDP
western snowberry	Symphoricarpos occidentalis	SYOC	UUUU	UUUU	UUUU	UUUU	DUUD	DUUU
wildrose	Rosa woodsii var. woodsii	ROWOW	UDUU	UDUU	NUUN	UDUU	UDUU	UDUU
willows	Salix spp.	SALIX	PUPD	PUPD	DUUD	UUUU	PUPD	PUPD
winterfat	Krascheninnikovia lanata	KRLA2	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP

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)
Rhizomatous Wheatgrass/Green Needlegrass (HCPC)	500-1300	0.3
Rhizomatous Wheatgrass/Big Sagebrush	400-1200	0.3
Blue Grama Sod	400-800	0.2
Big Sagebrush	200-800	0.2

\* - 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 C, with localized areas in hydrologic group D. Infiltration ranges from very slow to moderately slow. Runoff potential for this site varies from moderate to high depending on soil hydrologic group and ground cover. In many cases, lesser sloping areas with greater than 75% ground cover have the greatest potential for high infiltration and lower runoff. Greater sloping 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 hydrologic 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 and shrubs. Litter typically falls in place, and signs of movement are not common. Chemical and physical crusts are rare to non-existent. Cryptogammic crusts are present, but only cover 1-2% of the soil surface.

## Recreational Uses

This site provides limited hunting opportunities.

## Wood Products

No appreciable wood products are present on the site.

## Other Products

None noted.

## Supporting Information

### Associated Sites

Shallow Clayey	R034AY358WY
Sandy	R034AY350WY
Loamy	R034AY322WY
Clayey Overflow	R034AY306WY

### Similar Sites

R034AY104WY – Clayey (Cy) 7-9GR has lower production.  
R034AY322WY – Loamy (Ly) 10-14SE has coarser soil textures and more diverse grass species.

### Inventory Data References (narrative)

Information presented here has been derived from NRCS clipping data and other inventory data. Field observations from range trained personnel were also used. Other sources used as references include: USDA NRCS Water and Climate Center, USDA NRCS National Range and Pasture Handbook, and USDA NRCS Soil Surveys from various counties.

### Inventory Data References

<u>Data Source</u>	<u>Number of Records</u>	<u>Sample Period</u>	<u>State</u>	<u>County</u>
SCS-RANGE-417	69	1967-1988	WY	Carbon & others

### State Correlation

### Type Locality

### Field Offices

Baggs, Casper, Lander, Laramie, Medicine Bow, Riverton, Saratoga

### Relationship to Other Established Classifications

### Other References

### Site Description Approval

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State Range Management Specialist

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Date