

United States Department of Agriculture Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

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

Site ID: R034AY306WY

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

Physiographic Features

This site occurs on gently sloping to moderately sloping flood plains, canyons, and small valley bottoms along intermittent streams. This site is found on all exposures .

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

| | <u>Minimum</u> | <u>Maximum</u> |
|------------------------------------|----------------|----------------|
| Elevation (feet): | 5500 | 7500 |
| Slope (percent): | 0 | 10 |
| Water Table Depth (inches): | none | none |
| Flooding: | | |
| Frequency: | frequent | frequent |
| Duration: | very brief | very brief |
| Ponding: | | |
| Depth (inches): | 0 | 0 |
| Frequency: | none | none |
| Duration: | none | none |
| Runoff Class: | negligible | medium |

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> |
|---------------------------------------|----------------|----------------|---------------------------------|
| Frost-free period (days): | 57 | 149 | June 1 – September 16 |
| Freeze-free period (days): | 94 | 183 | May 15 – September 28 |
| Annual Precipitation (inches): | 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

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. Layers of the soil most influential to the plant community varies from 3 to 6 inches thick. These soils have slow permeability. The surface soil will vary from 2 to 5 inches deep and have one of the following textures: silty clay, sandy clay, clay, and the finer portions of silty clay loam, clay loam, and sandy clay loam. These soils may develop severe cracks. These areas receive additional water from overflow of intermittent streams or runoff from adjacent slopes.

Major Soils correlated to this site include:

Parent Material Kind: alluvium
Parent Material Origin: shale, calcareous
Surface Texture: clay loam, clay, silty clay loam, silty clay
Surface Texture Modifier: none
Subsurface Texture Group: clay
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: | moderately well drained | well drained |
| Permeability Class: | moderately slow | slow |
| Depth (inches): | 20 | >60 |
| Electrical Conductivity (mmhos/cm) ≤20": | 0 | 8 |
| Sodium Absorption Ratio ≤20": | 0 | 10 |
| Soil Reaction (1:1 Water) ≤20": | 6.6 | 8.4 |
| Soil Reaction (0.1M CaCl₂) ≤20": | NA | NA |
| Available Water Capacity (inches) ≤30": | 2.8 | 5.7 |
| Calcium Carbonate Equivalent (percent) ≤20": | 0 | 5 |

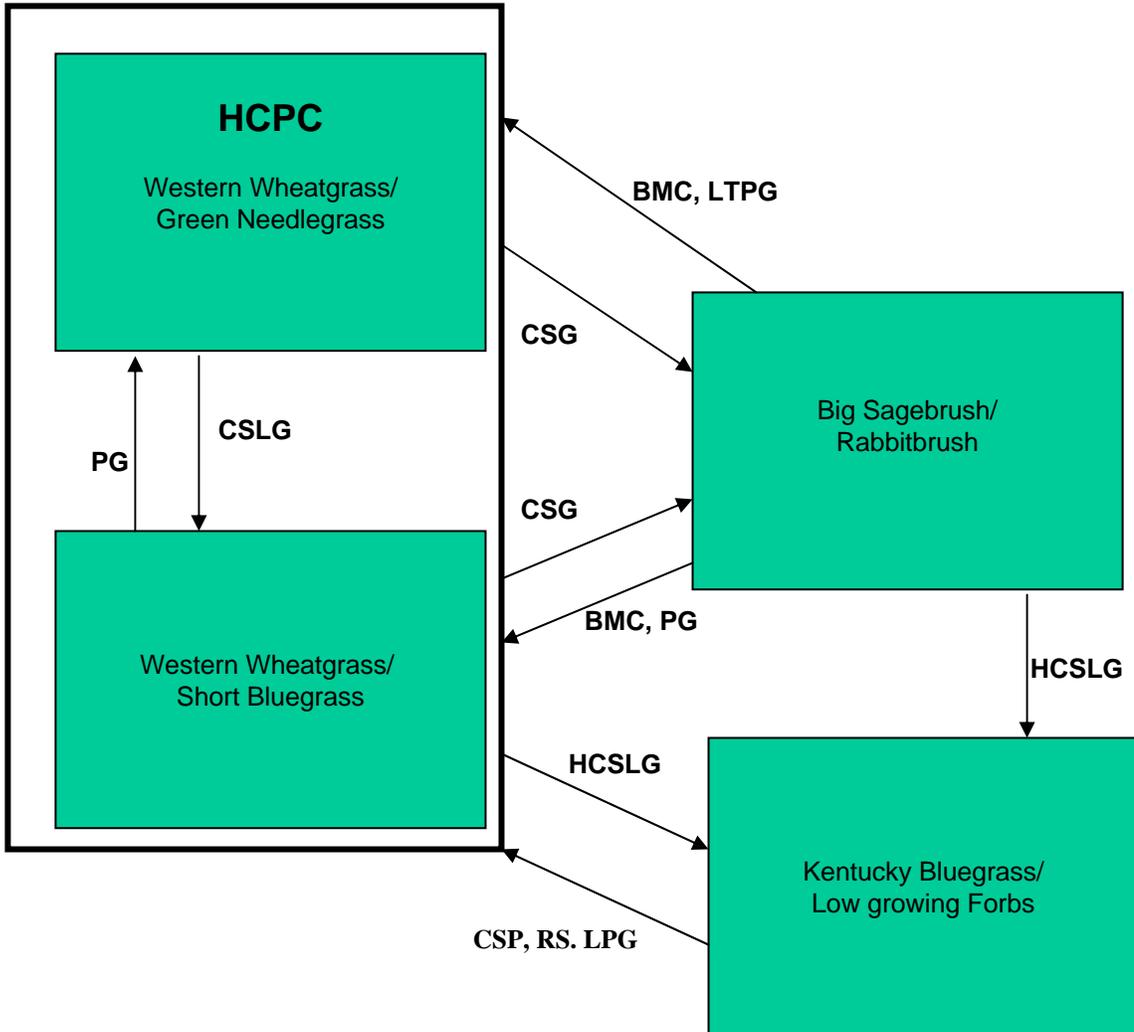
Plant Communities

Ecological Dynamics of the Site:

As this site deteriorates woody species such as big sagebrush and rabbitbrush will increase. As improper grazing continues Kentucky bluegrass and low growing forbs become dominant.

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) | | |
|-------------------------------------|------------------------------|-------------|---------------------------------|-----------------|---------------|
| | | | Group | lbs./acre | % Comp. |
| | | | Total: 1800 | | |
| GRASSES AND GRASS-LIKES | | | | | |
| GRASSES/GRASSLIKES | | | | | |
| Western wheatgrass | Pascopyrum smithii | PASM | 1 | 540 - 810 | 30 - 45 |
| Slender wheatgrass | Elymus trachycaulis | ELTR7 | 2 | 180 - 360 | 10 - 20 |
| Green needlegrass | Nassella viridula | NAVI4 | 3 | 180 - 360 | 10 - 20 |
| Basin wildrye | Leymus cinereus | LEC14 | 4 | 90 - 180 | 5 - 10 |
| MISC. GRASSES/GRASSLIKES | | | 5 | 90 - 360 | 5 - 20 |
| Bloomer's ricegrass | Achnatherum bloomeri | ACBL | 5 | 0 - 90 | 0 - 5 |
| Bottlebrush squirreltail | Elymus elymoides | ELEL5 | 5 | 0 - 90 | 0 - 5 |
| Canada wildrye | Elymus canadensis | ELCA4 | 5 | 0 - 90 | 0 - 5 |
| Canby bluegrass | Poa canbyi (syn. P. secunda) | POCA (POSE) | 5 | 0 - 90 | 0 - 5 |
| Prairie junegrass | Koeleria macrantha | KOMA | 5 | 0 - 90 | 0 - 5 |
| Sandberg bluegrass | Poa secunda | POSE | 5 | 0 - 90 | 0 - 5 |
| Threadleaf sedge | Carex filifolia | CAFI | 5 | 0 - 90 | 0 - 5 |
| other perennial grasses (native) | | 2GP | 5 | 0 - 90 | 0 - 5 |
| FORBS | | | 6 | 90 - 270 | 5 - 15 |
| Hawksbeard | Crepis acuminata | CRAC2 | 6 | 0 - 90 | 0 - 5 |
| Penstemons | Penstemon spp. | PENST | 6 | 0 - 90 | 0 - 5 |
| Phlox | Phlox spp. | PHLOX | 6 | 0 - 90 | 0 - 5 |
| Scarlet globemallow | Sphacelalcea coccinea | SPCO | 6 | 0 - 90 | 0 - 5 |
| Yarrows | Achillea spp. | ACHIL | 6 | 0 - 90 | 0 - 5 |
| other perennial forbs (native) | | 2FP | 6 | 0 - 90 | 0 - 5 |
| TREES/SHRUBS | | | | | |
| MISC. SHRUBS | | | 7 | 90 - 270 | 5 - 15 |
| Big sagebrush | Artemisia tridentata | ARTR2 | 7 | 0 - 90 | 0 - 5 |
| Birdfoot sagebrush | Artemisia pedatifida | ARPE6 | 7 | 0 - 90 | 0 - 5 |
| Green rabbitbrush | Chrysothamnus viscidiflorus | CHVI8 | 7 | 0 - 90 | 0 - 5 |
| Western snowberry | Symphoricarpos occidentalis | SYOC | 7 | 0 - 90 | 0 - 5 |
| other shrubs & half shrubs (native) | | | 7 | 0 - 90 | 0 - 5 |

This list of plants and their relative proportions are based on near normal year. 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.

Western Wheatgrass / Green Needlegrass Plant Community (HCPC)

The interpretive plant community for this site is the Historic Climax Plant Community. Potential vegetation is estimated at 70% grasses or grass-like plants, 10% forbs and 20% woody plants. The major grasses include western wheatgrass, slender wheatgrass, basin wildrye, and green needlegrass. Silver sagebrush is the major woody plant. Other woody plants that may occur include rabbitbrush and snowberry.

A typical plant composition for this state consists of western wheatgrass 30-45%, slender wheatgrass 10-20%, green needlegrass 10-20%, others grass species 5-10%. Perennial forbs 5-10% and woody plants 5-10%. Ground cover, by ocular estimate, varies from 40-50%.

The total annual production (air-dry weight) of this state is about 1800 pounds per acre, but it can range from about 1200 lbs./acre in unfavorable years to about 2200 lbs./acre in above average years.

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

Growth curve number: WY0902

Growth curve name: 10-14SE, EXTRA WATER SITES

Growth curve description: LL, OV, CYO, SL EXTRA WATER SITES

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | 0 | 0 | 5 | 15 | 35 | 35 | 10 | 0 | 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 Spring Grazing will convert the plant community to the *Big Sagebrush / Rabbitbrush plant community*.
- Continuous Season-long Grazing will convert the plant community to the *Western Wheatgrass/ Short Bluegrass Plant Community*.

Big Sagebrush / Rabbitbrush Plant Community

This plant community is the result of continuous spring grazing of the HCPC. Woody species become dominant and mid bunch grasses have decreased in production. Big sagebrush may exceed 40% of annual production.

The total annual production (air-dry weight) of this state is about 1000 pounds per acre, but it can range from about 400 lbs./acre in unfavorable years to about 1400 lbs./acre in above average years.

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

Growth curve number: WY0902

Growth curve name: 10-14SE, EXTRA WATER SITES
 Growth curve description: LL, OV, CYO, SL EXTRA WATER SITES

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | 0 | 0 | 5 | 15 | 35 | 35 | 10 | 0 | 0 | 0 | 0 |

(Monthly percentages of total annual growth)

The state is moderately stable and somewhat vulnerable to excessive erosion. The biotic integrity of this plant community is usually intact. However, it can be at risk depending on how far a shift has occurred in plant composition toward silver sagebrush. The watershed is usually functioning. However, it can become at risk due to increase in canopy cover of woody species and bare ground.

Transitional pathways leading to other plant communities are as follows:

- Brush Management (chemical) with Long-term Prescribed Grazing will return this state to near *Historic Climax Plant Community- Western Wheatgrass/ Green Needlegrass Plant Community*
- Brush Management (chemical) with Prescribed Grazing will convert the plant community to the *Western Wheatgrass/ Short Bluegrass Plant Community*.
- Heavy Continuous Season Long Grazing following Brush Management will lead the community towards the *Kentucky Bluegrass/ Low Growing Forb Plant Community*.

Western Wheatgrass / Short Bluegrass Plant Community

This plant community is a result of heavy continuous season-long grazing. Mid bunchgrasses such as basin wildrye and green needlegrass are replaced by low growing Sandberg, Canby and mutton bluegrasses. This site becomes susceptible to change caused by grazing practices and fire.

The total annual production (air-dry weight) of this state is about 1500 pounds per acre, but it can range from about 1000 lbs./acre in unfavorable years to about 2000 lbs./acre in above average years.

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

Growth curve number: WY0902
 Growth curve name: 10-14SE, EXTRA WATER SITES
 Growth curve description: LL, OV, CYO, SL EXTRA WATER SITES

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | 0 | 0 | 5 | 15 | 35 | 35 | 10 | 0 | 0 | 0 | 0 |

(Monthly percentages of total annual growth)

This state is moderately stable but may be vulnerable to excessive erosion. The biotic integrity of this community is still intact for the most part lacking structural diversity. The watershed is usually functioning but may be at risk if bare soil increases.

Transitional pathways leading to other plant communities are as follows:

- Prescribed Grazing will return this state to near *Historic Climax Plant Community- Western Wheatgrass/ Green Needlegrass Plant Community*
- Heavy Continuous Season Long Grazing following Brush Management will lead the community towards the *Kentucky Bluegrass/ Low Growing Forb Plant Community*.

Kentucky Bluegrass/ Low Growing Forb Plant Community

This plant community is a result of heavy continuous season-long grazing alone or in combination with brush management practices.

The total annual production (air-dry weight) of this state is about 1500 pounds per acre, but it can range from about 1000 lbs./acre in unfavorable years to about 2000 lbs./acre in above average years.

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

Growth curve number: WY0902

Growth curve name: 10-14SE, EXTRA WATER SITES

Growth curve description: LL, OV, CYO, SL EXTRA WATER SITES

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | 0 | 0 | 5 | 15 | 35 | 35 | 10 | 0 | 0 | 0 | 0 |

(Monthly percentages of total annual growth)

This state is somewhat stable but is vulnerable to excessive erosion and noxious weed invasion. The biotic integrity of this community is at risk. The watershed is usually functioning at risk but trending toward non functioning.

Transitional pathways leading to other plant communities are as follows:

- Chemical Seedbed Preparation, Reseeding, and Long Term Prescribed Grazing will return this state to near *Historic Climax Plant Community- Western Wheatgrass/ Green Needlegrass Plant Community*. Some Remnants of Introduced species will remain.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Western Wheatgrass/ Green Needlegrass Plant Community (HCPC): The predominance of grasses in this community favors foraging animals such as Elk, Antelope, and other small herbivores. Suitable thermal and escape cover for mule deer may be limited due to the low availability of woody species. When found adjacent to sagebrush dominated sites, this plant community may provide suitable brood rearing / foraging areas for sage grouse. Other birds that frequent this site include meadow larks, horned larks, and raptors. Many small grassland obligates will also be seen here.

Big Sagebrush/ Rabbitbrush Plant Community: This plant community is beneficial for the same wildlife species found with in the HCPC. The additional increase in Woody Species provides thermal and escape cover for deer, small mammals, and birds.

Western Wheatgrass/ Short Bluegrass 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.

Kentucky Bluegrass/ Low Growing Forb 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.

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 |
|---|--------------------------------------|----------------------|--------|-------|--------|-----------|----------|------|
| GRASSES/GRASSLIKES | | | | | | | | |
| 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 | MUR1 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| mountain muhly | Muhlenbergia montana | MUM0 | DDDD | DDDD | DDDD | DDDD | DDDD | 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 |
| FORBS | | | | | | | | |
| 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 | UDUU | UDUU | UPPU | UDDD | UUDD |
| scurfpea | Psoraleidum 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 |
| TREES, SHRUBS & HALF-SHRUBS | | | | | | | | |
| antelope bitterbrush | Purshia tridentata | PUTR2 | PDDD | PDDD | DDUD | PDDP | PDDP | PDDP |
| big sagebrush | Artemisia tridentata | ARTR2 | UUUU | UUUU | UNNU | PPPP | PUPD | DUUU |
| 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 |
| greenmolly 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 | PDDP | 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) |
|--|---------------------|-----------------------------|
| Western Wheatgrass/ Green Needlegrass (HCPC) | 1200-2200 | 0.6 |
| Big Sagebrush/ Rabbitbrush | 400-1400 | 0.33 |
| Western Wheatgrass/ Short Bluegrass | 1000-2000 | 0.5 |
| Kentucky Bluegrass/ Low Growing Forbs | 1000-2000 | 0.5 |

* - 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 and C. Infiltration ranges from moderate to rapid. Runoff potential for this site varies from moderate to high depending on soil hydrologic group and ground cover. In many cases, areas with greater than 75% ground cover have the greatest potential for high infiltration and lower runoff. 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. Cryptogammic 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 esthetic values that appeal to visitors.

Wood Products

No appreciable wood products are present on the site.

Other Products

None noted.

Supporting Information

Associated Sites

| | |
|----------------|-------------|
| Clayey | R034AY304WY |
| Loamy Overflow | R034AY326WY |
| Lowland | R034AY328WY |

Similar Sites

R034AY326WY – Loamy Overflow (LyO), 10-14SE has coarser soil textures.

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

State Range Management Specialist

Date