

United States Department of Agriculture Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

Site Name: Overflow (Ov), 10-14" P.Z., Foothills and Basins West

Site ID: R034AY230WY

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 and at elevations mostly above 7000 feet.

Landform: alluvial fans & stream terraces

Aspect: N/A

| | <u>Minimum</u> | <u>Maximum</u> |
|------------------------------------|-----------------------|----------------|
| Elevation (feet): | 6500 | 7500 |
| Slope (percent): | 0 | 10 |
| Water Table Depth (inches): | none within 60 inches | |
| Flooding: | | |
| Frequency: | frequent | frequent |
| Duration: | very brief | very brief |
| Ponding: | | |
| Depth (inches): | 0 | 0 |
| Frequency: | none | none |
| Duration: | none | none |
| Runoff Class: | negligible | moderate |

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 August 15. Some green up of cool season plants usually occurs in September depending upon fall moisture occurrences.

The following information is from the “Pinedale” climate station:

| | <u>Minimum</u> | <u>Maximum</u> | <u>5 yrs. out of 10 between</u> |
|--------------------------------|----------------|----------------|---------------------------------|
| Frost-free period (days): | 18 | 67 | July 5 – August 15 |
| Freeze-free period (days): | 53 | 97 | June 15 – August 24 |
| Annual Precipitation (inches): | <7.18 | >13.94 | (2 years in 10) |

Average annual precipitation: 11.29 inches

Average annual air temperature: 35.9°F (20.4°F Avg. Min. to 51.4°F Avg. Max.)

For detailed information visit the Natural Resources Conservation Service National Water and Climate Center at <http://www.wcc.nrcs.usda.gov/cgibin/state.pl?state=wy> website. Other climate stations representative of this precipitation zone include “Border 3 N ” and Kemmerer Wtr Trtmt” in Lincoln County; “Evanston 1 E” in Uinta County; and “Merna” in Sublette County.

Influencing Water Features

| <u>Wetland Description:</u> | <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 deep and strata range in texture from sandy loam to silty clay. These soils occur in playa areas or along stream courses which receive periodic overflow from adjacent slopes. Landscape position is very important to this site.

Major Soils correlated to this site include: Battlement and Cowestellen series.

Parent Material Kind: alluvium

Parent Material Origin: mixed

Surface Texture: sandy loam, loam, and silty clay

Surface Texture Modifier: gravelly, cobbly

Subsurface Texture Group: sandy loam, loam, silty clay

Surface Fragments ≤ 3” (% Cover): 0-25

Surface Fragments > 3” (%Cover): 0-15

Subsurface Fragments ≤ 3” (% Volume): 0-25

Subsurface Fragments > 3” (% Volume): 0-15

| | <u>Minimum</u> | <u>Maximum</u> |
|--|-----------------|------------------|
| Drainage Class: | moderately well | well |
| Permeability Class: | slow | moderately rapid |
| Depth (inches): | 20 | >60 |
| Electrical Conductivity (mmhos/cm) ≤20”: | 0 | 8 |
| Sodium Absorption Ratio ≤20”: | 0 | 5 |
| Soil Reaction (1:1 Water) ≤20”: | 7.2 | 8.8 |
| Soil Reaction (0.1M CaCl2) ≤20”: | NA | NA |
| Available Water Capacity (inches) ≤30”: | 3 | 4.5 |
| Calcium Carbonate Equivalent (percent) ≤20”: | 0 | 15 |

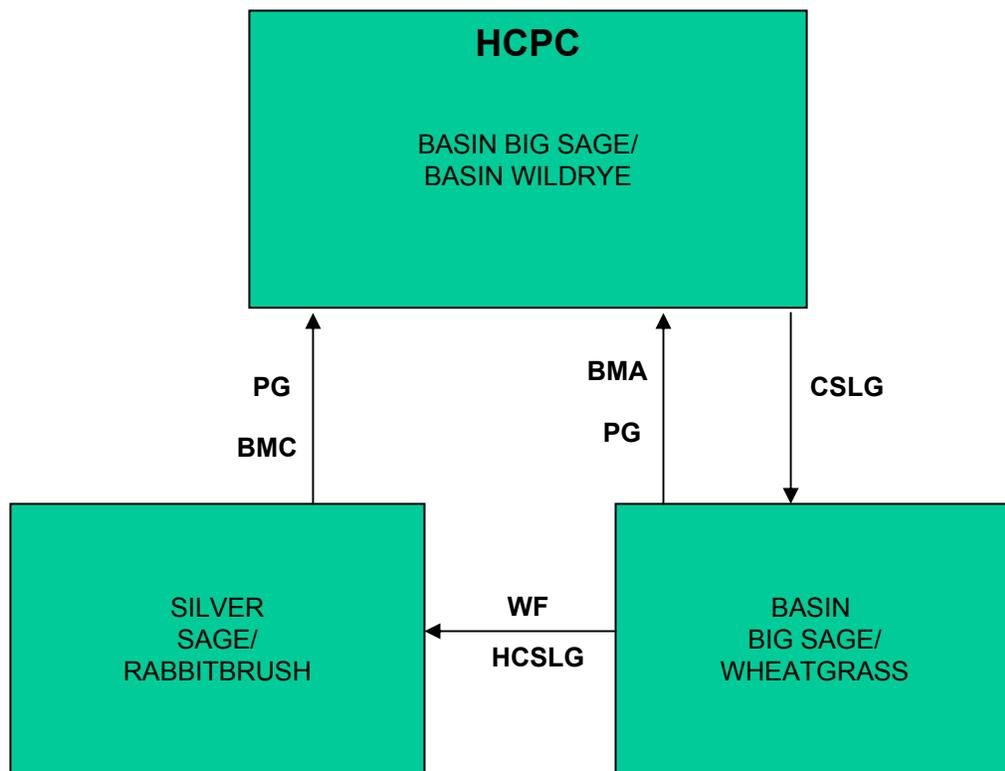
Plant Communities

Ecological Dynamics of the Site:

As this site deteriorates from improper grazing management, species such as rabbitbrush and basin big sagebrush will increase. Cool season bunchgrasses such as basin wildrye and needleandthread 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)

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 | | | | | |
| Rhizomatous wheatgrasses | Pascopyrum smithii | PASM | 1 | 270 - 450 | 15 - 25 |
| basin wildrye | Leymus cinereus | LECI4 | 2 | 180 - 360 | 10 - 20 |
| Canby bluegrass | Poa canbyi (syn. P. secunda) | POCA (POSE) | 3 | 180 - 360 | 10 - 20 |
| Needle and thread | Hesperostipa comata | HECO26 | 4 | 90 - 270 | 5 - 15 |
| Letterman needlegrass | Achnatherum nelsonii | ACLE9 | 5 | 90 - 270 | 5 - 15 |
| MISC. GRASSES/GRASSLIKES | | | 6 | 90 - 180 | 5 - 10 |
| Griffiths wheatgrass or | Elymus albicans | ELAL7 | 6 | 0 - 90 | 0 - 5 |
| Bluebunch wheatgrass | Pseudoroegneria spicata | PSSP6 | | | |
| bottlebrush squirreltail | Elymus elymoides | ELEL5 | 6 | 0 - 90 | 0 - 5 |
| Indian ricegrass | Achnatherum hymenoides | ACHY | 6 | 0 - 90 | 0 - 5 |
| mutton bluegrass | Poa fendleriana | POFE | 6 | 0 - 90 | 0 - 5 |
| Needleleaf sedge | Carex duriuscula | CADU6 | 6 | 0 - 90 | 0 - 5 |
| prairie junegrass | Koeleria macrantha | KOMA | 6 | 0 - 90 | 0 - 5 |
| Sandberg bluegrass | Poa secunda | POSE | 6 | 0 - 90 | 0 - 5 |
| slender wheatgrass | Elymus trachycaulis | ELTR7 | 6 | 0 - 90 | 0 - 5 |
| other perennial grasses (native) | | 2GP | 6 | 0 - 90 | 0 - 5 |
| FORBS | | | 7 | 180 - 360 | 10 - 20 |
| agoseris | Agoseris spp. | AGOSE | 7 | 0 - 90 | 0 - 5 |
| American licorice | Glycyrrhiza lepidota | GLLE3 | 7 | 0 - 90 | 0 - 5 |
| asters | Eucephalus spp. | EUCEP2 | 7 | 0 - 90 | 0 - 5 |
| bluebells | Mertensia spp. | MERTE | 7 | 0 - 90 | 0 - 5 |
| buckwheats | Eriogonum spp. | ERIOG | 7 | 0 - 90 | 0 - 5 |
| buttercups | Ranunculus spp. | RANUN | 7 | 0 - 90 | 0 - 5 |
| clovers | Trifolium spp. | TRIFO | 7 | 0 - 90 | 0 - 5 |
| fleabane | Erigeron spp. | ERIGE2 | 7 | 0 - 90 | 0 - 5 |
| larkspur | Delphinium spp. | DELPH | 7 | 0 - 90 | 0 - 5 |
| lupine | Lupinus spp. | LUPIN | 7 | 0 - 90 | 0 - 5 |
| milkvetches | Astragalus spp. | ASTRA | 7 | 0 - 90 | 0 - 5 |
| paintbrushes | Castilleja spp. | CAST | 7 | 0 - 90 | 0 - 5 |
| pussytoes | Antennaria rosea | ANRO2 | 7 | 0 - 90 | 0 - 5 |
| scarlet globemallow | Sphaeralcea coccinea | SPCO | 7 | 0 - 90 | 0 - 5 |
| starwort | Callitriche spp. | CALL16 | 7 | 0 - 90 | 0 - 5 |
| violet | Viola spp. | HELEN | 7 | 0 - 90 | 0 - 5 |
| western yarrow | Achillea lanulosa | ACHIL | 7 | 0 - 90 | 0 - 5 |
| other perennial forbs (native) | | 2FP | 7 | 0 - 90 | 0 - 5 |
| TREES/SHRUBS | | | | | |
| big sagebrush | Artemisia tridentata | ARTR2 | 8 | 18 - 180 | 1 - 10 |
| MISC. SHRUBS | | | 9 | 90 - 270 | 5 - 15 |
| chokecherry | Prunus virginiana var. virginiana | PRVIV | 9 | 0 - 90 | 0 - 5 |
| green rabbitbrush | Chrysothamnus viscidiflorus | CHVI8 | 9 | 0 - 90 | 0 - 5 |
| low sagebrush | Artemisia arbuscula | ARAR8 | 9 | 0 - 90 | 0 - 5 |
| rubber rabbitbrush | Ericameria nauseosa | ERNA10 | 9 | 0 - 28 | 0 - 5 |
| serviceberry | Amelanchier alnifolia | AMAL2 | 9 | 0 - 90 | 0 - 5 |
| silver sagebrush | Artemisia cana | ARCA13 | 9 | 0 - 90 | 0 - 5 |
| snowberry | Symphoricarpus occidentalis | SYOC | 9 | 0 - 90 | 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.

Basin Big Sage/Basin Wildrye Plant Community (HCPC)

The interpretive plant community for this site is the Historic Climax Plant Community. This state evolved with grazing by large herbivores and is suited for grazing by domestic livestock. Potential vegetation is estimated at 65% grasses or grass-like plants, 15% forbs and 20% woody plants. The major grasses include rhizomatous wheatgrass, basin wildrye, Canby bluegrass, needleandthread, and Letterman needlegrass. Other grasses may include mutton and Sandberg bluegrass, bluebunch and slender wheatgrass, bottlebrush squirreltail, Indian ricegrass, needleleaf sedge, and prairie junegrass. Basin big sagebrush is the dominant woody species. Other woody plants may include chokecherry, snowberry, serviceberry, silver and low sagebrush, and green and rubber rabbitbrush.

A typical plant community consists of rhizomatous wheatgrass 15-25%, basin wildrye 10-20%, Canby bluegrass 10-20%, needleandthread 5-15%, Letterman needlegrass 5-15%, other perennial grasses 5-10%, perennial forbs 10-20%, basin big sagebrush 1-10%, and 5-15% other woody plants. Ground cover, by ocular estimate, varies from 60-75%.

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: WY0302

Growth curve name: 10-14W, 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 plant community is extremely stable and well adapted to the Cool Central Desertic Basins and Plateaus climatic conditions. The diversity in plant species and additional moisture allows for high drought tolerance. 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 this plant community to the *Basin Big Sage/Wheatgrass State*.

Basin Big Sage/Wheatgrass Plant Community

This plant community evolved under continuous grazing by domestic livestock. Dominant grasses include rhizomatous wheatgrass, Kentucky bluegrass, and Sandberg bluegrass. Grasses/grasslikes of secondary importance include prairie junegrass and needleleaf sedge. Basin big sagebrush has increased, with annual production often exceeding 40%. Silver sagebrush and rabbitbrush are of secondary importance.

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: WY0302

Growth curve name: 10-14W, 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 basin big sagebrush. The watershed is usually functioning. However, it can become at risk when canopy cover of big sagebrush and/or bare ground increases.

Transitional pathways leading to other plant communities are as follows:

- Brush Management followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan will eventually result in a plant community very similar to the *Historic Climax Plant Community (Basin Big Sage/Basin Wildrye State)*. Care should be taken when planning brush management to consider wildlife habitat and critical winter ranges.
- Wildfire followed by Heavy Continuous Season-long Grazing will result in the *Silver Sage/Rabbitbrush State*.

Silver Sage/Rabbitbrush Plant Community

This plant community is the result of long-term improper grazing use after wildfire. Sprouting woody species such as silver sagebrush and rabbitbrush dominate this state. Noxious weeds such as Canada thistle and cheatgrass may invade. Basin wildrye and basin big sage have been lost.

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 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: WY0302

Growth curve name: 10-14W, 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 biotic integrity is threatened by the invasion of noxious weeds. The soil of this state is not protected. The watershed may produce excessive runoff.

Transitional pathways leading to other plant communities are as follows:

- Chemical Brush Management followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan over the long-term will return this state to near *Historic Climax Plant Community (Basin Big Sage/Basin Wildrye State)*. Care should be taken when planning brush management to consider wildlife habitat and critical winter ranges.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Basin Big Sage/Basin Wildrye Plant Community (HCPC): The high degree of plant species and structural diversity, additional moisture, and woody plants in this community favors a large variety of wildlife. Basin big sage provides suitable thermal and escape cover for mule deer, elk, and antelope. This plant community provides brood rearing/foraging areas as well as important wintering habitat for sage grouse. This community provides habitat for a wide array of small mammals such as jackrabbits, cottontail rabbits, mice, and voles so diverse prey populations are available for badgers, fox, coyotes, and raptors such as red-tail and Swainson's hawks. Birds such as sage sparrow, Brewer's sparrow, and the sage thrasher will utilize this community for nesting and foraging.

Basin Big Sage/Wheatgrass Plant Community: This plant community may be useful 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.

Silver Sage/Rabbitbrush Plant Community: The plant community composition is much less diverse, and thus, less apt to meet the seasonal needs of many wildlife dependent on big sagebrush.

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA34A, 10-14 inch West

| COMMON NAME/ GROUP NAME | SCIENTIFIC NAME | SCIENTIFIC SYMBOL | Cattle | Sheep | Horses | Mule Deer | Antelope | Elk |
|---|--------------------------------------|----------------------|--------|-------|--------|-----------|----------|------|
| GRASSES/GRASSLIKES | | | | | | | | |
| alkali bluegrass (aka Sandberg) | Poa secunda (syn. Poa juncifolia) | POSE (POJU) | UDUD | NDNU | UDUD | UDUU | UDUU | DPDD |
| alkali muhly | Muhlenbergia asperifolia | MUAS | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| alkali sacaton | Sporobolus airoides | SPA1 | UPDU | UPDU | UPDU | UUUU | UUUU | UPDU |
| 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 | LEC14 | DPDD | UPDU | DPDD | UDUU | UDUU | DPDD |
| bluebunch wheatgrass | Pseudoroegneria spicata | PSSP4 | DPDD | UPDD | DPDD | UDUU | UDUU | DPDD |
| bluejoint reedgrass (aka bluejoint) | Calamagrostis canadensis | CACA4 | UPDU | UDUU | UPDU | UDUU | UDUU | UPDU |
| bottlebrush squirreltail | Elymus elymoides | ELELE | DDDD | DDDD | DDDD | UUUU | UUUU | DDDD |
| Canby bluegrass (aka Sandberg) | Poa secunda (syn. Poa canbyi) | POSE (POCA) | PPPP | PPPP | PPPP | PPPP | PPPP | PPPP |
| Indian ricegrass | Achnatherum hymenoides | ACHY | DPPD | UPDU | DPPD | UDUU | UDUU | DPPD |
| inland saltgrass | Distichlis spicata | DISP | UUUN | UUUN | UUUN | UUUN | UUUN | UUUN |
| inland sedge | Carex interior | CAIN11 | DDDD | DDDD | DDDD | UUUU | UUUU | DDDD |
| Letterman needlegrass | Achnatherum lettermanii | ACLE9 | PPPP | PPPP | PPPP | PPPP | PPPP | PPPP |
| mat muhly | Muhlenbergia richardsonis | MURI | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| 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 | CAST13 | UPDU | UDUU | UPDU | UDUU | UDUU | UPDU |
| Nuttall's alkaligrass | Puccinellia nuttalliana | PUNU2 | DPUD | NPND | DPUD | UDUU | UDUU | DPPD |
| plains reedgrass | Calamagrostis montanensis | CAMO | UPDU | UDUU | UPDU | UDUU | UDUU | UPDU |
| prairie junegrass | Koeleria macrantha | KOMA | UDUU | NDNU | UDUU | UDUU | UDUU | UDUU |
| sand dropseed | Sporobolus cryptandrus | SPCR | UUUN | UUUN | UUUN | UUUN | UUUN | UUUN |
| Sandberg bluegrass | Poa secunda | POSE | NPUN | NPUN | NPUN | NDUN | NDUN | NPUN |
| slender wheatgrass | Elymus trachycaulus | ELTR7 | DPDD | UPDD | DPDD | UDUU | UDUU | DPDD |
| tall mannegrass (aka fowl) | Glyceria striata (syn. G. elata) | GLST (GLEL) | DDDD | UUUU | DDDD | UUUU | UUUU | DDDD |
| thickspike wheatgrass (aka streambank) | Elymus lanceolatus ssp. lanceolatus | LELL4 | DPDD | UPDD | DPDD | UDUU | UDUU | DPDD |
| threeawn | Aristida spp. | ARIS1 | NNNN | NNNN | NNNN | NNNN | NNNN | NNNN |
| tufted hairgrass | Deschampsia caespitosa | DECA18 | PPPP | PPPP | PPPP | PPPP | PPPP | PPPP |
| western wheatgrass | Pascopyrum smithii | PASM | DPDD | UPDD | DPDD | UDUU | UDUU | DPDD |
| FORBS | | | | | | | | |
| agoseris (pale) | Agoseris glauca | AGGL | DDDD | DDDD | PPPP | DDDD | DDDD | DDDD |
| American bistort | Polygonum bistortoides | POB16 | DDDD | DDDD | DDDD | DDDD | DDDD | DDDD |
| American licorice | Glycyrrhiza lepidota | GLLE3 | NNNN | UUUN | NNNN | UUUN | UUUN | UUUN |
| American vetch | Vicia americana | VIAM | UPPU | UPPU | UPPU | UPPU | UPPU | UPPU |
| arrowgrass | Triglochin spp. | TRIGL | TTTT | TTTT | TTTT | TTTT | TTTT | TTTT |
| aster | Eucephalus spp. | EUCEP2 | NNNN | NNNN | NNNN | NNNN | NNNN | NNNN |
| biscuitroot (aka desertparsley) | Lomatium spp. | LOMAT | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| bluebells | Mertensia | MERTE | DDDD | PPPP | DDDD | DDDD | DDDD | DDDD |
| blue-eyed grass | Sisyrinchium spp. | SISYR | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| buckwheat | Eriogonum spp. | ERIOG | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| buttercup | Ranunculus spp. | RANUN | DDDD | DDDD | DDDD | DDDD | DDDD | DDDD |
| chickweed | Cerastium spp. | CERAS | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| clover | Trifolium spp. | TRIFO | PPPP | PPPP | PPPP | PPPP | PPPP | PPPP |
| common tansy | Tanacetum vulgare | TAVU | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| cowparnsip, common | Heracleum | HERAC | PPPP | PPPP | PPPP | PPPP | PPPP | PPPP |
| deathcamas | Zigadenus venenosus | ZIVE | TTTT | TTTT | TTTT | TTTT | TTTT | TTTT |
| dock | Rumex spp. | RUMEX | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| elephanthead lousewort | Pedicularis groenlandica | PEGR2 | UUUU | DDDD | UUUU | DDDD | UUUU | UUUU |
| flax | Linum spp. | LINUM | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| fleabane | Erigeron spp. | ERIGE2 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| fringed sagewort | Artemisia frigida | ARFR4 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| goldenpea | Thermopsis spp. | THERM | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| goldenrod | Solidago spp. | SOLID | NUNN | NUNN | NNNN | NUNN | NUNN | NUNN |
| goldenweed | Pyrocoma | PYRRO | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| gromwell, com | Buglossoides arvensis | BUAR3 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| groundsel | Senecio spp. | SENEC | NNNN | NNNN | NNNN | NNNN | NNNN | NNNN |
| hawksbeard | Crepis acuminata | CRAC2 | UUUU | PPPP | UUUU | DDDD | DDDD | UUUU |
| Hoods phlox | Phlox hoodii | PHHO | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| horsetail | Equisetum spp. | EQUIS | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| iris, Rocky Mountain | Iris missouriensis | IRMI | UUUN | UUUN | NNNN | UUUN | UUUN | UUUN |
| larkspur | Delphinium spp. | DELPH | TTTT | TTTT | TTTT | TTTT | TTTT | TTTT |
| lupine (toxic at certain times) | Lupinus spp. | LUPIN | DDDD | DDDD | DDDD | DDDD | DDDD | DDDD |
| milkvetch | Astragalus spp. | ASTRA | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| mint, wild | Menthan arvensis | MEAR4 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| hailwort | Paronychia spp. | PARON | NNNN | NNNN | NNNN | NNNN | NNNN | NNNN |
| paintbrush | Castilleja spp. | CASTI2 | DDDD | DDDD | DDDD | DDDD | DDDD | DDDD |
| penstemon | Penstemon spp. | PENST | UPPU | UPPU | UPPU | UPPU | UPPU | UPPU |
| phacelia | Phacelia spp. | PHACE | DDDD | DDDD | DDDD | DDDD | DDDD | DDDD |
| phlox | Phlox spp. | PHLOX | NNNN | NNNN | NNNN | NNNN | NNNN | NNNN |
| plaintain | Plantago spp. | PLANT | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| povertyweed | Iva axillaris | IVAX | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| primrose | Primula spp. | PRIMU | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| princesplume | Stanleya spp. | STANL | TTTT | TTTT | TTTT | TTTT | TTTT | TTTT |
| pussytoes | Antennaria spp. | ANTEN | NNNN | NNNN | NNNN | NNNN | NNNN | NNNN |
| 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 | UUUU | UUUU | UPPU | UUUU | UUUU |
| shooting star | Dodecatheon spp. | DODEC | DDDD | DDDD | UUUU | DDDD | UUUU | DDDD |
| starwort | Stellaria spp. | STELL | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| stonecrop | Sedum spp. | SEDUM | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| stoneseed | Lithospermum spp. | LITHO3 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| sweetroot | Osmorhiza | OSMOR | DDDD | DDDD | DDDD | DDDD | DDDD | DDDD |
| toadflax, pale bastard | Comandra umbellata | COUMP | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| violet | Viola spp. | VIOLA | DDDD | DDDD | DDDD | DDDD | DDDD | DDDD |
| water hemlock | Cicuta spp. | CICUT | TTTT | TTTT | TTTT | TTTT | TTTT | TTTT |
| waterleaf | Hydrophyllum | HYDRO4 | DDDD | PPPP | DDDD | PPPP | PPPP | DDDD |
| western yarrow | Achillea millefolium | ACMI2 | UUUN | UUUN | NNNN | UUUN | UUUN | UUUN |
| wild onion | Allium spp. | ALLIU | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| woodyaster, smooth | Xylorhiza glabruscula | XYGL | TTTT | TTTT | TTTT | TTTT | TTTT | TTTT |
| TREES, SHRUBS & HALF-SHRUBS | | | | | | | | |
| alkali sagebrush (aka early or little) | Artemisia arbuscula ssp. longiloba | ARARL | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| antelope bitterbrush | Purshia tridentata | PUTR2 | PDDD | PDDD | DDDD | PDDP | PDDP | PDDP |
| big sagebrush | Artemisia tridentata | ARTR2 | UUUU | UUUU | UNNU | PPPP | PDDP | UUUU |
| birdfoot sagebrush | Artemisia pedatifida | ARPE6 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| black sagebrush | Artemisia nova | ARNO4 | UUUU | PPPP | UUUU | PPPP | PPPP | UUUU |
| boxelder | Acer negundo | ACNE2 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA34A, 10-14 inch West

| | | | | | | | | |
|--|------------------------------------|--------|------|------|------|------|------|------|
| bud sawewort | Picrothamnus desertorum | PIDE4 | PPPP | PPPP | DDDD | PPPP | PPPP | PPPP |
| chokecherry (toxic in large amounts) | Prunus virginiana | PRVI | DDDD | DDDD | DDDD | PPPP | DDDD | DDDD |
| dogwood | Cornus spp. | CORNU | DDDD | DDDD | DDDD | DDDD | UUUU | DDDD |
| fourwing saltbush | Atriplex canescens var. canescens | ATCAC | 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 (aka low or douglas) | Chrysothamnus viscidiflorus | CHVI8 | DUUD | DUUD | UNNU | PUDD | PUDD | DUUD |
| greenmolly summercypress | Kochia americana | KOAM | UUUU | DDDD | UUUU | UUUU | UUUU | UUUU |
| juniper | Juniperus spp. | JUNIP | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| limber pine | Pinus flexilis | PIFL2 | NNNN | NNNN | NNNN | NNNN | NNNN | NNNN |
| low sagebrush (aka little) | Artemisia arbuscula | ARAR8 | DDDD | DDDD | UUUU | DDDD | DDDD | DDDD |
| poplar-cottonwood & aspen(sprouts) | Populus spp. | POPUL | PPPP | PPPP | PPPP | PPPP | UUUU | PPPP |
| rubber rabbitbrush | Ericameria nauseosa | ERNA10 | UUUU | DUUD | UUUU | UDDU | DUUD | DUUU |
| serviceberry (aka saskatoon) | 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 | PUDP | DUUU |
| silver sagebrush | Artemisia cana | ARCA13 | DUUD | DUUD | UNNU | PPPP | PDDP | DUUD |
| skunkbush sumac | Rhus trilobata var. trilobata | RHTRT | DUUD | DUUD | UUUU | DUUD | DUUD | DUUD |
| spineless horsebrush | Tetradymia canescens | TECA2 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| spiny hopsage | Grayia spinosa | GRSP | UUUU | DDDD | DDDD | UUUU | DDDD | UUUU |
| spiny horsebrush (aka shortspine) | Tetradymia spinosa | TESP2 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| true mountainmahogany (aka alderleaf) | Cercocarpus montanus var. montanus | CEMOM4 | DDDD | PDDD | DDDD | UNNU | PDDP | PDDD |
| water birch | Betula occidentalis | BECC2 | UUUU | UUUU | UUUU | UUUU | UUUU | UUUU |
| western snowberry | Symphoricarpos occidentalis | SYOC | UUUU | UUUU | UUUU | UUUU | UDDU | DUUU |
| wildrose | Rosa woodsii var. woodsii | ROWOW | UDDU | UDDU | NUUN | UDDU | UDDU | UDDU |
| willow | Salix spp. | SALIX | PUDP | PUDP | DUUD | UUUU | PUDP | PUDP |
| 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.

| Plant Community | Production (lb./ac) | Carrying Capacity* (AUM/ac) |
|-------------------------------------|---------------------|-----------------------------|
| Basin Big Sage/Basin Wildrye (HCPC) | 1200-2200 | .6 |
| Basin Big Sage/Wheatgrass | 400-1400 | .3 |
| Silver Sage/Rabbitbrush | 200-1000 | .15 |

* - 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

| | |
|--------------|-------------|
| Loamy | R034AY222WY |
| Lowland | R034AY228WY |
| Subirrigated | R034AY274WY |

Similar Sites

R034AY206WY – Clayey Overflow (CyO) 10-14W has heavier soil textures and more rhizomatous wheatgrasses.

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. Those involved in developing this site include: Bill Christensen, Range Management Specialist, NRCS; Karen Clause, Range Management Specialist, NRCS; and Everet Bainter, Range Management Specialist, NRCS. 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 | 15 | 1966-1988 | WY | Sublette & others |

State Correlation

Type Locality

Field Offices

Baggs, Cokeville, Rock Springs/Farson, Lyman, Pinedale

Relationship to Other Established Classifications

Other References

Site Description Approval

State Range Management Specialist

Date