

## United States Department of Agriculture Natural Resources Conservation Service

### Ecological Site Description

**Site Type:** Rangeland

**Site Name:** Stony (St), 15-19" P.Z., Foothills and Mountains West

**Site ID:** R043BY272WY

**Major Land Resource Area:** 43B-Central Rocky Mountains

### Physiographic Features

This site usually occurs on gentle mountain slopes, valley bottoms, and outwash fans.

**Landform:** hill sides, alluvial fans, ridges & stream terraces      **Aspect:** all

	<u>Minimum</u>	<u>Maximum</u>
<b>Elevation (feet):</b>	5600	8300
<b>Slope (percent):</b>	0	30
<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>	negligible	moderate

### Climatic Features

Annual precipitation ranges from 15-19 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.

Prevailing winds are from the southwest, and strong winds are less frequent than over other areas of Wyoming. Occasional storms, however, can bring brief periods of high winds with gusts exceeding 50 mph.

Growth of native cool season plants begins about May 15 and continues to about August 15.

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

	<u>Minimum</u>	<u>Maximum</u>	<u>5 yrs. out of 10 between</u>
Frost-free period (days):	12	60	July 9 – August 12
Freeze-free period (days):	42	100	June 20 – August 26

Annual Precipitation (inches): <11.98 >19.69 (2 years in 10)

Mean annual precipitation: 17.00 inches

Mean annual air temperature: 38.9°F (23.3°F Avg. Min. to 54.5°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 "Afton" in Lincoln County; and "Darwin Ranch" in Teton County.

## 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 to deep (greater than 20" to bedrock), well-drained, and stony and/or bouldery. Coarse fragments are greater than 35 percent, by volume, within the first 20 inches of soil, usually increasing with depth. Roots penetrate the soil material to at least 20 inches in most places.

Major Soil Series correlated to this site includes: Dra, Rammel, and Ridgecrest series.

Parent Material Kind: alluvium ,colluvium

Parent Material Origin: mixed

Surface Texture: loam

Surface Texture Modifier: gravelly

Subsurface Texture Group: loamy (skeletal)

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

Surface Fragments > 3" (%Cover): 0-5

Subsurface Fragments ≤ 3" (% Volume): 10-30

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

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	well	somewhat excessive
Permeability Class:	moderately slow	moderately rapid
Depth (inches):	20	60
Electrical Conductivity (mmhos/cm) ≤20":	0	4
Sodium Absorption Ratio ≤20":	0	0
Soil Reaction (1:1 Water) ≤20":	6.6	8.4
Soil Reaction (0.1M CaCl <sub>2</sub> ) ≤20":	0	0
Available Water Capacity (inches) ≤30":	2	4
Calcium Carbonate Equivalent (percent) ≤20":	0	15

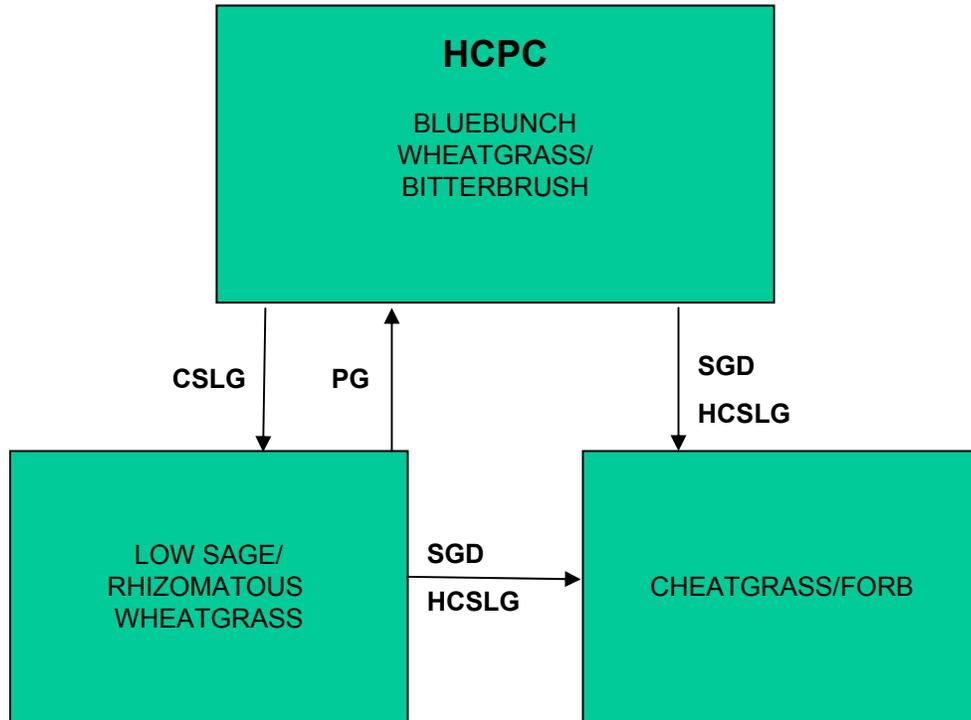
## Plant Communities

### Ecological Dynamics of the Site:

As this site deteriorates, species such as rhizomatous wheatgrass, Idaho fescue, timber oatgrass, green rabbitbrush, and low sagebrush will increase. Bluebunch wheatgrass, spike fescue, and bitterbrush will decrease in frequency and production. Cheatgrass and annual forbs often invade. This site has relatively low productivity potential, and is not well suited to grazing improvement practices unless treated as part of a larger unit containing more productive areas.

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.
			<b>Total: 700</b>		
<b>GRASSES AND GRASS-LIKES</b>					
<b>GRASSES/GRASSLIKES</b>					
bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6	1	70 - 245	10 - 35
Idaho fescue	Festuca idahoensis	FEID	2	35 - 70	5 - 10
rhizomatous wheatgrass	Pascopyrum smithii	PASM	3	35 - 70	5 - 10
spike fescue	Leucopoa kingii	LEKI2	4	35 - 70	5 - 10
timber oatgrass	Danthonia intermedia	DAIN	5	35 - 70	5 - 10
<b>MISC. GRASSES/GRASSLIKES</b>			<b>6</b>	<b>70 - 140</b>	<b>10 - 20</b>
basin wildrye	Leymus cinereus	LECI4	6	0 - 35	0 - 5
big bluegrass	Poa ampla (syn. P. secunda)	POAM (POSE)	6	0 - 35	0 - 5
bottlebrush squirreltail	Elymus elymoides	ELEL5	6	0 - 35	0 - 5
Canby bluegrass	Poa canbyi (syn. P. secunda)	POCA (POSE)	6	0 - 35	0 - 5
Columbia needlegrass	Achnatherum nelsonii	ACNE9	6	0 - 35	0 - 5
Letterman needlegrass	Achnatherum lettermanii	ACLE9	6	0 - 35	0 - 5
mountain muhly	Muhlenbergia montana	MUMO	6	0 - 35	0 - 5
mutton bluegrass	Poa fendleriana	POFE	6	0 - 35	0 - 5
oniongrass	Melica bulbosa	MEBU	6	0 - 35	0 - 5
prairie junegrass	Koeleria macrantha	KOMA	6	0 - 35	0 - 5
Sandberg bluegrass	Poa secunda	POSE	6	0 - 35	0 - 5
slender wheatgrass	Elymus trachycaulis	ELTR7	6	0 - 35	0 - 5
Threadleaf sedge	Carex filifolia	CAFI	6	0 - 35	0 - 5
other perennial grasses (native)		2GP	6	0 - 35	0 - 5
<b>FORBS</b>			<b>7</b>	<b>35 - 70</b>	<b>5 - 10</b>
American vetch	Vicia americana	VIAM	7	0 - 35	0 - 5
Aster	Eucephalus & Symphyotrichum spp.	EUCEP2/ SYMPH4	7	0 - 35	0 - 5
balsamroot	Balsamorhiza sagittata	BASA3	7	0 - 35	0 - 5
biscuitroot	Lomatium spp.	LOMAT	7	0 - 35	0 - 5
Bitterroot	Lewisia rediviva ssp. rediviva	LERER	7	0 - 35	0 - 5
bluebell	Mertensia spp.	MERTE	7	0 - 35	0 - 5
buckwheat	Eriogonum spp.	ERIOG	7	0 - 35	0 - 5
clover	Trifolium spp.	TRIFO	7	0 - 35	0 - 5
fleabane	Erigeron spp.	ERIGE2	7	0 - 35	0 - 5
Hawksbeard	Crepis spp.	CREPI	7	0 - 35	0 - 5
Locoweed	Oxytropis spp.	OXYTR	7	0 - 35	0 - 5
lupine	Lupinus spp.	LUPIN	7	0 - 35	0 - 5
milkvetch	Astragalus spp.	ASTRA	7	0 - 35	0 - 5
mountain dandelion	Agoseris spp.	AGOSE	7	0 - 35	0 - 5
Oregon grape	Mahonia repens	MARE11	7	0 - 35	0 - 5
paintbrush	Castilleja spp.	CAST	7	0 - 35	0 - 5
Penstemon	Penstemon spp.	PENST	7	0 - 35	0 - 5
Phacelia	Phacelia spp.	PHACE	7	0 - 35	0 - 5
phlox	Phlox spp.	PHLOX	7	0 - 35	0 - 5
Pussytoes	Antennaria spp.	ANTEN	7	0 - 35	0 - 5
sandwort	Arenaria spp.	ARENA	7	0 - 35	0 - 5
Sego lily	Calochortus nuttallii	CANU3	7	0 - 35	0 - 5
stonecrop	Sedum spp.	SEDUM	7	0 - 35	0 - 5
stoneseed	Lithospermum spp.	LITHO3	7	0 - 35	0 - 5
Yarrow (common & western)	Achillea millefolium	ACMI2	7	0 - 35	0 - 5
other perennial forbs (native)		2FP	7	0 - 35	0 - 5
<b>TREES/SHRUBS</b>					
bitterbrush	Purshia tridentata	PUTR2	8	7 - 70	1 - 10
low sagebrush	Artemisia arbuscula	ARAR8	9	7 - 70	1 - 10
<b>MISC. SHRUBS</b>			<b>10</b>	<b>35 - 105</b>	<b>5 - 15</b>
big sagebrush	Artemisia tridentata	ARTR2	10	0 - 35	0 - 5
black sagebrush	Artemisia nova	ARNO4	10	0 - 35	0 - 5
green rabbitbrush	Chrysothamnus viscidiflorus	CHVI8	10	0 - 35	0 - 5
Raspberry	Rubus idaeus	RUID	10	0 - 35	0 - 5
serviceberry	Amelanchier alnifolia	AMAL2	10	0 - 35	0 - 5
snowbrush ceanothus	Ceanothus velutinus	CEVE	10	0 - 35	0 - 5
threetip sagebrush	Artemisia tripartita	ARTR4	10	0 - 35	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.

#### Bluebunch Wheatgrass/Bitterbrush Plant Community (HCPC)

The interpretive plant community for this site is the Historic Climax Plant Community. Potential vegetation is estimated at 55% grasses or grass-like plants, 10% forbs, and 35% woody plants. The major grasses include bluebunch wheatgrass, Idaho fescue, spike fescue, and rhizomatous wheatgrass. Other grasses include big, Canby, and mutton bluegrass, Letterman and Columbia needlegrass, basin wildrye, slender wheatgrass, mountain muhly, oniongrass, and prairie junegrass. The major woody plants are bitterbrush, low and mountain big sagebrush, green rabbitbrush, and serviceberry. Other woody plants may include black and threetip sagebrush and snowbrush ceanothus.

A typical plant composition for this state consists of bluebunch wheatgrass 10-35%, Idaho fescue 5-10%, spike fescue 5-10%, rhizomatous wheatgrass 5-10%, other grasses and grass-like plants 10-20%, perennial forbs 5-10%, bitterbrush 1-10%, low sagebrush 1-10%, and up to 15% other woody plants. Ground cover, by ocular estimate, varies from 35-40%.

The total annual production (air-dry weight) of this state is about 700 pounds per acre, but it can range from about 500 lbs./acre in unfavorable years to about 900 lbs./acre in above average years.

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

Growth curve number: WY0201

Growth curve name: 15-19W, UPLAND SITES

Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	35	30	20	5	0	0	0

(Monthly percentages of total annual growth)

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

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

- Severe Ground Disturbance with Heavy, Continuous Season-long Grazing will convert this plant community to the *Cheatgrass/Forb State*.
- Continuous Season-long Grazing will convert the plant community to the *Low Sage/Rhizomatous Wheatgrass State*.

#### Low Sage/Rhizomatous Wheatgrass Plant Community

This plant community is a result of improper grazing management practices. The stand is composed of almost entirely low sage and rhizomatous wheatgrass with such forbs as phlox and goldenweed

present as well. This state is commonly found on exposed, windswept ridges that are subject to harsh climatic conditions as well as severe winter use due to their exposed nature.

The total annual production (air-dry weight) of this state is about 400 pounds per acre, but it can range from about 200 lbs./acre in unfavorable years to about 700 lbs./acre in above average years.

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

Growth curve number: WY0201

Growth curve name: 15-19W, UPLAND SITES

Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	35	30	20	5	0	0	0

(Monthly percentages of total annual growth)

The state is stable and protected from excessive erosion. The biotic integrity of this plant community is usually intact, however forage value will decrease and wildlife values will shift toward different species. The watershed is functioning.

Transitional pathways leading to other plant communities are as follows:

- Severe Ground Disturbance followed by Heavy, Continuous Season-long Grazing will convert this plant community to the *Cheatgrass/Forb State*.
- Prescribed Grazing will return this state to near *Historic Climax Plant Community (Bluebunch Wheatgrass/Bitterbrush State)*.

### Cheatgrass/Forb Plant Community

This plant community is the result of wildfire or severe ground disturbance followed by improper grazing management practices. Cheatgrass invades, effectively decreasing the fire interval (fewer years between fire events) and limiting the ability for non-sprouting woody plants to reestablish. Other species include green rabbitbrush and rhizomatous wheatgrass.

The total annual production (air-dry weight) of this state is about 250 pounds per acre, but it can range from about 100 lbs./acre in unfavorable years to about 600 lbs./acre in above average years.

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

Growth curve number: WY0201

Growth curve name: 15-19W, UPLAND SITES

Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	0	10	35	30	20	5	0	0	0

(Monthly percentages of total annual growth)

The state is unstable and vulnerable to excessive erosion. The biotic integrity of this plant community is at risk depending on how far a shift has occurred in plant composition toward cheatgrass and annual forbs. The watershed is usually at risk or nonfunctioning due to an increase in bare ground.

Transitional pathways leading to other plant communities are as follows:

It is not often practicable or economically feasible to convert this plant community at the present time.

## Ecological Site Interpretations

### Animal Community – Wildlife Interpretations

**Bluebunch Wheatgrass/Bitterbrush Plant Community (HCPC):** When blown clear, this plant community provides limited winter forage for large grazers when snow depth prevents foraging on other sites. Otherwise, it is mostly used by wildlife in transit to other habitats.

**Low Sage/Rhizomatous 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.

**Cheatgrass/Forb Plant Community:** This plant community exhibits a low level of plant species diversity. In most cases, it is not a desirable plant community to select as a wildlife habitat management objective.

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA 43B, 15-19W

COMMON NAME/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Cattle	Sheep	Horses	Mule Deer	Antelope	Elk	Moose
<b>GRASSES/GRASSLIKES</b>									
Alkali bluegrass	<i>Poa juncea</i> (syn. to <i>P. secunda</i> )	POJU	DDDD	PPPP	DDDD	PPPP	PPPP	DDDD	DDDD
Alkali muhly	<i>Muhlenbergia asperifolia</i>	MUAS	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Alkali sacaton	<i>Sporobolus airoides</i>	SPAI	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Alpine timothy	<i>Phleum alpinum</i>	PHAL2	PPPP	PPPP	PPPP	DDDD	UUUU	PPPP	DDDD
American mannagrass	<i>Glyceria grandis</i>	GLGR	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD	DDDD
Baltic rush	<i>Juncus balticus</i>	JUBA	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD	UUUU
Basin wildrye	<i>Elymus cinereus</i>	LEC14	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP	DDDD
Beaked sedge	<i>Carex rostrata</i>	CARO6	DDUD	UUUU	DDUD	UUUU	UUUU	DDUD	DDUD
Bearded wheatgrass	<i>Elymus trachycaulus</i> ssp. <i>subsecundus</i>	ELTRS	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Bentgrass	<i>Agrostis</i> spp.	AGROS2	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Big bluegrass	<i>Poa ampla</i> (syn. to <i>Poa secunda</i> )	POAM	PPPP	DDDD	PPPP	PPPP	PPPP	PPPP	PPPP
Blue wildrye	<i>Elymus glaucus</i>	ELGL	PPPP	DDDD	PPPP	DDDD	UUUU	PPPP	DDDD
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	FSSP6	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP	DDDD
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>	CACA4	PPPP	DDDD	PPPP	UUUU	UUUU	PPPP	DDDD
Bottlebrush squirreltail	<i>Elymus elymoides</i>	ELELE	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	NNNN
Bulrush	<i>Scirpus</i> spp.	SCIRP	DDDD	UUUU	UUUU	UUUU	UUUU	DDDD	DDDD
California oatgrass	<i>Danthonia californica</i>	DACA3	PPPP	DDDD	DDDD	DDDD	DDDD	PPPP	DDDD
Canby bluegrass	<i>Poa canbyi</i> (syn. to <i>Poa secunda</i> )	POCA	PPPP	DPDD	DPDD	DPDD	DPDD	PPPP	DPDD
Cattail	<i>Typha</i> spp.	TYPHA	DUUD	DUUD	DUUD	DUUD	DUUD	DUUD	DUUD
Columbia needlegrass	<i>Achnatherum nelsonii</i>	ACNE9	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Cusick bluegrass	<i>Poa cusickii</i>	POCU3	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Dunehead sedge	<i>Carex phaeocephala</i>	CAPH2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fowl bluegrass	<i>Poa palustris</i>	POPA2	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Green needlegrass	<i>Nassella viridula</i>	NAV14	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Idaho fescue	<i>Festuca idahoensis</i>	FEID	DDPD	DDPD	DDPD	DDDD	DDDD	DDPD	DDDD
Indian ricegrass	<i>Achnatherum hymenoides</i>	ACHY	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Inland saltgrass	<i>Distichlis spicata</i>	DISP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Inland sedge	<i>Carex interior</i>	CAIN11	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD	DDDD
Letterman needlegrass	<i>Achnatherum lettermanii</i>	ACLE9	UPUU	UUUU	UUUU	DDDD	DDDD	DDDD	DDDD
Little barley	<i>Hordeum pusillum</i>	HOPU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Mat muhly	<i>Muhlenbergia richardsonis</i>	MURI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Montana wheatgrass	<i>Elymus albicans</i>	ELAL7	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Mountain brome	<i>Bromus marginatus</i>	BRMA4	PPPP	PPPP	DDDD	DDDD	NNNN	PPPP	DDDD
Mountain muhly	<i>Muhlenbergia montana</i>	MUMO	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Mutton bluegrass	<i>Poa fenderiana</i>	POFE	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Nebraska sedge	<i>Carex nebrascensis</i>	CANE2	PPPP	PPPP	PPPP	PPPP	DDDD	PPPP	DDDD
Needleleaf sedge	<i>Carex duriuscula</i>	CADU6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Nodding brome	<i>Bromus porteri</i>	BRPO2	PPPP	PPPP	DDDD	DDDD	UUUU	PPPP	DDDD
Northern reedgrass	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	CAS13	PPPP	DDDD	PPPP	DDDD	UUUU	PPPP	DDDD
Nuttall's alkalgrass	<i>Puccinellia nuttalliana</i>	PUNU2	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
One-spike oatgrass	<i>Danthonia unispicata</i>	DAUN	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	DDDD
Oniongrass	<i>Melica bulbosa</i>	MEBU	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Prairie junegrass	<i>Koeleria macrantha</i>	KOMA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Pumpelly's brome	<i>Bromus inermis</i> ssp. <i>pumpellianus</i>	BRINP	PPPP	PPPP	DDDD	DDDD	UUUU	PPPP	DDDD
Redtop	<i>Agrostis stolonifera</i>	AGST2	UPDU	UPDU	UPDU	UPDU	UPDU	UPDU	UPDU
Reed canarygrass	<i>Phalaris arundinacea</i>	PHAR3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Richardson's needlegrass	<i>Achnatherum richardsonii</i>	ACRI8	PPPP	PPPP	DDDD	DDDD	DDDD	PPPP	DDDD
Sandberg bluegrass	<i>Poa secunda</i>	POSE	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Shortawn foxtail	<i>Alopecurus aequalis</i>	ALAE	DDDU	DDDU	DDDU	DDDU	DDDU	DDDU	DDDU
Slender wheatgrass	<i>Elymus trachycaulus</i>	ELTR7	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Spikefescue	<i>Leucopoa kingii</i>	LEK12	PPPP	DDDD	PPPP	PPPP	DDDD	PPPP	DDDD
Spikerush	<i>Eleocharis</i> spp.	ELEOC	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Spike trisetum	<i>Trisetum spicatum</i>	TRSP2	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Sun sedge	<i>Carex inops</i> ssp. <i>heliophila</i>	CAIH2	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP	DDDD
Tall mannagrass	<i>Glyceria elata</i> (syn. <i>G. striata</i> )	GLEL	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD	DDDD
Thickspike wheatgrass	<i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i>	ELMA7	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Threadleaf sedge	<i>Carex filifolia</i>	CAFI	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Timber oatgrass	<i>Danthonia intermedia</i>	DAIN	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD	DDDD
Tufted hairgrass	<i>Deschampsia caespitosa</i>	DECA18	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP	DDDD
Water sedge	<i>Carex aquatilis</i> ssp. <i>aquatilis</i>	CAQA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Western needlegrass	<i>Achnatherum occidentale</i>	ACOC3	PPPP	PPPP	DDDD	DDDD	DDDD	PPPP	DDDD
Western wheatgrass	<i>Pascopyrum smithii</i>	PASM	DPDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
<b>FORBS</b>									
American licorice	<i>Glycyrrhiza lepidota</i>	GLE3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
American bistort	<i>Polygonum bistortoides</i>	POB16	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
American vetch	<i>Vicia americana</i>	VIAM	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	DDDD
Arnica	<i>Arnica</i> spp.	ARNIC	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU	UUUU
Arrowgrass	<i>Triglochin</i> spp.	TRIGL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Asters	<i>Eucephalus &amp; Symphyotrichum</i> spp.	EUCEP2/SYMPH4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Avens (prairie smoke)	<i>Geum</i> spp.	GEUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Balsamroot	<i>Balsamorhiza</i> spp.	BALSA	DPDD	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Bedstraw	<i>Galium</i> spp.	GALIU	UUUU	DDDD	UUUU	DDDD	DDDD	DDDD	UUUU
Biscuitroot	<i>Lomatium</i> spp.	LOMAT	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD	DDDD
Bitterroot	<i>Lewisia rediviva</i> ssp. <i>rediviva</i>	LERER	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Bluebell	<i>Mertensia</i> spp.	MERTE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Blue-eyed grass	<i>Sisyrinchium</i> spp.	SISYR	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Buckwheat	<i>Eriogonum</i> spp.	ERIOG	UUUU	DDDD	UUUU	UUUU	UUUU	UUUU	UUUU
Buttercup	<i>Ranunculus</i> spp.	RANUN	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Cinquefoil (herbaceous)	<i>Potentilla</i> spp.	POTEN	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Clover	<i>Trifolium</i> spp.	TRIFO	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Columbine	<i>Aquilegia</i> spp.	AQUIL	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Cow parsnip	<i>Heraclium maximum</i>	HERAC	PPPP	PPPP	PPPP	PPPP	PPPP	DDDD	NNNN
Daisy	<i>Townsendia</i> spp.	TOWNS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Deathcamas	<i>Zigadenus venenosus</i>	ZIVE	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Elephanthead lousewort	<i>Pedicularis groenlandica</i>	PEGR2	UUUU	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD
Elk thistle	<i>Cirsium foliosum</i>	CIFO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Evening-primrose	<i>Oenothera</i> spp.	OENOT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fireweed	<i>Chamerion angustifolium</i>	CHAN9	PPPP	DDDD	UUUU	PPPP	DDDD	PPPP	PPPP
Flax	<i>Linum</i> spp.	LINUM	UPDU	UPDU	UPDU	UPDU	UPDU	UPDU	UPDU
Fleabane	<i>Erigeron</i> spp.	ERIGE2	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Gentian	<i>Gentiana</i> spp.	GENTI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Geranium	<i>Geranium</i> spp.	GERAN	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Gilia	<i>Gilia</i> spp.	GILIA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenaster	<i>Heterotheca</i> spp.	HETER8	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenpea	<i>Thermopsis</i> spp.	THERM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenrod	<i>Solidago</i> spp.	SOLID	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Golden smoke	<i>Corydalis aurea</i>	COAU2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenweed, stemless	<i>Stenotus acaulis</i> ssp. <i>acaulis</i>	STACA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Green gentian	<i>Frasera speciosa</i>	FRSP	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Groundsel	<i>Packera</i> spp.	PACKE	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Harebell (bellflower)	<i>Campanula</i> spp.	CAMPA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Hawksbeard	<i>Crepis</i> spp.	CREPI	UUUU	PPPP	UUUU	DDDD	DDDD	UUUU	DDDD
Hawkweed	<i>Hieracium</i> spp.	HIERA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Horsemint	<i>Agastache</i> spp.	AGAST	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD	DDDD
Horsetail (scouring rush)	<i>Equisetum</i> spp.	EQUIS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Iris (Rocky Mountain)	<i>Iris missouriensis</i>	IRMI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA 43B, 15-19W

COMMON NAME/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Cattle	Sheep	Horses	Mule Deer	Antelope	Elk	Moose
Larkspur (poisonous in spring before flowering)	Delphinium spp.	DELPH	DTDD	DTDD	DTDD	DTDD	DTDD	DTDD	DTDD
Little sunflower	Helianthus pumilus	HEPU3	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Locoweed	Oxytropis spp.	OXYTR	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU
Lupine (may be poisonous after seedpots mature)	Lupinus spp.	LUPIN	DDTT	DDTT	DDTT	DDTT	DDTT	DDTT	DDTT
Meadow-rue	Thalictrum occidentale	THOC	DDDD	PPPP	DDDD	PPPP	PPPP	DDDD	PPPP
Milkvetch	Astragalus spp.	ASTRA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Minerscandle	Cryptantha spp.	CRYPT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Mint (wild)	Mentha arvensis	MEAR4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Monkeyflower	Mimulus spp.	MIMUL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Monkshood	Aconitum spp.	ACONI	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Mountain dandelion	Agoseris spp.	AGOSE	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	DDDD
Mule-ears	Wyethia amplexicaulis	WYAM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Mustard	Draba spp.	DRABA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Nailwort	Paronychia spp.	FARON	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Onion (wild)	Allium spp.	ALLI4	DPDD	PPPP	DPDD	PPPP	DPDD	DPDD	DPDD
Oregon grape	Mahonia repens	MARE11	UUUU	DDDD	UUUU	PPPP	DDDD	DDDD	DDDD
Owl's-clover	Orthocarpus spp.	ORTHO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Paintbrush	Castilleja spp.	CAST	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Peavine	Lathyrus spp.	LATHY	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Penstemon	Penstemon spp.	PENST	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Phacelia	Phacelia spp.	PHACE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Phlox	Phlox spp.	PHLOX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Plantain	Plantago spp.	PLANT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Primrose	Primula spp.	FRIMU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Pussytoes	Antennaria spp.	ANTEN	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Ragwort (groundsel)	Senecio spp.	SENEC	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Sandwort	Arenaria spp.	ARENA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Shooting star	Dodecatheon spp.	DODEC	DDDD	DDDD	UUUU	DDDD	UUUU	UUUU	UUUU
Starwort	Stellaria spp.	STELL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Sego lily	Calochortus nuttallii	CANU3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Smartweed (knotweed)	Polygonum spp.	POLYG4	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU	UUUU
Sneezeweed, orange (rubberweed)	Hymenoxys spp.	HYMEN7	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Springbeauty	Claytonia spp.	CLAYT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Stinging nettle	Urtica dioica	URDI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Stoncrop	Sedum spp.	SEDUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Stoneseed	Lithospermum spp.	LITHO3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Sunflower	Helianthus spp.	HELIA3	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Sweetroot	Osmorhiza spp.	OSMOR	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Toadflax	Comandra umbellata	COUMP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Valerian (tobacco root)	Valeriana spp.	VALER	DDDD	PPPP	DDDD	DDDD	DDDD	DDDD	DDDD
Violet	Viola spp.	VIOLA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Water hemlock (spotted)	Cicuta maculata var. angustifolia	CIMAA	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU	TTUU
Waterleaf	Hydrophyllum spp.	HYDR04	DDDD	DDDD	DDDD	PPPP	DDDD	DDDD	DDDD
Western coneflower	Rudbeckia occidentalis	RUOC2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Wild strawberry (false strawberry)	Fragaria vesca	FRVE	DDDD	PPPP	DDDD	PPPP	PPPP	DDDD	DDDD
Yarrow (common & western)	Achillea millefolium	ACMI2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Yellowbell	Fritillaria pudica	FRPU2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Yellow sneezeweed	Helenium autumnale	HEAU	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
<b>TREES, SHRUBS &amp; HALF-SHRUBS</b>									
Alpine laurel (bog kalmia)	Kalmia microphylla	KAMI	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Antelope bitterbrush	Purshia tridentata	PUTR2	PPPP	PPPP	DDDD	PPPP	PPPP	PPPP	PPPP
Aspen	Populus tremuloides	POTR5	DDDD	DDDD	DDDD	PPPP	DDDD	PPPP	PPPP
Basin big sagebrush	Artemisia tridentata ssp. tridentata	ARTR1	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Big sagebrush	Artemisia tridentata	ARTR2	DUDD	DDDD	UUUU	PPPP	PPPP	DDDD	DDDD
Black sagebrush	Artemisia nova	ARNO4	DDDD	PPPP	UUUU	DDDD	DDDD	DDDD	DDDD
Chokecherry (toxic in large amounts)	Prunus virginiana	PRVI	DTDD	DTDD	DDDD	PPPP	UUUU	DDDD	PPPP
Currant	Ribes spp.	RIBES	DDDD	DDDD	DDDD	PPPP	UUUU	DDDD	DDDD
Dogwood	Cornus spp.	CORNU	DDDD	DPDD	DDDD	DPDD	DDDD	DPDD	DPDD
Early (alkali) sage	Artemisia arbuscula ssp. longiloba	ARAL	UUUU	DUDD	UUUU	PUPP	PDDP	DUUD	UUUU
Elderberry	Sambucus spp.	SAMBU	DDDD	DDDD	UUUU	PPPP	UUUU	DDDD	DDDD
Fringed sagewort	Artemisia frigida	ARFR4	UUUU	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU
Goldenweed, shrubby	Ericameria suffruticosa	ERSU13	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Greasewood (toxic in large amounts)	Sarcobatus vermiculatus	SAVE4	DUDD	DDDD	UUUU	DDDD	DDDD	DUUD	UUUU
Green (low) rabbitbrush	Chrysothamnus viscidiflorus	CHV18	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Juniper, common	Juniperus communis var. depressa	JUCOD	UUUU	UUUU	UUUU	DUUD	UUUU	UUUU	UUUU
Juniper, Rocky Mountain	Juniperus scopulorum	JUSC2	UUUU	DUDD	UUUU	DUDD	UUUU	UUUU	UUUU
Limber pine	Pinus flexilis	PIFL2	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
Low sagebrush	Artemisia arbuscula ssp. arbuscula	ARAR8	DUDD	DDDD	UUUU	DDDD	DDDD	DDDD	DDDD
Mountain big sagebrush	Artemisia tridentata ssp. vaseyana	ARTRV	UUUU	DDDD	UUUU	DDDD	DDDD	UUUU	UUUU
Mountain mahogany	Cercocarpus spp.	CERCO	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Raspberry	Rubus idaeus	RUID	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU	DDDD
Rubber rabbitbrush	Ericameria nauseosa	ERNA10	UUUU	PPPP	UUUU	DDDD	PPPP	DDDD	DDDD
Serviceberry	Amelanchier alnifolia	AMAL2	DDDD	PPPP	UUUU	PPPP	DDDD	DDDD	DDDD
Shrubby cinquefoil	Dasiphora floribunda	DAFL3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Silverberry	Elaeagnus commutata	ELCO	DDDD	DDDD	UUUU	DUUD	DDDD	DUUD	PPPP
Silver sagebrush	Artemisia cana	ARCA13	UUUU	DDDD	UUUU	PPPP	PPPP	DDDD	DDDD
Snowberry (western)	Symphoricarpos occidentalis	SYOC	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU	UUUU
Snowbrush ceanothus	Ceanothus velutinus	CEVE	UUUU	DDDD	UUUU	DDDD	UUUU	DDDD	UUUU
Spiked big sagebrush	Artemisia tridentata ssp. spiciformis	ARTRS2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Thimbleberry	Rubus parviflorus	RUPA	UUUU	DDDD	UUUU	DUUD	UUUU	DUUD	DPDD
Three-tip sagebrush	Artemisia tripartita	ARTR4	UUUU	DDDD	UUUU	UUUU	DDDD	UUUU	DDDD
True mountainmahogany	Cercocarpus montanus	CEMO2	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Water birch	Betula occidentalis	BEOC2	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Wild rose	Rosa woodsii var. woodsii	ROWOW	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD	DDDD
Willow, Bebb's	Salix bebbiana	SABE2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, Blueberry	Salix myrtilifolia	SAMY	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, Booths	Salix boothii	SABO2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, coyote (sandbar)	Salix exigua	SAEX	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Willow, Drummonds	Salix drummondiana	SADR	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, grayleaf	Salix glauca	SAGL	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, Geyers	Salix geeyriana	SAGE2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, Lemmons	Salix lemmonii	SALE	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, peachleaf	Salix amygdaloides	SAMM2	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Willow, planeleaf (diamondleaf)	Salix planifolia	SAPL2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, pussy	Salix discolor	SADI	DDDD	DDDD	DDDD	DDDD	UUUU	DDDD	DDDD
Willow, Scoulers	Salix scouleriana	SASC	PPPP	PPPP	DDDD	PPPP	DDDD	PPPP	PPPP
Willow, short-fruit (barrenground)	Salix brachycarpa	SABR	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, tweedy	Salix tweedyi	SATW	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, whiplash	Salix lucida ssp. Caudata	SALUC	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, interior	Salix interior	SAIN3	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Willow, wolf	Salix wolffii	SAWO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU	DDDD
willow, yellow	Salix lutea	SALU2	PPPP	PPPP	DDDD	PPPP	UUUU	PPPP	PPPP
Wyoming big sagebrush	Artemisia tridentata ssp. wyomingensis	ARTRW8	UUUU	DDDD	UUUU	PPPP	PPPP	UUUU	UUUU

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)
Bluebunch Wheatgrass/Bitterbrush (HCPC)	500-900	.25
Low Sage/Rhizomatous Wheatgrass	200-700	.12
Cheatgrass/Forb	100-600	.08

\* - 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, with localized areas in hydrologic group D. Infiltration ranges from moderately slow to moderate. Runoff potential for this site varies from low to moderate depending on soil hydrologic group and ground cover (refer to Part 630, NRCS National Engineering Handbook for detailed hydrology information).

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

## Recreational Uses

This site provides hunting opportunities for upland game species.

## Wood Products

No appreciable wood products are present on the site.

## Other Products

## Supporting Information

### Associated Sites

Shallow Loamy R043BY262WY  
Steep Stony R043BY270WY

### Similar Sites

R043BY212WY – Gravelly (Gr) 15-19W has western needlegrass and different shrub species.  
R043BY270WY – Steep Stony (St) 15-19W has higher production and different shrub species.  
R043BY208WY – Coarse Upland (CU) 15-19W has higher production, larger coarse fragments (boulders), and different shrub 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. 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	58	1966-1986	WY	Lincoln & others

### State Correlation

### Type Locality

### Field Offices

Lyman, Cokeville, Afton, Jackson, Pinedale

### Relationship to Other Established Classifications

### Other References

### Site Description Approval

\_\_\_\_\_  
State Range Management Specialist

\_\_\_\_\_  
Date