

## United States Department of Agriculture Natural Resources Conservation Service

### Ecological Site Description

**Site Type:** Rangeland

**Site Name:** Subirrigated (Sb), 7-9" P.Z., Green River and Great Divide Basins

**Site ID:** R034AY174WY

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

### Physiographic Features

This site will usually occur on level to nearly level land along perennial or intermittent streams and near seeps, springs, and sloughs. It is found on all exposures and on slopes about 3%.

**Landform:** alluvial fans & stream terraces

**Aspect:** N/A

	<u>Minimum</u>	<u>Maximum</u>
<b>Elevation (feet):</b>	6000	7200
<b>Slope (percent):</b> 1	1	10
<b>Water Table Depth (inches):</b>	12	40
<b>Flooding:</b>		
<b>Frequency:</b>	rare	occasional
<b>Duration:</b>	very brief	brief
<b>Ponding:</b>		
<b>Depth (inches):</b>	0	0
<b>Frequency:</b>	none	none
<b>Duration:</b>	none	none
<b>Runoff Class:</b>	negligible	high

### Climatic Features

Annual precipitation ranges from 7-9 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 late April and continues to about early September.

The following information is from the "Green River" climate station:

	<u>Minimum</u>	<u>Maximum</u>	<u>5 yrs. out of 10 between</u>
<b>Frost-free period (days):</b>	68	121	June 2 – September 5
<b>Freeze-free period (days):</b>	97	132	May 23 – September 19

Annual Precipitation (inches): <5.32 >9.34 (2 years in 10)

Average annual precipitation: 7.78 inches

Average annual air temperature: 41.8°F (25.6°F Avg. Min. to 58.1°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 “Bitter Creek”, “Farson”, “Rock Springs FAA AP”, and “Wamsutter” in Sweetwater County; “Church Buttes Gas PLT”, and “Mountain View” in Uinta County; “Fontenelle”, “La Barge”, and “Sage 4 NNW” in Lincoln County; and “Big Piney” in Sublette 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: C (Rosgen)

### Representative Soil Features

The soils of this site are moderately deep to very deep (greater than 15”to bedrock) and formed from alluvium. They have water tables below the surface for all of the growing season. The water table is non-saline and non-alkaline. They are loamy soils with a seasonal high water table depth of about 1 to 3 feet most years. These areas may have water over the surface from run-in but only for short periods of time. Soil surface usually has a high content of organic matter with mottling or gleying usually occurring within 20 to 40 inches of the surface.

Major Soil Series correlated to this site include: Becks, Canninger, Lander, Pescar,

Other Soil Series in MLRA34 correlated to this site include:

Parent Material Kind: alluvium

Parent Material Origin: mixed

Surface Texture: loam, clay loam, silt loam, fine sandy loam, sandy loam

Surface Texture Modifier: gravelly, cobbly

Subsurface Texture Group: loam, clay loam, sandy loam

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

Surface Fragments > 3” (%Cover): 0-5

Subsurface Fragments ≤ 3” (% Volume): 0-30

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

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	SW poorly	moderately well
Permeability Class:	moderately slow	medium
Depth (inches):	15	>60
Electrical Conductivity (mmhos/cm) ≤20”:	0	8
Sodium Absorption Ratio ≤20”:	0	5
Soil Reaction (1:1 Water) ≤20”:	6.6	8.6
Soil Reaction (0.1M CaCl2) ≤20”:	NA	NA
Available Water Capacity (inches) ≤30”:	2.5	5.5
Calcium Carbonate Equivalent (percent) ≤20”:	0	40

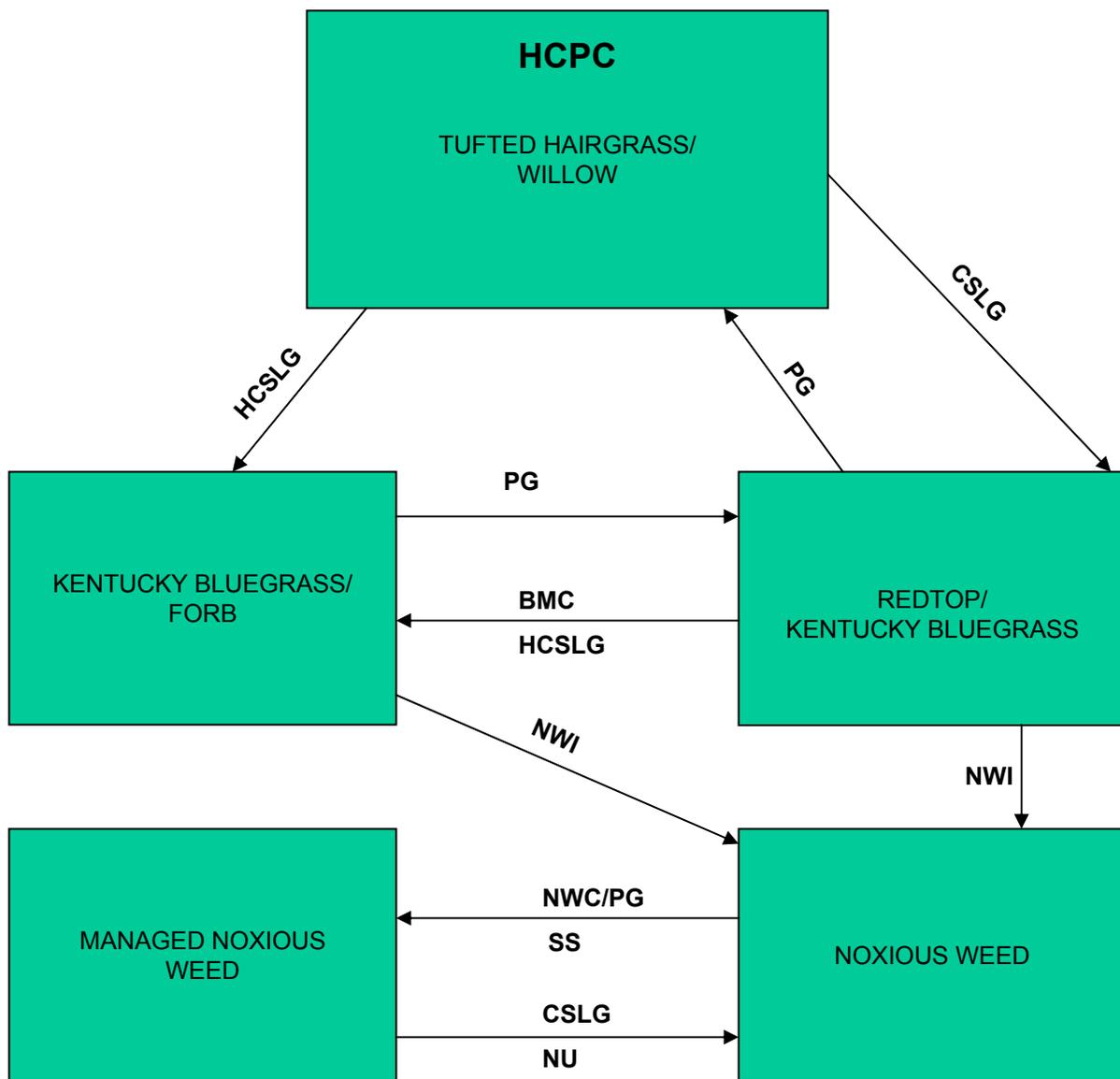
## Plant Communities

### Ecological Dynamics of the Site:

As this site deteriorates, species such as inland sedge and Baltic rush increase. Grasses such as tufted hairgrass, slender wheatgrass, Nebraska sedge, and basin wildrye will decrease in frequency and production. Willow stands will become decadent with a lack of diverse age classes as site declines. This site is vulnerable to noxious weed invasion by such species as perennial pepperweed.

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  
 WD – Wildlife Damage (Beaver)  
 WF - Wildfire

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  
 SS – Streambank Stabilization  
 MT – Mechanical Treatment (chiseling, ripping, pitting)

**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: 3000</b>		
<b>GRASSES AND GRASS-LIKES</b>					
<b>GRASSES/GRASSLIKES</b>					
basin wildrye	Leymus cinereus	LECI4	1	1050 - 1500	35 - 50
tufted hairgrass	Deschampsia caespitosa	DECA18	2	300 - 600	10 - 20
Nebraska sedge	Carex nebrascensis	CANE2	3	300 - 600	10 - 20
western wheatgrass	Pascopyrum smithii	PASM	4	150 - 300	5 - 10
<b>MISC. GRASSES/GRASSLIKES</b>			<b>5</b>	<b>300 - 600</b>	<b>10 - 20</b>
alkali sacaton	Sporobolus airoides	SPAI	5	0 - 150	0 - 5
Baltic rush	Juncus balticus	JUBA	5	0 - 150	0 - 5
bluejoint reedgrass	Calamagrostis canadensis	CACA4	5	0 - 150	0 - 5
inland sedge	Carex interior	CAIN11	5	0 - 150	0 - 5
mat muhly	Muhlenbergia richarsonis	MURI	5	0 - 150	0 - 5
northern reedgrass	Calamagrostis stricta	CAST13	5	0 - 150	0 - 5
Nuttall's alkaligrass	Puccinellia nuttalliana	PUNU2	5	0 - 150	0 - 5
slender wheatgrass	Elymus trachycaulis	ELTR7	5	0 - 150	0 - 5
tall mannagrass	Glyceria elata (syn. G. striata)	GLEL (GLST)	5	0 - 150	0 - 5
other perennial grasses (native)		2GP	5	0 - 150	0 - 5
<b>FORBS</b>			<b>6</b>	<b>150 - 600</b>	<b>5 - 20</b>
American licorice	Glycyrrhiza lepidota	GLLE3	6	0 - 150	0 - 5
arrowgrass	Triglochin spp.	TRIGL	6	0 - 150	0 - 5
asters	Eucephalus spp.	EUCEP2	6	0 - 150	0 - 5
buttercup	Ranunculus spp.	RANUN	6	0 - 150	0 - 5
cinquefoils	Potentilla spp.	POTEN	6	0 - 150	0 - 5
clover	Trifolium spp.	TRIFO	6	0 - 150	0 - 5
fleabane	Erigeron spp.	ERIGE2	6	0 - 150	0 - 5
goldenpea	Thermopsis spp.	THERM	6	0 - 150	0 - 5
horsetail	Equisetum hyemale	EQHY	6	0 - 150	0 - 5
iris	Iris spp.	IRIS	6	0 - 150	0 - 5
milkvetch	Astragalus spp.	ASTRA	6	0 - 150	0 - 5
mint	Mentha spp.	MENTH	6	0 - 150	0 - 5
violets	Viola spp.	VIOLA	6	0 - 150	0 - 5
western yarrow	Achillea lanulosa	ACHIL	6	0 - 150	0 - 5
other perennial forbs (native)		2FP	6	0 - 150	0 - 5
<b>TREES/SHRUBS</b>					
willows	Salix spp.	SALIX	7	150 - 450	5 - 15
<b>MISC. SHRUBS</b>			<b>8</b>	<b>30 - 150</b>	<b>1 - 5</b>
buffaloberry	Shepherdia argentea	SHAR	8	0 - 150	0 - 5
rubber rabbitbrush	Ericameria nauseosa	ERNA10	8	0 - 150	0 - 5
shrubby cinquefoil	Dasiphora floribunda	DAFL3	8	0 - 150	0 - 5
wildrose	Rosa woodsii var. woodsii	ROWOW	8	0 - 150	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.

#### Tufted Hairgrass/Willow 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, 20% forbs and 15% woody plants. The major grasses include Basin wildrye, Nebraska sedge, tufted hairgrass, and Western wheatgrass. Other grasses and grass-like plants may include Baltic rush, tall mannagrass, bluejoint and northern reedgrass, Nuttalls alkaligrass, alkali sacaton, mat muhly, inland sedge, and slender wheatgrass. A variety of willow species are the dominant woody plants. Other woody plants may include buffaloberry, wildrose, rubber rabbitbrush, and shrubby cinquefoil.

A typical plant composition for this state consists of Basin wildrye 35-50%, Nebraska sedge 10-20%, tufted hairgrass 10-20%, Western wheatgrass 5-10%, other grasses and grass-like plants 5-15%, perennial forbs 5-20%, willows 5-15%, and up to 5% other woody species. Ground cover, by ocular estimate, varies from 85-100%.

The total annual production (air-dry weight) of this state is about 3000 pounds per acre, but it can range from about 2300 lbs./acre in unfavorable years to about 3500 lbs./acre in above average years.

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

Growth curve number: WY0403

Growth curve name: 7-9GR, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	20	40	20	10	5	0	0	0

(Monthly percentages of total annual growth)

The state is stable and well adapted to the Cool Central Desertic Basins and Plateaus climatic conditions. The diversity in plant species and the reliable water table, allow for high drought resistance. This is a sustainable plant community (site/soil stability, watershed function, and biologic integrity).

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

- Continuous Season-long Grazing will convert this plant community to the *Redtop/Kentucky Bluegrass State*.
- Heavy Continuous Season-long Grazing will convert this plant community to the *Kentucky Bluegrass/Forb State*.

#### Managed Noxious Weed Plant Community

This plant community is the result of noxious weed control and prescribed grazing. Grazing is used as a tool to control introduced and noxious weeds by selecting livestock type and timing use during the flowering of the identified weed such as perennial pepperweed. Other weed control efforts such

as chemical, mechanical, or biological methods are employed in conjunction with a grazing management scheme. The native plant community responds to this management by increasing in production and vigor, however it is very sensitive to any management change that allows the seed production and increase of noxious weeds such as nonuse or overuse. Noxious weeds are still present, but in smaller amounts and may be isolated to exposed or bare ground areas such as sandbars.

The total annual production (air-dry weight) of this state is about 2500 pounds per acre, but it can range from about 1800 lbs./acre to about 3000 lbs./acre depending on irrigation water management practices.

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

Growth curve number: WY0403

Growth curve name: 7-9GR, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	20	40	20	10	5	0	0	0

(Monthly percentages of total annual growth)

Bare ground has decreased. The soil of this state is moderately protected. Degraded stream banks may still erode, but increased amounts of deep-rooting sedges provide adequate stability to the system. The biotic community has been compromised, but is relatively stable and at risk due to invasive plants. The watershed is functioning, but is at risk of degrading rapidly with the introduction of improper management techniques.

Transitional pathways leading to other plant communities are as follows:

- Nonuse OR Continuous Season-long Grazing will convert this plant community to the *Noxious Weed State*.

### Redtop/Kentucky Bluegrass Plant Community

This plant community evolved under moderate, continuous grazing by domestic livestock. Dominant grasses include redtop, Kentucky bluegrass, bearded wheatgrass, spike sedge and Baltic rush. Mature and/or decadent willows are common in the overstory, but woody plants are lacking in a diversity of age classes.

The total annual production (air-dry weight) of this state is about 2500 pounds per acre, but it can range from about 1800 lbs./acre in unfavorable years to about 3000 lbs./acre in above average years.

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

Growth curve number: WY0403

Growth curve name: 7-9GR, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	20	40	20	10	5	0	0	0

(Monthly percentages of total annual growth)

Site stability is moderate. The biotic integrity is somewhat compromised by a shift in species composition toward introduced and less palatable plants. The watershed is usually functioning, but at risk.

Transitional pathways leading to other plant communities are as follows:

- Prescribed Grazing will result in a plant community very similar to the *Historic Climax Plant Community (Tufted Hairgrass/Willow State)* although Kentucky bluegrass will remain a part of the plant community.
- Continued Heavy Continuous Season-long Grazing and Brush Management will convert this plant community to the *Kentucky Bluegrass/Forb State*.
- Noxious Weed Invasion will convert this plant community to the *Noxious Weed State*.

**Kentucky Bluegrass/Forb Plant Community**

This plant community evolved under continuous heavy grazing pressure by domestic livestock. Kentucky bluegrass dominates as the site dries out. American licorice and herbaceous cinquefoils are dominant forbs. Remnant willows continue to mature and die without replacement seedlings and saplings.

The total annual production (air-dry weight) of this state is about 1500 pounds per acre, but it can range from about 800 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: WY0403

Growth curve name: 7-9GR, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	20	40	20	10	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 and watershed is nonfunctioning.

Transitional pathways leading to other plant communities are as follows:

- Prescribed Grazing will convert this plant community to the *Redtop/Kentucky Bluegrass State*.
- Noxious Weed Invasion will convert this plant community to the *Noxious Weed State*.

**Noxious Weed Plant Community**

This plant community is the result of long-term improper grazing use and subsequent downcutting of watercourses resulting in a lowered water table. Bare ground has allowed the invasion of noxious weeds such as perennial pepperweed. The site has dried out, and most plants requiring additional moisture have disappeared. Rhizomatous wheatgrass and Kentucky bluegrass are dominant grasses. Rubber rabbitbrush is the dominant woody plant. Willows have disappeared although remnants may still exist.

The total annual production (air-dry weight) of this state is about 800 pounds per acre, but it can range from about 500 lbs./acre in unfavorable years to about 1300 lbs./acre in above average years.

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

Growth curve number: WY0403

Growth curve name: 7-9GR, FREE WATER SITES

Growth curve description: WL, SB, SS FREE WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	20	40	20	10	5	0	0	0

(Monthly percentages of total annual growth)

Bare ground has increased. The soil of this state is not well protected. Degraded stream banks erode due to the lack of deep-rooted riparian plants. The watershed is nonfunctioning and usually produces excessive runoff. The biotic community is nonfunctioning due to invasive plants.

Transitional pathways leading to other plant communities are as follows:

- Noxious Weed Control in conjunction with Prescribed Grazing and Streambank Stabilization will convert this state to the *Managed Noxious Weed State*.

## Ecological Site Interpretations

### Animal Community – Wildlife Interpretations

**Tufted Hairgrass/Willow Plant Community (HCPC):** This plant community is very important for most wildlife in the area. Over 80% of all wildlife use this site to fulfill some part of their habitat needs. It provides forage and thermal and hiding cover for mule deer and moose. It provides nesting habitat for shorebirds, songbirds, and waterfowl as well as ground nesting birds such as harriers. The lush herbaceous material produces insects for sage grouse brood rearing and foraging. Dense ground cover provides escape cover, forage, and breeding areas for small mammals which draw predators such as raptors, red fox and coyote. Other birds that would frequent this plant community include red-wing blackbirds, sandhill cranes, western meadowlarks, neotropical migrants, and golden eagles.

**Redtop/Kentucky Bluegrass Plant Community:** This plant community may be useful for the same large grazers 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. It may provide some foraging opportunities for sage grouse when it occurs proximal to woody cover.

**Managed Noxious Weed 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. It may provide some foraging opportunities for sage grouse when it occurs proximal to woody cover due to enhanced insect populations.

**Kentucky Bluegrass/Forb Plant Community:** This plant community may be beneficial for some of the same wildlife that would use the Historic Climax Plant Community. However, the woody component is typically less productive and unable to support large browsers such as moose. As woody plants decrease, structural diversity is lost for neotropical migrants, cover decreased for deer, and nesting for shrub-nesting birds is impacted. It may provide some brood rearing and foraging opportunities for sage grouse when it occurs proximal to woody cover.

**Noxious Weed Plant Community:** This plant community is less diverse, and thus, less able to meet the habitat needs of many wildlife. Herbaceous forage and cover is not as dense and will aid in successful predation of nesting birds, therefore improving habitat for predators such as raptors, red fox, and coyote. It may provide some brood rearing and foraging opportunities for sage grouse when it occurs proximal to woody cover.

Animal Preferences (Quarterly - 1,2,3,4) for commonly occurring plants in MLRA34A, 7-9 inch Green River & Great Divide Basins

COMMON NAME/ GROUP NAME	SCIENTIFIC NAME	SCIENTIFIC SYMBOL	Cattle	Sheep	Horses	Mule Deer	Antelope	Elk
<b>GRASSES/GRASSLIKES</b>								
Alkali bluegrass	<i>Poa juncea</i> (syn. <i>P. secunda</i> )	POJU (POSE)	DDDD	PPPP	DDDD	PPPP	PPPP	DDDD
Alkali muhly	<i>Muhlenbergia asperifolia</i>	MUAS	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Alkali sacaton	<i>Sporobolus airoides</i>	SPA1	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Baltic rush	<i>Juncus balticus</i>	JUBA	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD
Basin wildrye	<i>Leymus cinereus</i>	LEC4	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	PSSP6	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>	CACAM	PPPP	DDDD	PPPP	DDDD	UUUU	PPPP
Bottlebrush squirreltail	<i>Elymus elymoides</i>	ELELE	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Canada wildrye	<i>Elymus canadensis</i>	ELCA4	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Canby bluegrass	<i>Poa canbyi</i> (syn. <i>P. secunda</i> )	POCA (POSE)	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Indian ricegrass	<i>Achnatherum hymenoides</i>	ACHY	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Inland saltgrass	<i>Distichlis spicata</i>	DISP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Inland sedge	<i>Carex interior</i>	CAIN11	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
James' galleta	<i>Pleuraphis jamesii</i>	PLJA	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Letterman needlegrass	<i>Achnatherum lettermanii</i>	ACLE9	PPPP	PPPP	DDDD	DDDD	DDDD	PPPP
Mat muhly	<i>Muhlenbergia richardsonis</i>	MURI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Nebraska sedge	<i>Carex nebrascensis</i>	CANE2	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Needleandthread	<i>Hesperostipa comata</i>	HECO26	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Needleleaf sedge	<i>Carex durivoluta</i>	CADU6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Northern reedgrass	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	CASTI3	PPPP	DDDD	PPPP	DDDD	UUUU	PPPP
Nuttall's alkaligrass	<i>Puccinellia nuttalliana</i>	PUNU2	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Plains reedgrass	<i>Calamagrostis montanensis</i>	CAMO	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Prairie junegrass	<i>Koeleria macrantha</i>	KOMA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Reed canarygrass	<i>Phalaris arundinacea</i>	PHAR3	PPPP	UUUU	UUUU	UUUU	UUUU	PPPP
Saline wildrye	<i>Leymus salinus</i>	LESA4	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Sandberg bluegrass	<i>Poa secunda</i>	POSE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Sand dropseed	<i>Sporobolus cryptandrus</i>	SPCR	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Slender wheatgrass	<i>Elymus trachycaulis</i>	ELTR7	PPPP	DDDD	PPPP	DDDD	DDDD	PPPP
Tall mangrass	<i>Glyceria elata</i> (syn. <i>G. striata</i> )	GLEL (GLST)	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD
Thickspike wheatgrass	<i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i>	ELLAL	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Threadleaf sedge	<i>Carex filifolia</i>	CAFI	DDDD	DDDD	DDDD	DDDD	PPPP	DDDD
Threeawns	<i>Aristida</i> spp.	ARIS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Tufted hairgrass	<i>Deschampsia caespitosa</i>	DECA18	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
Western wheatgrass	<i>Pascopyrum smithii</i>	PASM	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
<b>FORBS</b>								
American licorice	<i>Glycyrrhiza lepidota</i>	GLLE3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Arrowgrass	<i>Triglochin</i> spp.	TRIGL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Asters	<i>Eucephalus</i> spp.	EUCEP2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Biscuitroot	<i>Lomatium</i> spp.	LOMAT	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Blue-eyed grass	<i>Sisyrinchium</i> spp.	SISYR	DDDD	PPPP	DDDD	DDDD	DDDD	DDDD
Buckwheats	<i>Eriogonum</i> spp.	ERIOG	UUUU	DDDD	UUUU	UUUU	UUUU	UUUU
Buttercup	<i>Ranunculus</i> spp.	RANUN	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Clovers	<i>Trifolium</i> spp.	TRIFO	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Deathcamas	<i>Zigadenus</i> spp.	ZIGAD	TTTT	ZIGAD	TTTT	TTTT	TTTT	TTTT
Docks	<i>Rumex</i> spp.	RUMEX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Elephanthead lousewort	<i>Pedicularis groenlandica</i>	PEGR2	UUUU	DDDD	UUUU	DDDD	UUUU	UUUU
Flax	<i>Linum</i> spp.	LINUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fleabanes	<i>Erigeron</i> spp.	ERIGE2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fringed sagewort	<i>Artemisia frigida</i>	ARFR4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenpea	<i>Thermopsis</i> spp.	THERM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Goldenweed	<i>Stenotus acaulis</i>	STAC	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Gromwell	<i>Buglossoides arvensis</i>	BUAR3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Groundsel	<i>Tephrosia</i> spp.	TEPHR3	TTTT	UUUU	TTTT	UUUU	UUUU	TTTT
Hawksbeard	<i>Crepis acuminata</i>	CRAC2	UUUU	PPPP	UUUU	DDDD	DDDD	UUUU
Horsetails	<i>Equisetum</i> spp.	EQUIS	UUUU	UUUU	TTTT	UUUU	UUUU	UUUU
Iris	<i>Iris</i> spp.	IRIS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Milkvetch (locoweed)	<i>Astragalus</i> spp.	ASTRA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Miners candle	<i>Cryptantha virgata</i>	CRV14	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Paintbrush	<i>Castilleja</i> spp.	CAST	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Penstemons	<i>Penstemon</i> spp.	PENST	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Phlox	<i>Phlox</i> spp.	PHLOX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Povertyweed	<i>Monolepis</i> spp.	MONOL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Primrose	<i>Oenothera</i>	OENOT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Princesplume	<i>Stanleya</i> spp.	STANL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Pussytoes	<i>Antennaria</i> spp.	ANTEN	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Sagebrush gilia	<i>Leptodactylon pungens</i>	LEPU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Sandwort	<i>Arenaria</i> spp.	ARENA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Scarlet globemallow	<i>Sphaeralcea coccinea</i>	SPCO	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Scurfpeas	<i>Psoralea</i> spp.	PSORA2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Stoncrop	<i>Sedum</i> spp.	SEDUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Tansy	<i>Tanacetum</i> spp.	TANAC	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Toadflax	<i>Comandra umbellata</i>	COUMP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Violets	<i>Viola</i> spp.	VIOLA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Water hemlock	<i>Cicuta</i> spp.	CICUT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
Waterleaf	<i>Hydrophyllum</i> spp.	HYDRO4	DDDD	DDDD	DDDD	PPPP	DDDD	DDDD
Western yarrow	<i>Achillea millefolium</i>	ACHMIO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Wild onion	<i>Allium textile</i>	ALTE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Woody aster	<i>Xylorhiza</i> spp.	XYLOR	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
<b>TREES, SHRUBS &amp; HALF-SHRUBS</b>								
Antelope bitterbrush	<i>Purshia tridentata</i>	PUTR2	PPPP	PPPP	DDDD	PPPP	PPPP	PPPP
Big sagebrush	<i>Artemisia tridentata</i>	ARTR2	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Birdfoot sagebrush	<i>Artemisia pedatifida</i>	ARPE6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Bud sagewort	<i>Artemisia spinescens</i>	ARSP5	PPPP	PPPP	DDDD	PPPP	PPPP	PPPP
Buffalobery	<i>Shepherdia</i> spp.	SHEPH	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Cottonwood (sprouts only)	<i>Populus angustifolia</i>	POAN3	PPPP	PPPP	PPPP	PPPP	UUUU	PPPP
Currant	<i>Ribes</i> spp.	RIBES	DDDD	DDDD	DDDD	DDDD	UUUU	DDDD
Early (alkali) sagebrush	<i>Artemisia arbuscula</i> ssp. <i>longiloba</i>	ARARL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Fourwing saltbush	<i>Atriplex canescens</i>	ATCA2	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Gardners saltbush	<i>Atriplex gardneri</i>	ATGA	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Greasewood (toxic in large amounts)	<i>Sarcobatus vermiculatus</i>	SAVE4	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Greenmolly summercypress	<i>Kochia americana</i>	KOMA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Green rabbitbrush	<i>Chrysothamnus viscidiflorus</i>	CHV18	DDDD	DDDD	UUUU	PPPP	PPPP	DDDD
Hawhorn	<i>Crataegus</i> spp.	CRATA	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Junipers	<i>Juniperus scopulorum</i>	JUSC2	UUUU	UUUU	UUUU	DDDD	UUUU	UUUU
Limber pine	<i>Pinus flexilis</i>	PIFL2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Low sagebrush	<i>Artemisia arbuscula</i>	ARAR8	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Rubber rabbitbrush	<i>Ericameria nauseosa</i>	ERNA10	UUUU	DDDD	UUUU	DDDD	PPPP	UUUU
Shadscale	<i>Atriplex confertifolia</i>	ATCO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Shrubby cinquefoil	<i>Dasiphora floribunda</i>	DAFL3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Silver sagebrush	<i>Artemisia cana</i>	ARCA13	DDDD	DDDD	DDDD	PPPP	PPPP	DDDD
Skunkbush sumac	<i>Rhus trilobata</i>	RHTR	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
Spineless horsebrush	<i>Tetradymia canescens</i>	TECA2	UUUU	TTTT	UUUU	UUUU	UUUU	UUUU
Spiny hopsage	<i>Grayia spinesa</i>	GRSP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Spiny horsebrush	<i>Tetradymia spinosa</i>	TESP2	UUUU	DDDD	UUUU	UUUU	DDDD	UUUU
Wildrose	<i>Rosa woodsii</i> var. <i>woodsii</i>	ROWOW	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
Willows	<i>Salix</i> spp.	SALIX	DDDD	DDDD	DDDD	PPPP	UUUU	DDDD
Winterfat	<i>Krascheninnikovia lanata</i>	KRAL2	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)
Tufted Hairgrass/Willow (HCPC)	2300-3500	.9
Redtop/Kentucky Bluegrass	1800-3000	.8
Managed Noxious Weed	1800-3000	.8
Kentucky Bluegrass/Forb	800-2000	.5
Noxious Weed	500-1300	.25

\* - 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

Climate is the principal factor limiting forage production on this site. This site is dominated by soils in hydrologic group C. Infiltration rate is slow when soils are thoroughly wet. These soils have a slow rate of water transmission due to moderately fine to fine textures and/or high water table conditions. However, high forage production on this site diminishes runoff potential as long as site is managed for maintaining adequate residual vegetation. (Refer to Part 630, NRCS National Engineering Handbook for detailed hydraulic information).

Rills and gullies should not typically be present. Water flow patterns may be present if associated with a perennial flowing stream. Litter typically falls in place, and signs of movement are not common unless associated with a perennial flowing stream. Chemical and physical crusts are rare to non-existent.

## Recreational Uses

This site provides a variety of hunting opportunities as well as providing popular camping areas for recreationists. This site has a wide variety of forbs which bloom throughout spring and summer, providing 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

Wetland	R034AY178WY
Lowland	R034AY128WY
Saline Subirrigated	R034AY142WY
Saline Lowland	R034AY138WY

### Similar Sites

R034AY274WY – Subirrigated (Sb) 10-14W has higher production.  
R034AY178WY – Wetland (WL) 7-9GR has a higher water table.

### 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	50	1966-1985	WY	Sweetwater & others

### State Correlation

### Type Locality

### Field Offices

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

### Relationship to Other Established Classifications

### Other References

### Site Description Approval

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State Range Management Specialist

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Date