

## United States Department of Agriculture Natural Resources Conservation Service

### Ecological Site Description

**Site Type:** Rangeland

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

**Site ID:** R034AY142WY

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

### Physiographic Features

This site occurs on nearly level land along perennial or intermittent streams, near seeps, sloughs, or springs. It is also found on broad, low lake terraces, lake plains, flood plains, on alluvial bottoms, and poorly-drained bottom lands adjacent to stream channels. These areas receive additional run-in water from higher sites and from a fluctuating water table, well within the root zone. Slopes are most commonly less than 3%.

**Landform:** alluvial fans, drainage ways & stream terraces

**Aspect:** N/A

	<u>Minimum</u>	<u>Maximum</u>
<b>Elevation (feet):</b>	6000	7200
<b>Slope (percent):</b>	0	10
<b>Water Table Depth (inches):</b>	12	40
<b>Flooding:</b>		
<b>Frequency:</b>	occasional	frequent
<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>
Frost-free period (days):	68	121	June 2 – September 5
Freeze-free period (days):	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

<u>Wetland Description:</u>	<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

These are deep, saline, usually sodic soils on stream terraces. Sand and gravel may be at depths of 40 to 60 inches. The water table fluctuates during the growing season and is generally between 20-40 inches. Moderate to strong salt and alkali concentration in conjunction with moderately deep water tables characterize these soils. Salt crusts are commonly found on ridges and mounds during dry periods. Mottling or gleying may occur within 20-40 inches of the surface.

Major Soil Series correlated to this site include: Gunbarrel, Saleratus and phases of the Clowers, Leckman, and Pescar series.

Parent Material Kind: alluvium

Parent Material Origin: mixed

Surface Texture: loam, fine sandy loam, sandy loam

Surface Texture Modifier: none

Subsurface Texture Group: silty clay loam, loam, fine sandy loam, sandy loam

Surface Fragments ≤ 3” (% Cover): 0-10

Surface Fragments > 3” (%Cover): 0

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

Subsurface Fragments > 3” (% Volume): 0-5

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	somewhat poor	moderately well
Permeability Class:	moderate	moderate
Depth (inches):	15	>60
Electrical Conductivity (mmhos/cm) ≤20”:	8	>16
Sodium Absorption Ratio ≤20”:	5	15
Soil Reaction (1:1 Water) ≤20”:	8.0	9.0
Soil Reaction (0.1M CaCl2) ≤20”:	NA	NA
Available Water Capacity (inches) ≤30”:	3.5	5.0
Calcium Carbonate Equivalent (percent) ≤20”:	0	10

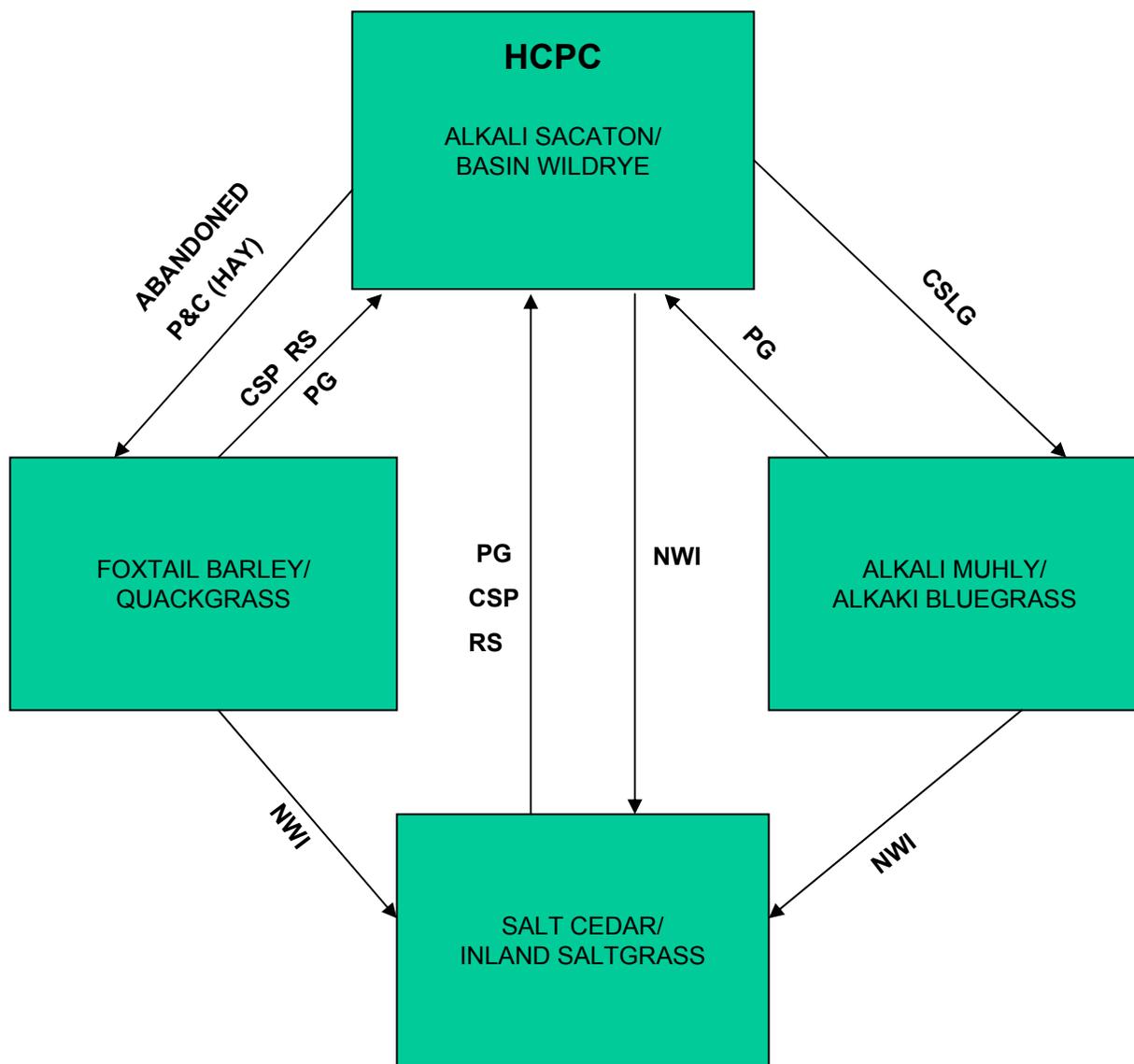
## Plant Communities

### Ecological Dynamics of the Site:

As this site deteriorates from improper grazing management, species such as inland saltgrass and greasewood increase. Grasses such as alkali sacaton, basin wildrye, and Nuttall's alkaligrass will decrease in frequency and production. Basin wildrye will disappear from this site when hayed or with extended improper grazing during spring and summer.

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)		
			Total: 2500		
			Group	Ibs./acre	% Comp.
<b>GRASSES AND GRASS-LIKES</b>					
<b>GRASSES/GRASSLIKES</b>					
alkali sacaton	Sporobolus airoides	SPAI	1	875 - 1125	35 - 45
basin wildrye	Leymus cinereus	LECI4	2	375 - 750	15 - 30
Nuttall's alkaligrass	Puccinellia nuttalliana	PUNU2	3	250 - 500	10 - 20
<b>MISC. GRASSES/GRASSLIKES</b>			<b>4</b>	<b>250 - 500</b>	<b>10 - 20</b>
alkali bluegrass	Poa secunda	POSE	4	0 - 125	0 - 5
alkali muhly	Muhlenbergia asperifolia	MUAS	4	0 - 125	0 - 5
Baltic rush	Juncus balticus	JUBA	4	0 - 125	0 - 5
inland saltgrass	Distichlis spicata	DISP	4	0 - 125	0 - 5
inland sedge	Carex interior	CAIN11	4	0 - 125	0 - 5
Nebraska sedge	Carex nebrascensis	CANE2	4	0 - 125	0 - 5
western wheatgrass	Pascopyrum smithii	PASM	4	0 - 125	0 - 5
other perennial grasses (native)		2GP	4	0 - 125	0 - 5
<b>FORBS</b>			<b>5</b>	<b>125 - 375</b>	<b>5 - 15</b>
arrowgrass	Triglochin spp.	TRIGL	5	0 - 125	0 - 5
horsetail	Equisetum hyemale	EQHY	5	0 - 125	0 - 5
milkvetch	Astragalus spp.	ASTRA	5	0 - 125	0 - 5
other perennial forbs (native)		2FP	5	0 - 125	0 - 5
<b>TREES/SHRUBS</b>					
black greasewood	Sarcobatus vermiculatus	SAVE4	6	25 - 125	1 - 5
rubber rabbitbrush	Ericameria nauseosa	ERNA10	7	25 - 125	1 - 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.

#### Alkali Sacaton/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 80% grasses or grass-like plants, 10% forbs and 10% woody plants. Saline tolerant species dominate the site. The major grasses include alkali sacaton, basin wildrye, and Nuttall’s alkaligrass. Other grasses that may occur on this site include alkali bluegrass, alkali muhly, inland sedge, rhizomatous wheatgrass, Baltic rush, inland saltgrass, and Nebraska sedge. Common woody plants are greasewood and rubber rabbitbrush.

A typical plant composition for this state consists of Alkali sacaton 35-45%, Basin wildrye 15-30%, Nuttall’s alkaligrass 10-20%, other grasses and grass-like plants 10-20%, perennial forbs 5-15%, greasewood 1-5%, and up to 5% rubber rabbitbrush. Ground cover, by ocular estimate, varies from 65-75%.

The total annual production (air-dry weight) of this state is about 2500 pounds per acre, but it can range from about 2000 lbs./acre in unfavorable years to about 2800 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. It is a critical state providing water and habitat for the surrounding area. It is resistant to drought due to a dependable water supply. 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 *Alkali Muhly/Alkali Bluegrass State*.
- Noxious Weed Invasion will convert this plant community to the *Salt Cedar/Inland Saltgrass State*.
- Plowing & Cropping (haying) followed by abandonment will convert this plant community to the *Foxtail Barley/Quackgrass State*.

### Alkali Muhly/Alkali Bluegrass Plant Community

This plant community evolved under continuous grazing by domestic livestock. Saline tolerant grasses make up the majority of the understory. Dominant grasses include alkali muhly and alkali bluegrass.

The total annual production (air-dry weight) of this state is about 1500 pounds per acre, but it can range from about 1000 lbs./acre in unfavorable years to about 1800 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 protected from excessive erosion. The biotic integrity of this plant community is at risk due to decreased species diversity. The watershed is usually functioning.

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 (Alkali Sacaton/Basin Wildrye State)*.
- Noxious Weed Invasion will convert this plant community to the *Salt Cedar/Inland Saltgrass State*.

### Foxtail Barley/Quackgrass Plant Community

This plant community is the result of plowing and cropping practices, typically haying. Following abandonment or with improper management, foxtail barley and quackgrass dominate. Povertyweed is a common forb on this site. Basin wildrye will disappear very quickly.

The total annual production (air-dry weight) of this state is about 1000 pounds per acre, but it can range from about 500 lbs./acre in unfavorable years to about 2300 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 moderately stable with some bare ground present. The biotic integrity of this plant community has been compromised, especially with introduction of nonnative, shallow-rooted species, and noxious weed invasion. The watershed is at risk.

Transitional pathways leading to other plant communities are as follows:

- Noxious Weed Invasion will convert this plant community to the *Salt Cedar/Inland Saltgrass State*.
- Chemical Seedbed Preparation and Re-seeding followed by 1 to 2 years deferment as part of a Prescribed Grazing plan over the long-term may return this state to near *Historic Climax Plant Community (Alkali Sacaton/Basin Wildrye State)*. However, introduced and noxious weeds such as foxtail barley and quackgrass will persist to some degree.

### Salt Cedar/Inland Saltgrass Plant Community

This plant community evolved under frequent and severe grazing accompanied by the introduction of noxious weeds, mainly salt cedar and Russian knapweed. Inland saltgrass persists in the understory, but annual forbs and weeds have invaded the site. Salt Cedar comprises 80-90% of the annual production on the site.

The total annual production (air-dry weight) of this state is about 500 pounds per acre, but it can range from about 200 lbs./acre in unfavorable years to about 800 lbs./acre in above average years.

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

Growth curve number: 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 from erosion. The watershed is at risk and may produce excessive runoff.

Transitional pathways leading to other plant communities are as follows:

- Chemical Seedbed Preparation and Re-seeding followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan over the long-term may result in a plant community very similar to the *Historic Climax Plant Community (Alkali Sacaton/Basin Wildrye State)*, except that noxious weeds will persist to some degree. Additional deferment may be necessary and should be prescribed on an individual site basis.

## Ecological Site Interpretations

### Animal Community – Wildlife Interpretations

**Alkali Sacaton/Basin Wildrye Plant Community (HCPC):** This plant community is very important for many of the wildlife species in the area. With the presence of water at or near the soil surface, over 80% of all wildlife will use this site to fulfill some part of their habitat needs. It provides forage for mule deer and antelope. 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, and neotropical migrants.

**Alkali Muhly/Alkali Bluegrass Plant Community:** This plant community may be beneficial for the same wildlife that would use the Historic Climax Plant Community. However, the plant community composition is less diverse, and thus, less apt to meet the seasonal needs of these animals. It may provide some foraging opportunities for sage grouse when it occurs proximal to woody cover.

**Foxtail Barley/Quackgrass 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.

**Salt Cedar/Inland Saltgrass Plant Community:** This plant community exhibits a low level of plant species diversity due to the accumulation of salts in the soil. It may provide some thermal and escape cover for deer and moose if no other woody community is nearby, but 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 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	PPPP	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 durivula</i>	CADU6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
Northern reedgrass	<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	CAST13	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 mannagrass	<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)
Alkali Sacaton/Basin Wildrye (HCPC)	2000-2800	.8
Alkali Muhly/Alkali Bluegrass	1000-1800	.5
Foxtail Barley/Quackgrass	500-2300	.3
Salt Cedar/Inland Saltgrass	200-800	.2

\* - Continuous, season-long grazing by cattle under average growing conditions.

Grazing by domestic livestock is one of the major income-producing industries in the area. Rangeland in this area may provide yearlong forage for cattle, sheep, or horses. During the dormant period, the forage for livestock use needs to be supplemented with protein because the quality does not meet minimum livestock requirements.

## Hydrology Functions

Salinity/alkalinity is the principal factor limiting forage production on this site. This site is dominated by soils in hydrologic groups C and D. Infiltration ranges from moderately slow to moderately well. 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 sometimes present.

## Recreational Uses

This site provides a variety of hunting opportunities as well 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
Subirrigated	R034AY174WY
Lowland	R034AY128WY
Saline Lowland	R034AY138WY

### Similar Sites

R034AY242WY – Saline Subirrigated (SS) 10-14W has higher production.  
R034AY138WY – Saline Lowland (SL) 7-9GR has more greasewood.

### 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