

United States Department of Agriculture Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

Site Name: Lowland (LL), 7-9" P.Z., Green River and Great Divide Basins

Site ID: R034AY128WY

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

Physiographic Features

This site occurs on gently sloping land along perennial or intermittent streams. It is found on all exposures. Slopes vary from 0 to 10%, but are mostly 0 to 3%.

Landform: alluvial fans, drainage ways & stream terraces

Aspect: N/A

	<u>Minimum</u>	<u>Maximum</u>
Elevation (feet):	6000	7200
Slope (percent):	0	10
Water Table Depth (inches):	>36	
Flooding:		
Frequency:	none	none
Duration:	none	none
Ponding:		
Depth (inches):	0	0
Frequency:	none	none
Duration:	none	none
Runoff Class:	negligible	moderate

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 April 15 and continues to about August 15. Some green up of cool season plants may occur in late September if moisture is available.

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: None

Representative Soil Features

The soils of this site are deep to very deep, stratified in texture, and most commonly occur on stream terraces. The depth to a seasonal high water table is 3 feet or greater and is beneficial to the woody plants but not to the majority of the forbs or grasses. These soils may occasionally receive overflow water.

Major Soil Series correlated to this site include: Clowers, Quealman, and a phase of the Otterson series.

Parent Material Kind: alluvium

Parent Material Origin: Mixed sources

Surface Texture: loam, fine sandy loam, loamy sand

Surface Texture Modifier: none

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

Surface Fragments ≤ 3” (% Cover): 0

Surface Fragments > 3” (%Cover): 0

Subsurface Fragments ≤ 3” (% Volume): 0-20

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

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	moderately well	well
Permeability Class:	moderate	moderately rapid
Depth (inches):	15	>60
Electrical Conductivity (mmhos/cm) ≤20”:	0	8
Sodium Absorption Ratio ≤20”:	0	5
Soil Reaction (1:1 Water) ≤20”:	7.9	8.4
Soil Reaction (0.1M CaCl2) ≤20”:	NA	NA
Available Water Capacity (inches) ≤30”:	4.0	5.0
Calcium Carbonate Equivalent (percent) ≤20”:	0	10

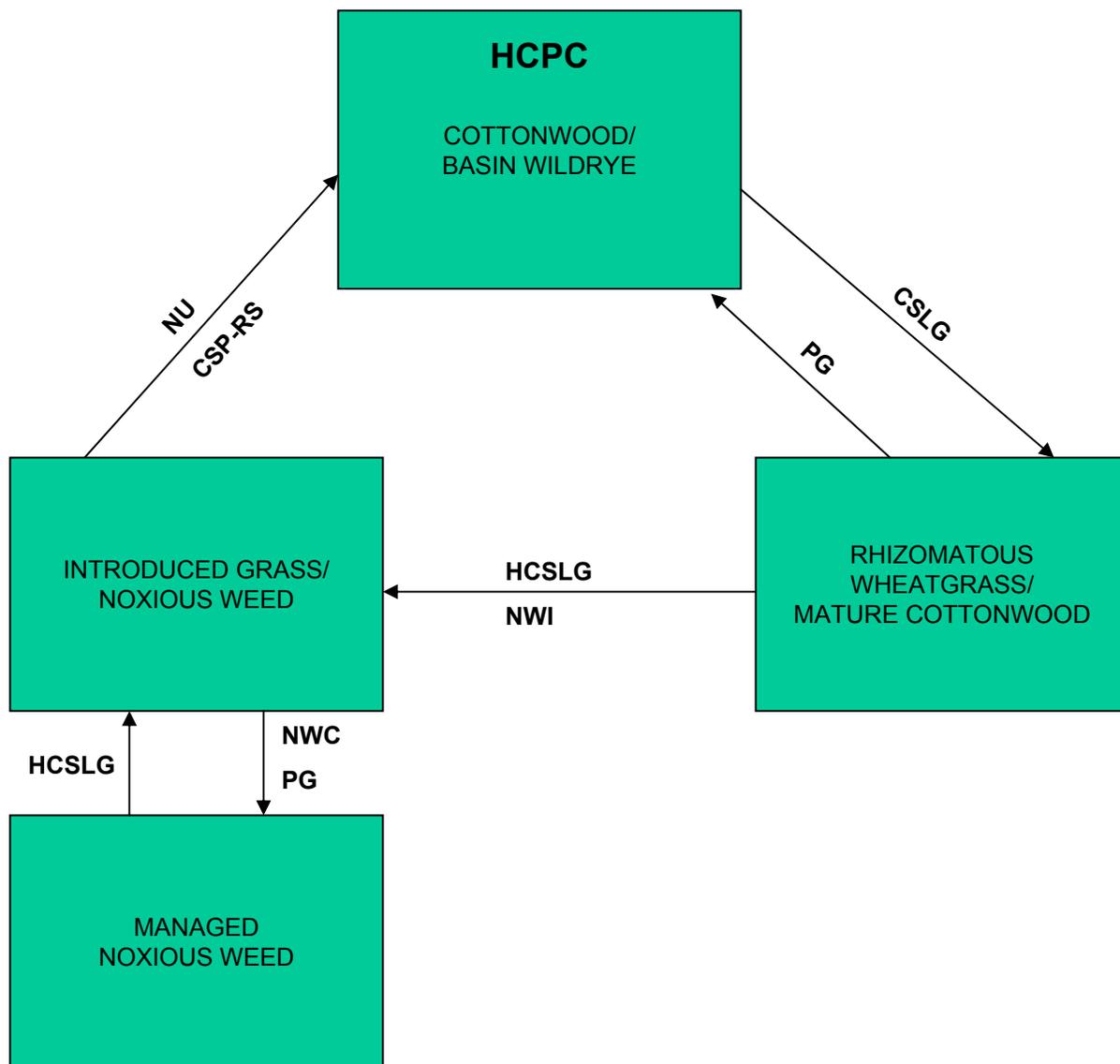
Plant Communities

Ecological Dynamics of the Site:

As this site deteriorates from improper grazing management, species such as big sagebrush and rubber rabbitbrush will increase, and species such as thistles and Kentucky bluegrass invade the site. Grasses such as basin wildrye and needleandthread will decrease in frequency and production. Cottonwood will lose younger age classes.

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: 2000		
			Group	lbs./acre	% Comp.
GRASSES AND GRASS-LIKES					
GRASSES/GRASSLIKES					
needleandthread	Hesperostipa comata	HECO26	1	300 - 600	15 - 30
basin wildrye	Leymus cinereus	LECI4	2	200 - 500	10 - 25
thickspike wheatgrass	Elymus macrourus	ELMA7	3	200 - 400	10 - 20
Letterman needlegrass	Achnatherum lettermanii	ACLE9	4	200 - 400	10 - 20
bottlebrush squirreltail	Elymus elymoides	ELEL5	5	100 - 200	5 - 10
MISC. GRASSES/GRASSLIKES			6	100 - 300	5 - 15
Griffiths wheatgrass or	Elymus albicans	ELAL7	6	0 - 100	0 - 5
Bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6			
Canada wildrye	Elymus canadensis	ELCA4	6	0 - 100	0 - 5
Canby bluegrass	Poa cambii (syn. P. secunda)	POCA(POSE)	6	0 - 100	0 - 5
Indian ricegrass	Achnatherum hymenoides	ACHY	6	0 - 100	0 - 5
Needleleaf sedge	Carex duriuscula	CADU6	6	0 - 100	0 - 5
prairie junegrass	Koeleria macrantha	KOMA	6	0 - 100	0 - 5
Sandberg bluegrass	Poa secunda	POSE	6	0 - 100	0 - 5
other perennial grasses (native)		2GP	6	0 - 100	0 - 5
FORBS			7	100 - 300	5 - 15
American licorice	Glycyrrhiza lepidota	GLLE3	7	0 - 100	0 - 5
asters	Eucephalus spp.	EUCEP2	7	0 - 100	0 - 5
buckwheats	Eriogonum spp.	ERIOG	7	0 - 100	0 - 5
clovers	Trifolium spp.	TRIFO	7	0 - 100	0 - 5
fleabane	Erigeron spp.	ERIGE2	7	0 - 100	0 - 5
goldenpea	Thermopsis spp.	THERM	7	0 - 100	0 - 5
gromwell	Buglossoides arvensis	BUAR3	7	0 - 100	0 - 5
Hoods phlox	Phlox hoodii	PHHO	7	0 - 100	0 - 5
penstemon	Penstemon spp.	PENST	7	0 - 100	0 - 5
pussytoes	Antennaria rosea	ANRO2	7	0 - 100	0 - 5
scarlet globemallow	Sphaeralcea coccinea	SPCO	7	0 - 100	0 - 5
scurfpea	Psoraleidum tenuiflorum	PSTE5	7	0 - 100	0 - 5
violet	Viola spp.	HELEN	7	0 - 100	0 - 5
western yarrow	Achillea lanulosa	ACHIL	7	0 - 100	0 - 5
other perennial forbs (native)		2FP	7	0 - 100	0 - 5
TREES/SHRUBS					
cottonwood	Populus angustifolia	POAN3	8	100 - 400	5 - 20
silver buffaloberry	Shepherdia argentea	SHAR	9	20 - 200	1 - 10
MISC. SHRUBS			10	100 - 200	5 - 10
big sagebrush	Artemisia tridentata	ARTR2	10	0 - 100	0 - 5
currant	Ribes spp.	RIBES	10	0 - 100	0 - 5
rubber rabbitbrush	Ericameria nauseosa	ERNA10	10	0 - 100	0 - 5
silver sagebrush	Artemisia cana	ARCA13	10	0 - 100	0 - 5
skunkbush	Rhus trilobata	RHTR	10	0 - 100	0 - 5
wild rose	Rosa woodsii var. woodsii	ROWOW	10	0 - 100	0 - 5
willows	Salix spp.	SALIX	10	0 - 100	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.

Cottonwood/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 45% grasses or grass-like plants, 15% forbs and 40% woody plants. The major grasses include needleandthread, basin wildrye, Letterman needlegrass, thickspike wheatgrass, and bottlebrush squirreltail. Other grasses and grass-like plants may include Canada wildrye, Indian ricegrass, prairie junegrass, bluebunch wheatgrass, Canby bluegrass, needleleaf sedge, and Sandberg bluegrass. The major woody plants include cottonwood and buffaloberry. Other woody plants that may occur include currant, wild rose, rubber rabbitbrush, silver sagebrush, willows, big sagebrush, and skunkbush sumac.

A typical plant composition for this state consists of needleandthread 15-30%, Basin wildrye 10-25%, Letterman needlegrass 10-20%, thickspike wheatgrass 10-20%, Bottlebrush squirreltail 5-10%, other grasses and grass-like plants 5-15%, perennial forbs 5-15%, cottonwood 5-20%, up to 10% buffaloberry, and 5-10% other woody species. Ground cover, by ocular estimate, varies from 65-70%.

The total annual production (air-dry weight) of this state is about 2000 pounds per acre, but it can range from about 1400 lbs./acre in unfavorable years to about 2700 lbs./acre in above average years.

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

Growth curve number: WY0402

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

Growth curve description: LL, SL EXTRA WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	25	35	25	5	0	0	0	0

(Monthly percentages of total annual growth)

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

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

- Continuous Season-long Grazing will convert this plant community to the *Rhizomatous Wheatgrass/Mature Cottonwood 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. 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. This state is dominated by rhizomatous wheatgrass, Kentucky bluegrass, other introduced grasses, cottonwood, silverberry, currants, and wild rose. Cottonwood is rejuvenating with young shoots present in the understory of mature trees, but a middle age class is conspicuously absent.

The total annual production (air-dry weight) of this state is about 1800 pounds per acre, but it can range from about 1100 lbs./acre in unfavorable years to about 2500 lbs./acre in above average years.

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

Growth curve number: WY0402

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

Growth curve description: LL, SL EXTRA WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	25	35	25	5	0	0	0	0

(Monthly percentages of total annual growth)

Bare ground has decreased. The soil of this state is moderately protected. 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:

- Heavy Continuous Season-long Grazing will convert this plant community to the *Introduced Grass/Noxious Weed State*.

Rhizomatous Wheatgrass/Mature Cottonwood Plant Community

This plant community evolved under heavy grazing by domestic livestock. Dominant grasses include rhizomatous wheatgrass, Kentucky bluegrass, and other introduced grasses. Woody plants resistant to grazing such as wild rose and silverberry increase. Cottonwoods become mature and decadent without younger age classes present. As the site dries, woody species such as rubber rabbitbrush and big sagebrush increase. This state is extremely vulnerable to the invasion of noxious weeds.

The total annual production (air-dry weight) of this state is about 1500 pounds per acre, but it can range from about 900 lbs./acre in unfavorable years to about 2200 lbs./acre in above average years.

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

Growth curve number: WY0402

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

Growth curve description: LL, SL EXTRA WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	25	35	25	5	0	0	0	0

(Monthly percentages of total annual growth)

The soil of this state is not well protected. The biotic integrity is somewhat compromised by more xeric species, decreased plant diversity, and increased bare ground. The watershed is somewhat functioning, but may produce excessive runoff.

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 (Cottonwood/Basin Wildrye State)*.

- Heavy Continuous Season-long Grazing and Noxious Weed Invasion will convert this plant community to the *Introduced Grass/Noxious Weed State*.

Introduced Grass/Noxious Weed Plant Community

This plant community is the result of long-term improper grazing use. This state is dominated by rhizomatous wheatgrass, Kentucky bluegrass, other introduced grasses, and noxious weeds. Woody species are greatly diminished if not totally absent.

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 1200 lbs./acre in above average years.

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

Growth curve number: WY0402

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

Growth curve description: LL, SL EXTRA WATER SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	25	35	25	5	0	0	0	0

(Monthly percentages of total annual growth)

Bare ground has increased. The soil of this state is not well protected. 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:

- Prescribed Grazing and Noxious Weed Control will convert this plant community to the *Managed Noxious Weed State*.
- Chemical Seedbed Preparation and Re-seeding followed by Nonuse for two or more years may return this state to near *Historic Climax Plant Community (Cottonwood/Basin Wildrye State)*. However, noxious weeds will persist to some degree.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Cottonwood/Basin Wildrye Plant Community (HCPC): The high degree of plant species and structural diversity, proximity to areas with water at or near the soil surface, and woody plants in this community favors a large variety of wildlife. Trees and shrubs provide suitable thermal and escape cover for mule deer, moose, and occasional whitetail deer as well as nesting habitat for all primary and secondary tree-nesting birds. This community provides habitat for a wide array of small mammals such as jackrabbits, cottontail rabbits, mice, and voles so diverse prey populations are available for badgers, fox, coyotes, and raptors such as red-tail and Swainson’s hawks. Birds such as western kingbird, western meadowlark, lark bunting, and grasshopper sparrow will utilize this community for nesting and foraging. The overstory of large cottonwoods provides habitat for a variety of birds ranging from golden eagles to neotropical migrants.

Managed Noxious Weed 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

Rhizomatous Wheatgrass/Mature Cottonwood 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 tree-nesting birds is impacted.

Introduced Grass/Noxious Weed Plant Community: This plant community is less diverse, and thus, less able to meet the habitat needs of many wildlife species. 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 shrub 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
GRASSES/GRASSLIKES								
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 durivoluta</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 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
FORBS								
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
TREES, SHRUBS & HALF-SHRUBS								
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)
Basin Wildrye/Cottonwood (HCPC)	1400-2700	.4
Managed Noxious Weed	1100-2500	.35
Rhizomatous Wheatgrass/Mature Cottonwood	900-2200	.33
Introduced Grass/Noxious Weed	200-1200	.17

* - 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 herbaceous forage production on this site. This site is dominated by soils in hydrologic groups B and C, with localized areas in hydrologic group D. Infiltration ranges from moderate to rapid. Runoff potential for this site varies from moderate to high depending on soil hydrologic group and ground cover. In many cases, areas with greater than 75% ground cover have the greatest potential for high infiltration and lower runoff. Areas where ground cover is less than 50% have the greatest potential to have reduced infiltration and higher runoff (refer to Part 630, NRCS National Engineering Handbook for detailed hydrology information).

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

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

Limited value for firewood.

Other Products

None noted.

Supporting Information

Associated Sites

Subirrigated	R034AY174WY
Wetland	R034AY178WY

Similar Sites

R034AY238WY – Lowland (LL) 10-14W has higher production.
R034AY174WY – Subirrigated (Sb) 7-9GR has a higher water table and the absence of cottonwood.

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

State Range Management Specialist

Date