

United States Department of Agriculture Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

Site Name: Shallow Clayey (SwCy), 7-9" P.Z., Green River and Great Divide Basins

Site ID: R034AY158WY

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

Physiographic Features

This site usually occurs in an upland position on south and west facing slopes, but can be found on all slopes and positions.

Landform: Hill sides, ridges & escarpments

Aspect: N/A

	<u>Minimum</u>	<u>Maximum</u>
Elevation (feet):	6000	7200
Slope (percent):	0	60
Water Table Depth (inches):	none within 60 inches	
Flooding:		
Frequency:	none	none
Duration:	none	none
Ponding:		
Depth (inches):	0	0
Frequency:	none	none
Duration:	none	none
Runoff Class:	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 April 15 and continues to about July 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 shallow (8 to 15” to bedrock), well-drained loamy and fine soils weathered from sedimentary rock. These soils have slow to moderately slow permeability and may occur on all slopes. The bedrock is residuum which is virtually impenetrable to plant roots. This site may also include some deep gravelly and/or cobbly soils on south and west facing slopes which react like shallow soils.

Major Soil Series correlated to this site includes: Devoe, Roxal, and non-sodic phases of Youjay.

Other Soil Series in MLRA 34 correlated to this site include: Some clay loam phases of Haterton.

Parent Material Kind: residuum

Parent Material Origin: sedimentary rock

Surface Texture: clay loam, clay

Surface Texture Modifier: cobbly

Subsurface Texture Group: cobbly clay, gravelly clay loam

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

Surface Fragments > 3” (%Cover): 0-10

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

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

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	well	well
Permeability Class:	slow	moderately slow
Depth (inches):	8	15
Electrical Conductivity (mmhos/cm) ≤20”:	0	10
Sodium Absorption Ratio ≤20”:	0	5
Soil Reaction (1:1 Water) ≤20”:	7.4	9.0
Soil Reaction (0.1M CaCl2) ≤20”:	NA	NA
Available Water Capacity (inches) ≤30”:	1.2	4.0
Calcium Carbonate Equivalent (percent) ≤20”:	0	10

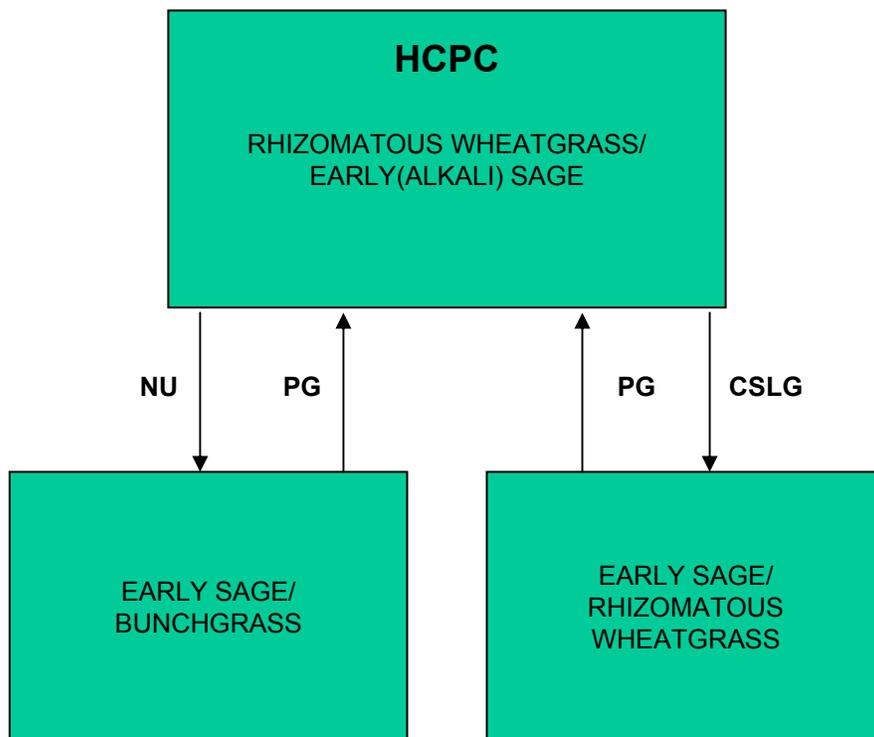
Plant Communities

Ecological Dynamics of the Site:

As this site deteriorates, species such as early sagebrush and unpalatable forbs will increase. Cool season bunchgrasses such as bluebunch wheatgrass and Indian ricegrass will decrease in frequency and production. This site has relatively low productivity potential, and is not well suited to grazing improvement practices unless treated as part of a larger unit containing more productive areas.

The Historic Climax Plant Community (description follows the plant community diagram) has been determined by study of rangeland relic areas, or areas protected from excessive disturbance. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures, and historical accounts have also been used.

The following is a State and Transition Model Diagram that illustrates the common plant communities (states) that can occur on the site and the transitions between these communities. The ecological processes will be discussed in more detail in the plant community narratives following the diagram.



BMA – Brush Management (all methods)
 BMC – Brush Management (chemical)
 BMF – Brush Management (fire)
 BMM – Brush Management (mechanical)
 CSP – Chemical Seedbed Preparation
 CSLG – Continuous Season-long Grazing
 DR – Drainage
 CSG – Continuous Spring Grazing
 HB – Heavy Browse
 HCSLG – Heavy Continuous Season-long Grazing
 HI – Heavy Inundation
 LPG – Long-term Prescribed Grazing
 MT – Mechanical Treatment (chiseling, ripping, pitting)

NF – No Fire
 NS – Natural Succession
 NWC – Noxious Weed Control
 NWI – Noxious Weed Invasion
 NU – Nonuse
 P&C – Plow & Crop (including hay)
 PG – Prescribed Grazing
 RPT – Re-plant Trees
 RS – Re-seed
 SGD – Severe Ground Disturbance
 SHC – Severe Hoof Compaction
 WD – Wildlife Damage (Beaver)
 WF - Wildfire

Plant Community Composition and Group Annual Production
Reference Plant Community (HCPC)

COMMON NAME/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Annual Production (Normal Year)		
			Group	lbs./acre	% Comp.
			Total: 350		
GRASSES AND GRASS-LIKES					
GRASSES/GRASSLIKES					
rhizomatous wheatgrasses	Pascopyrum smithii	PASM	1	88 - 158	25 - 45
bottlebrush squirreltail	Elymus elymoides	ELEL5	2	35 - 70	10 - 20
Indian ricegrass	Achnatherum hymenoides	ACHY	3	18 - 53	5 - 15
Griffiths wheatgrass or	Elymus albicans	ELAL7	4	18 - 35	5 - 10
Bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6			
MISC. GRASSES/GRASSLIKES			5	18 - 35	5 - 10
Letterman needlegrass	Achnatherum nelsonii	ACLE9	5	0 - 18	0 - 5
needleandthread	Hesperostipa comata	HECO26	5	0 - 18	0 - 5
needleleaf sedge	Carex duriuscula	CADU6	5	0 - 18	0 - 5
prairie junegrass	Koeleria macrantha	KOMA	5	0 - 18	0 - 5
Sandberg bluegrass	Poa secunda	POSE	5	0 - 18	0 - 5
threeawns	Aristida spp.	ARIST	5	0 - 18	0 - 5
other perennial grasses (native)		2GP	5	0 - 18	0 - 5
FORBS					
asters	Eucephalus spp.	EUCEP2	6	0 - 18	0 - 5
biscuitroot	Lomatium spp.	LOMAT	6	0 - 18	0 - 5
buckwheats	Eriogonum spp.	ERIOG	6	0 - 18	0 - 5
docks	Rumex spp.	RUMEX	6	0 - 18	0 - 5
fleabane	Erigeron spp.	ERIGE2	6	0 - 18	0 - 5
milkvetches	Astragalus spp.	ASTRA	6	0 - 18	0 - 5
onion	Allium textile	ALTE	6	0 - 18	0 - 5
phlox	Phlox spp.	PHLOX	6	0 - 18	0 - 5
primrose	Oenothera caespitosa	OECA10	6	0 - 18	0 - 5
pussytoes	Antennaria rosea	ANRO2	6	0 - 18	0 - 5
scarlet globemallow	Sphaeralcea coccinea	SPCO	6	0 - 18	0 - 5
western yarrow	Achillea lanulosa	ACHIL	6	0 - 18	0 - 5
other perennial forbs (native)		2FP	6	0 - 18	0 - 5
TREES/SHRUBS					
early(alkali) sagebrush	Artemisia arbuscula ssp. longiloba	ARARL	7	18 - 70	5 - 20
winterfat	Krascheninnikovia lanata	KRAL2	8	4 - 35	1 - 10
MISC. SHRUBS			9	18 - 35	5 - 10
big sagebrush	Artemisia tridentata	ARTR2	9	0 - 18	0 - 5
birdfoot sagebrush	Artemisia pedatifida	ARPE6	9	0 - 18	0 - 5
bud sagewort	Artemisia spinescens	ARSP5	9	0 - 18	0 - 5
Gardners saltbush	Atriplex gardneri	ATGA	9	0 - 18	0 - 5
green rabbitbrush	Chrysothamnus viscidiflorus	CHVI8	9	0 - 18	0 - 5
greenmolly summercypress	Kochia americana	KOAM	9	0 - 18	0 - 5
low sagebrush	Artemisia arbuscula	ARAR8	9	0 - 18	0 - 5
spineless horsebrush	Tetradymia canescens	TECA2	9	0 - 18	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.

Rhizomatous Wheatgrass/Early(alkali) Sage Plant Community (HCPC)

The interpretive plant community for this site is the Historic Climax Plant Community. Potential vegetation is about 50% grasses or grass-like plants, 10% forbs, and 40% woody plants. The major grasses include rhizomatous wheatgrass, bottlebrush squirreltail, Indian ricegrass, and bluebunch wheatgrass. Other grasses include Sandberg bluegrass, prairie junegrass, needleleaf sedge, and threeawn. Early sagebrush and winterfat are the dominant woody plants.

A typical plant composition for this state consists of rhizomatous wheatgrass 25-45%, bottlebrush squirreltail 10-20%, Indian ricegrass 5-15%, bluebunch wheatgrass 5-10%, other grasses and grass-like plants 5-10%, perennial forbs 5-10%, early sagebrush 5-20%, winterfat 1-10%, and 5-10% other woody species. Ground cover, by ocular estimate, varies from 35-45%.

The total annual production (air-dry weight) of this state is about 350 pounds per acre, but it can range from about 200 lbs./acre in unfavorable years to about 450 lbs./acre in above average years.

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

Growth curve number: WY0401

Growth curve name: 7-9GR, UPLAND SITES

Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

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

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

- Nonuse will convert this plant community to the *Early Sage/Bunchgrass State*.
- Continuous Season-long Grazing will convert the plant community to the *Early Sage/Rhizomatous Wheatgrass State*.

Early Sage/Bunchgrass Plant Community

This plant community is the result of protection from grazing and fire. Early sagebrush dominates this plant community with annual production often exceeding 30-40%. The understory of grass includes rhizomatous wheatgrass, bottlebrush squirreltail, Indian ricegrass, and bluebunch wheatgrass.

The total annual production (air-dry weight) of this state is about 300 pounds per acre, but it can range from about 100 lbs./acre in unfavorable years to about 400 lbs./acre in above average years.

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

Growth curve number: WY0401
 Growth curve name: 7-9GR, UPLAND SITES
 Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

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

Transitional pathways leading to other plant communities are as follows:

- Prescribed Grazing will return this state to near *Historic Climax Plant Community (Rhizomatous Wheatgrass/Early Sage State)*.

Early Sage/Rhizomatous Wheatgrass Plant Community

This plant community is the result of frequent and severe grazing. Early sagebrush is a significant component of this plant community, often exceeding 35% of the annual production. Thickspike wheatgrass and unpalatable annual and perennial forbs dominate the herbaceous understory. Green rabbitbrush and bare ground have increased.

The total annual production (air-dry weight) of this state is about 100 pounds per acre, but it can range from about 50 lbs./acre in unfavorable years to about 200 lbs./acre in above average years.

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

Growth curve number: WY0401
 Growth curve name: 7-9GR, UPLAND SITES
 Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	35	40	10	0	5	0	0	0

(Monthly percentages of total annual growth)

Soil erosion is accelerated because of increased bare ground. The biotic community has been compromised, but is relatively stable. The watershed is functioning, but is at risk of further degradation. Water flow patterns and pedestals are obvious. Infiltration is reduced and runoff is increased.

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 (Rhizomatous Wheatgrass/Early Sage State)*.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Rhizomatous Wheatgrass/Early Sage Plant Community (HCPC): Suitable thermal and escape cover for most wildlife is limited due to the low height of woody plants. However, early sagebrush and winterfat provide important winter forage for mule deer and antelope. When found proximal to taller sagebrush, these sites are suitable locations for sage grouse leks. Year-round habitat is provided for sage grouse and many other sagebrush obligate species such as the sage sparrow, Brewer's

sparrow, sage thrasher, pygmy rabbit, sagebrush vole, horned lizard, and pronghorn antelope. Other birds that would frequent this plant community horned larks and golden eagles.

Early Sagebrush/Bunchgrass Plant Community: This plant community may be beneficial for the same wildlife that would use the Historic Climax Plant Community.

Early Sagebrush/Rhizomatous Wheatgrass 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.

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 duriuscula</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
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)
Rhizomatous Wheatgrass/Early Sage (HCPC)	200-450	.11
Early Sage/Bunchgrass	100-400	.09
Early Sage/Rhizomatous Wheatgrass	50-200	.03

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

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

Hydrology Functions

Water is the principal factor limiting forage production on this site. This site is dominated by soils in hydrologic group D. Infiltration is low when soils are wet due to shallow depth to bedrock and/or impervious subsurface layer. Runoff potential for this site varies from high to moderate depending on soil depth, bedrock type (impervious vs. permeable) and ground cover (refer to Part 630, NRCS National Engineering Handbook for detailed hydrology information).

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

Recreational Uses

This site provides hunting opportunities for upland game species. Wildflowers that bloom in spring have esthetic values that appeal to visitors.

Wood Products

No appreciable wood products are present on the site.

Other Products

None noted.

Supporting Information

Associated Sites

Clayey	R034AY104WY
Shallow Loamy	R034AY162WY
Loamy	R034AY122WY

Similar Sites

R034AY258WY – Shallow Clayey (SwCy) 10-14W has higher production.
R034AY162WY – Shallow Loamy (SwLy) 7-9GR has a mixture of big sage and early sage.
R034AY122WY – Loamy (Ly) 7-9GR has big sage instead of early sage.
R034AY104WY – Clayey (Cy) 7-9GR has scattered big sage instead of early sage.

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