United States Department of Agriculture
Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

Site Name: Sands 10-14" Foothills and Basins West

Site ID: R034AY246WY

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

Physiographic Features
This site usually occurs in an upland position on rolling to very rough topography. Slopes are commonly 10 to 30%, and elevations are mostly above 7000 feet.

Landform: Hill sides & ridges **Aspect:** N/A

	Minimum	Maximum
Elevation (feet):	6500	7500
Slope (percent):	5	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	low

Climatic Features
Annual precipitation ranges from 10-14 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 usually occurs in September depending upon fall moisture occurrences.

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

	Minimum	Maximum	5 yrs. out of 10 between
Frost-free period (days):	18	67	July 5 – August 15
Freeze-free period (days):	53	97	June 15 – August 24

Annual Precipitation (inches): <7.18 >13.94 (2 years in 10)

Average annual precipitation: 11.29 inches

Average annual air temperature: 35.9°F (20.4°F Avg. Min. to 51.4°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 "Border 3 N " and Kemmerer Wtr Trtmt" in Lincoln County; "Evanston 1 E" in Uinta County; and "Merna" in Sublette County.

Influencing Water Features

Wetland Description:	System	Subsystem	Class	Sub-class
None	None	None	None	None

Stream Type: None

Representative Soil Features

The soils of this site formed primarily in aeolian deposits and less commonly in residuum. They are deep and moderately deep sandy soils. This soil can develop into active sand dunes with the deterioration of cover.

Major Soil Series correlated to this site include: Coyet, Zeomont and a moist phase of the Bodorumpe series.

Parent Material Kind: aeolian sand, residuum
Parent Material Origin: outwash, sandstone
Surface Texture: fine sand, loamy fine sand
Surface Texture Modifier: none
Subsurface Texture Group: fine sand, loamy fine sand
Surface Fragments ≤ 3" (% Cover): 0
Surface Fragments > 3" (%Cover): 0
Subsurface Fragments ≤ 3" (% Volume): 0-10
Subsurface Fragments > 3" (% Volume): 0

	Minimum	Maximum
Drainage Class:	well	somewhat excessively
Permeability Class:	moderately rapid	rapid
Depth (inches):	20	>60
Electrical Conductivity (mmhos/cm) ≤20":	0	8
Sodium Absorption Ratio ≤20":	0	5
Soil Reaction (1:1 Water) ≤20":	6.1	7.8
Soil Reaction (0.1M CaCl2) ≤20":	NA	NA
Available Water Capacity (inches) ≤30":	1.2	2.5
Calcium Carbonate Equivalent (percent) ≤20":	0	5

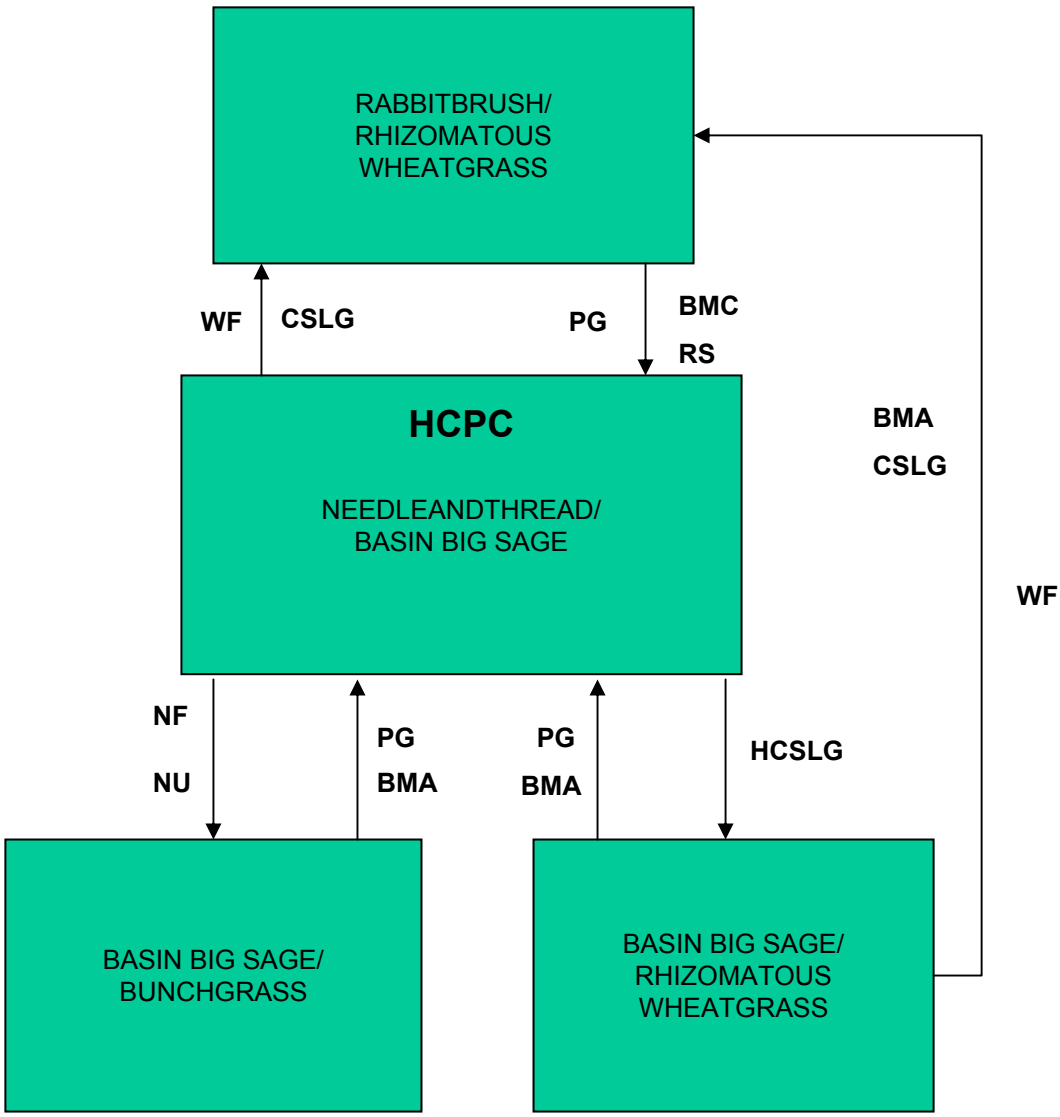
Plant Communities

Ecological Dynamics of the Site:

As this site deteriorates from improper grazing management, woody species such as basin big sagebrush and rabbitbrush will increase. Bunchgrasses such as Indian ricegrass and needleandthread will decrease in frequency and production.

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: 1400		
			Group	lbs./acre	% Comp.
GRASSES AND GRASS-LIKES					
GRASSES/GRASSLIKES					
Needle and thread	Hesperostipa comata	HECO26	1	210 - 490	15 - 35
Indian ricegrass	Achnatherum hymenoides	ACHY	2	140 - 350	10 - 25
Thickspike wheatgrass	Elymus lanceolatus ssp. lanceolatus	ELLAL	3	70 - 140	5 - 10
bottlebrush squirreltail	Elymus elymoides	ELEL5	4	70 - 140	5 - 10
MISC. GRASSES/GRASSLIKES			**5**	**140 - 280**	**10 - 20**
Griffiths wheatgrass or	Elymus albicans	ELAL7	5	0 - 70	0 - 5
Bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6			
Canby bluegrass	Poa canbyi (syn. P. secunda)	POCA (POSE)	5	0 - 70	0 - 5
Needleleaf sedge	Carex duriuscula	CADU6	5	0 - 70	0 - 5
prairie junegrass	Koeleria macrantha	KOMA	5	0 - 70	0 - 5
Sandberg bluegrass	Poa secunda	POSE	5	0 - 70	0 - 5
other perennial grasses (native)		2GP	5	0 - 70	0 - 5
FORBS			**6**	**70 - 210**	**5 - 15**
asters	Eucephalus spp.	EUCEP2	6	0 - 70	0 - 5
biscuitroot	Lomatium spp.	LOMAT	6	0 - 70	0 - 5
bluebells	Mertensia spp.	MERTE	6	0 - 70	0 - 5
buckwheats	Eriogonum spp.	ERIOG	6	0 - 70	0 - 5
buttercups	Ranunculus spp.	RANUN	6	0 - 70	0 - 5
clovers	Trifolium spp.	TRIFO	6	0 - 70	0 - 5
deathcamas	Zigadenus spp.	ZIGAD	6	0 - 70	0 - 5
fleabane	Erigeron spp.	ERIGE2	6	0 - 70	0 - 5
fringed sagewort	Artemisia frigida	ARFR4	6	0 - 70	0 - 5
milkvetches	Astragalus spp.	ASTRA	6	0 - 70	0 - 5
penstemons	Penstemon spp.	PENST	6	0 - 70	0 - 5
Phacelias	Phacelia spp.	PHACE	6	0 - 70	0 - 5
pussytoes	Antennaria rosea	ANRO2	6	0 - 70	0 - 5
sagebrush gilia	Leptodactylon pungens	LEPU	6	0 - 70	0 - 5
sandwort	Arenaria spp.	ARENA	6	0 - 70	0 - 5
scarlet globemallow	Sphaeralcea coccinea	SPCO	6	0 - 70	0 - 5
toadflax	Comandra umbellata	COUM	6	0 - 70	0 - 5
western yarrow	Achillea lanulosa	ACHIL	6	0 - 70	0 - 5
other perennial forbs (native)		2FP	6	0 - 70	0 - 5
TREES/SHRUBS					
big sagebrush	Artemisia tridentata	ARTR2	7	70 - 140	5 - 10
MISC. SHRUBS			**8**	**70 - 210**	**5 - 15**
Antelope bitterbrush	Purshia tridentata	PUTR2	8	0 - 70	0 - 5
four wing saltbush	Atriplex canescens	ATCA2	8	0 - 70	0 - 5
green rabbitbrush	Chrysothamnus viscidiflorus	CHVI8	8	0 - 70	0 - 5
rubber rabbitbrush	Ericameria nauseosa	ERNA10	8	0 - 28	0 - 5
silver sagebrush	Artemisia cana ssp. cana	ARCAC5	8	0 - 70	0 - 5
winterfat	Krascheninnikovia lanata	KRAL2	8	0 - 70	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.

Needleandthread/Basin Big Sage 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 60% grasses or grass-like plants, 15% forbs, and 25% woody plants. The major grasses include needleandthread, Indian ricegrass, thickspike wheatgrass, and bottlebrush squirreltail. Other grasses include Sandberg bluegrass, prairie junegrass, bluebunch wheatgrass, Canby bluegrass, and needleleaf sedge. Basin big sagebrush is the dominant woody plant. Other woody plants may include bitterbrush, fourwing saltbush, rubber and green rabbitbrush, winterfat, and silver sagebrush.

A typical plant composition for this state consists of needleandthread 15-35%, Indian ricegrass 10-25%, thickspike wheatgrass 5-10%, bottlebrush squirreltail 5-10%, other grasses and grass-like plants 10-20%, perennial forbs 5-15%, basin big sagebrush 5-10%, and 5-15% other woody species. Ground cover, by ocular estimate, varies from 20-30%.

The total annual production (air-dry weight) of this state is about 1400 pounds per acre, but it can range from about 900 lbs./acre in unfavorable years to about 1700 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:
Growth curve number: WY0301
Growth curve name: 10-14W, UPLAND SITES
Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	15	40	30	10	0	0	0	0

(Monthly percentages of total annual growth)

This plant community 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 tolerance. 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 and No Fire will convert this plant community to the *Basin Big Sage/Bunchgrass State*.
- Heavy Continuous Season-Long Grazing will convert this plant community to the *Basin Big Sage/Rhizomatous Wheatgrass State*.
- Wildfire followed by Continuous Season-long Grazing will convert this plant community to the *Rabbitbrush/Rhizomatous Wheatgrass State.*

Basin Big Sage/Bunchgrass Plant Community
This plant community is the result of nonuse and the absence of fire. Shrubs dominate the site, lowering herbaceous forage production. Basin big sagebrush often exceeds 15% of the annual production. Bunchgrasses such as needleandthread and Indian ricegrass dominate the understory.

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 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: WY0301
Growth curve name: 10-14W, UPLAND SITES
Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	15	40	30	10	0	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:

- Brush Management followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan will return this state to near *Historic Climax Plant Community (Needleandthread/Basin Big Sage State).* Care should be taken when planning brush management to consider wildlife habitat and critical winter ranges.
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Basin Big Sage/Rhizomatous Wheatgrass Plant Community
This plant community is the result of continuous season-long grazing. It is dominated by shrubs, bare ground, thickspike wheatgrass, bluegrasses, and both annual and perennial forbs. Common forbs include scurfpea and sagebrush gilia. Basin big sage often approaches 45% of annual production.

The total annual production (air-dry weight) of this state is about 700 pounds per acre, but it can range from about 200 lbs./acre in unfavorable years to about 1000 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:
Growth curve number: WY0301
Growth curve name: 10-14W, UPLAND SITES
Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	15	40	30	10	0	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:

- Brush Management followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan will return this state to near *Historic Climax Plant Community (Needleandthread/Basin Big Sage State).* Care should be taken when planning brush management to consider wildlife habitat and critical winter ranges.
- Wildfire OR Brush Management followed by Continuous Season-long Grazing will convert this plant community to the *Rabbitbrush/Rhizomatous Wheatgrass State.*

Rabbitbrush/Rhizomatous Wheatgrass Plant Community
This plant community is the result of severe disturbance such as brush management or wildfire followed by improper grazing. It is dominated by sprouting shrubs such as rabbitbrush. Rhizomatous grasses such as thickspike wheatgrass, and unpalatable annual and perennial forbs are in the understory. There is a substantial amount of bare ground.

The total annual production (air-dry weight) of this state is about 400 pounds per acre, but it can range from about 100 lbs./acre in unfavorable years to about 700 lbs./acre in above average years.

The following is the growth curve of this plant community expected during a normal year:
Growth curve number: WY0301
Growth curve name: 10-14W, UPLAND SITES
Growth curve description: ALL UPLAND SITES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	15	40	30	10	0	0	0	0

(Monthly percentages of total annual growth)

The soil is not protected and erosion will increase if management is not changed. The biotic integrity may be reduced due to low vegetative production and blowing sand. The watershed is functioning at risk.

Transitional pathways leading to other plant communities are as follows:

- Brush Management (chemical) and Re-seeding followed by deferment for 1 to 2 years as part of a Prescribed Grazing plan will return this plant community to near *Historic Climax Plant Community (Needleandthread/Basin Big Sage State).* Additional deferment may be necessary and should be prescribed on an individual site basis.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Needleandthread/Basin Big Sage Plant Community: This plant community provides suitable thermal and escape cover for mule deer and elk. Sagebrush, which can approach 15% protein and 40-60% digestibility, provides important winter forage for mule deer and antelope. 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 include horned larks and golden eagles.

Basin Big Sage/Bunchgrass Plant Community: This plant community may be useful for the same wildlife that would use the Historic Climax Plant Community.

Basin Big Sage/Rhizomatous Wheatgrass Plant Community: These communities are unstable due to moving sand dunes. They provide a unique temporary habitat for some small mammals and birds.

Rabbitbrush/Rhizomatous Wheatgrass Plant Community: These communities are unstable due to moving sand dunes. They provide a unique temporary habitat for some small mammals and birds.

COMMON NAME/ GROUP NAME	SCIENTIFIC NAME	SCIENTIFIC SYMBOL	*Cattle*	*Sheep*	*Horses*	*Mule Deer*	*Antelope*	*Elk*
GRASSES/GRASSLIKES								
alkali bluegrass (aka Sandberg)	Poa secunda (syn. Poa juncifolia)	POSE (POJU)	UDUD	NDNU	UDUD	UDUU	UDUU	DPDD
alkali muhly	Muhlenbergia asperifolia	MUAS	UUDU	UUDU	UUDU	UUDU	UUDU	UUDU
alkali sacaton	Sporobolus airoides	SPAI	UDPU	UPDU	UPDU	UUDU	UUDU	UDPU
American mannagrass	Glyceria grandis	GLGR	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Baltic rush	Juncus balticus	JUBA	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
basin wildrye	Leymus cinereus	LECI4	DPDD	UPDU	DPDD	UDUU	UDUU	DPDD
bluebunch wheatgrass	Pseudoroegneria spicata	PSSP6	DPDD	UPDD	DPDD	UDUU	UDUU	DPDD
bluejoint reedgrass (aka bluejoint)	Calamagrostis canadensis	CACA4	UPDU	UDUU	UPDU	UDUU	UDUU	UPDU
bottlebrush squirreltail	Elymus elymoides	ELELE	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Canby bluegrass (aka Sandberg)	Poa secunda (syn. Poa canbyi)	POSE (POCA)	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Indian ricegrass	Achnatherum hymenoides	ACHY	DPPD	UPDU	DPPD	UDUU	UDUU	DPPD
inland saltgrass	Distichlis spicata	DISP	NUUN	NUUN	NUUN	NUUN	NUUN	NUUN
inland sedge	Carex interior	CAIN11	DDDD	DDDD	DDDD	UUUU	UUUU	DDDD
Letterman needlegrass	Achnatherum lettermanii	ACLE9	PPPP	PPPP	DDDD	DDDD	DDDD	DDDD
mat muhly	Muhlenbergia richardsonis	MURI	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
muttongrass	Poa fendleriana	POFE	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
Nebraska sedge	Carex nebrascensis	CANE2	UDUD	UPND	UDUD	UPND	UPND	UDUD
needleandthread	Hesperostipa comata ssp. comata	HECOC8	DPDD	UPDU	DPDD	UDUU	UDUU	DPDD
needleleaf sedge	Carex duriuscula	CADU6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
northern reedgrass	Calamagrostis stricta ssp. inexpansa	CASTI3	UPDU	UDUU	UPDU	UDUU	UDUU	UPDU
Nuttall's alkaligrass	Puccinellia nuttalliana	PUNU2	DPUD	NPND	DPUD	UDUU	UDUU	DPPD
plains reedgrass	Calamagrostis montanensis	CAMO	UPDU	UDUU	UPDU	UDUU	UDUU	UPDU
prairie junegrass	Koeleria macrantha	KOMA	UDUU	NDNU	UDUU	UDUU	UDUU	UDUU
sand dropseed	Sporobolus cryptandrus	SPCR	NUUN	NUUN	NUUN	NUUN	NUUN	NUUN
Sandberg bluegrass	Poa secunda	POSE	NPUN	NPUN	NPUN	NDUN	NDUN	NPUN
slender wheatgrass	Elymus trachycaulus	ELTR7	DPDD	UPDD	DPDD	UDUU	UDUU	DPDD
tall mannagrass (aka fowl)	Glyceria striata (syn. G. elata)	GLST (GLEL)	DDDD	UUUU	DDDD	UUUU	UUUU	DDDD
thickspike wheatgrass (aka streambank)	Elymus lanceolatus ssp. lanceolatus	ELLAL	DPDD	UPDD	DPDD	UDUU	UDUU	DPDD
threeawn	Aristida spp.	ARIST	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
tufted hairgrass	Deschampsia caespitosa	DECA18	PPPP	PPPP	PPPP	DDDD	DDDD	PPPP
western wheatgrass	Pascopyrum smithii	PASM	DPDD	UPDD	DPDD	UDUU	UDUU	DPDD
FORBS								
agoseris (pale)	Agoseris glauca	AGGL	DDDD	DDDD	PPPP	DDDD	*DDDD*	DDDD
American bistort	Polygonum bistortoides	POBI6	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
American licorice	Glycyrrhiza lepidota	GLLE3	NNNN	NUUN	NNNN	NUUN	NUUN	NUUN
American vetch	Vicia americana	VIAM	UPPU	UPPU	UPPU	UPPU	UPPU	UPPU
arrowgrass	Triglochin spp.	TRIGL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
aster	Eucephalus spp.	EUCEP2	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
biscuitroot (aka desertparsley)	Lomatium spp.	LOMAT	UDUU	UDDU	UDUU	UDDU	UDDU	UDDU
bluebells	Mertensia	MERTE	DDDD	PPPP	DDDD	DDDD	DDDD	DDDD
blue-eyed grass	Sisyrinchium spp.	SISYR	UUDU	UUPU	UUDU	UUDU	UUDU	UUDU
buckwheat	Eriogonum spp.	ERIOG	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
buttercup	Ranunculus spp.	RANUN	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
chickweed	Cerastium spp.	CERAS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
clover	Trifolium spp.	TRIFO	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
common tansy	Tanacetum vulgare	TAVU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
cowparsnip, common	Heracleum	HERAC	PPPP	PPPP	PPPP	PPPP	PPPP	PPPP
deathcamas	Zigadenus venenosus	ZIVE	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
dock	Rumex spp.	RUMEX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
elephanthead lousewort	Pedicularis groenlandica	PEGR2	UUUU	DDDD	UUUU	DDDD	UUUU	UUUU
flax	Linum spp.	LINUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
fleabane	Erigeron spp.	ERIGE2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
fringed sagewort	Artemisia frigida	ARFR4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
goldenpea	Thermopsis spp.	THERM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
goldenrod	Solidago spp.	SOLID	NUNN	NUNN	NNNN	NUNN	NUNN	NUNN
goldenweed	Pyrrocoma	PYRRO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
gromwell, corn	Buglossoides arvensis	BUAR3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
groundsel	Senecio spp.	SENEC	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
hawksbeard	Crepis acuminata	CRAC2	UUUU	PPPP	UUUU	DDDD	DDDD	UUUU
Hoods phlox	Phlox hoodii	PHHO	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
horsetail	Equisetum spp.	EQUIS	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
iris, Rocky Mountain	Iris missouriensis	IRMI	NUUN	NUUN	NNNN	NUUN	NUUN	NUUN
larkspur	Delphinium spp.	DELPH	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
lupine (toxic at certain times)	Lupinus spp.	LUPIN	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
milkvetch	Astragalus spp.	ASTRA	UDUU	UDUU	UDUU	UDUU	UDUU	UDUU
mint, wild	Menthan arvensis	MEAR4	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
nailwort	Paronychia spp.	PARON	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
paintbrush	Castilleja spp.	CASTI2	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
penstemon	Penstemon spp.	PENST	UPPU	UPPU	UPPU	UPPU	UPPU	UPPU
phacelia	Phacelia spp.	PHACE	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
phlox	Phlox spp.	PHLOX	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
plaintain	Plantago spp.	PLANT	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
povertyweed	Iva axillaris	IVAX	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
primrose	Primula spp.	PRIMU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
princesplume	Stanleya spp.	STANL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
pussytoes	Antennaria spp.	ANTEN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
sagebrush gilia (granite prickly phlox)	Leptodactylon pungens	LEPU	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
sandwort	Arenaria spp.	ARENA	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
scarlet globemallow	Sphaeralcea coccinea	SPCO	UUDU	UDDU	UUDU	UPPU	UDDD	UDDD
shooting star	Dodecatheon spp.	DODEC	DDDD	DDDD	UUUU	DDDD	UUUU	DDDD
starwort	Stellaria spp.	STELL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
stonecrop	Sedum spp.	SEDUM	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
stoneseed	Lithospermum spp.	LITHO3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
sweetroot	Osmorhiza	OSMOR	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
toadflax, pale bastard	Comandra umbellata	COUMP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
violet	Viola spp.	VIOLA	DDDD	DDDD	DDDD	DDDD	DDDD	DDDD
water hemlock	Cicuta spp.	CICUT	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
waterleaf	Hydrophyllum	HYDRO4	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD
western yarrow	Achillea millefolium	ACMI2	NUUN	NUUN	NNNN	NUUN	NUUN	NUUN
wild onion	Allium spp.	ALLIU	UDUU	UDUU	UDUU	UDUU	UDUU	UDUU
woodyaster, smooth	Xylorhiza glabriuscula	XYGL	TTTT	TTTT	TTTT	TTTT	TTTT	TTTT
TREES, SHRUBS & HALF-SHRUBS								
alkali sagebrush (aka early or little)	Artemisia arbuscula ssp. longiloba	ARARL	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
antelope bitterbrush	Purshia tridentata	PUTR2	PDDD	PDDD	DDUD	PDDP	PDPP	PDDP
big sagebrush	Artemisia tridentata	ARTR2	UNUU	DUUD	UNNU	PPPP	PUDP	DUUU
birdfoot sagebrush	Artemisia pedatifida	ARPE6	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
black sagebrush	Artemisia nova	ARNO4	UUUU	PPPP	UUUU	PPPP	PPPP	UUUU
boxelder	Acer negundo	ACNE2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU

bud sagewort	Picrothamnus desertorum	PIDE4	PPPP	PPPP	DDDD	PPPP	PPPP	PPPP
chokecherry (toxic in large amounts)	Prunus virginiana	PRVI	DDDD	DDDD	DDDD	PPPP	DDDD	DDDD
dogwood	Cornus spp.	CORNU	DDDD	DDDD	DDDD	DDDD	UUUU	DDDD
fourwing saltbush	Atriplex canescens var. canescens	ATCAC	PDDP	PDDP	PDDP	PDDP	PDDP	PDDP
Gardner's saltbush	Atriplex gardneri	ATGA	PDDP	PDDP	DUUD	PDDP	PDDP	PDDP
greasewood (toxic in large amounts)	Sarcobatus vermiculatus	SAVE4	DUUD	DUUD	DUUD	DUUD	DUUD	DUUD
green rabbitbrush (aka low or douglas)	Chrysothamnus viscidiflorus	CHVI8	DUUD	DUUD	UNNU	PUDD	PUDD	DUUD
greenmolly summercypress	Kochia americana	KOAM	UUUU	DDDD	UUUU	UUUU	UUUU	UUUU
juniper	Juniperus spp.	JUNIP	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
limber pine	Pinus flexilis	PIFL2	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
low sagebrush (aka little)	Artemisia arbuscula	ARAR8	DDDD	DDDD	UUUU	DDDD	DDDD	DDDD
poplar-cottonwood & aspen(sprouts)	Populus spp.	POPUL	PPPP	PPPP	PPPP	PPPP	UUUU	PPPP
rubber rabbitbrush	Ericameria nauseosa	ERNA10	UUUU	DUUD	UUUU	UDDU	DUUD	DUUU
serviceberry (aka saskatoon)	Amelanchier alnifolia	AMAL2	DDDD	PPPP	DDDD	PPPP	DDDD	DDDD
shadscale saltbush	Atriplex confertifolia	ATCO	UUUU	DDDD	UUUU	DDDD	UUUU	UUUU
shrubby cinquefoil	Dasiphora floribunda	DAFL3	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
silver buffaloberry	Shepherdia argentea	SHAR	DUUU	DUUU	UUUU	UUUU	PUDP	DUUU
silver sagebrush	Artemisia cana	ARCA13	DUUD	DUUD	UNNU	PPPP	PDDP	DUUD
skunkbush sumac	Rhus trilobata var. trilobata	RHTRT	DUUD	DUUD	UUUU	DUUD	DUUD	DUUD
spineless horsebrush	Tetradymia canescens	TECA2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
spiny hopsage	Grayia spinosa	GRSP	UUUU	DDDD	DDDD	UUUU	DDDD	UUUU
spiny horsebrush (aka shortspine)	Tetradymia spinosa	TESP2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
true mountainmahogany (aka alderleaf)	Cercocarpus montanus var. montanus	CEMOM4	DDDD	PDDD	DDDD	UNNU	PDDP	PDDD
water birch	Betula occidentalis	BEOC2	UUUU	UUUU	UUUU	UUUU	UUUU	UUUU
western snowberry	Symphoricarpos occidentalis	SYOC	UUUU	UUUU	UUUU	UUUU	DUDD	DUUU
wildrose	Rosa woodsii var. woodsii	ROWOW	UDDU	UDDU	NUUN	UDDU	UDDU	UDDU
willow	Salix spp.	SALIX	PUDP	PUDP	DUUD	UUUU	PUDP	PUDP
winterfat	Krascheninnikovia lanata	KRLA2	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.

Plant Community	Production (lb./ac)	Carrying Capacity* (AUM/ac)
Needleandthread/Basin Big Sage (HCPC)	900-1700	.45
Basin Big Sage/Bunchgrass	500-1300	.3
Basin Big Sagebrush/Rhizomatous Wheatgrass	200-1000	.2
Rabbitbrush/ Rhizomatous Wheatgrass	100-700	.1

* - 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 A, with localized areas in hydrologic group B. Infiltration potential for this site varies from moderately rapid to very rapid depending on soil hydrologic group and ground cover. Runoff varies from very low to moderately low (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. 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 hunting opportunities for upland game species. The wide variety of plants which bloom from spring until fall have an esthetic value that appeals to visitors. The sandy nature of the soils appeals to Off-Road Vehicle (ORV) users.

Wood Products

No appreciable wood products are present on the site.

Other Products

None noted.

Supporting Information

Associated Sites

Sandy R034AY250WY

Similar Sites

R034AY146WY – Sands (Sa) 7-9GR has lower production.
R034AY250WY – Sandy (Sy) 10-14W has lower production and shorter shrub height.

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

Data Source	Number of Records	Sample Period	State	County
SCS-RANGE-417	15	1966-1988	WY	Sublette & others

State Correlation

Type Locality

Field Offices

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

Relationship to Other Established Classifications

Other References

Site Description Approval

_____ _____
State Range Management Specialist Date