

United States Department of Agriculture Natural Resources Conservation Service

Ecological Site Description

Site Type: Rangeland

Site Name: Wet Land

Site ID: R058DY002SD

Major Land Resource Area (MLRA): 58D – Northern Rolling High Plains, Eastern Part



Physiographic Features

This site occurs on nearly level river valleys and uplands.

Landform: depression, oxbow, slough **Aspect:** N/A

	<u>Minimum</u>	<u>Maximum</u>
Elevation (feet):	2,300	4,000
Slope (percent):	0	3
Water Table Depth (inches):	0	18
Flooding:		
Frequency:	None	Frequent
Duration:	None	Long
Ponding:		
Depth (inches):	0	12
Frequency:	Frequent	Frequent
Duration:	Brief	Very long
Runoff Class:	Negligible	Medium

Climatic Features

The climate in this MLRA is typical of the drier portions of the Northern Great Plains where sagebrush steppes to the west yield to grassland to the east. Annual precipitation ranges from 14 to 16 inches. Most of the rainfall occurs as frontal storms early in the growing season. Some high intensity, convective thunderstorms occur in the summer. Precipitation in winter occurs as snow. Temperatures show a wide range between summer and winter and between daily maximums and minimums, due to the high elevation and dry air, which permits rapid incoming and outgoing radiation. Outbreaks of cold air from Canada 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. The normal average annual temperature is about 44°F. January is the coldest month with average temperatures ranging from about 12°F (Marmarth, North Dakota (ND)), to about 20°F (Baker, Montana (MT)). July is the warmest month with temperatures averaging from about 70°F (Marmarth, ND), to about 76°F (Baker, MT). The range of normal average monthly temperatures between the coldest and warmest months is about 55°F. Hourly winds are estimated to average about 11 miles per hour (mph) annually, ranging from about 13 mph during the spring to about 10 mph during the summer. Daytime winds are generally stronger than nighttime and strong storms may bring brief periods of high winds with gusts to more than 50

mph.

Growth of cool-season plants begins in early to mid-March, slowing or ceasing in late June. Warm-season plants begin growth about mid-May and can continue to early or mid-September. Greenup of cool-season plants may occur in September and October when adequate soil moisture is present.

	<u>Minimum</u>	<u>Maximum</u>
Frost-free period (days):	110	123
Freeze-free period (days):	130	140
Mean Annual Precipitation (inches):	14	16

Average Monthly Precipitation (inches) and Temperature (°F):

	Precip. Min.	Precip. Max	Temp. Min.	Temp. Max.
January	0.39	0.46	-0.8	31.0
February	0.34	0.54	5.7	34.4
March	0.73	0.82	15.7	43.8
April	1.23	1.73	29.1	60.4
May	2.29	2.71	39.6	67.7
June	2.79	3.00	49.3	76.7
July	1.91	2.10	54.5	90.7
August	1.35	1.46	50.2	88.2
September	1.16	1.25	40.1	76.5
October	0.85	1.07	28.9	59.5
November	0.43	0.57	15.9	44.6
December	0.31	0.50	6.1	33.7

Climate Stations		Period	
Station ID	Location or Name	From	To
MT0412	Baker	1948	2005
SD1294	Camp Crook	1896	2006
SD3560	Harding 3 SE	1951	2006
ND5575	Marmarth	1950	2006
SD7062	Redig 11 NE	1948	2006

For other climate stations that may be more representative, refer to <http://www.wcc.nrcs.usda.gov>.

Influencing Water Features

Wetland Description:	<u>System</u>	<u>Subsystem</u>	<u>Class</u>	<u>Sub-class</u>
Cowardin, et. al., 1979	Palustrine	N/A	Emergent	Persistent

Representative Soil Features

The soils in this site are very poorly or poorly drained and formed in clayey or silty alluvium. The surface layer is five to six inches thick. The texture of the subsurface ranges from silty clay loam to silty clay. This site should show no evidence of rills, wind scoured areas, or pedestalled plants. Water flow paths are broken, irregular in appearance, or discontinuous with numerous debris dams or vegetative barriers. The soil surface is stable and intact.

Access Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/>) for specific local soils information.

Parent Material Kind: alluvium
Parent Material Origin: siltstone and mudstone
Surface Texture: silty clay, silty clay loam
Surface Texture Modifier: none
Subsurface Texture Group: clayey
Surface Fragments ≤3” (% Cover): 0
Surface Fragments >3” (%Cover): 0
Subsurface Fragments ≤3” (% Volume): 0
Subsurface Fragments >3” (% Volume): 0

	<u>Minimum</u>	<u>Maximum</u>
Drainage Class:	very poorly	poorly
Permeability Class:	very slow	moderate
Depth to Bedrock (inches):	80	80
Electrical Conductivity (mmhos/cm)*:	0	8
Sodium Absorption Ratio*:	0	13
Soil Reaction (1:1 Water)*:	6.1	9.0
Soil Reaction (0.1M CaCl₂)*:	NA	NA
Available Water Capacity (inches)*:	6	7
Calcium Carbonate Equivalent (percent)*:	0	30

*These attributes represent from 0-40 inches or to the first restrictive layer.

Plant Communities

Ecological Dynamics of the Site

This site developed under Northern Great Plains climatic conditions, natural influences of large herbivores, occasional fire, and other biotic and abiotic factors that typically influence soil/site development. Changes will occur in the plant communities due to short-term weather variations, impacts of native and/or exotic plant and animal species, and management actions. While the following plant community descriptions describe more typical transitions between communities that will occur, severe disturbances, such as periods of well below average precipitation, can cause significant shifts in plant communities and/or species composition.

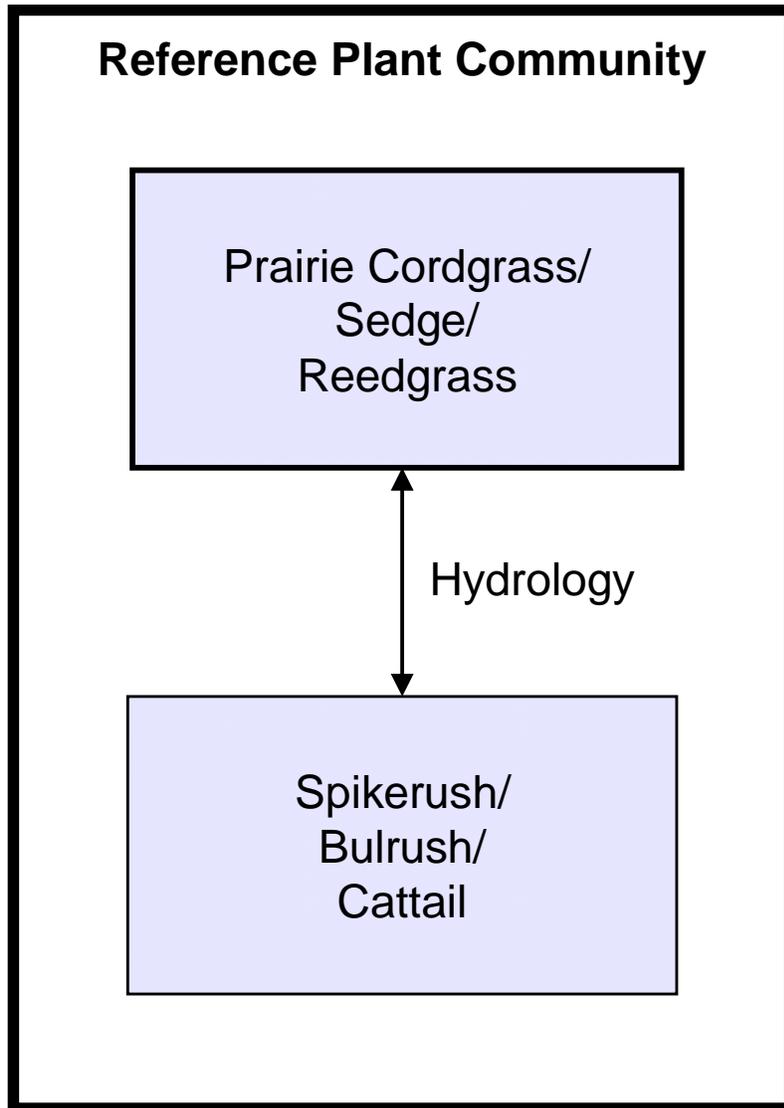
Changes will occur in the plant communities primarily due to periodic fluctuations in hydrologic cycles. As this site deteriorates, such as when excessive litter accumulates and plants become decadent, species such as spikerush and Baltic rush increase. Grasses and grass-likes such as Nebraska sedge, northern reedgrass, and bluejoint reedgrass will decrease in frequency and production. When this occurs, the plant composition will be similar to the Spikerush/Bulrush/Cattail Plant Community, but the total production will be significantly reduced.

This site can be significantly impacted when used as primary watering sources by livestock and to a lesser degree, wildlife. Compaction can occur, which can lead to pedestalling and increased bare ground. This does not significantly affect composition, but can lead to reduced production.

The plant community upon which interpretations are primarily based is the Reference Plant Community. This plant community has been determined by studying rangeland relic areas, areas protected from excessive disturbance, and areas under long-term rotational grazing regimes. Trends in plant community dynamics ranging from heavily grazed to lightly grazed areas, seasonal use pastures, and historical accounts also have been used. Plant communities, states, transitional pathways, and thresholds have been determined through similar studies and experience.

The following is a diagram that illustrates the common plant communities that can occur on the site and the transition pathways between communities. The ecological processes are discussed in more detail in the plant community descriptions following the diagram.

Plant Communities and Transitional Pathways



Hydrology – Natural wet and dry cycles.

Plant Community Composition and Group Annual Production

COMMON/GROUP NAME	SCIENTIFIC NAME	SYMBOL	Prairie Cordgrass/ Sedge/Reedgrass			Spikerush/Bulrush/Cattail			
			Group	lbs./acre	% Comp	Group	lbs./acre	% Comp	
GRASSES				2750 - 4125	50 - 75		550 - 1925	10 - 35	
TALL GRASSES			1	3025 - 3575	55 - 65		275 - 1100	5 - 20	
prairie cordgrass	Spartina pectinata	SPPE	1	2200 - 3025	40 - 55		275 - 825	5 - 15	
bluejoint reedgrass	Calamagrostis canadensis	CACA4	1	550 - 1375	10 - 25		0 - 550	0 - 10	
northern reedgrass	Calamagrostis stricta ssp. inexpansa	CASTI3	1	110 - 550	2 - 10		0 - 275	0 - 5	
narrow reedgrass	Calamagrostis stricta ssp. stricta	CASTS5	1	110 - 550	2 - 10		0 - 275	0 - 5	
rough barnyardgrass	Echinochloa muricata	ECMU2	1	275 - 825	5 - 15		0 - 275	0 - 5	
OTHER NATIVE GRASSES			2	275 - 550	5 - 10		275 - 825	5 - 15	
bluegrass	Poa spp.	POA	2	0 - 275	0 - 5		0 - 275	0 - 5	
foxtail barley	Hordeum jubatum	HOJU	2	0 - 275	0 - 5		0 - 275	0 - 5	
reed canarygrass	Phalaris arundinacea	PHAR3	2	0 - 275	0 - 5		0 - 275	0 - 5	
slender wheatgrass	Elymus trachycaulus	ELTR7	2	0 - 275	0 - 5		0 - 275	0 - 5	
switchgrass	Panicum virgatum	PAVI2	2	0 - 275	0 - 5		0 - 55	0 - 1	
western wheatgrass	Pascopyrum smithii	PASM	2	0 - 165	0 - 3		0 - 55	0 - 1	
inland saltgrass	Distichlis spicata	DISP	2	0 - 55	0 - 1		0 - 55	0 - 1	
other grasses		2GRAM	2	0 - 275	0 - 5		0 - 275	0 - 5	
GRASS-LIKES			3	1100 - 1925	20 - 35	3	2200 - 3300	40 - 60	
Baltic rush	Juncus balticus	JUBA	3	0 - 275	0 - 5	3	275 - 825	5 - 15	
bulrush	Schoenoplectus spp.	SCHOE6	3	275 - 550	5 - 10	3	550 - 1100	10 - 20	
Nebraska sedge	Carex nebrascensis	CANE2	3	275 - 825	5 - 15	3	275 - 825	5 - 15	
rush	Juncus spp.	JUNCU	3	0 - 275	0 - 5	3	275 - 825	5 - 15	
sedge	Carex spp.	CAREX	3	275 - 550	5 - 10	3	275 - 550	5 - 10	
slough sedge	Carex atherodes	CAAT2	3	275 - 825	5 - 15	3	275 - 825	5 - 15	
spikerush	Eleocharis spp.	ELEOC	3	275 - 550	5 - 10	3	550 - 1375	10 - 25	
other grass-likes		2GL	3	0 - 275	0 - 5	3	0 - 550	0 - 10	
FORBS			4	275 - 550	5 - 10	4	825 - 1925	15 - 35	
American licorice	Glycyrrhiza lepidota	GLLE3	4	0 - 110	0 - 2	4	0 - 275	0 - 5	
arrowgrass	Triglochin palustre	TRPA6	4	0 - 110	0 - 2	4	0 - 275	0 - 5	
aster	Aster spp.	ASTER	4	0 - 110	0 - 2	4	0 - 110	0 - 2	
cattail	Typha latifolia	TYLA	4	0 - 110	0 - 2	4	550 - 1100	10 - 20	
cinquefoil	Potentilla spp.	POTEN	4	0 - 110	0 - 2	4	0 - 165	0 - 3	
dock	Rumex spp.	RUMEX	4	0 - 275	0 - 5	4	0 - 275	0 - 5	
horsetail	Equisetum laevigatum	EQLA	4	0 - 110	0 - 2	4	110 - 550	2 - 10	
pale dock	Rumex altissimus	RUAL4	4	0 - 110	0 - 2	4	0 - 165	0 - 3	
Pennsylvania smartweed	Polygonum pensylvanicum	POPE2	4	0 - 110	0 - 2	4	0 - 275	0 - 5	
spotted water hemlock	Cicuta maculata	CIMA2	4	0 - 110	0 - 2	4	0 - 165	0 - 3	
stinging nettle	Urtica dioica	URDI	4	0 - 165	0 - 3	4	0 - 275	0 - 5	
swamp milkweed	Asclepias incarnata	ASIN	4	0 - 110	0 - 2	4	0 - 165	0 - 3	
swamp smartweed	Polygonum hydropiperoides	POHY2	4	0 - 110	0 - 2	4	0 - 275	0 - 5	
whitewater crowfoot	Ranunculus aquatilis	RAAQ	4	0 - 110	0 - 2	4	0 - 110	0 - 2	
wild mint	Mentha arvensis	MEAR4	4	0 - 165	0 - 3	4	0 - 165	0 - 3	
native forbs		2FN	4	55 - 275	1 - 5	4	55 - 275	1 - 5	
SHRUBS/TREES			5	0 - 275	0 - 5	5	0 - 275	0 - 5	
cottonwood	Populus spp.	POPUL	5	0 - 110	0 - 2	5	0 - 110	0 - 2	
false indigo	Amorpha fruticosa	AMFR	5	0 - 110	0 - 2	5	0 - 110	0 - 2	
willow	Salix spp.	SALIX	5	0 - 220	0 - 4	5	0 - 220	0 - 4	
other shrubs		2SHRUB	5	0 - 165	0 - 3	5	0 - 165	0 - 3	
Annual Production lbs./acre				LOW	RV	HIGH	LOW	RV	HIGH
GRASSES				3785	3438	-3625	475	738	-1385
GRASS-LIKES				480	1513	-1900	1775	2250	-2700
FORBS				235	413	-660	750	1375	-1600
SHRUBS/TREES				0	138	-315	0	138	-315
TOTAL				4500	5500	-6500	3000	4500	-6000

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.
 RV = Representative value.

Plant Community and Vegetation State Narratives

Following are the narratives for each of the described plant communities. These plant communities may not represent every possibility, but they 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 information is collected, some of these plant community descriptions may be revised or removed, and new ones added. None of these plant communities should necessarily be thought of as “Desired Plant Communities” (DPC). According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) National Range and Pasture Handbook, DPCs 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.

Reference Plant Community

The plant community upon which interpretations are primarily based is the Reference Plant Community. It is actually made up of two distinct plant communities, which are described further below. Potential vegetation is about 10 to 75 percent grasses, 20 to 60 percent grass-likes, 5 to 35 percent forbs, and 0 to 5 percent shrubs and/or trees. Major grasses and grass-likes include prairie cordgrass, sedge, bluejoint reedgrass, spikerush, cattail, and bulrush. Grasses and grass-likes of lesser importance are bluegrass, slender wheatgrass, Baltic rush and low-growing, unpalatable sedges, rushes and other grass-likes.

The plant community is well adapted to the Northern Great Plains climatic conditions. It is a critical plant community providing water and habitat for the surrounding area. The diversity in plant species provides a variety of habitats for wildlife. It is resistant to drought due to a dependable water supply. Community dynamics, nutrient cycle, water cycle and energy flow are functioning properly. Plant litter is properly distributed with very little movement offsite and natural plant mortality is very low.

The following growth curve shows the estimated monthly percentages of total annual growth of the dominant species expected during an average year:

Growth curve number: SD5808

Growth curve name: Northern Rolling High Plains, lowland cool-season/warm-season codominant.

Growth curve description: Cool-season, warm-season codominant, lowland.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	4	11	19	23	20	12	6	5	0	0

Transitional pathways and/or community pathways leading to other plant communities are as follows:

- Hydrology cycles will shift the Reference Plant Community between the *Prairie Cordgrass/Sedge/Reedgrass Plant Community* and the *Spikerush/Bulrush/Cattail Plant Community*.

Prairie Cordgrass/Sedge/Reedgrass Plant Community: This plant community occurs during the more normal to drier precipitation/hydrology cycles. During these periods, grasses become more dominant in the plant community. Grasses will make up about 50 to 75 percent, with grass-likes at 20 to 35 percent, forbs 5 to 10 percent and shrubs and/or trees at 0 to 5 percent. Dominant species are prairie cordgrass, bluejoint reedgrass, rough banyardgrass, sedge, and dock.

Spikerush/Bulrush/Cattail Plant Community: This plant community occurs during the wetter precipitation/hydrology cycles that naturally occur on this site. During these periods, the species composition shifts to being more dominated by the grass-like species. The plant community is made

up of about 10 to 35 percent grasses, 40 to 60 percent grass-likes, 15 to 35 percent forbs, and 0 to 5 percent shrubs and/or trees. Dominant species include bulrush, Baltic rush, Spikerush, and cattail.

Ecological Site Interpretations

Animal Community – Wildlife Interpretations

Major Land Resource Area (MLRA) 58D lies within the drier portion of Northern mixed-grass prairie ecosystem where sagebrush steppes to the west yield to grassland steppes to the east. Prior to European settlement, this area consisted of diverse grass/shrub land habitats interspersed with varying densities of depressional, in-stream wetlands, and woody riparian corridors. These habitats provided critical life cycle components for many of its users. Many species of grassland birds, small mammals, reptiles, amphibians, and herds of roaming bison, elk, and pronghorn were among the inhabitants adapted to this semi-arid region. Roaming herbivores, as well as, several small mammal and insect species, were the primary consumers linking the grassland resources to predators such as the wolf, mountain lion, and grizzly bear, as well as, smaller carnivores such as the coyote, bobcat, fox, and raptors. The black-tailed prairie dog was once abundant; however, the species remains a keystone species within its range. The black-footed ferret, burrowing owl, ferruginous hawk, mountain plover, and swift fox were associated with prairie dog complexes.

Historically, the Northern mixed-grass prairie was a disturbance-driven ecosystem with fire, herbivory, and climate functioning as the primary disturbance factors either singly or in combination. Following European settlement, livestock grazing, cropland conversion, elimination of fire, energy development, and other anthropogenic factors influenced species composition and abundance. Introduced and invasive species further impacted plant and animal communities. The bison was a historical keystone species but have been extirpated as a free-ranging herbivore. The loss of the bison, reduction of prairie dog colonies, and fire as ecological drivers greatly influenced the character of the remaining native plant communities and altered wildlife habitats. Human development has reduced habitat quality for area-sensitive species.

Within MLRA 58D, the Wet Land Ecological Site (ES) provides upland/wetland complex cover with an associated forb component. It was typically part of an expansive grassland landscape that included combinations of Shallow Loamy, Shallow Clayey, Thin Loamy, Thin Claypan, Sandy, Sandy Claypan, Loamy, Loamy Terrace, Sandy Terrace, and Clayey ESs.

The Wet Land ES has remained relatively intact but may be subject to haying under drier conditions. This site has sufficient hydrology to support hydrophytic vegetation and wildlife species associated with ponded or saturated soil conditions. This site receives surface and subsurface water from adjacent upland sites during precipitation events. The site provides important wetland habitat for birds, small rodents, bats, mammalian predators, reptiles, amphibians, and insects. These sites may provide forage sites for greater sage-grouse broods.

Prairie Cordgrass/Sedge/Reedgrass and Spikerush/Bulrush/Cattail:

The dominate plant community is dependent on the hydrologic cycle (wetter or drier). The predominance of hydrophytic vegetation, including a high diversity of sedges and other grass-like species, favors shorebirds, wading birds (e.g. egrets, bitterns, and herons), waterfowl (e.g. ducks and geese), and wetland associated songbirds. This plant community provides habitat for salamanders, various frog and toad species, and various snake species. Invertebrates are an important component of the food web. Raptors such as northern harrier, short-eared owl, Swainson's hawk, and American kestrel will use this site. Prey populations are limited to small mammals such as water shrew and meadow vole and invertebrates. When associated with ecological sites dominated by big sagebrush, greater sage-grouse will use the site for brood rearing/foraging habitat.

Animal Preferences (Quarterly – 1,2,3,4[†])

Common Name	Cattle	Sheep	Horses	Deer	Antelope	Bison	Elk
Grasses and Grass-likes							
Baltic rush	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N
bluegrass	U D U U	D P U D	U D U U	U P N D	U P N D	U D U U	U D U U
bluejoint reedgrass	U P D U	N D U N	U P D U	N D U N	N D U N	U P D U	U P D U
bulrush	U U U U	N N N N	U U U U	N N N N	N N N N	U U U U	U U U U
foxtail barley	U D N N	N P N N	U D N N	N P N N	N P N N	U D N N	U D N N
inland saltgrass	N U U N	N N N N	N U U N	N N N N	N N N N	N U U N	N U U N
narrow reedgrass	U P U D	N D U N	U P U D	N D U N	N D U N	U P U D	U P U D
Nebraska sedge	U P U D	U P N D	U P U D	U D U D	U D U D	U P U D	U P U D
northern reedgrass	U P U D	N D N U	U P U D	N D N U	N D N U	U P U D	U P U D
prairie cordgrass	U D D U	N N N N	U D D U	N N N N	N N N N	U D D U	U D D U
reed canarygrass	U D U U	N N N N	U D U U	N N N N	N N N N	U D U U	U D U U
rough barnyardgrass	U D U U	N N N N	U D U U	N N N N	N N N N	U D U U	U D U U
rush	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N
sedge	U D U D	U P N D	U D U D	U D U D	U D U D	U D U D	U D U D
slender wheatgrass	U P U U	N D U N	U P U U	N D U N	N D U N	U P U U	U P U U
slough sedge	U D U D	U P N D	U D U D	U D U D	U D U D	U D U D	U D U D
spikerush	U U U U	U U U U	U U U U	U U U U	U U U U	U U U U	U U U U
switchgrass	U D D U	U D U U	U D D U	N N N N	N N N N	U D D U	U D D U
western wheatgrass	U P D U	N D N N	U P D U	N D N N	N D N N	U P D U	U P D U
Forbs							
American licorice	U U D U	N U U N	U U D U	N U U N	N U U N	U U D U	N U U N
arrowgrass	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T
aster	U U D U	U U D U	U U D U	U U D U	U U D U	U U D U	U U D U
cattail	U U U U	U U U U	U U U U	U U U U	U U U U	U U U U	U U U U
cinquefoil	U U D U	U U U U	U U D U	U U U U	U U U U	U U D U	U U U U
dock	U U U U	N U U N	U U U U	N U U N	N U U N	U U U U	N U U N
horsetail	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T
pale dock	U U U U	N U U N	U U U U	N U U N	N U U N	U U U U	N U U N
Pennsylvania smartweed	U U D U	N N N N	U U D U	N N N N	N N N N	U U D U	N N N N
spotted water hemlock	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T	T T T T
stinging nettle	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N	N N N N
swamp milkweed	U U D U	U U D U	U U D U	U U D U	U U D U	U U D U	U U D U
swamp smartweed	U U D U	N N N N	U U D U	N N N N	N N N N	U U D U	N N N N
whitewater crowfoot	U U U U	N U U N	U U U U	N U U N	N U U N	U U U U	N U U N
wild mint	U D U U	U P P U	U D U U	U P P U	U P P U	U D U U	U P P U
Shrubs/Trees							
cottonwood	D U U D	D U U D	D U U D	D U D D	D U U D	D U U D	D U U D
false indigo	N U U N	N U U N	N U U N	N U U N	N U U N	N U U N	N U U N
willow	P U D P	P U D P	P U D P	P U D P	U U U U	P U D P	P U D P

N = not used; **U** = undesirable; **D** = desirable; **P** = preferred; **T** = toxic

[†] Quarters: 1 – Jan., Feb., Mar.; 2 – Apr., May, Jun.; 3 – Jul., Aug., Sep.; 4 – Oct., Nov., Dec.

Animal Community – Grazing Interpretations

Grazing by domestic livestock is one of the major income-producing industries in the area. Rangeland in this area may provide yearlong forage. During the dormant period, the forage for livestock will likely be lacking protein to meet livestock requirements, and added protein will allow ruminants to better utilize the energy stored in grazed plant materials. A forage quality test (either directly or through fecal sampling) should be used to determine the level of supplementation needed.

Hydrology Functions

Water is the principal factor limiting forage production on this site. This site is dominated by soils in hydrologic groups C and D. Infiltration and runoff potential for this site varies from moderate to high depending on soil hydrologic group, slope, and ground cover. In many cases, areas with greater than 75 percent ground cover have the greatest potential for high infiltration and lower runoff. An exception would be where shortgrasses form a strong sod and dominate the site. Normally, areas where ground cover is less than 50 percent have the greatest potential to have reduced infiltration and higher runoff (refer to Section 4, NRCS National Engineering Handbook for runoff quantities and hydrologic curves).

Recreational Uses

This site provides hunting opportunities for upland game species. The wide varieties of plants which bloom from spring until fall have an esthetic value that appeals to visitors.

Wood Products

No appreciable wood products are typically present on this site.

Other Products

Seed harvest of native plant species can provide additional income on this site.

Supporting Information

Associated Sites

Wet Meadow (R058DY004SD), Subirrigated (R058DY003SD), Saline Lowland (R058DY007SD)

Similar Sites

(R058DY004SD) – Wet Meadow [more prairie cordgrass; more upland grasses]

Inventory Data References

Information presented here has been derived from NRCS clipping data and other inventory data. Field observations and experience were also used. Those involved in developing this site description include: Ryan Beer, Range Management Specialist (RMS), NRCS; Stan Boltz, RMS, NRCS; Dave Dewald, Wildlife Biologist, NRCS; Jody Forman, RMS, NRCS; Dennis Froemke, RMS, NRCS; Cheryl Nielsen, RMS, NRCS; Jeff Printz, RMS, NRCS; Mike Stirling, RMS, NRCS; and Darrell Vanderbusch, Soil Scientist, NRCS.

<u>Data Source</u>	<u>Number of Records</u>	<u>Sample Period</u>	<u>State</u>	<u>County</u>
SCS-RANGE-417				

State Correlation

This site has been correlated between MT, ND, and South Dakota (SD) in MLRA 58D.

Field Offices

Baker, MT (Fallon County)
Bowman, ND (Bowman and Slope Counties)
Ekalaka, MT (Carter County)

Belle Fourche, SD (Butte County)
Buffalo, SD (Harding County)

Relationship to Other Established Classifications

Level IV Ecoregions of the Conterminous United States: 43e – Sagebrush Steppe.

Other References

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Site Description Approval

MT, State Range Management Specialist

Date

ND, State Range Management Specialist

Date

SD, State Range Management Specialist

Date