

## United States Department of Agriculture Natural Resources Conservation Service

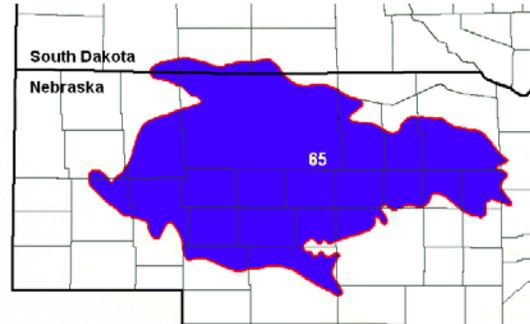
### Ecological Site Description

**Site Type:** Rangeland

**Site Name:** Wet Subirrigated

**Site ID:** R065XY023NE

**Major Land Resource Area:**  
65 – Nebraska Sand Hills



### Physiographic Features

**Landform:** Alluvial flat

**Aspect:** N/A

	<u>Minimum</u>	<u>Maximum</u>
<b>Elevation (feet):</b>	2000	3900
<b>Slope (percent):</b>	0	2
<b>Water Table Depth (inches):</b>	0	18
<b>Flooding:</b>		
<b>Frequency:</b>	None	Frequent
<b>Duration:</b>	None	Brief
<b>Ponding:</b>		
<b>Depth (inches):</b>	None	None
<b>Frequency:</b>	None	None
<b>Duration:</b>	None	None
<b>Runoff Class:</b>	None	Low

### Climatic Features

The mean average annual precipitation varies from 14 - 25 inches, but has varied from 12 to 29 inches in the driest to wettest seasons. Approximately 65 percent of the annual precipitation occurs during the growing season of mid-April to late September. The average annual snowfall varies from about 30 inches to about 55 inches. The wind velocity is high throughout the year, averaging 10 to 12 miles per hour. Maximum wind velocities generally occur in the spring.

The average length of the growing season is 138 days, but the growing season has varied from 114 to 168 days. The average date of first frost in the fall is September 25, and the last frost in the spring is about May 10. July is the hottest month and January is the coldest. It is not uncommon for the temperature to reach 100 °F during the summer. Summer humidity is low and evaporation is high. The winters are characterized with frequent northerly winds, producing severe cold with temperatures dropping to as low as -30 °F.

Growth of native cool season plants begins mid to late March and continues to late June. Native warm season plants begin growth in early May and continue to late August. Green up of cool season plants may occur in September and October when adequate soil moisture is present.

	<u>Minimum</u>	<u>Maximum</u>
<b>Frost-free period (days):</b>	131	145
<b>Freeze-free period (days):</b>	150	165
<b>Mean Annual Precipitation (inches):</b>	14	25

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

	Precip. Min.	Precip. Max	Temp. Min.	Temp. Max.
January	0.33	0.51	8.0	37.8
February	0.39	0.66	12.7	43.7
March	0.86	1.54	21.3	50.0
April	1.51	2.31	31.4	62.1
May	2.87	3.54	41.5	72.7
June	2.94	4.15	51.3	82.2
July	2.05	3.29	57.2	88.9
August	1.07	3.12	55.2	87.0
September	1.16	2.37	44.7	77.7
October	0.87	1.61	32.7	66.6
November	0.51	0.94	20.5	49.6
December	0.31	0.61	11.4	40.3

<b>Climate Stations</b>		<b>Period</b>	
<b>Station ID</b>	<b>Location or Name</b>	<b>From</b>	<b>To</b>
NE1130	Brewster	1948	1997
NE2000	Crescent Lake Natl WLR	1948	1997
NE2805	Ewing	1948	1997
NE2647	Ellsworth 15 NNE	1963	1997
NE6970	Purdum	1948	1997
NE7665	Scottsbluff WSO AP	1948	1997

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

**Influencing Water Features**

This ecological site has a combination of physical and hydrological features that: 1) provide season-long ground water within 3.5 feet of the surface, 2) allows relatively free movement of water and air in the upper part of the soil, and 3) are rarely to frequently flooded.

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

**Stream Type:** None  
 (Rosgen System)

## **Representative Soil Features**

The features common to all soils in this site are the fine sand and loamy textured surface soils and slopes of 0 to 2 percent. The soils in this site are poorly drained and formed in eolian sands and sandy alluvium. Minor soils in this site occur along streams flowing through and out of the Sand Hills, and formed in sandy to loamy alluvium. The surface layer is 3 to 10 inches thick. The subsurface texture ranges from loamy fine sand to fine sand. Runoff as evidenced by patterns of rill, gully or other water flow is negligible due to the low slope gradient and high intake rate of these soils. Cryptobiotic crusts are present, but their function is not well understood. Some pedestalling of plants occurs, but it is not very evident on casual observation and occurs on less than 5% of the plants.

More information can be found in the various soil survey reports. Contact the local USDA Service Center for soil survey reports that include more detail specific to your location.

Major soil series correlated to this ecological site include: Hoffland, Loup and Tryon.

Other soil series that have been correlated to this site include: Almeria, Crowther, Cullison, Gannett, Gus and Lawet.

**Parent Material Kind:** alluvium  
**Parent Material Origin:** mixed  
**Surface Texture:** loamy fine sand, fine sandy loam, loam  
**Surface Texture Modifier:** none  
**Subsurface Texture Group:** sandy

**Surface Fragments  $\leq$  3" (% Cover):** 0  
**Surface Fragments  $>$  3" (%Cover):** 0  
**Subsurface Fragments  $\leq$  3" (% Volume):** 0-5  
**Subsurface Fragments  $>$  3" (% Volume):** 0

	<u>Minimum</u>	<u>Maximum</u>
<b>Drainage Class:</b>	poorly	poorly
<b>Permeability Class:</b>	moderate	rapid
<b>Depth (inches):</b>	>80	>80
<b>Electrical Conductivity (mmhos/cm):</b>	0	2
<b>Sodium Absorption Ratio:</b>	0	5
<b>Soil Reaction (1:1 Water):</b>	5.6	8.4
<b>Soil Reaction (0.1M CaCl<sub>2</sub>):</b>	NA	NA
<b>Available Water Capacity (inches):</b>	3	6
<b>Calcium Carbonate Equivalent (percent):</b>	0	$\geq$ 40

## Plant Communities

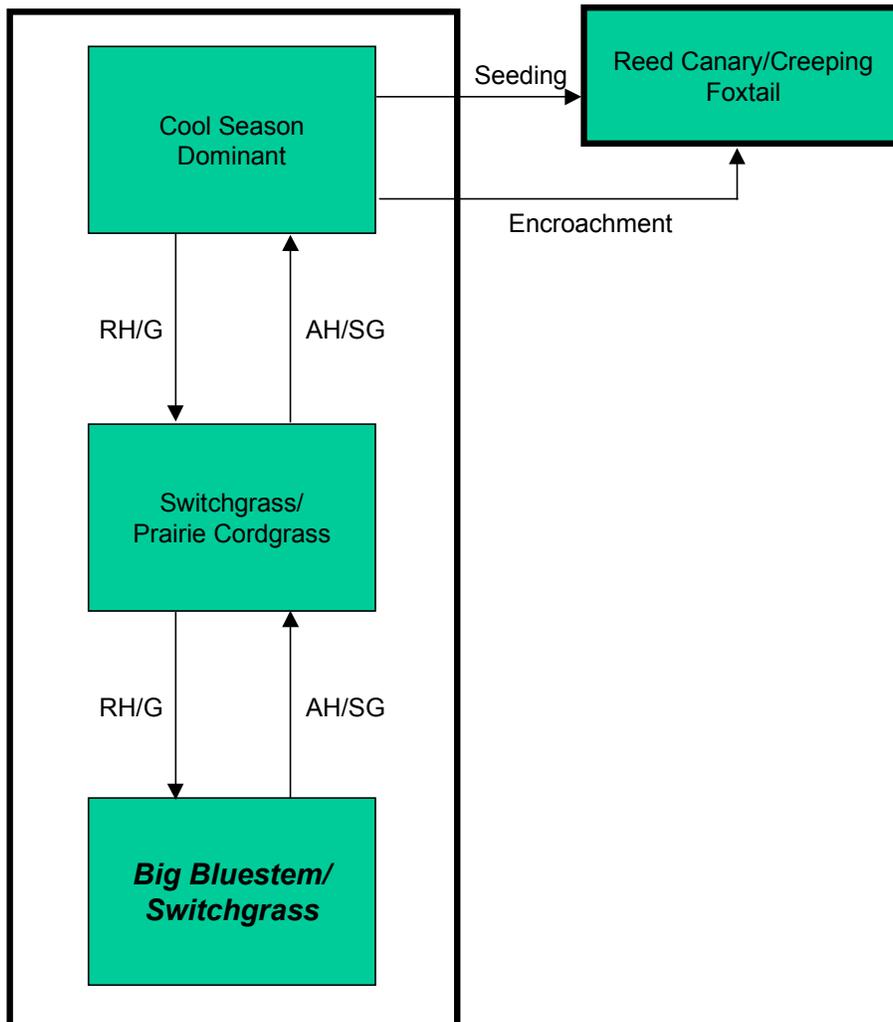
### Ecological Dynamics of the Site:

As this site deteriorates, species such as switchgrass, slender wheatgrass, Scribner panicum, western wheatgrass, foxtail barley, and prairie cordgrass will increase. Warm season grasses such as big bluestem and Indiangrass will decrease in frequency and production.

Interpretations are primarily based on the Big Bluestem/Switchgrass Plant Community. It has been determined by study of 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. Subclimax 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 will be discussed in more detail in the plant community descriptions following the diagram.

### Plant Communities and Transitional Pathways (diagram)



**AH/SG** - annual haying/summer grazing  
**RH/G** - rotational haying/grazing

**Plant Community Composition and Group Annual Production**

COMMON/GROUP NAME	SYMBOL	Big Bluestem/Switchgrass			Switchgrass/Prairie Cordgrass			Cool Season Dominant				
		Grp	lbs./acre	% Comp	Grp	lbs./acre	% Comp	Grp	lbs./acre	% Comp		
<b>GRASSES</b>			4000 - 4750	80 - 95		3600 - 4275	80 - 95		2960 - 3515	80 - 95		
<b>WARM-SEASON GRASSES</b>		<b>1</b>	<b>2000 - 4000</b>	<b>40 - 80</b>	<b>1</b>	<b>1800 - 3600</b>	<b>40 - 80</b>	<b>1</b>	<b>740 - 1665</b>	<b>20 - 45</b>		
big bluestem	ANGE	1	750 - 1500	15 - 30	1	450 - 900	10 - 20	1	0 - 555	0 - 15		
prairie cordgrass	SPPE	1	750 - 1500	15 - 30	1	900 - 1800	20 - 40	1	555 - 1295	15 - 35		
switchgrass	PAV12	1	750 - 1250	15 - 25	1	900 - 1800	20 - 40	1	185 - 555	5 - 15		
Indiangrass	SONU2	1	250 - 750	5 - 15	1	0 - 225	0 - 5	1	0 - 185	0 - 5		
green muhly	MURA	1	0 - 250	0 - 5	1	0 - 225	0 - 5	1	0 - 74	0 - 2		
<b>COOL-SEASON GRASSES</b>		<b>2</b>	<b>500 - 1500</b>	<b>10 - 30</b>	<b>2</b>	<b>450 - 1350</b>	<b>10 - 30</b>	<b>2</b>	<b>1110 - 2775</b>	<b>30 - 75</b>		
bluejoint reedgrass	CACA4	2	250 - 500	5 - 10	2	225 - 450	5 - 10	2	370 - 925	10 - 25		
northern reedgrass	CAST13	2	250 - 500	5 - 10	2	225 - 450	5 - 10	2	370 - 925	10 - 25		
plains bluegrass	POAR3	2	250 - 500	5 - 10	2	225 - 450	5 - 10	2	370 - 925	10 - 25		
slender wheatgrass	ELTRT	2	100 - 500	2 - 10	2	90 - 450	2 - 10	2	74 - 555	2 - 15		
western wheatgrass	PASM	2	0 - 250	0 - 5	2	0 - 450	0 - 10	2	0 - 370	0 - 10		
foxtail barley	HOJU	2	0 - 100	0 - 2	2	0 - 135	0 - 3	2	0 - 185	0 - 5		
<b>OTHER NATIVE GRASSES</b>		<b>3</b>	<b>0 - 250</b>	<b>0 - 5</b>	<b>3</b>	<b>0 - 225</b>	<b>0 - 5</b>	<b>3</b>	<b>0 - 185</b>	<b>0 - 5</b>		
other perennial grasses	2GP	3	0 - 250	0 - 5	3	0 - 225	0 - 5	3	0 - 185	0 - 5		
<b>NON-NATIVE GRASSES</b>		<b>4</b>			<b>4</b>	<b>0 - 225</b>	<b>0 - 5</b>	<b>4</b>	<b>0 - 555</b>	<b>0 - 15</b>		
reed canarygrass	PHAR3				4	0 - 225	0 - 5	4	0 - 555	0 - 15		
<b>GRASS-LIKES</b>		<b>5</b>	<b>250 - 500</b>	<b>5 - 10</b>	<b>5</b>	<b>225 - 675</b>	<b>5 - 15</b>	<b>5</b>	<b>185 - 740</b>	<b>5 - 20</b>		
sedge	CAREX	5	50 - 500	1 - 10	5	45 - 450	1 - 10	5	74 - 555	2 - 15		
rush	JUNCU	5	0 - 250	0 - 5	5	0 - 225	0 - 5	5	37 - 185	1 - 5		
bulrush	SCIRP	5	0 - 250	0 - 5	5	0 - 225	0 - 5	5	0 - 185	0 - 5		
spikerush	ELEOC	5	0 - 150	0 - 3	5	0 - 135	0 - 3	5	0 - 185	0 - 5		
<b>FORBS</b>			<b>0 - 250</b>	<b>0 - 5</b>		<b>0 - 225</b>	<b>0 - 5</b>		<b>0 - 370</b>	<b>0 - 10</b>		
<b>NATIVE FORBS</b>		<b>6</b>	<b>0 - 250</b>	<b>0 - 5</b>	<b>6</b>	<b>0 - 225</b>	<b>0 - 5</b>	<b>6</b>	<b>0 - 185</b>	<b>0 - 5</b>		
American licorice	GLLE3	6	0 - 50	0 - 1	6	0 - 45	0 - 1	6	0 - 37	0 - 1		
black-eyed Susan	RUHI2	6	0 - 50	0 - 1	6	0 - 90	0 - 2	6	0 - 74	0 - 2		
cinquefoil	POTEN	6	0 - 50	0 - 1	6	0 - 45	0 - 1	6	0 - 37	0 - 1		
goldenrod	SOLID	6	0 - 50	0 - 1	6	0 - 45	0 - 1	6	0 - 37	0 - 1		
heath aster	SYER	6	0 - 50	0 - 1	6	0 - 90	0 - 2	6	0 - 111	0 - 3		
ironweed	VERNO	6	0 - 50	0 - 1	6	0 - 90	0 - 2	6	0 - 111	0 - 3		
Pennsylvania smartweed	POPE2	6	0 - 50	0 - 1	6	0 - 90	0 - 2	6	0 - 74	0 - 2		
scouringrush	EQHY	6	0 - 50	0 - 1	6	0 - 45	0 - 1	6	0 - 37	0 - 1		
western ragweed	AMPS	6	0 - 50	0 - 1	6	0 - 90	0 - 2	6	0 - 74	0 - 2		
other perennial forbs	2FP	6	0 - 100	0 - 2	6	0 - 90	0 - 2	6	0 - 74	0 - 2		
<b>NON-NATIVE FORBS</b>		<b>7</b>			<b>7</b>			<b>7</b>	<b>0 - 185</b>	<b>0 - 5</b>		
red clover	TRPR2							7	0 - 185	0 - 5		
white clover	TRRE3							7	0 - 74	0 - 2		
<b>Annual Production lbs./acre</b>			<b>LOW</b>	<b>RV</b>	<b>HIGH</b>	<b>LOW</b>	<b>RV</b>	<b>HIGH</b>	<b>LOW</b>	<b>RV</b>	<b>HIGH</b>	
<b>GRASSES</b>			4280	·	4500	-	4675	3780	·	3938	-	4120
<b>GRASS-LIKES</b>			220	·	375	-	550	220	·	450	-	650
<b>FORBS</b>			0	·	125	-	275	0	·	113	-	230
<b>TOTAL</b>			4500	·	5000	-	5500	4000	·	4500	-	5000

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 = Relative 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 data are 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.

### **Big Bluestem/Switchgrass Plant Community**

Interpretations are primarily based on the Big Bluestem/Switchgrass Plant Community (this is also considered climax). This site evolved with grazing by large herbivores and is well suited for grazing by domestic livestock. This plant community can be found on areas that are properly managed with grazing and/or prescribed burning. Harvesting hay at a different time during the growing season each year allows this plant community to persist. The potential vegetation is about 85% grasses, 10% grass-like plants and 5% forbs. Tall, warm season grasses dominate the plant community.

The major grasses include big bluestem, Indiangrass, switchgrass, bluejoint reedgrass, northern reedgrass, and prairie cordgrass. Other grasses occurring on this plant community include slender wheatgrass, plains bluegrass, and western wheatgrass.

This plant community is extremely resilient and well adapted to the Northern Great Plains climatic conditions. The diversity in plant species allows for high drought tolerance. This is a healthy and sustainable plant community (site/soil stability, watershed function, and biologic integrity).

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

Growth curve number: NE6543

Growth curve name: Nebraska/South Dakota Sandhills, Native Grasslands, Wet

Growth curve description: Warm-season dominant, cool-season subdominant, mid & tall grasses.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	5	20	35	25	10	5	0	0	0

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

- Annual haying or summer grazing will shift this plant community to the *Switchgrass/Prairie Cordgrass Plant Community*. Haying or grazing at set times during the growing season can reduce plant diversity and reduce the vigor of desirable grasses.

### **Switchgrass/Prairie Cordgrass Plant Community**

Historically, this plant community evolved under annual haying or moderate summer grazing followed by heavy grazing in the fall. The potential vegetation is about 80% grasses, 15% grass-like plants and 5% forbs. Dominant grasses include switchgrass, prairie cordgrass, big bluestem and forbs such as smartweed and ironweed.

When compared to the Big Bluestem/Switchgrass Plant Community, switchgrass and prairie cordgrass have increased while big bluestem and Indiangrass have decreased. Plant diversity has decreased with the desirable, more palatable, grasses being suppressed due to heavier use.

This plant community is somewhat resistant to change. The herbaceous species present are well adapted to grazing; however, species composition can be altered through long-term overgrazing. If the herbaceous component is intact, it tends to be resilient if the disturbance is not long-term.

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

Growth curve number: NE6544

Growth curve name: Nebraska/South Dakota Sandhills, Hayed and Grazed Subirrigated Meadows

Growth curve description: Warm-season dominant, cool-season subdominant, mid & tall grasses.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	0	10	20	25	20	15	10	0	0	0

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

- Timely haying and/or rotational grazing will shift this plant community back to the *Big Bluestem/Switchgrass Plant Community*. Haying or grazing prior to the onset of active warm-season grass growth will improve warm season grass vigor. This early haying also reduces cool season grass competition, and improves the quality of the hay. Waiting to graze after a killing frost in the fall will also help to reduce the cool season grasses, while improving the vigor of the warm season grasses.
- Repeated annual mid summer haying or grazing will shift this plant community to the *Cool Season Dominant Plant Community*.

### **Cool Season Dominant Plant Community**

Historically, this plant community evolved under long term annual haying in the mid summer. Cool season grasses make up a majority of the plant community with the balance made up of warm season grasses and miscellaneous forbs. The potential vegetation is about 70% grasses, 20% grass-like plants and 10% forbs. Dominant grasses include bluejoint and northern reedgrass, which are acceptable grasses on this plant community. The reedgrasses become aggressive and increase, crowding out the warm season plants of big bluestem, Indiangrass and switchgrass. Grasses of secondary importance include prairie cordgrass, slender wheatgrass, and western wheatgrass. Forbs commonly found in this plant community include red and white clover.

When compared to the Big Bluestem/Switchgrass Plant Community, bluejoint and northern reedgrass, slender wheatgrass and prairie cordgrass have increased. Big bluestem and Indiangrass have decreased.

This plant community is moderately resistant to change. The herbaceous species present are well adapted to grazing; however, species composition can be altered through long-term overgrazing. If the herbaceous component is intact, it tends to be resilient if the disturbance is not long-term.

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

Growth curve number: NE6545

Growth curve name: Nebraska/South Dakota Sandhills, Hayed and Grazed Cool-Season Meadows

Growth curve description: Cool-season dominant, warm-season subdominant, mid & tall grasses.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	0	5	15	30	25	10	5	10	0	0	0

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

- Timely haying and/or rotational grazing will shift this plant community back to the *Big Bluestem/Switchgrass Plant Community*. Haying or grazing prior to the onset of active warm-season grass growth will improve plant vigor. This early haying also reduces cool season grass competition, and improves the quality of the hay. Grazing after a killing frost in the fall will also help to reduce cool season grasses.
- Seeding can move this plant community to the *Reed Canary/Creeping Foxtail Plant Community*.

### **Reed Canary/Creeping Foxtail**

When the Cool Season Dominant Plant Community is stressed by heavy grazing and repeated haying, reed canarygrass or creeping foxtail may encroach if a viable seed source is available. Reed canarygrass and creeping foxtail seedings have occurred when cool season grass production deteriorates. However, this seeding practice has serious repercussions on numerous wildlife species, and once established becomes difficult to alter due to aggressive behavior. While this plant community has a high production potential, forage quality is sacrificed.

## Ecological Site Interpretations

### Animal Community – Wildlife Interpretations

Big Bluestem/Switchgrass Plant Community:

Switchgrass/Prairie Cordgrass Plant Community:

Cool Season Dominant Plant Community:

Reed Canary/Creeping Foxtail Plant Community:

### Animal Preferences (Quarterly – 1,2,3,4<sup>†</sup>)

Common Name	Cattle	Sheep	Horses	Deer	Antelope	Bison	Elk
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
big bluestem	U D P D	U D U U	U D P D	U D U U	U D U U	U D P D	U D P D
black-eyed Susan	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
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
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
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
goldenrod	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
green muhly	U D D U	N U N N	U D D U	N U N N	N U N N	U D D U	U D D U
heath aster	U U D U	U U P U	U U D U	U U P U	U U P U	U U D U	U U P U
Indiangrass	U D P D	U D U U	U D P D	U D U U	U D U U	U D P D	U D P D
ironweed	U U U U	N N N N	U U U U	N N N N	N N N N	U U U U	N N N N
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
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
plains bluegrass	U D U D	N D N U	U D U D	U P N D	U P N D	U D U D	U D 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
red clover	U D P U	U P P U	U D P U	U P P U	U P P U	U D P U	U P P 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
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
scouringrush	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
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
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 ragweed	U U U U	N N N N	U U U U	N N N N	N N N N	U U U U	N N N N
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
white clover	U D P U	U P P U	U D P U	U P P U	U P P U	U D P U	U P P U

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

<sup>†</sup> Quarters: 1 – Jan., Feb., Mar.; 2 – Apr., May, Jun.; 3 – Jul., Aug., Sep.; 4 – Oct., Nov., Dec.

## 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. With consultation of the land manager, more intensive grazing management may result in improved harvest efficiencies and increased carrying capacity.

Plant Community	Production (lbs./acre)	Carrying Capacity* (AUM/acre)
Big Bluestem/Switchgrass	5000	1.58
Switchgrass/Prairie Cordgrass	4500	1.42
Cool Season Dominant	3700	1.17
Reed Canary/Creeping Foxtail	-	-

\* Continuous season-long grazing with proper livestock distribution under average growing conditions. If distribution problems occur, stocking rates must be reduced to maintain plant health and vigor.

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

Moisture conditions tend to be ideal for forage production on this site. Soils on this site are nearly all in Hydrologic Soil Group D due to high water tables. Although soils are permeable, high water tables limit infiltration in wet seasons. Surrounding upland areas tend to have permeable soils and surface inflow peaks on these sites are often muted. Many areas are seasonally flooded for short periods in wet weather.

For the interpretive plant community, rills and gullies are not typically present. Water flow patterns should be barely distinguishable if at all present. Pedestals are only slightly present. Litter falls in place, and signs of movement are not common. Chemical and physical crusts are rare to non-existent. Cryptogamic crusts may be present but are not significant for hydrologic considerations. Overall this site has the appearance of being very stable and very productive.

## 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.

## Wood Products

No appreciable wood products are present on the site.

## Other Products

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

## Supporting Information

### Associated Sites

- (065XY011NE) – Sandy 14-17” P.Z.
- (065XY032NE) – Sandy 17-22” P.Z.
- (065XY054NE) – Sandy 22-25” P.Z.
- (065XY012NE) – Sands 14-17” P.Z.
- (065XY033NE) – Sands 17-22” P.Z.
- (065XY055NE) – Sands 22-25” P.Z.
- (065XY022NE) – Wetland
- (065XY024NE) – Subirrigated

### Similar Sites

- (065XY024NE) – Subirrigated  
[more big bluestem; little bluestem present; less prairie cordgrass; bluejoint reedgrass common; slightly less productive]

### Inventory Data References

Information presented here has been derived from NRCS clipping data and other inventory data. Field observations from range trained personnel was also used. Those involved in developing this site include: Dave Cook, Rangeland Management Specialist, NRCS; Dwight Hale, Engineer, NRCS; Sheila Luoma, Resource Conservationist, NRCS; Marla Shelbourn, Rangeland Management Specialist, NRCS; Dave Steffen, Rangeland Management Specialist, NRCS.

<u>Data Source</u>	<u>Number of Records</u>	<u>Sample Period</u>	<u>State</u>	<u>County</u>
SCS-RANGE-417	4	1982 – 1983	NE	Lincoln, Logan, Loup, Sheridan
Ocular estimates	0	19 -19	XX	county

### State Correlation

This site has been correlated with South Dakota.

### Type Locality

**State:**

**County:**

**Latitude:**

**Longitude:**

**Township:**

**Range:**

**Section:**

**Is the type locality sensitive? (Y/N):**

**General Legal Description:**

Site Type: Rangeland  
MLRA: 65 – Nebraska Sand Hills

**Wet Subirrigated  
R065XY023NE**

### **Field Offices**

Ainsworth, NE  
Albion, NE  
Alliance, NE  
Bridgeport, NE  
Broken Bow, NE  
Burwell, NE  
Greeley, NE  
Martin, SD  
Neligh, NE  
North Platte, NE  
Ogallala, NE  
O’Neill, NE  
Oshkosh, NE  
Rushville, NE  
Thedford, NE  
Valentine, NE  
White River, SD

### **Counties**

Brown, Keya Paha and Rock, NE  
Boone, NE  
Box Butte, NE  
Morrill, NE  
Custer, NE  
Garfield, Loup and Wheeler, NE  
Greeley, NE  
Bennett and Shannon, SD  
Antelope, NE  
Lincoln, Logan and McPherson, NE  
Arthur and Keith, NE  
Holt, NE  
Garden, NE  
Sheridan, NE  
Blaine, Grant, Hooker and Thomas, NE  
Cherry, NE  
Todd, SD

### **Relationship to Other Established Classifications**

Level IV Ecoregions of the Conterminous United States; 44a – Nebraska Sand Hills.

### **Other References**

Other sources used as references include: USDA NRCS Water & Climate Center, USDA NRCS National Range and Pasture Handbook, USDA NRCS Soil Surveys from various counties, Atlas of the Sandhills.

### **Site Description Approval**

\_\_\_\_\_

State Range Management Specialist

\_\_\_\_\_

Date

\_\_\_\_\_

State Range Management Specialist

\_\_\_\_\_

Date