

FIELD OFFICE TECHNICAL GUIDE: BLACK HILLS TECHNICAL GUIDE  
LOCATION: .....  
AREA: .....  
STATE: ..... SOUTH DAKOTA

RANGE SITE DESCRIPTION

RANGE SITE NAME . : SAVANNAH  
RANGE SITE NUMBER : 062XY038SD  
ORIGINAL DATE ... : 05/13/1992  
REVISION DATE ... : 05/13/1992  
AUTHOR'S INITIALS : RDB/DWS

\* SOIL NARRATIVE:

THESE ARE DEEP, WELL DRAINED SOILS FORMED IN MATERIAL WEATHERED FROM METAMORPHIC AND IGNEOUS ROCKS. SURFACE TEXTURES ARE CHANNERY LOAM AND SUBSURFACE TEXTURE ARE VERY CHANNERY CLAY LOAM. THESE SOILS ARE FOUND IN THE MOUNTAINS. PERMEABILITY IS MODERATE.

\* LIST OF SOIL TAXONOMIC UNITS OR SOILS MAPPING UNITS FOR ALL SOILS INCLUDED IN THIS SITE:

SHIRTTAIL CHANNERY LOAM

\* LANDSCAPE FACTORS

PHYSIOGRAPHY:

ELEVATION/ASPECT:

LOW 3500 ft / HIGH 7200 ft /

PERCENT SLOPE:

LOW 10  
HIGH 40

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\* CLIMATE FACTORS

FREEZE-FREE PERIOD (FFP): 0 TO 0 (DAYS)  
 FROST-FREE PERIOD: 111 TO 123 (DAYS)  
 MEAN ANNUAL PRECIPITATION (MAP): 18 TO 26 (INCHES)  
 MEAN ANNUAL AIR TEMPERATURE (MAAT): 34 TO 55 (F)  
 MEAN ANNUAL SOIL TEMPERATURE (MAST): 32 TO 57 (F)

MOISTURE AND TEMPERATURE DISTRIBUTION:

|          | -JAN--- | FEB--- | MAR--- | APR--- | MAY--- | JUN--- | JUL--- | AUG--- | SEP--- | OCT--- | NOV--- | DEC- |
|----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| - PPT -  |         |        |        |        |        |        |        |        |        |        |        |      |
| HIGH     | 4.78    | 4.32   | 4.79   | 7.82   | 15.31  | 10.02  | 8.78   | 7.77   | 5.08   | 3.28   | 6.30   | 3.51 |
| MEAN     | 1.13    | 1.10   | 1.75   | 3.10   | 4.02   | 4.07   | 2.56   | 2.00   | 1.86   | 1.47   | 1.26   | 1.09 |
| LOW      | 0.00    | 0.17   | 0.52   | 0.45   | 0.47   | 0.81   | 0.43   | 0.22   | 0.04   | 0.00   | 0.03   | 0.19 |
| - TEMP - |         |        |        |        |        |        |        |        |        |        |        |      |
| HIGH     | 33      | 35     | 41     | 51     | 61     | 72     | 81     | 79     | 69     | 58     | 44     | 36   |
| MEAN     | 23      | 25     | 30     | 41     | 50     | 60     | 68     | 67     | 57     | 47     | 34     | 27   |
| LOW      | 14      | 16     | 20     | 30     | 39     | 49     | 56     | 54     | 45     | 36     | 25     | 18   |

\* VEGETATION FACTORS - CLIMAX PLANT COMMUNITY

RANGE SITE DESCRIPTION NARRATIVE:

THE POTENTIAL NATIVE VEGETATION ON THIS SITE IS A SPARSE OVERSTORY OF PONDEROSA PINE AND AN UNDERSTORY OF MIXED PRAIRIE GRASSES. WARM SEASON GRASSES, SUCH AS LITTLE BLUSTEM, SIDEOATS GRAMA, BIG BLUESTEM, AND BLUE OR HAIRY GRAMA ARE THE CONSTANT DOMINANTS. COOL SEASON MID GRASSES INCLUDING, WESTERN, BEARDED OR SLENDER WHEATGRASS, NEEDLEANDTHREAD, AND PRAIRIE JUNEGRASS ARE PRESENT BUT ONLY IN SMALL AMOUNTS. BLUEGRASS AND SEDGES ARE PRESENT IN THE UNDERSTORY. FORBS SUCH AS SAGEWORT, AND CONEFLOWER ARE PRESENT BUT ONLY IN SMALL AMOUNTS. SHRUBS SUCH AS LEADPLANT ARE COMMON. TREES INCLUDING PONDEROSA PINE AND ROCKY MOUNTAIN JUNIPER OCCUR IN THE OVERSTORY BUT ARE USUALLY NOT VERY DENSE.

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PERCENT COVER:

GROUND COVER AND STRUCTURE:

|                        | % CANOPY COVER<br>(VERTICAL VIEW) | AVERAGE<br>HEIGHT (FT) | % BASAL AREA<br>COVER |
|------------------------|-----------------------------------|------------------------|-----------------------|
| GRASSES AND GRASSLIKES | 60                                | 2.50                   | 45                    |
| FORBS                  | 8                                 | 1.20                   | 5                     |
| CRYPTOGAMS             | 0                                 | 0.00                   | 0                     |
| SHRUBS                 | 7                                 | 2.50                   | 4                     |
| TREES                  | 5                                 | 20.00                  | 3                     |

PLANT COMMUNITY COMPOSITION AND PRODUCTION:

Herbaceous

Grasses and grasslikes

| National<br>Symbol | Common<br>Name     | Grp | % Composition<br>by weight | Group %<br>Allowable |
|--------------------|--------------------|-----|----------------------------|----------------------|
| ANGE               | BIG BLUESTEM       | 1   | 0 to 0                     | 15 to 30             |
| SONU2              | INDIANGRASS        | 1   | 0 to 0                     | 15 to 30             |
| PAVI2              | SWITCHGRASS        | 1   | 0 to 0                     | 15 to 30             |
| SCSC               | LITTLE BLUESTEM    | 2   | 0 to 0                     | 15 to 30             |
| BOCU               | SIDEOATS GRAMA     | 2   | 0 to 0                     | 15 to 30             |
| POA++              | BLUEGRASSES        | 0   | 0 to 10                    | 0 to 0               |
| AGSU               | BEARDED WHEATGRASS | 3   | 0 to 0                     | 0 to 5               |
| AGTR               | SLENDER WHEATGRASS | 3   | 0 to 0                     | 0 to 5               |
| AGSM               | WESTERN WHEATGRASS | 3   | 0 to 0                     | 0 to 5               |
| STCO4              | NEEDLEANDTHREAD    | 0   | 0 to 5                     | 0 to 0               |
| SPHE               | PRAIRIE DROPSEED   | 4   | 0 to 0                     | 0 to 5               |
| SPAS               | TALL DROPSEED      | 4   | 0 to 0                     | 0 to 5               |
| BOGR2              | BLUE GRAMA         | 5   | 0 to 0                     | 0 to 10              |
| BOHI2              | HAIRY GRAMA        | 5   | 0 to 0                     | 0 to 10              |

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Grasses and grasslike continued

| National Symbol | Common Name | Grp | % Composition by weight | Group % Allowable |
|-----------------|-------------|-----|-------------------------|-------------------|
| CAREX           | SEDGES      | 0   | 5 to 15                 | 0 to 0            |

Forbs

| National Symbol | Common Name         | Grp | % Composition by weight | Group % Allowable |
|-----------------|---------------------|-----|-------------------------|-------------------|
| ARLU            | CUDWEED SAGEWORT    | 1   | 0 to 0                  | 0 to 10           |
| ARFR4           | FRINGED SAGEWORT    | 1   | 0 to 0                  | 0 to 10           |
| ARCA12          | GREEN SAGEWORT      | 1   | 0 to 0                  | 0 to 10           |
| RACO3           | PRAIRIE CONEFLOWER  | 1   | 0 to 0                  | 0 to 10           |
| PSES            | BREADROOT SCURFPEA  | 1   | 0 to 0                  | 0 to 10           |
| PSAR2           | SLIVERLEAF SCURFPEA | 1   | 0 to 0                  | 0 to 10           |
| PSTE3           | SLIMFLOWER SCURFPEA | 1   | 0 to 0                  | 0 to 10           |

Shrubs

| National Symbol | Common Name       | Grp | % Composition by weight | Group % Allowable |
|-----------------|-------------------|-----|-------------------------|-------------------|
| AMCA6           | LEADPLANT         | 1   | 0 to 0                  | 5 to 10           |
| SYOC            | WESTERN SNOWBERRY | 1   | 0 to 0                  | 5 to 10           |

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Trees

| National<br>Symbol | Common<br>Name         | Grp | % Composition<br>by weight | Group %<br>Allowable |
|--------------------|------------------------|-----|----------------------------|----------------------|
| PIPO               | PONDEROSA PINE         | 1   | 0 to 0                     | 5 to 10              |
| JUSC2              | ROCKY MOUNTAIN JUNIPER | 1   | 0 to 0                     | 5 to 10              |

Production

Grasses and grasslikes: 70 to 90 % of total  
 Forbs: 0 to 10 % of total  
 Shrubs: 5 to 10 % of total  
 Trees: 5 to 10 % of total  
 Lichen community: 0.00 lbs/acre (NOT ANNUAL PRODUCTION)  
 Moss community: 0.00 lbs/acre

Cover

Lichen community: 0 % cover  
 Moss community: 0 % cover

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\* PLANT GROWTH CURVES

| ID  | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| NUMBER: SD0001  | 0   | 0   | 5   | 15  | 30  | 25  | 5   | 5   | 10  | 5   | 0   | 0   |
| NAME: 100% COOL SEASON SPECIES  |     |     |     |     |     |     |     |     |     |     |     |     |
| DESC: 100% OF PRODUCTION PROVIDED BY COOL SEASON SPECIES                    |     |     |     |     |     |     |     |     |     |     |     |     |
| NUMBER: SD0002  | 0   | 0   | 5   | 15  | 25  | 20  | 15  | 10  | 7   | 3   | 0   | 0   |
| NAME: 75% COOL, 25% WARM  |     |     |     |     |     |     |     |     |     |     |     |     |
| DESC: 75% OF PRODUCTION FROM COOL SEASON PLANTS, 25% FROM WARM SEASON PLANT |     |     |     |     |     |     |     |     |     |     |     |     |
| NUMBER: SD0003  | 0   | 0   | 5   | 15  | 20  | 20  | 20  | 10  | 7   | 3   | 0   | 0   |
| NAME: 50% WARM, 50% COOL SEASON   |     |     |     |     |     |     |     |     |     |     |     |     |
| DESC: 50 % OF PRODUCTION FROM COOL SEASON PLANTS, 50% FROM WARM SEASON      |     |     |     |     |     |     |     |     |     |     |     |     |
| NUMBER: SD0004  | 0   | 0   | 5   | 5   | 15  | 25  | 30  | 10  | 7   | 3   | 0   | 0   |
| NAME: 75% WARM, 25% COOL SEASON   |     |     |     |     |     |     |     |     |     |     |     |     |
| DESC: 75% OF FORAGE PRODUCED BY WARM SEASON PLANTS, 25% FROM COOL SEASON    |     |     |     |     |     |     |     |     |     |     |     |     |
| NUMBER: SD0005  | 0   | 0   | 0   | 0   | 10  | 35  | 30  | 20  | 5   | 0   | 0   | 0   |
| NAME: 100% WARM SEASON PLANTS   |     |     |     |     |     |     |     |     |     |     |     |     |
| DESC: 100% OF PRODUCTION IS FROM WARM SEASON PLANTS                         |     |     |     |     |     |     |     |     |     |     |     |     |

\* TOTAL ANNUAL PRODUCTION (EXCELLENT CONDITION)

FAVORABLE 1800 TO 2100 lbs/acre

AVERAGE 1400 TO 1700 lbs/acre

UNFAVORABLE 1000 TO 1300 lbs/acre

LIVESTOCK DATA

\* ESTIMATED STOCKING RATE

EXCELLENT 0 TO 0 AC/AU OR 0.7100 TO 1.0000 AUM/AC

GOOD 0 TO 0 AC/AU OR 0.5100 TO 0.7000 AUM/AC

FAIR 0 TO 0 AC/AU OR 0.3100 TO 0.5000 AUM/AC

POOR 0 TO 0 AC/AU OR 0.1000 TO 0.3000 AUM/AC

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\* WILDLIFE SPECIES LIST:

|                     |                 |
|---------------------|-----------------|
| WHITE-TAILED DEER   | MULE DEER       |
| TURKEY              | RUFFED GROUSE   |
| ELK                 | RED SQUIRRELS   |
| ANTELOPE            |                 |
| SHARP TAILED GROUSE | RACCOONS        |
|                     | COYOTES         |
| RED AND GRAY FOX    | BOBCATS         |
| GOLDEN EAGLES       | RED-TAILED HAWK |

\* RANGE SITE DEGRADATION:

WITH CONTINUED OVERUSE THE BLUESTEM, WILL BE THE FIRST SPECIES TO DISAPPEAR. AS THE HAPPENS NEEDLEANDTHREAD AND SIDEOATS GRAMA WILL INCREASE. IF OVERUSE CONTINUES SHORT GRASSES SUCH AS BLUE GRAMA AND SEDGES SUCH AS THREADLEAF SEDGE BECOME DOMINANT. WEEDY FORBS AND SHRUBS SUCH AS YUCCA AND PRICKLEYPEAR CACTUS ALSO BECOME COMMON.

\* TYPICAL LOCATION:

TO BE ENTERED LOCALLY.

