

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

RANGE SITE DESCRIPTION

RANGE SITE NAME . : SHALLOW
RANGE SITE NUMBER : 062XY024SD
ORIGINAL DATE ... : 05/13/1992
REVISION DATE ... : 05/13/1992
AUTHOR'S INITIALS : RDB/DWS

* SOIL NARRATIVE:

THESE ARE SHALLOW, WELL TO EXCESSIVELY DRAINED SOILS DERIVED FROM SANDSTONE, LIMESTONE, SILTSTONE OR WITE GYPSUM. PERMEABILITY IS MODERATE. SURFACE AND SUBSURFACE TEXTURE IS LOAM, COBBLY LOAM OR GRAVELLY LOAM. THESE SOILS ARE FOUND ON MOUNTAIN RIDGES, SIDE SLOPES, UPLANDS AND MOUNTAINS.

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

PAUNSAUGUNT GRAVELLY LOAM BUTCHE COBBLY LOAM
REKOP LOAM

* LANDSCAPE FACTORS

PHYSIOGRAPHY:

ELEVATION/ASPECT:

LOW 3500 ft / HIGH 7200 ft /

PERCENT SLOPE:

LOW 2
HIGH 60

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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 MIXED PRAIRIE GRASSES. WARM SEASON GRASSES, SUCH AS LITTLE BLUESTEM, SIDEOATS GRAMA AND BIG BLUESTEM ARE THE CONSTANT DOMINANTS. COOL SEASON GRASSES SUCH AS SPIKE OR IDAHO FESCUE, NEEDLEANDTHREAD AND WESTERN WHEATGRASS ARE PRESENT BUT DO NOT DOMINATE THE SITE AS DO THEIR WARM SEASON COUNTERPARTS. BLUEGRASSES, SEDGES AND BLUE GRAMA ARE FOUND IN THE UNDERSTORY. FORBS ARE VERY CONSPICUOUS AND MAKE UP A SIGNIFICANT PORTION OF THE PLANT COMMUNITY. COMMON FORBS INCLUDE SAGEWORT, YARROW, BLACKSAMSON AND ASTER. SHRUBS INCLUDING SKUNKBUSH SUMAC AND MOUNTAIN MAHOGANY ARE PRESENT BUT NEVER DOMINANT.

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PERCENT COVER:

GROUND COVER AND STRUCTURE:

	% CANOPY COVER (VERTICAL VIEW)	AVERAGE HEIGHT (FT)	% BASAL AREA COVER
GRASSES AND GRASSLIKES	65	2.20	50
FORBS	10	1.50	8
CRYPTOGAMS	0	0.00	0
SHRUBS	5	3.00	2
TREES	0	0.00	0

PLANT COMMUNITY COMPOSITION AND PRODUCTION:

Herbaceous

Grasses and grasslikes

National Symbol	Common Name	Grp	% Composition by weight	Group % Allowable
SCSC	LITTLE BLUESTEM	1	0 to 0	20 to 40
BOCU	SIDEOATS GRAMA	1	0 to 0	20 to 40
FEID	IDAHO FESCUE	0	0 to 10	0 to 0
POA++	BLUEGRASS	0	0 to 10	0 to 0
STCO3	COLUMBIA NEEDLEGRASS	2	0 to 0	0 to 5
STRI2	RICHARDSEN NEEDLEGRASS	2	0 to 0	0 to 5
STVI4	GREEN NEEDLEGRASS	2	0 to 0	0 to 5
AGSU	BEARDED WHEATGRASS	3	0 to 0	0 to 10
AGTR	SLENDER WHEATGRASS	3	0 to 0	0 to 10
AGSM	WESTERN WHEATGRASS	3	0 to 0	0 to 10
STCO4	NEEDLEANDTHREAD	0	5 to 15	0 to 0
SPHE	PRAIRIE DROPSEED	4	0 to 0	5 to 15
SPAS	TALL DROPSEED	4	0 to 0	5 to 15
KOPY	PRAIRIE JUNEGRASS	0	0 to 5	0 to 0

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Grasses and grasslike continued

National Symbol	Common Name	Grp	% Composition by weight	Group % Allowable
BOGR2	BLUE GRAMA	5	0 to 0	0 to 10
BOHI2	HAIRY GRAMA	5	0 to 0	0 to 10
CAREX	SEDGES	0	0 to 10	0 to 0

Forbs

National Symbol	Common Name	Grp	% Composition by weight	Group % Allowable
ARLU	CUDWEED SAGEWORTS	1	0 to 0	5 to 15
ARFR4	FRINGED SAGEWORT	1	0 to 0	5 to 15
ARCA12	GREEN SAGEWORT	1	0 to 0	5 to 15
ASER3	HEATH ASTER	1	0 to 0	5 to 15
RACO3	PRAIRIE CONEFLOWER	1	0 to 0	5 to 15
ACMI2	WESTERN YARROW	1	0 to 0	5 to 15
GUSA2	BROOM SNAKEWEED	1	0 to 0	5 to 15
PSES	BREADROOT SCURFPEA	1	0 to 0	5 to 15
PSAR2	SILVERLEAF SCURFPEA	1	0 to 0	5 to 15
PSTE3	SLIMFLOWER SCURFPEA	1	0 to 0	5 to 15
ECAN2	BLACK SAMSON	1	0 to 0	5 to 15
LIPU	DOTTED GAYFEATHER	1	0 to 0	5 to 15

Shrubs

National Symbol	Common Name	Grp	% Composition by weight	Group % Allowable
RHTR	SKUNKBUSH SUMAC	1	0 to 0	0 to 5
CEMO2	TRUE MOUNTAINMAHOGANY	1	0 to 0	0 to 5

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Production

Grasses and grasslikes: 80 to 95 % of total
 Forbs: 5 to 15 % of total
 Shrubs: 0 to 5 % of total
 Trees: 0 to 0 % 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

* PLANT GROWTH CURVES

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

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* TOTAL ANNUAL PRODUCTION (EXCELLENT CONDITION)

FAVORABLE 1700 TO 2000 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 0.5260 TO 0.6750 AUM/AC

GOOD 0 TO 0 AC/AU OR 0.3760 TO 0.5250 AUM/AC

FAIR 0 TO 0 AC/AU OR 0.2260 TO 0.3750 AUM/AC

POOR 0 TO 0 AC/AU OR 0.0750 TO 0.2250 AUM/AC

* WILDLIFE SPECIES LIST:

WHITE-TAILED DEER	MULE DEER
ELK	
ANTELOPE	
SHARP TAILED GROUSE	
RED AND GRAY FOX	COYOTES
GOLDEN EAGLES	BOBCATS
	RED-TAILED HAWK

* RANGE SITE DEGRADATION:

WHEN THIS SITE IS CONTINUOUSLY OVERGRAZED LITTLE BLUESTEM AND GREEN, COLUMBIA OR RICHARDSEN NEEDLEGRASSES WILL BE THE FIRST SPECIES TO DECLINE IN VIGOR AND AMOUNT. SIDEOATS GRAMA AND WESTERN WHEATGRASS WILL INITIALLY INCREASE. IF OVERGRAZING CONTINUES SHORT GRASSES SUCH AS BLUE GRAMA AND/OR BLUEGRASS ALONG WITH SEDGES SUCH AS THREADLEAF SEDGE WILL BECOME DOMINANT. WEEDY ANNUAL FORBS AND THE PERCENTAGE OF BARE GROUND WILL INCREASE REDUCING FORAGE PRODUCTION, DEGRADING WILDLIFE HABITAT AND INCREASING THE POTENTIAL FOR EROSION DAMAGE.

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* TYPICAL LOCATION:

TO BE ENTERED LOCALLY.

