Major Land Resource Area 062X
Black Hills

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Ecological site keys

MLRA 062X - Black Hills - Rangeland (LRU's A-North, B-High Central, C-South, and Y-Common), and Black Hills - Forest Land (Low Elevation < 6,200' and High Elevation > 6,200').

I. RANGELAND (Soils usually have a mollic epipedon, lack an O horizon and do not have an E horizon. Rangelands may have conifer encroachment but are not Forest Sites).

A. RUN-OFF LANDSCAPE POSITIONS (Upland, normally convex short slopes > 6 percent, Shoulder).

1 Dig hole to a depth of 20 inches minimum. Is there root restrictive layer within 10 inches of the soil surface?

i. Yes. Very Shallow ... R062XY016SD – Very Shallow

ii. No. Is there a root restricting layer within 10-20 inches of the surface?

a. Yes. Determine the soil texture.

1) Clayey - Shallow Clayey - North (R062XA17SD) ... R062XA017SD – Shallow Clayey - North

2) Loamy

a) North LRU - Shallow Loamy - North (R062XA024SD), ... R062XA024SD – Shallow Loamy - North

b) High Central LRU: SwLy - High Central (R062XB024SD), ... R062XB024SD – Shallow Loamy - High Central

c) South LRU: SwLy - South (R062XC024SD) ... R062XC024SD – Shallow Loamy - South

b. No. Is the soil > 20 inches in depth but have a thin surface layer (typically less than 3”) and effervesce at or near the surface (within 6 inches)?

1) Yes. Thin Upland (R062XY012SD) ... R062XA012SD – Thin Upland - North

2) No. See "Normal Landscape Positions"

B. NORMAL LANDSCAPE POSITIONS (Upland, slopes normally linear, 1 to 6 percent except sandy/sands sites can have complex slopes, Back slope, Summit, Foot slope)

1 Are soils mod. deep or deep and have many (> 35%) coarse fragments (rocks) at or near the surface and throughout the soil profile?

i. Yes. Is the soil derived from flat fragmented metamorphic rock?

a. Yes. Channery Loam - North (R062XA032SD). ... R062XA032SD – Channery Loam - North

b. No. Stony Hills - (R062XY029SD). ... R062XY029SD – Stony Hills

ii. No. Are soils loamy with a thick dark colored surface layer (> 16” thick) and not adjacent to a stream? Typically, in upland “U-” or “V”-shaped valleys.

a. Yes. Valley Loam - (R062XY043SD). ... R062XY043SD – Valley Loam

b. No. Clay or Silty clay (40 to 55% clay) Surface (>1.75” ribbon) with Clayey Subsoil?

1) Yes.

a) North LRU - Clayey - North (R062XA011SD) ... R062XA011SD – Clayey - North

b) South LRU - Clayey - South (R062XC011SD). ... R062XC011SD – Clayey - South

2) No. Loam, Silt loam, Silty, Clay loam, Sandy clay loam, or Very fine sandy loam (0.5 to 1.75” ribbon)?

a) Yes. Is the site an old stream terrace?

(1) Yes. Loamy Terrace. FUTURE PROJECT

(2) No.

(a) North LRU - Loamy - North (R062XA010SD) ... R062XA010SD – Loamy - North

(b) High Central LRU - Ly - Central (R062XB010SD), ... R062XB010SD – Loamy - High Central

(c) South LRU - Ly - South (R062XC010SD). ... R062XC010SD – Loamy - South

b) No. Sandy loam, Fine sandy loam, or Loamy very fine sand (0.25 to 0.5” ribbon)?

(1) Yes. Sandy - North (R062XA009SD). ... R062XA009SD – Sandy - North

(2) No. See “ Run-in Landscape Position"

C. RUN-IN LANDSCAPE POSITIONS [Valley Bottomlands, Drainageways (not depressions), Toe slopes].

1 Observe the soil to a depth of 60 inches. Is there evidence of a permanent water table within 0 to 1 foot of the surface and the site is dominated by hydrophytes?

i. Yes. Wet Land (R062XY002SD). ... R062XY002SD – Wet Land

ii. No. Is there evidence of a permanent water table within 1 to 2 feet of the

surface?

a. Yes. Wet Subirrigated (R062XY005SD). ... R062XY005SD – Wet Subirrigated

b. No. Is there evidence of a permanent water table within 2 to 5 feet of the surface?

1 Yes, 2-5ft permanent water table. ... R062XY003SD – Subirrigated

2) No. Is the site adjacent to a stream or a low stream terrace that occasionally floods and is located below 6,200' in elevation? There may also be a seasonal water table present (>5 feet of the surface).

a) Yes. Dryer than lowland ES,

(1) North LRU - Loamy Overflow - North (R062XA020SD), ... R062XA020SD – Loamy Overflow - North

(2) South LRU - LyOv - South (R062XC020SD). ... R062XC020SD – Loamy Overflow - South

c) Yes, located below/wetter than loamy overflow, precip zone between 17-22 inch. ... R062XC042SD – Lowland 17-22 PZ

d) Yes, located below/wetter than loamy overflow, precip zone between 22-30 inches. ... R062XA042SD – Lowland 22-30 PZ

b) No. Is the site very stony, occasionally flood, and located at or above 6,200' in elevation?

(1) Yes. Stony Overflow - Central (R062XB039SD). ... R062XB039SD – Stony Overflow - High Central

(2) No. See "Run-off and Normal Landscape Positions"

II. FOREST [Soils typically have an E horizon and translocated clays (argillic horizon). They may have an O horizon but very seldom a mollic epipedon].

A. ELEVATION LESS THAN 6,200 FEET? (Low Elevation) Soils are Frigid.

1 Are you in LRU A/ Northern Low Elevation Hills?

i. Cool fringe forest or pockets of increased moisture ... F062XY057SD – Cool Fringe Mixed Hardwood Forest

ii. Slope 0-15% ... F062XA051SD – Low Elevation Northern Hills Pine Forest(0-15% Slope)

iii. Slope 15+% ... F062XA054SD – Low Elevation Northern Hills Pine Forest(15+% Slope)

2 Are you in LRU C/ Southern Dry Low Elevation Hills?

i. Slope 0-45+% ... F062XC053SD – Low Elevation Dry Southern Hills Pine Forest

B. ELEVATION GREATER THAN 6,200 FEET? LRU B (High Elevation) Soils are Cryic.

1 Depressions/Cool Moist Slopes and Valleys, moss often present in great quantities ... F062XB056SD – Highland Cool Valley Slopes and Depressions

2 Cool fringe hardwood forest between pine dominated hills and valley loam or rangelands. ... F062XY057SD – Cool Fringe Mixed Hardwood Forest

3 All other.

i. Slopes 0-15% ... F062XB052SD – Highland Hills Pine Forest(0-15% Slope)

ii. Slopes 15-60% ... F062XB058SD – Highland Hills Pine Forest (15-60% Slope)

iii. Slopes 60+% ... F062XB059SD – Highland Hills Pine Forest (60+% Slope)