

# 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').**

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**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)**

**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)