

Major Land Resource Area 032X

Northern Intermountain Desertic Basins

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Ecological site keys

Historic Key MLRA 32X Zone 5: 5-9 BH

- I. Soil depth very shallow (<8-10"), possibly with areas of exposed bedrock and pockets of deep soil OR deep heavy clay soils with a high concentration of exchangeable sodium throughout the profile
- A. Soils are very fine textured and have a high concentration of exchangeable sodium throughout the profile, birdfoot sagebrush common woody species ... R032XY118WY – Impervious Clay (IC) 5-9" Big Horn Basin Precipitation Zone
 - B. Site not as above
 - 1 Site found in uplands, slopes typically 5-25%, WITH many outcrops of clay shale bedrock that may be saline and/or alkaline in various degrees, Gardner's saltbush common woody species ... R032XY154WY – Shale (Sh) 5-9" Big Horn Basin Precipitation Zone
 - 2 Site not as above, upland with steep slopes (25-50%), commonly on windswept ridges, fractured bedrock of various types, and juniper occasionally found at higher elevations ... R032XY176WY – Very Shallow (VS) 5-9" Big Horn Basin Precipitation Zone
- II. Soil depth >8"
- A. Soil depth shallow (8-15") OR may be deep (>15"), gravelly and/or cobbly soils on south and west facing slopes which react like shallow soils
 - 1 Silty clays or heavier textured soils over clay shale bedrock, soil may develop large cracks when dry, bud sagebrush, birdfoot sagebrush and Gardner's saltbush common woody species ... R032XY158WY – Shallow Clayey (SwCy) 5-9" Big Horn Basin Precipitation Zone
 - 2 Soils not as above, including gravelly and/or cobbly soils on south and west facing slopes which react like shallow soils
 - i. Fine sandy loams or coarser textured soils over sandstone or sandy shale, needle and thread and Indian ricegrass common grass species on site ... R032XY166WY – Shallow Sandy (SwSy) 5-9" Big Horn Basin Precipitation Zone
 - ii. Very fine sandy loams to clay loam textured soils over various bedrock types (commonly limestone, siltstone, or shale) ... R032XY162WY – Shallow Loamy (SwLy) 5-9" Big Horn Basin Precipitation Zone
 - B. Soils depth deep (>15")
 - 1 Site that receives significant additional moisture from runoff of adjacent slopes or from intermittent/perennial streams or a water table
 - i. Sites that are saline and/or alkaline
 - a. Water table within rooting depth of herbaceous species (typically 20-40") during some or most of the growing season, salt crusts can be found on ridges and mounds during dry periods, alkali sacaton & Nuttalls alkaligrass common species ... R032XY142WY – Saline Subirrigated (SS) 5-9" Big Horn Basin Precipitation Zone
 - b. Site adjacent to intermittent/perennial stream, occasionally receiving overflow water, and water table usually >3 feet (within rooting depth of woody plants, but not within rooting depth of herbaceous plants), greasewood and alkali sacaton common species ... R032XY138WY – Saline Lowland (SL) 5-9" Big Horn Basin Precipitation Zone

ii. Sites that are not saline and/or alkaline

- a. Site poorly drained with water table above surface part of growing season, Nebraska sedge and willows common species ... R032XY178WY – Wetland (WL) 5-9" Big Horn Basin Precipitation Zone
- b. Site adjacent to intermittent/perennial stream and water table usually >3 feet (within rooting depth of woody plants, but not within rooting depth of herbaceous plants), cottonwoods or remnants thereof may be present ... R032XY128WY – Lowland (LL) 5-9" Big Horn Basin Precipitation Zone

2 Upland site that does not receive significant additional moisture as above

i. Sites that are saline and/or alkaline, Gardner's saltbush and/or winterfat common species ...

R032XY144WY – Saline Upland (SU) 5-9" Big Horn Basin Precipitation Zone

ii. Sites that are not saline and/or alkaline

a. Sites with a high volume of coarse fragments in top 20" (>35% by volume)

1) Site occurs along terrace breaks or steep slopes with the majority of coarse fragments from 2 mm to 3" in diameter covering 50-75% of surface and making up 40-50% volume in top 20", may have lime horizon below 12 inches, bluebunch wheatgrass and variety of woody plants may be present, productivity low ... R032XY112WY – Gravelly (Gr) 5-9" Big Horn Basin Precipitation Zone

2) Site occurs in a variety of upland positions, majority of coarse fragments greater than 3" in diameter found in abundance on surface, at least 35% volume of coarse fragments in top 20", generally increasing with depth, bluebunch wheatgrass common ... R032XY108WY – Coarse Upland (CU) 5-9" Big Horn Basin Precipitation Zone

b. Sites without high volume of coarse fragments

1) Soils textures are heavy and range from silty clay to heavy clay, slight to severe soil cracking in dry conditions. Textures range from silty clay through finer silty and sandy clay loams, soil cracking common during dry summer months, though not severe, big sagebrush more common woody species ... R032XY104WY – Clayey (Cy) 5-9" Big Horn Basin Precipitation Zone

2) Soils not as above

a) Soil textures are coarse and range from fine sandy loam to sand

(1) Soils coarse, loamy sand to sand textures, sometimes as dunes, dark or light colored, needle and thread and prairie sandreed are abundant species ... R032XY146WY – Sands (Sa) 5-9" Big Horn Basin Precipitation Zone

(2) Soils fine sandy loams, sandy loams, or loamy sands in texture, light or dark colored, needle and thread and Indian ricegrass are abundant species ... R032XY150WY – Sandy (Sy) 5-9" Big Horn Basin Precipitation Zone,

b) Soils not as above - sandy loams to clay loams, moderate textures ... R032XY122WY – Loamy (Ly) 5-9" Big Horn Basin Precipitation Zone