Major Land Resource Area 043B
Central Rocky Mountains

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Ecological site keys

ARCHIVED: Key to Ecological Sites MLRA 43B Zone 2: 15-19 W

I. Site in a lowland position that receives significant additional moisture from runoff of adjacent slopes or from intermittent/perennial streams or a water table (HIGH Productivity Potential)

- A. Sites that are saline and/or alkaline, dominated by salt tolerant species (inland saltgrass, alkali sacaton, alkali bluegrass, Nutall's alkaligrass, alkali muhly) ... R043BY242WY – Saline Subirrigated Foothills and Mountains West
- B. Sites that are not saline and/or alkaline
  - 1 Site poorly drained with water table above surface part of growing season, Nebraska sedge, water sedge, and willows common species ... R043BY278WY – Wetland Foothills and Mountains West
  - 2 Site not as above
    - i. Water table within rooting depth of herbaceous species (typically above 20") during part of the growing season, tufted hairgrass, shrubby cinquefoil, sedges, rushes, and willows common ... R043BY274WY – Subirrigated Foothills and Mountains West
    - ii. Site not as above
      - a. Site receives periodic overflow from adjacent slopes, but without a water table within rooting depth of woody plants, and soil textures are loamy, silver sagebrush, slender wheatgrass, and basin wildrye common ... R043BY230WY – Overflow Foothills and Mountains West
      - b. Site similar to above with heavy textured soils (finer portions of silty clay loams to sandy clay loams and clay loams), heavy presence of rhizomatous wheatgrass ... R043BY206WY – Clayey Overflow Foothills and Mountains West

II. Upland site that does not receive additional moisture as above

- A. Soil depth very shallow (<10"), shallow (10-20") OR moderately deep to deep (>20") reacting like shallow soils due to root restrictive layer or on south and west facing slopes (LOW productivity potential)
  - 1 Soils very shallow (<10"), but may include areas of exposed bedrock and pockets of deep soil, often on steep (up to 55%) south and west facing slopes with VERY LOW productivity potential
    - i. Bedrock igneous or volcanic, three-tip sagebrush, mountain mahogany, and black sage common shrubs ... R043BY216WY – Igneous Foothills and Mountains West
    - ii. Fracture bedrock of various types except igneous or volcanic, commonly on windswept ridges, bluebunch wheatgrass and a variety of shrub species dominate ... R043BY276WY – Very Shallow Foothills and Mountains West
  - 2 Soils shallow (10-20"), but may include moderately deep to deep gravelly or cobbly soils, soils with a root restrictive layer, and/or south and west facing slopes that react like shallow soils, productivity potential is LOW
    - i. Coarse fragments common on surface and throughout profile (>35% by volume in top 20")
      - a. Site occurs along terrace breaks, steep slopes or along streams terraces with coarse fragments up to 3" diameter covering 50-75% of surface and making up >35% volume in top 20", may have lime horizon below 12 inches, bluebunch wheatgrass, bitterbrush, and black sagebrush are common, productivity potential VERY LOW ... R043BY212WY – Gravelly Foothills and Mountains West

b. Coarse fragments are larger than 3” and often dominated by a variety of shrubs such as bitterbrush, low sage, mountain big sage, serviceberry, and green rabbitbrush ... R043BY272WY – Stony Foothills and Mountains West

ii. Soils without high amount of coarse fragments

a. Medium to moderately coarse textured soils over igneous or volcanic bedrock, bitterbrush and three-tip sagebrush common ... R043BY260WY – Shallow Igneous Foothills and Mountains West

b. Very fine sandy loam to clay loam textured soils over various bedrock types (commonly limestone, siltstone, or shale), low sagebrush intermixed with big sagebrush ... R043BY262WY – Shallow Loamy Foothills and Mountains West

B. Soil depth moderately deep to deep (>20”) without root restricting layer that inhibits the productivity potential

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

i. Site occurs in a variety of upland positions, boulders found in abundance on surface, bluebunch wheatgrass, Idaho fescue, spike fescue, bitterbrush, and big sage common, productivity high ... R043BY208WY – Coarse Upland Foothills and Mountains West

ii. Site occurs on steep south and west facing mountain slopes, bluebunch wheatgrass, Idaho fescue, and spike fescue dominant grasses, mountain mahogany common shrub ... R043BY270WY – Steep Stony Foothills and Mountains West

2 Sites without high volume of coarse fragments

i. Soil textures are heavy, slight to severe soil cracking in dry conditions

a. Soil textures range from silty clay through finer silty and sandy clay loams, soil cracking common during dry summer months, though not severe, serviceberry common shrub with a lot of western needlegrass and rhizomatous wheatgrass ... R043BY204WY – Clayey Foothills and Mountains West

b. Heavy clay soils with severe soil cracking in dry conditions, very sticky when wet, low sagebrush common shrub ... R043BY210WY – Dense Clay Foothills and Mountains West

ii. Soils very fine sandy loams to clay loams, a good variety and even mix of grass species, mountain big sagebrush dominant shrub ... R043BY222WY – Loamy Foothills and Mountains West