

Major Land Resource Area 034A

Cool Central Desertic Basins and Plateaus

Accessed: 05/10/2025

Ecological site keys

34A Utah

- I. Site in a lowland position (bottom) that receives significant additional moisture from runoff of adjacent slopes or intermittent/perennial streams or a water table (HIGH productivity potential)
- A. Site moderately to strongly saline (>8mmhos/cm) within 20" (50cm) and dominated by salt tolerant species
- 1 Site adjacent to perennial or intermittent streams, receiving some overland flow from adjacent slopes, with moderately good drainage, but water table within 36" (within rooting depth of woody plants, but not herbaceous plants) during most of the growing season ... R034AA201UT – Semi-desert Saline Well-Drained Terraces (Indian ricegrass/ Greasewood)
- 2 Site may receive periodic overflow from adjacent slopes, located in lowland position but water is typically channeled into gullies so that plants are not receiving a lot of benefit from additional moisture ... R034AA203UT – Semi-desert Saline Terraces (Gardner's saltbush/ Bluebunch wheatgrass)
- B. Site not saline
- 1 Site with a water table present and visible for at least part of the growing season above 40 inches.
- i. Site has a water table within rooting depth of herbaceous species (12-24" (30-60cm)) during most of the growing season ... R034AA013UT – Semi-Wet Fresh Meadow
- ii. Site has fluctuating water table above surface part of growing season (redox features in top 12" (30cm))
- a. Without the prominent riparian gravels ... R034AA012UT – Riparian Complex Perennial II/E4 (Nebraska Sedge/Baltic Rush)
- b. With the prominent riparian gravels
- 1) Water table fluctuates low enough to encourage woody riparian species. ... R034AA010UT – Riparian Complex Perennial Gravelly VIII/E4 (Geyers Willow/Northwest Territory Sedge)
- 2) Water table fluctuates and remains high enough to restrict the woody species. ... R034AA011UT – Riparian Complex Perennial Gravelly VIII/E4 (Northwest Territory Sedge)
- 2 Surface textures range from sandy loam to light silty clay loam (if redox features are present they are below 40" (100cm)) ... R034AA237UT – Semi-desert Loamy Run-on (Basin big sagebrush/ Mixed bunchgrass)
- II. Site is in an upland position and does not receive additional effective moisture from runoff of adjacent slopes and there is no water table.
- A. Soil depth very shallow (<10" (25cm)), shallow (10-20" (25-50cm)) OR moderately deep to deep (>20" (>50cm)), skeletal (>35% coarse fragments by volume in top 20" (50cm)) soils on south and west aspects and/or with a root restricting layer which react like shallow soils (LOW productivity potential)
- 1 Site with a highly calcareous subsoil with highly calcareous (violent effervescence (>15%CCE)) subsoil at <10" (25cm), often gravelly or skeletal and on 15 to 35% slopes, Moderately deep to deep soil (>20" (50cm)) , (compare with II. B. 2. i. a) ... R034AA205UT – Semi-desert Stony Loam (Black sagebrush)
- 2 Site without highly calcareous subsoil or bedrock, OR if lime horizon present, accompanied by high volume of coarse fragments at soil surface, slopes variable
- i. Soil is skeletal with coarse fragments common on surface and throughout profile (>35% by volume in top 20" (50cm))

- a. Site occurs along terrace breaks, steep slopes, or terraces with coarse fragments up to 10" diameter covering 50-75% of surface and making up 40-50% volume in top 20" (50cm), may have lime horizon below 12", often westerly aspect and windswept ridges, soils are excessively well drained loamy sands, sandy loams and fine sandy loams ... R034AA228UT – Semi-desert Gravel (Bluebunch wheatgrass/ Wyoming big sagebrush)
- b. Fractured sedimentary bedrock at 10-20" (25-50cm) with cobble, stone, and angular fragments on the surface and throughout soil profile, inclusions of very shallow to deep pockets of soil, loamy well drained soils commonly on south & west facing slopes (productivity potential higher than Very Shallow (VS) site) ... R034AA240UT – Semi-desert Shallowbreaks (Bluebunch wheatgrass/ Utah juniper)

ii. Soils without high amount of coarse fragments at soil surface, but still may be skeletal, have root restricting layer, shallow to bedrock

- a. Root restricting (7-15" 18-30cm) clay loam to clay subsoil layer (>40% clay) with sharply contrasting loam to clay loam surface textures, soil may develop large cracks when dry ... R034AA210UT – Semi-desert Shallow Clay (Early sagebrush)
- b. Well-drained soils with 35% or less clay in the mineral soil surface and are over sedimentary bedrock or loams with root restricting layer (i.e. rock layer and/or similar layer)
 - 1) Soil textures are fine sandy loam to loams ... R034AA235UT – Semi-desert Shallow Loam (Wyoming big sagebrush)
 - 2) Soil textures are silt loam to loams ... R034AA207UT – Semi-desert Shallow Loam (Black sagebrush)

B. Soil depth moderately deep to deep (>20" (50cm)) without root restricting layer and is NOT skeletal and/or south or west facing that inhibits the productivity potential; Sites are not affected by soil chemistry

1 Sandy clay loam, silty clay loam and clay loam surface, soil cracking common during dry summer months, though not severe (>36% clay in subsurface)

- i. Heavy clay soils (>40%) at surface with severe soil cracking in dry conditions may occur, very sticky when wet, (slick spot) ... R034AA215UT – Semi-desert Dense Clay (Low and/ or Early sagebrush/ Rhizomatous wheatgrass)
- ii. Silty clay loam and clay loams soil cracking common during dry summer months, though not severe (>36% clay in subsurface) ... R034AA239UT – Semi-desert Silt (Basin big sagebrush/ Bluebunch wheatgrass)

2 Site not as above

- i. Excessively drained soils that are very coarse (loamy sand to sand), on nearly level to rolling uplands or dunes, dark or light colored ... R034AA248UT – Semi-desert Sand (Indian ricegrass/ Needle and thread)
- ii. Soil not as above, Clay content is not greater than 35% but is greater than 15% in the mineral soil surface layer (1-2")
 - a. Soil textures range from silty loamy to silty clay loam ... R034AA223UT – Semi-desert Silt Loam (Wyoming big sagebrush/ Bluebunch wheatgrass)
 - b. Soil textures range from loamy fine sand to clay loam ... R034AA220UT – Semi-desert Loam (Wyoming big sagebrush/ Bluebunch wheatgrass)