

Ecological site group DX035X01AESG18

Grand Staircase-Deep Rocky-Mid Elevation

Last updated: 10/05/2022
Accessed: 04/19/2024

Key Characteristics

- Grand Staircase-Kaiparowits
- Deep Rocky Soils
- Mid elevation MAST<54 degrees F

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Physiography

This ecological site group is found on many landforms with deep stony soils, including; mountain slopes, slump blocks, structural benches, remnant alluvial fans, remnant stream terraces, landslides, and benches. Elevations are typically 5600 to 6500 feet, but are sometimes as low as 4200 or as high as 7200 feet. Slopes range from 15-60% and runoff is medium to high.

Climate

Soil temperature and moisture regimes range from mesic, typic aridic to mesic aridic ustic.

Soil features

The soils are typically deep and loamy with rock fragments making up greater than 50% of the soil volume throughout the profile. These soils formed in colluvium and alluvium derived from sandstone and shale. Textures of the fine fraction range from loams to loamy sands, and rock fragment sizes range from gravels to boulders. These soils are well drained with moderately rapid permeability.

Vegetation dynamics

This ecological site group is dominated by diverse perennial grasses and Utah juniper. Two-needle pinyon is also abundant, and diverse shrubs and forbs can make up a significant portion of the community in some areas. Composition by air-dry weight is 30-60% grasses, 0-15% forbs, 0-30% shrubs, and 30-60% trees. This phase is resistant to soil erosion as well as invasion by non-native species.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XY136UT–Desert Stony Loam (Shadscale-Bud Sagebrush)
- R035XY206UT–Semidesert Gravelly Loam (Utah Juniper-Pinyon)
- R035XY246UT–Semidesert Stony Loam (Utah Juniper-Pinyon)
- R035XY302UT–Upland Dissected Slope (Twoneedle Pinyon-Utah Juniper)
- R035XY317UT–Upland Steep Stony Loam (Utah Juniper-Pinyon)
- R035XY321UT–Upland Stony Loam (Pinyon-Utah Juniper)

Correlated Map Unit Components

22601861, 22600920, 22600919, 22601867, 22601474, 22601058, 22601077, 22601079, 22601054, 22965590, 22965107, 22965106, 22965147, 22965213, 22965212, 22965501, 22965346, 22965294, 22965337, 22965455, 22965472, 22965792, 22965783, 22965778, 22963424, 22963438, 22963403, 22963339, 22963340, 22963366, 22963368, 22963393

Stage

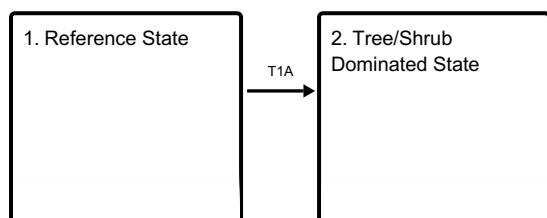
Provisional

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State and transition model

Ecosystem states



T1A - D = Drought ILG = Improper livestock grazing SD = Surface disturbances

State 1 submodel, plant communities

1.1. Utah Juniper-Pinyon-Native Shrubs/Grasses
Relatively open overstory of trees and shrubs with perennial grasses present in the

State 2 submodel, plant communities

2.1. Utah Juniper-Pinyon-Shrub Dominance

State 1 Reference State

The reference state is dominated by an overstory of trees and/or shrubs with perennial grasses present in the understory.

Community 1.1

Utah Juniper-Pinyon-Native Shrubs/Grasses Relatively open overstory of trees and shrubs with perennial grasses present in the understory.

Relatively open overstory of Utah juniper and pinyon and/or Wyoming big sagebrush or shadscale, depending on precipitation, aspect, etc., with perennial grasses, typically blue gramma, galleta, or Indian ricegrass, present in the understory.

State 2

Tree/Shrub Dominated State

This state results when perennial grasses are lost from the system and trees increase and dominate. Soil erosion may become a hazard, and non-native invasive species, particularly cheatgrass, may be more likely to establish in this state.

Community 2.1

Utah Juniper-Pinyon-Shrub Dominance

This community is dominated by Utah juniper, pinyon and/or Wyoming big sagebrush or shadscale, depending on precipitation, aspect, etc. Perennial herbaceous vegetation is greatly reduced. Soil erosion may result from the lack of herbaceous cover. This phase may be susceptible to invasion by non-native invasive species.

Transition T1A

State 1 to 2

This transition occurs when perennial grasses are reduced by improper livestock grazing (season long grazing providing little rest and recovery for preferred grazed plants during critical growing periods coupled with high utilization) followed by an increase in woody species. The resulting state is unable to regain perennial grasses without significant management inputs.

Citations