

Ecological site group DX035X02FESG02

Kaibab Plateau - Ustic Aridic - Clay Loam or Shale Upland

Last updated: 09/02/2021
Accessed: 04/19/2024

Key Characteristics

- Kaibab Plateau (F)
- Site parent material is shale or clayey.
- Soils are ustic aridic, or precipitation is within the range of 10 to 14 inches.
- Site is and/or located in an upland with slopes <15%.

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

Site is and/or located in an upland with slopes <15%. Aspects tend toward the perimeter of the LRU subset.

Climate

Site soils are ustic aridic or within a 10-14" precipitation zone. Precipitation comes predominantly from winter storm patterns from November through March at upper elevations. Monsoonal patterns and xeric patterns occur more equally at lower elevations.

Soil features

Parent material is shale. Soils are clay loam and clayey. Site consists of limited amounts of gently sloping sheet alluvial or eolian deposits over residuum of plateaus and structural benches.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

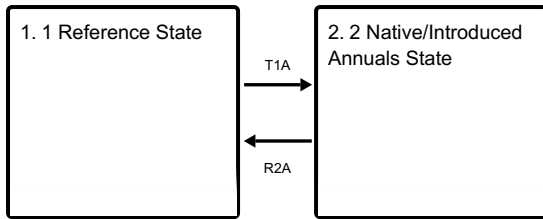
- R035XC307AZ–Clay Loam Upland 10-14" p.z.
- R035XY243UT–Semidesert Stony Loam (Blackbrush)

Stage

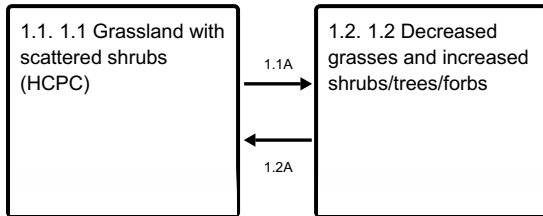
Provisional

State and transition model

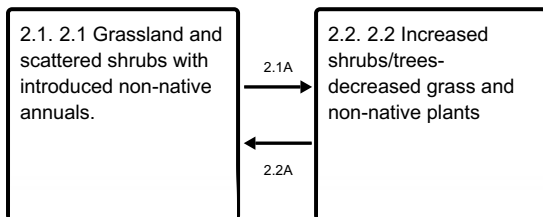
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1

1 Reference State

This site is a grassland community with scattered shrubs and a few forbs. The grasses are a mixture of cool and warm season grasses. The shrubs are fourwing saltbush at the lower elevation and precipitation areas and Wyoming big sagebrush at the higher elevation and precipitation areas.

Community 1.1

1.1 Grassland with scattered shrubs (HCPC)

The historic climax plant community consists of mid and short grasses with a small percentage of shrubs, half shrubs and forbs. Common plant species include: blue grama, needle and thread, western wheatgrass, muttongrass, fourwing saltbush and Wyoming big sagebrush.

Community 1.2

1.2 Decreased grasses and increased shrubs/trees/forbs

Disturbance has deteriorated the site. There is a significant loss of perennial native grasses. Shrubs increase on the site and annual grasses and forbs increase. Juniper can invade from nearby upland sites. Plants that increase or invade: fourwing saltbush, Wyoming big sagebrush, broom snakeweed, rabbitbrush, juniper.

Pathway 1.1A

Community 1.1 to 1.2

Repetitive, high utilization of palatable grasses have given shrubs a competitive advantage.

Pathway 1.2A

Community 1.2 to 1.1

A set-back to the shrubs such as fire along with improved management to increase composition of palatable grasses.

State 2

2 Native/Introduced Annuals State

The plant communities in this state are similar to those in the reference state. Non-native annuals are now present in the plant communities and compete with the native species. Disturbances such as fire or drought may allow these non-native species to increase their dominance on the site.

Community 2.1

2.1 Grassland and scattered shrubs with introduced non-native annuals.

This plant community consists of mid and short grasses with a small percentage of shrubs, half shrubs and forbs. Common plant species include: blue grama, needle and thread, western wheatgrass, muttongrass, fourwing saltbush and Wyoming big sagebrush. Non-native annual grasses and forbs are part of the plant community. Cheatgrass and Russian thistle are common non-native plants found on the site.

Community 2.2

2.2 Increased shrubs/trees-decreased grass and non-native plants

There is a significant loss of perennial native grasses. Shrubs increase on the site and annual grasses and forbs increase. Juniper can invade from nearby upland sites. Plants that increase or invade: fourwing saltbush, Wyoming big sagebrush, broom snakeweed, rabbitbrush, juniper. Non-native annual grasses and forbs are part of the plant community. Cheatgrass and Russian thistle are common examples.

Pathway 2.1A

Community 2.1 to 2.2

Repetitive, high utilization of palatable grass species giving shrubs a competitive advantage.

Pathway 2.2A

Community 2.2 to 2.1

A set-back to the shrubs such as fire along with improved management to increase composition of palatable grasses.

Transition T1A

State 1 to 2

Invasion of introduced species.

Restoration pathway R2A

State 2 to 1

Once introduced species have invaded it is unlikely the site can return to reference.

Citations