

# Ecological site group DX035X02FESG05

## Kaibab Plateau - Ustic Aridic - Limestone or Loamy Slopes

Last updated: 10/31/2022  
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### Key Characteristics

- Kaibab Plateau (F)
- Site parent material is limestone or loamy.
- 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 limestone. Soils are loamy. Site consists of gently dipping shallow residuum weathered from sedimentary rocks eroded into steep cliff faces and canyons.

### Vegetation dynamics

This site is a complex of trees, shrubs, forbs, and grasses. In the original plant community there is a mixture of cool and warm season plants. The plant community is composed of relatively equal amounts of shrubs, grasses, and forbs. It can be variable due to site conditions (aspect, soil depth, run-on & run-off areas).

Plants most likely to increase or invade when the site deteriorates are big sagebrush, snakeweed, juniper and cacti.

### Major Land Resource Area

MLRA 035X  
Colorado Plateau

### Subclasses

- R035XC302AZ–Sedimentary Cliffs 10-14" p.z.
- R035XC308AZ–Limestone/Sandstone Hills 10-14" p.z.
- R035XC343AZ–Limestone/Sandstone Cliffs 10-14" p.z.

### Correlated Map Unit Components

22391033

## Stage

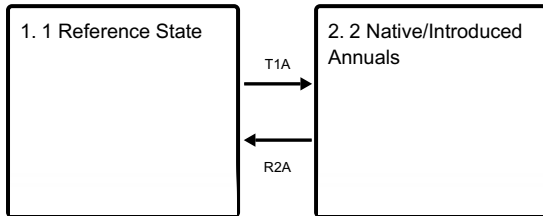
Provisional

## Contributors

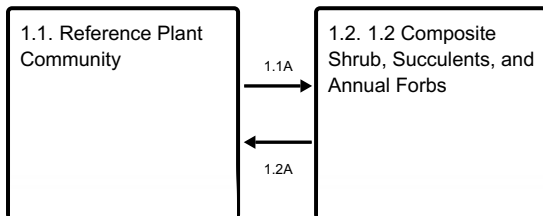
Curtis Talbot

## State and transition model

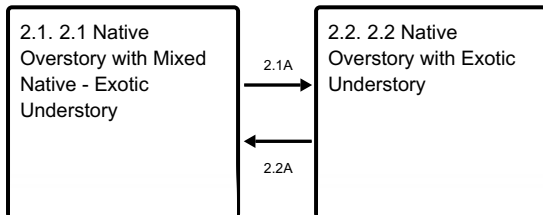
### Ecosystem states



### State 1 submodel, plant communities



### State 2 submodel, plant communities



## State 1

### 1 Reference State

#### Community 1.1

##### Reference Plant Community

This site is a complex of trees, shrubs, forbs, and grasses. In the original plant community there is a mixture of cool and warm season plants. The plant community is composed of relatively equal amounts of shrubs, grasses, and forbs. It can be variable due to site conditions (aspect, soil depth, run-on & run-off areas). Plants most likely to increase or invade when the site deteriorates are big sagebrush, snakeweed, juniper and cacti.

#### Community 1.2

##### 1.2 Composite Shrub, Succulents, and Annual Forbs

Composite Shrub, Succulents, and Annual Forbs – Composite shrubs such as broom snakeweed, and succulents such as prickly pear increase over Big sagebrush and other palatable shrubs. Perennial bunchgrasses decrease in relation to annual grasses and forbs.

#### Pathway 1.1A

##### Community 1.1 to 1.2

Repetitive, high utilization of palatable plants leads to reduced site health.

## **Pathway 1.2A**

### **Community 1.2 to 1.1**

A set back for shrubs coupled with improved management of palatable grass species.

## **State 2**

### **2 Native/Introduced Annuals**

#### **Community 2.1**

##### **2.1 Native Overstory with Mixed Native - Exotic Understory**

Native Overstory with Mixed Native – Exotic Understory – Exotic annual grasses are present in the plant community but the amount and composition of native perennial grasses remains unchanged. Introduced annuals can range in composition from 2-10 percent in the total plant community composition.

#### **Community 2.2**

##### **2.2 Native Overstory with Exotic Understory**

Native Overstory with Mixed Native – Exotic Understory – Exotic annual grasses are present in the plant community but the amount and composition of native perennial grasses remains unchanged. Introduced annuals can range in composition from 2-10 percent in the total plant community composition.

## **Pathway 2.1A**

### **Community 2.1 to 2.2**

A decrease of palatable grass species due to excessive, repeated herbivory.

## **Pathway 2.2A**

### **Community 2.2 to 2.1**

A disturbance for shrubs and succulents coupled with improved management for perennial grass species.

## **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**