

# Ecological site group DX035X02EESG17

## Arizona Strip - Ustic Aridic - Limestone or Loamy Bottoms

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### Key Characteristics

- Arizona Strip (E)
- 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 a wash.

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 bottoms with slopes <3%. Aspects tend toward northeast except along escarpments.

### Climate

Site soils are ustic aridic or within a 10-14" precipitation zone. Precipitation comes monsoonal patterns during months of July, August, and September, and is supplemented by winter storm patterns from November through March.

### Soil features

Parent material is limestone. Soils are loamy. Site consists of broad alluvial deposits in washes, streams or fans, often deep.

### Vegetation dynamics

This site consists predominately of cool and warm season grasses with a small percentage of shrubs and forbs. In the original plant community there is a mixture of both cool and warm season grasses.

### Major Land Resource Area

MLRA 035X  
Colorado Plateau

### Subclasses

- R035XC312AZ–Loamy Wash 10-14" p.z.

### Correlated Map Unit Components

22338583

### Stage

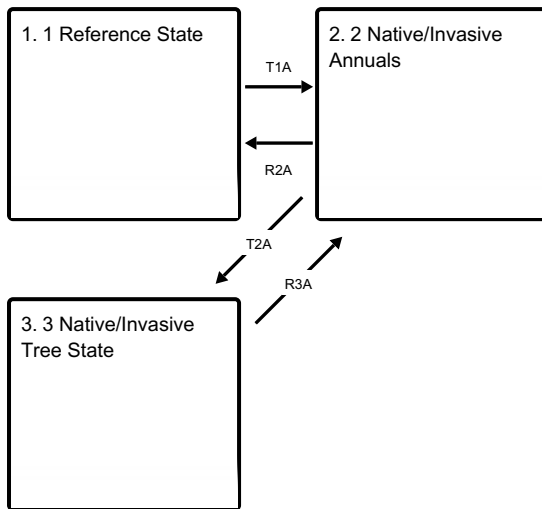
Provisional

# Contributors

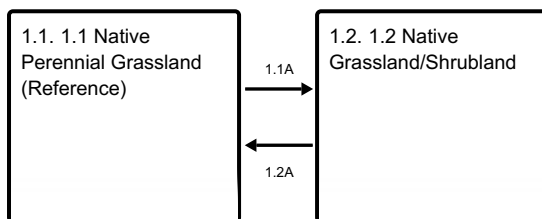
Curtis Talbot

## State and transition model

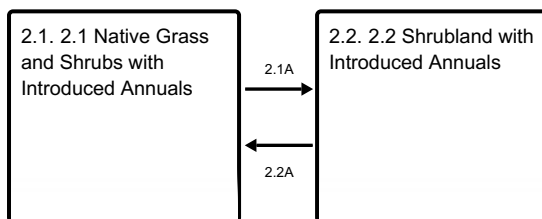
### Ecosystem states



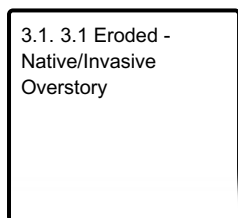
### State 1 submodel, plant communities



### State 2 submodel, plant communities



### State 3 submodel, plant communities



## State 1

### 1 Reference State

#### Community 1.1

##### 1.1 Native Perennial Grassland (Reference)

The reference plant community consists predominately of cool and warm season grasses with a small percentage of shrubs and forbs. In the original plant community there is a mixture of both cool and warm season grasses.

#### Community 1.2

## **1.2 Native Grassland/Shrubland**

Palatable cool and warm grasses decreases due to continuous yearlong grazing, thus decreasing the vegetative cover of the native grasses. As the native grasses begin to decline, native shrubs increase their establishment such as fourwing saltbush, broom snakeweed, Greene's rabbitbrush, rubber rabbitbrush, and whipple cholla. Dominant plant species include: James' galleta, Indian ricegrass, western wheat grass and fourwing saltbush.

### **Pathway 1.1A**

#### **Community 1.1 to 1.2**

Repetitive, high utilization of palatable grass species have led to shrub dominance.

### **Pathway 1.2A**

#### **Community 1.2 to 1.1**

A disturbance such as fire to set the shrubs back plus management to improve the composition of palatable grass species.

## **State 2**

### **2 Native/Invasive Annuals**

The general aspect of this state is a native perennial grassland/shrubland with a mix of native and non-native annuals. Invasive annuals have been introduced and are well established in the understory.

### **Community 2.1**

#### **2.1 Native Grass and Shrubs with Introduced Annuals**

If left unmanaged from continuous grazing, undesirable exotic plant species will establish and continue to increase in the understory. Introduced invasive species most likely to establish themselves when the site deteriorates are prickly Russian thistle, weed Kochia, cheatgrass, filaree and other exotic annuals. There will be a low component of these exotic annuals in the understory, and beginning the process of exotic annuals establishing themselves on site.

### **Community 2.2**

#### **2.2 Shrubland with Introduced Annuals**

In addition to unmanaged rangelands on the adjacent uplands, extensive grazing drives the native plant community on a downward trend, and exotic annuals continue an upward trend. Invasive native shrubs most likely to increase and invade are broom snakeweed, Greene's rabbitbrush, rubber rabbitbrush, pricklypear and whipple cholla. Dominant plant species will include: James' galleta, Indian ricegrass, broom snakeweed, Greene's rabbitbrush, rubber rabbitbrush, pricklypear whipple cholla, Russian thistle, weed Kochia, Rocky Mountain beeplant, cheatgrass, thistles, mustards, filaree and other exotic annuals.

### **Pathway 2.1A**

#### **Community 2.1 to 2.2**

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

### **Pathway 2.2A**

#### **Community 2.2 to 2.1**

A disturbance such as fire to set the shrubs back plus management to improve the composition of palatable grass species.

## **State 3**

### **3 Native/Invasive Tree State**

The plant community in this state is dominated by a mix of native and non-native trees and shrubs with scattered patches of grasses and forbs. There is active channel downcutting and deposition.

## **Community 3.1**

### **3.1 Eroded - Native/Invasive Overstory**

As native grasses and shrubs are grazed continuously, the native vegetative cover decreases rapidly and the understory is transformed into an exotic plant community. There will be a higher component of exotic trees, annual grasses and forbs eventually stressing and outcompeting the native plant community. Invasive dominant species include: Tamarisk, Russian olive, broom snakeweed, rubber rabbitbrush, Greene's rabbitbrush, prickly Russian thistle, common sunflower, weed Kochia, mustards, beeplant, thistles, cheatgrass, foxtail barley, field bindweed, filaree and other exotic annuals. Distribution of these exotics species will be extensive and eventually displace most of the native herbaceous species, as the native species are not given time to reproduce. Bare interspaces with less vegetative cover are visible on the surface resulting in the increased erosion process allowing for more rainfall runoff

#### **Transition T1A**

##### **State 1 to 2**

Invasion of introduced species

#### **Restoration pathway R2A**

##### **State 2 to 1**

It may not be possible to return to reference once introduced species are present.

#### **Transition T2A**

##### **State 2 to 3**

Excessive erosion along with spread of trees.

#### **Restoration pathway R3A**

##### **State 3 to 2**

Restoration of soil and plant health coupled with management to decrease trees.

## **Citations**