Ecological site group DX035X02EESG20
Arizona Strip - Aridic Ustic - Limestone or Loamy Upland

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Key Characteristics

- Arizona Strip (E)
- Site parent material is limestone or loamy.
- Soils are aridic ustic, or precipitation is within the range of 13 to 17 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 northeast except along escarpments.

Climate

Site soils are aridic ustic or within a 14-18" 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 limited amounts of gently sloping sheet alluvial or eolian deposits over residuum of plateaus and structural benches.

Vegetation dynamics

The dominant aspect of the site is a grass-shrub mix. Major grasses include western wheatgrass, blue grama and bottlebrush squirreltail. Dominant shrubs are mountain and Wyoming big sagebrush.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- F035XF614AZ–Loamy Upland 13-17" p.z. Gravelly (PIED, JUOS)
- R035XF605AZ–Loamy Upland 13-17" p.z.

Correlated Map Unit Components

22394918

Stage

Provisional

Contributors

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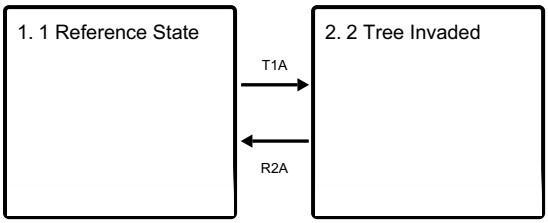
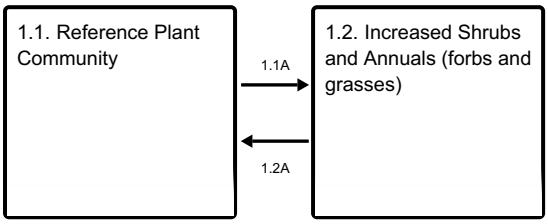
State and transition model

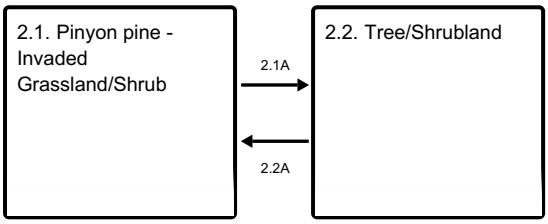
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1
1 Reference State

This is a grassland / shrub mix. The approximate total production breakdown is grasses are 60-70%, forbs 1-5%, shrubs 25-35% and trees 0-4%. Western wheatgrass, squirreltail, muttongrass and blue grama are the dominant grasses and Wyoming big sagebrush is the dominant shrub.

Community 1.1
Reference Plant Community

The dominant aspect of the site is a grass-shrub mix. Major grasses include western wheatgrass, blue grama and bottlebrush squirreltail. Dominant shrubs are mountain and Wyoming big sagebrush.

Community 1.2
Increased Shrubs and Annuals (forbs and grasses)

Disturbance has reduced perennial grasses. Sagebrush, broom snakeweed, sixweeks fescue and annual lupine increase.

Pathway 1.1A
Community 1.1 to 1.2

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

Pathway 1.2A
Community 1.2 to 1.1

A disturbance such as fire to set the shrubs back along with management to improve palatable grass species.

State 2
2 Tree Invaded

Trees (mostly pinyon pine) is invading the site. Disturbed understory, lack of fire and favorable climatic conditions have opened up the site to this tree invasion. Left unchecked the trees and shrubs will dominate the site and the understory becomes less productive with less quality forage plant species. It takes tree and shrub treatments along with careful management which might include some re-seeding to move back to a more desired plant communty. There are times when drought and insect damage reduce tree densities,also. There may be very little to a few percent of non-native plants. Introduction of non-native annuals species creates an irreversible change in the plant community.

Community 2.1
Pinyon pine - Invaded Grassland/Shrub

This community will have pinyon pine (PIED) invade this site when fire has been suppressed and there is a favorable moisture regime to allow the trees to move in from adjacent areas. Grasses will still be the dominant plants followed by shrubs and will remain similar to the plant community of 1.1. There may be very little to a few percent of non-native plants. Introduction of non-native annuals species creates an irreversible change in the plant community

Community 2.2
Tree/Shrubland

Continued tree invasion is facilitated by continuous understory disturbance. Pinyon pine and sagebrush expand and increase their influence on the site. Broom snakeweed and annual forbs and grasses increase while perennial native grasses decrease. Note: Mechanical removal of the trees will be needed to reverse the tree invasion. There are times when drought, fire and insect damage reduce tree densities. There may be very little to a few percent of non-native plants. Introduction of non-native annuals species creates an irreversible change in the plant community

Pathway 2.1A
Community 2.1 to 2.2

Continued tree invasion is facilitated by continuous understory disturbance.

Pathway 2.2A
Community 2.2 to 2.1

Tree reduction

Transition T1A
State 1 to 2

Trees (mostly pinyon pine) is invading the site. Disturbed understory, lack of fire and favorable climatic conditions have opened up the site to this tree invasion. Left unchecked the trees and shrubs will dominate the site and the understory becomes less productive with less quality forage plant species.

Restoration pathway R2A
State 2 to 1

It takes tree and shrub treatments along with careful management which might include some re-seeding to move back to a more desired plant community.

Citations