Ecological site group DX035X02EESG13
Arizona Strip - Aridic Ustic - Clayey or Clay Loam Upland

Last updated: 09/02/2021
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Key Characteristics

- Arizona Strip (E)
- Site parent material is basalt or clayey
- Soils are ustic aridic, 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 basalt. Soils are clay loam or clayey. Site consists of limited amounts of gently sloping sheet alluvial or eolian deposits over residuum of plateaus and structural benches.

Vegetation dynamics

This is a grassland / shrub mix. The approximate total production breakdown is grasses are 65-75%, forbs 1-5%, shrubs 15-25%.

Western wheatgrass, squirreltail and blue grama are the dominant grasses and Wyoming big sagebrush is the dominant shrub.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

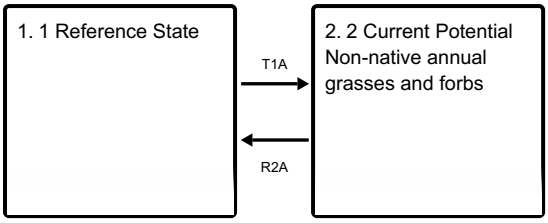
- DX035X02B611–Clay Loam Upland 13-17" p.z. Gravelly (PIED, JUOS)
- R035XF604AZ–Clayey Upland 13-17" p.z.

Stage

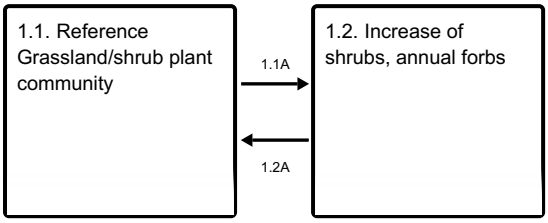
Provisional

State and transition model

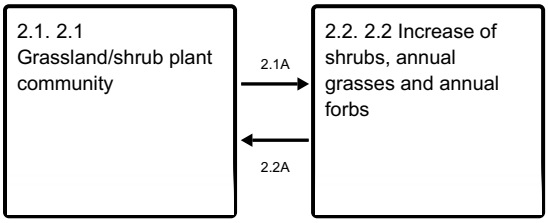
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1
1 Reference State

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Community 1.1
Reference Grassland/shrub plant community

Western wheatgrass, squirreltail, blue grama, and Wyoming big sagebrush The dominant aspect of this site is a grassland with some shrubs. Major grasses are western wheatgrass, bottlebrush squirreltail and blue grama. Wyoming big sagebrush is the dominant shrub. With severe disturbance, Wyoming big sagebrush and western wheatgrass will increase and annual forbs will invade.

Community 1.2
Increase of shrubs, annual forbs

Wyoming big sagebrush, western wheatgrass, squirreltail, blue grama, globemallow and fleabane Disturbance has led to the increased shrub production of Wyoming big sagebrush and Greene rabbitbrush. Perennial grass production decreases and annual forbs increase.

Pathway 1.1A
Community 1.1 to 1.2

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

Pathway 1.2A
Community 1.2 to 1.1

A set back to shrubs such as fire plus management to improve palatable grass species.

State 2
2 Current Potential Non-native annual grasses and forbs

Cheatgrass and Russian thistle have been introduced to the site. Some areas of severe surface disturbance allows native black sage to invade and dominate the site. Note: Introduction of non-native annuals species creates an irreversible change in the plant community

Community 2.1
2.1 Grassland/shrub plant community

western wheatgrass, squirreltail, blue grama, and Wyoming big sagebrush This is a reflection of plant community 1.1 with introduced non-native annuals introduced on the site. Russian thistle and cheatgrass are the most common invaders.

Community 2.2
2.2 Increase of shrubs, annual grasses and annual forbs

Wyoming big sagebrush, western wheatgrass, squirreltail, blue gram, globemallow and fleabane. Severe disturbance will allow black sage to invade and can dominate shrub community. This plant community can resemble plant community 1.2. There is a difference of possible shrub dominance. Black sage can invade and increase to dominance on areas of severe surface distubance. Once again, cheatgrass and Russian thistle are the common non-native invaders.

Pathway 2.1A
Community 2.1 to 2.2

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

Pathway 2.2A
Community 2.2 to 2.1

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

Transition T1A
State 1 to 2

Invasion of introduced species

Restoration pathway R2A
State 2 to 1

Once invasive introduced species are prevalent it may not be possible to restore reference.

Citations