Ecological site group DX035X01JESG06
Paria and Kaibito Plateaus Shallow Upland

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Key Characteristics

- Paria and Kaibito Plateaus
- Sandy
- Uplands
- Shallow

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

This ecolgical site occurs on very shallow soils (<10 inches but can be up to 20 inches to R) over weathered sandstone. Slopes are generally less than 15 percent, but can be higher in spots. The soils are formed from residuum and eolian and alluvial deposits. The site occurs in the lower, warmer elevations and on the warmer slopes of the Common Resource Area that are preferred by blackbrush.

Climate

The 35.2 Colorado Plateau Cold Desert Shrub - Grassland common resource area has a very dry and windy climate that is hot in the summer and cold in the winter. The annual precipitation averages between 6 and 10 inches but may be as high as 10 to 14 inches. The soil moisture regime is typic aridic to ustic aridic and the soil temperature regime is mesic. A slight majority of the precipitation arrives during the late fall, winter, and early spring. This winter season moisture originates in the Pacific Ocean and arrives as rain, or sometimes snow, during widespread frontal storms of generally low intensity. The majority of the snow (average range of 1 to 17 inches) falls from December through February, but rarely lasts more than a few days. A seasonal drought occurs from late May through early July. Summer rains occur from July through September during brief intense local thunderstorms. The rain is sporadic in intensity and location. The moisture originates from the Gulf of Mexico in the early summer and the Gulf of California in the late summer/early fall. Windy conditions are common year round, but the winds are strongest and most frequent during the spring.

Soil features

Soil associated with this site are very shallow, soils that formed in eolian and alluvial deposits on hills, sand sheets on structural benches and plateaus. These soils are very shallow to sandstone. The depth is typically 5 to 10 inches deep with occasional small areas of deeper soils.

Vegetation dynamics

The soil temperature regime is mesic and the soil moisture regime is typic aridic. Elevations range from 3800-5800 feet and precipitation averages 6 to 10 inches per year.Vegetation includes shadscale, fourwing saltbush, Mormon tea, blackbrush, Indian ricegrass, galleta, blue grama, and black grama.
Drought, extended winter dominated precipitation patterns, interruption of natural fire cycles, and unmanaged livestock grazing will decrease the perennial grasses, which are replaced by shrubs. introduced exotic annuals such as cheatgrass, red brome and Russian thistle may exist.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XB230AZ–Sandstone Upland 6-10" p.z. Very Shallow, Warm
- R035XY224UT–Semidesert Shallow Sand (Blackbrush)
- R035XY227UT–Semidesert Shallow Sand (Utah Juniper-Pinyon)

Correlated Map Unit Components

22601073

Stage

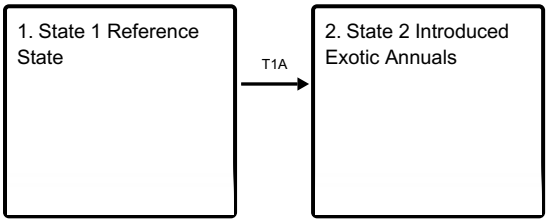
Provisional

Contributors

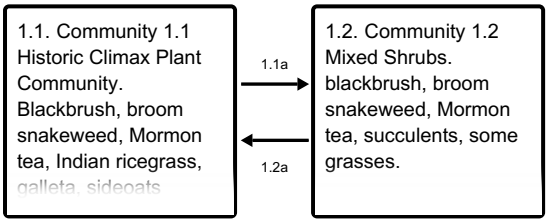
Curtis Talbot

State and transition model

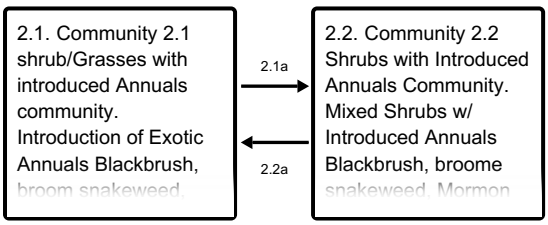
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1
State 1 Reference State

State 1 Reference State

Community 1.1
Community 1.1 Historic Climax Plant Community. Blackbrush, broom snakeweed, Mormon tea, Indian ricegrass, galleta, sideoats gramma.

Community 1.1 Historic Climax Plant Community This ecolgical site site has a plant community made up of

primarily of a mix of warm season grasses with a fair percentage of cool season grasses, shrubs. There may be occasional large shrubs/small trees on very shallow sites. There is a mixture of both cool and warm season grasses and half-shrubs. Dominant grasses include blue grama, Indian ricegrass and squirreltail. Dominant shrubs are Apache plume, mormon tea, Bigelow sage and Navajo yucca.

Community 1.2
Community 1.2 Mixed Shrubs. blackbrush, broom snakeweed, Mormon tea, succulents, some grasses.

Community 1.2 Mixed Shrubs This plant community has a mix of shrubs, including the increase of mormon tea, broom snakeweed and succulents. There is also a decline of perennial grasses such as Indian ricegrass.

Pathway 1.1a
Community 1.1 to 1.2

Drought, extended winter dominated precipitation patterns, interuption of natural fire cycles, and unmanaged livestock grazing will decrease the perennial grasses, which are replaced by shrubs. Unmanaged grazing can be described here as: Season-long grazing providing little rest and recovery for preferred grazed plants during critical growing periods, coupled with high utilization.

Pathway 1.2a
Community 1.2 to 1.1

Normal precitation patterns with well managed grazing and/or rest will allow native perennial bunchgrasses and other palatable shrubs to increase in the plant community. Allowing natural fires to burn will accelerate recovery.

State 2
State 2 Introduced Exotic Annuals

State 2 Introduced Exotic Annuals

Community 2.1
Community 2.1 shrub/Grasses with introduced Annuals community. Introduction of Exotic Annuals Blackbrush, broom snakeweed, Mormon tea, Indian ricegrass, galleta, sideoats grama, cheatgrass, red brome, Russian thistle.

Community 2.1 Introduction of Exotic Annuals This plant community is identical to 1.1 and it includes the introduction of exotic annuals, such as cheatgrass, red brome and Russian thistle in minor amounts. 1.1 This ecological site has a plant community made up of primarily of a mix of warm season grasses with a fair percentage of cool season grasses, shrubs. There may be occasional large shrubs/small trees on very shallow sites. There is a mixture of both cool and warm season grasses and half-shrubs. Dominant grasses include blue grama, Indian ricegrass and squirreltail. Dominant shrubs are Apache plume, mormon tea, Bigelow sage and Navajo yucca.

Community 2.2
Community 2.2 Shrubs with Introduced Annuals Community. Mixed Shrubs w/ Introduced Annuals Blackbrush, broome snakeweed, Mormon tea, cheatgrass, red brome, Russian thistle.

Community 2.2 Mixed Shrubs w/ Introduced Annuals This plant community is the same as 1.2 and, once again, there is a smalle component of introduced exotic annuals such as cheatgrass, red brome and Russian thistle. There is probably no practical means of removing the exotic annual grasses from the site once it is introduced, therefore, there is no return pathway suggested in this situation. Community 1.2 Mixed Shrubs 1.2 Mixed Shrub Community This plant community has a mix of shrubs, including the increase of mormon tea, broom snakeweed and succulents. There is also a decline of perennial grasses such as Indian ricegrass.

Pathway 2.1a

Community 2.1 to 2.2

Continuous heavy herbivory, drought. Continuous herbivory can be described here as: Season-long grazing providing little rest and recovery for preferred grazed plants during critical growing periods, coupled with high utilization.

Pathway 2.2a
Community 2.2 to 2.1

Proper grazing practices and/or rest allow native perennial bunchgrasses and other palatable shrubs to increase in the plant community.

Transition T1A
State 1 to 2

Introduction of non-native annual species creates an irreversible change in the plant community

Citations