

Ecological site group DX035X01JESG10

Paria and Kaibito Plateaus Loamy Shallow Benches and Mesas

Last updated: 10/25/2022
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Key Characteristics

- Paria and Kaibito Plateaus
- Loamy
- Uplands
- Shallow
- Benches, terraces, mesas

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 ecological site is found on summits and gentle side slopes of plateaus, mesas, and pediments. The slopes mostly range from 1 to 15 percent, with occasional areas as steep as 25 percent.

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. The soil moisture regime is typic 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

The soils formed in residuum and pedisidiment from sandstone (calcareous and non-calcareous), mudstone, shale, and conglomerate of the Chinle Formation and Carmel Formation. Most of the soils are very shallow (<10 inches) to sandstone. A few areas are shallow (10-15 inches). The surface textures are mostly clay loam and sandy clay loam, but also include: loam, sandy clay, and clay. The profile can have a lot of coarse fragments, but most soils are not skeletal. The surface usually effervesces slightly to strongly when treated with hydrochloric acid. The subsurface is generally strongly to violently effervescent.

Vegetation dynamics

This site exists on summits and side slopes of plateaus, mesas, and pediments. The site is characterized by a mix of shrubs with scattered perennial grasses and forbs. Primary shrubs are blackbrush and Torrey's jointfir with James' galleta and Indian ricegrass as the understory. Other shrubs present include cliffrose, snakeweed and Greenes' rabbitbrush.

The Shrubland with Native Grasses plant community is characterized by a dominance of shrubs with scattered perennial grasses and forbs. Primary shrubs are blackbrush and Torrey's jointfir with James' galleta and Indian ricegrass as the understory. Other shrubs present include cliffrose, snakeweed and Greenes' rabbitbrush.

Blackbrush Shrubland - The dominant aspect of this site is of blackbrush. Other shrubs are present but in small amounts. Perennial forbs and grasses are present, but in minor amounts. Grasses commonly present are James galletaa and Indian ricegrass. Shrubs commonly present include blaackbrush, Torrey jointfir along with other native shrubs in small amounts.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XB226AZ–Sandstone/Shale Upland 6-10" p.z. Warm
- R035XB232AZ–Limestone/Sandstone Upland 6-10" p.z.
- R035XD415AZ–Shallow Loamy 7-11" p.z.
- R035XY122UT–Desert Shallow Loam (Shadscale)
- R035XY221UT–Semidesert Shallow Loam (Utah Juniper-Pinyon)
- R035XY226UT–Semidesert Shallow Loam (Black Sagebrush/Indian Ricegrass)

Correlated Map Unit Components

22340832, 22340833, 22601692, 22965438, 22965441

Stage

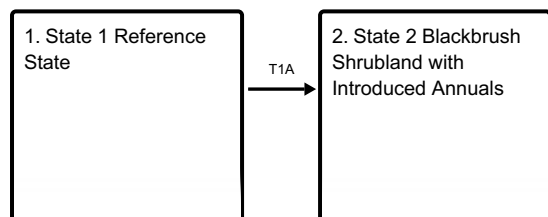
Provisional

Contributors

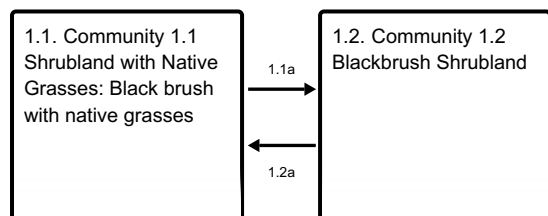
Curtis Talbot

State and transition model

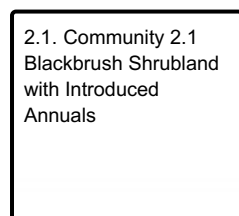
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1

State 1 Reference State

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Community 1.1

Community 1.1 Shrubland with Native Grasses: Black brush with native grasses

Community 1.1 Shrubland with Native Grasses The Shrubland with Native Grasses plant community is characterized by a dominance of shrubs with scattered perennial grasses and forbs. Primary shrubs are blackbrush and Torrey's jointfir with James' galleta and Indian ricegrass as the understory. Other shrubs present include cliffrose, snakeweed and Greenes' rabbitbrush.

Community 1.2

Community 1.2 Blackbrush Shrubland

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Pathway 1.1a

Community 1.1 to 1.2

Drought, Domestic/Wildlife Grazing

Pathway 1.2a

Community 1.2 to 1.1

Favorable precipitation, Time without disturbance, Prescribed Grazing

State 2

State 2 Blackbrush Shrubland with Introduced Annuals

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Community 2.1

Community 2.1 Blackbrush Shrubland with Introduced Annuals

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Transition T1A

State 1 to 2

Introduction of Non-native Annuals create a irreversible change in plant community

Citations