

Ecological site group DX035X01HESG09

Black Mesa-Navajo Mtn-Shallow Sandy Loam Upland, warm

Last updated: 10/12/2022
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Key Characteristics

- Black Mesa Navajo Mountain
- Sandy loam soils
- Shallow sandy loam soils
- Shallow sandy loam soils, warm

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 group typically occurs on structural benches, pediments, and hillslopes. Slopes are typically 1 to 15 percent. Elevation ranges from 4300 to 5800 feet.

Climate

Mean annual precipitation is 6 to 14 inches. The precipitation varies substantially year to year. Mean annual air temperature typically ranges from 54 to 57 degrees Fahrenheit.

Soil features

Soils are typically shallow to sandstone bedrock. Soil surface textures are generally fine sandy loam or sandy loam with 0 to 35 percent rock fragments.

Vegetation dynamics

Typically the vegetation is dominated by blackbrush, Indian ricegrass, galleta, blue gramma and other grasses.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XB234AZ–Sandstone Upland 6-10" p.z. Warm
- R035XC331AZ–Shallow Upland 10-14" p.z. Warm
- R035XC333AZ–Sandstone Upland 10-14" p.z. Warm
- R035XY133UT–Desert Shallow Sandy Loam (Blackbrush)

Correlated Map Unit Components

22397490, 22397524

Stage

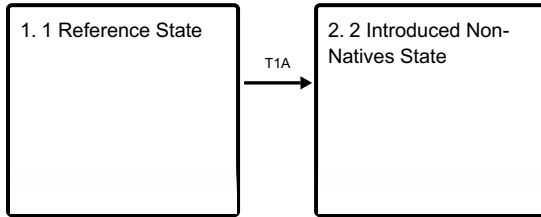
Provisional

Contributors

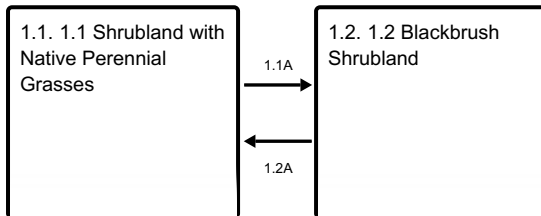
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State and transition model

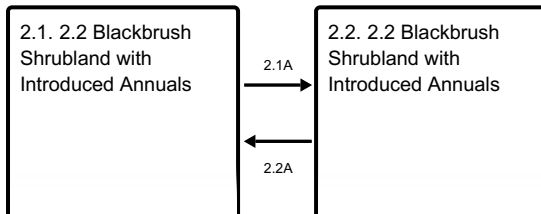
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1

1 Reference State

The dominate aspect is a shrub canopy of blackbrush with lesser amounts of Mormon tea, fourwing saltbush, Stansbury cliffrose and Bigelow sagebrush. Common grasses include blue grama, sand dropseed, James' galleta and Indian ricegrass. Blackbrush appears to act as a paleo-endemic species in this MLRA and may not be able to or be very slow to reestablish itself after signficiant disturbance. Plants likely to increase are annual grasses and forbs, perennial forbs and broom snakweed. Plants likely to invade and become established are cheatgrass, Russian thistle and red brome.

Community 1.1

1.1 Shrubland with Native Perennial Grasses

This plant community is dominated by blackbrush with scattered perennial grasses and half-shrubs. Common grasses include blue grama, sand dropseed, Indian ricegrass, James' galleta, black grama, squirreltail and sixweeks fescue. Other shrubs commonly found include Mormon tea, Stansbury cliffrose, Bigelow sagebrush, narrowleaf yucca, fourwing saltbush, broom snakweed and pricklypear.

Community 1.2

1.2 Blackbrush Shrubland

This plant community is dominated by blackbrush with scattered perennial warm season grasses and half-shrubs. Common grasses include blue grama, sand dropseed, James' galleta, Indian ricegrass. Other shrubs commonly found include Mormon tea, narrowleaf yucca, and broom snakeweed. There is a decline in perennial grasses and shrubs, such as fourwing saltbush and Bigelow sagebrush. Plant community composition by weight are about 75-95 percent for shrubs, 1-10 percent for grasses, 1-15 percent for forbs, and less than 5 percent for trees. There is an increase in bare ground as herbaceous cover decreases in shrub interspaces.

Pathway 1.1A **Community 1.1 to 1.2**

Continuous livestock grazing, prolonged drought, surface disturbance reduces herbaceous cover.

Pathway 1.2A **Community 1.2 to 1.1**

Prescribed grazing or Rest, favorable climate or time for recovery allows for increase cover of perennial herbaceous species.

State 2 **2 Introduced Non-Natives State**

This state is similar to the Reference State, but non-native annual grasses and forbs have been introduced into the plant community. In the plant communities phases of the Introduced Non-Native State is the amount of annual grasses and forbs is only a small amount (1-3%), but will fluctuate slightly from year to year due to fluctuations in the amount and timing of precipitation. Normal soil surface disturbance expected from moderate levels of livestock grazing may cause the amount of non-native annual grasses and forbs to increase slightly.

Community 2.1 **2.2 Blackbrush Shrubland with Introduced Annuals**

Introduced non-native annual grasses and forbs are present in minor amounts (1-3%) in the plant community, but the amount of native plants is similar to that of 1.2, Blackbrush Shrubland.

Community 2.2 **2.2 Blackbrush Shrubland with Introduced Annuals**

Introduced non-native annual grasses and forbs are present in minor amounts (1-3%) in the plant community, but the amount of native plants is similar to that of 1.2, Blackbrush Shrubland.

Pathway 2.1A **Community 2.1 to 2.2**

Continuous livestock grazing, prolonged drought, surface disturbance reduces herbaceous cover.

Pathway 2.2A **Community 2.2 to 2.1**

Prescribed grazing or Rest, favorable climate or time for recovery allows for increase cover of perennial herbaceous species.

Transition T1A **State 1 to 2**

The introduction of non-native annual grasses and forbs creates an irreversible change in the plant community.

Citations

