

Ecological site group DX035X04CESG04

Chaco Mesa LRU Subset - Limy

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Key Characteristics

- Chaco Mesa. This LRU subset is composed of Cretaceous materials, is generally above 1900 m in elevation, and does not drain directly into the San Juan River. The Chaco Mesa subset is further distinguished from the Bisti Lowlands in that the former receives more monsoonal moisture, harbors more warm-season grasses, and experiences a considerable amount of blowing sands.
- Sites that occur on "upland", water-shedding landforms. Elevated terraces are included in this group.
- Soils are > 50 cm to lithic or paralithic contact (root-restrictive bedrock).
- Soils lack both significant salinity and sodicity.
- Soils have a combination of free carbonates and calcareous rock fragments at the surface. Strong or violent response to dilute HCl and $\geq 5\%$ calcareous fragments.

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

Various upland, water-shedding landforms.

Soil features

The overriding property of the soils in this group is that they have abundant free carbonates (i.e. they will react strongly to dilute HCL) at the surface. Additionally, these soils are well-drained and >50 cm to root-restrictive layers.

Major Land Resource Area

MLRA 035X

Colorado Plateau

Subclasses

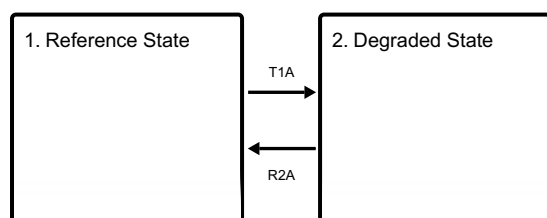
- DX035X03E003–Limy
- R035XB267AZ–Sandy Loam Upland 6-10" p.z. Limy
- R035XB277AZ–Siltstone Upland 6-10" p.z. Limy

Stage

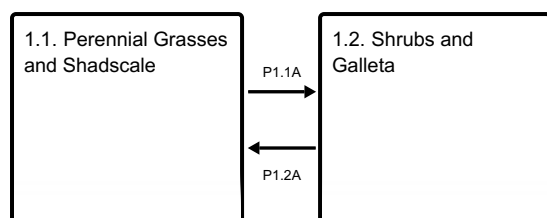
Provisional

State and transition model

Ecosystem states



State 1 submodel, plant communities



State 1 Reference State

The plant community is roughly balanced between grasses and shrubs. Topsoils are not severely eroded.

Dominant plant species

- shadscale saltbush (*Atriplex confertifolia*), shrub
- broom snakeweed (*Gutierrezia sarothrae*), shrub
- Indian ricegrass (*Achnatherum hymenoides*), grass

Community 1.1 Perennial Grasses and Shadscale

Dominant plant species

- shadscale saltbush (*Atriplex confertifolia*), shrub
- Indian ricegrass (*Achnatherum hymenoides*), grass
- James' galleta (*Pleuraphis jamesii*), grass

Community 1.2 Shrubs and Galleta

Dominant plant species

- broom snakeweed (*Gutierrezia sarothrae*), shrub
- shadscale saltbush (*Atriplex confertifolia*), shrub
- James' galleta (*Pleuraphis jamesii*), grass

Pathway P1.1A Community 1.1 to 1.2

Continuous grazing.

Pathway P1.2A Community 1.2 to 1.1

Prescribed and/or deferred grazing.

State 2 Degraded State

Shrub-dominated state that includes a significant component of invasive annuals. Topsoils significantly degraded.

Dominant plant species

- broom snakeweed (*Gutierrezia sarothrae*), shrub
- shadscale saltbush (*Atriplex confertifolia*), shrub
- James' galleta (*Pleuraphis jamesii*), grass
- cheatgrass (*Bromus tectorum*), grass

Transition T1A

State 1 to 2

Prolonged continuous grazing, followed by a drought event, leads to significant mortality of perennial grasses. Low plant basal area leads to accelerated erosion. Invasive annuals and shrubs gain a competitive advantage.

Restoration pathway R2A

State 2 to 1

This restoration pathway involves the recovery of perennial grasses and the reversal of erosion. Prescribed/deferred grazing is a necessary component. Additionally, shrub control, erosion control, and seeding may be necessary.

Citations