

Ecological site group DX035X01IESG15

Little Colorado River Basin-Shale or clayey shallow soils basalt or cinders (non run in moisture)

Last updated: 10/25/2022
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Key Characteristics

- Little Colorado River Basin
- Shale or Clayey
- Does not receive extra water from run-in moisture
- Generally shallow soils on hills, benches and slopes
- landforms are basalt capped or shallow to cinders

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 occurs on summits and slopes of lava flows and footslopes of hills. Slopes are generally 0 to 15 percent, but occasional steeper slopes to 30 percent on edges of lava flows. The soils are shallow (<20") to basalt bedrock. Deeper soils occur in small drainages as inclusions within this site.

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

These soils formed from residuum alluvium, and residuum from pyroclastic basalt flows. These soils are shallow (<20") to basalt rubble and bedrock. Surface textures range from loam to clay loam and are gravelly. The subsurface texture is silt loam. The soil is strongly effervescent and increases with depth.

Vegetation dynamics

This group is characterized as a sparse shrubland with scattered perennial grasses and forbs. Non-native annuals species occur on the site.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XB231AZ–Basalt Upland 6-10" p.z.
- R035XG701AZ–Basalt Upland 14-18" p.z.
- R035XG704AZ–Cinder Upland 14-18" p.z.

Correlated Map Unit Components

22341157, 22341214, 22341215, 22341633, 22396760, 22396761, 22396818, 22976401, 22976405

Stage

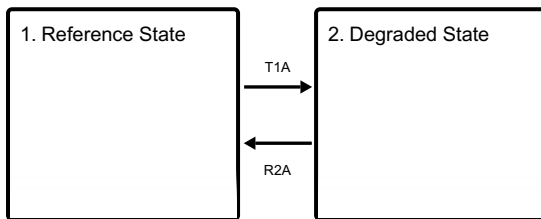
Provisional

Contributors

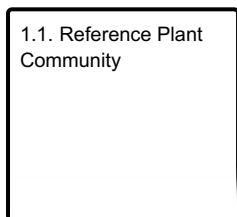
Curtis Talbot

State and transition model

Ecosystem states



State 1 submodel, plant communities



State 1 Reference State

This ecological site is characterized as a sparse shrubland with scattered perennial grasses and forbs. Non-native annuals species occur on the site.

Community 1.1 Reference Plant Community

This plant community is a shrubland with scattered forbs and perennial grasses. The dominant shrubs are shadscale saltbush, fourwing saltbush and rubber rabbitbrush. Galleta is the most common grass and globemallow the most common forb.

State 2 Degraded State

Excessive bare soil and erosion coupled with scattered shrubs and introduced, invasive species.

Transition T1A State 1 to 2

Repetitive defoliation along with high utilization in time decreases plant and soil health.

Restoration pathway R2A

State 2 to 1

A slow process starting with shrub colonization and then grass reproduction.

Citations