

Ecological site group DX035X01IESG04

Little Colorado River Basin-Gypsum soils

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Key Characteristics

- Little Colorado River Basin
- Gypsum

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

Site occurs in an upland position and usually as residuum deposits. It neither benefits significantly from run-in of moisture from adjacent areas nor does it suffer from excessive loss of moisture from runoff, unless denuded of its vegetative cover when disturbed severe erosion can occur. It is on gently sloping to rolling plains and slopes are usually less than eight percent. It occurs on plains, fans or terraces. Elevations range 4,500-5,500 ft .

Climate

About 50% of moisture falls as monsoon rains in Jul through Sept and is effective moisture for plant growth. The remaining moisture comes as snow during the winter. Winds of high velocity during the winter and spring are common to this sub-resource area.

Mean temperatures for the hottest month (Jul) is 72 degrees F; for the coldest month (Jan) is 32 degrees F. Extreme temperatures of 105 degrees F and -26 degrees F have been recorded. Long periods with little or no effective moisture are relatively common.

Cool season plants begin growth in early spring and mature in the early summer. Warm season plants take advantage of the summer rains and grow and retain their nutrition from July through September.

Soil features

Soil on this site is moderately deep and well drained. They formed from residual weathered gypsiferous sandy shale. The surface layer is sandy loam to very fine sandy loam with 0 to 60 percent gravel. The substratum is sandy loam to clay loam. The water erosion hazard is slight to moderate. The wind erosion hazard is moderate. A layer of soft powdery gypsum may be present in the profile.

Vegetation dynamics

The plant community is made up primarily of mid and short grasses with relatively large portion of low growth form desert shrubs.

Plant species most likely to invade or increase on this site when it deteriorates are broom snakeweed, Russian thistle and Annual forbs.

Continuous grazing coupled with heavy utilization during the winter and spring periods will decrease the cool season grasses, which are replaced by warm season, lower forage value grasses and shrubs

Major Land Resource Area

Subclasses

- R035XA109AZ–Gypsum Upland 10-14" p.z.
- R035XB205AZ–Loamy Upland 6-10" p.z. Gypsic

Correlated Map Unit Components

22341138, 22353849, 22353959

Stage

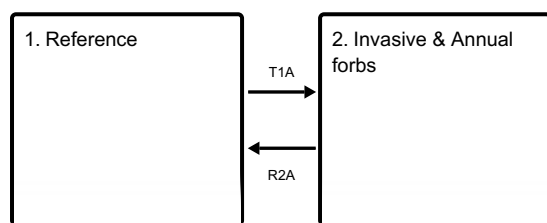
Provisional

Contributors

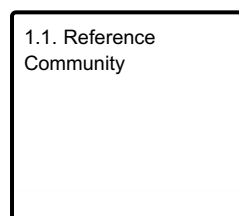
Curtis Talbot

State and transition model

Ecosystem states



State 1 submodel, plant communities



State 1 Reference

The reference state is made up primarily of mid and short grasses with relatively large portion of low growth form desert shrubs.

Community 1.1 Reference Community

The plant community is made up primarily of mid and short grasses with relatively large portion of low growth form desert shrubs.

State 2 Invasive & Annual forbs

Plant production, composition, and cover have decreased. Plant species most likely to invade or increase on this site when it deteriorates are broom snakeweed, Russian thistle and Annual forbs.

Transition T1A

State 1 to 2

Plant species most likely to invade or increase on this site when it deteriorates are broom snakeweed, Russian thistle and Annual forbs such as cheatgrass. Deterioration is often caused by repetitive, high utilization of palatable species especially during drought.

Restoration pathway R2A

State 2 to 1

Improved organic matter, cover, and water retention coupled with reduction of invasive species.

Citations