

Ecological site group DX035X01GESG07

Chinle Valley Saline Uplands Escarpments and Steep Slopes

Last updated: 10/12/2022
Accessed: 04/19/2024

Key Characteristics

- Chinle Valley
- Saline
- Uplands
- Escarpments

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 occurs on side slopes of fan remnants and risers of stream terraces.

This group occurs in an upland position. It neither benefits significantly from run-in moisture nor does it suffer from excessive loss of moisture from runoff, unless denuded of its vegetative cover.

Climate

Area has a very dry and windy climate that is hot in the summer and cold in the winter. Average annual precipitation is from 6 to 14 inches. 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 falls from December through February, but rarely lasts more than a few days. The driest period is from late May to early July. Summer rains occur from July through September during brief intense local thunderstorms. The rain is sporadic in intensity and location. Windy conditions are common year round with the strongest most frequently in the spring.

Soil features

Soils on this site consist of soils that are moderately deep to shale.

These soils formed in alluvium and residuum derived from quartz diorite and shale. Slopes are 20 to 50 percent. These soils are well drained. Soil moisture regime is typical aridic or ustic aridic and the soil temperature regime is mesic.

Vegetation dynamics

The plant communities found on an ecological site are naturally variable. Composition and production will vary with yearly conditions, location, aspect, and the natural variability of the soils. The historical climax plant community represents the natural potential plant communities found on relict or relatively undisturbed sites. Other plant communities described here represent plant communities that are known to occur when the site is disturbed by factors such as grazing, fire, or drought.

Production data provided in this site description is standardized to air-dry weight at the end of the summer growing season. The plant communities described in this site description are based on near normal rainfall years.

NRCS uses a Similarity Index to compare existing plant communities to the plant communities described here. Similarity Index is determined by comparing the production and composition of a plant community to the production

and composition of a plant community described in this site description. To determine Similarity Index, compare the production (air-dry weight) of each species to that shown in the plant community description. For each species, count no more than the maximum amount shown for the species, and for each group, count no more than the maximum shown for the group. Divide the resulting total by the total normal year production shown in the plant community description. If rainfall has been significantly above or below normal, use the total production shown for above or below normal years. If field data is not collected at the end of the summer growing season, then the field data must be corrected to the end of the year production before comparing it to the site description. The growth curve can be used as a guide for estimating production at the end of the summer growing season.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XB229AZ–Cobbly Slopes 6-10" p.z. Saline
- R035XC325AZ–Cobbly Slopes 10-14" p.z. Saline

Correlated Map Unit Components

22999800

Stage

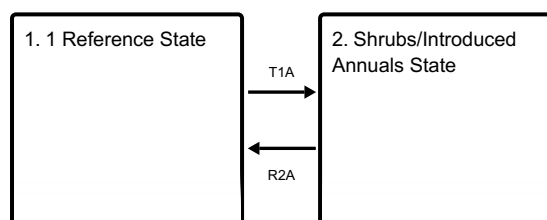
Provisional

Contributors

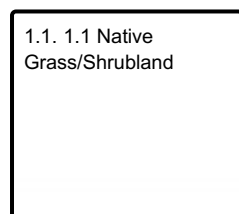
Curtis Talbot

State and transition model

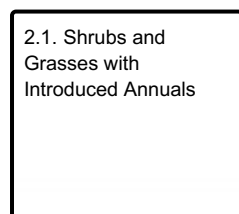
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1

1 Reference State

This plant community is a grassland aspect with scattered shrubs and the occasional juniper.

Community 1.1

1.1 Native Grass/Shrubland

This plant community is a grassland with mid and short grasses with low growing shrubs and a relatively small percentage of forbs. Major grasses include galleta, alkali sacaton, indian ricegrass and New Mexico feathergrass. Shadscale is the major shrub. Utah juniper can occur on the site. Plant species most likely to invade or increase on this site when it deteriorates are broom snakeweed, mormon tea, sagebrush, and annuals.

State 2

Shrubs/Introduced Annuals State

The plant community in this state is a shrubland with some perennial grasses and non native plant species.

Community 2.1

Shrubs and Grasses with Introduced Annuals

This plant community is shrub dominated by species such as broom snakeweed and shadscale saltbush. Perennial grasses, such as galleta and alkali sacaton are still present but at reduced amounts. Introduced annual grasses and forbs, including red brome, cheatgrass, and Russian thistle are common. Juniper can also increase on this site. These species can affect biotic integrity, fire frequency/intensity, or hydrologic function on the site.

Transition T1A

State 1 to 2

Unmanaged grazing, fire exclusion, drought, introduction of non-native annuals.

Restoration pathway R2A

State 2 to 1

Managed grazing, favorable precipitation, prescribed or natural fire.

Citations