

Ecological site group DX035X03BESG06

Chuska Mountains - Sedimentary or Loamy

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Key Characteristics

- Chuska Mountains
- Soils not sodic
- Soils not saline
- Soils not limy
- Soils not silty
- Soils not sandy
- Parent Material is Sedimentary or soil is Loamy

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

These ecological sites occur on footslopes and backslopes of mountains, canyon sides, and mesas, fan terraces of undulating plateaus, valley floors and abandoned stream terraces that no longer benefit from moisture associated with the channel. Slopes generally range from 1 to 15 percent. Sites do not benefit significantly from run-on moisture from other sites.

Climate

The climate of this land resource unit is semiarid with warm summers and cool winters. Winter summer moisture ratios range from 70:30 to 60:40. Late spring is usually the driest period, and early fall moisture can be sporadic. Summer rains fall from June through September; moisture originates in the Gulf of Mexico and creates convective, usually brief, intense thunderstorms. Cool season moisture from October through May tends to be frontal; it originates in the Pacific and the Gulf of California and falls in widespread storms with longer duration and lower intensity. Precipitation generally comes as snow from December through February. Accumulations above 12 inches are not common but can occur. Snow usually lasts for 3-4 days but can persist much longer. Summer daytime temperatures are commonly 95-100 F and, on occasion, exceed 105 F. Winter air temperatures can regularly go below 10 F and have been recorded below -20 F. Mean annual air temperature is 47-52 F. Strong winds are common, especially in the spring.

Soil features

Soils are shallow to very deep. Parent material is alluvium and residuum from sandstone and shale, and alluvium from metamorphic, igneous and sedimentary materials. Surface textures range from fine sandy loam to clay loam and may have gravels to cobbles. Subsurface textures are fine sandy loam to clay and may contain gravel or cobbles. Water erosion potential is moderate to severe; wind erosion potential is slight to moderately high. Soils are slightly to moderately saline and slightly sodic with a pH range of 7.4-8.4, and non-saline, non-sodic with pH range of 6.1-8.4.

Major Land Resource Area

MLRA 035X

Colorado Plateau

Subclasses

- DX035X01I113–Loamy Upland 10-14" p.z.
- DX035X03A118–Bottomland
- DX035X03B134–Gravelly - Woodland
- DX035X03B625–Loamy Upland (PIED, JUOS) 13-17" p.z. (Provisional)
- DX035X03B817–Loamy Slopes 17-25" p.z. Cobbly (PIPO)
- DX035X04B335–Sandstone/Shale Hills 10-14" p.z.
- F035XF637AZ–Loamy Bottom 13-17" p.z.
- F035XH808AZ–Loamy Upland 17-25" p.z. (PIPO)
- R035XA119AZ–Shallow Loamy 10-14" p.z.
- R035XB020NM–Loamy 6-10" terrace
- R035XB021NM–Loamy Upland 7-10
- R035XB210AZ–Loamy Upland 6-10" p.z.
- R035XB215AZ–Sandstone/Shale Upland 6-10" p.z.
- R035XB268AZ–Shale Hills 6-10" p.z.
- R035XB275AZ–Loamy Fan 6-10" p.z.
- R035XC302AZ–Sedimentary Cliffs 10-14" p.z.
- R035XC312AZ–Loamy Wash 10-14" p.z.
- R035XC313AZ–Loamy Upland 10-14" p.z.
- R035XC329AZ–Loamy Upland 10-14" p.z. Gravelly
- R035XF601AZ–Sedimentary Cliffs 13-17" p.z.
- R035XF603AZ–Clay Loam Upland 13-17" p.z.
- R035XF605AZ–Loamy Upland 13-17" p.z.
- R035XF608AZ–Limestone / Sandstone Upland 13-17" p.z.
- R035XH802AZ–Loamy Cienega 17-25" p.z.
- R035XH807AZ–Loamy Upland 17-25" p.z.
- R035XH821AZ–Meadow 17-25" p.z.

Correlated Map Unit Components

22529733, 22529442

Stage

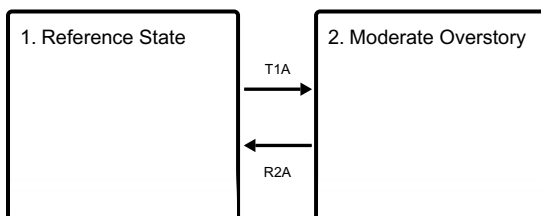
Provisional

Contributors

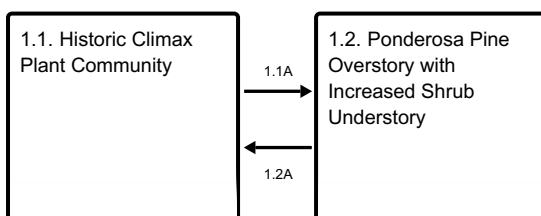
Curtis Talbot

State and transition model

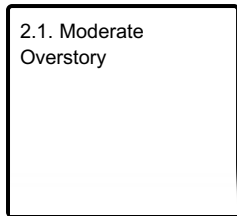
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1 Reference State

This is a forest site that is dominated by a ponderosa pine tree overstory. Cool season grasses dominate the understory vegetation with shrubs and forbs as minor components throughout the site. Fire suppression, grazing and favorable climatic conditions have increased shrub and/or tree components of this site. This is in conjunction with decreased amounts of grass cover and an increase in pine needle litter and annuals.

Community 1.1 Historic Climax Plant Community

1.1 This site was developed under historic Colorado Plateau climatic conditions and reflects the natural influences of herbivores, climate fluctuations and occasional fire. This community has an overstory layer dominated by mature and widely-spaced ponderosa pine. The shrub layer is intermittent. Grasses are dominantly cool-season perennials and make up a substantial part of the vegetation. Perennial and annual forbs are also well represented.

Community 1.2 Ponderosa Pine Overstory with Increased Shrub Understory

Fire suppression and grazing have decreased the amount of grass understory and various shrubs have increased on the site.

Pathway 1.1A Community 1.1 to 1.2

Fire suppression and unmanaged grazing.

Pathway 1.2A Community 1.2 to 1.1

Brush treatment and possible grass re-seeding.

State 2 Moderate Overstory

This state has a very dense overstory of ponderosa pine trees. Much of the understory vegetation is excluded from this plant community. It takes large amounts of energy to return to the reference plant community.

Community 2.1 Moderate Overstory

Thick ponderosa pine overstory with a very diminished plant community understory.

Transition T1A State 1 to 2

Lack of fire/fire suppression, excessive grazing, high precipitation years

Restoration pathway R2A

State 2 to 1

Thinning of forest overstory, burning of understory and possible re-seeding

Citations