Ecological site group DX035X04AESG03
San Juan River Corridor LRU Subset - Saline/Sodic Subgroup

Last updated: 11/01/2022
Accessed: 05/02/2024

Key Characteristics

- San Juan River Corridor. This LRU subset consists of landforms which drain directly into the San Juan River. Elevations are mostly under 1900 meters. Stratigraphy is varied, ranging from the Mancos to the Nacimiento formations. This LRU subset is distinct from the rest of 35.4 in that it provides irrigation water. Thus, upland landforms which contribute significant water are included.
- 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).
- Sites that have saline and/or sodic soils. In these cases soils regularly have an EC > 4.0 and/or SAR > 10 or ESP > 15.

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 site occurs on various water-shedding landforms, including elevated terraces and alluvial fans. Water-collecting landforms such as drainageways and floodplains are excluded, regardless of salinity/sodicity.

Soil features

Soils regularly have an EC > 4.0 and/or SAR > 10 or ESP > 15.

DX035XY402CO Sandy Saltdesert
R035XB016NM-Clay Loam Terrace (Sodic) 7-10"
R035XB022NM-Loamy Upland 6-10"p.z. sodic (Provisional)
R035XB034NM-Sandy Terrace 6-10" sodic
R035XB271AZ-Loamy Upland 6-10" p.z. Saline-Sodic
R035XB274AZ-Sandy Loam Upland 6-10" p.z. Saline
R035XB276AZ-Siltstone Upland 6-10" p.z. Saline
R035XB277AZ-Siltstone Upland 6-10" p.z. Limy
R035XB278AZ-Loamy Upland 6-10" p.z. Saline, Gypsic
R035XB279AZ-Clay Loam Upland 6-10" p.z. Sodic, Gypsic
R035XC326AZ-Sandy Loam Upland 10-14" p.z. Saline
DX035X04A403-Clayey Salt Desert

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XB008NM–Sodic Slopes
- R035XB016NM–Clay Loam Terrace (Sodic) 7-10"
- R035XB022NM–Loamy Upland 6-10"p.z. sodic
- R035XB034NM–Sandy Terrace 6-10" sodic
- R035XB271AZ–Loamy Upland 6-10" p.z. Saline-Sodic

- R035XB274AZ–Sandy Loam Upland 6-10" p.z. Saline
- R035XB276AZ–Siltstone Upland 6-10" p.z. Saline
- R035XB277AZ–Siltstone Upland 6-10" p.z. Limy
- R035XB278AZ–Loamy Upland 6-10" p.z. Saline, Gypsic
- R035XB279AZ–Clay Loam Upland 6-10" p.z. Sodic, Gypsic
- R035XC326AZ–Sandy Loam Upland 10-14" p.z. Saline
- R035XY402CO–Sandy Saltdesert
- R035XY403CO–Clayey Salt Desert

Correlated Map Unit Components

22960373, 22960078, 22960027, 22960024, 22959953, 22959952, 22960106, 22960268, 22960259, 22960039, 22960033, 22960029, 22960042, 22960018, 22960011, 22960007, 22960200, 22960222, 22960220, 22960223, 22960066, 22856794, 22856795, 22856796, 22933850, 23435853

Stage

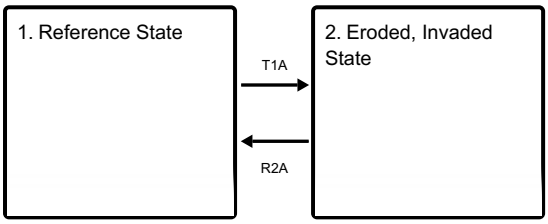
Provisional

Contributors

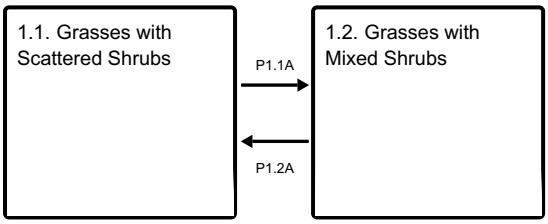
Curtis Talbot

State and transition model

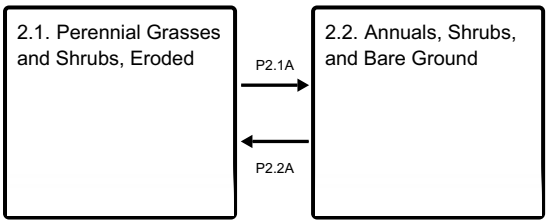
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 1
Reference State

This state is characterized by a mix of grasses, shrubs, and forbs. Topsoils are at least somewhat intact, and invasive annuals are not a major component.

Community 1.1
Grasses with Scattered Shrubs

Dominant plant species

- saltbush (*Atriplex*), shrub
- alkali sacaton (*Sporobolus airoides*), grass
- James' galleta (*Pleuraphis jamesii*), grass
- Indian ricegrass (*Achnatherum hymenoides*), grass

Community 1.2
Grasses with Mixed Shrubs

Dominant plant species

- saltbush (*Atriplex*), shrub
- broom snakeweed (*Gutierrezia sarothrae*), shrub
- goldenbush (*Ericameria*), shrub
- alkali sacaton (*Sporobolus airoides*), grass
- James' galleta (*Pleuraphis jamesii*), grass

Pathway P1.1A
Community 1.1 to 1.2

Continuous herbivory.

Pathway P1.2A
Community 1.2 to 1.1

Prescribed and/or deferred grazing.

State 2
Eroded, Invaded State

Topsoils significantly degraded or absent; invasive annuals are an important component.

Community 2.1
Perennial Grasses and Shrubs, Eroded

A mix of perennial grasses and shrubs, with a significant component of invasive annual grasses and forbs.

Community 2.2
Annuals, Shrubs, and Bare Ground

Shrubs and annual grasses and forbs make up the plant community. Production is quite low, and bare ground abounds.

Pathway P2.1A
Community 2.1 to 2.2

Continuous grazing

Pathway P2.2A
Community 2.2 to 2.1

Prescribed/deferred grazing

Transition T1A
State 1 to 2

Prolonged continuous grazing and subsequent drought leads to considerable mortality among perennial grasses. Low plant basal area leads to accelerated erosion. Invasive annuals gain a competitive advantage.

Restoration pathway R2A
State 2 to 1

Successful restoration will be multi-faceted, involving some combination of: prescribed/deferred grazing, shrub control, erosion control, and seeding. Full recovery of the site will require the re-building of topsoil--a very slow process in this setting.

Citations