Ecological site group DX035X04DESG04
Canon Seboyeta LRU Subset - Clayey Subgroup

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Key Characteristics

- Canon Seboyeta. This LRU subset drains eastward toward the Acoma Valley, and is confined to Cretaceous sedimentary parent materials. It is bounded to the west by the Mt. Taylor Volcanic field, to the north by a watershed divide, and to the east and south by a break between Cretaceous and Jurassic strata.
- Sites that occur on "upland", water-shedding landforms. Elevated terraces are included in this group.
- Soils lack both significant salinity and sodicity.
- Sites with soils that have particle size classes of clayey, fine, or very fine.

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.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- DX035X03A131–Foothills
- DX035X03E004–Clayey
- DX035X03E006–Shallow
- DX035X03F128–Clayey
- R035XA130NM–Shale Hills 10-14"p.z.

Correlated Map Unit Components

22980207, 23436275

Stage

Provisional

Contributors

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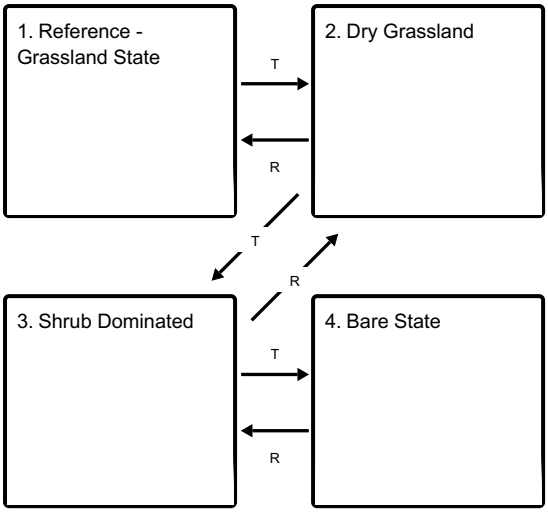
State and transition model

Ecosystem states



State 1
Reference - Grassland State

Grassland State: The historic plant community is dominated by alkali sacaton and galleta or western wheatgrass as subdominant. Other important grasses that appear on this site include blue grama, sideoats grama, and bottlebrush squirreltail. Fourwing saltbush and winterfat are the dominant shrubs with pinon and juniper occurring on steeper scarp slopes. Rabbitbrush, and broom snakeweed may also be sparsely scattered across the site. Continuous heavy grazing will typically cause a decrease in western wheatgrass. A community dominated by alkali sacaton with blue grama or galleta as the subdominant may result. In other instances, especially on the heavier textured clay soils, a sparser, less productive, near monotypic stand of western wheatgrass may persist. Diagnosis: Grass cover is dominant and either uniform or patchy with few large bare connected areas present. Shrubs are scattered with canopy cover averaging five percent or less. On shale bedrock soils, rock fragments can be a large part of ground cover, and often some secondary carbonates at the surface. Evidence of erosion such as pedestalling of grasses, rills and gullies are infrequent.

Characteristics and indicators. If this site is subjected to continuous heavy grazing, plants such as alkali sacaton, sideoats grama, black grama, and fourwing saltbush typically decrease. Galleta and blue grama increase in response and may become dominant.

Dominant plant species

- fourwing saltbush (*Atriplex canescens*), shrub
- winterfat (*Krascheninnikovia arborescens*), shrub
- rubber rabbitbrush (*Ericameria nauseosa*), shrub
- broom snakeweed (*Gutierrezia sarothrae*), shrub
- alkali sacaton (*Sporobolus airoides*), grass
- sideoats grama (*Bouteloua curtipendula*), grass
- western wheatgrass (*Pascopyrum smithii*), grass
- James' galleta (*Pleuraphis jamesii*), grass
- blue grama (*Bouteloua gracilis*), grass
- squirreltail (*Elymus elymoides*), grass

State 2
Dry Grassland

Dry Grassland: This site is characterized by decreased available soil moisture, decrease in grass cover and a change in species composition. Typically galleta or blue grama is the dominant grass species. Alkali sacaton, if present, is generally found in clumps or tussocks with interconnected bare areas between plants, or in patches on wetter low-lying spots. Diagnosis: Grass cover is typically patchy with large interconnected bare areas present. Blue grama or galleta is the dominant grass species. Rills, gullies, or obstructions to overland flow are present.

Characteristics and indicators. Transition to Dry Grassland (1a): Soil drying due to blocked or redirected flow of

run-on water, loss of grass cover, or gullying are thought to initiate this transition. Water retention or diversion structures, sediment deposition, or roads may block or divert water that would naturally flow onto the site. Roads or trails may concentrate water during high flow periods and facilitate gully formation. Loss of adequate grass cover due to overgrazing can decrease infiltration, increase flow rates, and initiate gullying.

Dominant plant species

- James' galleta (*Pleuraphis jamesii*), grass
- blue grama (*Bouteloua gracilis*), grass
- alkali sacaton (*Sporobolus airoides*), grass

State 3
Shrub Dominated

Shrub-Dominated: This state is characterized by the predominance of shrubs, especially rabbitbrush. Broom snakeweed and cacti species may also increase in representation. Blue grama, galleta, and alkali sacaton are typically the dominant grass species. However, alkali sacaton may be sparse if the transition to this state was from the Dry Grassland. Diagnosis: Rabbitbrush is found at increased densities relative to the Grassland state. Grass cover is patchy with large bare areas present. Evidence of erosion including pedestalling of plants, elongated water flow patterns, litter dams, and rills or gullies is common.

Dominant plant species

- rubber rabbitbrush (*Ericameria nauseosa*), shrub
- broom snakeweed (*Gutierrezia sarothrae*), shrub
- blue grama (*Bouteloua gracilis*), grass
- James' galleta (*Pleuraphis jamesii*), grass
- alkali sacaton (*Sporobolus airoides*), grass

State 4
Bare State

Bare State: Extensive areas of bare ground characterize this site. Surface soils in most bare areas are sealed over with physical crusts. Herbaceous cover consists mainly of annuals. If perennial grasses are present, they occur only in isolated patches. Diagnosis: Annuals are the dominant herbaceous vegetation. Extensive interconnected bare areas are common with scattered or no grass plants. Evidence of erosion such as rills and gullies are present.

Transition T
State 1 to 2

Transition to Dry Grassland: Soil drying due to blocked or redirected flow of run-on water, loss of grass cover, or gullying are thought to initiate this transition. Water retention or diversion structures, sediment deposition, or roads may block or divert water that would naturally flow onto the site. Roads or trails may concentrate water during high flow periods and facilitate gully formation. Loss of adequate grass cover due to overgrazing can decrease infiltration, increase flow rates, and initiate gullying. Key indicators of approach to transition: * Reduction in western wheatgrass and alkali sacaton cover and increase in size and frequency of bare patches. * Increase in cover of blue grama, galleta, ring muhly and mat muhly. * The formation of trails, gullies or other features that disrupts natural overland flow

Restoration pathway R
State 2 to 1

Transition back to Grassland (1b) The natural hydrology of the site must be restored. Erosion control structures, shaping or filling gullies, culverts, turnouts, or moving or re-routing obstructions may be necessary to restore natural run-on flow patterns. Prescribed grazing will help restore and maintain adequate grass cover.

Conservation practices

Prescribed Burning

Prescribed Grazing

Transition T
State 2 to 3

Transition to Shrub-Dominated (2, 3a) Loss of grass cover and resulting decreased competition by grasses is believed to initiate this transition. The loss of grass cover may be due to a change in hydrology, overgrazing, or other disturbance such as fire. Rabbitbrush is believed to increase under heavy grazing pressure4 and after 1-3 years following fire5. Key indicators of approach to transition: * Decrease or change in composition or distribution of grass cover. * Increase in size and frequency of bare patches. * Increase in amount of shrub seedlings.

Restoration pathway R
State 3 to 2

Transition back to Grassland: Brush control is necessary to initiate the transition back to the grassland state. Chemical control has been shown to be effective in controlling rabbitbrush. Root plowing and other mechanical methods that sever the plant below the root crown may reduce rabbitbrush densities. Follow up treatment may be necessary. Prescribed grazing will help ensure adequate rest following brush control and will assist in the establishment and maintenance of grass cover. In addition the natural hydrology of the site must be restored if the transition pathway was from Dry Grassland to Shrub- Dominated (2). See Transition Back to Grassland (1b).

Conservation practices

Brush Management
Prescribed Burning
Prescribed Grazing

Transition T
State 3 to 4

Transition to Bare State (4) The continued loss of remaining grass cover due to overgrazing or soil drying may cause this transition. The subsequent sealing of the soil surface by physical crusts reduces infiltration and inhibits grass reestablishment.

Restoration pathway R
State 4 to 3

Transition back to Grassland: The hydrology of the site must be restored first . Seeding is necessary to reestablish grasses. Prescribed grazing will help ensure adequate rest and proper forage utilization following grass establishment. The degree to which this site is capable of recovery depends on the restoration of hydrology, the extent of degradation to soil resources, and adequate rainfall necessary to establish grasses.

Conservation practices

Prescribed Burning
Range Planting
Prescribed Grazing
Managing livestock access to water bodies/courses

Citations