

Ecological site group DX035X01JESG08

Paria and Kaibito Plateaus Loamy Washes and Bottoms

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Key Characteristics

- Paria and Kaibito Plateaus
- Loamy
- Washes and bottoms

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 ecological site is found on flood plains, stream terraces and alluvial fans. The site receives run-on moisture. The soils are deep to very deep to any plant root restricting layer. The surface texture of the soil is loam to very fine sandy loam and sub-surfaces may contain stratified alluvium layers. Slopes range from 0 to 15 percent.

Climate

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.

Soil features

Soils are moderately deep to very deep. Surface texture ranges from very fine sandy loam to sandy clay loam. Subsurface horizons have textures of clay loam to sandy loam and contain less than 35% gravel by volume. There may be stratified layers of coarser or finer soils in the profile. Permeability ranges from moderately slow to moderate. The soil reaction ranges from neutral to moderately alkaline (pH 6.6-8.4). The soil surface and subsurface horizons are non to strongly effervescent. Plant soil moisture relationships are better than average.

Vegetation dynamics

The historic climax plant community consists predominately of cool and warm season grasses with a small percentage of shrubs and forbs. In the original plant community there is a mixture of both cool and warm season grasses.

In addition to unmanaged rangelands on the adjacent uplands, extensive grazing drives the native plant community on a downward trend, and exotic annuals continue an upward trend. Invasive native shrubs most likely to increase and invade are broom snakeweed, Greene's rabbitbrush, rubber rabbitbrush, pricklypear and whipple cholla. Dominant plant species will include: James' galleta, Indian ricegrass, broom snakeweed, Greene's rabbitbrush, rubber rabbitbrush, pricklypear whipple cholla, Russian thistle, weed Kochia, Rocky Mountain beeplant, cheatgrass, thistles, mustards, filaree and other exotic annuals.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XC312AZ–Loamy Wash 10-14" p.z.
- R035XY011UT–Loamy Bottom (Basin Big Sagebrush)

Correlated Map Unit Components

22601670, 22601880, 22601878

Stage

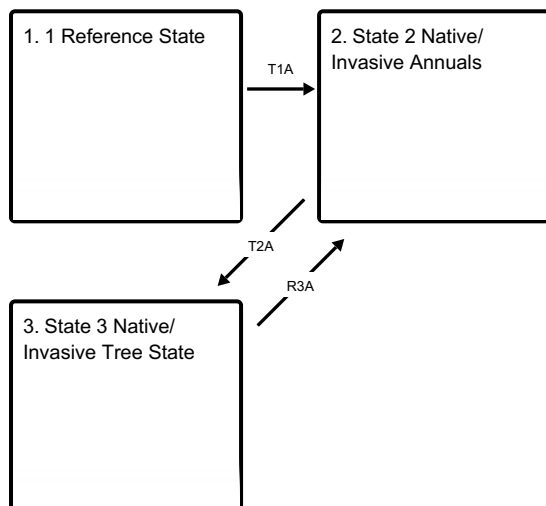
Provisional

Contributors

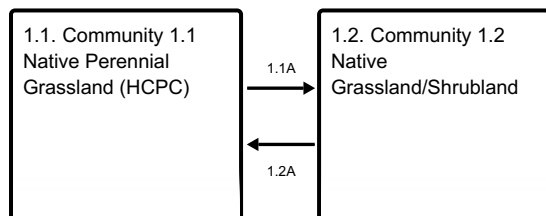
Curtis Talbot

State and transition model

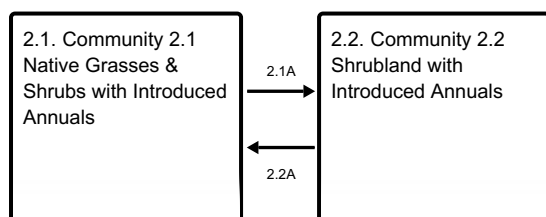
Ecosystem states



State 1 submodel, plant communities



State 2 submodel, plant communities



State 3 submodel, plant communities

3.1. Community 3.1
Eroded - Native/
Invasive Overstory

State 1

1 Reference State

State 1 Reference State

Community 1.1

Community 1.1 Native Perennial Grassland (HCPC)

Community 1.1 Native Perennial Grassland The historic climax plant community consists predominately of cool and warm season grasses with a small percentage of shrubs and forbs. In the original plant community there is a mixture of both cool and warm season grasses. 1.1 Native Perennial Grassland: The site consist of perennial Native grasses and forbs with minor amounts of shrub cover. Dominant plants species include: James' galleta, Indian ricegrass, sand dropseed, and western wheat grass.

Community 1.2

Community 1.2 Native Grassland/Shrubland

Community 1.2 Native Grassland and Shrubland

Resilience management. 1.2 Palatable cool and warm grasses decreases due to continuous yearlong grazing, thus decreasing the vegetative cover of the native grasses. As the native grasses begin to decline, native shrubs increase their establishment such as fourwing saltbush, broom snakeweed, Greene's rabbitbrush, rubber rabbitbrush, and whipple cholla. Dominant plant species include: James' galleta, Indian ricegrass, western wheat grass and fourwing saltbush.

Pathway 1.1A

Community 1.1 to 1.2

Continuous yearlong herbivory.

Pathway 1.2A

Community 1.2 to 1.1

No grazing to rest the rangelands and implement a prescribed grazing plan with favorable precipitation

State 2

State 2 Native/ Invasive Annuals

State 2 Native/ Invasive Annuals The general aspect of this state is a native perennial grassland/shrubland with a mix of native and non-native annuals. Invasive annuals have been introduced and are well established in the understory.

Community 2.1

Community 2.1 Native Grasses & Shrubs with Introduced Annuals

Community 2.1 Native Grasses & Shrubs with Introduced Annuals 2.1 Plant Community 2.1 If left unmanaged from continuous grazing, undesirable exotic plant species will establish and continue to increase in the understory. Introduced invasive species most likely to establish themselves when the site deteriorates are prickly Russian thistle, weed Kochia, cheatgrass, filaree and other exotic annuals. There will be a low component of these exotic annuals in

the understory, and beginning the process of exotic annuals establishing themselves on site.

Community 2.2

Community 2.2 Shrubland with Introduced Annuals

Community 2.2 Shrubland with Introduced Annuals 2.2 In addition to unmanaged rangelands on the adjacent uplands, extensive grazing drives the native plant community on a downward trend, and exotic annuals continue an upward trend. Invasive native shrubs most likely to increase and invade are broom snakeweed, Greene's rabbitbrush, rubber rabbitbrush, pricklypear and whipple cholla. Dominant plant species will include: James' galleta, Indian ricegrass, broom snakeweed, Greene's rabbitbrush, rubber rabbitbrush, pricklypear whipple cholla, Russian thistle, weed Kochia, Rocky Mountain beeplant, cheatgrass, thistles, mustards, filaree and other exotic annuals.

Pathway 2.1A

Community 2.1 to 2.2

Continuous yearlong grazing/ Drought/ Decrease of perennial grass cover/ Higher bare ground/ Active erosion

Pathway 2.2A

Community 2.2 to 2.1

Rest/ Prescribed grazing/ Favorable precipitation

State 3

State 3 Native/ Invasive Tree State

State 3 Native/ Invasive Tree State The plant community in this state is dominated by a mix of native and non-native trees and shrubs with scattered patches of grasses and forbs. There is active channel down-cutting and deposition.

Community 3.1

Community 3.1 Eroded - Native/ Invasive Overstory

Community 3.1 Eroded - Native/ Invasive Overstory 3.1 As native grasses and shrubs are grazed continuously, the native vegetative cover decreases rapidly and the understory is transformed into an exotic plant community. There will be a higher component of exotic trees, annual grasses and forbs eventually stressing and outcompeting the native plant community. Invasive dominant species include: Tamarisk, Russian olive, broom snakeweed, rubber rabbitbrush, Greene's rabbitbrush, prickly Russian thistle, common sunflower, weed Kochia, mustards, beeplant, thistles, cheatgrass, foxtail barley, field bindweed, filaree and other exotic annuals. Distribution of these exotics species will be extensive and eventually displace most of the native herbaceous species, as the native species are not given time to reproduce. Bare interspaces with less vegetative cover are visible on the surface resulting in the increased erosion process allowing for more rainfall runoff

Transition T1A

State 1 to 2

Continuous yearlong herbivory/ Drought/ Introduction of Exotics

Transition T2A

State 2 to 3

Unmanaged Continuous Grazing/ Severe Prolonged Drought/ Unmanaged Uplands - increased run-on & sediments/ Invasion of Woody Exotics

Restoration pathway R3A

State 3 to 2

Rest/ Prescribe grazing/ Reseeding/ Integrated Shrub & Weed treatment

Citations