Ecological site group DX035X01EESG01
Green River Desert - Bottoms and Flats - riparian

Last updated: 09/01/2021
Accessed: 04/19/2024

Key Characteristics

- Green River Desert
- Bottoms and Flats
- Extra water is from perennial or intermittent streamflow

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 valley bottoms, inset fans and low lying terraces adjacent to live streams and rivers.

Climate

Average annual precipitation is 6 to 12 inches. Approximately 77% occurs as rain from March through October. On the average, February, May and June are the driest months and August, September and October are the wettest months. The mean annual air temperature is 11-13 degrees celsius and the soil temperatures are in the mesic regime. The average freeze-free period is 160 to 220 days. This site is frequently flooded and has a watertable. These factors over-ride climate as a controlling factor. This site occurs primarily in the semidesert and desert climatic zones. In average years, plants begin growth around March 20 and end growth around October. Optimum growth on cool season plants occurs in May. Warm season plants make their optimum growth in July and August.

Soil features

Characteristic soils in this site are deep and somewhat poorly drained. They formed in alluvium derived mainly from mixed parent materials. Soils contain 4 to 16 mmhos/cm of salt and have a water table at a depth of 20 to 60 inches during most of the plant growing season. Soils are flooded during spring runoff and frequently as the result of intense summer convection storms.

Vegetation dynamics

As ecological condition deteriorates due to overgrazing, alkali sacaton and coyote willow decrease while salt cedar and rubber rabbitbrush increase to dominate the site. Cheatgrass and annual weeds are most likely to invade this site.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- R035XY012UT–Semiwet Saline Streambank (Fremont Cottonwood)

Stage

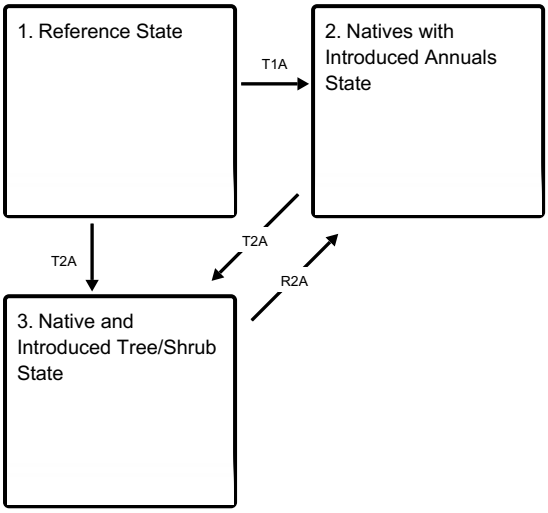
Provisional

Contributors

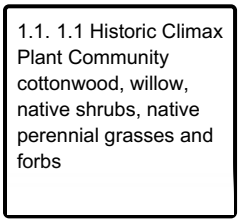
Vic Parslow
Jim Harrigan
Harry Hosler
Keith Crossland

State and transition model

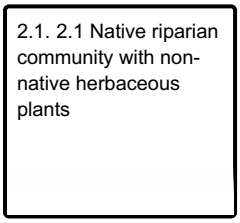
Ecosystem states



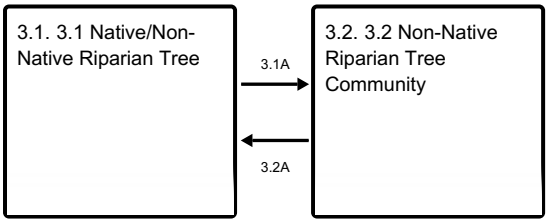
State 1 submodel, plant communities



State 2 submodel, plant communities



State 3 submodel, plant communities



State 1
Reference State

Cottonwood, willow, rubber rabbitbrush, perennial forbs and grasses, species dependent on salinity

Community 1.1
1.1 Historic Climax Plant Community cottonwood, willow, native shrubs, native perennial

grasses and forbs

State 2
Natives with Introduced Annuals State

Cottonwoods, willows, rubber rabbitbrush, native perennial grasses and forbs with non-native annuals

Community 2.1
2.1 Native riparian community with non-native herbaceous plants

Cottonwood, willows, native perennial grasses and forbs with non-native grasses and forbs present

State 3
Native and Introduced Tree/Shrub State

This state is typically dominated by trees and shrubs. Under heavy use the herbaceous is depleted and the site is dominated by native woody vegetation. Under continued improper grazing management of severe disturbance the site may become dominated by non-native species, typically tamarisk and Russian olive.

Community 3.1
3.1 Native/Non-Native Riparian Tree

Cottonwood, willows, introduced trees and shrubs. native and non-native herbaceous species

Community 3.2
3.2 Non-Native Riparian Tree Community

Overstory dominated by non-native trees, typically salt cedar. Native and non-native herbaceous understory.

Pathway 3.1A
Community 3.1 to 3.2

Loss of native trees from drought, fire, disease or unmanaged grazing

Pathway 3.2A
Community 3.2 to 3.1

Control of non-native woody species. Manage grazing by livestock and wildlife. Reseeding/planting native species

Transition T1A
State 1 to 2

Introduction of non-native herbaceous species

Transition T2A
State 1 to 3

Introduction of non-native tree species

Transition T2A
State 2 to 3

Introduction of non-native tree species

Restoration pathway R2A
State 3 to 2

Control of non-native trees; planting of native tree and shrub species, manage grazing by livestock and wildlife

Citations