

Ecological site group DX035X04BESG03

Bisti Lowlands LRU Subset - Sandy Subgroup

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Key Characteristics

- Bisti Lowlands. This LRU subset is composed of Cretaceous materials, and is generally below 1900 m in elevation. The Bisti Lowlands subset is further distinguished from Chaco Mesa in that the former receives less monsoonal moisture, harbors less warm-season grass, and experiences low amounts of blowing sands.
- 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).
- Soils lack both significant salinity and sodicity.
- Soils lack one or both of the following at the surface: Strong or violent response to dilute HCl or $\geq 5\%$ calcareous fragments.
- Sites with soils that have particle size classes of sandy, coarse loamy, or coarser.

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

Various water-shedding, upland landforms, including elevated terraces. Drainageways are excluded from the Sandy ESG concept. Also excluded are soils with moderate to high salinity and or sodicity, and those with abundant free carbonates at the surface.

Soil features

Soils have particle size family classes of coarse-loamy and coarser.

Major Land Resource Area

MLRA 035X
Colorado Plateau

Subclasses

- DX035X03A113–Sandy
- DX035X03E002–Sandy
- DX035X03E007–Deep Sand
- R035XB035NM–Sandy Upland 6-10"
- R035XB217AZ–Sandy Upland 6-10" p.z.

Correlated Map Unit Components

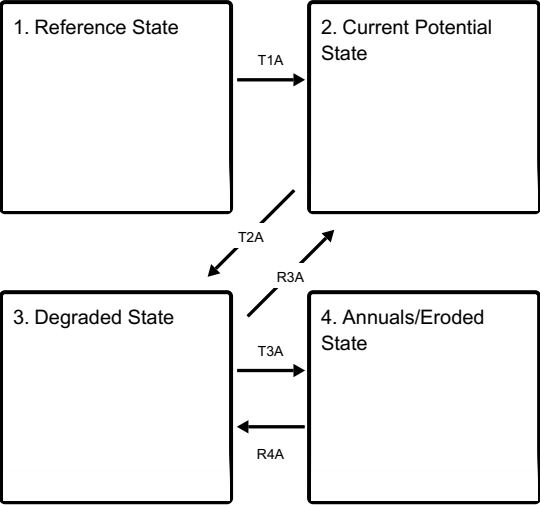
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Stage

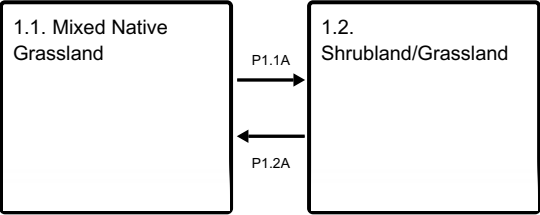
Provisional

State and transition model

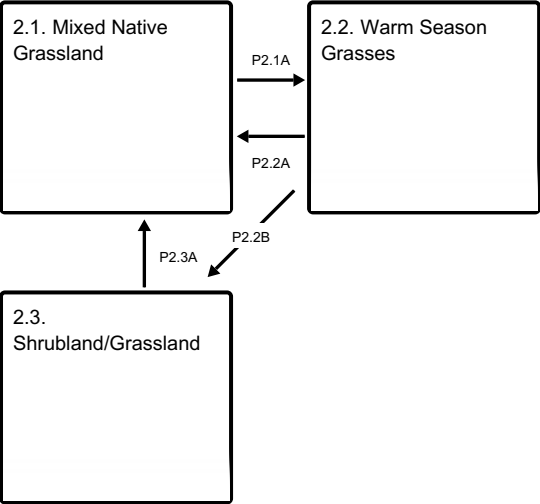
Ecosystem states



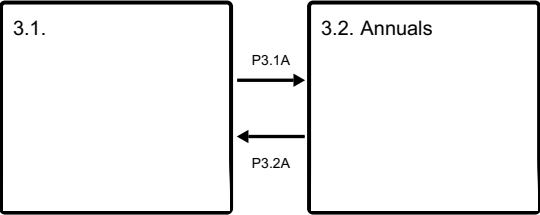
State 1 submodel, plant communities



State 2 submodel, plant communities



State 3 submodel, plant communities



State 1
Reference State

This state represents historical conditions that are rarely found in current times.

Community 1.1

Mixed Native Grassland

This is our best estimate of the historic climax community. It is grass-dominated, but also contains a mix of shrubs and forbs.

Dominant plant species

- fourwing saltbush (*Atriplex canescens*), shrub
- blue grama (*Bouteloua gracilis*), grass
- black grama (*Bouteloua eriopoda*), grass
- Indian ricegrass (*Achnatherum hymenoides*), grass

Community 1.2

Shrubland/Grassland

Dominant plant species

- rabbitbrush (*Chrysothamnus*), shrub
- broom snakeweed (*Gutierrezia sarothrae*), shrub
- fourwing saltbush (*Atriplex canescens*), shrub
- mormon tea (*Ephedra viridis*), shrub
- James' galleta (*Pleuraphis jamesii*), grass
- Indian ricegrass (*Achnatherum hymenoides*), grass
- blue grama (*Bouteloua gracilis*), grass

Pathway P1.1A

Community 1.1 to 1.2

Continuous grazing

Pathway P1.2A

Community 1.2 to 1.1

Prescribed/deferred grazing

State 2

Current Potential State

Community 2.1

Mixed Native Grassland

Perennial native grassland with some native shrubs and introduced annuals.

Dominant plant species

- fourwing saltbush (*Atriplex canescens*), shrub
- blue grama (*Bouteloua gracilis*), grass
- Indian ricegrass (*Achnatherum hymenoides*), grass
- black grama (*Bouteloua eriopoda*), grass

Community 2.2

Warm Season Grasses

Grassland dominated by perennial, warm-season grasses, with scattered native shrubs and introduced annuals.

Dominant plant species

- fourwing saltbush (*Atriplex canescens*), shrub
- mormon tea (*Ephedra viridis*), shrub
- blue grama (*Bouteloua gracilis*), grass
- James' galleta (*Pleuraphis jamesii*), grass
- dropseed (*Sporobolus*), grass

Community 2.3

Shrubland/Grassland

Dominant plant species

- fourwing saltbush (*Atriplex canescens*), shrub
- mormon tea (*Ephedra viridis*), shrub
- broom snakeweed (*Gutierrezia sarothrae*), shrub
- rabbitbrush (*Chrysothamnus*), shrub
- James' galleta (*Pleuraphis jamesii*), grass
- Indian ricegrass (*Achnatherum hymenoides*), grass
- blue grama (*Bouteloua gracilis*), grass

Pathway P2.1A

Community 2.1 to 2.2

Continuous grazing

Pathway P2.2A

Community 2.2 to 2.1

Prescribed/deferred grazing

Pathway P2.2B

Community 2.2 to 2.3

Continuous grazing

Pathway P2.3A

Community 2.3 to 2.1

Prescribed/deferred grazing

State 3

Degraded State

Community 3.1

Dominant plant species

- rabbitbrush (*Chrysothamnus*), shrub
- mormon tea (*Ephedra viridis*), shrub
- James' galleta (*Pleuraphis jamesii*), grass
- Indian ricegrass (*Achnatherum hymenoides*), grass
- blue grama (*Bouteloua gracilis*), grass

Community 3.2

Annuals

Community dominated by annual grasses and forbs, including Russian thistle.

Dominant plant species

- cheatgrass (*Bromus tectorum*), grass

Pathway P3.1A

Community 3.1 to 3.2

Continuous grazing

Pathway P3.2A

Community 3.2 to 3.1

Prescribed/deferred grazing

State 4

Annuals/Eroded State

This state is dominated by annuals such as cheatgrass and Russian thistle. Productivity is quite low, and bare ground abounds.

Dominant plant species

- cheatgrass (*Bromus tectorum*), grass

Transition T1A

State 1 to 2

Continuous grazing

Transition T2A

State 2 to 3

Prolonged continuous grazing.

Restoration pathway R3A

State 3 to 2

Prescribed/deferred grazing

Transition T3A

State 3 to 4

Prolonged continuous grazing

Restoration pathway R4A

State 4 to 3

Deferred/prescribed grazing, coupled with seeding.

Citations