# Ecological site group DX035X04BESG07
# Bisti Lowlands LRU Subset - Shallow 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 Lowanads 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).

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 occupies various bedrock-controlled landforms, such as plateau summits and escarpments. Water-collecting landforms such as drainageways are excluded from the Shallow concept.

## Soil features

Soils are < 50 cm to lithic or paralithic contact.

## Major Land Resource Area

MLRA 035X
Colorado Plateau

## Subclasses

- DX035X03A121–Shallow Sandstone
- DX035X03E006–Shallow
- DX035X04B204–Sandstone Upland 6-10" p.z.
- DX035X04B314–Sandstone Upland 10-14" p.z.
- DX035X04B321–Sandstone Hills 10-14" p.z.
- DX035X04B335–Sandstone/Shale Hills 10-14" p.z.
- F035XC322AZ–Sandstone Upland 10-14" p.z. (JUOS)
- R035XA101AZ–Breaks 10-14" p.z.
- R035XB201AZ–Mudstone/Sandstone Hills 6-10" p.z.
- R035XB215AZ–Sandstone/Shale Upland 6-10" p.z.
- R035XC302AZ–Sedimentary Cliffs 10-14" p.z.
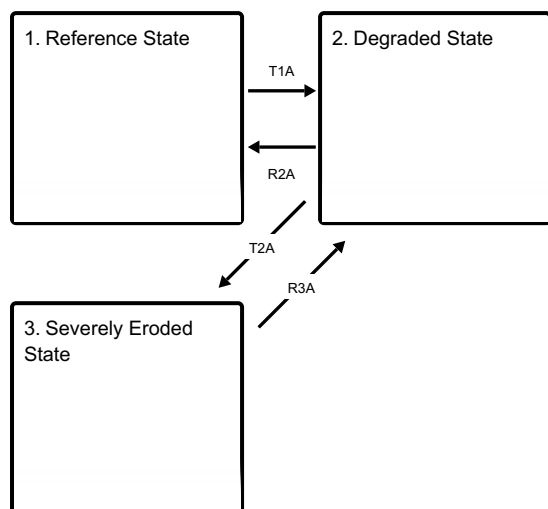
## Correlated Map Unit Components

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## Stage

Provisional

## Contributors

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## State and transition model

**Ecosystem states**

## State 1
## Reference State

Mix of perennial grasses and shrubs. Topsoil remains intact.

### Dominant plant species

- Bigelow sage (*Artemisia bigelovii*), shrub
- winterfat (*Krascheninnikovia arborescens*), shrub
- green rabbitbrush (*Ericameria teretifolia*), shrub
- Indian ricegrass (*Achnatherum hymenoides*), grass
- black grama (*Bouteloua eriopoda*), grass
- James' galleta (*Pleuraphis jamesii*), grass
- threeawn (*Aristida*), grass

## State 2
## Degraded State

Shrub-dominated plant community on degraded soils.

### Dominant plant species

- Bigelow sage (*Artemisia bigelovii*), shrub
- mormon tea (*Ephedra viridis*), shrub
- broom snakeweed (*Gutierrezia sarothrae*), shrub
- green rabbitbrush (*Ericameria teretifolia*), shrub
- James' galleta (*Pleuraphis jamesii*), grass
- blue grama (*Bouteloua gracilis*), grass
- threeawn (*Aristida*), grass

## State 3
## Severely Eroded State

Sparse plant community dominated by shrubs, early-seral grasses, and halogeton.

### Dominant plant species

- green rabbitbrush (*Ericameria teretifolia*), shrub
- broom snakeweed (*Gutierrezia sarothrae*), shrub
- cheatgrass (*Bromus tectorum*), grass
- threeawn (*Aristida*), grass
- James' galleta (*Pleuraphis jamesii*), grass

## Transition T1A
## State 1 to 2

Prolonged continuous grazing leads to mortality among perennial grasses. Low basal area leads to accelerated erosion. Shrubs gain a competitive advantage.

## Restoration pathway R2A
## State 2 to 1

This restoration pathway involves the reversal of erosion and the re-establishment of extirpated species. Seeding and erosion control measures are likely necessary. Additionally, herbivory must be carefully managed.

## Transition T2A
## State 2 to 3

Prolonged continuous grazing leads to mortality among perennial grasses. Extremely low basal area leads to accelerated erosion. Loss of topsoil severely reduces plants' access to water and nutrients, leading to very low production.

## Restoration pathway R3A
## State 3 to 2

This restoration pathway involves the reversal of erosion and the re-establishment of extirpated species. Seeding and erosion control measures are likely necessary. Additionally, herbivory must be carefully managed.

## Citations