

# Ecological site group DX035X02DESG09

## Grand Canyon - Ustic Aridic - Volcanic or Clayey Upland

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### Key Characteristics

- Grand Canyon (D)
- Site parent material is volcanic or clayey.
- Site soils are ustic aridic or within a 10-14" precipitation zone.
- Site is and/or located in an upland with slopes <15%.

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

Site is and/or located in an upland with slopes <15%. Physiography is complex.

### Climate

Site soils are ustic aridic or within a 10-14" precipitation zone. Precipitation comes monsoonal patterns during months of July, August, and September, and is supplemented by winter storm patterns from November through March.

### Soil features

Parent material is basalt or andesite. Soils are clayey or clay loam. Site consists of limited amounts of gently sloping sheet alluvial or eolian deposits over residuum of plateaus and structural benches.

### Vegetation dynamics

This site consists of a plant community of grasses with a significant percentage of shrubs. In the potential plant community, there is a mixture of cool and warm season grasses.

Plant species most likely to increase or invade on this site when it deteriorates are fendler threeawn, broom snakeweed, Buckhorn cholla, and annual grasses and forbs. Continuous livestock grazing during the spring will decrease cool season grasses, which are replaced by lower forage grasses and shrubs.

### Major Land Resource Area

MLRA 035X  
Colorado Plateau

### Subclasses

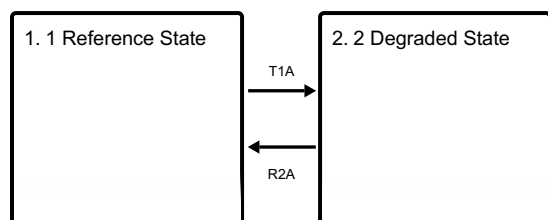
- DX035X01I104–Clay Loam Wash 10-14" p.z.
- R035XA108AZ–Tephra Uplands 10-14" p.z.

### Stage

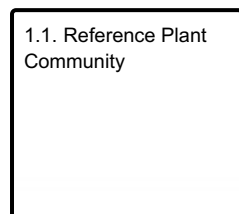
Provisional

# State and transition model

## Ecosystem states



## State 1 submodel, plant communities



## State 1 1 Reference State

### Community 1.1 Reference Plant Community

This site consists of a plant community of grasses with a significant percentage of shrubs. In the potential plant community, there is a mixture of cool and warm season grasses. Plant species most likely to increase or invade on this site when it deteriorates are fender threeawn, broom snakeweed, Buckhorn cholla, and annual grasses and forbs. Continuous livestock grazing during the spring will decrease cool season grasses, which are replaced by lower forage grasses and shrubs. Because of the scattered canopy cover and sparse understory, this site does not have a history of regular fire disturbance. Blackbrush plant communities are often quite old and tend to be stable. If it is severely disturbed this site will revert to an early seral stage of mostly annuals, including a large increase of cheatgrass brome and broom snakeweed. A more advanced plant community will contain scattered desert shrubs and a small increase in perennial grasses, with little regeneration of blackbrush. It is speculated that blackbrush communities evolved under a different climatic regime, and once removed will not readily return to a site

## State 2 2 Degraded State

Loss of plant and soil due to degradation and erosion.

### Transition T1A State 1 to 2

Plant species most likely to increase or invade on this site when it deteriorates are fender threeawn, broom snakeweed, Buckhorn cholla, and annual grasses and forbs. Continuous livestock grazing with high utilization during the spring will decrease cool season grasses, which are replaced by lower forage grasses and shrubs. Eventually the site becomes degraded.

### Restoration pathway R2A State 2 to 1

Slow restoration of soil and plant resources.

## Citations