

10660

Inter-Mountain Basins Mat Saltbush Shrubland

BpS Model/Description Version: Aug. 2020

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Vegetation Type

Shrubland

Map Zones

16, 23, 24

Geographic Range

This ecological system occurs on gentle slopes and rolling plains in the northern Colorado Plateau and Uinta Basin on Mancos Shale and arid, wind-swept basins and plains across parts of Wyoming.

Biophysical Site Description

Substrates are shallow, typically saline, alkaline, fine-textured soils developed from shale or alluvium and may be associated with shale badlands. Infiltration rate is typically low. In Wyoming and possibly elsewhere, inclusions of non-saline, gravelly barrens or rock outcrops may be present.

Vegetation Description

These dwarf-shrublands are typically composed of relatively pure stands of *Atriplex* spp. such as *Atriplex corrugata* (mat saltbush) or *Atriplex gardneris* (Gardner's saltbush). Other dominant or co-dominant dwarf-shrubs may include *Artemisia longifolia* (longleaf wormwood), *Artemisia pedatifida* (birdfoot sagebrush), or *Picrothamnus desertorum* (bud sagebrush), sometimes with a mix of other low shrubs such as *Krascheninnikovia lanata* (winterfat) or *Tetradymia spinosa*. *Atriplex confertifolia* (shadscale) or *Atriplex canescens* (fourwing saltbush) may be present but do not co-dominate. The herbaceous layer is typically sparse. Scattered perennial forbs occur, such as *Xylorhiza glabriuscula* and *Sphaeralcea grossulariifolia*, and the perennial grasses *Achnatherum hymenoides* (Indian ricegrass), *Bouteloua gracilis* (blue grama), *Elymus elymoides*, *Elymus lanceolatus* ssp. *lanceolatus*, *Pascopyrum smithii* (western wheatgrass), or *Sporobolus airoides* (alkali sacaton) may dominate the herbaceous layer. In less saline areas, there may be inclusions grasslands dominated by *Hesperostipa comata*, *Leymus salinus*, *Pascopyrum smithii*, or *Pseudoroegneria spicata*. In Wyoming and possibly elsewhere, inclusions of non-saline, gravelly barrens, or rock outcrops dominated by cushion plants such as *Arenaria hookeri* (Hooker's sandwort) and *Phlox hoodii* without dwarf-shrubs may be present. Annuals are seasonally present and may include *Eriogonum inflatum* and *Plantago tweedyi*.

BpS Dominant and Indicator Species

Symbol	Scientific Name	Common Name
ATCO4	<i>Atriplex corrugata</i>	Mat saltbush

Species names are from the NRCS PLANTS database. Check species codes at <http://plants.usda.gov>.

This system does not have a fire regime due to discontinuous fuel. High mortality (every 100yrs on average) can occur in conjunction with wet years. Wet periods contribute to mortality and are the only disturbance in this system.

Severity	Avg FI	Percent of All Fires	Min FI	Max FI
Replacement				
Moderate (Mixed)				
Low (Surface)				
All Fires				

Map zones 16, 23, and 24 were combined during 2015 BpS Review.

[illegible]

Model Parameters

Deterministic Transitions

From Class	Begins at (yr)	Succeeds to	After (years)
Early1:ALL	0	Late1:ALL	11
Late1:ALL	12	Late1:ALL	999

Probabilistic Transitions

Disturbance Type	Disturbance occurs In	Moves vegetation to	Disturbance Probability	Return Interval (yrs)	Reset Age to New Class Start Age After Disturbance?	Years Since Last Disturbance
Wind or Weather or Stress	Early1:ALL	Early1:ALL	0.01	100	Yes	0
Wind or Weather or Stress	Late1:ALL	Early1:ALL	0.01	100	Yes	0

References

Blaisdell, J.P. and R.C. Holmgren. 1984. Managing intermountain rangelands-salt-desert shrub ranges. General Technical Report INT-163. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 52 pp.

Fire Effects Information System, [Online]. USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis> [2005, February 23].

NatureServe. 2007. International Ecological Classification Standard: Terrestrial Ecological Classifications. NatureServe Central Databases. Arlington, VA. Data current as of 10 February 2007.