

Ecological site R006XB015OR
Marshy Swale
14-26 PZ

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General information

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.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

Table 2. Representative physiographic features

Landforms	(1) Alluvial fan (2) Depression
Ponding duration	Very long (more than 30 days)
Ponding frequency	Frequent
Elevation	1,220 – 1,830 m
Slope	0 %
Ponding depth	0 – 60 cm
Water table depth	0 – 150 cm
Aspect	Aspect is not a significant factor

Climatic features

This site is characterized by relatively short, hot summers and cold, snowy winters. The site receives approximately 20 inches of precipitation per year, the bulk of which is snowfall. There are frequent thunderstorms in the summer months. There may be ground fogs in the mornings during the growing season which affect stomatal gas exchange and photosynthetic activity,

Table 3 Representative climatic features

Frost-free period (average)	20 days
Freeze-free period (average)	50 days
Precipitation total (average)	640 mm

Influencing water features

Soil features

Soils for this site typically have an organic layer over loams, layers of coarse pumice over heavy clay loams. There is an apparent water table present for most of the year. The soils are ponded for a significant time during the spring, summer, and early fall. These relatively young soils have been deposited over older, remnant fans and terraces. Variations and intergrades of soil characteristics are common.

Table 4. Representative soil features

Surface texture	(1) Mucky silt loam
Family particle size	(1) Loamy
Drainage class	Poorly drained
Permeability class	Very slow
Soil depth	120 – 160 cm
Surface fragment cover <=3"	Not specified
Surface fragment cover >3"	Not specified
Available water capacity (0-101.6cm)	13.97 – 16.51 cm
Calcium carbonate equivalent (0-101.6cm)	Not specified

Electrical conductivity (0-101.6cm)	Not specified
Sodium adsorption ratio (0-101.6cm)	Not specified
Soil reaction (1:1 water) (0-101.6cm)	Not specified
Subsurface fragment volume <=3" (Depth not specified)	Not specified
Subsurface fragment volume >3" (Depth not specified)	Not specified

Ecological dynamics

This site is a highly variable transition site between Meadow Swale and Wet Marsh sites. The site is usually located in swales, old channels, oxbows, and deeper depressions. An apparent water table appears at or near the surface in all but the driest portions of the year. IN the same area there may be different plant communities on the same soils. this patchy variability may be due to slight differences in hydrology, position, and elevation (micro relief), or the mere fact that one of these plant communities pioneered and came to dominate the site. In the same area there may be almost pure stands of either of the dominant Carex species or, in lower seral stages, Eleocharis or Juncus will dominate the stand. The interpretative plant community for this site is the Historic Climax Plant Community (HCPC).

State and transition model

Figure 3. Marshy Swale State & Transition Model

Additional community tables

Contributors

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Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	

Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. Number and extent of rills:

2. Presence of water flow patterns:

3. Number and height of erosional pedestals or terracettes:

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):

5. Number of gullies and erosion associated with gullies:

6. Extent of wind scoured, blowouts and/or depositional areas:

7. Amount of litter movement (describe size and distance expected to travel):

8. Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):

9. Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):

10. Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:

11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):

12. Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):

Dominant:

Sub-dominant:

Other:

Additional:

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):

14. Average percent litter cover (%) and depth (in):

15. Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):

16. Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:

17. Perennial plant reproductive capability:
