

Ecological site R023XY416OR **WET MEADOW**

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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.

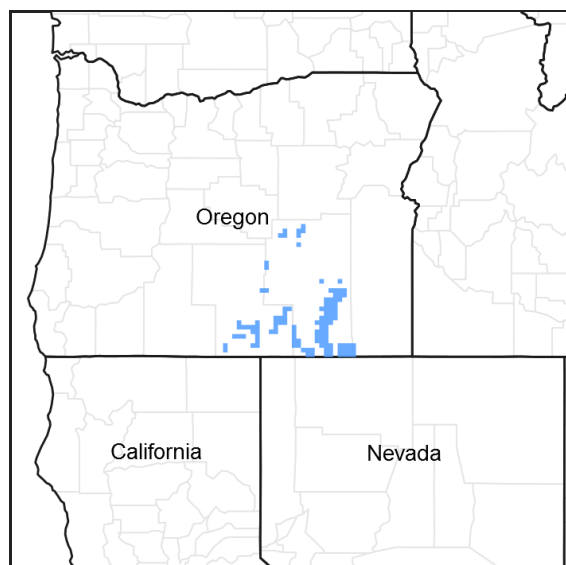


Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Associated sites

R023XY200OR	PONDED CLAY Ponded Clay
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Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on floodplains of narrow valleys in mountainous areas. Slopes range from 0 to 5%. Elevation ranges from 5000 to 6500 feet.

Table 2. Representative physiographic features

Landforms	(1) Flood plain
Elevation	1,524–1,981 m

Slope	0–5%
Aspect	Aspect is not a significant factor

Climatic features

The annual precipitation ranges from 10 to 25 inches, most of which occurs in the form of snow during the months of December through February. Spring rains are common. This site receives run-on from snow melt during the spring and early summer. The soil temperature regime is frigid. Extreme temperatures range from 90 degrees F. to -30 degrees F. The frost-free period is about 30 to 90 days. The optimum period for plant growth is from mid-April to early September for lower elevation sites and mid-June to mid-August for higher elevation sites.

Table 3. Representative climatic features

Frost-free period (average)	90 days
Freeze-free period (average)	0 days
Precipitation total (average)	635 mm

Influencing water features

Soil features

These soils are deep, medium to fine textured, somewhat poorly to poorly drained, formed in alluvium. The available water holding capacity (AWC) is 8 to 12 inches for the profile. The surface layer is typically a silt loam or silty clay loam, with variable thickness. The soil is subject to annual flooding during the spring and early summer months. The water table will range from the surface to a depth of 40 inches throughout the year. The effective rooting depth will be limited by the high water table.

Table 4. Representative soil features

Drainage class	Somewhat poorly drained to poorly drained
Permeability class	Moderate

Ecological dynamics

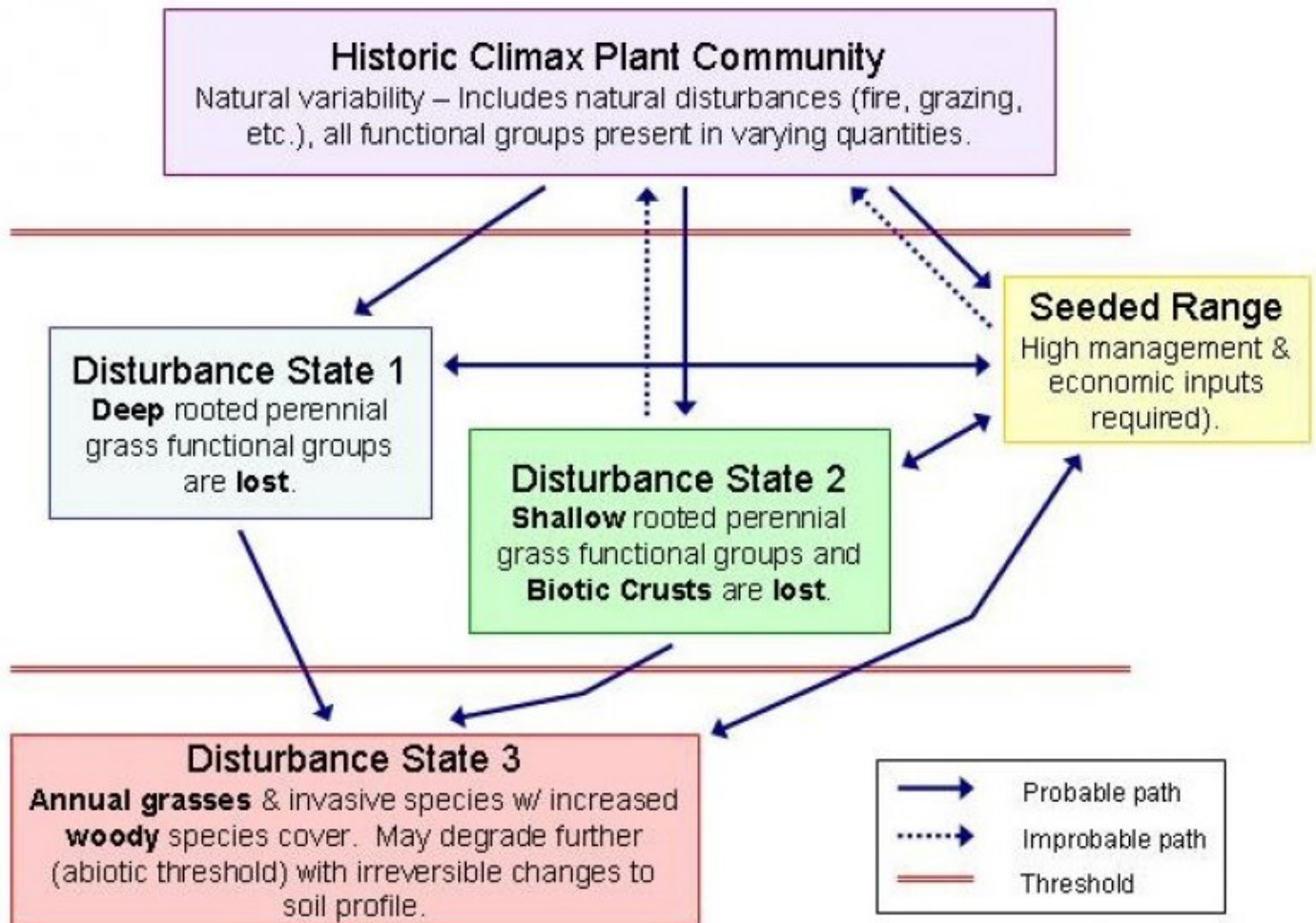
Range in Characteristics:

Tufted hairgrass dominates this site. On the more mesic end of this site northern mannagrass, Baltic rush and Nebraska sedge are subordinate to tufted hairgrass and aggregated in colonies only in wetter depressions. Orange arnica, silver weed and small bed straw are typical forbs of more mesic sites. On the drier end of the site Nevada bluegrass, creeping wildrye, western yarrow and rose pussytoes are subordinate to tufted hairgrass.

Response to Disturbance:

If heavy grazing causes site deterioration, tufted hairgrass decreases and becomes codominant with other grasses, sedges and forbs. Baltic rush, sedges or reedgrass become more dominant, with large colonies of arnica, and silverweed occurring on the more mesic sites. Nebraska sedge is capable of becoming dominant on mesic sites with overgrazing. Prairie junegrass and oatgrass along with yarrow, aster, cinquefoil and buttercups increase on drier sites. With overgrazing on drier sites Kentucky bluegrass can become naturalized and be codominant with mat muhly, oatgrass or Baltic rush. With lowering of the watertable Kentucky bluegrass and silver sagebrush can dominate. Severe stream entrenchment may change the stand composition to upland species such as silver sagebrush, big sagebrush, green rabbitbrush and annual weeds. Foxtail barley, squirreltail, lupine, dock, and thistle are likely to invade.

State and transition model



GENERAL MODEL FOR COOL-SEASON BUNCHGRASS RANGELANDS

State 1

Historic Climax Plant Community

Community 1.1

Historic Climax Plant Community

The potential native plant community is dominated by tufted hairgrass. Mannagrass, reedgrass, sedge and baltic rush occupy very wet spots within the site. Willows occasionally occur along the streambank. Vegetative composition is about 90 percent grasses and grass-like plants, and 10 percent forbs.

Additional community tables

Animal community

Livestock Grazing:

This site is suitable for cattle and sheep grazing use in mid-summer to fall under a planned grazing system that allows for deferment of use during periods when the soils are wet.

Wildlife:

This site provides important food and cover for sage grouse and their young in the spring.

Hydrological functions

The soils of this site have slow to medium infiltration rates and none to slight runoff potential. The hydrologic soil group is D.

Recreational uses

This is an ecologically sensitive site due to its wet nature. Vehicular recreation should be avoided. This isThis site will attract many species of wildlife and provide scenic vistas for photographers.

Other information

This site is fair or better condition favors rapid vegetative recovery in response to improved grazing practices. Poor condition sites will need rehabilitation to raise the water table and reestablish the native plant community.

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)	Jeff Repp
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Date	08/17/2012
Approved by	Bob Gillaspy
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None, moderate sheet & rill erosion hazard

2. **Presence of water flow patterns:** Frequent flooding with seasonal high water table

3. **Number and height of erosional pedestals or terracettes:** None

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 0-5%

5. **Number of gullies and erosion associated with gullies:** Very poor resistance to erosion while cover is lacking. Subject to incision and downcutting

6. **Extent of wind scoured, blowouts and/or depositional areas:** None, Slight wind erosion hazard

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7. **Amount of litter movement (describe size and distance expected to travel):** Fine to moderately coarse - limited movement
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8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Moderately resistant to erosion with adequate cover: aggregate stability = 3-5
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Deep somewhat poorly drained silt loams and silty clay loam soils with water table at 40 inches: Moderate to high OM (3-6%)
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Significant ground cover (70-90%) and gentle slopes (0-5%) effectively limit rainfall impact and overland flow
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11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None
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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: Tufted hairgrass > Nebraska sedge > Rush = Northern mannagrass = Reedgrass = sedges > other grasses > forbs
- Sub-dominant:
- Other:
- Additional:
-
13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Normal decadence and mortality expected
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14. **Average percent litter cover (%) and depth (in):**
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Favorable: 2500, Normal: 2000, Unfavorable: 1000 lbs/acre/year at high RSI (HCPC)
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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: Perennial forb and brush species will increase with deterioration of plant community. Kentucky bluegrass and Meadow foxtail invade sites that have lost deep rooted perennial grass functional groups.

17. **Perennial plant reproductive capability:** All species should be capable of reproducing annually
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