

Ecological site R023XY503OR

OPEN SLOPES 25-35 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.

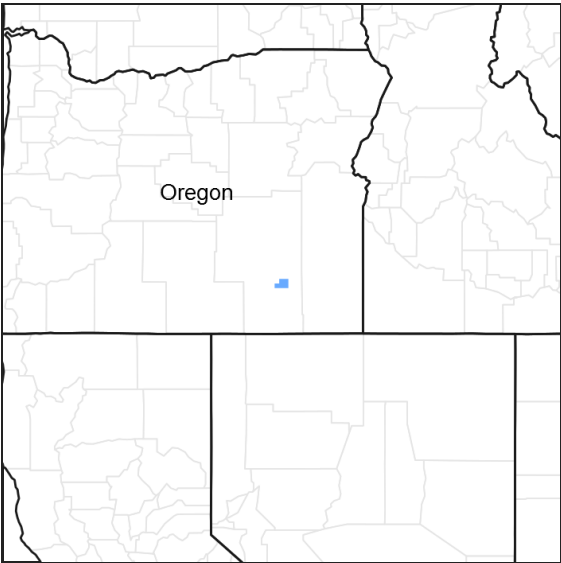


Figure 1. Mapped extent

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

R023XY502OR	LOAMY 25-35 PZ Loamy 25-35" PZ
R023XY504OR	SUBALPINE LOAMY 35-40 PZ Subalpine Loamy 35-40" PZ
R023XY505OR	SUBALPINE THIN SURFACE 35-40 PZ Subalpine Thin Surface 35-40" PZ
R023XY509OR	SUBALPINE SLOPES 16-35 PZ Subalpine Slopes 16-40" PZ

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on ridgetops and shoulders in mountainous areas. Slopes range from 10 to 30%. Elevation ranges

from 7900 to 8800 feet.

Table 2. Representative physiographic features

Landforms	(1) Mountain (2) Ridge
Elevation	2,408–2,682 m
Slope	10–30%

Climatic features

Mean annual precipitation is 25 to 35 inches. Most of the precipitation occurs as snow during December through March. Mean annual air temperature is 40 to 43 degrees F. The typical frost free period is 30 to 60 days. The soil temperature regime is cryic. The period of primary plant growth occurs between June and August.

Table 3. Representative climatic features

Frost-free period (average)	60 days
Freeze-free period (average)	0 days
Precipitation total (average)	889 mm

Influencing water features

Soil features

Typical soil depths of this site are moderately deep (20-40 inches to bedrock). Soils of this site are well drained with moderately slow permeability. Average water holding capacity is about 3 inches. There is moderate potential for frost action and moderate shrink-swell potential. Surface textures are typically very gravelly loams. The soils of this site generally contain 30 to 50% rock fragments throughout the soil profile. Subsurface textures are very stony clay loams.

Table 4. Representative soil features

Surface texture	(1) Very gravelly loam
Family particle size	(1) Loamy
Drainage class	Well drained
Permeability class	Moderately slow

Ecological dynamics

Range in Characteristics:

Sedges increase in sheltered areas with late season snow melt. Sagebrush increases on ridges and open slopes. Needlegrasses increase on coarser textured soils.

Response to Disturbance:

This is an eroded phase of the Subalpine Loamy 35-40 PZ range site. As the site deteriorates sedges, fescue and needlegrasses decrease in plant density while bottlebrush squirreltail and bluegrasses increase.

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 community is dominated by sedges and needlegrasses. Prairie junegrass and sheep fescue are also present in the stand. Vegetative composition is about 90 percent grasses and 10 percent forbs.

Additional community tables

Animal community

Livestock Grazing:

this tie is suitable to light grazing during summer and fall under a suitable grazing system. There is high potential to negatively affect this site due to the harsh climate and steep slopes.

Wildlife:

This site has a low diversity of resident wildlife species due to the simple structure of the vegetative community. Non-game mammals and bird species are the most common species.

Hydrological functions

The soils of this site have moderate infiltration rates and medium runoff potential. The hydrologic soil group is C.

Other information

Suitability for seeding the soil is low because of the short growing season and surface rock fragments. Waterbar construction is necessary to prevent gully erosion on roads, trails and pipelines. Depth to bedrock limits construction of water impoundments. Settling snow pack may damage fence structures requiring special design of fences such as laydown fences.

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:**
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17. **Perennial plant reproductive capability:**

