Ecological site R021XY418OR
WET LOAMY TERRACE

Accessed: 08/16/2026

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

This site occurs on alluvial terraces and fans. Slopes range from 1 to 12 percent. Elevations typically range from 4000 to 4500 feet on the east side of the Cascade Mountains. Minor occurrences may range as low as 2500 feet on the west side in the Butte Falls or Prospect area.

Table 2. Representative physiographic features

Landforms	(1) Terrace (2) Alluvial fan
Elevation	1,220 – 1,370 m
Slope	0 – 10 %
Aspect	Aspect is not a significant factor

Climatic features

The annual precipitation ranges from 20 to 40 inches. It occurs mainly between the months of October and June in the form of both rain and snow. The soil temperature regime is primarily frigid (east side). The average annual air temperature is about 47 degrees F. The frost free period is less than 120 days. The optimum period for plant growth is from April through July.

Table 3 Representative climatic features

Frost-free period (average)	120 days

Freeze-free period (average)	0 days
Precipitation total (average)	1,020 mm

Influencing water features

Soil features

The soils of this site are moderately deep to a hardpan, loamy textured and moderately well drained or well drained. Seasonally wet conditions in the subsoil are great enough, however, to significantly affect the plant community. They are generally formed in alluvium. Permeability is moderate about the hardpan and very slow below. The avialable water holding capacity is 2 to 4 inches for the profile. The potential for water erosion is slight.

Table 4. Representative soil features

Family particle size	(1) Loamy
Drainage class	Moderately well drained to well drained
Soil depth	100 cm
Available water capacity (0-101.6cm)	5.08 – 10.16 cm

Ecological dynamics

Overstory removal is likely to initiate ponderosa pine regeneration and an increase in plants such as Oregon grape, dewberry, serviceberry, and snowberry.

Composition of the plant community is closely correlated to soil wetness and aeration since this site has a temporary seasonal watertable. An increase in lodgepole pine and water loving species occurs as wetness increses. This often occurs adjacent to lodgepole pine meadow areas which are intermingled with this site. The dry margins will have an increase in Douglas-fir, white fir and/or incense cedar, and less Douglas-fir or spirea.

State and transition model

Additional community tables

Table 5. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production ()	Foliar Cover (%)
Grass/Grasslike					
1	**Dominant deep rooted perennial grasses**			81-135	
	Idaho fescue	FEID	*Festuca idahoensis*	67-101	–
	western fescue	FEOC	*Festuca occidentalis*	13-34	–
2	**Sub-dominant deep rooted perennial grasses**			13-34	
	Orcutt's brome	BROR2	*Bromus orcuttianus*	7-20	–
	Ross' sedge	CARO5	*Carex rossii*	7-13	–

4	**Sub-dominant shallow rooted perennial grasses**			7-20	
	prairie Junegrass	KOMA	*Koeleria macrantha*	7-20	–
Forb					
9	**Other perennial forbs**			13-34	
	common yarrow	ACMI2	*Achillea millefolium*	0-6	–
	blue eyed Mary	COLLI	*Collinsia*	0-6	–
	trumpet	COLLO	*Collomia*	0-6	–
	common woolly sunflower	ERLA6	*Eriophyllum lanatum*	0-6	–
	strawberry	FRAGA	*Fragaria*	0-6	–
	avens	GEUM	*Geum*	0-6	–
	white hawkweed	HIAL2	*Hieracium albiflorum*	0-6	–
	desertparsley	LOMAT	*Lomatium*	0-6	–
	western sweetroot	OSOC	*Osmorhiza occidentalis*	0-6	–
	tall cinquefoil	POAR7	*Potentilla arguta*	0-6	–
Shrub/Vine					
12	**Sub-dominant evergreen shrubs**			20-40	
	pinemat manzanita	ARNE	*Arctostaphylos nevadensis*	7-13	–
	prostrate ceanothus	CEPR	*Ceanothus prostratus*	7-13	–
	hollyleaved barberry	MAAQ2	*Mahonia aquifolium*	7-13	–
13	**Dominant deciduous (or 1/2 shrubs) shrubs**			168-269	
	rose spirea	SPDO	*Spiraea douglasii*	135-202	–
	common snowberry	SYAL	*Symphoricarpos albus*	34-67	–
14	**Sub-dominant deciduous (or 1/2 shrubs) shrubs**			27-94	
	Saskatoon serviceberry	AMAL2	*Amelanchier alnifolia*	7-34	–
	Pacific dewberry	RUVI4	*Rubus vitifolius*	7-34	–
	oceanspray	HODI	*Holodiscus discolor*	7-13	–
	rose	ROSA5	*Rosa*	7-13	–
Tree					
16	**Dominant evergreen trees**			34-67	
	ponderosa pine	PIPO	*Pinus ponderosa*	34-67	–
17	**Sub-dominant evergreen trees**			27-54	
	white fir	ABCO	*Abies concolor*	7-13	–
	incense cedar	CADE27	*Calocedrus decurrens*	7-13	–
	ponderosa pine	PIPO	*Pinus ponderosa*	7-13	–
	Douglas-fir	PSME	*Pseudotsuga menziesii*	7-13	–
18	**Dominant deciduous trees**			7-34	
	willow	SALIX	*Salix*	7-34	–

Contributors

E Ersch
Hickman, Borine
K.Kennedy

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
Contact for lead author	Oregon NRCS State Rangeland Management Specialist
Date	09/05/2012
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

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

2. **Presence of water flow patterns:** None

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):** <5%

5. **Number of gullies and erosion associated with gullies:** None

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

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

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Significantly resistant to erosion: aggregate stability = 4-6

---

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Moderately deep (to a hardpan), moderately well drained or well drained loams (seasonally wet subsoil limits plant growth): Moderate OM (1-3%)

---

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Significant vegetative cover of over 110% and gentle slopes (1-12%) effectively limit rainfall impact and overland flow; infiltration is moderate

---

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

---

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: Rose spirea > Idaho fescue > Snowberry = Ponderosa Pine > Western fescue = forbs > other forbs > other shrubs > other grasses

    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

---

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):** Favorable: 700, Normal: 600, Unfavorable: 500 lbs/acre/year at high RSI (HCPC)

---

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:** Lodgepole pine and other water loving species will increase with increased wetness. Douglas fir, white fir, and incense cedar will increase with decreasing wetness. Cheatgrass and Medusahead invade sites that lost deep rooted perennial grass functional groups.

---

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