USDA Natural Resources Conservation Service

Ecological site R021XY424OR
JUNIPER LAVALANDS 8-11 PZ

Accessed: 05/21/2025

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.

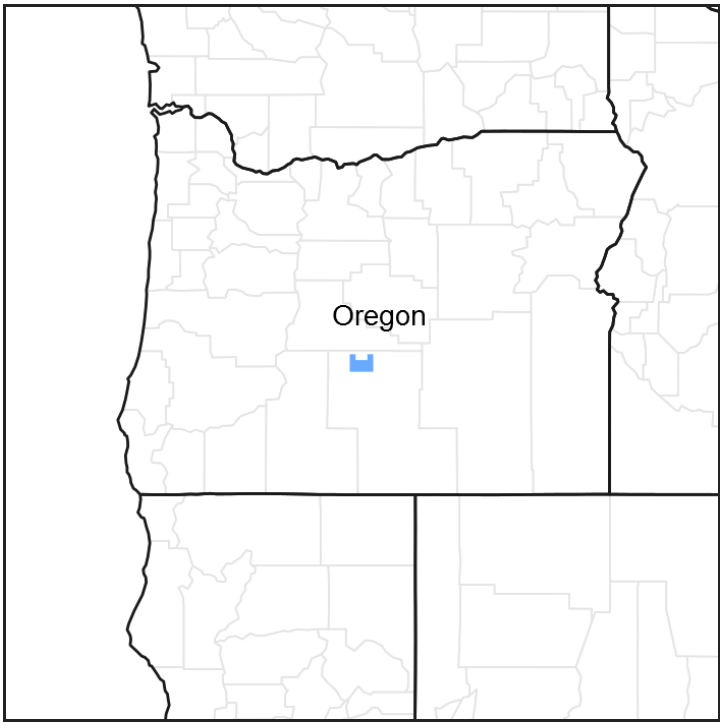


Figure 1. Mapped extent

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.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

Table 2. Representative physiographic features

Landforms	(1) Lava plain
Flooding frequency	None
Ponding frequency	None
Elevation	1,219–1,402 m
Slope	0–50%
Aspect	Aspect is not a significant factor

Climatic features

Summer thunderstorms and summer frosts may occur.

Table 3. Representative climatic features

Frost-free period (average)	60 days
Freeze-free period (average)	90 days
Precipitation total (average)	254 mm

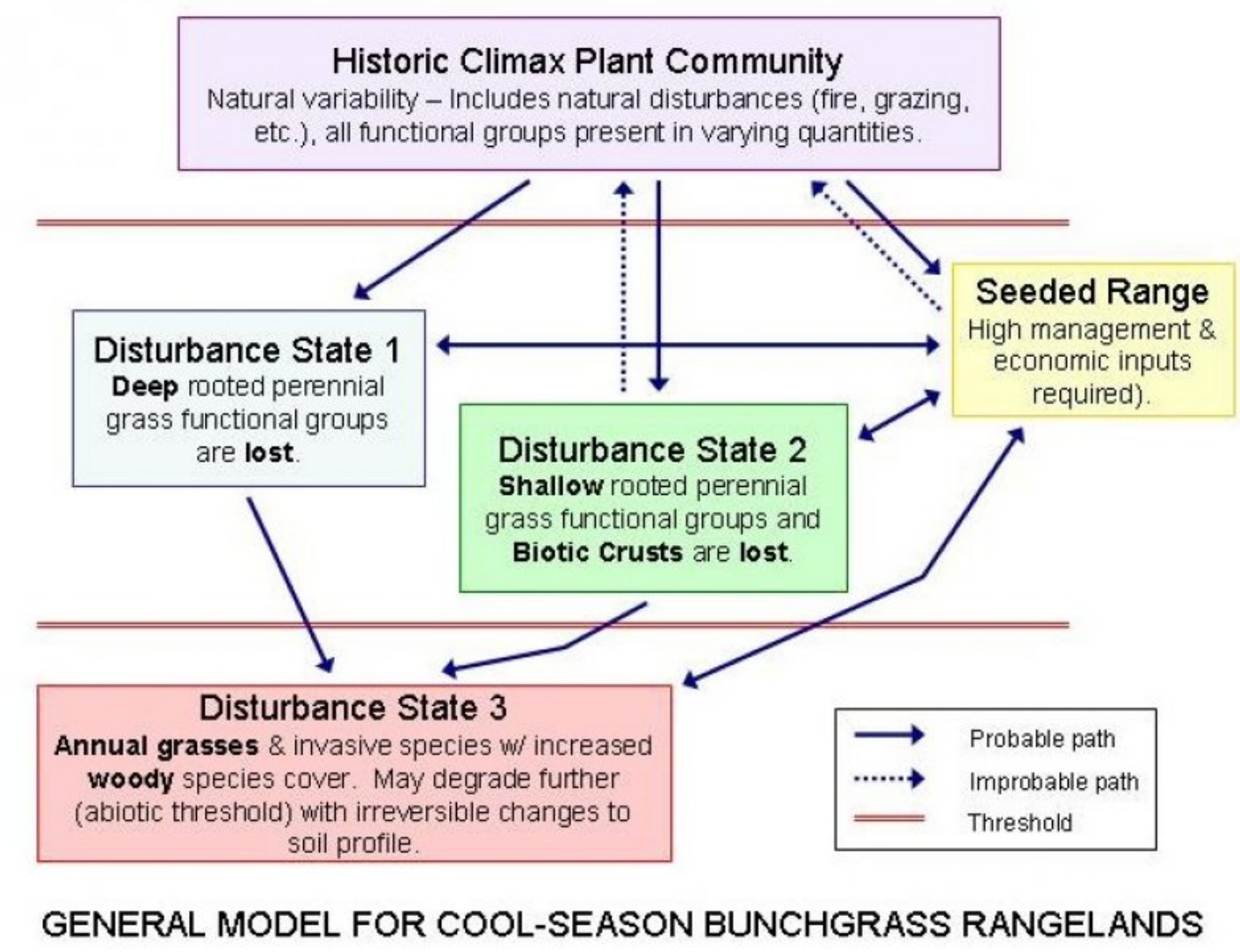
Influencing water features

Soil features

Ecological dynamics

Juniper and curleaf mountian mahogany dominate the overstory as an open stand which is quite variable depending on soil and rock content.
Severe crown fires remove the overstory. Recovery after such fires can be very slow. Sites with more lava flow material are more likely to have limited burming of the overstory - lightning strikes may only affect individual trees. The post fire state is treeless, with rabbitbrush and bunchgrasses, a weedy forb/cheatgrass mix, and scatterred remnant shrubs.

State and transition model



GENERAL MODEL FOR COOL-SEASON BUNCHGRASS RANGELANDS

State 1
HCPC, FEID-PSSP6/ARTRV-CELE3/JUOC

Community 1.1
HCPC, FEID-PSSP6/ARTRV-CELE3/JUOC

Juniper and curleaf mountian mahogany dominate the overstory as an open stand. A mix of low shrubs is common including bitterbrush, wax currant, mountain big sagebrush, and gray rabbitbrush. Desertsweet may also be present in minor amounts. Idaho fescue and bluebunch wheatgrass are codominant but are not high in ground cover because of limited area for plant establishment. A variety of other grasses present may include western needlegrass, Thurber needlegrass, bottlebrush squirreltail, Sandberg bluegrass and Ross sedge (grass like). Forbs are minor in the stand but include a variety of species such as penstemon, buttercup, violet, phacelia, tall potentilla, death camas, canactus tidy tips and parsley.

Table 4. Annual production by plant type

Plant Type	Low (Kg/Hectare)	Representative Value (Kg/Hectare)	High (Kg/Hectare)
Grass/Grasslike	2347	392	455
Shrub/Vine	188	310	432
Tree	47	71	94
Forb	8	24	39
Total	**2590**	**797**	**1020**

Figure 4. Plant community growth curve (percent production by month). OR5621, D21 Juniper Sites 8-16. D21 Juniper Sites 8-16 pz RPC Growth Curve.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	10	30	40	20	0	0	0	0	0

Additional community tables

Table 5. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Kg/Hectare)	Foliar Cover (%)
Grass/Grasslike					
1	**Dominant deep rooted perennial grasses**			314–392	
	Idaho fescue	FEID	*Festuca idahoensis*	157–196	–
	bluebunch wheatgrass	PSSP6	*Pseudoroegneria spicata*	157–196	–
5	**Other perennial grasses**			16–63	
	western needlegrass	ACOC3	*Achnatherum occidentale*	0–6	–
	Thurber's needlegrass	ACTH7	*Achnatherum thurberianum*	0–6	–
	Ross' sedge	CARO5	*Carex rossii*	0–6	–
	squirreltail	ELEL5	*Elymus elymoides*	0–6	–
	prairie Junegrass	KOMA	*Koeleria macrantha*	0–6	–
	Sandberg bluegrass	POSE	*Poa secunda*	0–6	–
Forb					
9	**Other perennial forbs**			8–39	
	grapefern	BOTRY	*Botrychium*	0–6	–
	pincushion	CHAEN	*Chaenactis*	0–6	–
	tidytips	LAYIA	*Layia*	0–6	–

	desertparsley	LOMAT	*Lomatium*	0–6	–
	beardtongue	PENST	*Penstemon*	0–6	–
	phacelia	PHACE	*Phacelia*	0–6	–
	cinquefoil	POTEN	*Potentilla*	0–6	–
	buttercup	RANUN	*Ranunculus*	0–6	–
	violet	VIOLA	*Viola*	0–6	–
	deathcamas	ZIGAD	*Zigadenus*	0–6	–
Shrub/Vine					
11	**Dominant evergreen shrubs**			118–196	
	mountain big sagebrush	ARTRV	*Artemisia tridentata ssp. vaseyana*	118–196	–
13	**Dominant deciduous (or 1/2 shrubs) shrubs**			55–157	
	curl-leaf mountain mahogany	CELE3	*Cercocarpus ledifolius*	39–78	–
	antelope bitterbrush	PUTR2	*Purshia tridentata*	16–78	–
15	**Other shrubs**			16–78	
	basin big sagebrush	ARTRT	*Artemisia tridentata ssp. tridentata*	0–6	–
	desert sweet	CHMI2	*Chamaebatiaria millefolium*	0–6	–
	rubber rabbitbrush	ERNA10	*Ericameria nauseosa*	0–6	–
	chokecherry	PRVI	*Prunus virginiana*	0–6	–
	wax currant	RICE	*Ribes cereum*	0–6	–
	elderberry	SAMBU	*Sambucus*	0–6	–
Tree					
16	**Dominant evergreen trees**			39–78	
	western juniper	JUOC	*Juniperus occidentalis*	39–78	–
17	**Sub-dominant evergreen trees**			8–16	
	ponderosa pine	PIPO	*Pinus ponderosa*	8–16	–

Type locality

Location 1: Lake County, OR	
General legal description	North edge of Fort Rock Valley (south of Devils Garden and adjacent to Cougar mtn.)

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:**