

Ecological site R021XY425OR

JUNIPER-PINE LAVALANDS 10-12 PZ

Accessed: 05/17/2024

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	1,219–1,585 m
Slope	1–50%
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)	305 mm

## Influencing water features

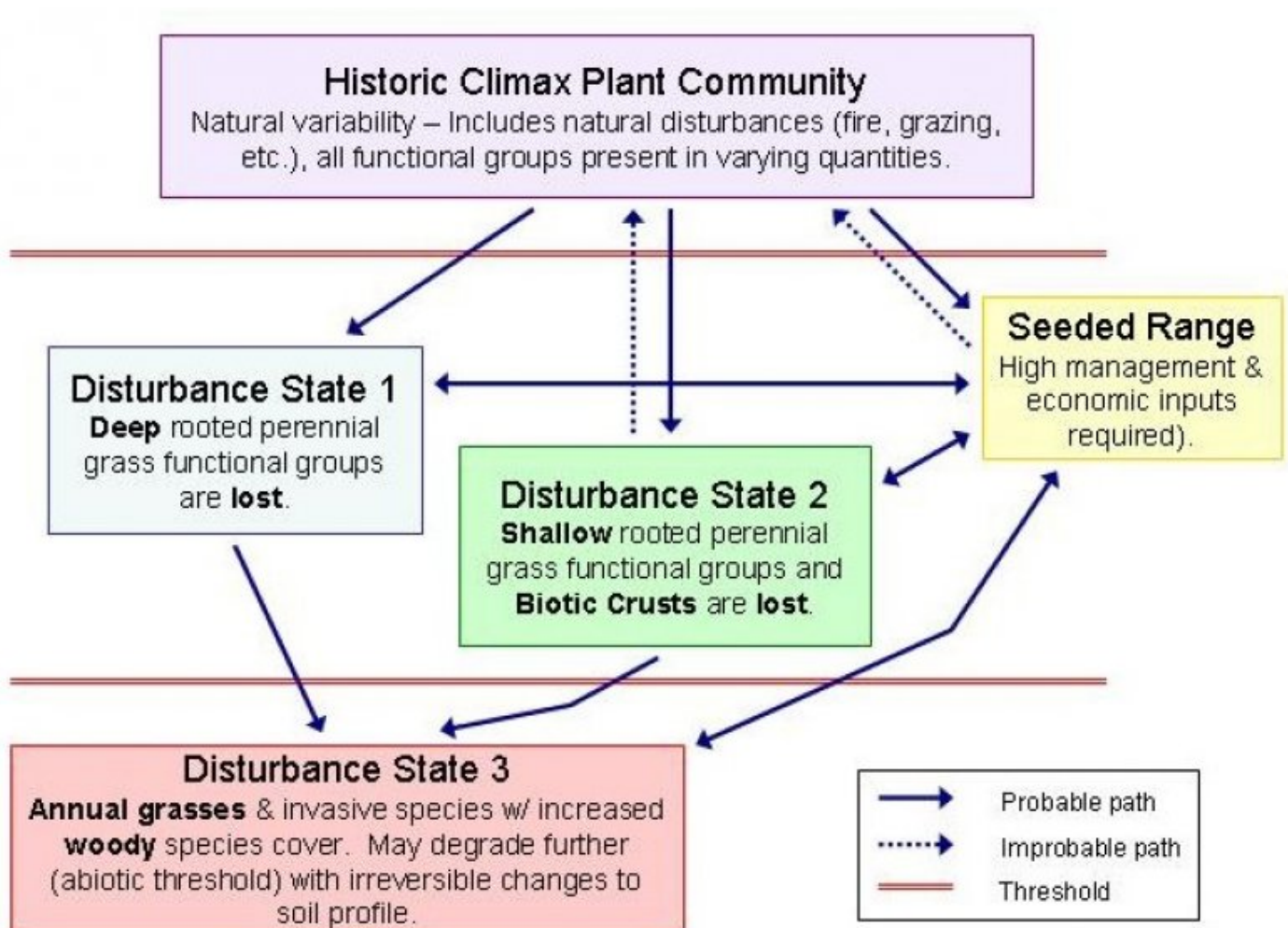
## Soil features

## Ecological dynamics

Juniper and curleaf mountain 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 burning 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 scattered remnant shrubs.

## State and transition model



## GENERAL MODEL FOR COOL-SEASON BUNCHGRASS RANGELANDS

# State 1 HCPC, FEID-PSSP6/ARTRV-CELE3/PIPO

## Community 1.1 HCPC, FEID-PSSP6/ARTRV-CELE3/PIPO

Juniper and ponderosa pine dominate the overstory. Curlleaf mountain mahogany is abundant and dominates the midstory. A mix of low understory shrubs includes bitterbrush, mountain big sagebrush, wax currant, gray rabbitbrush, prickly granite gilia and desertsweet (fernbush). A variety of grasses are present including Idaho fescue, bluebunch wheatgrass, sandberg bluegrass, western needlegrass and Ross sedge (grass-like). Forbs are minor in the stand such as tall cinquefoil, penstemon, phacelia, violet, buttercup, and low larkspur. Cover of all species varies greatly from place to place due to the variability of soil and rock on the landscape.

Table 4. Annual production by plant type

Plant Type	Low (Kg/Hectare)	Representative Value (Kg/Hectare)	High (Kg/Hectare)
Grass/Grasslike	207	242	278
Shrub/Vine	101	164	228
Tree	40	63	86
Forb	26	38	50
<b>Total</b>	<b>374</b>	<b>507</b>	<b>642</b>

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 (%)
<b>Grass/Grasslike</b>					
1	<b>Dominant deep rooted perennial grasses</b>			202–252	
	Idaho fescue	FEID	<i>Festuca idahoensis</i>	101–127	–
	bluebunch wheatgrass	PSSPS	<i>Pseudoroegneria spicata ssp. spicata</i>	101–127	–
5	<b>Other perennial grasses</b>			6–26	
	mountain big sagebrush	ARTRV	<i>Artemisia tridentata ssp. vaseyana</i>	36–45	–
	curl-leaf mountain mahogany	CELE3	<i>Cercocarpus ledifolius</i>	9–18	–
	antelope bitterbrush	PUTR2	<i>Purshia tridentata</i>	3–6	–
	western needlegrass	ACOC3	<i>Achnatherum occidentale</i>	0–6	–
	Thurber's needlegrass	ACTH7	<i>Achnatherum thurberianum</i>	0–6	–
	Ross' sedge	CARO5	<i>Carex rossii</i>	0–6	–
	squirreltail	ELEL5	<i>Elymus elymoides</i>	0–6	–
	prairie Junegrass	KOMA	<i>Koeleria macrantha</i>	0–6	–
	Sandberg bluegrass	POSE	<i>Poa secunda</i>	0–6	–
	wax currant	RICE	<i>Ribes cereum</i>	2–3	–
	desert sweet	CHMI2	<i>Chamaebatiaria millefolium</i>	2–3	–

	rubber rabbitbrush	ERNAS	<i>Ericameria nauseosa</i> ssp. <i>nauseosa</i> var. <i>salicifolia</i>	0–2	–
	oceanspray	HODI	<i>Holodiscus discolor</i>	0–2	–
<b>Forb</b>					
7	<b>Dominant perennial forbs</b>			20–40	
	common yarrow	ACMI2	<i>Achillea millefolium</i>	6–10	–
	Wyoming Indian paintbrush	CALI4	<i>Castilleja linariifolia</i>	6–10	–
	beardtongue	PENST	<i>Penstemon</i>	6–10	–
	cinquefoil	POTEN	<i>Potentilla</i>	6–10	–
9	<b>Other perennial forbs</b>			6–10	
	phacelia	PHACE	<i>Phacelia</i>	0–6	–
	buttercup	RANUN	<i>Ranunculus</i>	0–6	–
	violet	VIOLA	<i>Viola</i>	0–6	–
<b>Shrub/Vine</b>					
11	<b>Dominant evergreen shrubs</b>			50–127	
	mountain big sagebrush	ARTRV	<i>Artemisia tridentata</i> ssp. <i>vaseyana</i>	50–127	–
13	<b>Dominant deciduous (or 1/2 shrubs) shrubs</b>			26–50	
	curl-leaf mountain mahogany	CELE3	<i>Cercocarpus ledifolius</i>	26–50	–
14	<b>Sub-dominant deciduous (or 1/2 shrubs) shrubs</b>			16–26	
	antelope bitterbrush	PUTR2	<i>Purshia tridentata</i>	10–16	–
	desert sweet	CHMI2	<i>Chamaebatiaria millefolium</i>	6–10	–
15	<b>Other shrubs</b>			6–16	
	rubber rabbitbrush	ERNA10	<i>Ericameria nauseosa</i>	0–6	–
	oceanspray	HODI	<i>Holodiscus discolor</i>	0–6	–
<b>Tree</b>					
16	<b>Dominant evergreen trees</b>			36–76	
	western juniper	JUOC	<i>Juniperus occidentalis</i>	26–50	–
	ponderosa pine	PIPO	<i>Pinus ponderosa</i>	10–26	–
19	<b>Sub-dominant deciduous trees</b>			6–10	
	quaking aspen	POTR5	<i>Populus tremuloides</i>	6–10	–

## Type locality

Location 1: Lake County, OR	
General legal description	North edge of Fort Rock Valley (North of Devils Garden; also Derrick Cave area)

## 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:**  

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2. **Presence of water flow patterns:**  

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3. **Number and height of erosional pedestals or terracettes:**  

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

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5. **Number of gullies and erosion associated with gullies:**  

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

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

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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):**  

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

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

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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):

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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:

Sub-dominant:

Other:

Additional:

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