

Ecological site R226XY031AK

Moss/Willow (Coastal) (AK653 St Paul Island)

Accessed: 05/13/2025

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.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

Occurs on flat broad ridges and gently sloping hillsides near the coast.

Table 2. Representative physiographic features

Landforms	(1) Coastal plain
Elevation	9–61 m
Slope	4–16%
Aspect	Aspect is not a significant factor

Climatic features

Table 3. Representative climatic features

Frost-free period (average)	120 days
Freeze-free period (average)	100 days
Precipitation total (average)	610 mm

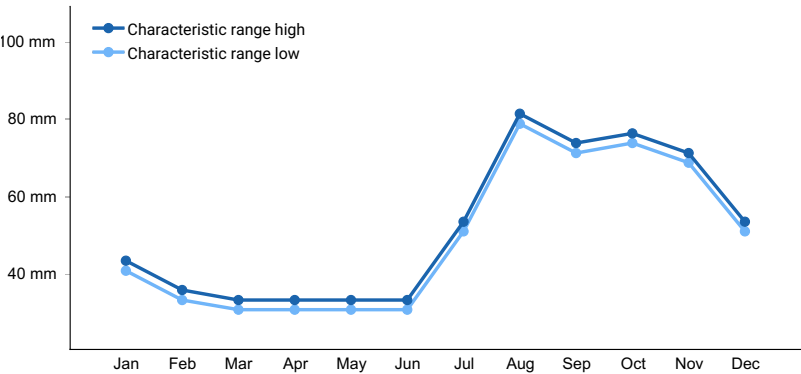


Figure 1. Monthly precipitation range

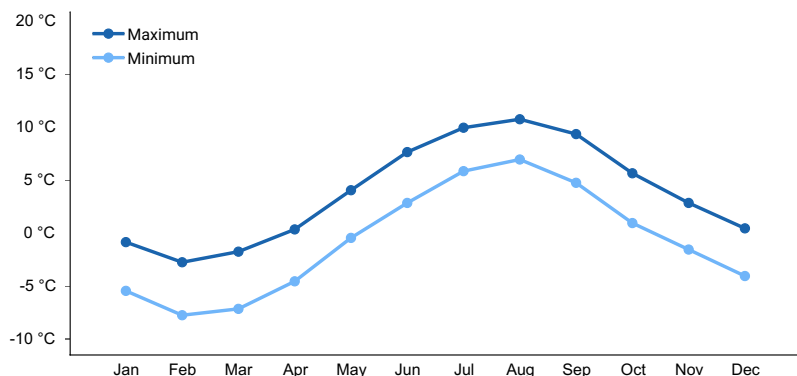


Figure 2. Monthly average minimum and maximum temperature

## Influencing water features

### Soil features

Soils are generally deep and moderately well drained. Textures below the surface are medium, but a sand layer often occurs at the surface. Soil pH is neutral. Runoff is low and permeability is moderate to rapid.

Table 4. Representative soil features

Surface texture	(1) Gravelly sand
Family particle size	(1) Sandy
Drainage class	Moderately well drained
Permeability class	Moderate to rapid
Soil depth	102–152 cm
Surface fragment cover <=3"	0%
Surface fragment cover >3"	0%
Available water capacity (0-101.6cm)	14.22–14.73 cm
Calcium carbonate equivalent (0-101.6cm)	0%
Electrical conductivity (0-101.6cm)	0 mmhos/cm
Sodium adsorption ratio (0-101.6cm)	0
Soil reaction (1:1 water) (0-101.6cm)	6.6–7.3
Subsurface fragment volume <=3" (Depth not specified)	0%
Subsurface fragment volume >3" (Depth not specified)	0%

## Ecological dynamics

### State and transition model

Ecosystem states

1. Lupinus nootkatensis/ Salix ovalifolia
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State 1 submodel, plant communities

1.1. Lupinus nootkatensis/ Salix ovalifolia
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State 1  
Lupinus nootkatensis/ Salix ovalifolia

Community 1.1  
Lupinus nootkatensis/ Salix ovalifolia

Shrubs make up about 40% of the composition, sedges and grasses 15% and forbs about 45% of the composition. Total annual vascular herbage production is 1010 pounds/acre. Total live lichen biomass is 3000 pounds/acre.

Additional community tables

Table 5. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Kg/Hectare)	Foliar Cover (%)
<b>Shrub/Vine</b>					
1				392–504	
	oval-leaf willow	SAOV	<i>Salix ovalifolia</i>	437–460	–
<b>Grass/Grasslike</b>					
1				163–174	
	red fescue	FERU2	<i>Festuca rubra</i>	163–174	–
	Bering chickweed	CEBE2	<i>Cerastium beeringianum</i>	0–6	–
	common woodrush	LUMU2	<i>Luzula multiflora</i>	0–6	–
	spike trisetum	TRSP2	<i>Trisetum spicatum</i>	0–6	–
	American dunegrass	LEMOM2	<i>Leymus mollis ssp. mollis</i>	0–1	–
<b>Forb</b>					
1				476–560	
	Nootka lupine	LUNO	<i>Lupinus nootkatensis</i>	191–202	–
	Pacific hemlockparsley	COGM	<i>Conioselinum gmelinii</i>	163–174	–
	boreal yarrow	ACMIB	<i>Achillea millefolium var. borealis</i>	140–151	–
	sweetflower rockjasmine	ANCH	<i>Androsace chamaejasme</i>	0–6	–
	seacoast angelica	ANLU	<i>Angelica lucida</i>	0–6	–
	field horsetail	EQAR	<i>Equisetum arvense</i>	0–6	–
	Lapland poppy	PALA9	<i>Papaver lapponicum</i>	0–6	–
	northern Jacob's-ladder	POBO2	<i>Polemonium boreale</i>	0–6	–
	villous cinquefoil	POVI4	<i>Potentilla villosa</i>	0–6	–
	larkspurleaf monkshood	ACDE2	<i>Aconitum delphiniifolium</i>	0–6	–

## Animal community

This is a high value winter reindeer range. Grazing should be carefully monitored to avoid overuse of the oval-leaf willow. Reindeer have a tendency to concentrate on this site during winter because they are attracted to the lichens.

## Contributors

David Swanson

## 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:

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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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