Ecological site R226XY056AK
Herbaceous Hillsides (AK653 St Paul Island)

Accessed: 05/03/2024

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.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on sloping foot and side slopes of hills and volcanic cones where deep soils support highly productive stands of vegetation. This site occurs most frequently on north-facing slopes; however the site occurs on all aspects.

Table 2. Representative physiographic features

Landforms	(1) Hillside
Elevation	60–120 ft
Slope	30–100%

Climatic features

Table 3. Representative climatic features

Frost-free period (average)	120 days
Freeze-free period (average)	100 days
Precipitation total (average)	24 in

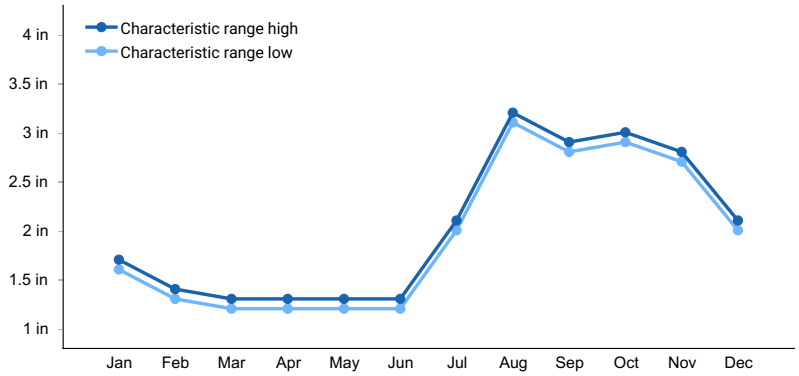

Figure 1. Monthly precipitation range

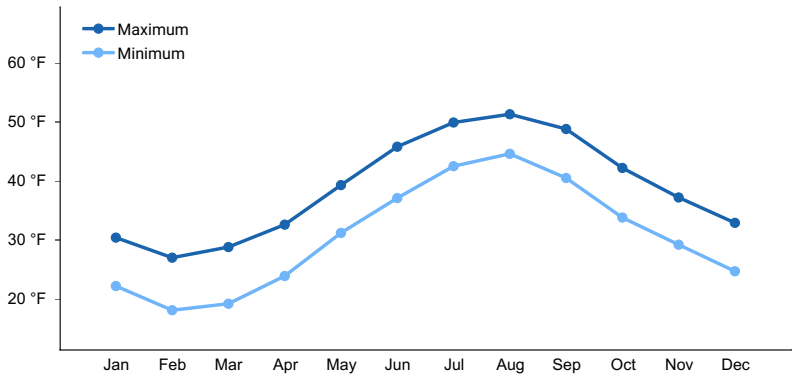

Figure 2. Monthly average minimum and maximum temperature

Influencing water features

Soil features

Soils are deep to very deep and well drained. Textures are medium and soil pH is slightly acid to neutral. Runoff is low and permeability is moderately rapid to rapid.

Table 4. Representative soil features

Surface texture	(1) Medial sandy loam
Family particle size	(1) Loamy
Drainage class	Well drained
Permeability class	Moderately rapid to rapid
Soil depth	40–60 in
Surface fragment cover <=3"	0%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	8.6–8.8 in
Calcium carbonate equivalent (0-40in)	0%
Electrical conductivity (0-40in)	0 mmhos/cm
Sodium adsorption ratio (0-40in)	0
Soil reaction (1:1 water) (0-40in)	6.1–7.3
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. Elymus mollis/ Lupinus nootkatensis

State 1 submodel, plant communities

1.1. Elymus mollis/ Lupinus nootkatensis

State 1
Elymus mollis/ Lupinus nootkatensis

Community 1.1
Elymus mollis/ Lupinus nootkatensis

Forbs make up 90% and grasses 10% of the composition. Total annual vascular herbage production is 4250 pounds/acre.

Additional community tables

Table 5. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1				430–440	
	American dunegrass	LEMOM2	*Leymus mollis ssp. mollis*	270–280	–
	wideleaf polargrass	ARLA2	*Arctagrostis latifolia*	70–80	–
	shortstalk sedge	CAPO	*Carex podocarpa*	30–40	–
	foxtail	ALOPE	*Alopecurus*	10–20	–
Forb					
1				3500–4000	
	Nootka lupine	LUNO	*Lupinus nootkatensis*	1900–1950	–
	seacoast angelica	ANLU	*Angelica lucida*	550–600	–
	Pacific hemlockparsley	COGM	*Conioselinum gmelinii*	340–345	–
	arctic sweet coltsfoot	PEFR5	*Petasites frigidus*	255–265	–
	Tilesius' wormwood	ARTI	*Artemisia tilesii*	180–200	–
	boreal yarrow	ACMIB	*Achillea millefolium var. borealis*	135–145	–
	field horsetail	EQAR	*Equisetum arvense*	120–130	–
	captiate valerian	VACA3	*Valeriana capitata*	70–80	–
	Bering chickweed	CEBE2	*Cerastium beeringianum*	45–55	–
	larkspurleaf monkshood	ACDE2	*Aconitum delphiniifolium*	45–50	–
	dandelion	TARAX	*Taraxacum*	30–40	–
	tall Jacob's-ladder	POAC	*Polemonium acutiflorum*	25–35	–
	springbeauty	CLAYT	*Claytonia*	0–5	–

Animal community

Grasses and grass-likes such as wide leaf polargrass, shortstalk sedge, alpine timothy and bluegrass provide high value reindeer forage from spring to fall. These same grasses decline in forage value during the winter, at which time their forage value is moderate. The large variety of forbs provides excellent spring and summer forage. These areas are subject to snow accumulation during winter and on the north facing slopes; snow is retained for longer periods into the spring than surrounding sites.

Contributors

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:**
