USDA Natural Resources Conservation Service

Ecological site R226XY099AK
Grassy Meadow (AK653 St Paul Island)

Accessed: 05/12/2025

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

This site occurs in broad drainage-ways, plains and alluvial fans. This site occurs near the coastal zones and in conjunction with Forb Tundra (Coastal).

Table 2. Representative physiographic features

Landforms	(1) Drainageway (2) Plain (3) Alluvial fan
Elevation	6–24 m
Slope	1–10%

Climatic features

Table 3. Representative climatic features

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

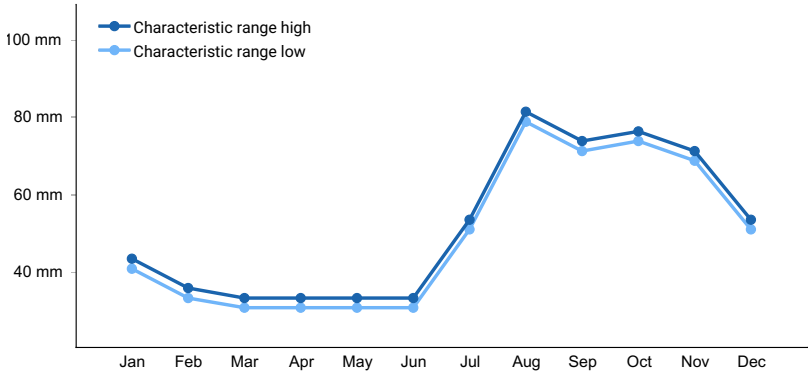

Figure 1. Monthly precipitation range

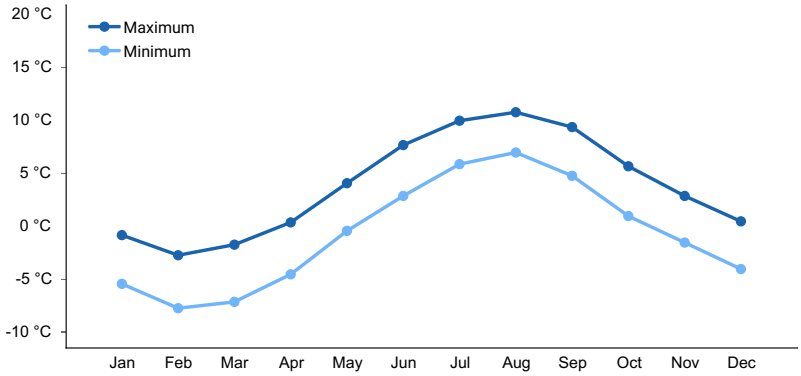

Figure 2. Monthly average minimum and maximum temperature

Influencing water features

Soil features

Soils are moderately deep to deep and moderately well to somewhat poorly drained. Soil pH is moderately acid. Soils are stony and cobbly, and textures are medium. Runoff is very low and permeability is moderately rapid.

Table 4. Representative soil features

Surface texture	(1) Medial silt loam (2) Stony
Family particle size	(1) Loamy
Drainage class	Moderately well drained to somewhat poorly drained
Permeability class	Moderately rapid
Soil depth	51–152 cm
Surface fragment cover <=3"	0%
Surface fragment cover >3"	0%
Available water capacity (0-101.6cm)	14.99–15.49 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)	5.6–6
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 arenarius ssp. mollis/Calamagrostis holmii

State 1 submodel, plant communities

1.1. Elymus arenarius ssp. mollis/Calamagrostis holmii

State 1
Elymus arenarius ssp. mollis/Calamagrostis holmii

Community 1.1
Elymus arenarius ssp. mollis/Calamagrostis holmii

Grasses make up 60% and forbs 40% of the composition. Total annual vascular herbage production is 3660 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 (%)
Grass/Grasslike					
1				2410–2522	
	American dunegrass	LEMOM2	*Leymus mollis ssp. mollis*	1334–2242	–
	Holm's reedgrass	CAHO	*Calamagrostis holmii*	600–611	–
	wideleaf polargrass	ARLA2	*Arctagrostis latifolia*	291–308	–
	arctic bluegrass	POARA2	*Poa arctica ssp. arctica*	129–135	–
	alpine timothy	PHAL2	*Phleum alpinum*	39–50	–
	Bering's tufted hairgrass	DEBE2	*Deschampsia beringensis*	22–34	–
Forb					
1				1569–1681	
	seacoast angelica	ANLU	*Angelica lucida*	493–510	–
	Pacific hemlockparsley	COGM	*Conioselinum gmelinii*	286–291	–
	boreal yarrow	ACMIB	*Achillea millefolium var. borealis*	207–213	–
	Nootka lupine	LUNO	*Lupinus nootkatensis*	196–213	–
	Tilesius' wormwood	ARTI	*Artemisia tilesii*	101–112	–
	larkspurleaf monkshood	ACDEC	*Aconitum delphiniifolium ssp. chamissonianum*	73–84	–
	northern Jacob's-ladder	POBOM	*Polemonium boreale ssp. macranthum*	34–39	–
	northern starwort	STCA	*Stellaria calycantha*	17–28	–
	Aleutian violet	VILA6	*Viola langsdorffii*	11–17	–
	larkspurleaf monkshood	ACDE2	*Aconitum delphiniifolium*	6–17	–
	Hornemann's willowherb	EPHOB	*Epilobium hornemannii ssp. behringianum*	11–17	–
	field horsetail	EQAR	*Equisetum arvense*	6–17	–
	Danish scurvygrass	COGR6	*Cochlearia groenlandica*	6–11	–
	captiate valerian	VACA3	*Valeriana capitata*	6–11	–

Animal community

Excellent in spring for a short period of time after soils have thawed and snow runoff has percolated down through soil profile. Later on during middle to late summer, the forage is significantly reduced.

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:**
