USDA Natural Resources Conservation Service

Ecological site R226XY030AK
Crowberry (Lowland) (St. Paul Island)

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.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

Occurs on flat plains and flat broad ridges on sandy plains.

Table 2. Representative physiographic features

Landforms	(1) Valley flat
Elevation	9–73 m
Slope	0–8%
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

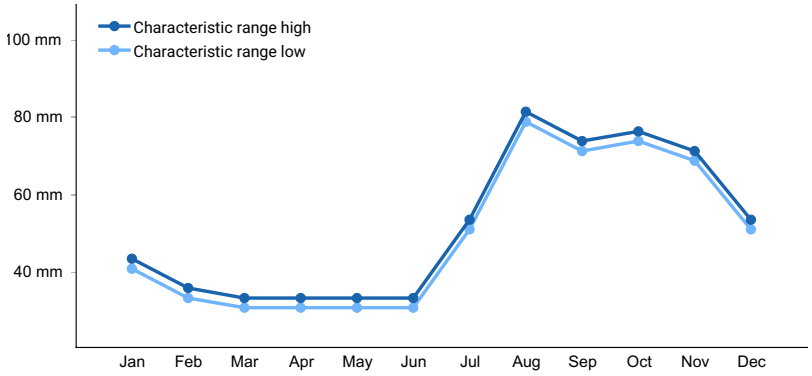

Figure 1. Monthly precipitation range

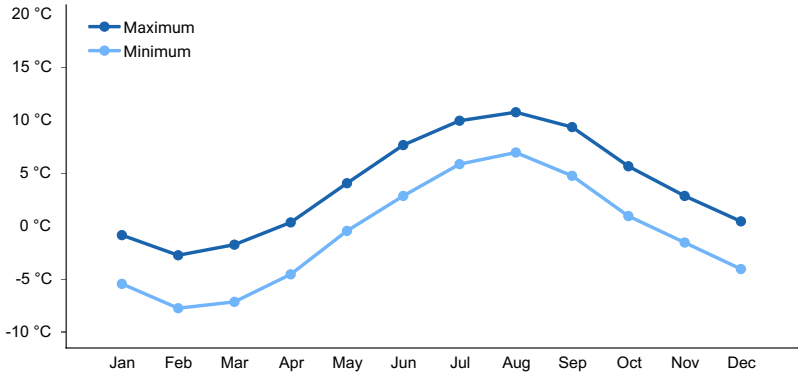

Figure 2. Monthly average minimum and maximum temperature

Influencing water features

Soil features

Soils are moderately deep to very deep and well drained. Soils are medium textured and soil pH ranges from strongly acid to slightly acid. Runoff is low to very low, and permeability is moderately rapid to rapid in the upper part.

Table 4. Representative soil features

Surface texture	(1) Medial silt loam
Family particle size	(1) Loamy
Drainage class	Well drained
Permeability class	Moderately rapid to rapid
Soil depth	51–152 cm
Surface fragment cover <=3"	0%
Surface fragment cover >3"	0%
Available water capacity (0-101.6cm)	20.57–21.08 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)	5.1–6.5
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. Empetrum nigrum L./Carex macrochaeta

State 1 submodel, plant communities

1.1. Empetrum nigrum L./Carex macrochaeta

State 1
Empetrum nigrum L./Carex macrochaeta

Community 1.1
Empetrum nigrum L./Carex macrochaeta

Composition is 20% grasses and grasslikes, 4% forbs, 77% shrubs, and 1% lichens. Avergae annual herbage production is 600-800 pounds/acre.

Table 5. Annual production by plant type

Plant Type	Low (Kg/Hectare)	Representative Value (Kg/Hectare)	High (Kg/Hectare)
Grass/Grasslike	179	194	202
Lichen	22	31	34
Forb	22	30	34
Total	**223**	**255**	**270**

Additional community tables

Table 6. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Kg/Hectare)	Foliar Cover (%)
Shrub/Vine					
1				695–729	
	black crowberry	EMNI	*Empetrum nigrum*	695–729	–
Grass/Grasslike					
1				179–202	
	longawn sedge	CAMA11	*Carex macrochaeta*	179–185	–
	Bering hairgrass	DEBR2	*Deschampsia brevifolia*	6–17	–
	bluegrass	POA	*Poa*	–	–
	wideleaf polargrass	ARLA2	*Arctagrostis latifolia*	–	–
Forb					
1				22–34	
	Nootka lupine	LUNO	*Lupinus nootkatensis*	22–34	–
	cloudberry	RUCH	*Rubus chamaemorus*	4–7	–
	heartleaf saxifrage	SANEN	*Saxifraga nelsoniana ssp. nelsoniana*	–	–
	saxifrage	SAXIF	*Saxifraga*	–	–
	seacoast angelica	ANLU	*Angelica lucida*	–	–
	mountain harebell	CALA7	*Campanula lasiocarpa*	–	–
Lichen					
1				22–39	
	whiteworm lichen	THAMN3	*Thamnolia*	22–39	–
	cup lichen	CLAM60	*Cladonia amaurocraea*	0–6	–
	reindeer lichen	CLAR60	*Cladina arbuscula*	0–6	–
	greygreen reindeer lichen	CLRA60	*Cladina rangiferina*	0–6	–

Recreational uses

Traditional Mossberry picking, hiking

Contributors

David Swanson
Rick Strait

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:**
