

Ecological site R226XY060AK

Sedge Meadow (Lowland) (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 occupies coastal and inland areas on the west coast of St. Paul Island, on gently sloping plains and uplands slopes.

Table 2. Representative physiographic features

Landforms	(1) Plain
Elevation	60–200 ft
Slope	6–15%

Climatic features

Table 3. Representative climatic features

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

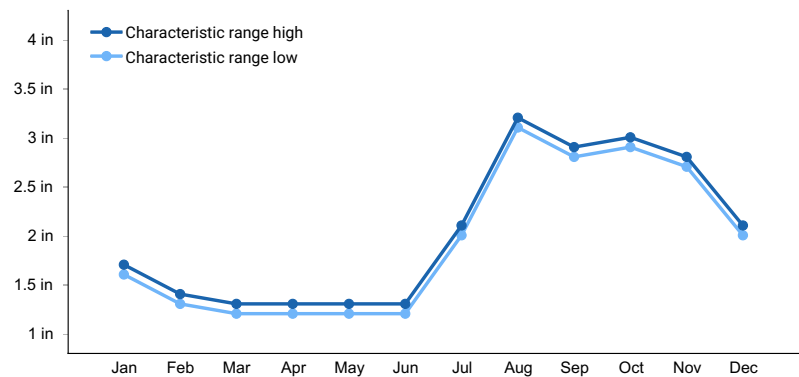


Figure 1. Monthly precipitation range

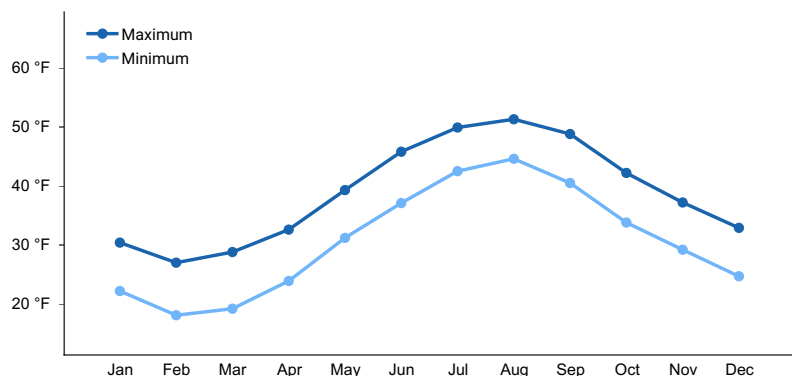


Figure 2. Monthly average minimum and maximum temperature

Influencing water features

Soil features

Soils are moderately deep and moderately well to well drained. Textures are fine to medium and soil pH is strongly to moderately acid. Runoff is low to medium and permeability is moderately slow to moderately rapid.

Table 4. Representative soil features

Surface texture	(1) Very cobbly silt loam (2) Medial
Family particle size	(1) Loamy
Drainage class	Moderately well drained to well drained
Permeability class	Moderately slow to moderately rapid
Soil depth	20–40 in
Surface fragment cover <=3"	0%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	9.5–9.7 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)	5.1–6
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. Carex
podocarpa/Salix
cyclophylla

State 1 submodel, plant communities

1.1. Carex
podocarpa/Salix
cyclophylla

State 1 Carex podocarpa/Salix cyclophylla

Community 1.1 Carex podocarpa/Salix cyclophylla

Sedges and grasses make up about 45% of the composition. Forbs make up 30% and shrubs 25% . Total annual vascular herbage production is 1610 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 (%)
Shrub/Vine					
1				350–400	
	oval-leaf willow	SAOVC	<i>Salix ovalifolia</i> var. <i>cyclophylla</i>	185–195	–
	netleaf willow	SARE2	<i>Salix reticulata</i>	90–95	–
	arctic willow	SAAR27	<i>Salix arctica</i>	55–65	–
	black crowberry	EMNI	<i>Empetrum nigrum</i>	30–35	–
Grass/Grasslike					
1				750–775	
	shortstalk sedge	CAPO	<i>Carex podocarpa</i>	195–205	–
	sedge	CAREX	<i>Carex</i>	180–200	–
	Bering's tufted hairgrass	DEBE2	<i>Deschampsia beringensis</i>	70–80	–
	bluegrass	POA	<i>Poa</i>	60–70	–
	showy sedge	CASP5	<i>Carex spectabilis</i>	45–55	–
	red fescue	FERU2	<i>Festuca rubra</i>	30–35	–
	spike trisetum	TRSP2	<i>Trisetum spicatum</i>	20–30	–
	alpine timothy	PHAL2	<i>Phleum alpinum</i>	15–25	–
	Alaska fescue	FEBR2	<i>Festuca brevissima</i>	5–15	–
	Kentucky bluegrass	POPR	<i>Poa pratensis</i>	5–15	–
	curved woodrush	LUAR5	<i>Luzula arcuata</i>	5–15	–
	Aleutian wormwood	ARAL6	<i>Artemisia aleutica</i>	10–15	–

	Alaska curved woodrush	LUARU	<i>Luzula arcuata ssp. unalaschcensis</i>	0–5	–
	common woodrush	LUMU2	<i>Luzula multiflora</i>	0–5	–
	woodrush	LUZUL	<i>Luzula</i>	0–5	–
	alpine fescue	FEBR	<i>Festuca brachyphylla</i>	0–5	–
Forb					
1				450–500	
	Nootka lupine	LUNO	<i>Lupinus nootkatensis</i>	60–70	–
	seacoast angelica	ANLU	<i>Angelica lucida</i>	55–65	–
	capitate valerian	VACA3	<i>Valeriana capitata</i>	50–55	–
	boreal yarrow	ACMIB	<i>Achillea millefolium var. borealis</i>	45–55	–
	Tilesius' wormwood	ARTI	<i>Artemisia tilesii</i>	30–35	–
	boreal yarrow	ACMIB	<i>Achillea millefolium var. borealis</i>	15–25	–
	Lehmann's rockjasmine	ANCHL	<i>Androsace chamaejasme ssp. lehmanniana</i>	15–25	–
	weaselsnout	LAGL2	<i>Lagotis glauca</i>	20–25	–
	field horsetail	EQAR	<i>Equisetum arvense</i>	5–15	–
	Aleutian violet	VILA6	<i>Viola langsдорffii</i>	5–15	–
	mountain harebell	CALA7	<i>Campanula lasiocarpa</i>	5–15	–
	boreal sagebrush	ARAR9	<i>Artemisia arctica</i>	0–10	–
	larkspurleaf monkshood	ACDEP	<i>Aconitum delphiniifolium ssp. paradoxum</i>	0–10	–
	arctic stitchwort	MIAR3	<i>Minuartia arctica</i>	5–10	–
	arctic sweet coltsfoot	PEFR5	<i>Petasites frigidus</i>	5–10	–
	heartleaf saxifrage	SANEN	<i>Saxifraga nelsoniana ssp. nelsoniana</i>	0–10	–
	tall Jacob's-ladder	POAC	<i>Polemonium acutiflorum</i>	3–8	–
	sulphur buttercup	RASU2	<i>Ranunculus sulphureus</i>	2–8	–
	arctic raspberry	RUAR	<i>Rubus arcticus</i>	0–5	–
	arctic raspberry	RUARS	<i>Rubus arcticus ssp. stellatus</i>	0–5	–
	stiffstem saxifrage	SAHI5	<i>Saxifraga hieraciifolia</i>	0–5	–
	sudetic lousewort	PESU	<i>Pedicularis sudetica</i>	0–5	–
	whorled lousewort	PEVE	<i>Pedicularis verticillata</i>	0–5	–
	Bering chickweed	CEBE2	<i>Cerastium beeringianum</i>	0–5	–
	Bering chickweed	CEBEG3	<i>Cerastium beeringianum ssp. beeringianum var. grandiflorum</i>	0–5	–
	Alaska springbeauty	CLSA2	<i>Claytonia sarmentosa</i>	0–5	–
	larkspurleaf monkshood	ACDEC	<i>Aconitum delphiniifolium ssp. chamissonianum</i>	0–5	–
	common dandelion	TAOFC	<i>Taraxacum officinale ssp. ceratophorum</i>	0–2	–
	arctic starflower	TREUA	<i>Trientalis europaea ssp. arctica</i>	0–2	–
	dandelion	TARAX	<i>Taraxacum</i>	0–1	–
	alpine bistort	POVI3	<i>Polygonum viviparum</i>	0–1	–
	umbel bittercress	CAOLK	<i>Cardamine oligosperma var. kamtschatica</i>	0–1	–
	villous cinquefoil	POVI4	<i>Potentilla villosa</i>	0	–

	moss campion	SIAC	<i>Silene acaulis</i>	0	–
	common chickweed	STME2	<i>Stellaria media</i>	0	–
Lichen					
1				0–5	
	whiteworm lichen	THAMN3	<i>Thamnolia</i>	0–2	–
	whiteworm lichen	THSU60	<i>Thamnolia subuliformis</i>	0–2	–
	lung lichen	LOLI60	<i>Lobaria linita</i>	0–1	–

Animal community

Sedges and shrubs both provide high quality forage during both the winter and spring seasons.

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:
-
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:**
