

Ecological site R226XY056AK Herbaceous Hillside (AK653 St Paul Island)

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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 |

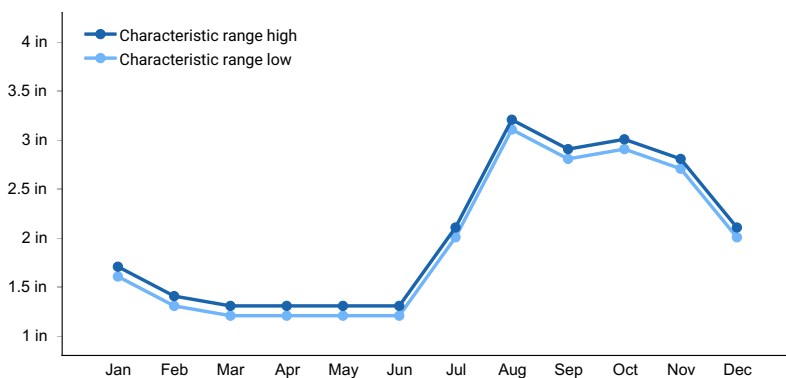


Figure 1. Monthly precipitation range

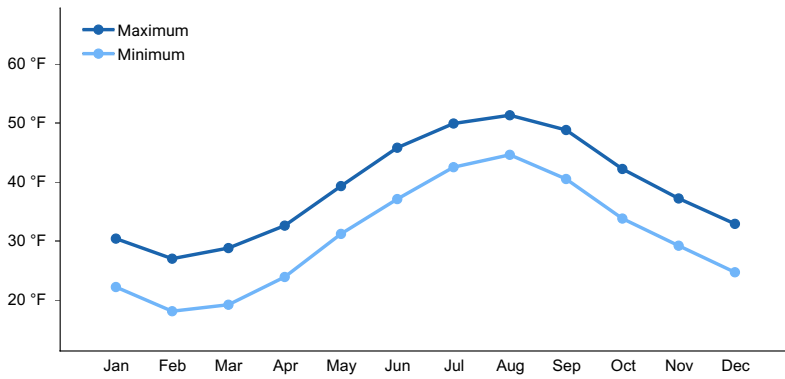


Figure 2. Monthly average minimum and maximum temperature

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

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):**
-

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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