Ecological site R224XY257AK
Gravelly Flood Plains, Cool Alpine-riparian scrub gravelly diorite flood plains, Alpine-riparian scrub gravelly flood plains

Accessed: 04/25/2024

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.

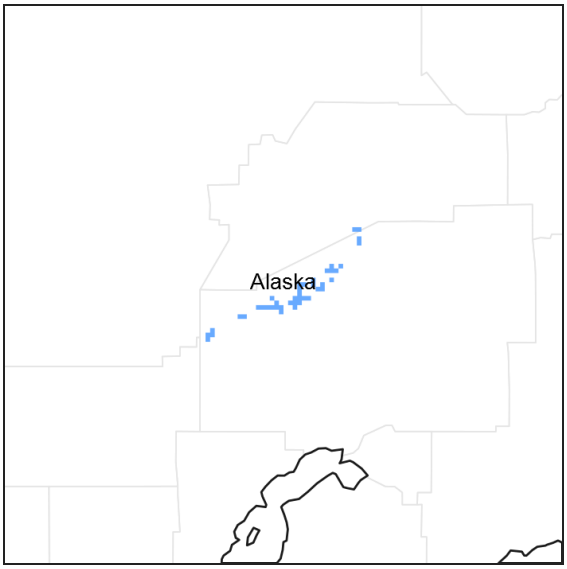

Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site is on nearly level or gently sloping, somewhat excessively drained, very deep soils on channels on flood plains, occurring in MLRA 224 Cook Inlet Lowlands, located in South Central Alaska

Table 2. Representative physiographic features

Landforms	(1) Channel (2) Flood plain
Flooding duration	Brief (2 to 7 days)
Flooding frequency	Rare to occasional
Ponding frequency	None

Elevation	1,263–2,565 ft
Slope	2–6%
Water table depth	72 in
Aspect	Aspect is not a significant factor

Climatic features

Influencing water features

Soil features

Alpine-Riparian Scrub Gravelly Diorite Flood Plains component is on channels on flood plain. The parent material consists of sandy and gravelly alluvium derived from diorite. The depth to restrictive layer is greater than 80 inches. It is somewhat excessively drained. The slowest permeability of the soil material is moderately rapid. Available water capacity is low and shrink swell potential is low. This soil is occasionally flooded and is not ponded. The water table is deeper than 6 feet. There are no saline horizons within 30 inches of the soil surface.

Alpine-Riparian Scrub Gravelly Flood Plains component is on a channels on flood plains. The parent material consists of sandy and gravelly alluvium. The depth to restrictive layer is greater than 80 inches. It is somewhat excessively drained. The slowest permeability of the soil material is moderately rapid. Available water capacity is low and shrink swell potential is low. This soil is occasionally flooded and is not ponded. The water table is deeper than 6 feet. The maximum amount of calcium carbonate within 40 inches is 1 percent. There are no saline horizons within 30 inches of the soil surface.

Table 3. Representative soil features

Surface texture	(1) Extremely cobbly coarse sand (2) Extremely gravelly loamy coarse sand
Family particle size	(1) Sandy
Drainage class	Somewhat excessively drained
Permeability class	Moderately rapid
Soil depth	72 in
Surface fragment cover <=3"	35–60%
Surface fragment cover >3"	0–35%
Available water capacity (0-40in)	2 in
Calcium carbonate equivalent (0-40in)	0–1%
Electrical conductivity (0-40in)	0–1 mmhos/cm
Soil reaction (1:1 water) (0-40in)	5–8.4
Subsurface fragment volume <=3" (Depth not specified)	35–60%
Subsurface fragment volume >3" (Depth not specified)	0–35%

Ecological dynamics

State and transition model

Contributors

Dennis Moore
Michelle Schuman

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:**