

Ecological site F227XY110AK

Mountain Slopes, Shallow

Accessed: 09/24/2026

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	(1) <i>Picea glauca</i>
Shrub	(1) <i>Betula glandulosa</i>
Herbaceous	Not specified

Physiographic features

This site occurs on bedrock cored mountain slopes and summits below about 2900 feet (884 m) elevation. Most areas have been smeared with a thin mantle of loamy till and lacustrine deposits. Slopes range from about 8 to 35 percent.

In the Gulkana River area, this site is of minor occurrence in a few scattered locations above the Middle Fork and upper Main Stem. It is probably extensive at middle elevations throughout the Copper River basin

Table 2. Representative physiographic features

Landforms	(1) Mountain slope
Flooding frequency	None
Elevation	760 – 880 m
Slope	0 – 40 %
Water table depth	150 cm
Aspect	Aspect is not a significant factor

Climatic features

The subarctic continental climate of this site is characterized by long cold winters and short warm summers. Mean January temperature is -2 °F.; mean July temperature is 54 °F. Mean annual precipitation ranges from 15 to 21 inches. Annual snowfall ranges from 54 to 102 inches. The frost-free season is about 60 to 80 days (28 °F. base temperature). The growing season varies greatly from year to year and

frosts can occur during any summer month.

Table 3 Representative climatic features

Frost-free period (average)	80 days
Freeze-free period (average)	0 days
Precipitation total (average)	530 mm

Influencing water features

Soil features

The moderately well developed soils on this site have a mantle of silty eolian material 1 to 4 inches (2 to 10 cm) thick over very gravelly and very cobbly loamy till and loamy lacustrine material. Bedrock is at depths of 10 to 20 inches in most places. The soils are well drained. Parent aterial is glacial till and colluvium over bedrock. Note: this is not available as a choice below.

Table 4. Representative soil features

Surface texture	(1) Silt loam
Family particle size	(1) Loamy
Drainage class	Well drained
Soil depth	30 – 50 cm
Available water capacity (0-101.6cm)	0.3 – 0.51 cm

Ecological dynamics

Spruce/shrub birch woodland is best described as mid to late seral. This type develops on a wide variety of sites following fire, either from Low shrub birch scrub or Low shrub birch/lichen scrub. On sandy and gravelly soils on stream terraces, outwash plains, and strandline deposits, and other sites with a short fire return interval, Spruce/shrub birch woodland is probably the potential. Elsewhere, continued succession may lead to Spruce/spruce muskeg sedge open forest and possibly Black spruce/closed sheath cottongrass woodland.

Wildfire, which is common in the boreal forest zone of the Copper River basin, periodically impacts this site. Most stands have common to abundant charred snags and woody debris; scattered trees and clumps of trees are common also. Following wildfire, the vegetation on this site would be expected to go through a relatively short-lived herb stage codominated by herbs and shrub sprouts. This would be followed by a Low shrub birch scrub stage with occasional to common spruce regeneration. Most areas of this site in the Gulkana River area currently support Low shrub birch scrub. Woodland development likely is a long-term process at the elevation and on the soils of this site. Seed trees in many burned stands were rare and tree seedlings nearly impossible to find.

Riparian-Wetland Status Classification: almost always upland; occasionally Palustrine needle-leaved evergreen scrub-shrub and forested (Cowardin et al. 1979)

State and transition model

Additional community tables

Table 5. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production ()	Foliar Cover (%)
-------	-------------	--------	-----------------	----------------------	------------------

Table 6. Community 2.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production ()	Foliar Cover (%)
-------	-------------	--------	-----------------	----------------------	------------------

Table 7. Community 3.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production ()	Foliar Cover (%)
-------	-------------	--------	-----------------	----------------------	------------------

Animal community

Habitat is suitable for Moose, Caribou and Grizzly for certain periods of time.

Contributors

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:
