

Ecological site R227XY203AK

Upper Mountains Slopes, Shallow Cobblank,cool; Goodview

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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.



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 occurs on bedrock cored mountain slopes and summits above about 2700 feet (823 m) elevation. Most areas have been smeared with a thin mantle of loamy till and lacustrine deposits. Slopes range from 0 to 30 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
Elevation	823–1,097 m
Slope	0–30%

Water table depth	152 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)	0 days
Freeze-free period (average)	0 days
Precipitation total (average)	0 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.

**Table 4. Representative soil features**

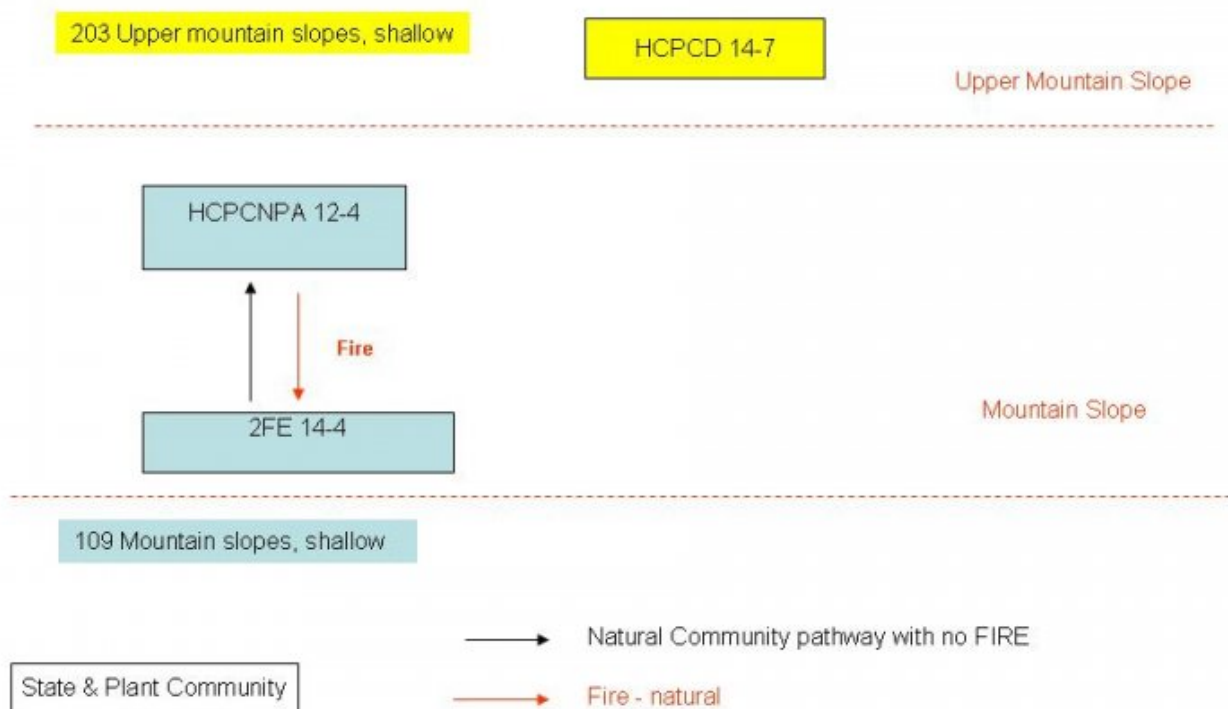
Surface texture	(1) Silt loam (2) Loam
Drainage class	Well drained
Soil depth	25–51 cm
Available water capacity (0-101.6cm)	0.33–0.51 cm

## Ecological dynamics

Wildfire, which is common in the boreal forest zone of the Copper River Plateau, periodically impacts this site. The occurrence and abundance of charred snags and woody litter in some sample stands suggests that scattered small trees are probably found throughout the PNC at lower elevations. Following wildfire, the vegetation on this site would be expected to go through a relatively short-lived stage codominated by herbs and shrub sprouts. This stage would lead directly to scrub vegetation similar to the PNC.

## State and transition model

## Relationship between ecological sites on mountain slopes



### State 1 Low Shrub Birch Scrub

#### Community 1.1 Low Shrub Birch Scrub

Low shrub birch scrub is the correlated PNC on this site. Low shrub birch scrub consists of moderately open to closed stands of medium and low shrubs dominated by *Betula glandulosa*, *Ledum* spp., and *Vaccinium uliginosum*. Low shrub birch scrub consists of moderately open to closed stands of medium and low shrubs dominated by *Betula glandulosa*, *Ledum* spp., and *Vaccinium uliginosum*. Dwarf shrub, primarily *Vaccinium vitis-idaea* and *Empetrum nigrum*, also are usually abundant. *B. glandulosa* is typically 4.5 to 7 feet (1.4 to 2.1 m) in height and forms an irregular, broken upper shrub layer. Other shrubs are usually about 3 feet (0.9 m) in height or less and fill in the spaces between and below the birch. In many stands, *Picea glauca* and/or *P. mariana* saplings, small trees, and relic trees are common to well-represented. Canopy cover of the upper shrub layer ranges from 25 to 70 percent. Total shrub canopy cover is usually between 50 and 90 percent. In most stands, the herb layer is sparse to open. The number of different herb species is usually fairly high; however, no species are particularly abundant.

**Forest understory.** Important herbs include *Equisetum* spp., *Petasites frigidus*, *Epilobium angustifolium*, *Arctagrostis latifolia*, and *Calamagrostis canadensis*. A mosaic of feathermoss, lichen, and litter covers the ground surface. In some stands on more mesic sites, *Carex lugens* is abundant to very abundant, and lichen is usually considerably more abundant. Most stands show evidence of recent burns, and snags and woody litter are common to well-represented.

Table 5. Ground cover

Tree foliar cover	0%
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Shrub/vine/liana foliar cover	1-35%
Grass/grasslike foliar cover	1%
Forb foliar cover	1%
Non-vascular plants	20-50%
Biological crusts	0%
Litter	10%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	10%
Bedrock	0%
Water	0%
Bare ground	7%

**Table 6. Canopy structure (% cover)**

Height Above Ground (M)	Tree	Shrub/Vine	Grass/ Grasslike	Forb
<0.15	—	—	—	—
>0.15 <= 0.3	—	—	1-15%	1-15%
>0.3 <= 0.6	—	—	—	—
>0.6 <= 1.4	—	50-85%	—	—
>1.4 <= 4	0-10%	—	—	—
>4 <= 12	—	—	—	—
>12 <= 24	—	—	—	—
>24 <= 37	—	—	—	—
>37	—	—	—	—

## Additional community tables

### Contributors

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### 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:**

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2. **Presence of water flow patterns:**

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3. **Number and height of erosional pedestals or terracettes:**

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

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5. **Number of gullies and erosion associated with gullies:**

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6. **Extent of wind scoured, blowouts and/or depositional areas:**

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7. **Amount of litter movement (describe size and distance expected to travel):**

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8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

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11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

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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:

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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):**

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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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