USDA Natural Resources
Conservation Service

Ecological site R023XY504OR
SUBALPINE LOAMY 35-40 PZ

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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.

Associated sites

R023XY505OR	**SUBALPINE THIN SURFACE 35-40 PZ** Subalpine Thin Surface 35-40" PZ

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on ridgetops and sideslopes in mountainous areas. Slopes range from 3 to 30%. Elevations range from 8800 to 9700 feet.

Table 2. Representative physiographic features

Landforms	(1) Mountain (2) Ridge (3) Mountain slope
Elevation	2,682–2,957 m
Slope	3–30%
Aspect	Aspect is not a significant factor

Climatic features

The annual precipiation is 35 to 40 inches, most of which occurs as snow during December to March. Late spring rains are common. The soiil temperature regime is cyric. Mean annual temperatures rnage from 40 to 43 degrees F. The frost free period is 30 to 60 days. The period of optimum plant growth is late June to mid-August.

Table 3. Representative climatic features

Frost-free period (average)	60 days
Freeze-free period (average)	0 days
Precipitation total (average)	1,016 mm

Influencing water features

Soil features

The soils in this site are typically moderately deep and well drained. Depth to bedrock is 20 to40 inches. The soil surface texture is very gravelly loam. The subsurface soil textures range from gravelly loams to very gravelly loams. Permeability is moderate. The available water holding capacity is about 4 inches for the profile.

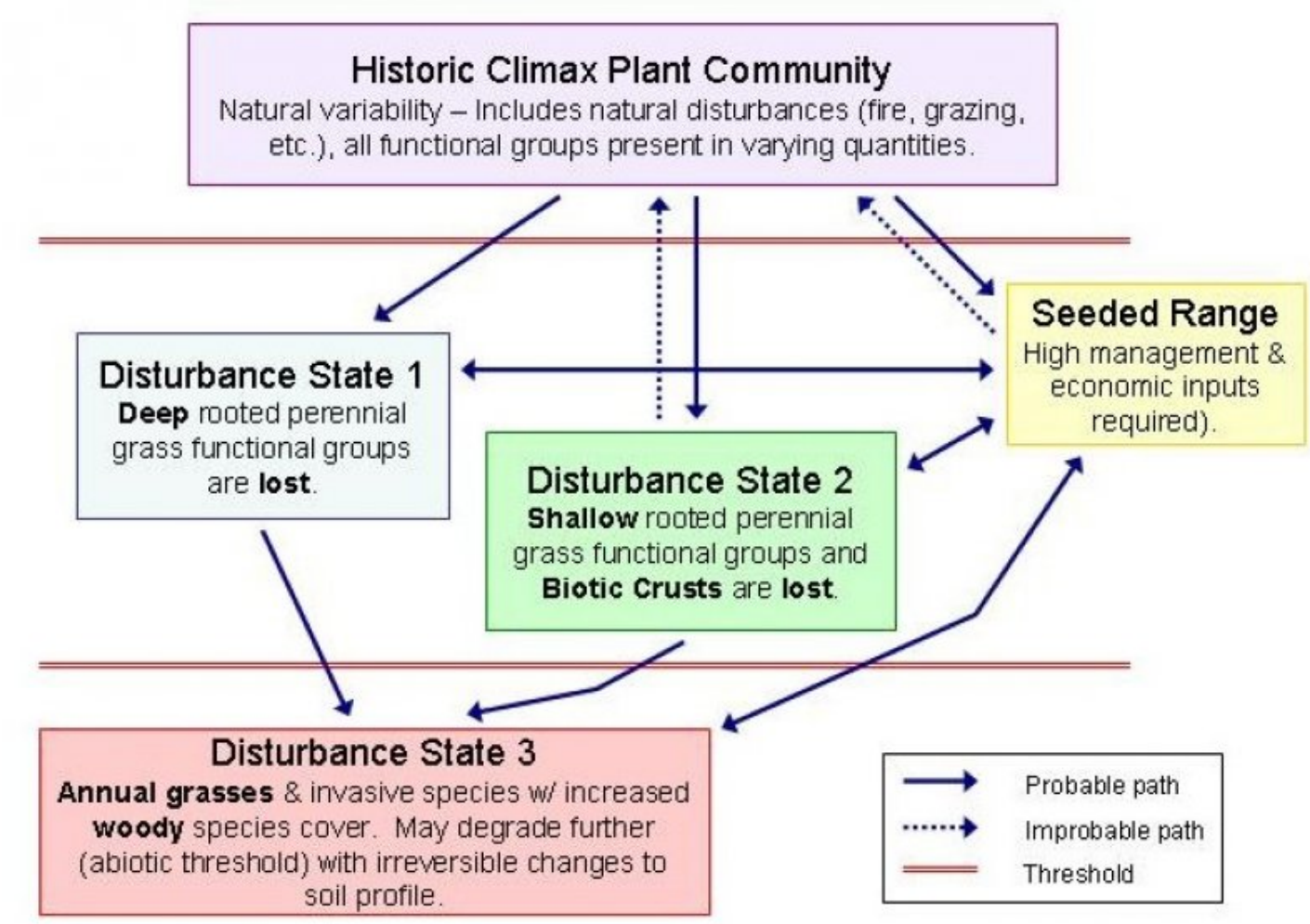
Table 4. Representative soil features

Surface texture	(1) Very gravelly loam
Family particle size	(1) Loamy
Drainage class	Well drained
Permeability class	Moderate to moderately rapid

Ecological dynamics

Range in Characteristics:
Rough fescue and Cusick Bluegrass increase with increasing elevation and soil depth. Tufted hairgrass increases with higer amounts of late season soil moisture.
Response to Disturbance:
As the site deteriorates, fescues, bluegrasses, and tufted hairgrass decrease in plant denstity while bottlebrush squirreltail increases.

State and transition model



GENERAL MODEL FOR COOL-SEASON BUNCHGRASS RANGELANDS

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

The potential native commmunity is dominated by rough fescue. Tufted hairgrass, sheep fescue, Idaho fescue, and Cusick's Bluegrass and other grasses are common in the stand. Vegetative composition is about 95 percent grasses, 5 percent forbs, and minor amounts of shrubs.

Additional community tables

Animal community

Livestock Grazing:
This stie is suitable for livestock grazing use in the summer and early fall under a planned grazing system.

Hydrological functions

The soils of this site have moderarte infiltration rates and medium runoof potential. The hydrologic soil group is B.

Other information

Suitablility for seeding is fair because of the short growing season and surface rock fragments. Water bar construction is nessisary to prevent gullying on roads trails and pipelines. Depth to bedrock limits consturction of water improvements. Settling snow-pack may damage fence structures requiring special design of fences such as laydown fences.

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:**

   _____

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):**

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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:**
