

USDA icon Natural Resources
Conservation Service

Ecological site F043BP611ID

Upland, Warm Woodland Group

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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.

MLRA notes

Major Land Resource Area (MLRA): 043B—Central Rocky Mountains

The Central Rocky Mountains (MLRA 43B) of Idaho exist primarily in central and southeastern portions of the state. The climate is extremely variable with precipitation lows of 9 to 100 inches per year and frost free days of less than 30 to over 110 days. The geology of the region is also highly variable. The combination of variable climate and geology create a complex relationship of plant communities. MLRA 43B elevations with most mountain peaks reach an elevation of 6,000 to 8,000 feet (1,830 to 2,440 meters), but peaks exceeding 10,000 feet (3,050 meters) are not uncommon.

LRU notes

LRU P: PES/PEG (Provisional Ecological Site or Group) A PROVISIONAL ECOLOGICAL SITE is a conceptual grouping of soil map unit components within a Major Land Resource Area (MLRA) based on the similarities in response to management. Although there may be wide variability in the productivity of the soils grouped into a Provisional Site, the soil vegetation interactions as expressed in the state-and-transition model are similar and the management actions required to achieve objectives, whether maintaining the existing ecological state or managing for an alternative state, are similar. Provisional sites are likely to be refined into a more precise concept during the process of meeting the APPROVED ECOLOGICAL SITE DESCRIPTION criteria.

Classification relationships

This PROVISIONAL ECOLOGICAL SITE has been developed to meet the standards established in the National Ecological Site Handbook. The information associated with this ecological site does not meet the Approved Ecological Site Description Standard, but it has been through Quality Control and Quality Assurance processes to assure consistency and completeness. Further investigations, reviews and correlations are necessary before it becomes an Approved Ecological Site Description.

Ecological site concept

• Site does not receive any additional water • Dominant Cover: Ponderosa Pine Forest • Soils are o Generally not saline or saline-sodic o Moderately deep, deep, or very deep o Typically less than 5% stone and boulder cover (15% max) • Soil surface texture ranges from sandy loam to clay loam in surface mineral 4" • Site Landform: mountain slopes, ridges, escarpments • Area of rugged mountain, hills, plateaus, and valleys of the Central Rocky Mountains in southwest Montana, central and southeastern Idaho. • Parent material is colluvium, colluvium over residuum, residuum • Moisture Regime: ustic • Temperature Regime: frigid • Elevation Range: 3000-5500 • Slope: 0-60% (typically less than 25%)

Associated sites

F043BP604ID	Shallow Warm Woodland Group
F043BP607ID	Subirrigated Cool Woodland Group

Similar sites

F043BP610ID	Upland Cool Woodland Group
F043BP609ID	Upland Cold Woodland Group

Table 1. Dominant plant species

Tree	(1) <i>Pinus ponderosa</i> (2) <i>Pseudotsuga menziesii</i>
Shrub	(1) <i>Symphoricarpos oreophilus</i> (2) <i>Acer glabrum</i>
Herbaceous	(1) <i>Pseudoroegneria spicata</i> (2) <i>Calamagrostis rubescens</i>

Physiographic features

This site tends to exist on the lower to middle third of the landform (mountain slopes, ridges, and escarpments). Slopes exist between nearly level to 60 percent however typically exist below 25 percent. Elevation is 2500 to 5500 feet elevation.

Table 2. Representative physiographic features

Landforms	(1) Mountains > Mountain slope (2) Mountains > Ridge
Elevation	760 – 1,680 m
Slope	0 – 60 %
Aspect	Aspect is not a significant factor

Climatic features

- Representative Value (RV) of range of Effective Precipitation: 12-19 inches
- Representative Value (RV) of range of Frost Free Days: 70-115 days

Table 3 Representative climatic features

Frost-free period (characteristic range)	40-100 days
Freeze-free period (characteristic range)	90-140 days

Precipitation total (characteristic range)	380-430 mm
Frost-free period (actual range)	30-110 days
Freeze-free period (actual range)	60-150 days
Precipitation total (actual range)	380-460 mm
Frost-free period (average)	70 days
Freeze-free period (average)	120 days
Precipitation total (average)	410 mm

- (1) SHOUP [USC00108395], Shoup, ID
- (2) TAYLOR RCH [USC00109000], McCall, ID
- (3) MIDDLE FORK LODGE [USC00105897], Stanley, ID
- (4) KETCHUM RS [USC00104845], Ketchum, ID

Influencing water features

n/a

Soil features

Soils are well drained and considered moderately deep to very deep with typically less than 5 percent stone or boulder cover (15 percent maximum). Textures vary based on local geology. Parent material is colluvium, colluvium over residuum, and residuum.

Table 4. Representative soil features

Parent material	(1) Colluvium – volcanic and metamorphic rock (2) Residuum – igneous, metamorphic and sedimentary rock
Surface texture	(1) Very cobbly, very gravelly loam (2) Very cobbly, very gravelly loamGravelly, extremely gravelly silt loam (3) Very cobbly, very gravelly loamGravelly, extremely gravelly silt loamFine gravelly loamy coarse sand (4) Very cobbly, very gravelly loamGravelly, extremely gravelly silt loamFine gravelly loamy coarse sandGravelly, very cobbly sandy loam

Family particle size	(1) Sandy (2) Coarse-loamy (3) Fine-loamy (4) Loamy-skeletal (5) Sandy-skeletal
Drainage class	Well drained
Depth to restrictive layer	50 – 250 cm
Soil depth	50 – 250 cm
Surface fragment cover <=3"	0 – 20 %
Surface fragment cover >3"	0 – 20 %
Available water capacity (0-101.6cm)	3.81 – 21.08 cm
Clay content (0-101.6cm)	10 – 40 %
Soil reaction (1:1 water) (0-101.6cm)	4.5 – 8.4
Subsurface fragment volume <=3" (0-101.6cm)	0 – 50 %
Subsurface fragment volume >3" (0-101.6cm)	0 – 50 %

Ecological dynamics

1 Reference State

1.1 Reference Community: ponderosa pine dominant overstory; mix of grasses and shrubs understory

1.1A low intensity understory fire

1.2A time allowing understory recovery

1.2 Recent low-intensity fire: ponderosa pine dominant overstory; grass/forb understory

2.1 Dog-hair stand Douglas fir dominant with degraded understory

T1A Fire suppression causing a decrease in ponderosa pine and increase density of dog-hair Douglas fir

R2A Forest thinning and prescribed fire to thin out the dog-hair Douglas fir

3.1 Ponderosa pine dominant with heavily reduced cool-season bunchgrasses

T1B Improper grazing management

R3A Prescribed grazing management, time, integrated pest management

State and transition model

Additional community tables

Animal community

This ecological site is considered important habitat for large wild game such as deer, elk, and moose; as well as, upland birds such as ruffed, dusky, and spruce grouse. Typically this site is considered good for livestock grazing. If the tree canopy is open it will often contain grazeable forage.

Recreational uses

Site frequently used by many outdoor recreationists such as bird watchers, campers, hikers, bikers, and hunters.

Wood products

The dominant forest type is typically not suited to forest products however small post and pole operations may exist. Harvest of this site may prove challenging due to slope.

Inventory data references

Information was gathered from Forest Habitat Type guides and other reference material gathered historically by range and forest professionals.

Other references

Steele, Robert; Pfister, Robert D.; Ryker, Russell A.; Kittams, Jay A. 1981. Forest Habitat Types of Central Idaho. General Technical Report INT-114. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 138 p.

Steele, Robert; Cooper, Stephen V.; Ondov, David M.; Roberts, David W.; Pfister, Robert D. 1983. Forest habitat types of eastern Idaho-western Wyoming. Gen. Tech. Rep. INT-144. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 122 p.

Contributors

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Approval

Kirt Walstad, 3/01/2024

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	09/02/2026
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:
