

Ecological site F043BP604ID Shallow 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 southeast 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 or GROUPING 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 a 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

- Dominant Cover: Coniferous Forest
- Site does not receive any additional water
- Soils are
 - o Not saline or saline-sodic
 - o Not strongly or violently effervescent within surface mineral 4"
 - o Soil is shallow (less than 20in (50cm) to bedrock, lithic, or paralithic root restriction)
 - o Soil is not ashy or medial textural family
 - o Stones and/or boulders cover <15% surface area or fragmental textural class
- Soil surface texture variable from loamy to sandy loam (often channery to cobbly)
- Site Landform: hillslopes, ridges, escarpments
- Area of rugged mountain, hills, plateaus, and valleys of the Central Rocky Mountains in central and southeast

Idaho.

- Parent material is colluvium, colluvium over residuum, residuum
- Moisture Regime: ustic and xeric
- Temperature Regime: cryic and frigid, cool
- Elevation Range: 3800-7800
- Slope: 0-60% (typically less than 25%)

Associated sites

F043BP611ID	Upland, Warm Woodland Group
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Similar sites

F043BP602ID	Shallow Cool Woodland Group
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Table 1. Dominant plant species

Tree	(1) <i>Pinus ponderosa</i> (2) <i>Pinus flexilis</i>
Shrub	(1) <i>Rhus</i> (2) <i>Ribes</i>
Herbaceous	(1) <i>Pseudoroegneria spicata</i> (2) <i>Festuca campestris</i>

Physiographic features

Site is quite variable in slope from two to 60 percent however slope is rarely greater than 25 percent. Site exists on ridges, escarpments, and mountains slopes.

Table 2. Representative physiographic features

Landforms	(1) Mountains > Ridge (2) Mountains > Mountain slope (3) Mountains > Escarpment
Elevation	1,524–2,134 m
Slope	5–60%
Aspect	W, NW, N, NE, E, SE, S, SW

Climatic features

This site exists in the frigid, cool soil temperature regime in the Typic Ustic moisture regime. Relatively Effective Annual Precipitation varies from 10-22 inches. Frost free days are 60-115 days.

Table 3. Representative climatic features

Frost-free period (characteristic range)	12-50 days
Freeze-free period (characteristic range)	37-102 days
Precipitation total (characteristic range)	330-381 mm
Frost-free period (actual range)	3-59 days
Freeze-free period (actual range)	20-119 days
Precipitation total (actual range)	305-406 mm
Frost-free period (average)	31 days
Freeze-free period (average)	70 days

Precipitation total (average)

356 mm

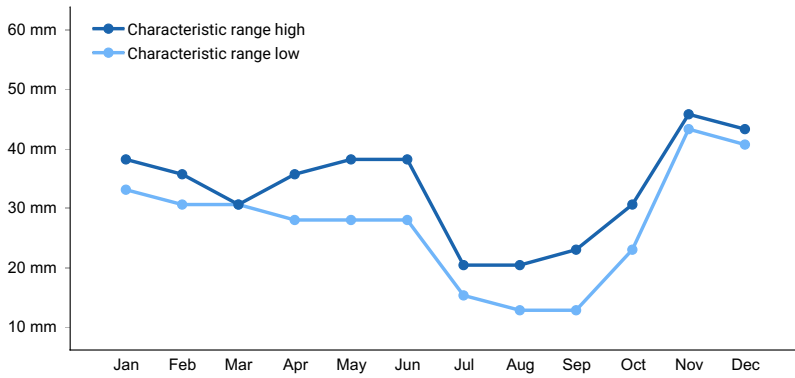


Figure 1. Monthly precipitation range

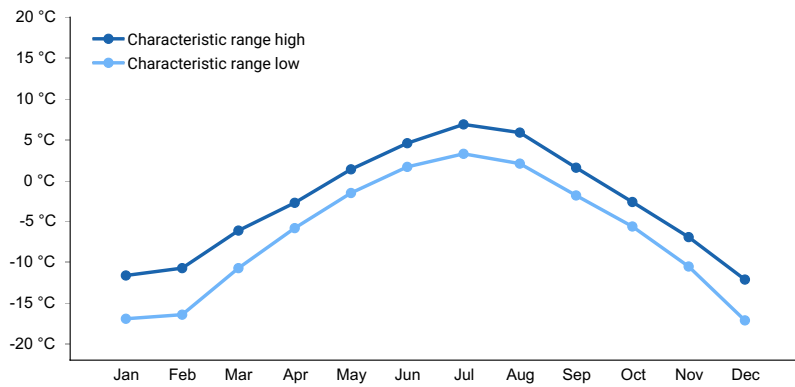


Figure 2. Monthly minimum temperature range

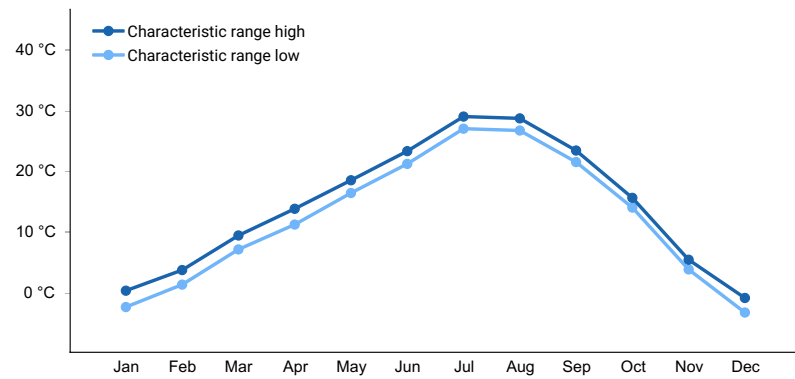


Figure 3. Monthly maximum temperature range

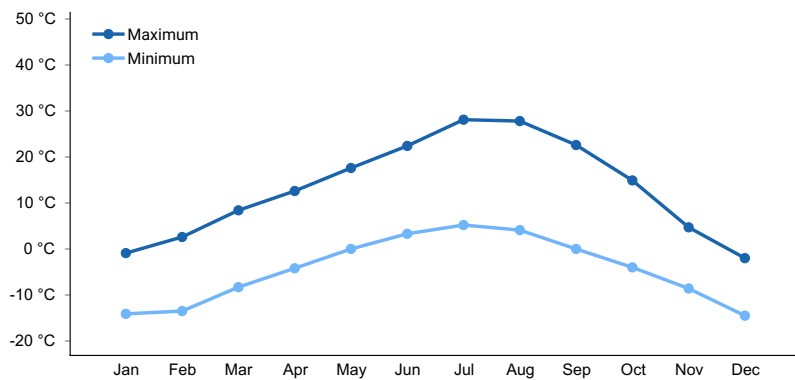


Figure 4. Monthly average minimum and maximum temperature

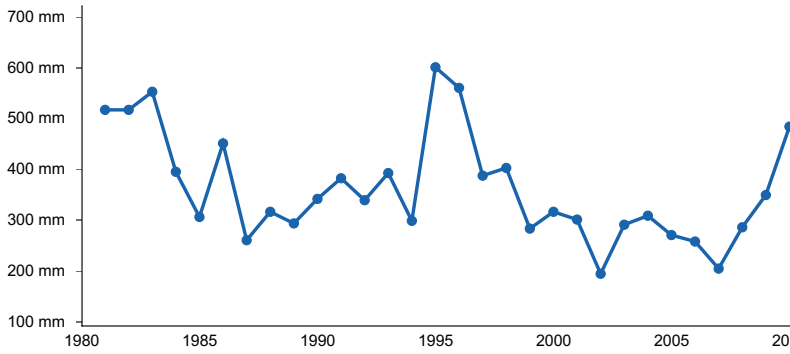


Figure 5. Annual precipitation pattern

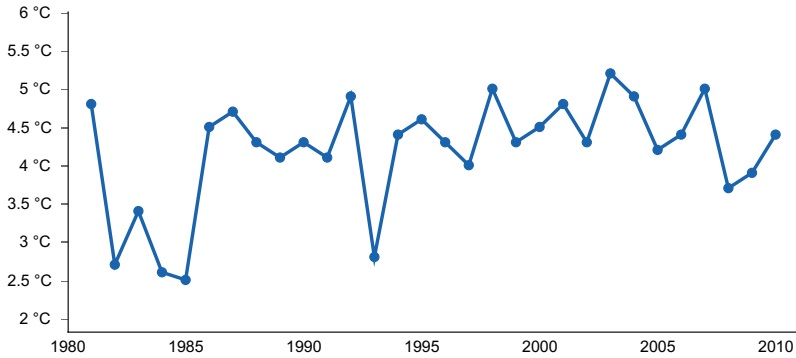


Figure 6. Annual average temperature pattern

Climate stations used

- (1) STANLEY [USC00108676], Stanley, ID
- (2) MIDDLE FORK LODGE [USC00105897], Stanley, ID

Influencing water features

Site not associated with water resources

Wetland description

Site not associated with wetlands.

Soil features

Soil is formed of colluvium, colluvium over residuum, and residuum from varying geology.

Table 4. Representative soil features

Parent material	(1) Colluvium (2) Residuum
Surface texture	(1) Gravelly loamy coarse sand (2) Sandy loam (3) Loam (4) Fine gravelly loamy sand (5) Gravelly silty clay loam (6) Channery silt loam
Family particle size	(1) Loamy-skeletal (2) Coarse-loamy
Drainage class	Well drained to excessively drained
Depth to restrictive layer	25–51 cm

Soil depth	25–51 cm
Surface fragment cover <=3"	0–5%
Surface fragment cover >3"	0–25%
Available water capacity (0-101.6cm)	1.02–7.11 cm
Clay content (0-101.6cm)	5–20%
Soil reaction (1:1 water) (0-101.6cm)	5.6–8.4
Subsurface fragment volume <=3" (0-101.6cm)	0–30%
Subsurface fragment volume >3" (0-101.6cm)	0–30%

Table 5. Representative soil features (actual values)

Drainage class	Not specified
Depth to restrictive layer	Not specified
Soil depth	Not specified
Surface fragment cover <=3"	Not specified
Surface fragment cover >3"	Not specified
Available water capacity (0-101.6cm)	Not specified
Clay content (0-101.6cm)	3–33%
Soil reaction (1:1 water) (0-101.6cm)	Not specified
Subsurface fragment volume <=3" (0-101.6cm)	Not specified
Subsurface fragment volume >3" (0-101.6cm)	Not specified

Ecological dynamics

Site Development and Testing Plan:

This Provisional Ecological Site Description was developed to meet the criteria as defined in Soil Survey National Instruction part 306 (430-306-NI, April 2015) as interpreted by Regional Ecological Site Specialist. Information in this description are first approximations based on broad groupings of soil properties and vegetation characteristics associated with those groupings. Although this description has been through the quality control and quality assurance review process it has not been certified for use in conservation planning.

State and Transition Model

1.1 Ponderosa Pine and Limber pine forest with mixed understory of shrubs, grasses, and forbs. Douglas fir is a common overstory minor component. Bluebunch wheatgrass and rough fescue commonly dominant grasses. Shrubs commonly include rhus and ribes species.

T1A The decrease of overstory canopy. Understory is relatively unchanged from the Reference State.

T1B Improper grazing management degrades understory; however, tree canopy remains the same.

2.1 Fire, insect damage, or climate episode damage overstory. Lesser trees may increase in size and amount. Understory is relatively unchanged; however, the understory is likely to increase in production with decreased competition.

R2A Prescribed grazing management, time, and integrated pest management.

3.1 Overgrazing and fire degrades understory. Native grasses typically reduced or replaced with invasive species such as cheatgrass or knapweed. Canopy is typically unaffected.

R3A Prescribed grazing management, time, integrated pest management.

State and transition model

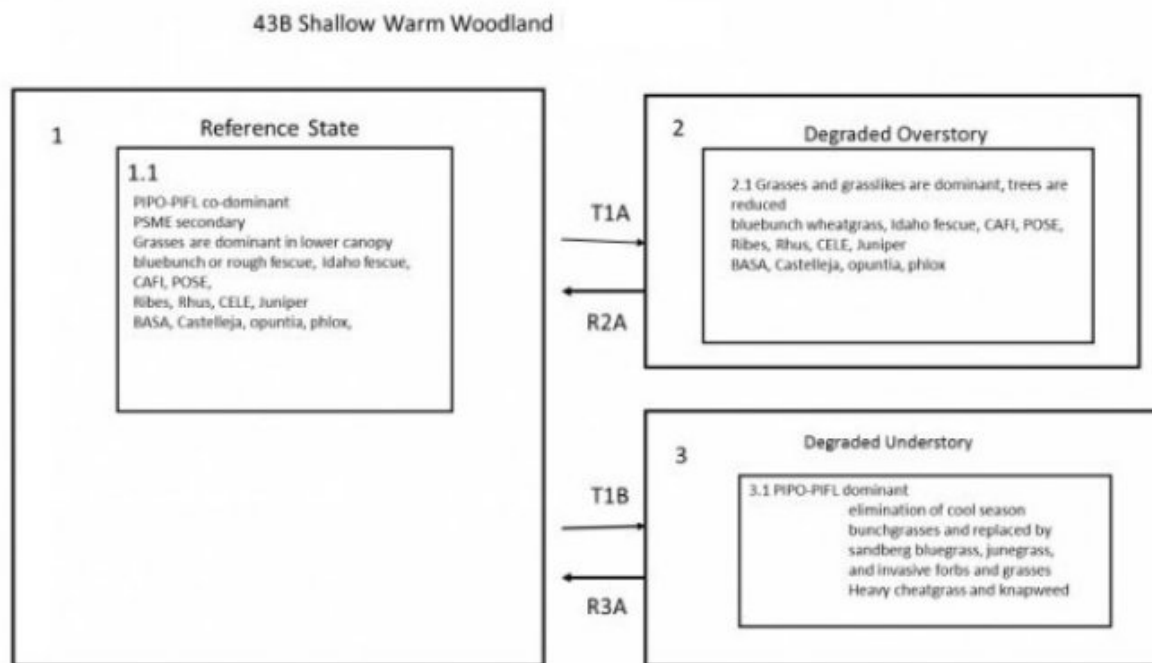


Figure 7.

43B Shallow Warm Woodland

1.1 Ponderosa Pine and/or Limber pine forest with mixed understory of shrubs, grasses, and forbs. Douglas Fir is a common overstory minor component. Bluebunch and Rough fescue commonly dominant grasses. Shrubs common include Rhus and Ribes species.

T1A The decrease of overstory. Understory is relatively unchanged from reference

T1B Improper grazing management degrades understory however tree canopy remains same

2.1 Fire, insect damage, or climatic episode damage overstory. Lesser trees may increase in size and amount. Understory is relatively unchanged however is likely to increase in production with decreased competition

R2A Prescribed grazing management, time, integrated pest management

3.1 Overgrazing and/or fire degrades understory. Native grasses typically reduced or replaced with invasive species such as cheatgrass or knapweed. Canopy is typically unaffected.

R3A Prescribed grazing management, time, integrated pest management

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	05/17/2024
Approved by	Kirt Walstad
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:**
