

Ecological site EX043B23B170 Steep Stony Upland (SStU) Absaroka Upper Foothills

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Rangeland health reference sheet

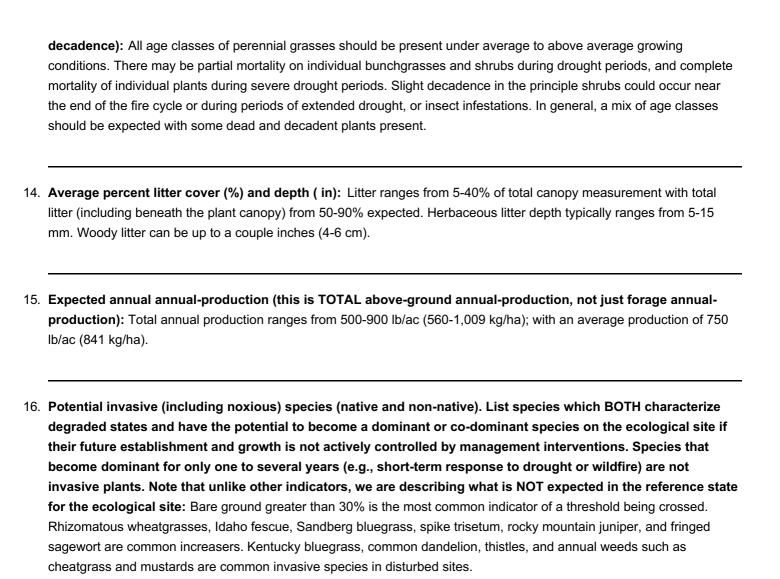
Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative 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)	Marji Patz Blaise Allen
Contact for lead author	marji.patz@usda.gov; 307-271-3130
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Approved by	Kirt Walstad
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- 1. **Number and extent of rills:** Rare. Increase in rill development occurs on slopes located below exposed bedrock or other water shedding areas where increased runoff may occur. When present, rills should be short (2-5 feet), and less than one inch deep and somewhat widely spaced (4-8 feet). Rills may increase in length (3-6 feet) and decrease in spacing (3-6 feet) on slopes greater than 60 percent. A minor increase in rill development may be observed on all slopes following major thunderstorm or spring runoff events but should heal during the next growing season.
- 2. **Presence of water flow patterns:** Barely observable. Minor evidence of water flow patterns will be found around perennial plant bases. Occurrences show little evidence of current erosion, and are expected to be short (3-6 feet), stable, sinuous, and not connected. There may be very minor evidence of deposition.
- 3. **Number and height of erosional pedestals or terracettes:** Perennial vegetation shows little evidence of erosional pedestalling (1 to 2% of individual plants). Plant roots are covered and litter remains in place around plant crowns. Terracettes are minor and are stable.
- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground): Bare ground can range from 5-20%. Bare ground patches should not be greater than 18 inches in diameter.

	Extent of wind scoured, blowouts and/or depositional areas: Rare to nonexistent. No evidence of wind generated soil movement is present. Wind caused blowouts and deposition are not present.	
7.	Amount of litter movement (describe size and distance expected to travel): Herbaceous and large woody litter not expected to move. Most litter resides in place with some redistribution down slope caused by water movement. The majority of litter accumulates at the base of plants. Some grass leaves and stems may accumulate in soil depressions adjacent to plants. Woody stems are not likely to move. However, some litter movement is expected (up to 6 feet) with increases in slopes >25% and/or increased runoff resulting from heavy thunderstorms.	
8.	Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values): Soil Stability Index ratings range from 3 (interspaces) to 6 (under plant canopy), but average values should be 4.0 or greater.	
9.	Soil surface structure and SOM content (include type of structure and A-horizon color and thickness): Soil data is limited for this site. Soil organic matter of 2 to 5% is expected.	
10.	Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff: Plant community consists of 70-80% grasses, 15% forbs, and 5-15% shrubs. Evenly distributed plant canopy (60-95%) and litter plus moderate infiltration rates result in minimal runoff. Basal cover is typically 5-15% for this site and does affect runoff on this site. Surface rock fragments of 15-50% provide stability to the site, but reduce infiltration.	
11.	Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None.	
	mistaken for compaction on this site): None.	
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	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: Mid-stature, cool season bunchgrasses >>	



17. Perennial plant reproductive capability: All species are capable of reproducing, except in extreme drought years.