

Ecological site R043BY024ID Subalpine Loamy 22+ PZ BRMA4/POGR9-GEVI2

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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.

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Approved by	Scott Woodall
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** rills are rare on this site.

- Presence of water flow patterns:** water-flow patterns do not occur on this site.

- Number and height of erosional pedestals or terracettes:** both are rare on the site.

- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** data is not available. Rodent activity is common on this site. Where rodent activity is abundant, increased bare ground should be expected.

- Number of gullies and erosion associated with gullies:** gullies do not occur on this site.

6. **Extent of wind scoured, blowouts and/or depositional areas:** blowouts and depositional areas are usually not present. Immediately following wildfire some soil movement may occur on lighter textured soils.
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7. **Amount of litter movement (describe size and distance expected to travel):** fine litter in the interspaces may move up to 2 feet following a significant run-off event. Coarse litter generally does not move.
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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):** values should range from 3 to 5 but needs to be tested.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** structure ranges from weak fine granular to moderate fine and medium granular to weak fine subangular blocky. Soil organic matter (SOM) needs to be determined. The soil surface color is generally very dark grayish brown to dark grey to black to dark brown. The A or A1 horizon is typically 2 to 31 inches thick.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** bunchgrasses, especially deep-rooted perennials, slow run-off and increase infiltration.
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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):** is not present.
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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: perennial forbs
- Sub-dominant: cool season perennial grasses and grass-like
- Other: tall shrubs
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** little decadence is expected to occur on the site.
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14. **Average percent litter cover (%) and depth (in):** additional litter cover data is needed. Very little litter is expected to accumulate on the site.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** is 2200 pounds per acre (1980 kilograms per hectare) in a year with normal temperatures and precipitation.

Perennial grasses produce 20-30 percent of the total production, forbs 70-80 percent, and shrubs 0-2 percent.

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: includes Kentucky bluegrass, leafy spurge, curlycup gumweed, St. Johnswort, rush skeletonweed, musk and yellow star thistle, diffuse and spotted knapweed, tarweed, and orange hawkweed.
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17. **Perennial plant reproductive capability:** all functional groups have the potential to reproduce in most years.
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