

Ecological site R009XY017ID Very Shallow 12-22 PZ PSSPS-POSE

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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	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** Rills rarely occur on this site. They are most likely to occur immediately following a wildfire. Cobbles and stones on the surface reduce erosion.

2. **Presence of water flow patterns:** Water-flow patterns can occur on this site. When they do occur on slopes greater than 15 percent, they are short, disrupted by cool season perennial grasses, cobbles and stones and are not extensive.

3. **Number and height of erosional pedestals or terracettes:** A few terracettes can occur on this site. They are not extensive. They typically develop on the uphill side of the larger bunchgrasses on steeper slopes. Pedestals do not occur on the site.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground ranges from 20-40 percent but additional data is needed.

5. **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:** Does not occur on the site.
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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 2-3 feet or further following a significant run-off event. High winds can also move fine litter. 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 3-5 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 very fine to fine granular. Soil organic matter (SOM) ranges from 1 to 4 percent. The A or A1 horizon is typically 2 to 5 inches thick and dark brown when moist.
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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. Terracettes provide a favorable micro-site for vegetation establishment, which further increases 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):** 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: cool season bunchgrasses
- Sub-dominant: perennial forbs
- Other: shrubs
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Some decadence is expected to occur on this site in the absence of ungulate grazing and/or fire. Mortality can occur following extended drought.
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14. **Average percent litter cover (%) and depth (in):** Annual litter cover in the interspaces will be 5-10 percent to a depth of <0.1ft. Fine litter can accumulate on the terracettes.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Is 250 lbs. per acre in a year with normal precipitation and temperatures. Perennial grasses produce 60-70 percent of the total ,forbs 10-20 percent and shrubs 15-25 percent.

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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: Includes cheatgrass, soft chess, ventenata, bulbous bluegrass, medusahead, tarweed, curlycup gumweed, spotted and diffuse knapweed, and yellow star-thistle.
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17. **Perennial plant reproductive capability:** All functional groups have the potential to reproduce in normal years.
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