

## Ecological site R025XY043ID LOAMY 11-13

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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

- Number and extent of rills:** Rills rarely occur on this site. If rills are present, they are most likely to occur on steeper slopes >15% and immediately following wildfire. Rills are most likely to occur on soils with surface textures of silt loam and clay loam.

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- Presence of water flow patterns:** Water flow patterns rarely occur on this site except on slopes >15%. When they occur, they are short, disrupted by cool season perennial grasses and tall shrubs and are not extensive.

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- Number and height of erosional pedestals or terracettes:** Pedestals and/or Terracettes are rare on this site but both can occur. In areas of >15% slopes where flow patterns and /or rills are present, few pedestals may be expected. Do not misinterpret frost heaving for pedestals.

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- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Data not available. On sites in mid-seral status, bare ground may range from 30-40 percent.

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- Number of gullies and erosion associated with gullies:** None.

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6. **Extent of wind scoured, blowouts and/or depositional areas:** Usually does not occur.
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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 3 feet or further following a significant run-off event. Terracettes and rocks can trap 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 4-6 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):** The surface horizon is typically 3 to 6 inches thick. Structure typically includes moderate thin and medium platy, weak or moderate fine and medium granular, and moderate fine subangular blocky. Soil organic matter (SOM) is 1 to 3 percent.
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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. Shrubs accumulate snow in the interspaces. 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):** Compaction Layer 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: Cool season deep-rooted perennial bunchgrasses
- Sub-dominant: Tall shrubs> perennial forbs> shallow rooted grasses
- Other:
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Basin big sagebrush will become decadent in the absence of fire and ungulate grazing. Grass and forb mortality will occur as tall shrubs increase.
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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 <0.1. Under the mature shrubs litter is greater than 0.5 inches. Fine litter can accumulate on the terracettes and

behind surface stones.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 900 lbs. per acre in a year with normal precipitation and temperatures. Perennial grasses produce 45-55 percent of the total, forbs 10-15 percent and shrubs 25-35 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:** Invasive Plants are cheatgrass, medusahead rye, bulbous bluegrass, rush skeletonweed, scotch thistle, spotted and diffuse knapweed.
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17. **Perennial plant reproductive capability:** All functional groups have the potential to reproduce in most years.
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