

Ecological site R011XB005ID Fractured Loamy 8-16 PZ ARTRW8/PSSPS

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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:** rarely occur on this site due to the light textured surface soils. If they do occur it will normally be on slopes greater than 10%.

2. **Presence of water flow patterns:** normally not present on this site. When they do occur they are short and disrupted by cool season grasses and shrubs. They are not extensive.

3. **Number and height of erosional pedestals or terracettes:** rarely occur on the site.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** ranges from 65-75 percent but more 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 except immediately after wildfire.

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7. **Amount of litter movement (describe size and distance expected to travel):** fine litter moves by wind or water. Fine litter can move up to 2 feet after a strong summer convection storm. Due to the relatively flat slopes, large litter 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):** structure typically includes weak thin and moderate thick platy or weak fine granular. Soil organic matter (SOM) ranges from 0.5 to 1 percent. The surface horizon is typically 1 to 3 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 runoff 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):** 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: medium shrubs
- Other: perennial forbs
- Additional: shallow-rooted bunchgrasses
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** very little mortality or decadence is expected on this site. Mortality of shallow rooted grasses may occur due to extended periods of drought.
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14. **Average percent litter cover (%) and depth (in):** additional data is needed but is expected to be low and at a shallow depth.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** is 175 pounds per acre (194 Kg/ha) in a year with normal precipitation and temperatures. Perennial

grasses produce 45-55 percent of the total production, forbs 5-15 percent, and shrubs 35-45 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 cheatgrass, Russian thistle, yellow salsify, and annual mustards.
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17. **Perennial plant reproductive capability:** all functional groups have the potential to reproduce in favorable years.
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