

Ecological site R012XY006ID Windswept 8-16 PZ ARFR4/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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| Author(s)/participant(s) | |
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| Date | 02/05/2008 |
| 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 due to the gravelly surface soils.

- Presence of water flow patterns:** Water-flow patterns rarely occur on this site. When they do occur, they are short and disrupted by cool season grasses, shrubs and surface stones. They are not extensive.

- Number and height of erosional pedestals or terracettes:** Erosional pedestals or terracettes are rare but can occur on the site, especially where flow patterns are present and on slopes greater than 20%.

- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground ranges from 20-35 percent but additional data is needed.

- 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:** This site is naturally scoured by wind. Surface stones and vegetation protect the soil from additional wind erosion.
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7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter in the interspaces typically moves up to three feet or further. Fine litter can be moved by both wind and water. 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 need 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 and fine granular to weak or moderate thin and medium platy to weak very fine and fine subangular blocky. The A or A1 horizon is typically 2 to 9 inches thick. Soil organic matter (SOM) ranges from 0.5 to 7 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 and shrubs slow runoff and increase infiltration. Little to no snow accumulation occurs on the site due to winter winds.
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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. Do not mistake an increase in clay content of the subsoil for a compaction layer.
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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: Low growing shrubs= perennial bunchgrasses>
- Sub-dominant: Perennial forbs
- Other:
- Additional:
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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):** Annual production is 200 pounds per acre (222 Kg/ha) in a year with normal precipitation and temperatures. Perennial grasses produce 30-40 percent of the total production, forbs 25-35 percent and shrubs 30-40 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 species include cheatgrass, annual mustards and halogeton.
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17. **Perennial plant reproductive capability:** All functional groups have the potential to reproduce in normal and favorable years.
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