Ecological site R011XB017ID
Loamy 6-8 PZ ATCO/ACHY

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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 due to relatively flat slopes and gravelly surface.

2. **Presence of water flow patterns:** water-flow patterns rarely occur on this site due to relatively flat slopes and gravelly surface.

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

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** data is not available. On sites in mid-seral status bare ground may range from 60-80 percent.

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:** 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 3 feet primarily by wind. 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):** structure typically includes weak thin and moderate thick platy and weak fine and moderate fine granular structure. Soil organic matter (SOM) ranges from 1 to 2 percent. The surface horizon is typically 2 to 5 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: Medium shrubs

    Sub-dominant: season deep rooted perennial bunchgrasses

    Other: perennial forbs

    Additional:

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** little mortality or plant decadence occurs on this site. Shallow rooted bunchgrasses may suffer mortality during extended periods of drought.

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14. **Average percent litter cover (%) and depth (in):** additional litter cover data is needed but is expected to be 5-20 percent to a depth of 0.1 inches. Under mature shrubs litter is <0.5 inches deep and is 90-100 percent ground cover.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** is 300 pounds per acre (336kilograms per hectare) in a year with normal temperatures and precipitation. Perennial grasses produce 30-40 percent of the total production, forbs 5-10 percent and shrubs 50-70 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, Vulpia sp., annual mustards, Russian thistle, and annual Kochia.

17. **Perennial plant reproductive capability:** all functional groups have the potential to reproduce in favorable years.