

Ecological site R011XY009ID Silty 7-10 PZ KRLA2/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. When they do occur, they are on slopes greater than 10 percent.

2. **Presence of water flow patterns:** water-flow patterns rarely occur on this site due to relatively flat slopes. When they do occur, they are on slopes greater than 10 percent.

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:** none.

6. **Extent of wind scoured, blowouts and/or depositional areas:** usually not present. Immediately following wildfire

some soil movement may occur on lighter textured soils.

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.

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 to 6 but needs to be tested.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** structure ranges from moderate to strong medium platy. Soil organic matter (SOM) is 0.5 to 1 percent. The A or A1 horizon is typically 5 inches thick.

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. Medium shrubs can catch snow in the interspaces.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** not present.

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: cool season deep-rooted perennial bunchgrasses

Other: perennial forbs

Additional:

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

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.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** is 500 pounds per acre (555 kilograms per hectare) in a year with normal temperatures and precipitation. Perennial grasses produce 20-30 percent of the total production, forbs 5-10 percent, and shrubs 60-70 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, halogeton, Russian thistle, and annual Kochia.

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