

Ecological site R010XA050ID Very Shallow Loam 12-16 PZ ARAR8/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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Approved by	Kirt Walstad
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 the gravelly and stony surface. If they do occur it will normally be on slopes greater than 10%.

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

3. **Number and height of erosional pedestals or terracettes:** pedestals can occur on the site. They are most likely to occur where water-flow patterns are present and surface stones are absent. Terracettes are rare.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** ranges from 20-30 percent but more data is needed.

5. **Number of gullies and erosion associated with gullies:** does not occur.

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.

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 summertime convection storm. Due to the relatively flat slopes, large litter 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 weak, moderate and strong fine granular. Soil organic matter (SOM) ranges from 1 to 4 percent. The A or A1 horizon is typically 3 to 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 runoff and increase infiltration. Shrubs accumulate little snow in the interspaces since the site occurs on or near ridgetops.

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: cool season shallow-rooted perennial bunchgrasses

Sub-dominant: medium shrubs

Other: perennial forbs deep rooted bunchgrasses

Additional:

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.

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 200 pounds per acre (336 Kg/ha) in a year with normal precipitation and temperatures. Perennial grasses produce 65-75 percent of the total production, forbs 10-15 percent and shrubs 15-20 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:** includes cheatgrass, medusahead, *Vulpia* species, bulbous bluegrass, 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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