

Ecological site R058AC044MT Subirrigated (Sb) RRU 58A-C 11-14" p.z.

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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.

Author(s)/participant(s)	Loretta Metz
Contact for lead author	
Date	04/23/2005
Approved by	Kirt Walstad
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None.

2. **Presence of water flow patterns:** None.

3. **Number and height of erosional pedestals or terracettes:** None.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground is less than 5%.

5. **Number of gullies and erosion associated with gullies:** None.

6. **Extent of wind scoured, blowouts and/or depositional areas:** None.

7. **Amount of litter movement (describe size and distance expected to travel):** Litter movement is very limited and would only occur in a rare flooding event.

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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):** Stability values of 4-5 in plant interspaces. Stability values of 5-6 under plant canopies and at plant bases.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Soil surface structure is moderate or strong granular. Organic matter is 3-6%. The A-horizon is 6 to 16 inches thick. There may be a surface organic horizon up 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:** Deep-rooted native perennial bunchgrasses (and some rhizomatous grasses), plus grasslike plants, optimize infiltration and runoff. Bunchgrasses should be no more than 0.5-1.0 foot apart.
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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):** None.
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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: Warm and cool season native perennial bunchgrasses and grasslikes >> native shrubs > native forbs >> warm season rhizomatous grasses.
- Sub-dominant:
- Other:
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Plant mortality is very low; decadence is minimal except in prolonged periods of drought (>5-6 years).
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14. **Average percent litter cover (%) and depth (in):**
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 3940 – 4420 #/acre.
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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:** Kentucky bluegrass, Canada bluegrass, timothy, smooth brome, Baltic rush, redtop, thistles,

snowberry, dandelion, Rocky Mountain iris, Russian olive.

17. **Perennial plant reproductive capability:** This is not impaired in the reference state. Except in extended periods of drought, plants are able to reproduce sexually or vegetatively.
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