

## Ecological site R058AE008MT Subirrigated (Sb) RRU 58A-E 10-14" 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.

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Approved by	Jon Siddoway
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

- 1. Number and extent of rills:** Rills should not be present.  

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- 2. Presence of water flow patterns:** Barely observable.  

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- 3. Number and height of erosional pedestals or terracettes:** Essentially non-existent.  

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- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground is 0-trace  

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- 5. Number of gullies and erosion associated with gullies:** Active gullies should not be present. Existing gullies should be "healed" with a good vegetative cover.  

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

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- 7. Amount of litter movement (describe size and distance expected to travel):** Plant litter remains in place and is not moved by erosional forces.

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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):** Surface Soil Aggregate Stability should typically be 6 with or without plant canopy.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Use soil survey series description.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** High grass canopy and basal cover and small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. Healthy, deep rooted native grasses enhance infiltration and reduce runoff.
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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):** No compaction layer should be evident.
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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: sedges and rushes
- Sub-dominant: Warm season, tall-stature, rhizomatous grass = Cool season, tall-stature, rhizomatous grasses = shrubs  
\*\* > Warm season, mid-stature, bunch grasses
- Other: Minor components: Cool season, tall-stature, bunch grasses; Cool season, mid-stature, bunch grasses; Cool season, mid-stature, rhizomatous grasses; Warm season, tall-stature, rhizomatous grasses; forbs; shrubs \*\*
- Additional: \*\* Due to the range of characteristics and site variability of the Subirrigated Ecological Site, shrubs may range from a Sub-dominate component (10-40%) to a Minor component (<10%)
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Very low.
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14. **Average percent litter cover (%) and depth ( in):** Litter cover is in contact with soil surface.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 4500 to 5000 #/acre (13 to 14 inch precip. Zone) 3000 to 4000+ #/ac (10 to 12 inch precip. Zone).
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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:** Purple loosestrife, Sulphur cinquefoil, common tansy, oxeye daisy, Leafy spurge, knapweeds, whitetop, Dalmatian toadflax, yellow toadflax, St. Johnswort, perennial pepperweed, Kentucky bluegrass, smooth brome, Russian olive, salt cedar, Reed canarygrass.

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17. **Perennial plant reproductive capability:** All species are capable of reproducing.
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