

## Ecological site R058AC052MT Shale (Sh) RRU 58A-C 11-14" p.z.

Last updated: 6/14/2023  
Accessed: 04/28/2024

### 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	04/10/2005
Approved by	Kirt Walstad
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

- Number and extent of rills:** Minor rills (less than 1.0 to 3.0 inches in depth; less than 10 feet long) may be present in the reference state when slopes are greater than 8%. Plant community 2 has more rills than Plant community 1.
- Presence of water flow patterns:** Water flow patterns are evident. Following heavy thunderstorms, or on slopes over 8%, flow patterns less than 20 feet long may be apparent.
- Number and height of erosional pedestals or terracettes:** These are generally not common but may occur. Terracettes less than 2.0-inch depth are apparent on slopes less than 20%.
- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground is between 60-80%.
- Number of gullies and erosion associated with gullies:** Gully erosion is not evident.
- Extent of wind scoured, blowouts and/or depositional areas:** None.

7. **Amount of litter movement (describe size and distance expected to travel):** Litter movement varies by size and depth of litter. In the reference state, litter should be coarse and will not move more than a couple of feet from where it originated.
- 
8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Stability values of 2-3 in plant interspaces. Stability values of 3-4 under plant canopies and at plant bases.
- 
9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Weak or moderate granular structure. A-horizon is approximately 2.0 to 4.0 inches thick. Organic matter in A-horizon approximately 1-3%.
- 
10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Rather "open" plant community with a mix of perennial bunchgrasses, shrubs and some trees, contribute to slow infiltration and a high runoff rate.
- 
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 present in the reference state.
- 
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: mid- and short-height, native perennial bunchgrasses >> native shrubs >> warm season rhizomatous grasses > native forbs >> trees.
- Sub-dominant:
- Other:
- Additional:
- 
13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Plant mortality is low (<5-15%); decadence is minimal except in prolonged periods of drought.
- 
14. **Average percent litter cover (%) and depth ( in):**
- 
15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 350 – 500 #/acre.
- 
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: Sandberg bluegrass, longleaf sagebrush, slender eriogonum, greasewood, fringed sagewort, plains pricklypear.

---

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.
-