

Ecological site R086BY004TX Eroded Blackland

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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	Bryan Christensen
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- 1. Number and extent of rills:** Rills are not uncommon for this site. Extent is influenced by length of slope.

- 2. Presence of water flow patterns:** Water flow patterns are common due to topography and landscape position.

- 3. Number and height of erosional pedestals or terracettes:** Occasional low pedestals or terracettes are expected in association with rills and water flow areas.

- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Expect no more than 30 percent bare ground randomly distributed.

- 5. Number of gullies and erosion associated with gullies:** Some gullies should be expected but should be vegetated and stable.

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

7. **Amount of litter movement (describe size and distance expected to travel):** Small to medium-sized litter will move short distances during intense storms.
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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):** Soil surface is resistant to erosion.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** The soil surface is 40 to 60 inches thick with colors from olive gray to dark grayish brown and weak fine, medium fine and moderate blocky structures. SOM is less than 1.0 percent.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** This prairie site is dominated by tallgrasses and forbs. With adequate litter and little bare ground, this site provides for maximum infiltration and little runoff under normal rainfall events.
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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-season tallgrasses >>
- Sub-dominant: Warm-season midgrasses > Cool-season grasses >
- Other: Warm-season forbs > Trees > Shrubs/Vines
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** There should be little mortality or decadence for any functional groups.
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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):** 1,800 pounds per acre for below average moisture years to 4,800 pounds per acre for above average moisture years.
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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: Potential invasive species include yellow bluestems, common Bermudagrass, mesquite, elm, huisache, eastern red cedar, hackberry, osage orange and McCartney rose.

17. **Perennial plant reproductive capability:** All perennial plants should be capable of reproducing except for periods of prolonged drought conditions, heavy natural herbivory, and intense wildfires.
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