

Ecological site R086BY005TX Blackland

Last updated: 9/21/2023
Accessed: 03/22/2025

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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Date	05/23/2005
Approved by	Bryan Christensen
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- 1. Number and extent of rills:** A few rills of small extent may naturally occur on this site.

- 2. Presence of water flow patterns:** Some water flow patterns are normal for this site due to landscape position and slope but should be vegetated and stable.

- 3. Number and height of erosional pedestals or terracettes:** Pedestals or terracettes are uncommon for this site when occupied by the reference community.

- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Expect no more than 20 percent bare ground distributed in small patches.

- 5. Number of gullies and erosion associated with gullies:** No gullies should be present. Drainageways should be stable and covered with vegetation.

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

7. **Amount of litter movement (describe size and distance expected to travel):** This site has slowly permeable soils. On sloping sites, small to medium-size litter will move short distances with 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. Stability class range is expected to be 5 to 6.
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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 greater than 60 inches. Colors range from black to very dark brown and moderate fine to medium subangular block structure. SOM is one to three 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, which 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):** No evidence of compaction.
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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 midgrasses > Forbs >
- Other: 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 group for the reference community.
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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):** 4,500 pounds per acre during below average moisture years to 7,500 pounds per acre during 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, and osage orange.

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