

Ecological site R081BY333TX Loamy 19-23 PZ

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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)	Joe Franklin, Zone RMS, NRCS, San Angelo, TX
Contact for lead author	325-944-0147
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Approved by	Bryan Christensen
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** None to slight.
- Presence of water flow patterns:** Water flow patterns are common, and follow old drainage patterns. Erosion and deposition is uncommon but may occur during intense rainfall events.
- Number and height of erosional pedestals or terracettes:** None to few. Uncommon for this site.
- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground is 5 to 15 percent, randomly distributed.
- Number of gullies and erosion associated with gullies:** Some gullies may be present, but they should be vegetated and stable.
- Extent of wind scoured, blowouts and/or depositional areas:** None.

7. **Amount of litter movement (describe size and distance expected to travel):** Little movement of any size. However, litter of all sizes can be expected to move considerable distances under intense rainfall events.
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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):** Bare soil surface moderately resistant to erosion. Little erosion occurs under reference conditions.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Surface soil is 0 to 7 inches and brown silty clay loam, weak sub-angular blocky structure. Soil organic matter 1 to 5 percent.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** The climax Midgrass Prairie vegetation provides maximum infiltration, percolation, and little 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):** 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 midgrasses
- Sub-dominant: Warm-season shortgrasses Cool-season grasses = Forbs =
- Other: Shrubs/Vines Trees
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Perennial grasses will naturally exhibit a minor amount (less than five percent) of senescence and some mortality every year.
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14. **Average percent litter cover (%) and depth (in):** Litter is primarily herbaceous.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 600 to 2,500 pounds per 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: Mesquite, pricklypear, lotebush, and tasajillo.

17. **Perennial plant reproductive capability:** All perennial species should be capable of reproducing every year unless disrupted by extended drought, overgrazing, wildfire, insect damage, or other events occurring immediately prior to, or during the reproductive phase.
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