

Ecological site R081BY336TX Low Stony Hill 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.

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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 few and follow old drainages. Intense rainstorms may cause soil movement and deposition.

- Number and height of erosional pedestals or terracettes:** Rare to uncommon. If present, stabilized with vegetation.

- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Less than 10 percent coverage of well distributed and random areas.

- Number of gullies and erosion associated with gullies:** None to few.

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

- Amount of litter movement (describe size and distance expected to travel):** Slight to moderate movement of all

sizes of litter during runoff producing rainfall. Movement fairly evenly distributed and only for short distances in normal rainfall.

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. Soil stability ratings estimated at 5 to 6.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Soils typically are very dark grayish brown clay about six inches thick. They contain much lime and angular fragments of limestone gravel. SOM is moderate.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** The mixed-grass savannah provided adequate cover, litter and organic matter to produce high infiltration and non-erosive runoff. Because of shallow soils, runoff does occur from steeper slopes.
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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. Fractured limestone substrata limits root and water penetration.
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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 midgrass
- Sub-dominant: Warm-season tallgrass Warm-season Shortgrass
- Other: Forbs = Cool-season grasses 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):** Minimal under normal weather conditions. Grasses almost always show some decadence and mortality.
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14. **Average percent litter cover (%) and depth (in):** Litter covers most all plant and rock interspaces.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 1,200 pounds per acre in below average moisture years, 2,500 pounds per acre in normal years and 3,000 pounds per acre in 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: Live oak, ashe juniper, redberry juniper, pricklypear, Texas persimmon, shin oak, sacahuista, and agarito.

17. **Perennial plant reproductive capability:** Good. Only drought, natural herbivory and/or wildfire decrease reproductive capability of any functional group in the reference state.
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