

Ecological site R085AY183TX Redland 30-38" 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)	Lem Creswell, Zone RMS, NRCS, Weatherford Zone
Contact for lead author	817-596-2865
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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:** None.

2. **Presence of water flow patterns:** Water flow patterns are common and flow across and around large fragments. Deposition or erosion is uncommon for normal rainfall conditions but may occur during intense rainfall events.

3. **Number and height of erosional pedestals or terracettes:** Pedestals or terracettes would have been uncommon for this site.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Expect no more than 10% bare ground randomly distributed throughout in small and non-connected areas.

5. **Number of gullies and erosion associated with gullies:** Some gullies may be present on side drains into perennial and intermittent streams. Gullies should be vegetated and stable.

6. **Extent of wind scoured, blowouts and/or depositional areas:** Essentially none.

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7. **Amount of litter movement (describe size and distance expected to travel):** Under normal rainfall conditions, little litter movement should be expected; however, litter of all sizes may move long distances during severe storm 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):** Soil surface under HCPC is resistant to erosion. Stability class range is expected to be 5-6.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** 0-4 inches: brown loam, moderate fine granular structure, surface crusty when dry, hard, friable, many fine roots, slightly alkaline, clear smooth boundary. SOM is 1-4%.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** The savannah of tallgrasses, midgrasses, and forbs having adequate litter and little bare ground can provide 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 >>
- Other: Trees > Warm-season shortgrasses > Cool-season grasses > Forbs
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Grasses and forbs due to their growth habit will exhibit some mortality and decadence, though very slight. Open spaces from disturbance are quickly filled by new plants through seedlings and reproductive reproduction (tillering).
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14. **Average percent litter cover (%) and depth (in):** Litter is dominantly herbaceous.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 2500 - 3500 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: Ashe juniper, Honey mesquite, Pricklypear, Bermudagrass, Johnsongrass, King Ranch bluestem.

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