

## Ecological site R081CY361TX Redland 29-35 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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|---|-------------------|
| Author(s)/participant(s)                    | San Angelo ZO     |
| Contact for lead author                     | 325-944-0147      |
| Date  | 04/08/2013        |
| Approved by                                 | Colin Walden      |
| Approval date                               |                   |
| Composition (Indicators 10 and 12) based on | Annual Production |

### Indicators

1. **Number and extent of rills:** None.
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2. **Presence of water flow patterns:** Some minimal flow patterns may be evident at the juncture of the associated sites.
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3. **Number and height of erosional pedestals or terracettes:** None.
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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** None.
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5. **Number of gullies and erosion associated with gullies:** None.
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6. **Extent of wind scoured, blowouts and/or depositional areas:** None.
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7. **Amount of litter movement (describe size and distance expected to travel):** Little or no litter movement or deposition during normal 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):** Soil surface is resistant to wind erosion. Stability 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 to 3.1 inches; brown dry, loam; moderate fine subangular blocky structure; friable, moderately hard, slightly sticky, slightly plastic; 2 percent limestone fragments; noneffervescent by HCl, 1 normal; clear smooth boundary.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** The tallgrass/midgrass savanna with abundant forbs, adequate litter, and little bare ground provides for maximum infiltration and negligible 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 tallgrasses
- Sub-dominant: Warm-season midgrasses Trees Forbs
- Other: Cool Season Grasses Shrubs Warm Season Short Grasses
- 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 5%) of senescence and some mortality every year.
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14. **Average percent litter cover (%) and depth ( in):** >90 percent litter, 0.5 to 3 inch depth.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 2500 to 5000 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, baccharis, pricklypear, yucca, tasajillo, pricklyash, lotebush, mesquite, King

Ranch bluestem, silky bluestem, and annual broomweed.

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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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