

## Ecological site R078AY128TX Very Shallow 25-28" 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)	Charles Anderson, RMS, NRCS, San Angelo, Texas
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

1. **Number and extent of rills:** None.

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2. **Presence of water flow patterns:** None. This site rarely has water flow patterns due to shallow soil depth and surface rocks.

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3. **Number and height of erosional pedestals or terracettes:** None. Some very minor pedestalling may occur in the shallow, lower production portions of site.

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 5 to 10 percent. Small and non-connected areas.

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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):** Minimal and short.
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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):** Stability class is 4-6 for both canopy and interspaces.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Grayish brown (10YR 5/2) gravelly loam, moderate, fine, granular structure and moderate fine subangular blocky; hard; firm; many roots; 25 percent hard caliche fragments and siliceous pebbles; 40 % surface fragments; calcareous; moderately alkaline.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** High canopy, basal cover and density with small interspaces should make rainfall impact negligible. The stones in the profile capture moisture and enter through soil profile. This site has well drained soils, shallow with 0 to 5 percent slopes which are less susceptible to high runoff and erosion rates.
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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 > Forbs > Warm-season tallgrasses >
- Other: Trees > Shrubs/Vines > Cool-season midgrasses
- Additional: Forbs make up 10 percent of species composition, shrubs and trees compose up to 5 percent species composition.
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Grasses will almost always show some mortality and decadence.
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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):** 1000 to 2500 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 and Saccahuista are the primary invaders.

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17. **Perennial plant reproductive capability:** All species should be capable of reproduction except during prolonged periods of drought, heavy natural herbivory or intense wildfires.
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