

Ecological site R070BY664TX Red Shale 12-18" 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	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** Moderate

2. **Presence of water flow patterns:** Moderate

3. **Number and height of erosional pedestals or terracettes:** Moderate

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 20 to 25% bare ground.

5. **Number of gullies and erosion associated with gullies:** Moderate.

6. **Extent of wind scoured, blowouts and/or depositional areas:** None to Slight.

7. **Amount of litter movement (describe size and distance expected to travel):** None to Slight.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Moderately resistant to erosion.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Clay surface, low soil organic matter.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Basal cover somewhat sparse, rainfall impact is significant. This site has moderately slow permeability, runoff is moderate, and available water holding capacity is moderately low.
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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 shortgrasses >>
- Sub-dominant: Warm-season midgrasses >
- Other: Forbs > Shrubs > Cool-season grasses
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Minimal mortality and decadence.
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14. **Average percent litter cover (%) and depth (in):** Litter is dominately herbaceous.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 510 to 875 lbs 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:** Broom snakeweed, pricklypear.
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17. **Perennial plant reproductive capability:** All species should be capable of reproduction.
