

## Ecological site R078BY075TX Gravelly 20-24" 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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|---------------------------------------------|-----------------------------------------------|
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| Date                                        | 09/04/2007                                    |
| Approved by                                 | Bryan Christensen                             |
| Approval date                               |                                               |
| Composition (Indicators 10 and 12) based on | Annual Production                             |

### Indicators

- Number and extent of rills:** Due to percent slopes, rills will be common.

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- Presence of water flow patterns:** Due to percent slopes, water flow patterns will be common.

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- Number and height of erosional pedestals or terracettes:** Due to percent slopes, pedestals/terraces will be common.

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- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 10-15% mineral soil. Low percentage due to rock fragments scattered throughout soil profile.

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

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

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

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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):** Very resistant to surface erosion.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Very gravelly loam; friable; low SOM.
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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, density and rock fragments should make rainfall impact minimal. This site has moderately permeable soils, runoff is medium, and available water holding capacity is medium.
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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 >
- Other: Shrubs/Vines > Forbs > Trees
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Plant mortality and decadence is minimal.
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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):** 700 to 1,600 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:** Yucca and juniper can become invasive.
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17. **Perennial plant reproductive capability:** All plant species should be capable of reproduction except during periods of prolonged drought conditions, heavy natural herbivory or intense wildfires.
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