

Ecological site R080BY151TX Loamy Bottomland 26-33" 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	Bryan Christensen
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- 1. Number and extent of rills:** Minor rilling could occur for brief periods as result of intense rainfall or upstream flooding events.

- 2. Presence of water flow patterns:** Water flow patterns are common and follow old stream meanders. Deposition or erosion may occur as a result of intense rainfall or upstream flooding events.

- 3. Number and height of erosional pedestals or terracettes:** Pedestals or terracettes are rare to non-existent on 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 20% bare ground randomly distributed throughout.

- 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:** None.

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7. **Amount of litter movement (describe size and distance expected to travel):** Under normal rainfall, little litter movement should be expected. Litter of all sizes may move long distances in flooding 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):** 0-40 inches thick that has moderate medium granular structure. SOM is approximately 1-6%. See soil survey for more info.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Dense herbaceous vegetation with very little bare ground, and a significant overstory canopy 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 > Cool-season midgrasses > Trees >
- Other: Shrubs > Forbs > Vines
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Grasses exhibit some mortality and decadence because of their growth habits and normal life cycles.
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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):** 3800 to 9000 lbs/ac
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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 pricklypear, tasajillo, lotebush, sumacs, sumpweed, ragweed, broomweed, cocklebur, threeawns, Bermudagrass, Johnsongrass are all potential invasive species on this site.

17. **Perennial plant reproductive capability:** Plants should be healthy, vigorous and capable of reproducing unless recently impacted by extreme drought, abusive grazing or wildfire.
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