

Ecological site R080BY160TX Shallow 26-33" PZ

Last updated: 9/19/2023
Accessed: 07/27/2024

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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Date	04/20/2009
Approved by	Bryan Christensen
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

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

2. **Presence of water flow patterns:** Water flow patterns are common and follow old stream meanders. Deposition or erosion is uncommon for normal rainfall but may occur during intense rainfall events.

3. **Number and height of erosional pedestals or terracettes:** Pedestals or terracettes would have been uncommon for 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 to slight.

7. **Amount of litter movement (describe size and distance expected to travel):** Under normal rainfall, litter movement should be expected; however, litter of all sizes may move long distances depending on obstructions under intense storm 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 in HCPC is resistant to wind erosion but moderate to severe water hazards. 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):** Shallow clays & clay loam surface; weak fine granular structure; hard, friable; few fine roots; calcareous moderately alkaline; moderate permeability; well drained; good plant-soil-moisture; moderate SOM.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Functional groups and slight slopes make site well drained; permeability is moderately slow; run-off negligible on 0-1% slopes, very low on 1-3% and low on 3-5% slopes. Infiltration moderate to caliche layer which is impermeable except at cracks.
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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 tallgrasses > Warm-season shortgrasses >
- Other: Cool-season grasses > Forbs > Shrubs/Vines > Trees
- 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):** 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):** 1500 - 3500 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, pricklypear, lotebush, tasajillo.

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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