

Ecological site R083EY021TX Sandy

Last updated: 9/21/2023
Accessed: 05/03/2024

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	01/12/2010
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:** None.

3. **Number and height of erosional pedestals or terracettes:** None.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 0 to 5 percent bare ground. Small and non-connected areas.

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

6. **Extent of wind scoured, blowouts and/or depositional areas:** Due to the sandy properties of the soil, severe soil erosion by wind can occur.

7. **Amount of litter movement (describe size and distance expected to travel):** Under normal rainfall, little litter

movement should be expected; however, litter of all sizes may move long distances. Minimal and short.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil surface under reference conditions is resistant to erosion. Stability class range is expected to be 5 to 6.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** 0 to 3 inches, very pale brown (10YR 7/3) fine sand, brown (10YR 5/3) moist; single grain; loose; common fine roots; slightly acid; clear smooth boundary.
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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. This site has well drained soils, deep with level to gently sloping (0 to 5 percent) which produces negligible runoff and water erosion.
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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 >

Other: Forbs > Shrubs

Additional: Forbs make up five percent species composition while shrubs make up five percent.

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 five percent) 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):** 2,000 to 5,000 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 burgrass are the primary invaders. Other invaders include King Ranch bluestem, Guineagrass, lotebush, pricklypear, yucca, spiny hackberry, live oak, and brasil.

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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