

Ecological site R078CY107TX Sand Hills 23-31" PZ

Last updated: 9/15/2023
Accessed: 04/28/2024

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.

Author(s)/participant(s)	Lem Creswell, Zone RMS, NRCS, Weatherford, Texas
Contact for lead author	817-596-2865
Date	01/01/2008
Approved by	Bryan Christensen
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** None to slight.

- Presence of water flow patterns:** None to slight.

- Number and height of erosional pedestals or terracettes:** None to slight.

- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Expect no more than 20 to 30% bare ground.

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

- Extent of wind scoured, blowouts and/or depositional areas:** Slight to moderate extent of wind scoured areas randomly distributed.

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

movement would take place due to high water intake of soil.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil surface not resistant to erosion.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Fine sand single grained surface with 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 and density with moderate interspaces should make rainfall impact minimal. This site has rapid permeability, runoff is slow, and available water holding capacity is 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):** No evidence of compaction under HCPC.
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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:

Other: Warm-season midgrasses > Shrubs/Vines/Trees > Warm-season shortgrasses = Forbs > Cool-season grasses

Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** There should be little mortality or decadence for any functional group.
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14. **Average percent litter cover (%) and depth (in):** Dominant litter is herbaceous.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 1500 - 4000 lbs/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:** Sand sagebrush, Yucca, Plums, Skunkbush sumac, Mesquite, Juniper, Camphorweed, Annual wild buckwheat.

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17. **Perennial plant reproductive capability:** All perennial plants should be capable of reproducing except during periods of prolonged drought conditions, heavy natural herbivory or wildfires.
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