

Ecological site R113XY001MO Claypan Summit Prairie

Accessed: 04/26/2024

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	08/06/2015
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Foliar Cover

Indicators

1. **Number and extent of rills:** Rills are rare due to the extensive ground and thatch cover.

2. **Presence of water flow patterns:** Water flows in interstitial areas between grass and forb hummocks.

3. **Number and height of erosional pedestals or terracettes:** rare; < 1 inch in height

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground areas are rare in unburned areas. Bare ground occurs immediately after prescribed burns that remove significant amounts of plant material. Within a few months after the burn the site is recovered.

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

6. **Extent of wind scoured, blowouts and/or depositional areas:** none

7. **Amount of litter movement (describe size and distance expected to travel):** minimal

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil surface resistance to erosion is strong due the high amounts of ground cover and extensive root systems.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** 0-12 inches very dark grayish-brown; SOM <5%

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Infiltration and runoff are moderate.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** none

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 grasses > forbs > sedges

Sub-dominant:

Other:

Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** All plant species should be capable of reproduction depending on water availability. All plants should be vigorous, healthy and reproductive depending on disturbance (e.g., drought). Plants should have numerous seed heads, vegetative tillers etc.

The only limitations are weather-related effects, wildfire, and natural disease that may temporarily reduce reproductive capability.

14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 374 - 570 g/m²/yr net primary production (Rabinowitz and others, 1979; Buyanovsky and others, 1987)

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: eastern redcedar, smooth sumac, sweet clover, tall fescue, teasel

17. **Perennial plant reproductive capability:** Better in normal to wet years and seasons. Poorer in dry years and seasons.
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