USDA Natural Resources
Conservation Service

Ecological site R080AY025OK
Depressional Upland

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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:** None

2. **Presence of water flow patterns:** Very few, some drains visible

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):** < 10% This site will have variable bare ground and is controlled by frequency and duration of inundation.

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):** Only litter movement would be during high intensity storms. Concave topography should limit movement.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Stability Class 4+. Stable with abundant organic matter in surface.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Refer to specific description for component sampled.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Mixed grass community promotes infiltration. However, the nature of the soils restrict infiltration. The main runoff will be during high rainfall events.

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: Tallgrass Midgrass Cool Season Perennial Grass

    Sub-dominant: Annual Forbs Perennial Forbs

    Other: Shrubs

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Some mortality and decadence can be expected but less than 5%.

14. **Average percent litter cover (%) and depth (in):** 60-80% at a depth of less than 1 inch. Depending on time since fire.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Total production is about 4500-7500# per acre

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:** None. Potentially Hedge, Cedar(if dry enough), willow, and cottonwood.

17. **Perennial plant reproductive capability:** All species are capable of reproducing annually, both vegetatively and by seed.
