USDA Natural Resources
Conservation Service

Ecological site R078CY056OK
Loamy 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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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):** <5%

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. Short distance movement. Only litter movement would be during high intensity storms.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Stability Class 6. Very stable with abundant organic matter in surface.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Dark, high organic matter surface, moderately granular. A horizon 4 – 8 inches.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** None

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 tallgrasses > warm season bunchgrasses > warm season sod grasses

    Sub-dominant: perennial forbs

    Other: shrubs and vines > trees

    Additional: Warm season tallgrasses > warm season bunchgrasses > warm season sod grasses > perennial forbs > cool season perennial grasses > shrubs

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 not much.

14. **Average percent litter cover (%) and depth (in):** 75% at a depth of less than 1 inch.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Total production is about 2500 pounds per acre in unfavorable years, 6000 pounds in favorable years, averaging 5000 pounds over the long term.

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 is a native that will encroach and increase on this site without fire. Eastern redcedar can dominate the site over time. Other woody plants such as mesquite may encroach upon the site, but rarely

completely dominate the site unless the site is severely degraded.

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17. **Perennial plant reproductive capability:** All species are capable of reproducing both vegetatively and with seed except during periods of prolonged drought conditions, heavy natural herbivory or intense wildfires.
