

Ecological site R084AY075OK Sandy Loam Savannah

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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	Foliar Cover

Indicators

- Number and extent of rills:** No rills present due to adequate ground cover.

- Presence of water flow patterns:** Very few water flow patterns. Only in understory following intense storms.

- Number and height of erosional pedestals or terracettes:** No pedestals or terracettes present on site.

- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** There is some variability, but it should average less than 10% bare ground on this site. Bare areas are small and not connected.

- Number of gullies and erosion associated with gullies:** No gully erosion on site.

- Extent of wind scoured, blowouts and/or depositional areas:** No wind erosion on site.

7. **Amount of litter movement (describe size and distance expected to travel):** Uniform distribution of litter. Litter rarely moves >6 inches on flatter slopes and may be as much as doubled on steeper slopes, then only 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):** Average of stability scores 5 or better.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Ap horizon: 0 to 16 inches; light brown loamy fine sand, single grained structure.
Bt horizon: 16 to 36 inches; reddish brown sandy loam, reddish brown medium prismatic structure.

Refer to description for specific component sampled.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Infiltration and runoff are not affected by any changes in plant community composition and distribution. (Tallgrass/ Tree dominant).

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** There is no compaction layer.

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: Foliar cover : Tree = Tallgrasses

Sub-dominant: Little Bluestem

Other: Mid/Short = Forb+Legume , Shrub

Additional: Tree species should be predominately oak and hickory

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** There may be some plant mortality and decadence on the perennial grasses, especially in the absence of fire and herbivory, but usually <5%.

14. **Average percent litter cover (%) and depth (in):** Litter should cover 50-75% of the area between plants with accumulations of no more than 1 inch deep.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Normal production is 2500 – 5000 pounds per year.

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: Invasives include: eastern redcedar, elm, hackberry, greenbriar, privet, sericea lespedeza and non-natives (introduced species).
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17. **Perennial plant reproductive capability:** All plants capable of reproducing every year. Seed stalks, stalk length and seedheads are numerous.
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