

## **Ecological site R078CY083OK Shallow 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	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### **Indicators**

1. **Number and extent of rills:** There are very few, if any, rills.  

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2. **Presence of water flow patterns:** Some evidence of soil deposition only on steeper slopes among areas of bare ground between plants, particularly after significant rain events, but water usually flows evenly over this site.  

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3. **Number and height of erosional pedestals or terracettes:** Very uncommon. Restricted to steeper portion of the site.  

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** There is some variability on these sites. Average less than 20% bare ground on this site. Depending on time since fire.  

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5. **Number of gullies and erosion associated with gullies:** None. Some gullies possible in drains, but usually associated with adjacent "Loamy Breaks" site.  

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

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7. **Amount of litter movement (describe size and distance expected to travel):** Uniform distribution of litter. Litter rarely moves more than 12 inches on flat surfaces or more than 2 feet on steeper slopes except during intense storms.
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8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Surface soil stabilized (Stability Score 5 – 6). Stability scores based on a minimum of 6 samples tested.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** A--0 to 8 inches; reddish brown (5YR 5/4) loam, reddish brown (5YR 4/4) moist; weak medium granular structure; slightly hard, friable; many fine roots; slightly effervescent; moderately alkaline; gradual wavy boundary. (4 to 12 inches thick)
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Representative plant community intact. At least 60% coverage of tall/midgrasses slow runoff and promote infiltration into soil profile.
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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):** There is no compaction layer.
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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 Midgrass & Tallgrass
- Sub-dominant: Cool Season Grasses, Forbs, Shortgrasses, Shrub
- Other:
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Highly variable, but usually averages ~10% unless subjected to prolonged drought.
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14. **Average percent litter cover (%) and depth ( in):** Litter should cover >60% of the area between plants with accumulations of ½ inch.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Annual production is 1200 - 3000lbs/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: Invasives might be eastern redcedar, annuals, non-natives, and Mesquite in some areas.

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17. **Perennial plant reproductive capability:** All plants capable of reproducing at least 3 years. Both seedheads and vegetative rhizomes/tillers should be evaluated.
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