

Ecological site R078CY017OK Deep Sand Shrubland

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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	Brandon Reavis
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):** Variable but should average about 5 - 15%.

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):** Not much litter movement due to high infiltration rates. Twelve inches maximum, and only with strong winds.

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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):** Stability score 4 – 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):** See Soil Series Description.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Runoff and infiltration are not affected by changes in plant community composition due to rapidly permeable soils with a plant cover of trees, shrubs, tall and midgrasses.
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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):** None.
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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: Tallgrasses
- Sub-dominant: midgrasses (little bluestem)
- Other: Trees/shrubs > shortgrasses > forbs > cool season grasses and grasslikes.
- Additional: Tallgrasses > midgrasses (little bluestem) > Trees/shrubs > shortgrasses > forbs > cool season grasses and grasslikes.
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** There can be some plant loss due to droughty nature of the site, especially after severe drought, but should be less than 10%.
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14. **Average percent litter cover (%) and depth (in):** Litter cover should average 85% at a depth not more than 1 inch, depending upon the location of leaf litter.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 1555 – 4100#/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 include: eastern redcedar, annuals and non-natives.

17. **Perennial plant reproductive capability:** All plants capable of reproducing at least every 2 – 3 years.
