USDA Natural Resources
Conservation Service

Ecological site R083BY016TX
Saline Clay Loam

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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:** Somewhat, because of location on toe slopes of hills and ridges.

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):** 0 to 5 percent bare ground. Small and non-connected areas.

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 and short.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Depth is from 4 to 12 inches, dark grayish brown (10YR 4/2) clay loam or sandy clay loam; moderate fine subangular blocky structure; hard and friable; neutral to mildly alkaline; many fine and medium roots; few fine tubular pores; noncalcareous; SOM is 0 to 3 percent.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** High canopy, basal cover and density with small interspaces should make rainfall impact negligible. This site has well drained soils, deep with 0 to 3 percent slopes which allows negligible runoff and erosion.

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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: Warm-season midgrasses >>

    Sub-dominant: Warm-season shortgrasses >

    Other: Forbs > Shrubs/Vines > Trees

    Additional: Forbs make up to five percent of species composition, shrubs and trees compose five percent species composition.

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Grasses, due to their growth habit, will exhibit some mortality and decadence, though very slight.

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14. **Average percent litter cover (%) and depth (in):** Litter is primarily herbaceous.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 2,250 to 3,750 pounds per 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:** Woody increasers that invade include blackbrush acacia, lotebush, allthorn goatbush,

whitebrush, and prickly pear. Drummond's goldenweed may invade this site heavily. Introduced grasses that may invade include Kleberg bluestem.

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17. **Perennial plant reproductive capability:** All species should be capable of plant reproduction, except during periods of prolonged drought, heavy natural herbivory, and/or wild fires.
