Ecological site R072XY105KS
Chalk Fans

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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	David Kraft
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):** Less than 5% bare ground is found on this site.

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):** Expect small size herbaceous litter to

travel short distances, associated with water flow patterns following extremely high intensity 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):** Stability class of 4-5 under canopies and in intercanopy spaces.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Typical A is 0-7 inches; brown (10YR 4/3), moist; weak fine granular structure; soft, friable; strongly effervescent.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** High grass canopy and basal cover and small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. High herbaceous vegetation on this site will result in less rain necessary to sustain this site because more water is retained.

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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 Seson midgrass some tallgrasses (60%) little bluestem > sideoats grama > big bluestem >> switchgrass

    Sub-dominant: Shortgrasses-cool season (25%) blue grama > buffalograss > inland saltgrass = western wheatgrass

    Other: Forbs (10%) other grasses (5%) shrubs (1%)

    Additional:

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** The majority of plants are alive and vigorous. Some mortality and decadence is expected for the site. This in part is due to drought, unexpected wildfire or a combination of the two events. This would be expected for both dominant and sub-dominant groups.

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14. **Average percent litter cover (%) and depth (in):** Plant litter is distributed evenly throughout the site.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 1500-3000 lbs/acre. Representative value is 2200 lbs/forage/acre. Below normal precipitation during the growing season expect 1500 lbs/forage/acre and above normal precipitation during the growing season expect 3000 lbs/forage/acre. If utilization has occurred, estimate the annual production removed or expected and include this amount when making the total site production estimate.

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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:** None

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17. **Perennial plant reproductive capability:** The number and distribution of tillers or rhizomes is assessed relative to the expected production of the perennial warm season midgrass and shortgrasses.
