Ecological site R080AY091OK
Slickspot

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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.

Author(s)/participant(s)	Harry Fritzler, Steve Glasgow, Jack Eckroat, Mark Moseley
Contact for lead author	
Date	07/01/2005
Approved by	Colin Walden
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** Due to flatter slopes, there are usually few, if any, rills and there is no active headcutting and sides are covered with vegetation.

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2. **Presence of water flow patterns:** There is some distinct evidence of soil deposition or erosion, (typically around bunchgrasses); otherwise water generally flows evenly over the entire landscape.

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3. **Number and height of erosional pedestals or terracettes:** Pedestals are rare, usually not more than 1 inch deep (usually around rocks and bunchgrasses). Terracettes are absent .

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** These sites are complexes comprised of Loamy Prairie and Claypan Prairie soils with slickspots occupying 10-30% of the area. There should generally be ~10% bare ground. In the more saline portions, bare ground varies due to sodium content, but may be as much as 30%.

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5. **Number of gullies and erosion associated with gullies:** Rare, due to flatter slopes and sodium content.

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

7. **Amount of litter movement (describe size and distance expected to travel):** Distribution of litter is variable due to sodium content. If the amount of bare ground is high, then litter movement will be greater. On the average, litter can move ~12-18 inches, 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):** Surface soil is stabilized (Stability Score 5-6). Stability scores based on a minimum of 6 samples tested.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** A horizon 0 to 6 inches; brown silt loam, hard and friable with a very abrupt boundary. B horizon: 6 to 50 inches; reddish brown silty clay to yellowish red to red clay, columnar structure to blocky structure, very hard and firm.

   Refer to specific description for component sampled.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Infiltration capacity of this soil is naturally low and runoff is very high. The plant community composition and distribution is a Midgrass and Shortgrass community randomly dispersed. Slowly permeable soils result in high runoff. M

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** There is usually no compaction layer. Fine texture and hard, firm structure can be mistaken for a compaction layer, but this is a natural characteristic.

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: Midgrasses Shortgrasses

    Sub-dominant: Forbs

    Other: Shrubs Annuals

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Plant mortality and decadence is highly variable on this site due to the droughty nature of the clayey soils, (especially after a severe drought), but will primarily average ~5-10%, especially in the absence of fire and herbivory.

14. **Average percent litter cover (%) and depth (in):** Litter should cover ~60% of the area between plants with accumulations of up to 1/2 inch deep.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Normal production is 1000 – 3800 pounds per year.

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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:** No invasive species. Invasives might include: mesquite, prickly pear, annuals and non-natives.

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17. **Perennial plant reproductive capability:** All plants capable of reproducing at least every 2 years. Seed stalks, stalk length, and seedheads are numerous and what would be expected. Overall health of plants is what would be expected.
