Ecological site R073XY107KS
Sandy Floodplain

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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:** There are no rills or active headcutting present on the site.

2. **Presence of water flow patterns:** There is no evidence of water flow patterns, soil deposition or erosion on the site.

3. **Number and height of erosional pedestals or terracettes:** There is no evidence of pedestaled plants or terracettes or the site.

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. Cover can be defined as live plants, litter, rocks, moss, lichens, etc.

5. **Number of gullies and erosion associated with gullies:** There are no gullies present on the site.

6. **Extent of wind scoured, blowouts and/or depositional areas:** There is no evidence of wind erosion creating bare

areas or denuding vegetation.

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7. **Amount of litter movement (describe size and distance expected to travel):** Plant litter is distributed evenly throughout the site.

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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):** Plant canopy is sufficient to intercept the majority of raindrops. Soil organic matter is incorporated into aggregates at the surface, and/or adhesion of decomposing organic matter is present, and/or biological crusts are present on the surface. Soil stability scores will range from 4-6.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** OSD from Inavale series; A--0 to 8 inches; dark grayish brown (10YR 4/2) moist, loamy fine sand; weak coarse granular structure; loose; slightly alkaline; clear smooth boundary. AC--8 to 17 inches ; grayish brown (10YR 5/2) moist, loamy sand; single grained; loose; slightly alkaline; abrupt smooth boundary. C--17 to 79 inches; light brownish gray (10YR 6/2) moist, fine sand; single grained; loose; thin strata of finer and coarser textured sediments; slightly alkaline.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** There is no negative effect on water infiltration and/or runoff due to plant community composition or distribution. Plant composition and spatial distribution are adequate to prevent any rill formation and/or pedastalling. Plant rooting patterns, litter production, decomposition processes, and spatial distribution are adequate to establish good infiltration and prevent all runoff.

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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 evidence of compacted soil layers due to animal impact or cultural practices.

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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 tallgrasses Dominant-60%. Sand bluestem 700-1400, Indiangrass 175-525, switchgrass 175-525, prairie sandreed 105-200, composite dropseed 0-30, sand dropseed 0-30.

    Sub-dominant: Warm-season mid-, shortgrass sub-dominant 15%. little bluestem 175-525, sideoats grama 105-200, sand lovegrass 0-105, blue grama 0-30.

    Other: Cool-season grasses minor component 10%. Canada wildrye 0-105, western wheatgrass 105-200, sedge 0-30, Scribner's rosette grass 0-30, thin paspalum 0-30.

    Additional: Forbs Minor component 10%. Trees, Shrubs, and Cacti Minor 5%.

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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 subdominant groups.

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14. **Average percent litter cover (%) and depth (in):** Plant litter is distributed evenly throughout the site. There is no restriction to plant regeneration due to depth of litter. Plant litter at 45-55% cover, at a depth of .25 of an inch.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 3,000 pounds of production per ac/yr for a below average year, 4,500 pounds of production per ac/yr for an above average year. Relative value is 3,000 pounds of production per ac/yr.

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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:** There are no noxious weeds present. Invasive plants make up a small percentage of plant community, and invasive brush species are < 5% canopy.

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17. **Perennial plant reproductive capability:** The number and distribution of tillers or rhizomes is assessed on perennial plants occupying the evaluation area. No reduction in vigor or capability to produce seed or vegetative tillers given the constraints of climate and herbivory.
