USDA Natural Resources
Conservation Service

Ecological site R080AY068OK
Sandy Bottomland

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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	Colin Walden
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, although some possible following out of bank flow.

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):** < 2%

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. Short distance movement. Only litter movement would be during high intensity storms with out of bank flow. Some litter will lodge against other

plants and debris.

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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 6. Very stable with abundant organic matter in surface.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Ap: 0 to 9 inches; brown silt loam, weak fine and medium granular structure. A1: 9 to 14 inches; reddish brown silt loam, weak fine and medium granular structure. A2: 14 to 30 inches; reddish brown silt loam, weak fine and medium granular structure.

   Refer to specific description for component sampled.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Tallgrass and tree component provide high infiltration and retention of rainfall. The main runoff will be during high rainfall events.

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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 tallgrasses

    Sub-dominant: warm season midgrasses

    Other: trees and shrubs perennial forbs cool season perennial grasses.

    Additional: Warm season tallgrasses warm season midgrasses trees and shrubs perennial forbs cool season perennial grasses.

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Some mortality and decadence can be expected but not much <5%.

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14. **Average percent litter cover (%) and depth (in):** 50 - 75% covers at a depth of .5 - 1 inches.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Total production is about 4500 – 8500 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: Eastern redcedar is a native that will increase without fire. Other woody plants such as elm, willow, cottonwood, and buckbrush can increase to the point of crossing a threshold.

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17. **Perennial plant reproductive capability:** All species are capable of reproducing, both vegetatively and with seed.
