Ecological site R041XC312AZ
Loamy Bottom 12-16" p.z.

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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	Curtis Talbot
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None Present on this site.

2. **Presence of water flow patterns:** Uncommon; probably cover no more than 5% of area; very short and discontinuous, 1-3 feet in length.

3. **Number and height of erosional pedestals or terracettes:** Slope is 0-1% and not conducive to forming pedestals and terracettes.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 3-10% basd on monitoring data. Bare areas are <3 feet in diameter; perennial grasses are evenly distributed.

5. **Number of gullies and erosion associated with gullies:** Occasional, discontinuous gullies. These gullies can be 50-200 feet in length, 2-5 feet wide and 2-5 feet deep.

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

7. **Amount of litter movement (describe size and distance expected to travel):** All litter size classes staying in place, occasionally being transported in flow paths.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** No slake test performed. Expect values of 5's & 6's across site.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Weak granular to moderate subangular blocky; Color is 10YR5/2 Dry, 10YR3/2 Moist; thickness to 20+ inches.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Cover estimated as follows: Canopy 47-93%, Basal 17-24%, Litter 65-79%; 95% of canopy cover is perennial tall grasses, 3% is short grasses, and 2 % is grass like and forbs. Short grass species cover occupy scattered patches throughout site. Canopy cover is temporally dynamic.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None present on this site.

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: Perennial tall grasses >>

    Sub-dominant: short grasses > grasslike species > perennial forbs > annuals grasses & forbs.

    Other:

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** 10-20% basal area lost on short grasses, 5% basal area lost on tall grasses.

14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 3,500 lbs/acre unfavorable precipitation, 5,000 lbs/acre normal precipitation, 6,500 lbs/acre favorable precipitation.

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: mesquite, wait-a-bit, burrobrush, rubber rabbitbrush, johnson grass, bermuda grass.

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17. **Perennial plant reproductive capability:** Not affected even following several years of prolonged drought period for region.