Ecological site R034AY354WY
Shale High Plains Southeast (Sh)

Accessed: 04/28/2024

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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Date	05/01/2005
Approved by	E. Bainter
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** Rills will be continuous.

2. **Presence of water flow patterns:** Water flow paths will be obvious, regular and continuous with debris dams occurring only on lesser slopes.

3. **Number and height of erosional pedestals or terracettes:** Erosional pedestals present with terracettes present at debris dams.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground is 75 to 85%.

5. **Number of gullies and erosion associated with gullies:** Active gullies may be present on steeper slopes.

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

7. **Amount of litter movement (describe size and distance expected to travel):** Plant litter movement is expected.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Plant cover and litter is at 20% or greater of soil surface. Stability class anticipated to be 3 or greater.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Use soil series description for depth and color of A-horizon.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Sparse plant canopy (8% maximum), slow infiltration rates, and the high amount of bare ground contribute to a naturally high runoff rate even in HCPC.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** No compaction layer would be expected but soil surface is typically crusted and hard to very hard when dry.

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:

Sub-dominant:

Other:

Additional: Mid stature rhizomatous grasses > Mid stature bunch grasses = shrubs > forbs = short stature grasses/grasslikes

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Some plant mortality and decadence (10 to 15%) is expected on this site.

14. **Average percent litter cover (%) and depth (in):** Litter cover is in contact with soil surface with little evidence of biological activity.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 300 lbs/acre

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: Annuals, unpalatable forbs, and Species found on Noxious Weed List.

17. **Perennial plant reproductive capability:** Limited ability to reproduce.