USDA Natural Resources
Conservation Service

Ecological site R083AY009TX
Clayey Bottomland

Last updated: 9/19/2023
Accessed: 05/12/2025

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)	Vivian Garcia, RMS, NRCS, Corpus Christi, Texas
Contact for lead author	361-241-0609
Date	04/02/2015
Approved by	Bryan Christensen
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.

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):** Small and non-connected areas.

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):** Short, less than one foot except during overflow events.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil Stability Rating of 5 to 6.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Subangular blocky, A-horizon 4 to 12 inches, three percent SOM.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Tall and midgrasses reduce runoff to minimal amounts except in exceptional rainfall events.

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

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 tall grasses>>

    Sub-dominant: short warm season grasses (SD)> cool season grasses (SD)>perennial forbs(SD)> trees=shrubs (SD). Forbs make up 10 percent species composition, shrubs and trees compose up to 10 percent.

    Other:

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** None.

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):** 3,750 to 8,550 air-dry pounds per 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:** King Ranch bluestem, spiny aster, mesquite, twisted acacia, annual forbs, annual panicums, threeawns, and red grama.

17. **Perennial plant reproductive capability:** All plants should reproduce each year.