

Ecological site R010XB096OR JD Claypan South 12-16 PZ

Last updated: 12/13/2023
Accessed: 05/21/2024

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.

Author(s)/participant(s)	Cici Brooks, Rangeland Management Specialist for MLRA B10
Contact for lead author	
Date	09/18/2008
Approved by	Kirt Walstad
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** Slopes >20% will have slight to moderate rills due to low moisture holding capacity and low plant productivity.

- Presence of water flow patterns:** Some minor water flow patterns are apparent due to slope and slow infiltration rates of the soils.

- Number and height of erosional pedestals or terracettes:** None

- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 5-15% bare ground is expected for this site.

- Number of gullies and erosion associated with gullies:** None

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

7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter movement would be approximately 10" depending on slope.
-
8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Values are expected to be 4-5, but need to be validated.
-
9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** A horizon structure varies from very cobbly silt loam with weak fine granular structure to a very stony loam with weak platy structure. Dry soil colors range from 5YR 4/4 to 10 YR 4/2. Soil organic matter ranges from 1 to 4 percent.
-
10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Slope, aspect, soil depth and low productivity of plant community limit the infiltration of precipitation and increase runoff potential.
-
11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** A compaction layer does not occur but a claypan or bedrock does occur on this site within 6-10" of the surface.
-
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: Deep-rooted perennial, cool season bunchgrasses>>
- Sub-dominant: Shallow-rooted shrubs=shallow rooted, perennial, cool season bunchgrasses>>
- Other: Shallow rooted and annual forbs.
- Additional:
-
13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Expect some decadence and mortality in low sagebrush.
-
14. **Average percent litter cover (%) and depth (in):** Needs to be verified.
-
15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Favorable 900 lbs/acre; Normal 700 lbs/acre; Unfavorable 500 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: Cheatgrass, Medusahead, Toadflax, Thistle.

17. **Perennial plant reproductive capability:** All species should be capable of reproducing annually.
-