

Ecological site R034AY310WY Dense Clay High Plains Southeast (DC)

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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.

Author(s)/participant(s)	
Contact for lead author	
Date	05/05/2005
Approved by	E. Bainter
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- 1. Number and extent of rills:** Rills should not be present on slopes <6% and will be short, broken and discontinuous on slopes > 7%.

- 2. Presence of water flow patterns:** Barely observable on slopes < 6% and evident on slopes >7%.

- 3. Number and height of erosional pedestals or terracettes:** Not evident on slopes < 6%. Erosional pedestals may be present with small terracettes present at debris dams on slopes >7%.

- 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground is 40 to 60%.

- 5. Number of gullies and erosion associated with gullies:** Active gullies should not be present

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

- 7. Amount of litter movement (describe size and distance expected to travel):** Little to no plant litter movement. If litter

movement occurs, it is only for a short distance.

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 40% or greater of soil surface and maintains soil surface integrity. Stability class anticipated to be 3 or greater.
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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.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Sparse plant canopy (20% maximum), very slow to slow infiltration rates, and the high amount of bare ground contribute to a naturally high runoff rate even in HCPC.
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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):** No compaction layer is expected.
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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:

Sub-dominant:

Other:

Additional: Mid-stature cool season rhizomatous grass > mid-stature, cool season bunch grasses > short stature grasses/grasslikes > shrubs > forbs

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Some plant mortality and decadence (5 to 10%) is expected on this site.
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14. **Average percent litter cover (%) and depth (in):** Litter cover is in contact with soil surface.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 750 lbs/ac
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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: Plains prickly pear, broom snakeweed, annual bromes, and species found on the noxious weed list.

17. **Perennial plant reproductive capability:** No limitations.
