

Ecological site R085AY276TX Gravelly 30-38 PZ

Last updated: 9/21/2023
Accessed: 05/11/2025

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.

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Date	02/20/2006
Approved by	Bryan Christensen
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** None. This site does not usually develop rills due to shallow depths and surface rocks.
- Presence of water flow patterns:** None. This site rarely has flow patterns, due to shallow soil depth and surface rocks. Some are expected to be around surface obstacles.
- Number and height of erosional pedestals or terracettes:** None. Some very minor pedestalling may occur in the shallow, lower production portions of the site. Rarely should they be over 1/4 inch height.
- Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 0 to 10 percent. Small and non-connected areas.
- Number of gullies and erosion associated with gullies:** This site does not develop gullies due to shallow soils and rock outcrops.
- Extent of wind scoured, blowouts and/or depositional areas:** None.

7. **Amount of litter movement (describe size and distance expected to travel):** Minimal and short. Less than 6 inches. Only associated with water flow patterns following extremely high intensity rainfall.
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8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil surface is stabilized by organic matter, decomposition products and/or a biological crust. Stability class 6 for both canopy and ground cover.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Pale to dark brown loamy surface with sub surface rounded to angular pebbles, cobbles and stones. Soil Organic Matter is 1 to 4 percent.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** High canopy and basal cover and density with small interspaces make rainfall impact negligible. This site has well drained soils, slowly permeable with 1 to 12% (some short steep slopes up to 20%) slopes which allow negligible runoff and erosion.
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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):** None.
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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: Warm-season tallgrasses >>
- Sub-dominant: Warm-season midgrasses > Warm-season shortgrasses >
- Other: Forbs = Shrubs > Trees
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Grasses due to their growth habit will exhibit some mortality and decadence, though very slight.
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14. **Average percent litter cover (%) and depth (in):** Litter is dominantly herbaceous and covers most plant and rock interspaces.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 2000 - 4500 #/acre. 2000# in below average moisture years, 3250# in "normal" years, and 4500# in above average moisture years.
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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: Ashe juniper, pricklypear, and mesquite are the primary invaders. Also baccharis, persimmon, old world bluestems, and agrito.

17. **Perennial plant reproductive capability:** All plants should be capable of reproduction except during periods of prolonged drought conditions, heavy natural herbivory or intense wildfires.
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