

Ecological site R042AB586TX Sandstone Hill and Mountain, Hot Desert Shrub

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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.

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Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

- Number and extent of rills:** None.

- Presence of water flow patterns:** None, except following high intensity storms, when short (less than 1 m) and discontinuous flow patterns may appear. Flow patterns in drainages are linear and continuous.

- 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):** 2-5% bare ground.

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

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

- Amount of litter movement (describe size and distance expected to travel):** In drainages, there can be significant amounts of litter moved long distances. On most of the site, minimal and short distance (<5ft) of litter movement

associated with high intense rainfall.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Stability values anticipated to be 2-3 in the interspaces and 3-4 under plant canopies. Values need verification at reference sites.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** 0-2 inches thick, light yellowish brown surface horizon with a weak medium granular structure. Data from Solis soil series description
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** A high canopy cover of midgrass bunch and stoloniferous grasses will help minimize runoff and maximize infiltration. Grasses should comprise approximately 65% of total plant composition by weight. Shrubs will comprise about 25% by weight.
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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 perennial mid bunchgrass

Sub-dominant: Warm-season perennial mid/short stoloniferous = Warm-season perennial short bunchgrasses = Mid/tall Shrubs

Other: Subshrubs = Semi-succulent/succulent = Perennial forbs > Annual forbs

Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** All grasses will show some mortality and decadence in addition to annual forbs. Mid/tall perennial shrubs will show some mortality or decadence only after drought conditions.
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14. **Average percent litter cover (%) and depth (in):**
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 200-500 lbs/acre
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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: None.

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