USDA Natural Resources
Conservation Service

Ecological site R041XC303AZ
Clayey Slopes 12-16" p.z.

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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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Date	03/07/2005
Approved by	Scott Woodall
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None present on this site.

2. **Presence of water flow patterns:** Uncommon, probably cover no more than 10% of area; discontinuous; very short, usually less than 1-3 feet in length.

3. **Number and height of erosional pedestals or terracettes:** Pedestals are uncommon on perennial grass and shrubs; Terracettes uncommon.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 0-5%

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5. **Number of gullies and erosion associated with gullies:** None present on this site.

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6. **Extent of wind scoured, blowouts and/or depositional areas:** None present on this site.

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7. **Amount of litter movement (describe size and distance expected to travel):** All litter size classes staying in place.

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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):** Expect values of 1-3 in canopy interspaces and 4-6 under plant canopies.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Weak fine granular; Color is 5YR4/2 Dry, 5YR3/2 Moist; thickness 2 to 8 inches.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Canopy 30-40%, Basal 5%, Litter 45-55%; 60-70% of canopy cover is perennial grasses, 5% perennial forbs, 15-25% shrubs & subshrubs. Cover is well dispersed throughout site.

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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 present on this site.

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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: perennial grass

Sub-dominant: subshrubs

Other: annual grasses & forbs

Additional: perennial grass > subshrubs > annual grasses & forbs > shrubs succulents = perennial forbs

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** 50% of basal cover of perennial grasses has likely been lost in recent prolonged drought.

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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):** 500 lbs/acre unfavorable precipitation, 850 lbs/acre normal precipitation, 1,200 lbs/acre favorable precipitation

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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:** jojoba, whitethorn, mesquite, prickley pear, cane cholla & ocotillo may increase to undesirable levels in the absence of natural fires; Red brome and wild oats.

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17. **Perennial plant reproductive capability:** Not affected even following several years of prolonged drought period for region

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