USDA Natural Resources
Conservation Service

Ecological site R041XC308AZ
Limy 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	03/04/2005
Approved by	Scott Woodall
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None

2. **Presence of water flow patterns:** 10-20 feet long, discontinuous

3. **Number and height of erosional pedestals or terracettes:** Pedestals common on perennial bunch grasses. Terracettes common on black grama plants.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 10-20%

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5. **Number of gullies and erosion associated with gullies:** none

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

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7. **Amount of litter movement (describe size and distance expected to travel):** Herbaceous litter in vicinity of flow paths moves in flow paths.

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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 4-6 across site.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Weak granular; color is 7.5YR5/3 dry, 7.5YR3/2 moist; thickness to 2 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 5-10%, litter 15-40%; 75-80% of canopy cover is perennial grasses, 10-15% is subshrubs and 5% is trees & shrubs. 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

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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 midgrasses >> annual forbs & grasses > subshrubs > large shrubs >

succulents

Sub-dominant:

Other:

Additional:

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Approximately 50% of cnaopy and basal cover of midgrass species 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):** 600 lbs/ac unfavorable precipitation; 900 lbs/ac normal precipitation; 1500 lbs/ac 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:** Lehmann lovegrass, creosote, whitethorn, mesquite, prickly pear, burroweed, wait-a-bit

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17. **Perennial plant reproductive capability:** Not affected due regional prolonged drought.
