USDA Natural Resources
Conservation Service

Ecological site R035XB202AZ
Clayey Wash 6-10" 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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Approved by	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** Few. Any rills present will continually form and reshape periodically due to occasional flooding on the site.

2. **Presence of water flow patterns:** Some water flow patterns may be present, but are highly variable due to position on landscape and dependant on run-in moisture from uplands. The high shrink/swell characteristics of the soil and occasional flooding (overland flow) will continually reshape the surface.

3. **Number and height of erosional pedestals or terracettes:** Very few expected, some minor pedestals/terracettes may occur along water flow patterns.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** This site has moderate to high potential to produce herbaceous cover and low amounts of bare ground. Bare ground ranges from 15-35%.

5. **Number of gullies and erosion associated with gullies:** Uncommon, some gullies may form due to location on floodplains. Any gullies present should be stable with vegetation and no signs of active erosion.

6. **Extent of wind scoured, blowouts and/or depositional areas:** Some deposition areas (from sediments) may occur due to overland flow and occasional flooding.

7. **Amount of litter movement (describe size and distance expected to travel):** Most herbaceous and woody litter will be transported throughout the site during intense overland flow/flood events. Only minor amounts of fine litter will be transported by wind.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Expected values of 1-3 in interspaces and 4-6 under the plant canopies. This site is fairly resistance to erosion when well vegetated.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Surface textures typically range from clay loam to clay with a thickness of 2-14 inches. Typically soil structure is moderately (thin, fine to medium) platy structure. Surface colors range from light reddish brown to reddish brown.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** This site is characterized as a

native grassland with scattered large and half shrubs with few forbs. This site is dominated by a mix of bunch and colonizing grasses providing a diverse root structure and vegetation pattern. Perennial grasses reduce raindrop impact and slow run-in moisture (overland flow) to allow for increased infiltration.

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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. These soils have a naturally platy structure.

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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 grasses > Cool season grasses >

    Sub-dominant: Large shrubs > Half shrubs > Forbs > Cacti

    Other:

    Additional:

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** All plants functional groups are adapted to survival in all but the most severe droughts. Severe winter droughts affect shrubs the most. Severe summer droughts affect grasses the most.

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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):** Average annual production on this site is expected to be 900 to 1100 lbs/ac. in a year of average annual 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: Tamarisk, cheatgrass, foxtail barley, silverleaf nightshade, Russian thistle, and camelthorn.

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17. **Perennial plant reproductive capability:** All plants native to this site are adapted and are capable of producing seeds, stolons and rhizomes in all but the most severe drought.
