

Ecological site R035XC309AZ Clay Loam Terrace 10-14" p.z. Saline-Sodic

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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:** None is expected on shallow slopes. Steeper slopes that have run-in moisture from adjacent shallow sites in conjunction with bare ground can generate a few rills.

- 2. Presence of water flow patterns:** A few discontinuous water flow patterns may be present, but short.

3. **Number and height of erosional pedestals or terracettes:** There can be occasional terracettes due to woody litter debris dams.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 40% or less. This has the potential to produce moderate amounts of herbaceous cover.

5. **Number of gullies and erosion associated with gullies:** None expected.

6. **Extent of wind scoured, blowouts and/or depositional areas:** None. Any depositional areas are influenced by adjacent sites.

7. **Amount of litter movement (describe size and distance expected to travel):** Fine herbaceous litter is considerable distance by wind and water. Woody debris tends to stay in place except during large storm runoff events. Fine and woody herbaceous litter stays under the canopy of long lived perennial plants.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil surface stability in plant interspaces ranges from 1 to 2 with an average of 1.6. Soil stability underplant canopies ranges from 1 to 5 with an average of 3.5.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** The soil surface horizon is 1-4 inches thick with textures of loams to silty clay loam. It is grayish in color (10YR) with weak fine platy structure.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** The plant community is composed of 70% grasses, 23% shrubs and 7% forbs. The annual average production of 900-1000 pounds per acre and low bare ground is beneficial for aiding infiltration and reducing runoff.

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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 expected.
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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

Other: Low shrubs > Forbs > Annual grasses

Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** A small amount of mortality (<10%) is expected in the plant community. Shrubs will show the greatest loss during long term drought followed by grasses. Most plants are adapted to short term 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):** The annual production for an average year is 900-1000 pounds per 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:** Plants that do invade

this site and can increase are goosefoot (CHENO), Russian thistle (SATR12), cheatgrass (BRTE) and annual wheatgrass (ERTR13). There is a point where black greasewood (SAVE4) in combination with the plants previously mentioned create and represent plant communities that are generated from a degraded state.

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