USDA Natural Resources
Conservation Service

Ecological site R027XY044NV
SALINE FLAT

Last updated: 6/03/2024
Accessed: 05/13/2025

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	06/20/2006
Approved by	Kendra Moseley
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:** Water flow patterns may commonly occur. Moderately fine to fine surface textures result in limited infiltration rates. Concentrations of surface salts and sodium often result in chemical crusts which impede infiltration of precipitation. Water flow patterns are typically short, ending in depressional areas.

3. **Number and height of erosional pedestals or terracettes:** None

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare Ground ± 30%; cover of surface rock fragments often more than 35%; shrub canopy ±15%; basal area for perennial herbaceous plants ± 1%.

5. **Number of gullies and erosion associated with gullies:** Gullies are rare to common depending on landform. Where this site occurs on landforms not associated with ephemeral or perennial drainageways, gullies do not occur. Where this site occurs associated with drainageways, gullies are rare to common. Gullies and associated head cuts should be healing and stable.

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):** Persistent litter (large woody material) will remain in place except during catastrophic run-in (flooding) events.

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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):** Soil stability values will range from 1 to 4. (To be field tested.)

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Structure of soil surface will be platy or massive. Soil surface colors are light and are typified by an ochric epipedon. Organic carbon can range from 1.5 to 4.5 percent (OM values taken from lab characterization data.)

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Deep-rooted, perennial grasses (i.e., basin wildrye & alkali sacaton] slow runoff and increase infiltration. Tall stature and relatively coarse foliage of basin wildrye and shrubs (with associated litter) break raindrop impact and provide opportunity for snow catch and moisture accumulation on 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):** Compacted layers are not typical. Platy or massive subsurface layers are normal for this site and are not to be interpreted as compaction.

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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: Reference Plant Community: Tall shrubs >> tall-statured, deep-rooted, cool season, perennial bunchgrasses. (By above ground production)

    Sub-dominant: Associated low shrubs > perennial rhizomatous grasses > deep-rooted, cool season, perennial forbs = fibrous, shallow-rooted, cool season, perennial and annual forbs = shallow-rooted, cool season, perennial grasses and grass-like plants. (By above ground production)

    Other:

    Additional:

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Dead branches within individual shrubs are common and standing dead shrub canopy material may be as much as 25% of total woody canopy.

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14. **Average percent litter cover (%) and depth (in):** Within plant interspaces (± 40%) and depth of litter ± 1 inch.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** For normal or average growing season (through mid-May) ± 400 lbs/ac; Winter moisture significantly affects total production.

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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:** Rubber rabbitbrush; annual mustards; povertyweed; annual kochia; pigweed; bassia; cheatgrass; knapweeds

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17. **Perennial plant reproductive capability:** All functional groups should reproduce in average (or normal) and above average growing season years.
