Ecological site R029XY004NV
SALINE BOTTOM

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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.

Author(s)/participant(s)	GK BRACKLEY
Contact for lead author	State Rangeland Management Specialist
Date	06/20/2006
Approved by	
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 are rare to common. Moderately fine to fine surface textures result in limited infiltration rates. Concentrations of surface salts and sodium result in chemical crusts which also impedes infiltration. 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 ± 65%; surface rock fragments less than 5%; shrub canopy ±10%; basal area for perennial herbaceous plants ± 20%.

5. **Number of gullies and erosion associated with gullies:** Gullies are none 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 may occur. 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):** Fine litter (foliage of grasses and annual & perennial forbs)is only expected to move during periods of flooding by adjacent streams. Where present, this site typically occurs on the outer margins of active floodplains and persistent litter (large woody material) will remain in place except during major 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 bunchgrasses (basin wildrye and alkali sacaton) slow runoff and increase infiltration. Tall stature and relatively coarse foliage of basin wildrye and 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-statured, deep-rooted, cool season, perennial bunchgrasses > perennial rhizomatous grasses > associated perennial grasses and grass-like plants > tall shrubs. (By above ground production)

    Sub-dominant: Deep-rooted, perennial forbs = fibrous, shallow-rooted, cool season, perennial and annual forbs. (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 (± 35%) and depth of litter ± ½ inch.

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** For normal or average growing season (through June) ± 1300 lbs/ac; Winter moisture significantly affects total production.

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 (aggressive increaser spp.); annual mustards; povertyweed; annual kochia; pigweed; knapweeds

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