USDA Natural Resources
Conservation Service

Ecological site R048BY265CO
Salt Meadow

Last updated: 9/07/2023
Accessed: 05/11/2025

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	01/20/2005
Approved by	Kirt Walstad
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:** None

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

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Expect 5-15% bare ground. Extended drought or increased salt concentrations can cause bare ground to increase.

5. **Number of gullies and erosion associated with gullies:** None to rare. Due to off-site influence. If present, edges rounded and vegetated.

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

7. **Amount of litter movement (describe size and distance expected to travel):** Typically slight, however during major flooding events this site slows water flow and captures litter and sediment.

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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):** Stability class rating anticipated to be 3-5 at soil surface.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Soils are typically deep and poorly drained with a high water table. Surface texture ranges from loam to fine sandy loam with a moderate medium sub-angular blocky structure. The A-horizon ranges from 0-8 inches in depth. Color varies from light gray to pale brown. Moderate to strongly saline-alkali. Surface salts may be obvious.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Diverse grass, sedge/rush, shrub and forb functional/structural groups and diverse root structure/patterns reduces raindrop impact slows overland flow providing increased time for infiltration to occur. However, the high water table inherent to this site has more effect on infiltration than does plant community.

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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: cool season rhizomatous grass >

    Sub-dominant: warm season rhizomatous grass > cool season bunchgrass

    Other: shrubs > sedges/rushes forbs

    Additional:

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Minimal

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14. **Average percent litter cover (%) and depth (in):** 30-40% litter cover and ranges from 0.25 to 0.50 inches in depth. Litter cover declines during and following extended drought.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 1200 lbs./ac. low precip years; 1700 lbs./ac. average precip years; 2000 lbs./ac. above average precip years. After extended drought, production may be reduced by 350 – 800 lbs./ac. or more.

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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: Big sagebrush, rabbitbrush, foxtail barley, inland saltgrass.

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17. **Perennial plant reproductive capability:** The only limitations are weather-related, wildfire, natural disease, inter-species competition, wildlife, and insects that may temporarily reduce reproductive capability.
