

## Ecological site R051XY263CO Salt Flats

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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	Kirt Walstad
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

1. **Number and extent of rills:** None

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2. **Presence of water flow patterns:** None, where vegetation is continuous. Slick spots (high sodium areas) can pond water and concentrate overland flow. Flow paths should be short in length and disconnected.

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

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 5-10% bare ground, with bare patches generally less than 5-10 inches in diameter. Extended drought can cause bare ground to increase upwards to 15-20% with bare patches reaching upwards to 10-15 inches in diameter.

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

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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):** Litter movement is minimal and short.
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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 1-2 in interspaces at soil surface.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Surface soils range from loam, sandy loam, sandy clay loam to loamy sand in texture. The A-horizon is light gray to brownish gray that can extend to 8 inches deep. The structure is typically weak ranging from fine granular to sub-angular blocky.
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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, forb, shrub canopy and root structure reduces raindrop impact and concentrations of salt thereby providing increased time for infiltration to occur. Extended drought reduces grass and forb production and increases shrub component causing decreased infiltration and increased potential for ponding and evaporation.
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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: warm season bunchgrass >
- Sub-dominant: shrubs > warm season rhizomatous > cool season rhizomatous >
- Other: forbs
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Minimum. Expect some natural mortality and decadence on grasses and shrubs.
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14. **Average percent litter cover (%) and depth ( in):** 15-25% litter cover at 0.25 – .50 inch depth. Litter cover during and following extended drought ranges from 5-10%.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 600 lbs./ac. low precip years; 900 lbs./ac. average precip years; 1200 lbs./ac. above average precip years. After extended drought, production will be significantly reduced to 400 – 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: None

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