

## **Ecological site R030XC018NV SHALLOW GRAVELLY SLOPE 11-13 P.Z.**

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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:** Rill are not common but can occur on this site, especially following summer convective storms due to very shallow loamy-skeletal, soils with low water holding capacity with 15 to 30 percent slope.

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- 2. Presence of water flow patterns:** Water flow patterns are few and are found in interspaces between shrubs, not connected. Should be minimal except following intense summer storms.

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- 3. Number and height of erosional pedestals or terracettes:** Few to none. High gravel cover

limits pedestal development. Some terracettes found on sites with slopes.

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground from 5 to 20 percent. Mostly covered by gravels and vegetation.
  5. **Number of gullies and erosion associated with gullies:** None
  6. **Extent of wind scoured, blowouts and/or depositional areas:** No wind-scoured or blow out areas due to high gravel cover.
  7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter, 1 inch or less in size, is expected to move distance of slope length during intense summer convection storms. Persistent litter (large woody material) will remain in place except during catastrophic events.
  8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil surface is resistant due to high amounts of gravels and vegetation cover and litter. Stability values be 3-5 (needs to be field tested).
  9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Surface structure is moderate medium subangular blocky. Soil surface colors are light and soils have an ochric epipedon. Organic matter is 0.25 to 0.75 percent in the A horizon.
  10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Plant community composition is approximately 20 percent herbaceous and 80 percent shrubs production with 25 to 35 percent ground cover. Soils have moderate permeability.
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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. Petrocalcic horizon occurs at 11 to 14 inches.
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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: Evergreen shrubs> warm-season perennial bunchgrasses = cool-season perennial bunchgrasses. (By above ground production)
- Sub-dominant: Associated shrubs/trees> 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 30% of total woody canopy; some of the mature bunchgrasses have dead centers.
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14. **Average percent litter cover (%) and depth ( in):** Between shrub interspaces.
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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), approximately 600 lbs/ac.
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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:** Broom snakeweed, red brome, and cheatgrass are invaders on this site. Utah juniper is an increaser on this site.

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