

## Ecological site R039XA143AZ Cinder Cones 17-22"

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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	Scott Woodall
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

1. **Number and extent of rills:** No rills on this site. This area is extensively covered in volcanic cinders. These cinders stabilize the site and prevent rills.

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2. **Presence of water flow patterns:** No water flow patterns on this site.

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3. **Number and height of erosional pedestals or terracettes:** No erosional pedestals on this site.

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** 0 to 1 percent bare ground on this site; the majority of the site is covered in volcanic tephra

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5. **Number of gullies and erosion associated with gullies:** No gullies on this site.

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6. **Extent of wind scoured, blowouts and/or depositional areas:** Some litter accumulation under sparse shrub vegetation as evidence of wind disturbance; no wind scouring or blowouts on this site.

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7. **Amount of litter movement (describe size and distance expected to travel):** Very little litter present due to limited presence of vegetation; less than 1 inch in length and diameter and movement limited to the area immediately surrounding the leaf drop for the most part due to the [presence of volcanic cinders.
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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):** This site is stable and able to support vegetation due to the presence of pea-sized cinders. Under the cinders, the soil is relatively young and undeveloped. Without the presence of cinders this soil would erode quickly.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Little to no soil surface structure. This site is stabilized by the presence of volcanic cinders and ash.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** This site has high infiltration and low runoff due to the nearly continuous cover of porous cinders.
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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):** No compaction layer on this site.
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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: Bare ground>>forbs>shrubs>grasses
- Sub-dominant:
- Other:
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** No significant problems with plant mortality on this site. The vegetation is widely scattered making dispersal of pathogens difficult.
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14. **Average percent litter cover (%) and depth ( in):** This site has limited vegetative litter cover due to sparse scattered vegetation.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** <100 lbs/acre total production would be expected on this site.
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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:** No invasives currently on site. There is potential for dalmation toadflax to occur on the site but not to the extent of being a significant problem.

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17. **Perennial plant reproductive capability:** Normal reproduction on site.

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