

## Ecological site R039XA140AZ Canyon Bottom (Riparian) 18-22" 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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|---|-----------------------------------|
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| Contact for lead author                     | Flagstaff MLRA Soil Survey Office |
| Date  | 03/27/2012                        |
| Approved by                                 | Scott Woodall                     |
| 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:** Water flow patterns are currently limited to the edges of the site-near limestone cliffs where water seeps through and maintains the current riparian state.

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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):** 0-5 percent bare ground. This site is heavily vegetated with riparian overstory and understory.

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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:** Wind scoured, blowouts, and depositional areas are limited to the edges of the site near limestone canyon walls where there is exposed bedrock.

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7. **Amount of litter movement (describe size and distance expected to travel):** Very low litter movement. Most litter will stay in place except in the case of a rare flood, in which case litter will be moved downstream.
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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):** 1-2
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Heavy plant cover due to lack of periodic scouring by water has permitted high infiltration and low runoff
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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: Shrubs>trees>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):** Low mortality on this site due to water from water table and water coming in from the limestone cliff sides.
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14. **Average percent litter cover (%) and depth ( in):**
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):**
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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 on this site.

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17. **Perennial plant reproductive capability:** Reproduction on site is normal.

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