

Ecological site R023XF093CA SHALLOW CLAY 9-16"

Last updated: 4/10/2025
Accessed: 12/22/2025

General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Ecological site concept

Currently there is only a draft of the initial concept for this ecological site. The initial concept for this site places it within the Cobbly Mod Deep Clay 10-14 PZ Low or Lahontan Sagebrush and Sandberg bluegrass Ecological Site Group. To view the General STM and other information available for this ESG please go to <https://edit.jornada.nmsu.edu/catalogs/esg/023X/R023XY904NV>

This site has a similar plant community to the modal site, but is more productive at 450 lbs/ac in a normal year. Western juniper may be present on this site. The clay soils are also subject to shrink-swell fracturing, with a silty surface texture and stones or cobbles on the surface. This site's STM is similar to the modal site, with 5 stable states.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

Climatic features

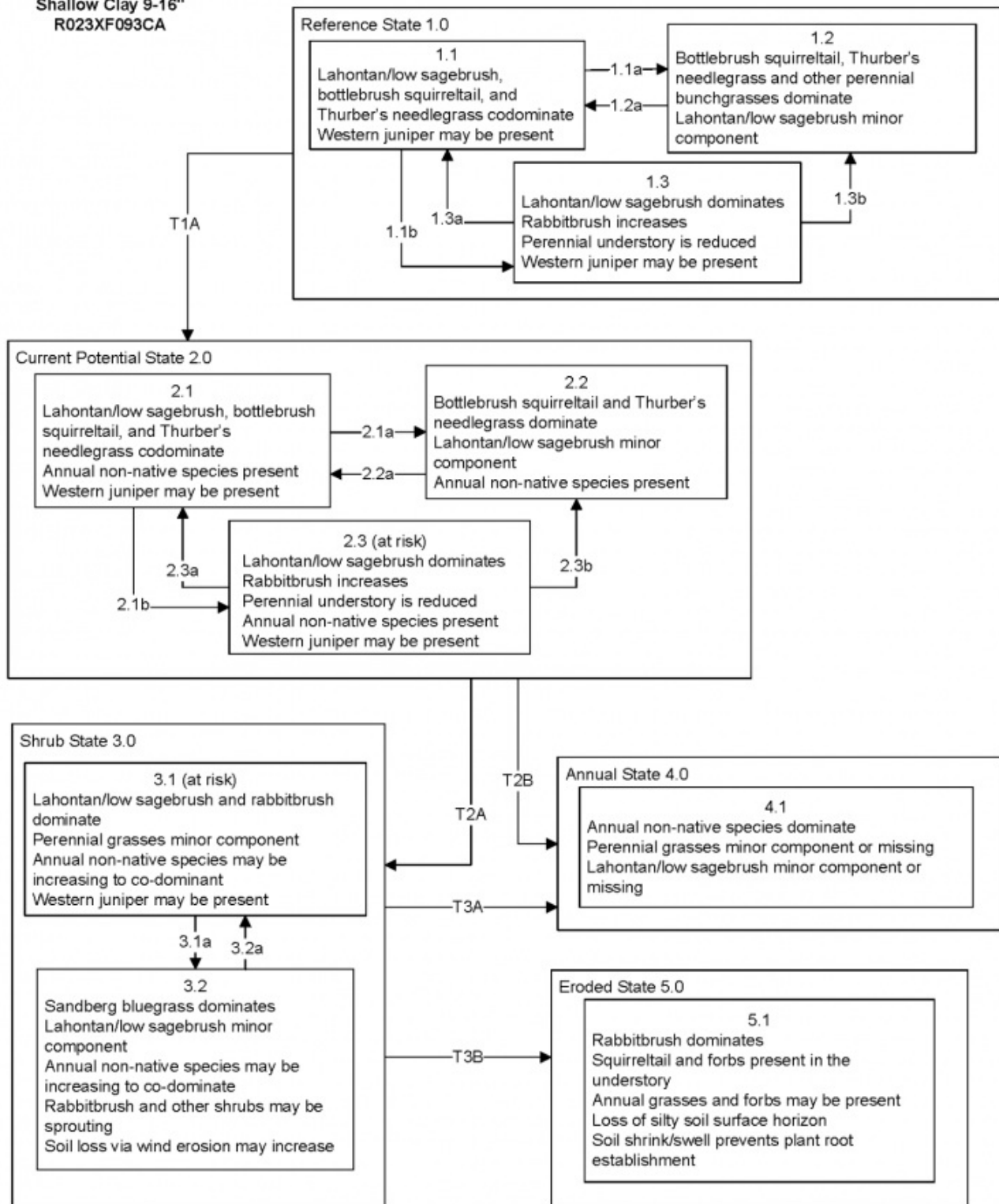
Influencing water features

Soil features

Ecological dynamics

State and transition model

MLRA 23
Group 4
Shallow Clay 9-16"
R023XF093CA



MLRA 23
Group 4
Shallow Clay 9-16"
R023XF093CA
KEY

Reference State 1.0 Community Phase Pathways

1.1a: Low severity fire creates grass/sagebrush mosaic; high severity fire significantly reduces sagebrush cover and leads to early/mid-seral community, dominated by grasses and forbs.

1.1b: Time and lack of disturbance such as fire or drought. Excessive herbivory would also reduce perennial understory.

1.2a: Time and lack of disturbance allows for shrub regeneration.

1.3a: Low severity fire or late fall/winter herbivory causing mechanical damage to sagebrush would reduce sagebrush overstory.

1.3b: High severity fire significantly reduces sagebrush cover leading to early/mid-seral community.

Transition T1A: Introduction of non-native species such as cheatgrass.

Current Potential State 2.0 Community Phase Pathways

2.1a: Low severity fire creates grass/sagebrush mosaic; high severity fire significantly reduces sagebrush cover and leads to early/mid-seral community dominated by grasses and forbs; non-native annual species present.

2.1b: Time and lack of disturbance such as fire or drought. Inappropriate grazing management may also reduce perennial understory.

2.2a: Time and lack of disturbance allows for shrub regeneration.

2.3a: Low severity fire resulting in a mosaic pattern. Brush management with minimal soil disturbance; late-fall/winter grazing causing mechanical damage to sagebrush.

2.3b: High severity fire significantly reduces sagebrush cover leading to early/mid-seral community.

Transition T2A: Inappropriate grazing management (3.1). Fire or brush treatment; may be coupled with inappropriate grazing management (3.2).

Transition T2B: Inappropriate grazing management, soil disturbing treatments, fire or multiple fires.

Shrub State 3.0 Community Phase Pathways

3.1a: Fire or brush management (i.e. mowing) with minimal soil disturbance.

3.2a: Time and lack of disturbance (unlikely to occur).

Transition T3A: Catastrophic fire.

Transition T3B: Inappropriate grazing management.

Contributors

T Stringham (UNR under contract with BLM)

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.

Author(s)/participant(s)	
Contact for lead author	
Date	12/22/2025
Approved by	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. Number and extent of rills:

2. Presence of water flow patterns:

3. Number and height of erosional pedestals or terracettes:

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):

5. Number of gullies and erosion associated with gullies:

6. Extent of wind scoured, blowouts and/or depositional areas:

7. **Amount of litter movement (describe size and distance expected to travel):**

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

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:

Sub-dominant:

Other:

Additional:

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

14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):**

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:**

17. **Perennial plant reproductive capability:**
