

Ecological site R030XB152CA

Saline Hill

3-5" P.Z.

Last updated: 2/25/2025
Accessed: 08/27/2026

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

This site occurs on steep sideslopes of mountains on all exposures. Elevations are 2100 to 4500 feet. Slopes range from 15 to 75% percent. Please refer to group concept R030XB116NV to view the provisional STM.

Associated sites

R030XB077NV	STEEP SOUTH SLOPE Steep South Slope
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Similar sites

R030XB126CA	Saline Slope 3-5" P.Z. Saline Slope 3-5
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Table 1. Dominant plant species

Tree	Not specified
Shrub	(1) <i>Atriplex hymenelytra</i> (2) <i>Ambrosia dumosa</i>
Herbaceous	(1) <i>Achnatherum speciosum</i>

Physiographic features

This site occurs on steep sideslopes of mountains on all exposures. Elevations are 2100 to 4500 feet. Slopes range from 15 to 75% percent.

Table 2. Representative physiographic features

Landforms	(1) Mountain slope
Elevation	640 – 1,370 m

Slope	20 – 80 %
Aspect	Aspect is not a significant factor

Climatic features

The climate on this site is arid, characterized by warm, moist winters (30 to 60 degrees F) and hot, somewhat dry summers (70 to 100 degrees F). The average annual precipitation ranges from 2 to 7 inches with most falling as rain from November to March. Approximately 30% of the annual precipitation occurs from July to September as a result of summer convection storms. Mean annual air temperature is 57 to 70 degrees F.

The average frost-free period is 200 to 300 days.

Table 3 Representative climatic features

Frost-free period (average)	300 days
Freeze-free period (average)	
Precipitation total (average)	180 mm

Influencing water features

Soil features

The soils that characterize this site are shallow and very shallow. They are formed in colluvium and residuum from mainly volcanic sources. Surface textures are extremely gravelly sandy loams. Subsurface textures are very gravelly sandy loams, sandy loams and fine sandy loams. Available water capacity is very low and permeability is moderate. Wind erosion hazard is negligible due to surface rock fragments. Effective rooting depth is 4 to 14 inches to unweathered rhyolite bedrock.

Representative_Soil Map Units
 403 Upspring,saline, inclusion in Haleburu-
 Upspring complex 8-50% slopes
 407 Lithic Torriorthents, inclusion in
 Haleburu-Sunrock complex,15-75% slopes
 420 Lithic Torriorthents, inclusion in
 Dalvord-Goldroad-Rock Outcrop
 association, 15-75% slopes

Ecological dynamics

Please refer to group concept R030XB116NV to view the provisional STM.

The historic site potential is comprised of low, grayish microphyllous shrubs, 0.3 to 1 meter tall, with some succulent species. Total cover often low, with bare ground between the widely spaced shrubs. Stands typically are strongly dominated by a single Atriplex species. Perennial grasses and forbs are sparse. Annual grasses and forbs are seasonally present. Pockets of cryptogamic crust have developed in between the surface rock and vegetation. This site is stable in this condition.

As ecological condition deteriorates, the perennial grasses decrease. The opportunistic shrubs such as desert holly, white bursage and shadscale increase. Desert trumpet and wirelettuce will also increase. Invaders on this site include non-native species such as red-stem filaree, red brome and schismus. White burrobush is the primary perennial pioneer species.

Management for this site would be to protect it from excessive disturbance and maintain existing plant cover. Close roads and trails no longer being used and revegetate using native species indigenous to this site. Water is the main limitation on this site. Water

developments would greatly increase the diversity of species.

Species indigenous to this site are recommended for any revegetation efforts. Desert holly and white bursage are effective for erosion control and slope stabilization. Transplanting seedlings is more effective than direct seeding. Planting in late fall or early spring allows for acclimation to summer conditions. Transplants that are dormant during the hot, dry season are best maintained that way rather than attempting to force them to break dormancy and undergo new vegetative growth out of season. Supplemental irrigation is recommended for the first growing season, especially if winter rainfall has been sparse. Protection from rodents is also recommended.

The foliage of the saltbushes appears to have fire-retarding qualities associated with the salt content of the leaves. A severe fire, however, will typically kill the aboveground portions of the saltbushes. White bursage and creosotebush possess limited sprouting ability and can be killed by fire. White bursage, however, can rapidly re-establish from seed.

State and transition model

Additional community tables

Table 4. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production ()	Foliar Cover (%)
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Animal community

This site provides habitat for small mammals such as antelope ground squirrels, desert woodrats, and canyon and long-tailed pocket mice. This site provides habitat for lizards, such as the western whiptail, desert collared lizard, and chuckwalla; and snakes such as gopher, coachwhip, western patch-nosed and speckled rattlesnake. Depth to bedrock is a restrictive feature to burrowing reptiles, such as the desert tortoise. Birds common to this site include black-throated sparrows, rock wrens, common ravens and raptors. LIVESTOCK GRAZING: This site has limited use for livestock grazing due to low production, steep slopes and lack of stock water. White bursage is fair browse for cattle and horses, and fair to good browse for goats. Sheep also use this shrub, feeding primarily on new growth and seeds. Creosotebush is unpalatable to livestock. During favorable years, annual grasses and forbs provide additional forage. General guide to initial stocking rate. Before making specific recommendations, an on-site evaluation must be made. Pounds/acre air dry AUM/AC AC/AUM Normal Years 150

Hydrological functions

Runoff is medium to high. Hydrologic group D - soils having very slow infiltration rates when thoroughly wetted and consisting chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. Hydrologic conditions: good - >70% ground cover (includes litter, grass and brush overstory); fair - 30 to 70% ground cover; poor 30% ground cover. Soil Series: Lithic Torriorthents Hydrologic Group: D Hydrologic Conditions and Runoff Curves: Good 84; Fair 86; Poor 88 Soil Series: Upspring, saline Hydrologic Group: D Hydrologic Conditions and Runoff Curves: Good 84; Fair 86; Poor 88

Recreational uses

This site is highly valued for open space and those interested in desert ecology. Flowering wildflowers and shrubs may also attract visitors during the spring.

Other information

Military Operations - The steep rocky slopes restrict extensive vehicle and foot traffic. Management for this site would be to protect it from excessive disturbance and maintain existing plant cover.

Inventory data references

Sampling technique 2 NV-ECS-1 SCS-Range 417 Other

Type locality

Location 1: San Bernardino County, CA	
Township/Range/Section	T6N R5E S12

UTM zone	N
UTM northing	3830900
UTM easting	555000
General legal description	SE1/4, Sec. 12, T6N R5E Approximately 15 miles southwest of Ludlow, CA Galway Lake Quadrangle UTM 11S 0555000e 3830900n (Datum=NAS-C) San Bernardino Co., CA

Other references

Cutler, P.L. and D.J. Griffin 1998. Personal communication, September 1998.

Contributors

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Approval

Sarah Quistberg, 2/25/2025

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	08/27/2026
Approved by	
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:
