Ecological site R030XY132CA
Saline Flat 3-5" P.Z.

Last updated: 2/24/2025
Accessed: 05/13/2025

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

This site occurs on convex hummocks on alluvial flats. Elevations are 590 to 655 feet. Slopes range from 4 to 15 percent. The soils that characterize this site are very deep and well drained. They are formed in mixed alluvium. Surface textures are very fine sandy loams. The surface texture is flocculated due to the extremely high salt concentrations.

Please refer to group concept R030XY129CA to view the provisional STM.

Associated sites

R030XY046NV	**OUTWASH PLAIN** Outwash Plain

Similar sites

R030XY127CA	**Sodic Dune 3-5" P.Z.** Sodic Dunes 3-5

Table 1. Dominant plant species

Tree	Not specified
Shrub	(1) *Allenrolfea* (2) *Suaeda moquinii*
Herbaceous	Not specified

Physiographic features

This site occurs on convex hummocks on alluvial flats. Elevations are 590 to 655 feet. Slopes range from 4 to 15 percent.

Table 2. Representative physiographic features

Landforms	(1) Alluvial flat
Elevation	590–655 ft
Slope	4–15%
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, dry summers (70 to 110 degrees F). The average annual precipitation ranges from 2 to 5 inches with most falling as rain from November to March. Approximately 30% to 45% of the annual precipitation occurs from July to September as a result of summer convection storms. Mean annual air temperature is 69 to 75 degrees F.

b. The average frost-free period is 300 to 360 days.

Table 3. Representative climatic features

Frost-free period (average)	360 days
Freeze-free period (average)	
Precipitation total (average)	5 in

Influencing water features

Soil features

The soils that characterize this site are very deep and well drained. They are formed in mixed alluvium. Surface textures are very fine sandy loams. The surface texture is flocculated due to the extremely high salt concentrations. Subsurface textures are fine sandy loams, loams and silt loams. Available water capacity is very low and permeability is moderate. Wind erosion hazard is moderate. Effective rooting depth is 60 inches or more. Water tables are greater than 60 inches.

Representative_Soil Map Units
253 Amboy Crater-Gypboy association, 0-15% slopes
902 Typic Haplosalids-Gypboy association, 0-15% slopes

Ecological dynamics

Please refer to group concept R030XY129CA to view the provisional STM.

This is a halophytic phase of saltbush scrub on soils with available groundwater and high concentrations of salt or alkali. The historic site potential is characterized by an open canopy with low total cover and widely spaced succulent chenopods growing on small hummocks. Perennial grasses and forbs are sparse. Annuals are seasonally present. This site is associated with a playa and may be intermittently flooded.

This site is characterized by low productivity with little plant diversity. Disturbance would allow for the introduction of non-native species such as Schismus, Schismus spp. Saltcedar, *Tamarix ramosissima*, occurs in washes and bomb craters that intermittently hold water.

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. Removal of non-native species and an appropriate monitoring program are also recommended.

Species indigenous to this site are recommended for any revegetation efforts. Transplanting seedlings is more effective than direct seeding. The soil profile should be irrigated prior to transplanting and supplemental irrigation is recommended for the first growing season. Protection from rodents is also recommended.

This community is usually unaffected by fire because of low fuel loads. The foliage of the chenopods appears to have fire-retarding qualities associated with the salt content of the leaves. A severe fire, however, will typically kill the aboveground portions. These species can reestablish sites through an abundance of wind-dispersed seed from

adjacent unburned sites.

State and transition model

Ecosystem states

1. Reference State - Plant Community 1

State 1 submodel, plant communities

1.1. Reference State - Plant Community 1

State 1
Reference State - Plant Community 1

Community 1.1
Reference State - Plant Community 1

The representative natural plant community is Desert Sink Scrub or Iodinebush Series. Iodinebush and Mojave seablite dominate this community. Potential vegetative composition is about 5% grasses, 5% forbs, and 90% shrubs. The following table lists the major plant species and percentages by weight, air dry, of the total plant community that each contributes in an average production year. Fluctuations in species composition and relative production may change from year to year dependent upon abnormal precipitation or other climatic factors.

Table 4. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Shrub/Vine	46	90	136
Grass/Grasslike	2	5	7
Forb	2	5	7
Total	**50**	**100**	**150**

Table 5. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	2-9%
Grass/grasslike foliar cover	0-1%
Forb foliar cover	0-1%
Non-vascular plants	0%
Biological crusts	0%
Litter	0%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%

Bare ground	0%

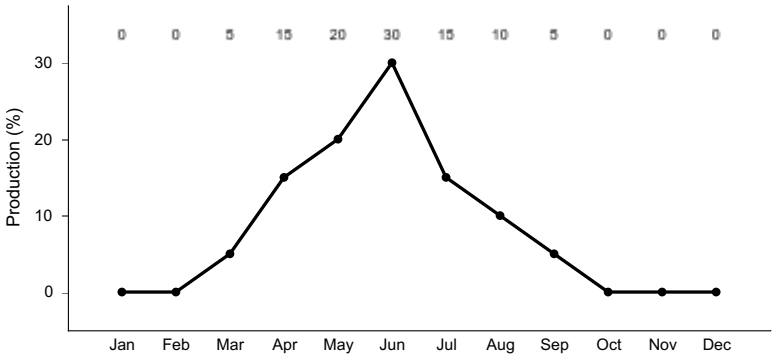

Figure 2. Plant community growth curve (percent production by month). CA3010, Mojave Seablite. Growth begins in early spring; flowering occurs from July to September..

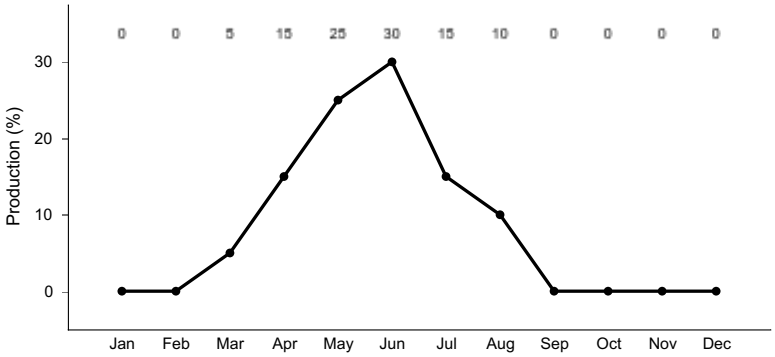

Figure 3. Plant community growth curve (percent production by month). CA3029, Iodine bush. Growth begins in early spring and continues through the summer, setting seed by late summer..

Additional community tables

Animal community

This site has low species diversity. Small mammals that may occur include round-tailed ground squirrels and Merriam's kangaroo rats. Coyotes and black-tailed jackrabbits may also occur.

Lizards common to this site include western whiptails and zebra-tailed lizards.

Birds occurring on this site include horned larks, black-throated sparrows, loggerhead shrikes and common ravens.

Season of Use- Other Mgt. Considerations: This site has limited value for livestock grazing due to very low productivity and lack of stock water. Iodinebush and Mojave seablite are considered poor forage for livestock.

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 100

Hydrological functions

Runoff is medium. Hydrologic soil group B - soils having moderate infiltration rates when thoroughly wetted and consisting chiefly of moderately deep to deep, moderately well drained to well drained soils with moderately fine to

moderately coarse textures. Hydrologic conditions: good - >70% ground cover (includes litter, grass and brush overstory); fair - 30 to 70% ground cover; poor <30% ground cover.

Soil Series: Gypboy
Hydrologic Group: B
Hydrologic Conditions and Runoff Curves:
Good 68; Fair 72; Poor 77

Recreational uses

This site is highly valued for open space and those interested in desert ecology.

Other information

Military Operations - Management for this site would be to protect it from excessive disturbance and maintain existing plant cover. Land clearing or other disturbances that destroy the vegetation can result in soil compaction reduced infiltration rates, accelerated erosion, soil blowing, barren areas and the introduction of non-native plants.

Inventory data references

Sampling technique
_1_ NV-ECS-1
___ SCS-Range 417
_1_ Other

Type locality

Location 1: San Bernardino County, CA	
Township/Range/Section	T5N R11E S6
UTM zone	N
UTM northing	3822869
UTM easting	603339
General legal description	SW1/4 Sec. 6, T5N R11E Approximately 5 miles southwest of Amboy, CA Amboy Crater Quadrangle UTM 11S 0603339e 3822869n (Datum=NAS-C) San Bernardino Co., CA

Other references

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

Contributors

P. Novak-Echenique

Approval

Sarah Quistberg, 2/24/2025

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	05/13/2025
Approved by	Sarah Quistberg
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:

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

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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:**

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17. **Perennial plant reproductive capability:**
