

# Major Land Resource Area 029X

## Southern Nevada Basin and Range

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### Ecological site keys

#### MLRA 29

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##### I. basins (including playa)

###### A. basins west of 1872 Von Schmidt line

1. Bishop volcanic tablelands
2. Owens valley

###### B. basins east of 1872 Von Schmidt line

###### 1. typic aridic valleys/basin floors including playas

###### i. Typic aridic soils w/o bedrock

###### a. ES characterized 5" or less PZ

- 1) ES dominated by ATCA2 (found on Torripsammments) ... R029XY034NV – SANDY 3-5 P.Z.
- 2) ES dominated by ATCO
  - a) base of natrargid horizon within 10" of soil surface ... R029XY032NV – SODIC LOAM 3-5 P.Z.
  - b) soil not as above
    - (1) AMDU2 found in ES ... R029XY039NV – COARSE GRAVELLY LOAM 3-5 P.Z.
    - (2) AMDU2 not found in ES
      - (a) found on alluvial flat and lower fan skirts ... R029XY063NV – DRY SODIC TERRACE
      - (b) found on fan skirts and inset fans ... R029XY035NV – LOAMY 3-5 P.Z.

###### b. ES characterized 5" or more PZ

###### 1) water table within 45ft, indicated by presence of SAVE4

- a) soil with EC 16-32, SAR 30-99, lake plain or basin floors ... R029XY076NV – SODIC FLAT
- b) soil with EC <16, SAR <30
  - (1) NO water table w/in profile
    - (a) found on stabilized sand dune ... R029XY018NV – SODIC DUNE
    - (b) found on fan skirt or alluvial flat ... R029XY024NV – SODIC TERRACE 5-8 P.Z.
  - (2) water table w/in profile 30-60" ... R029XY004NV – SALINE BOTTOM

###### 2) water table deeper than 45ft, indicated by dominance of ATCO

###### a) found on basin floors

- (1) ATCO dominant, possible ATBO (see also R029XY159NV & R029XY117NV) ... R029XY059NV – SHALLOW SILTY 5-8 P.Z.
- (2) ATCA2 (or possible hybrid ATCA) dominant ... R029XY048NV – OUTWASH PLAIN

###### b) found on piedmont slopes

- (1) soils have platy structure and vesicular pores in A2 (see also R029XY036NV, R029XY087NV, R029XY093NV, R029XY007NV, R029XY080NV [petrocalcic], R029XY107NV, & R029XY161NV) ... R029XY017NV – LOAMY 5-8 P.Z.

(2) soils not as above

(a) 14-20" of sandy surface ... R029XY012NV – SANDY 5-8 P.Z.

(b) not as above (see also R029XY046NV, R029XY031NV, & R029XY079NV) ...  
R029XY016NV – LOAMY UPLAND 5-8 P.Z.

c) found on drainageways. Soils are rarely to occasionally flooded (see also R029XY072NV)  
... R029XY041NV – DRY WASH

ii. Typic aridic soil w bedrock

a. ES dominated by ATCO

1) soil typically >10" deep ... R029XY022NV – LOAMY SLOPE 5-8 P.Z.

2) soil typically <10" deep ... R029XY033NV – LOAMY SLOPE 3-5 P.Z.

b. ES dominated by GRSP/LYCIU ... R029XY021NV – LOAMY HILL 5-8 P.Z.

2. xeric-aridic valleys/fan piedmont

i. xeric-aridic valleys/fan piedmont limestone PM

a. site found alluvial soil

1) site found on alluvium derived from sedimentary PM (limestone)

a) site found on alluvium derived from limestone, ochric epipedon (see also R029XY047NV &  
R029XY099NV)

b) site found on alluvium derived from limestone, mollic epipedon (see also R029XY173NV)  
... R029XY170NV – SHALLOW CALCAREOUS LOAM 10-12

2) site found on alluvium derived from volcanic PM. Go to I.B.2.ii.

b. site found on bedrock controlled soils. Go to II.B.2.

ii. xeric-aridic valleys/piedmont volcanic PM

a. site found alluvial soil

1) site found on alluvium derived from sedimentary PM (limestone). Go to I.B.2.i.

2) site found on alluvium derived from volcanic PM

a) ES dominated by ARNO4 (possible more effervescence) (see R029XY008NV &  
R029XY058NV)

b) ES dominated by ARTRW8 (possible less effervescence)

(1) ES found on inset fans, drainageways (terrace) (see also R029XY114NV &  
R029XY158NV) ... R029XY049NV – SANDY LOAM 8-12 P.Z.

(2) ES found on fan remnants (see also R029XY167NV) ... R029XY006NV – LOAMY 8-  
10 P.Z.

c) ES dominated by ARPY2 (on eroded fan remnant) ... R029XY092NV – BARREN FAN 8-10  
P.Z.

d) ES dominated by ARTRT on inset fans and terraces of ephemeral streams ...  
R029XY003NV – LOAMY BOTTOM 8-12 P.Z.

e) ES dominated by ARTRV, soil pachic ... R029XY061NV – FAN COLLAR 12-16 P.Z.

b. site found on bedrock controlled soils

1) site found on residuum derived from sedimentary (limestone) PM. Go to I.B.2.i.

2) site found on residuum derived from volcanic PM

a) ES dominated by ARNO4 (possible more effervescence)

(1) ES dominated by ARNO4 w/ACTH7 (above 10" PZ) ... R029XY104NV – SHALLOW  
CLAY LOAM 10-12 P.Z.

(2) ES dominated by ARNO4 w/o ACTH7 (below 10" PZ)

(a) ES on south aspect dominated by ARNO4 w/o ACTH7 (below 10" PZ) ...  
R029XY045NV – STONY CALCAREOUS SLOPE 8-12 P.Z.

(b) ES on aspect other than south dominated by ARNO4 w/o ACTH7. Go to II.B.2.

b) ES dominated by ARTRW8 (possible less effervescence)

(1) ES found on low mtns and hills, below 10"PZ ... R029XY010NV – LOAMY SLOPE 8-10 P.Z.

(2) ES found on low mtns and hills, above 10"PZ ... R029XY057NV – LOAMY ASH INFLUENCED SLOPE 12-14 P.Z.

## II. mountains and foothills

### A. mountain backslopes and high mountains

#### 1. White Mountains

i. White Mountains high elevation

ii. White Mountains mid elevation

#### 2. typic xeric above tree line

i. soils mod deep to very deep, >40"

a. dominant veg ARTRV

1) soil pachic ... R029XY051CA – Shallow Gravelly Slope 5-8" P.Z.

2) soil not as above ... R029XY150NV – MOUNTAIN SHOULDER

b. dominant veg ARAR8 ... R029XY052NV – CLAYPAN 16+ P.Z.

c. dominant veg POTR5 ... F029XY130NV – POTR5 WSG 1A1701 16 to 20

ii. soil not as above, <40"

a. ES found above 8000'

1) ES on ridge (convex/convex or convex/linear) ... R029XY053NV – MOUNTAIN RIDGE 16+ P.Z.

2) ES on sideslopes (linear/linear, convex/linear) - R029XY052NV

b. ES found below 8000'

1) soil textures with ashy modifier (>30% volcanic glass) ... R029XY055NV – CLAYPAN 12-16 P.Z.

2) soil textures w/o ashy modifier (<30% volcanic glass) ... R029XY062NV – CLAYPAN 8-12 P.Z.

#### 3. aridic-xeric mid-slope woodland and brushland

i. soil greater than 60" (very deep)

a. associated with flowing stream ... R029XY026NV – STREAMBANK 14+ P.Z.

b. associated with wash or drainageway ... R029XY009NV – UPLAND WASH

c. ES found on fan remnant (see also R029XY105NV) ... R029XY030NV – LOAMY 12-14 P.Z.

ii. soil less than 60"(deep, mod-deep, or shallow)

a. soil 20-40" deep (mod-deep)

1) ES dominated by CELE3 (see also R029XY043NV) ... R029XY027NV – MAHOGANY THICKET

2) ES dominated by PIMO or PIMO/JUOS (see also F029XY066NV) ... F029XY101NV – PIMO WSG 1R0601 14 to 18

b. soil shallow <20" (shallow)

1) granitic PM ... F029XY068NV – PIMO-JUOS/ARAR8

2) PM not as above

a) understory story veg dominated by ARNO4 ... F029XY069NV – PIMO-JUOS WSG 0R0504 12 to 16

b) understory not as above

(1) understory dominated by ARTRW (below 7200') ... F029XY065NV – PIMO-JUOS/ARTRW8

(2) understory not as above (above 7200')

(a) understory dominated by ARTRV (see also F029XY103NV & F029XY095NV) ...  
F029XY102NV – PIMO WSG 0R0601 14 to 18

(b) understory dominated by ARAR8 ... F029XY131NV – PIMO WSG 0R0603 12 to 16

B. foothills and low mountains

1. 29 Utah - low mountains

2. xeric-aridic low mtns & hills

i. ES dominated by CEIN7 and soil 15cm or less ... R029XY040NV – LIMESTONE HILL

ii. ES not as above

a. ES dominated by CORA (see also R029XY019NV & R029XY077NV) ... R029XY013NV –  
SHALLOW GRAVELLY LOAM 5-8 P.Z.

b. ES not as above

1) ES dominated by ARNO4 (possible more effervescence)

a) ES dominated by ARNO4 w/2-10% canopy cover old JUOS (see also R029XY081NV) ...  
R029XY015NV – SHALLOW CALCAREOUS HILL 8-10 P.Z.

b) ES dominated by ARNO4 w/ <2% old JUOS

(1) ES dominated by ARNO4 w/PSSPI ... R029XY028NV – SHALLOW CALCAREOUS  
SLOPE 12-14 P.Z.

(2) ES not as above (see also R029XY014NV & R029XY168NV) ... R029XY008NV –  
SHALLOW CALCAREOUS LOAM 8-12 P.Z.

2) ES dominated by ARTR2 (possible less effervescence)

a) ES associated with rock scree

(1) soil w/mollic epipedon, ACTH7 dom grass ... R029XY106NV – GRAVELLY CLAY  
SLOPE 10-12 P.Z.

(2) soil w/ ochric epipedon, ACSP12 dom grass ... R029XY169NV – SCREE SLOPE 8-10

b) ES not as above

(1) ES dominated by ARTRW8 w/ACSP12 ... R029XY073NV – BOULDERY SLOPE 8-12  
P.Z.

(2) ES dominated by ARTRW8 w/HECO26-ACHY (see also R029XY010NV) ...  
R029XY075NV – LOAMY SLOPE 10-12 P.Z.