

Major Land Resource Area 038X Mogollon Transition South

Accessed: 08/13/2026

Ecological site group keys

MLRA 38

I. Additional water

A. [Criteria] ... 038XESG09 – Riparian

B. Ephemeral water

1 Sand >50% & Clay <25% for surface and subsurface ... 038XESG13 – Sandy Bottoms

2 Sand <50% & Clay >25% for surface and subsurface ... 038XESG01 – Bottoms

II. Uplands

A. >75% bedrock outcrop ... 038XESG08 – Outcrops

B. <75% bedrock outcrop

1 Surface SAR >8, or Subsurface EC>8, or Surface EC >4 ... 038XESG11 – Saline Hills

2 Surface SAR<8, or Subsurface EC <8, and Surface EC <4

i. Gypsum >5% surface or >10% subsurface ... 038XESG06 – Gypsum

ii. Gypsum <5% surface and <10% subsurface

a. EC >1.5 surface or >2 subsurface ... 038XESG12 – Saline Uplands

b. EC <1.5 surface and <2 subsurface

1) slope >35% & >40% surface rock ... 038XESG02 – Breaks

2) slope <35% or <40% surface rock

a) depth <30cm ... 038XESG16 – Very Shallow

b) depth: 30-55cm ... 038XESG15 – Shallow

c) depth >55cm

(1) rock >30% surface or >30% subsurface ... 038XESG04 – Deep Rocky

(2) rock <30% surface and <30% subsurface

(a) clay >30% surface or >35% subsurface ... 038XESG03 – Clay Uplands

(b) clay <30% surface or <35% subsurface

(1) sand >75% or texture is Loamy Sand or sandier in surface & subsurface ... 038XESG14 –
Sandy Uplands

(2) sand <75% or texture is Loamy Fine Sand or finer in surface & subsurface

- (a) clay <20% or texture is Sandy Loam or sandier in surface ... 038XESG07 – Loamy Uplands
- (b) clay >20% or texture is Fine Sandy Loam or finer in surface ... 038XESG05 – Finer Uplands

National Park Service

I. Additional water

A. Perennial water - 041XESG09 Riparian

B. Ephemeral water

- 1 Sand >50% & clay <25% for surface and subsurface - 040XESG13 Sandy Bottoms
- 2 Sand <50% or clay >25% for surface and subsurface - 040XESG01 Bottoms

II. Uplands

A. Surface SAR >8 - 042BESG38 Madrean Woodland Saline Hills

B. Surface SAR <8

- 1 Gypsum >5% surface or >10% subsurface - 042AESG33 Gypsum Thornscrub
- 2 Gypsum <5% surface and <10% subsurface

i. Subsurface EC >8 or surface EC >4 - 042BESG Madrean Woodland Saline Hills

ii. Subsurface EC <8 and surface EC <4

- a. EC >1.5 surface or >2 subsurface - 041XESG39 Thornscrub Saline Uplands
- b. EC <1.5 surface and <2 subsurface

1) Slope >35% & >40% surface rock

- a) Elevation 2500-3700 ft - 040XESG Thornscrub Breaks
- b) Elevation 3700-4500 ft ... 038XESG18 – Semi-Desert Grassland Breaks
- c) Elevation 4500-6000 ft ... 038XESG19 – Madrean Woodland Breaks
- d) Elevation >6000 ft - 042CESG20 Temperate Forest Breaks

2) Slope <35% or <40% surface rock

a) Depth <30cm

- (1) Elevation 2500-3700 ft - 040XESG46 Very Shallow Thornscrub
- (2) Elevation 3700-4500 ft - 042AESG47 Very Shallow Semi-Desert Grassland
- (3) Elevation 4500-6000 ft - 042AESG48 Very Shallow Madrean Woodland
- (4) Elevation >6000 ft - 070BESG49 Very Shallow Temperate Forest

b) Depth: 30-55cm

- (1) Elevation 2500-3700 ft - 040XESG42 Shallow Thornscrub
- (2) Elevation 3700-4500 ft - 042AESG43 Shallow Semi-Desert Grassland
- (3) Elevation 4500-6000 ft ... 038XESG44 – Shallow Madrean Woodland
- (4) Elevation >6000 ft - 070BESG45 Shallow Temperate Forest

c) Depth >55cm

- (1) Rock >30% surface or >30% subsurface

- (a) Elevation 2500-3700 ft - 040XESG25 Deep Rocky Thornscrub
 - (b) Elevation 3700-4500 ft - 042AESG26 Deep Rocky Semi-Desert Grassland
 - (c) Elevation 4500-6000 ft - 042BESG Deep Rocky Madrean Woodland
 - (d) Elevation >6000 ft - 070BESG28 Deep Rocky Temperate Forest
- (2) Rock <30% surface and <30% subsurface
- (a) Clay >30% surface or >35% subsurface
 - (1) Elevation 2500-3700 ft - 040XESG21 Thornscrub Clay Uplands
 - (2) Elevation 3700-4500 ft - 041XESG22 Semi-Desert Grasslands Clay Uplands
 - (3) Elevation 4500-6000 ft ... 038XESG23 – Madrean Woodland Clay Uplands
 - (4) Elevation >6000 ft ... 038XESG24 – Temperate Forest Clay Uplands
 - (b) Clay <30% surface and <35% subsurface
 - (1) Sand >75% or texture is loamy sand or sandier in surface & subsurface
 - (a) elevation 2500-3700 ft - 042CESG40 Thornscrub Sandy Uplands
 - (b) Elevation 3700-4500 ft - 042BESG41 Semi-Desert Grasslands Sandy Uplands
 - (2) Sand <75% or texture sandy loam or finer in surface & subsurface
 - (a) Clay <20% or texture is sandy loam or sandier in surface
 - (1) Elevation 2500-3700 ft - 040XESG34 Thornscrub Loamy Uplands
 - (2) Elevation 3700-4500 ft - 041XESG35 Semi-Desert Grassland Loamy Uplands
 - (3) Elevation 4500-6000 ft - 042BESG36 Madrean Woodland Loamy Uplands
 - (4) Elevation >6000 ft - 070BESG37 Temperate Forest Loamy Uplands
 - (b) Clay >20% or texture is finer than sandy loam in surface
 - (1) Elevation 2500-3700 ft - 042AESG29 Thornscrub Finer Uplands
 - (2) Elevation 3700-4500 ft - 041XESG30 Semi-Desert Grassland Finer Uplands
 - (3) Elevation 4500-6000 ft - 070BESG31 Madrean Woodland Finer Uplands
 - (4) Elevation >6000 ft - 070BESG32 Temperate Forest Finer Uplands