

Major Land Resource Area 038X

Mogollon Transition South

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Ecological site keys

MLRA 38

I. 38.AZ1 – Lower Mogollon Transition

A. Flooded (bottom position, flooded from the valley-side or over-bank)

1 Soils with a perennial high water-table (3-15 ft.)

- i. Soils sandy, gravelly, cobbly and with redox features - Sandy Bottom, POFR2, FRVE2
- ii. Soils loamy to clayey with redox features - Meadow

2 Soils without a high water table (3-15 ft)

- i. Soils sandy - Sandy Bottom
- ii. Soils sandy loam to clay loam - Loamy Bottom
- iii. Soils clayey (vertic) - Clayey Bottom

B. Not Flooded (upland position, receives only precipitation)

1 Slopes less than 15%

i. Soils calcareous throughout

a. Soils shallow (less than 20 inches deep)

- 1) Soils with a lime cemented hardpan ... R038XA106AZ – Limy Upland 12-16" p.z.
- 2) Soils underlain by limy schist, diorite or diabase – Shallow Upland, limy

b. Soils moderately deep to deep (30 to 60 inches), Soils with an argillic horizon - Loamy Upland, limy

ii. Soils non calcareous in upper 10 inches

a. Soils shallow (less than 20 inches deep)

- 1) Soils underlain by granite, schist and rhyolite – Granitic Upland
- 2) Soils underlain by basalt, andesite and related rocks, Soils clay loam to clay ... R038XA115AZ – Volcanic Upland 12-16" p.z.

b. Soils moderately deep to deep (30 to 60 inches)

- 1) Soils without an argillic horizon, Soils loamy fine sand to sandy loam – Sandy Loam, Deep
- 2) Soils with an argillic horizon

a) Soils with sandy loam surface 4 in. or thicker – Sandy Loam Upland

b) Soils with sandy loam surface less than 4 in., Soils with a loam surface ... R038XA109AZ – Loamy Upland 12-16 p.z.

c) Soils with a surface (not vertic) ... R038XA103AZ – Clay Loam Upland 12-16" p.z.

d) Soils with a clayey surface (vertic)

(1) Soils not skeletal (< 35% coarse fragments) ... R038XA102AZ – Clayey Upland 12-16" p.z.

(2) Soils skeletal (> 35% coarse fragments) – Clayey Upland, Stony

2 Slopes greater than 15%

- i. Soils very shallow (less than 10 inches deep), Soils over welded volcanic tuff and ash ... R038XA136AZ – Tuff Hills 12-16" p.z.

ii. Soils shallow (less than 20 inches deep)

a. Soils calcareous throughout

- 1) Soils over limestone, marl and related rocks ... R038XA105AZ – Limestone Hills 12-16" p.z.
- 2) Soils over diabase and related rocks ... R038XA135AZ – Diabase Hills 12-16" p.z.
- 3) Soils over sandstone and related rocks - Sandstone Hills
- 4) Soils over layered basalt, sandstone & volcanic ash ... R038XA118AZ – Basalt / Sandstone Hills 12-16" p.z.

b. Soils non calcareous in upper 10 inches

- 1) Soils over granite, gneiss, rhyolite (acid igneous) ... R038XA104AZ – Granitic Hills 12-16" p.z.
- 2) Soils over schist bedrock ... R038XA114AZ – Schist Hills 12-16" p.z.
- 3) Soils over weathered volcanic and metamorphic bedrock ... R038XA133AZ – Volcanic/Metamorphic Hills 12-16" p.z.
- 4) Soils over hard basalt, andesite, tuff (basic igneous)
 - a) Soils loamy - Volcanic Hills
 - b) Soils clayey (smectitic) ... R038XA117AZ – Volcanic Hills 12-16" p.z. Clayey
- 5) Soils over quartzite parent material - Quartzite Hills

iii. Soils moderately deep and deep (30 to 60 inches)

- a. Soils calcareous throughout. Soils dark colored in the surface 5 inches (10YR,3/2) ... R038XA126AZ – Limy Slopes 12-16" p.z.
- b. Soils non calcareous in the upper 10 inches
 - 1) Soils sandy loam to clay loam - Loamy Slopes
 - 2) Soils clayey ... R038XA108AZ – Clayey Slopes 12-16" p.z.

II. 38.AZ2 – Middle Mogollon Transition

A. Flooded (bottom position, flooded from the valley-side or over-bank)

1 Soils with a perennial high water-table (3-15 ft.)

- i. Soils sandy, gravelly, cobbly and with redox features – Sandy Bottom, Subirrigated, PLWR2, POFR2
- ii. Soils loamy to clayey with redox features - Meadow

2 Soils without a high water table (3-15 ft)

- i. Soils sandy - Sandy Bottom, QUERC
- ii. Soils sandy loam to clay loam ... R038XB226AZ – Loamy Swale 16-20" p.z.
- iii. Soils clayey (vertic) ... R038XB225AZ – Clayey Swale 16-20" p.z.

B. Not Flooded (upland position, receives only precipitation)

1 Slopes less than 15%

i. Soils calcareous throughout

a. Soils shallow (less than 20 inches deep)

- 1) Soils with a lime cemented hardpan - Limy Upland
- 2) Soils underlain by limy schist, diorite or diabase - Shallow Upland, Limy

b. Soils moderately deep to deep (30 to 60 inches). Soils with an argillic horizon - Loamy Upland, Limy

ii. Soils non calcareous in upper 10 inches

a. Soils shallow (less than 20 inches deep)

- 1) Soils underlain by granite, schist and rhyolite – Granitic Upland
- 2) Soils underlain by basalt, andesite and related rocks. Soils clay loam to clay –Clayey Upland, Shallow

b. Soils moderately deep to deep (30 to 60 inches)

- 1) Soils without an argillic horizon. Soils loamy fine sand to sandy loam - Sandy loam, Deep

2) Soils with an argillic horizon

- a) Soils with sandy loam surface 4 in. or thicker – Sandy Loam Upland
- b) Soils with sandy loam surface less than 4 in. ... R038XB209AZ – Loamy Upland 16-20" p.z.
- c) Soils with a loam surface - R038XB209AZ - Loamy Upland
- d) Soils with clay loam surface (not vertic) ... R038XB203AZ – Clay Loam Upland 16-20" p.z.
- e) Soils with a clayey surface (vertic)
 - (1) Soils not skeletal (< 35% coarse frags) ... R038XB202AZ – Clayey Upland 16-20" p.z.
 - (2) Soils skeletal (> 35% coarse frags) – Clayey Upland, Stony

2 Slopes greater than 15%

i. Soils shallow (less than 20 inches deep)

a. Soils calcareous throughout

- 1) Soils over limestone, marl and related rocks – Limestone Hills
- 2) Soils over diabase and related rocks ... R038XB230AZ – Limy Hills 16-20" p.z.
- 3) Soils over sandstone and related rocks - Sandstone Hills

b. Soils non calcareous in upper 10 inches

- 1) Soils over granite, schist, gneiss, rhyolite (acid igneous) ... R038XB204AZ – Granitic Hills 16-20" p.z.
- 2) Soils over basalt, andesite, welded tuff (basic igneous)
 - a) Soils loamy - Volcanic Hills
 - b) Soils clayey (smectitic) ... R038XB215AZ – Clayey Hills 16-20" p.z.
- 3) Soils over quartzite parent material – Quartzite Hills

ii. Soils moderately deep and deep (30 to 60 inches)

- a. Soils calcareous throughout. Soils dark colored in the surface 5 inches (10YR,3/2) - Limy Slopes
- b. Soils non calcareous in the upper 10 inches
 - 1) Soils sandy loam to clay loam - Loamy Slopes
 - 2) Soils clayey - Clayey Slopes

III. 38.AZ3 – Upper Mogollon Transition