

Major Land Resource Area 040X

Sonoran Basin and Range

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Ecological site keys

MLRA 40-1 Ecological Sites

- I. Bottom position (plant community reliant upon run-on from valley-side or over-bank)
 - A. Soils with water table available to the plant community
 - 1 Soils with visible reduction-oxidation features ... R040XA125AZ – Sandy Bottom, Woodland 10"-13" p.z.
 - 2 Soils without visible reduction-oxidation features ... R040XA124AZ – Loamy Bottom, Woodland 10"-13" p.z.
 - B. Soils without a water table available to the plant community
 - 1 Soils sandy ... R040XA115AZ – Sandy Wash 10"-13" p.z.
 - 2 Soils fine sandy loam to clay loam ... R040XA112AZ – Loamy Swale 10"-13" p.z.
 - 3 Soils clayey ... R040XA102AZ – Clayey Swale 10"-13" p.z.
- II. Upland position (plant community reliant upon on-site precipitation, run-on ≤ run-off)
 - A. Gently sloping terrain (slopes predominantly <15%)
 - 1 Soils shallow (≤20 inches)
 - i. Soils calcareous ... R040XA111AZ – Limy Upland 10"-13" p.z.
 - ii. Soils non-calcareous ... R040XA121AZ – Granitic Upland 10"-13" p.z.
 - 2 Soils moderately deep to deep (>20 inches)
 - i. Soils calcareous in the upper 10" or throughout
 - a. Soils gypsic ... R040XA126AZ – Gypsum Upland 10"-13" p.z.
 - b. Soils not gypsic
 - 1) Soils with argillic horizon (or clay cambic) ... R040XA130AZ – Loamy Upland, Limy 10"-13" p.z.
 - 2) Soils skeletal (≥35% fragments) ... R040XA106AZ – Limy Upland, Deep 10"-13" p.z.
 - 3) Soils not skeletal (<35% fragments) and without argillic ... R040XA108AZ – Limy Fan 10"-13" p.z.
 - ii. Soils non-calcareous in the upper 10 inches
 - a. Soils without an argillic horizon
 - 1) Soils sandy and eolian ... R040XA116AZ – Sandy Upland 10"-13" p.z.
 - 2) Soils loamy fine sand to sandy loam ... R040XA117AZ – Sandy Loam Upland, Deep 10"-13" p.z.
 - b. Soils with an argillic horizon
 - 1) Soils with sandy loam surface ≥4" over argillic ... R040XA118AZ – Sandy Loam Upland 10"-13" p.z.
 - 2) Soils with sandy loam surface <4" or loam surface any depth over argillic ... R040XA114AZ – Loamy Upland 10"-13" p.z.
 - 3) Soils with a clayey surface, not vertic ... R040XA120AZ – Clay Loam Upland 10"-13" p.z.
 - 4) Soils with a clayey surface, vertic ... R040XA104AZ – Clayey Upland 10"-13" p.z.
 - B. Steeply sloping terrain (slopes predominantly ≥15%)

1 Soils shallow (≤ 20 inches)

i. Soils calcareous throughout

- a. Soils over limestone parent materials ... R040XA107AZ – Limestone Hills 10"-13" p.z.
- b. Soils over fanglomerate and conglomerate ... R040XA128AZ – Conglomerate Hills 10"-13" p.z.
- c. Soils over basalt parent materials ... R040XA101AZ – Basalt Hills 10"-13" p.z.
- d. Soils over volcanic rock, breccia, and agglomerates ... R040XA129AZ – Limy Hills 10"-13" p.z.

ii. Soils non-calcareous in upper 10 inches

- a. Soils over granite, gneiss, schist, rhyolite ... R040XA105AZ – Shallow Hills 10"-13" p.z.
- b. Soils over andesite, dacite, basalt, welded tuff ... R040XA123AZ – Volcanic Hills 10"-13" P.Z.
- c. Soils over schist ... R040XA119AZ – Schist Hills 10"-13" p.z.

2 Soils moderately deep to deep (> 20 inches)

i. Soils calcareous throughout

- a. Soils gypsic ... R040XA127AZ – Gypsum Slopes 10"-13" p.z.
- b. Soils not gypsic ... R040XA110AZ – Limy Slopes 10"-13" p.z.

ii. Soils non-calcareous in the upper 10 inches

- a. Soils sandy loam to clay loam ... R040XA113AZ – Loamy Slopes 10"-13" p.z.
- b. Soils clay loam to clay ... R040XA103AZ – Clayey Slopes 10"-13" p.z.