Major Land Resource Area 040X
Sonoran Basin and Range

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Ecological site keys

MLRA 40-3 Ecological Sites

I. Bottom position (plant community reliant upon run-on from valley-side or over-bank)
  A. Slightly to strongly saline soils (ECe ≥4 dS/m)
    1 Soils with a high water table ... R040XC315AZ – Saline Bottom 3"-7" p.z.
    2 Soils without a high water table ... R040XC314AZ – Saline Swale 3"-7" p.z.
  B. Non-saline to very slightly saline soils (ECe <4 dS/m)
    1 Soils with water table available to plant community
      i. Soils with a reduced matrix ... R040XC331AZ – Sandy Bottom, Ciénaga 3"-7" p.z.
      ii. Soils with visible reduction-oxidation features ... F040XC327AZ – Sandy Bottom, Woodland 3"-7" p.z.
      iii. Soils without visible reduction-oxidation features ... F040XC328AZ – Loamy Bottom, Woodland 3"-7" p.z.
    2 Soils without water table available to plant community
      i. Narrow drainage, active flow channel <5' width ... R040XC330AZ – Sandy Loam Drainage 3"-7" p.z.
      ii. Wide drainage, active flow channel >5' width
        a. Soils sandy ... R040XC318AZ – Sandy Wash 3"-7" p.z.
        b. Soils fine sandy loam to clay loam ... R040XC312AZ – Loamy Swale 3"-7" p.z.
        c. Soils clayey ... R040XC303AZ – Clayey Swale 3"-7" p.z.

II. Upland position (plant community reliant upon on-site precipitation, run-on ≤ run-off)
  A. Gently sloping terrain (slopes <15%)
    1 Soil surface armored with interlocking rock fragments, well-developed vesicular surface horizon ... R040XC326AZ – Desert Pavement 3"-7" p.z.
    2 Soil surface not armored with interlocking rock fragments, soil surface horizon lacking vesicular crust
      i. Soils shallow (≤20" depth)
        a. Soils calcareous ... R040XC310AZ – Limy Upland 3"-7" p.z.
        b. Soils non-calcareous ... R040XC322AZ – Shallow Upland 3"-7" p.z.
      ii. Soils moderately deep to deep (>20" depth)
        a. Soils moderately saline to strongly saline (EC >8 dS/m) ... R040XC317AZ – Saline Upland 3"-7" p.z.
        b. Soils non-saline to slightly saline (EC ≤8 dS/m)
          1) Soil calcareous
            a) Soil skeletal ... R040XC311AZ – Limy Upland, Deep 3"-7" p.z.
            b) Soil not skeletal
              (1) Soil sandy, eolian ... R040XC307AZ – Limy Fan, Sandy 3"-7" p.z.
              (2) Soil loamy, slopes 0-6% ... R040XC306AZ – Limy Fan 3"-7" p.z.
              (4) Soil loamy, slopes >7% ... R040XC302AZ – Limy Slopes 3"-7" p.z.
              (5) Soil gypsic, slopes >7% ... R040XC309AZ – Limy Slopes, Gypsum 3"-7" p.z.

2) Soil non-calcareous in upper 10 inches

a) Argillic horizon present ... R040XC320AZ – Sandy Loam Upland 3"-7" p.z.

b) No argillic horizon, soil eolian ... R040XC319AZ – Sandy Upland 3"-7" p.z.

B. Steeply sloping terrain (slopes >15%)

1 Soils shallow, calcareous (≤20" depth)

i. Surface fragments black or nearly so (Munsell color value <4) ... R040XC301AZ – Basalt Hills 3"-7" p.z.

ii. Surface fragments not black (Munsell color value ≥4)

a. Parent material fractured or weather, able to dig into with shovel ... R040XC305AZ – Paralithic Hills 3"-7" p.z.

b. Parent material indurated for not weathered, unable to dig into with shovel ... R040XC324AZ – Lithic Hills 3"-7" p.z.

2 Soils moderately deep to deep, calcareous (>20" depth)

i. Soils fine sandy, eolian ... R040XC329AZ – Sandy Slopes, Dunes 3"-7" p.z.

ii. Soils loamy, alluvial ... R040XC302AZ – Limy Slopes 3"-7" p.z.

iii. Soils gypsic ... R040XC309AZ – Limy Slopes, Gypsum 3"-7" p.z.