

Major Land Resource Area 036X

Southwestern Plateaus, Mesas, and Foothills

Accessed: 05/11/2025

Ecological site keys

MLRA 36 Key to Keys

- I. Site located in New Mexico portion of MLRA 36. ... Key 2 – New Mexico MLRA 36 Ecological Site Key
- II. Site located in Colorado or Utah portion of MLRA 36. ... Key 3 – Colorado & Utah MLRA 36 Ecological Site Key

New Mexico MLRA 36 Ecological Site Key

- 1a. Temperature regime is mesic and annual precipitation is 10-16" and mesic - (36.2 NM)
- 2a. Soils receive extra beyond normal precipitation water either by having a water table or being in a run-in position
 - 3a. Water table is less than 12" in depth
 - 4a. Soil is coarse-loamy in control section
 - 5a. Soils are ≥ 40 " in depth; surface textures range from fine sandy loam and silt loam; Landforms are abandoned channels on flood plains of valley floors with intermittent streams ... R036XB138NM – Marshy
 - 5b. Site not as above. Unclassified
 - 4b. Soil is fine-loamy in control section
 - 6a. Water table 6-48" in depth; slopes 0-5%; soils are deep, Surface textures are silty clay loam, clay loam, loam, and gravelly loam with a subsoil of stratified loam, silt loam, silty clay loam, clay loam, very gravelly sand, and gravelly sand. Landform is in a stream terrace, valley floors and alluvial flats positions. This site is subirrigated. It may occur adjacent to streams, springs, and seeps ... R036XB008NM – Meadow
 - 6b. Site not as above. Unclassified
 - 4c. Site not as above. Unclassified.
 - 3b. Water table is greater than 12" in depth
 - 7a. Water table is greater than 6 ft. (72") in depth
 - 8a. Sites not influenced by salts and/or sodium
 - 9a. Soils are deep to very deep soils that have surface textures of silty clay loam, clay loam, silt loam, and fine sandy loam with loamy subsoil. Landforms are flood plains, alluvial fans, valley floors, valley flats, stream terraces, broad valley bottoms, depressions (swales) and other low-lying areas which receive runoff moisture from adjacent sites. This site is enhanced by runoff during periods of high runoff (intermittent) ... R036XB017NM – Swale
 - 9b. Site not as above. Unclassified.
 - 8b. Sites influences by salts and/or sodium
 - 10a. Water table 72"+ in depth; slopes 0-5%; soils are deep, high in sodium. Surface textures are loam, clay loam, or silty clay with a subsoil of clay or clay loam. Landform is nearly level to gently sloping playas, alluvial fans, floodplains, lake plains, stream terraces, and lake terraces. It

commonly forms a narrow band adjacent to a flowing or intermittent stream ... R036XB010NM – Salty Bottomland

10b. Site not as above. Unclassified

7b. Water table between 12-72" in depth

11a. Sites influenced by salts and/or sodium

12a. Water table 4-50" in depth; slopes are 0-5%; soils are deep, Surface textures are loam, clay loam, or silty clay with a subsoil of clay or clay loam. Landform is nearly level to gently sloping playas, alluvial fans, floodplains, lake plains, stream terraces, and lake terraces. It commonly forms a narrow band adjacent to a flowing stream ... R036XB009NM – Salt Meadow

12b. Site not as above. Unclassified

11b. Sites not influenced by salts and/or sodium

13a. Soils are fine-loamy, fine or fine-loamy over sandy or sandy-skeletal in the soils control section

14a. Water table 6-48" in depth, slopes 0-5%, soils are deep. Surface textures are silty clay loam, clay loam, loam, and gravelly loam with a subsoil of stratified loam, silt loam, silty clay loam, clay loam, very gravelly sand, and gravelly sand. Landform is in a stream terrace, valley floors and alluvial flats positions. This site is subirrigated. It may occur adjacent to streams, springs, and seeps ... R036XB008NM – Meadow

14b. Site not as above. Unclassified

13b. Coarse-loamy, sandy skeletal, ashy or fine-loamy over sandy or sandy-skeletal in soils control section; if fine-loamy over sandy or sandy-skeletal there is strongly contrasting textural stratification as a restriction kind and water table is above 12" when fine-loamy over sandy or sandy-skeletal in the control section

15a. Site has a water table at 12-48" ; slopes 0-3%; soils are deep; Surface textures are a very fine sandy loam, fine sandy loam, very gravelly coarse sand, and ashy loam; subsoils textures are coarse-loamy. Landforms are flood plains, stream terraces, flood-plain steps on valley floors, natural levees flood plains on valley floors and swales ... F036XA005NM – Riverine Riparian

15b. Site not as above. Unclassified.

13c. Site not as above. Unclassified.

2b. Soils without a water table and not in a run-position

16a. Shallow soils (≤ 20 " in depth)

17a. Non-skeletal (<35% rock fragments in soil profile-can have gravels, cobbles, stones and channers on the surface)

18a. Surface texture modifier used (ie. gravelly, cobby)

19a. Slopes 3-20%; soils are very shallow to shallow and non-skeletal; soil surface gravelly loam or gravelly fine sandy loam; gravelly sandy loam; subsoil is sandy loams to loams. Landforms located adjacent to narrow ridges, hills, breaks structural benches and mesas of bedrock controlled landscapes ... R036XB013NM – Shallow Gravelly

19b. Site not as above. Unclassified

18b. Stony, cobby or channery modifier on surface texture

1) Slopes 1-55%; very shallow to shallow soils and non-skeletal; very cobbly loam, very cobbly sandy loam, loam, cobbly clay loam, and channery clay loam over a clayey subsoil. Bedrock can be sandstone, shale or basalt. Landforms narrow ridges, hills, breaks and mesas of bedrock controlled landscapes ... R036XB015NM – Shallow Savanna

2) Slopes 1-15%; soils are skeletal and not skeletal; soil surface are loam, stony to very stony loam, very cobbly loam, fine sandy loam, very cobbly fine sandy loam, stony silt loam, stony silty clay loam, and cobbly silty clay loam; Parent materials are basalt influences but can have sometimes influence from sandstone and/or shale. Landforms are mesas, lava plateaus, lava flows, lava flows on valley floors, and ridges ... R036XB007NM – Malpais

3) Slope 1-35%; Soils are very shallow to shallow and non-skeletal; soil surface is loam, channery loam or clay loam. Landforms are broad mesas, cuestras, and hills interspersed with numerous deep canyons and dry washes ... F036XA001NM – Pinyon Upland

4) Site not as above. Unclassified

18c. No surface texture modifier or not as above in 18a or 18b

1) Slopes 1-25%; soils are non-skeletal; soil surface is sandy loam to loam with a loamy subsoil from basalt and eolian materials. Landform is ridges, hills, interfluvies on undulating plateaus, escarpments on cuestras, and escarpments on mesas ... R036XB014NM – Shallow Loam

2) Slopes 1-15%; soils are skeletal and not skeletal; soil surface are loam, stony to very stony loam, very cobbly loam, fine sandy loam, very cobbly fine sandy loam, stony silt loam, stony silty clay loam, and cobbly silty clay loam; Parent materials are basalt influences but can have sometimes influence from sandstone and/or shale. Landforms are mesas, lava plateaus, lava flows, lava flows on valley floors, and ridges ... R036XB007NM – Malpais

3) Site not as above. Unclassified

17b. Skeletal ($\geq 35\%$ rock fragments in soil profile-may or may not have gravels, cobbles, stones and channers on the surface)

1) Slopes 1-15%; soils are skeletal and not skeletal; soil surface are loam, stony to very stony loam, very cobbly loam, fine sandy loam, very cobbly fine sandy loam, stony silt loam, stony silty clay loam, and cobbly silty clay loam; Parent materials are basalt influences but can have sometimes influence from sandstone and/or shale. Landforms are mesas, lava plateaus, lava flows, lava flows on valley floors, and ridges ... R036XB007NM – Malpais

2) Slopes 10-55%; soils are very shallow to moderately deep and skeletal; Surface soil textures are loams to clay with loamy subsoil. Landforms are scarp slope (along canyon edges, side-slopes, ridges, and benches) ... R036XB001NM – Breaks

3). Site not as above. Unclassified

16b. Moderately deep to very deep soils (≥ 20 " in depth)

19a. Non-skeletal ($< 35\%$ rock fragments in soil profile)

20a. Calcareous (very calcareous throughout the profile);

21a. Slopes are 3-8%; soils are deep; surface is generally a silt loam and subsoil textures range from loam to silt loam. Landforms are gently alluvial fans and valley sides ... R036XB005NM – Limy

21b. Site not as above. Unclassified.

20b. Non- calcareous (Calcium carbonate equivalent is $< 10\%$ within 40" in depth)

22a. Slopes $\geq 25\%$

23a. No surface texture modifier

24a. Slopes are 15-40%. Soils are moderately deep to deep; Surface textures are loamy fine sand, loamy very fine sand, sandy loam and loamy sand with sandy subsoil.

Landforms are hills, ridges, escarpments on cuestras, and escarpments on plateaus ... R036XB111NM – Sandy Slopes

24b. Site not as above. Unclassified

23b. Surface texture modifier of gravelly, very gravelly extremely gravelly, or para-gravelly, very cobbly, extremely cobbly or ashy

24a. Loamy subsoils (loam, clay loam (loamy or fine loamy in particle control section (18-35% clay))). Can have surface textures of sandy loam, fine sandy loam, sandy clay loam, loam, silt loam, clay loam, and loamy fine sand.

1) Slopes are 1-65%; Soils are moderately deep to deep and skeletal and non-skeletal. Surface texture of gravelly to very gravelly sandy loam, very gravelly loam, loam, para-gravelly-ashy loamy coarse sand, and extremely cobbly coarse sandy loam with a sandy subsoil. Landform is mesas, hills, fan piedmonts, valley sides, plateaus,

mountain slopes, structural benches, breaks and ridges ... F036XB133NM – Pinyon-Utah juniper/skunkbush sumac

2) Soils can be skeletal or non-skeletal; Surface textures can be gravelly to extremely gravelly loam, loam, very gravelly to extremely gravelly coarse sandy loam, extremely cobbly fine sandy loam, extremely gravelly sandy clay loam, fine sandy loam, very gravelly fine sandy loam, sandy loam, or gravelly sandy loam with a subsoil that is loamy ... F036XA136NM – Pinyon-Utah juniper/Apache plume

3) Site not as above. Unclassified

24b. Sandy subsoils (Coarse loamy or Sandy in the particle control section; <18% clay) (Loamy sand, loamy fine sand, loamy very fine sandy, sandy loam, or fine sandy loam)

25a. Slopes are (10-65%); Soils are very deep and skeletal and non-skeletal. Surface texture of gravelly to very gravelly fine sandy loam, very gravelly sandy loam, very cobbly loam, or gravelly loam with a sandy subsoil. Landforms are escarpments, fan piedmonts, mesas, hills, ridges and knolls ... R036XB132NM – Gravelly Hills

25b. Site not as above. Unclassified

24c. Site not as above. Unclassified

23c. Site not as above. Unclassified

22b. Slopes are 25% or less; non-skeletal

26a. Sandy subsoils (Coarse loamy or Sandy in the particle control section; <18% clay) (Loamy sand, loamy fine sand, loamy very fine sandy, sandy loam, fine sandy loam. Some may have a loam soil surface

(1) Slopes are 1-25%; soils are deep; Surface textures are loamy sand, loamy fine sand, and sandy loam with sandy subsoil. Landforms are plateaus, mesas, upland plains ... R036XB012NM – Sandy Savanna

(2) Slopes are 15-40% Soils are moderately deep to deep; Surface textures are loamy fine sand, loamy very fine sand, sandy loam and loamy sand with sandy subsoil. Landforms are hills, ridges, escarpments on cuestas, and escarpments on plateaus ... R036XB111NM – Sandy Slopes

(3) Slopes are 1-15%; soils are deep to very deep; Surface textures are loamy sand, gravelly loamy sand, loamy fine sand, fine sandy loam and sandy loam with sandy subsoil. Landforms are nearly level to gently sloping landscapes on dunes, fan remnant and alluvial fans ... R036XB011NM – Sandy

(4) Slopes are (10-65%); Soils are very deep and skeletal and non-skeletal. Surface texture of gravelly to very gravelly fine sandy loam, very gravelly sandy loam, very cobbly loam, or gravelly loam with a sandy subsoil. Landforms are escarpments, fan piedmonts, mesas, hills, ridges and knolls ... R036XB132NM – Gravelly Hills

(5) Slopes are 1-65%; Soils are moderately deep to deep and skeletal and non-skeletal. Surface texture of gravelly to very gravelly sandy loam, very gravelly loam, loam, para-gravelly-ashy loamy coarse sand, and extremely cobbly coarse sandy loam with a sandy subsoil. Landform is mesas, hills, fan piedmonts, valley sides, plateaus, mountain slopes, structural benches, breaks and ridges ... F036XB133NM – Pinyon-Utah juniper/skunkbush sumac

(6) Site not as above. Unclassified

26b. Soils with $\geq 18\%$ clay in the particle control section

27a. Clayey subsoils (Fine, clayey. Fine silty in particle control section; >35% clay)

(1) Slopes are 0-15%; Soils are moderately deep to deep; soil surface loam, clay loam, silty clay loam, and silty clay over clayey subsoil with textures of clay loam, clay to silty clay loam or silty clay. Landforms are stream terraces, valley floors, fan remnants, alluvial fans, dipslopes on cuestas, mesas, hills, and valley floors ... R036XB002NM – Clayey

(2) Slopes are 1-15%; Soils are moderately deep to deep; soil surface range from very fine sandy loam to clay loam. Subsoil is fine-textured. Landforms are nearly level to undulating plains, hills, ridges, and mesa tops, although it may occur on more rolling landscapes ... R036XB016NM – Loamy Savanna

(3) Site not as above. Unclassified

27b. Loamy subsoils (loam, clay loam (loamy or fine loamy in particle control section)). Can have surface textures of sandy loam, fine sandy loam, sandy clay loam, loam, silt loam, clay loam, and loamy fine sand.

(1) Slopes are 1-15%; surface textures range from loam, gravelly loam, loamy fine sand, fine sandy loam, sandy loam, silt loam, and clay loam; Subsoil ranges from loam to clay loam (loamy); Found on mesas, plateaus, fan remnants, terraces, dipslopes on cuestas, and valley sides ... R036XB006NM – Loamy

(2) Soils can be skeletal or non-skeletal; Surface textures can be gravelly to extremely gravelly loam, loam, very gravelly to extremely gravelly coarse sandy loam, extremely cobbly fine sandy loam, extremely gravelly sandy clay loam, fine sandy loam, very gravelly fine sandy loam, sandy loam, or gravelly sandy loam with a subsoil that is loamy ... F036XA136NM – Pinyon-Utah juniper/Apache plume

(3) Slopes 3-20%; soils are moderately deep and fine-loamy. Surface soil textures are loam. The subsoil is loamy. Landforms are hills ... R036XB003NM – Gravelly Fan

(4) Slopes 0-15%; soils are deep to very deep and skeletal and non-skeletal; Surface soil textures are cobbly loam, or loam. Subsoils are loamy. Landforms are nearly level alluvial fans, stream terraces, plateaus, mesas and volcanic cones ... R036XB018NM – Stony Loam

(5) Site not as above. Unclassified

27c. Site not as above. Unclassified

19b. Skeletal (>35% rock fragments in soil profile-can have gravels, cobbles, stones and channers on the surface)

28a. Sandy subsoils (Coarse loamy or Sandy in the particle control section; <18% clay) (Loamy sand, loamy fine sand, loamy very fine sandy, sandy loam, fine sandy loam. Some may have a loam soil surface.

1) Slopes are 1-65%; Soils are moderately deep to deep and skeletal and non-skeletal. Surface texture of gravelly to very gravelly sandy loam, very gravelly loam, loam, para-gravelly-ashy loamy coarse sand, and extremely cobbly coarse sandy loam with a sandy subsoil. Landform is mesas, hills, fan piedmonts, valley sides, plateaus, mountain slopes, structural benches, breaks and ridges ... F036XB133NM – Pinyon-Utah juniper/skunkbush sumac

2) Slopes are (10-65%); Soils are very deep and skeletal and non-skeletal. Surface texture of gravelly to very gravelly fine sandy loam, very gravelly sandy loam, very cobbly loam, or gravelly loam with a sandy subsoil. Landforms are escarpments, fan piedmonts, mesas, hills, ridges and knolls ... R036XB132NM – Gravelly Hills

3) Site not as above. Unclassified

28b. Loamy subsoils (loam, clay loam (loamy or fine loamy in particle control section (18-35% clay))). Can have surface textures of sandy loam, fine sandy loam, sandy clay loam, loam, silt loam, clay loam, and loamy fine sand.

1) Slopes 10-55%; soils are very shallow to moderately deep and skeletal; Surface soil textures are loams to clay with loamy subsoil. Landforms are scarp slope (along canyon edges, side-slopes, ridges, and benches) ... R036XB001NM – Breaks

2) Slopes are 3-25%; Soils are skeletal and deep. Soil surface textures are gravelly to very gravelly loam or cobbly loam with subsoil that are loams to clay loam. Landforms are rolling hills, divides, and ridges ... R036XA004NM – Gravelly Slopes

3) Soils can be skeletal or non-skeletal; Surface textures can be gravelly to extremely gravelly

loam, loam, very gravelly to extremely gravelly coarse sandy loam, extremely cobbly fine sandy loam, extremely gravelly sandy clay loam, fine sandy loam, very gravelly fine sandy loam, sandy loam, or gravelly sandy loam with a subsoil that is loamy ... F036XA136NM – Pinyon-Utah juniper/Apache plume

4) Slopes 0-15%; soils are deep to very deep and skeletal and non-skeletal; Surface soil textures are cobbly loam, or loam. Subsoils are loamy. Landforms are nearly level alluvial fans, stream terraces, plateaus, mesas and volcanic cones ... R036XB018NM – Stony Loam

5) Site not as above. Unclassified

28c. Site not as above. Unclassified

1b. Temperature regime is mesic and annual precipitation is 16-20" and mesic/frigid (36.1 NM) - Site not as above. Unclassified

Colorado & Utah MLRA 36 Ecological Site Key

1a. Receive extra water beyond normal precipitation and are high in salinity and alkaline, mesic

2a. Site with water table above 60"

A1. Precipitation is 9-15"; High water table with deep gleyed soils; soil textures from clay loam and silty clay loam, poorly drained; strongly saline-alkaline. Landforms are gently sloping to flat in lowland position (drainageways, alluvial fans, and flood plain) ... R036XY266CO – Salt Meadow

A2. Precipitation is 12-16"; High water table with deep gleyed soils; soil textures from loam or clay loam and subsoils are loamy textured, poorly drained. Landforms are gently sloping to flat in lowland position (draws, drainageways, swales, flood plains, flood-plain steps, and terraces) ... R036XY038CO – Wet Meadow

A3. Precipitation 11-16"; Site has water table 30-60" and without run-in. Soils are deep. Soil surface textures are extremely cobbly sand and loamy fine sand. Landforms are flood plain, flood plain step and terrace ... R036XC013UT – Southwestern Plateau Riparian Complex Intermittent (Valley Type IV - F4/B4C Stream Type)

A4. Site not as above. Unclassified

2b. Site has a water table below 60"

B1. Precipitation is 12-16"; Soils are deep; Site has a water table below 60"; Soils have loam and clay loam. Subsoils may have stratified layers. Soils can contain some alkali. Landforms are drainageways, draws, floodplains, and alluvial fans in narrow canyon bottoms with intermittent drainages flowing through them ... R036XY405CO – Loamy Bottom

B2. Site not as above. Unclassified

1b. Sites with no water table or not run in sites

3a Temperature regime is mesic and annual precipitation is 8/9-12" ----- Semidesert

4a. Shallow soils (≤ 20 " in depth)

5a. Slopes are steeper than 25%

6a. Surface textures very boulder/very stony sandy clay loams, clay loams, and very stony loam. Subsoil textures can be sandy clay loam, clay loam, and silty clay loam and can have gravels, stones and boulders in it. Landforms are steep and very steep side-slopes of canyons and hills ... R036XY111CO – Steep Shallow Clay Loam (pinyon-Utah juniper)

6b. Site not as above. Unclassified

5b. Slopes are less than 25%

7a. Soil Surface is sandy clay loam, silty clay loam, clay loam

C1. Soils surface sandy clay loams, clay loams, and silty clay loams. Subsoil is clay textured (sandy clay loam, clay loam, silty clay loam). Parent materials are shale or interbedded sandstone and shale. Landforms are canyon walls, sideslopes and edges of mesas, pediments and

dipslopes ... R036XY110CO – Shallow Clay Loam (pinyon-Utah juniper)

C2. Soils are shallow to moderately deep. Surface textures are silty clay loam over subsoils that are silty clay or clay loam. Parent material is alluvium and residuum from Mancos and Morrison shale. Landforms are low alluvial terraces, ridges, hills, structural benches, and alluvial fans ... R036XY408CO – Basin Shale

C3. Site not as above. Unclassified

7b. Soil Surface is fine sandy loam, sandy loam and loams

8a. Soil Surface is fine sandy loam, sandy loam and loams. Landforms are dipslopes, dipslopes on cuestras, cuestras, and eroded dipslopes on cuestras ... R036XY113CO – Semidesert Juniper Loam

8b. Site not as above. Unclassified

7c. Site not as above. Unclassified

4b. Moderately deep to very deep soils (≥ 20 " in depth)

9a. Soil Surface is silty clay loam, silty clay or clay loam

D1. Soils are deep; Soil surface silty clay loam, silty clay or clay loam; Subsoil are silty clay loam, clay loam or silty clay. Parent materials are mainly from cretaceous age shale (Manco Shale).

Landforms are alluvial fans, terraces and fan terraces ... R036XY328CO – Semidesert Clay Loam

D2. Soils are shallow to moderately deep. Surface textures are silty clay loam over subsoils that are silty clay or clay loam. Parent material is alluvium and residuum from Mancos and Morrison shale.

Landforms are low alluvial terraces, ridges, hills, structural benches and alluvial fans ...

R036XY408CO – Basin Shale

D3. Site not as above. Unclassified

9b. Soil Surface is fine sandy loam, very fine sandy loam

10a. Subsoil is sandy clay loam, clay loam; Parent materials are mainly from sandstone or sandstone and shale. Landforms are structural benches, dipslopes, dipslopes on cuestras, alluvial fans, mesas, hills, valley floor and terraces ... R036XY325CO – Semidesert Loam

10b. Subsoil is sandy loam. Parent materials are mainly from sandstone. Landforms are alluvial fans, fan terraces, mesas, and valley floors ... R036XY326CO – Semidesert Sandy Loam

10c. Site not as above. Unclassified

9C. Site not as above. Unclassified

3b. Temperature regime is mesic and annual precipitation is 12-16" ----- Upland/Foothills zone – Central Colorado on the Western Slope (Uncompaghre Plateau Area and Grand Valley area)

11a. Very shallow to Shallow soils (≤ 20 " in depth)

12a. Slopes are steeper than 25%

13a. Soil surface is cobbly fine sandy loam, very gravelly clay loam, very stony sandy clay loam, very channery clay loam, and extremely gravelly loam. Landforms are very steep side slopes, canyon walls, dissected dipslopes, dissected dipslopes on cuestras, and mountain slopes and ridges ...

R036XY445CO – Steep Colluvial Slopes

13b. Site not as above. Unclassified

12b. Slopes are less than 25%

E1. Precipitation is 12-14"; slopes 3 to 10%; Soils surface textures are fine sandy loams, flaggy fine sandy loam and channery fine sand with a loamy subsoil and may have up to 15-20% flagstones and/or channers on the surface and in the profile. Landforms are plateaus, structural benches, mesa tops, ledges, escarpments and cuestras slopes ... R036XY315UT – Upland Shallow Loam (pinyon-Utah juniper)

E2. Precipitation is 12-14"; slopes 2 to 20%; Soils surface textures are fine sandy loams to very fine sandy loams with loamy subsoil; non-saline, and moderately alkaline. Landforms are structural benches and cuestras ... R036XY316UT – Upland Shallow Loam (littleleaf mountain mahogany)

E3. Precipitation is 12-16"; slopes 3 to 25%; soils are very shallow to shallow; Surface textures are fine sandy loam to loam, some gravels may be present on the surface. Subsoils are sandy clay loam, clay loam or loam that can have gravels up to 45%. Landforms are dipslopes, mountain slopes and structural benches ... R036XY114CO – Mountain Pinyon

E4. Site not as above. Unclassified

11b. Moderately deep to very deep soils (≥ 20 " in depth)

13a. Skeletal soils ($\geq 35\%$ rock fragments in the profile)

14a. Not steep slopes ($\leq 30\%$ slopes)

15a. Soil surface very cobbly loams, very gravelly loam, gravelly loam, loam, and fine sandy loam with sandy clay loam or clay loam subsurface with rock fragments. Landforms are escarpments, moraines, fan remnants, dipslopes, outwash fans, structural benches, and colluvial aprons ... R036XY287CO – Stony Foothills

15b. Site not as above. Unclassified

14b. Steep slopes $\geq 30\%$

F1. Precipitation is 12-14"; skeletal soils ($35\%+$ rock fragments); soils are very shallow to deep. Slopes between 50-75%; soils surface textures are very gravelly loamy sand, extremely channery fine sandy loam, stony fine sandy loam and from calcareous sandstone with loamy subsoil.

Landforms are mesa escarpments, hill, and ridges ... R036XY328UT – Upland Very Steep Stony Loam (pinyon-Utah juniper)

F2. Site not as above. Unclassified

13b. Non-skeletal soils ($\leq 35\%$ rock fragments in the profile)

14a. Soils textures are heavy clay loams ($\geq 35\%+$ clay), silty clay loam and clays (Fine, clayey. Fine silty in particle control section; $\geq 35\%$ clay)

15a. Precipitation is 12-16"; slopes are 1-30%; soils are moderately deep to very deep; Soils surface textures are silty clay loam or clay loam. Subsoils are clay loam, silty clay loam, silty clay and clay from marine shale. Landforms hills, alluvial fans, pediments, complex landslides, terraces, fan remnants, fans, and valleys ... R036XY289CO – Clayey Foothills

15b. Site not as above. Unclassified

14b. Soils are sandy loam, fine sandy loam, loam, sandy clay loam or light clay loams ($< 35\%$ clay)

16a. Soils are sandy loam, fine sandy loam, light loam ($\leq 18\%$ clay), very fine sandy loam, loamy fine sand, sand ($\leq 18\%$ clay in soil profile)

17a. Slopes 0-12%; Soils are deep; Soils are fine sandy loams, very fine sandy loams, and loamy fine sands; subsoil is loamy sand, sandy loam, sand or light loam textures. Landforms fan remnants, dunes, terraces, structural benches ... R036XY310CO – Sandy Foothills

17b. Site not as above. Unclassified

16b. Soils are loam ($> 18\%$ clay), silt loam, sandy clay loam, clay loam (18-35% clay in soil profile)

G1. 1-15% slopes; Soils are moderately deep to deep. Surface textures are loam; subsoil can be loam, silt loam, sandy clay loam or clay loam. Landforms are hills, mesas, structural benches, alluvial fans and old terraces ... R036XY284CO – Loamy Foothills

G2. Slopes 0-15%; Soils are deep to very deep. Soil surface ranges from sandy loam to a loam. Subsoil textures are clay loam, sandy clay loam, or loam. Landforms are concave upland valley bottoms and floors, stream terraces, toe-slopes, and alluvial fans. It is dissected in many places by gullies and draws running down the valleys ... R036XY347CO – Foothill Valley

G3. Precipitation is 12-14"; Soils are moderately deep to very deep; Soils are fine sandy loams, sandy loam and sandy clay loam with a loamy subsoil; non-saline and neutral to slightly alkaline. Landforms are structural benches, plateaus, hills and mesas. Example soil – Plumasano & Nomrah ... R036XY306UT – Upland Loam (big sagebrush)

G4. Precipitation is 12-14"; Soils are moderately deep to deep; soil surface textures are fine

sandy loams and sandy loam with loamy subsoil. Landforms are structural benches and mesas edges, but may occur on cuestas, plateaus, hills and ridges. Example soil –

Plumasano ... R036XY307UT – Upland Loam (pinyon-Utah juniper)

G5. Precipitation is 12-14"; soils are moderately deep to deep. Soil surface textures are fine sandy loams, sandy loam and sandy clay loam with loamy subsoil; non-saline and neutral to slightly alkaline. Occurs on structural benches, mesas edges and cuestas, but may also occur on plateaus, hills and ridges. Example soil – Plumasano & Plumasano Family ...

R036XC302UT – Upland Dissected Slope (pinyon-Utah juniper)

G6. Site not as above. Unclassified

3c. Temperature regime is mesic and annual precipitation is 15/16-18" ----- Upper Foothills/lower Mountain Zones – Southern Colorado and Northern Mexico (Utah Juniper representative species, Mesa Verde NP area)

18a. Shallow soils (≤ 20 " in depth)

H1. Precipitation is 15-18"; slopes are 3-25%; soils are shallow; Soil surfaces are loamy sand, fine sandy loam, loam, cobbly fine sandy loam, gravelly sandy loam or channery fine sandy loam. Subsoil can be sandy clay loam, fine sandy loam, loam, and/or clay loam. Landforms are mesa, dissected dipslopes, dissected dipslopes on cuestas, and structural benches. Mesa Verde NP Area ... R036XY141CO – Shallow Loamy Mesa Top (pinyon-Utah juniper)

H2. Precipitation is 15-18"; slopes are 3-25%; soils are shallow. Surface soil textures are very fine sandy loam, sandy clay loam to clay loam and subsoil is gravelly fine sandy loam, very gravelly clay loam, or clay loam. Landforms are hills, mesas, dissected dipslopes, and dissected dipslopes on cuestas. ... R036XY446CO – Southwestern Mountain (pinyon-Utah juniper)

H3. Site not as above. Unclassified

18b. Moderately deep to very deep soils (≥ 20 " in depth)

I1. Precipitation is 15-18"; slopes 1-15%; Surface soils are loam or gravelly sandy loam; subsoil is sandy clay loam or clay loam from calcareous eolian material. Shallow carbonatic calcic layer is common.

Landform dissected dipslopes on cuestas, and mesas ... R036XY142CO – Loamy Mesa Top (pinyon-Utah juniper)

I2. Precipitation is 15-18"; slope is 0-20%; soil surface is cobbly loam, or gravelly loam; subsoil is loam, sandy clay loam or clay loam and commonly very cobbly or very gravelly. Soils have argillic and calcic horizons. Landforms are generally nearly level to undulating mesas, ridge tops, old terraces, and slope breaks ... R036XY346CO – Cobbly Foothills

I3. Site not as above. Unclassified