

# Major Land Resource Area 136X

## Southern Piedmont

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### Ecological site keys

#### MLRA 136 - Southern Piedmont

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- I. The soil temperature regime is mesic, residing outside the native range of loblolly pine
  - A. Parent materials are alluvium: FLOOD PLAINS AND BOTTOMLANDS
    - 1 Active flood plains (site is subject to regular overbank flooding)
      - i. The seasonal high water table is within 12 inches of the surface (backswamps, depressions, sloughs, and other wet areas on flood plains): FLOOD PLAINS, VERY WET  
T [Criteria] ... PX136X00X100 – Mesic Temperature Regime, Flood Plain Forest, Very Wet
      - ii. The depth to the seasonal high water table is  $\geq 12$  inches of the surface
        - a. Nearly level flood plains
          - 1) The seasonal high water table is within 12 to 24 inches of surface (depth to low chroma colors  $> 12$  inches and  $\leq 24$  inches): FLOOD PLAINS, WET  
T [Criteria] ... PX136X00X110 – Mesic Temperature Regime, Flood Plain Forest, Wet
          - 2) The depth to the seasonal high water table is  $\geq 24$  inches of the surface: FLOOD PLAIN, MOIST  
T [Criteria] ... PX136X00X120 – Mesic Temperature Regime, Flood Plain Forest, Moist
        - b. Sandy natural levees ( $> 70\%$  sand throughout) adjacent to larger rivers and streams  
T [Criteria] ... PX136X00X130 – Mesic Temperature Regime, Flood Plain Levee Forest, Sandy
    - 2 Above active flood plain (site is NOT subject to regular overbank flooding). Soils are better-developed.
      - i. The seasonal high water table is within 12 inches of the surface (depth to low chroma colors  $\leq 12$  inches): LOW STREAM TERRACES AND

## DRAINAGEWAYS, VERY WET

T [Criteria] ... PX136X00X140 – Mesic Temperature Regime, Low Terraces and Drains, Occasional Inundation

- ii. The depth to the seasonal high water table is  $\geq 12$  inches of the surface
  - a. Subsoil is red and highly weathered AND flooding frequency is none
    - 1) Proceed to I.B.: PIEDMONT UPLANDS
  - b. Subsoil is NOT red and highly weathered, flooding frequency is rare or occasional

- 1) The seasonal high water table is within 12 to 18 inches of surface (depth to low chroma colors  $> 12$  inches and  $\leq 18$  inches): LOW STREAM TERRACES AND DRAINAGEWAYS, WET

- T [Criteria] ... PX136X00X150 – Mesic Temperature Regime, Low Terraces and Drains, Rare Inundation

- 2) The depth to the seasonal high water table is  $\geq 18$  inches of the surface: HIGH STREAM TERRACES, MOIST

- T [Criteria] ... PX136X00X160 – Mesic Temperature Regime, High Terraces, Very Rare Inundation

B. Parent materials are residuum, colluvium, or highly weathered, old alluvium: PIEDMONT UPLANDS

1 Parent materials are NOT Triassic sedimentary rock

- i. Parent materials are mafic intrusive rock AND base saturation  $\geq 35\%$  in the subsoil: BASIC UPLANDS
  - a. The seasonal high water table is within 12 inches of the surface (depth to low chroma colors  $\leq 12$ ): BASIC UPLANDS, SEASONALLY VERY WET
    - 1) Upland flats, upland depressions, heads of drains
      - T [Criteria] ... PX136X00X200 – Mesic Temperature Regime, Basic Upland Flats and Depressions, Expansive Clay, Seasonally Wet and Dry
  - b. The depth to the seasonal high water table is  $\geq 12$  inches of the surface
    - 1) The seasonal high water table is within 12 to 40 inches of the surface (depth to low chroma colors is  $> 12$  inches and  $\leq 40$  inches): BASIC UPLANDS, SEASONALLY WET
      - T [Criteria] ... PX136X00X210 – Mesic Temperature Regime, Basic Upland Woodland, Expansive Clay, Seasonally Wet and Dry
    - 2) The depth to the seasonal high water table is  $\geq 40$  inches of the surface
      - a) Depth to bedrock is  $\geq 40$  inches OR the available water storage capacity of the profile is  $\geq 6$  inches: BASIC UPLANDS, MOIST
        - T [Criteria] ... PX136X00X220 – Mesic Temperature Regime,

Basic Upland Forest, Moist

b) Depth to bedrock is < 40 inches AND the available water storage capacity of the profile is < 6 inches: BASIC UPLANDS, DRY

T [Criteria] ... PX136X00X230 – Mesic Temperature Regime,  
Basic Upland Forest, Depth Restriction, Dry

ii. Parent materials are NOT mafic intrusive rock OR base saturation < 35%:  
ACIDIC UPLANDS

a. The seasonal high water table is within 12 inches of the surface (depth to low chroma colors ≤ 12 inches): ACIDIC UPLANDS, SEASONALLY VERY WET

1) Upland depressions, heads of drains, upland flats

T [Criteria] ... PX136X00X300 – Mesic Temperature Regime, Acidic  
Upland Depressions and Heads of Drains, Wet

b. The depth to the seasonal high water table is ≥ 12 inches of the surface

1) The seasonal high water table is within 12 to 40 inches of the surface  
(depth to low chroma colors is > 12 and < 40 inches): ACIDIC  
UPLANDS, SEASONALLY WET

T [Criteria] ... PX136X00X310 – Mesic Temperature Regime, Acidic  
Upland Forest, Seasonally Wet

2) The depth to the seasonal high water table is ≥ 40 inches of the  
surface

a) Depth to bedrock is ≥ 40 inches OR the available water storage  
capacity of the profile is ≥ 4 inches

(1) Rolling Piedmont plateau

(a) Depth to bedrock is ≥ 40 inches AND the available water  
storage capacity of the profile is ≥ 6 inches: ACIDIC  
UPLANDS, MOIST

T [Criteria] ... PX136X00X320 – Mesic Temperature  
Regime, Acidic Upland Forest, Moist

(b) Depth to bedrock is < 40 inches AND the available water  
storage capacity of the profile is < 6 inches: ACIDIC  
UPLANDS, DRY-MOIST

T [Criteria] ... PX136X00X330 – Mesic Temperature  
Regime, Acidic Upland Forest, Depth Restriction, Dry-  
moist

(2) Landscape is highly dissected

(a) Lower landscape positions (footslopes and toeslopes)  
AND parent materials are colluvium, or a mixture of  
colluvium and slope alluvium

T [Criteria] ... PX136X00X340 – Mesic Temperature

Regime, Acidic Upland Colluvial Forest

b) Depth to bedrock is < 40 inches AND the available water storage capacity of the profile is < 4 inches: ACIDIC UPLANDS, DRY

(1) Rolling Piedmont Plateau

T [Criteria] ... PX136X00X370 – Mesic Temperature Regime, Acidic Upland Woodland, Depth Restriction, Dry

(2) Landscape is highly dissected (e.g., high hills, prominent ridges, monadnocks, etc.)

T [Criteria] ... PX136X00X380 – Mesic Temperature Regime, Acidic High Hills and Isolated Ridges, Depth Restriction, Dry

2 Parent materials are Triassic sedimentary rock: TRIASSIC BASIN UPLANDS

i. The seasonal high water table is within 12 inches of the surface: TRIASSIC BASIN UPLANDS, SEASONALLY VERY WET

a. Parent materials are strongly basic sedimentary rock (Triassic shale, siltstone, mudstone, etc.) and react with dilute hydrochloric acid

T [Criteria] ... PX136X00X200 – Mesic Temperature Regime, Basic Upland Flats and Depressions, Expansive Clay, Seasonally Wet and Dry

ii. The depth to the seasonal high water table is  $\geq 12$  inches of the surface

a. The seasonal high water table is within 12 to 40 inches of the surface (depth to low chroma colors is between 12 to 40 inches): TRIASSIC BASIN UPLANDS, SEASONALLY WET

1) Shrink-swell potential is very high (subsoil is sticky when wet, becoming hard when dry)

T [Criteria] ... PX136X00X400 – Triassic Basin Upland Woodland, Expansive Clay, Seasonally Wet and Dry

2) Shrink-swell potential is NOT very high

T [Criteria] ... PX136X00X410 – Triassic Basin Upland Forest, Seasonally Wet

b. The depth to the seasonal high water table is  $\geq 40$  inches of the surface

1) Depth to bedrock is  $\geq 40$  inches OR the available water storage capacity of the profile is  $\geq 4$  inches: TRIASSIC BASIN UPLANDS, MOIST TO DRY-MOIST

T [Criteria] ... PX136X00X420 – Triassic Basin Upland Forest, Moist

2) Depth to bedrock is < 40 inches AND the available water storage capacity of the profile is < 4 inches: TRIASSIC BASIN UPLANDS, DRY

T [Criteria] ... PX136X00X430 – Triassic Basin Upland Forest, Dry

II. The soil temperature regime is thermic, residing inside the native range of loblolly pine

A. Parent materials are Triassic sedimentary rock: TRIASSIC BASIN UPLANDS

1 The seasonal high water table is within 12 to 40 inches of the surface (depth to low chroma colors is between 12 to 40 inches): TRIASSIC BASIN UPLANDS, SEASONALLY WET

i. Shrink-swell potential is very high (subsoil is sticky when wet, becoming hard when dry)

T [Criteria] ... PX136X00X400 – Triassic Basin Upland Woodland, Expansive Clay, Seasonally Wet and Dry

ii. Shrink-swell potential is NOT very high

T [Criteria] ... PX136X00X410 – Triassic Basin Upland Forest, Seasonally Wet

2 The depth to the seasonal high water table is  $\geq 40$  inches of the surface

i. Depth to bedrock is  $\geq 40$  inches OR the available water storage capacity of the profile is  $\geq 4$  inches: TRIASSIC BASIN UPLANDS, MOIST TO DRY-MOIST

T [Criteria] ... PX136X00X420 – Triassic Basin Upland Forest, Moist

ii. Depth to bedrock is  $< 40$  inches AND the available water storage capacity of the profile is  $< 4$  inches: TRIASSIC BASIN UPLANDS, DRY

T [Criteria] ... PX136X00X430 – Triassic Basin Upland Forest, Dry

B. Parent materials are NOT Triassic sedimentary rock

1 Parent materials are alluvium: FLOOD PLAINS AND BOTTOMLANDS

i. Active flood plains (site is subject to regular overbank flooding)

a. The seasonal high water table is within 12 inches of the surface (backswamps, depressions, sloughs, and other wet areas on flood plains): FLOOD PLAINS, VERY WET

T [Criteria] ... PX136X00X600 – Flood Plain Forest, Very Wet

b. The depth to the seasonal high water table is  $\geq 12$  inches of the surface

1) Nearly level flood plains

a) The seasonal high water table is within 12 to 24 inches of surface (depth to low chroma colors  $> 12$  inches and  $\leq 24$  inches): FLOOD PLAINS, WET

T [Criteria] ... PX136X00X610 – Flood Plain Forest, Wet

b) The depth to the seasonal high water table is  $\geq 24$  inches of the surface: FLOOD PLAINS, MOIST

T [Criteria] ... PX136X00X620 – Flood Plain Forest, Moist

2) Sandy natural levees ( $> 70\%$  sand throughout) adjacent to larger rivers and streams

T [Criteria] ... PX136X00X630 – Flood Plain Levee Forest, Sandy

ii. Above active flood plain (site is NOT subject to regular overbank flooding). Soils are better-developed.

a. The seasonal high water table is within 12 inches of the surface (depth to low chroma colors  $\leq$  12 inches): LOW STREAM TERRACES AND DRAINAGEWAYS, VERY WET

T [Criteria] ... PX136X00X640 – Low Terraces and Drains, Occasional Inundation

b. The depth to the seasonal high water table is  $\geq$  12 inches of the surface

1) Subsoil is red and highly weathered AND flooding frequency is none

a) Proceed to II.B.2.: PIEDMONT UPLANDS

2) Subsoil is NOT red and highly weathered, flooding frequency is rare or occasional

a) The seasonal high water table is within 12 to 18 inches of surface (depth to low chroma colors  $>$  12 inches and  $\leq$  18 inches): LOW STREAM TERRACES AND DRAINAGEWAYS, WET

T [Criteria] ... PX136X00X650 – Low Terraces and Drains, Rare Inundation

b) The depth to the seasonal high water table is  $\geq$  18 inches of the surface: HIGH STREAM TERRACES, MOIST

T [Criteria] ... PX136X00X660 – High Terraces, Very Rare Inundation

2 Parent materials are residuum, colluvium, or highly weathered, old alluvium: PIEDMONT UPLANDS

i. Parent materials are mafic intrusive rock AND base saturation  $\geq$  35% in the subsoil: BASIC UPLANDS

a. The seasonal high water table is within 12 inches of the surface (depth to low chroma colors  $\leq$  12 inches): BASIC UPLANDS, SEASONALLY VERY WET

1) Upland flats, upland depressions, heads of drains

T [Criteria] ... PX136X00X700 – Basic Upland Flats and Depressions, Expansive Clay, Seasonally Wet and Dry

b. The depth to the seasonal high water table is  $\geq$  12 inches of the surface

1) The seasonal high water table is within 12 to 40 inches of the surface (depth to low chroma colors is between 12 to 40 inches): BASIC UPLANDS, SEASONALLY WET

T [Criteria] ... PX136X00X710 – Basic Upland Woodland, Expansive Clay, Seasonally Wet and Dry

2) The depth to the seasonal high water table is  $\geq$  40 inches of the surface

a) Depth to bedrock is  $\geq$  40 inches OR the available water storage capacity of the profile is  $\geq$  6 inches: BASIC UPLANDS, MOIST

T [Criteria] ... PX136X00X720 – Basic Upland Forest, Moist

b) Depth to bedrock is < 40 inches AND the available water storage capacity of the profile is < 6 inches: BASIC UPLANDS, DRY

T [Criteria] ... PX136X00X730 – Basic Upland Forest, Depth Restriction, Dry

ii. Parent materials are NOT mafic intrusive rock OR base saturation < 35%:  
ACIDIC UPLANDS

a. The seasonal high water table is within 12 inches of the surface (depth to low chroma colors  $\leq$  12 inches): ACIDIC UPLANDS, SEASONALLY VERY WET

1) Upland depressions, heads of drains, upland flats

T [Criteria] ... PX136X00X800 – Acidic Upland Depressions and Heads of Drains, Wet

b. The depth to the seasonal high water table is  $\geq$  12 inches of the surface

1) The seasonal high water table is within 12 to 40 inches of the surface (depth to low chroma colors is > 12 and < 40 inches): ACIDIC UPLANDS, SEASONALLY WET

a) Depth to bedrock is  $\geq$  40 inches OR the available water storage capacity of the profile is  $\geq$  6 inches

T [Criteria] ... PX136X00X810 – Acidic Upland Forest, Seasonally Wet

b) Depth to bedrock is < 40 inches AND the available water storage capacity of the profile is < 6 inches: ACIDIC UPLANDS, SEASONALLY WET, SEASONALLY DRY

T [Criteria] ... PX136X00X815 – Acidic Upland Woodland, Depth Restriction, Seasonally Wet and Dry

2) The depth to the seasonal high water table is  $\geq$  40 inches of the surface

a) Depth to bedrock is  $\geq$  40 inches OR the available water storage capacity of the profile is  $\geq$  4 inches

(1) Rolling Piedmont plateau

(a) The particle-size family is coarse-loamy or finer (< 70 percent sand and > 15 percent clay in the subsoil)

(1) Depth to bedrock is  $\geq$  40 inches AND the available water storage capacity of the profile is  $\geq$  6 inches: ACIDIC UPLANDS, MOIST

T [Criteria] ... PX136X00X820 – Acidic Upland Forest, Moist

(2) Depth to bedrock is < 40 inches AND the available

water storage capacity of the profile is < 6 inches: ACIDIC UPLANDS, DRY-MOIST

T [Criteria] ... PX136X00X830 – Acidic Upland Forest, Depth Restriction, Dry-moist

(b) Soils formed in sandy, old alluvium reworked by wind ( $\geq 70$  percent sand and  $\leq 15$  percent clay in the subsoil)

T [Criteria] ... PX136X00X835 – Piedmont Riverine Sandhills

(2) Landscape is highly dissected (e.g., high hills, prominent ridges, monadnocks, etc.)

(a) Lower landscape positions (footslopes and toeslopes) AND parent materials are colluvium, or a mixture of colluvium and slope alluvium

T [Criteria] ... PX136X00X840 – Acidic Upland Colluvial Forest

(b) Upper landscape positions (e.g., summits, shoulders, backslopes, etc.) AND parent materials are residuum

T [Criteria] ... PX136X00X850 – Acidic High Hills and Isolated Ridges, Dry-moist

b) Depth to bedrock is < 40 inches AND the available water storage capacity of the profile is < 4 inches: ACIDIC UPLANDS, DRY

(1) Lower Piedmont (ecoregions 45b, 45f)

(a) River and stream bluffs formed through the cutting action of a moving body of water (slope  $\geq 28\%$  AND adjacent to a river or stream)

T [Criteria] ... PX136X00X860 – Lower Piedmont Acidic River Bluff Forest

(b) NOT river and stream bluffs

T [Criteria] ... PX136X00X870 – Lower Piedmont Acidic Upland Woodland, Depth Restriction, Dry

(2) NOT Lower Piedmont

(a) NOT Talladega Uplands (ecoregion 45d) or Pine Mountain Ridges (ecoregion 45h)

(1) High hills, prominent ridges, monadnocks

T [Criteria] ... PX136X00X880 – Acidic High Hills and Isolated Ridges, Depth Restriction, Dry

(b) Talladega Uplands (45d) or Pine Mountain Ridges (45h) ecoregions

(1) Parent materials are fine-grained metasedimentary

rock (phyllite, schist, slate, etc.)

T [Criteria] ... PX136X00X900 – Talladega Upland  
and Pine Mountain Acidic High Hills and Ridges, Dry,  
Metasedimentary

(2) Quartzite ridgetops

T [Criteria] ... PX136X00X910 – Talladega Upland  
and Pine Mountain Quartzite Ridges, Dry