Map Unit Description

Madison County, Tennessee

Ar Arents-Urban land complex

Setting

Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Arents and similar soils: 50 percent
Urban land: 50 percent

Description of Arents

Properties and Qualities

Slope: 1 to 5 percent
Drainage class: Well drained
Frequency of flooding: None
Frequency of ponding: None

Interpretive Groups

Land capability (non irrigated): 2e

Description of Urban land

Properties and Qualities

Slope: 1 to 5 percent
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent

Interpretive Groups

Land capability (non irrigated): 8s

Typical Profile

0 to 60 inches: variable

Ca Calhoun and Henry silt loams

Setting

Landscape: Plains
Elevation: 10 to 50 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Calhoun and similar soils: 50 percent
Henry and similar soils: 50 percent

Description of Calhoun

Setting

Landform: Depressions on stream terraces
Parent material: Loess

Properties and Qualities

Slope: 0 to 1 percent
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 12.9 inches)

Interpretive Groups

Land capability (non irrigated): 3w

Typical Profile

0 to 19 inches: silt loam
19 to 50 inches: silty clay loam
50 to 72 inches: silt loam

Description of Henry

Setting

Landform: Stream terraces
Parent material: Loess

Properties and Qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 18 to 37 inches to Fragipan
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 4.2 inches)

Interpretive Groups

Land capability (non irrigated): 3w

Typical Profile

0 to 7 inches: silt loam
7 to 19 inches: silt loam
19 to 50 inches: silt loam
50 to 72 inches: silt loam

Co Calloway silt loam

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Calloway and similar soils: 100 percent

Description of Calloway

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 18 to 30 inches to Fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 5.7 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 26 inches: silt loam
26 to 45 inches: silt loam
45 to 72 inches: silt loam

Cs Collins silt loam

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Collins and similar soils: 100 percent

Description of Collins

Setting

Landform: Flood plains
Parent material: Silty alluvium

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Depth to water table: About 24 to 30 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 13.0 inches)

Interpretive Groups

Land capability (non irrigated): 2w

Typical Profile

0 to 8 inches: silt loam
8 to 72 inches: silt loam

DuB Dulac silt loam, 2 to 5 percent slopes

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Dulac and similar soils: 100 percent

Description of Dulac

Setting

Landform: Interfluves
Parent material: Loess over clayey marine deposits

Properties and Qualities

Slope: 2 to 5 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 4.8 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 6 inches: silt loam
6 to 23 inches: silt loam
23 to 37 inches: silt loam
37 to 72 inches: clay

DuB3 Dulac silt loam, 2 to 5 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Dulac and similar soils: 100 percent

Description of Dulac

Setting

Landform: Interfluves
Parent material: Loess over clayey marine deposits

Properties and Qualities

Slope: 2 to 5 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 3.8 inches)

Interpretive Groups

Land capability (non irrigated): 3e

Typical Profile

0 to 6 inches: silt loam
6 to 18 inches: silt loam
18 to 32 inches: silt loam
32 to 72 inches: clay

DuC3 Dulac silt loam, 5 to 8 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Dulac and similar soils: 100 percent

Description of Dulac

Setting

Landform: Hillslopes
Parent material: Loess over clayey marine deposits

Properties and Qualities

Slope: 5 to 8 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 3.8 inches)

Interpretive Groups

Land capability (non irrigated): 4e

Typical Profile

0 to 6 inches: silt loam
6 to 18 inches: silt loam
18 to 32 inches: silt loam
32 to 72 inches: clay

DuD3 Dulac silt loam, 8 to 12 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Dulac and similar soils: 100 percent

Description of Dulac

Setting

Landform: Hillslopes
Parent material: Loess over clayey marine deposits

Properties and Qualities

Slope: 8 to 12 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 3.4 inches)

Interpretive Groups

Land capability (non irrigated): 6e

Typical Profile

0 to 6 inches: silt loam
6 to 16 inches: silt loam
16 to 30 inches: silt loam
30 to 72 inches: clay

EuE Eustis sandy loam, 12 to 35 percent slopes

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Eustis and similar soils: 100 percent

Description of Eustis

Setting

Landform: Hillslopes
Parent material: Sandy marine deposits

Properties and Qualities

Slope: 12 to 35 percent
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High or very high (5.95 to 19.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability (non irrigated): 7s

Typical Profile

0 to 8 inches: loamy fine sand
8 to 45 inches: loamy fine sand
45 to 72 inches: loamy sand

Fa Falaya silt loam

Setting

Landscape: Plains
Elevation: 250 to 450 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Falaya and similar soils: 91 percent
Minor components: 8 percent

Description of Falaya

Setting

Landform: Flood plains
Parent material: Silty alluvium

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or high (0.06 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 12.1 inches)

Interpretive Groups

Land capability (non irrigated): 2w

Typical Profile

0 to 45 inches: silt loam
45 to 72 inches: silt loam

Minor Components

Waverly soils

Percent of map unit: 8 percent
Landform: Flood plains

GrA Grenada silt loam, 0 to 2 percent slopes

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Grenada and similar soils: 100 percent

Description of Grenada

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 0 to 2 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 8 inches: silt loam
8 to 23 inches: silt loam
23 to 29 inches: silt loam
29 to 45 inches: silt loam
45 to 72 inches: silt loam

GrB Grenada silt loam, 2 to 5 percent slopes

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Grenada and similar soils: 100 percent

Description of Grenada

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 2 to 5 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 8 inches: silt loam
8 to 23 inches: silt loam
23 to 29 inches: silt loam
29 to 45 inches: silt loam
45 to 72 inches: silt loam

GrB3 Grenada silt loam, 2 to 5 percent slopes, severely eroded

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Grenada and similar soils: 100 percent

Description of Grenada

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 2 to 5 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 4.9 inches)

Interpretive Groups

Land capability (non irrigated): 3e

Typical Profile

0 to 6 inches: silt loam
6 to 18 inches: silt loam
18 to 22 inches: silt loam
22 to 55 inches: silt loam
55 to 72 inches: silt loam

GrC3 Grenada silt loam, 5 to 8 percent slopes, severely eroded

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Grenada and similar soils: 100 percent

Description of Grenada

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 5 to 8 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability (non irrigated): 4e

Typical Profile

0 to 6 inches: silt loam
6 to 18 inches: silt loam
18 to 21 inches: silt loam
21 to 50 inches: silt loam
50 to 72 inches: silt loam

Iu Iuka fine sandy loam

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Iuka and similar soils: 100 percent

Description of Iuka

Setting

Landform: Flood plains
Parent material: Loamy alluvium

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 8.3 inches)

Interpretive Groups

Land capability (non irrigated): 2w

Typical Profile

0 to 33 inches: fine sandy loam
33 to 50 inches: silt loam
50 to 72 inches: silt loam

LeB Lexington silt loam, 2 to 5 percent slopes

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 100 percent

Description of Lexington

Setting

Landform: Interfluves
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 2 to 5 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: High (about 9.2 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 7 inches: silt loam
7 to 38 inches: silty clay loam
38 to 50 inches: sandy loam
50 to 72 inches: sandy loam

LeB3 Lexington silt loam, 2 to 5 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 100 percent

Description of Lexington

Setting

Landform: Interfluves
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 2 to 5 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 8.7 inches)

Interpretive Groups

Land capability (non irrigated): 3e

Typical Profile

0 to 6 inches: silt loam
6 to 34 inches: silty clay loam
34 to 45 inches: sandy loam
45 to 72 inches: sandy loam

LeC Lexington silt loam, 5 to 8 percent slopes

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 100 percent

Description of Lexington

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 5 to 8 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 8.5 inches)

Interpretive Groups

Land capability (non irrigated): 3e

Typical Profile

0 to 9 inches: silt loam
9 to 31 inches: silty clay loam
31 to 48 inches: sandy loam
48 to 72 inches: sandy loam

LeC3 Lexington silt loam, 5 to 8 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 100 percent

Description of Lexington

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 5 to 8 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 8.3 inches)

Interpretive Groups

Land capability (non irrigated): 4e

Typical Profile

0 to 6 inches: silt loam
6 to 30 inches: silty clay loam
30 to 45 inches: sandy loam
45 to 72 inches: sandy loam

LeD Lexington silt loam, 8 to 12 percent slopes

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 100 percent

Description of Lexington

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 8 to 12 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 8.3 inches)

Interpretive Groups

Land capability (non irrigated): 4e

Typical Profile

0 to 9 inches: silt loam
9 to 30 inches: silty clay loam
30 to 45 inches: sandy loam
45 to 72 inches: sandy loam

LeD3 Lexington silt loam, 8 to 12 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 100 percent

Description of Lexington

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 8 to 12 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 8.3 inches)

Interpretive Groups

Land capability (non irrigated): 6e

Typical Profile

0 to 6 inches: silt loam
6 to 30 inches: silty clay loam
30 to 45 inches: sandy loam
45 to 72 inches: sandy loam

LeE Lexington silt loam, 12 to 20 percent slopes

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 100 percent

Description of Lexington

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 12 to 20 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 8.3 inches)

Interpretive Groups

Land capability (non irrigated): 6e

Typical Profile

0 to 6 inches: silt loam
6 to 30 inches: silty clay loam
30 to 45 inches: sandy loam
45 to 72 inches: sandy loam

LgC Lexington-Urban land complex, 1 to 12 percent slopes

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 50 percent
Urban land: 50 percent

Description of Lexington

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 1 to 12 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: High (about 9.2 inches)

Interpretive Groups

Land capability (non irrigated): 3e

Typical Profile

0 to 7 inches: silt loam
7 to 38 inches: silty clay loam
38 to 50 inches: sandy loam
50 to 72 inches: sandy loam

Description of Urban land

Properties and Qualities

Slope: 1 to 12 percent
Frequency of flooding: None
Frequency of ponding: None

LmE3 Lexington and Smithdale soils, 10 to 30 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Elevation: 300 to 650 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Lexington and similar soils: 50 percent
Smithdale and similar soils: 50 percent

Description of Lexington

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 10 to 20 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 7.7 inches)

Interpretive Groups

Land capability (non irrigated): 6e

Typical Profile

0 to 5 inches: silt loam
5 to 24 inches: silty clay loam
24 to 42 inches: sandy loam
42 to 72 inches: sandy loam

Description of Smithdale

Setting

Landform: Hillslopes
Parent material: Loamy marine deposits

Properties and Qualities

Slope: 15 to 30 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: High (about 9.5 inches)

Interpretive Groups

Land capability (non irrigated): 7e

Typical Profile

0 to 4 inches: silt loam
4 to 72 inches: sandy clay loam

LoB Loring silt loam, 2 to 5 percent slopes

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Loring and similar soils: 100 percent

Description of Loring

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 2 to 5 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 7.4 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 7 inches: silt loam
7 to 35 inches: silty clay loam
35 to 47 inches: silt loam
47 to 65 inches: silt loam

LoB3 Loring silt loam, 2 to 5 percent slopes, severely eroded

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Loring and similar soils: 100 percent

Description of Loring

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 2 to 5 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 8.1 inches)

Interpretive Groups

Land capability (non irrigated): 3e

Typical Profile

0 to 6 inches: silt loam
6 to 38 inches: silty clay loam
38 to 45 inches: silt loam
45 to 65 inches: silt loam

LoC3 Loring silt loam, 5 to 8 percent slopes, severely eroded

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Loring and similar soils: 100 percent

Description of Loring

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 5 to 8 percent
Depth to restrictive feature: None within 60 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 5.1 inches)

Interpretive Groups

Land capability (non irrigated): 4e

Typical Profile

0 to 6 inches: silt loam
6 to 24 inches: silty clay loam
24 to 42 inches: silt loam
42 to 65 inches: silt loam

Ma Mantachie fine sandy loam

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Mantachie and similar soils: 100 percent

Description of Mantachie

Setting

Landform: Flood plains
Parent material: Loamy alluvium

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: High (about 10.3 inches)

Interpretive Groups

Land capability (non irrigated): 2w

Typical Profile

0 to 13 inches: fine sandy loam
13 to 73 inches: loam

MeA Memphis silt loam, 0 to 2 percent slopes

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Memphis and similar soils: 100 percent

Description of Memphis

Setting

Landform: Stream terraces
Parent material: Loess

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 13.0 inches)

Interpretive Groups

Land capability (non irrigated): 1

Typical Profile

0 to 8 inches: silt loam
8 to 22 inches: silty clay loam
22 to 72 inches: silt loam

MeB Memphis silt loam, 2 to 5 percent slopes

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Memphis and similar soils: 100 percent

Description of Memphis

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 2 to 5 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 13.0 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 7 inches: silt loam
7 to 19 inches: silty clay loam
19 to 72 inches: silt loam

MeB2 Memphis silt loam, 2 to 5 percent slopes, eroded

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Memphis and similar soils: 100 percent

Description of Memphis

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 2 to 5 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 13.1 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 6 inches: silt loam
6 to 14 inches: silty clay loam
14 to 72 inches: silt loam

MeC3 Memphis silt loam, 5 to 8 percent slopes, severely eroded

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Memphis and similar soils: 100 percent

Description of Memphis

Setting

Landform: Loess hills
Parent material: Loess

Properties and Qualities

Slope: 5 to 8 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 13.1 inches)

Interpretive Groups

Land capability (non irrigated): 4e

Typical Profile

0 to 6 inches: silt loam
6 to 12 inches: silty clay loam
12 to 72 inches: silt loam

Oc Ochlockonee fine sandy loam

Setting

Landscape: Coastal plains
Elevation: 100 to 800 feet
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Ochlockonee and similar soils: 100 percent

Description of Ochlockonee

Setting

Landform: Flood plains
Parent material: Loamy alluvium

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability (non irrigated): 2w

Typical Profile

0 to 31 inches: fine sandy loam
31 to 46 inches: silt loam
46 to 72 inches: silt loam

PrB Providence silt loam, 2 to 5 percent slopes

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Providence and similar soils: 100 percent

Description of Providence

Setting

Landform: Interfluves
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 18 to 38 inches to Fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 12 to 35 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Moderate (about 6.3 inches)

Interpretive Groups

Land capability (non irrigated): 2e

Typical Profile

0 to 6 inches: silt loam
6 to 30 inches: silty clay loam
30 to 45 inches: silt loam
45 to 72 inches: clay loam

PrC3 Providence silt loam, 5 to 8 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Providence and similar soils: 100 percent

Description of Providence

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 5 to 8 percent
Depth to restrictive feature: 18 to 38 inches to Fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 4.2 inches)

Interpretive Groups

Land capability (non irrigated): 4e

Typical Profile

0 to 6 inches: silt loam
6 to 20 inches: silty clay loam
20 to 37 inches: silt loam
37 to 72 inches: clay loam

PrD3 Providence silt loam, 8 to 12 percent slopes, severely eroded

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Providence and similar soils: 100 percent

Description of Providence

Setting

Landform: Hillslopes
Parent material: Loess over loamy marine deposits

Properties and Qualities

Slope: 8 to 12 percent
Depth to restrictive feature: 18 to 38 inches to Fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Low (about 3.8 inches)

Interpretive Groups

Land capability (non irrigated): 6e

Typical Profile

0 to 6 inches: silt loam
6 to 18 inches: silty clay loam
18 to 35 inches: silt loam
35 to 72 inches: clay loam

SmE Smithdale soils, 10 to 20 percent slopes

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Smithdale and similar soils: 100 percent

Description of Smithdale

Setting

Landform: Hillslopes
Parent material: Loamy marine deposits

Properties and Qualities

Slope: 10 to 20 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: High (about 9.4 inches)

Interpretive Groups

Land capability (non irrigated): 6e

Typical Profile

0 to 21 inches: fine sandy loam
21 to 72 inches: sandy clay loam

SmF Smithdale soils, 20 to 30 percent slopes

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Smithdale and similar soils: 100 percent

Description of Smithdale

Setting

Landform: Hillslopes
Parent material: Loamy marine deposits

Properties and Qualities

Slope: 20 to 30 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: High (about 9.4 inches)

Interpretive Groups

Land capability (non irrigated): 7e

Typical Profile

0 to 21 inches: fine sandy loam
21 to 72 inches: sandy clay loam

SwD Sweatman soils, 5 to 12 percent slopes

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Sweatman and similar soils: 100 percent

Description of Sweatman

Setting

Landform: Hillslopes
Parent material: Clayey marine deposits

Properties and Qualities

Slope: 5 to 12 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: High (about 10.9 inches)

Interpretive Groups

Land capability (non irrigated): 6e

Typical Profile

0 to 6 inches: silt loam
6 to 45 inches: clay
45 to 72 inches: clay

SwE Sweatman soils, 12 to 25 percent slopes

Setting

Landscape: Coastal plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Sweatman and similar soils: 100 percent

Description of Sweatman

Setting

Landform: Hillslopes
Parent material: Clayey marine deposits

Properties and Qualities

Slope: 12 to 25 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: High (about 10.9 inches)

Interpretive Groups

Land capability (non irrigated): 7e

Typical Profile

0 to 6 inches: silt loam
6 to 45 inches: clay
45 to 72 inches: clay

Vk Vicksburg silt loam

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Vicksburg and similar soils: 100 percent

Description of Vicksburg

Setting

Landform: Flood plains
Parent material: Silty alluvium

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Depth to water table: About 30 to 60 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 12.1 inches)

Interpretive Groups

Land capability (non irrigated): 2w

Typical Profile

0 to 7 inches: silt loam
7 to 55 inches: silt loam

Wa Waverly silt loam

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Waverly and similar soils: 100 percent

Description of Waverly

Setting

Landform: Flood plains
Parent material: Silty alluvium

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Depth to water table: About 3 to 10 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 12.6 inches)

Interpretive Groups

Land capability (non irrigated): 5w

Typical Profile

0 to 6 inches: silt loam
6 to 72 inches: silt loam

Map Unit Description

Madison County, Tennessee

Wf Waverly silt loam, frequently flooded

Setting

Landscape: Plains
Mean annual precipitation: 47 to 62 inches
Mean annual air temperature: 49 to 70 degrees F
Frost-free period: 197 to 211 days

Composition

Waverly and similar soils: 100 percent

Description of Waverly

Setting

Landform: Flood plains
Parent material: Silty alluvium

Properties and Qualities

Slope: 0 to 2 percent
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high or high (0.57 to 1.98 in/hr)
Depth to water table: About 3 to 10 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate maximum: 0 percent
Gypsum maximum: 0 percent
Available water capacity: Very high (about 12.6 inches)

Interpretive Groups

Land capability (non irrigated): 5w

Typical Profile

0 to 6 inches: silt loam
6 to 72 inches: silt loam

Map Unit Description

Detailed Soil Map Units

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description indicates the composition of the map unit and selected properties of the components of the unit.

Soils that have profiles that are almost alike make up a "soil series." Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into "soil phases." Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A "complex" consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An "association" is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An "undifferentiated group" is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include "miscellaneous areas." Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.