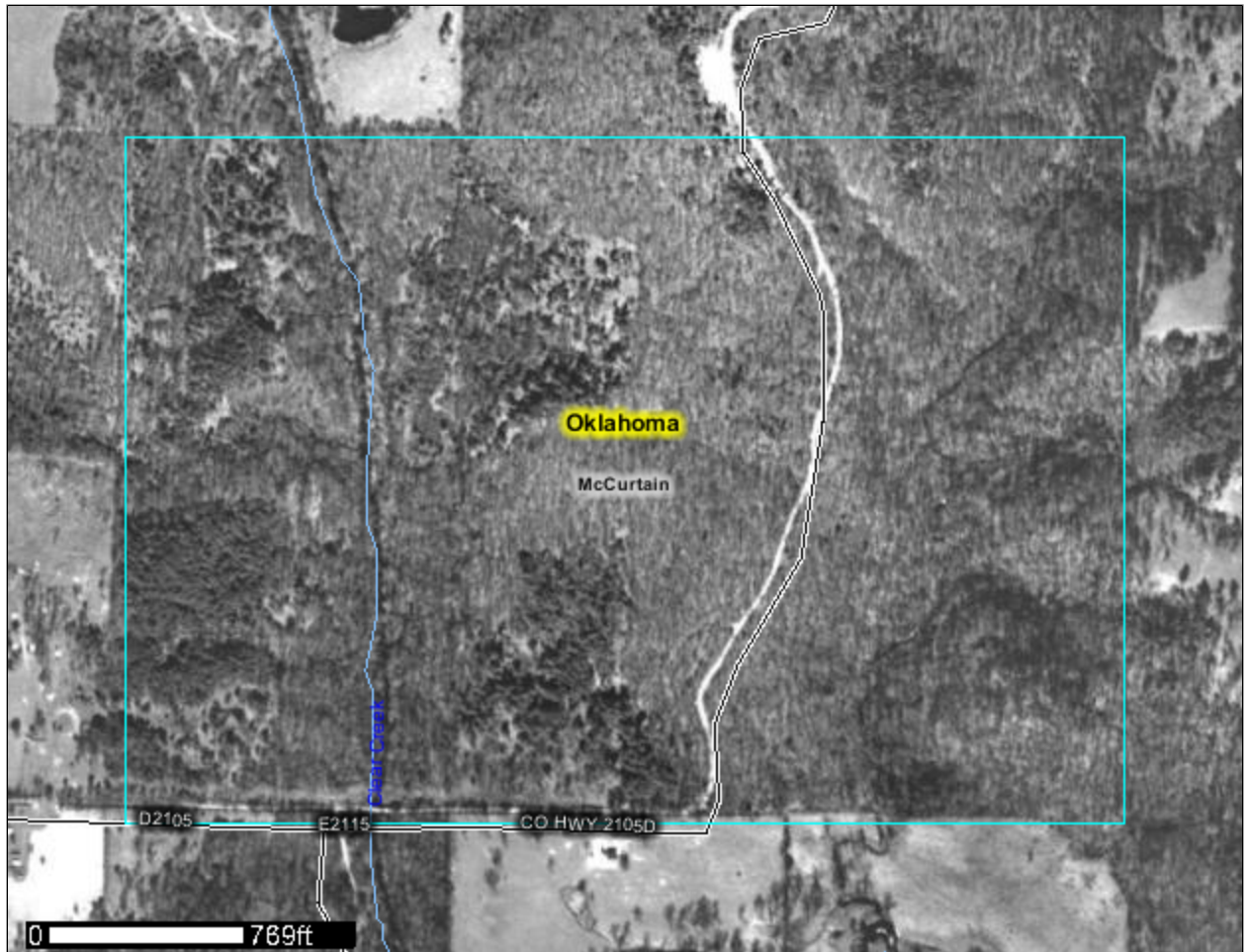




A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for McCurtain County, Oklahoma

Lindley Central Timber Tract



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	4
Soil Map	6
Soil Map (Lindley Central Timber Tract).....	7
Legend (Lindley Central Timber Tract).....	8
Map Unit Legend (Lindley Central Timber Tract).....	9
Map Unit Descriptions (Lindley Central Timber Tract).....	9
McCurtain County, Oklahoma Version date:7/24/2007 1:31:25 PM.....	12
CaC—Cadeville loam, 3 to 5 percent slopes.....	12
CkD3—Cahaba and Tiak soils, 3 to 8 percent slopes, severely eroded.....	13
Ka—Kaufman clay, 0 to 1 percent slopes, occasionally flooded.....	15
Kc—Kaufman clay, 0 to 1 percent slopes, frequently flooded.....	16
Pr—Tinn-Roebuck complex, 0 to 1 percent slopes, occasionally flooded...	17
RuD—Ruston fine sandy loam, 3 to 8 percent slopes.....	18
SeE—Saffell gravelly fine sandy loam, 5 to 12 percent slopes.....	19
SwE—Swink-Hollywood complex, 5 to 20 percent slopes.....	20
TkE—Tiak-Ruston complex, 5 to 15 percent slopes.....	21
References	24

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

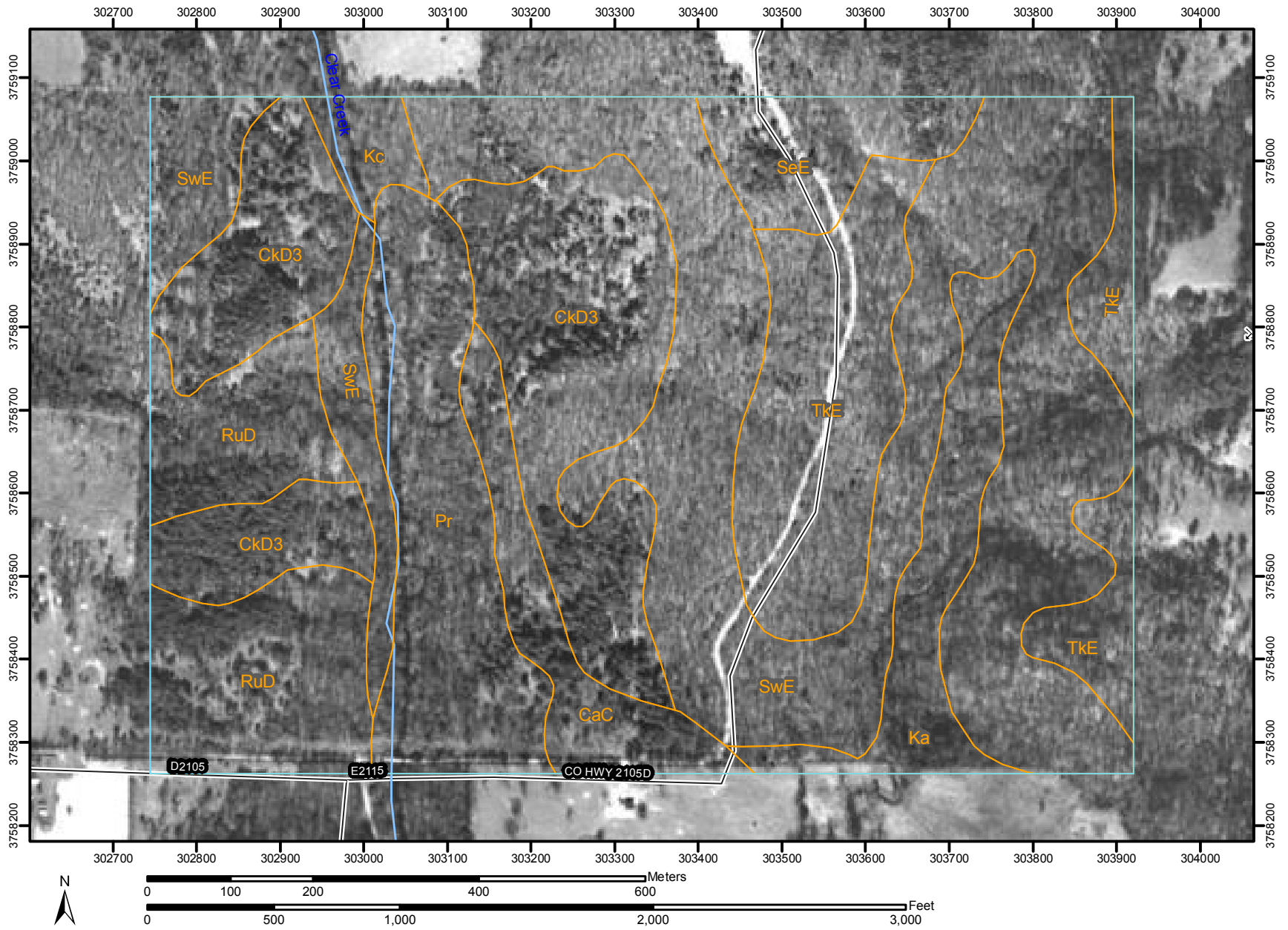
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report


Soil Map (Lindley Central Timber Tract)



Custom Soil Resource Report Legend (Lindley Central Timber Tract)

MAP LEGEND






















Area of Interest (AOI)




 Area of Interest (AOI)

Soils




 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot



-  Very Stony Spot
-  Wet Spot
-  Other

Special Line Features



-  Gully
-  Short Steep Slope
-  Other

Political Features

Municipalities

-  Cities
-  Urban Areas






Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails

Roads

-  Interstate Highways
-  US Routes
-  State Highways
-  Local Roads
-  Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 15N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: McCurtain County, Oklahoma
Survey Area Data: Version 6, Jul 24, 2007

Date(s) aerial images were photographed: 1996

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Lindley Central Timber Tract)

McCurtain County, Oklahoma (OK089)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CaC	Cadeville loam, 3 to 5 percent slopes	10.0	4.2%
CkD3	Cahaba and Tiak soils, 3 to 8 percent slopes, severely eroded	44.1	18.5%
Ka	Kaufman clay, 0 to 1 percent slopes, occasionally flooded	12.7	5.3%
Kc	Kaufman clay, 0 to 1 percent slopes, frequently flooded	3.3	1.4%
Pr	Tinn-Roebuck complex, 0 to 1 percent slopes, occasionally flooded	23.7	9.9%
RuD	Ruston fine sandy loam, 3 to 8 percent slopes	24.3	10.2%
SeE	Saffell gravelly fine sandy loam, 5 to 12 percent slopes	8.9	3.7%
SwE	Swink-Hollywood complex, 5 to 20 percent slopes	82.0	34.3%
TkE	Tiak-Ruston complex, 5 to 15 percent slopes	30.0	12.5%
Totals for Area of Interest (AOI)		238.9	100.0%

Map Unit Descriptions (Lindley Central Timber Tract)

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, 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.

Custom Soil Resource Report

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. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. 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 includes general facts about the unit and gives important soil properties and qualities.

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

Custom Soil Resource Report

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.

**McCurtain County, Oklahoma Version date:7/24/2007
1:31:25 PM**

CaC—Cadeville loam, 3 to 5 percent slopes

Map Unit Setting

Elevation: 90 to 1,500 feet

Mean annual precipitation: 48 to 57 inches

Mean annual air temperature: 58 to 63 degrees F

Frost-free period: 190 to 230 days

Map Unit Composition

Cadeville and similar soils: 85 percent

Minor components: 15 percent

Description of Cadeville

Setting

Landform: Paleoterraces

Landform position (three-dimensional): Riser

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Alluvium and/or clayey fluviomarine deposits

Properties and qualities

Slope: 3 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: High (about 11.3 inches)

Interpretive groups

Land capability (nonirrigated): 3e

Typical profile

0 to 7 inches: Loam

7 to 43 inches: Clay

43 to 68 inches: Clay

Minor Components

Alusa

Percent of map unit: 5 percent

Landform: Interfluves

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Convex

Tiak

Percent of map unit: 5 percent

Landform: Hillslopes on hills

Landform position (two-dimensional): Backslope

Custom Soil Resource Report

Down-slope shape: Convex
Across-slope shape: Convex

Muskogee

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Loamy savannah PE 70-80 (R133BY062OK)

CKD3—Cahaba and Tiak soils, 3 to 8 percent slopes, severely eroded

Map Unit Setting

Elevation: 90 to 1,500 feet
Mean annual precipitation: 48 to 57 inches
Mean annual air temperature: 58 to 63 degrees F
Frost-free period: 190 to 230 days

Map Unit Composition

Cahaba, severely eroded, and similar soils: 49 percent
Tiak, severely eroded, and similar soils: 26 percent
Minor components: 25 percent

Description of Cahaba, Severely Eroded

Setting

Landform: Paleoterraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy alluvium

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.5 inches)

Interpretive groups

Land capability (nonirrigated): 6e

Typical profile

0 to 8 inches: Fine sandy loam
8 to 12 inches: Loam
12 to 38 inches: Clay loam
38 to 80 inches: Sandy loam

Description of Tiak, Severely Eroded

Setting

Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from shale

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.4 inches)

Interpretive groups

Land capability (nonirrigated): 6e

Typical profile

0 to 3 inches: Fine sandy loam
3 to 6 inches: Fine sandy loam
6 to 26 inches: Clay
26 to 68 inches: Clay

Minor Components

Gullied land

Percent of map unit: 10 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Microfeatures of landform position: Gullies
Down-slope shape: Linear
Across-slope shape: Concave

Kullit, severely eroded

Percent of map unit: 5 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex

Muskogee, severely eroded

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex

Sherwood, severely eroded

Percent of map unit: 5 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope

Custom Soil Resource Report

Down-slope shape: Convex
Across-slope shape: Convex

Ka—Kaufman clay, 0 to 1 percent slopes, occasionally flooded

Map Unit Setting

Elevation: 90 to 1,500 feet
Mean annual precipitation: 48 to 57 inches
Mean annual air temperature: 58 to 63 degrees F
Frost-free period: 190 to 230 days

Map Unit Composition

Kaufman and similar soils: 95 percent
Minor components: 5 percent

Description of Kaufman

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Moderate (about 9.0 inches)

Interpretive groups

Land capability (nonirrigated): 4w

Typical profile

0 to 18 inches: Clay
18 to 28 inches: Clay
28 to 65 inches: Clay

Minor Components

Tinn

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Kc—Kaufman clay, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

Elevation: 90 to 1,500 feet

Mean annual precipitation: 48 to 57 inches

Mean annual air temperature: 58 to 63 degrees F

Frost-free period: 190 to 230 days

Map Unit Composition

Kaufman and similar soils: 95 percent

Minor components: 5 percent

Description of Kaufman

Setting

Landform: Flood plains

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Clayey alluvium

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Gypsum, maximum content: 5 percent

Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0

Available water capacity: Moderate (about 9.0 inches)

Interpretive groups

Land capability (nonirrigated): 5w

Typical profile

0 to 17 inches: Clay

17 to 28 inches: Clay

28 to 65 inches: Clay

Minor Components

Tinn

Percent of map unit: 5 percent

Landform: Flood plains

Down-slope shape: Linear

Across-slope shape: Linear

Pr—Tinn-Roebuck complex, 0 to 1 percent slopes, occasionally flooded

Map Unit Setting

Elevation: 90 to 1,500 feet
Mean annual precipitation: 48 to 57 inches
Mean annual air temperature: 58 to 63 degrees F
Frost-free period: 190 to 230 days

Map Unit Composition

Tinn and similar soils: 50 percent
Roebuck and similar soils: 45 percent
Minor components: 5 percent

Description of Tinn

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous clayey alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 6.0
Available water capacity: High (about 9.9 inches)

Interpretive groups

Land capability (nonirrigated): 4w

Typical profile

0 to 15 inches: Clay
15 to 45 inches: Clay
45 to 90 inches: Stratified fine sandy loam to silty clay loam

Description of Roebuck

Setting

Landform: Flood plains
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey and/or loamy alluvium

Properties and qualities

Slope: 0 to 1 percent

Custom Soil Resource Report

Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water capacity: High (about 9.5 inches)

Interpretive groups

Land capability (nonirrigated): 4w

Typical profile

0 to 12 inches: Clay
12 to 32 inches: Clay
32 to 66 inches: Clay

Minor Components

Redlake

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave

RuD—Ruston fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 90 to 1,500 feet
Mean annual precipitation: 48 to 57 inches
Mean annual air temperature: 58 to 63 degrees F
Frost-free period: 190 to 230 days

Map Unit Composition

Ruston and similar soils: 90 percent
Minor components: 10 percent

Description of Ruston

Setting

Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy alluvium

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 8.8 inches)

Interpretive groups

Land capability (nonirrigated): 4e

Typical profile

0 to 9 inches: Fine sandy loam

9 to 52 inches: Sandy clay loam

52 to 72 inches: Sandy clay loam

Minor Components

Blevins

Percent of map unit: 5 percent

Landform: Paleoterraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Tiak

Percent of map unit: 5 percent

Landform: Hillslopes on hills

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

SeE—Saffell gravelly fine sandy loam, 5 to 12 percent slopes

Map Unit Setting

Elevation: 90 to 1,500 feet

Mean annual precipitation: 48 to 57 inches

Mean annual air temperature: 58 to 63 degrees F

Frost-free period: 190 to 230 days

Map Unit Composition

Saffell and similar soils: 90 percent

Minor components: 10 percent

Description of Saffell

Setting

Landform: Hillslopes on hills

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy and/or gravelly alluvium

Properties and qualities

Slope: 5 to 12 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 5.5 inches)

Interpretive groups

Land capability (nonirrigated): 6e

Typical profile

0 to 3 inches: Gravelly fine sandy loam

3 to 8 inches: Gravelly fine sandy loam

8 to 32 inches: Very gravelly sandy clay loam

32 to 56 inches: Very gravelly fine sandy loam

56 to 60 inches: Very gravelly sandy loam

Minor Components

Ruston

Percent of map unit: 5 percent

Landform: Hillslopes on hills

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Tiak

Percent of map unit: 5 percent

Landform: Hillslopes on hills

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

SwE—Swink-Hollywood complex, 5 to 20 percent slopes

Map Unit Setting

Elevation: 90 to 1,500 feet

Mean annual precipitation: 48 to 57 inches

Mean annual air temperature: 58 to 63 degrees F

Frost-free period: 190 to 230 days

Map Unit Composition

Swink and similar soils: 65 percent

Hollywood and similar soils: 30 percent

Minor components: 5 percent

Description of Swink

Setting

Landform: Hillslopes on hills

Landform position (two-dimensional): Backslope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Clayey residuum weathered from limestone

Properties and qualities

Slope: 5 to 20 percent

Depth to restrictive feature: 6 to 20 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None
Available water capacity: Very low (about 1.6 inches)

Interpretive groups

Land capability (nonirrigated): 6e
Ecological site: Shallow prairie PE 56-66 (R085XY083OK)

Typical profile

0 to 7 inches: Very stony clay
7 to 16 inches: Very stony clay
16 to 30 inches: Bedrock

Description of Hollywood

Setting

Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey colluvium over limestone

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: 48 to 96 inches to lithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.6 inches)

Interpretive groups

Land capability (nonirrigated): 4e
Ecological site: Clay prairie PE 70-80 (R133BY002OK)

Typical profile

0 to 16 inches: Silty clay
16 to 30 inches: Silty clay
30 to 45 inches: Silty clay
45 to 72 inches: Silty clay
72 to 75 inches: Bedrock

Minor Components

Panola

Percent of map unit: 5 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Loamy prairie PE 70-80 (R133BY060OK)

TkE—Tiak-Ruston complex, 5 to 15 percent slopes

Map Unit Setting

Elevation: 90 to 1,500 feet

Custom Soil Resource Report

Mean annual precipitation: 48 to 57 inches
Mean annual air temperature: 58 to 63 degrees F
Frost-free period: 190 to 230 days

Map Unit Composition

Tiak and similar soils: 65 percent
Ruston and similar soils: 30 percent
Minor components: 5 percent

Description of Tiak

Setting

Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from shale

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.2 inches)

Interpretive groups

Land capability (nonirrigated): 6e

Typical profile

0 to 4 inches: Gravelly sandy loam
4 to 8 inches: Fine sandy loam
8 to 26 inches: Clay
26 to 68 inches: Clay

Description of Ruston

Setting

Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy alluvium

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 8.7 inches)

Custom Soil Resource Report

Interpretive groups

Land capability (nonirrigated): 4e

Typical profile

0 to 4 inches: Gravelly sandy loam

4 to 9 inches: Fine sandy loam

9 to 52 inches: Sandy clay loam

52 to 72 inches: Sandy clay loam

Minor Components

Muskogee

Percent of map unit: 2 percent

Landform: Stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: Loamy savannah PE 70-80 (R133BY062OK)

Saffell

Percent of map unit: 2 percent

Landform: Hillslopes on hills

Landform position (two-dimensional): Backslope

Down-slope shape: Convex

Across-slope shape: Convex

Blevins

Percent of map unit: 1 percent

Landform: Paleoterraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. <http://soils.usda.gov/>

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. <http://soils.usda.gov/>

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. <http://soils.usda.gov/>

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. <http://soils.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.glti.nrcs.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. <http://soils.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. <http://soils.usda.gov/>

Custom Soil Resource Report

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.