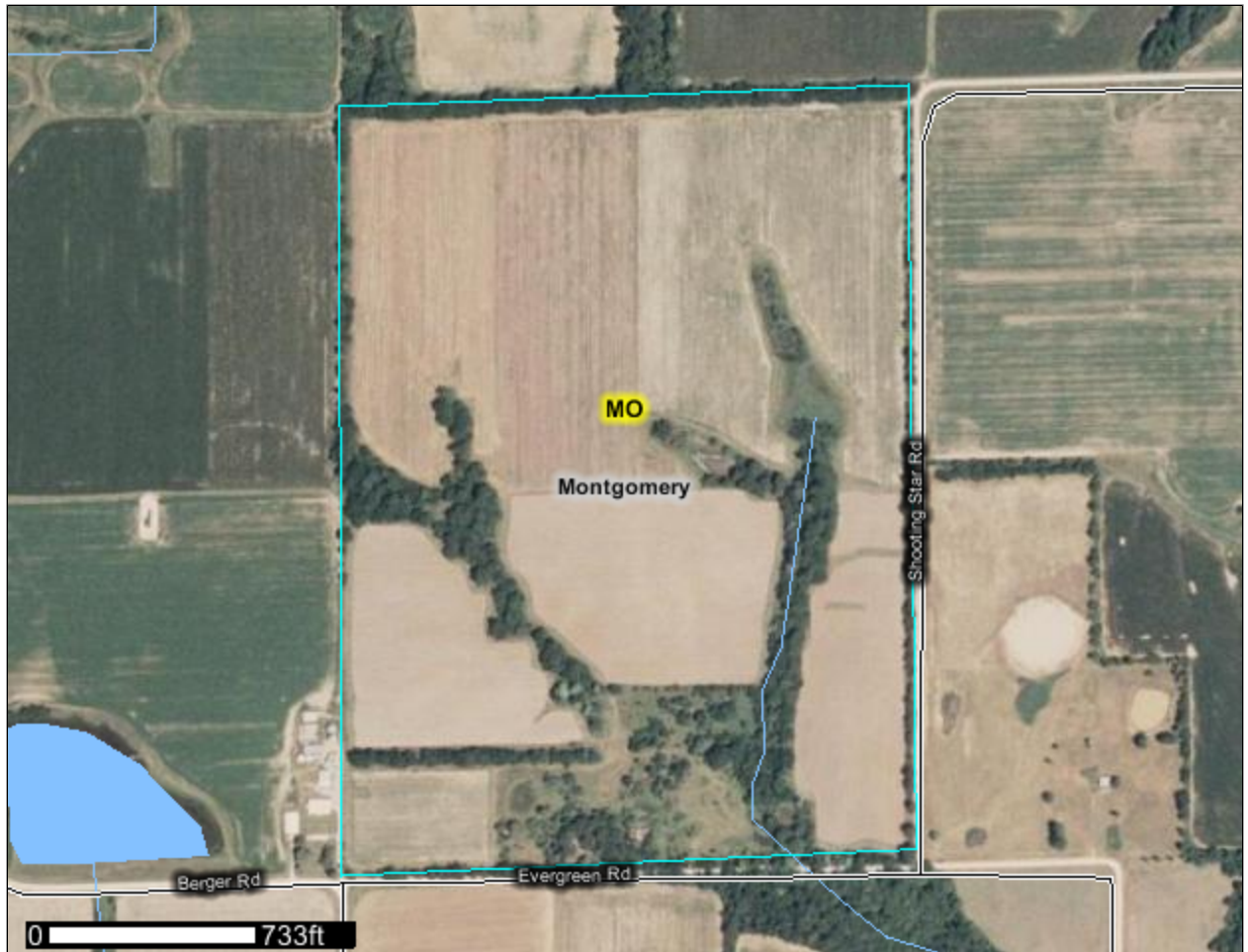




A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Montgomery County, Missouri

MC124 Acres - Leon R. Miller Co



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.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://soils.usda.gov/sqi/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nracs>) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

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.

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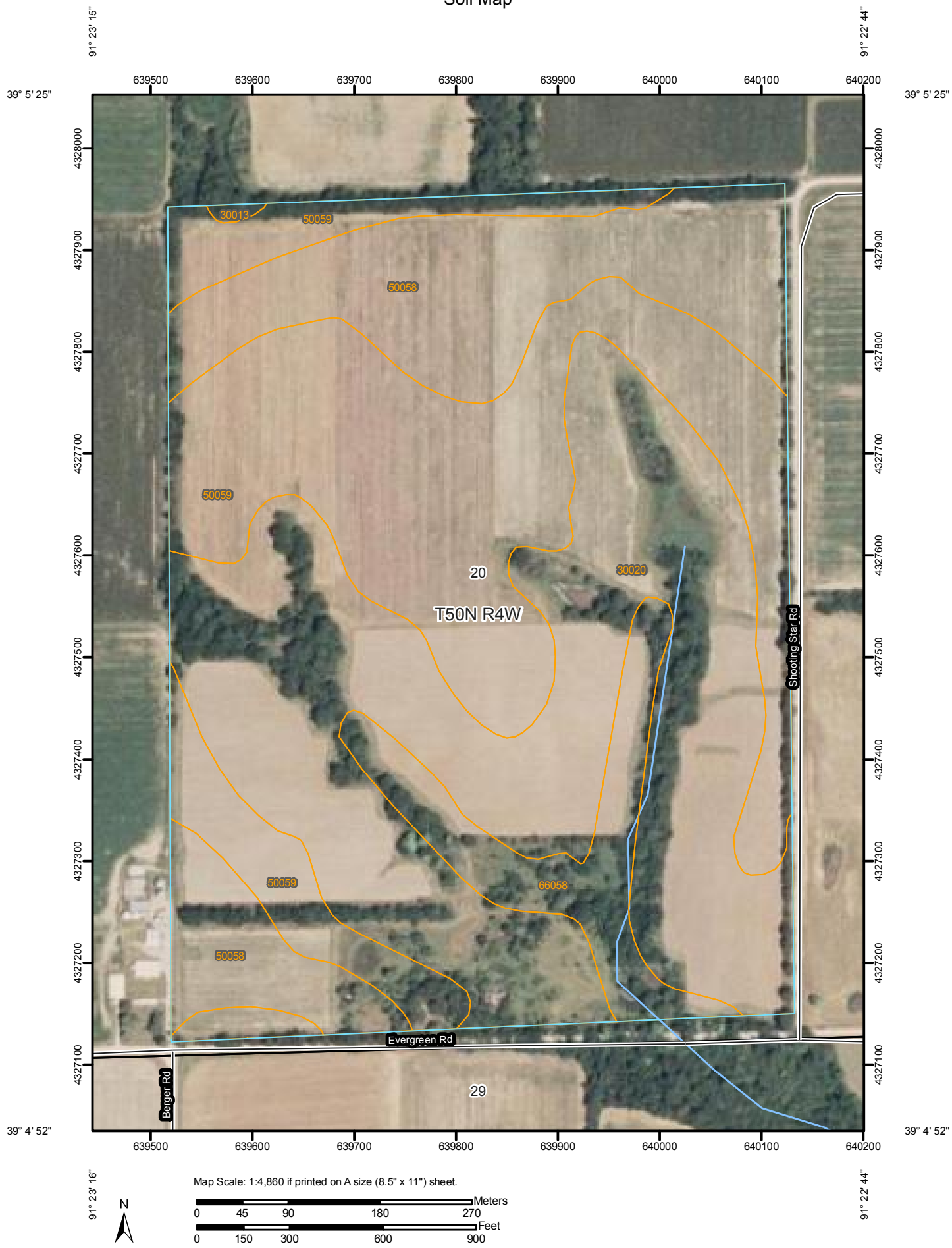
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Soil Map

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



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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 or swamp
-  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

-  Cities
-  PLSS Township and Range
-  PLSS Section

Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:4,860 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 15N NAD83

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

Soil Survey Area: Montgomery County, Missouri
 Survey Area Data: Version 8, Jun 5, 2009

Date(s) aerial images were photographed: 7/8/2007

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

Montgomery County, Missouri (MO139)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
30013	Armster clay loam, 5 to 9 percent slopes, severely eroded	0.2	0.1%
30020	Armster loam, 5 to 9 percent slopes, eroded	49.7	40.4%
50058	Mexico silt loam, 0 to 2 percent slopes	23.0	18.6%
50059	Mexico silt loam, 1 to 4 percent slopes, eroded	42.0	34.1%
66058	Belknap silt loam, 0 to 2 percent slopes, occasionally flooded	8.3	6.7%
Totals for Area of Interest		123.2	100.0%

Map Unit Descriptions

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.

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

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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 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.

Montgomery County, Missouri

30013—Armster clay loam, 5 to 9 percent slopes, severely eroded

Map Unit Setting

Elevation: 550 to 1,100 feet

Mean annual precipitation: 35 to 41 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 177 to 209 days

Map Unit Composition

Armster and similar soils: 90 percent

Description of Armster

Setting

Landform: Hillslopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Pedisediment over till

Properties and qualities

Slope: 5 to 9 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 48 inches

Frequency of flooding: None

Frequency of ponding: None

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

Available water capacity: High (about 9.2 inches)

Interpretive groups

Land capability (nonirrigated): 4e

Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)

Typical profile

0 to 5 inches: Clay loam

5 to 41 inches: Clay loam

41 to 60 inches: Clay loam

30020—Armster loam, 5 to 9 percent slopes, eroded

Map Unit Setting

Elevation: 550 to 1,100 feet

Mean annual precipitation: 35 to 41 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 177 to 209 days

Map Unit Composition

Armster and similar soils: 100 percent

Description of Armster

Setting

Landform: Hillslopes

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Pedisediment over till

Properties and qualities

Slope: 5 to 9 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 36 to 60 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 2 percent

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

Available water capacity: Moderate (about 8.6 inches)

Interpretive groups

Land capability (nonirrigated): 3e

Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)

Typical profile

0 to 5 inches: Loam

5 to 11 inches: Clay loam

11 to 31 inches: Clay

31 to 70 inches: Clay loam

50058—Mexico silt loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 600 to 1,100 feet

Mean annual precipitation: 37 to 47 inches

Mean annual air temperature: 52 to 57 degrees F

Frost-free period: 184 to 228 days

Map Unit Composition

Mexico and similar soils: 85 percent

Minor components: 15 percent

Description of Mexico

Setting

Landform: Divides

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Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over pedisediment

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 9.8 inches)

Interpretive groups

Land capability (nonirrigated): 3w
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)

Typical profile

0 to 9 inches: Silt loam
9 to 15 inches: Silt loam
15 to 34 inches: Clay
34 to 42 inches: Silty clay loam
42 to 80 inches: Silty clay loam

Minor Components

Putnam

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)

Adco

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)

Leonard

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)

50059—Mexico silt loam, 1 to 4 percent slopes, eroded

Map Unit Setting

Elevation: 600 to 1,300 feet

Mean annual precipitation: 37 to 47 inches

Mean annual air temperature: 52 to 57 degrees F

Frost-free period: 184 to 228 days

Map Unit Composition

Mexico and similar soils: 85 percent

Minor components: 15 percent

Description of Mexico

Setting

Landform: Hillslopes, interfluves

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Side slope, interfluve

Down-slope shape: Concave, convex, linear

Across-slope shape: Linear, convex

Parent material: Loess over pedisediment

Properties and qualities

Slope: 1 to 4 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

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

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

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

Available water capacity: High (about 10.8 inches)

Interpretive groups

Land capability (nonirrigated): 2e

Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)

Typical profile

0 to 7 inches: Silt loam

7 to 12 inches: Silty clay loam

12 to 26 inches: Silty clay

26 to 34 inches: Silty clay loam

34 to 80 inches: Silty clay loam

Minor Components

Leonard

Percent of map unit: 5 percent

Landform: Hills

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Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)

Armstrong

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)

Mexico, severely eroded

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave, convex
Other vegetative classification: Grass/Prairie (Herbaceous Vegetation)

66058—Belknap silt loam, 0 to 2 percent slopes, occasionally flooded

Map Unit Setting

Elevation: 340 to 1,000 feet
Mean annual precipitation: 37 to 47 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 184 to 228 days

Map Unit Composition

Belknap and similar soils: 85 percent
Minor components: 10 percent

Description of Belknap

Setting

Landform: Flood-plain steps
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches

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Frequency of flooding: Occasional
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very high (about 12.7 inches)

Interpretive groups

Land capability (nonirrigated): 2w
Other vegetative classification: Trees/Timber (Woody Vegetation)

Typical profile

0 to 6 inches: Silt loam
6 to 24 inches: Silt loam
24 to 58 inches: Silt loam
58 to 80 inches: Silt loam

Minor Components

Moniteau

Percent of map unit: 5 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Trees/Timber (Woody Vegetation)

Belknap

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Trees/Timber (Woody Vegetation)