



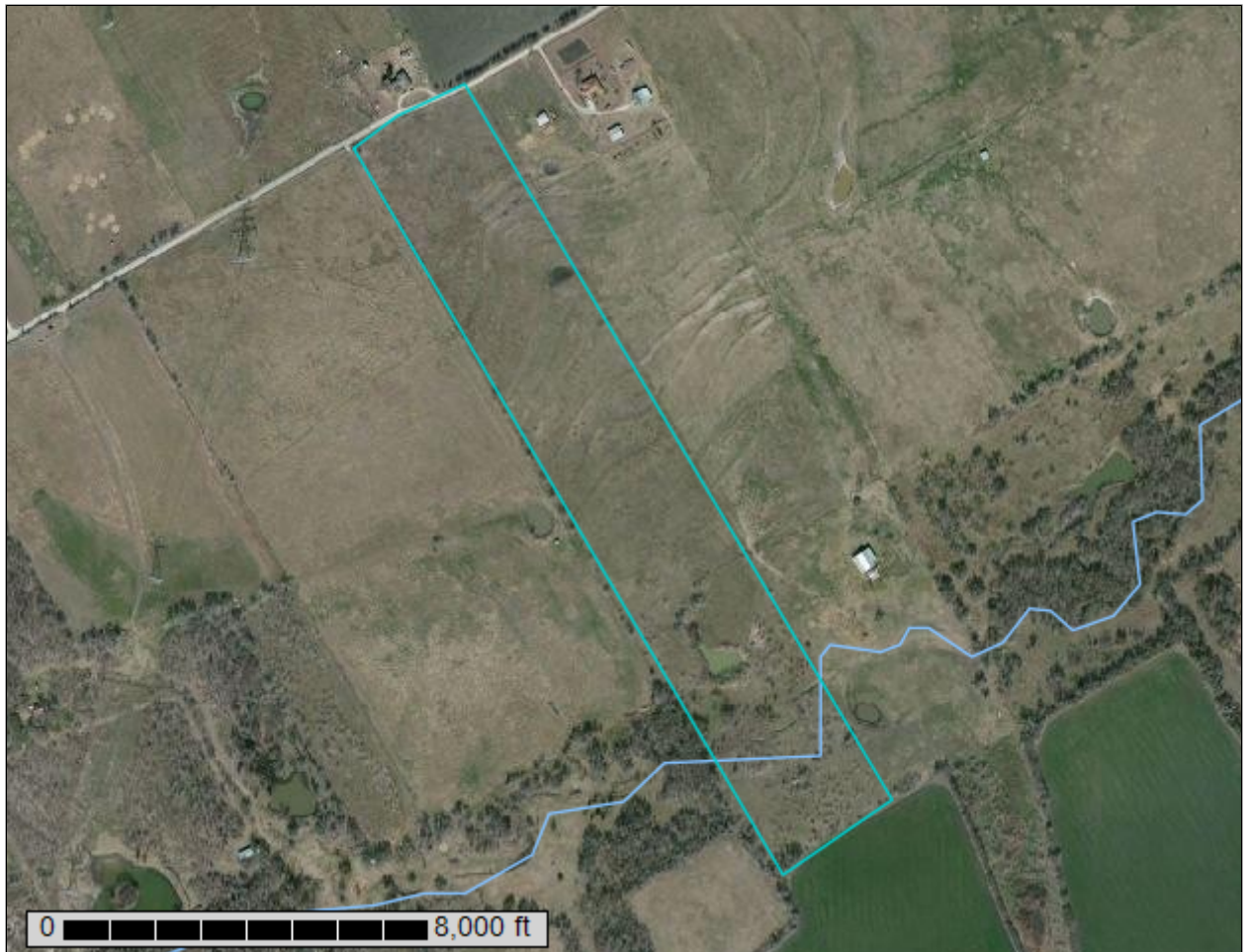
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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 **Navarro County, Texas**



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://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) 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=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

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 Web Soil Survey, the site for official soil survey information.

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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

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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.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

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.

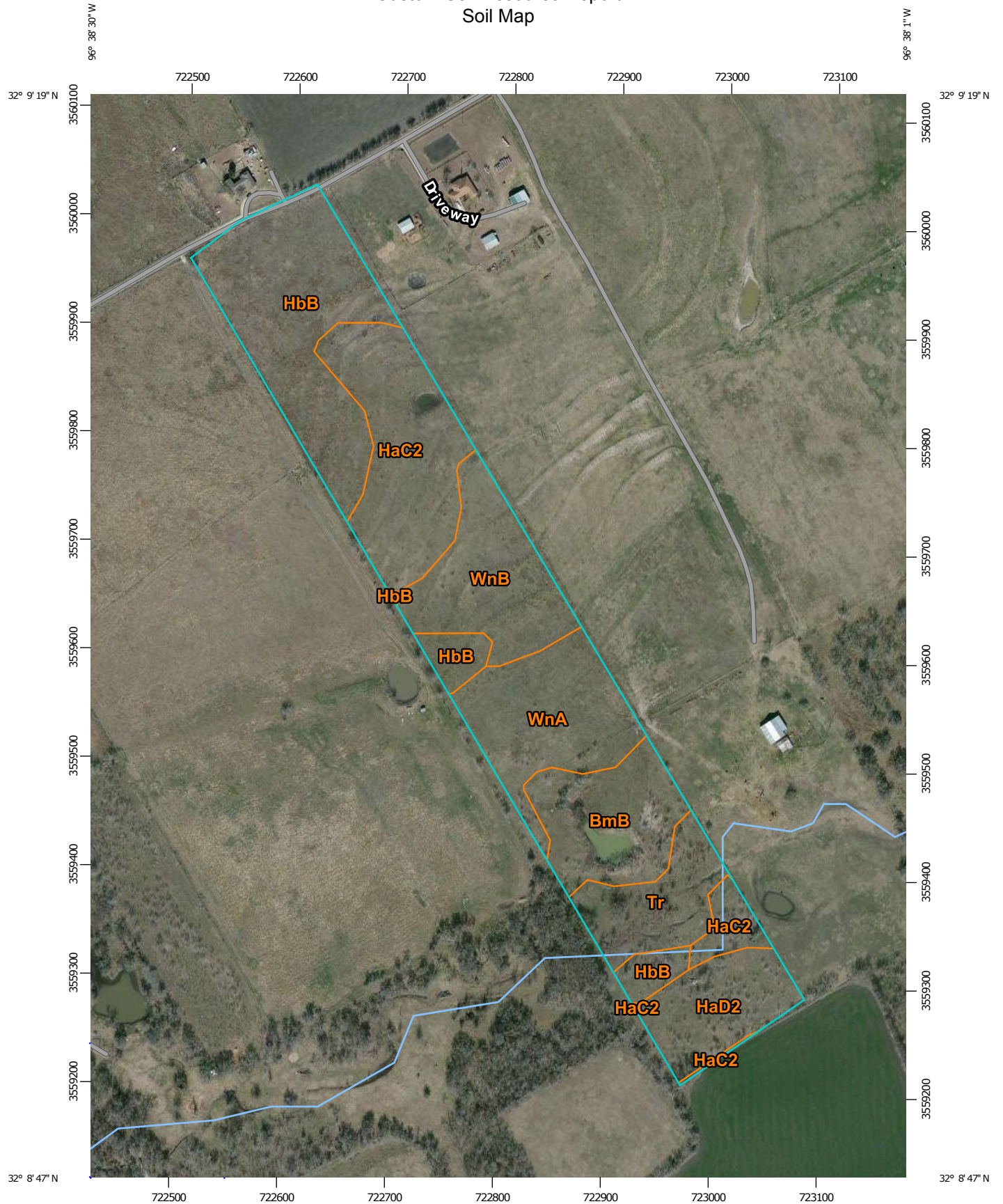
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree 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.

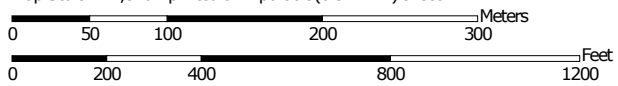
Soil Map

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




Map Scale: 1:4,870 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils





 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

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


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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

Soil Survey Area: Navarro County, Texas
 Survey Area Data: Version 8, Dec 12, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 13, 2010—Feb 28, 2011

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

Navarro County, Texas (TX349)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BmB	Bonham loam, 1 to 3 percent slopes	3.4	11.4%
HaC2	Heiden clay, 3 to 5 percent slopes, eroded	5.8	19.4%
HaD2	Heiden clay, 5 to 8 percent slopes, eroded	2.6	8.8%
HbB	Houston Black clay, 1 to 3 percent slopes	7.7	25.4%
Tr	Trinity clay, frequently flooded	2.5	8.2%
WnA	Wilson clay loam, 0 to 1 percent slopes	4.2	13.9%
WnB	Wilson clay loam, 1 to 3 percent slopes	3.9	13.0%
Totals for Area of Interest		30.1	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

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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 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.

Navarro County, Texas

BmB—Bonham loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 250 to 750 feet

Mean annual precipitation: 38 to 44 inches

Mean annual air temperature: 64 to 68 degrees F

Frost-free period: 225 to 275 days

Map Unit Composition

Bonham and similar soils: 100 percent

Description of Bonham

Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluvium

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Clayey residuum weathered from calcareous shale of the Bonham marl formation and/or loamy residuum weathered from calcareous shale of the Bonham marl formation

Typical profile

H1 - 0 to 9 inches: loam

H2 - 9 to 17 inches: clay loam

H3 - 17 to 56 inches: silty clay

H4 - 56 to 80 inches: channery silty clay

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural 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: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 20 percent

Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: High (about 9.6 inches)

Interpretive groups

Farmland classification: All areas are prime farmland

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: Clay Loam 28-40" PZ (R086AY199TX)

HaC2—Heiden clay, 3 to 5 percent slopes, eroded

Map Unit Setting

Elevation: 400 to 1,000 feet

Mean annual precipitation: 28 to 42 inches

Mean annual air temperature: 64 to 70 degrees F

Frost-free period: 225 to 275 days

Map Unit Composition

Heiden, eroded, and similar soils: 100 percent

Description of Heiden, Eroded

Setting

Landform: Ridges

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Microfeatures of landform position: Linear gilgai

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Clayey residuum weathered from clayey shale of eagleford shale or taylor marl

Typical profile

H1 - 0 to 34 inches: clay

H2 - 34 to 60 inches: clay

H3 - 60 to 80 inches: clay

Properties and qualities

Slope: 3 to 5 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well 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: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 55 percent

Gypsum, maximum in profile: 5 percent

Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 10.0

Available water storage in profile: Moderate (about 9.0 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Ecological site: Blackland 28-40" PZ (R086AY196TX)

HaD2—Heiden clay, 5 to 8 percent slopes, eroded

Map Unit Setting

Elevation: 400 to 1,000 feet

Mean annual precipitation: 28 to 42 inches

Mean annual air temperature: 64 to 70 degrees F

Frost-free period: 225 to 275 days

Map Unit Composition

Heiden, eroded, and similar soils: 100 percent

Description of Heiden, Eroded

Setting

Landform: Ridges

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Microfeatures of landform position: Linear gilgai

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Clayey residuum weathered from clayey shale of eagleford shale or taylor marl

Typical profile

H1 - 0 to 22 inches: clay

H2 - 22 to 60 inches: clay

H3 - 60 to 80 inches: clay

Properties and qualities

Slope: 5 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well 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: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 55 percent

Gypsum, maximum in profile: 5 percent

Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 10.0

Available water storage in profile: Moderate (about 9.0 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: Blackland 28-40" PZ (R086AY196TX)

HbB—Houston Black clay, 1 to 3 percent slopes

Map Unit Setting

Elevation: 400 to 1,000 feet

Mean annual precipitation: 28 to 42 inches

Mean annual air temperature: 63 to 70 degrees F

Frost-free period: 220 to 250 days

Map Unit Composition

Houston black and similar soils: 100 percent

Description of Houston Black

Setting

Landform: Ridges

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Interfluvium

Microfeatures of landform position: Circular gilgai

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from calcareous shale of Taylor Marl and Eagleford shale

Typical profile

H1 - 0 to 17 inches: clay

H2 - 17 to 80 inches: clay

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well 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: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 35 percent

Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: High (about 9.5 inches)

Interpretive groups

Farmland classification: All areas are prime farmland

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: D

Ecological site: Blackland 28-40" PZ (R086AY196TX)

Tr—Trinity clay, frequently flooded

Map Unit Setting

Elevation: 100 to 550 feet

Mean annual precipitation: 34 to 52 inches

Mean annual air temperature: 63 to 70 degrees F

Frost-free period: 230 to 280 days

Map Unit Composition

Trinity and similar soils: 90 percent

Minor components: 10 percent

Description of Trinity

Setting

Landform: Flood plains

Microfeatures of landform position: Circular gilgai

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Clayey alluvium of holocene age derived from mixed sources

Typical profile

H1 - 0 to 24 inches: clay

H2 - 24 to 58 inches: clay

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat 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: More than 80 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: D

Ecological site: Clayey Bottomland 28-40" PZ (R086AY198TX)

Minor Components

Unnamed, minor components

Percent of map unit: 10 percent

WnA—Wilson clay loam, 0 to 1 percent slopes

Map Unit Setting

Elevation: 250 to 700 feet

Mean annual precipitation: 32 to 45 inches

Mean annual air temperature: 64 to 70 degrees F

Frost-free period: 220 to 270 days

Map Unit Composition

Wilson and similar soils: 100 percent

Description of Wilson

Setting

Landform: Stream terraces, stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Clayey alluvium of quaternary age derived from mixed sources

Typical profile

H1 - 0 to 8 inches: clay loam

H2 - 8 to 48 inches: clay

H3 - 48 to 60 inches: clay

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well 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: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 20 percent

Gypsum, maximum in profile: 15 percent

Salinity, maximum in profile: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 10.0

Available water storage in profile: Moderate (about 7.9 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Ecological site: Claypan Prairie 28-40" PZ (R086AY200TX)

WnB—Wilson clay loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 250 to 700 feet

Mean annual precipitation: 32 to 45 inches

Mean annual air temperature: 64 to 70 degrees F

Frost-free period: 220 to 270 days

Map Unit Composition

Wilson and similar soils: 100 percent

Description of Wilson

Setting

Landform: Stream terraces, stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Clayey alluvium of quaternary age derived from mixed sources

Typical profile

H1 - 0 to 8 inches: clay loam

H2 - 8 to 48 inches: clay

H3 - 48 to 60 inches: clay

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well 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: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 20 percent

Gypsum, maximum in profile: 15 percent

Salinity, maximum in profile: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 10.0

Available water storage in profile: Moderate (about 7.9 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Ecological site: Claypan Prairie 28-40" PZ (R086AY200TX)

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

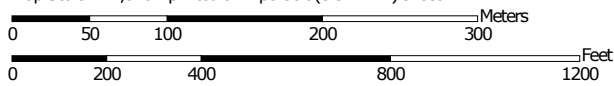
Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report Map—Farmland Classification



Map Scale: 1:4,870 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

Custom Soil Resource Report









MAP LEGEND








Area of Interest (AOI)

 Area of Interest (AOI)




Soils








Soil Rating Polygons






-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available







Soil Rating Lines










-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained

-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available








Soil Rating Points

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

Water Features

MAP INFORMATION

-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
-  Aerial Photography

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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

Soil Survey Area: Navarro County, Texas
Survey Area Data: Version 8, Dec 12, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 13, 2010—Feb 28, 2011

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.

Table—Farmland Classification

Farmland Classification— Summary by Map Unit — Navarro County, Texas (TX349)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BmB	Bonham loam, 1 to 3 percent slopes	All areas are prime farmland	3.4	11.4%
HaC2	Heiden clay, 3 to 5 percent slopes, eroded	Not prime farmland	5.8	19.4%
HaD2	Heiden clay, 5 to 8 percent slopes, eroded	Not prime farmland	2.6	8.8%
HbB	Houston Black clay, 1 to 3 percent slopes	All areas are prime farmland	7.7	25.4%
Tr	Trinity clay, frequently flooded	Not prime farmland	2.5	8.2%
WnA	Wilson clay loam, 0 to 1 percent slopes	Not prime farmland	4.2	13.9%
WnB	Wilson clay loam, 1 to 3 percent slopes	Not prime farmland	3.9	13.0%
Totals for Area of Interest			30.1	100.0%

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Vegetative Productivity

Vegetative productivity includes estimates of potential vegetative production for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture and rangeland. In the underlying database, some states maintain crop yield data by individual map unit component. Other states maintain the data at the map unit level. Attributes are included for both, although only one or the other is likely to contain data for any given geographic area. For other land uses, productivity data is shown only at the map unit component level. Examples include potential crop yields under irrigated and nonirrigated conditions, forest productivity, forest site index, and total rangeland production under of normal, favorable and unfavorable conditions.

Range Production (Normal Year)

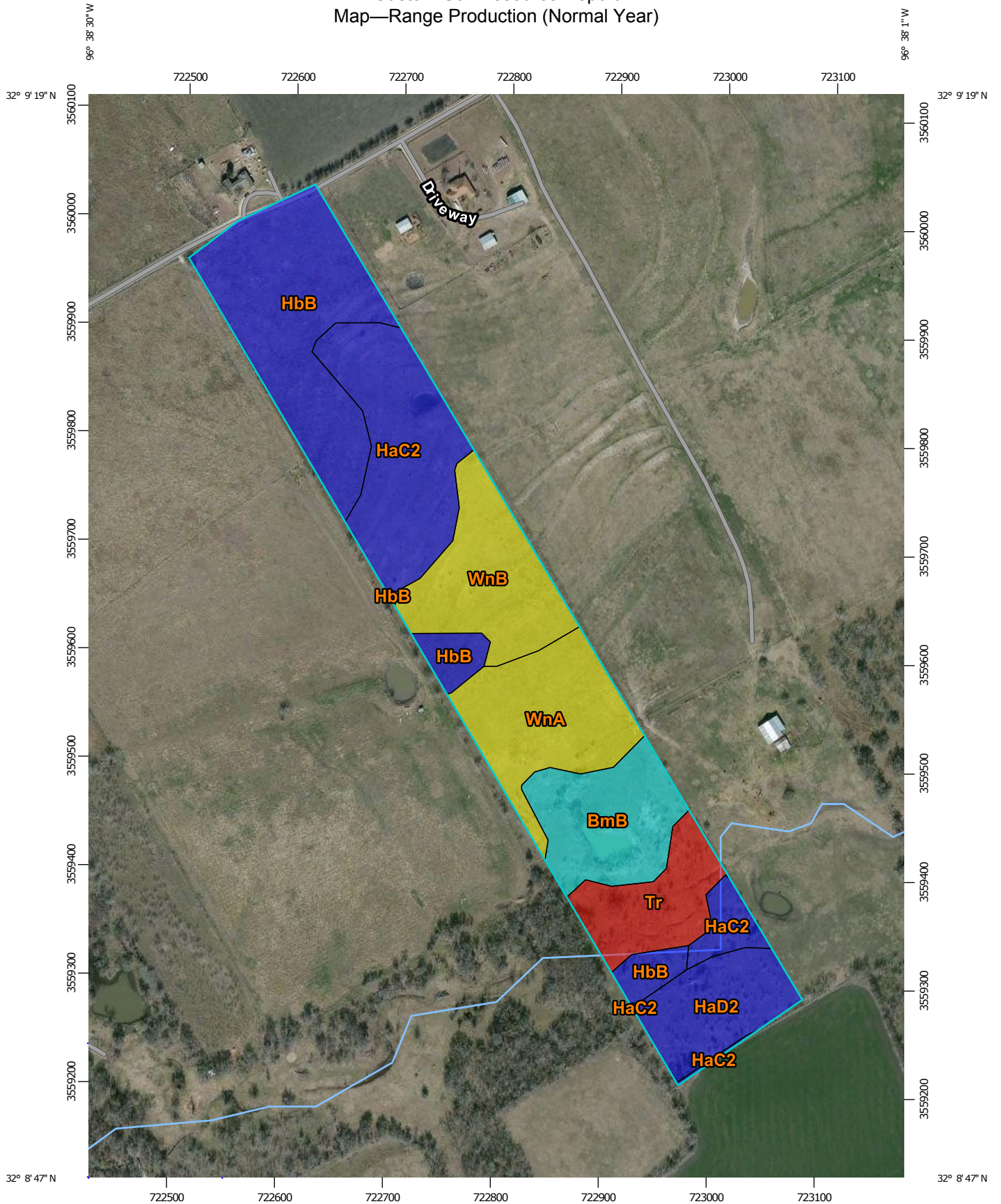
Total range production is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds

Custom Soil Resource Report

per acre of air-dry vegetation. In a normal year, growing conditions are about average. Yields are adjusted to a common percent of air-dry moisture content.

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

Custom Soil Resource Report
Map—Range Production (Normal Year)



Map Scale: 1:4,870 if printed on A portrait (8.5" x 11") sheet.
























0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Soils**
 - Soil Rating Polygons**
 -  <= 3600
 -  > 3600 and <= 4500
 -  > 4500 and <= 5500
 -  > 5500 and <= 6000
 -  Not rated or not available
 - Soil Rating Lines**
 -  <= 3600
 -  > 3600 and <= 4500
 -  > 4500 and <= 5500
 -  > 5500 and <= 6000
 -  Not rated or not available
 - Soil Rating Points**
 -  <= 3600
 -  > 3600 and <= 4500
 -  > 4500 and <= 5500
 -  > 5500 and <= 6000
 -  Not rated or not available
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
 -  Aerial Photography

MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

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

Soil Survey Area: Navarro County, Texas
 Survey Area Data: Version 8, Dec 12, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 13, 2010—Feb 28, 2011

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.

Table—Range Production (Normal Year)

Range Production (Normal Year)— Summary by Map Unit — Navarro County, Texas (TX349)				
Map unit symbol	Map unit name	Rating (pounds per acre per year)	Acres in AOI	Percent of AOI
BmB	Bonham loam, 1 to 3 percent slopes	5500	3.4	11.4%
HaC2	Heiden clay, 3 to 5 percent slopes, eroded	6000	5.8	19.4%
HaD2	Heiden clay, 5 to 8 percent slopes, eroded	6000	2.6	8.8%
HbB	Houston Black clay, 1 to 3 percent slopes	6000	7.7	25.4%
Tr	Trinity clay, frequently flooded	3600	2.5	8.2%
WnA	Wilson clay loam, 0 to 1 percent slopes	4500	4.2	13.9%
WnB	Wilson clay loam, 1 to 3 percent slopes	4500	3.9	13.0%
Totals for Area of Interest			30.1	100.0%

Rating Options—Range Production (Normal Year)

Units of Measure: pounds per acre per year

Aggregation Method: Weighted Average

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: Yes

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