APPENDIX A

SOIL RESOURCES REPORTS

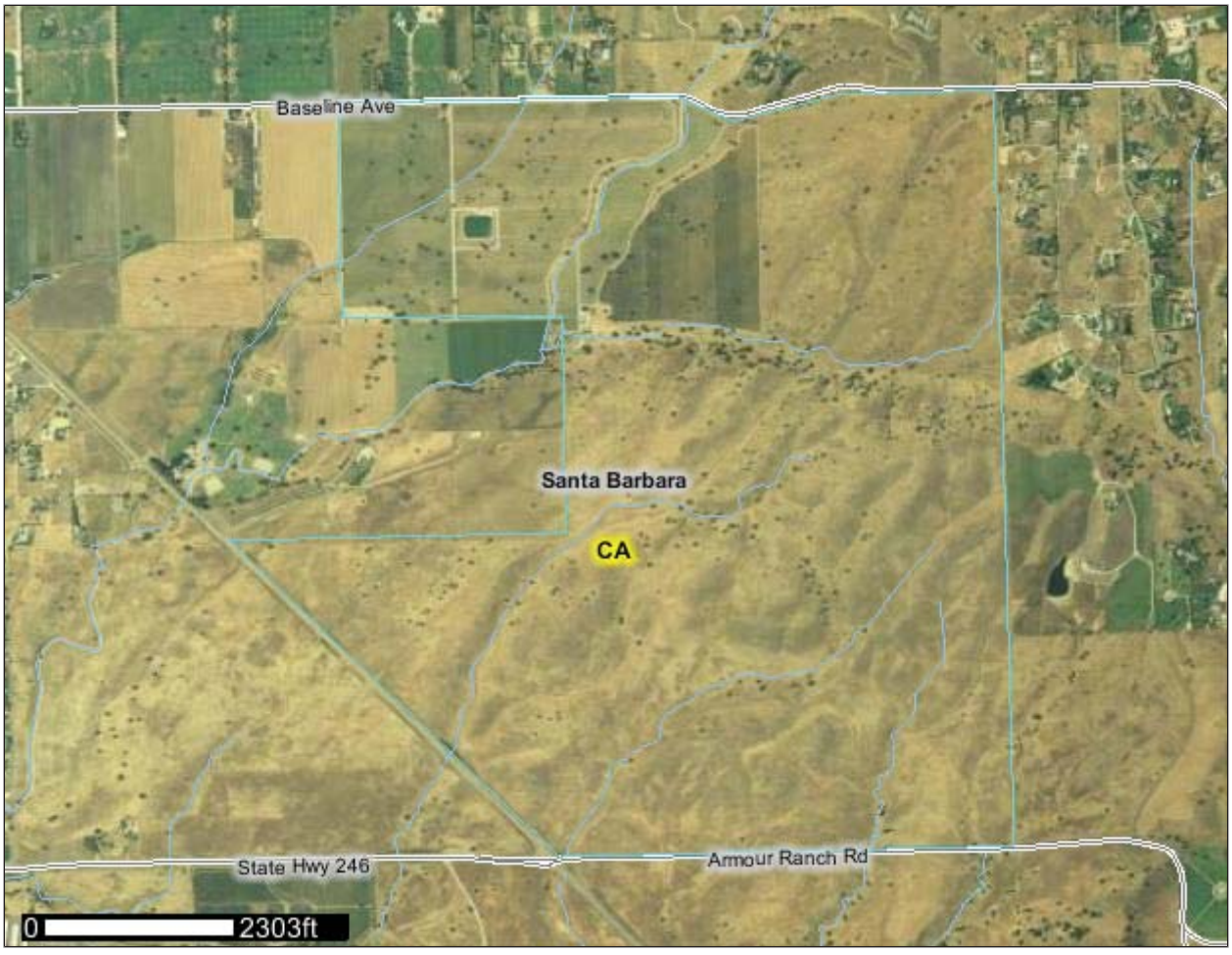
United States Department of Agriculture

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 Northern Santa Barbara Area, California

Santa Ynez Camp 4 Site



December 28, 2011

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=nrcs) 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.

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

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

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.

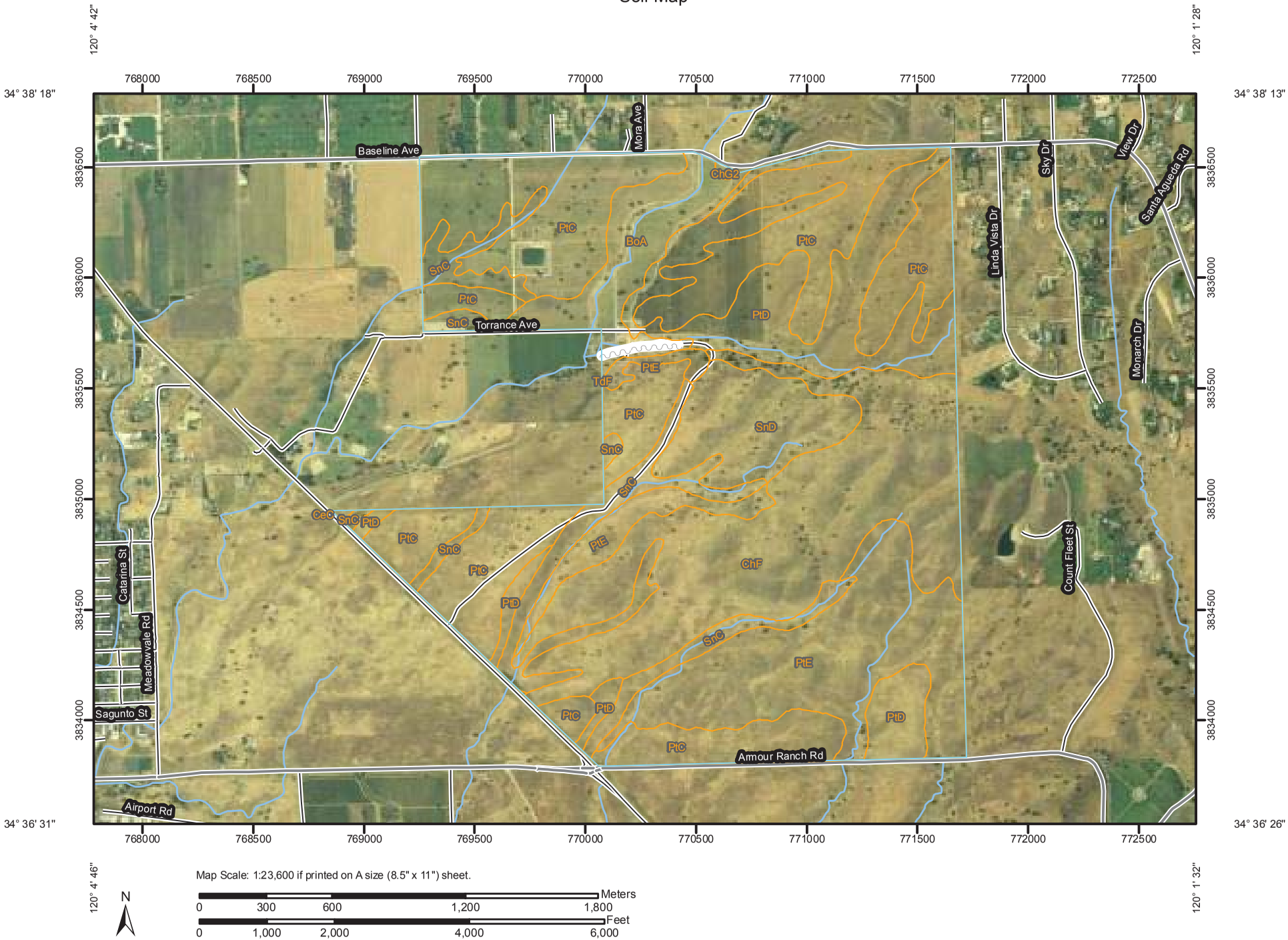
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree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

Water Features
- Streams and Canals

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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

Northern Santa Barbara Area, California (CA672)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	81.1	5.7%
TdF	Terrace escarpments, loamy	0.0	0.0%
Totals for Area of Interest		**1,429.3**	**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 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.

Northern Santa Barbara Area, California

BoA—Botella loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 50 to 800 feet
Mean annual precipitation: 12 to 22 inches
Mean annual air temperature: 57 degrees F
Frost-free period: 250 to 320 days

Map Unit Composition

Botella and similar soils: 85 percent
Minor components: 15 percent

Description of Botella

Setting

Landform: Flood plains, valleys
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from acid sandstone and shale

Properties and qualities

Slope: 0 to 2 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 (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability (nonirrigated): 3c

Typical profile

0 to 9 inches: Loam
9 to 65 inches: Clay loam
65 to 76 inches: Sandy clay loam

Minor Components

Unnamed

Percent of map unit: 10 percent

Botella clay loam

Percent of map unit: 5 percent

CeC—Chamise sandy loam, 5 to 9 percent slopes

Map Unit Setting

Elevation: 200 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 57 degrees F
Frost-free period: 240 to 300 days

Map Unit Composition

Chamise and similar soils: 85 percent
Minor components: 15 percent

Description of Chamise

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: 34 to 46 inches to strongly contrasting textural stratification
Drainage class: 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
Available water capacity: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability (nonirrigated): 3e
Other vegetative classification: LOAMY (015XD047CA_1)

Typical profile

0 to 28 inches: Sandy loam
28 to 34 inches: Shaly clay
34 to 47 inches: Very shaly clay
47 to 60 inches: Very shaly clay loam

Minor Components

Unnamed

Percent of map unit: 10 percent

Chamise sh-l
Percent of map unit: 5 percent

ChF—Chamise shaly loam, 15 to 45 percent slopes

Map Unit Setting
Elevation: 200 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 57 degrees F
Frost-free period: 240 to 300 days

Map Unit Composition
Chamise and similar soils: 85 percent
Minor components: 15 percent

Description of Chamise

Setting
Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 15 to 45 percent
Depth to restrictive feature: 22 to 40 inches to strongly contrasting textural stratification
Drainage class: 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
Available water capacity: Low (about 3.0 inches)

Interpretive groups
Land capability classification (irrigated): 6e
Land capability (nonirrigated): 6e
Other vegetative classification: LOAMY (015XD047CA_1)

Typical profile
0 to 18 inches: Shaly loam
18 to 24 inches: Shaly clay
24 to 37 inches: Very shaly clay
37 to 60 inches: Very shaly clay loam

Minor Components

Tierra
Percent of map unit: 5 percent

Chamise sandy loam
Percent of map unit: 5 percent

Unnamed
Percent of map unit: 5 percent

ChG2—Chamise shaly loam, 30 to 75 percent slopes, eroded

Map Unit Setting
Elevation: 200 to 1,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 57 degrees F
Frost-free period: 240 to 300 days

Map Unit Composition
Chamise and similar soils: 85 percent
Minor components: 15 percent

Description of Chamise

Setting
Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 30 to 75 percent
Depth to restrictive feature: 10 to 20 inches to strongly contrasting textural stratification
Drainage class: 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
Available water capacity: Very low (about 1.5 inches)

Interpretive groups
Land capability classification (irrigated): 7e
Land capability (nonirrigated): 7e
Ecological site: SHALLOW LOAMY (R015XD093CA)

Typical profile

0 to 10 inches: Shaly loam
10 to 16 inches: Shaly clay
16 to 29 inches: Very shaly clay
29 to 60 inches: Very shaly clay loam

Minor Components

Unnamed

Percent of map unit: 15 percent

PtC—Positas fine sandy loam, 2 to 9 percent slopes

Map Unit Setting

Elevation: 400 to 900 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 300 to 320 days

Map Unit Composition

Positas and similar soils: 85 percent
Minor components: 15 percent

Description of Positas

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: 20 to 26 inches to abrupt textural change
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
Available water capacity: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability (nonirrigated): 3e
Ecological site: CLAYPAN (R015XD115CA)

Typical profile

0 to 21 inches: Fine sandy loam

21 to 48 inches: Clay
48 to 60 inches: Very gravelly clay

Minor Components

Unnamed
Percent of map unit: 15 percent

PtD—Positas fine sandy loam, 9 to 15 percent slopes

Map Unit Setting
Elevation: 400 to 900 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 300 to 320 days

Map Unit Composition
Positas and similar soils: 85 percent
Minor components: 15 percent

Description of Positas

Setting
Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 9 to 15 percent
Depth to restrictive feature: 12 to 20 inches to abrupt textural change
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
Available water capacity: Very low (about 2.3 inches)

Interpretive groups
Land capability classification (irrigated): 3e
Land capability (nonirrigated): 3e
Ecological site: CLAYPAN (R015XD115CA)

Typical profile
0 to 21 inches: Fine sandy loam
21 to 48 inches: Clay
48 to 60 inches: Very gravelly clay

Minor Components

Unnamed
Percent of map unit: 15 percent

PtE—Positas fine sandy loam, 15 to 30 percent slopes

Map Unit Setting
Elevation: 400 to 900 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 300 to 320 days

Map Unit Composition
Positas and similar soils: 85 percent
Minor components: 15 percent

Description of Positas

Setting
Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 15 to 30 percent
Depth to restrictive feature: 6 to 26 inches to abrupt textural change
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
Available water capacity: Very low (about 2.3 inches)

Interpretive groups
Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Ecological site: CLAYPAN (R015XD115CA)

Typical profile
0 to 21 inches: Fine sandy loam
21 to 48 inches: Clay
48 to 60 inches: Very gravelly clay

Minor Components

Unnamed
Percent of map unit: 10 percent

Positas cb-fsl
Percent of map unit: 5 percent

SnC—Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes

Map Unit Setting
Elevation: 600 to 800 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 260 to 300 days

Map Unit Composition
Santa ynez and similar soils: 85 percent
Minor components: 15 percent

Description of Santa Ynez

Setting
Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 2 to 9 percent
Depth to restrictive feature: 20 to 30 inches to abrupt textural change
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
Available water capacity: Very low (about 2.5 inches)

Interpretive groups
Land capability classification (irrigated): 3e
Land capability (nonirrigated): 3e
Ecological site: CLAYPAN (R015XD115CA)

Typical profile
0 to 25 inches: Gravelly fine sandy loam
25 to 32 inches: Gravelly clay
32 to 60 inches: Very gravelly clay

Minor Components

Unnamed
Percent of map unit: 15 percent

SnD—Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes

Map Unit Setting
Elevation: 600 to 800 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 260 to 300 days

Map Unit Composition
Santa ynez and similar soils: 85 percent
Minor components: 15 percent

Description of Santa Ynez

Setting
Landform: Scarp slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 9 to 15 percent
Depth to restrictive feature: 20 to 29 inches to abrupt textural change
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
Available water capacity: Very low (about 2.4 inches)

Interpretive groups
Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Ecological site: CLAYPAN (R015XD115CA)

Typical profile
0 to 25 inches: Gravelly fine sandy loam
25 to 32 inches: Gravelly clay
32 to 60 inches: Very gravelly clay

Minor Components

Unnamed
Percent of map unit: 10 percent

Positas
Percent of map unit: 5 percent

TdF—Terrace escarpments, loamy

Map Unit Setting
Mean annual precipitation: 14 inches
Mean annual air temperature: 61 degrees F

Map Unit Composition
Terrace escarpments: 85 percent
Minor components: 15 percent

Description of Terrace Escarpments

Setting
Landform: Escarpments
Parent material: Loamy alluvium

Interpretive groups
Land capability classification (irrigated): 6e
Land capability (nonirrigated): 6e
Ecological site: SHALLOW LOAMY (R015XD093CA)

Typical profile
0 to 60 inches: Variable

Minor Components

Unnamed
Percent of map unit: 15 percent

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.

Building Site Development

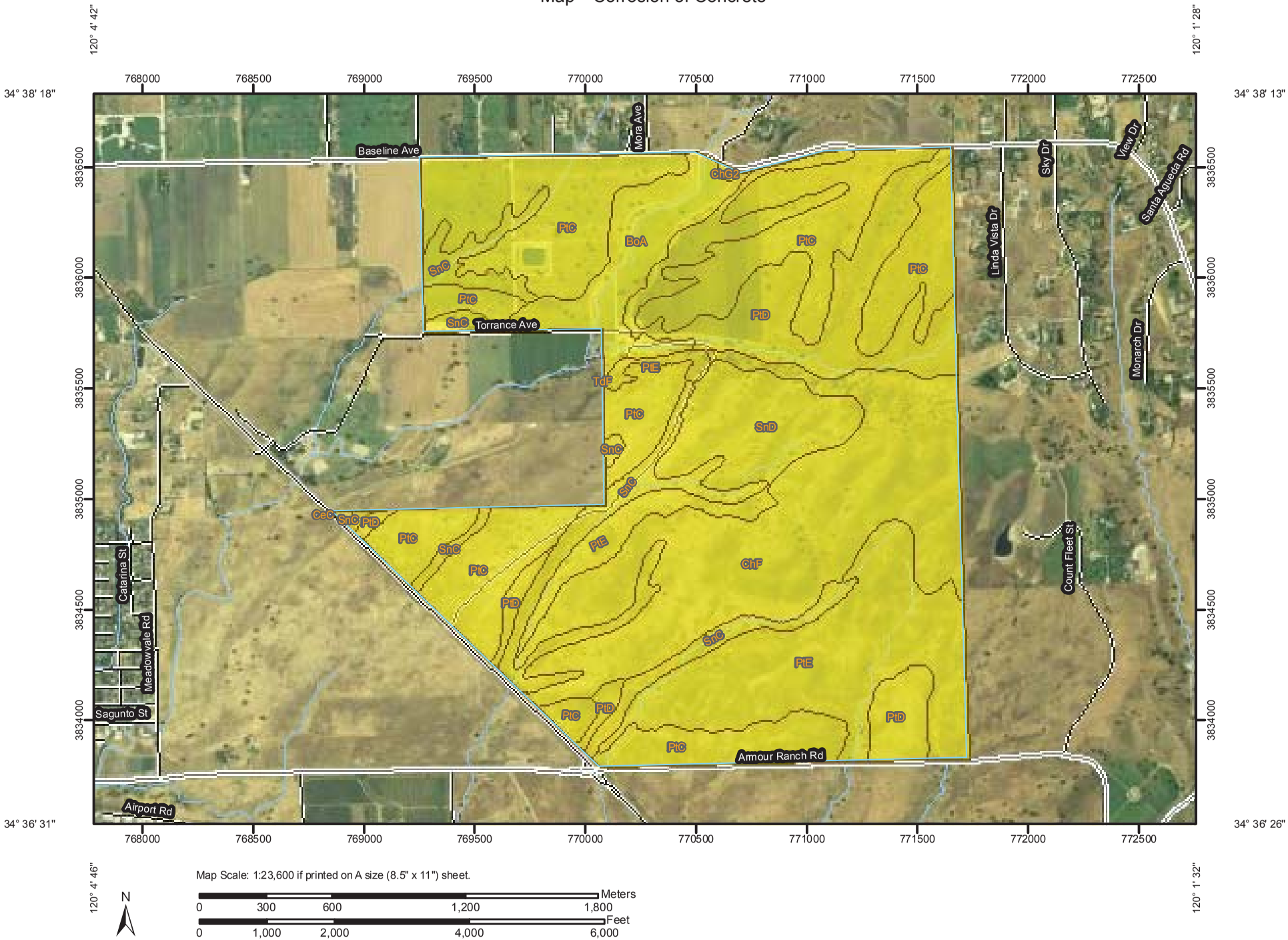
Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Corrosion of Concrete

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Custom Soil Resource Report
Map—Corrosion of Concrete



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- High
- Moderate
- Low
- Not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Corrosion of Concrete

Corrosion of Concrete— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	Moderate	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	Moderate	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	Moderate	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	Moderate	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	Moderate	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	Moderate	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	Moderate	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	Moderate	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	Moderate	81.1	5.7%
TdF	Terrace escarpments, loamy		0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Corrosion of Concrete

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

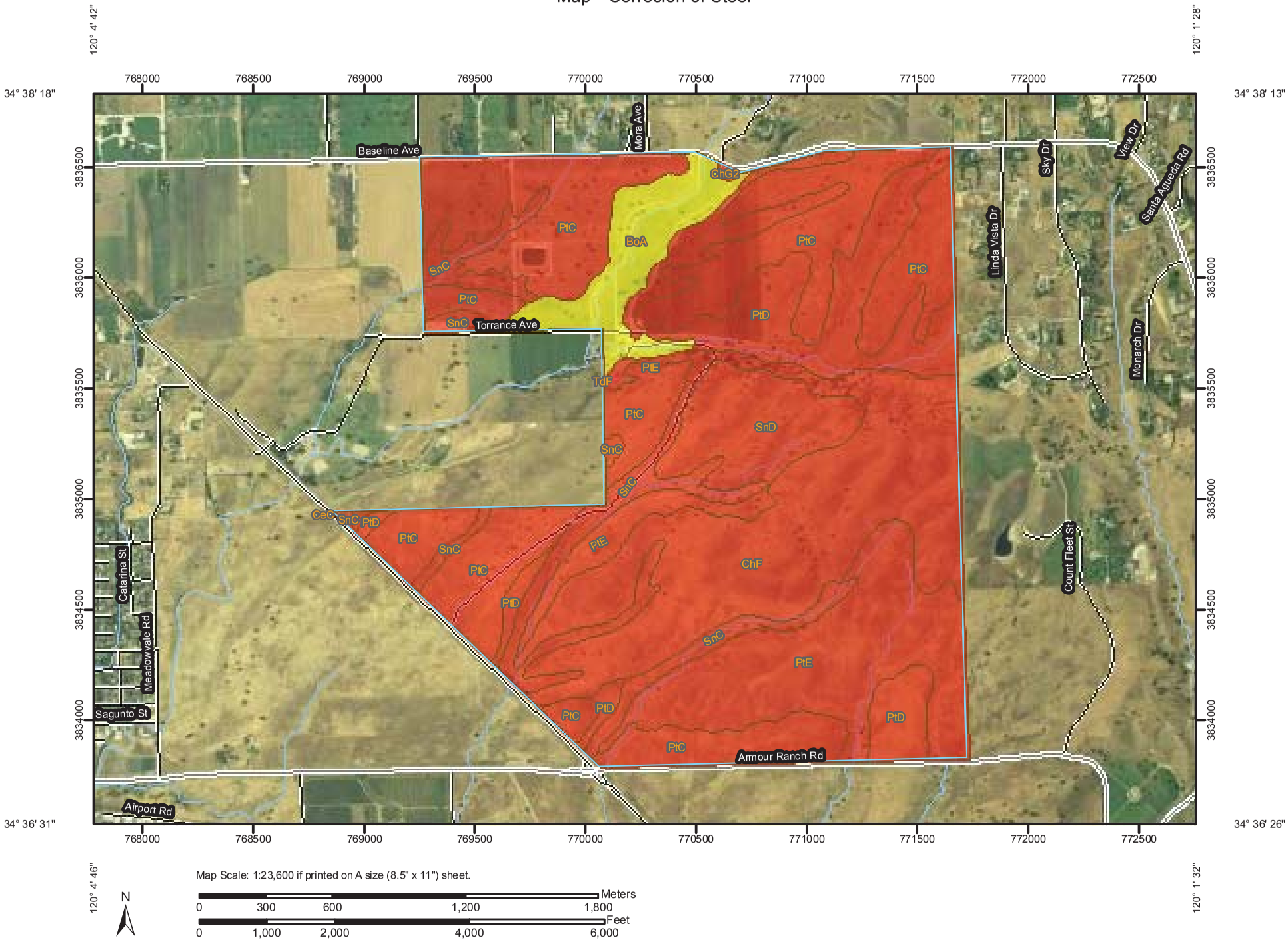
Tie-break Rule: Higher

Corrosion of Steel

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Custom Soil Resource Report
Map—Corrosion of Steel



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- High
- Moderate
- Low
- Not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Corrosion of Steel

Corrosion of Steel— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	Moderate	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	High	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	High	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	High	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	High	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	High	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	High	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	High	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	High	81.1	5.7%
TdF	Terrace escarpments, loamy		0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Corrosion of Steel

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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.

California Revised Storie Index (CA)

The Storie Index is a soil rating based on soil properties that govern a soil's potential for cultivated agriculture in California.

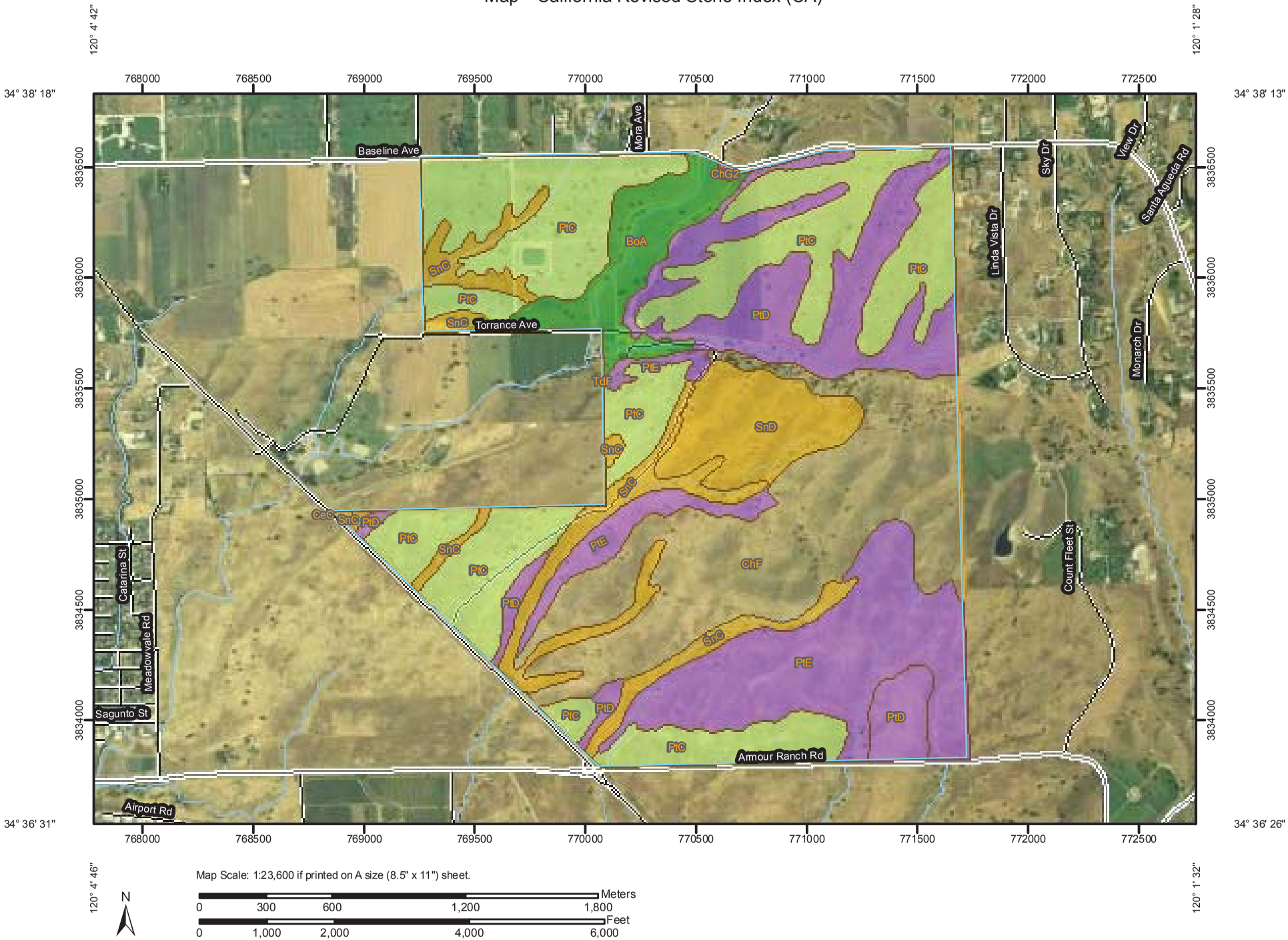
The Storie Index assesses the productivity of a soil from the following four characteristics: Factor A, degree of soil profile development; factor B, texture of the surface layer; factor C, slope; and factor X, manageable features, including drainage, microrelief, fertility, acidity, erosion, and salt content. A score ranging from 0 to 100 percent is determined for each factor, and the scores are then multiplied together to derive an index rating.

For simplification, Storie Index ratings have been combined into six grade classes as follows: Grade 1 (excellent), 100 to 80; grade 2 (good), 79 to 60; grade 3 (fair), 59 to 40; grade 4 (poor), 39 to 20; grade 5 (very poor), 19 to 10; and grade 6 (nonagricultural), less than 10.

The components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one shown for the map unit. The percent composition of each component in a particular map unit is given to help the user better understand the extent to which the rating applies to the map unit.

Other components with different ratings may occur in each map unit. The ratings for all components, regardless the aggregated rating of the map unit, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
Map—California Revised Storie Index (CA)



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- Grade One - Excellent
- Grade Two - Good
- Grade Three - Fair
- Grade Four - Poor
- Grade Five - Very Poor
- Grade Six - Nonagricultural
- Not rated
- not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—California Revised Storie Index (CA)

California Revised Storie Index (CA)— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)					
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	Grade One - Excellent	Botella (85%)	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	Grade Four - Poor	Chamise (85%)	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	Grade Five - Very Poor	Chamise (85%)	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	Grade Six - Nonagricultural	Chamise (85%)	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	Grade Two - Good	Positas (85%)	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	Grade Three - Fair	Positas (85%)	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	Grade Three - Fair	Positas (85%)	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	Grade Four - Poor	Santa Ynez (85%)	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	Grade Four - Poor	Santa Ynez (85%)	81.1	5.7%
TdF	Terrace escarpments, loamy	Not Rated	Terrace escarpments (85%)	0.0	0.0%
			Unnamed (15%)		
Totals for Area of Interest				**1,429.3**	**100.0%**

Rating Options—California Revised Storie Index (CA)

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component

typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie.

The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Hydric Rating by Map Unit

This rating indicates the proportion of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is designated as "all hydric," "partially hydric," "not hydric," or "unknown hydric," depending on the rating of its respective components.

"All hydric" means that all components listed for a given map unit are rated as being hydric, while "not hydric" means that all components are rated as not hydric. "Partially hydric" means that at least one component of the map unit is rated as hydric, and at least one component is rated as not hydric. "Unknown hydric" indicates that at least one component is not rated so a definitive rating for the map unit cannot be made.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

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

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

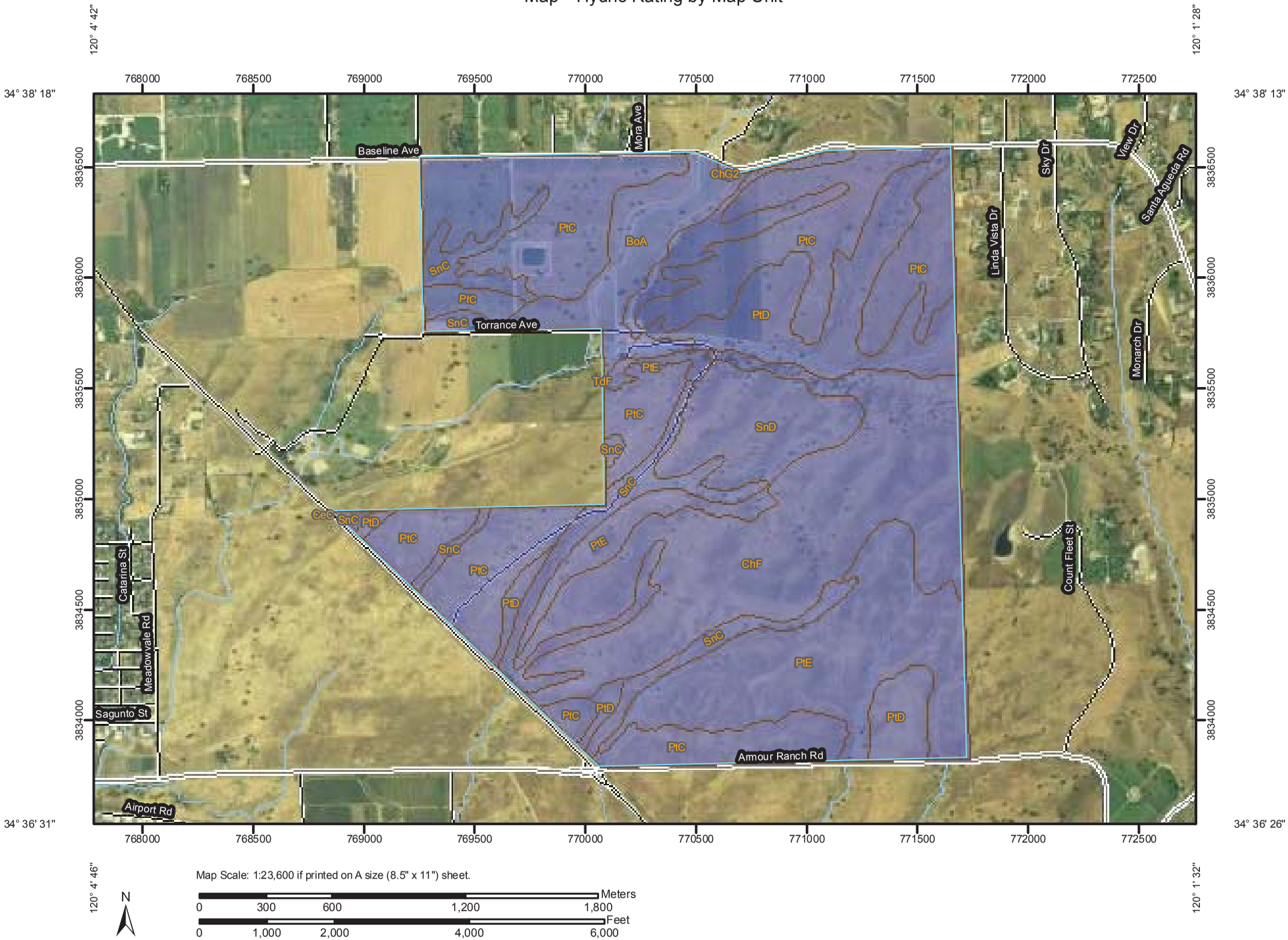
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

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.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report
Map—Hydric Rating by Map Unit



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- All Hydric
- Partially Hydric
- Not Hydric
- Unknown Hydric
- Not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Hydric Rating by Map Unit

Hydric Rating by Map Unit— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	Not Hydric	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	Not Hydric	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	Not Hydric	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	Not Hydric	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	Not Hydric	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	Not Hydric	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	Not Hydric	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	Not Hydric	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	Not Hydric	81.1	5.7%
TdF	Terrace escarpments, loamy	Not Hydric	0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Absence/Presence

Tie-break Rule: Lower

Irrigated Capability Class

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels-capability class, subclass, and unit. Only class and subclass are included in this data set.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have few limitations that restrict their use.

Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

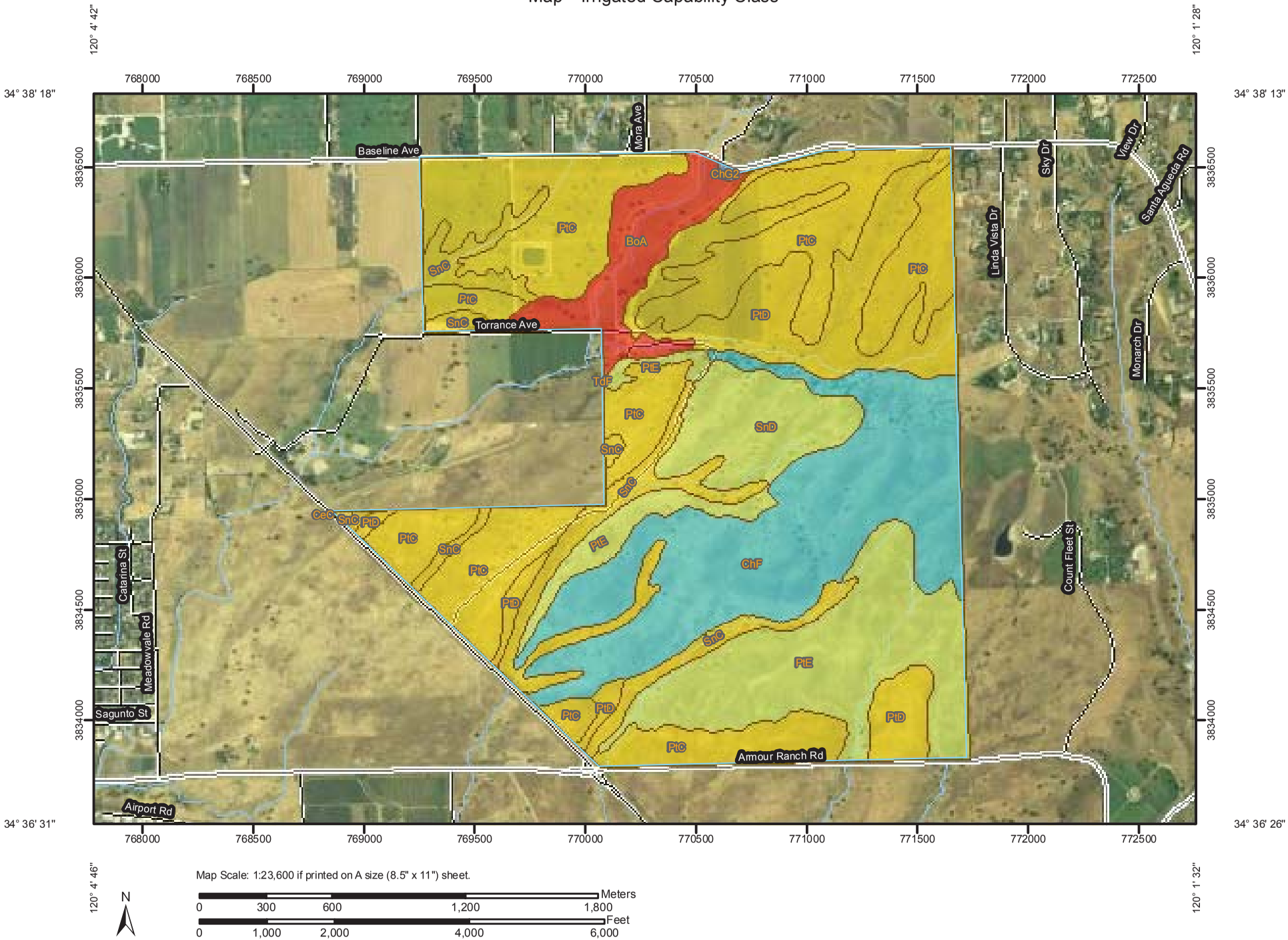
Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Custom Soil Resource Report
Map—Irrigated Capability Class



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- Capability Class - I
- Capability Class - II
- Capability Class - III
- Capability Class - IV
- Capability Class - V
- Capability Class - VI
- Capability Class - VII
- Capability Class - VIII
- Not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Irrigated Capability Class

Irrigated Capability Class— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	1	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	3	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	6	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	7	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	3	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	3	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	4	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	3	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	4	81.1	5.7%
TdF	Terrace escarpments, loamy	6	0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Irrigated Capability Class

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Irrigated Capability Subclass

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels-capability class, subclass, and unit. Only class and subclass are included in this data set.

Capability subclasses are soil groups within one capability class. They are designated by adding a small letter, "e," "w," "s," or "c," to the class numeral, for example, 2e. The letter "e" shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; "w" shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); "s" shows that the soil is limited mainly because it is shallow, droughty, or stony; and "c," used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by "w," "s," or "c" because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, or wildlife habitat.

Custom Soil Resource Report
Map—Irrigated Capability Subclass

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- Erosion
- Soil limitation within the rooting zone
- Excess water
- Climate condition
- Not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Irrigated Capability Subclass

Irrigated Capability Subclass— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes		77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	e	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	e	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	e	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	e	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	e	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	e	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	e	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	e	81.1	5.7%
TdF	Terrace escarpments, loamy	e	0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Irrigated Capability Subclass

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities 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 property or quality.

Soil Erosion Factors

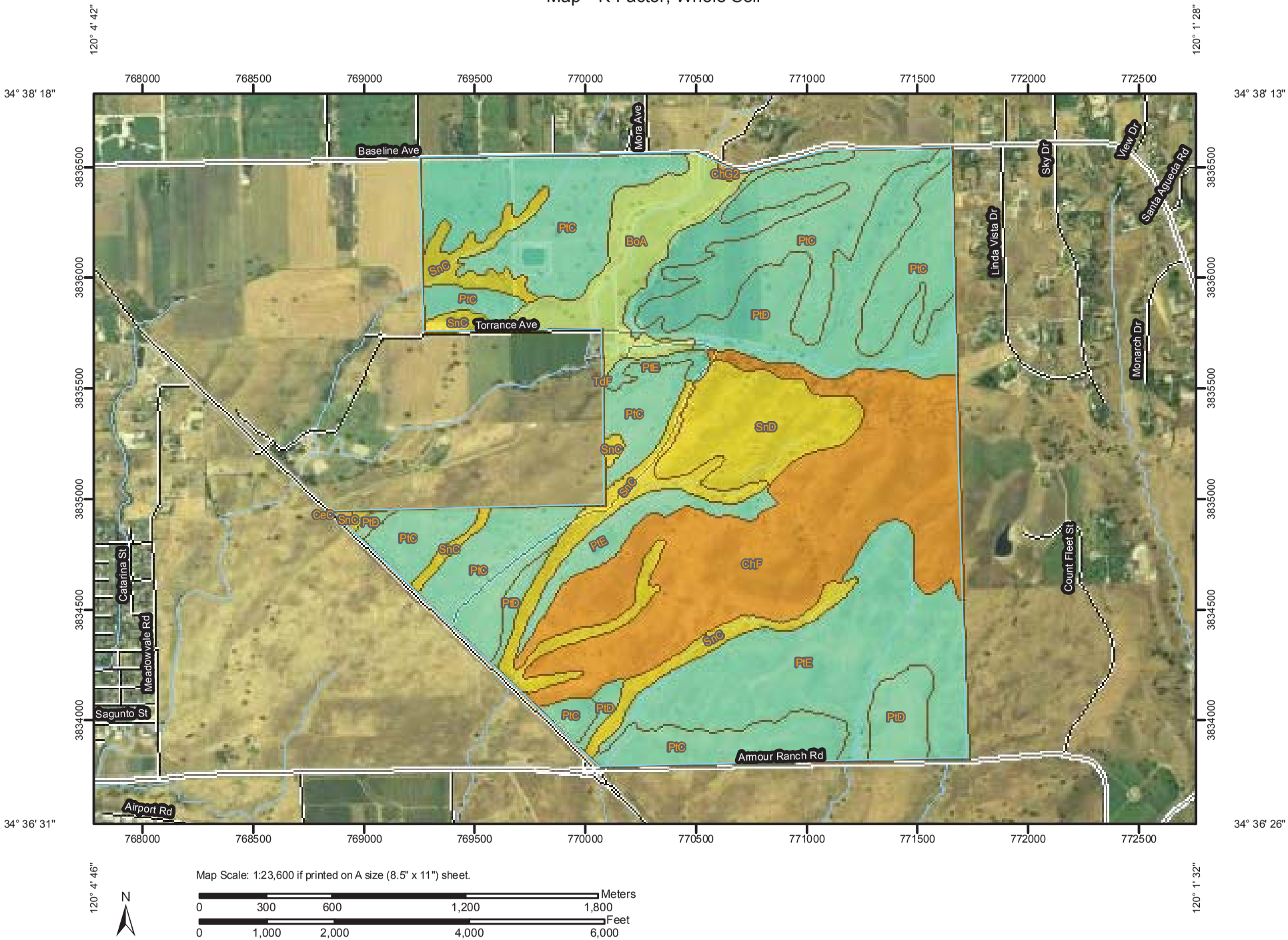
Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

K Factor, Whole Soil

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Custom Soil Resource Report
Map—K Factor, Whole Soil



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Political Features
- Cities

Water Features
- Streams and Canals

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—K Factor, Whole Soil

K Factor, Whole Soil— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	.24	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	.15	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	.10	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	.10	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	.32	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	.32	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	.32	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	.17	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	.17	81.1	5.7%
TdF	Terrace escarpments, loamy		0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—K Factor, Whole Soil

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options: Surface Layer

Soil Physical Properties

Soil Physical Properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Linear Extensibility

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported as percent change

for the whole soil. The amount and type of clay minerals in the soil influence volume change.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- Low (0 - 3)
- Moderate (3 - 6)
- High (6 - 9)
- Very High (9 - 30)
- Not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Linear Extensibility

Linear Extensibility— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating (percent)**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	4.1	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	3.1	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	3.6	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	4.0	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	4.2	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	4.2	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	4.2	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	3.6	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	3.6	81.1	5.7%
TdF	Terrace escarpments, loamy		0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Linear Extensibility

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Layer Options: All Layers

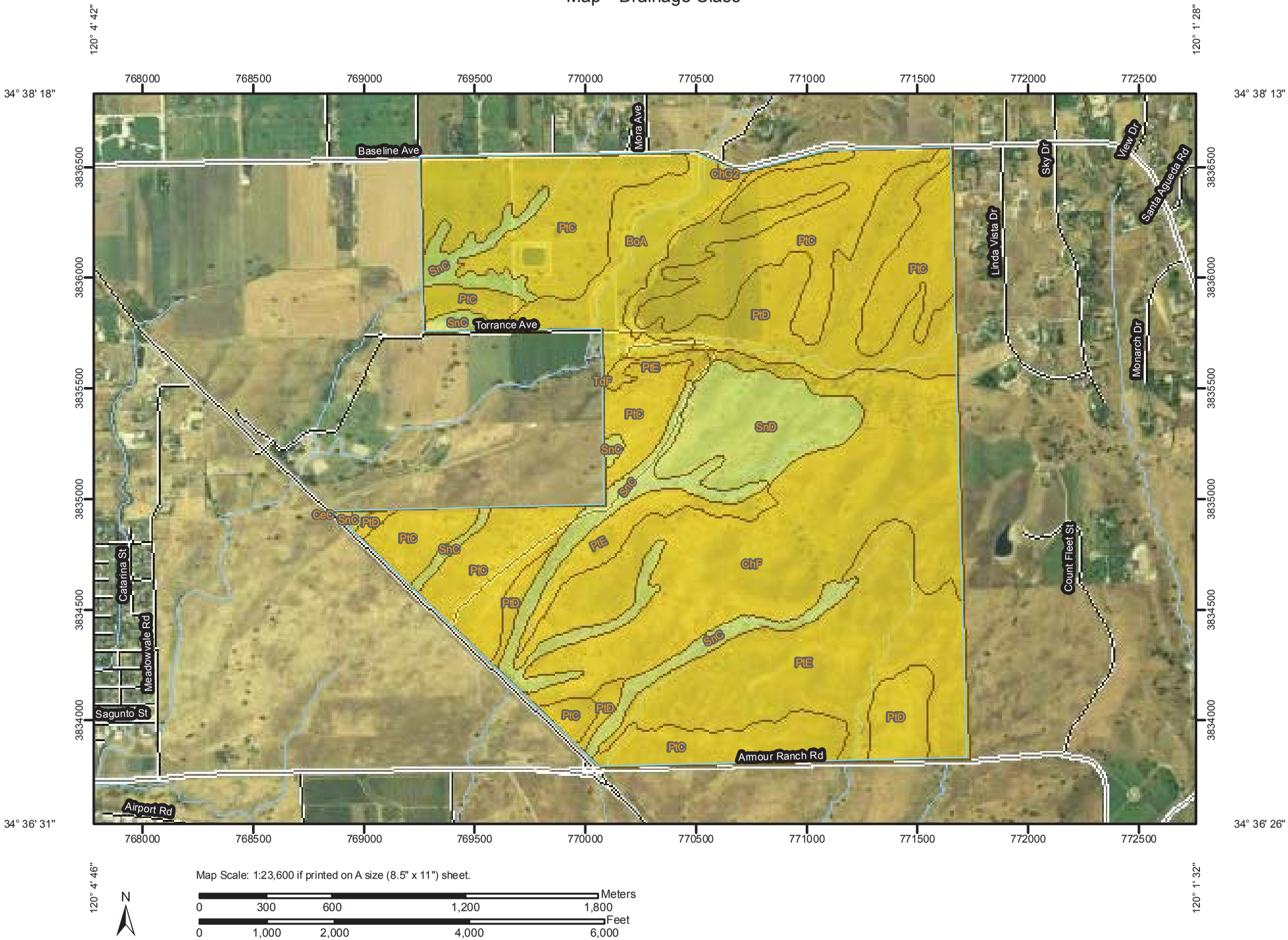
Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Drainage Class

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Custom Soil Resource Report
Map—Drainage Class



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Drainage Class

Drainage Class— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	Well drained	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	Well drained	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	Well drained	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	Well drained	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	Well drained	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	Well drained	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	Well drained	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	Moderately well drained	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	Moderately well drained	81.1	5.7%
TdF	Terrace escarpments, loamy		0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Drainage Class

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Depth to Any Soil Restrictive Layer

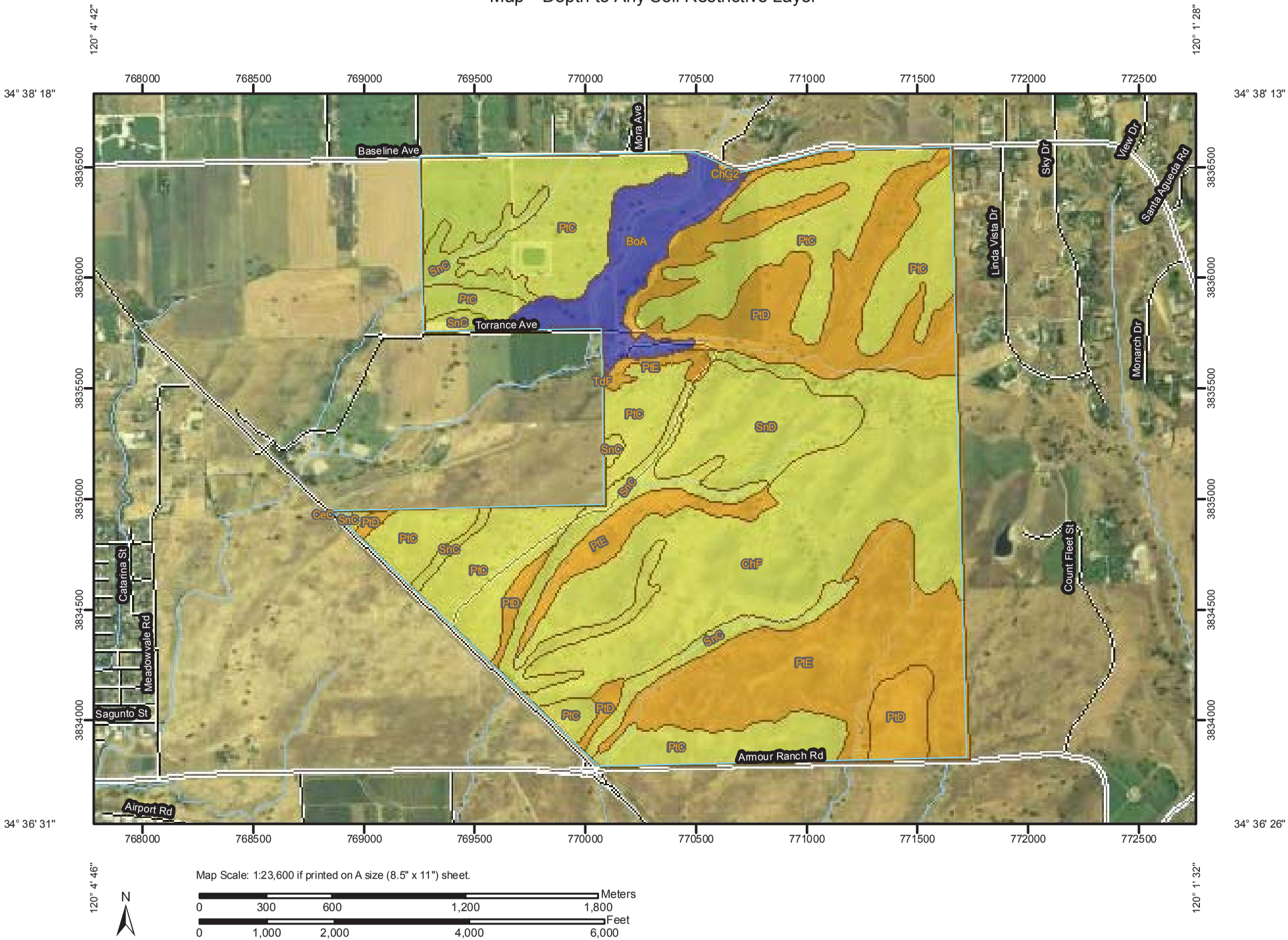
A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "> 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A

"representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Depth to Any Soil Restrictive Layer



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Depth to Any Soil Restrictive Layer

Depth to Any Soil Restrictive Layer— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating (centimeters)**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	>200	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	102	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	79	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	38	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	58	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	41	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	41	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	64	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	62	81.1	5.7%
TdF	Terrace escarpments, loamy	>200	0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Depth to Any Soil Restrictive Layer

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Water Features

Water Features include ponding frequency, flooding frequency, and depth to water table.

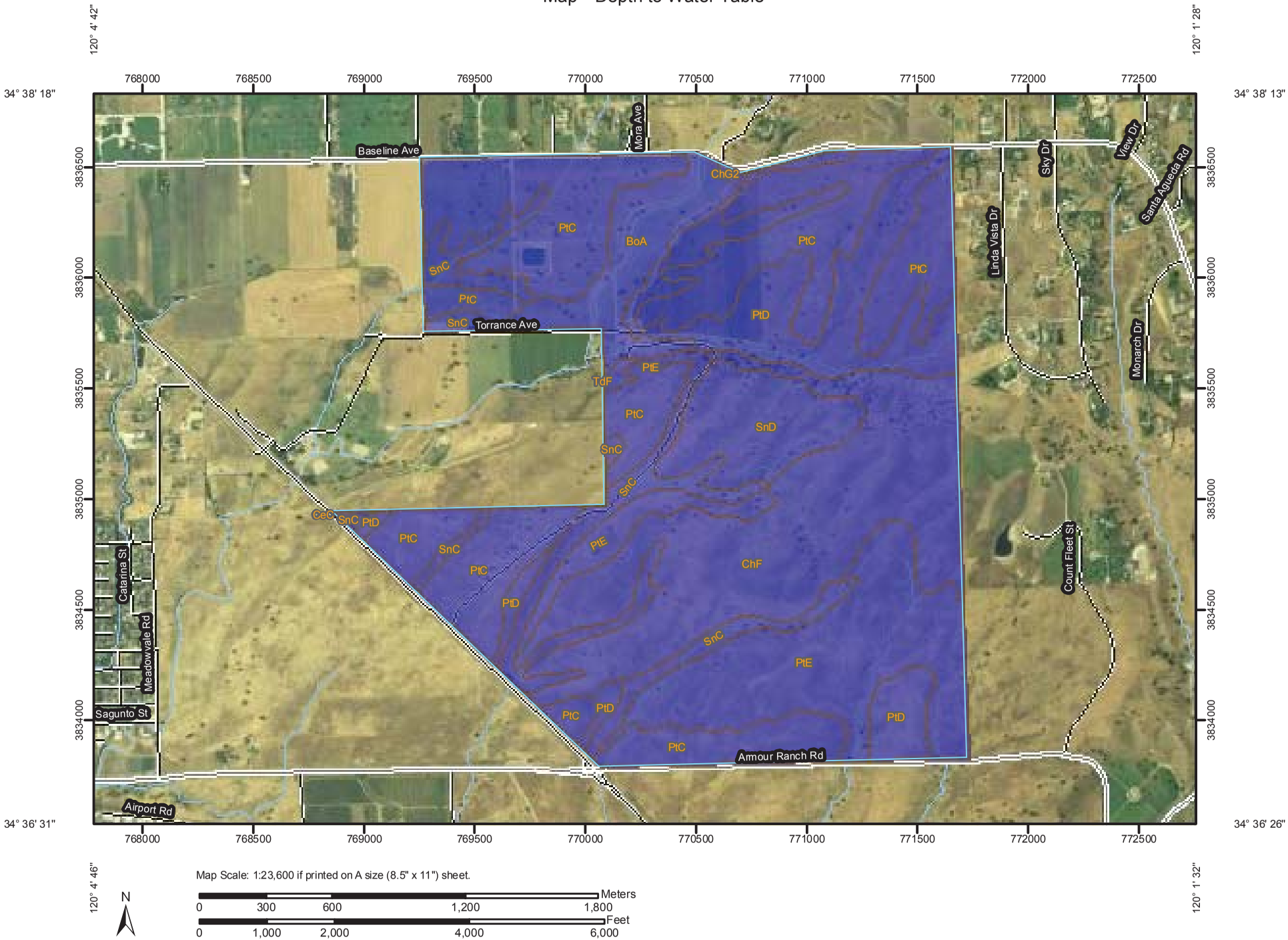
Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors

(redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Depth to Water Table



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200

Political Features

- Cities

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:23,600 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

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 accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

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

Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 7, Aug 31, 2009

Date(s) aerial images were photographed: 6/6/2005

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—Depth to Water Table

Depth to Water Table— Summary by Map Unit — Northern Santa Barbara Area, California (CA672)				
Map unit symbol	**Map unit name**	**Rating (centimeters)**	**Acres in AOI**	**Percent of AOI**
BoA	Botella loam, 0 to 2 percent slopes	>200	77.6	5.4%
CeC	Chamise sandy loam, 5 to 9 percent slopes	>200	0.5	0.0%
ChF	Chamise shaly loam, 15 to 45 percent slopes	>200	302.9	21.2%
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	>200	1.2	0.1%
PtC	Positas fine sandy loam, 2 to 9 percent slopes	>200	438.9	30.7%
PtD	Positas fine sandy loam, 9 to 15 percent slopes	>200	189.6	13.3%
PtE	Positas fine sandy loam, 15 to 30 percent slopes	>200	224.2	15.7%
SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes	>200	113.2	7.9%
SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes	>200	81.1	5.7%
TdF	Terrace escarpments, loamy	>200	0.0	0.0%
Totals for Area of Interest			**1,429.3**	**100.0%**

Rating Options—Depth to Water Table

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

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/

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