SALO ENGINEERING

Appendix III: Watershed Hydro-physiographic Data
USDA NRCS Soil Resource Report

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 Humacao Area, Puerto Rico Eastern Part

April 12, 2023

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 (https://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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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.

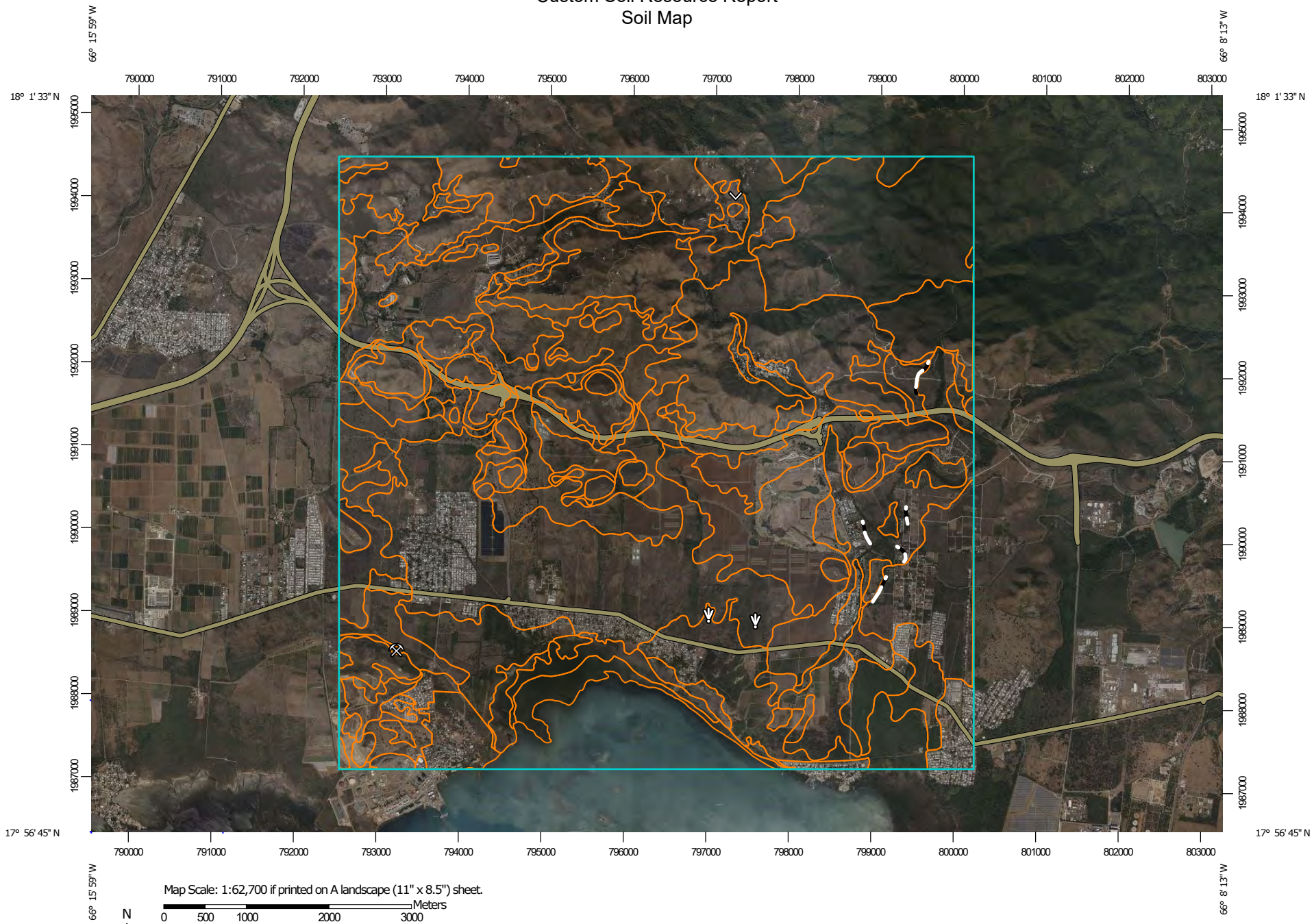
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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 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 1:20,000.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
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: Humacao Area, Puerto Rico Eastern Part
Survey Area Data: Version 14, Sep 13, 2022

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

Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmB	Amelia gravelly clay loam, 2 to 5 percent slopes	474.4	3.4%
AmC2	Amelia gravelly clay loam, 5 to 12 percent slopes, eroded	482.9	3.4%
An	Arenales sandy loam	17.2	0.1%
BoA	Boqueron silty clay, 0 to 2 percent slopes, frequently flooded	136.7	1.0%
Ce	Cartagena clay	248.2	1.8%
ClB	Coamo clay loam, 2 to 5 percent slopes	600.1	4.3%
Cn	Cobbly alluvial land	191.2	1.4%
DcE2	Daguao clay, 20 to 40 percent slopes, eroded	33.6	0.2%
DeC2	Descalabrado clay loam, 5 to 12 percent slopes, eroded	230.9	1.6%
DeE2	Descalabrado clay loam, 20 to 40 percent slopes, eroded	642.5	4.6%
DgF2	Descalabrado and Guayama soils, 20 to 60 percent slopes, eroded	897.9	6.4%
DrF	Descalabrado-Rock land complex, 40 to 60 percent slopes	1,911.7	13.6%
FrB	Fraternidad clay, 2 to 5 perecent slopes	71.0	0.5%
Gm	Guamani silty clay loam	736.1	5.2%
JaB	Jacana clay, 2 to 5 percent slopes	283.8	2.0%
JaC2	Jacana clay, 5 to 12 percent slopes, eroded	584.2	4.2%
PlB	Paso Seco clay, 0 to 5 percent slopes	1,830.9	13.0%
Po	Poncena clay	818.1	5.8%
PrC2	Pozo Blanco clay loam, 5 to 12 percent slopes, eroded	143.3	1.0%
Rs	Rock land	938.8	6.7%
Uc	Urban land-Cartagena complex, 0 to 2 percent slopes, rarely ponded	114.9	0.8%
Ul	Urban land	157.7	1.1%
Up	Urban land-Poncena complex, 0 to 2 percent slopes	25.3	0.2%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UrA	Ursula muck, 0 to 1 percent slopes, very frequently flooded	117.8	0.8%
Vc	Vayas silty clay, frequently flooded	137.0	1.0%
Vs	Vives silty clay loam, high bottom	229.2	1.6%
VvB	Vives clay, 2 to 7 percent slopes	1,289.2	9.2%
WSf0	San Felipe, very frequently flooded-Mar Negro, 0 to 0.5 water depth complex, 0 to 1 percent slopes	152.9	1.1%
Totals for Area of Interest		**14,068.5**	**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.

Humacao Area, Puerto Rico Eastern Part

AmB—Amelia gravelly clay loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: bz3r
Elevation: 30 to 160 feet
Mean annual precipitation: 30 to 40 inches
Mean annual air temperature: 79 to 81 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Amelia and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Amelia

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Nose slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Gravelly sediments

Typical profile

H1 - 0 to 7 inches: gravelly clay loam
H2 - 7 to 14 inches: gravelly clay loam
H3 - 14 to 23 inches: very gravelly clay
H4 - 23 to 60 inches: very gravelly clay loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 15.0
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: B
Hydric soil rating: No

AmC2—Amelia gravelly clay loam, 5 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: bz3s
Elevation: 30 to 160 feet
Mean annual precipitation: 30 to 40 inches
Mean annual air temperature: 79 to 81 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Amelia and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Amelia

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Nose slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Gravelly sediments

Typical profile

H1 - 0 to 6 inches: gravelly clay loam
H2 - 6 to 12 inches: gravelly clay loam
H3 - 12 to 22 inches: very gravelly clay
H4 - 22 to 60 inches: very gravelly clay loam

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 15.0
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Hydric soil rating: No

An—Arenales sandy loam

Map Unit Setting

National map unit symbol: bz3t
Elevation: 20 to 100 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 79 to 81 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Arenales and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arenales

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Stratified coarse sediments

Typical profile

H1 - 0 to 8 inches: sandy loam
H2 - 8 to 24 inches: loamy sand
H3 - 24 to 31 inches: coarse sand
H4 - 31 to 42 inches: sand
H5 - 42 to 60 inches: very gravelly coarse sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: A
Hydric soil rating: No

BoA—Boqueron silty clay, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2yq8t
Elevation: 0 to 10 feet
Mean annual precipitation: 20 to 63 inches
Mean annual air temperature: 71 to 87 degrees F
Frost-free period: 365 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Boqueron, frequently flooded, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Boqueron, Frequently Flooded

Setting

Landform: Flood plains, tidal flats, mangrove swamps
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear
Parent material: Alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

Oa - 0 to 2 inches: muck
A - 2 to 4 inches: silty clay
Cg1 - 4 to 8 inches: clay
Cg2 - 8 to 55 inches: clay
Cg3 - 55 to 80 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 9.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Teresa, frequently flooded
Percent of map unit: 10 percent
Landform: Flood plains, tidal flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Ursula, very frequently flooded
Percent of map unit: 5 percent
Landform: Tidal flats, mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Guanica
Percent of map unit: 5 percent
Landform: Alluvial flats
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Hydric soil rating: Yes

Ce—Cartagena clay

Map Unit Setting
National map unit symbol: bz42
Elevation: 10 to 90 feet
Mean annual precipitation: 25 to 66 inches
Mean annual air temperature: 66 to 89 degrees F
Frost-free period: 365 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Cartagena and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cartagena

Setting
Landform: Fan skirts
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Alluvium and clayey marine sediments

Typical profile

H1 - 0 to 10 inches: clay
H2 - 10 to 19 inches: clay
H3 - 19 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 24 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Aguirre

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

CIB—Coamo clay loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2wq36
Elevation: 30 to 330 feet
Mean annual precipitation: 13 to 54 inches
Mean annual air temperature: 70 to 88 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Coamo and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Coamo

Setting

Landform: Terraces, alluvial fans
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed loamy alluvium derived from volcanic and sedimentary rock over mixed gravelly alluvium derived from volcanic and sedimentary rock

Typical profile

Ap - 0 to 10 inches: clay loam
Bt - 10 to 23 inches: clay loam
Btk - 23 to 50 inches: sandy clay loam
2C - 50 to 80 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Jacana

Percent of map unit: 10 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Camp santiago

Percent of map unit: 10 percent
Landform: Alluvial fans
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex, linear
Across-slope shape: Linear

Hydric soil rating: No

Cn—Cobbly alluvial land

Map Unit Setting

National map unit symbol: bz49
Elevation: 0 to 10 feet
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Cobbly alluvial land: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cobbly Alluvial Land

Setting

Landform: Flood plains

Minor Components

Hydraquents

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Hydric soil rating: Yes

DcE2—Daguao clay, 20 to 40 percent slopes, eroded

Map Unit Setting

National map unit symbol: bz4g
Elevation: 600 to 900 feet
Mean annual precipitation: 80 to 85 inches
Mean annual air temperature: 79 to 81 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Daguao and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Daguao

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Moderately fine and fine textured residuum

Typical profile

H1 - 0 to 34 inches: clay
H2 - 34 to 40 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 40 percent
Depth to restrictive feature: 20 to 36 inches to lithic bedrock
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 supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Hydric soil rating: No

DeC2—Descalabrado clay loam, 5 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: bz4h
Elevation: 30 to 710 feet
Mean annual precipitation: 25 to 66 inches
Mean annual air temperature: 66 to 89 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Descalabrado and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Descalabrado

Setting

Landform: Ridges, ridges, mountain slopes, hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Mountaintop, mountainflank, crest, head slope, side slope

Down-slope shape: Concave, convex
Across-slope shape: Concave, convex
Parent material: Residuum and colluvium

Typical profile

H1 - 0 to 7 inches: clay loam
H2 - 7 to 18 inches: gravelly clay
H3 - 18 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.38 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Hydric soil rating: No

DeE2—Descalabrado clay loam, 20 to 40 percent slopes, eroded

Map Unit Setting

National map unit symbol: bz4j
Elevation: 30 to 710 feet
Mean annual precipitation: 25 to 66 inches
Mean annual air temperature: 66 to 89 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Descalabrado and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Descalabrado

Setting

Landform: Ridges, ridges, mountain slopes, hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Mountaintop, mountainflank, crest, head slope, side slope
Down-slope shape: Concave, convex
Across-slope shape: Concave, convex
Parent material: Residuum and colluvium

Typical profile

H1 - 0 to 6 inches: clay loam
H2 - 6 to 19 inches: gravelly clay
H3 - 19 to 23 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 40 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.38 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

DgF2—Descalabrado and Guayama soils, 20 to 60 percent slopes, eroded

Map Unit Setting

National map unit symbol: bz4k
Elevation: 30 to 840 feet
Mean annual precipitation: 25 to 66 inches
Mean annual air temperature: 66 to 89 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Descalabrado and similar soils: 51 percent
Guayama and similar soils: 49 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Descalabrado

Setting

Landform: Ridges, ridges, mountain slopes, hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Mountaintop, mountainflank, crest, head slope, side slope
Down-slope shape: Concave, convex
Across-slope shape: Concave, convex
Parent material: Residuum and colluvium

Typical profile

H1 - 0 to 5 inches: clay loam
H2 - 5 to 12 inches: gravelly clay
H3 - 12 to 16 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 60 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.38 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Guayama

Setting

Landform: Ridges, mountain slopes, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Mountainflank, mountaintop, head slope, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Residuum and colluvium

Typical profile

H1 - 0 to 5 inches: clay loam
H2 - 5 to 18 inches: gravelly clay
H3 - 18 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 60 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

DrF—Descalabrado-Rock land complex, 40 to 60 percent slopes

Map Unit Setting

National map unit symbol: bz4l
Elevation: 30 to 710 feet
Mean annual precipitation: 25 to 66 inches
Mean annual air temperature: 66 to 89 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Descalabrado and similar soils: 70 percent
Rock land: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Descalabrado

Setting

Landform: Ridges, ridges, mountain slopes, hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Mountaintop, mountainflank, crest, head slope, side slope
Down-slope shape: Concave, convex
Across-slope shape: Concave, convex
Parent material: Residuum and colluvium

Typical profile

H1 - 0 to 5 inches: clay loam
H2 - 5 to 12 inches: gravelly clay
H3 - 12 to 16 inches: unweathered bedrock

Properties and qualities

Slope: 40 to 60 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.38 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Rock Land

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, side slope, crest
Down-slope shape: Concave, convex
Across-slope shape: Concave, convex

Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 40 to 60 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

FrB—Fraternidad clay, 2 to 5 perecent slopes

Map Unit Setting

National map unit symbol: 2yq8y
Elevation: 0 to 160 feet
Mean annual precipitation: 20 to 63 inches
Mean annual air temperature: 71 to 87 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Fraternidad and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fraternidad

Setting

Landform: Fan skirts
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Convex, linear
Across-slope shape: Concave, linear
Parent material: Clayey alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

Ap - 0 to 13 inches: clay

ABss - 13 to 17 inches: clay
Bkss1 - 17 to 42 inches: clay
Bkss2 - 42 to 80 inches: clay

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 34 to 43 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 8 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 2c
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Paso seco

Percent of map unit: 5 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Rise, talf
Down-slope shape: Linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Santa isabel

Percent of map unit: 5 percent
Landform: Valleys, fan skirts
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Hydric soil rating: No

Poncena

Percent of map unit: 5 percent
Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Rise, talf
Down-slope shape: Concave, convex, linear
Across-slope shape: Linear
Hydric soil rating: No

Cartagena

Percent of map unit: 5 percent
Landform: Fan skirts

Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Hydric soil rating: No

Gm—Guamani silty clay loam

Map Unit Setting

National map unit symbol: bz4s
Elevation: 10 to 100 feet
Mean annual precipitation: 35 to 45 inches
Mean annual air temperature: 79 to 81 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Guamani and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Guamani

Setting

Landform: Flood plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Medium textured sediments over sand, pebbles, and cobbles

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 20 inches: silty clay loam
H3 - 20 to 60 inches: sand and gravel

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 to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: B
Hydric soil rating: No

JaB—Jacana clay, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: bz52
Elevation: 20 to 250 feet
Mean annual precipitation: 14 to 54 inches
Mean annual air temperature: 70 to 88 degrees F
Frost-free period: 365 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Jacana and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Jacana

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, base slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Weathered materials

Typical profile

H1 - 0 to 5 inches: clay
H2 - 5 to 21 inches: clay
H3 - 21 to 26 inches: clay loam
H4 - 26 to 30 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: D

Hydric soil rating: No

JaC2—Jacana clay, 5 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: bz53
Elevation: 20 to 250 feet
Mean annual precipitation: 14 to 54 inches
Mean annual air temperature: 70 to 88 degrees F
Frost-free period: 365 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Jacana and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Jacana

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, base slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Weathered materials

Typical profile

H1 - 0 to 5 inches: clay
H2 - 5 to 21 inches: clay
H3 - 21 to 26 inches: clay loam
H4 - 26 to 30 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: D
Hydric soil rating: No

PlB—Paso Seco clay, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: bz60
Elevation: 10 to 100 feet
Mean annual precipitation: 25 to 66 inches
Mean annual air temperature: 66 to 89 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Paso seco and similar soils: 98 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paso Seco

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Rise, talf
Down-slope shape: Linear
Across-slope shape: Convex, linear
Parent material: Fine textured sediments overlying gravelly, medium textured sediments

Typical profile

H1 - 0 to 5 inches: clay
H2 - 5 to 19 inches: clay
H3 - 19 to 38 inches: gravelly clay
H4 - 38 to 50 inches: very gravelly loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Aguirre

Percent of map unit: 2 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Po—Poncena clay

Map Unit Setting

National map unit symbol: bz64
Elevation: 0 to 40 feet
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 77 to 81 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Poncena and similar soils: 97 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Poncena

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Rise, talf
Down-slope shape: Concave, convex, linear
Across-slope shape: Linear
Parent material: Weathered material

Typical profile

H1 - 0 to 2 inches: clay
H2 - 2 to 14 inches: clay
H3 - 14 to 41 inches: clay
H4 - 41 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Reparada

Percent of map unit: 3 percent
Landform: Coastal plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

PrC2—Pozo Blanco clay loam, 5 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: bz65
Elevation: 10 to 330 feet
Mean annual precipitation: 14 to 54 inches
Mean annual air temperature: 70 to 88 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Pozo blanco and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pozo Blanco

Setting

Landform: Low hills, alluvial fans
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, base slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Alluvium and colluvium over residuum

Typical profile

H1 - 0 to 7 inches: clay loam
H2 - 7 to 15 inches: clay loam
H3 - 15 to 60 inches: loam

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: B
Hydric soil rating: No

Rs—Rock land

Map Unit Composition

Rock land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Land

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave, convex
Across-slope shape: Convex, linear

Typical profile

H1 - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 60 to 70 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Uc—Urban land-Cartagena complex, 0 to 2 percent slopes, rarely ponded

Map Unit Setting

National map unit symbol: 2yg1q
Elevation: 40 to 160 feet
Mean annual precipitation: 20 to 63 inches
Mean annual air temperature: 71 to 87 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 50 percent
Cartagena, rarely ponded, and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Cartagena, Rarely Ponded

Setting

Landform: Fan skirts
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Clayey alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

Ap - 0 to 7 inches: clay
ABkss - 7 to 15 inches: clay
Bknssz - 15 to 46 inches: clay
Bknz - 46 to 80 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Rare
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum: 20.0
Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Interpretive groups
Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Aguirre, occasionally ponded
Percent of map unit: 8 percent
Landform: Depressions, basin floors
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Vayas, occasionally flooded
Percent of map unit: 1 percent
Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Poncena
Percent of map unit: 1 percent
Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Rise, talf
Down-slope shape: Concave, convex, linear
Across-slope shape: Linear
Hydric soil rating: No

Ul—Urban land

Map Unit Setting
National map unit symbol: 2yg1h
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition
Urban land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Up—Urban land-Poncena complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2yg1z
Elevation: 0 to 30 feet
Mean annual precipitation: 20 to 63 inches
Mean annual air temperature: 71 to 87 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 46 percent
Poncena and similar soils: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Poncena

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Rise, talf
Down-slope shape: Concave, convex, linear
Across-slope shape: Linear
Parent material: Alluvium derived from volcanic and sedimentary rock

Typical profile

Ap - 0 to 2 inches: clay
ABkss - 2 to 14 inches: clay
Bkss1 - 14 to 41 inches: clay
Bkss2 - 41 to 80 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Cartagena

Percent of map unit: 5 percent
Landform: Fan skirts
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Hydric soil rating: No

Vayas, occasionally flooded

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Teresa, frequently flooded

Percent of map unit: 2 percent
Landform: Flood plains, tidal flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

UrA—Ursula muck, 0 to 1 percent slopes, very frequently flooded

Map Unit Setting

National map unit symbol: 2yq8j
Elevation: 0 feet
Mean annual precipitation: 20 to 63 inches
Mean annual air temperature: 71 to 87 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Ursula, very frequently flooded, and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ursula, Very Frequently Flooded

Setting

Landform: Tidal flats, mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Sulfidic organic material over clayey fluviomarine deposits derived from igneous, metamorphic and sedimentary rock

Typical profile

Oase - 0 to 4 inches: muck
2Cseg1 - 4 to 9 inches: silty clay
2Cseg2 - 9 to 25 inches: silty clay
2Cseg3 - 25 to 43 inches: clay
2Cseg4 - 43 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 15.0
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Mareas, 0 to 0.5 meter water depth

Percent of map unit: 5 percent
Landform: Mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Boqueron, frequently flooded

Percent of map unit: 5 percent
Landform: Flood plains, mangrove swamps, tidal flats
Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear, concave
Across-slope shape: Linear
Hydric soil rating: Yes

Mar negro, 0 to 0.5 meter water depth
Percent of map unit: 5 percent
Landform: Coral islands, mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

San felipe, very frequently flooded
Percent of map unit: 5 percent
Landform: Coral islands, mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Manglillo, 0 to 0.5 meter water depth
Percent of map unit: 2 percent
Landform: Mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Teresa, frequently flooded
Percent of map unit: 2 percent
Landform: Flood plains, tidal flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Serrano, very frequentlt flooded
Percent of map unit: 1 percent
Landform: Tidal flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Vc—Vayas silty clay, frequently flooded

Map Unit Setting
National map unit symbol: bz6r
Elevation: 0 to 50 feet
Mean annual precipitation: 14 to 54 inches
Mean annual air temperature: 70 to 88 degrees F

Frost-free period: 365 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Vayas and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vayas

Setting
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alcaline alluvium

Typical profile
H1 - 0 to 8 inches: silty clay
H2 - 8 to 21 inches: silty clay
H3 - 21 to 60 inches: clay loam

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 30 to 60 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups
Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: C
Hydric soil rating: Yes

Vs—Vives silty clay loam, high bottom

Map Unit Setting
National map unit symbol: bz6z
Elevation: 0 to 100 feet
Mean annual precipitation: 25 to 45 inches
Mean annual air temperature: 79 to 81 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Vives and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vives

Setting

Landform: Alluvial fans, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine and moderately fine textured sediments

Typical profile

H1 - 0 to 9 inches: silty clay loam
H2 - 9 to 32 inches: clay loam
H3 - 32 to 43 inches: clay loam
H4 - 43 to 50 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 2c
Hydrologic Soil Group: B
Hydric soil rating: No

VvB—Vives clay, 2 to 7 percent slopes

Map Unit Setting

National map unit symbol: bz71
Elevation: 0 to 100 feet
Mean annual precipitation: 25 to 45 inches
Mean annual air temperature: 79 to 81 degrees F
Frost-free period: 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Vives and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vives

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine and moderately fine textured sediments

Typical profile

H1 - 0 to 9 inches: clay
H2 - 9 to 32 inches: clay loam
H3 - 32 to 43 inches: clay loam
H4 - 43 to 50 inches: clay loam

Properties and qualities

Slope: 2 to 7 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Available water supply, 0 to 60 inches: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Hydric soil rating: No

WSf0—San Felipe, very frequently flooded-Mar Negro, 0 to 0.5 water depth complex, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2yq8p
Elevation: 0 feet
Mean annual precipitation: 20 to 63 inches
Mean annual air temperature: 71 to 87 degrees F
Frost-free period: 365 days
Farmland classification: Not prime farmland

Map Unit Composition

San felipe, very frequently flooded, and similar soils: 50 percent
Mar negro, 0 to 0.5 meter water depth, and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Felipe, Very Frequently Flooded

Setting

Landform: Coral islands, mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic material over stratified mineral and mucky mineral fluviomarine deposits derived from igneous, metamorphic and sedimentary rock

Typical profile

Oase1 - 0 to 3 inches: muck
Oase2 - 3 to 19 inches: muck
Cseg - 19 to 48 inches: mucky silty clay
2Aseb - 48 to 54 inches: mucky loam
2Csegb - 54 to 80 inches: mucky clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Maximum salinity: Strongly saline (16.0 to 36.3 mmhos/cm)
Sodium adsorption ratio, maximum: 25.0
Available water supply, 0 to 60 inches: Very high (about 13.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Description of Mar Negro, 0 To 0.5 Meter Water Depth

Setting

Landform: Coral islands, mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic material over fine or very fine fluviomarine deposits derived from igneous, metamorphic and sedimentary rock

Typical profile

Oase1 - 0 to 3 inches: muck
Oase2 - 3 to 12 inches: muck
Oese1 - 12 to 29 inches: mucky peat
Oese2 - 29 to 46 inches: mucky peat
Oese3 - 46 to 64 inches: mucky peat
2Aseb - 64 to 80 inches: mucky silt loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Subaqueous
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.60 to 1.42 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Maximum salinity: Strongly saline (36.3 to 54.2 mmhos/cm)
Sodium adsorption ratio, maximum: 25.0
Available water supply, 0 to 60 inches: Very high (about 28.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Manglillo, 0 to 0.5 meter water depth

Percent of map unit: 5 percent
Landform: Mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mareas, 0 to 0.5 meter water depth

Percent of map unit: 5 percent
Landform: Mangrove swamps
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Soil Information for All Uses

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 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.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

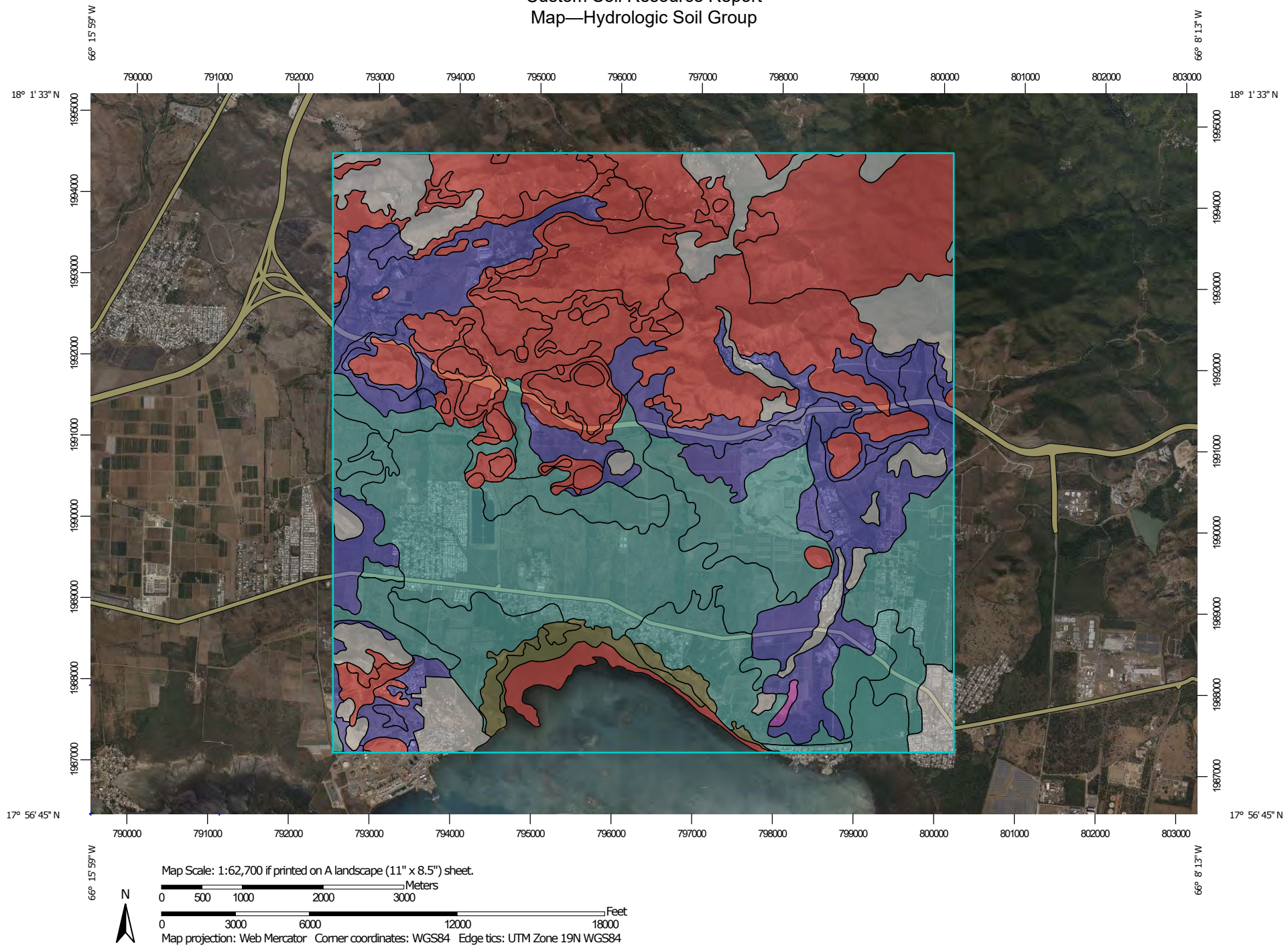
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- 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 1:20,000.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
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: Humacao Area, Puerto Rico Eastern Part
Survey Area Data: Version 14, Sep 13, 2022

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

Date(s) aerial images were photographed: Jan 23, 2022—Mar 1, 2022

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—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AmB	Amelia gravelly clay loam, 2 to 5 percent slopes	B	474.4	3.4%
AmC2	Amelia gravelly clay loam, 5 to 12 percent slopes, eroded	B	482.9	3.4%
An	Arenales sandy loam	A	17.2	0.1%
BoA	Boqueron silty clay, 0 to 2 percent slopes, frequently flooded	C/D	136.7	1.0%
Ce	Cartagena clay	C	248.2	1.8%
ClB	Coamo clay loam, 2 to 5 percent slopes	B	600.1	4.3%
Cn	Cobbly alluvial land		191.2	1.4%
DcE2	Daguao clay, 20 to 40 percent slopes, eroded	D	33.6	0.2%
DeC2	Descalabrado clay loam, 5 to 12 percent slopes, eroded	D	230.9	1.6%
DeE2	Descalabrado clay loam, 20 to 40 percent slopes, eroded	D	642.5	4.6%
DgF2	Descalabrado and Guayama soils, 20 to 60 percent slopes, eroded	D	897.9	6.4%
DrF	Descalabrado-Rock land complex, 40 to 60 percent slopes	D	1,911.7	13.6%
FrB	Fraternidad clay, 2 to 5 perecent slopes	C	71.0	0.5%
Gm	Guamani silty clay loam	B	736.1	5.2%
JaB	Jacana clay, 2 to 5 percent slopes	D	283.8	2.0%
JaC2	Jacana clay, 5 to 12 percent slopes, eroded	D	584.2	4.2%
PlB	Paso Seco clay, 0 to 5 percent slopes	C	1,830.9	13.0%
Po	Poncena clay	C	818.1	5.8%
PrC2	Pozo Blanco clay loam, 5 to 12 percent slopes, eroded	B	143.3	1.0%
Rs	Rock land		938.8	6.7%
Uc	Urban land-Cartagena complex, 0 to 2 percent slopes, rarely ponded		114.9	0.8%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ul	Urban land		157.7	1.1%
Up	Urban land-Poncena complex, 0 to 2 percent slopes	C	25.3	0.2%
UrA	Ursula muck, 0 to 1 percent slopes, very frequently flooded	C/D	117.8	0.8%
Vc	Vayas silty clay, frequently flooded	C	137.0	1.0%
Vs	Vives silty clay loam, high bottom	B	229.2	1.6%
VvB	Vives clay, 2 to 7 percent slopes	C	1,289.2	9.2%
WSf0	San Felipe, very frequently flooded-Mar Negro, 0 to 0.5 water depth complex, 0 to 1 percent slopes	D	152.9	1.1%
Totals for Area of Interest			**14,068.5**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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