

Appendix 3A STATSGO and SSURGO Datasets

Table of Contents

Appendix 3A STATSGO and SSURGO Datasets

- 3A.1 STATSGO and SSURGO Datasets Descriptions
- 3A.2 Soil Properties
 - 3A.2.1 SSURGO Soil Properties by Mapping Unit
 - 3A.2.2 SSURGO Soil Properties by Route Segment
 - 3A.2.3 SSURGO Soil Property Descriptions
 - 3A.2.4 STATSGO Data by Route Segment
- 3A.3 Soils Figures
 - 3A.3.1 Map of SSURGO and STATSGO Mapping Units
 - 3A.3.2 WEG Map
 - 3A.3.3 Hydrologic Group
 - 3A.3.4 Depth to Restrictive Layer
 - 3A.3.5 Corrosion of Concrete
 - 3A.3.6 Corrosion of Steel



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State Websites

Search

Browse By Audience | A-Z Index | Help

You are Here: [Home](#) / [Soils](#) / [Soil Surveys](#) / Digital Soils Data Fact Sheet

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DIGITAL SOILS DATA FACT SHEET

U.S. Department of Agriculture
Natural Resources Conservation Service

DIGITAL SOILS DATA

1:12,000 to 1:7,500,000-Scale Digital Soils Information from the [SSURGO](#), [STATSGO](#), and [NATSGO](#) Data Bases

The Natural Resources Conservation Service (NRCS) has the federal responsibility for the National Cooperative Soil Survey (NCSS) and federal leadership for collecting, storing, maintaining, and distributing soils information of privately owned lands in the United States. The Federal Geographic Data Committee and the Office of Management and Budget have formally assigned the responsibility for national coordination of digital soils data to the NRCS.

As a step toward making digital soil data available, the NRCS is releasing for sale, boundary and attribute data from it's major soil data bases.

NRCS has established three digital soil geographic data bases representing different intensities of soil mapping. Common to each soil geographic (spatial) data base is the linkage to a soil interpretations (attribute) record data base, which gives the proportionate extent of the component soils and their properties for each map unit.

With these digital data bases, users can store, retrieve, analyze, and display soil data in a highly efficient manner, as well as integrate the data with other spatially referenced resource and demographic data in a Geographic Information System (GIS).

THE THREE DATA BASES

The three soil geographic data bases are the Soil Survey Geographic Data Base (SSURGO), the State Soil Geographic Data Base (STATSGO), and the National Soil Geographic Data Base (NATSGO). Components of map units in each geographic data base are generally phases of soil series. Phases of series enable the most precise interpretation. Interpretations are displayed differently for each geographic data base to be consistent with the level of detail mapped. The soil interpretations record data base encompasses more than 25 soil physical and chemical properties for approximately 18,000 soil series recognized in the United States.

Information such as particle size distribution, bulk density, available water capacity, soil reaction, salinity, and organic matter is included for each major layer of the soil profile. Also included are data on flooding, water table, bedrock, subsidence characteristics of the soil, and interpretations for erosion potential, septic tank limitations, engineering, building and recreation development, and cropland, woodland, wildlife habitat, and rangeland management.

SSURGO, the most detailed level of information, is used primarily for farm and ranch conservation planning; range and timber management; and county, township, and watershed resource planning and management. Utilizing the soil attributes, this data also serves as an excellent source to review site development proposals and land use potential, make land use assessments and to identify potential wetland areas.

Using national mapping standards, soil maps in the SSURGO data base are made by field methods, using observations along soil delineation boundaries and traverses, and determining map unit composition by field transects. Aerial photographs are interpreted and used as the field map base. Maps are made at scales ranging from 1:12,000 to 1:31,680 and incorporated with comprehensive descriptions to produce the NCSS publications.

Digitizing is by line segment (vector) in accordance with NRCS-established digitizing specifications and standards for duplicating the original soil survey map. The mapping bases are normally orthophotoquads or 7.5 minute topoquads. Digitizing is done by NRCS or by cooperating state and local governments.

SSURGO data are collected and archived in 7.5 minute topographic quadrangle units, and distributed as complete

coverage for a soil survey area usually consisting of ten or more quadrangle units. The adjoining 7.5 minute units are matched within the survey areas.

STATSGO is used primarily for river basin, state, and multicounty resource planning, management, and monitoring.

Soil maps for STATSGO were made by generalizing the detailed soil survey maps. Where more detailed maps are not available, data on geology, topography, vegetation, and climate were assembled, together with satellite images. Soils of analogous areas are studied, and a determination of the classification and extent of the soils is made.

Map unit composition for STATSGO is determined by transecting or sampling areas on the detailed maps and expanding the data statistically to characterize the whole map unit.

STATSGO was mapped on the U.S. Geological Survey's 1:250,000-scale topographic quadrangle series. Soil boundaries were digitized by line segment (vector) to comply with national guidelines and standards.

STATSGO data are archived and distributed as complete coverage for a state. STATSGO data are joined between states.

The NATSGO Data Base

NATSGO is used primarily for national, regional, and multistate resource appraisal, planning, and monitoring, and is under development.

The boundaries of the major land resource area (MLRA) and land resource regions are included as part of the 1992 Natural Resources Inventory (NRI) Database.

DATA CONTENT AND FORMAT

Spatial Data

SSURGO, STATSGO, and NATSGO spatial data are distributed to the public from the National Cartography and GIS Center (NCG) in the USGS Digital Line Graph (DLG-3) Optional Distribution Format.

SSURGO data are archived in various formats. Depending on the format requested, the customer's request may be delayed to reformat the data to the DLG-3 Optional format. NRCS soil map symbols (AbC) are not normally carried within the DLG-3 Optional format. However, these map symbols are made available as a unique ASCII file when NRCS soils data are distributed in the DLG format.

The distribution medium for spatial data will normally be CD-ROM-ISO9660 format, but may be cartridge tape, also by mutual agreement.

Additional information regarding file formats for data, as well as the technical specifications for digitizing NRCS soils data, is available from the NCG.

Attribute Data

NRCS's attribute data for [SSURGO](#) and [STATSGO](#) are stored in a relational data base. This format is a nonfixed length, tab delimited, ASCII file. NATSGO is stored in a flat ASCII file. Attribute data are distributed as part of each complete dataset.

Before obtaining digital soil data, the user needs to identify the area of interest and examine the anticipated use of the data. More importantly, the user should be knowledgeable of the software and/or data format capabilities available on the computer system intended for use. The user should be knowledgeable of soils data and their characteristics. If you need assistance, contact:

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TABLE 3A-1 SUMMARY OF SSURGO PROPERTIES BY MAPPING UNIT												
MAP SYMBOL	SOIL MAP UNIT	SOURCE DATABASE	SEGMENT LOCATIONS	SOIL PROPERTIES AND QUALITIES RATINGS								
				CONSTRUCTION MATERIALS		SOIL CHEMICAL PROPERTIES		SOIL PHYSICAL PROPERTIES				UNIFIED SOIL CLASSIFICATION (SURFACE)
				GRAVEL SOURCE	SAND SOURCE	CALCIUM CARBONATE	GYPSUM	PERCENT CLAY	PERCENT SAND	PERCENT SILT	SURFACE TEXTURE	
Ac	Aco gravelly loamy sand	Palo Verde Area, California (CA681)	ca-06, ca-07, ca-08, ca-09, p-16, p-17, x-15, x-16	Poor	Fair	8	0	9	73.9	17.2	Gravelly loamy sand	SM
Af	Aco sandy loam	Palo Verde Area, California (CA681)	ca-05, ca-06, ca-07, ca-08, ca-09, p-16, p-17, p-18, x-12, x-15, x-16	Poor	Fair	10	0	9.4	73.1	17.5	Sandy loam	SM
Aa	Agualt loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	9	0	11.6	70.5	17.9	Loam	ML
AL	Antho association	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Fair	11	0	12.2	67	20.8	Sandy loam	SM
AdA	Antho gravelly sandy loam, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	11	0	12.2	67	20.8	Gravelly sandy loam	SM
AbA	Antho sandy loam, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	11	0	12.2	67	20.8	Sandy loam	SM
Ac	Antho sandy loam, saline-alkali	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	11	0	12.2	67	20.8	Sandy loam	SM
AGB	Antho-Carrizo complex, 0 to 3 percent	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Fair	11	0	12.2	67	20.8	Sandy loam	SM
4	Antho-Carrizo-Maripo complex, low precipitation	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Poor	Fair	8	0	10	66.9	23.1	Sandy loam	SM
AM	Antho-Valencia association	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Fair	12	0	18	67	20.8	Sandy loam	SM
Ao	Avondale clay loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	13	0	24	39.4	36.6	Clay loam	CL
BaG	Badland	Palo Verde Area, California (CA681)	ca-05, ca-06, ca-07, p-16, p-17, x-12, x-15, x-16	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Unweathered bedrock	Not rated
BPI	Borrow pit	Maricopa County, Arizona, Central Part (AZ651)	p-01	Not Rated	Not rated	Not rated	Not rated					
Bs	Brios sandy loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	6	0	8.7	84.4	7	Sandy loam	SM
385	Carrizo family very gravelly sandy loam, dry, 0 to 3 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	qn-02, qs-02	Fair	Fair	2	0	5.3	89.9	5	Very gravelly sandy loam	GC-GM
390	Carrizo family-Riverwash complex, dry, 0 to 2 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	qn-02, qs-01, qs-02, x-07	Fair	Fair	2	0	5	91.5	3.5	Extremely gravelly sand	GW
Ce	Carrizo gravelly sand	Palo Verde Area, California (CA681)	ca-01, ca-05, ca-06, ca-08, ca-09, p-15w, p-16, p-17, p-18, x-12, x-13	Fair	Fair	0	0	2.5	86.7	10.8	Gravelly sand	SW-SM
Cb	Carrizo gravelly sandy loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	7	0	3.1	88.9	7.9	Gravelly sandy loam	SM
3	Carrizo very gravelly sand	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)	ca-04, cb-05, cb-10, i-07, i-08s, p-13, p-14, p-15e, p-15w, x-11	Fair	Fair	3	0	2.5	91.2	6.3	Very gravelly sand	GP

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MAP SYMBOL	SOIL MAP UNIT	SOURCE DATABASE	SEGMENT LOCATIONS	SOIL PROPERTIES AND QUALITIES RATINGS								
				CONSTRUCTION MATERIALS		SOIL CHEMICAL PROPERTIES		SOIL PHYSICAL PROPERTIES				UNIFIED SOIL CLASSIFICATION (SURFACE)
				GRAVEL SOURCE	SAND SOURCE	CALCIUM CARBONATE	GYPSUM	PERCENT CLAY	PERCENT SAND	PERCENT SILT	SURFACE TEXTURE	
Ch	Casa Grande loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	20	2	21.2	53.2	25.6	Loam	CL
Cm	Casa Grande-Laveen complex, alkali	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	20	2	21.2	53.2	39.8	Loam	CL
CO	Cherioni-Rock outcrop complex	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Poor	20	0	20	42.1	37.9	Very gravelly loam	GM
18	Cherioni-Rock outcrop complex, 5 to 60 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Poor	28	0	15.3	44.1	40.6	Extremely stony loam	GC-GM
Ch	Chuckawalla very gravelly silt loam	Palo Verde Area, California (CA681)	ca-08, ca-09, p-16, p-17, p-18, x-13	Fair	Fair	7	0	19.4	57.7	22.9	Gravelly silt loam	GC-GM
19	Chuckawalla-Gunsight complex, 1 to 8 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Fair	23	0	11.3	65.6	23.1	Extremely gravelly loam	GC-GM
20	Chuckawalla-Gunsight complex, low precipitation, 1 to 8 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Fair	23	0	11.3	65.6	23.1	Extremely gravelly loam	GC-GM
Co	Cibola fine sandy loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, i-08s, p-15e, p-15w, p-16, p-17, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	14.1	62	23.9	Fine sandy loam	ML
Cs	Cibola silty clay loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, i-08s, p-15w, p-16, p-17, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	17.4	52.2	35.3	Silty clay loam	ML
CV	Coolidge-Laveen association	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	24	0	14.2	67.9	36.9	Sandy loam	ML
395	Cristobal family-Gunsight family complex, dry, 1 to 10 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	qn-02, qs-01, qs-02, x-07	Fair	Fair	10	0	13.7	73.5	12.7	Very gravelly clay loam	GC
325	Dateland-Denure complex, 0 to 2 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	i-01, i-03, p-01, p-02, p-03, x-01, x-04	Poor	Fair	2	0	11.1	55.9	33	Fine sandy loam	SC-SM
30	Denure-Momoli-Carrizo complex, low precipitation	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Fair	8	0	14.8	66	19.2	Gravelly sandy loam	SM
205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	i-01, i02, p-01, p-02, p-04, x-01, x-02, x-03	Poor	Fair	5	0	17.6	68.3	33.1	Fine sandy loam	SC-SM
Dn	Dune land	Maricopa County, Arizona, Central Part (AZ651)	d-01	Not Rated	Not rated	Not rated	Not rated	N/A	N/A	N/A	N/A	N/A
DuD	Duneland	Palo Verde Area, California (CA681)	ca-05, ca-06, ca-07, p-16, p-17, x-15, x-16	Poor	Good	0	0	0.5	97.9	1.6	Sand	SM
Es	Estrella loam	Maricopa County, Arizona, Central Part	d-01	Poor	Poor	10	0	27.4	37.4	35.2	Loam	CL
Et	Estrella loam, saline-alkali	Maricopa County, Arizona, Central Part (AZ651)	d-01	Not Rated	Poor	12	0	27.4	37.5	35.1	Loam	ML

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				CONSTRUCTION MATERIALS		SOIL CHEMICAL PROPERTIES		SOIL PHYSICAL PROPERTIES				UNIFIED SOIL CLASSIFICATION (SURFACE)
				GRAVEL SOURCE	SAND SOURCE	CALCIUM CARBONATE	GYPSUM	PERCENT CLAY	PERCENT SAND	PERCENT SILT	SURFACE TEXTURE	
50	Estrella loams	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Poor	Fair	20	0	24.5	39.4	36.2	Loam	CL-ML
52	Gachado-Lomitas-Rock outcrop complex, 7 to 55 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Poor	3	0	16.7	45.6	37.7	Extremely gravelly sandy loam	GW-GC
8	Gadsden clay	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)	ca-04, i-07, i-08s	Poor	Poor	12	0	46.2	24.8	29	Clay	CH
312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	d-01, i-01, i-03, p-01, p-02, p-03, p-04, x-01, x-02, x-03	Poor	Poor	2	0	44.5	12.1	43.5	Silty clay loam	CL
Gb	Gilman fine sandy loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, d-01, i-07, i-08s, p-15e, p-15w, p-16, p-17, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	3	0	4.1	87.4	8.5	Fine sandy loam	SM
Gf	Gilman fine sandy loam, saline-alkali	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	11	0	12.5	60.5	27	Fine sandy loam	ML
GgA	Gilman loam, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	11	0	15.6	51.5	32.9	Loam	ML
Gh	Gilman loam, saline-alkali	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	11	0	13.9	52.6	33.5	Loam	ML
56	Gilman loams, low precipitation	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Poor	Fair	3	0	14.1	51.7	34.2	Loam	CL
345	Gilman silt loam, 0 to 1 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	i-01, p-01, p-02, p-03, x-01, x-02	Poor	Poor	2	0	12	37.4	50.6	Silt loam	CL-ML
Gc	Gilman silty clay loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, i-08s, p-15e, p-15w, p-16, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	2	0	10.1	74.6	15.3	Silty clay loam	CL
GM	Gilman-Antho association	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Fair	11	0	15.6	51.5	32.9	Loam	ML
400	Gilman-Carrizo family complex, dry, 0 to 3 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	qn-02, qs-01, qs-02, x-07	Poor	Fair	2	0	11.1	48.8	40.1	Very fine sandy loam	CL-ML
GN	Gilman-Laveen association	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Fair	11	0	15.6	51.5	32.9	Loam	ML
59	Gilman-Momoli-Denure complex, low precipitation	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Poor	Fair	3	0	12.9	45.5	41.7	Gravelly sandy loam	CL
Gt	Glenbar clay loam, 0 to 2 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	10	1	32.3	12.3	55.3	Clay loam	CL
Gr	Glenbar loam, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	4	0	30.7	13.9	55.4	Loam	CL

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				CONSTRUCTION MATERIALS		SOIL CHEMICAL PROPERTIES		SOIL PHYSICAL PROPERTIES			SURFACE TEXTURE	UNIFIED SOIL CLASSIFICATION (SURFACE)
				GRAVEL SOURCE	SAND SOURCE	CALCIUM CARBONATE	GYPSUM	PERCENT CLAY	PERCENT SAND	PERCENT SILT		
Ge	Glenbar silty clay loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, p-15w, p-16, p-17, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	23	44.8	30.6	Silty clay loam	CL
410	Gunsight family very gravelly sandy loam, dry, 1 to 15 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	qn-02, qs-01, qs-02, x-07	Fair	Fair	6	0	9.3	73.8	16.9	Very gravelly sandy loam	GC-GM
350	Gunsight family-Cristobal complex, dry, 1 to 10 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	qn-02, qs-01, qs-02, x-07	Fair	Fair	7	0	11	65.6	23.4	Gravelly loam	GC-GM
200	Gunsight family-Pinam complex, 1 to 15 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	i-01	Fair	Fair	9	0	10.5	65.4	24.1	Very gravelly loam	GC
330	Gunsight family-Rillito complex, 1 to 10 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	i-01, i-03	Fair	Fair	8	0	11	66	23	Gravelly sandy loam	GC-GM
68	Gunsight-Cipriano complex, 1 to 7 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Fair	9	0	17.9	65.2	17	Very gravelly sandy loam	GM
GWD	Gunsight-Pinal complex, 1 to 10 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Fair	Poor	24	0	21.7	46.6	31.7	Cobbly loam	GC
GxA	Gunsight-Rillito complex, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	22	0	21.7	46.6	37.8	Gravelly loam	GC
GYD	Gunsight-Rillito complex, 0 to 10 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Poor	22	0	21.7	46.6	37.8	Gravelly loam	GC
70	Gunsight-Rillito complex, 1 to 25 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Poor	13	0	20	61.4	37.9	Gravelly loam	GC-GM
71	Gunsight-Rillito complex, low precipitation, 1 to 40 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Poor	13	0	20	61.4	37.9	Gravelly loam	GC-GM
405	Harqua-Casa Grande family complex, dry, 0 to 4 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	qn-02	Poor	Fair	10	0	24.7	57.3	18	Sandy loam	SC
HLC	Harqua-Gunsight complex, 0 to 5 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Poor	10	0	32	34.9	33.1	Gravelly clay loam	CL
Hb	Holtville fine sandy loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, i-08s, p-15w, p-16, x-09, x-10, x-11, x-13, x-15	Poor	Fair	4	0	15.7	59.3	25	Fine sandy loam	SM

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				GRAVEL SOURCE	SAND SOURCE	CALCIUM CARBONATE	GYPSUM	PERCENT CLAY	PERCENT SAND	PERCENT SILT	SURFACE TEXTURE	
Hc	Holtville silty clay	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, i-07, i-08s, p-15e, p-15w, p-16, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	21.4	48.9	29.7	Silty clay	CH
245	Hyder-Rock outcrop complex, 5 to 45 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	d-01, p-03, p-04, x-01, x-02	Poor	Poor	3	0	21.9	40.1	38.1	Very channery loam	GC-GM
lb	Imperial fine sandy loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, i-08s, p-15w, p-16, x-09, x-10, x-12, x-13, x-15	Poor	Poor	4	0	45.9	12.8	41.3	Fine sandy loam	SM
lc	Imperial silty clay	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, i-08s, p-15w, p-16, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Poor	4	0	50	5.3	44.7	Silty clay	CH
13	Indio silt loam, 0 to 1 percent slopes	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)	ca-04, ca-05, i-07, i-08s, x-09, x-10	Poor	Fair	3	0	11.8	53.1	35.2	Silt loam	CL
le	Indio silty clay loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, p-15w, p-16, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	3	0	13.4	54.7	31.9	Silty clay loam	ML
ld	Indio very fine sandy loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, cb-10, i-07, i-08s, p-15e, p-15w, p-16, p-17, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	3	0	10.2	62.9	26.9	Very fine sandy loam	ML
16	Indio-Lagunita-Ripley complex	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)	ca-01, ca-04, ca-05, cb-10, i-07, i-08s, p-15e, p-15w, x-09, x-10, x-11	Poor	Fair	22	0	13	58.9	28.1	Silt loam	ML
LcA	Laveen loam, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	18	0	15.8	43.9	40.3	Loam	ML
Ld	Laveen loam, saline-alkali	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	18	0	16.6	43.5	39.8	Loam	ML
Lb	Laveen sandy loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	18	0	14.2	48.8	36.9	Sandy loam	ML
21	Ligurta-Cristobal complex, 2 to 6 percent slopes	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)	cb-05, cb-10, i-07, i-08sm p-13, p-14, p-15e, p-15w, x-11	Poor	Poor	17	0	29.8	33.7	36.5	Very gravelly loam	GC
Ma	Maripo sandy loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	11	0	7.4	78.9	13.7	Sandy loam	SM
Md	Meloland fine sandy loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, i-07, i-08s, p-15e, p-15w, p-16, p-17, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	19.8	60.8	19.5	Fine sandy loam	ML

TABLE 3A-1 SUMMARY OF SSURGO PROPERTIES BY MAPPING UNIT												
MAP SYMBOL	SOIL MAP UNIT	SOURCE DATABASE	SEGMENT LOCATIONS	SOIL PROPERTIES AND QUALITIES RATINGS								
				CONSTRUCTION MATERIALS		SOIL CHEMICAL PROPERTIES		SOIL PHYSICAL PROPERTIES				UNIFIED SOIL CLASSIFICATION (SURFACE)
				GRAVEL SOURCE	SAND SOURCE	CALCIUM CARBONATE	GYPSUM	PERCENT CLAY	PERCENT SAND	PERCENT SILT	SURFACE TEXTURE	
Me	Meloland silty clay loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, i-08s, p-15w, p-16, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	22.7	50.8	26.5	Gravelly silty clay loam	CL
Mp	Mohall loam MLRA 40	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	14	0	24.4	45.2	30.3	Loam	CL
317	Mohall loam, 0 to 1 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	p-01	Poor	Poor	13	0	28.3	40.2	31.5	Loam	CL
Mo	Mohall sandy loam, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	14	1	22.4	56	21.6	Sandy loam	SC-SM
340	Mohall-Contine complex, 1 to 5 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	i-01, i-03, p-01, p-02	Poor	Fair	12	0	24.8	57	18.2	Sandy loam	SC-SM
91	Momoli-Carrizo complex	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Poor	Fair	3	0	15	66.9	18.1	Very gravelly sandy loam	GM
92	Momoli-Carrizo complex, low precipitation	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Poor	Fair	3	0	15	66.9	18.1	Very gravelly sandy loam	GM
220	Momoli-Carrizo family complex, 1 to 5 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	p-01	Fair	Fair	2	0	6.6	69.7	23.7	Sandy loam	SC-SM
Oc	Orita fine sand	Palo Verde Area, California (CA681)	ca-05, ca-07, ca-08, ca-09, p-16, p-17, p-18, x-15, x-16	Poor	Fair	4	0	22.8	52.6	24.6	Fine sand	SM
Or	Orita gravelly fine sandy loam	Palo Verde Area, California (CA681)	ca-07, ca-08, ca-09, p-16, p-17, p-18, x-16	Poor	Fair	4	0	11.8	67.6	20	G	GM
Og	Orita gravelly loamy sand	Palo Verde Area, California (CA681)	ca-07, ca-08, p-16, p-17, x-16	Poor	Poor	4	0	22.8	50.8	26.4	Gravelly loamy sand	SM
208	Pahaka fine sandy loam, 0 to 1 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	i-01, p-01, p-02	Poor	Fair	4	0	16.5	59.6	23.9	Fine sandy loam	SC-SM
PeA	Perryville gravelly loam, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	23	0	19.6	54	26.4	Gravelly loam	SC-SM
PRB	Perryville-Rillito complex, 0 to 3 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	23	0	19.6	54	26.4	Loam	SC-SM
PT	Pinal gravelly loam	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Poor	18	0	17.5	43	39.5	Gravelly loam	ML
PYD	Pinamt-Tremant complex, 1 to 10 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Fair	20	0	17.8	62.3	20	Very cobbly loam	GM
23	Pits, gravel	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)	ca-04, i-07, i-08s	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated
RbA	Rillito loam, 0 to 1 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Poor	Poor	22	0	19.2	42.5	38.3	Loam	SC-SM
RhB	Rillito-Harqua complex, 1 to 3 percent slopes	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Poor	22	0	32	42	37.8	Gravelly clay loam	CL

TABLE 3A-1 SUMMARY OF SSURGO PROPERTIES BY MAPPING UNIT												
MAP SYMBOL	SOIL MAP UNIT	SOURCE DATABASE	SEGMENT LOCATIONS	SOIL PROPERTIES AND QUALITIES RATINGS								
				CONSTRUCTION MATERIALS		SOIL CHEMICAL PROPERTIES		SOIL PHYSICAL PROPERTIES				UNIFIED SOIL CLASSIFICATION (SURFACE)
				GRAVEL SOURCE	SAND SOURCE	CALCIUM CARBONATE	GYPSUM	PERCENT CLAY	PERCENT SAND	PERCENT SILT	SURFACE TEXTURE	
Rc	Ripley silty clay loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, i-08s, p-15w, p-16, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	15.5	57.2	27.3	Silty clay loam	CL
Rb	Ripley very fine sandy loam	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, i-07, i-08s, p-15e, p-15w, p-16, p-17, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	11.5	66.6	21.9	Very fine sandy loam	ML
RS	Rock outcrop-Cherioni complex	Maricopa County, Arizona, Central Part (AZ651)	d-01, p-01	Not rated	Not rated	0	0					
103	Rock outcrop-Gachado complex, 5 to 55 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Not rated	Not rated	0	0					
415	Rock outcrop-Laposa family-Hyder complex, dry, 3 to 45 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	qs-01, qs-02, x-07	Fair	Fair	0	0	N/A	N/A	N/A	N/A	N/A
RoA	Rositas fine sand, 0 to 2 percent slopes	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, ca-08, ca-09, cb-10, i-07, i-08s, p-15e, p-15w, p-16, p-17, p-18, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Good	4	0	3.3	95.5	1.1	Loamy fine sand	SM
RoB	Rositas fine sand, 2 to 9 percent slopes	Palo Verde Area, California (CA681)	ca-05, ca-06, ca-07, ca-08, ca-09, p-16, p-17, x-12, x-15, x-16	Poor	Good	4	0	3	96.3	0.7	Fine sand	SM
RrA	Rositas fine sand, wet, 0 to 2 percent slopes	Palo Verde Area, California (CA681)	ca-01, ca-05, ca-06, p-15e, p-15w, p-16, x-12, x-13	Poor	Fair	4	0	16.2	68.4	15.4	Loamy fine sand	SM
RsA	Rositas gravelly loamy sand, 0 to 2 percent slopes	Palo Verde Area, California (CA681)	ca-06, ca-07, p-16, p-17, p-18, x-15, x-16	Poor	Fair	4	0	2.5	94.6	2.9	Gravelly loamy sand	SM
25	Rositas sand	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)	i-07	Poor	Good	3	0	3	95.5	1.5	Sand	SM
RtA	Rositas silty clay loam, 0 to 2 percent slopes	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, ca-06, ca-07, cb-10, i-08s, p-15e, p-15w, p-16, x-09, x-10, x-11, x-12, x-13, x-15, x-16	Poor	Fair	4	0	6.4	86	7.6	Silty clay loam	CL
RuA	Rositas silty clay loam, wet, 0 to 2 percent slopes	Palo Verde Area, California (CA681)	ca-01, p-15w, x-10, x-11	Poor	Fair	4	0	26.3	53.7	20	Silty clay loam	CL
106	Sal-Cipriano complex, 1 to 10 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Poor	9	0	30.4	36	33.7	Extremely gravelly loam	GC

TABLE 3A-1 SUMMARY OF SSURGO PROPERTIES BY MAPPING UNIT												
MAP SYMBOL	SOIL MAP UNIT	SOURCE DATABASE	SEGMENT LOCATIONS	SOIL PROPERTIES AND QUALITIES RATINGS								
				CONSTRUCTION MATERIALS		SOIL CHEMICAL PROPERTIES		SOIL PHYSICAL PROPERTIES				UNIFIED SOIL CLASSIFICATION (SURFACE)
				GRAVEL SOURCE	SAND SOURCE	CALCIUM CARBONATE	GYPSUM	PERCENT CLAY	PERCENT SAND	PERCENT SILT	SURFACE TEXTURE	
107	Sal-Cipriano complex, low precipitation, 1 to 10 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Fair	Poor	9	0	30.4	36	33.7	Extremely gravelly loam	GC
30	Torriorhents-Torrifluents complex, 1 to 50 percent slopes	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California (AZ649)	ca-04, cb-05, cb-10, i-07, i-08s, p-13, p-14, p-15e, p-15w, x-11	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated
114	Tremant gravelly loams, low precipitation	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Poor	Fair	26	0	15.5	65.9	18.5	Gravelly loam	CL
115	Tremant-Antho complex, 1 to 5 percent slopes	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Poor	Fair	26	0	15.5	69.4	15	Gravelly sandy loam	SM
Tw	Tucson clay loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Not rated	Poor	23	0	31.1	33.5	35.5	Clay loam	ML
Tu	Tucson loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Not rated	Poor	23	0	28.1	35.2	36.6	Loam	ML
Va	Valencia sandy loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	14	0	18	62.2	19.9	Sandy loam	SM
Vb	Valencia sandy loam, saline-alkali	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	14	0	18	62.2	19.9	Sandy loam	SM
Vh	Vint fine sandy loam	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	3	0	7.7	82.6	9.6	Fine sandy loam	SM
Vg	Vint loamy fine sand	Maricopa County, Arizona, Central Part (AZ651)	d-01	Poor	Fair	3	0	7.5	83.1	9.4	Loamy fine sand	SM
W	Water	Palo Verde Area, California (CA681)	ca-01, ca-04, ca-05, p-15w, p-16, x-09, x-10, x-11	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated
35	Water	Yuma-Wellton Area, Parts of Yuma County, Arizona and Imperial County, California	cb-10, i-07, i-08s, p-15e	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated
126	Water	Aguila-Carefree Area, Arizona, Parts of Maricopa and Pinal Counties (AZ645)	p-01	Not rated	Not rated	Not rated	Not rated					
430	Water association	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	i-01, p-01, p-02, p-03, x-01	Not rated	Not rated	Not rated	Not rated					
355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Kofa Area, Arizona, Parts of La Paz and Yuma Counties (AZ657)	d-01, i-01, i-02, p-01, p-02, p-03, p-04, x-01, x-02, x-03	Poor	Poor	28	0	24.5	37.4	38.1	Sandy loam	SC-SM

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
ca-01	66.70	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
ca-01	16.21	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
ca-01	10.24	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
ca-01	82.93	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
ca-01	822.22	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-01	762.94		Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-01	681.88	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-01	510.05	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-01	18.78	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
ca-01	1,437.57	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
ca-01	52.75	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
ca-01	1,938.62	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
ca-01	292.97	ld	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
ca-01	67.69	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-01	683.44	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
ca-01	442.17	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
ca-01	444.39	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-01	463.97	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-01	878.97	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
ca-01	10.07	RrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
ca-01	631.06	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-01	62.47	RuA	Rositas silty clay loam, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	6	>200	C/D	0	Rare
ca-01	109.27	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
ca-02	83.55	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
ca-02	886.95	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
ca-02	42.86	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
ca-02	5.29	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
ca-02	0.11	Ch	Chuckawalla very gravelly silt loam	High	High	0	Slight	Suited	7	>200	B	>200	None
ca-02	64.80	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
ca-02	274.63	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-02	116.73	DuD	Duneland	Not Rated	Not rated	0	Moderate	Poorly Suited	1	>200	A	>200	None
ca-02	136.75	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-02	373.69	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-02	364.84	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-02	13.97	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
ca-02	690.86	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
ca-02	47.70	Ib	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
ca-02	1,134.52	Ic	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
ca-02	41.17	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
ca-02	63.47	Ie	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-02	361.33	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
ca-02	82.94	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
ca-02	148.36	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-02	180.90	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-02	567.66	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
ca-02	357.71	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
ca-02	25.98	RrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
ca-02	274.31	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-04	12.09	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
ca-04	73.47	8	Gadsden clay	Moderate	High	0	Slight	Not rated	4	>200	C	>200	None
ca-04	390.46	13	Indio silt loam, 0 to 1 percent slopes	Moderate	High	0	Slight	Not rated	5	>200	B	>200	Occasional
ca-04	189.71	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
ca-04	12.21	23	Pits, gravel	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
ca-04	215.39	30	Torrorthents-Torrifluvents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
ca-04	54.90	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
ca-04	16.78	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
ca-04	91.75	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-04	210.18	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-04	136.54	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-04	44.22	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-04	16.91	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
ca-04	156.16	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
ca-04	13.12	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
ca-04	166.60	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
ca-04	40.69	ld	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
ca-04	23.51	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-04	221.83	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
ca-04	148.80	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
ca-04	83.42	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-04	78.27	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-04	361.56	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
ca-04	115.81	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-04	160.84	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
ca-05	44.41	13	Indio silt loam, 0 to 1 percent slopes	Moderate	High	0	Slight	Not rated	5	>200	B	>200	Occasional
ca-05	205.15	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
ca-05	0.52	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
ca-05	1.28	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
ca-05	18.12	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
ca-05	13.25	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
ca-05	50.79	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
ca-05	799.03	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-05	0.52	DuD	Duneland	Not Rated	Not rated	0	Moderate	Poorly Suited	1	>200	A	>200	None
ca-05	617.12	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-05	816.00	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-05	608.98	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-05	20.13	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
ca-05	1,878.86	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
ca-05	37.13	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
ca-05	2,135.26	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
ca-05	106.02	ld	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
ca-05	190.18	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-05	397.70	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
ca-05	583.57	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
ca-05	7.39	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
ca-05	242.91	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-05	431.91	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-05	468.60	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
ca-05	11.78	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
ca-05	9.57	RrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
ca-05	595.24	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-05	143.22	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
ca-06	47.18	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
ca-06	524.77	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
ca-06	47.52	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
ca-06	6.46	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
ca-06	14.50	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
ca-06	151.04	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-06	106.51	DuD	Duneland	Not Rated	Not rated	0	Moderate	Poorly Suited	1	>200	A	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
ca-06	19.17	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-06	212.56	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-06	142.94	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-06	2.77	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
ca-06	713.85	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
ca-06	12.73	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
ca-06	1,065.46	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
ca-06	48.77	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
ca-06	136.81	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
ca-06	91.47	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
ca-06	27.36	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-06	112.74	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-06	941.23	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
ca-06	637.92	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
ca-06	43.38	RrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
ca-06	214.18	RsA	Rositas gravelly loamy sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	None
ca-06	70.71	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-07	725.60	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
ca-07	759.30	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
ca-07	3.47	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
ca-07	14.22	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
ca-07	91.94	DuD	Duneland	Not Rated	Not rated	0	Moderate	Poorly Suited	1	>200	A	>200	None
ca-07	2.37	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-07	23.58	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-07	0.89	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
ca-07	0.02	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
ca-07	42.65	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
ca-07	93.87	Ic	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
ca-07	84.26	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
ca-07	4.24	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
ca-07	285.21	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
ca-07	0.07	Og	Orita gravelly loamy sand	Moderate	High	0	Slight	Well Suited	2	>200	C	>200	None
ca-07	134.20	Or	Orita gravelly fine sandy loam	Moderate	High	0	Slight	Well Suited	3	>200	B	>200	None
ca-07	1.26	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
ca-07	978.99	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
ca-07	796.38	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
ca-07	214.18	RsA	Rositas gravelly loamy sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	None
ca-07	6.59	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
ca-08	687.66	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
ca-08	613.71	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
ca-08	111.44	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
ca-08	63.99	Ch	Chuckawalla very gravelly silt loam	High	High	0	Slight	Suited	7	>200	B	>200	None
ca-08	412.58	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
ca-08	17.88	Og	Orita gravelly loamy sand	Moderate	High	0	Slight	Well Suited	2	>200	C	>200	None
ca-08	390.84	Or	Orita gravelly fine sandy loam	Moderate	High	0	Slight	Well Suited	3	>200	B	>200	None
ca-08	389.74	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
ca-08	945.67	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
ca-09	298.00	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
ca-09	305.17	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
ca-09	115.76	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
ca-09	69.63	Ch	Chuckawalla very gravelly silt loam	High	High	0	Slight	Suited	7	>200	B	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
ca-09	139.42	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
ca-09	239.20	Or	Orita gravelly fine sandy loam	Moderate	High	0	Slight	Well Suited	3	>200	B	>200	None
ca-09	23.89	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
ca-09	701.27	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
cb-05	545.12	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
cb-05	591.47	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
cb-05	937.74	30	Torriorhents-Torrifluvents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
cb-10	651.72	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
cb-10	474.94	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
cb-10	28.92	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
cb-10	2,148.58	30	Torriorhents-Torrifluvents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
cb-10	133.65	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
cb-10	296.88	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
cb-10	48.92	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
cb-10	6.19	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
cb-10	9.64	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
cb-10	68.78	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
cb-10	8.68	Ic	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
cb-10	12.20	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
cb-10	140.55	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
cb-10	92.90	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
cb-10	131.23	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
cb-10	84.24	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
cb-10	58.41	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
d-01	8.16	245	Hyder-Rock outcrop complex, 5 to 45 percent slopes	Low	Moderate	0	Severe	N/A	7	30	D	>200	None
d-01	13.95	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
d-01	279.82	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
d-01	52.41	Aa	Agualt loam	Low	High	0	Slight	N/A	4L	>200	B	>200	None
d-01	1,011.04	AbA	Antho sandy loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	None
d-01	15.89	Ac	Antho sandy loam, saline-alkali	Moderate	High	0	Slight	N/A	3	>200	A	>200	None
d-01	63.94	AdA	Antho gravelly sandy loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	5	>200	A	>200	None
d-01	2,561.09	AGB	Antho-Carrizo complex, 0 to 3 percent	Low	Moderate	0	Slight	N/A	3	>200	A	>200	None
d-01	1,621.94	AL	Antho association	Low	Moderate	0	Slight	N/A	3	>200	A	>200	None
d-01	26.80	AM	Antho-Valencia association	Moderate	Moderate	0	Slight	N/A	3	>200	C	>200	None
d-01	3.60	Ao	Avondale clay loam	Low	Moderate	0	Slight	N/A	4L	>200	C	>200	None
d-01	2.24	Bs	Brios sandy loam	Low	High	0	Slight	N/A	3	>200	A	>200	Occasional
d-01	3.62	Cb	Carrizo gravelly sandy loam	Low	Moderate	0	Slight	N/A	5	>200	A	>200	Occasional
d-01	465.61	Ch	Casa Grande loam	High	High	0	Slight	N/A	4L	>200	C	>200	None
d-01	132.28	Cm	Casa Grande-Laveen complex, alkali	High	High	0	Slight	N/A	4L	>200	C	>200	None
d-01	79.71	Co	Cherioni-Rock outcrop complex	Moderate	Moderate	0	Moderate	N/A	6	15	D	>200	None
d-01	170.86	CV	Coolidge-Laveen association	Moderate	Moderate	0	Slight	N/A	3	>200	B	>200	None
d-01	20.38	Dn	Dune land	Not Rated	Not rated	0	Not rated	N/A	Not rated	>200	Not rated	>200	None
d-01	1,093.77	Es	Estrella loam	Moderate	Moderate	0	Slight	N/A	6	>200	C	>200	Rare
d-01	210.03	Et	Estrella loam, saline-alkali	High	High	0	Slight	N/A	6	>200	C	>200	None
d-01	949.05	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
d-01	4.97	Gf	Gilman fine sandy loam, saline-alkali	High	High	0	Slight	N/A	3	>200	B	>200	None
d-01	5,009.60	GgA	Gilman loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	4L	>200	B	>200	None
d-01	120.28	Gh	Gilman loam, saline-alkali	High	High	0	Slight	N/A	4L	>200	B	>200	None
d-01	1,138.08	GM	Gilman-Antho association	Low	Moderate	0	Slight	N/A	4L	>200	B	>200	None
d-01	528.49	GN	Gilman-Laveen association	Low	Moderate	0	Slight	N/A	4L	>200	B	>200	None
d-01	100.00	Gr	Glenbar loam, 0 to 1 percent slopes	Moderate	Moderate	0	Slight	N/A	6	>200	C	>200	Occasional
d-01	36.62	Gt	Glenbar clay loam, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	4L	>200	C	>200	Occasional
d-01	312.26	GWD	Gunsight-Pinal complex, 1 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	5	>200	B	>200	None
d-01	13.90	GxA	Gunsight-Rillito complex, 0 to 1 percent slopes	Moderate	Moderate	0	Moderate	N/A	5	>200	B	>200	None
d-01	951.88	GYD	Gunsight-Rillito complex, 0 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	5	>200	B	>200	None
d-01	1,608.96	HLC	Harqua-Gunsight complex, 0 to 5 percent slopes	High	High	0	Slight	N/A	5	>200	C	>200	None
d-01	361.72	Lb	Laveen sandy loam	Moderate	Moderate	0	Slight	N/A	3	>200	B	>200	None
d-01	1,364.24	LcA	Laveen loam, 0 to 1 percent slopes	Moderate	Moderate	0	Slight	N/A	4L	>200	B	>200	None
d-01	13.71	Ld	Laveen loam, saline-alkali	Moderate	High	0	Slight	N/A	4L	>200	B	>200	None
d-01	106.73	Ma	Maripo sandy loam	Low	Moderate	0	Slight	N/A	3	>200	A	>200	None
d-01	11.84	Mo	Mohall sandy loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
d-01	200.56	Mp	Mohall loam MLRA 40	High	High	0	Slight	N/A	4L	>200	C	>200	None
d-01	19.95	PeA	Perryville gravelly loam, 0 to 1 percent slopes	Moderate	Moderate	0	Slight	N/A	5	>200	B	>200	None
d-01	13.46	PRB	Perryville-Rillito complex, 0 to 3 percent slopes	Moderate	Moderate	0	Slight	N/A	4L	>200	B	>200	None
d-01	42.40	PT	Pinal gravelly loam	Moderate	Moderate	0	Slight	N/A	5	30	D	>200	None
d-01	1.72	PYD	Pinamt-Tremant complex, 1 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	8	>200	C	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
d-01	238.97	RbA	Rillito loam, 0 to 1 percent slopes	Moderate	Moderate	0	Slight	N/A	4L	>200	B	>200	None
d-01	262.58	RhB	Rillito-Harqua complex, 1 to 3 percent slopes	High	High	0	Slight	N/A	5	>200	C	>200	None
d-01	524.16	RS	Rock outcrop-Cherioni complex	Not rated	Not rated	0	Not rated	N/A	Not rated	>200		>200	None
d-01	1,892.39	Tu	Tucson loam	Moderate	Moderate	0	Slight	N/A	4L	>200	C	>200	None
d-01	97.55	Tw	Tucson clay loam	Moderate	Moderate	0	Slight	N/A	4L	>200	C	>200	None
d-01	152.28	Va	Valencia sandy loam	Moderate	Moderate	0	Slight	N/A	3	>200	C	>200	None
d-01	6.01	Vb	Valencia sandy loam, saline-alkali	High	High	0	Slight	N/A	3	>200	C	>200	None
d-01	100.97	Vg	Vint loamy fine sand	Moderate	Moderate	0	Slight	N/A	2	>200	A	>200	None
d-01	10.98	Vh	Vint fine sandy loam	Moderate	Moderate	0	Slight	N/A	3	>200	A	>200	None
i-01	1.15	200	Gunsight family-Pinamt complex, 1 to 15 percent slopes	Low	Moderate	0	Moderate	N/A	6	>200	A	>200	None
i-01	77.07	205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	Rare
i-01	3.07	208	Pahaka fine sandy loam, 0 to 1 percent slopes	Moderate	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
i-01	1,060.63	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
i-01	1,301.40	325	Dateland-Denure complex, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Rare
i-01	30.16	330	Gunsight family-Rillito complex, 1 to 10 percent slopes	Low	Moderate	0	Moderate	N/A	5	>200	A	>200	None
i-01	175.58	340	Mohall-Contine complex, 1 to 5 percent slopes	Moderate	Moderate	0	Moderate	N/A	3	>200	C	>200	Rare
i-01	2,851.09	345	Gilman silt loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	5	>200	B	>200	Rare
i-01	5,718.77	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
i-01	347.50	430	Water association	Not rated	Not rated	0	Not rated	N/A	Not rated	>200		>200	None
i-02	4.62	205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
i-02	895.90	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
i-03	2,124.31	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
i-03	5,608.46	325	Dateland-Denure complex, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Rare
i-03	790.87	330	Gunsight family-Rillito complex, 1 to 10 percent slopes	Low	Moderate	0	Moderate	N/A	5	>200	A	>200	None
i-03	1,562.10	340	Mohall-Contine complex, 1 to 5 percent slopes	Moderate	Moderate	0	Moderate	N/A	3	>200	C	>200	Rare
i-07	712.72	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
i-07	141.57	8	Gadsden clay	Moderate	High	0	Slight	Not rated	4	>200	C	>200	None
i-07	206.13	13	Indio silt loam, 0 to 1 percent slopes	Moderate	High	0	Slight	Not rated	5	>200	B	>200	Occasional
i-07	79.36	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
i-07	1,337.13	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
i-07	39.38	23	Pits, gravel	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
i-07	29.81	25	Rositas sand	Moderate	Moderate	0	Moderate	Not rated	1	>200	A	>200	None
i-07	1,516.59	30	Torrifluents-Torriorhents-Torrifluents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
i-07	68.85	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
i-07	31.76	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
i-07	3.67	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
i-07	12.73	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
i-07	2.89	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
i-07	0.90	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
i-07	95.40	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
i-07	74.09	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
i-08s	293.41	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
i-08s	166.96	8	Gadsden clay	Moderate	High	0	Slight	Not rated	4	>200	C	>200	None
i-08s	434.59	13	Indio silt loam, 0 to 1 percent slopes	Moderate	High	0	Slight	Not rated	5	>200	B	>200	Occasional
i-08s	299.86	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
i-08s	31.47	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
i-08s	29.82	23	Pits, gravel	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
i-08s	1,106.54	30	Torrorthents-Torrifluvents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
i-08s	70.48	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
i-08s	16.78	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
i-08s	36.85	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
i-08s	159.21	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
i-08s	30.52	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
i-08s	6.36	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
i-08s	32.45	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
i-08s	8.64	Ib	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
i-08s	54.52	Ic	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
i-08s	28.27	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
i-08s	87.64	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
i-08s	27.06	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
i-08s	62.29	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
i-08s	29.65	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
i-08s	372.81	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
i-08s	48.02	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
i-08s	163.87	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-01	134.80	4	Antho-Carrizo-Maripo complex, low precipitation	Low	Moderate	0	Slight	N/A	3	>200	A	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
p-01	762.71	18	Cherioni-Rock outcrop complex, 5 to 60 percent slopes	Moderate	Moderate	0	Severe	N/A	8	25	D	>200	None
p-01	112.75	19	Chuckawalla-Gunsight complex, 1 to 8 percent slopes	High	High	0	Slight	N/A	8	>200	B	>200	None
p-01	5,903.61	20	Chuckawalla-Gunsight complex, low precipitation, 1 to 8 percent slopes	High	High	0	Slight	N/A	8	>200	B	>200	None
p-01	3,423.45	30	Denure-Momoli-Carrizo complex, low precipitation	Moderate	Moderate	0	Slight	N/A	5	>200	A	>200	None
p-01	239.13	50	Estrella loams	Low	Moderate	0	Slight	N/A	5	>200	C	>200	None
p-01	398.56	52	Gachado-Lomitas-Rock outcrop complex, 7 to 55 percent slopes	Low	Low	0	Severe	N/A	8	46	D	>200	None
p-01	33.70	56	Gilman loams, low precipitation	Low	Moderate	0	Slight	N/A	6	>200	C	>200	None
p-01	3,875.33	59	Gilman-Momoli-Denure complex, low precipitation	Moderate	Moderate	0	Slight	N/A	5	>200	A	>200	None
p-01	527.52	68	Gunsight-Cipriano complex, 1 to 7 percent slopes	Moderate	High	0	Slight	N/A	6	>200	B	>200	None
p-01	25.27	70	Gunsight-Rillito complex, 1 to 25 percent slopes	Moderate	High	0	Severe	N/A	6	>200	B	>200	None
p-01	91.67	71	Gunsight-Rillito complex, low precipitation, 1 to 40 percent slopes	Moderate	High	0	Severe	N/A	6	>200	B	>200	None
p-01	137.57	91	Momoli-Carrizo complex	Moderate	Moderate	0	Slight	N/A	6	>200	A	>200	None
p-01	3,977.43	92	Momoli-Carrizo complex, low precipitation	Moderate	Moderate	0	Slight	N/A	6	>200	A	>200	None
p-01	547.31	103	Rock outcrop-Gachado complex, 5 to 55 percent slopes	Not rated	Not rated	0	Not rated	N/A	Not rated	>200		>200	None
p-01	47.25	106	Sal-Cipriano complex, 1 to 10 percent slopes	High	High	0	Slight	N/A	8	51	C	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
p-01	951.79	107	Sal-Cipriano complex, low precipitation, 1 to 10 percent slopes	High	High	0	Slight	N/A	8	51	C	>200	None
p-01	74.81	114	Tremant gravelly loams, low precipitation	Moderate	Moderate	0	Slight	N/A	6	>200	C	>200	None
p-01	10.20	115	Tremant-Antho complex, 1 to 5 percent slopes	Moderate	Moderate	0	Slight	N/A	5	>200	C	>200	None
p-01	2.17	126	Water	Not rated		0	Not rated	N/A	Not rated	>200		>200	None
p-01	220.78	205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	Rare
p-01	17.66	208	Pahaka fine sandy loam, 0 to 1 percent slopes	Moderate	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
p-01	0.07	220	Momoli-Carrizo family complex, 1 to 5 percent slopes	Low	Moderate	0	Moderate	N/A	3	>200	A	>200	Rare
p-01	479.09	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
p-01	0.60	317											
p-01	2,919.32	325	Dateland-Denure complex, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Rare
p-01	8.99	340	Mohall-Contine complex, 1 to 5 percent slopes	Moderate	Moderate	0	Moderate	N/A	3	>200	C	>200	Rare
p-01	2,239.76	345	Gilman silt loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	5	>200	B	>200	Rare
p-01	41.72	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
p-01	351.04	430	Water association	Not rated	Not rated	0	Not rated	N/A	Not rated	>200		>200	None
p-01	2,082.58	AGB	Antho-Carrizo complex, 0 to 3 percent	Low	Moderate	0	Slight	N/A	3	>200	A	>200	None
p-01	10.84	AL	Antho association	Low	Moderate	0	Slight	N/A	3	>200	A	>200	None
p-01	16.45	AM	Antho-Valencia association	Moderate	Moderate	0	Slight	N/A	3	>200	C	>200	None
p-01	15.78	BPI	Borrow pit	Not Rated	Not Rated	0	Not rated	N/A	Not rated	>200		>200	None
p-01	266.23	Co	Cherioni-Rock outcrop complex	Moderate	Moderate	0	Moderate	N/A	6	15	D	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
p-01	1,426.92	GM	Gilman-Antho association	Low	Moderate	0	Slight	N/A	4L	>200	B	>200	None
p-01	14.82	GN	Gilman-Laveen association	Low	Moderate	0	Slight	N/A	4L	>200	B	>200	None
p-01	237.32	GWD	Gunsight-Pinal complex, 1 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	5	>200	B	>200	None
p-01	912.50	GYD	Gunsight-Rillito complex, 0 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	5	>200	B	>200	None
p-01	1,790.99	HLC	Harqua-Gunsight complex, 0 to 5 percent slopes	High	High	0	Slight	N/A	5	>200	C	>200	None
p-01	29.41	PT	Pinal gravelly loam	Moderate	Moderate	0	Slight	N/A	5	30	D	>200	None
p-01	3.20	PYD	Pinamt-Tremant complex, 1 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	8	>200	C	>200	None
p-01	28.10	RbA	Rillito loam, 0 to 1 percent slopes	Moderate	Moderate	0	Slight	N/A	4L	>200	B	>200	None
p-01	1,107.02	RS	Rock outcrop-Cherioni complex	Not rated	Not rated	0	Not rated	N/A	Not rated	>200		>200	None
p-02	72.42	205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	Rare
p-02	3.04	208	Pahaka fine sandy loam, 0 to 1 percent slopes	Moderate	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
p-02	868.47	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
p-02	141.54	325	Dateland-Denure complex, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Rare
p-02	8.99	340	Mohall-Contine complex, 1 to 5 percent slopes	Moderate	Moderate	0	Moderate	N/A	3	>200	C	>200	Rare
p-02	1,632.20	345	Gilman silt loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	5	>200	B	>200	Rare
p-02	50.80	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
p-02	416.04	430	Water association	Not rated	Not rated	0	Not rated	N/A	Not rated	>200		>200	None
p-03	8.16	245	Hyder-Rock outcrop complex, 5 to 45 percent slopes	Low	Moderate	0	Severe	N/A	7	30	D	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
p-03	989.85	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
p-03	117.91	325	Dateland-Denure complex, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Rare
p-03	804.33	345	Gilman silt loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	5	>200	B	>200	Rare
p-03	356.86	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
p-03	180.46	430	Water association	Not rated	Not rated	0	Not rated	N/A	Not rated	>200		>200	None
p-04	506.81	205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	Rare
p-04	8.16	245	Hyder-Rock outcrop complex, 5 to 45 percent slopes	Low	Moderate	0	Severe	N/A	7	30	D	>200	None
p-04	17.12	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
p-04	306.64	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
p-13	595.36	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
p-13	853.76	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
p-13	894.05	30	Torriorthents-Torrifluvents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-14	702.79	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
p-14	520.50	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
p-14	1,906.78	30	Torriorthents-Torrifluvents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-15e	857.84	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
p-15e	891.72	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
p-15e	238.95	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
p-15e	2,183.86	30	Torriorhents-Torrifluvents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-15e	140.64	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-15e	18.31	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
p-15e	443.85	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
p-15e	48.92	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-15e	0.10	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
p-15e	5.46	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
p-15e	114.16	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
p-15e	144.13	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
p-15e	373.75	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
p-15e	10.25	RrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
p-15e	69.46	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-15e	75.16	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-15w	96.31	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
p-15w	723.75	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
p-15w	73.84	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
p-15w	6.31	30	Torriorhents-Torrifluvents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-15w	91.17	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-15w	7.39	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
p-15w	163.06	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
p-15w	455.49	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
p-15w	1,693.15	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
p-15w	176.12	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-15w	499.12	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
p-15w	19.96	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
p-15w	805.55	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
p-15w	33.08	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
p-15w	831.89	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
p-15w	319.19	ld	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
p-15w	89.06	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
p-15w	1,962.36	md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
p-15w	194.31	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
p-15w	595.51	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
p-15w	318.73	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-15w	742.25	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
p-15w	110.08	RrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
p-15w	353.39	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-15w	2.52	RuA	Rositas silty clay loam, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	6	>200	C/D	0	Rare
p-15w	96.60	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-16	733.46	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
p-16	646.97	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
p-16	95.30	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
p-16	7.39	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
p-16	8.00	Ch	Chuckawalla very gravelly silt loam	High	High	0	Slight	Suited	7	>200	B	>200	None
p-16	245.75	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
p-16	484.59	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-16	73.16	DuD	Duneland	Not Rated	Not rated	0	Moderate	Poorly Suited	1	>200	A	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
p-16	527.06	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
p-16	233.19	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-16	543.34	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
p-16	79.42	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
p-16	598.30	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
p-16	21.08	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
p-16	605.20	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
p-16	96.52	ld	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
p-16	125.97	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
p-16	412.51	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
p-16	169.15	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
p-16	80.79	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
p-16	27.36	Og	Orita gravelly loamy sand	Moderate	High	0	Slight	Well Suited	2	>200	C	>200	None
p-16	94.07	Or	Orita gravelly fine sandy loam	Moderate	High	0	Slight	Well Suited	3	>200	B	>200	None
p-16	319.76	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
p-16	403.66	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-16	666.11	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
p-16	176.87	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
p-16	43.17	RrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
p-16	102.33	RsA	Rositas gravelly loamy sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	None
p-16	440.08	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-16	3.76	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
p-17	1,210.10	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
p-17	665.45	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
p-17	32.04	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
p-17	277.63	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
p-17	165.73	Ch	Chuckawalla very gravelly silt loam	High	High	0	Slight	Suited	7	>200	B	>200	None
p-17	0.92	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
p-17	0.50	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
p-17	28.72	DuD	Duneland	Not Rated	Not rated	0	Moderate	Poorly Suited	1	>200	A	>200	None
p-17	1.44	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
p-17	1.49	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
p-17	3.81	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
p-17	5.43	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
p-17	335.24	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
p-17	142.73	Og	Orita gravelly loamy sand	Moderate	High	0	Slight	Well Suited	2	>200	C	>200	None
p-17	449.24	Or	Orita gravelly fine sandy loam	Moderate	High	0	Slight	Well Suited	3	>200	B	>200	None
p-17	3.03	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
p-17	417.99	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
p-17	118.89	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
p-17	311.89	RsA	Rositas gravelly loamy sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	None
p-18	145.99	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
p-18	41.84	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
p-18	13.84	Ch	Chuckawalla very gravelly silt loam	High	High	0	Slight	Suited	7	>200	B	>200	None
p-18	69.79	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
p-18	147.89	Or	Orita gravelly fine sandy loam	Moderate	High	0	Slight	Well Suited	3	>200	B	>200	None
p-18	11.72	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
p-18	63.56	RsA	Rositas gravelly loamy sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	None
qn-02	19.44	350	Gunsight family-Cristobal complex, dry, 1 to 10 percent slopes	Low	Moderate	0	Moderate	N/A	8	>200	A	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
qn-02	59.01	385	Carrizo family very gravelly sandy loam, dry, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	6	>200	A	>200	Rare
qn-02	45.81	390	Carrizo family-Riverwash complex, dry, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	1	>200	A	>200	Frequent
qn-02	64.66	395	Cristobal family-Gunsight family complex, dry, 1 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	8	>200	C	>200	None
qn-02	213.68	400	Gilman-Carrizo family complex, dry, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Occasional
qn-02	225.67	405	Harqua-Casa Grande family complex, dry, 0 to 4 percent slopes	Moderate	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
qn-02	61.04	410	Gunsight family very gravelly sandy loam, dry, 1 to 15 percent slopes	Low	Moderate	0	Moderate	N/A	6	>200	A	>200	None
qs-01	193.17	350	Gunsight family-Cristobal complex, dry, 1 to 10 percent slopes	Low	Moderate	0	Moderate	N/A	8	>200	A	>200	None
qs-01	30.96	390	Carrizo family-Riverwash complex, dry, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	1	>200	A	>200	Frequent
qs-01	146.39	395	Cristobal family-Gunsight family complex, dry, 1 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	8	>200	C	>200	None
qs-01	145.70	400	Gilman-Carrizo family complex, dry, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Occasional
qs-01	361.74	410	Gunsight family very gravelly sandy loam, dry, 1 to 15 percent slopes	Low	Moderate	0	Moderate	N/A	6	>200	A	>200	None
qs-01	11.86	415	Rock outcrop-Laposa family-Hyder complex, dry, 3 to 45 percent slopes	Low	Moderate	0	Severe	N/A	8	>200	N/A	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
qs-02	732.75	350	Gunsight family-Cristobal complex, dry, 1 to 10 percent slopes	Low	Moderate	0	Moderate	N/A	8	>200	A	>200	None
qs-02	20.14	385	Carrizo family very gravelly sandy loam, dry, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	6	>200	A	>200	Rare
qs-02	31.03	390	Carrizo family-Riverwash complex, dry, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	1	>200	A	>200	Frequent
qs-02	32.67	395	Cristobal family-Gunsight family complex, dry, 1 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	8	>200	C	>200	None
qs-02	134.70	400	Gilman-Carrizo family complex, dry, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Occasional
qs-02	305.53	410	Gunsight family very gravelly sandy loam, dry, 1 to 15 percent slopes	Low	Moderate	0	Moderate	N/A	6	>200	A	>200	None
qs-02	13.91	415	Rock outcrop-Laposa family-Hyder complex, dry, 3 to 45 percent slopes	Low	Moderate	0	Severe	N/A	8	>200	N/A	>200	None
x-01	803.42	205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	Rare
x-01	8.16	245	Hyder-Rock outcrop complex, 5 to 45 percent slopes	Low	Moderate	0	Severe	N/A	7	30	D	>200	None
x-01	2,704.08	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
x-01	412.91	325	Dateland-Denure complex, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Rare
x-01	1,260.62	345	Gilman silt loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	5	>200	B	>200	Rare
x-01	4,871.84	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
x-01	180.72	430	Water association	Not rated	Not rated	0	Not rated	N/A	Not rated	>200		>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
x-02	828.09	205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	Rare
x-02	8.16	245	Hyder-Rock outcrop complex, 5 to 45 percent slopes	Low	Moderate	0	Severe	N/A	7	30	D	>200	None
x-02	1,344.05	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
x-02	94.74	345	Gilman silt loam, 0 to 1 percent slopes	Low	Moderate	0	Slight	N/A	5	>200	B	>200	Rare
x-02	4,450.06	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
x-03	35.28	205	Denure-Pahaka-Growler complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	A	>200	Rare
x-03	53.43	312	Gadsden-Glenbar complex, 0 to 2 percent slopes	Moderate	High	0	Slight	N/A	4	>200	D	>200	Occasional
x-03	72.67	355	Wintersburg-Laveen complex, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	C	>200	Rare
x-04	240.91	325	Dateland-Denure complex, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Rare
x-07	193.40	350	Gunsight family-Cristobal complex, dry, 1 to 10 percent slopes	Low	Moderate	0	Moderate	N/A	8	>200	A	>200	None
x-07	30.97	390	Carrizo family-Riverwash complex, dry, 0 to 2 percent slopes	Low	Moderate	0	Slight	N/A	1	>200	A	>200	Frequent
x-07	5.27	395	Cristobal family-Gunsight family complex, dry, 1 to 10 percent slopes	Moderate	Moderate	0	Moderate	N/A	8	>200	C	>200	None
x-07	134.27	400	Gilman-Carrizo family complex, dry, 0 to 3 percent slopes	Low	Moderate	0	Slight	N/A	3	>200	B	>200	Occasional
x-07	305.74	410	Gunsight family very gravelly sandy loam, dry, 1 to 15 percent slopes	Low	Moderate	0	Moderate	N/A	6	>200	A	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
x-07	11.86	415	Rock outcrop-Laposa family-Hyder complex, dry, 3 to 45 percent slopes	Low	Moderate	0	Severe	N/A	8	>200	N/A	>200	None
x-09	59.61	13	Indio silt loam, 0 to 1 percent slopes	Moderate	High	0	Slight	Not rated	5	>200	B	>200	Occasional
x-09	211.42	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
x-09	11.27	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
x-09	27.92	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
x-09	108.87	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-09	274.28	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-09	208.10	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-09	50.68	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-09	16.91	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
x-09	150.94	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
x-09	13.12	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
x-09	141.49	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
x-09	48.28	ld	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
x-09	38.36	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-09	211.47	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
x-09	191.00	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
x-09	65.52	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-09	130.43	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-09	405.02	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
x-09	157.78	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-09	157.72	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
x-10	50.46	13	Indio silt loam, 0 to 1 percent slopes	Moderate	High	0	Slight	Not rated	5	>200	B	>200	Occasional
x-10	334.73	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
x-10	16.70	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
x-10	59.78	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
x-10	135.16	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-10	465.98	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-10	234.63	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-10	100.25	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-10	30.16	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
x-10	232.13	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
x-10	13.12	Ib	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
x-10	95.08	Ic	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
x-10	65.15	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
x-10	85.61	Ie	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-10	400.10	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
x-10	212.05	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
x-10	137.17	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-10	120.54	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-10	593.00	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
x-10	194.40	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-10	14.28	RuA	Rositas silty clay loam, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	6	>200	C/D	0	Rare
x-10	192.55	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
x-11	151.45	3	Carrizo very gravelly sand	Moderate	High	0	Slight	Not rated	2	>200	A	>200	Rare
x-11	672.86	16	Indio-Lagunita-Ripley complex	Moderate	High	0	Slight	Not rated	4L	>200	B	>200	Rare
x-11	31.03	21	Ligurta-Cristobal complex, 2 to 6 percent slopes	High	High	0	Slight	Not rated	6	>200	C	>200	None
x-11	341.30	30	Torriorhents-Torrifluents complex, 1 to 50 percent slopes	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
x-11	214.92	35	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
x-11	53.21	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
x-11	71.48	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-11	736.66	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-11	124.47	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-11	87.79	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-11	18.78	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
x-11	178.28	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
x-11	42.26	Ic	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
x-11	81.89	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
x-11	53.13	Ie	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-11	416.41	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
x-11	106.97	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
x-11	229.63	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-11	53.00	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-11	582.93	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
x-11	146.97	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-11	33.76	RuA	Rositas silty clay loam, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	6	>200	C/D	0	Rare
x-11	150.74	W	Water	Not rated	Not rated	0	Not rated	Not rated	Not rated	>200	Not rated	>200	None
x-12	1.23	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
x-12	18.06	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
x-12	6.46	Ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
x-12	6.80	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
x-12	230.78	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-12	88.82	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-12	296.24	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-12	177.38	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-12	893.31	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
x-12	0.55	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
x-12	1,172.20	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
x-12	15.87	ld	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
x-12	43.86	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-12	73.53	md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
x-12	92.99	me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
x-12	101.11	rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-12	193.07	rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-12	151.31	roA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
x-12	11.73	roB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
x-12	28.09	rrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
x-12	230.02	rtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-13	10.82	ce	Carrizo gravelly sand	Moderate	High	0	Slight	Poorly Suited	1	>200	A	>200	Rare
x-13	9.53	ch	Chuckawalla very gravelly silt loam	High	High	0	Slight	Suited	7	>200	B	>200	None
x-13	42.93	co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
x-13	504.64	cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-13	240.83	gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-13	360.31	gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-13	290.69	ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-13	7.65	hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
x-13	745.17	hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
x-13	1.08	lb	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
x-13	921.92	lc	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
x-13	43.92	ld	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
x-13	67.98	le	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-13	229.72	md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
x-13	77.12	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
x-13	248.64	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-13	306.03	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-13	295.78	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
x-13	10.06	RrA	Rositas fine sand, wet, 0 to 2 percent slopes	High	High	5	Slight	Poorly Suited	2	>200	A/D	0	None
x-13	317.64	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-15	136.16	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
x-15	1,124.76	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
x-15	41.60	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
x-15	37.06	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
x-15	7.37	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-15	165.75	DuD	Duneland	Not Rated	Not rated	0	Moderate	Poorly Suited	1	>200	A	>200	None
x-15	23.40	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-15	59.12	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-15	34.93	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-15	0.02	Hb	Holtville fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	C	>200	Rare
x-15	81.24	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
x-15	18.17	Ib	Imperial fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	D	>200	Rare
x-15	112.05	Ic	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
x-15	3.99	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
x-15	9.12	Ie	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-15	159.61	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
x-15	9.80	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
x-15	6.77	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
x-15	47.28	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-15	4.40	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-15	1,095.84	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
x-15	757.17	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
x-15	214.18	RsA	Rositas gravelly loamy sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	None
x-15	13.51	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-16	1,058.28	Ac	Aco gravelly loamy sand	Moderate	Moderate	0	Slight	Well Suited	2	>200	A	>200	None
x-16	1,775.33	Af	Aco sandy loam	Moderate	Moderate	0	Slight	Well Suited	3	>200	A	>200	None
x-16	100.27	BaG	Badland			0	Not rated	Poorly Suited	Not rated	0	D	>200	None
x-16	30.30	Co	Cibola fine sandy loam	High	High	0	Slight	Poorly Suited	3	>200	C	>200	Rare
x-16	13.12	Cs	Cibola silty clay loam	High	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-16	141.69	DuD	Duneland	Not Rated	Not rated	0	Moderate	Poorly Suited	1	>200	A	>200	None
x-16	35.13	Gb	Gilman fine sandy loam	Moderate	Moderate	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-16	23.86	Gc	Gilman silty clay loam	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-16	62.56	Ge	Glenbar silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-16	15.15	Hc	Holtville silty clay	Moderate	High	0	Slight	Poorly Suited	4	>200	C	>200	Rare
x-16	9.99	Ic	Imperial silty clay	High	High	0	Slight	Poorly Suited	4	>200	D	>200	Rare
x-16	14.76	Id	Indio very fine sandy loam	Moderate	High	0	Slight	Suited	3	>200	B	>200	Rare
x-16	3.88	Ie	Indio silty clay loam	Moderate	High	0	Slight	Suited	6	>200	C	>200	Rare
x-16	65.31	Md	Meloland fine sandy loam	High	High	3	Slight	Poorly Suited	3	>200	C/D	0	Rare
x-16	5.81	Me	Meloland silty clay loam	Moderate	High	0	Slight	Poorly Suited	7	>200	C/D	0	Rare
x-16	80.79	Oc	Orita fine sand	Moderate	High	0	Slight	Well Suited	1	>200	C	>200	None
x-16	21.38	Og	Orita gravelly loamy sand	Moderate	High	0	Slight	Well Suited	2	>200	C	>200	None
x-16	92.67	Or	Orita gravelly fine sandy loam	Moderate	High	0	Slight	Well Suited	3	>200	B	>200	None
x-16	45.03	Rb	Ripley very fine sandy loam	Moderate	High	0	Slight	Poorly Suited	3	>200	B	>200	Rare
x-16	3.72	Rc	Ripley silty clay loam	Moderate	High	0	Slight	Poorly Suited	6	>200	C	>200	Rare
x-16	645.41	RoA	Rositas fine sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	Rare
x-16	511.46	RoB	Rositas fine sand, 2 to 9 percent slopes	Moderate	Moderate	0	Moderate	Poorly Suited	1	>200	A	>200	None
x-16	102.33	RsA	Rositas gravelly loamy sand, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	2	>200	A	>200	None

TABLE 3A-2 PROPERTIES BY ROUTE SEGMENT

SEGMENT	ACRES	MAP SYMBOL	SOIL MAP UNIT	SUITABILITIES AND LIMITATIONS RATINGS					SOIL PROPERTIES AND QUALITY RATINGS				
				BUILDING SITE DEVELOPMENT		LAND CLASSIFICATION	LAND MANAGEMENT	WILDLIFE MANAGEMENT	SOIL EROSION FACTORS	SOIL QUALITIES AND FEATURES		WATER FEATURES	
				CORROSION OF CONCRETE	CORROSION OF STEEL	HYDRIC SOILS	EROSION HAZARD (ROAD, TRAIL)	DESERT TORTOISE (CA ONLY)	WIND ERODIBILITY GROUP	DEPTH TO ANY SOIL RESTRICTIVE LAYER	HYDROLOGICAL SOIL GROUP	DEPTH TO WATER TABLE	FLOODING FREQUENCY CLASS
x-16	15.16	RtA	Rositas silty clay loam, 0 to 2 percent slopes	Moderate	Moderate	0	Slight	Poorly Suited	6	>200	C	>200	Rare

			TABLE 3A-3 -- SSURGO SOIL DATA DESCRIPTIONS
	BUILDING SITE DEVELOPMENT	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."
		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."
	CONSTRUCTION MATERIALS	GRAVEL SOURCE	<p>Gravel consists of natural aggregates (2 to 75 millimeters in diameter) suitable for commercial use with a minimum of processing. It is used in many kinds of construction. Specifications for each use vary widely. Only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.</p> <p>The properties used to evaluate the soil as a source of gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains gravel, the soil is considered a likely source regardless of thickness. The assumption is that the gravel layer below the depth of observation exceeds the minimum thickness. The ratings are for the whole soil, from the surface to a depth of about 6 feet. Coarse fragments of soft bedrock, such as shale and siltstone, are not considered to be gravel.</p> <p>The soils are rated "good," "fair," or "poor" as potential sources of gravel. A rating of "good" or "fair" means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.</p> <p>The map unit 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 listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.</p>
		SAND SOURCE	<p>Sand is a natural aggregate (0.05 millimeter to 2 millimeters in diameter) suitable for commercial use with a minimum of processing. It is used in many kinds of construction. Specifications for each use vary widely. Only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.</p> <p>The properties used to evaluate the soil as a source of sand are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand, the soil is considered a likely source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness. The ratings are for the whole soil, from the surface to a depth of about 6 feet.</p> <p>The soils are rated "good," "fair," or "poor" as potential sources of sand. A rating of "good" or "fair" means that sand is likely to be in or below the soil. The bottom layer and the thickest layer of the soil are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand. The number 0.00 indicates that the layer is a "poor source." The number 1.00 indicates that the layer is a "good source." A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.</p> <p>The map unit 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 listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.</p> <p>Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, 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</p>

			TABLE 3A-3 -- SSURGO SOIL DATA DESCRIPTIONS
SUITABILITIES AND LIMITATIONS RATINGS	LAND CLASSIFICATION	HYDRIC SOILS	<p>This rating indicates the percentage 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 rated based on its respective components and the percentage of each component within the map unit.</p> <p>The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.</p> <p>In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.</p> <p>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.</p> <p>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).</p> <p>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).</p> <p>References:</p> <p>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.</p>
	LAND MANAGEMENT	EROSION HAZARD (ROAD, TRAIL)	<p>The ratings in this interpretation indicate the hazard of soil loss from unsurfaced roads and trails. The ratings are based on soil erosion factor K, slope, and content of rock fragments.</p> <p>The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," or "severe." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and "severe" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.</p> <p>Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).</p> <p>The map unit 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 listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.</p> <p>Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by</p>

			TABLE 3A-3 -- SSURGO SOIL DATA DESCRIPTIONS
	WILDLIFE MANAGEMENT	DESERT TORTOISE (CA ONLY)	<p>This interpretation gives information about the soils as potential habitat for the desert tortoise. It is intended to be used only in those soil survey areas that have the potential for desert tortoise habitat. The soils are rated according to their suitability for burrowing by desert tortoises. Burrows are considered a necessary part of the habitat.</p> <p>This interpretation is intended to provide guidelines in the identification and selection of sites that have the best potential for preserving, maintaining, or increasing local populations of the desert tortoise. It is of a general nature. It is designed to be used in the planning process to identify areas of concern prior to the application of conservation practices. Based upon the wildlife objectives, these areas can be avoided or practices can be adjusted to minimize damage to the burrow habitat. The guide does not take into account climate or soil temperature, which may influence the presence or distribution patterns of a wildlife species. The presence or absence of a species is determined at the local level.</p> <p>The interpretation provides suitability ratings and identifies the dominant soil characteristics that influence the suitability of a site for burrowing by desert tortoises. This information allows the user to plan and develop alternatives in site selection by identifying the site that best meets the wildlife habitat requirements.</p> <p>Soils that are rated "well suited" have no restrictions and are favorable for burrowing by desert tortoises. Colonization and population densities may be above average if other habitat factors are not limiting. A rating of "suited" indicates that the soil is suitable for burrowing by desert tortoises and that some restrictive features may limit the use of the habitat. Colonization and population densities may be average if the other habitat requirements are met. A rating of "poorly suited" indicates that the soil characteristics may limit establishment, maintenance, or use of the soil by burrowing species. Colonization and population densities may be restricted by the limiting factors even though all the other species habitat requirements are met.</p> <p>The final identification and selection of a site for burrowing by desert tortoises are determined by the limitations of the soils that influence excavation, maintenance, and preservation of the burrows. This interpretation identifies the soil-related restricting features that have the most significant effects on the habitat.</p> <p>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.</p>
	SOIL CHEMICAL PROPERTIES	CALCIUM CARBONATE	<p>Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil.</p> <p>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.</p>
		GYPSUM	<p>The content of gypsum is the percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils high in content of gypsum, such as those with more than 10 percent gypsum, may collapse if the gypsum is removed by percolating water. Gypsum is corrosive to concrete.</p> <p>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.</p>
	SOIL EROSION FACTORS	WIND ERODIBILITY GROUP	<p>A wind erodibility group (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.</p>
		PERCENT CLAY	<p>Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.</p> <p>Most of the material is in one of three groups of clay minerals or a mixture of these clay minerals. The groups are kaolinite, smectite, and hydrous mica, the best known member of which is illite.</p> <p>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</p>
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TABLE 3A-3 -- SSURGO SOIL DATA DESCRIPTIONS			
SOIL PROPERTIES AND QUALITIES RATINGS	SOIL PHYSICAL PROPERTIES	PERCENT SAND	<p>Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In the database, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.</p> <p>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.</p>
		PERCENT SILT	<p>Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the database, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.</p> <p>The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.</p> <p>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.</p>
		SURFACE TEXTURE	<p>This displays the representative texture class and modifier of the surface horizon.</p> <p>Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."</p>
	SOIL QUALITIES AND FEATURES	DEPTH TO ANY SOIL RESTRICTIVE LAYER	<p>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.</p> <p>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. Units are in centimeters.</p> <p>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.</p>
		HYDROLOGICAL SOIL GROUP	<p>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.</p> <p>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:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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</p>

			TABLE 3A-3 -- SSURGO SOIL DATA DESCRIPTIONS
		UNIFIED SOIL CLASSIFICATION (SURFACE)	<p>The Unified soil classification system classifies mineral and organic mineral soils for engineering purposes on the basis of particle-size characteristics, liquid limit, and plasticity index. It identifies three major soil divisions: (i) coarse-grained soils having less than 50 percent, by weight, particles smaller than 0.074 mm in diameter; (ii) fine-grained soils having 50 percent or more, by weight, particles smaller than 0.074 mm in diameter; and (iii) highly organic soils that demonstrate certain organic characteristics. These divisions are further subdivided into a total of 15 basic soil groups. The major soil divisions and basic soil groups are determined on the basis of estimated or measured values for grain-size distribution and Atterberg limits. ASTM D 2487 shows the criteria chart used for classifying soil in the Unified system and the 15 basic soil groups of the system and the plasticity chart for the Unified system.</p> <p>The various groupings of this classification correlate in a general way with the engineering behavior of soils. This correlation provides a useful first step in any field or laboratory investigation for engineering purposes. It can serve to make some general interpretations relating to probable performance of the soil for engineering uses.</p> <p>For each soil horizon in the database one or more Unified soil classifications may be listed. One is marked as the representative or most commonly occurring. The representative</p>
		DEPTH TO WATER TABLE	<p>"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.</p> <p>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</p>
	WATER FEATURES	FLOODING FREQUENCY CLASS	<p>Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.</p> <p>Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent.</p> <p>"None" means that flooding is not probable. The chance of flooding is nearly 0 percent in any year. Flooding occurs less than once in 500 years.</p> <p>"Very rare" means that flooding is very unlikely but possible under extremely unusual weather conditions. The chance of flooding is less than 1 percent in any year.</p> <p>"Rare" means that flooding is unlikely but possible under unusual weather conditions. The chance of flooding is 1 to 5 percent in any year.</p> <p>"Occasional" means that flooding occurs infrequently under normal weather conditions. The chance of flooding is 5 to 50 percent in any year.</p> <p>"Frequent" means that flooding is likely to occur often under normal weather conditions. The chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year.</p>

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
ca-08	Rositas-Dune land-Carsitas (s1136)	59.74	The soil association consists of very deep, somewhat excessively drained soils formed in sandy eolian material or alluvium from granitoid and/or gneissic rocks. The soils are on dunes and sand sheets, alluvial fans, fan aprons, valley fills, dissected remnants of alluvial fans and in drainageways. Slope ranges from 0 to 30 percent.	1, 2, 6	0	Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Dune land: N/A Carsitas: Somewhat excessively drained; negligible to low runoff; high saturated hydraulic conductivity. Altered drainage may occur where irrigation or seepage has caused a seasonal water table at 2 to 5 feet. Torrential summer thundershowers occasionally produce enough runoff to flood the soil for brief periods
ca-08	Rositas-Orita-Carrizo-Aco (s1041)	1.44	The soil association consists of very deep, well drained to excessively drained soils formed in sandy eolian material, alluvium from mixed sources, and mixed igneous alluvium. The soils are on dunes and sand sheets, fan remnants and terraces, floodplains, fan piedmonts, and bolson floors. Slope ranges from 0 to 30 percent.	1-3, 5-6	0.14, 1.00	Low-Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Orita: The Orita soils are well drained. Runoff is very low to medium. Permeability is moderate Carrizo: Excessively drained; negligible to low runoff; high saturated hydraulic conductivity Aco: Well to somewhat excessively drained; permeability is moderately rapid. Runoff is mostly low, a few more sloping areas may have medium runoff
ca-08	Vaiva-Quilotosa-Hyder-Cipriano-Cherioni (s1141)	125.84	The soil association consists of very shallow and shallow, well drained to somewhat excessively drained soils formed in slope alluvium from granite and gneiss, and alluvium from rhyolite and related volcanic rocks. The soils are on hills and mountains, or fan terraces with slopes of 1 to 70 percent.	None available	0.5	Low-Moderate	Moderate	<ul style="list-style-type: none"> Vaiva: Well drained; medium to rapid runoff; moderate permeability Quilotosa: Somewhat excessively drained; medium to rapid runoff; moderately rapid permeability Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
ca-09	Rositas-Dune land-Carsitas (s1136)	2,406.32	The soil association consists of very deep, somewhat excessively drained soils formed in sandy eolian material or alluvium from granitoid and/or gneissic rocks. The soils are on dunes and sand sheets, alluvial fans, fan aprons, valley fills, dissected remnants of alluvial fans and in drainageways. Slope ranges from 0 to 30 percent.	1, 2, 6	0	Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Dune land: N/A Carsitas: Somewhat excessively drained; negligible to low runoff; high saturated hydraulic conductivity. Altered drainage may occur where irrigation or seepage has caused a seasonal water table at 2 to 5 feet. Torrential summer thundershowers occasionally produce enough runoff to flood the soil for brief periods
ca-09	Rositas-Orita-Carrizo-Aco (s1041)	3.10	The soil association consists of very deep, well drained to excessively drained soils formed in sandy eolian material, alluvium from mixed sources, and mixed igneous alluvium. The soils are on dunes and sand sheets, fan remnants and terraces, floodplains, fan piedmonts, and bolson floors. Slope ranges from 0 to 30 percent.	1-3, 5-6	0.14, 1.00	Low-Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Orita: The Orita soils are well drained. Runoff is very low to medium. Permeability is moderate Carrizo: Excessively drained; negligible to low runoff; high saturated hydraulic conductivity Aco: Well to somewhat excessively drained; permeability is moderately rapid. Runoff is mostly low, a few more sloping areas may have medium runoff
ca-09	Vaiva-Quilotosa-Hyder-Cipriano-Cherioni (s1141)	1,458.68	The soil association consists of very shallow and shallow, well drained to somewhat excessively drained soils formed in slope alluvium from granite and gneiss, and alluvium from rhyolite and related volcanic rocks. The soils are on hills and mountains, or fan terraces with slopes of 1 to 70 percent.	None available	0.5	Low-Moderate	Moderate	<ul style="list-style-type: none"> Vaiva: Well drained; medium to rapid runoff; moderate permeability Quilotosa: Somewhat excessively drained; medium to rapid runoff; moderately rapid permeability Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
cb-01	Ligurta-Gunsight-Cristobal (s290)	139.89	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
cb-01	Schenco-Rock outcrop-Laposa (s295)	5,951.19	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
cb-02	Ligurta-Gunsight-Cristobal (s290)	113.13	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
cb-02	Schenco-Rock outcrop Laposa (s295)	4,708.50	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
cb-03	Ligurta-Gunsight-Cristobal (s290)	1,153.74	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
cb-03	Schenco-Rock outcrop Laposa (s295)	6,255.36	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
cb-04	Ligurta-Gunsight-Cristobal (s290)	2,377.47	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
cb-04	Schenco-Rock outcrop Laposa (s295)	2,022.19	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
cb-05	Ligurta-Gunsight-Cristobal (s290)	5,615.81	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
cb-06	Ligurta-Gunsight-Cristobal (s290)	4,458.65	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
d-01	Hyder-Coolidge-Cipriano-Cherioni (s289)	9,284.06	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
d-01	Pahaka-Estrella-Antho (s299)	810.52	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
i-01	Pahaka-Estrella-Antho (s299)	1,111.27	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
i-02	Hyder-Coolidge-Cipriano-Cherioni (s289)	69.20	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
i-02	Pahaka-Estrella-Antho (s299)	5,003.45	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
I-02	Rillito-Gunsight-Denure-Chuckawalla (s288)	254.07	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed alluvium. Gunsight soils are strongly calcareous. The soils are formed in alluvium from mixed sources and are on fan terraces or stream terraces and relict basin floors. Slopes are 0 to 60 percent.	3, 4L, 5, 6, 8	1	Low-Moderate-High	Moderate-High	<ul style="list-style-type: none"> Rillito: Somewhat excessively drained; slow or medium runoff; moderate permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Denure: Well and somewhat excessively drained; runoff negligible to low; moderately rapid permeability Chuckawalla: Well drained; medium runoff; moderate permeability
I-03	Hyder-Coolidge-Cipriano-Cherioni (s289)	6,980.22	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
I-03	Pahaka-Estrella-Antho (s299)	9,005.22	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
I-03	Rillito-Gunsight-Denure-Chuckawalla (s288)	963.16	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed alluvium. Gunsight soils are strongly calcareous. The soils are formed in alluvium from mixed sources and are on fan terraces or stream terraces and relict basin floors. Slopes are 0 to 60 percent.	3, 4L, 5, 6, 8	1	Low-Moderate-High	Moderate-High	<ul style="list-style-type: none"> Rillito: Somewhat excessively drained; slow or medium runoff; moderate permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Denure: Well and somewhat excessively drained; runoff negligible to low; moderately rapid permeability Chuckawalla: Well drained; medium runoff; moderate permeability
I-03	Rock outcrop-Quilotosa-Momoli (s293)	504.40	The soil association consists of very shallow and shallow to very deep, somewhat excessively drained to excessively drained soils that formed from granitic and metamorphic rocks or in fan alluvium and eolian deposits. The soils are on hills and mountains, stream terraces, and fan terraces and have slopes of 0 to 65 percent.	6	None available	Moderate	Moderate	<ul style="list-style-type: none"> Rock outcrop: N/A Quilotosa: Somewhat excessively drained; medium to rapid runoff; moderately rapid permeability Momoli: Somewhat excessively drained; slow to medium runoff; moderately rapid permeability
I-03	Valencia-Estrella-Cuerda (s300)	0.62	The soil association consists of very deep, well drained soils formed in recent alluvium and stratified mixed alluvium. The soils are on floodplains and alluvial fans and have slopes of 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low-Moderate	Moderate	<ul style="list-style-type: none"> Valencia: Well drained; slow runoff; moderately rapid permeability in the A and B horizons and moderately slow in the buried Bt horizons Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Cuerda: Well drained; slow runoff; moderate permeability; receives runoff from slopes above. Flooding is occasional, shallow and very brief. In undisturbed areas, the proximal end of alluvial fans flood more often than the distal end
I-04	Hyder-Coolidge-Cipriano-Cherioni (s289)	8,676.97	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
I-04	Ligurta-Gunsight-Cristobal (s290)	2,348.67	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
I-04	Rock outcrop-Lehmans-Gran (s316)	90.70	The soil association consists of very shallow and shallow, well drained soils formed in slope alluvium-colluvium from volcanic rock. The soils are on pediments, hill slopes, and mountain slopes and have slopes of 1 to 65 percent.	None available	None available	None available	None available	<ul style="list-style-type: none"> Rock outcrop: N/A Lehmans: Well drained; medium runoff; slow permeability Gran: Well drained; slow to medium runoff; moderately slow permeability
I-04	Schenco-Rock outcrop-Laposa (s295)	4,203.26	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
I-05	Ligurta-Gunsight-Cristobal (s290)	5,541.82	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
i-05	Schenco-Rock outcrop Laposa (s295)	121.44	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
i-06	Ligurta-Gunsight-Cristobal (s290)	4,462.83	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
i-06	Schenco-Rock outcrop Laposa (s295)	6,652.79	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
i-07	Ligurta-Gunsight-Cristobal (s290)	5,825.96	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
i-07	Schenco-Rock outcrop Laposa (s295)	100.57	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
in-01	Hyder-Coolidge-Cipriano-Cherioni (s289)	8,866.78	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
in-01	Ligurta-Gunsight-Cristobal (s290)	6,342.14	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
in-01	Schenco-Rock outcrop Laposa (s295)	4,358.13	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
p-02	Pahaka-Estrella-Antho (s299)	175.27	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
p-03	Hyder-Coolidge-Cipriano-Cherioni (s289)	1,783.96	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
p-03	Pahaka-Estrella-Antho (s299)	432.75	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
p-04	Hyder-Coolidge-Cipriano-Cherioni (s289)	6,309.47	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively-drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
p-04	Pahaka-Estrella-Antho (s299)	1,785.29	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
p-04	Valencia-Estrella-Cuerda (s300)	166.33	The soil association consists of very deep, well drained soils formed in recent alluvium and stratified mixed alluvium. The soils are on floodplains and alluvial fans and have slopes of 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low-Moderate	Moderate	<ul style="list-style-type: none"> Valencia: Well drained; slow runoff; moderately rapid permeability in the A and B horizons and moderately slow in the buried Bt horizons Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Cuerda: Well drained; slow runoff; moderate permeability; receives runoff from slopes above. Flooding is occasional, shallow and very brief. In undisturbed areas, the proximal end of alluvial fans flood more often than the distal end
p-05	Hyder-Coolidge-Cipriano-Cherioni (s289)	1,021.96	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively-drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
p-05	Pahaka-Estrella-Antho (s299)	2,870.21	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
p-05	Valencia-Estrella-Cuerda (s300)	641.95	The soil association consists of very deep, well drained soils formed in recent alluvium and stratified mixed alluvium. The soils are on floodplains and alluvial fans and have slopes of 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low-Moderate	Moderate	<ul style="list-style-type: none"> Valencia: Well drained; slow runoff; moderately rapid permeability in the A and B horizons and moderately slow in the buried Bt horizons Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Cuerda: Well drained; slow runoff; moderate permeability; receives runoff from slopes above. Flooding is occasional, shallow and very brief. In undisturbed areas, the proximal end of alluvial fans flood more often than the distal end
p-06	Hyder-Coolidge-Cipriano-Cherioni (s289)	16,776.95	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively-drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
p-06	Ligurta-Gunsight-Cristobal (s290)	4,680.86	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
p-06	Pahaka-Estrella-Antho (s299)	9,083.93	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
p-06	Rillito-Gunsight-Denure-Chuckawalla (s288)	7,928.76	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed alluvium. Gunsight soils are strongly calcareous. The soils are formed in alluvium from mixed sources and are on fan terraces or stream terraces and relict basin floors. Slopes are 0 to 60 percent.	3, 4L, 5, 6, 8	1	Low-Moderate-High	Moderate-High	<ul style="list-style-type: none"> Rillito: Somewhat excessively drained; slow or medium runoff; moderate permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Denure: Well and somewhat excessively drained; runoff negligible to low; moderately rapid permeability Chuckawalla: Well drained; medium runoff; moderate permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
p-06	Rock outcrop-Lehmans-Gran (s316)	4,733.99	The soil association consists of very shallow and shallow, well drained soils formed in slope alluvium-colluvium from volcanic rock. The soils are on pediments, hill slopes, and mountain slopes and have slopes of 1 to 65 percent.	None available	None available	None available	None available	<ul style="list-style-type: none"> Rock outcrop: N/A Lehmans: Well drained; medium runoff; slow permeability Gran: Well drained; slow to medium runoff; moderately slow permeability
p-06	Schenco-Rock outcrop-Laposa (s295)	574.19	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
p-06	Valencia-Estrella-Cuerda (s300)	3,908.28	The soil association consists of very deep, well drained soils formed in recent alluvium and stratified mixed alluvium. The soils are on floodplains and alluvial fans and have slopes of 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low-Moderate	Moderate	<ul style="list-style-type: none"> Valencia: Well drained; slow runoff; moderately rapid permeability in the A and B horizons and moderately slow in the buried Bt horizons Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Cuerda: Well drained; slow runoff; moderate permeability; receives runoff from slopes above. Flooding is occasional, shallow and very brief. In undisturbed areas, the proximal end of alluvial fans flood more often than the distal end
p-07	Ligurta-Gunsight-Cristobal (s290)	4,597.93	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
p-08	Ligurta-Gunsight-Cristobal (s290)	2,868.30	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
p-09	Ligurta-Gunsight-Cristobal (s290)	7,541.83	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
p-09	Schenco-Rock outcrop-Laposa (s295)	3,295.97	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
p-10	Ligurta-Gunsight-Cristobal (s290)	26.77	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
p-10	Schenco-Rock outcrop-Laposa (s295)	3,452.67	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
p-11	Ligurta-Gunsight-Cristobal (s290)	1,086.01	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
p-11	Schenco-Rock outcrop-Laposa (s295)	6,009.43	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
p-12	Ligurta-Gunsight-Cristobal (s290)	4,398.33	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
p-12	Schenco-Rock outcrop-Laposa (s295)	1,000.88	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
p-13	Ligurta-Gunsight-Cristobal (s290)	4,100.71	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
p-14	Ligurta-Gunsight-Cristobal (s290)	78.09	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
p-17	Rillito-Gunsight (s1140)	303.49	The soil association consists of very deep, somewhat excessively drained soils that formed in mixed alluvium. Gunsight soils are strongly calcareous. The soil association is on fan terraces or stream terraces. Slopes are predominantly 0 to 60 percent.	4L-6	0.5	Moderate	Moderate-High	<ul style="list-style-type: none"> Rillito: Somewhat excessively drained; slow or medium runoff; moderate permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability
p-17	Rositas-Dune land-Carsitas (s1136)	246.82	The soil association consists of very deep, somewhat excessively drained soils formed in sandy eolian material or alluvium from granitoid and/or gneissic rocks. The soils are on dunes and sand sheets, alluvial fans, fan aprons, valley fills, dissected remnants of alluvial fans and in drainageways. Slope ranges from 0 to 30 percent.	1, 2, 6	0	Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Dune land: N/A Carsitas: Somewhat excessively drained; negligible to low runoff; high saturated hydraulic conductivity. Altered drainage may occur where irrigation or seepage has caused a seasonal water table at 2 to 5 feet. Torrential summer thundershowers occasionally produce enough runoff to flood the soil for brief periods
p-17	Rositas-Orita-Carrizo-Aco (s1041)	1,140.38	The soil association consists of very deep, well drained to excessively drained soils formed in sandy eolian material, alluvium from mixed sources, and mixed igneous alluvium. The soils are on dunes and sand sheets, fan remnants and terraces, floodplains, fan piedmonts, and bolson floors. Slope ranges from 0 to 30 percent.	1-3, 5-6	0.14, 1.00	Low-Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Orita: The Orita soils are well drained. Runoff is very low to medium. Permeability is moderate Carrizo: Excessively drained; negligible to low runoff; high saturated hydraulic conductivity Aco: Well to somewhat excessively drained; permeability is moderately rapid. Runoff is mostly low, a few more sloping areas may have medium runoff
p-18	Rillito-Gunsight (s1140)	775.48	The soil association consists of very deep, somewhat excessively drained soils that formed in mixed alluvium. Gunsight soils are strongly calcareous. The soil association is on fan terraces or stream terraces. Slopes are predominantly 0 to 60 percent.	4L-6	0.5	Moderate	Moderate-High	<ul style="list-style-type: none"> Rillito: Somewhat excessively drained; slow or medium runoff; moderate permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability
p-18	Rositas-Dune land-Carsitas (s1136)	1,956.15	The soil association consists of very deep, somewhat excessively drained soils formed in sandy eolian material or alluvium from granitoid and/or gneissic rocks. The soils are on dunes and sand sheets, alluvial fans, fan aprons, valley fills, dissected remnants of alluvial fans and in drainageways. Slope ranges from 0 to 30 percent.	1, 2, 6	0	Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Dune land: N/A Carsitas: Somewhat excessively drained; negligible to low runoff; high saturated hydraulic conductivity. Altered drainage may occur where irrigation or seepage has caused a seasonal water table at 2 to 5 feet. Torrential summer thundershowers occasionally produce enough runoff to flood the soil for brief periods
p-18	Rositas-Orita-Carrizo-Aco (s1041)	1,275.81	The soil association consists of very deep, well drained to excessively drained soils formed in sandy eolian material, alluvium from mixed sources, and mixed igneous alluvium. The soils are on dunes and sand sheets, fan remnants and terraces, floodplains, fan piedmonts, and bolson floors. Slope ranges from 0 to 30 percent.	1-3, 5-6	0.14, 1.00	Low-Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Orita: The Orita soils are well drained. Runoff is very low to medium. Permeability is moderate Carrizo: Excessively drained; negligible to low runoff; high saturated hydraulic conductivity Aco: Well to somewhat excessively drained; permeability is moderately rapid. Runoff is mostly low, a few more sloping areas may have medium runoff
p-18	Vaiva-Quilotosa-Hyder-Cipriano-Cherioni (s1141)	349.53	The soil association consists of very shallow and shallow, well drained to somewhat excessively drained soils formed in slope alluvium from granite and gneiss, and alluvium from rhyolite and related volcanic rocks. The soils are on hills and mountains, or fan terraces with slopes of 1 to 70 percent.	None available	0.5	Low-Moderate	Moderate	<ul style="list-style-type: none"> Vaiva: Well drained; medium to rapid runoff; moderate permeability Quilotosa: Somewhat excessively drained; medium to rapid runoff; moderately rapid permeability Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
qn-01	Ligurta-Gunsight-Cristobal (s290)	2,771.43	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
qn-02	Ligurta-Gunsight-Cristobal (s290)	12,744.21	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
qn-02	Schenco-Rock outcrop-Laposa (s295)	2,212.58	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

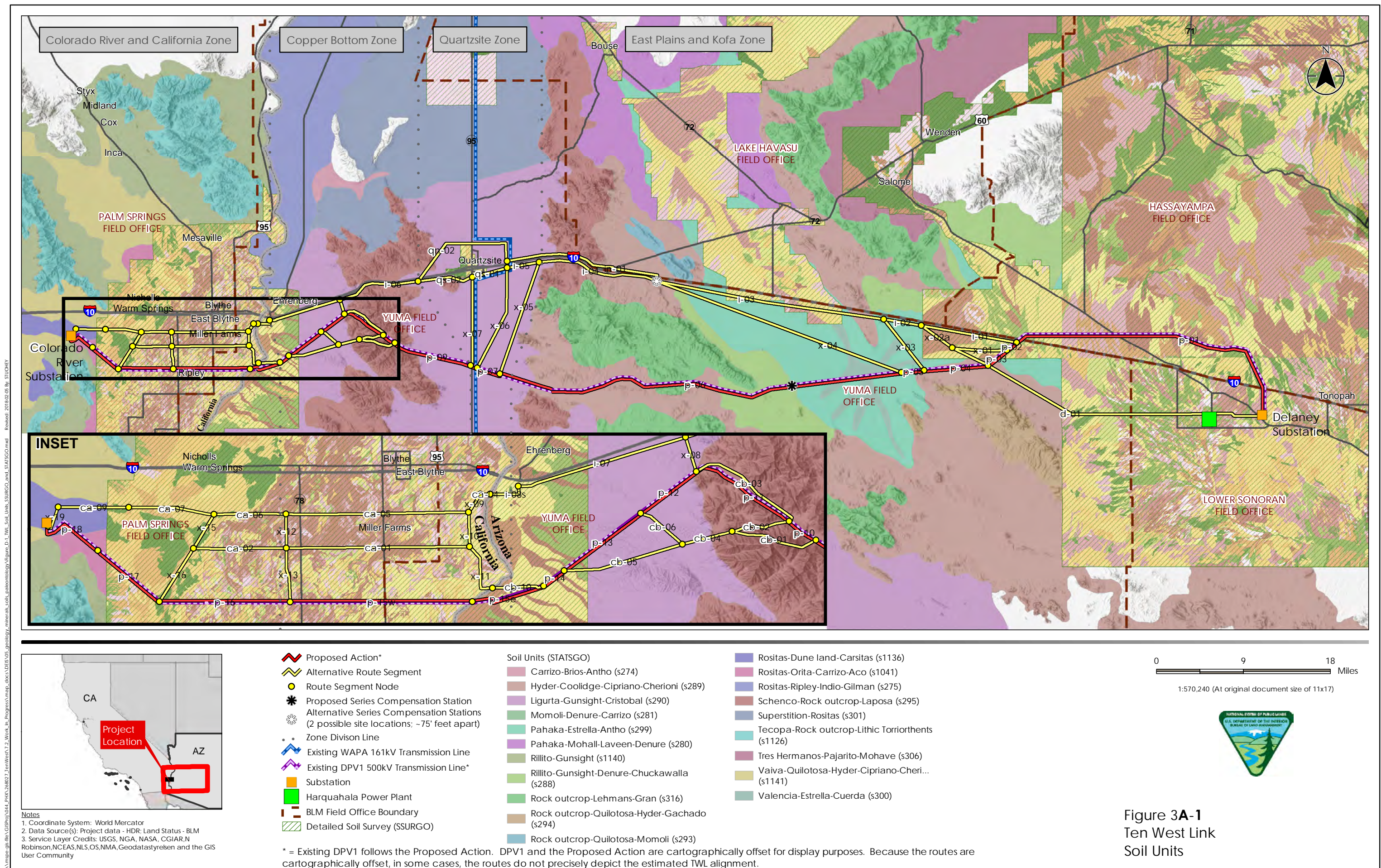
Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
qs-01	Ligurta-Gunsight-Cristobal (s290)	5,028.13	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
qs-02	Ligurta-Gunsight-Cristobal (s290)	5,429.85	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
qs-02	Schenco-Rock outcrop Laposa (s295)	1,481.55	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
x-01	Hyder-Coolidge-Cipriano-Cherioni (s289)	488.34	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
x-01	Pahaka-Estrella-Antho (s299)	1,406.83	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
x-02	Hyder-Coolidge-Cipriano-Cherioni (s289)	2,484.00	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
x-02	Pahaka-Estrella-Antho (s299)	1,421.78	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
x-03	Hyder-Coolidge-Cipriano-Cherioni (s289)	1,033.03	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
x-03	Pahaka-Estrella-Antho (s299)	6,798.15	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
x-03	Rillito-Gunsight-Denure-Chuckwalla (s288)	211.89	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed alluvium. Gunsight soils are strongly calcareous. The soils are formed in alluvium from mixed sources and are on fan terraces or stream terraces and relict basin floors. Slopes are 0 to 60 percent.	3, 4L, 5, 6, 8	1	Low-Moderate-High	Moderate-High	<ul style="list-style-type: none"> Rillito: Somewhat excessively drained; slow or medium runoff; moderate permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Denure: Well and somewhat excessively drained; runoff negligible to low; moderately rapid permeability Chuckwalla: Well drained; medium runoff; moderate permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

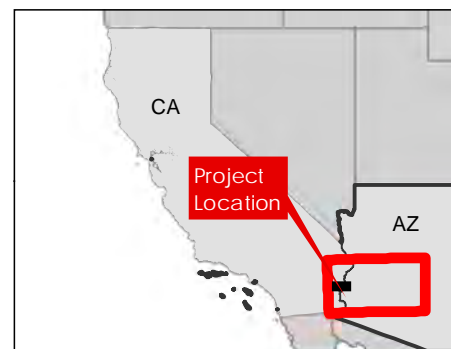
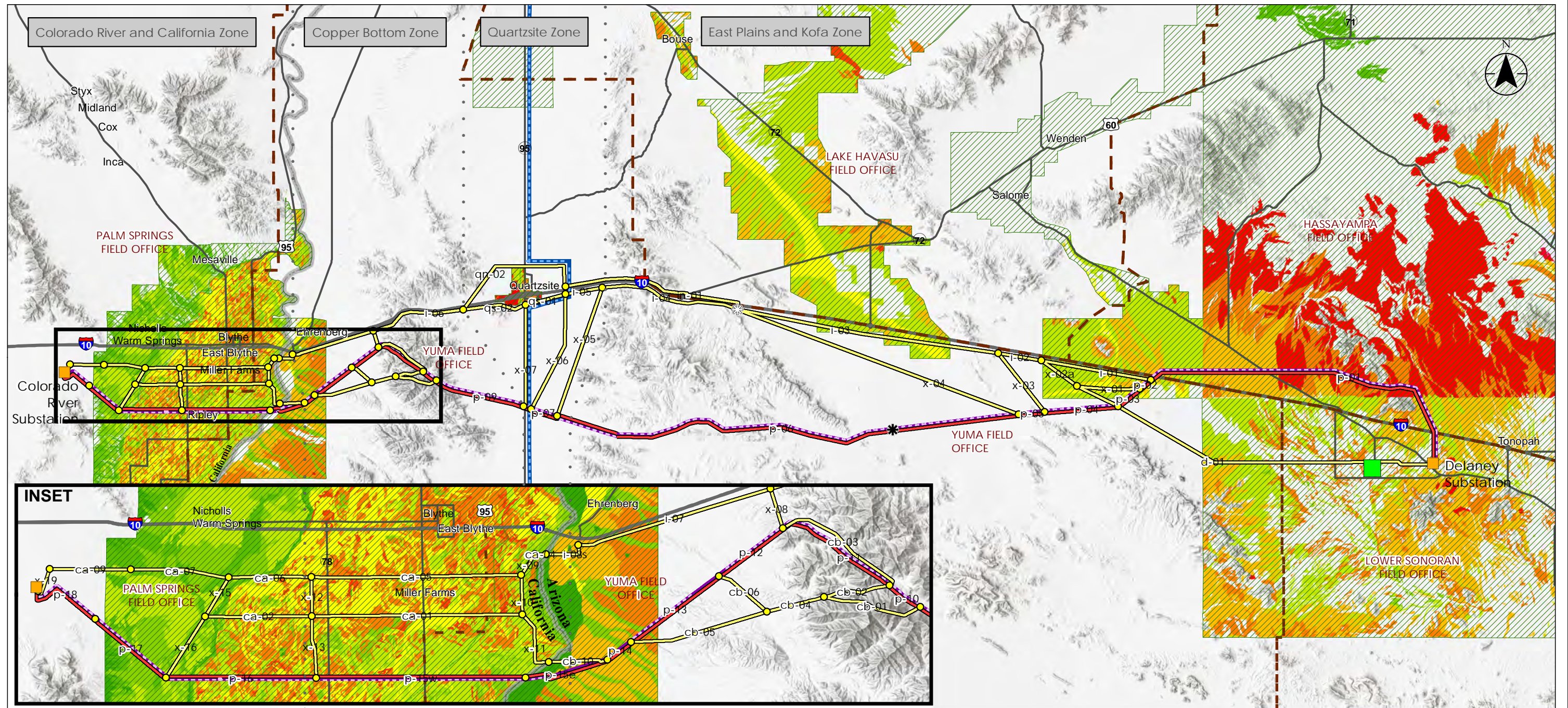
Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
x-03	Valencia-Estrella-Cuerda (s300)	1,016.07	The soil association consists of very deep, well drained soils formed in recent alluvium and stratified mixed alluvium. The soils are on floodplains and alluvial fans and have slopes of 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low-Moderate	Moderate	<ul style="list-style-type: none"> Valencia: Well drained; slow runoff; moderately rapid permeability in the A and B horizons and moderately slow in the buried Bt horizons Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Cuerda: Well drained; slow runoff; moderate permeability; receives runoff from slopes above. Flooding is occasional, shallow and very brief. In undisturbed areas, the proximal end of alluvial fans flood more often than the distal end
x-04	Hyder-Coolidge-Cipriano-Cherioni (s289)	4,173.67	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively-drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
x-04	Pahaka-Estrella-Antho (s299)	23,071.88	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed and stratified fan alluvium. The soils are on alluvial fans, terraces, and floodplains with slopes ranging from 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low	Moderate	<ul style="list-style-type: none"> Pahaka: Well drained; slow runoff; moderately rapid permeability above and moderately slow in the buried horizon Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Antho: Somewhat excessively drained; medium runoff; moderately rapid permeability
x-04	Rillito-Gunsight-Denure-Chuckwalla (s288)	852.77	The soil association consists of very deep, well drained to somewhat excessively drained soils that formed in mixed alluvium. Gunsight soils are strongly calcareous. The soils are formed in alluvium from mixed sources and are on fan terraces or stream terraces and relict basin floors. Slopes are 0 to 60 percent.	3, 4L, 5, 6, 8	1	Low-Moderate-High	Moderate-High	<ul style="list-style-type: none"> Rillito: Somewhat excessively drained; slow or medium runoff; moderate permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Denure: Well and somewhat excessively drained; runoff negligible to low; moderately rapid permeability Chuckwalla: Well drained; medium runoff; moderate permeability
x-04	Rock outcrop-Quilotosa-Momoli (s293)	40.09	The soil association consists of very shallow and shallow to very deep, somewhat excessively-drained to excessively drained soils that formed from granitic and metamorphic rocks or in fan alluvium and eolian deposits. The soils are on hills and mountains, stream terraces, and fan terraces and have slopes of 0 to 65 percent.	6	None available	Moderate	Moderate	<ul style="list-style-type: none"> Rock outcrop: N/A Quilotosa: Somewhat excessively drained; medium to rapid runoff; moderately rapid permeability Momoli: Somewhat excessively drained; slow to medium runoff; moderately rapid permeability
x-04	Valencia-Estrella-Cuerda (s300)	2,600.37	The soil association consists of very deep, well drained soils formed in recent alluvium and stratified mixed alluvium. The soils are on floodplains and alluvial fans and have slopes of 0 to 5 percent.	3, 5	0.06, 0.08, 0.09	Low-Moderate	Moderate	<ul style="list-style-type: none"> Valencia: Well drained; slow runoff; moderately rapid permeability in the A and B horizons and moderately slow in the buried Bt horizons Estrella: Well drained; slow runoff; moderate permeability in the A and C horizons and moderately slow in the buried argillic horizon Cuerda: Well drained; slow runoff; moderate permeability; receives runoff from slopes above. Flooding is occasional, shallow and very brief. In undisturbed areas, the proximal end of alluvial fans flood more often than the distal end
x-05	Hyder-Coolidge-Cipriano-Cherioni (s289)	403.81	The soil association consists of very shallow and shallow to very deep, well drained to somewhat excessively-drained soils that formed in fan or stream alluvium from rhyolite and related volcanic rocks. The soils are on fan terraces, stream terraces, mountains, and hills and have slopes of 0 to 70 percent.	None available	1	Low-Moderate	Moderate	<ul style="list-style-type: none"> Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Coolidge: Well drained; very low to medium runoff; moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability
x-05	Ligurta-Gunsight-Cristobal (s290)	13,975.35	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
x-05	Rock outcrop-Lehmans-Gran (s316)	50.41	The soil association consists of very shallow and shallow, well drained soils formed in slope alluvium-colluvium from volcanic rock. The soils are on pediments, hill slopes, and mountain slopes and have slopes of 1 to 65 percent.	None available	None available	None available	None available	<ul style="list-style-type: none"> Rock outcrop: N/A Lehmans: Well drained; medium runoff; slow permeability Gran: Well drained; slow to medium runoff; moderately slow permeability
x-05	Schenco-Rock outcrop-Laposa (s295)	681.17	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
x-06	Ligurta-Gunsight-Cristobal (s290)	13,831.59	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability

TABLE 3A-4 STATSGO PROPERTY BY ROUTE SEGMENT

Segment	STATSGO General Map Unit (Soil Association)	Acres within Study Area	Description	Wind Erodibility Group	Shrink/Swell Potential	Corrosion Risk - Concrete	Corrosion Risk - Steel	Drainage and Permeability
x-07	Ligurta-Gunsight-Cristobal (s290)	11,176.70	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
x-08	Ligurta-Gunsight-Cristobal (s290)	2,584.64	The soil association series consists of very deep, well drained to somewhat excessively drained, strongly saline soils that formed in fan alluvium weathered from a wide variety of rocks. The soils are on fan terraces or stream terraces with slopes of 0 to 60 percent.	5, 6	1	Moderate-High	Moderate-High	<ul style="list-style-type: none"> Ligurta: Well drained; rapid runoff; moderately slow permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability Cristobal: Well drained; rapid or medium runoff; moderately slow permeability
x-08	Schenco-Rock outcrop Laposa (s295)	1,047.34	The soil association consists of very shallow and shallow to moderately deep, well drained to somewhat excessively drained soils formed in slope alluvium from schist, granite, gneiss, rhyolite, and eolian deposits. The soils are on hill slopes, hills and mountains and have slopes of 3 to 75 percent. Average annual precipitation is about 4 to 8 inches and the mean annual temperature is about 72 to 73 degrees Fahrenheit.	8	None available	None available	Moderate	<ul style="list-style-type: none"> Schenco: Well drained; medium to rapid runoff; moderate permeability Rock outcrop: N/A Laposa: Somewhat excessively drained; rapid runoff; moderate permeability
x-19	Rillito-Gunsight (s1140)	308.35	The soil association consists of very deep, somewhat excessively drained soils that formed in mixed alluvium. Gunsight soils are strongly calcareous. The soil association is on fan terraces or stream terraces. Slopes are predominantly 0 to 60 percent.	4L-6	0.5	Moderate	Moderate-High	<ul style="list-style-type: none"> Rillito: Somewhat excessively drained; slow or medium runoff; moderate permeability Gunsight: Somewhat excessively drained; very low to high runoff; moderate or moderately rapid permeability
x-19	Rositas-Dune land-Carsitas (s1136)	1,813.00	The soil association consists of very deep, somewhat excessively drained soils formed in sandy eolian material or alluvium from granitoid and/or gneissic rocks. The soils are on dunes and sand sheets, alluvial fans, fan aprons, valley fills, dissected remnants of alluvial fans and in drainageways. Slope ranges from 0 to 30 percent.	1, 2, 6	0	Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Dune land: N/A Carsitas : Somewhat excessively drained; negligible to low runoff; high saturated hydraulic conductivity. Altered drainage may occur where irrigation or seepage has caused a seasonal water table at 2 to 5 feet. Torrential summer thundershowers occasionally produce enough runoff to flood the soil for brief periods
x-19	Rositas-Orita-Carrizo-Aco (s1041)	215.87	The soil association consists of very deep, well drained to excessively drained soils formed in sandy eolian material, alluvium from mixed sources, and mixed igneous alluvium. The soils are on dunes and sand sheets, fan remnants and terraces, floodplains, fan piedmonts, and bolson floors. Slope ranges from 0 to 30 percent.	1-3, 5-6	0.14, 1.00	Low-Moderate	Moderate	<ul style="list-style-type: none"> Rositas: Somewhat excessively drained; negligible to low runoff; rapid permeability Orita: The Orita soils are well drained. Runoff is very low to medium. Permeability is moderate Carrizo: Excessively drained; negligible to low runoff; high saturated hydraulic conductivity Aco: Well to somewhat excessively drained; permeability is moderately rapid. Runoff is mostly low, a few more sloping areas may have medium runoff
x-19	Vaiva-Quilotosa-Hyder-Cipriano-Cherioni (s1141)	801.36	The soil association consists of very shallow and shallow, well drained to somewhat excessively drained soils formed in slope alluvium from granite and gneiss, and alluvium from rhyolite and related volcanic rocks. The soils are on hills and mountains, or fan terraces with slopes of 1 to 70 percent.	None available	0.5	Low-Moderate	Moderate	<ul style="list-style-type: none"> Vaiva: Well drained; medium to rapid runoff; moderate permeability Quilotosa: Somewhat excessively drained; medium to rapid runoff; moderately rapid permeability Hyder: Somewhat excessively drained; high to high runoff; moderate or moderately rapid permeability Cipriano: Somewhat excessively drained; low to very high runoff; moderate permeability Cherioni: Somewhat excessively drained; medium to rapid runoff; moderate permeability



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Revised: 2018.02.06 By: STUCHEY



Notes
1. Coordinate System: World Mercator
2. Data Source(s): Project data - HDR; Soils - NRCS
3. Service Layer Credits: USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastystrelsen and the GIS User Community

- Proposed Action*
- Alternative Route Segment
- Route Segment Node
- Proposed Series Compensation Station
- Alternative Series Compensation Stations (2 possible site locations; ~75' feet apart)
- Zone Division Line
- Existing WAPA 161kV Transmission Line
- Existing DPV1 500kV Transmission Line*
- Substation

- Harquahala Power Plant
- BLM Field Office Boundary
- Extent of Detailed Soil Survey (SSURGO)

- Wind Erodibility Class
- 1 - Most Susceptible
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8 - Least Susceptible

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Figure 3A-2
Ten West Link
SSURGO Wind Erodibility

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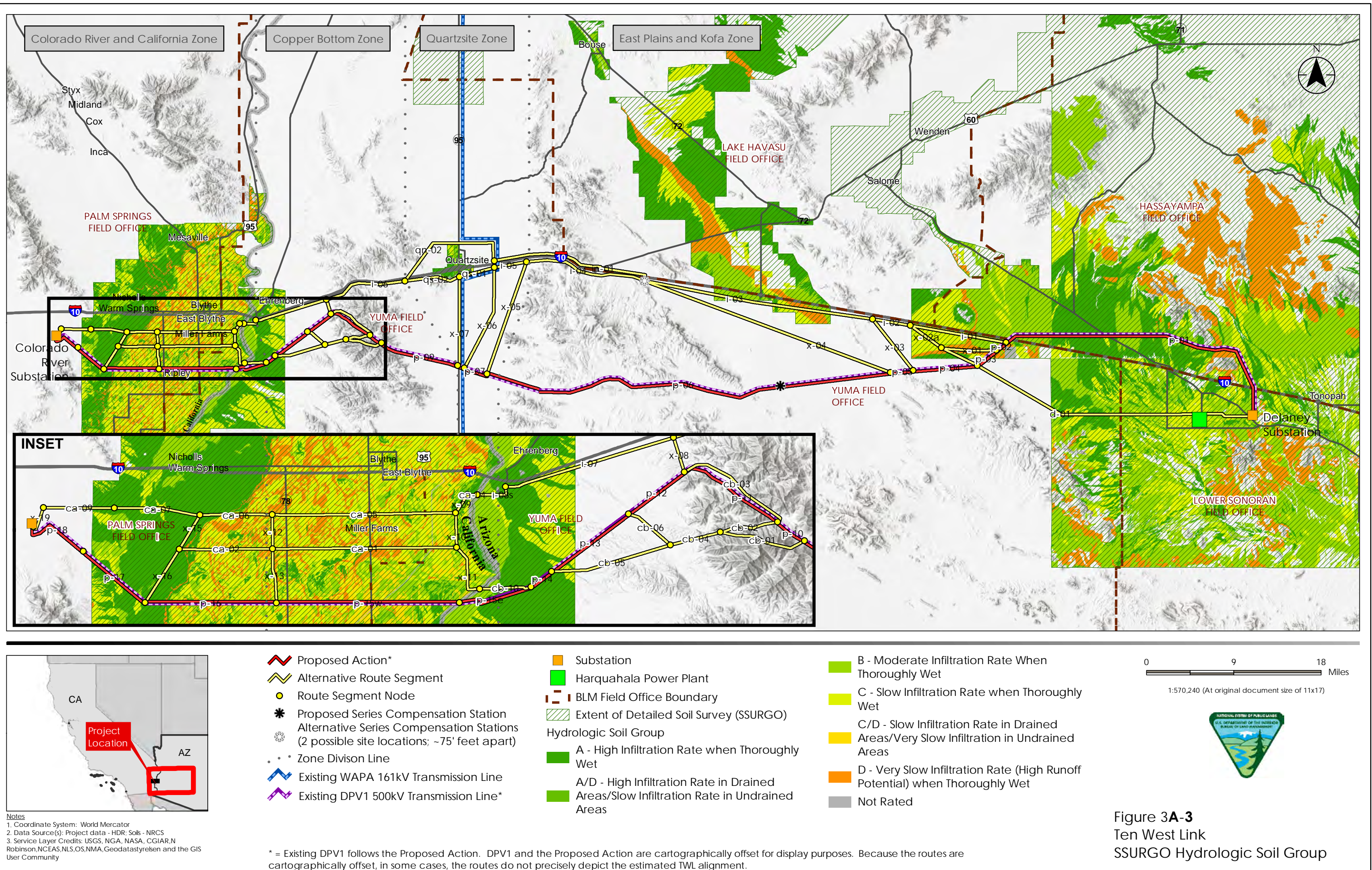
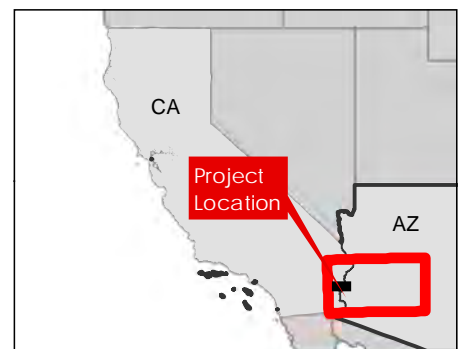
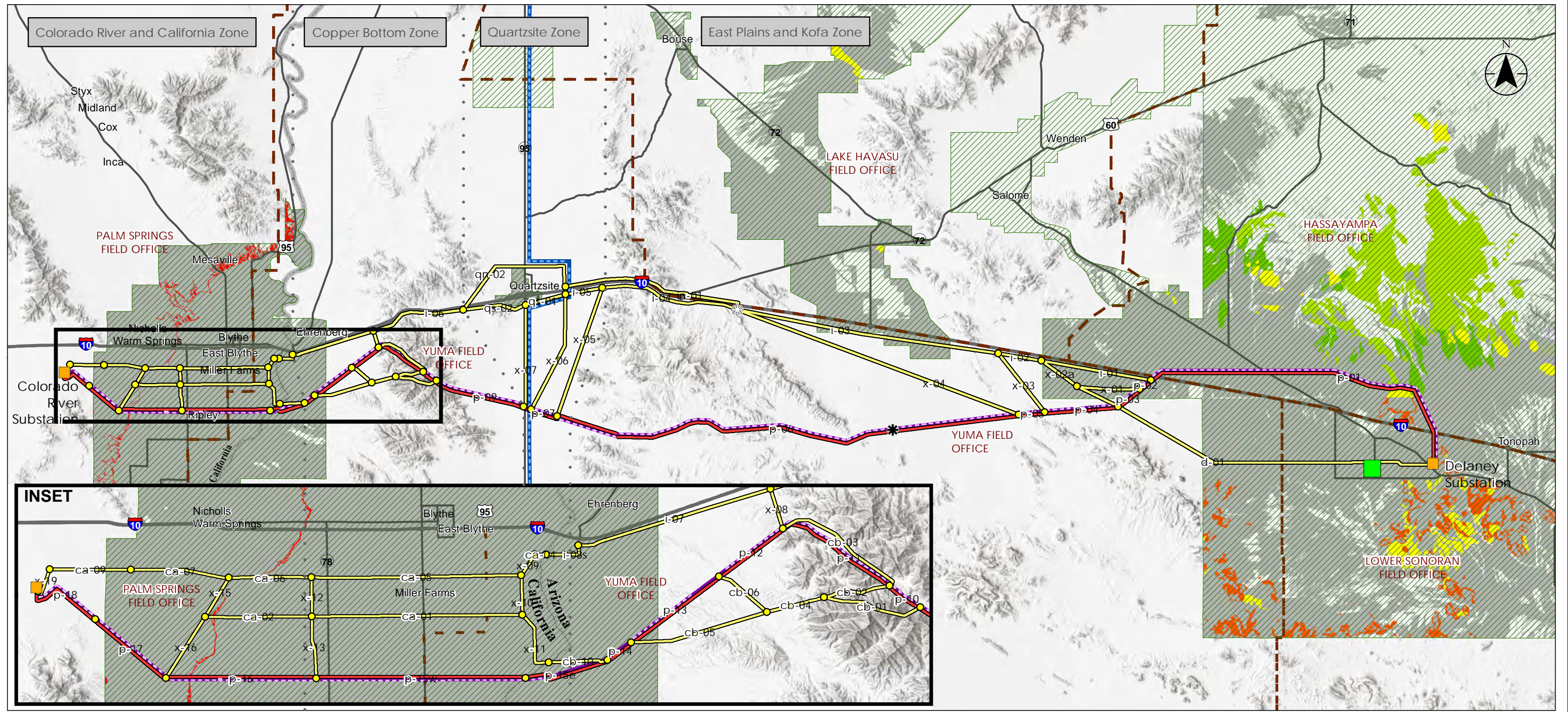


Figure 3A-3
Ten West Link
SSURGO Hydrologic Soil Group

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Notes
1. Coordinate System: World Mercator
2. Data Source(s): Project data - HDR; Soils - NRCS
3. Service Layer Credits: USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastystrelsen and the GIS User Community

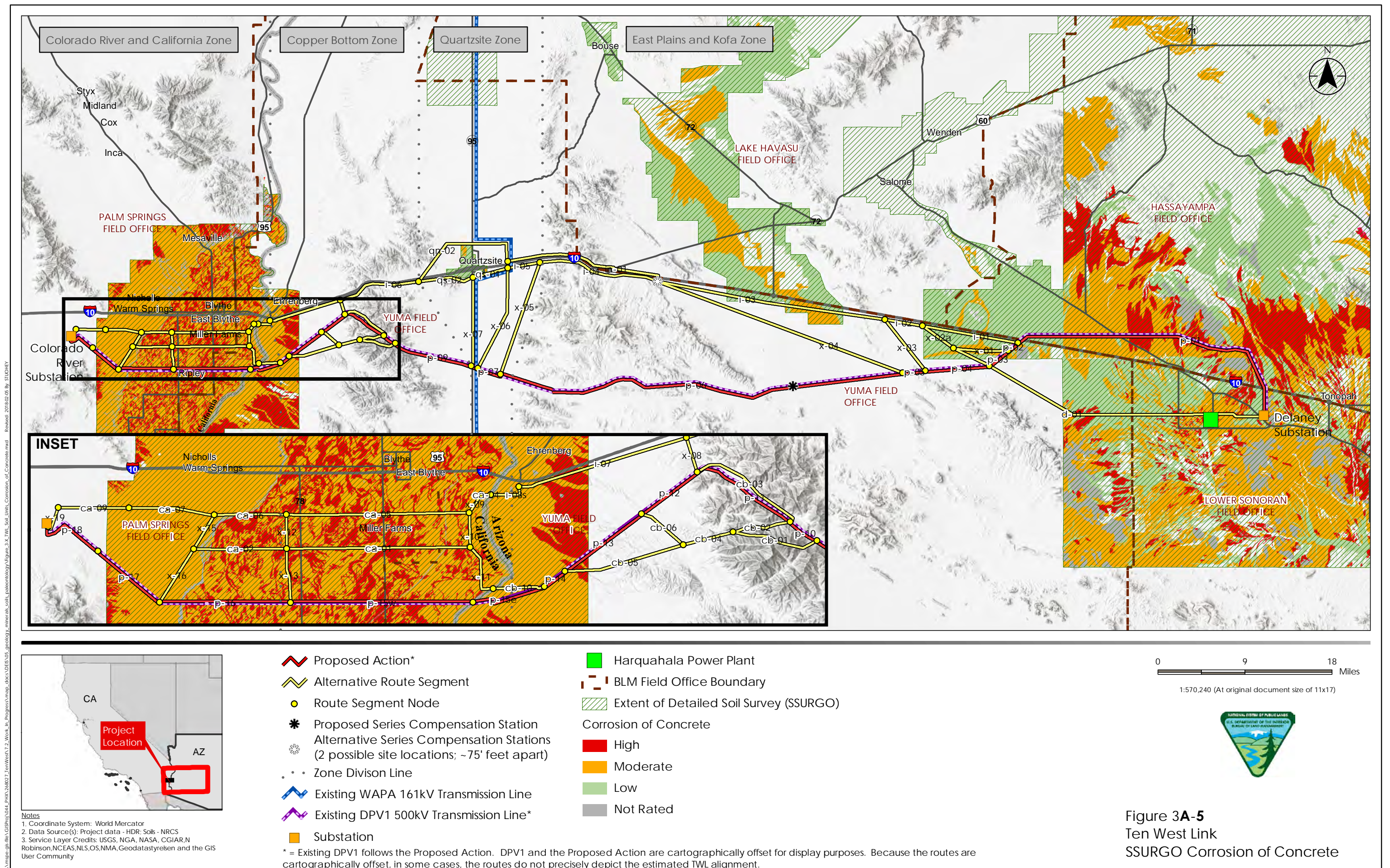
- Proposed Action*
 - Alternative Route Segment
 - Route Segment Node
 - Proposed Series Compensation Station
 - Alternative Series Compensation Stations (2 possible site locations; ~75' feet apart)
 - Zone Division Line
 - Existing WAPA 161kV Transmission Line
 - Existing DPV1 500kV Transmission Line*
 - Substation
 - Harquahala Power Plant
 - BLM Field Office Boundary
 - Extent of Detailed Soil Survey (SSURGO)
- * = Existing DPV1 follows the Proposed Action. DPV1 and the Proposed Action are cartographically offset for display purposes. Because the routes are cartographically offset, in some cases, the routes do not precisely depict the estimated TWL alignment.

- Depth to Soil Restrictive Layer
- Surface to 12 inches
 - 12 to 24 inches
 - 24 to 36 inches
 - 36 to 48 inches
 - 48 to 200 inches
 - Greater than 200 inches

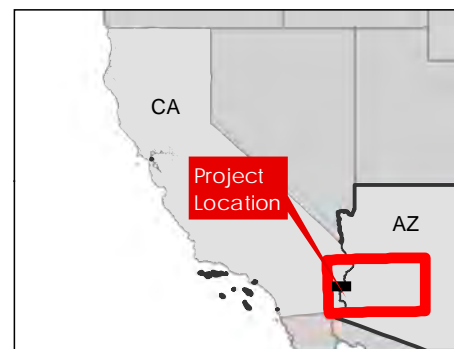
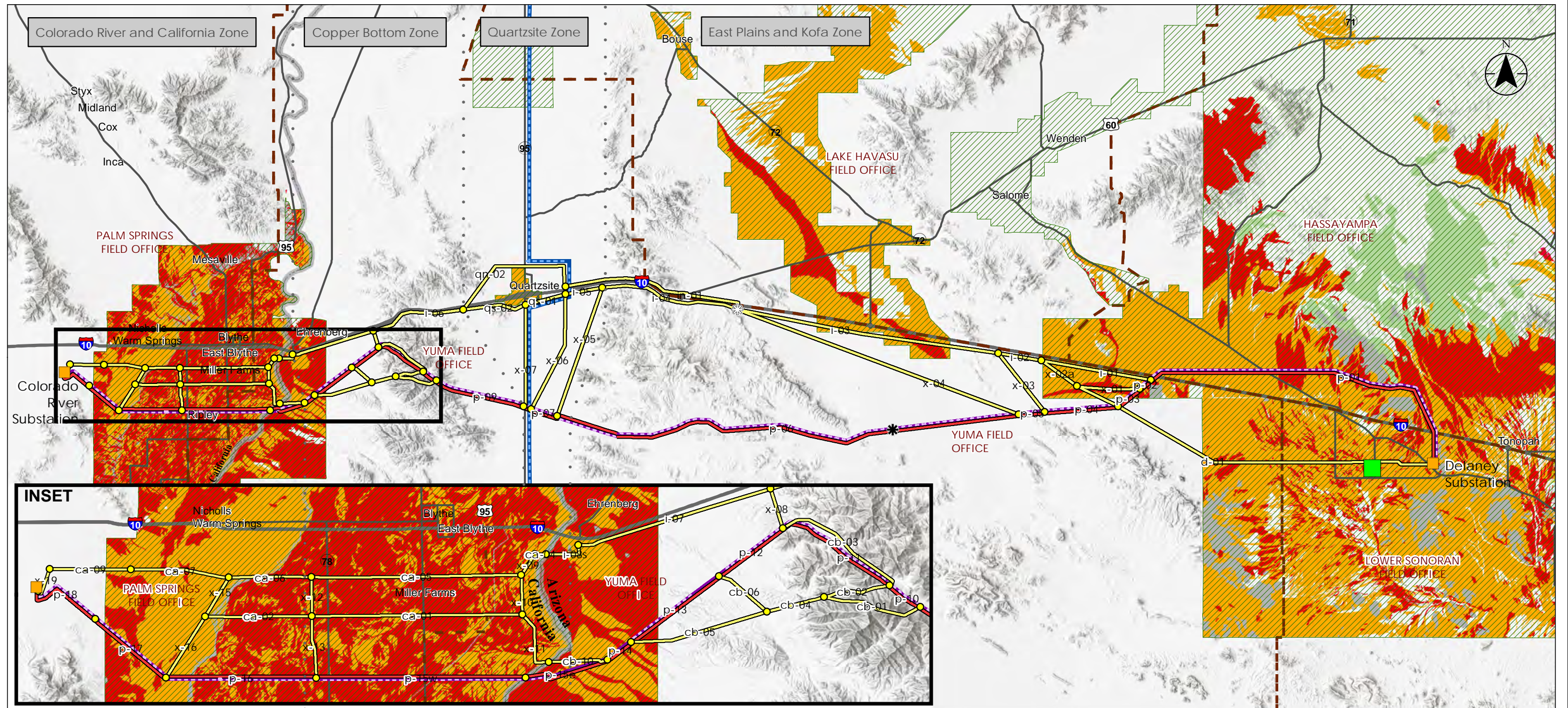
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Figure 3A-4
Ten West Link
SSURGO Depth to Soil Restrictive Layer



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Notes
1. Coordinate System: World Mercator
2. Data Source(s): Project data - HDR; Soils - NRCS
3. Service Layer Credits: USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastystreln and the GIS User Community

- Proposed Action*
- Alternative Route Segment
- Route Segment Node
- Proposed Series Compensation Station
- Alternative Series Compensation Stations (2 possible site locations; ~75' feet apart)
- Zone Division Line
- Existing WAPA 161kV Transmission Line
- Existing DPV1 500kV Transmission Line*
- Substation
- Harquahala Power Plant
- BLM Field Office Boundary
- Extent of Detailed Soil Survey (SSURGO)
- Corrosion of Steel
 - High
 - Moderate
 - Low
 - Not Rated

* = Existing DPV1 follows the Proposed Action. DPV1 and the Proposed Action are cartographically offset for display purposes. Because the routes are cartographically offset, in some cases, the routes do not precisely depict the estimated TWL alignment.

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Figure 3A-6
Ten West Link
SSURGO Corrosion of Steel