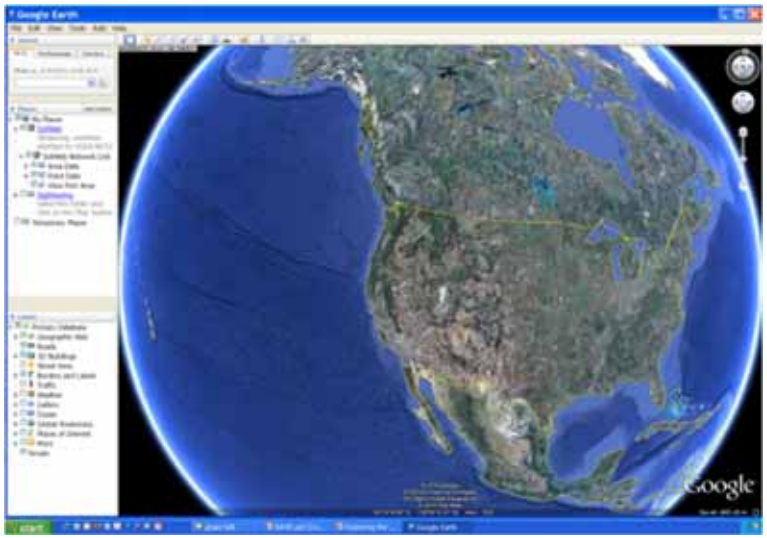
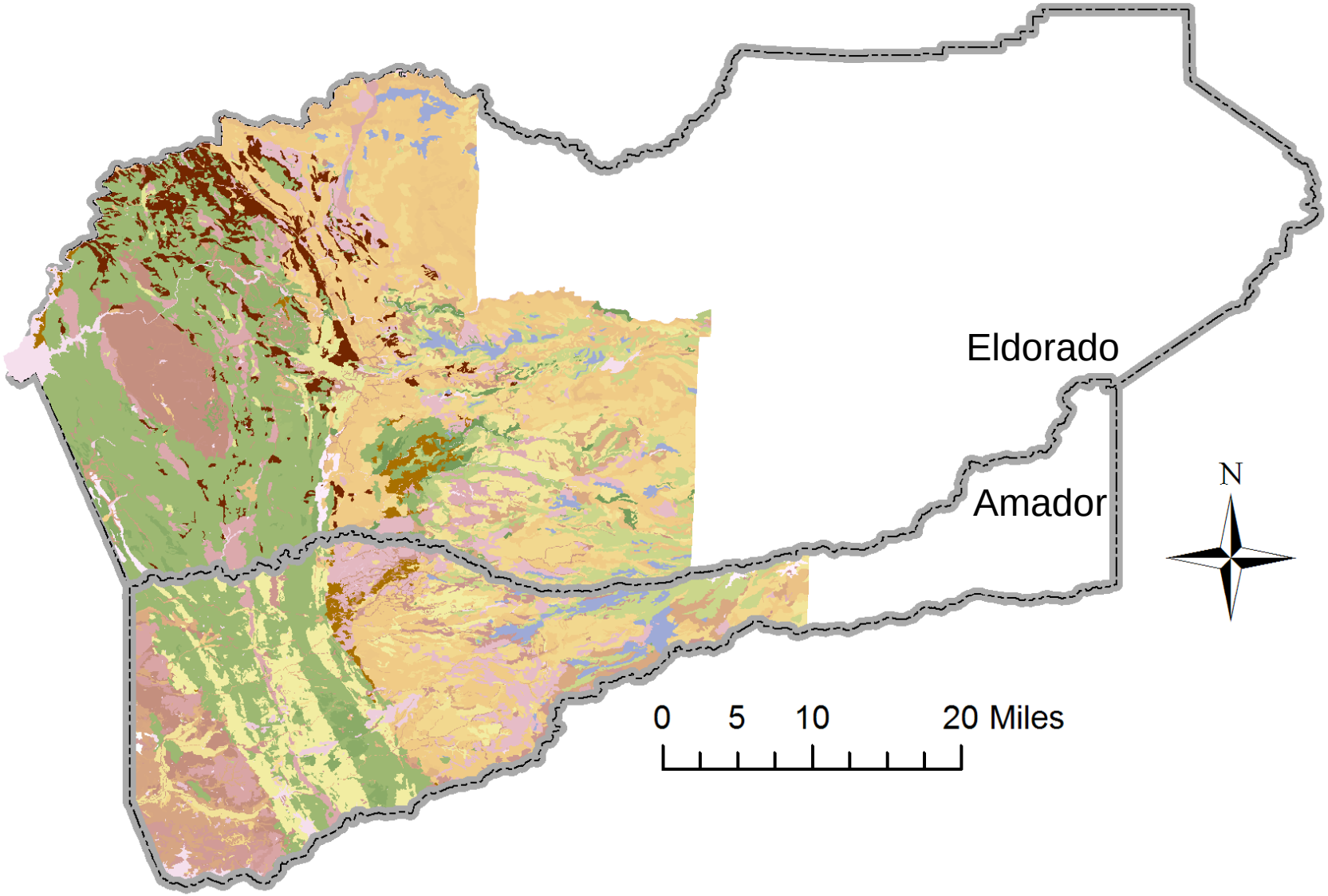
Understanding Foothill Vineyard Soils: Implications for Nutrition and Terroir

Toby O'Geen
Dept. of Land Air and Water Resources
UC Davis



General Soils Map of Eldorado and Amador Counties



http://casoilresource.lawr.ucdavis.edu/soilsurvey

California Soil Resource Lab

Home Links Online Soil Survey People Projects Software Site Map

SoilWeb: An Online Soil Survey Browser
- Dynamic Export of Soil Survey Data to KML through Soil-Web
- Major updates to CA, AZ, NV online soil survey system
- Migrating to Ka-Map! Online Soil Survey for AZ, CA and NV
- SoilWeb for the iPhone
- Streaming Soil Survey Data in Google Earth (updates)
- Two New Soils-Related KMZ Demos
- Updates to SoilWeb
- Who is Using our Online Soil Survey?

Navigation
- blogs
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- Recent posts
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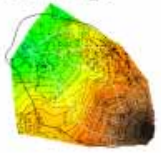
Random image



User login

Username: *

Password: *

Log in

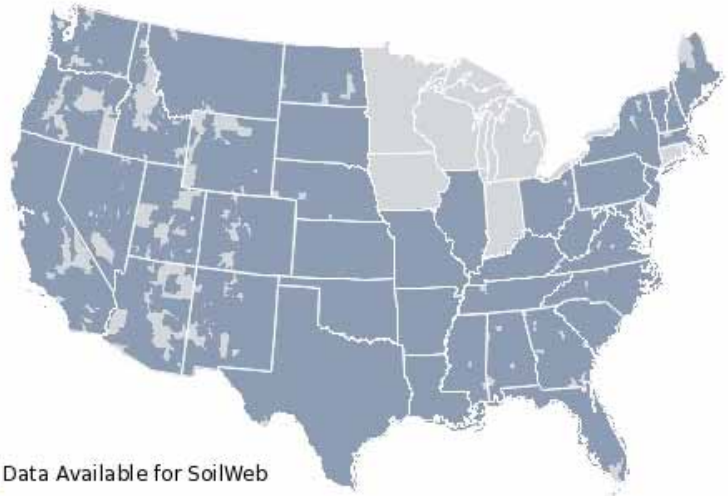
SoilWeb: An Online Soil Survey Browser

Submitted by dylan on Fri, 2010-02-26 16:13.

Our online soil survey can be used to access NRCS-NCSS 1:24,000 scale detailed soil survey data (SSURGO) in many parts of the lower 48 states. Where this data is not yet available, 1:250,000 scale generalized soils data (STATSGO) can be accessed instead (AZ, CA, NV only). An interactive map interface allows for panning and zooming, with highways, streets, and aerial photos to assist navigation (Figure 1). Soil polygons become visible near a scale of 1:30,000. Alternatively, a GPS point, CA Zip code, or a street address can be used to zoom in on a specific location. General usage notes and information on how our online soil survey work can be found here. Statistics on who is using our online soil survey can be found here. Technical details on SoilWeb can be found in this publication.

SSURGO Map Units

STATSGO Map Units



Data Available for SoilWeb

Select an Interface to SoilWeb

- An iPhone App for real-time, location-based soil queries!
- Google Maps interface
- Google Earth Interface
- A Text-only interface to SSURGO
- Original Interface

http://casoilresource.lawr.ucdavis.edu/soilsurvey

California Soil Resource Lab

Links Online Soil Survey People Projects Site Map Software

Online Soil Survey (D.E. Beaudette and A.T. O'Geen)

Submitted by dylan on Tue, 2005-05-31 17:37.

Location Query Results:

Zoom to Street Address:

Address:
City
State:
GO

Zoom to CA PLSS Grid:

Section Information

1/4 1/4 Section

Township / Range Information

T N R E Mt. Diablo, CA

GO

Zoom to Geographic Coordinates:

	Decimal Degrees		*Degrees Minutes Seconds*		
Latitude:	° North		° ′	" North	
Longitude:	° West		° ′	" West	

GO

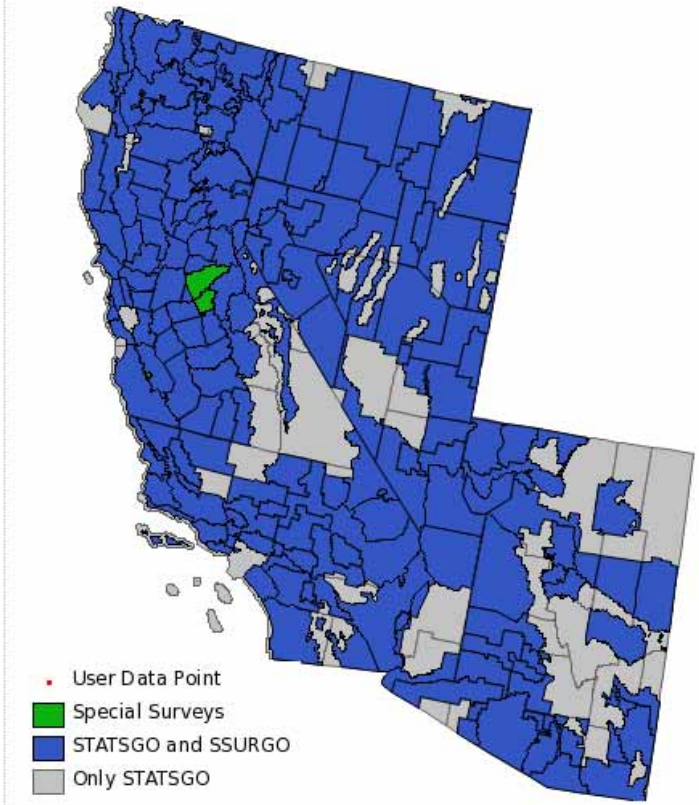
Other Interfaces:

Pinnacles National Monument, CA
Google Earth Interface (Includes OSD)
Google Maps Interface
Static Map Interface
Text-based Interface Suitible for a braile console

Contact Us

For additional information please contact:
Dylan Beaudette at debeaudette AT ucdavis DOT edu
or Toby O'Geen at atogeen AT ucdavis DOT edu.
530.754.7341

Status Map

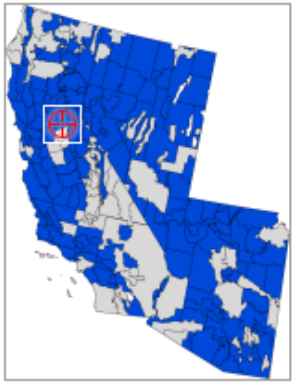


SOIL-WEB an Online Interface to Digital Soil Survey Data

RETURN TO MAIN PAGE | SOIL SURVEY | HELP | INFO

casoil | 1:500000

Keymap

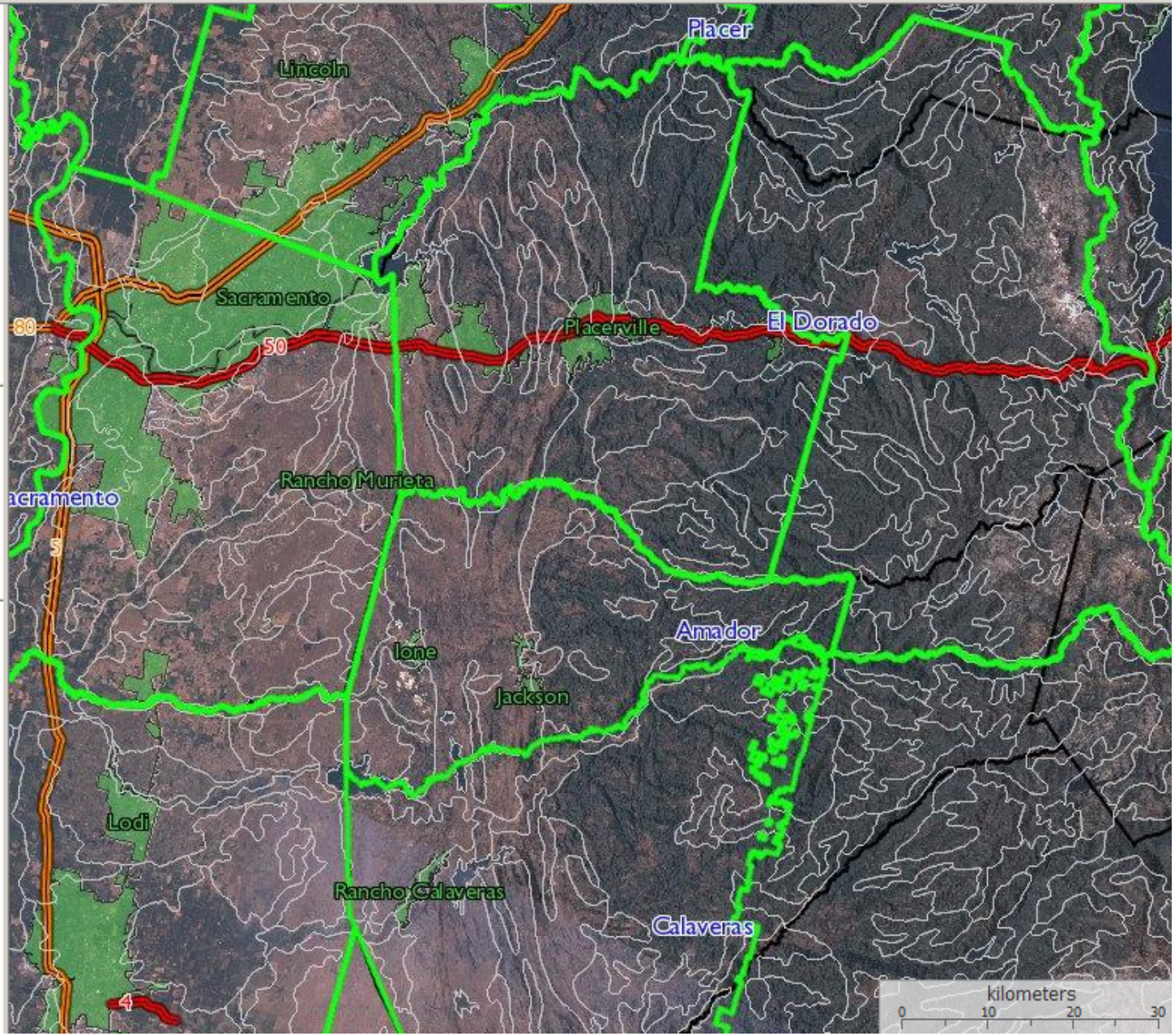


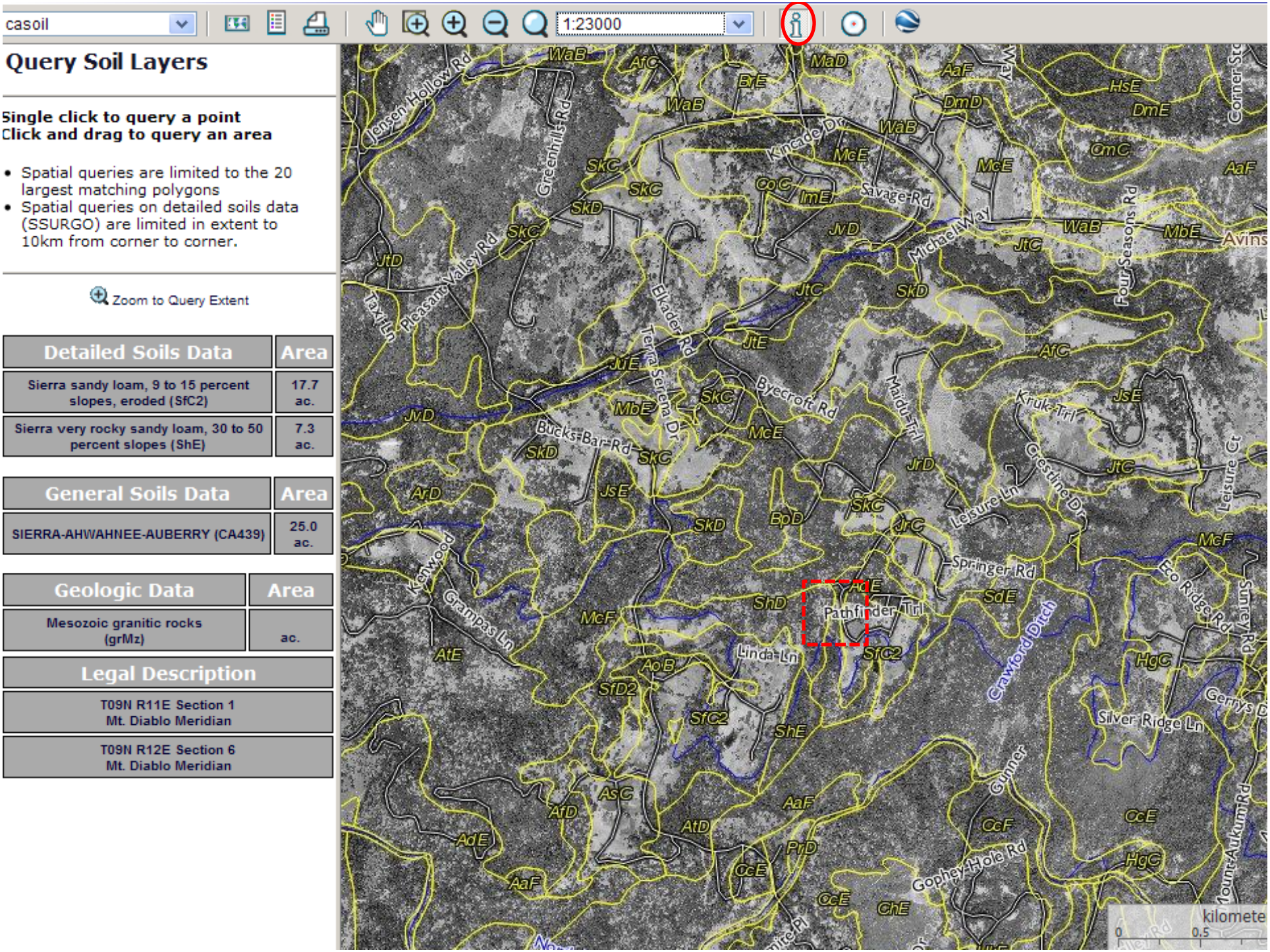
Coords

Longitude: 120.747411
Latitude: 38.443277

Extents

minx: -2079976.65
miny: 30515.26
maxx: -1941864.23
maxy: 151694.36




casoil
1:23000
Query Soil Layers
Single click to query a point
Click and drag to query an area
• Spatial queries are limited to the 20 largest matching polygons
• Spatial queries on detailed soils data (SSURGO) are limited in extent to 10km from corner to corner.
Zoom to Query Extent
Detailed Soils Data | Area
Sierra sandy loam, 9 to 15 percent slopes, eroded (SfC2) | 17.7 ac.
Sierra very rocky sandy loam, 30 to 50 percent slopes (ShE) | 7.3 ac.
General Soils Data | Area
SIERRA-AHWAHNEE-AUBERRY (CA439) | 25.0 ac.
Geologic Data | Area
Mesozoic granitic rocks (grMz) | ac.
Legal Description
T09N R11E Section 1 Mt. Diablo Meridian
T09N R12E Section 6 Mt. Diablo Meridian
Jensen Hollow Rd
Greenhills Rd
Pleasant Valley Rd
Taxi Ln
Elkader Rd
Terra Serena Dr
Bucks Bar Rd
Byecroft Rd
Savage Rd
Michael Way
Four Seasons Rd
Maidu Trl
Kruk Trl
Gresthe Dr
Leisure Ln
Springer Rd
Pathfinder Trl
Linda Ln
Crawford Ditch
Kenwood
Grampas Ln
Eco Ridge Rd
Silver Ridge Ln
Gopher Hole Rd
Gunner
Mount Aukum Rd
kilometers
0
0.5

Map Unit Composition

Map units consist of 1 or more soil types, commonly referred to as "components".

Component Name	Geomorphic Position	Area Fraction	Component Type	Horizon Data
Soil Type 1 ***Sierra***	*ridges / Backslope*	*84%*	*Major Soil Type*	*YES*
Soil Type 2 ***Unamed moderately deep***		*10%*	*Inclusion*	*None*
Soil Type 3 ***Unamed strongly acid subsoil***		*3%*	*Inclusion*	*None*
Soil Type 4 ***Unamed in swales***		*3%*	*Inclusion*	*None*

*Note: links to horizon data marked with an * are approximate.*

Map Unit Data *What is a Map Unit?*

Cartographic information about this map unit.

Map Unit Name:	*Sierra coarse sandy loam, 9 to 16 percent slopes*
Map Unit Type:	*Consociation*
Map Unit Symbol:	*SgC*
Map Unit Acres:	*14 acres (837ac. total in survey area)*
Raw Map Unit Data	
Raw Component Data (All Components)	

Queried map unit polygons in yellow, queried point in red.

Map Unit Aggregated Data

Generalized soils information within this map unit.

Farmland Class:	*Not prime farmland*
Available Water Storage (0-100cm):	*15.32 cm*
Max Flood Freq:	*None*
Drainage Class (Dominant Condition):	*Well drained*
Drainage Class (Wettest Component):	*Well drained*
Hydric Conditions:	*Not hydric*
Min Water Table Depth:	*n/a*
Min Bedrock Depth:	*n/a*
Raw Aggregated Map Unit Data	

Map Unit Notes

Miscellaneous notes recorded by NRCS staff about this map unit.

Associated Point Data

Links to any NSSL point data within this map unit.

1 *Lab Data for NSSL Pedon 59CA005015*

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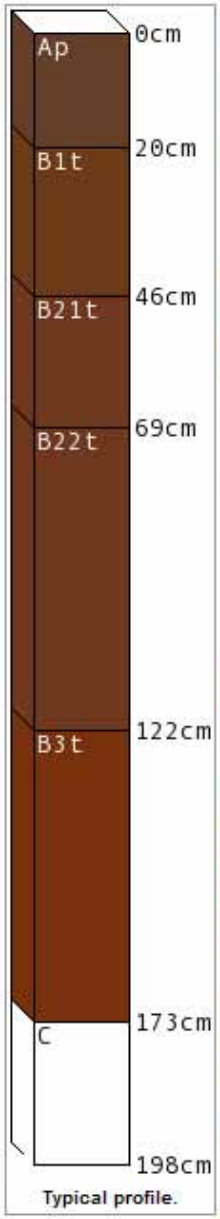

Typical profile.

Soil Taxonomy

Order:	*Alfisols*
Suborder:	*Xeralfs* *[Map of Suborders]*
Greatgroup:	*Haploxeralfs*
Subgroup:	*Ultic Haploxeralfs*
Family:	*Fine-loamy, mixed, active, thermic Ultic Haploxeralfs*
Soil Series:	*Sierra* *(Link to OSD)* *(Link to SM Tool)*
Data:	*[Lab Data]* *[Nitrate Groundwater Pollution Hazard Index]*
Raw Data	*Component* *All Horizons*

Land Classification

Storie Index	*49*
Land Capability Class **[non-irrigated]**	*3-e*
Land Capability Class **[irrigated]**	*3-e*
Ecological Site Description	*DEEP GRANITIC SOILS*

Soil Suitability Ratings

Waste Related	*Engineering*
Urban/Recreational	*Irrigation*
Wildlife	*Runoff*

Hydraulic and Erosion Ratings

Wind Erodibility Group	*3*
Wind Erodibility Index	*86*
T Erosion Factor	*4*
Runoff	*High*
Drainage	*Well drained*
Hydric Rating / Hydrologic Group	*No [Group C]*
Parent Material:	*residuum weathered from granite*
Profile Water Storage (cm):	*23.12*

Geomorphology

Landform	*ridges* *[Backslope]*	
Landscape	*foothills*	

Queried map unit polygons in yellow, queried point in red.

Plants

Symbol	Scientific Name	Common Name	Range Prod.
BRHOH	*Bromus hordeaceus ssp. hordeaceus*	*soft chess*	*25*
AVFA	*Avena fatua*	*wild oat*	*15*

Links to Official Soil Series Description

SIERRA SERIES

The Sierra series is a member of the fine-loamy, mixed, thermic family of Ultic Haploxeralfs. Typically, Sierra soils have brown, moderately acid, coarse sandy loam A horizons that grade to yellowish red and red, slightly acid, heavy loam and clay loam B2t horizons grading to strongly weathered acid igneous bedrock.

TAXONOMIC CLASS: Fine-loamy, mixed, active, thermic Ultic Haploxeralfs

TYPICAL PEDON: Sierra coarse sandy loam - cultivated. (Colors are for dry soil unless otherwise noted.)

Ap--0 to 8 inches; brown (7.5YR 5/4) coarse sandy loam, dark reddish brown (5YR 3/4) moist; massive; slightly hard, friable; many very fine roots; many very fine and fine pores; moderately acid (pH 5.7); clear smooth boundary. (5 to 15 inches thick)

Blt--8 to 18 inches; reddish brown (5YR 5/4) loam, yellowish red (5YR 3/6) moist; massive; hard, friable, slightly sticky, slightly plastic; many very fine roots; many very fine, common fine, few medium and coarse pores; few thin discontinuous clay films line pores, colloids mainly bridging mineral grains; moderately acid (pH 5.9); gradual smooth boundary. (5 to 11 inches thick)

B21t--18 to 27 inches; yellowish red (5YR 5/6) heavy loam, dark red (2.5YR 3/6) moist; massive; very hard, firm, slightly sticky, slightly plastic; common very fine roots; few medium coarse pores; clay films are thin and nearly continuous; slightly acid (pH 6.2); gradual smooth boundary. (6 to 11 inches thick)

B22t--27 to 48 inches; red (2.5YR 5/6) clay loam, dark red (2.5YR 3/6) moist; massive; very hard, firm, sticky, plastic; common very fine roots- common very fine, few fine pores; moderately thick continuous clay films line most pores and as bridges between sand grains; slightly acid (pH 6.5); gradual smooth boundary. (9 to 30 inches thick)

B3t--48 to 68 inches; yellowish red (5YR 5/8) loam, dark red (2.5YR 3/8) moist; massive; very hard, firm, sticky, plastic; few very fine roots; common very fine and few fine pores; thin continuous clay films line some pores and as bridges between sand grains; slightly acid (pH 6.5); clear irregular boundary. (14 to 21 inches thick)

C--68 to 78 inches; yellowish red (5YR 5/8) weathered granite that textures fine sandy loam, yellowish red (5YR 3/8) moist, dark red (2.5YR 3/8 dry or moist) coatings; massive; original granitic structure is evident; hard, friable; thin discontinuous clay films along parting planes; slightly acid (pH 6.5).

TYPE LOCATION: Amador County, California; approximately 2 1/4 miles northwest of Fiddletown, 1/2 mile south of the Shenandoah School on the Shenandoah School road in SW1/4 SW1/4 sec. 29, T.8N., R.llE.

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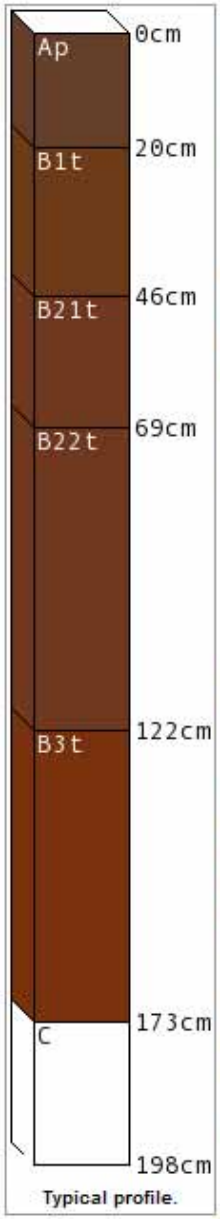

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Soil Series:	*Sierra* *(Link to OSD)* *(Link to SM Tool)*
Data:	*[Lab Data]* *[Nitrate Groundwater Pollution Hazard Index]*
Raw Data	*Component* *All Horizons*

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Storie Index	*49*
Land Capability Class **[non-irrigated]**	*3-e*
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Soil Suitability Ratings

Waste Related	*Engineering*
Urban/Recreational	*Irrigation*
Wildlife	*Runoff*

Hydraulic and Erosion Ratings

Wind Erodibility Group	*3*
Wind Erodibility Index	*86*
T Erosion Factor	*4*
Runoff	*High*
Drainage	*Well drained*
Hydric Rating / Hydrologic Group	*No [Group C]*
Parent Material:	*residuum weathered from granite*
Profile Water Storage (cm):	*23.12*

Geomorphology

Landform	*ridges* *[Backslope]*	
Landscape	*foothills*	

Queried map unit polygons in yellow, queried point in red.

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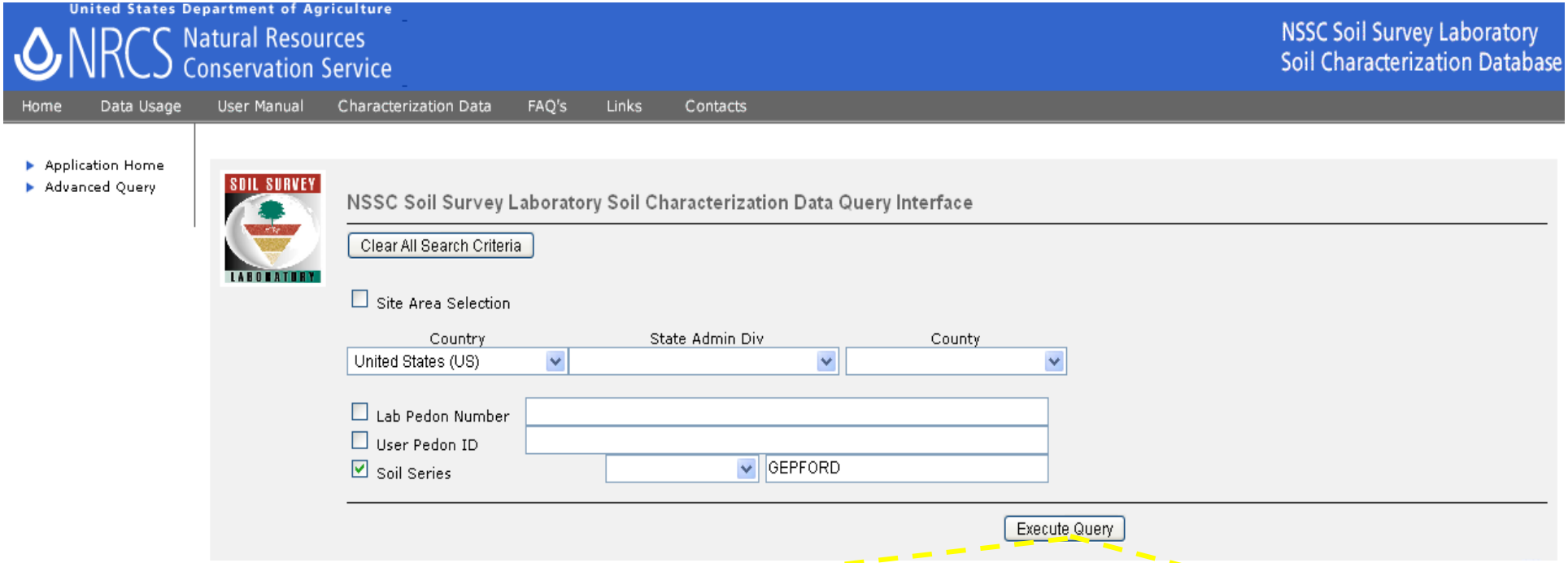
AVFA	*Avena fatua*	*wild oat*	*45*



*** Primary Characterization Data ***

Pedon ID: 84CA031008 (Kings, California) Print Date: Nov 29 2005 6:44PM

Sampled As : Gepford Fine, montmorillonitic (calcareous), thermic Vertic Haplaquoll

USDA-NRCS-NSSC-National Soil Survey Laboratory ; Pedon No. 85P0198

PSDA & Rock Fragments				-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	-9-	-10-	-11-	-12-	-13-	-14-	-15-	-16-	-17-
				(- - - - - Total - - - - - -)			(- - Clay - - -)		(- - - - Silt - - - - -)		(- - - - - - - - - - - - Sand - - - - - - - - - - - -)					(Rock Fragments (mm))				
				Clay	Silt	Sand	Fine	CO3	Fine	Coarse	VF	F	M	C	VC	(- - - - - - - - Weight - - - - - - - -)				>2 mm
				<	.002	.05	<	<	.002	.02	.05	.10	.25	.5	1	2	5	20	.1-	wt %
	Depth			.002	-.05	-2	.0002	.002	-.02	-.05	-.10	-.25	-.50	-1	-2	-5	-20	-75	75	whole
Layer	(cm)	Horz	Prep	(- % of <2mm Mineral Soil -)												(- - - - - - - % of <75mm - - - - - -)				soil
				3A1	3A1	3A1		3A1	3A1	3A1	3A1	3A1	3A1	3A1	3A1	3A1	3B1	3B1	3B1		
85P01025	0-13	Ap	S	49.1	42.7	8.2			31.7	11.0	3.5	2.7	1.2	0.6	0.2	tr	--	--	5	--
85P01026	13-25	A1	S	52.1	40.5	7.4			30.1	10.4	3.4	2.4	1.2	0.4	--	--	--	--	4	--
85P01027	25-41	A2	S	51.1	40.4	8.5			28.9	11.5	3.5	2.6	1.3	0.8	0.3	tr	--	--	5	--

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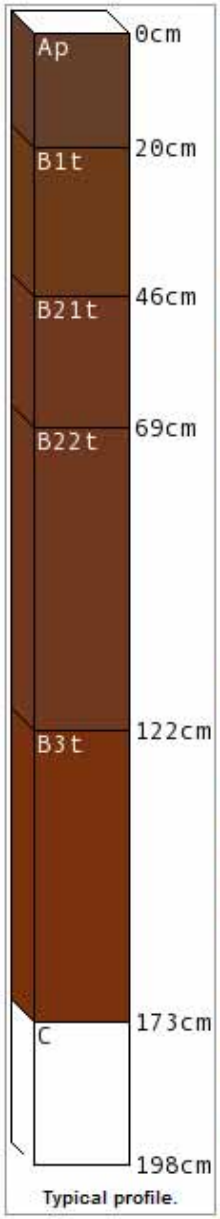

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UCDAVIS University of California, Davis

Links to Soil Survey Handbook

CAPABILITY CLASSES

Land Suited to Cultivation and Other Uses

Class I -- Soils in class I have few limitations that restrict their use.

Soils in this class are suited to a wide range of plants and may be used safely for cultivated crops, pasture, rang

nd easily worked. They hol

ited to intensive cropping.

Wind Erodibility Group and Index (618.72)

(a) Definition

A wind erodibility group (WEG) is a grouping of soils that have similar properties affecting their resistance to soil blo
the susceptibility to blowing. The Wind Erodibility Index (I), used in the wind erosion equation, is assigned using the v

(b) Significance

There is a close c
properties that are
HCl, (4) rock and

Wind Erodibility Groups (WEG) and Index (Exhibit 618-16)

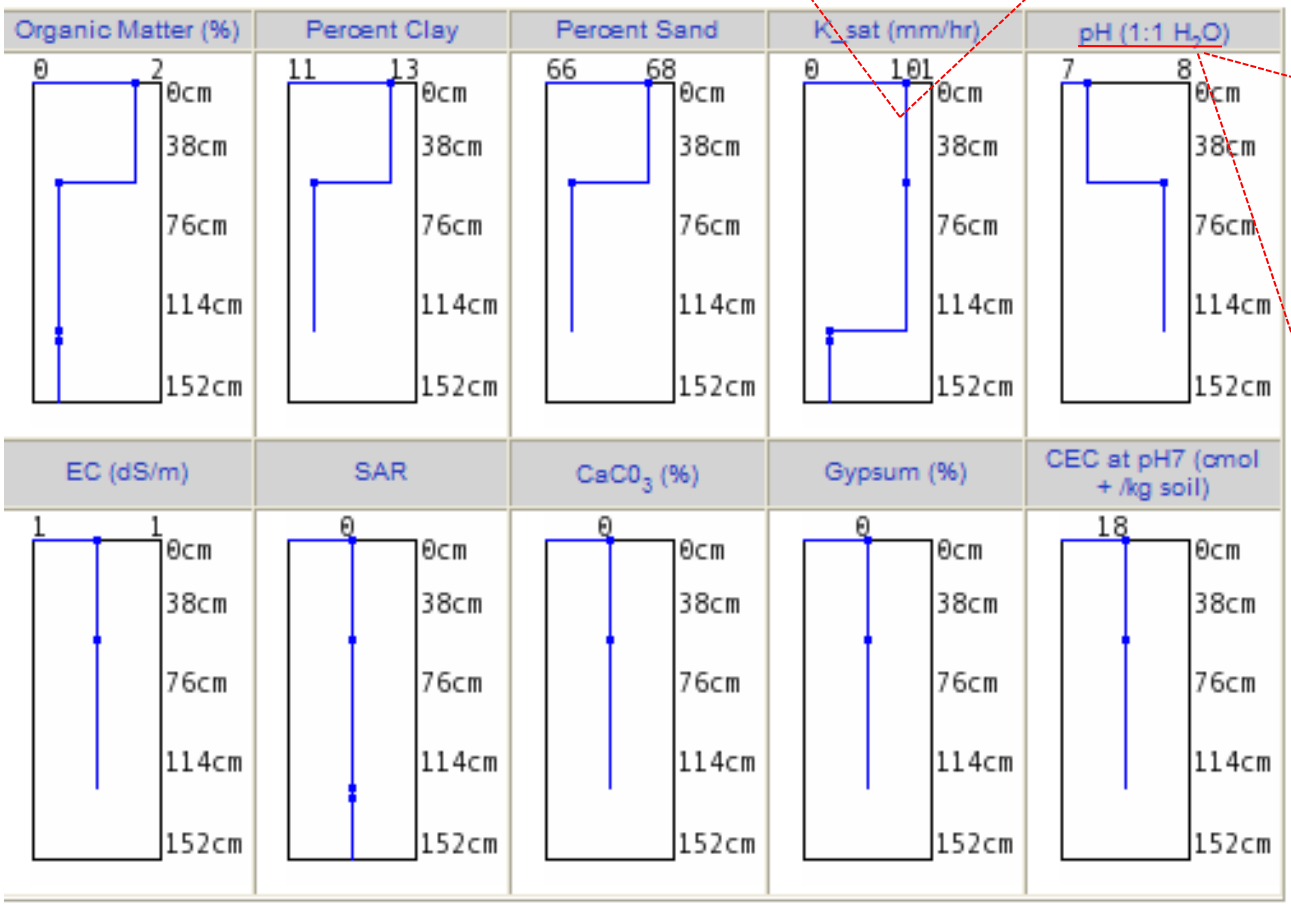
WEG 1,3,4,5	Properties of Soil Surface Layer	Dry SoilAggregatesMore Than0.84 mm (wt.%)	Wind Erodibility Index (I) (tons/ac/yr)
1	Very fine sand, fine sand, sand or coarse sand[2]	1 2 3 5 7	310 250 220 180 160
2	Loamy very fine sand, loamy fine sand, loamy sand, loamy coarse sand; very fine sandy loam and silt loam with 5 or less percent clay and 25 or less percent very fine sand; and sapric soil materials (as defined in Soil Taxonomy); except Folists	10	134
3	Very fine sandy loam, fine sandy loam, sandy loam, coarse sandy loam, and noncalcareous silt loam that has 20 to 50 percent very fine sand and 5 to 12 percent clay	25	86

Mapunit Browser - Mozilla Firefox

http://casoilresource.lawr.ucdavis.edu/soil_web/property_with_depth_table.php?&cokey=4621·

Depth Range (cm)	Horizon Designation	Percent Clay	Percent Sand	Percent Organic Matter	pH by water Extraction	Sat. Hydraulic Conductivity (mm/hr)	EC (dS/m)	SAR (%)	Carbonates (% of < 2 mm)	Gypsum (% of < 20 mm)	CEC at pH 7 (cmol charge / kg soil)
0 - 48	A	12.5	70.9	2	7	100.8	1	0	0	0	10.5
48 - 114	Bt	14	69.6	0	7	100.8	1	0	0	0	11.5
114 - 152	C	11.5	67.5	0	7.3	100.8	1	0	0	0	10

Done



Reaction, Soil (pH) (618.47)

(a) Definition

Soil reaction is a numerical expression of the relative acidity or alk

(b) Classes

The descriptive terms for reaction and their respective ranges in p

Descriptive Term	pH Range
Ultra acid	1.8 - 3.4
Extremely acid	3.5 - 4.4
Very strong acid	4.5 - 5.0

Interpretations: Waste Application, Engineering, Urban/Recreational, Irrigation

	Irrigation	
WMS - Excavated Ponds (Aquifer-fed)	**Very limited** 1. Depth to water	 *(Deep to Apparent Water Table)*
WMS - Pond Reservoir Area (CA)	**Limitations** 1. Permeability > 2/hr (seepage)	 *(Perm (seepage) .6 to >2/hr, 30-150cm (12-60) - MO2)*
WMS - Furrow Irrigation (CA)	**Limitations** 1. AWC from 2 - 6	 *(AWC 4-6 in 0-100cm - MO2)*
WMS - Graded Border Irrigation (CA)	**Limitations** 1. AWC from 2 - 6	 *(AWC 4-6 in 0-100cm - MO2)*
WMS - Sprinkler Irrigation (CA)	**Limitations** 1. AWC from 2 - 6	 *(AWC 4-6 in 0-100cm - MO2)*
WMS - Drip or Trickle Irrigation (CA)	**No limitations**	
WMS - Basin or Paddy Irrigation (level border) (CA)	**Limitations** 1. Permeability >= 1.2/hr 2. AWC from 2 - 6	 *(Perm (seepage) >=1.2/hr 0-150cm - MO2)* *(AWC 4-6 in 0-100cm - MO2)*
WMS - Embankments, Dikes, and Levees (CA)	**No limitations**	

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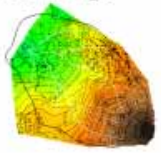


User login

Username: *

Password: *

Log in

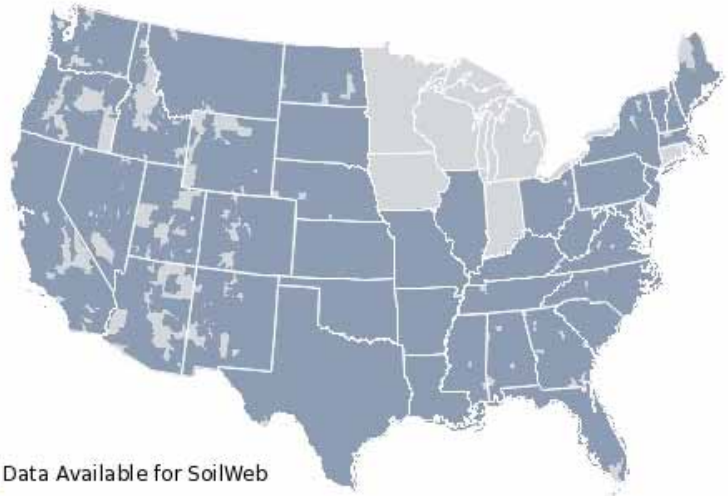
SoilWeb: An Online Soil Survey Browser

Submitted by dylan on Fri, 2010-02-26 16:13.

Our online soil survey can be used to access NRCS-NCSS 1:24,000 scale detailed soil survey data (SSURGO) in many parts of the lower 48 states. Where this data is not yet available, 1:250,000 scale generalized soils data (STATSGO) can be accessed instead (AZ, CA, NV only). An interactive map interface allows for panning and zooming, with highways, streets, and aerial photos to assist navigation (Figure 1). Soil polygons become visible near a scale of 1:30,000. Alternatively, a GPS point, CA Zip code, or a street address can be used to zoom in on a specific location. General usage notes and information on how our online soil survey work can be found here. Statistics on who is using our online soil survey can be found here. Technical details on SoilWeb can be found in this publication.

SSURGO Map Units

STATSGO Map Units

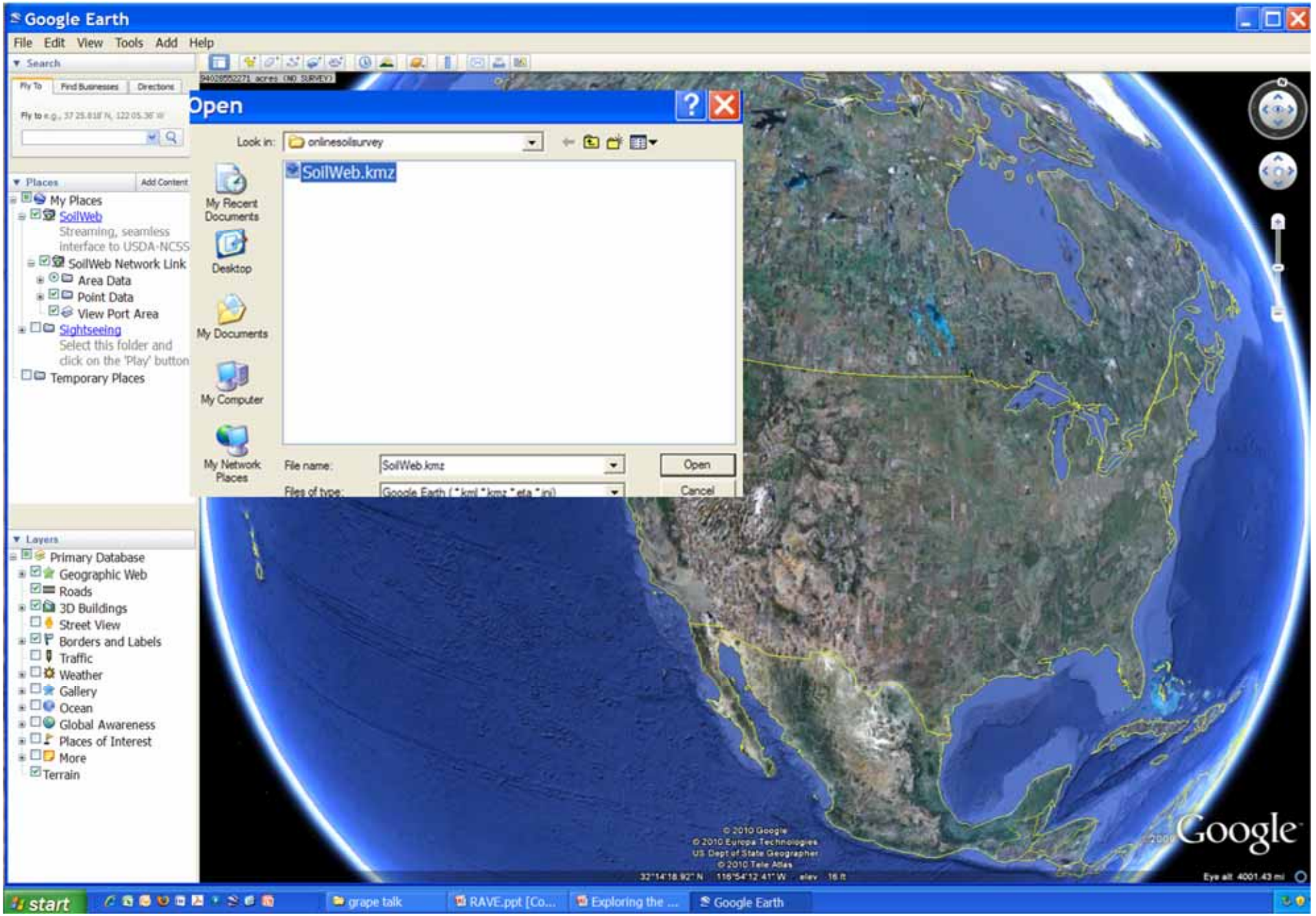


Data Available for SoilWeb

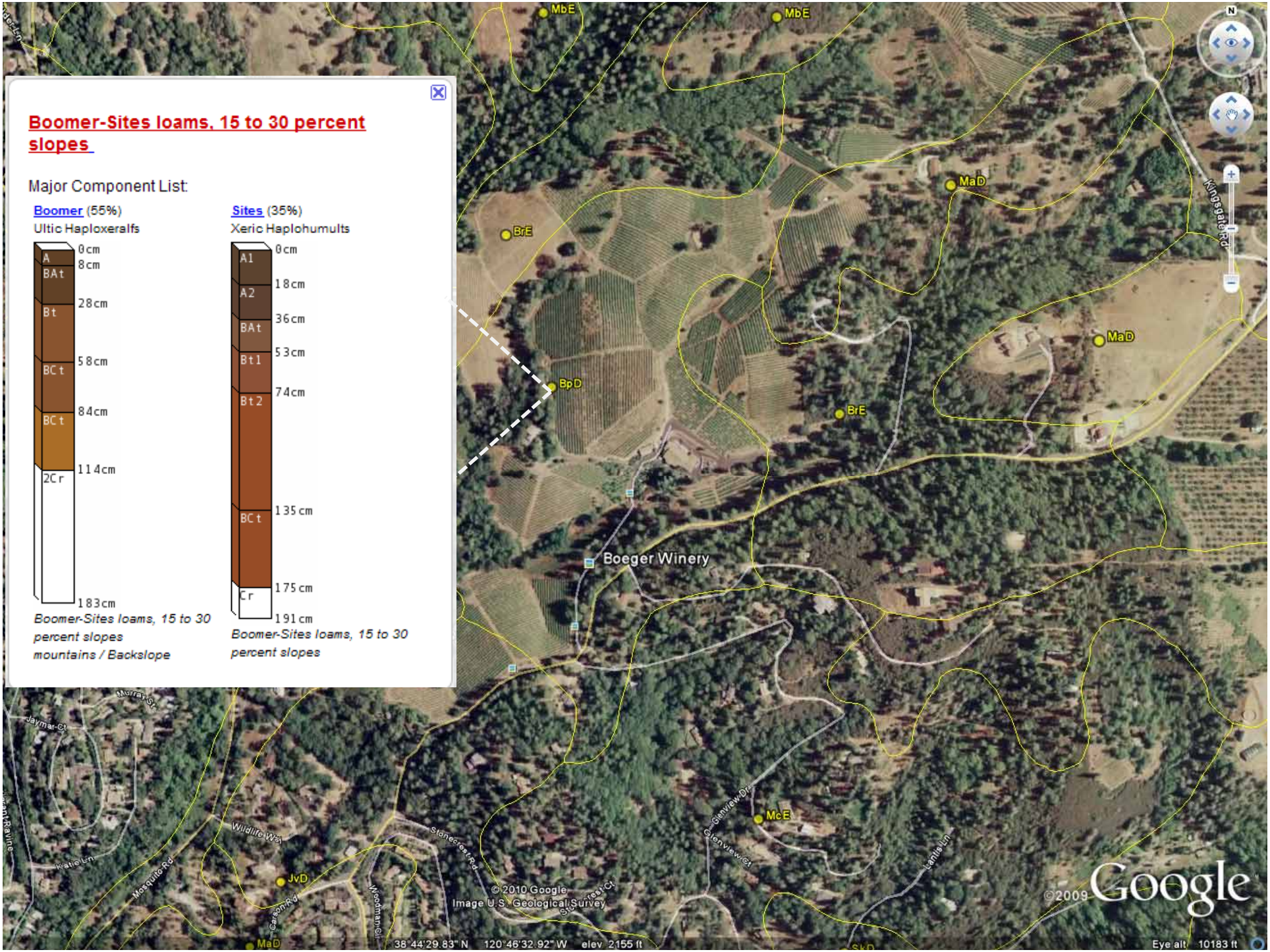
Select an Interface to SoilWeb

- An iPhone App for real-time, location-based soil queries!
- Google Maps interface
- Google Earth Interface
- A Text-only interface to SSURGO
- Original Interface

Google Earth Interface




Boeger Winery
Placerville
193
49
50
Google
©2009
Imagery Date: May 31, 2007



Boomer-Sites loams, 15 to 30 percent slopes

Major Component List:

Boomer (55%)
Ultic Haploxeralfs

A	0 cm
BAt	8 cm
Bt	28 cm
BCt	58 cm
BCt	84 cm
2Cr	114 cm
	183 cm

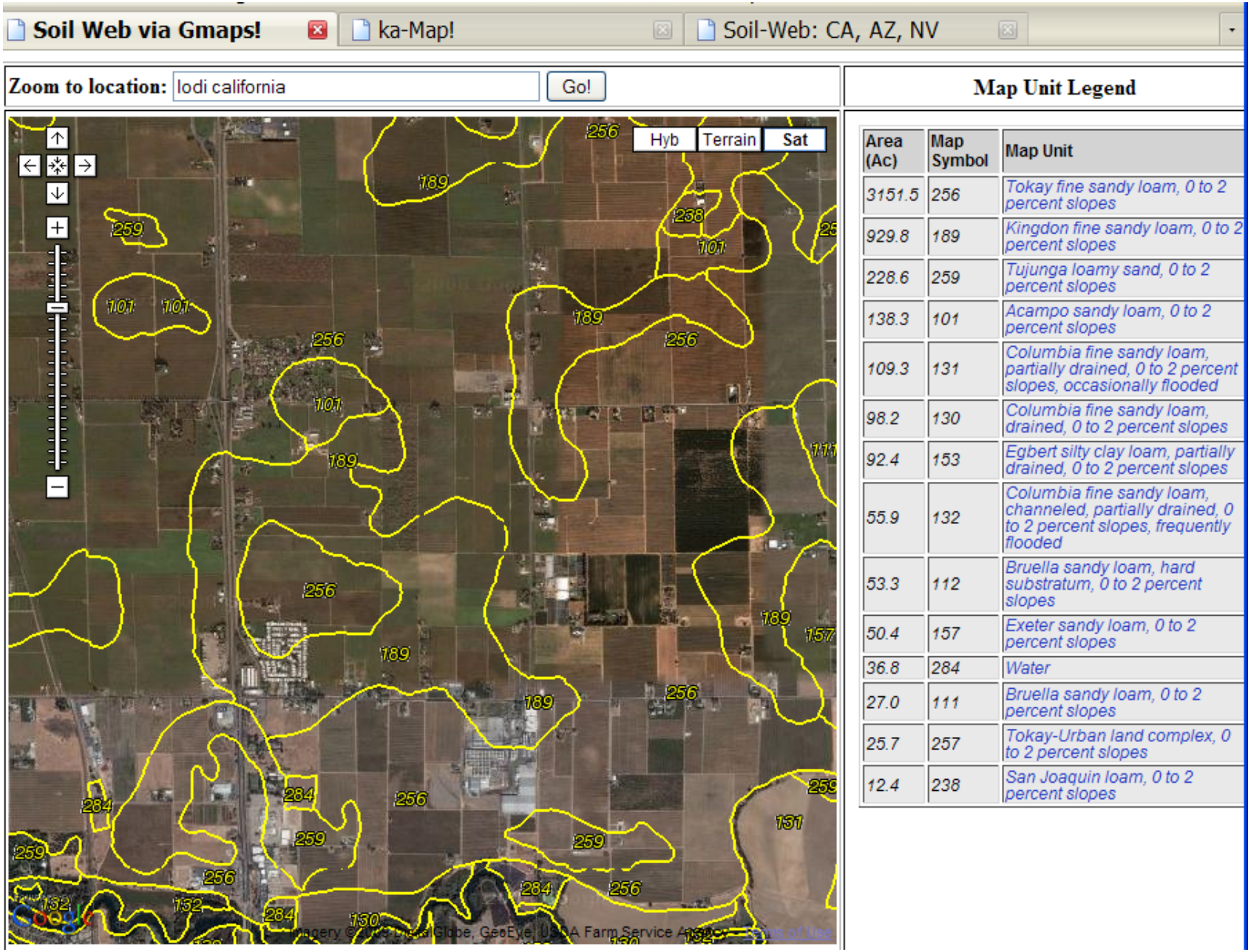
Boomer-Sites loams, 15 to 30 percent slopes
mountains / Backslope

Sites (35%)
Xeric Haplohumults

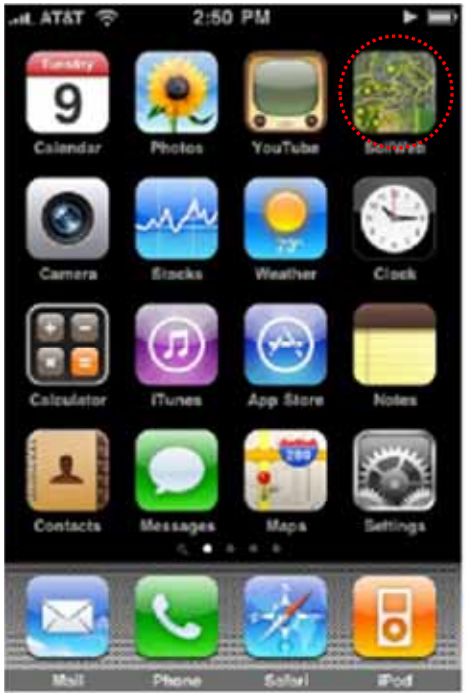
A1	0 cm
A2	18 cm
BAt	36 cm
Bt1	53 cm
Bt2	74 cm
BCt	135 cm
Cr	175 cm
	191 cm

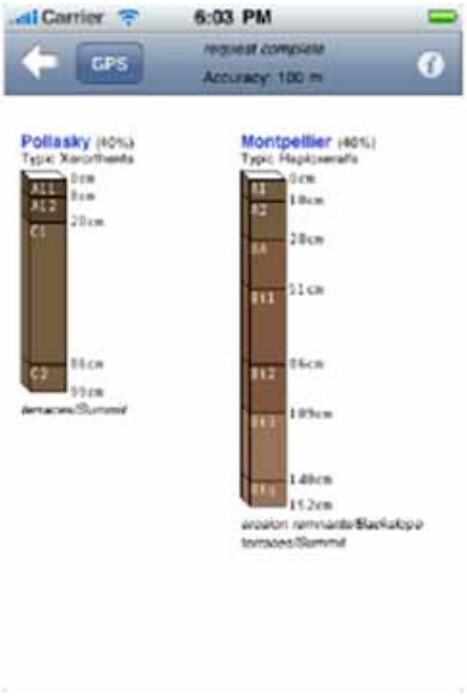
Boomer-Sites loams, 15 to 30 percent slopes

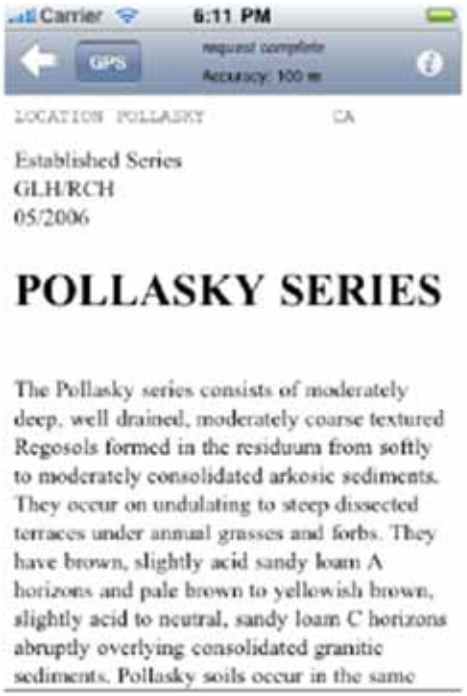
Google Maps Interface



Iphone Soil App







Getting to Know Your Soils with Soil Survey

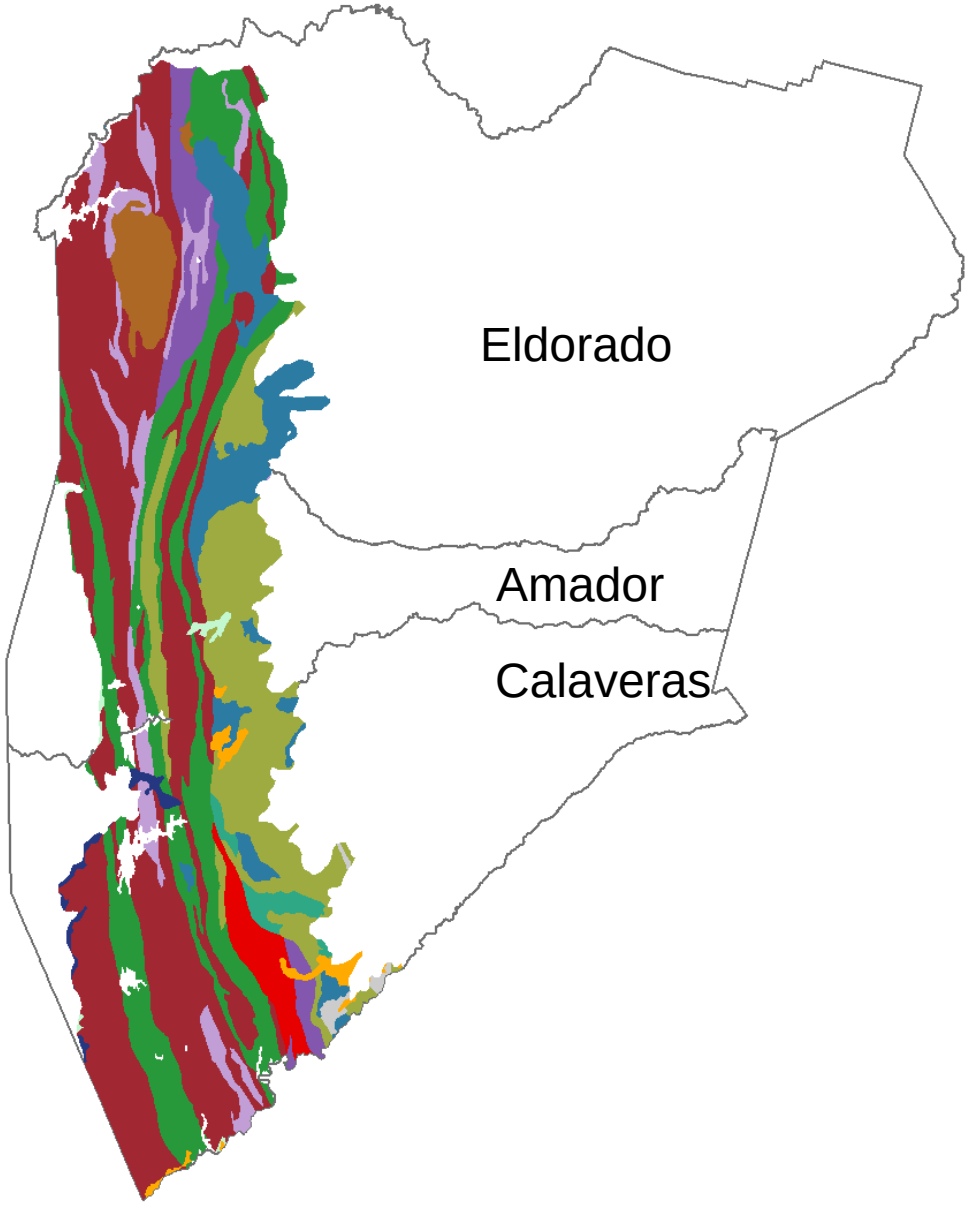
Critical functions of soil for wine production:

-Rooting depth; Drainage; Nutrient supply; Regulation of water

Other utilities of soil survey:

-Creating a sense of place

Sierra Foothill Geology



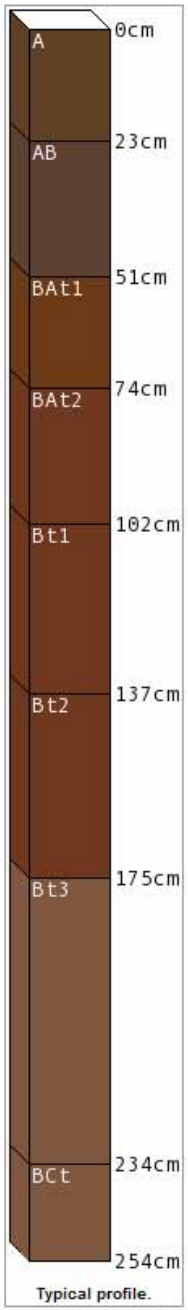
Volcanic Terrain

Common soils:
Aiken, Cohasset, Iron Mountain, McCarthy

Important properties:

1) high water holding capacity
2) phosphorus deficiency
3) high potassium

California Soil Resource Lab



Typical profile.

Soil Taxonomy

Order:	*Ultisols*
Suborder:	*Humults* [Map of Suborders]
Greatgroup:	*Haplohumults*
Subgroup:	*Xeric Haplohumults*
Family:	*Clayey, parasesquic, mesic Xeric Haplohumults*
Soil Series:	*Aiken* (Link to OSD) (Link to SM Tool)
Data:	[Lab Data] [Nitrate Groundwater Pollution Hazard Index]
Raw Data	Component All Horizons

Land Classification

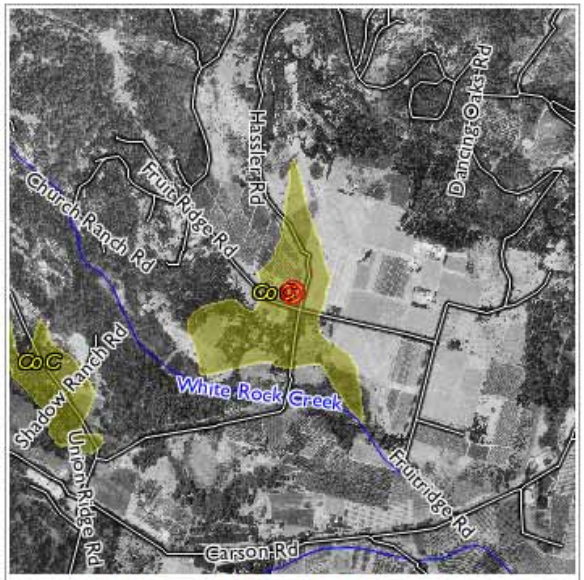
Storie Index	65
Land Capability Class [non-irrigated]	3-e
Land Capability Class [irrigated]	3-e
Ecological Site Description	

Soil Suitability Ratings

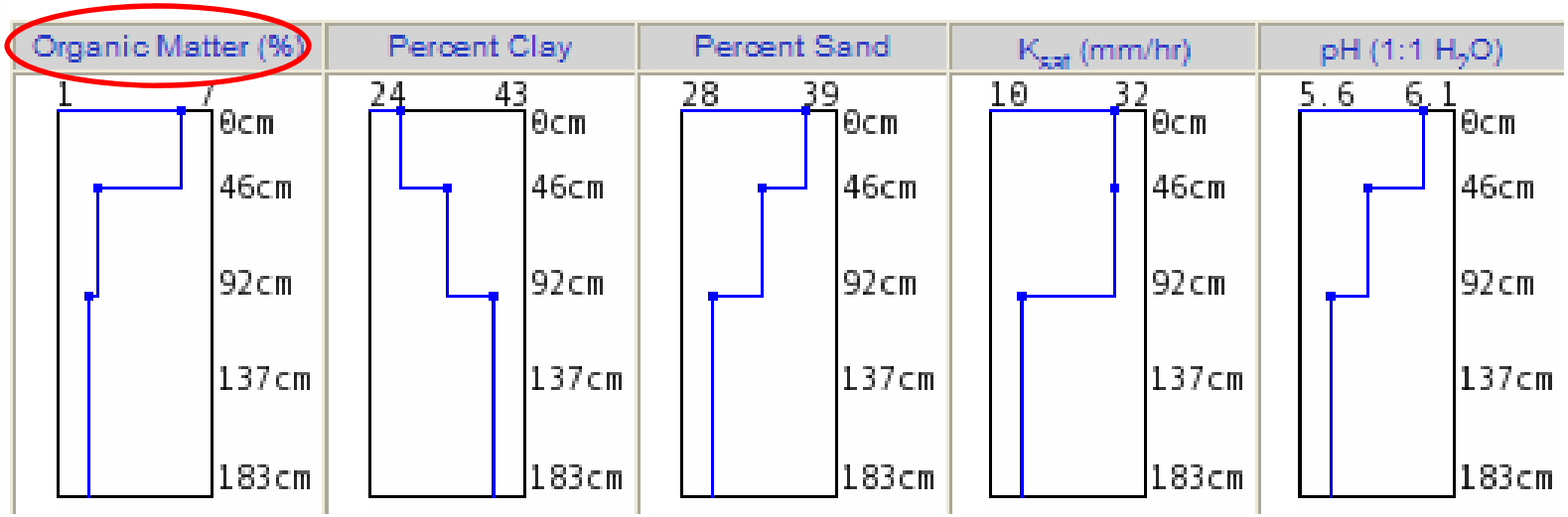
Waste Related	*Engineering*
Urban/Recreational	*Irrigation*
Wildlife	*Runoff*

Hydraulic and Erosion Ratings

Wind Erodibility Group	6
Wind Erodibility Index	48
T Erosion Factor	5
Runoff	*Medium*
Drainage	*Well drained*
Hydric Rating / Hydrologic Group	*No [Group B]*
Parent Material:	*andesitic conglomerate and/or residuum weathered from tuff breccia*
Profile Water Storage (cm):	*30.3*



Queried map unit polygons in yellow, queried point in red.

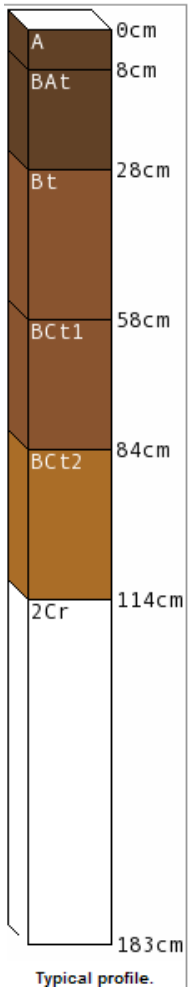


Metavolcanic Terrain

Common soils:
Boomer, Sobrante, Argonaut

Important properties:

1) Mod-high water holding capacity
2) phosphorus deficiency
3) soil depth



Typical profile.

Soil Taxonomy

Order:	*Alfisols*
Suborder:	*Xeralfs* *[Map of Suborders]*
Greatgroup:	*Haploxeralfs*
Subgroup:	*Ultic Haploxeralfs*
Family:	*Fine-loamy, mixed, superactive, mesic Ultic Haploxeralfs*
Soil Series:	*Boomer* *(Link to OSD)* *(Link to SM Tool)*
Data:	*[Lab Data]* *[Nitrate Groundwater Pollution Hazard Index]*
Raw Data	*Component* *All Horizons*

Land Classification

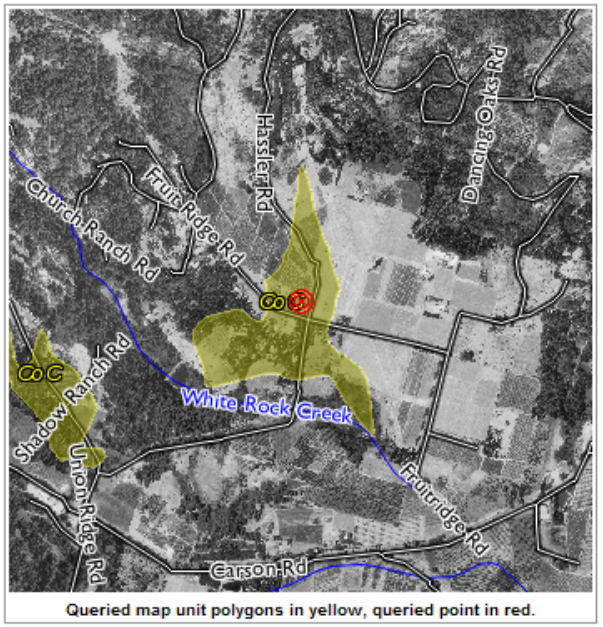
Storie Index	*17*
Land Capability Class **[non-irrigated]**	*6-e*
Land Capability Class **[irrigated]**	-
Ecological Site Description	

Soil Suitability Ratings

Waste Related	*Engineering*
Urban/Recreational	*Irrigation*
Wildlife	*Runoff*

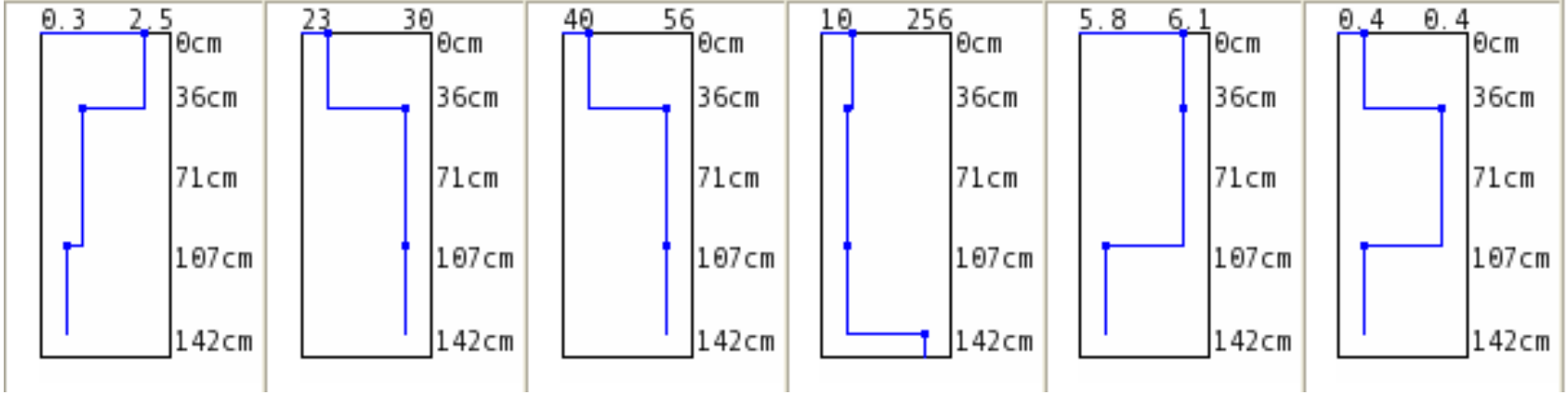
Hydraulic and Erosion Ratings

Wind Erodibility Group	*6*
Wind Erodibility Index	*48*
T Erosion Factor	*4*
Runoff	*Medium*
Drainage	*Well drained*
Hydric Rating / Hydrologic Group	*No [Group B]*
Parent Material:	*residuum weathered from greenstone and/or residuum weathered from schist*
Profile Water Storage (cm):	*20.03*



Queried map unit polygons in yellow, queried point in red.

Organic Matter (%)	Percent Clay	Percent Sand	K_{sat} (mm/hr)	pH (1:1 H_2O)	K_f Factor
0.3 2.5	23 30	40 56	10 256	5.8 6.1	0.4 0.4

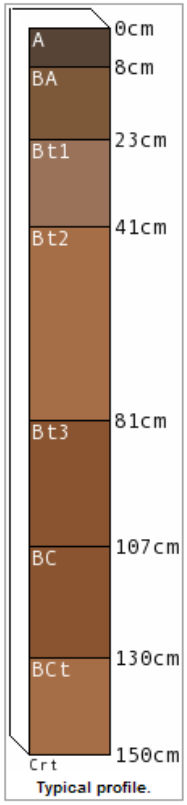


Metasedimentary Terrain

Common soils:
Josephine, Sites, Auburn, Mariposa

Important properties:

1) Moderate water holding capacity
2) phosphorus deficiency
3) soil depth



Typical profile.

Soil Taxonomy

Order:	*Ultisols*
Suborder:	*Xerults* *[Map of Suborders]*
Greatgroup:	*Haploxerults*
Subgroup:	*Typic Haploxerults*
Family:	*Fine-loamy, mixed, superactive, mesic Typic Haploxerults*
Soil Series:	*Josephine* *(Link to OSD)* *(Link to SM Tool)*
Data:	*[Lab Data]* *[Nitrate Groundwater Pollution Hazard Index]*
Raw Data	*Component* *All Horizons*

Land Classification

Storie Index	*24*
Land Capability Class **[non-irrigated]**	*6-e*
Land Capability Class **[irrigated]**	*6-e*
Ecological Site Description	

Soil Suitability Ratings

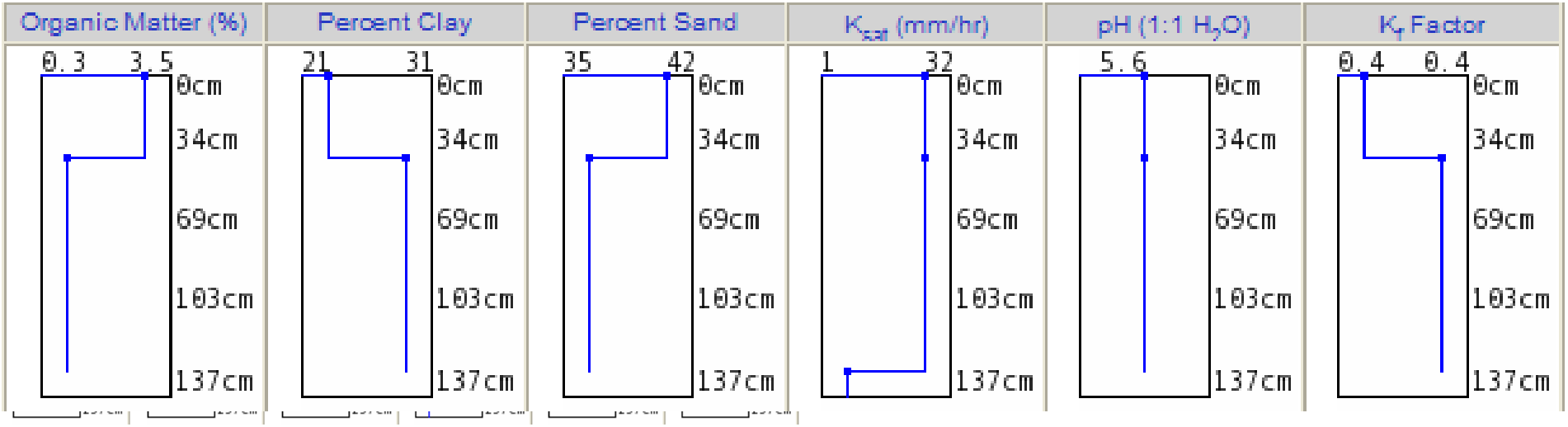
Waste Related	*Engineering*
Urban/Recreational	*Irrigation*
Wildlife	*Runoff*

Hydraulic and Erosion Ratings

Wind Erodibility Group	*6*
Wind Erodibility Index	*48*
T Erosion Factor	*5*
Runoff	*Medium*
Drainage	*Well drained*
Hydric Rating / Hydrologic Group	*No [Group B]*
Parent Material:	*residuum weathered from metamorphic rock, schist, or slate*
Profile Water Storage (cm):	*19.79*

Queried map unit polygons in yellow, queried point in red.

Geomorphology

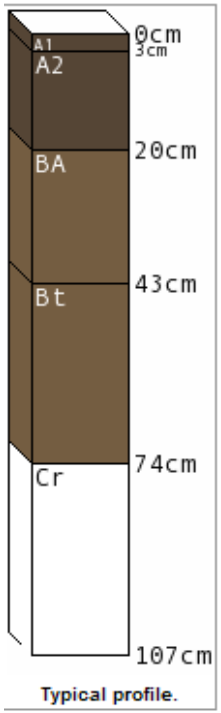


Granitic Terrain

Common soils:
Shenandoah, Auberry, Musick, Rescue, Holland, Sierra, Ahwahnee

Important properties:

1) low water holding capacity
2) potassium deficiency
3) soil depth



Typical profile.

Soil Taxonomy

Order:	*Alfisols*
Suborder:	*Xeralfs* *[Map of Suborders]*
Greatgroup:	*Haploxeralfs*
Subgroup:	*Mollic Haploxeralfs*
Family:	*Coarse-loamy, mixed, active, thermic Mollic Haploxeralfs*
Soil Series:	*Ahwahnee* *(Link to OSD)* *(Link to SM Tool)*
Data:	*[Lab Data]* *[Nitrate Groundwater Pollution Hazard Index]*
Raw Data	*Component* *All Horizons*

Land Classification

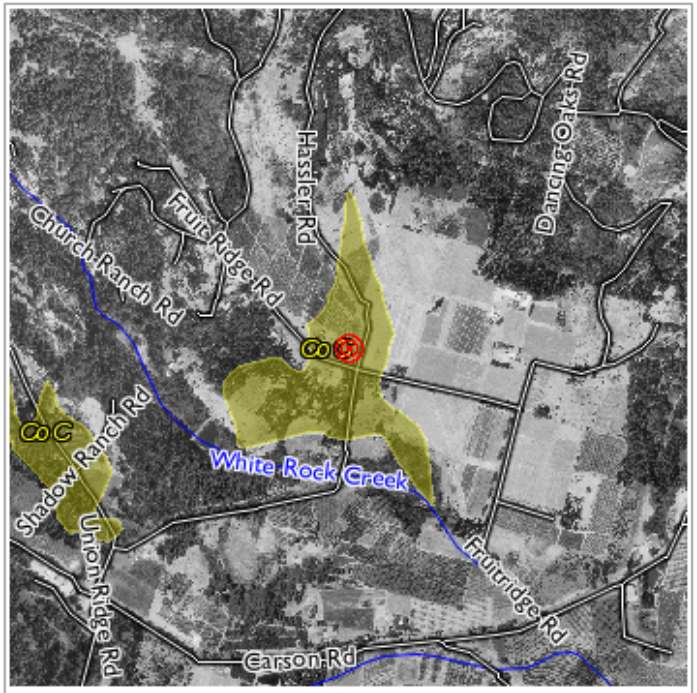
Storie Index	*27*
Land Capability Class **[non-irrigated]**	*6-e*
Land Capability Class **[irrigated]**	*6-e*
Ecological Site Description	*GRANITIC*

Soil Suitability Ratings

Waste Related	*Engineering*
Urban/Recreational	*Irrigation*
Wildlife	*Runoff*

Hydraulic and Erosion Ratings

Wind Erodibility Group	*5*
Wind Erodibility Index	*56*
T Erosion Factor	*3*
Runoff	*Medium*
Drainage	*Well drained*
Hydric Rating / Hydrologic Group	*No [Group B]*
Parent Material:	*residuum weathered from acid igneous rock*
Profile Water Storage (cm):	*8.84*



Queried map unit polygons in yellow, queried point in red.

Organic Matter (%)	Percent Clay	Percent Sand	K_{sat} (mm/hr)	pH (1:1 H_2O)	K_f Factor
0.3 2	13 16	65 69	10 101	6.3 6.7	0.3 0.3
0cm 19cm 38cm 57cm 76cm	0cm 19cm 38cm 57cm 76cm	0cm 19cm 38cm 57cm 76cm	0cm 19cm 38cm 57cm 76cm	0cm 19cm 38cm 57cm 76cm	0cm 19cm 38cm 57cm 76cm

Thank You

Acknowledgments: Thanks to Dylan Beaudette for his efforts in the development of online soil survey resources