

# 1-E New Land Management Tools – Technology At Your Fingertips!

Jim Turenne, CPSS

Assistant State Soil Scientist, RI USDA-Natural Resources Conservation Service (NRCS).

[Jim.Turenne@ri.usda.gov](mailto:Jim.Turenne@ri.usda.gov) (401-822-8830)

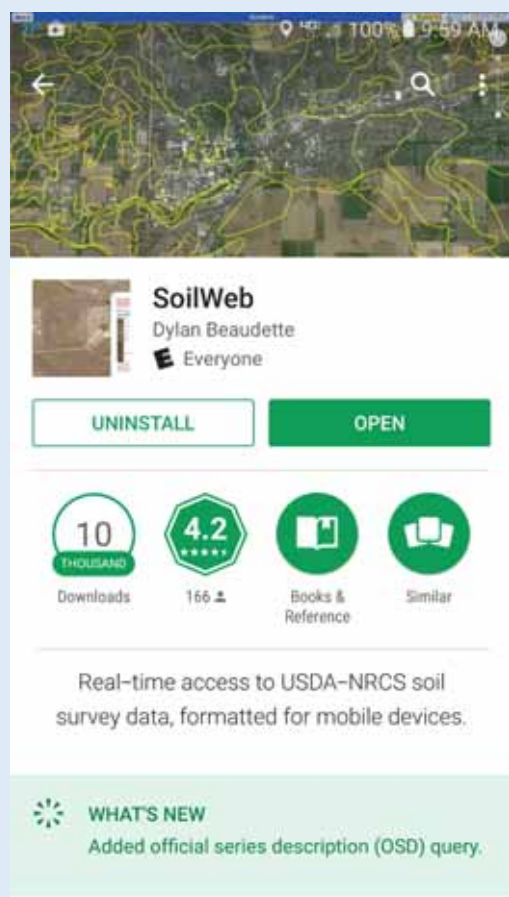
Soils Info: [www.FB.com/SoilSNE](https://www.FB.com/SoilSNE) or [www.twitter.com/soilsne](https://www.twitter.com/soilsne)

Narragansett silt loam (Un-official State Soil of RI).



Critical soil information has always been difficult to obtain.

## GOOGLE: SoilWeb



**SoilWeb**  
Dylan Beaudette  
Everyone

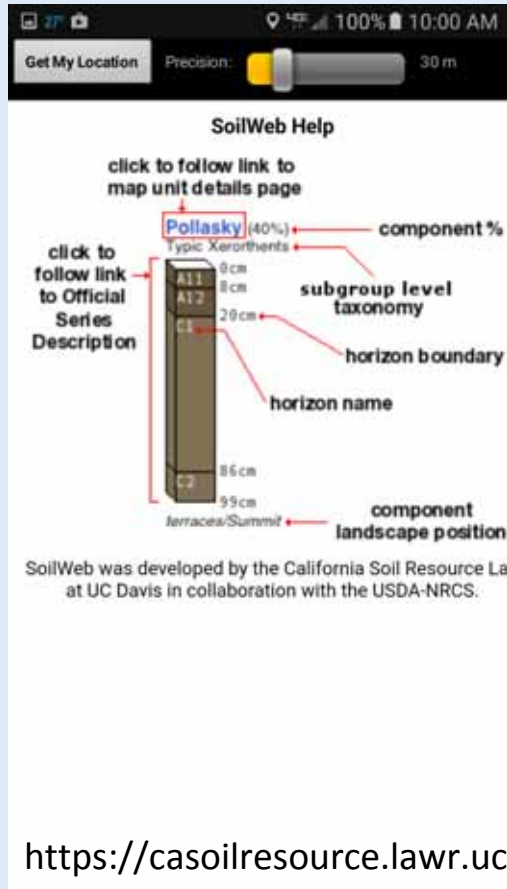
UNINSTALL OPEN

10 THOUSAND Downloads  
4.2 ★★★★★  
166 Reviews

Books & Reference  
Similar

Real-time access to USDA-NRCS soil survey data, formatted for mobile devices.

WHAT'S NEW  
Added official series description (OSD) query.



**SoilWeb Help**

click to follow link to map unit details page

**Pollasky** (40%)  
Typic Xeroorthents

component %

click to follow link to Official Series Description

subgroup level taxonomy

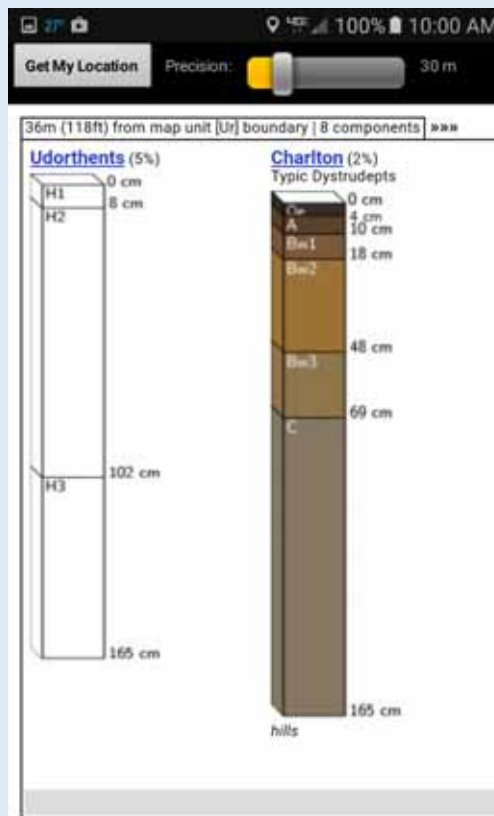
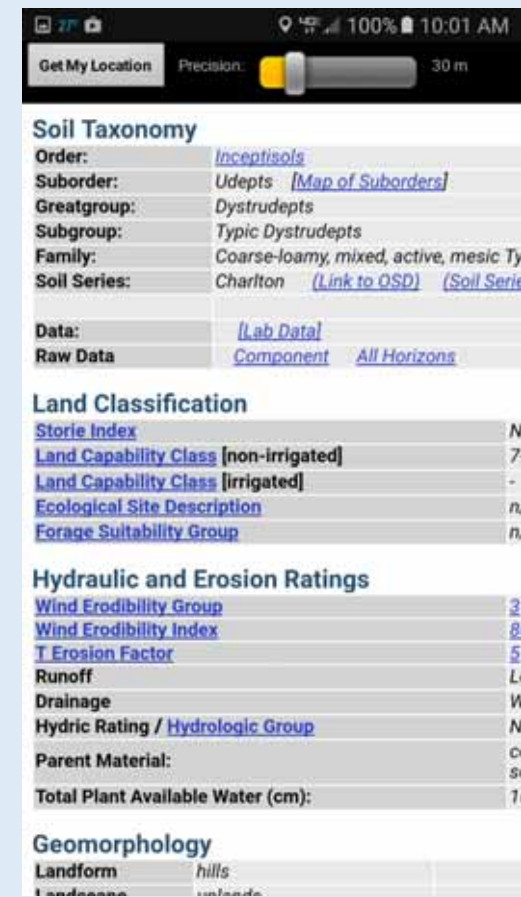
horizon boundary

horizon name

component landscape position

terraces/Summit

SoilWeb was developed by the California Soil Resource Lab at UC Davis in collaboration with the USDA-NRCS.

**Soil Taxonomy**

Order: [Inceptisols](#)

Suborder: [Udepts](#) [[Map of Suborders](#)]

Greatgroup: [Dystrudepts](#)

Subgroup: [Typic Dystrudepts](#)

Family: [Coarse-loamy, mixed, active, mesic Typic Dystrudepts](#)

Soil Series: [Charlton](#) [[Link to OSD](#)] [[Soil Series](#)]

Data: [[Lab Data](#)]

Raw Data [[Component](#)] [[All Horizons](#)]

**Land Classification**

[Storie Index](#) N

[Land Capability Class \[non-irrigated\]](#) 7-

[Land Capability Class \[irrigated\]](#) -

[Ecological Site Description](#) n

[Forage Suitability Group](#) n

**Hydraulic and Erosion Ratings**

[Wind Erodibility Group](#) 3

[Wind Erodibility Index](#) 8

[T Erosion Factor](#) 5

Runoff L1

Drainage W

Hydic Rating / [Hydrologic Group](#) N

Parent Material: C1

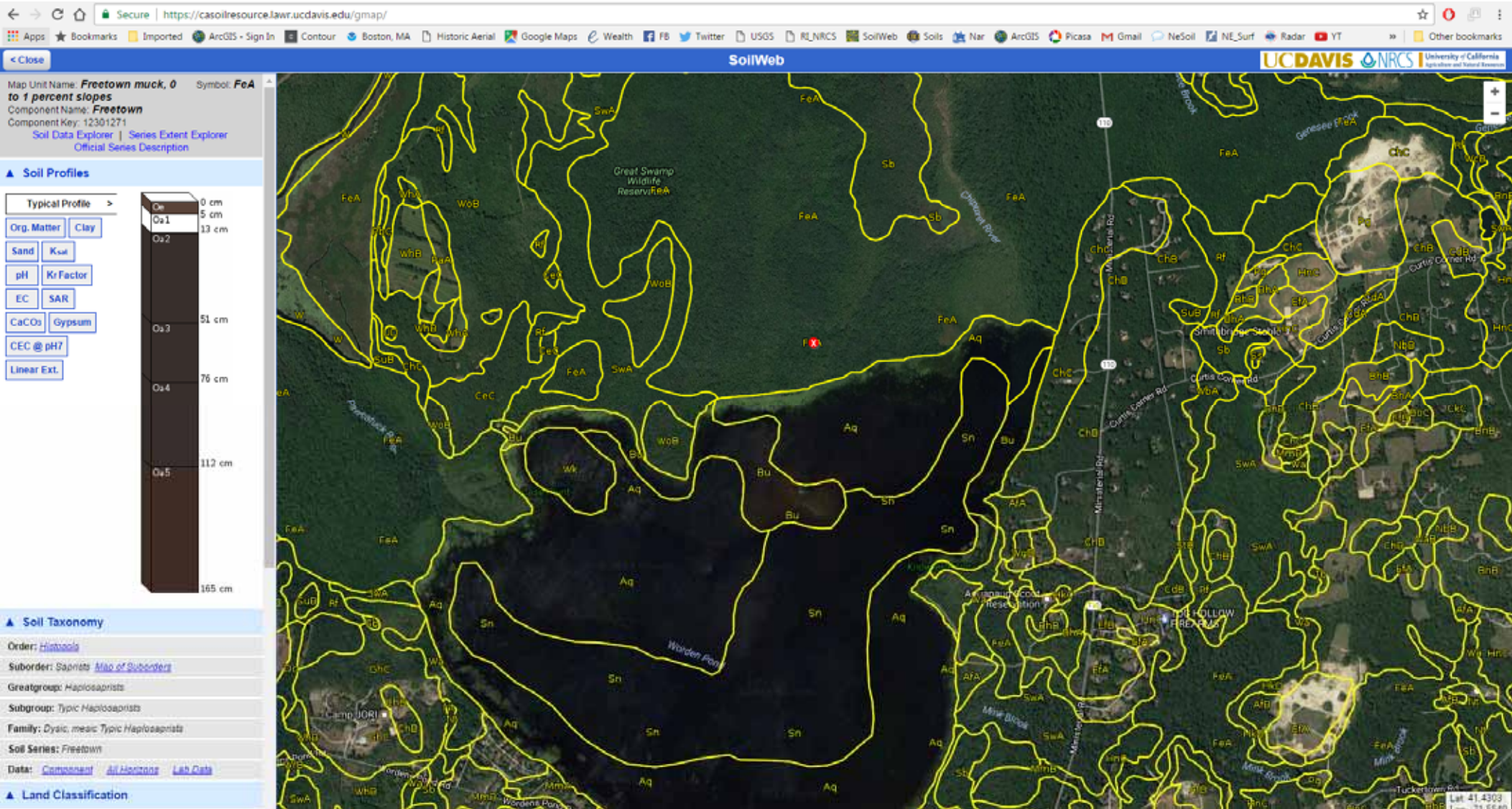
Total Plant Available Water (cm): 71

**Geomorphology**

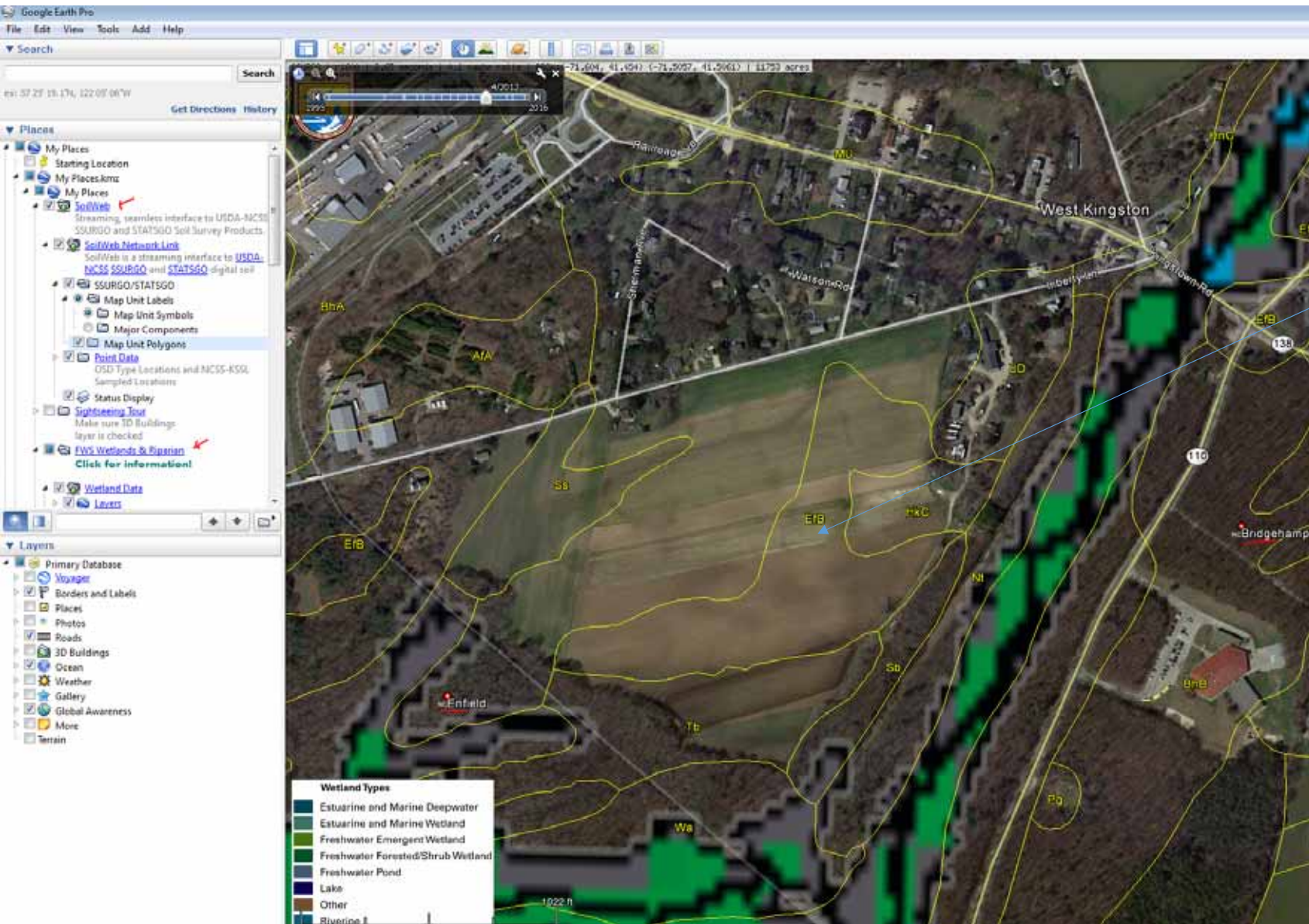
Landform hills

Landscape uplands

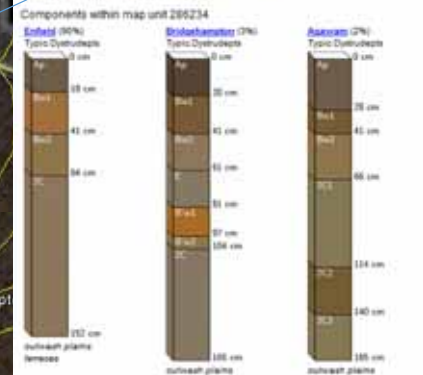
<https://casoilresource.lawr.ucdavis.edu/soilweb-apps/>



Works on smart phone browser also – use the phones GPS to locate yourself



Enfield silt loam, 2 to 8 percent slopes (SSURGO Export: 2015-09-22)

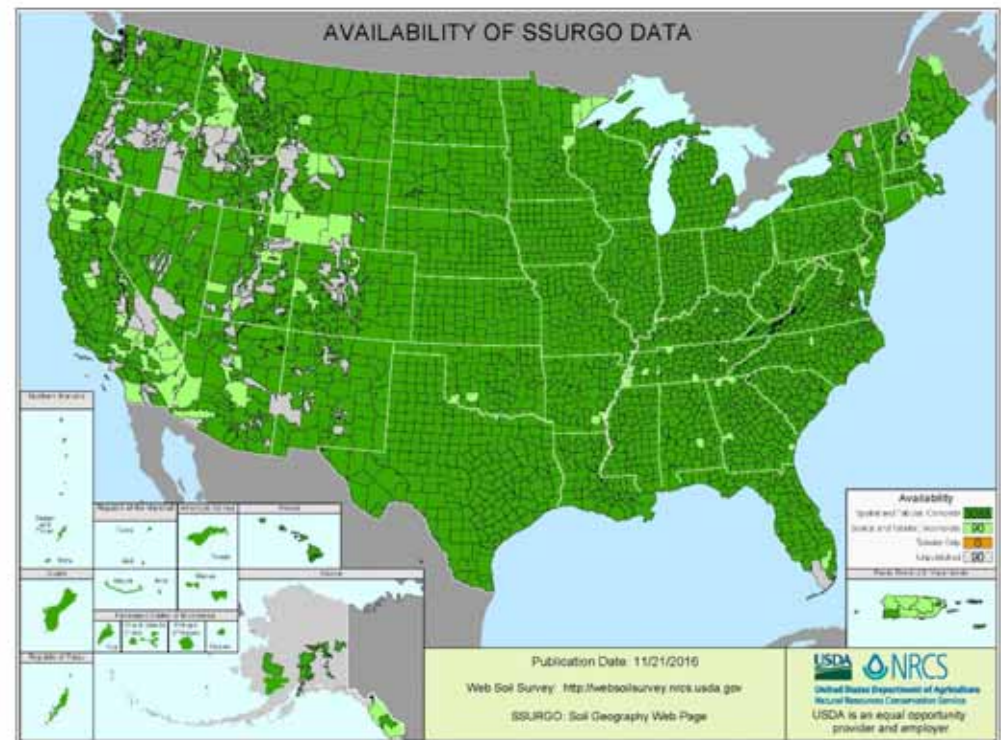


[http://casoilresource.lawr.ucdavis.edu/soil\\_web/kml/SoilWeb.kml](http://casoilresource.lawr.ucdavis.edu/soil_web/kml/SoilWeb.kml)

# What is a Soil Survey?

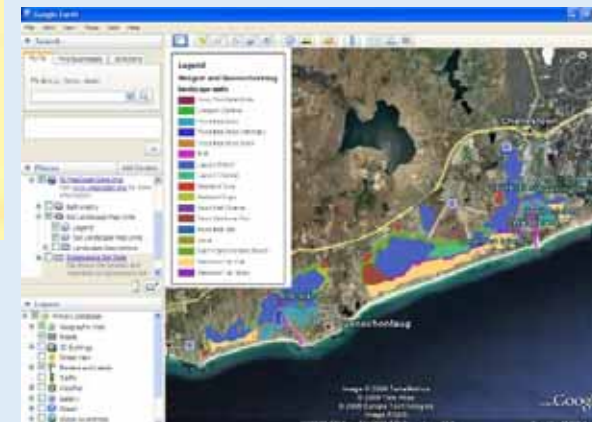
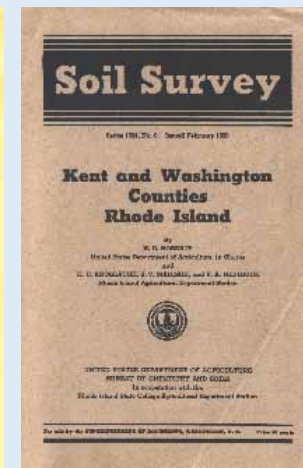
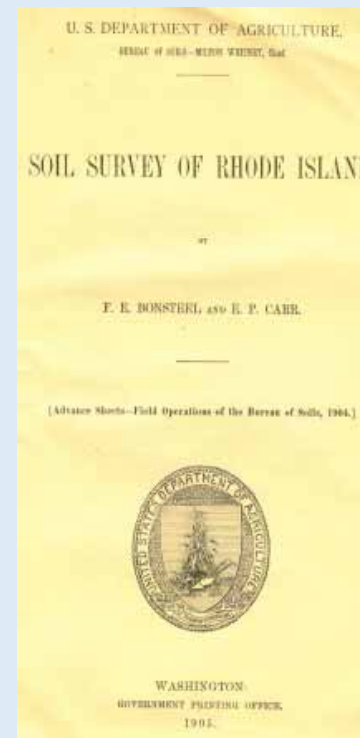
A soil survey is a scientific report about the soils in an area that consists of maps, descriptions of the soil, data, AND soil properties and interpretations on uses of the soil for over 96+ land-uses.

- Results of extensive field work.
- Over 100 years mapping soils.
- Largest soil database in world.
- New areas of mapping.

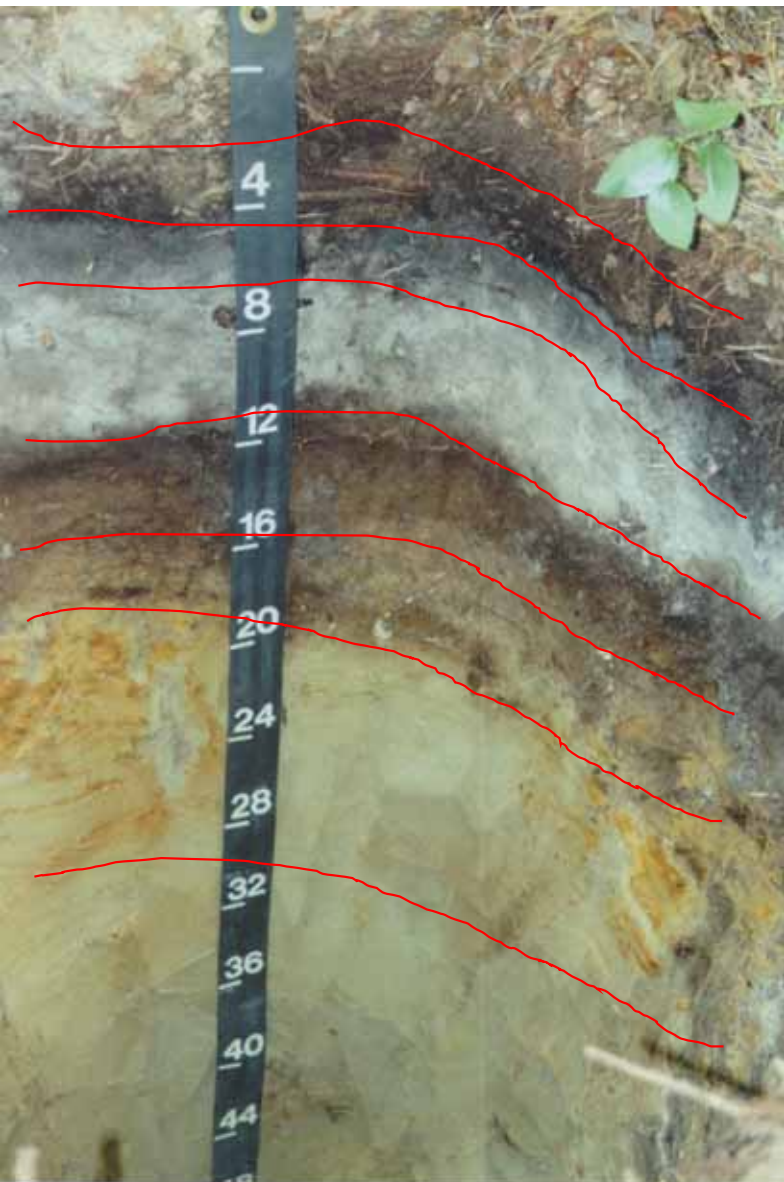


# Rhode Island Soil Survey

- Early surveys 1904/30's
- 1981 – Published RI Survey.
  - Field work 1965-75
  - 25 mappers worked on it.
  - Mapped at 1:12K.
- Digitized 1990's by EDC on Topo base map, SSURGO certified 1996, RIGIS attribute table added.
- 2004-Present – Coastal Zone Soil Survey, Freshwater, spatial edits, tabular changes.



All RI surveys online at:  
<https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=RI>



Oi--0 to 5 centimeters ; loose; abrupt wavy boundary. Lab sample # 93P04863

Oe--5 to 10 centimeters; very dark gray (5YR 3/1) broken face and dark reddish brown (5YR 3/2) rubbed partially decomposed organic matter; very friable; common fine to coarse roots throughout and many very fine roots throughout; abrupt wavy boundary. Lab sample # 93P04864

Oa--10 to 18 centimeters; dusky red (2.5YR 3/2) broken face and very dark gray (N 3/0) rubbed ; very friable; common fine to coarse roots throughout and many very fine roots throughout; extremely acid, pH 4.3, Bromcresol green; abrupt wavy boundary. Lab sample # 93P04865

A--18 to 24 centimeters; very dark gray (N 3/0) broken face fine sandy loam; weak medium and coarse granular structure; friable, nonsticky, nonplastic; common very fine and fine roots throughout and few medium and coarse roots throughout; strongly acid, pH 5.1, Bromcresol green; abrupt wavy boundary. Lab sample # 93P04866

E--24 to 36 centimeters; dark gray (10YR 4/1) broken face fine sandy loam; 10 percent medium faint spherical very dark gray (10YR 3/1) and 25 percent medium and coarse faint spherical gray (10YR 5/1) mottles; massive; friable, nonsticky, nonplastic; few very fine to medium roots throughout; organic stains; strongly acid, pH 5.3, Chlorophenol red; abrupt wavy boundary. Lab sample # 93P04867

Bhs--36 to 57 centimeters; dark brown (7.5YR 3/2) broken face loamy sand; 10 percent fine distinct spherical strong brown (7.5YR 4/6) and 10 percent fine and medium distinct spherical very dark gray (5YR 3/1) mottles; massive; friable, nonsticky, nonplastic; common very fine and fine roots throughout and few medium roots throughout; strongly acid, pH 5.5, Chlorophenol red; abrupt wavy boundary. Lab sample # 93P04868

Bsm--57 to 65 centimeters; strong brown (7.5YR 5/6) broken face loamy sand; 10 percent fine and medium prominent irregular dark reddish brown (2.5YR 3/4) and 10 percent fine and medium prominent irregular dusky red (2.5YR 3/2) mottles; massive; very firm, hard, nonsticky, nonplastic; common very fine roots in cracks; strongly acid, pH 5.5, Chlorophenol red; clear wavy boundary. Lab sample # 93P04869. sample # 93P4875 is a subsample of this horizon.

Bs--65 to 98 centimeters; 85 percent (10YR/), broken face and 15 percent (2.5Y/), broken face; 25 percent medium and coarse prominent irregular red (2.5YR 4/6) and 25 percent medium and coarse distinct irregular strong brown (7.5YR 4/6) mottles; firm, slightly hard, nonsticky, nonplastic; few fine roots in cracks and common very fine roots in cracks; strongly acid, pH 5.5, Chlorophenol red; clear wavy boundary. Lab sample # 93P04871. 93P4870.

C--98 to 126 centimeters; yellowish brown (10YR 5/4) broken face loamy sand; 10 percent fine and medium distinct irregular yellowish brown (10YR 5/6) and 10 percent fine faint irregular brown (10YR 5/3) mottles; massive; friable, loose, nonsticky, nonplastic; moderately acid, pH 5.7, Chlorophenol red; clear wavy boundary. Lab sample # 93P04872

2Cd1--126 to 150 centimeters; light olive brown (2.5Y 5/3) broken face sandy loam; 1 percent medium prominent irregular yellowish brown (10YR 5/6) and 1 percent medium distinct irregular light brownish gray (10YR 6/2) mottles; massive; firm, slightly hard, nonsticky, nonplastic; brittle; common very fine and fine moderate-continuity vesicular pores; moderately acid, pH 5.6, Chlorophenol red; clear wavy boundary. Lab sample # 93P04873

2Cd2--150 to 183 centimeters; grayish brown (2.5Y 5/2) broken face sandy loam; 1 percent fine and medium prominent irregular yellowish brown (10YR 5/6) mottles; massive; firm, hard, nonsticky, nonplastic; brittle; common very fine and fine moderate-continuity vesicular pores; 1 percent fine spherical extremely weakly cemented dark reddish brown (5YR 3/2) iron-manganese masses throughout; moderately acid, pH 5.7, Chlorophenol red. Lab sample # 93P04874

What does a soil scientist see? How are soil interpretations made? The following shows the data collected for each soil series.



Primary Characterization Data  
 Station # 00442301  
 Location Mattapan  
 USDA-NRCS-NRCS National Soil Survey Laboratory  
 Report No. 201704

Layer	Depth (cm)	Horiz	Muns	pH				Moisture				Bulk Density				Cation Exchange Capacity	
				1:1	1:2	1:5	1:10	1:1	1:2	1:5	1:10	1:1	1:2	1:5	1:10		
0P04000	0-2	Oa	5														
0P04004	2-10	Oa	5														
0P04008	10-14	Oa	5														
0P04012	14-20	B	5	1.6	12.0	71.9	0.2	11.0	13.0	51.0	23.1	0.0	0.8				
0P04016	20-26	B	5	1.7	13.0	70.0	0.9	8.0	12.0	52.0	25.2	0.0	2.2				
0P04020	26-32	Bw	5	2.0	7.0	62.0	1.1	4.0	10.0	60.0	24.0	0.7	1.4				
0P04024	32-38	Bw	5	2.0	5.1	64.0	2.1	5.0	7.0	58.0	22.0	1.0	2.3				
0P04028	38-44	Bw	5	2.0	5.0	62.0	2.0	2.0	6.0	52.0	20.0	0.9	1.6				
0P04032	44-50	Bw	5	2.0	5.0	62.0	2.1	4.2	14.0	47.0	18.0	0.8	1.7				
0P04036	50-56	2Caf	5				4.1	10.0	22.0	25.0	15.0	0.2	0.4				
0P04040	56-62	2Caf	5				4.0	10.0	22.0	25.0	15.0	0.2	0.4				
0P04044	62-68	2Caf	5				4.0	10.0	22.0	25.0	15.0	0.2	0.4				
0P04048	68-74	2Caf	5				4.0	10.0	22.0	25.0	15.0	0.2	0.4				
0P04052	74-80	B	5	1.0	11.0	64.0	1.4	10.0	12.0	55.0	18.0	0.7	0.9				

Established Series  
 PCF-JDT-DAS-DCP  
 06/2010

## MATTAPOISETT SERIES

The Mattapoissett series consists of soils shallow to ortstein, moderately deep or deep to dense lodgment till and very deep to bedrock. They are poorly drained soils that formed in sandy glaciofluvial deposits and/or eolian material underlain by lodgment till. Slope ranges from 0 through 8 percent. Saturated hydraulic conductivity is very high in the surface horizon and moderately low through low in the compacted subsoil (ortstein layer) and dense substratum. Mean annual temperature is about 48 degrees F. (9 degrees C.) and mean annual precipitation is about 1090 millimeters.

**TAXONOMY CLASS:** Sandy, isotic, mesic, shallow, ortstein Typic Duraquods

**TYPICAL PEDON:** Mattapoissett loamy sandy - on an east-facing, concave, 3 percent toe slope of a drumlin in a wooded area. (Colors are for moist soil).

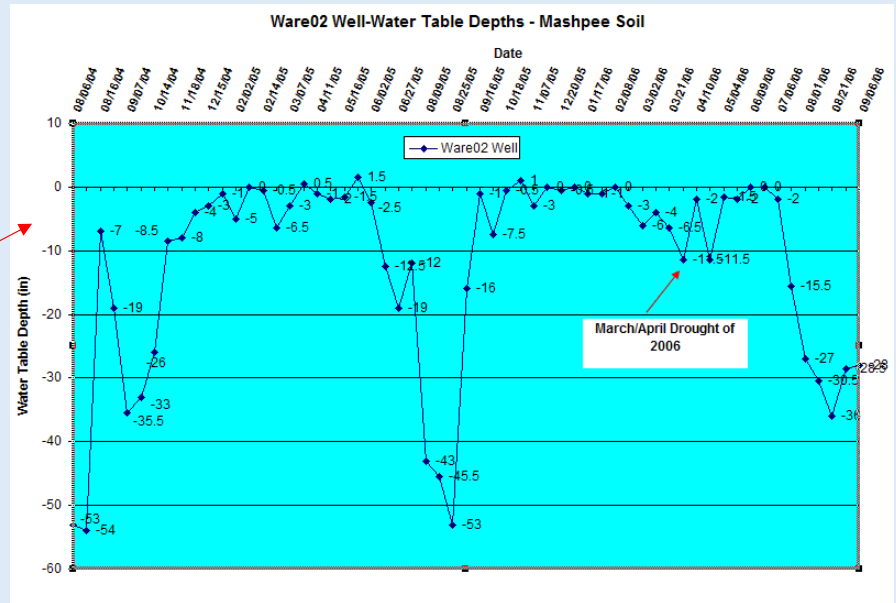
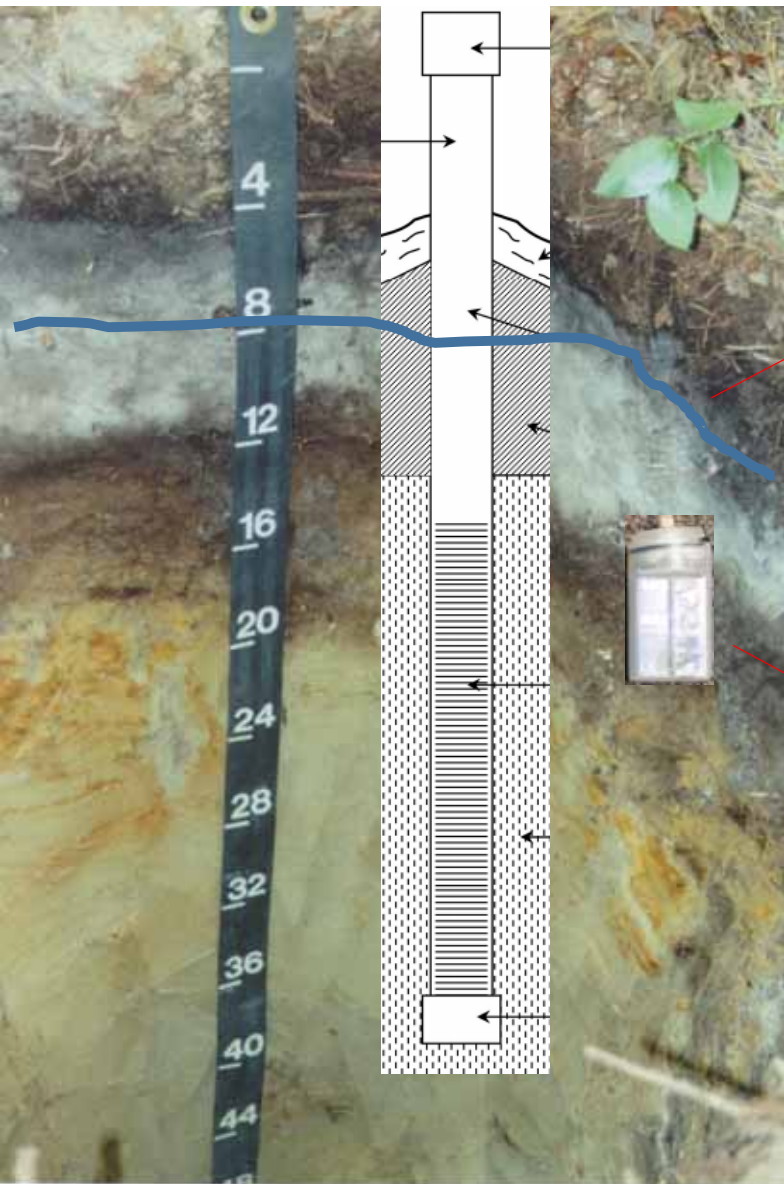
**Oe** - 0 to 3 centimeters; black (5YR 2.5/1) loam; material, many very fine, fine and medium roots; extremely acid; abrupt wavy boundary.

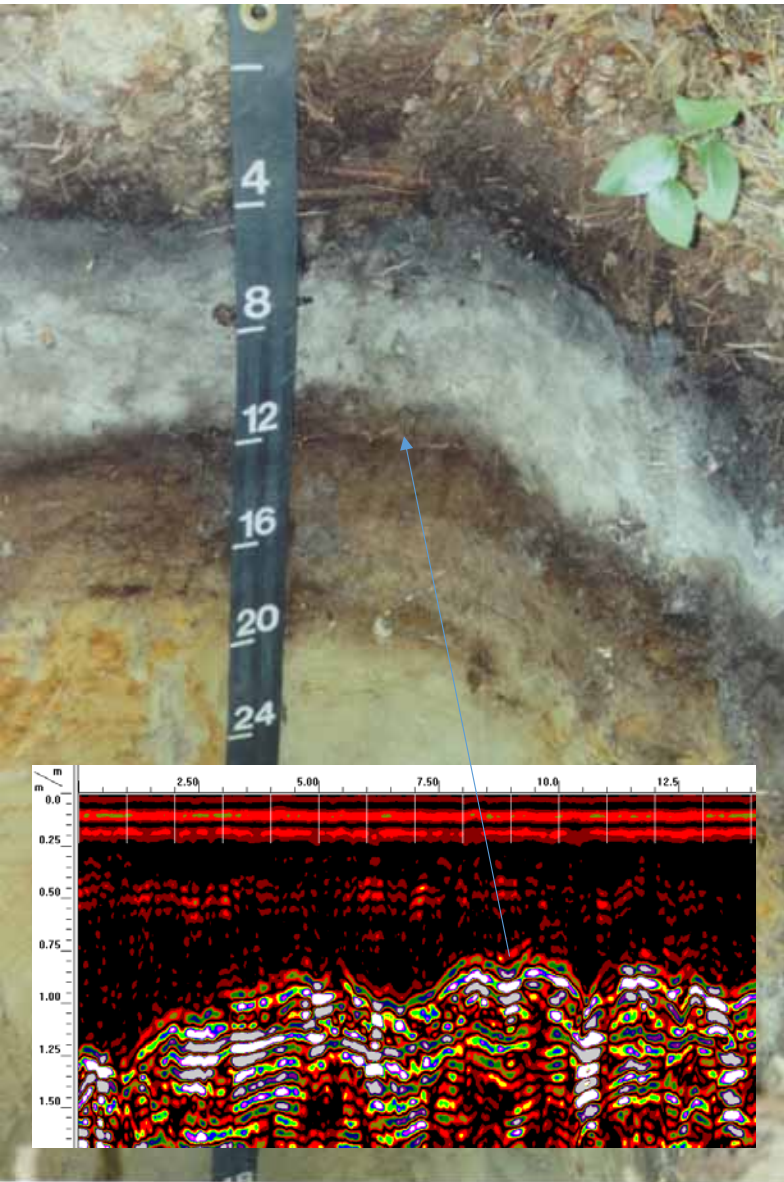
**Oa** - 3 to 8 centimeters; black (N 2.5/0) sapric material; common very fine and fine and few medium and coarse roots; extremely acid (pH 4.2); abrupt wavy boundary. (Combined thickness of the O horizons is 3 to 20 centimeters.)

**A** - 8 to 18 centimeters; black (N 2.5/0) loamy sand; massive; very friable; common very fine and fine roots and few medium and coarse roots; very strongly acid (pH 4.6); 3 percent gravel, 1 percent cobble, 2 percent stones; abrupt wavy boundary. (3 to 20 centimeters thick.)

Map of Lab Data:  
<https://tinyurl.com/jaycgto>









Physiognomy Key		Herbs & mosses	Structure & Physiognomy		actual		Cover/abundance		Sociability scale	
Trees		N no distinctive character	phys. code	(circle) code	(ht. range)	Strata	height (m)	percent	ESAXB	1 growing solitarily, si
F	Broad- <u>lvd</u> deciduous < 25 % conifers	H herbs +/-	F FC FC C	T1	(>20 m)	emergent tree	_____	0%	1 R	trace
FC	Broad- <u>lvd</u> deciduous 25-50 % conifers	G <u>graminoids</u>	F FC FC C	T2	(10-20 m)	canopy tree	_____	75%	2 +	<1 %
CF	Conifers 50-75% w/ broad- <u>lvd</u> deciduous	F ferns	F FC FC C	T3	(5-10 m)	<u>subcanopy</u> tree	_____	2%	3 1-	1-2 %
C	Conifers 75-100 %	Moss/Hepatic/Lichen	SD SC SE	S1	(2-5 m)	tall shrub	_____	10%	4 1+	2-5 %
Shrubs		Aquatics	SD SC SE	S2	(0.5-2 m)	short shrub	_____	90%	5 2-	5-10 %
SD	deciduous broad- <u>lvd</u> s	FL Floating	N H G F M	H	(< 0.5 [2] m)	herbaceous	_____	50%	6 2+	10-25 %
SE	evergreen shrubs	SB Submersed							7 3	25-50 %
SC	coniferous shrubs	MX Mixed	FL SB MX	AQ		mosses / hepatics / lichens	_____	1%	8 4	50-75 %
						true aquatics	_____	0%	9 5	75-95 %
									10	95 - 100%

Plant composition listed by prevailing Stratum - [cover scale / sociability / phenology.] Genus species (collect no.) . Taxonomic standard:											
	Canopy					Short shrub				2	<i>Rubus hispidus</i> (Bristle dewberry)
8	<i>Acer rubrum</i> (Red maple)				9	<i>Vaccinium corymbosum</i>				2	<i>Thelypteris simulata</i> (Bog fern)
1	<i>Nyssa sylvatica</i> (Blackgum)				4	<i>Lindera benzoin</i>				1	<i>Trientalis borealis</i> (Starflower)
1	<i>Quercus coccinea</i> (Scarlet oak)				2	<i>Smilax rotundifolia</i>				3	<i>Smilax rotundifolia</i>
					4	<i>Clethra alnifolia</i>				1	<i>Thelypteris noveboracensis</i> (New York)
	<u>Subcanopy</u>					<u>Herbaceous</u>					
3	<i>Acer rubrum</i>				3	<i>Onoclea sensibilis</i> (Sensitive fern)					
1	<i>Quercus alba</i> (White oak)				4	<i>Symplocarpus foetidus</i> (Skunk cabbage)					
	<u>Tall shrub</u>				3	<i>Osmunda cinnamomea</i> (Cinnamon fern)					
4	<i>Vaccinium corymbosum</i> (Highbush blueberry)				2	<i>Sphagnum</i> spp. (Peat moss)					
3	<i>Lindera benzoin</i> (Spicebush)				4	<i>Maianthemum canadensis</i> (Canada mayflower)					
2	<i>Smilax rotundifolia</i> (Roundleaf greenbrier)				4	<i>Clethra alnifolia</i>					
1	<i>Clethra alnifolia</i> (Sweet pepperbush)				2	<i>Lindera benzoin</i>					
					1	<i>Rhododendron viscosum</i> (Swampa azalea)					

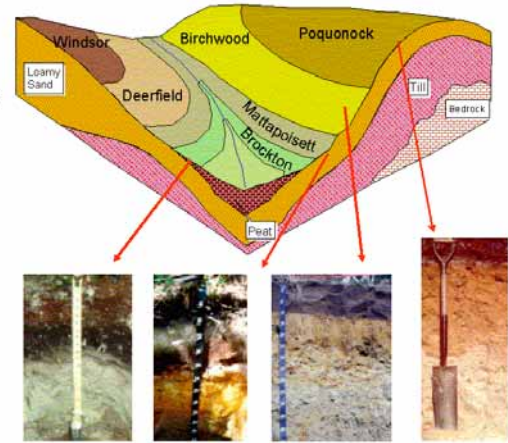


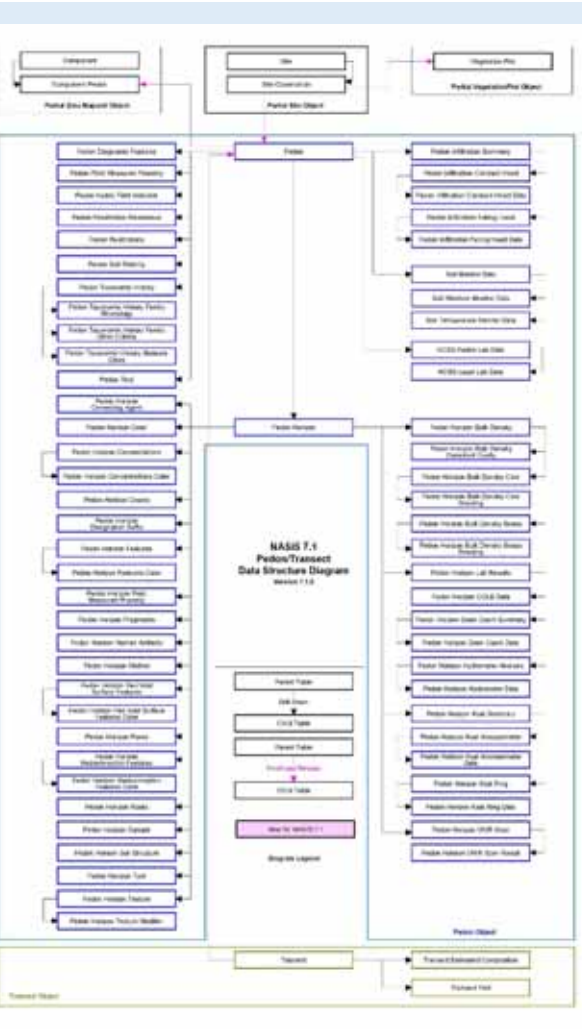
**TA6.—Mesic Spodic.** For testing in MLRAs 144A and 145 of LRR R and MLRA 149B of LRR S. A layer 5 cm (2 inches) or more thick, starting at a depth ≤15 cm (6 inches) from the mineral soil surface, that has value of 3 or less and chroma of 2 or less and is underlain by either:

- One or more layers 8 cm (3 inches) or more thick occurring at a depth ≤30 cm (12 inches) from the mineral soil surface, having value and chroma of 3 or less, and showing evidence of spodic development; or
- One or more layers 5 cm (2 inches) or more thick occurring at a depth ≤30 cm (12 inches) from the mineral soil surface, having value of 4 or more and chroma of 2 or less, and directly underlain by a layer(s) 8 cm (3 inches) or more thick having value and chroma of 3 or less and showing evidence of spodic development.

**User Notes:** This indicator is used to identify wet soils that have spodic materials or that meet the

- Soil/Geology**
- Bedrock
  - Birchwood
  - Brookton
  - Deerfield
  - Mattapoisett
  - Poquonock
  - Solum
  - Swansea
  - Till
  - Windsor peat





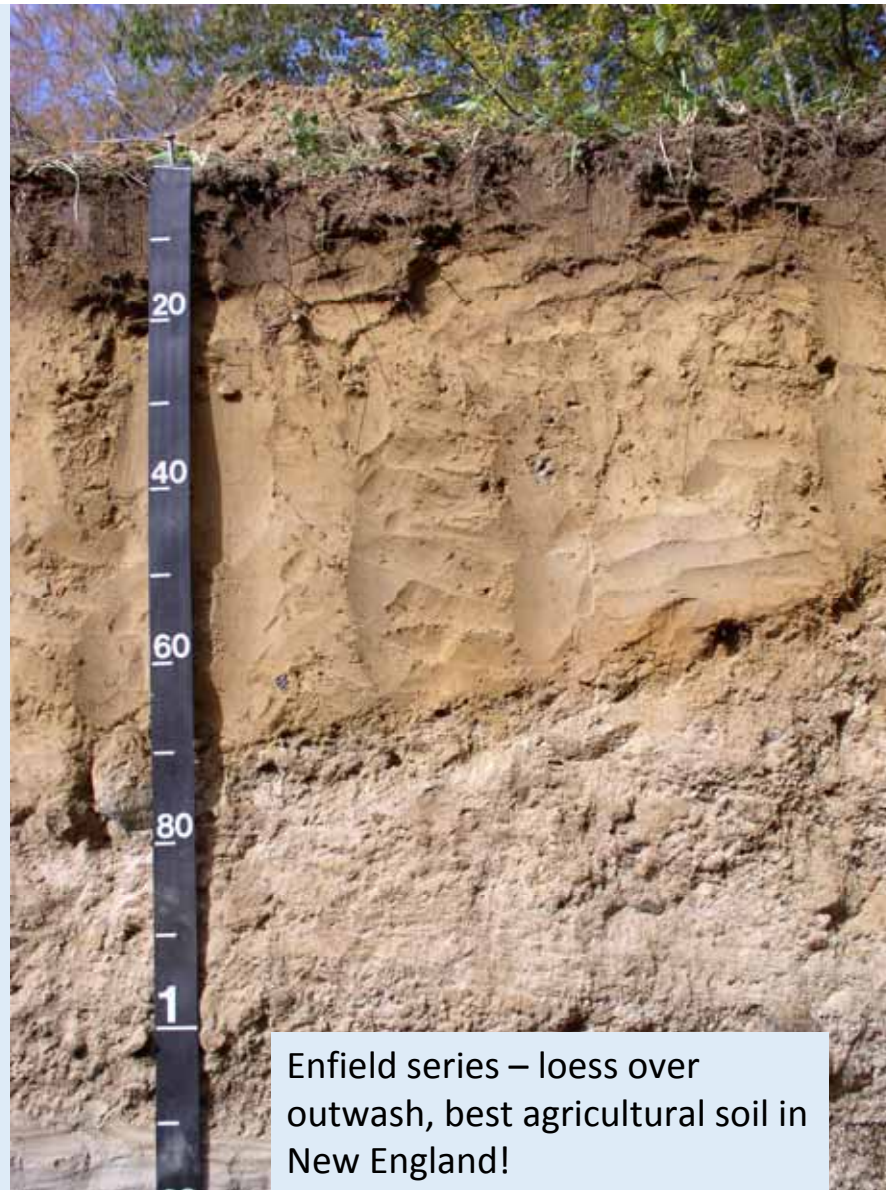
NASIS: The Beast!



- INTERPRETATIONS:
- Hydic Soil = Wetland
  - High Watertable = Sever for most uses.
  - Sandy soil – source of sand.
  - Not Prime Farmland
  - Hydrologic Group D
  - Buried carbon = good riparian soils for nitrate removal.
  - Site Index 55 for Red Maple
  - High Pollinator Habitat – dominated by Clethera
  - Well suited wetland wildlife habitat
  - Suited for Blueberries/Cranberry
  - Frequent Ponding (vernal pool)
  - High carbon pools
  - Low AWC
  - Low Runoff
  - etc.



Woodbridge series – dense till at 80cm, water table at 50 cm, prime farmland soil, bad for septics.



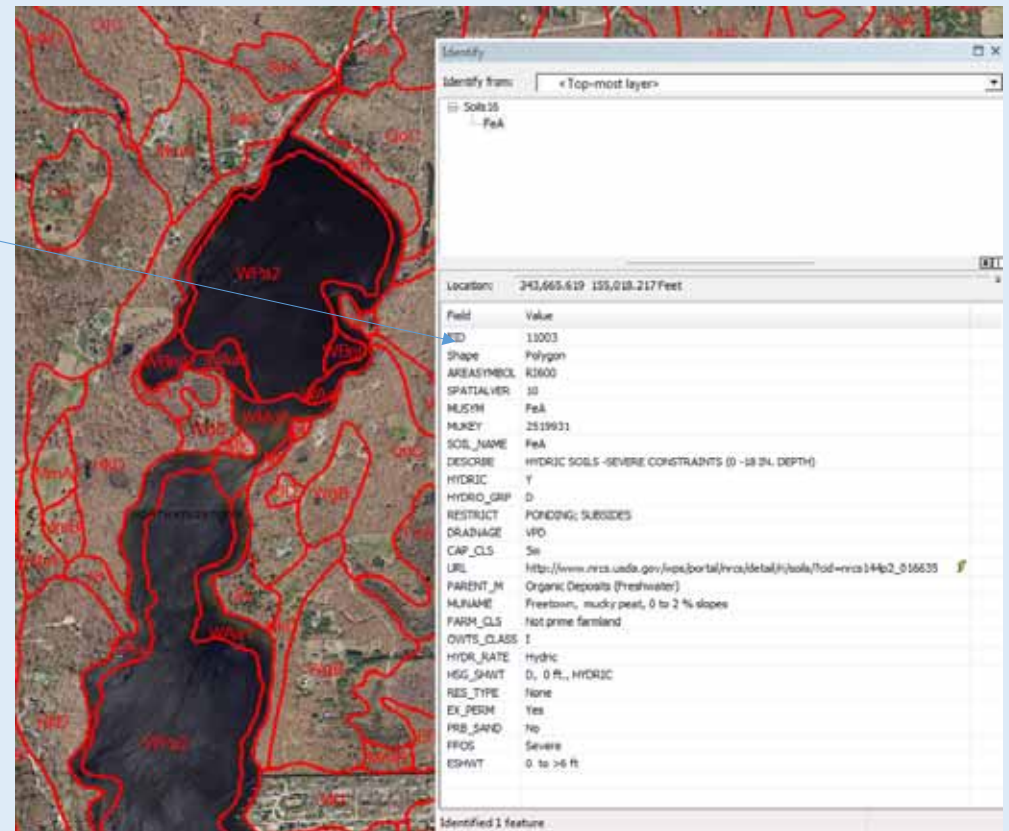
Enfield series – loess over outwash, best agricultural soil in New England!



Billington soil from Point Judith Pond – 4 geologic events.

# Improvements to RI Soil Survey

- RIGIS Attribute Table.
- Coastal Zone Soil Survey and Freshwater mapping.
- Spatial Edit fix and riparian wetland connections, errors.
- Northwest Hill Order 2.
- Ongoing data enhancements based on better data.
- Urban areas and better floodplain mapping.



Decreased from 33 to 20 fields – join sheet has all if needed.  
Attribute Guide: [nesoil.com/upload/2016\\_RIGIS\\_Soil.pdf](http://nesoil.com/upload/2016_RIGIS_Soil.pdf)

# Coastal and Freshwater Soil Survey



No subaqueous soils mapped, all beaches are one unit, barrier dunes are one undifferentiated unit with no data, marshes not mapped out in detail.



Subaqueous soils mapped, several beach units, barrier dunes are mapped to series level, marshes mapped out in detail. Point data provided along with special features.

# Oyster Reef Restoration Potential by Soil type

- Map Legend**
- Ri Coastal Zone Soil Survey**
- Oyster Restoration Potential**
- Fair - high energy
  - Fair - sedimentation
  - Fair - sedimentation, SAV
  - Fair - shallow fluid bottom, sulfides
  - Fair - water depth
  - Good - bottom structure
  - Good - boulder substrate
  - Good - sandy substrate
  - Poor - fluid bottom, depth, sulfides
  - Poor - fluid bottom, sulfides
  - Poor - intertidal
  - Poor - navigation channels

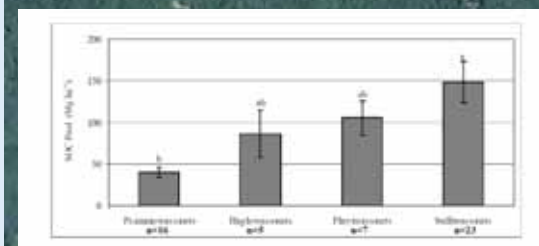
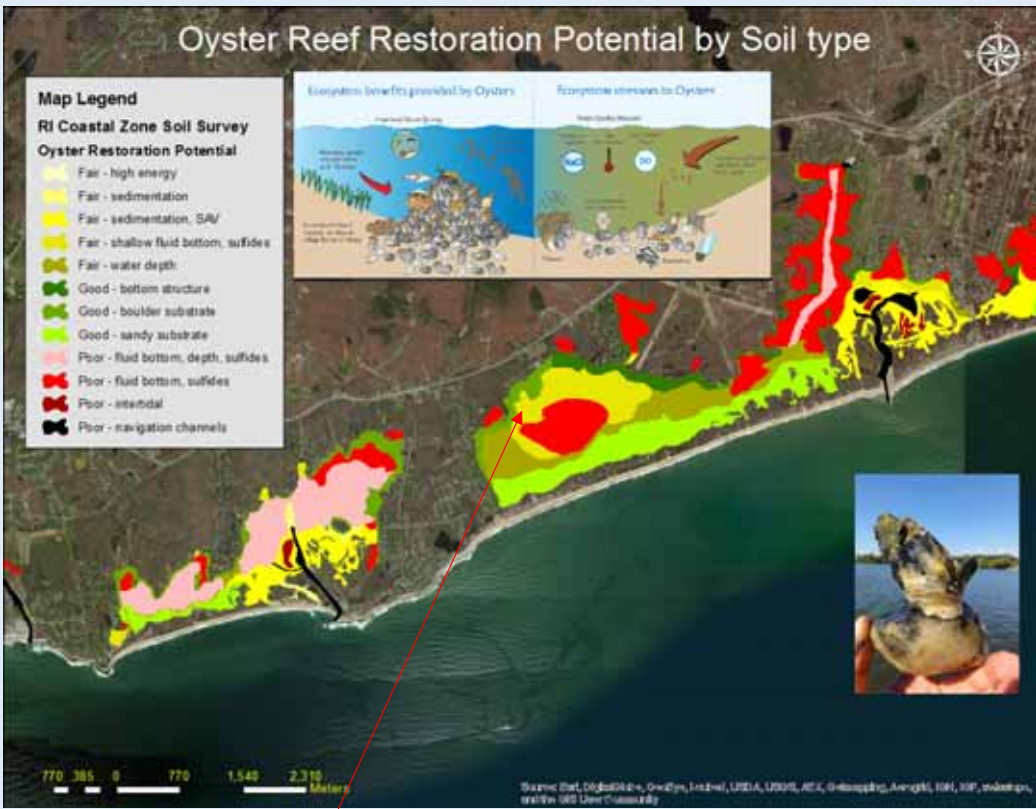
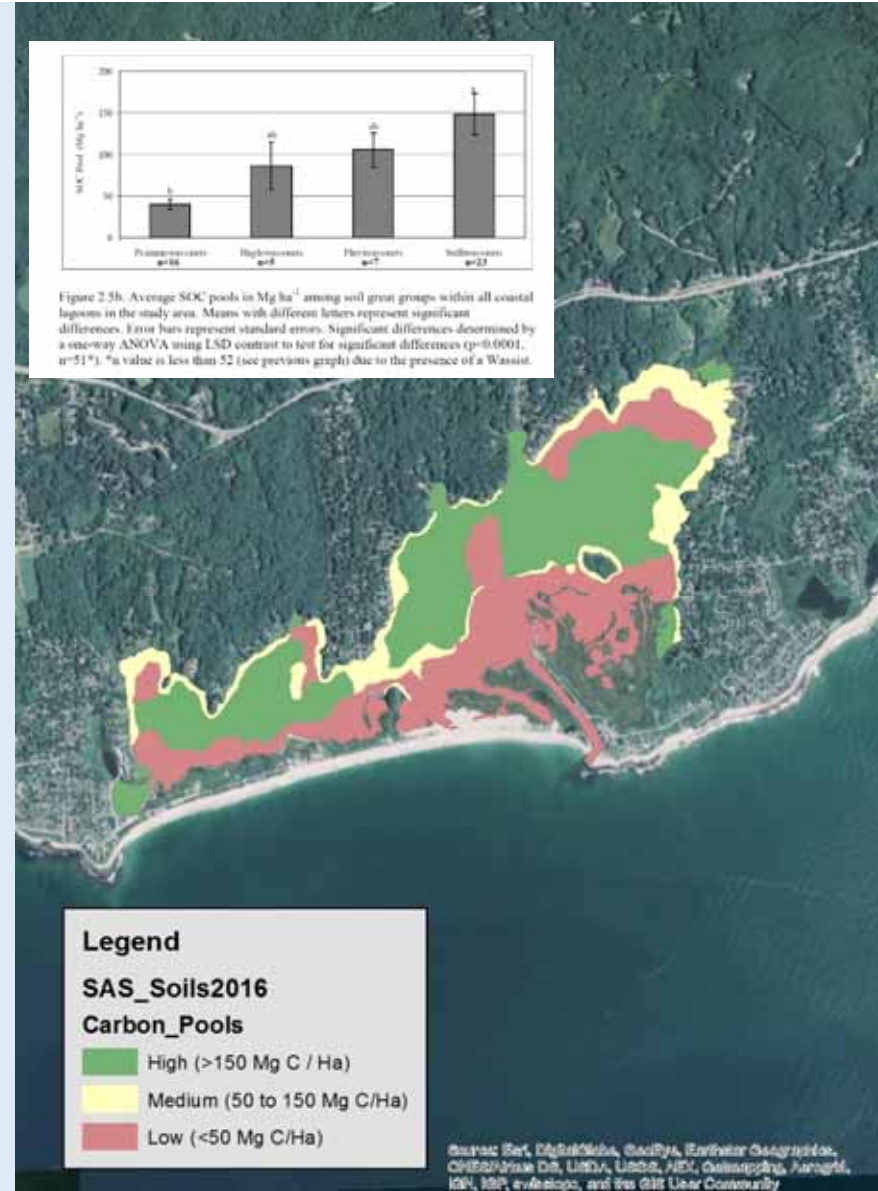


Figure 2.5b. Average SOC pools in Mg ha<sup>-1</sup> among soil great groups within all coastal lagoons in the study area. Means with different letters represent significant differences. Error bars represent standard errors. Significant differences determined by a one-way ANOVA using LSD contrast to test for significant differences ( $p < 0.0001$ ,  $n = 51$ ). \*n value is less than 52 (see previous graph) due to the presence of a Wauwit.



- Legend**
- SAS\_Soils2016**
- Carbon\_Pools**
- High (>150 Mg C / Ha)
  - Medium (50 to 150 Mg C / Ha)
  - Low (<50 Mg C / Ha)

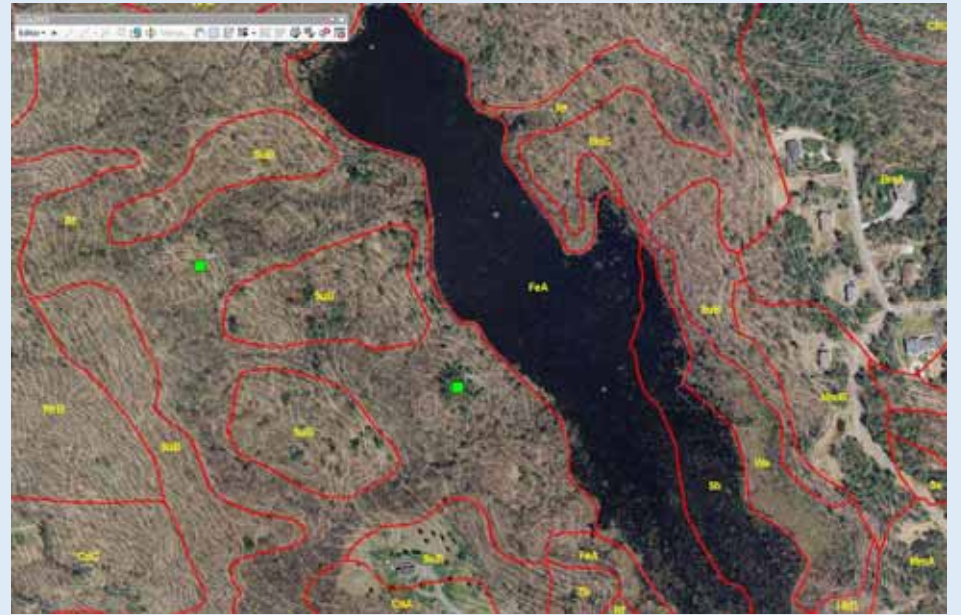
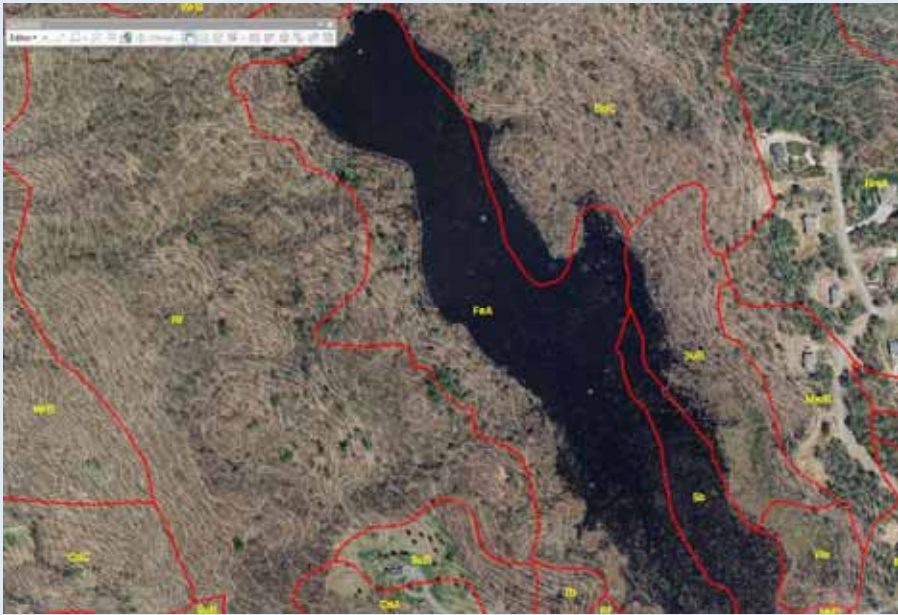
Source: RI, DigitalGlobe, GeoEye, Earthstar OpenSource, CNES/Airbus DS, USDA, USDA, AEX, GeoEye, AeroGRID, IGN, SPP, and the U.S. Coast Guard



# Spatial Edits!

- Issue with pre ortho basemap during digitizing.
- Attempts made to fix.
- Re-digitizing needed, all of Block Island fixed, Hydro fixed (streams, ponds, coastal zone).
- Riparian wetlands in progress (goal is to have best coverage of wetlands for RI).





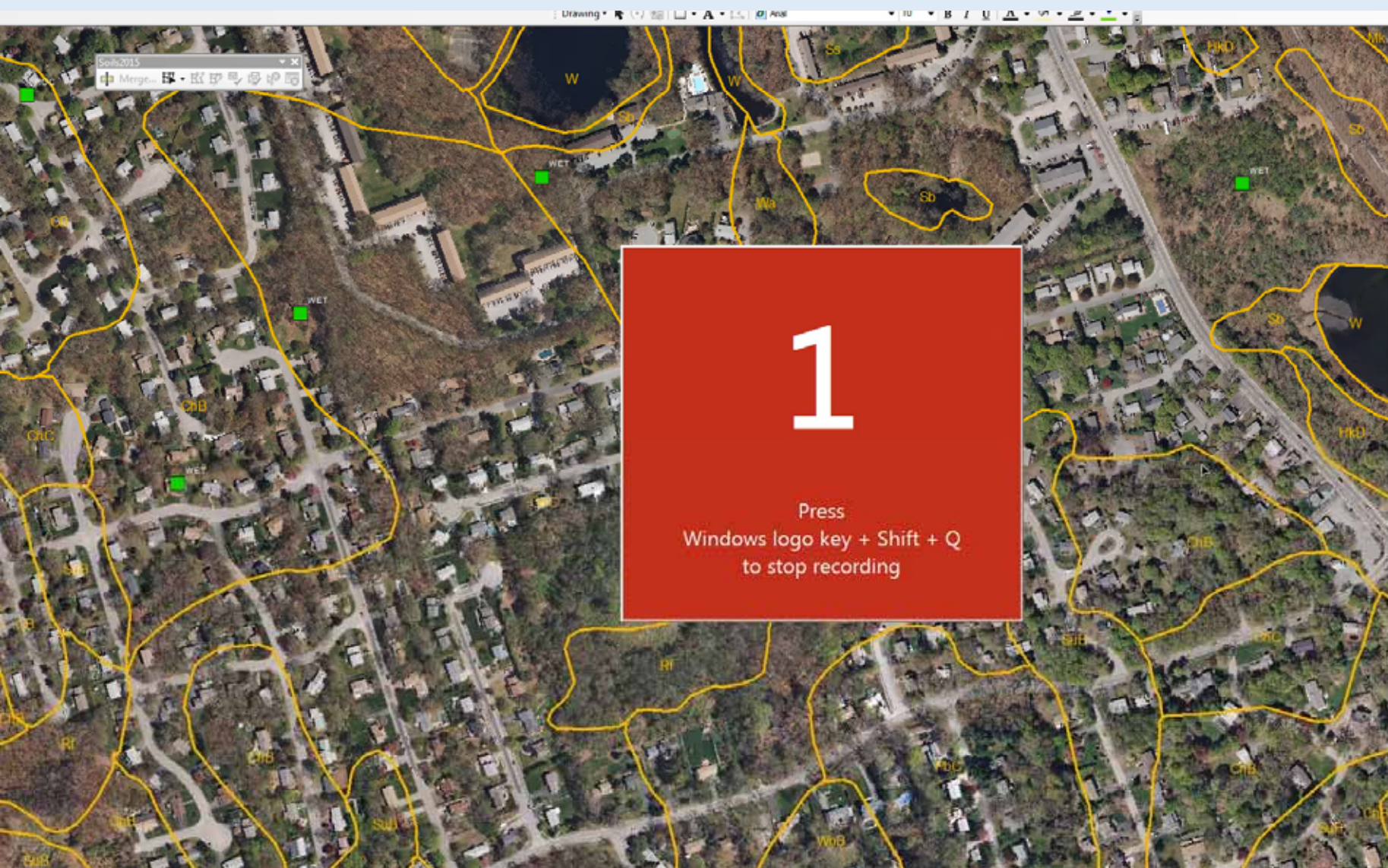


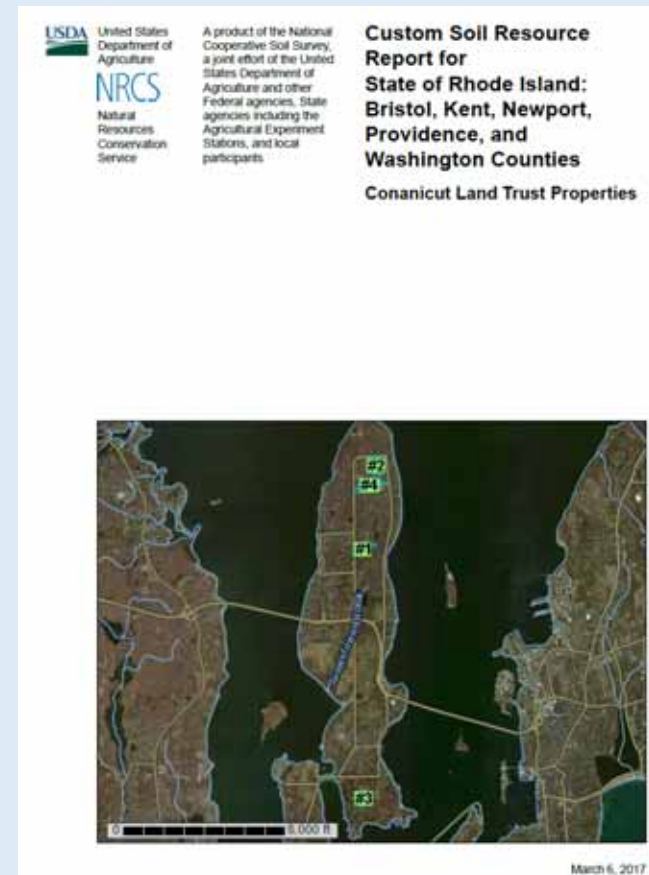
Table Of Contents

- Layers
  - soils\_Topology
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    - Line Errors
    - Point Errors
  - r600\_phaseV\_soils
  - r600\_phaseV\_points
  - r600\_phaseV\_lines
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  - r800\_2ft\_Albres
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    - Value
    - High : 26.0097
    - Low : -2.02314
  - 2015surgo
  - 2016soil\_edits
  - r003\_2ft\_cnr\_Albres
  - Wetlands
  - r3wetnsm
  - Atlas\_planningCadastral/Flood
  - Crompton\_Quad\_Surfacial\_Map
  - East\_Greenwich\_Quad\_Surfacial\_Map
  - Wickford\_Quad\_Surfacial\_Map
  - Narragansett\_Pier\_Quad\_Surfacial\_Map
  - Crompton.tif
  - r0wetnsm\_ne
  - r0wetnsm\_se
  - r0wetnsm\_sw
  - r003\_5m\_slp
  - neatline
  - Lidar
  - r009\_5m\_slp
  - r009\_5m\_slp
  - dig\_s\_r007.sid
  - dig\_s\_r003.sid
  - T2016NADP
  - T2014\_USGS
  - 2016eelgrass
  - 2012eelgrass
  - 2011

# Where to get Soil Survey Data?

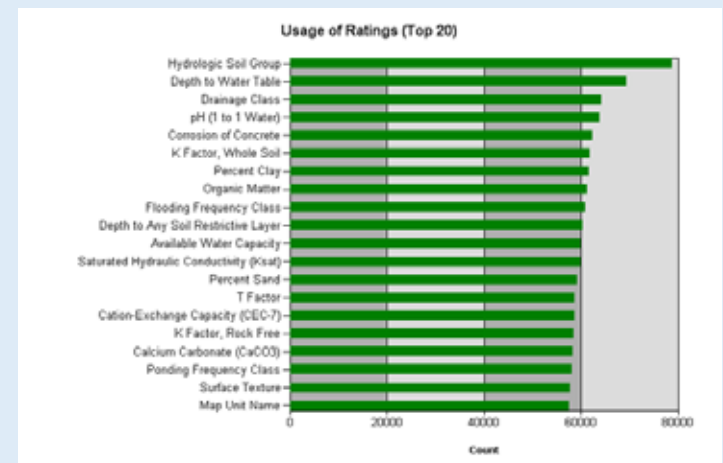
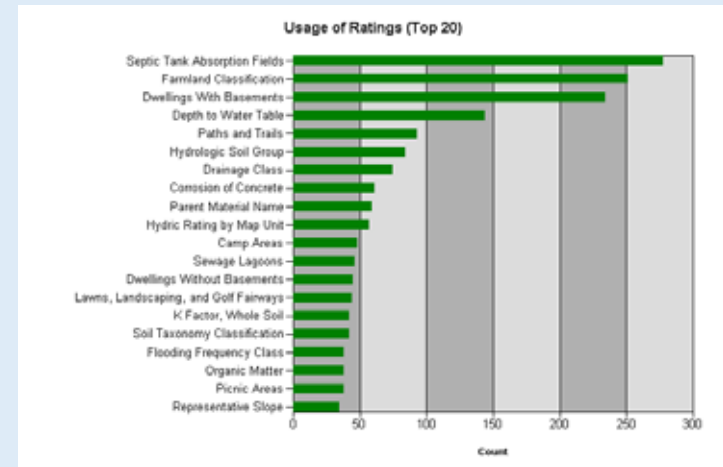
## Web Soil Survey (soils.usda.gov)

- Source for “Official” USDA soils.
- 8,400 users per day!
- Provides suitability, limitations for use, properties/qualities, and Ecologic Information (TBD).
- Allows for free customized soil reports (free).
- Export of data (shape file).
- Many other features.
- Cons: learning curve, outages.



# Other Sources (may not be updated)

- [www.rigis.org](http://www.rigis.org): Same spatial as SSURGO, Attribute table (spread sheet has all fields if needed), download points, lines, polygons. For use with a GIS.
- SoilWeb: Google SoilWeb for Google maps, Earth, and app store for smartphone. 2016 SSURGO should be online soon, provides some interps but not all.
- RI DEM Environmental Maps: <http://www.dem.ri.gov/maps/>
- ArcGIS Online (ESRI App): <http://www.arcgis.com/home/webmap/viewer.html?webmap=b9fe78abde47484690bfb9333ef2c926&extent=-71.5826,41.1867,-71.5509,41.2009>
- Contact Me!



# Questions/ Improvements / Demo Time





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# USDA NRCS soils website

**USDA** Natural Resources Conservation Service  
**Soils**

United States Department of Agriculture

Topics | Soil Survey | Soil Health | Contact Us

About Us | Soil Survey Releases | National Centers | State Offices



Browse By Audience | A-Z Index | Advanced Search | Help

### Web Soil Survey version 3.0

Web Soil Survey version 3.0 was recently launched. The web-based application provides free soils information along with maps, properties, and interpretations aimed at helping with land use decisions.

4/5

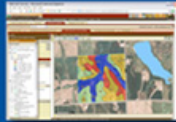
## Web Soil Survey

### Define.



Search / Locate

### Collect.



Analyze Data

### Develop.



Custom Reports & Maps

<http://websoilssurvey.nrcs.usda.gov>

### Popular Topics

- > Published Soil Surveys
- > Soil Education
- > Soil Classification
- > Soil Research
- > Soil Biology Primer



Sign up for email updates:



### Soil Survey Releases

- February Surveys
- January Surveys
- December Surveys
- November Surveys

### Helping People Understand Soils

- Web Soil Survey
- Official Soil Series Descriptions (OSD)
- Soil Data Access
- Soil Data Viewer
- Soil Lab Data
- Technical References

<http://soils.usda.gov/>



### Information for City and County Planners



### Information for Geographers



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Click on the **green** “START WSS” button

websoilsurvey.nrcs.usda.gov/app/



Web Soil Survey

Home About Soils Help Contact Us

You are here: WSS Home

**Search**

Enter Keywords

All NRCS Sites

**Browse by Subject**

- Soils Home
- National Cooperative Soil Survey (NCSS)
- Archived Soil Surveys
- Status Maps
- Official Soil Series Descriptions (OSD)
- Soil Series Extent Mapping Tool
- Soil Data Mart
- Geospatial Data Gateway
- eFOTG

The simple yet powerful way to access and use soil data.



**Welcome to Web Soil Survey (WSS)**



Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information.

**Three Basic Steps**

1. Define

**I Want To...**

- Start Web Soil Survey (WSS)
- Know the requirements for running Web Soil Survey
- Know whether my web browser works with Web Soil Survey
- Know the Web Soil Survey hours of operation
- Find what areas of the U.S. have soil data

**Announcements/Events**

- Web Soil Survey 2.0 has been released! [View description of new features.](#)

<http://websoilsurvey.nrcs.usda.gov>





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# Main Page



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[Soil Data Explorer](#)

[Download Soils Data](#)

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**Search**

**Area of Interest**

Import AOI

**Quick Navigation**

Address

State and County

Soil Survey Area

Latitude and Longitude

PLSS (Section, Township, Range)

Bureau of Land Management

Department of Defense

Forest Service

National Park Service

Hydrologic Unit

**Area of Interest Interactive Map**

View Extent:

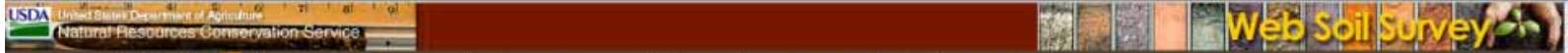
Scale:

500 mi



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# Navigate to the Area



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**Search**

**Area of Interest**

Import AOI

**Quick Navigation**

- Address
- State and County
- Soil Survey Area
- Latitude and Longitude
- PLSS (Section, Township, Range)
- Bureau of Land Management
- Department of Defense
- Forest Service
- National Park Service
- Hydrologic Unit

**Area of Interest Interactive Map**

Legend

View Extent: Contiguous U.S.

Scale: (not to scale)



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# To View Only Tabular Data

Area of Interest (AOI) | Soil Map | Soil Data Explorer | Download Soils Data | Shopping Cart (Free)

**Search**

**Area of Interest**

Import AOI

**Quick Navigation**

Address

State and County

**Soil Survey Area**

Set AOI | Select Map Units | View

State: Massachusetts

County (optional):

Soil Survey Area

Name	Area Symbol	Data Availability	Version
Barnstable County, Massachusetts	MA001	Tabular and Spatial, complete	Survey Area: Version 10, Dec 5, 2013 Tabular: Version 8, Dec 5, 2013 Spatial: Version 3, Dec 5, 2013
Berkshire County, Massachusetts	MA003	Tabular and Spatial, complete	Survey Area: Version 8, Dec 19, 2013 Tabular: Version 7, Dec 19, 2013 Spatial: Version 3, Dec 19, 2013
Bristol County, Massachusetts	MA602	Tabular and Spatial,	Survey Area: Version 6,

Show Soil Survey Areas Layer in Map

Set AOI | Select Map Units | View

**Area of Interest Interactive Map**

View Extent: Contiguous U.S.

Scale: (not to scale)



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# To View Spatial and Tabular Data

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Natural Resources Conservation Service

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Area of Interest (AOI) | **Soil Map** | **Soil Data Explorer** | Download Soils Data | Shopping Cart (Free)

Web Soil Survey

Search

Area of Interest

Open All | Close All

AOI Properties

Clear AOI

AOI Information

Name

Map Unit Symbols

Use Soil Survey Area Map Unit Symbols  
 Use National Map Unit Symbols

Area (acres) 12,583

Soil Data Available from Web Soil Survey

**Hampshire County, Massachusetts, Central Part (MA609)**

Data Availability	Tabular and Spatial, complete
Tabular Data	Version 7, Dec 17, 2013
Spatial Data	Version 4, Dec 17, 2013

Clear AOI

Import AOI

Export AOI

Quick Navigation

Address

State and County

Area of Interest Interactive Map

Legend

View Extent Contiguous U.S.

Scale [not to scale]



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# Soil Map Tab

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Area of Interest (AOI)

**Soil Map**

Soil Data Explorer

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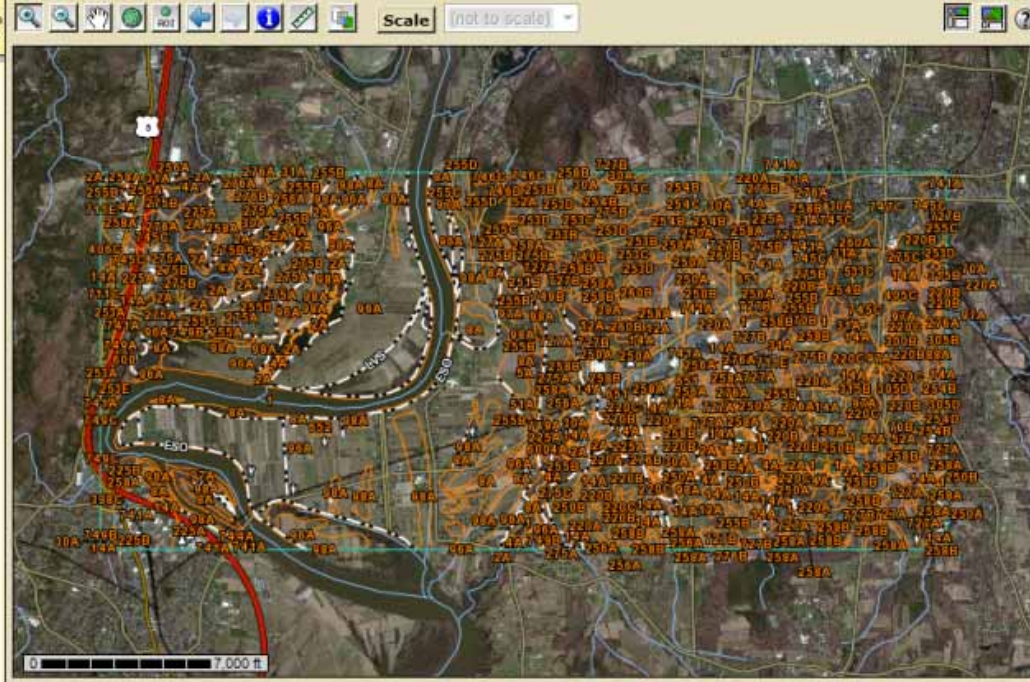
Search

Map Unit Legend

Hampshire County, Massachusetts, Central Part (MA609)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Water	779.1	6.2%
2A	Pootatuck fine sandy loam, 0 to 3 percent slopes	295.2	2.3%
4A	Rippowam fine sandy loam, 0 to 3 percent slopes	289.2	2.3%
5A	Saco silt loam, 0 to 3 percent slopes	34.5	0.3%
8A	Limerick silt loam, 0 to 3 percent slopes	342.2	2.7%
12A	Maybid silt loam, 0 to 3 percent slopes	72.4	0.6%
14A	Scitico silt loam, 0 to 3 percent slopes	775.8	6.2%
30A	Raynham silt loam, 0 to 3 percent slopes	79.8	0.6%
31A	Walpole fine sandy loam, 0 to 3 percent slopes	81.8	0.7%

Soil Map





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Suitabilities and Limitations Ratings

Open All Close All

Building Site Development	?
Construction Materials	?
Disaster Recovery Planning	?
Land Classifications	?
Land Management	?
Military Operations	?
Recreational Development	?
Sanitary Facilities	?
Vegetative Productivity	?
Waste Management	?
Water Management	?

**Soil Map**

Scale: 1:12,200 ±1%



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Suitabilities and Limitations Ratings

Open All | Close All

**Building Site Development**

- Corrosion of Concrete
- Corrosion of Steel

**Dwellings With Basements**

View Description | View Rating

**View Options**

Map

Table

Component Breakdown and Rating Reasons

Numeric Values

Description of Rating

Rating Options

Detailed Description

**Advanced Options**

View Description | View Rating

- Dwellings Without Basements
- Lawns, Landscaping, and Golf Fairways
- Local Roads and Streets
- Shallow Excavations
- Small Commercial Buildings
- Unpaved Local Roads and Streets
- Construction Materials

**Map — Dwellings With Basements**

Scale: 1:12,200 ±1%

**Tables — Dwellings With Basements — Summary By Map Unit**

Summary by Map Unit — Hampshire County, Massachusetts, Central Part (MA609)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
1	Water	Not rated	Water (100%)		779.1	6.2%







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Search

Properties and Qualities Ratings

Open All | Close All

- Soil Chemical Properties
- Soil Erosion Factors
- Soil Physical Properties
- Soil Qualities and Features
- Water Features

Soil Map

Scale 1:12,200 ±1%

FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | USA.gov | White House



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Search: **Map Legend**

**Layer Properties Menu**

- Area of Interest (AOI)
- Area of Interest (AOI)
- Location Marker
- Soils
- Soil Survey Areas
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points
- Soil Rating Polygons
- Ultra acid (pH < 3.5)
- Extremely acid (pH 3.5 - 4.4)
- Very strongly acid (pH 4.5 - 5.0)
- Strongly acid (pH 5.1 - 5.5)
- Moderately acid (pH 5.6 - 6.0)
- Slightly acid (pH 6.1 - 6.5)
- Neutral (pH 6.6 - 7.3)
- Slightly alkaline (pH 7.4 - 7.8)
- Moderately alkaline (pH 7.9 - 8.4)
- Strongly alkaline (pH 8.5 - 9.0)
- Very strongly alkaline (pH > 9.0)
- Not rated or not available
- Soil Rating Lines
- Ultra acid (pH < 3.5)
- Extremely acid (pH 3.5 - 4.4)
- Very strongly acid (pH

**Map - pH (1 to 1 Water)**

Scale: 1:12,200 ±1%

**Tables - pH (1 to 1 Water) - Summary By Map Unit**

Summary by Map Unit - Hampshire County, Massachusetts, Central Part (MA609)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Water		779.1	6.2%
2A	Pootabuck fine sandy loam, 0 to 3 percent slopes	5.9	295.2	2.3%





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[A](#) [A](#) [A](#)

[Area of Interest \(AOI\)](#)

[Soil Map](#)

[Soil Data Explorer](#)

**[Download Soils Data](#)**

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## Download Soils Data for...

### Your AOI (SSURGO)

[Create Download Link](#)

#### General Information

- Link** [Description of Soil Survey Geographic \(SSURGO\) Database](#)
- Download Contents** Tabular data, spatial data (if available), template database, and FGDC metadata
- Spatial Data Format** ESRI Shapefile, Geographic WGS84

#### Soils Data Download Package for your AOI (SSURGO)

##### AOI Location

Hampshire County, Massachusetts, Central Part

##### Soil Survey Areas

##### Hampshire County, Massachusetts, Central Part (MA609)

##### Area in AOI

12,583 acres

##### Data Availability

Tabular and Spatial, complete

##### Version

Survey Area: Version 8, Dec 17, 2013

Tabular: Version 7, Dec 17, 2013

Spatial: Version 4, Dec 17, 2013

##### Template Database

State: US

Microsoft Access Version: Access 2003

Template Database Version: 36

Template Database Name: soildb\_US\_2003

##### Download Size

—

##### Download Link

Press [Create Download Link](#) to create a soils data download package for your Area of Interest.

[Create Download Link](#)

Soil Survey Area (SSURGO)

U.S. General Soil Map (STATSGO2)

[Download SSURGO Template Databases](#)



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- Area of Interest (AOI)
- Soil Map
- Soil Data Explorer
- Download Soils Data
- Shopping Cart (Free)**

[Check Out](#) ?

### Search

### Report Properties

#### Title

Title: Custom Soil Resource Report for Hampshire County, Massachusetts, Central Part

Subtitle:

- Area of Interest Name: (none defined)
- Custom Subtitle:
- None

#### Map Options

Map Scale:

Printed Sheet Size:

Show UTM Coordinate Ticks:

### Table of Contents

- Custom Soil Resource Report for Hampshire County, Massachusetts, Central Part
  - Cover
  - Preface
  - Contents
  - How Soil Surveys Are Made
  - Soil Map



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SoilWeb Smartphone Application, Unique Queries (updated 2013-10-24)

