


STEP 1: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/>






**Natural Resources Conservation Service**
Soils
United States Department of Agriculture

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Web Soil Survey Information

- Version 3.2 New Features
- Tips and Shortcuts
- Frequently Asked Questions
- Updated Surveys
- State Map of Available Soil Surveys

Soil Survey

Web Soil Survey


 [Online Web Soil Survey](#) – Official [USDA](#) soil information as viewable maps and tables for more than 3200 soil surveys.

 [Sign up for E-mail updates on Web Soil Survey](#) 

[Annual Data Refresh](#)

[NRCS Improves Soils Data for Growing Customer Base](#) (PDF; 604 KB)

Historical Soil Surveys



[How to Use a Soil Survey](#) – basic information on utilizing a soil survey.

STEP 2: Select your State and County

Area of Interest
(AOI)

Soil
Map

Soil Data
Explorer

Download
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Search

Area of Interest

Import AOI

Quick Navigation

Address

State and County

Soil Survey Area

Latitude and Longitude or Current Location

PLSS (Section, Township, Range)

Bureau of Land Management

Department of Defense

Forest Service

National Park Service

Hydrologic Unit

Legend

Area of Interest Interactive Map

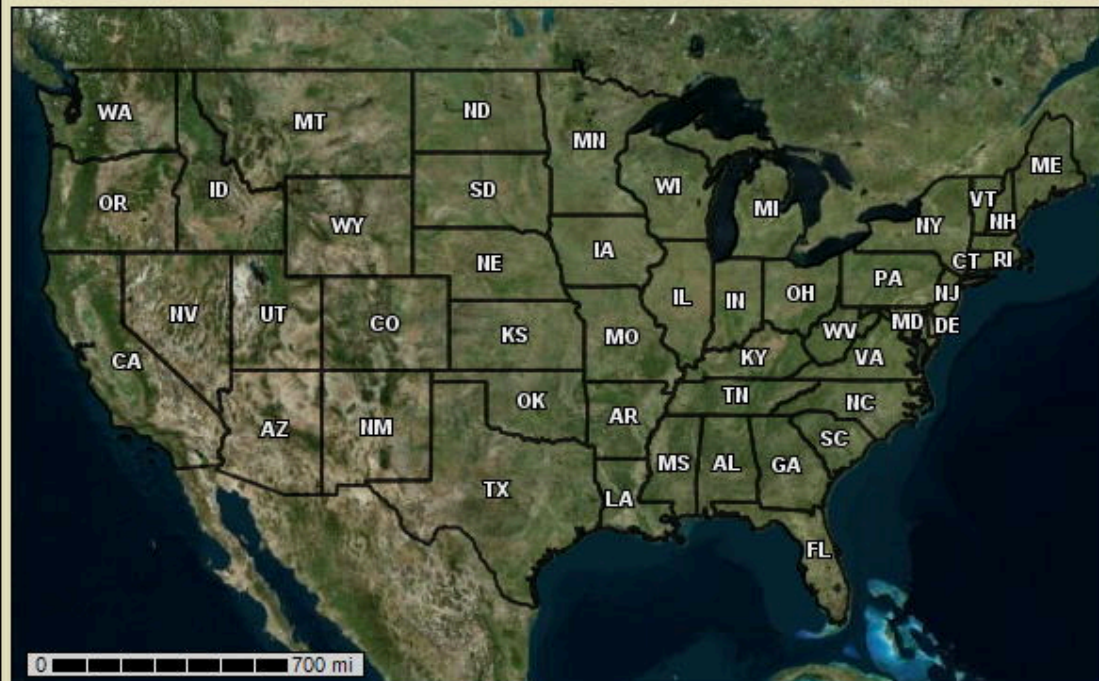


View Extent

Contiguous U.S.

Scale

(not to scale)



Click here

STEP 3: Click "View" button

Area of Interest (AOI)

Soil Map

Soil Data Explorer

Download Soils Data

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Search

Area of Interest

Import AOI

Quick Navigation

Address

State and County

View

State: Maine

County (optional): Cumberland

View

Soil Survey Area

Latitude and Longitude or Current Location

PLSS (Section, Township, Range)

Bureau of Land Management

Department of Defense

Forest Service

National Park Service


Hydrologic Unit

Legend

Area of Interest Interactive Map

View Extent: Contiguous U.S.

Scale: (not to scale)



0 700 mi

[Click here](#)

STEP 4: Zoom in to your project area using the magnifying glass; map will zoom, then use the "AOI" tool to draw a boundary around your project area.

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

State:

County (optional):

View

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Latitude and Longitude or Current Location

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Department of Defense

Forest Service

National Park Service

Hydrologic Unit

Area of Interest Interactive Map

Legend

View Extent: Scale:

0 20 mi

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

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) 6,021

Soil Data Available from Web Soil Survey

Cumberland County and Part of Oxford County, Maine (ME005)

Data Availability Tabular and Spatial, complete

Tabular Data Version 14, Sep 6, 2018

Spatial Data Version 6, Sep 6, 2018

Clear AOI

Import AOI

Export AOI

Quick Navigation

Address

State and County

View ?

State Maine

County (optional) Cumberland

View

Soil Survey Area


Latitude and Longitude or Current Location

PLSS (Section, Township, Range)

Area of Interest Interactive Map

Legend

View Extent Contiguous U.S. Scale (not to scale)



STEP 5: Click "Soil Map" tab; soil survey map units will appear on the diagonal gridded area of your project

Area of Interest
(AOI)

**Soil
Map**

Soil Data
Explorer

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Search

Map Unit Legend

**Cumberland County and Part of Oxford County,
Maine (ME005)**

Cumberland County and Part of Oxford
County, Maine (ME005)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BgB	Belgrade very fine sandy loam, 0 to 8 percent slopes	747.4	12.4%
BgC2	Belgrade very fine sandy loam, 8 to 15 percent slopes, eroded	136.5	2.3%
Bo	Biddeford mucky peat, 0 to 3 percent slopes	5.3	0.1%
BuB	Lamoine silt loam. 3 to 8	751.6	12.5%

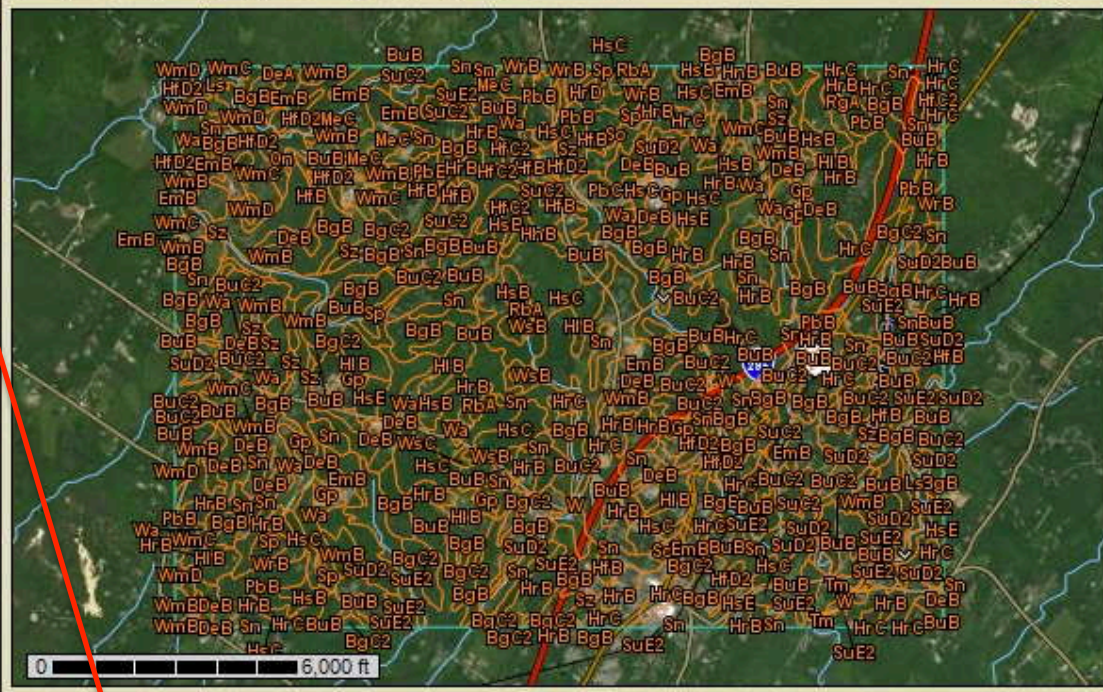
Legend

Soil Map



Scale

(not to scale)



STEP 6: In left navigation pane, scroll through the named soil series and select the Map unit with the component in a similar setting that best matches your Reference Pedon (RP) among your test pits.

STEP 7: [Click here](#)

Click here

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Intro to Soils
Suitabilities and Limitations for Use
Soil Properties and Qualities
Ecological Site Assessment
Soil Reports

Search

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	?
Soil Health	?
Vegetative Productivity	?
Waste Management	?
Water Management	?

Soil Map

Scale: (not to scale)

0
3,000 ft

Area of Interest
(AOI)

Soil
Map

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Explorer**

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AOI Inventory

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Construction Materials

Disaster Recovery Planning

Land Classifications

Land Management

Recreational Development

Sanitary Facilities

Soil Chemical Properties

Soil Erosion

Soil Health

Soil Physical Properties

Soil Qualities and Features

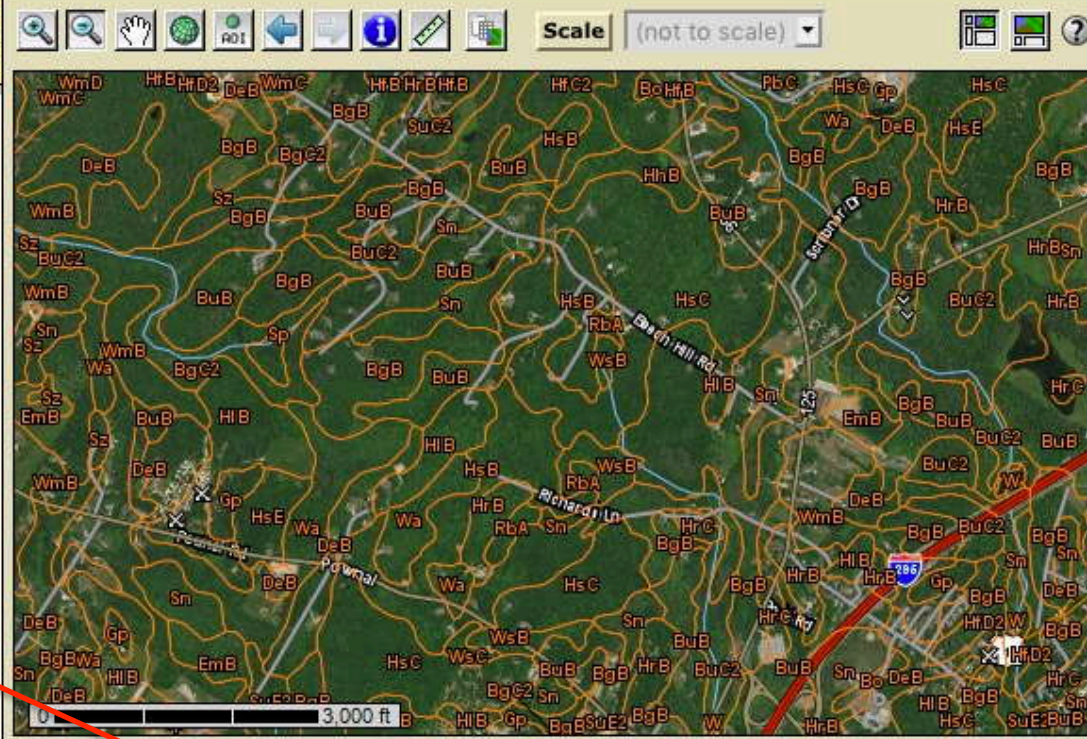
Vegetative Productivity

Waste Management

Water Features

Water Management

Soil Map



STEP 9: [Click here](#)

Area of Interest (AOI)

Soil Map

Soil Data Explorer

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All Uses

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Open All

Close All

AOI Inventory

Building Site Development

Construction Materials

Disaster Recovery Planning

Land Classifications

Land Management

Recreational Development

Sanitary Facilities

Soil Chemical Properties

Soil Erosion

Soil Health

Soil Physical Properties

Engineering Properties

Fragments on the Soil Surface

Particle Size and Coarse Fragments

Physical Soil Properties

Soil Qualities and Features

Vegetative Productivity

Waste Management

Water Features

Water Management

Soil Map

Scale (not to scale)



STEP 10: [Click here](#)

726

Firefox

Soil Survey: Past, Present, and Future (PDF; 73 KB) - Written 1999, Richard Arnold (former soil survey director) chesapeake

Area of Interest (AOI)

Soil Map

Soil Data Explorer

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Open AllClose All?

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Recreational Development

Sanitary Facilities

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Soil Erosion

Soil Health

Soil Physical Properties

Engineering Properties

Fragments on the Soil Surface

Particle Size and Coarse Fragments

Physical Soil Properties

Options

Include minor soils?

View DescriptionView Soil Report

View DescriptionView Soil Report

Soil Qualities and Features

Vegetative Productivity

Waste Management


Water Features

Water Management

Soil Map

Legend

Scale (not to scale)



STEP 11: Click here

Soil Erosion ? ⓘ

Soil Health ? ⓘ

Soil Physical Properties ? ⓘ

Engineering Properties ⓘ

Fragments on the Soil Surface ⓘ

Particle Size and Coarse Fragments ⓘ

Physical Soil Properties ⓘ

[View Description](#) [View Soil Report](#)

Options ⓘ

Include minor soils? ☐

[View Description](#) [View Soil Report](#)

Soil Qualities and Features ? ⓘ

Vegetative Productivity ? ⓘ

Waste Management ? ⓘ

Water Features ? ⓘ

Water Management ? ⓘ



This is Ksat

Report — Physical Soil Properties

Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Cumberland County and Part of Oxford County, Maine

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/In
PbB—Paxton fine sandy loam, 3 to 8 percent slopes							
Paxton	0-8	45-66- 85	0-28- 50	3- 7- 10	1.00-1.15-1.30	4.23-9.17-14.11	0.10-0.17-0.23
	8-20	45-66- 85	0-28- 50	3- 7- 10	1.30-1.45-1.60	4.23-9.17-14.11	0.06-0.13-0.20
	20-65	45-66- 85	0-28- 50	3- 7- 10	1.70-1.88-2.05	0.42-2.13-4.23	0.05-0.09-0.12

Paxton = Marlow

Least transmissive layer above the water impermeable layer (note bulk density in this case versus the Ap)

Cd-horizon; this is the water impermeable layer. See next slide for details on how to determine this layer

STEP 12: There are 3 values: the expected low (L), Representative Value (RV), and high (H)

What is a “water impermeable layer”?

See Footnote 1/ below **Table 7.1**, p. 7-4. The various diagnostic horizons are defined in *Keys to Soil Taxonomy*, USDA (Chapter 3).

“Fragipan” is equivalent to the Cd-horizon in lodgement till.

“Densic materials have, at their upper boundary, a densic contact if they have NO CRACKS or if the spacing of the cracks that roots can enter is 10 CM OR MORE.”

“An impermeable layer has a $K_{sat} < 0.01$ micro-meters/second*

*micro-meter = micron = 0.001 mm

SAND	
_____	0.050 microns
SILT	
_____	0.002microns
CLAY	

What is “Depth to high water table”?

See Footnote 2/ below **Table 7.1**, p. 7-4.

This is the Seasonal High Water Table (SHWT)

What is “Ksat of least transmissive layer in depth range”?

This is the layer or horizon with that will be least transmissive ABOVE THE WATER IMPERMEABLE LAYER.