Quick Guide to Online Maps and Mapping
for Zoning Administrators and Town Staff

Unfortunately there is no single mapping program which does everything (although the ANR Natural Resources Atlas is close!), so here's a list of some useful info.

SWCRPC can make paper maps, online maps and spatial data to meet your specific purposes. Contact Katharine Otto, 802-674-9201, kotto@swcrpc.org for more information

Useful Links

SWCRPC GIS Resources
- http://swcrpc.org/gis-mapping/ - every so often add link to a new resource as it becomes available

Vermont GIS Resources
- ANR Natural Resources Atlas - http://anrmaps.vermont.gov/websites/anra/
  - Includes several "Layers" which are related data grouped together in a map
  - Helpful how-to video at https://www.youtube.com/watch?v=jqDr93vUC_8
  - "FloodReady Map" – known as "Floodplain Management" layer
- VT Center for Geographic Information - http://vcgi.vermont.gov/
  - The Center of all GIS activity in Vermont
  - Stores lots of data available from a variety of sources, including State Agencies. Data can be downloaded, or links can be made to the data in other online mapping applications
  - Has links to many webinars/ trainings
- Renewable Energy Atlas of Vermont - http://www.vtenergyatlas.com/
- VT BioFinder Mapping Tool - http://biofinder.vermont.gov/biofindermap.htm
  - Focuses on natural resources and their contribution to biodiversity
  - Allows for large scale suitability assessment – eg where to put development and have minimal impacts on the natural environment
- VT Forest Stewardship Atlas - http://anrmaps.vermont.gov/websites/ForestStewardship/
- VTransparency Map Portal - http://vtrans.maps.arcgis.com/home/
  - Interactive maps include traffic volumes, Vermont 511 and bridges
- VTrans Static Maps - http://vtransmaps.vermont.gov/staticmaps.htm
  - Including Town Highway Maps
- VT Online Bridge and Culvert Inventory Tool – http://vtculverts.org
  - Includes online map of all town maintained bridges and culverts in your town
- VT E911 Viewer - http://maps.vermont.gov/e911/Html5Viewer/?viewer=e911viewer
  - Shows all the information emergency services might need – including buildings, roads, dams, trails, hydrants, etc

Non-Vermont Mapping Resources that are useful for Vermont town purposes
- FEMA Firmette – https://msc.fema.gov/portal/search
  - Official copy of a FEMA FIRM (or part of one) that is needed for many FEMA related applications (eg home buy-outs, hazard mitigation grants)
  - For instructions on how to make a Firmette, visit http://www.fema.gov/media-library/assets/documents/34930
- Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) - http://onthemap.ces.census.gov/
  - Online mapping tool which shows info about employment of people who live in your town, and who work in your town. Info comes from your Tax Form W-2 so includes about 90% of all people employed (does not include self-employed)
- Web Soil Survey - http://websoilsurvey.sc.egov.usda.gov
  - Information about soils from the USDA Natural Resources Conservation Service

Other Free Mapping Resources (often do not have data pre-loaded)
- ArcGIS online - www.arcgis.com – online GIS Software from ESRI
- Google Maps and Google Earth – https://www.google.com/maps http://www.google.com/earth/index.html
- DraftSight - https://www.3ds.com/products-services/draftsight-cad-software/
  - Allows you to open .dwg files that are created in AutoCAD (often by engineers and surveyors)
- QGIS – Quantum GIS – free desktop mapping software http://www.qgis.org/en/site/ .
  - Helpful webinars about using it at http://vcgi.vermont.gov/events/archive
- Wide variety of mapping apps for your tablets/ smartphone
  - For examples see http://vcgi.vermont.gov/sites/vcgi/files/event_archive/Webinar_Smartphones_Dec2013.pdf

Key Words

ArcGIS/ ArcMap – A type of mapping software created by ESRI. Widely used across the USA. Paper/ printed maps are often created using this software

Base Maps – the map shown behind all the data – aerial/ orthophoto, topographic, simple grey canvas (with roads)

Current Extent – What area the map is currently showing

FIRM – Flood Insurance Rate Map – produced by FEMA

Filter – In basic terms it is a "search".

GIS – Geographic Information Systems – a general name often used for mapping things. There are some variations on the definition.

kml/ kmz – data file with spatial information primarily designed for the google mapping environments, but is also a rather universal file type that can be used in other places

Layer – Can mean two things – either a group of data in a map (eg ANR Natural Resources Atlas) or how data is viewed (usually referring to a GIS type .lyr).

Legend – Also known as the "Key" – ie the color/ symbols on the map explained

Metadata – Data about the data – ie information about what your data shows, who collected it, when it was last updated, and other things you might want to know

Orthophoto – commonly known as aerial photo

Shapefile – data file with spatial information primarily designed for the ESRI mapping environments, but can also be used in other places. When you see this file on the computer it will appear to be 4-8 files of the same name but with different endings such as .shx, .shp, .dbf, .prf. Some online systems allow you to either upload a zipped version of this file (eg ArcGIS online) or particular parts of this file (eg LODES).

Toggle Toolbar – Useful toolbar which appears at the top of the Atlas, including ability to print, identify data and measure

Theme – A group of data that are useful to see together

Getting started

Make sure your pop up blocker is turned off

- In Firefox, go to Tools > Options > Content. Click on "Exceptions" next to "Block pop-up windows" and then type *anrmaps.vermont.gov* and click "Allow". Click "Close", and then "OK".
- In Internet Explorer, go to Settings > Internet Options > Privacy. Click on "Settings" next ot "Turn on Pop-up Blocker" and then type *anrmaps.vermont.gov* and click "Add". Click "Close", then "Apply" and then "OK".
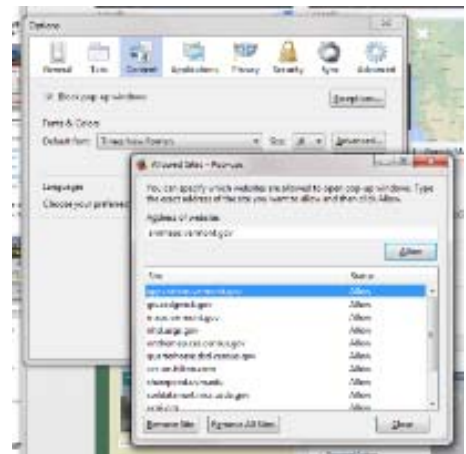
Other useful notes:

- Google Chrome – cannot be used at the moment – see note from ANR
- "Silverlight" is needed to run the program – so if prompted, allow Silverlight to run (may be as an add-on)

Google Chrome Users, Please Note:

Mozilla/Netscape browsers will be discontinuing its support for Microsoft Silverlight. Since the Natural Resources Atlas currently uses the Silverlight plugin, **the Natural Resources Atlas will stop working in Chrome browsers starting in April, 2015.** You may be required to 'enable' the plugin to continue using the plugin in Chrome beyond April. However, **September 2015, Silverlight will no longer work in Chrome.** If you would like to continue using our Natural Resources Atlas using the tools and functionality found within the Silverlight platform, you will be required to do so in another browser such as Internet Explorer. In the meantime, the Agency of Natural Resources is working on a new viewer utilizing the HTML5 web programming language that will be a cross-browser language that will also work on mobile devices, and provide more compatibilities between PC/MAC users. It will be our goal to offer the same amount of functionality between the Silverlight viewer and the HTML5 viewer that we will be releasing early 2015.

Thank you for your support while we work through this transition.
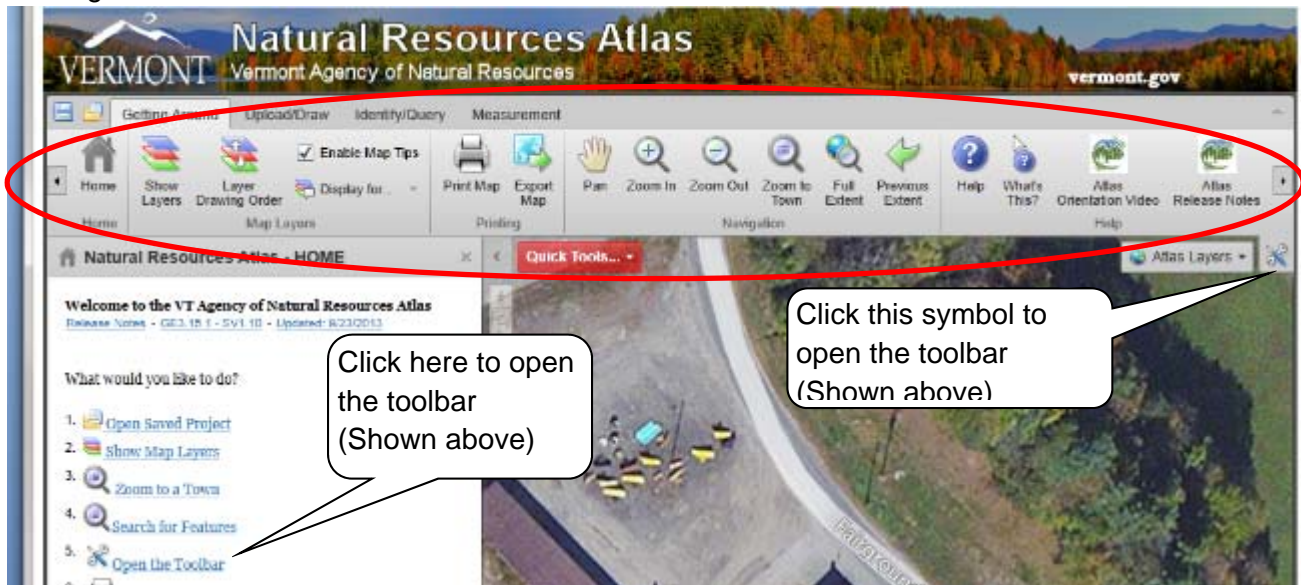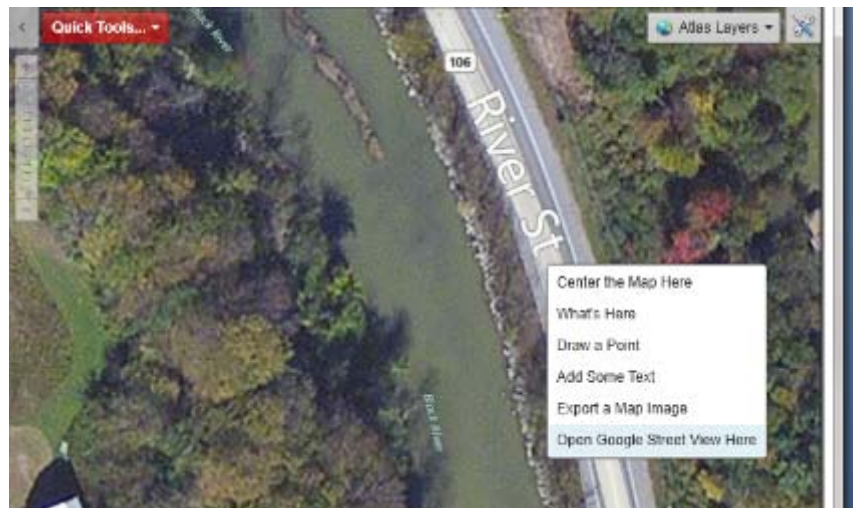-ANR GIS

Close Window and Return to the Atlas

Go to http://anrmaps.vermont.gov/websites/anra/

Click here to open the "Home" Menu and the layers list on the left side of the screen

Exploring the tool
Finding the toolbar:

Click here to open the toolbar
(Shown above)

Click this symbol to open the toolbar
(Shown above)
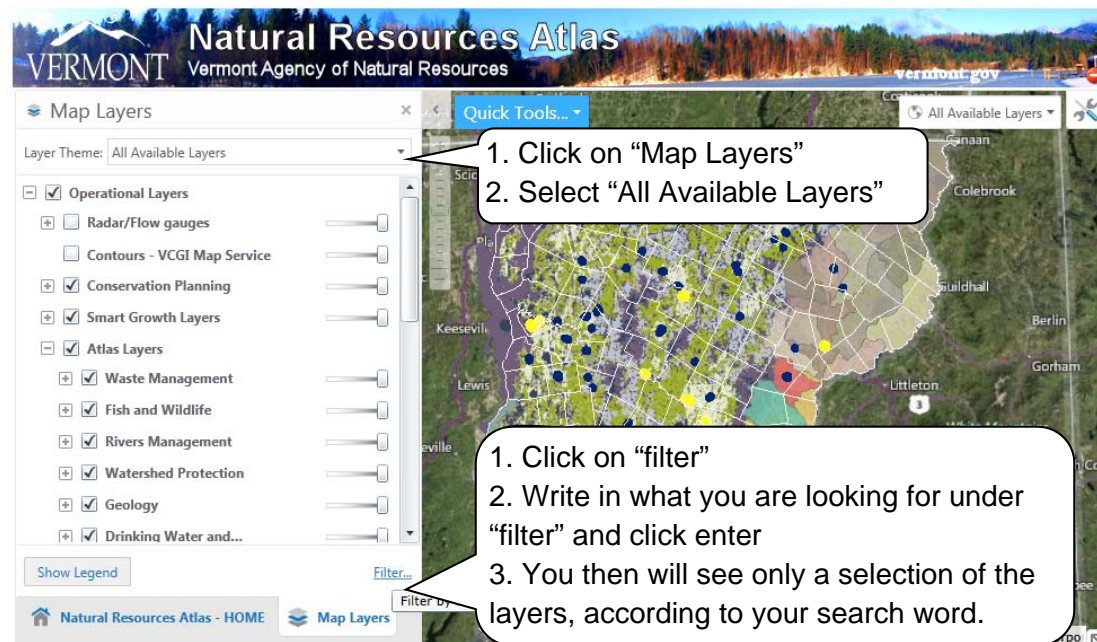
To see the Google street view, you can right click on a line which is slightly yellow (major roads and some other town roads) and then select "Open Google Street View Here"
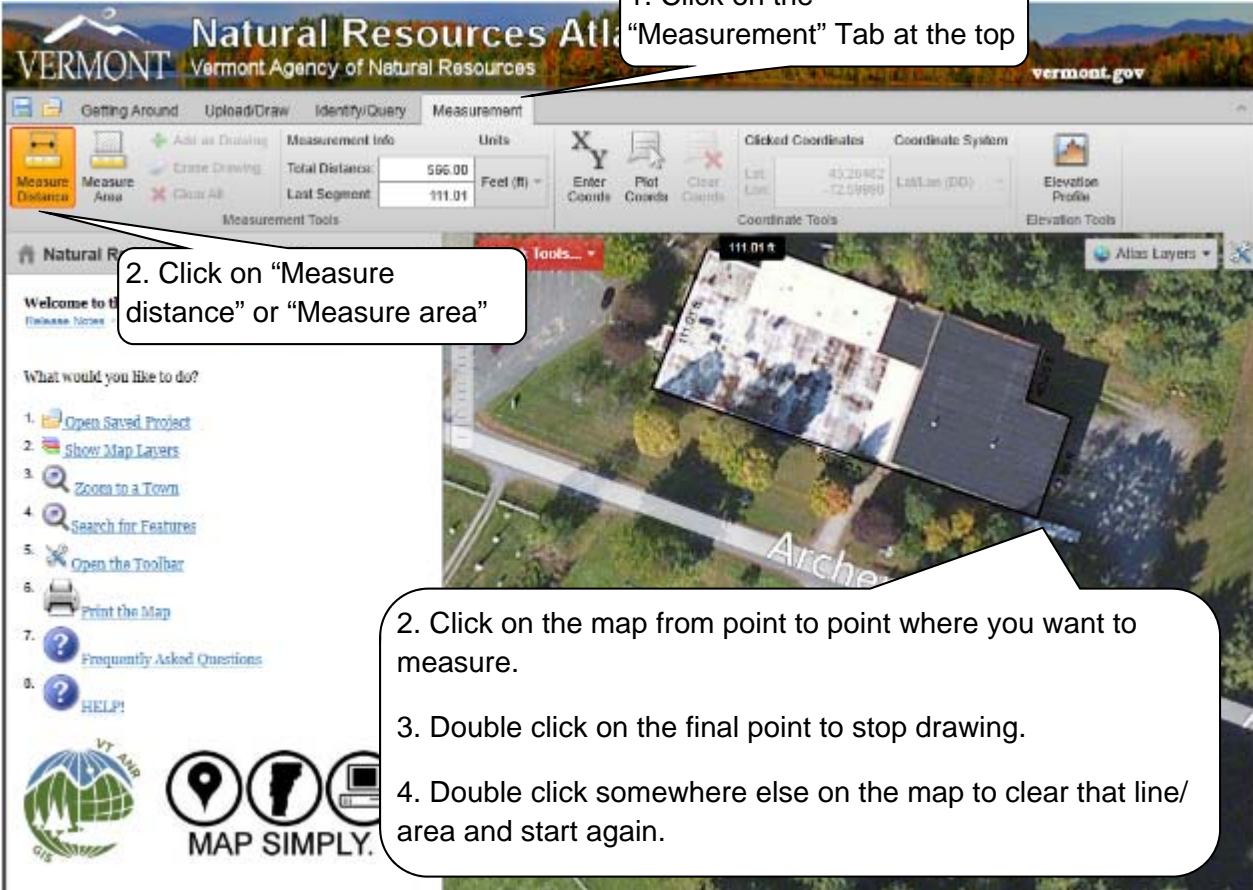

To find layers

1. Click on "Map Layers"
2. Select "All Available Layers"

1. Click on "filter"
2. Write in what you are looking for under "filter" and click enter
3. You then will see only a selection of the layers, according to your search word.

Distance, Coordinates, and area

To measure a distance or area:

1. Click on the "Measurement" Tab at the top

2. Click on "Measure distance" or "Measure area"
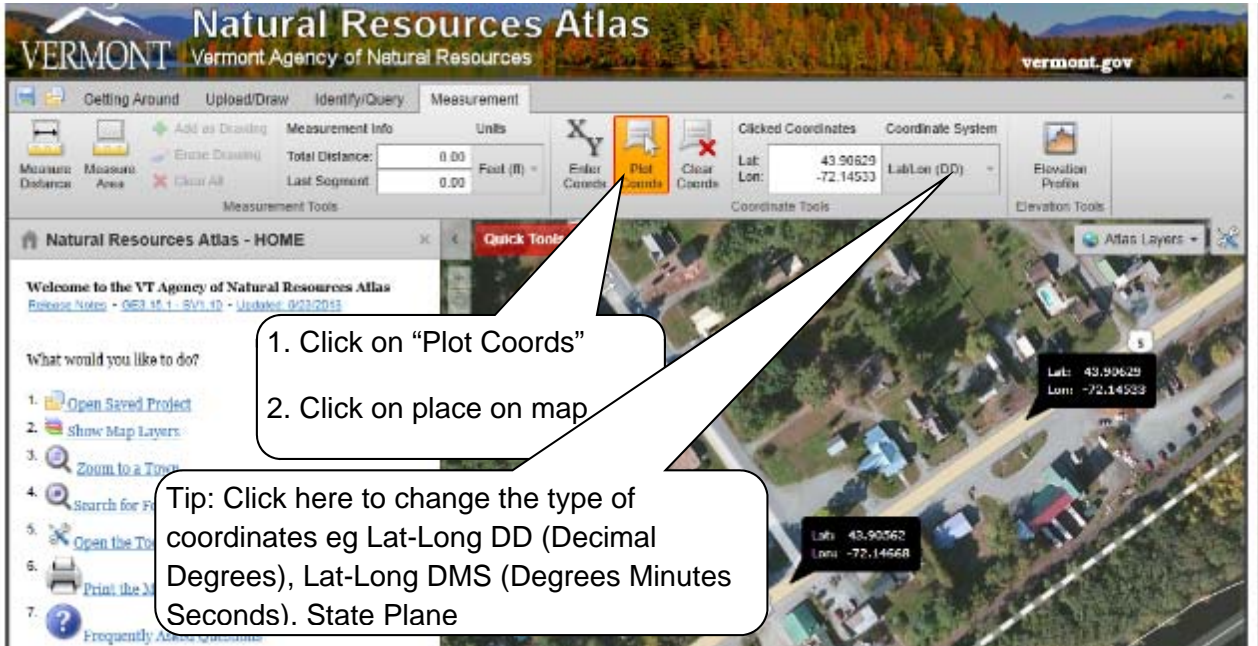
2. Click on the map from point to point where you want to measure.

3. Double click on the final point to stop drawing.

4. Double click somewhere else on the map to clear that line/area and start again.

To find out coordinates:

1. Click on "Plot Coords"

2. Click on place on map

Tip: Click here to change the type of coordinates eg Lat-Long DD (Decimal Degrees), Lat-Long DMS (Degrees Minutes Seconds). State Plane

Quick Guide of online mapping for ZAs and Town Staff – last amended 5/26/2015
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To Upload a shapefile and change how it looks

To upload a shapefile:
1. Click on "Upload" at the top", then click "add shapefile".
2. If you get the advice below, click "ok".
3. Then select the three relevant files (should all have the same "name", but then different endings of .dbf, .prj and .shp).
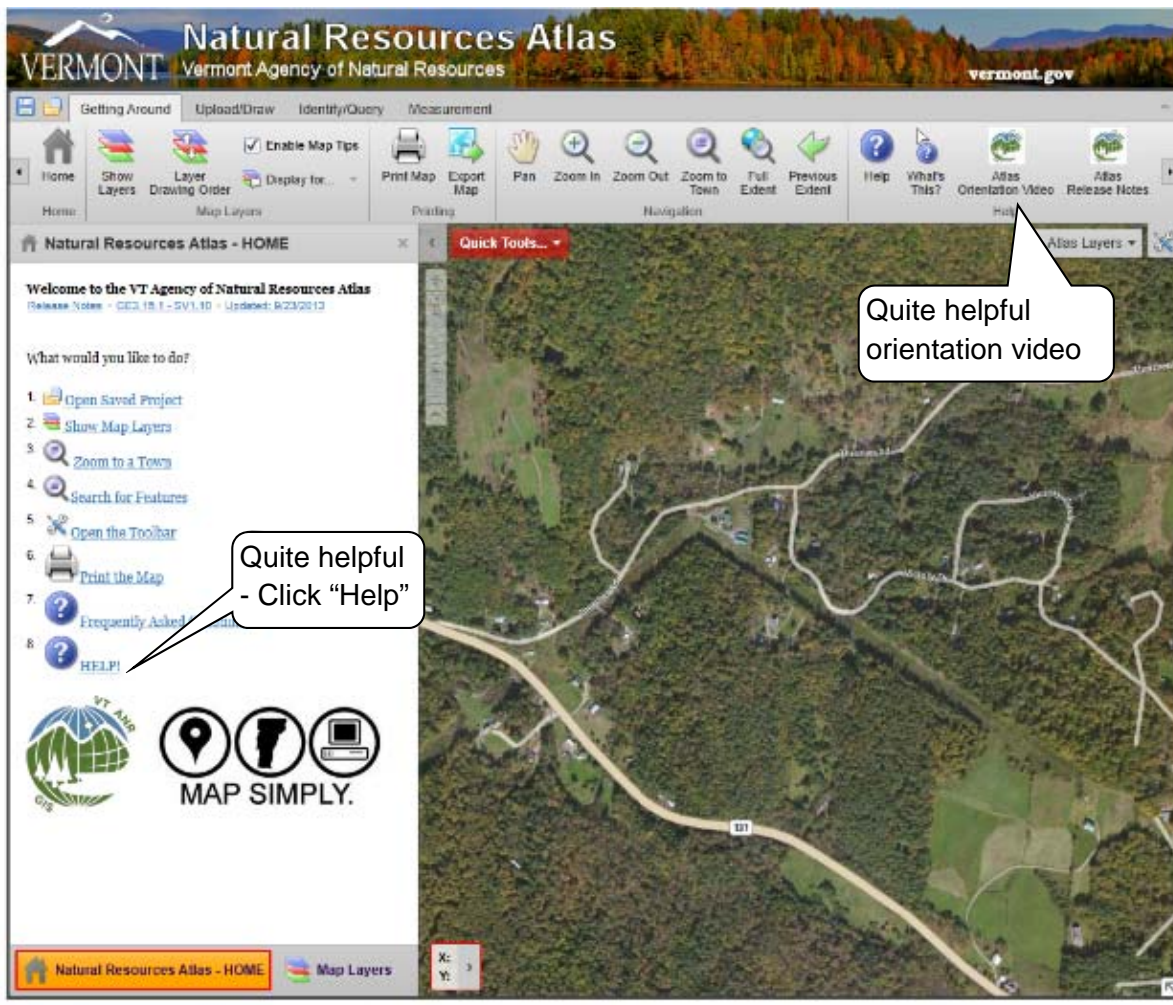
To change how it looks:
1. Right click on the layer. (Hint: it is likely stored under "Graphics Layer" at the bottom of the layer list)
2. Click on "Symbolization". Then select border and fill colors. Use the sliders to change how transparent the layer is
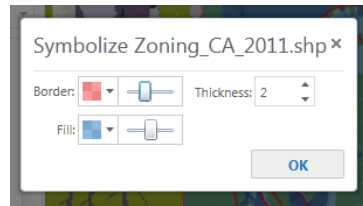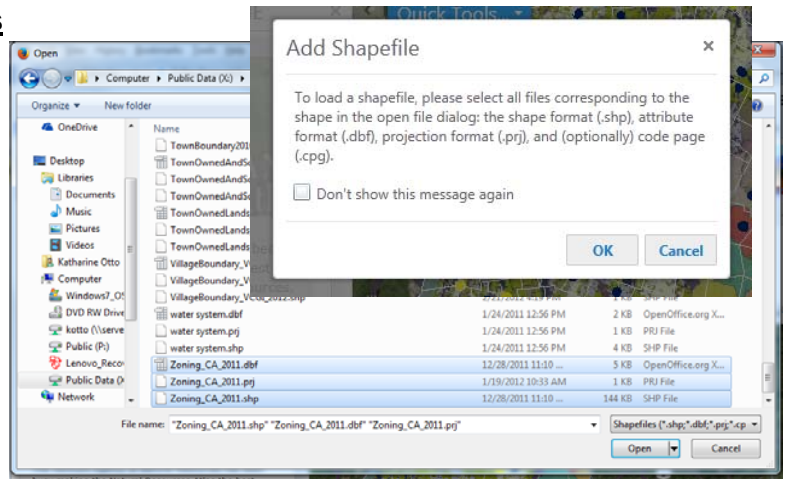
For additional help

Really helpful - Hour long video which shows you have to navigate and what to do – Produced by ANR in February 2013 http://www.youtube.com/watch?v=jqDr93vUC_8

FEMA maps

Getting started
http://msc.fema.gov/portal

Search by Address ❓

Enter an address, place, or coordinates:
weathersfield, vt 🔍

You are viewing the highlighted flood map and boundaries that best match your location. A new location may be chosen by panning the map and selecting a point, or by using the search field. The icons to the left of the map allow you to view the map on the FIRMette web tool, save the map as a zip file (image and geodata), open an interactive map of the area on FEMA's GeoPlatform, or advance to Search All Products to view effective, preliminary, pending, historic, and flood risk products.

You have selected a location in
WINDSOR COUNTY AND INCORPORATED AREAS

The flood map for the selected area is number 50027C0731E, effective on 09/28/2007 ❓

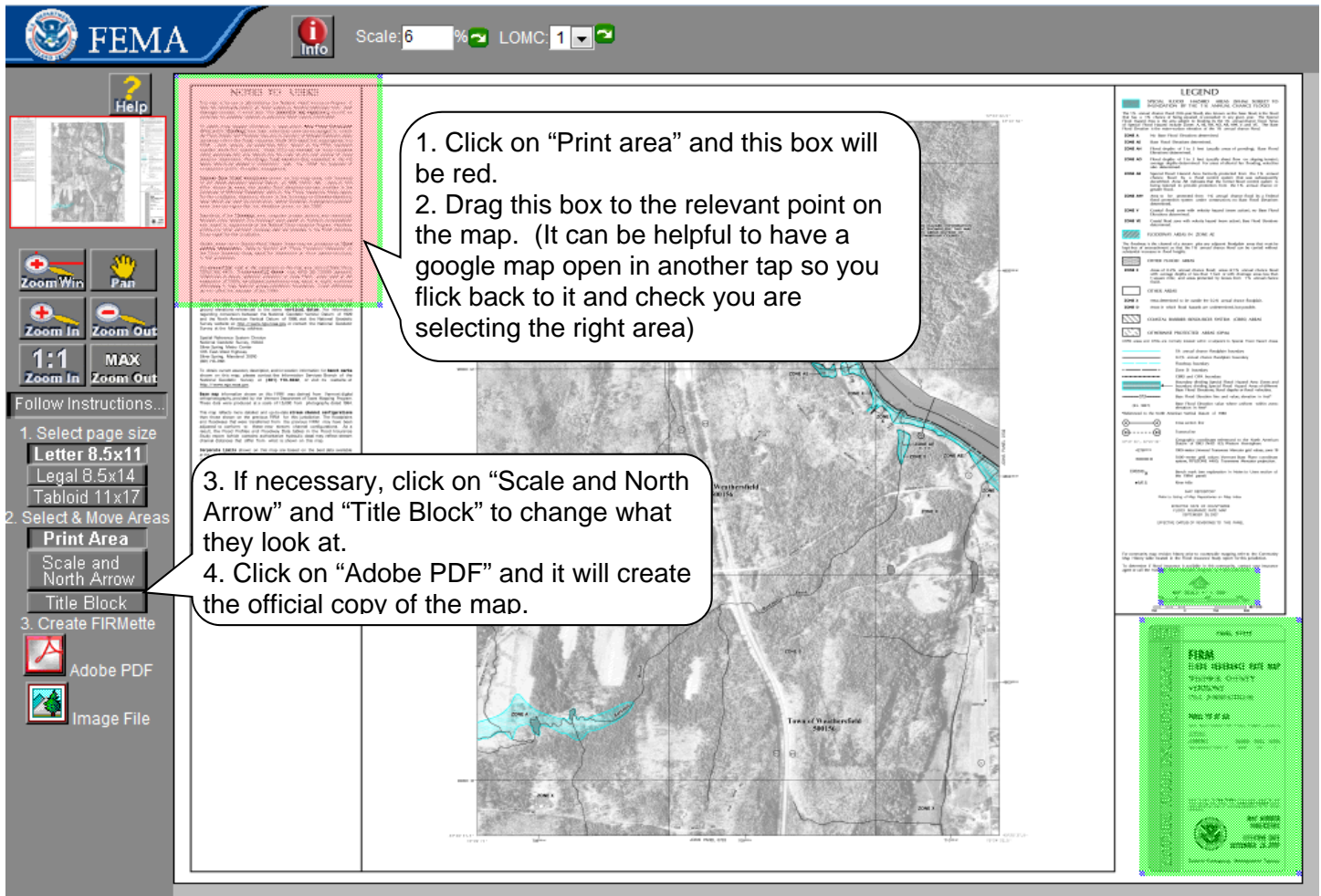VIEW MAP   SAVE MAP   INTERACTIVE MAP

Show all products for this area ➡

> Click "Save Map" for it to automatically download the entire map square.
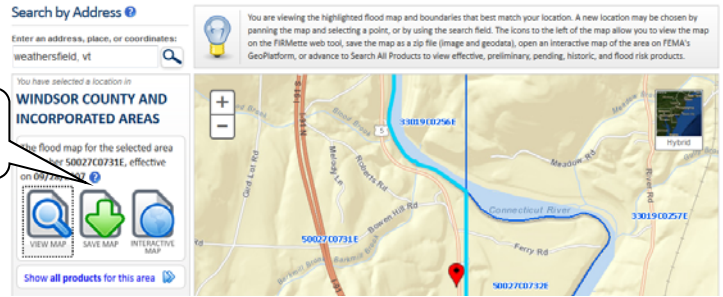
To make an official copy of the map "ie "Firmette")
1. Type in location
2. Click on "View map"
3. Click on "Make a firmette"

FEMA   ℹ️ Info   Scale: 6 % ↻   LOMC: 1 ↻

❓ Help

ZoomWin   Pan
Zoom In   Zoom Out
1:1 Zoom In   MAX Zoom Out

Follow Instructions...
1. Select page size
Letter 8.5x11
Legal 8.5x14
Tabloid 11x17
2. Select & Move Areas
Print Area
Scale and North Arrow
Title Block
3. Create FIRMette
📄 Adobe PDF
🖼️ Image File

> 1. Click on "Print area" and this box will be red.
> 2. Drag this box to the relevant point on the map. (It can be helpful to have a google map open in another tap so you flick back to it and check you are selecting the right area)

> 3. If necessary, click on "Scale and North Arrow" and "Title Block" to change what they look at.
> 4. Click on "Adobe PDF" and it will create the official copy of the map.

LEGEND

To explore the flood hazard areas in closer detail
1. Type in location
2. Click on "Interactive Map"
3. Then explore!

The default base map is from a USGS service and conforms to FEMA's specification for horizontal accuracy. This base map is composed of the orthoimagery used when the Flood Insurance Rate Maps (FIRMs) were initially created combined with standard imagery products managed by USGS. This map should be considered the best online resource to use for official National Flood Insurance Program (NFIP) purposes when determining locations in relation to regulatory flood hazard information. If a different base map is used with the NFHL, the accuracy specification may not be met and the resulting map should be used for general reference only, and not official NFIP purposes.