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A fresh angle on GIS and mapping news from Vermont...and the rest of the world

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VCGIS NEWS

Happenings At VCGI

VCGI Imagery Program News

Leslie Pelch

July 1, 2009 saw the birth of the VCGI Imagery Program. On that date, VCGI began making various types of orthoimagery available for free download at our web site. Users can also purchase imagery on media in either compressed or uncompressed format. Not surprisingly, there were a few bumps in the road during the first weeks of the program, and we realize not everyone was happy with the changes in the delivery of orthoimagery. Now that we have a couple of months under our belt, everything seems to be working smoothly, and most users have adjusted to this new method of accessing the imagery. We have received a great deal of positive feedback from users who appreciate being able to download the VT digital orthophotos for free or purchase them on media for a very inexpensive price.

2008 NAIP imagery, which includes the color infrared band, was released in late August to the cheers of many users. It is available for free download, as is an extract of just the Color Infrared data, and it will be available as a stand alone product on media for a limited time (until 1/31/2010); after that it will be rolled into the NAIP media bundle, which will include both 2003 and 2008 imagery.

2007 and 2008 black and white, 1:5000 scale orthoimagery will be released soon...really! The data has finally made it through the QA/QC process (thank you to Drew Emory for sticking with it!) and VCGI is currently compressing and loading it into our database in order to make it available to the public. As with the NAIP data, this new imagery will be available as a separate media bundle for about 6 months after it is released, then it will be rolled into the statewide, all vintages, black and white 1:5000 orthoimagery bundle.

A few other limited-extent imagery products have been made available for download:

1:1250 (0.15m) truecolor VT orthos (2006) - Barre Montpelier

1:1250 (0.125m) b&w VT orthos (2000) - Burlington + Barre

1:1250 (0.125m) b&w VT orthos (1998) - Randolph Village
1:1250 (0.15m) truecolor orthos (2001) - Rutland City

Here are some things to keep in mind regarding the imagery data we distribute:

You can get imagery in three different ways:

1. Download JPEG 2000 files by tile (.jp2) - this compressed format is not readable by all GIS and graphic software programs, you may need to look into getting a free plugin to make it work!
2. Download JPEG files via the Custom Download Tool - when you download using this tool (which allows the user to zoom to their area of interest and then "clip and zip" that image) you will have a .jpg file and a jgw file (world file) zipped together. This uncompressed format should work in any software that you have previously used to view orthos once you unzip.
3. Purchase imagery on media (flash drive or portable hard drive depending on size of data)- your choices at this point include statewide, black and white, 1:5000 orthos (compressed or uncompressed), statewide, color, NAIP imagery (just 2008 data or combined 2003 and 2008, compressed or uncompressed), and prices range from \$75 to \$220. Check the Media Bundles section of the Image Library web page for details and order forms.

Please check out the **Frequently Asked Questions** section of the Image Library! We have been trying to put relevant questions and answers there as they have come up, as well as useful tips. Here is the most recent addition:

Why can't I download imagery via FTP?

VCGI has had security breaches via FTP in the past, therefore we no longer offer FTP. However, all compressed image files can be downloaded from your browser via HTTP. If downloading files one-by-one is too much trouble, VCGI recommends one of the following "download managers". They make it easy to download an entire directory of files in one job.
<http://flashgot.net>

DeJung Gewissler Joins VCGI

DeJung is currently VCGI's liaison to Vermont Emergency Management and UVM's Center for Rural Studies. He joined VCGI in July of 2009 after spending 3 years as a GIS Specialist at the Monmouth County, NJ GIS Office and 4 years at the NJ State Office of GIS. He has worn the many hats of GIS (database admin, desktop support, GPS trainer, integrator of GIS in business work flow, web programmer, project manager, etc) and recently has found himself trying to build solutions using Open-Source community-supported GIS software in addition to ESRI products.

After studying abroad in Europe, DeJung decided to pursue a BA in Environmental Science with a minor in Geology and a BA in German from the University of Oregon. He must have had a lapse of sanity when after 3 years of hiking, biking, snowboarding, and living that wonderful organic life he decided to move back to NJ and found himself staying for 8 years! Now that that is over he is enjoying getting back to the land and being part of the Vermont mountain lifestyle again.

Calendar

VT Society of Land Surveyors Annual Conference - Sept. 17 and 18, Rutland, VT, 877-239-8757, info@vsls.org

VT League of Cities and Towns Annual Town Fair - October 1 and 2, Barre, VT, www.vlct.org

Northeast Arc Users Group Conference (NEARC) - October 4 - 7, Nashua, NH, www.northeastarc.org

VT Spatial Data Partnership Roundtable - October 21, Fairlee, VT, www.vcgi.org/vspd



VCGI Has a Facebook Page - Become a Fan!

Search for VCGI when you are logged into Facebook, or link from our website!



Introductory GIS Trainings Popular Once Again

Leslie Pelch, VCGI

30 people from around VT participated in the 2009 Introduction to GIS courses offered by VCGI in Rutland and Montpelier. Most participants were very motivated and eager to start applying their new knowledge of ArcExplorer in their work. The two consecutive days format was very popular, so we may consider offering all classes that way next year. We are also going to investigate some location options so that we can offer classes in a few more places around the state.

If you are interested in taking a very introductory GIS class focused on using free software, keep your eyes on the VCGI web page and the VGIS-L listserv for information about next year's offerings (info will be posted in late winter).

VCGI Customer Survey 2009

Leslie Pelch, VCGI

VCGI will be collecting information and feedback from you, our customers and constituents, once again this autumn. Keep an eye on the web site and the VGIS-L email listserv so you can tell us what you think about our website, our data, the new Imagery Program, the conferences and trainings we organize, and the services we provide. Everyone who fills out the survey will have the option of being entered to win a portable hard drive or consumer grade Garmin GPS receiver! The survey should be posted by early October.

Voices From All Sectors

VTrans Notes

Sara Moulton, VTrans

A recent question we received concerns the comparison of TransRoad_RDS mileage against our official mileage listing for any particular town.

Question: In comparing the Highway Mileage Statistics for 2009* against TransRoad_RDS, I'm not getting the same total mileage. Can you confirm which mileage field I should be comparing against (AOTMILES, ARCMILES, or LENGTH * 0.000621) and which road classes I should be selecting?

Answer: We generate two mileage summary listings for each town. One is on the Town Highway Map, the other is the Mileage Statistics* reports available from our website.

The mileage listed in the "Mileage Summary" listing on the Town Highway Map is not a listing of ALL the highway mileage in the town, but is a summary of the mileage for which the town receives reimbursement as part of the Town Highway Grant Program**. The mileage field in TransRoad_RDS that is used to generate the report is AOTMILES.

The following excerpt of the selection query selects the road classes involved (using the CTCODE for the Town of Addison as an example):

(CTCODE = '0101' and AOTCLASS Between 1 And 3) OR (CTCODE = '0101' AND AOTCLASS Between 10 And 60).

This query deliberately does not select class 4 town highways (AOTCLASS 4) and legal trails (AOTCLASS 7). These road classes carry official AOTMILES data because VTrans is mandated by statute*** to map class 1, 2, 3 or 4 town highways and trails, but since class 4 town highways and legal trails are not reimbursed for maintenance, their mileage is not included in the mileage summary listing.

There are two things to keep in mind when comparing the mileage derived from TransRoad_RDS against the Highway Mileage Statistics reports available from our website. One is that the Highway Mileage

Statistics reports are generated from a different set of data, separate from TransRoad_RDS, with a different provenance. We use it as a master data set to compare our other work against. It is this data set that is used to generate the mileage certificates ****. According to this master data set, the official total mileage for the whole state is 14,126.746 miles. According to TransRoad_RDS, the equivalent mileage total out of AOTMILES is 14,126.404. Close, but not quite a 100% matchup.

The other thing to watch out for is make sure you are using the right Highway Mileage Statistics report for the vintage of TransRoad_RDS you are using. For example, the 2009 Highway Mileage report is available, but its corresponding version of TransRoad_RDS has not been released yet. We hope to get it released within the next two months.

Please contact the VTrans Mapping Unit if you have any questions regarding highway mileage or road centerlines in general. Contact information is available at http://www.aot.state.vt.us/Planning/mapgis/town_maps1.htm.

More Information about Various References is Available via the Following Links:

* Highway Mileage Statistics reports (available under the Mileage Statistics section)

http://www.aot.state.vt.us/Planning/Documents/Mapping/Publications/mapping_pubs.htm

** Town Highway Grant Program

<http://apps.vtrans.vermont.gov/THGProgram/fintowngrant.aspx>

*** Vermont Statutes Annotated, Title 19, Chapter 3, sections 305 and 306

<http://www.leg.state.vt.us/statutes/chapters.cfm?Title=19>

**** Mileage Certificates

http://www.aot.state.vt.us/Planning/MapGIS/mapping_certs.htm

RPC GIS Meeting Notes

Dan Currier, Central VT RPC

The Regional Planning Commissions held their annual RPC GIS meeting back on April 3rd (Editor's Note: This article didn't quite make it into the May Newsletter...). The meeting had a full agenda and was productive, but very busy. The meeting started with a presentation from the Vermont Agency of Natural Resources Department of Environmental Conservation staff on the software used to map Fluvial Erosion Hazard (FEH) zones. FEH mapping is a GIS analysis that calculates the riparian area needed by each river or stream to meander within. This area is important because it's also the area that will be the most susceptible to erosion over time as the river or stream moves laterally inside its valley. Currently the creation of these FEH zones is done using the Stream Geomorphic Assessment Tool (SGAT), an extension that runs in ArcView 3.x. However, ANR is making the switch for their SGAT extension to ArcGIS 9.3. The first tool to be converted is the FEH analysis which the DEC staff demonstrated for the RPC's. The FEH tool is still in its beta form, but it should be available soon.

The next discussion was on the data for the 2010 Census and the Local Employment Dynamics (LED) data also gathered by the Census Bureau. Most of the Regional Planning Commissions are involved with the update of the Census tract, block, and designated place data. This updated data will be used during the 2010 Census. Most of the changes being made are based upon tracts and block groups falling outside of the Census recommended housing and/or population thresholds. The LED data was made known to us by Kevin Behm from ACRPC. The data has its own online map viewer called OnTheMap. A link to that view is <http://lehdmap3.did.census.gov/themap3/>.

This data is helpful in understanding where people are living and working and the kind of commuting patterns that exist.

The last topic before our lunch break was on VCGI's request for town parcel data from the RPC's. VCGI wants to store parcel data from all municipalities on their website so it can be distributed with the other VT State GIS data they offer. The RPC's are in favor of this request and are working on passing the data over to VCGI by July 1, 2009.

The RPC GIS specialists try to meet once a year to discuss topics that affect us all. If your organization has a topic or is interested in attending, please contact your local RPC or Daniel Currier, GIS manager at Central Vermont Regional Planning Commission.

A Cartophilic Trip Around Lake Champlain

Jeff Nugent, Windham Regional Commission

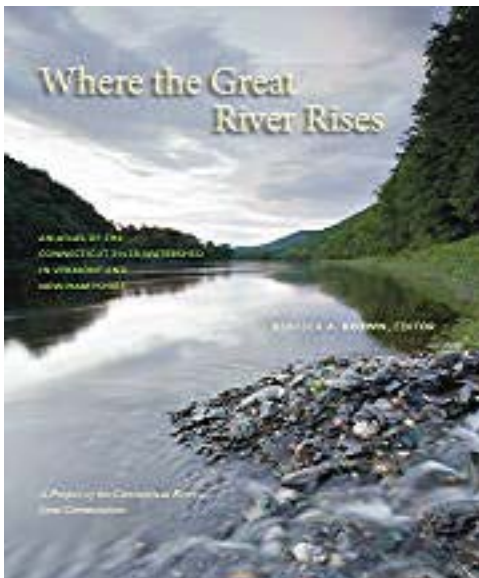
On a five day trip around Lake Champlain, I stopped in at the Henry Sheldon Museum in Middlebury, to take in the exhibit: "Mapping Champlain's New World." The exhibit featured over two dozen maps from 1635 to 1911. The maps ranged from those that covered most of the North American continent known to European mapmakers in the 17th century to large scale plans of the battle of Ticonderoga. The maps on exhibit were original documents, and an up-close look lets you marvel at the intricate detail that maps at that time possessed. It's something that can't be appreciated on-line. The exhibit runs through October 23rd.

You can also find historic maps at the Chimney Point State Historic Site. The site is dedicated to presenting the French and Native American cultures of not only the immediate area, but Vermont itself. There are a number of maps upstairs, several of them the same as those at the Sheldon Museum, but they are scanned copies that have been re-printed, and lack the interpretive text. If you are in the area, check it out, but again, to really appreciate these maps, see the originals in Middlebury.

Book Corner

Leslie Pelch

These are mentions of interesting books I have seen or heard about (but haven't read yet, so can't review). Remember to send me your reviews if you have read any interesting map/GIS related tomes!



Where the Great River Rises:

An Atlas of the Upper Connecticut River Watershed in Vermont and New Hampshire, Rebecca Brown, Editor, University Press of New England (2009).

A lavishly illustrated, comprehensive, interdisciplinary study of the natural and human elements that comprise the Upper Connecticut River watershed. Rebecca A. Brown has compiled a remarkable compendium of authoritative essays on the Connecticut River, touching on everything from its physical landscape and natural environment, to the human history, and culture that has grown up around it. This indispensable volume is the product of a remarkable partnership and years of collaboration between the Connecticut River Joint Commissions, Dartmouth College, and Northern Cartographic. Dozens of scholars, scientists, and other experts—all recognized as top authorities in their respective fields—were commissioned to prepare contributions related to their areas of expertise.

<http://www.upne.com/1-58465-765-0.html>

Maps That Made History: *The influential, the eccentric, and the sublime*, Lez Smart, The National Archives (UK) (2004).

From the Introduction: "Numerous books have been published on the subject of maps. Many deal with collecting, some with the mapmaker's art, while others focus on the historical development of

cartography itself. Very few adopt the approach taken here and explore the individual maps as a means of looking into the history of the period in which they were created. In effect, to use them as a 'window' into times now passed."

The Atlas of Food: *Who Eats What, Where, and Why*, Erik Millhouse and Tim Lang, University of California Press(2008).

From the VT Geographic Alliance Newsletter: "This Atlas uses beautiful, clear maps and graphics to show us where food comes from in the world, who eats what, who produces it, and what that means for nutrition, politics, economics, and the environment. The authors cover the entire food chain from the farmer to the consumer, and show how each link in the chain affects the others."

Parcel Data Report

Leslie Pelch, VCGI

VCGI and the Regional Planning Commissions are in the process of compiling available GIS parcel data so that VCGI can distribute the data via the VGIS Data Warehouse. Although the data will not be melded into a single seamless layer (it will be distributed "as is") it is a first step towards making this essential data more accessible and eventually more consistent.

To date, I have received parcel data from the following RPCs: Chittenden County RPC, Central VT RPC, Lamoille County PC, Northwest RPC, Rutland RPC, Southern Windsor County RPC, Two Rivers Ottaquechee RC, and Windham RC.

Data will be downloadable via the tiled data download tool (each town is a tile). I hope to post what we have for download before the end of this calendar year.

Cool Stuff

Mapping a better world - The Economist

"...mapping technology has matured into a tool for social justice. Whether it is to promote health, safety, fair politics or a cleaner environment, foundations, non-profit groups and individuals around the world are finding that maps can help them make their case far more intuitively and effectively than speeches, policy papers or press releases."

http://www.economist.com/sciencetechnology/tq/displayStory.cfm?story_id=13725877

Human Rights Maps



These maps are part of the P.A.P. Blog – Politics, Art and Philosophy HUMAN RIGHTS, incl. political and economic rights, from the perspective of politics, art, philosophy, law, economics and statistics.

<http://filipspagnoli.wordpress.com/tag/human-rights-maps/>

Mapping for Justice

At Tutor/Mentor Connection, Mike creates maps that look at the relationship among poverty, community resources, school performance, and locations of non-school tutoring/mentoring facilities for K-12 students.

<http://mappingforjustice.blogspot.com/>

US Food Policy Blog

For people who want to know where their food comes from, Google Maps offers a profound passport to the landscape you choose to view, in place of the pastoral image that an interested party wants you to view. For most of these locations, you can explore even more using the street view feature.

<http://usfoodpolicy.blogspot.com/2009/07/10-us-food-policy-destinations.html>

Map Hawk Blog (A Publication of Directions Media)

This blog covers the use of maps, mapping technology and location-based information in the media as well as its use by others who are using maps to convey a message on the web, TV, blogs, or other visual medium.

<http://maphawk.blogspot.com/>

VSDP News

Roundtable Roundup

Leslie Pelch



The last Roundtable was held July 21 in Waterbury, and was attended by 100 people (an unprecedented number during the summer!). You can see PDFs of many of the powerpoint presentations at the VSDP web page (Roundtable Archive). Johnathan Croft was presented with the 2009 Outstanding Achievement Award. The award was presented by the 2008 recipient, Jarlath O'Neil-Dunne, and they both did such a great job in their comments that we have decided to simply have them pass it back and forth each year and continue to entertain Roundtable Attendees.

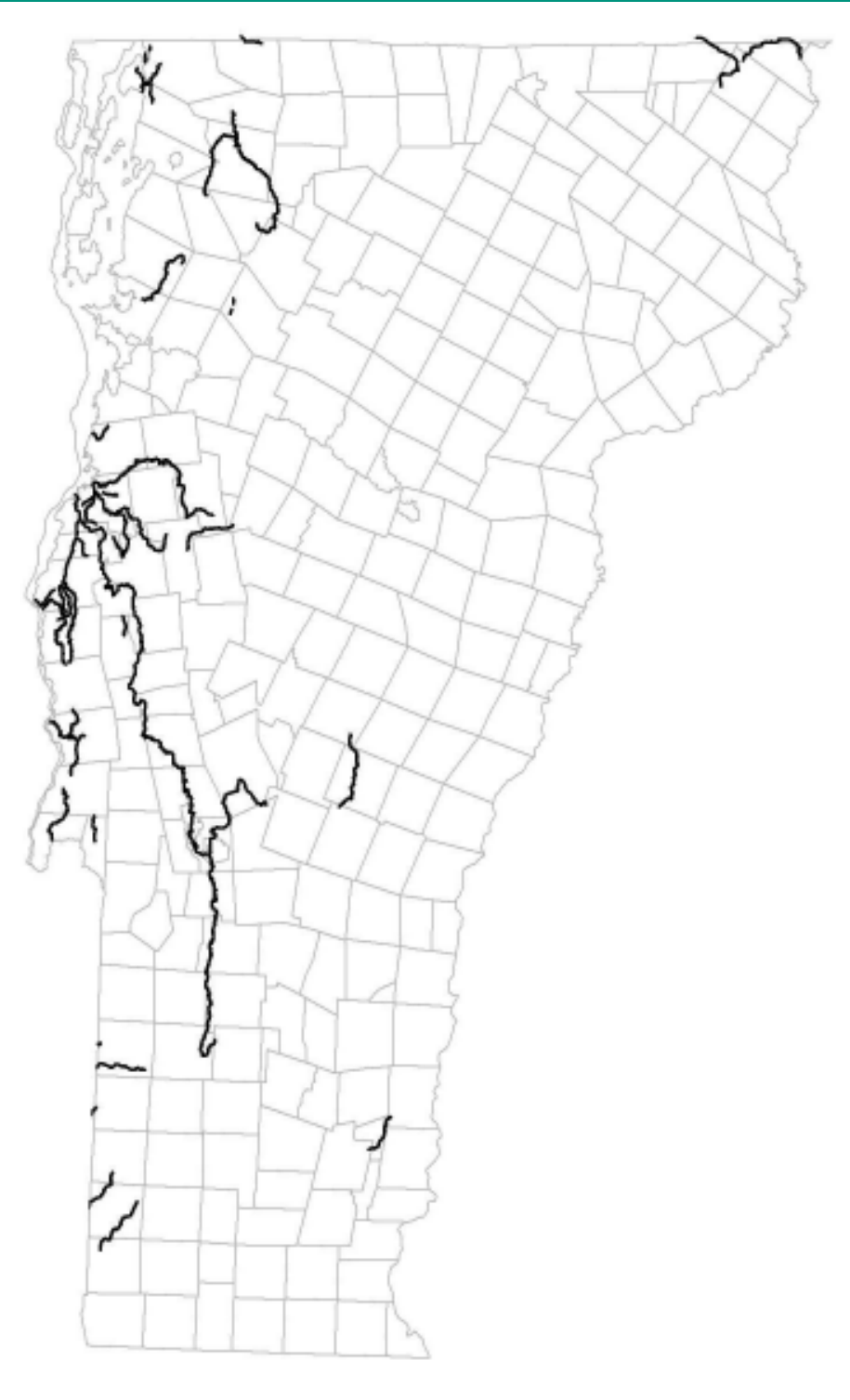
The **next Roundtable** is scheduled for October 21st at the Lake Morey Resort in Fairlee. The theme is "Unfolding the Map: Making Geospatial Information Accessible to the Public" and we have a great list of tentative topics (see below). Check the web page soon for schedule and registration information (www.vcgi.org/vsdp).

- Open-Source GIS: A Balancing Act Between A Wampeter and Saltpetre – John Van Hoesen, Green Mountain College
- Comparing the \$5,000 Trimble to the \$300 Garmin GPS, and how we use the Trimble to monitor tree survival in riparian buffers – Frank Pendelton & Karina Dailey, FWS
- Modelling Property and the Grandlist Digitally – Judy Bond, GrassRoots GIS
- Creating and Using Geo-Referenced PDF Maps - Burton Putrah, UVM Spatial Analysis Lab
- ArcGIS Explorer and ArcGIS Online – ESRI staff
- VELCO's Public Mapping Application – Jarrod Harper, VELCO
- GIS for Municipal Wildlife Planning - Jesse Mohr, Native Geographic and TBA
- Mapping Invasive Species and Changes Over Time. – Michelle Therrien, Town of Meredith, NH
- Urban/Regional land-Use Planning , Pam Brangan, CCRPC, others TBA
- Data collection – GPS – Bringing GPS Data Into...Google Earth, VT Online Mapping Applications, Geopdf, – Dan Currier, CVRPC and Leslie Pelch, VCGI
- Emergency Management and Mapping Update– Lin Neifert, USGS and Jeremy McMullen, E911
- Bringing Historic Maps and Orthophotos Into GIS – Jarlath O'Neil-Dunne, UVM, Bill Morriss, VHB/Pioneer, and Dan Currier, CVRPC
- Using Google Spreadsheets to Display Point Data in Google Earth - Brian Beck, UVM Spatial Analysis Lab



Mystery Map Contest

Last quarter's Mystery Map showed mean winter precipitation data for Vermont (1971-2000). Congratulations to Peter McAlenny of fountains spatial, Inc. for figuring it out!



What does the map above show (besides town boundaries)? Please submit your responses to Leslie at lesliep@vcgi.org or at the address given on the back page of the newsletter. The winner, drawn from among the respondents who send in correct answers, will receive his or her choice of data product: Topos, Imagery Bundle....

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