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

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VGIS News

Happenings At VCGI

Historic E-9-1-1 Data Now Available

Mike Brouillette, VCGI

VCGI is happy to announce the release of a new data product that some of you have been asking for: a historical archive of 9-1-1 data. The E911 historical archive contains approximate yearly “snapshots” of Driveways (DW), Emergency sites (ESITE) and Roads (RDS) selected from all available data deliveries to produce a rough yearly representation of data (yyyymm): 199901, 200001, 200010, 200102, 200204, 200302, 200402, 200501, 200512, 200701, 200801 and 200809

The individual layers are named as follows:

<Theme>_<NAME><yyyymm>_<type>, e.g., EmergencyE911_DW200101_line

As the data structure has changed over the years **it is not always possible to directly compare one dataset to another, e.g. for time series analysis.** For more information about this topic (and others) please see the E 9-1-1 Frequently Asked Question (FAQ) page at: http://www.vcgi.org/techres/white_papers/e911faq/. Time series analysis is addressed in FAQ number 19. “Is it possible to do statewide “Time Series” analysis using the historical 9-1-1 datasets?”

The archives can be acquired from the VGIS website individually as follows or by clicking on the ‘New Data’ link from the Data Warehouse tab.

<http://www.vcgi.org/dataware/?layer=DWARCHIVE>

<http://www.vcgi.org/dataware/?layer=ESITEARCHIVE>

<http://www.vcgi.org/dataware/?layer=RDSARCHIVE>

An additional dataset useful when using RDS and ESITE is the “EmergencyE911_OTHER” layer available from the Data Warehouse website - <http://www.vcgi.org/dataware/>. This data is not geospatial data but contains seven .DBF files, two ArcView legend files (e911-site-type.avl & e911rds-class.avl) and metadata (EmergencyE911_OTHER.txt).

The .DBF files are:

1. ESADATA.DBF - a listing of each emergency service provider;

2. ESN.DBF - Emergency Service Numbers built from town codes;
3. MCODE_TO_FIPS6.DBF - Provides users with a way to link MCODE to town FIPS6 code. ROADNAMES.DBF has MCODE but not FIPS6.
4. ROADNAMES.DBF - a listing of road names for the entire state;

In the January 16, 2007 data delivery, all 9-1-1 data was migrated to the ESRI Spatial Database Engine (SDE) software, and as a result all of the “key” unique identifiers were reset. The following “cross reference” tables translate the new and old SITEID, RDNAMID and ARCID “key fields” values.

5. ARCID_CROSSREF.DBF - RDS key field “ARCID” cross reference.
6. RDNAMID_CROSSREF.DBF - RDNAMID key field between RDS and ROADNAMES.DBF cross reference.
7. SITEID_CROSSREF.DBF - ESITE “SITEID” cross reference.

Please forward all questions and suggestions regarding this dataset to: Mike Brouillette: mikeb@vcgi.org, 802-882-3008.

New and Updated Data Available at the VGIS Data Warehouse

www.vcgi.org/dataware

NEW

- **BoundaryOther_ANRADMIN**, ANR Administrative Boundaries
- **ElevationDEM_CCLIDARDEM**, DEM derived from Bare Earth LIDAR (Chittenden County)
- **ElevationOther_CCLIDARHLSHD**, Hillshade derived from Bare Earth LIDAR (Chittenden County)
- **EmergencyE911_DWARCHIVE**, Historical E911 DW Archive (driveways)
- **EmergencyE911_ESITEARCHIVE**, Historical E911 ESITE Archive (buildings, etc.)
- **EmergencyE911_RDSARCHIVE**, Historical E911 RDS Archive (road centerlines)
- **EmergencyHazards_DAMINUND**, High risk dam inundation areas
- **FacilitiesBuildings_DENSITY**, Building density - derived from E911 ESITE points
- **TransOther_CCPARKING08**, Chittenden RPC Parking Inventory (2008)

UPDATED

- **TransStats_AADT**, Average Annual Daily Traffic: 1990-2007 - all routes
- **TransStats_AADT8688**, Average Annual Daily Traffic: 1986-1988 - Int, US, VT route
- **TransStats_AADTFUA8289**, Average Annual Daily Traffic: 1982-1989 - FUA routes only
- **TransStats_AADTMC8487**, Average Annual Daily Traffic: 1984-1987 - major collectors
- **WaterHydro_VHDCARTO**, Vermont Hydrography Dataset - Cartographic version

Calendar

*Charting a Course to Green Energy in Vermont - May 4, Burlington, VT - www.vcgi.org

*Spring Northeast Arc Users Group Conference (NEARC) - Tuesday May 12, Smith College, Northampton, MA, www.northeastarc.org

*NYS GeoSpatial Summit May 19 - 20 in Schenectady, NY - www.nygeosummit.org/

*O'Reilly Where 2.0 Conference, May 19-21, San Jose, CA en.oreilly.com/where2009/



Tom Williams of VCGI has attained his GISP certification from the GIS Certification Institute. (GISCI). In order to attain this certification, an applicant completes an application that reflects professional experience, education, and contributions to the profession. Visit the GISCI web site for more information: www.gisci.org.

Orthophotography Program Update

Leslie Pelch, VCGI

Many of you have probably heard the rumors about major changes at the VT Mapping Program – the source of our statewide orthophotography product.

The purpose of this email is to let you know the current state of affairs, now that the Governor has presented his budget to the legislature.

1)The Tax Dept. proposed \$0 to fund the VT Mapping Program in 2010 – this means no money for space, personnel, etc. It does not relate to Capital Fund money already allocated to gather new orthophotography in 2009.

2)The Tax Dept. had conversations with VCGI and other state agencies about the eventual fate of the program (which would simply end June 30, 2009 if other arrangements were not put in place). Other state agencies were not able to take on the program.

3)VCGI does not have the resources to take over the entire Vermont Mapping Program 'as is', but we do believe it is in the best interests of the state to continue the Orthophoto Program. In the absence of another agency taking over the full Mapping Program, VCGI has agreed with the Tax Dept. to work on continuing orthophoto collection and digital distribution in the state.

4)The current proposal

(which VCGI has accepted) is that VCGI will take on the following:

- a)Manage digital orthophotos and imagery product contracting for the state (dependent on availability of funds as always)
 - b)Provide or manage Quality Assurance for digital orthophotos and imagery products delivered by contractors
 - c)Provide distribution of digital orthophotos and imagery products
 - d)Provide archival storage of digital orthophotos and imagery products
- 5)VCGI has not agreed to:
- a)Provide hardcopy orthophoto distribution
 - b)Provide hardcopy orthophoto archival storage
- 6)This all has to be considered by the legislature before the budget is finalized, so changes may occur.

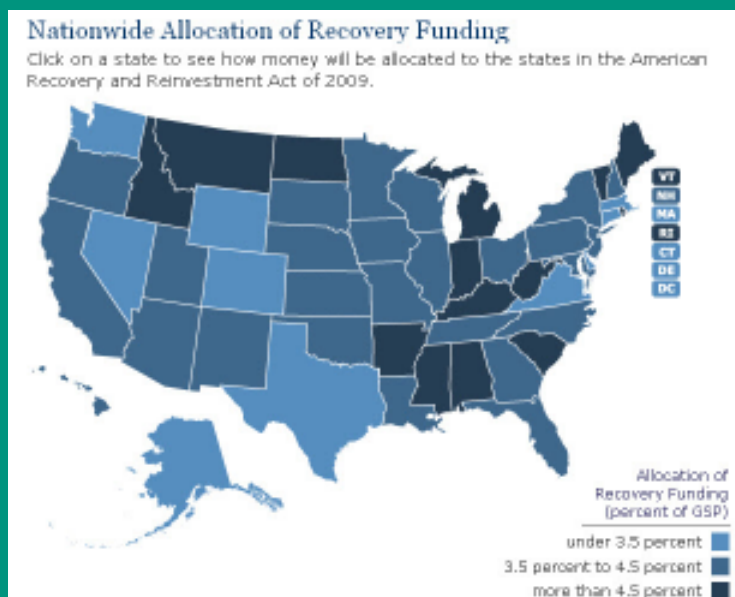
If you have questions, please contact VCGI's Executive Director, David Brotzman at 882-3003 or davidb@vcgi.org

Cool Stuff

- *VT.gov Map Mashup: <http://www.vermont.gov/portal/maps/>
- *For those of you who wonder what is going on at the Spatial Analysis Lab (SAL) these days, they now have a blog, "Letters from the SAL" - <http://letters-sal.blogspot.com/>. Jarlath O'Neil-Dunne will be posting on a wide range of topics relating to geospatial technology.
- *"Mapmania" is trend #5 for 2009! - Find out why maps are the new interface (well, we already know why, don't we?) <http://trendwatching.com/trends/halfozentrends2009/>
- *Do you see maps everywhere? You may be afflicted with "Cartoethes" - Find out more at the "Strange Maps" blog - <http://tiny.cc/SBZIO>
- *Proposed Book Project — Call for Chapter Authors. Working Title: "The Evolving Role of GIS in Hospital/Healthcare Preparedness," Book Editor: Ric Skinner, GISP. Contact Ric to learn more: ric.skinner@gmail.com.
- *Flatlanders drive up VAST trail because "GPS told them to" http://www.reformer.com/ci_11772200

How VT Fared re: the Stimulus Bill

(more than 4.5% of Gross State Product!)



Appeals Court Rejects Santa Clara County's Basemap Data Sale

The Court's decision can be found here: <http://www.courtinfo.ca.gov/opinions/documents/H031658.PDF>

Here are some excerpts -

The writ proceeding before us was instituted by the County of Santa Clara and its executive, Peter Kutras, Jr. (collectively, the County). The County seeks extraordinary relief from a superior court order filed in May 2007, requiring it to disclose its geographic information system basemap to the real party in interest, California First Amendment Coalition (CFAC). Having stayed the 2007 order, we issued an order to show cause in March 2008, to which CFAC and the County responded.

The County's petition in this court rests on three main legal arguments, which are asserted in the alternative: (1) paramount federal law promulgated under the Homeland Security Act protects the information from disclosure; (2) the requested information is exempt from disclosure under the California Public Records Act; (3) even if disclosure is required, the County can place restrictions on disclosure under state law provisions recognizing its copyright interests, and it can demand fees in excess of reproduction costs.

After considering the extensive record, the arguments raised by the parties, and the submissions by numerous *amici curiae*, we conclude that the County is not entitled to the relief sought. We therefore deny the County's writ petition on the merits. However, we will remand the matter to the superior court for a determination of whether and to what extent the County may demand fees in excess of the direct costs of reproducing the electronic record requested by CFAC.

(Preceding paragraphs from Page 1 and 2)

We agree with CFAC that the pertinent question here is not whether federal homeland security law trumps state disclosure law. Instead, the analysis in this case turns on whether the federal act and accompanying regulations apply at all. As we now explain, we conclude that the CII {Critical Infrastructure Information} Act does not apply here because the County is a *submitter* of CII, not a *recipient* of PCII. Given that conclusion, we need not consider whether the CII Act preempts the CPRA {California Public Records Act}.

(Preceding paragraph from Page 11)

VCGI Will Institute VT Parcel Data Compilation Project

Leslie Pelch, VCGI

During the spring of 2009, VCGI will be contacting each RPC to request that they provide what digital parcel data they have to or through VCGI for distribution. Currently, Chittenden County RPC already provides much of its towns' parcel data via the VCGI web site . The data is actually posted at the CCRPC server, but is made available through VCGI via our Distributed VGIS Data Warehouse (http://www.vcgi.org/dataware/search_tools/linked_servers.cfm).

Although VCGI does not have the resources to create a seamless parcel data layer at this time, we hope that this is the first step on a long road towards that goal. Many issues need to be tackled in the mean time: parcel data standard, town boundary disputes, processes for moving data from contractor to RPC to VCGI.

Before VCGI distributes parcel data, identifying information will have been removed. If you have any questions, please contact David Brozman at 882-3003 or davidb@vcgi.org.

Voices From All Sectors

Creating Cartograms for Fun.

Jonathan Frishtick

A cartogram is a type of map which distorts information in order to show a variable in terms of area. The November VCGI newsletter contained good examples of cartograms showing the 2008 presidential election results. The cartograms were created by Mark Newman.

At about the same time the newsletter came out, in his blog *Very Spatial*, James Fee wrote about free software called *Scape Toad*, which creates user defined cartographs.

With cartograms being so topical, I thought I'd give it a try and see if I could create my own.

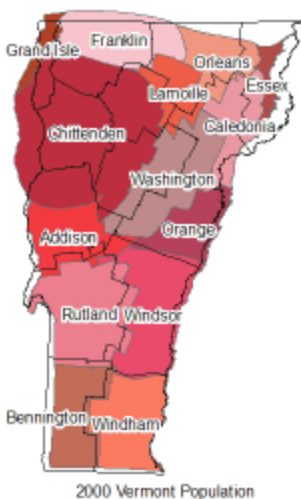
Scape Toad has been developed as part of the project "Our Inhabited Space", under the direction of Prof. Jacques Lévy, Chôros Laboratory, EPFL-ENAC-INTER. It is a stand alone open source application written in Java that can be used with ESRI products as well as open source GIS's.

Scape Toad uses the Gastner/Newman diffusion based algorithm to deform a map's surface while at the same time keeping the map's topological relationships.

The resulting map looks like a map you may be familiar with but shows expansions and contractions of the polygons to reflect the underlying numerical values.

Using the software is straightforward. After downloading and installing, you add layers to the workspace. I added shapefiles of Vermont data. You then click on the "Create cartogram" button and a cartogram is created. The resulting layer can then be exported as a shapefile and added to your ArcMap mxd. Because of this ability to export to a shapefile, you can still take advantage of all the normal ArcMap layer symbolization and labeling after the deformation.

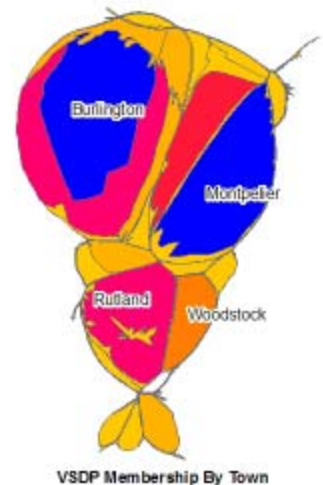
For my first cartogram, I added the Vermont County Population Stats, 1840-2000 (DemoCensus_CNTYPOPN) into my mxd in ArcMap. I symbolized this layer using the 2000 county populations, letting ArcMap use the default symbol properties. This is the result:



This cartogram didn't really surprise me. Bulging Chittenden pushed the shrinking surrounding counties away. Essex is holding on at the fringe.

This was a fine result but I wanted to create a cartogram that had a more drastic deviation from the "normal" map. I asked Leslie Pelch, VCGI Outreach Coordinator, for the Vermont Spatial Data Partnership (VSDP) membership data. This map shows VSDP membership by town.

Map 2 is more like what I was looking for. Data distorted to show the ratio between the surface polygon and the underlying numerical values, resulting in a graphic that looked vaguely familiar. It didn't take me long to realize that map 2 looked surprisingly like Tweety Bird, the Warner Bros., Looney Tunes character.



Source: http://www.jldfineart.com/images/tweety_bird.JPG

I didn't manipulate the data to produce this. The eyes, the feet, the tufts of hair; all are evident on the cartogram. For those of you who really want to know, the cartogram's singular tuft of hair is composed of the towns of Lemington, Cannan, Bloomfield and Norton.

Now get to work and make your own cartograms. Using Scape Toad it's easy.

Resources:

- Scape Toad software, to create your own cartographs.
- <http://chorogram.choros.ch/scapetoad/index.php>
- Mark Newman's site, Maps of the 2008 US presidential election results:
<http://www-personal.umich.edu/~mejn/election/2008/?map>
- The Atlas of the Real World, Dorling, Newman, Barford, Thames & Hudson, (2008), has 366 cartograms.
- Cartogram Central
- This site is funded by the USGS. It includes information on software used to create cartograms. http://www.ncgia.ucsb.edu/projects/Cartogram_Central/index.html
- Make Your Own Cartogram:
<http://ccablog.blogspot.com/2006/05/make-your-own-cartogram.html>
- http://www.jldfineart.com/images/tweety_bird.JPG
- <http://en.wikipedia.org/wiki/Tweety>



How Can I Map Federal-Aid Highways? *Sara Moulton, VTrans*

One of the provisions of the transportation portion of the newly signed Economic Recovery Act is that the use of funds for projects that improve the infrastructure of highways is limited to those highways that are designated Federal-Aid Highways.

A question we have been asked recently is, "How can I know which roads are Federal-Aid Highways?" Below are a series of points to assist in demystifying this topic.

For GIS users in Vermont, start with the data layer TransRoad_RDS that is available from the VCGI data warehouse (<http://www.vcgi.org>). Review the metadata that comes with it, or refer to the Road Centerline Spatial Data Standard available at http://www.vcgi.org/techres/standards/partii_section_g.pdf. In TransRoad_RDS there are two key fields that are used to map the Federal Aid System. One is FUNCL (Functional Class Code) and the other is LR_ETE (Route ID used to identify "routed" roads).

FUNCTIONAL CLASS CODE (FUNCL)

The codes used in FUNCL are based on the federal functional classification system. Details about this system are available at <http://www.fhwa.dot.gov/planning/fctoc.htm>. The following is a summary of the codes.

Functional classes are divided into two main categories: rural and urban.

RURAL CLASSES

FUNCL	Description
1	Rural Principal Arterial - Interstate Most of the interstate highways in Vermont fall into this category.

- 2** **Rural Principal Arterial** This involves various sections of U.S. routes such as US-2, US-4, US-7, and Vermont routes such as VT-9, VT-78, and VT-103.
- 4** **Rural Principal Arterial - Other** There aren't any in Vermont.
- 6** **Rural Minor Arterial** Examples of this category include sections of VT-30, VT-100, and VT-116.
- 7** **Rural Major Collector** Certain sections of VT-7A, VT-106, and VT-313 are included in this category.
- 8** **Rural Minor Collector** Most of the highways in this category are Class 2 town highways. Most highways with this code are not considered part of the Federal Aid System.
- 9** **Rural Local** Most of the highways in this category are Class 2 and Class 3 town highways. Most highways with this code are not considered part of the Federal Aid System.

URBAN CLASSES

- | FUNCL | Description |
|-----------|---|
| 11 | Urban Principal Arterial - Interstate - This includes urban sections of I-89 and I-91. |
| 12 | Urban Principal Arterial - Other Freeway -This includes certain urban sections of US-4, US-7, VT-279, and VT-289. |
| 14 | Urban Principal Arterial - Other - Certain sections of highways such as portions of US-302, VT-9, and VT-191 are in this category. |
| 16 | Urban Minor Arterial - Portions of VT-127, VT-133, and VT-142 are in this category. |
| 17 | Urban Collector - Many of the highways in this category are Class 2 and Class 3 town highways. |
| 19 | Urban Local - Most of the highways in this category are Class 2 and Class 3 town highways. Most highways with this code are not considered part of the Federal Aid System. |

"ROUTED" ROADS ID (LR_ETE)

The other key field in mapping highways on the Federal Aid System is LR_ETE. Background information about this field is available in the metadata associated with TransRoad_RDS, and in the Road Centerline Spatial Data Standard, and also in the VGIS Newsletter dated May 2007 in an article titled "Flood Evacuation Map for Montpelier" written by Sara Moulton.

Basically, this field is the route identifier field. It is used in the creation of the Linear Reference System (the data layer TransRoad_LRS2007, available from the VCGI data warehouse).

For the records where the field is populated with just a hyphen, "-", that section of highway is not considered a "routed" road. It does not have a route identifier and is not part of the Federal Aid System. If the field has information in it other than "-", that information is the route identifier. The data in the field consists of several parts. The two key parts that are in every "routed" road record are Route Type and Route Number.

LR_ETE	Route Type	Route Number	Description
I089	I - Interstate	089	I-89 northbound

U007	U - U.S. route	007	US-7
V017	V - VT route	017	VT-17
S3022	S - A local road that is part of the state highway system	3022	Grove Street in Rutland City, TH-6, Class 2
A007	A - Alternate route	007	Alternate route US-7
B002	B - Business route	002	Business route US-2

Some of the LR_ETE fields have more information than that addressed in the above examples. This information can include route modifiers, ramps, direction, or approaches. The metadata and the road centerline spatial data standard explain the LR_ETE field in much more detail.

COUNTY-TOWN CODES (CTCODE)

Another field that can be helpful in selecting the highways in specific counties and towns is CTCODE. A listing of these codes is available at http://www.aot.state.vt.us/Planning/Documents/Mapping/Publications/CTCODE_listing.pdf.

An example of how you can use this field to select all the towns in Lamoille County plus the towns of Craftsbury and Waterbury, would be to set up a SQL selection query based on the following concept: select where CTCODE like '08%' or CTCODE in ('1006','1318'). (Note that there is different syntax between layers stored in SDE, personal geodatabase, or shapefile formats, especially with wildcards and fieldnames.)

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

REFERENCES / RESOURCES

23 USC Chapter 1. Federal-Aid Highways

< <http://www.gpoaccess.gov/uscode/browse.html>>

< http://www4.law.cornell.edu/uscode/html/uscode23/usc_sup_01_23.html>

"AOT Mapping - Town Highway Maps." Vermont Agency of Transportation. 8 Jan 2009. Vermont Agency of Transportation. Retrieved 12 Feb 2009 <http://www.aot.state.vt.us/Planning/mapgis/town_maps1.htm>.

Federal Highway Administration, "FHWA Highway Functional Classification System: FHWA Guidelines Table of Contents - Statewide Planning - Planning - HEP - FHWA." Federal Highway Administration. 28 Apr 2008. U.S. Department of Transportation. Retrieved 12 Feb 2009 <<http://www.fhwa.dot.gov/planning/fctoc.htm>>.

Moulton, Sara. "Flood Evacuation Map for Montpelier." VGIS News May 2007: p. 4-6. <http://www.vcgi.org/commres/publications/news1_may2007.pdf>.

Vermont Center for Geographic Information, "VGIS Data Warehouse." VCGI. Retrieved 12 Feb 2009 <<http://www.vcgi.org/dataware/>>.

Vermont Center for Geographic Information, "VGIS Handbook, Part 2 - Standards, Section G, Road Centerline Spatial Data Standard." VCGI. Aug 2005. Vermont Center for Geographic Information. Retrieved 12 Feb 2009 <http://www.vcgi.org/techres/standards/partii_section_g.pdf>.

VTrans Notes

Sara Moulton, VTrans

The VTrans Mapping Unit has updated the format of the town highway maps that are posted online at – http://www.aot.state.vt.us/Planning/mapgis/Town_Maps1.htm

We've regenerated the older maps into PDF, so now all the maps are one consistent PDF format.

Previously, we had a mix of newer PDF files and older MrSid format files. This update makes it easier to access the maps and resolves a series of issues related to printing and viewing.

As part of the process, we also updated the map selection list to indicate the year of the map that is available. Starting in 2004, the Mapping Unit has produced new maps only for the towns that reported changes as part of the mileage certificate process. The maps from the years 2003-2007 are still valid for the towns that did not report changes in 2008.

If you have any questions or comments regarding the town highway maps, or mapping in general, please let us know: 802-828-2109.

Exploring Texas

Jeff Nugent, Windham Regional Commission

The highways and byways of Texas are blessed with thousands of State Historic Markers, and a drive across the Lone Star State can be a lesson in history if you choose to take the time to stop and read the signs.

This past December I drove out to New Mexico, crossing the Panhandle going west and returning east through the center of the state. (When looking at a map, Oklahoma's westward extension across the 100th meridian screams "panhandle," but Texas's northern protrusion doesn't seem to resemble one at all.) Two historic markers in particular are of interest to mappers.

One marker near the Northeast Corner of Texas, complete with latitude and longitude coordinates, tells of years of disputes to define the border between Texas and Oklahoma. A second, on a highway near the Geographic Center of Texas, gives the dimensions of the state and other interesting facts. Several other markers designate this center of Texas. One is supposedly on private land at the exact center point, while another is supposedly in the courthouse square of the closest town (though construction debris and fencing kept me from finding it).

All historic sites and markers are listed and mapped on the Texas Historical Commission's "Texas Historic Sites Atlas:" <http://atlas.thc.state.tx.us>. Do a keyword search on "Northeast Corner of Texas" or "Geographic Center of Texas," specify only historic markers as the record type, and links to a map and the marker's text will come up.



Using the atlas or some sort of guidebook to plan your stops might sound like the way to go, but it was actually more fun to simply drive along keeping alert for signs stating "Historic Marker ½ Mile Ahead" and just see what was up ahead: Lindbergh's unplanned landing, drift fences, salt wars.....

Looking at a map of Texas, you might wonder which of the two potential Northeast corners is the one with the historic marker. It's the one up in the so-called Panhandle, and that Northeast corner lies, well, west of the state's geographic center.

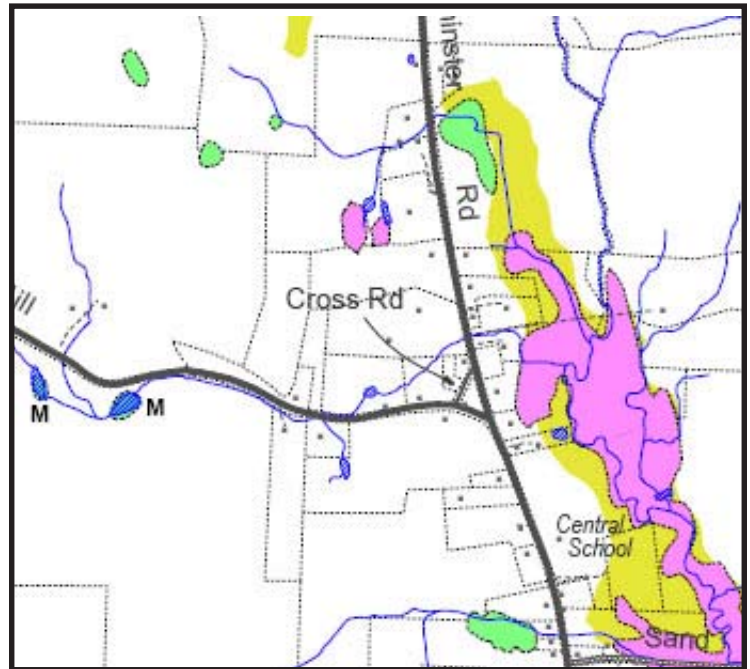
New Wetland, Water Resource Maps for Putney, VT

Jeff Nugent, Windham Regional Commission

The Windham Regional Commission (WRC) recently completed a project with the Putney Conservation Commission to create a series of wetland maps, GIS data, and an educational brochure. These materials were produced to both educate residents about wetlands in their town, and to provide Putney officials with better wetlands data to assist in the administration of State and Federal wetland regulations.

Kathy Urffer, a Brattleboro resident and student at Antioch University New England in Keene, NH, undertook the project with WRC as part of a student practicum.

The maps illustrate wetlands that are on National Wetlands Inventory (NWI) and Vermont Significant Wetlands Inventory (VSWI) maps, and allows for locally identified wetlands to be added. A master composite GIS data layer was created that integrates information from these data sources.



Data from both the NWI and VSWI maps were used to more accurately identify as many wetlands as possible. The maps do not show all wetlands, as they likely don't reflect vernal pools or many wetlands under 2-3 acres.

WRC believes NWI data in most cases provide more accurate wetland locations than VSWI data; the NWI data were used as the base for the Putney wetland maps. VSWI data provided information on additional wetlands identified by the Vermont Agency of Natural Resources (ANR) which do not appear in the NWI data. VSWI data were also used to determine wetlands identified by the State as Significant wetlands. In several cases, wetland boundaries were edited by WRC using orthophotos when it was clear locations in the original data were incorrect.

The resulting GIS data layer contains attributes that record the source of the boundary, whether the boundary was edited, the type of wetland (from NWI coding), if the wetland appears on the Significant Wetlands Inventory map, if the wetland is under two acres and diked, impounded, or otherwise altered by human activity, and if the wetland has been modified by beaver activity.

Two wetland maps were produced. One, a large-scale map with roads, driveways, buildings, parcel lines, and details of the attributes of each wetland polygon, was made for the town office to assist the Zoning Administrator and Planning Commission in their work. A second, smaller, less detailed map was made to be part of an educational brochure for town residents. Hydric soils are shown on both maps to indicate areas of possible unmapped wetlands.

It is hoped that the maps will be improved by at least two methods. First, better wetland boundary information, developed through field work (especially that by wetland scientists performing official delineations) could be incorporated into the map. Second, the addition from the public of unmapped wetlands is encouraged.

Besides the wetland maps, an updated water resources map was produced. It not only shows wetlands, source protection areas, and special flood hazard areas, but also surface waters data edited by WRC.

All the maps as well as supporting documentation area available on the Town of Putney web site. Go to <http://www.putneyvt.org> and click on "Maps."

Mystery Image...

Last quarter's map showed towns participating in the National Flood Insurance Program - and we had NO Winners! Does anyone recognize the VT valley depicted in the sink below? This image and explanation can be found on the back cover of Fine Homebuilding magazine (March 2009, Issue #201), the sink (and the photos) were created by Karolina Kawiaka, who grew up in VT. Send me your guess! lesliep@vcgi.org



Topography on tap



Some people preserve memories of home with a snapshot. Not architect Karolina Kawiaka, who created a scale replica of the Vermont valley she grew up in as the basin for this maple sink. Starting with a topographic map, she used form-Z software to feed the elevations into a CNC machine (left) that carved the relief into three 8-in. by 24-in. by 4-in. blocks of native Vermont maple. She glued up the sections, hand-sanded the contours, and finished the job with three layers of epoxy and five coats of urethane. The result, with the wood's grain standing in for contour lines, is a surprisingly functional study in the formative power of erosion.



Photos: Karolina Kawiaka

VSDP News

Charting a Course to Green Energy in Vermont

Leslie Pelch, VCGI

Bringing Together Energy Activists and Mapping Technology Professionals:
May 4, 2009, Davis Student Center at the University of Vermont Burlington, VT.

The Vermont Spatial Data Partnership (VSDP – supported by VCGI) is currently in the process of planning this exciting conference. The conference will bring together mapping technology professionals and green energy activists to learn more about existing energy/mapping projects as well as to explore how mapping technology can help municipalities, nonprofits, businesses, and the state as a whole implement the use of green energy.

Examples of some of the topics that will be presented include:

- Local Solutions to Global Energy Challenges – Steve Letendre & John Van Hoesen, Green Mountain College
- VT Renewable Energy Atlas – Mike Brouillette, VCGI (supported by the VT Sustainable Jobs Fund)
- IT meets ET: The Marriage of Broadband and Renewable Energy – Steve Sharp, VCGI (for the VT Telecommunications Authority)
- Food Waste to Biogas in Central Vermont - David Healy, Stone Environmental, Inc.
- How Much Do We Know About the Biomass Resource in Vermont? - Robert Turner, R. J. Turner Company & Bob DeGeus, VT Dept. of Public Service

Keep an eye on the VCGI web site for schedule, registration form, and more details!

Roundtable Roundup

Leslie Pelch, VCGI

For the first time in recorded history, the weather did affect the number of people who showed up at the VSDP's January Roundtable Conference. 67 participants braved the snow, sleet and freezing rain of January 7, and 24 didn't make it, most due to the weather. The Roundtable rolled on, of course, and everyone who attended seemed to enjoy and learn from the event. Please visit the VSDP web page for a list of the topics presented, and links to powerpoints, descriptions, or online instructional videos (!) of most of the presentations: www.vcgi.org/vsdp.



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