



Geographic Information Systems Technology News

The Newsletter of the New York State
GIS Coordination Program

George E. Pataki
Governor

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Director

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NYS GIS Clearinghouse: <http://www.nysgis.state.ny.us/>

New York State

GeoSpatial Summit

2006

Written by: Adena Schutzberg
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No one seemed to mind that there was very limited Internet access (one line!) and virtually no cell phone service in North Creek, New York, home of last week's New York State GeoSpatial Summit. In fact, by the end of the day attendees noted how nice it was to attend an event and leave "invigorated." My response was simply, "And we didn't have to go to San Diego!" My reference was to ESRI's annual event, which for many helps reinvigorate the passion for geospatial technology and inspires another year of good work.

This event could not be more different than the one held for 12-13 thousand people at the San Diego Convention Center. The Summit was not vendor focused. It was held on a single day in the middle of "nowhere." It was oversold at 168 people. So what happened that left attendees "jazzed"?

First, the main event set a tone of candor and good humor. The panel on the "Future of GIS," which I was privileged to host, included senior staff from Google, Microsoft, Pictometry, TeleAtlas, MapInfo and ESRI. As many attendees pointed out, "you don't get all those guys in the same room too often." That's true. And, you don't get to ask them pointed questions that often, either. The questions ranged from the future business models of geospatial companies, to how to get K-12 students ready for the new world that includes geospatial, to privacy and security, to the importance of 3D. While I can't say anything earth-shattering was shared by the panelists, I will say that the perspectives of the panelists were most instructive. It was a valuable lesson in "how some people who think a lot about geospatial look at the world" and from those perspectives I think attendees took home as much as if each participant predicted the future formally.



The afternoon was a mix of a New York State specific presentation (on New York State GIS Coordination Program) and four, what I'd call "non-traditional for a GIS conference" presentations. Ian White of Urban Mapping offered his "I'm not one of you" look at geodata, how they are used and how they are presented, highlighting how his company's datasets may be very different from those with which we are familiar. Todd Fabozzi from the Capital District Regional Planning Commission knocked our socks off with a perspective on the changing economic and population patterns of upstate New York. I hadn't thought about landscape that hard since grad school, nor had I heard the name of David Harvey since then. What moved much of the audience, I think, were several series of maps showing over and over again the decline of the cities and, for better or worse, the growth of car-defined suburbs. We groaned at the look of both, clearly hoping for better, even as we contemplated our own chosen geography. (Or at I least I did. I also kept thinking back to this great National Public Radio piece on cul-de-sacs from a few days before.)

I couldn't imagine a follow-up presentation that might move us in the same way, but Ross Whaley, chairman of the Adirondack Park Agency,

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did. He connected the importance of the map of the park, one steeped in legislation, with its mission. He held up a paper map of various shades of green noting land use in the park, and needed no pretty pictures of the park or any other visual aids to get us thinking about sustainability of such areas, supporting both environmental and economic goals. Michael Jones, who'd been on the panel earlier in the day, wrapped up the event (they were kicking us out as we overstayed our welcome!) with a "tour" of Google Earth.



The second half of the day was not really about GIS, and I enjoyed that. It was about ideas, and how GIS and its products can help us change the world. Mostly, it reminded us of what it is that geospatial technologies "let us see" and then forced us to consider what to do about what we did see. That is more inspirational than seeing "yet another feature/function demo or sales pitch." That, frankly, is what differentiates ESRI's event from many others. I like to think the committee behind this event took a page from ESRI's playbook and executed it brilliantly.

There were some newsy tidbits worth sharing that popped up among these presentations and discussions:

- Ian White noted that he was working with Manifold and was having some code written to link it to PostGIS (the open source data store built on PostGreSQL). That code, he shared, would be made available as open source.
- Michael Jones alluded to new offerings from Google that might have to do with making it easier to integrate a "medium amount" of GIS data with its mapping products and better rendering houses in SketchUp. (These may or may not be announced at Where 2.0 this week.) He did share that Google had the opportunity to populate the 3D world by partnering with Pictometry (which is what Microsoft is apparently doing), but chose a "shocking alternative bet." That was the choice to acquire SketchUp and let the world be populated with buildings "built by the people who live in them." Just one note about Jones, who I've now heard speak twice: besides being very articulate and passionate about his work, he's terribly funny.
- There is motion on a proposal I noted last fall about having states host their data in TerraServer. Use of that service, despite fancier interfaces and more up-to-date data elsewhere (from Microsoft and others), is way up. That seemed to please Tom Bailey of Microsoft, who was lead programmer on the project back in the day. I don't think we give that project enough credit for how much it changed expectations for the availability of geospatial data.
- Ross Whaley noted our need to (I'm paraphrasing) have a thin line

on a map be precisely wrong and not have a "fuzzy line" be approximately right.

The organizing committee boldly called this the "1st Annual Summit." I don't know how they'll top this one, but I urge them to try and you to get your registration in early for next year!

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Vassar College Utilizing Mobile Data Collection and GIS



Vassar College's combined department of Geology and Geography is using tablet PCs to facilitate mapping and field-data collection in a variety of classes. The department's classes and research rely increasingly on GIS (geographic information systems, or computer-based mapping and spatial analysis), and have frequent field trips that involve data collection: stream flow measurements, vegetation and habitat data, GPS locations of sample sites, and so on. The primary intent with the tablet PCs is to experiment with the ways that mobile technology can aid field work. In some cases, students and faculty find that having a GIS perspective and a visual assessment of a field location helps them better understand the processes and patterns that shape those locations. The department members are also discovering that other class instructors—from urban studies to environmental chemistry—are finding the tablets and GIS software useful.

For more information, contact Meg Stewart at mestewart@vassar.edu or stewart.meg@gmail.com.

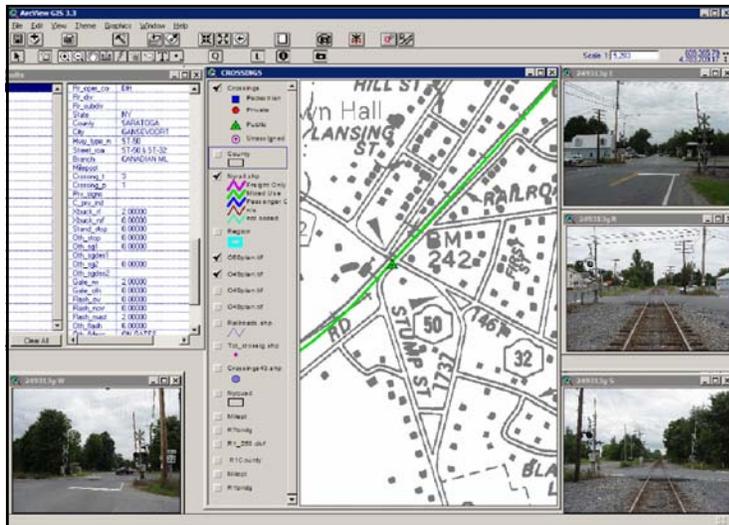
NYS DEPARTMENT OF TRANSPORTATION RAIL GEOGRAPHIC INFORMATION SYSTEM

The Rail Safety Program Bureau’s responsibility is to administer and direct the State’s Highway/Railroad At-Grade Crossings Improvement program. One of the program’s missions is to reduce the number and severity of highway vehicle crossing related accidents. Crossing improvements are made by adding active warning and protection devices at public crossings or by eliminating the crossing. The Rail Safety Program Bureau and the Program Delivery Bureau (PDB) have the responsibility for a number of rail and port related programs: capital projects, policy and planning, asset inventory/management and economic development. These two bureaus’ work together in progressing the rail programs and the GIS Coordinator provides support for them both.

There are over 6,000 crossings statewide. Public crossings state-wide and private crossings on passenger and commuter rail lines are NYSDOT’s first priority. The NYSDOT regional rail coordinators are tasked with collecting Federal reporting data on grade crossings on a regular basis. With such a large database of potential spatial data, GIS seemed well suited as a data inventory /management tool. It also had the potential to assist in the field data collection effort. With this in mind, the PDB initiated a GIS based grade crossing inventory application to serve as a tool for staff and management. Funding was obtained to purchase laptop computers for distribution to each of the NYSDOT regional rail coordinators. The GIS coordinator developed a Grade Crossings Inventory GIS application (GCI - GIS), and designed and provided training to the regional staff on the use of the application. Training was also coordinated with staff of NYSDOT’s Technical Services Division on the use of a hand held GPS device. The GCI - GIS application includes rail lines, rail junctions/stations and at-grade crossing ‘points’ along with four, directional photos of each crossing. A ‘photo-tool’ was developed by the main office GIS staff which allows simultaneous display of all four directional photos (i.e. taken in the N,S,E,W direction).



Armed with GPS and GIS training, the regional rail coordinators began collecting GPS ‘points’ and photos on their priority at-grade crossings. Typically this data was e-mailed or transmitted via a department server. The GIS coordinator then compiled, formatted, verified, edited, and organized the GPS points and photos by region. Data was then incorporated into the GCI-GIS application. This process took place on a regular basis and is still on-going. To date, a total of 3,967 crossing locations have been collected state-wide.



Initial ArcView 3.2 Application – displaying GCI database and photos.

As this effort was underway, the Department realized there was insufficient railroad clearance data available to satisfy freight rail planning purposes and to develop the rail capital program. To fill this gap, the GIS coordinator attained funding to collect vertical, horizontal and restricted clearance measurements of overhead structures along the 1,154+ miles of regional railroads in upstate New York State.



**Fremont Industrial Track -
demonstrates horizontal and vertical clearance issues**

In order to perform this data collection work, the study consultant was required to coordinate and obtain track access with the rail operators and obtain safety training and permits. As a result of this study, clearance measurements and associated data were collected on over 700 rail overhead structures (rail /signal/pedestrian bridges, utility lines/pipes, etc.) and more than 900 at-grade crossings, along with digital photos. A second consultant study gathered similar clearance data for the downstate rail lines and developed a GIS application which allowed queries en thru routes to determine rail route accessibility for planning purposes.

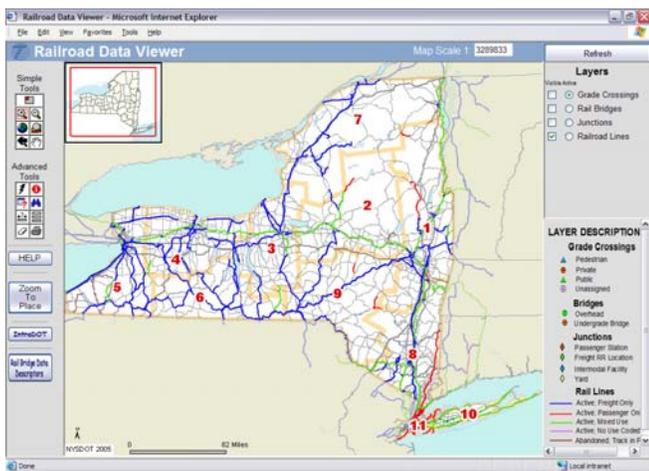
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(NYSDOT Rail Geographic Information System... continued from page 3)

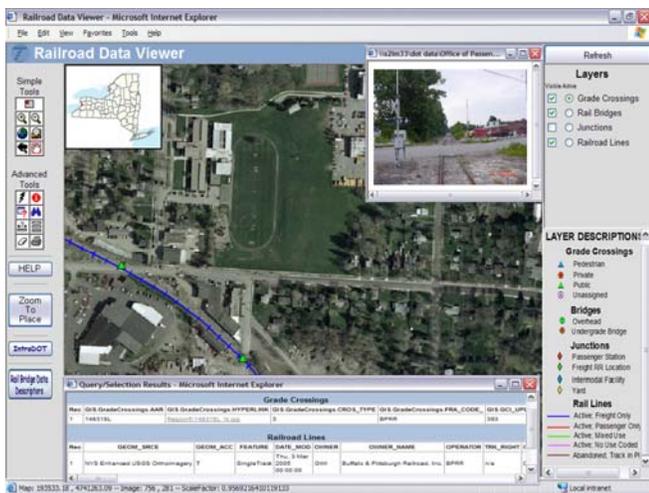
The data from these studies have been consolidated into the new Rail Geodatabase, which now also houses the data used in the GCI – GIS. The Rail Geodatabase was derived from the Accident Location Information System (ALIS) and contains new rail linework. This new rail line geometry is derived from the NYS Digital Orthoimagery program. It is more positionally accurate and delineates more distinct tracks than the legacy line work. The GIS Coordinator, with help from PDB staff, is working to enhance and improve the new rail geometry and feature attribution using orthophotography, track charts, diagrams and annotated quad maps, especially in detailed areas such as yards and sidings. Updates, edits and improvements are also being made on a continuing basis on the grade crossings, rail bridge and clearance data as new data is collected and submitted. This rail data set enhances the NYSDOT rail data previously available which was limited to rail lines and junctions/stations. It enhances the NYSDOT bridge data with data not previously maintained i.e. on rail owned bridges and overhead structures.

The GIS Coordinator provides GIS support for the division and is project manager for the rail GIS studies described above. She also maintains and edits the rail GIS data (i.e. at-grade crossings, rail bridge/clearance data), the IMS Rail Data Viewer and the Rail Geodatabase. The Grade Crossings GIS would not be possible without the work and cooperation of the regional rail coordinators and staff in collecting GPS crossings data and photos. Improvements to the Rail Geodatabase would not be possible without the invaluable wealth of information provided by the staff, formerly known as the Freight and Economic Development Division.

For more information about the Rail Data projects, contact Barbara Mullin, GIS Coordinator, NYSDOT Program Delivery Bureau. bmullin@dot.state.ny.us



Intranet IntraDOT - Rail Data Viewer



Rail Data Viewer zoomed in, displaying Orthophotography

More recently, the GIS Coordinator developed the GCI - GIS as an Internet Mapping Service (IMS) called the 'Rail Data Viewer'. This application is available internally at NYSDOT on the "IntraDOT". The 'Rail Data Viewer' design was based on a template created by the GIS group for standardization of IMS applications. It includes standard basemaps and orthophotography, along with the GCI data, crossing photos, rail bridges and /overhead structures.

GIS WEB SERVICE

The Office of Cyber Security and Critical Infrastructure Coordination (CSCIC) is working with the U.S. Geological Survey (USGS) to provide the NYSDOP orthoimagery through a web map service (WMS). A WMS makes GIS data available in a form which can be viewed in standard GIS software while the data, typically, resides on a remote server. The goal is to make GIS data more widely available without requiring data downloads and redundant data storage. (For example, a statewide coverage of the latest NYSDOP orthoimagery in compressed form requires approximately 130 GB of disk storage.) USGS' EROS Data Center (EDC) in South Dakota has made many USGS data sets available through a public web service, and the NYSDOP orthoimagery is being added. The imagery set is the same as that publicly available for viewing and download through the Clearinghouse, but users can add it as a data layer in their GIS documents through an Internet connection. The EDC WMS is available in an Open Geospatial Consortium (OGC) compliant format to maximize the number of GIS applications which can use the data.

More information about the availability of the NYSDOP orthoimagery being provided through the EROS Data Center will be posted on the NYS GIS Clearinghouse in the near future.

GIS Data sharing Cooperative Still Growing

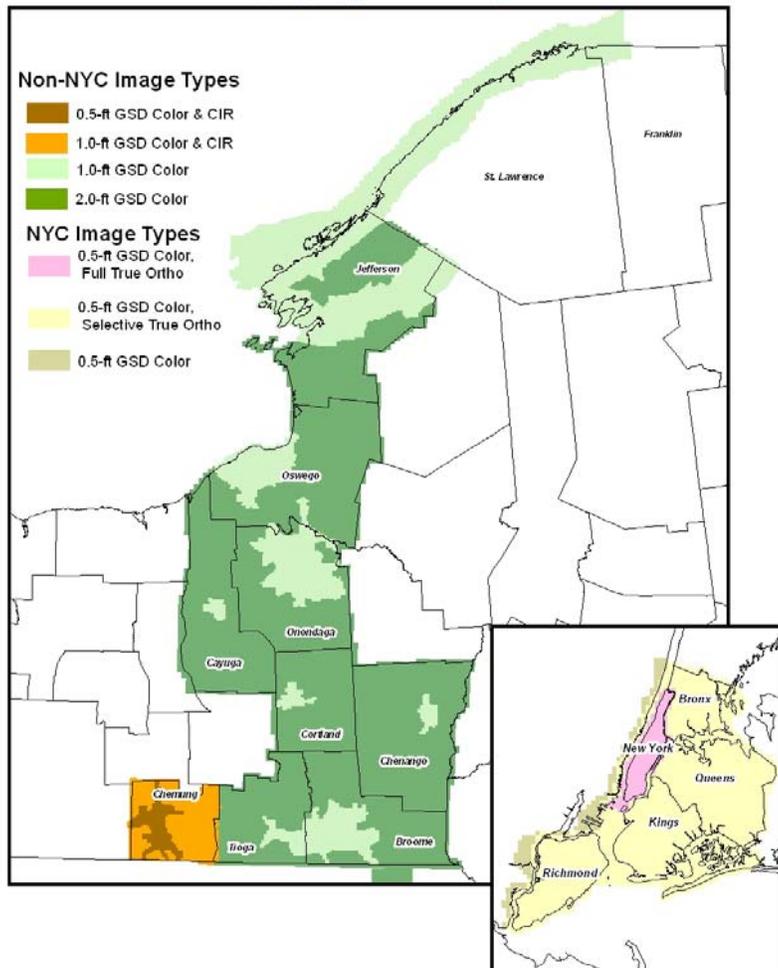
Membership in the NYS Data Sharing Cooperative has shown a steady increase with more and more governmental entities, not-for-profits, and academic institutions signing the Data Sharing Agreement, allowing each other to share their GIS data sets. At the time of this publication, the number of Cooperative Members is at an all-time high of 640.

Information regarding the cooperative can be found online at: www.nysgis.state.ny.us.

NYS DIGITAL ORTHOIMAGERY PROGRAM

Orthoimagery from Lot 5 has been delivered to the covered counties and is available for viewing and download on the NYS GIS Clearinghouse. Orthophoto production from the Spring 2006 flights of Lot 6 has begun. The counties to be covered in 2007 as part of Lot 7 have been selected and notified. Status and more detailed information are available on the NYS GIS Clearinghouse.

**NYS DOP Annual Lot 6 (2006 Flights)
Imagery Type Coverage**



NYS DIGITAL ORTHOIMAGERY PROGRAM 2006 BEST OF NEW YORK WINNER

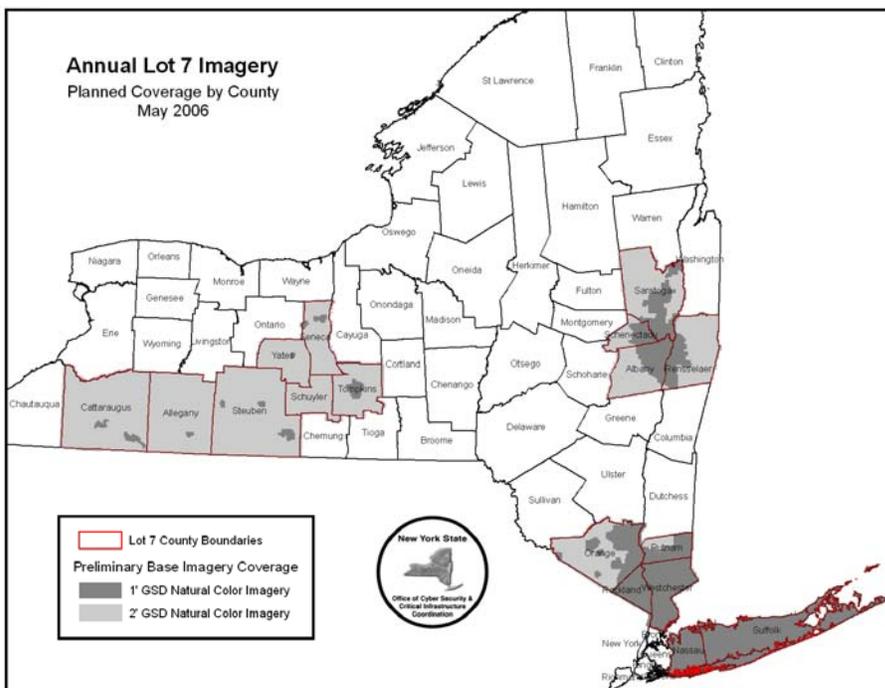
The New York State Digital Orthoimagery Program and Interactive Mapping Gateway were honored by the Center for Digital Government and *Government Technology* as the Project Demonstrating Best Sustainable Value at a formal awards ceremony hosted by GTC on June 22, 2006.

Sixteen of New York's most innovative, tech-savvy state and local government leaders and agencies have been selected by the Center and *Government Technology* to receive their prestigious Best of New York award, an annual award that recognizes excellence and outstanding contributions in the area of information technology.

Award recipients were selected from entries to the 2006 Best of New York Awards Program. Entries were divided into two categories: Leadership and Project Excellence. Final selections were made based on criteria that included collaboration between agencies, innovative use of technology and the improvement of services to citizens or state and local government employees.

"This year's Best of New York Awards are really tremendous," said Cathilea Robinett, executive director of the Center. "The competition was tough, and we are proud to honor those who continue to strive for excellence in government."

The New York Statewide Digital Orthoimagery Program represents a truly collaborative effort among governmental, private sector, public, and academic interests. While it is directly managed by the New York State Office of Cyber Security and Critical Infrastructure Coordination and now has a dedicated budget line item, it is guided by the Remote Sensing Work Group of the New York State GIS Coordinating Body. The Remote Sensing Work Group and the Coordinating Body include representatives from all sectors. Regular status and planning reports are delivered to both the Remote Sensing Work Group and the Coordinating Body. See <http://www.nysgis.state.ny.us/coordinationprogram/> and <http://www.nysgis.state.ny.us/coordinationprogram/workgroups/details/?ID=3> for further details.



MAINTENANCE RELEASE OF GIS STREETS AND ADDRESSING DATA

The NYS Office of Cyber Security & Critical Infrastructure Coordination (CSCIC) is pleased to announce that already this year, three new maintenance releases of the statewide GIS Streets and Addressing data and other GIS data created as part of the Accident Location Information System (ALIS) project have occurred.

Updated data sets include the statewide NYS Street centerline file, address points, railroads, bridges, census geography, zip codes, detailed hydrography, and several landmarks layers.

Several new enhancements included in the 2006 maintenance releases.

- Nine months of state and county-provided individual street name and address edits;
- Expanded address point coverage with approximately 700,000 new address points added (over 3 million total);
- The Address Points data set includes new attributes for the address source and address type (e.g. building centroid, parcel centroid, parcel centroid moved to a driveway entrance);
- Individual county cuts of the NYS Streets data set are now available in MapInfo TAB format;
- A separate NYS Streets layer for Queens County is provided with hyphenated ad-

resses, formatted with the hyphens present;

- New MapMarker User Dictionaries for the NYS Streets and NYS Address points data sets;
- Monthly Change Logs (see sample below) provided as a point layer indicate each Street Segment that has been changed and the type of change (attribute, new geometry, delete geometry, modify existing geometry).
- Increased frequency of data maintenance releases with a goal to have monthly updates of the NYS Streets data set and quarterly updates of many of the other data sets.

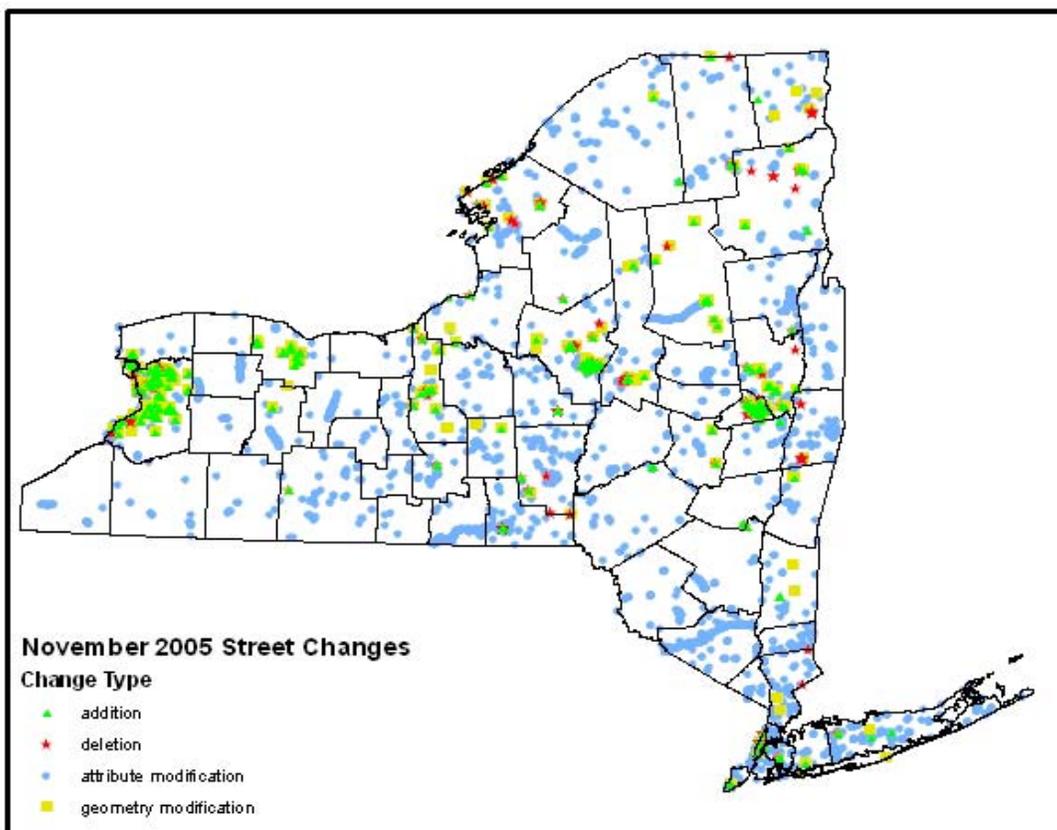
NYS GIS Data Sharing Cooperative members can access the data through the NYS GIS Clearinghouse (www.nysgis.state.ny.us) on the CSCIC and DOT Data Set Inventory pages. Local governments who are not yet NYS GIS Data Sharing Cooperative members should contact John Borst at john.borst@cscic.state.ny.us to discuss how they can obtain the data sets for the extent of their geographic footprint.

New York State commercial firms will be pleased to learn that effective June 2006, they will have access to many of the ALIS project

data sets. Due to contractual requirements, some data sets require additional processing to remove select attribute information. Most notable is that we are required to remove address numbers and some routing related attributes from the NYS Streets data set, although street names and alias/alternate street names will remain.

CSCIC continues to develop an on-going data maintenance program based on the data users' participation. Several different maintenance options that minimize the amount of effort required by program participants are being piloted across the state with much success. State and local government agencies interested in participating in data maintenance should contact John Borst at john.borst@cscic.state.ny.us or Cheryl Benjamin at cheryl.benjamin@cscic.state.ny.us to discuss how they can assist with keeping the data up-to-date.

As always, your input on any problems encountered while using the data is encouraged as it greatly helps us to improve the quality of the data and geocoding solutions for everyone. Please let us know if you have any questions or comments by contacting us at nysgis@cscic.state.ny.us.



NYS GIS Help Desk

The New York State GIS Help Desk, <http://www.gishost.com/gishelpdesk/> is administered by the NYS Office of Cyber Security & Critical Infrastructure Coordination and sponsored by the New York State GIS Coordination Program. This web-based help desk is intended to provide support for both general GIS questions and specific questions regarding the technical use of the following GIS software products:

ArcGIS 9
ArcGIS Desktop: ArcView
ArcGIS Desktop: ArcEditor
ArcGIS Desktop: ArcInfo
ArcInfo Workstation
ArcView GIS 3.x
MapInfo Professional

Visitors can search the online **Knowledge Base** to view previously submitted questions and answers or view the Help Desk's most **Frequently Asked Questions**. In April 2006, the Knowledge Base reached a milestone, surpassing 2300 in the total number of questions submitted and answers posted. Residents of New York State may **Submit** GIS technical questions which will be answered within one (1) business day. All questions and answers will also be included in the searchable knowledge base. For assistance in the use of the NYS GIS Help Desk, visitors can select **Help** from the options on the left.

For more information contact John Borst at john.borst@cscic.state.ny.us.

How do I Become a Cooperative Member?

To learn more about benefits of participating in the NYS GIS Data Sharing Cooperative, visit www.nysgis.state.ny.us/coordinationprogram/cooperative or contact Sharon Oskam at the NYS Office of Cyber Security and Critical Infrastructure Coordination at (518) 474-5212 or via e-mail at sharon.oskam@cscic.state.ny.us.

Who's Who in GIS

Would you like to be added to the "Who's Who in GIS" Listing? Please send an e-mail to the nysgis@cscic.state.ny.us. For more information, please visit <http://www.nysgis.state.ny.us/outreach/whoswho>.

GIS AND RECREATIONAL SAFETY Lewis County Soil & Water Conservation District

The Lewis County Soil & Water Conservation District began working with the Lewis County Sheriffs snowmobile patrol in 2002. The main goal behind the project was to plot all the counties snowmobile trails in GIS. This information was then used to plot snowmobile accidents and problem areas. Each time a snowmobile accident was investigated by the sheriff, N.Y.S. Parks and recreation police, N.Y.S. Troopers or N.Y.S. D.E.C. snowmobile patrols, a G.P.S. coordinate was taken. This data was entered into the Districts G.I.S. system.

The data is used to assess areas prone to accidents and where increased patrols might be needed. With the more than 686 miles of groomed snowmobile trails in Lewis County and a popular winter motorized recreational destination, this project has proven very beneficial.

Lewis County receives an average of 200 to 300 inches of snow each season. Of the 686 miles of groomed trails, less than half are accessible by any type of rescue vehicle. When an accident occurs, the patient has to be either pulled on a rescue toboggan behind a snowmobile or airlifted out. The District again helped using G.I.S. and G.P.S., by plotting areas that a helicopter could land. These areas are plotted near the accident-prone areas that were previously mapped. The county's 911 dispatcher

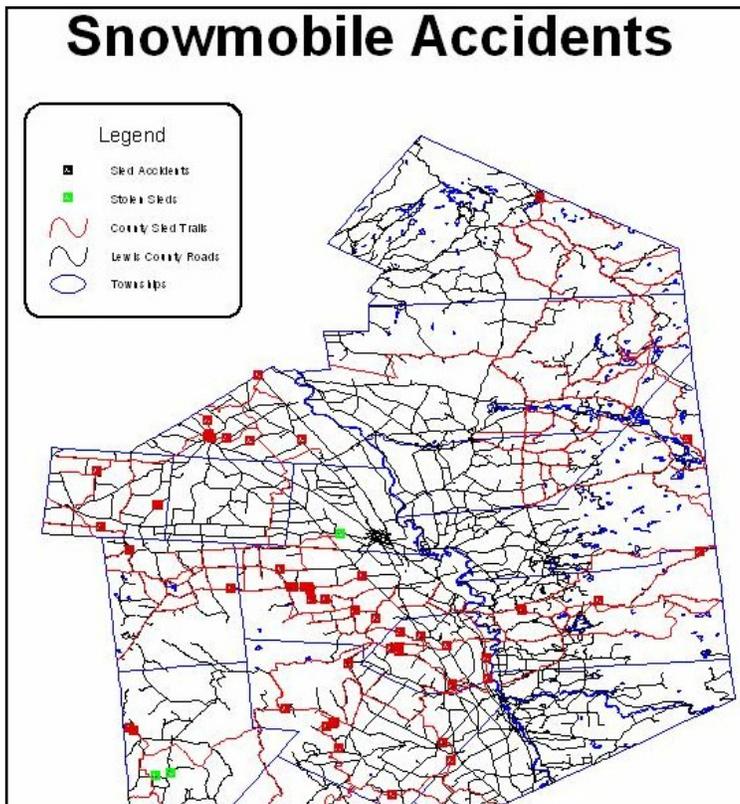
only needs to know the trail the accident is located on to give landing zone coordinates to incoming helicopters.

The entire system has led to a more rapid response to emergencies and helped in reducing accidents by putting law enforcement in areas where they can do the most good.

The District has future plans of working with the All Terrain Vehicle (ATV) trails as they are becoming more popular in the area. The current network of trails is mostly on secondary town roads, but the need for an organized trail system is growing rapidly. With the increase in motorized recreational tourist coming to Lewis County, the need for more detailed and accurate response systems is growing.

The District also provides G.I.S. mapping integration with the county's 911-dispatch system. This has saved the county over \$10,000 in having to contract the work out. As new roads are being built and named, they are updated in the system. The snowmobile, ATV, and horse trails are also incorporated into the system. Lewis County being so rural, and tourism rapidly becoming the number one industry, rapid response to any emergency is critical for us.

For more information contact John Stewart at lcswcd@northnet.org.



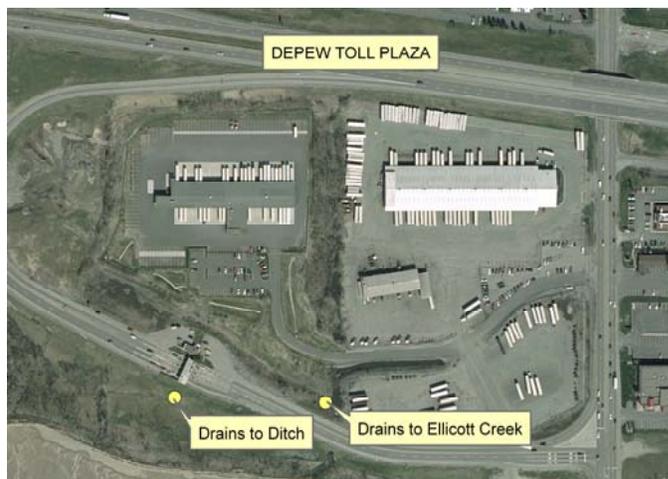
NYS THRUWAY AUTHORITY/CANAL CORPORATION USES GIS/GPS TO MAP OUTFALLS AND LOCATE POTENTIAL ILLICIT DISCHARGES

The New York State Thruway Authority operates and maintains 641 miles of roadway, including the 426-mile long Governor Thomas E. Dewey Thruway that connects New York City and Buffalo, the state's two largest cities. The Canal Corporation, a subsidiary of the Thruway Authority, operates and maintains the 524-mile New York State Canal System. This historic waterway is comprised of the Erie, Champlain, Oswego and Cayuga-Seneca canals, and provides seasonal navigation between the major water bodies of New York State.

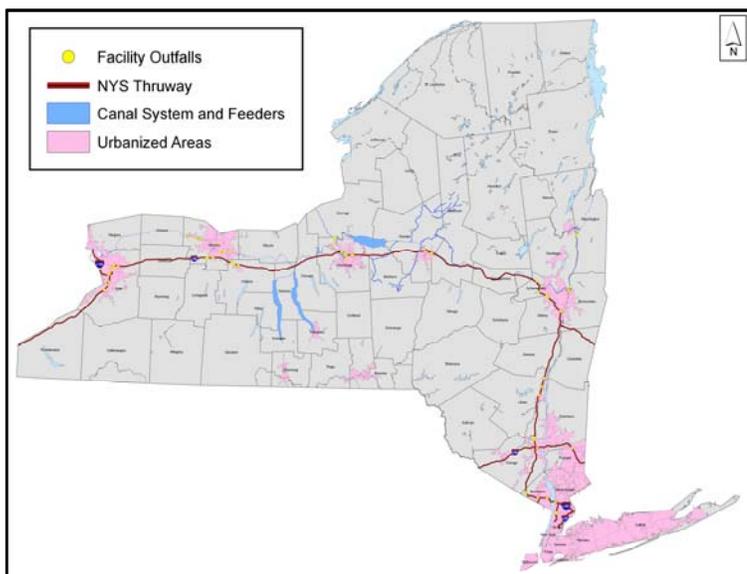
In response to the New York State Department of Environmental Conservation's (NYSDEC's) Municipal Separate Storm Water System (MS4) Phase 2 Storm Water Program, the Thruway Authority and Canal Corporation (NYSTA/NYSCC) have begun to map and inspect their storm water outfalls. During the summer of 2004, the NYSTA/NYSCC completed the first phase of their outfall mapping and inspection program, which included performing inspections of all the outfalls at Thruway and Canal facilities, located within the NYSDEC designated MS4 boundary areas. Approximately 85 Thruway Authority and Canal Corporation facilities were visited, and 165 outfalls were mapped and inspected over a period of four weeks. Facilities included service areas, toll plazas, police barracks, offices, salt storage areas, maintenance facilities, locks, and lift bridges. The NYSTA/NYSCC's GIS system played a vital role in identifying the facilities located within the designated urbanized areas, finding the streams that ultimately receive the storm water discharges, and for mapping the located outfalls. Outfalls were surveyed using Trimble GeoExplorer 3 GPS equipment, and inspected for evidence of illicit discharges. This data was then post processed and exported to a GIS format and added to the existing GIS. While performing outfall inspections, field time was optimized by recording the presence and quantity of vegetation for the NYS Invasive Species Task Force. Mapped vegetation included Giant Hog Weed, Japanese Knotweed, Purple Loosestrife and Phragmites. The locations of outfalls and invasive species were verified by field personnel by overlaying the GIS file over digital orthoimagery downloaded from the NYS GIS Clearinghouse.

The horizontal precision of the surveyed points captured using the Trimble GPS units fell between 0.5 - 2 meters, with an average preci-

sion of 1.3 meters. Survey and inspection attributes were recorded on the units in the field. A data dictionary was created and loaded onto the GPS units, allowing outfall inspectors to select options from dropdown menus where appropriate and forcing inspectors to populate critical fields before a new inspection record could be created. The use of dropdown menus ensured consistency in the recording of important attributes. Inspection information was exported to an Outfall Inspection database, developed using Microsoft Access that included inspection data such as the type of outfall (pipe, ditch, swale, etc.), pipe material, characteristics of the discharge, and the presence of upstream facilities that could potentially pollute storm water.



A digital photograph of each outfall and the surrounding area was taken to provide an illustration for the inspection report and to assist NYSTA/NYSCC's personnel in locating the outfalls in the future. Dye testing was performed at Canal locks, lift bridges, and maintenance facilities to verify that floor drains and bathrooms have the proper plumbing. In addition, a few Thruway facilities were dye tested to identify the direction of pipe flow, and in one instance to confirm that dry weather flow from an outfall was not due to an illicit discharge.



OUTFALL INSPECTION PROGRAM			Niagara Maintenance		
ID	102-1	Hw/Canal SIDE	N	DISCHARGE	Ditch
DIVISION	BUF	TYPE	End of Pipe	PIC_NO	4.5
SECTION		DIAMETER (in)	18	DISK_NO	1
ROUTE	190	PIPE MATERIAL	Concrete	<input type="button" value="Print Status"/> <input type="button" value="Cancel"/>	
MILEPOST	13	WATERBODY			
INSPECTION INFORMATION					
Date	9/17/2004	24hour Weather	Clear	Structural Cond	Good
Inspector	CP	Piped System	Yes	Operational Cond	Good
Rating	Low	Shared Pipe System	No	Comments	
Pipe Flow	Trace	Name Shared Sys			
POTENTIAL UPGRADIENT CONTAMINANT SOURCES					
Restaurant	AST	Garage	Septic	Parking	Haz/Wast
No	Yes	Yes	No	Yes	No
VISUAL EVIDENCE OF POSSIBLE ILLICIT DISCHARGES					
Clear	Milky	Foam	Colored	Oil Sheen	San Debris
Yes	No	No	No	No	No
ODORS ASSOCIATED WITH ILLICIT DISCHARGES					
Sewage	Chlorine	Odors	Rotten Eggs	Petroleum	OTHER
No	No	No	No	No	No
<input checked="" type="checkbox"/> Display Multiple Images					

(Continued on page 9)

(NYSTA/NYSCC... continued from page 8)

The use of GIS is crucial in managing the massive amounts of data collected during these surveys and in helping to identify the many geographical attributes required for each outfall entry (e.g., stream name, hydrologic unit code (HUC), water index number (WIN). During the fall of 2005, the NYSTA/NYSCC completed the second phase of their outfall mapping and inspection program with a pilot program that mapped and inspected all outfalls within one section of roadway in the Thruway's Albany Division, again using GPS. Mapping and inspection of all remaining outfalls on Thruway roadway is expected to be completed by the summer of 2008.

For more information on the MS4 program for the Thruway visit:
<http://www.thruway.state.ny.us/environmental/water.html#ms4>

For more information on the Canal Corporation's MS4 Program:
<http://www.canals.state.ny.us/busdevel/environaware/index.html#ms4>

Comments or questions may be addressed to Elizabeth K. Novak, New York State Thruway Authority, Environmental Services Group at Elizabeth_Novak@thruway.state.ny.us.



The New York State Geographic Information System (GIS) Conference has become a major GIS professional development opportunity for hundreds of GIS users across the State. This year, the 22nd NYS GIS Conference is being held in Lake Placid, NY at the Crowne Plaza Resort. The conference is a great place to discover how New York businesses, government organizations, academic institutions, and not-for-profit entities are using GIS to accomplish important objectives. Technical presentations featuring working professionals will share their GIS experiences and solutions in dealing with real world problems like yours. This year's conference will feature key personnel who responded to Hurricane Katrina, demonstrating the GIS techniques used during this incredible time. Conference attendees will also be able to step aboard the "Brain Bus", where hurricane volunteers worked non-stop at 12 workstations to provide timely information to decision-makers and rescuers. In the exhibit area, GIS vendors and consultants will display the latest in GIS hardware, software, analytical techniques, and services. Early conference registration with reduced fees must be received by October 4, 2006.

Conference information is available at the following website:
<http://nysgisconf.esf.edu/>.

GIS DAY 2005 WRAP-UP

Cattaraugus County held its 2nd Annual GIS Day in the lobby of the County Building in Little Valley, NY. The County's GIS Coordinator, Daniel T. Martonis, as well as Industrial Program Specialist, Joseph J. Williams were on hand all day to demonstrate the county's GIS capabilities.

Maps were displayed showing the numerous projects that have been accomplished or enhanced by the use of GIS. A GPS receiver was on hand to demonstrate how the county collects its GPS data. Two computers were on display--one showing a power point presentation of various GIS projects; while another was used to show the county's online ArcIMS: parcel viewer, polling/voting districts, & mosquito spraying maps (www.cattco.org). The computers were also used to print out maps for those who requested them. Multiple brochures that were created with the help of GIS & GPS were on display for the taking. These brochures included snowmobile trails, Amish locations, hiking trails, DEC fishing locations, and more.

The County plans to continue this tradition into 2006 and beyond. For more information contact Daniel Martonis, GIS Coordinator at dtmartonis@cattco.org.



GIS DAY 2005 AT BROOKHAVEN NATIONAL LABORATORY



UPTON, NY – Sixty-eight high school students from Long Island and New York City learned about the numerous uses of geographical information systems (GIS) on NYS GIS Day (November 16, 2005), an educational event held at the U.S. Department of Energy's Brookhaven National Laboratory. GIS is a system of computer software and hardware that combines information about a place to provide a better understanding of data related to it. GIS is used in a variety of ways, from analyzing weather and traffic patterns to assessing environmental damage or tracking the spread of disease.

Held as part of the National Geographic Society's yearlong initiative called "Geography Action" and sponsored by the Long Island Geographic Information Users Group and Brookhaven Lab's Office of Educational Programs (OEP), GIS Day at Brookhaven Lab was part of an international effort to engage people in learning about geography and showcase applications of the GIS technology.

High schools participating in Brookhaven's GIS Day included Brentwood, Longwood, North Babylon, Shoreham-Wading River, and four high school districts in Hofstra University's Science and Technology Entry Program: Freeport, Hempstead, Roosevelt and Uniondale. Also attending the event were students in the Gateway/Explore New York

City program, which prepares high school students for careers in medicine.

Mary Daum, one of the organizers of GIS Day at Brookhaven Lab and Information Technology Manager of the Laboratory's Environment, Safety, Health and Quality Directorate, said, "This was the second annual GIS Day held at Brookhaven Lab, and we had twice as many students participate compared to last year. We had a full program of workshops and many posters on display. One of the posters is based on my work that relates to the Department of Energy's Land Use Controls Management Plan. The map I created organizes many layers of information, from showing the location of contaminated soils to pinpointing sensitive wetlands or underground utilities, so it can be used, for instance, to determine where to locate a new building."

Jim Daly, Suffolk County GIS Coordinator and Chair of the Long Island GIS Users Group, was the keynote speaker at Brookhaven's GIS Day. He told the students to "think spatially." By thinking in terms of geography, students can start to understand GIS technology, which employs computers to store the information that experts use to analyze spatial information.

Among the workshops students attended were:

- "Using GIS to Study the New York State Salamander," taught by Valorie Titus, a doctoral candidate at Binghamton University who is working on her research with Tim Green, Brookhaven's Cultural and Natural Resources Manager.
- "Using Aerial Photography in Response to Hurricane Katrina," given by George Davis, Eastern U.S. Region Manager at Earth Resource Mapping, Inc., and a long island GIS Users Group member.
- "Estimating the Deer Population," given by Jennifer Higbie from Brookhaven Lab's Environmental and Waste Management Services Division, and one of the organizers of GIS Day at Brookhaven.

For more information contact Diane Greenberg at greenb@bnl.gov.

NYS GIS Day 2006

Mark your calendars!

NYS GIS Day is Wednesday, November 15.

A copy of New York State Governor George E. Pataki's NYS GIS Day proclamation can be found online at the NYS GIS Clearinghouse:

<http://www.nysgis.state.ny.us/coordinationprogram/reports/>

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