Westchester gov.com

Andrew J. Spano, Westchester County Executive
County Board of Legislators

Andrew J. Spano
County Executive
Dr. Norman J. Jacknis
Chief Information Officer
Sam Wear
GIS Manager
Department of Information Technology
Geographic Information Systems

GEOGRAPHIC INFORMATION SYSTEMS

Volume 10, Number 1 *Spring 2006*

GIS Receives State Grant to Support Vacant Parcel Inventory

Hudson River communities will be focus of detailed GIS mapping project

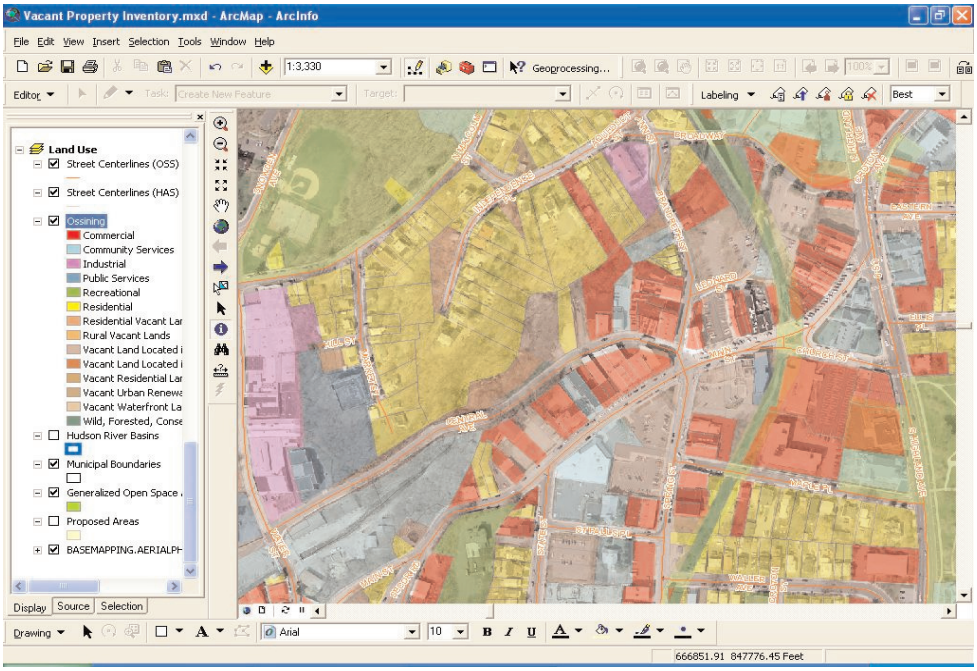
Westchester County GIS has recently received funding through the New York State Department of Environmental Hudson River Estuary Grant Program (*http://www.dec.state.ny.us/website/hudson/hrep.html*) to conduct a comprehensive GIS-based mapping inventory of vacant properties in 14 Hudson riverfront communities including Peekskill, Cortlandt, Ossining, Buchanan, Croton-on-Hudson, Briarcliff Manor, Sleepy Hollow, Tarrytown, Irvington, Dobbs Ferry, Hastings, and portions of Yonkers and Mt. Pleasant. The project, which is titled "Westchester County Vacant Property Inventory," is differentiated from previous open space mapping initiatives in the county in that this inventory will be based on digital tax parcel data.

In keeping with grant guidelines, vacant parcels will be also be inventoried in context of criteria such as: (1) proximity to existing open space areas as designated on the 2004 Westchester County Open Space Map, (2) watershed and drainage basins, (3) properties within 500 feet of stream corridors, and (4) parcels which may have unique or special natural resources/environmental characteristics as designated by local planning staff or consultants. Data collected during the project will be integrated into an on-line web mapping application entitled the Hudson River Communities Open Space Data Viewer which will be hosted by Westchester County GIS during the project and is intended to broaden community-wide awareness of the project.

The proposed ArcIMS application will include online links to other relevant website and information sources including Westchester County Proposal for Open Space (*http://www.westchestergov.com/openspace*), the Westchester Land Trust (*http://www.westchesterlandtrust.org*), the Scenic Hudson (*http://www.scenichudson.org*) and the Open Space Institute (*http://www.osiny.org/home.asp*), among other organizations.

Data developed by Westchester County GIS as part of this project will be made available in industry standard format ESRI coverage (.E00 export) and shapefile formats which are compatible with mapping systems being used by agencies involved in open space planning in the lower Hudson Valley.

Project initiation is scheduled to begin April 2006 with data collection, analysis, and web mapping applications anticipated to take 15 months to complete. For more information on the Hudson River Estuary Grant GIS project, contact Ana Hiraldo at (914) 995-4416 or Sam Wear at (914) 995-3047. The project can also be monitored by visiting the county's GIS website at *http://giswww.westchestergov.com*.



In most areas of the county, digital tax maps are now registered to the countywide base map and can be draped over orthophotography. This image is one illustration of the various types of "vacant" property classifications (urban, residential, waterfront, etc) in one Westchester County municipality.

2nd Annual
GIS Workshop
for
Engineering & Public Works

May 19, 2006

9:00 AM - 3:30 PM
Westchester County Center

Westchester County GIS continues its series of skill learning presentations focusing on the integration of GIS, CAD, and GPS. This year's workshop will offer a three-hour course entitled "Geographic Information Systems, Engineering and CAD" which has been approved for three (3) Professional Development Hour (PDH) credits through the Practicing Institute of Engineering (PIE). Cost for the PDH course is $25/person. Registration and agenda information is available on the county GIS website at *http://giswww.westchestergov.com*.

Contour Data Development

Westchester County has recently initiated development of countywide two-foot contour data under contract with Buchart-Horn, Inc. (*www.bh-ba.com*) and Pinnacle Mapping Technologies, Inc (*www.pinnaclemapping.com*). The contractors will be using the AT (aerotriangulation) solution, control network, scanned imagery, and related planimetric products from both the 2000 and 2004 countywide base map projects. The county partnered with the NYS Digital Orthoimagery Program (NYSDOP) on the Spring 2004 photogrammetric project, which was flown at 600 scale, to support increased street feature mapping and contour development. Starting May 1, production and delivery schedule of the contour data will be posted on the county's GIS website.

GIS Staff Training

GIS staff recently attended two ESRI software training courses at their training facilities in New York City. Three staff attended "Advanced Analysis with ArcGIS" which covered spatial analysis tools that are used to reveal spatial patterns in data and introductions to the Analysis Toolbox, model builder, and python scripts. Additional staff attended the two-day "Developing Applications with ArcGIS Engine" course which provided a hands-on overview of the ESRI ArcObjects and ArcGIS Engine programming components.

Trail System Update

Planning Department GIS staff completed a comprehensive update of the County Trailway System data layer. This line coverage illustrates over 250 miles of existing and proposed trails and bicycle routes located within abandoned railroad rights of way, utility and parkway rights of way and transportation corridors. It is an extensive update to the previous coverage from 1996 and has been spatially adjusted to more accurately follow existing and proposed trail alignments based on 2004 digital aerial photography. The county trail system is based on the 2001 tri-county trail master plan and also includes more recent trail initiatives such as the Westchester RiverWalk along the Hudson River and the Colonial Greenway in the Long Island Sound Shore area. Also featured are the North and South County Trailways along the former Putnam ROW; Briarcliff-Peekskill Trailway; Bronx River Pathway; and Old Croton Aqueduct Trailway; and East-West links such as the Tarrytown-Kensico Trailway. Not included are non-linear, self-contained, trail systems within county and other parks and open spaces. For more information contact Paul Gisondo in the Planning Department at *pxg3@westchestergov.com.*

Residents Can Now Query Gas Station Database

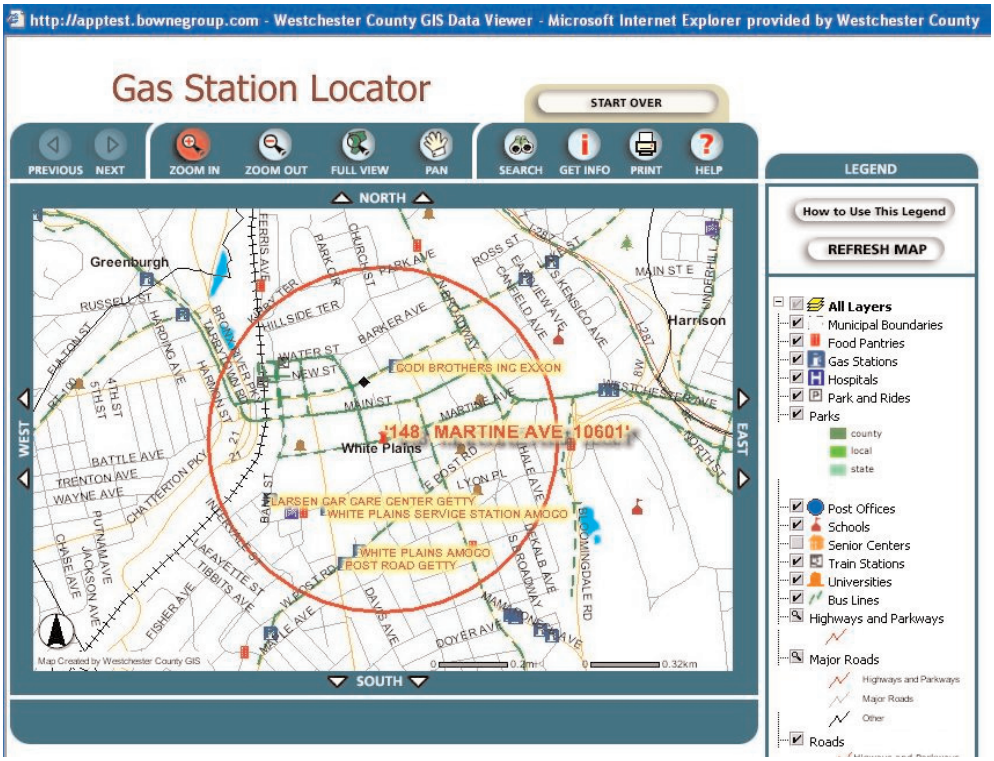
Application locates closest gas stations and cheaper gas prices

For the past five years, Westchester County Department of Consumer Protection (CP) has maintained a database of gas stations which includes facility information (address, phone number, operating hours) and gasoline prices. The database is available at the CP website (*http://www.westchestergov.com/consumer*) and can be queried by lowest prices, location, or for those gas stations which may have "gas specials." The current database includes pricing information on 358 gas stations throughout the county.

Due to the continued interest in the gas station database – combined with the recent increase in gasoline prices – Westchester County GIS has initiated work with CP staff to build more advanced spatial queries and mapping components utilizing ArcIMS technology into the existing gasoline database application.

Version 1.0 of the GIS-based CP gas station application will allow users to query for (a) the closest (or within a predefined radius; i.e., one mile, two mile, etc) gas station from a particular street address or intersection, (b) by municipal location, or (c) by zip code. Query results which match the search criteria are presented in spreadsheet format that can be printed out with a "Print Results" button. Individual stations can be selected, mapped and labeled or a "Map All Stations" button can be selected to show all gasoline stations which meet the search criteria. Also, users can map selected gas stations in context of other data layers from the county's central GIS database such as roads, community facilities, and related transportation features. "It's a great enhancement to our gas price survey" says John Gaccione, Public Information Officer, Westchester County Consumer Protection. "Not only can consumers find gas prices, now they can "map" out exactly where a station is located and what other stations are nearby. By using the new application, drivers will be better able to plan a trip and save money."

Version 2.0 of the application, which is scheduled to be released later this year, is being designed to include routing capabilities between the starting address and a selected gas station. This added functionality utilizes ESRI's ArcIMS Route Server (*http://www.esri.com/software/arcgis/arcims-routeserver/index.html*) and the Navteq's (*www.navteq.com*) SDC format of the street centerline file which the county utilizes nearly exclusively for web mapping applications. For more information on the gasoline and gas station web mapping program, contact either John Gaccione, Westchester County Department of Consumer Protection, at (914) 995-2160, or Tong Zhou, Westchester County GIS, at (914) 995-3012 or e-mail at *taz2@westchestergov.com*.



The new Gas Station Locator application allows users to search for the closest gas station from a specific address, street intersection, zip code or predefined radius. Search results are listed in spreadsheet format in ascending order (cheapest to highest price per gallon of gas).

County DOT Continues to Advance GIS Technology

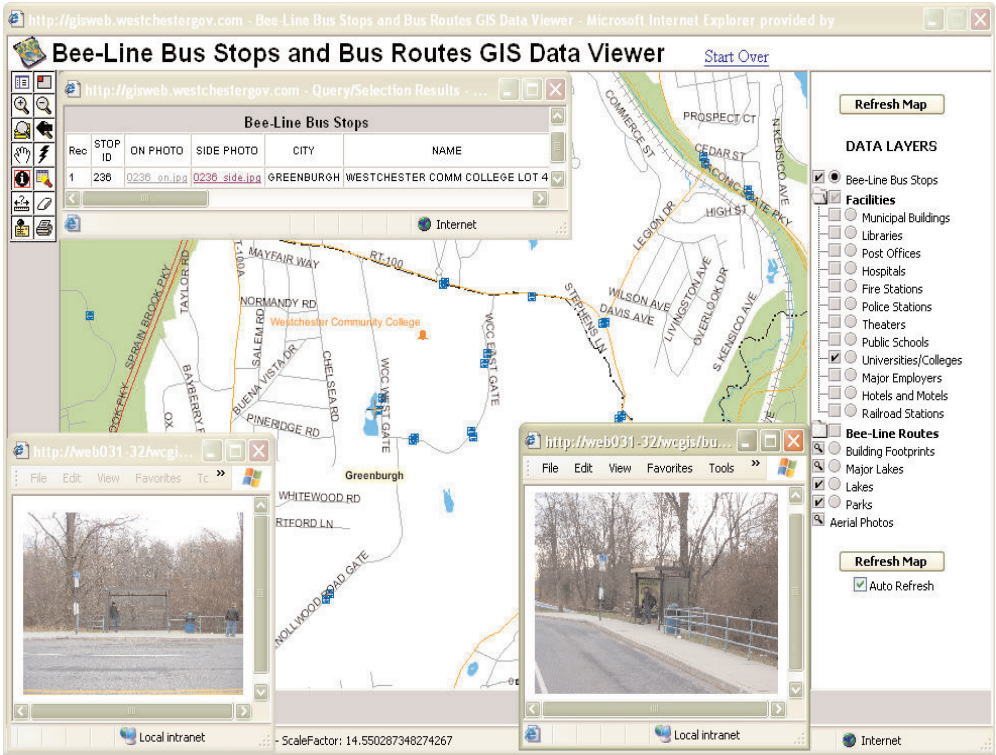
Intranet and desktop applications support day-to-day operations

Over the past 2-3 years, Westchester County's Department of Transportation (WCDOT) has become a significant user of GIS programs and applications supported by Westchester County GIS. Currently, GIS applications and software are being used at various levels in the agency ranging from the non-technical user to DOT staff which have received more in-depth training and are utilizing advanced ArcGIS tools.

Entry-level programs focus on web-based ArcIMS applications which provide basic data query, viewing, and map making functionality. Illustrative of this type of application is the Bee-Line Bus Stops and Bus Routes GIS Data Viewer which has proved to be a very useful tool for the department's operational staff. Users are able to view and query information on the county's 63 Bee-Line bus routes and the associated 3,100+ active bus stops.

In another initiative where GIS is being extensively used, WCDOT has been working with staff in the New York State Department of Transportation Hudson Valley Transportation Management Center (TMC) on a project that will analyze traffic disruptions and the impacts of major traffic detours or diversions within Westchester County. The emphasis of the project will be to determine the effect of the closure of specific highway corridors, due to man-made or natural disasters, on the overall transportation network of Westchester County. The TMC has been using a traffic model developed by staff at the Massachusetts Institute of Technology (MIT) that analyzes the impacts of complex traffic disruptions. In concert with DOT staff, county GIS personnel are assisting in mapping and coding and configuring street centerline files with attribute data which the MIT traffic model can utilize. This result of the analysis will be used to prioritize capital needs and identify opportunities for redundant transportation services.

WCDOT has also recently become part of a Regional GIS Transportation Coordinating Committee. The coordinating committee was established by The New York Metropolitan Transportation Committee (NYMTC) which provides a collaborative planning forum to address regional transportation-related issues and distributes federal transportation funds. One of the primary goals and purposes of the GIS Coordinating Committee is to address the need to create regional GIS standards with an emphasis on data sharing among GIS users in the NYMTC region. The Committee will also review other metropolitan region GIS issues such as application design and data distribution. The committee's last meeting was held March 2006. For more information on DOT GIS initiatives, contact Michael Swee, Westchester County Dept. of Transportation, at (914) 813-7760 or Cindy Louie at (914) 995-3014.



The Bee-Line Bus Stops and Bus Routes GIS Data viewer allows the DOT operations staff to view and query bus stop information by municipality and bus stop ID. Photographs of each bus stop are linked to the database and can be viewed though the application.

County Receives ORPS Grant

Westchester County GIS has received funding from the New York State Office of Real Property Services (ORPS) 2005-2006 Tax Administration Technology Improvement Grant Program (RPTATIP) to conduct a comprehensive countywide tax map administration and/or standardization feasibility study. The proposed study will provide government officials, the general public, and business and industry representatives with detailed information on the opportunities or limitations of increased county participation in tax map administration. The proposed study will also provide elected officials and government administrators with an overview of current GIS technology tools in supporting tax map maintenance programs. The study is anticipated to be initiated in May of this year. For more information contact Westchester County Tax Commissioner David Jackson at *dbj1@westchestergov.com* or Ana Hiraldo at *aeh2@westchestergov.com*

Metadata Training

GIS metadata training courses continue as part of the county's Federal Geographic Data Committee (FGDC) 2005 Cooperative Agreement Program (CAP) grant with the next session scheduled for May 23rd at the Hastings-on-Hudson Public Library (*http://hastingslibrary.org/*). Those attending the 2-hour session will learn the basics of metadata, and how to search for and create metadata for spatial datasets. Previous training sessions have been held at White Plains and Mt. Vernon. To register or for more information contact Ana Hiraldo at (914) 995-4416 or visit the county's website at *giswww.westchestergov.com*

GIS Website Redesign

The Westchester County GIS website has recently been redesigned to make user navigation easier and more intuitive. One of the major highlights of the redesign is the availability of 2000 base map (1'=100') planimetrics - which are currently being updated as part of the 2005/2006 base map project. The planimetric datasets are now available for download by municipality. Much of the functionality from the previous website remains which included access and download capabilities for over 100 data layers from the county's GIS database, contacts for local government GIS projects, presentations and publications, and access to the county's primary interactive web mapping portal Mapping Westchester County. The website also includes links to countywide 2004 orthophotography which can now be downloaded from the New York State GIS Clearinghouse (*http://www.nysgis.state.ny.us*). Visit the new site at *http://giswww.westchestergov.com*.

Westchester gov.com
Andrew J. Spano, Westchester County Executive
County Board of Legislators

DEPARTMENT OF INFORMATION TECHNOLOGY
908 Michaelian Office Building
148 Martine Avenue
White Plains, NY 10601

PRSRT STD
U.S. POSTAGE
PAID
WHITE PLAINS, NY
PERMIT NO. 261

Articles and graphics in this newsletter prepared by: Xiaobo Cui, Paul Gisondo, Noah Goldberg, Ana Hiraldo, Cindy Louie, Deborah Parker, Ilir Tota, Michael Swee, Sam Wear, and Tong Zhou.

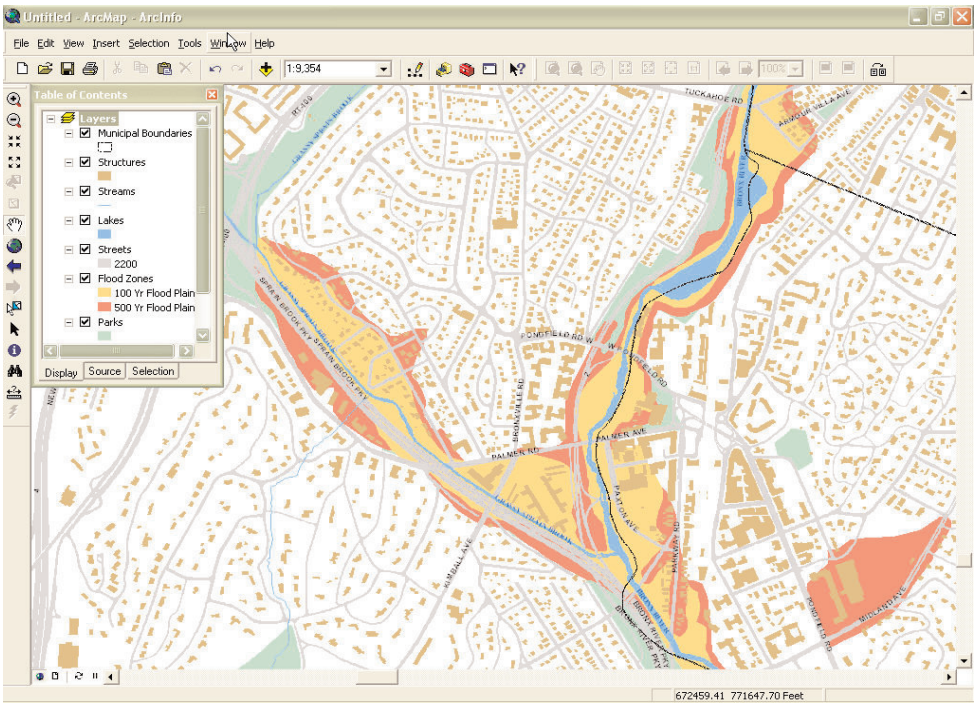
GIS GEOGRAPHIC INFORMATION SYSTEMS

http://www.westchestergov.com
Westchester County *GEOGRAPHIC INFORMATION SYSTEMS*
is published by the Westchester County Department of Information Technology

Andrew J. Spano, County Executive **Dr. Norman J. Jacknis, Chief Information Officer**

Desktop GIS for Office Of Emergency Management (OEM)

Using ArcReader (*www.esri.com/arcreader*) Westchester County's Office of Emergency Management (OEM) is increasing recognizing the benefits of GIS technology. In the past, OEM relied heavily on county GIS staff to produce a wide range of hardcopy maps and documents. Today, OEM staff now uses ArcReader to produce maps for training purposes, emergency response routes, and the routine mapping of Emergency Response Planning Areas (ERPA) and fire and EMS districts.



The Office of Emergency Management produces many maps for emergency response plans. The ability to analyze, view and print features such as flood and hurricane inundation zones and reference to the surrounding community has proved to be very useful.

One major project OEM staff is using ArcReader extensively for is in context of countywide hurricane preparedness and emergency response plans. In the aftermath of Hurricane Katrina, several local governments are currently redrafting or establishing evacuation plans and educating residents about what actions to take in the event of a hurricane. As part of this work, OEM has produced several "Hurricane Flood Inundation" maps for many of the coastal areas. Maps illustrate the potential extent of flooding throughout the community, showing how increased water levels might affect important critical facilities and local road networks.

The initial ArcReader published map file (pmf) was created with ESRI's ArcMap 9.1 software using the Publisher extension. "The Office of Emergency Management uses GIS in all stages of emergencies," states Noah Goldberg, OEM program specialist. "GIS is instrumental in supporting OEM functions on a daily basis". For more information contact, Cindy Louie at *llc4@westchestergov.com* or Noah Goldberg at *ndg1@westchestergov.com*.