# GEOGRAPHIC INFORMATION SYSTEMS

# Community Facility Locator Application Launched

## New Web Application Provides Information on Libraries, Parks, Museums, and Other Local Points of Interest

Based on ESRI's web mapping technology, Westchester County GIS has introduced a new mapping program which enables users to locate common community facilities such as schools, post offices, municipal buildings, and train stations based on a user defined address. The application was designed and developed in-house by GIS software architect Tong Zhou.

As illustrated below, a user activates the application by identifying a community facility of interest, completing an address and zip code input form, and finally selecting a search radius (between ½ and 10 miles). Currently the application contains the locations of over 2,000 community facilities throughout the county which have been derived from several data sources, including those developed in-house by Westchester County GIS.

"We expect to be adding new data sources to the application on a regular basis" says Zhou "We've gotten feedback and interest to include data from our recent countywide base mapping project as well as locational data on service industries and environmental quality indicators." The application was recently expanded to include the location of pharmacies throughout Westchester County which are selling the KI drug as part of the Indian Point Emergency Evacuation Plan.

In addition to providing an on-screen list of facilities which are identified in the specified search criteria, the application also includes a generic mapping template. The template generates a 8"x11" map which also includes a list of the "search" results. Search results include the facility name, address, and distance (miles) from the starting address point.

A set of basic map navigation tools, including "Pan" and "Zoom-In/Zoom-Out" buttons have also been incorporated into the application and a "Help" button provides users with on-line program information. A "Start Over" option allows the user to quickly clear an existing search and begin another query. The application has been customized for ease of use and is structured to be expanded upon as more pertinent data layers become available.

The application was built with ArcIMS 3.2 and works with Internet Explorer (Version 5.5 or higher) and for best screen display, monitor settings should be at 1024 X 768. For more information on the application, contact Tong Zhou at (914) 995-3012.



*View of the new Community Facility Locator application. This image shows the results of a search of all historic sites within a one-mile radius of the Westchester county offices in downtown White Plains. The results also show spatial relationships between historic sites and other community facilities.*

## Westchester County GIS Day

Westchester County GIS will hold its first GIS Day event on November 20, 2002. The event will be held in the main lobby of the county office building at 148 Martine Avenue in downtown White Plains. This worldwide event is sponsored by the National Geographic Society, Association of American Geographers, University Consortium for Geographic Information Science, U.S. Geologic Survey, Library of Congress, Sun Microsystems, and Environmental Systems Research Institute (ESRI). Designed to introduce the general public to Geographic Information Systems (GIS) technology, Westchester County GIS staff will be providing examples of GIS applications as well as offering handouts and other materials relating to GIS. There will also be a display of posters showing various projects the GIS team has been working on over the past year. The general public is encouraged to visit the display and participate. For more information on GIS Day contact Ana Hiraldo at *aeh2@westchestergov.com* or visit our site at *http://giswww.westchestergov.com*.

## GIS Outreach

GIS staff continue to maintain an active schedule in outreach and coordination with government officials and industry representatives on a wide range of GIS development and implementation issues. In May, Xiaobo Cui and Ana Hiraldo attended the *Introduction to ArcGIS* course held in NYC in anticipation of migrating both county and local government programs from the ArcINFO and ArcView environments. Sam Wear met with representatives from the county planning department and the *U.S. Army Corps of Engineers* regarding the use of county base mapping data for a proposed restoration project along the Saw Mill River. In June, Ana Hiraldo attended the New York State Archives *Managing Maps and Plans Workshop*. This workshop included discussion on how to archive both hardcopy and electronic maps and documents. Sam Wear attended the quarterly meeting of the New York State GIS Coordinating Body and met with Dr. Joseph Hankin, president of, *Westchester Community College* (WCC), to discuss proposed GIS coursework and curriculum. In August, Ms. Hiraldo, along with several local government representatives, attended the *Getting Started in Public Works Asset Management Workshop* held in White Plains. The workshop provided an overview of the benefits of using GIS in public works and utility programs. Ms. Hiraldo also gave a presentation at the *Semi-Annual Conference for Front-line Assessment Staff* held by the Westchester County Tax Commission.

## GIS EVENTS

### NEARC
The Northeast ARC/INFO Users Group (NEARC) will hold its 17th annual conference at the Mt. Washington Hotel in Bretton Woods, New Hampshire, November 3-6, 2002. With the theme "*Users Helping Users,*" the conference will feature keynote sessions, vendor demonstrations, poster displays, workshops and user presentations. For more information and registration visit the conference website at *http://www.northeastarc.org*.

### NYS GIS Conference
The 16th Annual New York State GIS Conference will be held in Liverpool, New York, October 10-11, 2002. With "*A Very Spatial Conference*" as this year's theme, the conference anticipates over 400 attendees. The conference showcases GIS projects throughout the state at all levels of government, industry, and academia. A wide range of paper presentations is scheduled, including poster sessions, and pre-conference workshops. Leading industry vendors will also be presenting GIS hardware and software related products, as well as professional services. For more information and registration, visit the conference website at *http://www.esf.edu/nys-gis/2002.htm*.
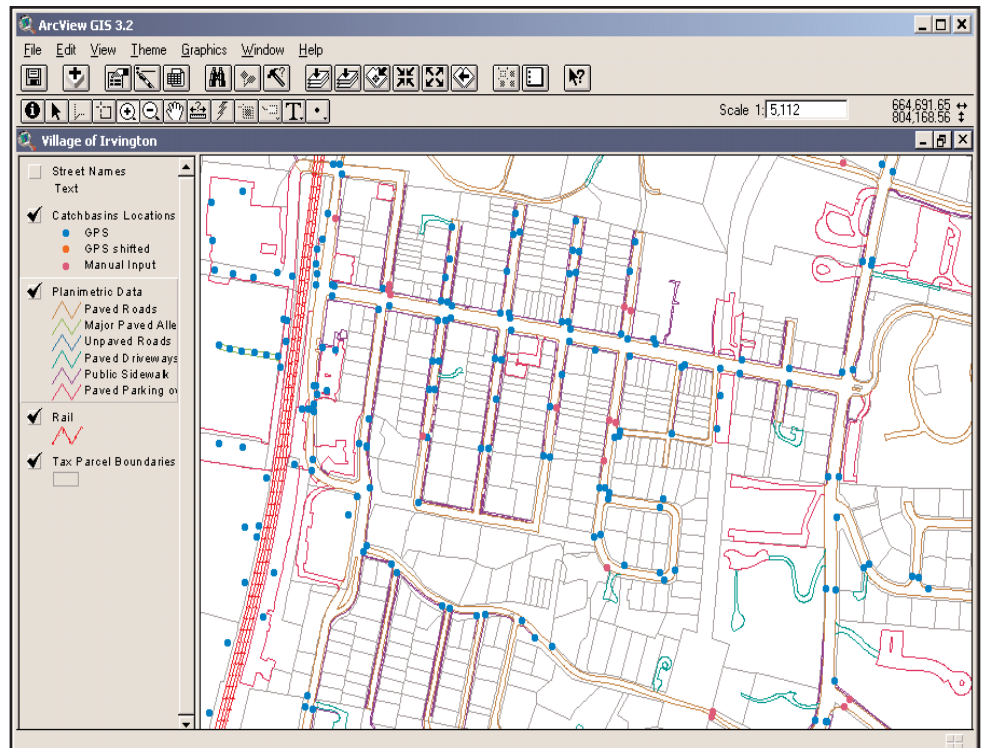
## Local Government

Westchester County GIS promotes an aggressive program in supporting local government GIS programs throughout the county. Over the past several months, GIS staff has provided a variety of services for municipal programs including database development, GPS support, development pf technical plans and proposals, map making and cartography, and web applications.

One of the highest priorities of the 2000 countywide base mapping project was to deliver both planimetric and digital orthophotography which would support local government tax mapping projects. To this end, Westchester County GIS is pleased to announce these datasets have been delivered to both the towns of *Ossining* and *North Castle* for tax map updating and recompilation work. Assisting both municipalities is Weiler Mapping, which is the primary contractor for both projects.

Working closely with local officials, county staff created ArcExplorer projects for the *City of Mt. Vernon* and the towns of *Yorktown* and *Greenburgh* which are now being served with ArcIMS on the county's GIS website. The projects, which can be accessed from either the municipal homepage or by going directly to the county's site, include a combination of both county and local data sources. A similar effort is being planned for the *City of New Rochelle*.

Other support work includes assistance to the *Village of Irvington* for infrastructure mapping (see graphic below); organizing a GIS Steering committee and identifying initial priorities for Phase I GIS implementation in the *City of Yonkers*; assisting the *City of Rye* managing GIS contractors performing database and application development functions; and working closely with *Village of Briarcliff Manor* officials on a potential villagewide GIS-based infrastructure mapping project. Similar infrastructure mapping projects are anticipated throughout the county over the next several months for compliance with GASB 34 regulations. County GIS staff is providing support to the *Town of Cortlandt* on a townwide master plan update and will be assisting with other Cortlandt GIS implementation functions throughout the remainder of the year.

This fall, GIS staff are scheduled to begin work with the *Village of Dobbs Ferry* on a user needs assessment and implementation plan which is being supported by a grant from the New York State Archives and Records Administration (SARA). For more information on local government GIS technical support, training opportunities, and related GIS/IT support functions to local government, refer to the county's GIS web page at *http://giswww.westchestergov.com* or contact Ana Hiraldo at *aeh2@westchestergov.com*.



*Over the summer, the Village of Irvington mapped over 600 catch basins with GPS technology. Utilizing GPS hardware provided by Westchester County GIS, data collection was done by a summer intern. This image illustrates catch basins mapped with GPS (blue) and those mapped manually (magenta). For more information on this local mapping effort, contact Larry Shopfer at lschopfer@village.irvington.ny.us.*

# *County Government*

Over the past several months, county GIS staff has been focusing on building GIS databases and programs for the Westchester County Department of Emergency Services (DES). Particular emphasis has focused on building both desktop and web applications relative to the emergency evacuation plan for Indian Point.

As reported in the last GIS newsletter, outreach and involvement with emergency services personnel started with developing an ArcExplorer application which contained several countywide data layers. This work has been greatly expanded upon in terms of both updating and developing new Indian Point data layers (ERPA boundaries, reception centers, evacuation routes, siren locations, congregate care facilities, traffic control points, etc.) which have been integrated into all new applications.
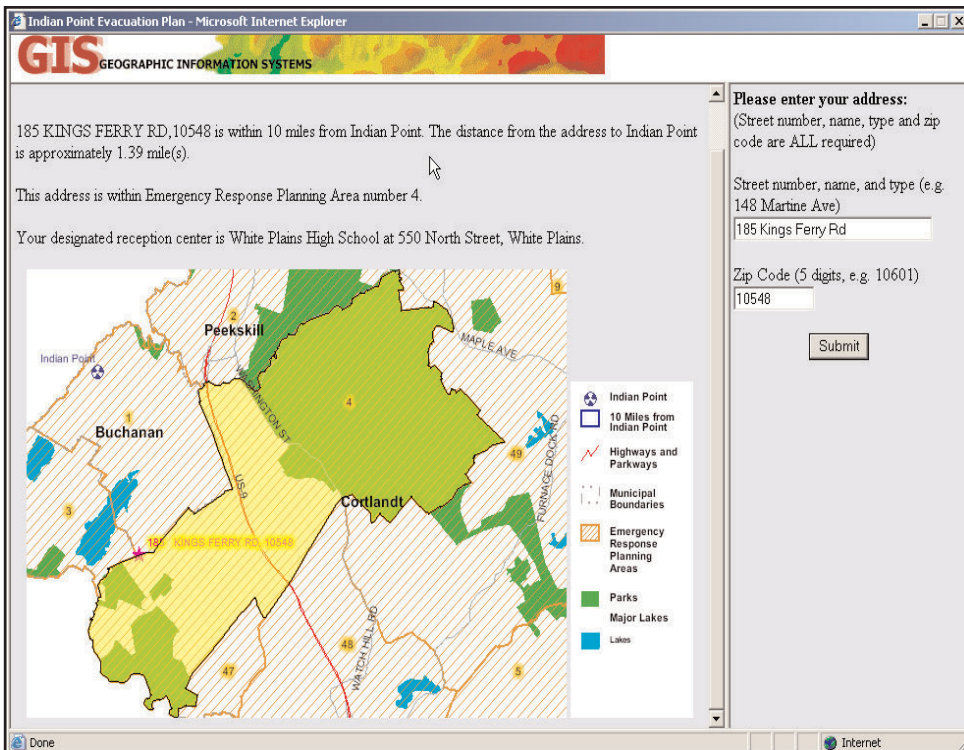
One GIS application which has proven to be useful to citizens of the county is illustrated below. Designed by GIS staff member Xiaobo Cui, this ArcIMS application, which is launched from the county's homepage, enables users to identify how far their address is from Indian Point, which emergency response planning area (ERPA) they are located, and the designated reception center they have been assigned to. This application will soon be enhanced to also highlight recomended evacuation routes to designated reception centers. This current application can be viewed at *http://giswww.westchestergov.com/wcgis/indianpoint/default.htm*.

Concurrently with the development of this internet application, GIS staff have also recently designed and successfully deployed an "Indian Point Data Viewer" intranet program for use in the county's emergency operations center (EOC). The browser-based application provides decision makers and emergency planners in the EOC with access to detailed GIS datasets during Indian Point evacuation drills and exercises.

Staff are also building GIS power workstations in the EOC. Based on the new ArcGIS architecture, these robust applications access the entire Westchester County GIS database, including detailed planimetric and digital orthophotography, and are designed to respond to ad hoc queries, on-the-fly mapping, and to perform more complex spatial analysis. Over time, this application will be integrated with additional third-party software programs which focus on emergency management and hazard prediction models.

For more information on these and other GIS support functions in the area of emergency management, contact Ariane Porter at (914) 995-3371 or *agp1@westchestergov.com*.



*This image shows the result of a query to calculate the distance between 185 Kings Ferry Rd. (address chosen at random) and Indian Point nuclear power plant. Results indicate the approximate distance, the Emergency Response Planning area, and designated reception center. Westchester County residents can perform the same query by logging on to http://giswww.westchestergov.com/wcgis/indianpoint/default.htm*

## *New GIS Staff*

Both Cynthia Louie and Ariane Porter have recently joined Westchester County GIS. Prior to joining Westchester County GIS, Ariane Porter was employed by Citizens Utilities in New Orleans, Louisiana where she provided system and database administration for a Smallworld GIS application. She also spent two years with CACI, a federal government contractor where she developed ArcView GIS applications for the U.S Army. She received her Masters of Public Health in Epidemiology from Tulane University School of Public Health and Tropical Medicine and her B.S. in Geography from East Carolina University. Her current focus of work with Westchester County GIS is in the areas of emergency services and public health. Cynthia Louie was most recently with Urban Data Solutions in New York City building digital 3D models of large cities with a variety of GIS and CAD software programs. She received her B.A. in geography from SUNY-Albany. Her current responsibilities focus on database development and map production work.

## *Base Mapping Project Update*

Westchester County is finalizing a Data Sharing IMA which will be used to distribute base mapping data (planimetrics and orthophotos) to local governments. Under the terms of the IMA, local governments will provide the county with local datasets (digital tax maps, infrastructure/utilities) in exchange for the county's digital base map data. Final approval of the Data Sharing IMA by the Westchester County Board of Legislators is anticipated this month. For more information on the Data Sharing IMA, contact either Sam Wear at (914) 995-3047 or Ana Hiraldo at (914) 995-4416. Information will also be posted on the GIS website.

## *Westchester GIS Distribution List*

If you or your agency are interested in obtaining periodic articles, web links, and general information on a wide range of geospatial technology topics, send us your email address and we will add it to our Westchester GIS distribution list. Recent articles/links selected and forwarded by Westchester County GIS staff include topics on GPS basics, infrastructure mapping, GIS certification, and GIS implementation. Articles are selected from GIS and geospatial technology periodicals received by county GIS, as well as information and technical documentation obtained from GIS vendors. Information and articles selected are "informational" in nature and intended to be relevant to all GIS programs and initiatives throughout the county. Contact Ana Hiraldo at *aeh2@westchestergov.com* to be added to the list.
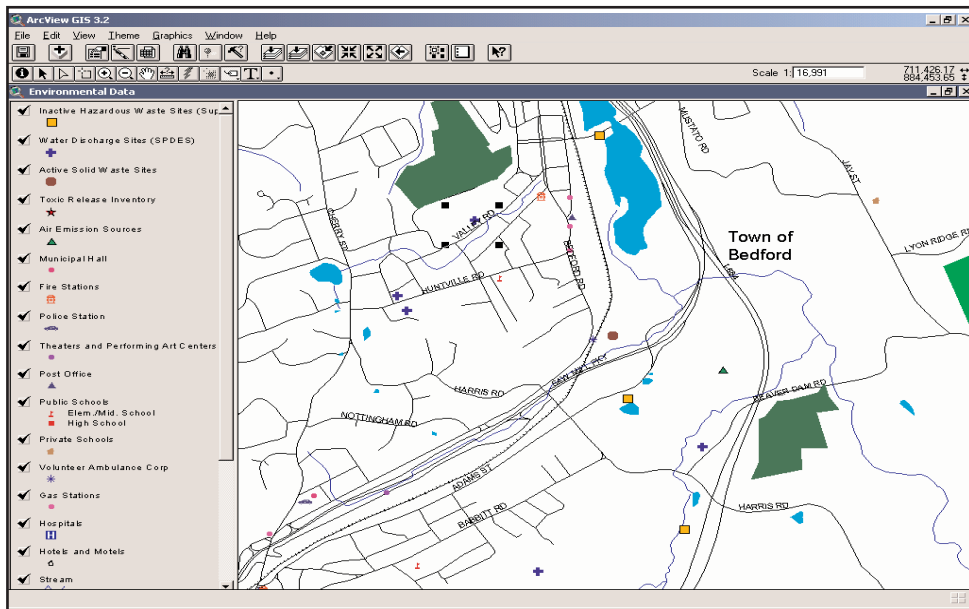
# NYSDEC Provides GIS Coverage Updates

*Data acquired as part of NYS Data Sharing Program*

As part of routine maintenance and updating programs associated with the central GIS database, Westchester County GIS recently obtained five coverages from the NYS Dept. of Environmental Conservation. Specific coverages provided by the state include (1) inactive hazardous waste and superfund sites, (2) solid waste transfer and disposal sites, (3) toxic release inventory, (4) SPDES/waste water sites, and (5) facility and industrial sites. The cooperative is a program "that encourages public agencies in New York to share in the creation, use, and maintenance of GIS datasets at the least possible cost while providing citizens, educational institutions, and the news media easy access to data for non-commercial uses." Westchester County GIS will be using the datasets for both internal/desktop GIS applications and public web mapping programs. Though the county does not redistribute GIS data obtained through the NYS data sharing cooperative, compliant metadata for these and other county GIS coverages are available through the NYS GIS Clearinghouse data sharing program. The county encourages users to contact NYSDEC directly for information on how to obtain specific GIS datasets or visit the NYS GIS Clearinghouse at *http://www.nysgis.sta-te.ny.us/datacoop.htm* to learn more about the data sharing program.

Additional spatial datasets have recently been added to the GIS website including tidal wetlands, national wetlands inventory, and a countywide 15-meter landcover coverage (raster format). By the end of the year, the county also anticipates making selected countywide planimetric base mapping datasets available for download at the county's website. For more information on the county's database development activities, contact either Sam Wear at *stw1@westchester-gov.com* or Cindy Louie at *llc4@westchester-gov.com*.



*This ArcView project highlights the five new coverages obtained from NYS Dept. of Environmental Conservation with other existing environmental data layers in the Town of Bedford.*

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