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Project "GIS Jumpstart" Introduced for Local Governments

Wide Range of Options Available for Municipalities Getting Started

Westchester County GIS is introducing a new program which includes several options to assist local governments starting GIS programs. By taking advantage of the *GIS Jumpstart* program - which includes access to dozens of countywide GIS data layers, integration with the county's web mapping environment, desktop mapping applications, ArcExplorer and metadata training, and GPS demonstrations - local governments can get involved with GIS technology with guidance and support from the county's experienced GIS staff. The *GIS Jumpstart* program includes several "modules" which local governments can choose from on an "as-need-be" basis. Major *GIS Jumpstart* components include:

GIS Data Bundles: This module provides access to a wide range of environmental coverages, planimetric, and digital orthophotos from the April 2000 county base map effort, and a copy of the Navteq

street centerline file which is used for geocoding (address matching functions). Data from the April 2004 countywide base map update will also be available in 2005. Data bundles are provided via the GIS Data Sharing Inter-Municipal Agreement (IMA).

Public Internet and Desktop Data

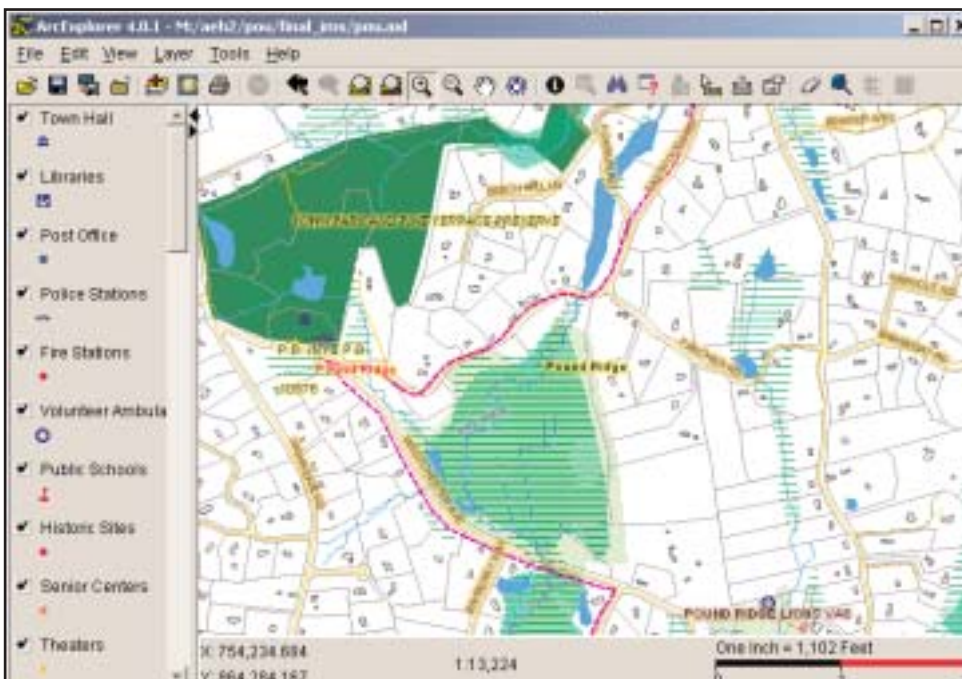
Viewers: Utilizing the county's built ArcIMS web mapping environment, local governments can provide "maps" of their municipality over the Internet. Similar opportunities exist for desktop mapping with ArcExplorer 2.0 which is free and provides basic GIS viewing and mapping functions.

Desktop Tax Parcel Viewer: This desktop application enables users to view local tax parcel maps and related assessment data. The program includes an abutters function for notifications (creating mailing labels) and also includes a mapping function. A copy of ArcView 3.2 is required for

the application as well as local digital tax parcel data. The county will provide an ArcObjects upgrade to this application.

Metadata and GPS: The *GIS Jumpstart* includes training in metadata creation through standards developed by the federal government as well as demonstrations on the uses of GPS for mapping and asset inventory.

For More Information: Contact Ana Hiraldo at (914) 995-4416 to find out how your local government can benefit from the *GIS Jumpstart* program. County GIS services associated with the program are procured through the county's Telecom contract with individual communities. Other service contracts are available as well. Contact County GIS staff by September 15, 2004 and have your local government become eligible to win free on-line GIS coursework at the ESRI Virtual Campus!



ArcExplorer projects such as the one shown above for the Town of Pound Ridge are developed for each municipality participating in the *GIS Jumpstart* program. A flyer describing the *GIS Jumpstart* program can be downloaded from the county's GIS website at <http://giswww.westchestergov.com>.

GIS User Group Meeting

October 6, 2004

9:00 AM - 3:00 PM
143 Grand Avenue
White Plains

Hosted by
Westchester County GIS

The next meeting of the Westchester GIS User Group will highlight current geospatial applications in government, not-for-profits, academia, and business in the Westchester County area and will include user presentations, displays, and GIS posters. Information on upcoming local ArcGIS training courses and other GIS activities will also be provided.

To register for the meeting or to submit a topic for a presentation, contact Ana Hiraldo at (914) 995-4416 or email at ah2@westchestergov.com. Seating is limited. For more agenda information visit <http://giswww.westchestergov.com>.

GIS Reviews ALOHA Model

GIS staff recently met with Bergmann Associates (Rochester, NY) to review the ALOHA Conversion Analysis and Summary (ACAS) extension for ArcGIS. Originally developed by the Environmental Protection Agency (EPA), the ALOHA model (which stands for Aerial Location of Hazardous Atmospheres) is an atmospheric model used for evaluating releases of chemical vapors. The ALOHA model is available for download at <http://www.epa.gov/ceppo/cameo/request.htm>.

Developed by Bergmann Associates, the ACAS extension allows emergency response staff to analyze the results of ALOHA plume models by generating demographic information, parcel and street data, and lists of geographic features that intersect with the plume. For more information contact Ariane Porter at (914) 995-3371 or visit the Bergmann Associates website at <http://www.bergmannpc.com>.

Fall GIS Conferences

Seven Westchester County GIS staff posters will be displayed at the 20th Annual New York State GIS Conference (October 18-19) at the Hudson Valley Resort and Spa, Kerhonkson, New York (<http://www.esf.edu/nysgis/2004.htm>). Specific posters to be shown include: *Croton Bay Watershed Conservation*; *GIS Mapping and Analysis and Integrating Traffic Signal Management with GIS*; *Municipal Government GIS Development in Westchester County*; *Design of the Indian Point Emergency GIS (IPEG) Application*; *Developing Metadata Explorer Tools at Westchester County GIS*; *Customized Data Clipping Tool for ArcMap 8.3 Using VB*; and *Tracking Rare Wood Turtles with GIS and GPS*. Sam Wear is scheduled for a paper presentation entitled *GIS Implementation for Villages and Towns: Strategies to Get Started (and keep it going)*. Also scheduled for the fall is the 19th Annual NEARC Arc Users Group Conference scheduled for Sept. 19-22 at the Lake Placid Resort, Lake Placid, NY. Registration information is available at (<http://www.northeastarc.org>).

NOAA GIS Data Available

GIS staff recently obtained Electronic Navigational Charts (ENCs) for Long Island Sound from the National Oceanic and Atmospheric Administration (NOAA) (<http://chartmaker.ncd.noaa.gov/mcd/ENC/>). NOAA's Data Handler for ArcView extension converts ENC data to shapefile format and loads legend files for features of interest to mariners including: anchorages, beacons, lights, soundings, obstructions, underwater cables, etc. For more information contact Deborah Parker at (914) 995-3888.

Action Plan for the Croton Bay Watershed

GIS tools used in planning, evaluation and implementation

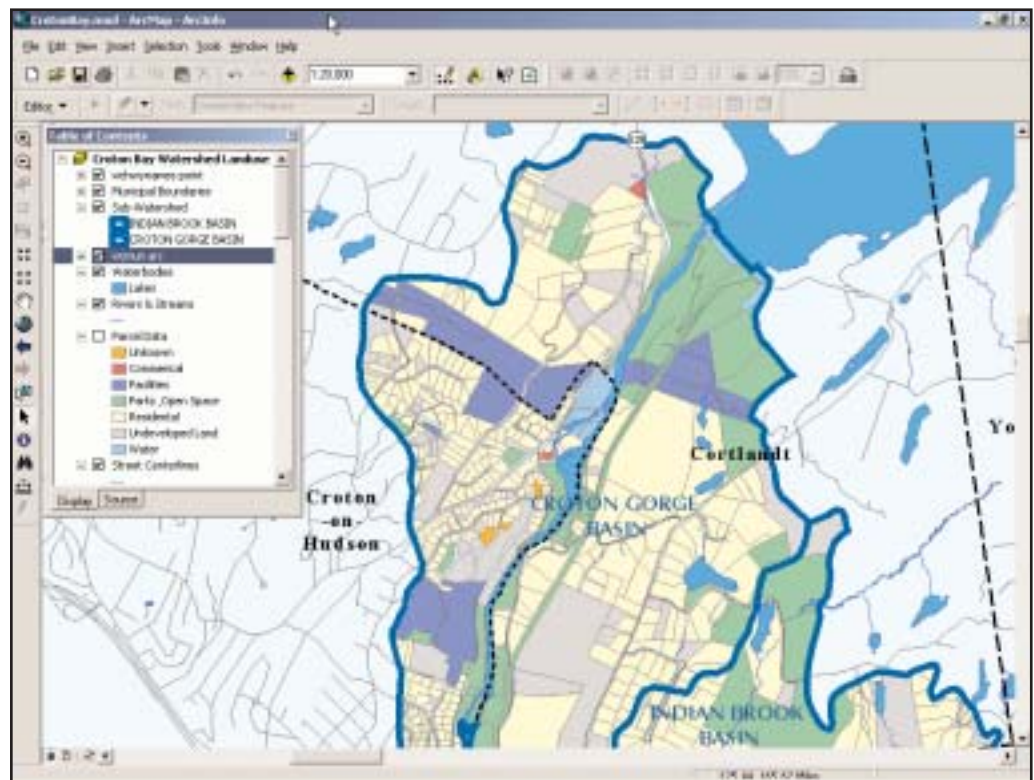
County GIS staff is currently providing technical support to the Westchester County Department of Planning in the preparation of a Watershed Conservation Action Plan for the Croton Bay Watershed. The watershed management process includes a series of steps: planning, assessment, evaluation and implementation. The Croton Bay Watershed encompasses approximately 3,000 acres within sections of the towns of Cortlandt, Ossining and New Castle and the villages of Ossining and Croton-on-the-Hudson. The work is being funded by a grant from the Hudson River Estuary Program, New York State Department of Environmental Conservation (<http://www.dec.state.ny.us/website/hudson>). The county and municipalities developed an inter-municipal organization entitled the Croton Bay Watershed Steering Committee (CBWSC) consisting of representatives from the five Croton Bay Watershed municipalities, as well as the Hudson River Estuary Program.

The Croton Bay Watershed, which serves as an important tributary to the Hudson River, consists of two subwatersheds: Croton Gorge and Indian Brook. The Croton Bay Watershed also contains two drinking water sources for the surrounding communities. Indian Brook Reservoir currently provides approximately 40% of the drinking water to the Village and Town of

Ossining. Another aquifer in the watershed provides drinking water to the Village of Croton-on-Hudson.

Developing the Croton Bay Watershed Management Plan utilizes GIS in several ways by using layers such as land use, parcel data, impervious surfaces such as transportation and structural features, natural resources such as streams, wetlands and waterbodies, and digital orthophotography. Calculations are generated using the GIS software to summarize the acreage of generalized land uses, land uses of concern, impervious surfaces and wetlands by each watershed and municipality. Hardcopy maps are also being generated for distribution to municipalities which will be responsible for annotating and identifying the locations of specific drainage infrastructure components.

Utilizing GIS in watershed planning provides tools to help identify both point and nonpoint sources of pollution. Working closely with local officials, the project will help ensure the long-term health and recreational viability of Westchester County's Central Hudson River watershed. For more information on the project visit <http://www.westchestergov.com/planning/environmental/default.htm> or contact Valerie Monastra, Westchester County Department of Planning, at (914) 995-3782.



In analyzing land use characteristics within the Croton Bay Watershed, county planners are utilizing digital tax parcel data which has an associated land use code based on the New York State Real Property System (RPS). The GIS software can then generate summaries of land uses by watershed, subwatershed, or municipality.

Local Government

Mount Vernon GIS - Computer Assisted Dispatch

The following article was written by Joseph Acampora, Manager of Information Systems, City of Mount Vernon

Our fire department dispatchers have been using CAD software for many years, and adding the spatial information of a map view was a natural evolution.

The city's GIS development provides a framework to access and view different types of information. To be able to look at a given spot on the map and instantly determine which parcels are there, how the owners could be contacted, whether there are hazards nearby and where the nearest city resources are located has been a much desired goal that can be fulfilled by GIS. The city is also ready to move forward in building, maintaining and linking the various layers of information that are related to the orthophoto base map which was developed by the county.

The map associated with the city's emergency dispatching system is one example of this. I obtained a copy of ESRI's MapObjects software and began coding an application that would zoom in on a given street address and display information about the nearby parcels. The variety of information available will grow as our database grows in the coming months. The same is true for the variety of spatial layers, which too will be expanding through our continuing GIS development efforts.

While the CAD system is specialized, with automatic parcel locating based on incoming phone call data and the display of information

pertinent to dispatchers, it is a good start towards building GIS applications that can be tailored to the needs of other city agencies including parking ticket collections and Public Works. A GIS software tool like MapObjects allows the city to deploy useful applications with a lower learning curve and far fewer operating steps than are necessary with more powerful GIS applications for end-users.

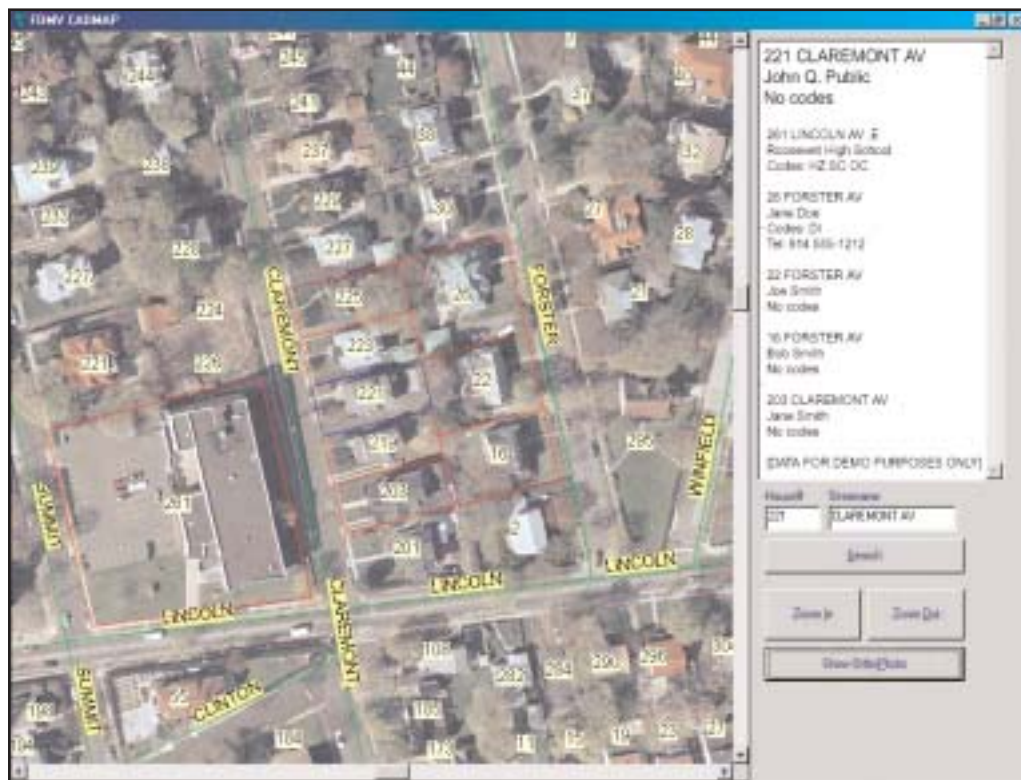
For more information contact Joseph Acampora at (914) 665-2396.

More Local News

GIS staff recently completed the **Village of Larchmont** and **Town and Village of Mamaroneck** GIS User Needs Assessments (UNA). All three municipalities are planning to work together on the implementation strategies to form an inter-municipal GIS program. This fall GIS staff will be working with the **Village of Pleasantville** on a similar study.

The county also set-up a GIS-based Asset Management, Mobile GIS and Pavement Management demonstration for the **Town and Village of Mamaroneck** Engineering and DPW with Woodard & Curran (<http://www.woodardcurran.com>).

GIS staff recently developed an ArcIMS application for the **City of Peekskill** which is currently under review by city officials. Similar work is in development for the **Town of Pound Ridge**, **Village of Hastings-on-Hudson**, and **City of New Rochelle**.



The City of Mt. Vernon Fire/CADMAP MapObjects application image drapes street names and centerlines, as well as parcel address information, on top of the county's orthophotography. When a user queries and identifies a specific parcel, the parcel is highlighted in blue (Parcel #221 above) with adjoining parcels being highlighted in red. The application generates a list for notification purposes.

GPS and Nextel Phones

Westchester County Department of Corrections (DOC) officers currently use GPS-enabled mobile phones. With "Air-Trak for Nextel", a service from Cloudberry (<http://www.cloudberry.com>), the phones report a location (X,Y) every three minutes (unless in use for voice transmission). The client service provides both live and replay position tracking in a map display, including heading, speed and approximate street address. The county recently acquired four additional phones for deployment and testing with Department of Probation and GIS staff. In parallel with an ongoing county AVL study, GIS staff is investigating options for integrating mobile phone tracking functions into a wide range of current GIS applications including public safety, transportation, and asset management. For more information, contact Deborah Parker at (914) 995-3888 or Sgt. Don Smith (DOC) at (914) 231-1435.

Parcel Locator Update

County GIS has selected Bowne Management Systems (Mineola, NY) to assist in the migration of an existing ArcView 3.2 tax parcel data viewer, which the county provides to local governments. The application allows municipalities to search, zoom, or buffer parcels by owner name, section/block/lot, and address. Additionally, users can print maps utilizing a standardized map layout template. Work and migration of the application involves the use of ESRI's new ArcGIS Engine Windows environment. By using ArcGIS Engine, municipalities are not required to have the ESRI ArcGIS suite resident on their workstations. The application is expected to be completed by the end of the 2004. For more information, contact Tong Zhou at (914) 995-3012 or visit the Bowne website at <http://www.bownegroup.com>.

Zoning Coverage Update

One of the most commonly used and downloaded Westchester County GIS datasets is the countywide local zoning districts coverage. The Department of Planning is initiating work on an update of the 1996 countywide coverage which contains over 160,000 unique polygons with an associated zoning code. The coverage will be modified based on updated zoning maps (hardcopy and digital) being obtained by the county from local government sources. County GIS staff is assisting county planners with new ArcGIS 9 spatial editing tools which will be utilized as part of the update. For more information on the zoning district coverage update, contact Paul Gisondo at (914) 995-3032.

Indian Point Emergency GIS (IPEG) Application

Westchester County GIS has recently received Version 1.0 of the Indian Point Emergency GIS (IPEG) application from ESRI. IPEG is a custom desktop application developed using ArcGIS Engine and written in Java. It was designed to support decision-making and emergency response functions associated with possible events at the Indian Point Energy

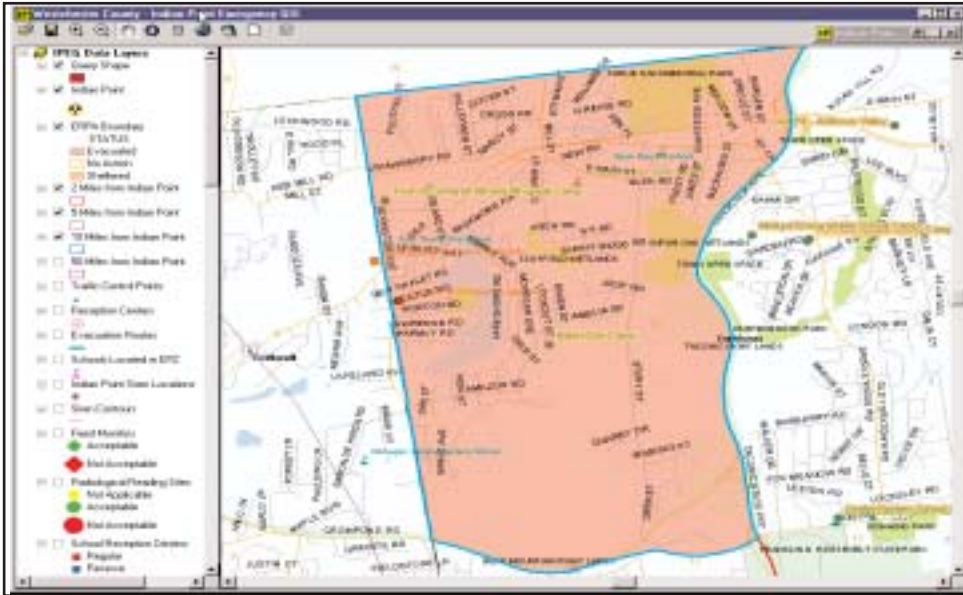
Center, as well as emergency events throughout Westchester County. In addition to impact assessment, IPEG includes GIS functions such as pan/zoom, identify, report generation, spatial analysis, and map making.

The functionality of the application is driven by the "IPEG query wizard." Users can identify

areas such as school districts or emergency response planning areas to generate lists of facilities (hospitals, day camps, congregate care centers, etc.), which may be located in impacted areas. Users can also "buffer" individual facilities (buildings, geocoded addresses, or locations defined "on-the-fly") to delineate other potential impacted areas. IPEG generates reports in Excel format listing all affected facilities including a map of the affected areas. The query wizard provides the user with the ability to perform additional tasks including select features by record, select features from map, find an address, create buffer zones, draw a rectangle, circle or polygon on the map, and select a plume model.

The IPEG Administrator will perform the majority of the application configuration using the Admin Tool, for example assigning whether a data layer is considered critical or non-critical. The end users will have the ability to add additional data layers to the IPEG Viewer as well as change their symbology.

Designed for deployment in the Department of Emergency Services and the Emergency Operations Center (EOC), it is anticipated the application will be further developed to support decision making in other public safety and emergency response program areas. For more information on the IPEG application contact Ariane Porter at (914) 995-3371.



This image highlights the result of a user query to locate critical facilities such as senior housing sites, nursery schools and day camps within the boundary of Emergency Response Planning Area (ERPA) 10. IPEG allows the user to select existing polygons (ERPAs, fire and school districts, etc.) or create new ones to determine affected facilities.



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