Westchester County
Information Technology
Geographic Information System

GEOGRAPHIC INFORMATION SYSTEMS

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Westchester County GIS Provides Outreach and Instruction to Croton-Harmon High School Science Class

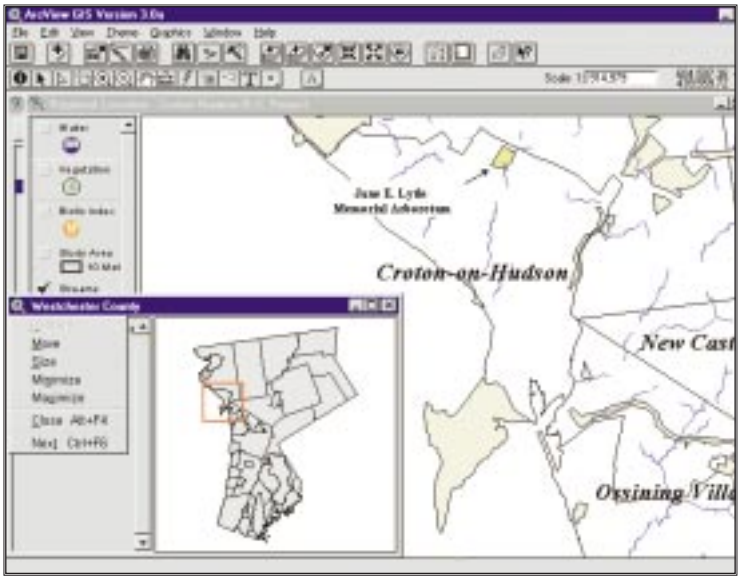
A New York State Learning Technology Grant from the State Education Department has enabled Donna Light-Donovan, a science teacher at Croton-Harmon High School, to work with the Westchester GIS in developing a GIS database for student research.

With the assistance of Ana Hiraldo and Sam Wear, the county provided high school students with "base-line" Village of Croton digital data, including wetlands, geology, soils, and hydrology, among others, for the development of a remediation plan for the Jane E. Lytle Arboretum. The Jane E. Lytle Memorial Arboretum is a 20-acre parcel of land donated by Samuel Rubin in 1975 for conservation and education purposes. Students were assigned to do a preliminary evaluation of the vegetation, biotic index, water quality, soil quality and location and path of the stream channel in two 10^{sq} meter stream sites within the Arboretum. Using ArcView, students mapped the location of their data samples which will be used in an on-going effort to monitor the environmental conditions of the arboretum and surrounding areas. For more information on the project, contact Ms. Light-Donovan at (914) 271-2147 or e-mail at dld@highlands.com. To learn more about how Westchester County GIS can assist educational programs, contact Ana Hiraldo at (914) 285-4416 or e-mail at aeh2@exchance.co.westchester.ny.us.

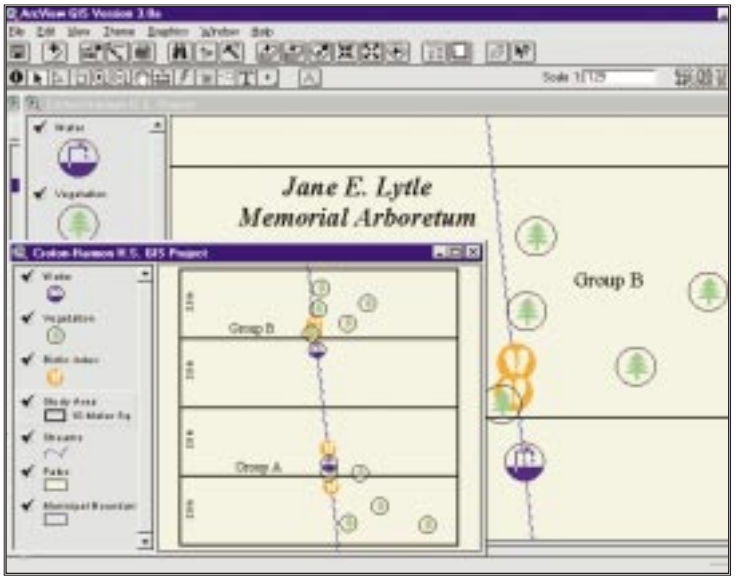
New York State GIS Clearinghouse Metadata Development

County GIS staff are working closely with the New York State GIS Clearinghouse in providing "metadata" (data about data) on coverages in the county's central GIS database. Recently, staff attended a metadata training workshop which provided an overview of the new Web-based metadata creation tools being provided by the Clearinghouse. NYS Clearinghouse metadata is compliant with national standards established by the Federal Geographic Data Committee (FGDC). The Clearinghouse will enable Web users to identify GIS datasets throughout the state and provide information on how to obtain the data.

The State GIS Clearinghouse is at: www.nysl.nysed.gov/gis/repository.



Regional location of the Croton-Harmon H.S. Science project for the evaluation of the Jane E. Lytle Memorial Arboretum.



This screen shows a section of the study area which identifies water, vegetation, and biotic index site locations.

Upcoming GIS Conferences

NEARC

October 4- October 7, 1998

The 13th Annual Northeast ARC/INFO Users Group Conference in Bethel, Maine. This year's 3½ day conference is scheduled to include workshops and seminars, user poster and paper presentations, ArcView training sessions, and networking with regional GIS professionals. For more information & registration visit the conference WEB site at *http://www.gis.usm.maine.edu/nearc98* or call ESRI at (978) 777-4543.

NYSGIS

September 23 - September 24, 1998

The 14th Annual New York State Geographic Information System Conference in Rochester, New York. *"Breaking Down the Barriers to GIS"*. Seek solutions to your geographic data management networking opportunities and exchange information with other New York State professionals. Registration fee is $55.00. For more information & registration call Carol Weinheiner or Horace Shaw at ESF at (315) 470-6891 or visit *http://www.esf.edu/conted/conferen.htm.*

New GIS Databases

Several GIS databases/coverages have been added to the county's central GIS database. Specific coverages include:

- Chemical Bulk Storage Tanks
- Toxic Release Inventory (TRI)
- State Pollutant Discharge sites Elimination System (SPDES)
- Water (stream) · Gaging Stations
- Solid Waste Facilities
- Landscaping and Nurseries
- Cinemas and Multiplex Locations

Most data was obtained from outside agencies such as U.S. Environmental Protection Agency and N.Y. State Department of Environmental Conservation. Other data was developed in-house by county staff. Coverages are available in ARC/INFO export format by calling the GIS data request line at (914) 285-6276.

County Begins Major Redesign of GIS

New Products to be Integrated with Core ARC/INFO

After nearly ten years of supporting the central GIS effort with UNIX ARC/INFO, county GIS staff, with support form ESRI expect to be redesigning and implementing several key system components over the next 6-18 months. Some of the more important areas of development include:

ArcView 3.1:

Quickly becoming a standard throughout government, ArcView 3.1 will be the primary software platform for most "desktop" GIS users in county government. ArcView utilizes both ESRI ArcView shapefiles and ARC/INFO coverages stored in the county's central GIS database. ArcView is also capable of accessing and utilizing a wide range of digital file formats including AutoCAD (.DXF), TIFF, text, video, and database files.

ArcView Internet Map Server:

ArcView Internet Map Server (IMS) provides the easiest way to publish maps or GIS applications on a Web site. It is an extension to ArcView 3.0. It allows users to view, browse, explore, and query maps on the Web with a ready-made, generic front end, called MapCafe™, a Java™ applet.

Spatial Database Engine (SDE):

The Spatial Database Engine™ is a spatial data manager that stores geographic information in a commercial relational database management system (RDBMS), such as Oracle. Its functionality includes the ability to quickly access data using spatial and attribute queries. SDE provides an interface for programmers that allow them to build custom applications.

Oracle:

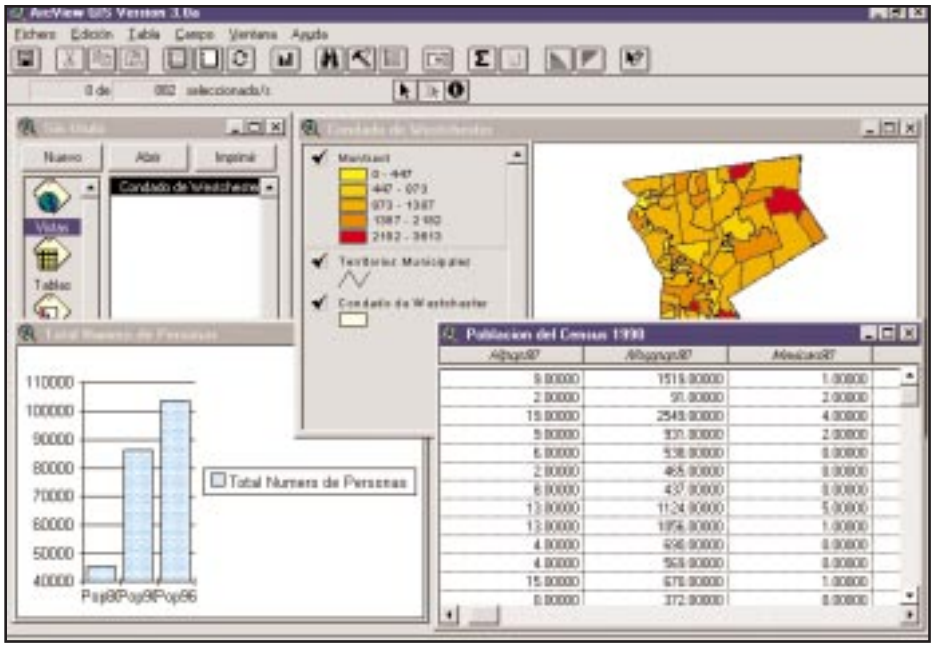
Replacing INFO with ORACLE will be a top priority for county GIS staff. As previously noted, most ESRI products and most notable SDE, are integrated with Oracle to provide GIS users with open, standards-based, spatial database management capabilities.

MapObjects:

MapObjects™ is a powerful collection of mapping and geographic information system (GIS) components that let the application developers add dynamic mapping and GIS capabilities to their applications. It can be used with a variety of industry-standard programming environments, such as Visual Basic, Visual C++, and others.

Spanish ArcView:

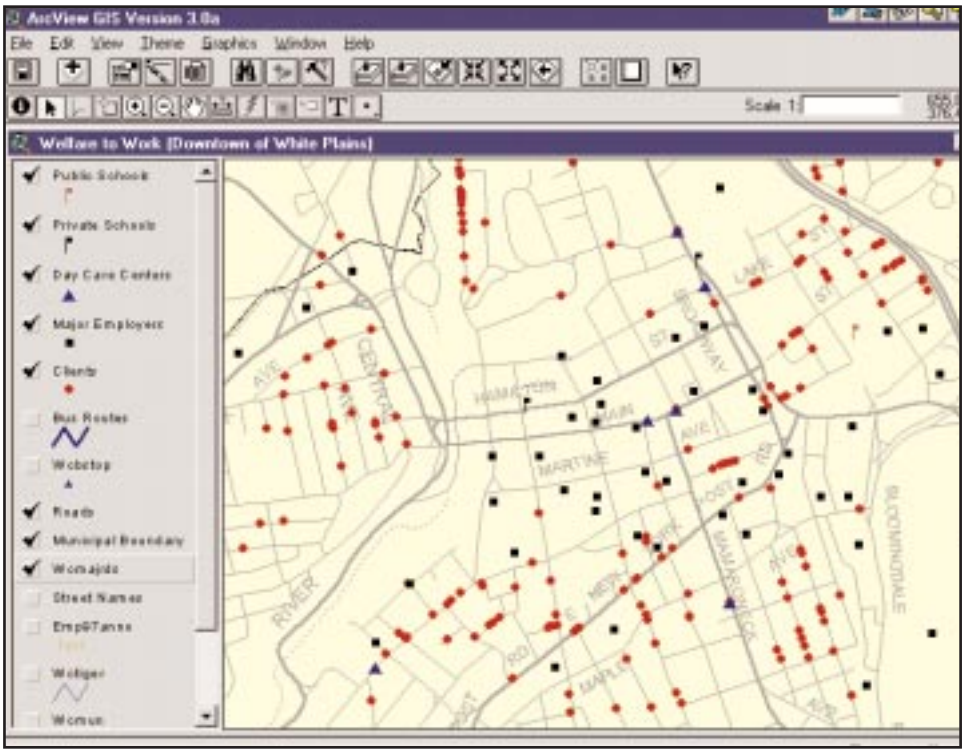
A Spanish Language Supplement of ArcView which enables GIS users to take full advantage of Arc View with a Spanish interface is now available. The county is planning for the integration of Spanish ArcView with Web GIS applications. To get more information on the Spanish language supplements, contract Ana Hiraldo at (914) 285-4416.



Westchester County Hispanic Population distribution using Spanish Version of ArcView 3.0a.

Health and HumanServices

GIS Prototype under review for Department of Social Services



GIS staff recently began work in building GIS programs which can be used to support planning programs in the Westchester County Department of Social Services (DSS). An initial prototype is shown above which illustrates how DSS client data can be shown in context of other human services and community related GIS coverages. For more information, contact Xiaobo Cui at xxc1@exchange.co.-westchester.ny.us

GIS in Local Government

GIS staff continues to provide valuable assistance to local governments with several GIS initiatives in Westchester County. County support includes identifying contractors or consultants for specific GIS development needs, software training and education, developing implementation plans, and assisting in preparing grant applications. A brief summary of local government assistance includes:

Town of Mount Pleasant: GIS staff completed a State Archives and Records Administration (SARA) funded GIS User Needs Assessment for the town in June and is planning to help organize a GIS Steering Committee to oversee GIS development. ***Village of Mount Kisco*** and ***Town of Ossining***: County GIS staff are scheduled to begin working on GIS User Needs Assessments and Implementation Plans early this fall for these municipalities as both received 1998-1999 SARA grants. GIS staff is preparing to provide additional ArcView training for ***City of New Rochelle*** staff. The training will be customized to include New Rochelle datasets. The ***City of Yonkers*** continues to work with county GIS staff in finalizing contracts with its tax mapping contractor and scoping first generation GIS applications and databases in the assessor's office. GIS development continues in the ***Town of Greenburgh***, with GIS staff providing continued assistance in related automation efforts in the area of infrastructure systems. GIS meetings are also scheduled with the ***Towns of Somers and North Castle*** in the month of August. In what is expected to be a major impetus for new GIS development over the next 6-12 months is the conversion of hardcopy tax maps in several northern Westchester County municipalities. As part of the Croton Watershed Planning Program, the delivery and availability of digital tax parcel data is anticipated by early fall. For more information the Department of Information Technology GIS assistance to local governments, contact Ana Hiraldo at (914) 285-4416.

Westchester County Executive Initiates Review of Large Scale Mapping Project

June 13th Meeting Brings Together Representatives of Government, Utilities and Business to Discuss Project Scope

Westchester County Executive Andy Spano has formed a Task Force to examine the feasibility of the first county-wide, large scale digital mapping project. As the interest and need for high-accuracy spatially referenced data continues to grow in both government and business, Westchester County is taking the lead in coordinating government and business stakeholders, identifying technical issues, and providing project design support. Current task force members include representatives from the Municipal Officials Association, county government, Consolidated Edison, BellAtlantic, and the Construction Industry Council. Additional government and business representatives are expected to be added to the Task Force as the projects develops. In addition to capturing and developing traditional planimetric databases, the project could potentially include digital orthophotography and street level elements such as catch basins, manholes, fire hydrants, and a wide range of infrastructure features. Over the next several months, the Task Force will be examining a wide range of project issues, including funding requirements, organizational components, data sharing and distribution, individual agency (stakeholder) needs, industry trends, as well as hardware and software requirements. A comprehensive User Needs Assessment, which will define the project's technical specifications, is anticipated to be initiated in the late summer. This past spring, the county issued a Request for Information (RFI) and received responses from 12 national photogrammetric and mapping firms with experience in similar county and regional base mapping efforts.

For more information on this project, contact Sam Wear at (914) 285-4400 or Dierdra Gray at (914) 285-2946.

UpComing GIS Courses

Westchester Community College
1998 Fall Courses

Introduction to ArcView
Classes start Sept. 16-Nov. 25
Wednesdays 4:00 pm - 6:00 pm.

GIS for Government and Business -
Five Tuesdays (Sept. 15, Sept. 29, Oct. 6, Oct. 20, and Nov. 10) 3:30 pm - 5:00 pm
Instructor: Sam Wear, Westchester County GIS Manager.

For more information & registration on both courses call WCC @(914)785-6830.

GIS BULLETIN BOARD

File Edit Special

GIS Speak!

A recurring column dedicated to unraveling some of the mysteries of GIS jargon.

CAD: Computer-aided design. An automated system for the design, drafting, and display of spatially and graphically oriented information.

Global Positioning System (GPS): A system of satellites and receiving devices used to compute positions on the earth. GPS is used in navigation, and its precision supports cadastral surveying.

Tic: Registration or geographic control points for a coverage representing known locations on the earth's surface.

Polygon : A coverage feature class used to represent areas. A polygon is defined by the lines that make up its boundary and has attributes that describe the geographic feature they represent.

Line: A set of ordered coordinates that represents the shape of geographic features too narrow to be displayed as an area at the given scale (e.g., contours, street centerlines, or streams), or linear features with no area (e.g., state and county boundary lines).

Point A single x,y coordinate that represents a geographic feature too small to be displayed as a line or area (i.e. fire hydrants, trees, manholes).

GIS

Data Request Number
(914) 285- 6276

MORE GIS WEBSITES

GPS World
http://www.gpsworld.com/classified.shtml

GeoPlace
http://www.geoplace.com

GISMO
http://everest.hunter.cuny.edu:80/gismo

GIS Dictionary
http://www.geo.ed.ac.uk/agidict/welcome.html

Microsoft Terra Server
http://terraserver.microsoft.com/default.htm

Data Access and Support Center (DASC)
http://gisdasc.kgs.ukans.edu

CIA World Map database and lat/long cord.
ftp://ftp.cc.toronto.edu/doc/geography

LandSat Homepage
http://geo.arc.nasa.gov/landsat/land history

Westchester County GIS
is now located in the
Department of Information Technology

DEPARTMENT OF INFORMATION TECHNOLOGY
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148 Martine Avenue
White Plains, NY 10601

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