

## **Burlington County Department of Information Technology, GIS Section**

### **BACKGROUND**

The GIS Section was established in 1995 to act as a coordinating body for GIS activities within the County. Thus, the GIS Section is responsible for creating, maintaining, acquiring and serving digital geographic data layers that are useful to the County's GIS user community. In order to facilitate the use of this data, the GIS Section also provides GIS software, training, technical support, and project development assistance and mapping to County departments. Departmental users of the GIS include Public Safety/Emergency Management, Engineering, Health, Resource Conservation, Prosecutors, Highway, Board of Elections, Legal and the Burlington County Bridge Commission's Economic Development office. Each department has a different level of autonomy thus requiring various degrees of support with the Burlington County Bridge Commission's Economic Development office employing their own full time GIS Specialists.

To keep abreast of technology, new data, data standards and other GIS user projects, the GIS Section attends various training programs, conferences, user groups and informational meetings throughout the year.

### **STRUCTURE**

The GIS Section is located in the County's Department of Information Technology. This allows it to take full advantage of IT support and expertise in the areas of systems, networks, communications and personal computers. A central GIS server and enterprise geodatabase supplies GIS data and software to the County's users over the County network. Other equipment in the GIS Section includes a large format plotter, large format scanner and 7 GPS (Global Positioning System) units; 2 Trimble ProXHs and 5 Trimble GeoXTs. Four additional large format plotters and 7 GPS units are located in other departments throughout the County.

### **SOFTWARE**

In order to be compatible with state and local agencies, the GIS is based on software from Esri (Environmental Systems Research Institute), often considered the leader in GIS. A variety of software is available to County Departments including ArcGIS Desktop and ArcInfo workstation. The County also has licenses of 3D Analyst for three dimensional visualization, Spatial Analyst, ArcGIS Server for publishing maps on the Internet, ArcSDE for serving spatial data from a database to the other GIS software, and SQL Server, a relational database management system that houses the County's enterprise geodatabase.

The GIS Section also provides a web-based application called Pictometry Online (POL) which is primarily used for viewing oblique aerial imagery but also incorporates framework GIS layers such as roads and parcels. POL is a restricted application limited to use by County employees, municipalities, fire departments and police departments. Inquiries regarding access to POL by these entities should be directed to Merrilee Torres at 609-702-7067 or mtorres@co.burlington.nj.us.

### **DATA**

Since its conception, the GIS Section has built a robust dataset of GIS information. Some framework data was developed primarily in house including, but not limited to, roads with a locational accuracy or +/- three feet, tax parcels linked to ownership information, and election districts. Other data layers were purchased or acquired from other government agencies and include soils, wetlands, landuse/land cover, flood plains, census, roads for use in mapping addresses, various boundary layers, and a wide variety of environmental information. Several digital orthophoto aerial photo sources are also housed including imagery from 1991, 1995, 2000 and 2002, 2005 & 2007, 2010 & 2012. The local regional planning agency, DVRPC (Delaware Valley Regional Planning Commission), is planning another overflight in 2015 and Burlington County expects to receive the resulting aerial imagery in 2016.

The GIS Section also works on various projects to collect datasets required by individual departments with a heavy emphasis on GPS and address matching to create the layers. Examples of such layers include fire hydrants, county road signs, bridges, stormwater infrastructure, and animal shelter intakes.

### **WEB MAPPING**

The GIS Section prepares and maintains interactive web maps for both internal use on the County's Intranet as well as publicly accessible maps. An example of a web map for the public is our [Parks and Trails in Burlington County](#) which can also be found on the Parks web page.

To build and support web mapping, the GIS Section uses ArcGIS Server and an ArcGIS Online Organizational account.

### **COOPERATION WITH OTHER AGENCIES**

The GIS Section has a long history of cooperating with other organizations. In the past, this was primarily accomplished through four mechanisms: user groups, GIS Data Sharing Agreements, Equipment Sharing Agreements and limited technical support. However, the GIS Data Sharing Agreement process was discontinued in January 2013.

In keeping with the spirit of open data access, most data can now be requested free of charge by any agency. Note that if substantial work is necessary to fill a data request, a Special Service Fee will be charged and some data may be redacted or unavailable due to homeland security concerns. Municipalities, fire departments, and police departments may enter into an Equipment Sharing Load Agreement to borrow GPS equipment or have limited use of GIS software, scanner and plotters at the GIS Section office.

Through the Burlington County GIS Users Group, the GIS Section is able to educate and inform a user community comprised of county personnel, local government, and private entities. This also acts as a forum to accessing user needs and acquiring information regarding their current projects. The GIS Section endeavors to assist other organizations, specifically municipalities, fire departments and police departments with limited technical support and mapping. Most of this support is provided over the phone with occasional site visits. Mapping requests are handled time permitting with most efforts focused on empowering the municipalities to become self-sufficient.

The GIS Section stays abreast of current topics and issues through involvement with groups outside the County. Staff member regularly attend meetings of the Delaware Valley Regional Planning Commission's Information Resources Exchange Group (DVRPC IREG), the New

Jersey Geospatial Forum, the New Jersey Department of Environmental Protection's County Environmental Health Act (NJDEP CEHA), MAC URISA (Mid-Atlantic Chapter of the Urban Regional Information Systems Association) and MAGTUG (Mid-Atlantic Geospatial Transportation User Group). The GIS Section has also participated in the following NJ Geospatial Forum task forces; Parcels, Emergency Management and Partnerships, and OPRA.