

NYC OEM's Public Safety GIS Data Development Center

Background

Emergency planning and response efforts require a wide variety of data sets. While some data sets, such as critical facilities and building lot information, are used on a daily basis, other data sets are used rarely. Because GIS specialists at NYC's public safety agencies are typically busy with ongoing operational concerns, they may not have time to gain an in-depth understanding of the available data. At times, the required data may be available, but not in a readily useable format, or its usefulness may be limited by poor documentation. Complex data sets, like the Census data, may require study to ensure that data are used appropriately. On occasions where a new data set is clearly needed, more than one agency may have staff attempting to develop parallel data sets.

The Public Safety GIS Data Development Center was created to develop and provide GIS data sets to NYC's public safety agencies (New York Police Department, Fire Department of New York, Office of Emergency Management, Department of Health and Mental Hygiene, and Department of Environmental Protection). The center is responsible for assessing which GIS data sets are available; which ones need collecting; which ones need development; which ones need updating; and what data formats are best suited for the partnering agencies. The Center provides assistance in choosing the right data sets for a project and works to make the data more accessible.

Roles and responsibilities

Data development – Develop new data sets to meet identified public safety needs.

Examples of past and current data projects include:

- Schools – In New York City, there may be multiple schools within a single building. There may be a charter school co-located with a traditional school or a large high school may have been reorganized into several smaller high schools sharing the same building. Schools may have classrooms in more than one building. The Center worked with DOE to develop a multi-tiered data set that captures the complexity of the school data.
- Buildings – City buildings may have more than one valid address, which can lead to confusion during field response. The Center combined data from several sources to create a data set that tags building footprints with various attributes, including all valid addresses, land use, building class, number of floors, number of residential units, and building name. Most recently, USPS data was used to tag each building with its valid postal address(es).
- Snow priority designation – Following a major blizzard in late December, 2010, the center worked with DSNY to convert paper documents describing salt spreader

and now plow routes into a GIS format. Each street segment was given a priority designation of primary, secondary, or tertiary.

- Hurricane evacuation zones – Using data from the National Weather Service’s storm surge model, the city’s hurricane evacuation zones were redrawn in 2013. The new zones incorporate new scientific information on the likely extent of storm surge and allow a more targeted evacuation based on both the category and bearing of a hurricane.

Data acquisition – Acquire new data sets using various state, local and federal contacts as needed by OEM’s operations or planning divisions, or upon special request from a public safety partner.

Data analysis – Examine existing data sets to determine best uses of the data, especially where more than one data set exists for a given type of data. Improve usability of data within the Esri (whose mapping software is used by OEM) environment by creating layer files, domains, field aliases, relationship classes, etc.

Data catalog – Maintain an annotated list of public safety data sets. Data catalog includes information on the source, owner, timeliness, update frequency, and characteristics of the data.

Data dissemination – Provide data to public safety agencies at the city, state and federal level (subject to distribution restrictions).