# Winter 2009 - Desktop GIS: The National Grid Wants You!

By Todd Lusk

In case of a disaster would you want emergency responders to be able to easily locate you? What would they do if the disaster was as big as something like Katrina, with no structures left on the ground by which to navigate? What if a relatively simple grid system could assist emergency responders in finding any location on the globe? Such a system currently exists. It is called the National Grid.

The Dakota County Office of GIS has been working with other counties, cities and some emergency responders to develop a series of maps using the National Grid for use in just such a scenario. The map series includes three different types of maps which show differing amounts of detail along with the National Grid. The primary dataset is a "points of interest" layer that includes features like police and fire stations, churches, schools and other resources in the community. Depending on the map scale other information is shown as it is available.
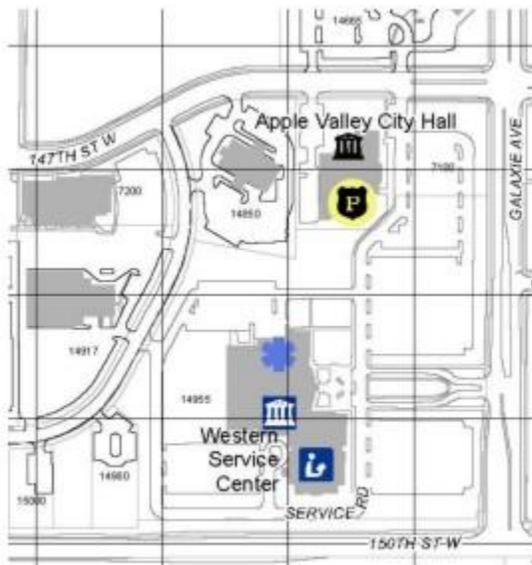
An example of a 1:6,000 scale map.

The first map in the series (referred to as "Neighborhood Maps (1K)" in DCGIS) is based on a scale of 1 inch = 500 feet (1:6,000) and shows the most detail. Each map corresponds to a 1,000-meter National Grid "cell" and is named according to its National Grid cell designation.

These "neighborhood" maps also feature street names, house numbers, parcels and other planimetric data where it is available. The maps are designed to fit perfectly on an 8.5" x 11" sheet of paper which makes printing the maps from just about any printer very easy.

The second map in the series (referred to as "Topo Maps (quarter-quad)" in DCGIS) is based on the 1:24,000 USGS quadrangles, and show less overall detail than the 1:6,000 scale maps. These maps do cover a larger geographical area and are based on an already existing standard used by the USGS. They

An example of a 1:24,000 scale map.

show much of the same "points of interest" information but also add some additional data such as contours. These maps are basically updated versions of the USGS' 1:24,000 quadrangles without the stringent cartographic design standards used for creating those maps.

A third variation of the maps (referred to as "Topo Map (10K)" in DCGIS) basically looks the same as the 1:24,000 scale maps but instead is based on the individual 10,000-meter National Grid "cells" instead of the USGS quadrangles. Using this approach, each of these maps ties directly to a National grid "cell", and each 1,000-meter cell subdivision displayed on the maps ties directly to a 1:6,000-scale map. This also helps to avoid the somewhat cryptic naming convention of the USGS Quadrangle map series, and provides a

direct interoperability between the 1:10,000 and 1:6,000 scale maps.

Currently, all of the National Grid maps are available for download as PDF documents through Dakota County's interactive map website, DCGIS. They can be accessed by going to the Dakota County website (http://www.dakotacounty.us) then to "Home & Property". Under the "Property Information" section look for the link to the "Interactive GIS Map" (or search for "Interactive GIS" on the county home page).

In the interactive map, go to the "Layers" tab, then expand the "Base Map" folder and check the box next to "Neighborhood Maps (1K)" or "Topo Maps (quarter-quad)", depending on which map is desired. The "Identify Features" tool on the toolbar across the top of the map can then be used to click in the map to open the appropriate PDF document. The map may need to be zoomed in slightly before all of the National Grid map indexes become selectable.