

Office of Local Government

- Supporting Flood Response Efforts -

In the aftermath of the May 2, 2010 flooding, the Office of Local Government (OLG) tried to identify ways that it could assist local government officials in their response efforts. Through the use of Geographic Information Systems (GIS) technology, OLG conducted a flood analysis for the following Tennessee counties: Dickson, Houston, Humphreys, Stewart, Jackson, Crockett, Hickman, Maury, Cheatham, Madison, Dyer and Perry.

The purpose of the analysis was to identify which parcels within the county had the greatest likelihood of experiencing flooding. Of these parcels, we then identified which contained improvements as well as the value of the improvement(s). This analysis was conducted by overlaying the Tennessee Base Mapping Program (TNBMP) parcel data with the Digital Flood Insurance Rate Model (DFIRM) 100 year flood plain data to see where intersections occurred. For counties that had building point data, we took our analysis a step further to identify which buildings fell within the 100 year flood plain and thus were likely to have flood damage. This provided a more accurate count of the buildings that were likely to have damage.

After the analysis was complete, there were three output products produced for use within the County Assessor's Office.

1. PDF maps depicting which parcels intersect the 100 year flood plain.
 - a. This was provided to counties that don't use GIS software within the Assessor's Office.
2. Custom parcel data sets that contained just the parcels that intersected the 100 year flood plain.
 - a. This was provided to counties that do use GIS software within the Assessor's Office.
3. Excel spreadsheet indicating which parcels intersected the 100 year flood plain and the total value of the improvement(s) on each parcel.

The information provided through these output products allowed local officials to get a very general damage assessment figure, but more importantly, identify where within their county the damage was likely to be the worst. This information could then be used to properly allocate resources to these flood prone areas.

This initiative is a good example of how OLG is continuously looking for ways that GIS technology can be used to make government work better within Tennessee. For more information on this or other programs within OLG, please contact us at (615) 401-7773.