GIS Connection

Whiteside County GIS Office

- Whiteside County is aiming to be up and running with ArcGIS 10 by the end of the Fall.

- The Road & Address Atlas is available for purchase for $10. Visit the GIS webpage for more information.

- The Illinois GIS Association Fall Conference is October 20-21, 2010 in Naperville, IL.

FARMS & Farmland Assessment

Farmland assessment is a significant project each year for the GIS office. The GIS office utilizes FARMS (Farmland Assessment & Reporting Management System) software from The Sidwell Company in conjunction with our ArcGIS software to generate assessments.

Farmland is assessed based on the productivity of the parcel. The FARMS program takes input information from our parcel, land use, soils, and flood layers and overlays them together to calculate the values of each combination of soil and land use classification present in each parcel. Basically the GIS program "cookie cutters" out of each area of the parcel the particular land use on a particular soil type, and also if flooding has occurred. A soil type and land use classification

exists for every area of the parcel. The flood layer only affects those portions of a parcel for which a 10-year flood history has been recorded.

Then the FARMS program takes this information and calculates an assessment based on the productivity index (PI) for each soil type, the fractional value assigned to each land use class, and a reduction if flooding has occurred. In addition, a file of the 5-year average of taxes levied on parcels in a drainage district is also input and is used to debase (or lower) the assessed value.

Bulletin 810 in 2006 mandated the current rules governing farmland assessment. Using the GIS for farmland assessments is a much more accurate and efficient method to calculate values than prior methods.

An Example of farmland layers in the GIS System: Parcels - Red, Soils - Green, Flood - Blue, Land use - Color Fill

Beacon Website

One of the great tools that Beacon offers is the spatial selection tool. This tool is located next to the measure tool and is only available when you have one or more features selected (highlighted). This tool offers two spatial operations: *Buffer* and *Select*. Buffer allows you to choose features within a certain distance of your selected feature(s). Select allows you choose features that intersect, are completely within, or have their centers within your selected feature(s). The "Results" tab displays the output of these processes.

For example, if you needed to send a mailing to property owners within 300 ft of a certain parcel, you could utilize the *Buffer* operation. Start by selecting the parcel using the search function or the white arrow tool. Click Spatial Selection. Choose Spatial operation: Buffer. Set the layer to "select features of" as Parcels. Enter the distance of 300 ft. Then click the "Buffer" button. The map will display the results and a list of parcels selected now exists under the "Results" tab.

The spatial selection tool is probably most useful on the Parcels layer, but can be utilized on other layers as well.

The Beacon GIS Website is located at www.beacon. schneidercorp.com. The map portion is subscription only.

In this issue:

Whiteside County GIS

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"The vast majority of the world is increasingly relying on more technologically advanced forms of maps ." — *Meg Beasley, National Geographic*

- Please feel free to contact Lauren Lee with any questions or comments at 815-772-5185 or llee@whiteside.org.

- Fun Map: Try ArcGIS Explorer Online at http://explorer.arcgis.com/

- Visit http://www.idaillinois.org/ to view digital archives of the Sterling Public Library including Historical Aerial Photography and Maps. Click under "Participating Institutions," choose the Library, then "Connect" to view.
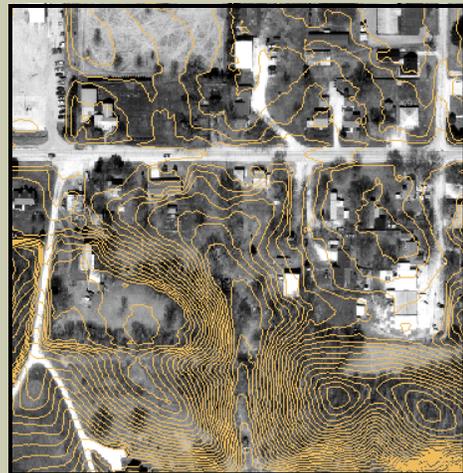
The Intern's Corner

My name is Willy Mekeel and I am a 2004 Sterling Newman graduate and current graduate student at Minnesota State University Mankato studying geography and GIS. I began my internship in May and it will end at the beginning of August this year. The past three months have given me a chance to apply my coursework in a government setting and have been a great learning opportunity.

This summer I created various layers for our GIS including survey monument locations and descriptions, cell tower sites, polling sites, police and fire stations, township offices, and city hall sites to name a few. Using tax districts' legal descriptions I helped verify our layers' boundaries. Another project we will continue to work on through August is the processing of LIDAR data received from IDOT to create contour maps. This high resolution elevation data will be useful for various projects throughout the county.

Two-foot contour lines from a sample of processed LIDAR data in Unionville near Morrison.

Information about the new LIDAR data can be found at http://www.isgs.illinois.edu/nsdihome/webdocs/ilhmp/data.html.