LiDAR Surface Topography of Jo Daviess County, Illinois

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LiDAR Elevation Data
The LiDAR elevation data used in this analysis was acquired in 2008 by the Illinois State Geological Survey and the University of Illinois. The data was acquired using airborne LiDAR technology and represents a digital terrain model (DTM) showing a 0.2 mi² area in western Jo Daviess County (T27N, R1E). A DTM is a three-dimensional representation of the ground surface, or a soft target, such as vegetation. When a laser pulse encounters a soft target, e.g., a tree, a portion of the light is reflected back to the sensor, creating what is commonly referred to as a "bare-earth" point cloud.

The bare-earth point cloud, comprising only ground returns, was processed to remove vegetation returns, canopy, and shadow points. The processed returns represent the ground surface, and are extracted from airborne LiDAR data using automated filtering methods to produce what is commonly referred to as a "bare-earth" point cloud. Note the distinctive circular features situated along the crests of the sinkholes observable on this DTM. The LiDAR surface topography map was created from enhanced LiDAR data collected for Jo Daviess County, Illinois, made available through the Illinois State Geological Survey and the University of Illinois.