1) LiDAR data used in computer modeling improves flood studies. A: Orthoimagery with current floodplain impacting many homes; B: LiDAR topography utilized in flood study; C: Results of study help design projects to limit future flood impacts.

Illinois Height Modernization Program elevation data has been incorporated into most aspects of flood studies at Illinois Department of Natural Resources (IDNR) Office of Water Resources. The availability of this high resolution elevation data and GIS has greatly improved the efficiency and accuracy of traditional water resource analyses (Figure 1 A-C). It has also allowed for the development of new GIS applications for mapping the extent and depth of flooding from National Weather Service river forecasts in near real-time in advance of a flood. The inundation maps produced through the use of LiDAR now help direct flood response resources for 49 miles of the Des Plaines River (Fig. 2) and 31 miles of the Rock River in Winnebago County.

IDNR Office of Water Resources: dnr.state.il.us/owr/

2) LiDAR data is utilized to map forecasts of river flooding. Knowing the extent and depth of predicted flooding can help emergency responders and communities minimize flood damages.
Illinois Height Modernization Program
crystal.isgs.uiuc.edu/nsdihome/webdocs/ilhmp/

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