



***Operation Blown Away:
GIS Unit Simulates Tornado Disaster in Emergency Response GIS Field Training***
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This summer the Geographic Information System (GIS) Unit of the Missouri Department of Health and Senior Services (DHSS) held emergency response GIS field training in Jefferson County, Missouri. “Operation Blown Away” simulated a severe summer storm, with a tornado damaging the town of Kimmswick. The primary purpose of the 3-day training was to develop and improve geospatial technology skills for state and local public health staff. The exercise also tested the functionality of the DHSS Mobile Command Center (MCC).

Personnel from eleven different Local Public Health Agencies (LPHA), University of Missouri Extension office, Missouri Department of Transportation, Missouri Department of Health and Senior Services, and Office of Administration - Information Technology Services Division (ITSD) were involved in the exercise. The group was divided into small teams, each with a designated GIS Professional who handed out tasks and provided guidance when needed.



Team Orange uses GPS technology to complete a property damage assessment

In the simulation, a severe summer storm passed through Jefferson County causing extensive damage to the northern part of the county. An F3 tornado was reported to have touched down near Kimmswick. In the scenario, an EOC had been set up for the Jefferson County Health Department in the Arnold office, and the teams were to provide geospatial support. Some of their tasks included mapping the population without power, identifying shelter locations, tracking food inspections and surveying damage. With the help of geospatial technology, participants were able to visualize events and resources, and quickly make decisions with this information. For example, while plotting out a chlorine plume caused by a train derailment, team members quickly saw that a shelter with accommodations for people with special needs was located inside the evacuation area.



Team Yellow maps out a train derailment event with help from their team advisor.

A special team consisting of DHSS staff was tasked with setting up and manning the DHSS Mobile Command Center (MCC), which was located in Kimmswick. Besides completing the other tasks, this team was given the additional task of communicating with the Decision Support Room (DSR) in Jefferson City, and the EOC at the Jefferson County Health Department. All teams reported to the MCC at some point where they were tasked with assessing the damaged homes by walking the streets of Kimmswick using GPS units and assessment forms. Later, the teams compiled field data, created a database of the information collected, and generated GIS data to create maps. Items used for this task were actual forms and photos from a tornado damage assessment that was conducted in Caruthersville, Missouri by DHSS environmental and GIS staff.

“Operation Blown Away” was conducted as part of the DHSS Emergency Response GIS program. Many DHSS staff and 30 LPHAs participate in this program. The GIS unit in ITSD provides software, training, and support to these staff. GIS is being utilized at state and local levels for projects such as emergency response, disease investigation, resource management and environmental public health.