

# Welcome to URISA's GISCorps



GIS = Giving International Service?

[General Policies](#) | [Code of Conduct](#) | [Sign up to Volunteer](#) | [Access your Record](#) | [Contact Us](#)

[GISCorps Home](#)

## About Us

[What We Do](#)

[Who We Are](#)

[Our Policies](#)

[Our History](#)

[Our Projects](#)

[Publications](#)

[Donations](#)

[News](#)

## Get Involved

[Become a Friend  
of GISCorps](#)

[Volunteer](#)

[Contribute](#)

[New Project](#)

## Support Info

[FAQ](#)

[Information for  
Volunteers](#)

[Volunteer Sites](#)

[GIS Certification  
Institute](#)

[Site Map](#)

## St Louis County Missouri's Flood

### GISCorps Experience - St Louis Floods, March 2008

*By Heather Milton, GIS Specialist at URS Corp, St Louis, MO*

Missouri was one of several Midwest states hit by severe storms this spring, causing flooding in parts of the state. One particular storm dumped up to 4 inches in 24 hours in some areas, and the ground was already saturated from previous rains. This caused the Meramec River, which drains from the Ozarks in South-central Missouri to rise far above flood stage. Several communities on the southern edge of St Louis County were affected by the flood, and the County activated its Emergency Operations Center (EOC) to coordinate rescue and emergency services for the event.

Brett Lord-Castillo, the GIS Programmer for the County Emergency Operations Center, requested some GISCorps volunteers to help with GIS and mapping needs. My boss at URS, Jim Hummert, was happy to send me over to help out.



Figure 1: Flooding of Highway 141 at the Interstate 44 underpass

Brett was well-prepared and was displaying a predictive model of the flood on a Smart Screen at the front of the room. He used data from several USGS gauges along the Meramec to estimate the extent of the flood as the flood crest passed through each area.

EOC staff from the County police, firefighters, and other crews were constantly checking with him to find out the timing and depth of the flooding in particular areas.

I worked alongside other St Louis County GIS staff from the Planning Department to provide other kinds of maps for the crews as needed. One set of maps showed the predictive flood stage and aerial photos draped on a hillshaded DEM, which enabled the workers to understand what structures were in the flooded areas. Another set of maps was in preparation for emergency evacuation of the city of Valley Park, in case their levee failed. The firefighters tasked with the evacuation asked for a set of maps of the city broken into zones to effectively task emergency crews with blanketing the town and evacuating all the residents. Thankfully the levee held and no evacuation was necessary.



Figure 2: Crest waters on the parking lot at Eureka Senior High

St Louis County has a strong history with GIS use, and it was evident that the County emergency operations were very aware of the advantages offered by using GIS to predict the flooding and prepare for appropriate actions. Mapping road closings, locating shelters, planning search and rescue operations, and providing information to the public were all facilitated by Brett, his GIS capabilities, and the County staff and volunteers including Mike Duncan, Melisa McLean, Mary Coffindaffer, Greg Wayne, Solana Rice, Debi Salberg, and Andrew Meyerkordand who assisted.



Figure 3: Damage to Yarnell Rd after the flood waters receded

---

1460 Renaissance Drive, Suite 305 Park Ridge, IL 60068  
+ 1 (847) 824-6300  
[About this site](#)