Texas EGRT: A Grass Roots Concept of GIS for Emergency Response

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How EGRT Developed in Texas for Emergency Response

The Texas Emergency GIS Response Team, or EGRT, is a rapidly deployable GIS resource built to support disaster response and recovery efforts across Texas. The concept for EGRT was developed in 2006 for the North East Fire Department Association (NEFDA) which covered 14 cities in northeast Tarrant County with operational agreements to share equipment and resources. A GIS team was formed and given access to the NEFDA Mobile Command Post, and since 2006, has responded to numerous incidents including flooding, a chemical spill, and several apartment fires. The team has also been deployed to Galveston for Hurricane Ike and the Possum Kingdom grass fires.

Eight years later the concept has expanded to cover the entire State of Texas for emergency training and response.

On Oct 3rd, 2014, the City of Red Oak, TX designed and built a 10,000 square foot GIS building in Red Oak, TX and designed and executed a full-scale drill of a chemical spill from a rail car. Texas EGRT (Tx EGRT) responded, producing maps of the spill plume area, evacuated areas, closed roads, shelter sites, and school sites. This event was a successful test of response time and use of templates and datasets.

On Oct 12-18, 2014, Tx EGRT was called into Disaster District 4 Garland Emergency Operations Center (EOC) to provide mapping support for the Ebola outbreak in Dallas, Texas. Fifteen different members responded producing maps of cleanup sites, hazmat material routes, and locations of monitored contacts over a period of 6 days. This event tested the Team’s ability to staff the EOC over a week’s time and respond in a real situation.

Tx EGRT Response to the Sunnyvale Tornado

On Dec 26, 2015, the team responded to a severe weather event in north Texas near Sunnyvale. Twelve tornadoes were confirmed, 3 were rated EF-2 or greater with the most intense, damage occurring with the Sunnyvale-Garland-Roylett tornado. Thirteen fatalities occurred.

The next morning, the Tx EGRT team was activated, bringing in team members from the surrounding area to man the EGRT Mapping Unit in the EOC, including Olesya Powers, a Sunnyvale resident. She had been trained and placed on the On-Call List for emergency response. Olesya was extremely lucky when a tornado hit her neighborhood in Sunnyvale, but left her own home basically untouched. Instead, it targeted several of the homes in her neighborhood, destroying structures and ultimately causing 13 fatalities.

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As emergency services arrived at the scene, the residents were told to evacuate the area. Olesya evacuated to her in-laws home. The following morning, she received an EGRT advance call and she headed to the Emergency Operations Center (EOC) at Roylett Fire Station #1 in Roylett, TX.

In addition to continually updating the Common Operational Picture in the EOC, staff also continually revise and print 8½ x 11 maps to be taken out into the field showing activities such as Recovery Operations, Demobilization Areas, of Long-Term Actions.

This Common Operational Picture map shows an exclusion zone, street blockage, and evacuation routes.

One of the final mapping products is the Damage Assessment map that shows an initial property damage assessment after the incident. As field data comes into the EOC concerning damage to property, an initial damage assessment map is created. This map will assist the municipality in estimating the potential dollar amount of damage from an incident so that a request for monetary aid can be placed as soon as possible.

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