By Greg Metz, Technical Assistant

Emergency Response Plans – Essential for Any City or RWD

A tornado struck the city of Jewell in Mitchell County in north-central Kansas on May 29, 2008. This photo shows what remained of the city's 50,000-gallon elevated storage tank and adjoining well house.

As a former water, wastewater and street superintendent, I have witnessed numerous emergency situations.. These included high winds and tornadoes, hail, fire, flooding, drought and numerous operational issues. Many of these emergencies were life threatening and were certainly responsible for destroying much property. In all these emergencies, the local city or rural water district's emergency plan was often critical to restore services and maintain some stability.

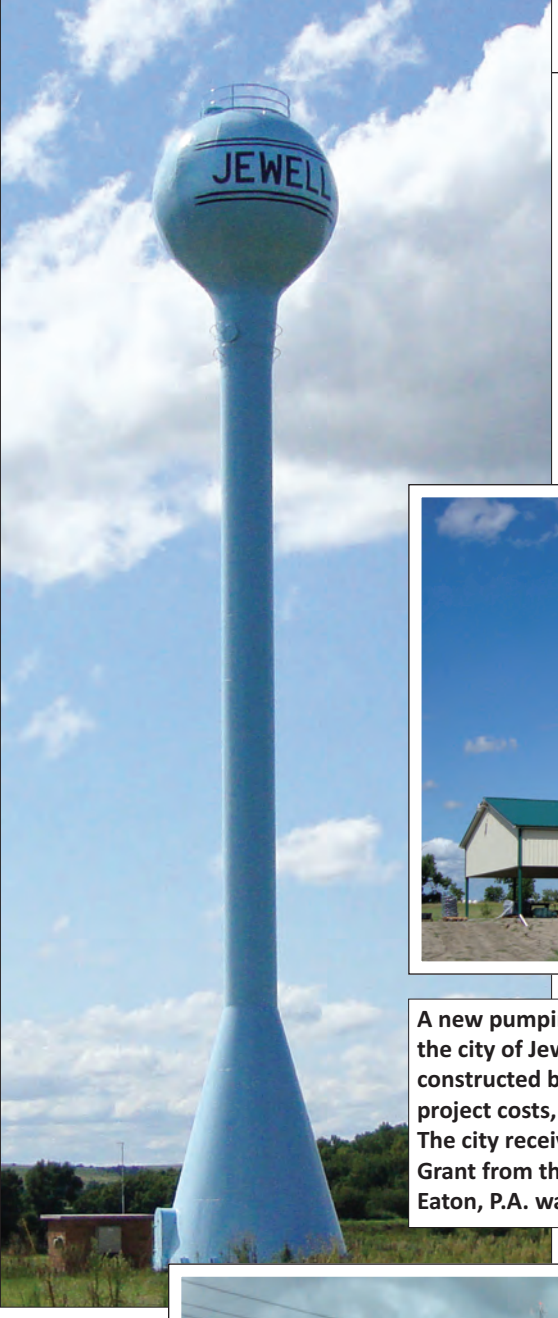
The first priority in any emergency is human safety. Next, there is a need to stabilize the incident. Emergency workers provide first aid; chemical spills can be contained; fires can be extinguished. Some severe weather events can be forecast hours before they arrive, providing valuable time to protect a facility. But in all these cases, there should be a plan to deal with the emergency.

A recent incident

Several weeks ago, a small rural water district in north-central Kansas was confronted with what was an emergency and that emergency is causing them to update their emergency response plan. The emergency could have been a lot more serious than it was but the incident made everyone there realize that they needed to create a more comprehensive emergency response plan just for this type of emergency. We all realize that all emergency response plans don't have to only address natural or large-scale disasters.

The emergency in this small water district was a gas chlorine leak at a well house pumping station. When the operator arrived at the site to check on the station, the smell of chlorine was prominent. Not knowing what the cause of the leak was and being the only person on the site, the operator wisely did not try to enter the building. Instead he called for the help of another person and also contacted the system manager. The system manager called me and asked for advice on how to address the problem.

Not knowing what the nature of the leak was I asked the manager if the district had the contact information for



the company that supplies the system with chlorine. Not having the information with her she had to drive back to the office to obtain it. It would have been a lot easier if the emergency contact information for a chlorine leak had been in the company truck or even posted on the outside of the building. Many times I see emergency contact information and plans posted inside of a chlorine building. That's the last place to be if there is a chlorine leak. This leak ended up being a small leak from a nearly empty bottle. The operator and assistants were able to ventilate the building, remove the bottle to the outside, tighten the valve and nut and the leak was stopped. Had this been a full cylinder where the fusible plug started leaking or some other issue that could not be solved by tightening the valve or nut, a large cloud of chlorine may have resulted with the need to have a hazmat crew with an A kit to contain the bottle. The area would have had to be evacuated. Not many smaller rural fire departments are equipped or trained to handle such an emergency. I think it is a good idea to contact local area emergency response personnel and find out what equipment they have access to for such an emergency and put together a plan. Most chlorine suppliers have an emergency response team to deal with chlorine leaks. But distance to travel may be an issue. In some cases evacuation of the area may be all that is possible until someone with the proper equipment can be onsite. Chlorine is heavier than air and will go to low-lying areas. Wind direction plays into the emergency response. A chlorine gas cloud will be yellowish in color and can travel. It will eventually dissipate.

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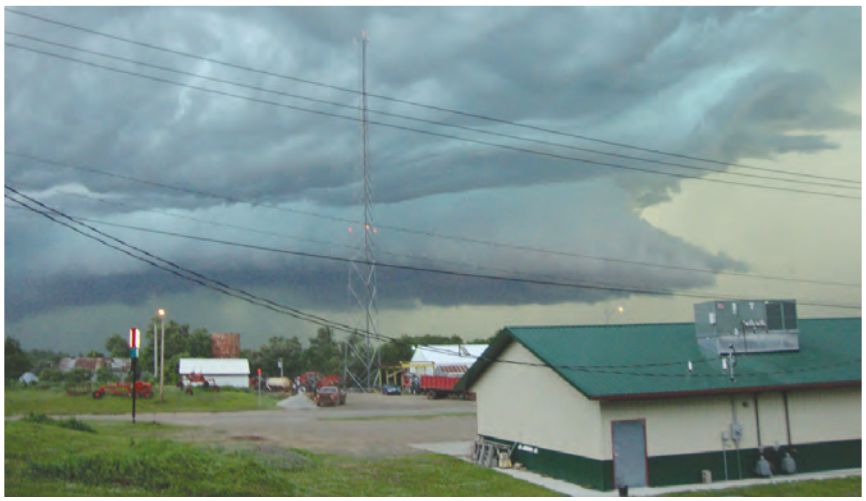
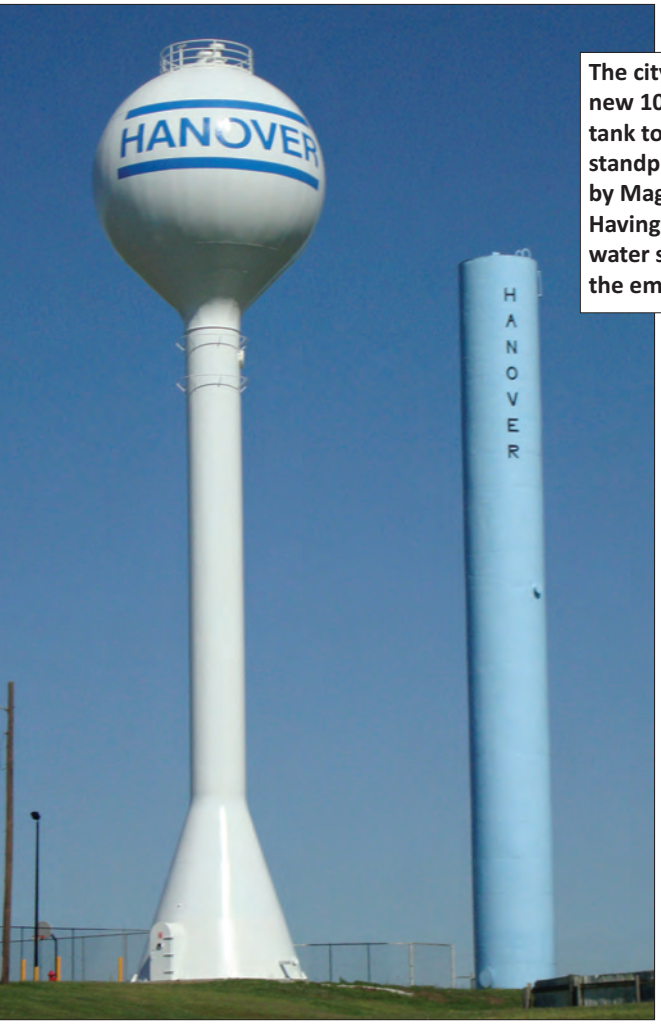
A new pumping station with a shop was constructed adjacent to the city of Jewell's new 50,000-gallon storage tank. The tank was constructed by Gerard Tank & Steel, Inc., Concordia, KS. Total project costs, including the new pump station, were $614,300. The city received a $320,000 Community Development Block Grant from the Kansas Department of Commerce. Schwab-Eaton, P.A. was project consultant.



In July 2011, this storm cloud brought hail and high winds that damaged buildings and flattened crops between Washington and Greenleaf, KS, in Washington County.



The city of Hanover, KS constructed a new 100,000-gallon elevated storage tank to replace the city's original standpipe. The tank was constructed by Maguire Iron, Sioux Falls, SD. Having and maintaining an adequate water supply should be addressed in the emergency response plan.

As the staff and board of this small water district learned, the actions taken in the initial minutes of an emergency are critical. Others were warned; help was called for.

Each water system or city is different. The emergency response plan also needs to be unique to that community. How to cover all types of emergencies is the challenge. Some emergency response plans may be as simple as having the contact information of the emergency personal who will need to be contacted. Emergency response plans should not just be documents that are on a shelf. Instead the plans should be reviewed and updated at least one time per year. Contact information is usually the main item that needs to be updated and revised.

A good idea that is often missed is to have emergency contact numbers posted on the outside of buildings such as well houses and chlorination buildings. The document could be laminated or stored in a weather resistant case. Also, carry a copy of the contact information in the utility vehicles with key phone numbers entered in contacts on cell phones for easy access.

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Help with vulnerability assessments

Vulnerability assessments take into account other factors than the typical emergency response plan. A first step in developing a vulnerability assessment is to list the assets and determine levels of vulnerability.

KRWA was instrumental in working with the National Rural Water Association in early 2002 to create a Small System Vulnerability Assessment Tool. In 2005, KRWA was a partner with Tetra Tech EM Inc. (Tetra Tech) as a subcontractor in conducting and preparing more than100 vulnerability assessments (VA's) and emergency response plans under contract with KDHE. That contract provided that KRWA conduct the VA's for all systems identified by KDHE that served fewer than 2,000

The above photo, snapped from the cell phone of KRWA Tech Assistant Greg Metz, shows a large tornado as it churned rural areas between Solomon and Abilene in 2011.

persons. The National Rural Water Association's Security Emergency Management System (SEMS) was approved for use in conducting the VA and ERPs. KRWA continues to utilize SEMS software to complete or update vulnerability assessments and emergency operating plans.

KRWA has provided numerous updates to emergency operating plans and emergency public water supply plans. KDHE has made numerous requests for KRWA to provide such assistance.

KRWA has also sponsored and conducted numerous training exercises in emergency management and tabletop exercises. From January 1, 2012 to September 30, 2012, KRWA conducted two emergency tabletop sessions. KRWA has been requested by several county emergency departments and water systems to provide individualized emergency planning exercises specific for their locality. KRWA was contracted in 2011 by KDHE to facilitate six (6) additional emergency planning sessions. There were 149 people attending from 77 public water systems. From 2009 to 2011, KRWA conducted 16 such sessions.

KRWA is qualified and prepared to help any community with developing or updating its emergency response or vulnerability assessment. Give KRWA a call or send an email. There of course is no charge for the assistance.

Greg Metz joined KRWA as a Technical Assistant in July 2009. He previously worked at the city of Washington for 13 years where he was involved in city utilities including the power plant, streets, water and wastewater. He also served as purchasing agent for those utilities.