



By Gary Ganson, CIH, CSP

Safety in Disasters

Part 1: Disaster preparedness is the key to keeping workers safe on the job.

Hurricane Sandy and its horrific effects that struck the North Atlantic coast can serve as a wake-up call to remind us how important it is to be prepared for disasters large or small.

Two additional storms struck after Sandy hit the East Coast and some companies and businesses are still not functioning. Many of those businesses probably thought they were exempt from the impact of a devastating hurricane in their region, but in reality they weren't.

Disasters Take Different Forms

Multiple types of disasters must be taken into consideration to make sure your groundwater business and your employees are properly prepared. These include disasters related to weather, earthquakes, epidemics such as the flu, and terrorism. And disastrous weather can be more than superstorms. For instance, it can include conditions brought on by severe drought, such as what hit the country last summer.

A drilling company working last year in Oklahoma saved the lives of 12 crew members by preplanning for the strong winds that accompany a tornado. Knowing that Oklahoma receives an average of 52 tornados a year, the company prepared their crew trailer by securing it to the ground to hold it firmly in place. This simple action provided a strong place of refuge for the workers to safely protect themselves when a tornado struck on a job.

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In the summer of 2012 in the Midwest, drought conditions required water well drillers to ramp up and do heavier drilling, sometimes down to depths of 1000 feet, to create wells that would have required 300 to 400 feet of drilling a few years ago. This is also a disaster preparedness issue.

We tend to think only the single incident types of disasters require disaster response preparations that are included in the company business plan. The drought of 2012 taught us differently. Disasters can be of long duration and become severe over time.

Regardless of what kind of disaster, the priority is always to make sure preparations have been taken to assure first of all the safety of all employees, and secondly the security of the surrounding areas. This means looking around and checking that nothing has been left behind or unsecured that could do additional harm. This could include hazardous liquids such as fuels that could contaminate soil or objects that could become airborne.

Having a Disaster Plan

The first thing a company does to prepare is to craft a written plan. The plan should be created around those disasters most likely to occur in the region where the company is operating—just

like the preparations made by the drilling company in Oklahoma.

A disaster plan for a company in Florida will focus largely on preparing for a hurricane, while a firm in the Midwest will have a plan preparing for a tornado, severe rain, a windstorm, and a massive snow or ice storm. With the changes in weather patterns we have been witness to lately, we might need to be a little more flexible regarding the category of disaster that could occur in our region.

The elements of a disaster preparation plan include the following:

- Conduct a risk assessment for the area and determine what the hazards are for a potential disaster to occur.
- Focus on life-saving measures such as knowing the route to the nearest hospital, performing CPR, and first aid training.
- Identify equipment needs such as tie-down supplies, food and water, additional clothing, shelter needs for workers, routes of escape, or spill supplies.
- Have emergency contact phone numbers for each location.

An understanding of what can happen will give you confidence that you have evaluated the resource requirements and developed a plan and procedures to prepare your crews should an emergency happen.

Communication Is Key

You then must communicate the plan to your employees. That could be done through formalized training or on-the-job training while employees are work-

ing—so long as the workers are familiar with how to conduct pre-task planning.

Prior to every project and every daily assignment, it's good practice for all crews and individual employees to understand how important it is to review the challenges they face at each job site.

They need to ask themselves, "What are the hazards and how do I prevent myself and others from being injured?"

This includes disaster planning.

Workers must have a good understanding of how to be prepared if something happens. This will mean less confusion, less chance of damage and injury, and better chance of a more speedy recovery.

Plan for communication devices.

Crews sometimes work in remote locations, and mobile communication devices anymore are typically carried by everyone. But towers, lines, or even weather can damage or interfere with electronic signals and prevent mobile phones from being of service. Old systems such as CB radios and walkie-talkies carried in a response kit have turned out to be useful devices when mobile phones aren't functioning.

Each employee should have a copy of the disaster plan, and there should be one at every work site. If the disaster preparedness plan requires special equipment such as tie-downs, absorbent material, personal protective equipment, or cover for employees, that equipment should be readily accessible—or even better—carried on the truck or trailer.

Being Prepared

Employees should also go through some method of disaster preparedness exercises. This can even be done as a tabletop exercise, but it's better to actually do the exercises out in the field. It might take an hour or two, but it's worth a life being saved or equipment not being damaged. Not to mention it can also mean the savings of many dollars.

Training should be repeated frequently. If nothing happens for a year and you have a 50 percent turnover in your workforce—repeat the training!

Even veteran employees will benefit as repeated actions will reinforce their knowledge that in the instant a disaster happens, knowing what to do and how

to react will mean the difference between injuries, loss of equipment, and how quickly work can resume. By way of example, under OSHA's Hazwoper (Hazardous Waste Operations and Emergency Response) standard, all personnel are required to go through eight hours of retraining annually. It is about being proactive in the act and the art of prevention.

The last thing you want to say to yourself is, "I wish I had planned better and been prepared."

Taking the time and some simple steps to think through a potential disaster is time well spent. The outcomes include never having to implement the plan, which is not a bad thing, and knowing that if it does happen, you were ready. And your employees went home safe to work another day. [WWJ](#)

This is part one of a two-part series. Part 2 focusing on disaster recovery will be published in the February 2013 issue of *Water Well Journal*.