

...And Not a Drop to Drink. Water, a Test for Emergency Managers

Michael Byrne

Water is the most basic and essential ingredient of life, so it is appropriate that the ability to get water to victims is the litmus test of success or failure of a disaster response. Too often, we fail the test because of the emergency management process imposed on something as simple as water.

Most Americans don't give much thought to water in normal times. For the most part, clean water is there when we want it. Turn on the tap and it flows easily. Walk into just about any store and it is there, in pints, quarts, liters or gallons – from mountain springs, Alpine snow melt, or Fijian aquifers. Trucks deliver five-gallon bottles to our offices.

When disaster strikes, however, we realize how precious clean water can be. And Americans expect their emergency managers to be able to deliver when the local water company cannot.

Most Americans would find it surprising to know that the process used to deliver water to a disaster scene has a complexity that could rival a space launch. While there are always variations in most cases, let us take a moment or two to consider the process, in hopes we will find lessons for all emergency management.

First, the local community hit by the disaster must decide if water is needed, if they can supply it without outside help and, if not, where to seek help.¹

Should local officials decide they cannot supply water, the chief elected officer in the community must declare an emergency. That declaration is more than just asking for help. It requires a legal document signed by the mayor or other official to be sent to the next level of government. In some cases it is sent from a city to a county, or a town or village to a parish.

At the next level the process repeats: the county or parish executive must determine what is needed and if it can be supplied locally. If not, it must declare an emergency and look to the next level of government – usually the state or commonwealth.

Now we need a state governor to declare an emergency, in order to ask the federal government to get involved. In our federal system, only the states can ask the federal government for help. You might assume this is a simple decision – but consider that we are expecting elected officials to make a legal statement that says, in essence: “I have a problem in the state I'm supposed to be running, and I can't manage to send a bottle of water to a disaster victim.”

Think for a moment about our fifty governors. They hold very powerful positions, and generally earn our respect and admiration. I have had the opportunity to work for a number of governors and have been impressed with their management and leadership skills. These are not weak men and women. They are strong, determined managers who take seriously their responsibilities to their state.

To get federal help in an emergency, however, the governor must write a letter to the president of the United States, saying “this condition our state finds itself

in has overwhelmed us, and we don't have the resources to respond." That is not an easy letter for a governor to write, and they never see it as a trivial matter.

Once the governor writes to the president, the letter usually will make its way to the Federal Emergency Management Agency, in particular the FEMA "declaration" office. Officials there consider the request and determine if it is actually true. I find this particular part of the process hard to accept – if a governor has taken the dramatic step of acknowledging helplessness, should some federal bureaucrat really be able to second-guess what is needed from hundreds of miles away?

Still, our current process requires FEMA to evaluate the preliminary damage assessments to determine whether or not a need really exists, even though the governor has risked his or her political future to declare the need exists.

If FEMA sees the need, the president is likely to declare either an emergency or a major disaster, depending on the severity of what is found on the scene. Either one will trigger the ability to supply water. Remember, we're this far along in the process and we still have not provided an ounce to those in need.

The emergency or disaster declaration allows FEMA to begin working. A forward joint field office is established, a federal coordinating officer is designated to head a command structure under the well-practiced process of the National Incident Management System, or City Incident Management System or State Incident Management System or whatever flavor incident management system you want. You would think at this point in time, after what our entire nation has been through, that we could agree on a single process to work together.

There are fifteen "emergency support functions" in NIMS, and one of them has responsibility to supply water. Now delivery mechanisms must be identified, the cost of the requirement has to be estimated, and the operations chief must issue a "mission assignment" to the appropriate federal agency or agent to supply water.

While FEMA has recently pulsed up its stockpile of water and can meet the immediate demand better than it ever has, the fundamental water supplier in the federal family comes under emergency support function number three, "public works," and the lead federal agency for that is the United States Army Corps of Engineers.² I must say the first time I learned this, I was a bit puzzled. I knew the Corps of Engineers was famous for redirecting rivers, building levees, building dams, and generally performing feats that change the face of our nation – but who knew they were in the bottled water business?

Actually, the Corps of Engineers doesn't directly provide bottles of water. But they do have contracting vehicles in place that allow them to take the mission assignment, which will have a dollar amount based on the amount of water needed and an estimate of how long it is needed. Those contracting vehicles will allow the Corps to begin the process of supplying water to people in the disaster area.

Even though the contracting vehicles are already in place, the process takes several days to begin supplying water, and once started, it takes a few days to stop after the need ends. And you better believe it's costly. It is not as simple as loading an Army truck from some stockpile and driving to the scene. Because the Corps of Engineers doesn't bottle water, they must first go to a manufacturer who

does. Then they enlist the emergency support function number one, transportation, to help pick up from the supplier and deliver to the disaster area.

Our bottle is still not in the hands of a thirsty victim, however, because the federal government will only deliver to a distribution point within the affected state. It is still the state's responsibility to deliver it to the "point of service" – what most of us would call a thirsty person.

While I readily admit the process can and does vary, the essential point I make here is valid. Believe it or not, there are steps that – under certain circumstances – would be needed in addition to what is presented here. There are multiple people involved all along the way, paperwork to file, boxes to check, and forms to fill out. To actually execute the process is much more complicated than I've described. Hard-working and resourceful emergency management professionals find ways to speed up the process and we are blessed with their ingenuity and courage to find a better way. But at the end of the day, this is how the plan is designed to work.

Remember, each one of these steps costs money and takes time. Agencies and individuals must be compensated for their time, there are travel costs to get water teams in place, there are rental fees for housing and office space and warehouse space – all before you even get to the cost of the water.

It is clear by looking at the long twisted road of our bottle of water that we are overdue for a rigorous performance evaluation of disaster response. Good businesses in this country have learned the value of performance evaluation tools and there are many valid methods. Six Sigma and Lean process reviews are examples of the types of tools that can help emergency managers.³

In its basic form, a Lean review begins with the steps of a process completely laid out on paper. Then a question is asked about each individual step: "Does this step add value; does it improve the process?" If it does not help our efforts, it is clear the step should be eliminated. The second question, if the step does add value, is "What is the cost in time and money?" and then, "Is the added value worth the cost?"

Consider again the steps to get a bottle of water to a disaster victim. Can we honestly say each of the steps adds value, and is worth the cost? The current process might eventually get water to a thirsty person, but it is an awfully expensive bottle.

Clearly, many of these steps are not necessary if we change the focus from the process to the victim and the responder at the point of service. Who really wants to argue that twenty steps are necessary to take care of water?

For a better option, let us look at the hurricane season of 2004 in Florida, where one of the most accomplished emergency managers in the country, Craig Fugate, began asking himself the cost and value questions because of his fiduciary responsibility to the state of Florida. As an emergency manager, he knows that even though the federal government offers disaster assistance, there is a cost to the state and city – about twenty-five cents for every dollar of aid.

During a conversation with Fugate, he shared with me that he started asking himself if that 25 percent of what the federal government proposed to spend on water was worth what the state would get. When he considered other options, he realized there were facilities like Wal-Marts and Home Depots around the state,

and if he could spend a little money to do whatever it took to allow them to operate – simple things like providing extra security, lifting weight restrictions, or providing curfew passes – the local stores would take care of the water.

“The point is, getting a store open is a better solution than trying to replicate its function,” Fugate says. “We still provide bottled water in areas where there are no stores, the stores were destroyed, or to folks who cannot get to the store or afford basic supplies like water.”

Fugate’s two- or three-step solution took the problem and put it in the hands of organizations whose day-to-day business is supplying water and food to the community. It didn’t require new distribution points, a complicated paperwork and personnel chain or special contracting mechanisms – and the water got to thirsty people quicker and at less cost.

In the 14th-century, English logician and Franciscan friar William of Ockham came up with the concept of parsimony or in other words the intriguing idea that, “All other things being equal, the simplest solution is the best.”⁴ What better time, no, what more essential time, is there for us to heed this concept than when people are in need. It is my hope we will all remember the story as we evaluate how we respond to all aspects of an emergency, for it is not only this process that is in need of a review. It doesn’t have to be as complicated or as costly as we make it. We have got what it takes to do this, both in resources and expertise; what is needed is the resolve. A rigorous process review is really worth the effort – before the next disaster strikes.

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¹ United States Department of Homeland Security (DHS), *National Response Framework: Stafford Act Support to States* (Washington, DC: DHS, 2008): 1-2.

² DHS, *National Response Framework: Emergency Support Function, Annex 3* (Washington, DC: DHS, 2008): 4.

³ Six Sigma, “What is Six Sigma?” (n.d.), http://www.isixsigma.com/sixsigma/six_sigma.asp.

⁴ Widely cited, and often debated, this is the theory commonly referred to as ‘Occam’s Razor.’