

7 Seven Things You Can Do to Prepare Your Water Utility for the Next Pandemic


In 2008, Homeland Security Presidential Directive 7 (HSPD-7) designated the now 160,000 drinking water systems in the United States as one of 17 “critical infrastructure” sectors. As defined by the USA Patriot Act of 2001 (42 U.S.C. 5195c(e)), critical infrastructure includes any “systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.” In my opinion, potable water is the utility we can least afford to lose. Disaster victims can endure without Internet, electricity or gas, but things get really ugly (and unhealthy) really fast when the taps stop running and the toilets stop flushing.




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The practical implication of this is that in times of disaster or emergency, water systems do not have the option to quit, stay home, lay low, hide out or otherwise fail to make and deliver potable water. You are expected to perform your mission no matter what. While the Patriot Act, Vulnerability Analyses and Emergency Response Plans all focus on terrorists, cyber-attacks, large chlorine releases and similar acute “emergencies,” the current Coronavirus pandemic presents the same challenges and requires the same level of effort. This became official on March 13, 2020 with the Presidential Declaration of National Emergency under section 501(b) of the Stafford Act.


Here are seven (7) things a water system can do to prepare for the next pandemic:


#1  Understand that there will be a “next” pandemic, just as there is always a next hurricane, earthquake or flood. Between MERS (2012), SARS (2002), H1N1 (2009), H3N2 (1968), H2N2 (1957) and numerous other warm up exercises, we humans have been dodging this bullet on a regular basis since our last really big one of these a hundred years ago (the so-called 1918 Spanish Flu).


#2  Inventory surfaces and materials that need to be cleaned and disinfected. Focus on everything that gets touched from the entry doors to the workstations to light switches.



#3  Find disinfection products that actually work by comparing the EPA registration number for any product you are considering using and verifying that it is on the applicable list. For the current virus (SARS-CoV-2), you should be looking at EPA "List N." These products have been evaluated by the EPA and found to be effective against this virus. The product label will specify the application method (wipe, spray, fog), contact time needed to kill or deactivate the virus and similar specifications required by the EPA.

#4  Try to use only non-destructive disinfectants on sensitive equipment. Not everything responds well to bleach or just whatever you happen to have in the supply cabinet. Touchscreens and monitors, for example, generally can be disinfected with 70% isopropyl alcohol (IPA) or quaternary ammonium products ("quats"), but will become smeared or greasy if wiped with hand sanitizer containing glycerin or other skin conditioners. Bleach, hydrogen peroxide and numerous other products may cause screens to darken or become spotty due to reactions with the polyester, polyacrylate or specialty coatings. Once damaged, they will not come back.

#5  Stockpile a reasonable amount of products and PPE (particularly masks) since they become very hard or impossible to find during the crisis. Consider using store brands (wipes and sprays) as long as the active ingredient(s) are the same as the name brands, which are often harder to find.

#6  Think in terms of infection control, not just a janitorial challenge. Germs need us to pass them around, usually by touching, coughing or sneezing. Examine your work practices to identify vulnerabilities such as shared equipment (even keys, pens and phones), too little social distancing (who even knew what that was just a few months ago?) and lack of hygiene.

#7 **Build "resiliency."** Defined very simply, this is your ability to take a hit and keep doing the job. Do you have good written SOPs for decontamination? Do you have reliable Mutual Aid agreements in place? Could you sequester your employees or shelter in place if things get so bad that you can't chance passing the virus to or from home? What about medical support? How will you manage known or suspected cases?

As you can see, a legitimate product list and non-destructive cleaning practices are only part of being a pandemic-resilient utility. Don't be afraid to contact a trusted advisor to help you with getting it right. Everyone needs you to stay on post. We can deal with a lot – until the water stops. ■

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