

Incident Action Checklist – Pandemic Incidents

The actions in this checklist are divided up into three “rip & run” sections and are examples of activities the water sector (drinking water and wastewater systems) can take to prepare for, respond to and recover from a pandemic. You can also populate the “My Contacts” sections with critical information that your utility may need during a pandemic.

Coronavirus Pandemic and Water Utilities

For general information from EPA about COVID-19 and water, see www.epa.gov/coronavirus. The risk of transmission of COVID-19 via drinking water and wastewater is low. However, there are other impacts to drinking water and wastewater utilities, which may include, but are not limited to:

- Staff shortages due to absenteeism;
- Supply chain disruptions (chemicals, materials, personal protective equipment);
- Field operations interruptions (repairs, meter reading, sampling); and
- Inability to maintain all operations.

Many water and wastewater utilities have created pandemic resilience plans based on best practices and experiences from past global outbreaks such as the avian flu in 2003 and swine flu in 2009. Utilities should review and update those plans and stay in close contact with their local health department and regulatory agency as the COVID-19 situation is dynamic and evolving rapidly. Water and wastewater systems need the most up-to-date information in order to make decisions that are right for their utility based on the pandemic impacts to their specific community.



Sign up for any COVID-19 alerts or notifications available from your regulatory agency and local emergency management agencies and health departments to stay up to date.

General COVID-19 Information

- [U.S. Coronavirus Website](#)
- [U.S. Centers for Disease Control and Prevention](#) Drinking Water and Wastewater COVID-19 (CDC)
- [World Health Organization](#) COVID-19 (WHO)
- [Association of State Drinking Water Administrators](#) COVID-19 (ASDWA)
- [Water Information Sharing and Analysis Center](#) COVID-19 (Water ISAC)
- [Water Environment Federation COVID-19](#) (WEF)
- [American Water Works Association](#) COVID-19 (AWWA)
- [Coronavirus Research Update](#) (WRF)

Information on Hygiene and Water Safety

- [OSHA Guidance for Wastewater Workers](#) COVID-19 (OSHA)
- [Water, Sanitation, Hygiene and Waste Management for COVID-19](#) (WHO, UNICEF)
- [Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response](#) (DHS)

Actions to Prepare for a Pandemic



Planning

- Identify a lead, back-up, and team of individuals to serve as the Pandemic Response Team.
 - Develop a process for maintaining situational awareness of the current and future spread of the virus, as well as community impacts.
 - Develop strategies for managing the pandemic such as identifying response actions based on current information and the system's emergency response plan and continuity of operations plan.
- Update your [drinking water emergency response plan](#) (ERP) and [wastewater ERP](#) to ensure all contacts (24/7 availability), system diagrams and standard operating procedures for system operations are up to date.
- Develop or update a Continuity of Operations Plan (COOP) that specifically addresses the challenges of a pandemic and plans for significant staff shortages. Resources to help in the development of the plan include the [Pandemic Continuity of Operations Template](#) and [Business Continuity Planning for Water Utilities: Guidance Document](#). The COOP should include, at a minimum, plans for the following:
 - Defining Roles and Responsibilities During the Pandemic
 - Protecting Employee Health
 - Maintaining Essential Operations and Critical Positions
 - Maintaining Essential Equipment, Materials and Supplies
 - Communications
 - Addressing Community Mitigation Impacts – Impacts of required social distancing, quarantine, school, and business closures, etc.
 - Identifying Delegations of Authority – Including orders of succession
 - Training – Cross-training and pandemic plan training
- [Join your state's Water and Wastewater Agency Response Network \(WARN\)](#) or other local mutual aid network. In addition, check to see if you are included in a statewide mutual aid law. WARNs may be able to provide assistance in the form of personnel, equipment, materials and technical assistance.
 - In addition, the Rural Community Assistance Partnership ([RCAP](#)), National Rural Water Association ([NRWA](#)), Rural Utilities Service ([RUS](#)), Indian Health Service ([IHS](#)), the Inter Tribal Council of Arizona ([ITCA](#)) and the United South and Eastern Tribes ([USET](#)), among others, may be able to provide licensed operators or technical assistance.
- Assess your system's Information Technology (IT) capability to ensure it can accommodate remote work arrangements without compromising security.
- Work with local law enforcement and health departments to ensure water sector staff are considered first responders, as specified in the [Department of Homeland Security's \(DHS\) Crisis Emergency Response and Recovery Access \(CERRA\) Framework](#), and will have the ability to conduct field work when necessary if quarantines are placed on a community.
 - DHS developed a [memorandum](#) that identifies drinking water and wastewater personnel as essential workers during the COVID-19 response
- Share your COOP, and any specific pandemic issues, with your local emergency management agency (EMA) and health departments, regulatory agency, and any consecutive systems.
- Conduct internal and external (e.g. EMA, health department, regulatory agency) pandemic specific [tabletop exercises](#) regularly. Be sure to conduct remote exercises to ensure capability during a pandemic.

Actions to Prepare for a Pandemic *(continued)*



Protecting Employee Health

- Reinforce good personal hygiene practices with all staff.
 - [Post proper hand washing techniques](#), with [pictures](#), at all sinks.
 - Share [preventative measures](#) (washing hands, covering cough, not touching face, etc.) provided by the [CDC](#) to minimize risk.
- Ensure availability of adequate proper personal protective equipment (PPE), infection control (hand sanitizer, tissues, disinfecting wipes, electronic cleaners), and cleaning supplies. The disinfection of electronics may require specific supplies.
- Set up a pandemic policy for screening employees for symptoms, setting up extended sick leave and telework, keeping critical staff on-site for an extended period of time (with access to beds, food, water, medical supplies, communications), and social distancing in the office (no meetings, keeping 6 feet apart, etc.).
- Establish pandemic-specific health and safety protocols for field sampling conducted by staff or others providing sampling assistance in the event of staff shortages.
- Work with staff to develop their own family response plans so their families are taken care of during a pandemic while they are working.

Maintaining Essential Operations

- Identify critical positions (plant operator, sampler, in-house and contract laboratory personnel, etc.) and skills, along with back-ups for each of those positions.
- Identify critical functions (disinfection, pumping, sampling and analysis, aeration, purchasing chemicals and supplies, etc.) and the minimum staff required to keep those functions operating.
- Develop a list of critical customers who need a continuous source of potable drinking water (e.g., hospitals, nursing homes, dialysis clinics, manufacturers).
- Assess staffing alternatives:
 - Determine the process to use for your state's WARN to request personnel during a pandemic. Reach out to your state or tribe's assistance providers such as [RCAP](#), [NRWA](#), [RUS](#), [IHS](#), [ITCA](#), and [USET](#) to determine their ability to provide personnel if your staff cannot report to work due to illness, caring for an ill family member, or being quarantined themselves.
 - Cross-train staff to handle multiple positions and critical operations.
 - Ensure redundancy in laboratory personnel and, when possible, have contracts with multiple commercial laboratories as a contingency measure in cases of laboratory staff shortages.
 - Assess your remote operations capabilities (i.e., SCADA).
- Communicate with the laboratory that does your analytical work to ensure that they have a pandemic plan in place and are available to receive and analyze your samples. Also, make sure they have a back-up laboratory option in place.
 - [The Water Laboratory Alliance](#) (WLA) is a nationwide network of laboratories that serves the water sector. The WLA is part of the national Environmental Response Laboratory Network. Encourage your laboratory to become a member of the WLA to ensure national capabilities during a pandemic.

Notes:

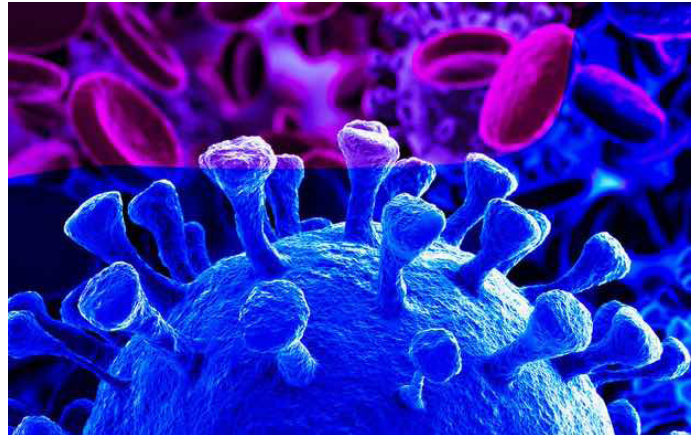


Maintaining Essential Facilities, Equipment, and Supplies

- Identify critical facilities (booster pump, chlorinator, aerator, etc.) and supplies (chlorine, other treatment chemicals, fuel, electricity, etc.) that must stay operational and available.
- Create an inventory of all critical materials, chemicals, supplies and equipment.
- Contact all vendors and manufacturers to ensure they have a pandemic plan in place and can deliver needed supplies.
 - Stock up on treatment chemicals and critical materials and equipment, as space, costs, and expiration dates allow.
- If possible, source materials and chemicals from two or more suppliers from different regions to mitigate supply chain disruptions.
 - Work with your vendors and require them to identify who their second-tier sources are to make sure the vendors you are using are not using the same source (which would equate to a sole source supply).

Communication

- Develop [communication templates](#) so you can communicate with your customers quickly.
- Identify appropriate distribution mechanisms such as via the website, social media, local news, reverse 911, etc.
- Identify emergency contacts with your local health department, regulatory agency, and EMA to communicate throughout the pandemic.



Notes:

Actions to Respond to a Pandemic



Initial Actions

- Activate your Pandemic Response Team
- Execute your pandemic COOP and Emergency Response Plan
 - Activate defined emergency roles and responsibilities
- Stay in close contact with your regulatory agency** to coordinate on any issues that arise (lack of certified operators, laboratory capacity, or access to sample locations).

Protecting Employee Health

- Inform all staff on the latest CDC recommendations to limit the further transmission of the virus.
- Close all offices to the public.
 - Communicate with customers via phone, email, social media, and websites.
 - Offer payment options online, via mail, or through drop boxes.
- Temporarily suspend any in-home non-sampling appointments by staff such as water efficiency visits. Compliance sampling activities must continue. Work with homeowners concerning any health and safety issues with compliance sampling and follow established pandemic-specific health and safety protocols.
- Consider temporarily suspending drinking water shut-offs due to non-payment in order to protect staff and maintain essential water services to individuals.
- Limit or cease all in-person meetings, gathering of people in the same location, and travel.
- Ensure that workers and those with overlapping expertise are generally separated to minimize the risk of co-transmission.
- Increase the frequency of cleaning and disinfecting all surfaces and equipment, including control rooms, vehicles, computers, phones, tablets, break rooms, and conference rooms.

- Implement telework for as many staff as is feasible to maintain operations.
- Assess all construction and maintenance activities and limit to only critical projects.

Maintaining Essential Operations

- Implement minimum staffing plans and set up shift rotations.
- If you begin or anticipate experiencing critical staffing shortages:
 - Keep your regulatory agency up to date on your situation.
 - Reach out to your [WARN](#). WARN members may be able to assist with personnel, equipment, supplies, and technical assistance.
 - If you are not a WARN member or your WARN is unable to assist, reach out to neighboring utilities and develop mutual aid agreements, if possible.
 - Reach out to your local assistance providers such as [RCAP](#), [NRWA](#), [RUS](#), [IHS](#), [ITCA](#), and [USET](#) about their ability to provide licensed operators or technical assistance.
 - If the above resources are not available, contact your local EMA. Make sure to be specific about the type of personnel you need and for the type of water system (license level, plant rating, treatment, drinking water, wastewater, etc.).
- Make immediate preparations to house critical staff on-site (with access to beds, food, water, medical supplies, communications, etc.).
- Communicate often with the laboratory that does your analytical work to ensure that they are available to receive and analyze your samples and make sure they have a back-up laboratory option in place.



- Remind all staff to anticipate cyber threats including social engineering, phishing, and other opportunistic cyber-attack tactics preying on fear and the need for information that could disrupt billing or supervisory control and data acquisition (SCADA) operations.
 - Remind staff not to click on any links that could execute a hostile program.
 - Back-up all critical files and ensure security systems (firewalls, anti-virus) are functioning on all remote equipment.

Maintaining Essential Facilities, Equipment, and Supplies

- Secure all facilities in preparation for limited access and surveillance.
- Stay in close contact with your suppliers of equipment, materials, treatment chemical, and other supplies, especially if you were not able to stockpile chemicals or materials. If you anticipate an impending shortfall of chemicals, contact your WARN to see if other utilities can assist, your assistance providers ([RCAP](#), [NRWA](#), [RUS](#), [IHS](#), [ITCA](#), [USET](#)) to see if they have resources, and your local emergency management agency who can request chemicals through state or tribal emergency authorities or make requests to the federal level.

Communication

- Drinking Water - Communicate with your customers as soon as possible and often about the safety of their water supply using guidance provided by the EPA and CDC.
 - If there is a temporary loss of water (line break, pump failure), remind customers to use the CDC-recommended alternative to hand washing, which is hand sanitizer with at least 60 percent alcohol content.
- Wastewater - Communicate with your customers (local news, social media, or webpage) about wet wipes and the consequences of flushing them down the toilet (e.g., sewage backups).
- Stay in close contact with your regulatory agency, local health department, and local EMA.

Documentation

- Document all events, timeframes, and resulting impacts, so this information can be used as part of the post-incident investigation.
 - Be sure to document all hours (regular and overtime) and keep invoices for all equipment, supplies, contracts, vendors, etc.

Notes:

Actions to Recover from a Pandemic



- Assign a utility representative to continue providing updates to customers regarding current mitigation actions, as well as preparation for future incidents.
- Work with vendors and internal departments to return to normal service.
- Develop a lessons-learned document and an after-action report (AAR) to document your response activities, including what went well and what did not go well. Create an improvement plan (IP) based on your AAR and use the IP to update your vulnerability assessment, ERP and COOP.
- Revise budget and asset management plans to address increased costs from response-related activities and follow-up actions.
- Identify mitigation measures that can help increase utility resilience for future pandemics.
- Conduct annual utility-specific pandemic awareness training with all employees.

Notes:

My Contacts and Resources



CONTACT NAME	UTILITY/ORGANIZATION NAME	PHONE NUMBER
	Primacy Agency	
	Local Health Department	
	Local EMA	
	WARN Chair	
	Local Laboratory	
	State EMA	

Resources

Mutual Aid Programs

- [Water/Wastewater Agency Response Network](#) (EPA)

Emergency Response and Continuity of Operations Planning

- [Drinking Water Emergency Response Plans](#) (EPA)
- [Wastewater Emergency Response Plan Template](#) (RCAP)
- [Pandemic Continuity of Operations Template](#) (GLCAP)
- [Business Continuity Planning for Water Utilities: Guidance Document](#) (WRF, AWWA, EPA)
- [Business Continuity Planning in the Event of an Influenza: A Reference Guide](#) (AMWA, WaterISAC)
- [Tabletop Exercise Tool, Pandemic Scenario](#) (EPA)

Other Tools and Resources

- [Water Laboratory Alliance](#) – Drinking Water and Wastewater (EPA)
- [Crisis Emergency Response and Recovery Access \(CERRA\) Framework](#) (DHS)
- [Water Utility Communication During Emergency Response](#) (EPA)
- [Water Utility Response On-The-Go](#) (EPA)
- [Resources for Small Public Water System Operators](#) (EPA)