Business Continuity Planning for a Pandemic
A Reference Guide

Introduction

The water and wastewater sector is a critical infrastructure sector and its importance means it is imperative for utilities to develop plans to operate in all adverse conditions. Such conditions can include sudden outbreaks of new diseases which can affect utilities and the communities they serve. Given the critical nature of the sector, it is essential to consider pandemics in continuity of operations planning.

The Association of Metropolitan Water Agencies (AMWA) and the Water Information Sharing and Analysis Center (WaterISAC) prepared this guide to help water and wastewater utilities prepare for, respond to, and recover from such events.

Pandemics vs. epidemics

According to the Centers for Disease Control and Prevention (CDC), an epidemic is "an increase, often sudden, in the number of cases of a disease above what is normally expected in that population in that area." In contrast, a pandemic is "an epidemic that has spread over several countries or continents, usually affecting a large number of people." Both epidemics and pandemics can impact utility operations.

Water and wastewater services are essential

Due to the number of other critical infrastructure sectors that depend on water and wastewater services, the sector is also designated as a critical lifeline. The sector's importance means utilities must have plans to withstand the challenges posed by outbreaks and continue operations.

The Department of Homeland Security's Cybersecurity and Infrastructure Security Agency broadly defines essential water and wastewater sector employees as any "needed to operate and maintain drinking water and wastewater and drainage infrastructure." As water utilities provide essential services to hospitals, power plants, and public safety agencies, among others, they will be a key part of any pandemic response. Accordingly, utilities should coordinate their pandemic plans with these organizations and other relevant entities when possible.

What will a pandemic response look like?

In a 2015 assessment, the Department of Homeland Security stated, "Second to vaccine development, the most effective and economical mitigation strategy is a rapidly deployed and multilayered approach combining various intervention strategies such as social distancing, school closures and treatment with antivirals."

Such measures may affect workforce availability and assignments. Shift sizes may need to be reduced to limit the potential spread of a disease while absenteeism may increase as employees care for family members or fall ill themselves. The 2006 National Strategy for Pandemic Influenza Implementation Plan stated government agencies and private entities should expect 40 percent of the workforce to be absent during a pandemic.

Keeping employees healthy

Utilities can develop plans to limit transmission of the disease at their facilities. Infection control measures can include promoting handwashing practices, limiting person-to-person contact, and

regularly disinfecting shared spaces and high-touch surfaces. Telework can help support the continuity of key business functions while limiting in-person interaction.

Informing employees
Share information about the outbreak and the utility's operational status with employees frequently. Depending on the scale of an outbreak, sources of information may include:
- Local public health agencies,
- Local emergency management and public safety agencies,
- CDC, and
- FEMA.

Continuous improvement
As utility operations continue to evolve, it is essential for utilities to periodically test their pandemic plans and revise them as necessary. It is particularly important to review emergency contacts as staff members move into other roles.

Pandemic checklist

The checklist in this guide includes a variety of practices that can help utilities continue their operations during an outbreak. These practices are drawn from a variety of response partners including the U.S. EPA, CDC, and the North American Energy Reliability Corporation.

The checklist is divided into seven key areas:
  I.   Develop Plans
  II. Develop Policies
  III. Conduct Training, Drills and Exercises
  IV. Provide for Protective Equipment and Prepare Facilities
  V.   Prepare Response Actions
  VI. Maintain Awareness and Communication Channels
  VII. Reconstituting Operations

Pandemic Preparedness and Response Checklist

I. Develop Plans

1) Develop appropriate response plans and procedures including:

- Provide for the recognition of the threat and appropriate response levels.
- Identify critical functions of the organization that must be kept in operation.
- Identify functions of the organization that can be suspended or conducted remotely.
- Review teleworking policy.
- Identify essential personnel. Define the roles and responsibilities of employees, labor organizations, staff, supervisors, managers, and staff medical personnel during a pandemic.
  - o Determine whether certain positions will be eligible for additional compensation (e.g. "hazard pay").
- Develop an emergency communications plan that includes key contacts and alternates, medical contacts, communication chains and processes to track and communicate employee status.
- Put in place plans to have an increased number of employees work from home. Ensure IT systems infrastructure can support this action.
- Plans and procedures should include providing support and assistance from human resource staff to employees' families.

2) Consider the need to separate the workforce to establish independent locations, and/or preserve one or more "clean" sites.

3) Consider expanding the use of teleconferencing and videoconferencing to limit the frequency of meetings and other types of face-to-face contact.

4) Consider security issues and the limitations law enforcement agencies will face during a pandemic. Develop a plan to ensure safety of security staff.

5) Consider developing joint operational plans with service providers, suppliers and key customers.

6) Evaluate potential financial and budget impacts of interrupted operations or reduced revenues and assess unusual supply, material and personnel costs.

7) Evaluate potential for increased insurance costs connected to increased medical costs for employees.

8) Consider the need to send home non-critical staff whether or not they can work remotely.

9) Consider the need and necessary conditions for measures such as sequestering on-site

critical staff.

10) Identify key customers with specific needs, including first responders, energy infrastructure, and hospitals.

11) Identify critical inputs necessary to maintain safe water (e.g. chlorine and other treatment chemicals).

12) Formalize agreements with neighboring systems to address communication, mutual aid, and other needs.

13) Collaborate with local and/or state public health agencies and/or emergency responders to participate in their planning processes, share your pandemic plans, and understand their capabilities.

II. Develop Policies

1) Develop/update staff travel policy, including possible provisions for self-quarantine after returning from an area where an outbreak has occurred. Such requirements may apply to both work and personal travel.

2) Develop a visitor's policy including a sign-in process.

3) Consult with health authorities to update confidentiality policies to allow effective exposure tracking to be completed.

4) Develop/update policies for employee compensation and sick leave absences unique to a pandemic.

5) Develop/update workforce deployment policies regarding teams and crews working together and the potential need to keep employees physically separate.

III. Conduct Training, Drills and Exercises

1) Periodically test and verify preparedness plans and procedures via a simulation exercise, tabletop exercise or process walk through.

2) Test IT infrastructure regularly to verify its capability to perform under pandemic conditions (e.g. more employees working from home, increased teleconferencing and videoconferencing).

3) Train and prepare ancillary workforce, (i.e. contractors, employees in other job titles/descriptions, retirees) to ensure essential functions can continue.

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IV. Provide for Protective Equipment and Prepare Facilities

1) Contract with a company that will clean/disinfect computer equipment, common areas, work stations, etc. Track expenditures for FEMA reimbursement under the Public Assistance Program.

2) Provide each workstation with a disinfecting agent in a spray bottle, a package of paper towels, and a package of latex gloves.

3) Determine what personal protective equipment will be effective and consider acquiring sufficient quantities (masks, gloves and face guards). Availability of critical personal protective equipment may approach zero during a pandemic. Consider requiring face coverings in situations where physical contact cannot be avoided. Note:

- Some masks deliver better speech clarity than others.
- Some masks (e.g. N95 masks) are designed to protect the person wearing the mask while other masks (e.g. cloth face coverings) prevent transmission by the person wearing the mask.

4) If appropriate, isolate buildings and restrict access to assigned staff.

V. Prepare Response Actions

1) When an employee has contracted or suspects that they have either contracted or have been exposed to the virus, the employee is to seek medical attention and advise their supervisor. Establish clear guidelines for when employees may return to work.

2) Implement a screening process for all employees and visitors to critical facilities to identify whether or not they may potentially be infected. e.g. Questions may include questions about current symptoms and recent travel. Have visitors provide their home and site/company as well as a contact number(s) for any follow-up. Conduct screening at all entrances.

3) If a case is discovered, contract a cleaning service/agency as appropriate and request the disinfection of the affected employee's workstation and shared work areas as well as all shared equipment and facilities (including washrooms, kitchen areas and meeting rooms). Notify staff in the affected areas and assess how to continue operations.

4) Close non-critical common areas, such as exercise rooms or cafeterias. If the pandemic has resulted in a need to shelter employees on site to continue critical operating functions, determine how employees will be accommodated.

5) Assess the need to direct staff to physically distance and identify ways to maintain an appropriate distance from each other

6) Assess the need for complete physical separation of staff including the activation of any backup facilities.

7) Assess the need to temporarily bar non-critical staff from the site and their ability to complete tasks remotely

8) Provide regular communication to all staff about the latest medical advisories and recommended actions.

9) Provide on-site critical operations staff with personal protective equipment.

10) Make disinfectant products (e.g. wipes, cleaning products) available to employees as appropriate. Ensure incompatible products (e.g. ammonia and bleach) are not provided together.

VI. Maintain Awareness and Communication Channels

1) Emergency management staff should monitor official channels for situational updates

2) Provide employees, labor organizations, staff and decision makers with the most up-to-date information available by documenting specific characteristics of the contagion, such as the following:

- Mechanisms(s), speed, and ease of transmission by the contagion is spread, and mode(s) of transmission, such as touch, airborne, etc.
- Time the contagion remains active on surfaces such as door handles.
- Incubation period, the time to exhibit symptoms, and maximum contagious period.
- Expectations of employees, supervisors and managers to help reduce the risk of spreading the disease.

3) Initiate a business continuity plan to support essential operations, the loss of which would have a direct and serious detrimental impact on public health and safety. Coordinate with interdependent organizations and sectors. Identify those functions critical to continued operations, and identify the people needed to fill those positions. Pre-screen critical staff to ensure their willingness to receive a vaccine when available. Involve human resources staff as well as established mechanisms such as joint health and safety committees early.

4) Communicate early and regularly with staff and include recommendations to minimize potential transfer of infectious agents within company facilities, so that these measures

5) Collaborate with the local public health unit or department on the prioritization of tests and vaccines for staff performing critical functions during an outbreak.

6) Communicate with local and/or state public health agencies and/or emergency responders about ongoing response operations and coordinate efforts where appropriate.

VII. Reconstituting Operations

1) Develop a plan to stagger the return of employees while supporting continued telework.

2) Ensure current occupational health standards can be met before individual business functions resume. Key actions may include:

- Flushing buildings or wings of any stagnant water.

- Revising current disinfection and sanitation plans to account for heavier facility use.

3) Identify potential alternate schedules to minimize total building occupancy. Continue to use teleworking where feasible.

4) Identify ways to continue infection control measures (e.g. social distancing) even as employees return to facilities