

## Water Utility COVID-19 Pandemic Management Plan – key guidelines

### International Water Association COVID-19 Task Force

The COVID-19 pandemic and the widespread measures introduced in response to it have challenged water and wastewater utilities around the world to maintain what are essential services under this type of emergency. Even where pandemic or emergency management plans were in place, lessons have been learned and response plans are having to be updated. To support utilities still facing challenges from the pandemic, and to help the process of incorporating lessons learned, the International Water Association's COVID-19 Task Force (<https://iwa-network.org/groups/covid-19-task-force/>) has prepared core guidelines of a pandemic management plan, drawing on sources that have included responses to a call for utilities themselves to share their own insights.

#### **Key guidelines**

1. **Create or activate a Pandemic (or Emergency) Team** to deal specifically with issues related with COVID-19. This team has the responsibility to assess the situation and to make decisions regarding the measures currently required (see following points). Therefore, this team should consist of the decision-makers of all relevant departments (e.g., corporate management, operations management, HR, IT).
2. A good **management system** should already be in place. **Review it and adapt and update it** based on its effectiveness. If one is not in place, use this opportunity to begin to implement a management system such as ISO9001 (or Water Safety Planning or Sanitation Safety Planning). In the short term, try to **identify the most significant processes** involved in drinking water supply / provision of wastewater treatment and optimize how these can be more efficient and resilient. More efficient and resilient processes tend to deal better in times of organizational stress and during contingency conditions. Whether or not a management system is already in place, these guidelines highlight priorities to attend to during the pandemic. Their use and effectiveness should be reviewed and form part of a 'Plan-Respond-Recover' cycle.
  - a) Start by identifying the critical operational, maintenance and laboratory processes that must not fail. A management system or

risk tool can be used to assess which are the critical steps. Once this has been done, all of the activities, equipment and services must be working perfectly to allow supply of drinking water and / or treatment of wastewater.

- b) Identify essential equipment (e.g., PPE) as well as further essential consumable goods (e.g. chemicals) and ensure their availability through resilience of the supply chain. Increase the stocks of essential chemicals to cover a few months. Simultaneously check with the suppliers of the main chemicals about the difficulties they could be facing due to the pandemic crisis, and check subsequently on a regular basis. Identify alternative solutions in the case that main suppliers are unable to continue to provide the utility with critical supplies.
- c) Identify critical positions (i.e., essential employees and their backup) and identify possibilities to protect them. Identify which are the employees without whom it is impossible to run the business.
- d) Concerning quality control of the product (treated drinking water or treated wastewater), identify the parameters that must be maintained. These could be identified as essential or critical parameters. Use a risk management system (or other type of supporting decision tool) to assist the team in the identification of these parameters. Typically, it will be the ones that support monitoring of the performance of the key operational stages, and also the ones which indicate that the final product meets the required quality. Furthermore, improve communications and contact with the relevant regulators regarding which parameters they require and how these have to be recorded (see also 7) during lockdowns.

3. **Promote a digitalized utility and create opportunities for remote working.** Utilities at which relevant tasks and processes are already digitalized can more easily adapt to remote working. This is relevant in order to reduce physical contact and minimize the potential for disease transmission. It is therefore especially important for the protection of essential employees. In the short term, try to identify the operational processes that only can be carried out locally, distinguishing between critical and non-critical processes. Check if the critical local tasks can be planned and controlled using digital tools, with feedback provided to field teams. All of the processes that can be performed (planned,

executed, controlled) using a digital or virtual tool should be carried out remotely.

4. **Develop an adapted operational plan** with different options to implement based on the extent of the pandemic (e.g., depending on the specific figures for the region). Typically, operational and maintenance teams must frequently be present at the plants. Establish options for how to maintain the business during staff shortages, such as use of quarantine islands (e.g., with mobile homes at the plants) or shift work, and establish routes to avoid having personnel cross paths (e.g., occupancy plans for changing rooms, break rooms, cars; staggered start and end of the work; virtual team meetings). If possible, promote the existence of backup or mirror teams. If necessary, contract or train additional personnel to reinforce the teams.
5. **Distribute and implement mandatory safety practices**, such as: use of masks, shields, disinfection of the workplace, maintaining physical distance, requirements for meetings, etc. These measures have to be checked regularly for appropriateness and communicated in different forms (e.g., orally by management, visually with signs, written in emails, online via the intranet) (see also 6).
6. **Communicate internally transparently** about COVID-19 decisions made by the utility (see 1 to 5; e.g., who is in the pandemic team) and explain the options available for each of the employees. During the first stages of the pandemic, the rate of acceptance of the changes in behaviour needed was probably higher than the current situation due to some fatigue. The organization needs to find new solutions to keep communicating effectively inside the organization (i.e., choose different forms of communication depending on the recipient), in order to protect worker health and to ensure activities run as required without further restrictions than those already needed to protect essential workers.
7. **Increase the quality of the external information for customers and stakeholders** in order to sustain or increase confidence. Share what type of actions the utility is planning and performing in order to maintain “business as usual”. Inform customers (e.g., via website) to confirm the safety of drinking water and treated wastewater with respect to the spread of COVID-19.
8. **Prepare a longer-term pandemic plan** to sustain appropriate measures during the pandemic. It is not clear when the pandemic crisis will end. Prospects depend also on which part of the world you are in. As part of the improvement activities, prepare a Business Continuity Plan in order

to manage as best as possible the impact of the COVID-19 pandemic inside the organization. Lessons learned should be used to prepare the organization to deal with future events like the pandemic. While preparing or reviewing the Business Continuity Plan, different action must be considered: in the short term, identify alternatives for the critical assets, whether they are workers or whether they are materials, chemicals or equipment. Establish partnerships with your critical suppliers or alternative ones. In the medium and longer term, establish a programme to train more workers to replace, if necessary, the essential workers that are absent due to COVID-19 infection or in prophylactic confinement. Identify and prepare alternative solutions to supply water from other sources or water treatment plants, as well as the most appropriate options in case of the need to discharge untreated or poorly treated wastewater.

### **Publication note and disclaimer**

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IWA COVID-19 Task Force

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### **Acknowledgement**

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### **More information**

For more information on the IWA COVID-19 Task Force, see:

<https://iwa-network.org/groups/covid-19-task-force/>