



Health care facilities can be affected by short- or long-term water outages, decreases in water pressure, contamination, and/or sewer backups. Water is critical to many facility functions, from sterilization, laundry, dialysis, and feeding patients and staff, to HVAC and fire suppression systems. Facility planners must account for local hazards that can lead to partial or total water disruptions (e.g., natural disasters, aging infrastructure, construction accidents, terrorism). It is also critical to identify the average consumption rates of both potable and non-potable water to best understand needs and triggers for conserving water in an outage. Risk identification and planning combined with conducting and/or participating in local exercises can help ensure resiliency.

Utility Failure Tip Sheet

WATER

The following general considerations are based on a short-term water outage:¹

- Track usual potable and service water sources, and usage (e.g., metered use) to benchmark needs.
- Develop and regularly review the facility's water management plan.
- Determine how and when water will be distributed throughout the facility and the staffing required to move, monitor, sanitize containers (if reusable), and switch out when empty.
- Develop a plan for water conservation that can be rapidly implemented.
- Establish and follow processes to rapidly assess any water disruption incident that affects clinical or support operations and determine whether to activate incident command.
- Follow processes outlined in business continuity plan.
- Be aware of local, state, or other requirements related to onsite water storage. Align water storage planning with 96-hour sustainability planning.
- Work with water supply vendors to establish contracts and create timelines that consider the potential for local distribution system/multiple area hospitals to be affected. Know where water is sourced from and whether additional filtration or treatment is needed before use. Include provisions for emergency delivery.
- Install an external connection for a water tanker or bladder to supply the facility if not already equipped. Ensure functionality of connection and understand whether supplier requires pump assistance.
- Consider a primary/backup well, storage tank, or other source of onsite water if not already present. Ensure quality meets Safe Drinking Water Act and any local or state regulatory requirements.
- Determine if nearby surface water source (e.g., reservoir, lake) or other non-traditional sources (e.g., hot water heaters) could be used as a backup source for non-potable water for topping off chillers, flushing toilets, and other safe uses of graywater.
- Work with local water authority to determine secondary supply service alternatives and timeframes for activation. Be aware of any pressure difference that will have to be accounted for by the facility.
- Determine jurisdictional emergency management options for health care facility water support.
- Consider identifying alternate supplies outside of the state or region to meet needs for larger scale disasters and outages.
- Determine options for supporting staff whose homes may be affected.
- Plan for comprehensive testing, purging, and disinfecting water systems after a contamination incident is resolved. Ensure processes are documented and readily available.
- Engage infection prevention experts in planning and response to water contamination incidents or those that require a restart of HVAC or water systems.
- Identify and follow regulatory requirements related to water quality associated with interruption and restoration of services.

¹Longer-term outages (e.g., the [Jackson, Mississippi incident that lasted months](#)) require similar planning considerations, but likely different arrangements for supplies and storage capacity.

N FIRE SUPPRESSION

- C** • Preplan with local fire department(s) to supplement or provide alternate water supply and/or fire pump management assistance.
- Establish plan for fire watch/fire suppression activities when water pressure is below design pressures or lost.
- Confirm appropriate standpipe connections exist to feed fire suppression systems if pressure is lost.
- Create and train fire watch teams (staff who circulate during an outage checking for threats and monitoring the suppression system).
- Determine if local fire department(s) or the state offer fire service strike force teams that can assist the facility fire watch teams.

N DIALYSIS

- C** • Determine availability of portable purification units through contract and emergency sources.
- Calculate average amount of purified water needed per patient.
- Increase frequency of water quality monitoring when supplied via tanker/bladder.
- Identify alternatives to onsite dialysis operations.
- Disinfect and rinse dialysis machines prior to use after water service is restored.

N LABORATORY/STERILIZATION

- C** • Determine availability of portable purification units through contract and emergency sources.
- Calculate average daily amount of purified water needed for laboratory, pharmacy, and other critical uses.
- Identify and establish contracts with offsite vendors that can process specimens and sanitize equipment if unable to do safely onsite.
- Determine need to store water onsite for laboratory contingency use.

N HOUSEKEEPING

- C** • Establish trigger for switching from water-based to wipe/spray-based cleaning methods as appropriate.
- Have backup plan for disposal of contaminated water.
- Work with infection prevention staff to establish the need for terminal cleaning during recovery.

N CAFETERIA/FOOD PREPARATION

- C** • Calculate average consumption rates of water for food preparation and dishwashing.
- Create low-water use/minimal clean-up menu as backup. Consider reducing meal options to the minimum necessary to meet the needs of the workforce and patients.
- Ensure enough water is available to prepare limited diet meals (e.g., liquid only, tube feedings).
- Establish/review existing contracts with backup prepared food suppliers and ice providers/vendors.
- Have emergency stock of disposable meal serving supplies and a plan to account for increased waste.
- Inventory and increase stocking of vending machines to ensure availability of purchased liquid refreshments.

N DRINKING WATER

- C** • Determine average consumption rates of drinking water and the forms (e.g., bottled, fountain) in which it is used.
- Identify all publicly accessible drinking water and ice sources (e.g., fountains, coffee/vending and ice machines attached to water supply) and label not to use in case water is non-potable.
- Maintain inventory of portable water dispensing units in offices, lounges, and other staff areas.
- Establish/review existing contracts with drinking water and ice providers/vendors.
- Store drinking water onsite in proportion to space availability, facility risks, and regional resources. Consider using storage such as sealed aluminum cans for longer shelf life.
- Determine how drinking water/potable water will be provided throughout the facility (including moving larger containers safely).

N HVAC SYSTEM

- C** • Understand and plan for loss of water supply and/or pressure effects on HVAC systems.
- Ensure temperature and humidity alarms are set where appropriate.
- Establish alternate methods of heating/cooling critical areas and equipment as required by system and according to local/state regulations.

KEY

N Need

C Considerations

N LAUNDRY

- C** • Consider outsourcing laundry and other services that require significant quantities of water.
- Explore with emergency management agency and vendors the feasibility of mobile laundry trailers.
- Switch to disposable items as practicable and account for increased waste generated.

N TOILETING

- C** • Plan for toilet flushing and related functions when water pressure is low (e.g., establish trigger for bagging waste and/or bucket flushing for higher floors). Establish refresh/replacement schedule.
- Identify and label working and non-available toilets.
- Establish/review existing contracts for portable restrooms (include hand washing and accessibility considerations).

N HYGIENE

- C** • Make disinfectants and hand hygiene materials readily accessible.
- Establish portable handwashing stations.
- Use bed bath alternatives or waterless bathing materials.

N WASTEWATER/SEWER

- C** • Establish backup plans for wastewater remediation in the event of an outage.
- Regularly inspect one-way/check-valves to prevent sewage back-up.

N COMMUNICATIONS

- C** • Ensure notification process is in place when water/wastewater provider alters processing (e.g., changes their chemical treatment) or experiences an interruption/reduction in services.
- Report changes in services as required by local, state, or other regulations.
- Develop and make available “how to” guides for staff for alternative practices implemented during the response.
- Prepare risk communication messages for staff, patients and loved ones, and the community served by the facility about the effects of the incident on the facility and any alterations in operations.

KEY

N Need

C Considerations

Related ASPR TRACIE Resources

- [Utility Failures](#) Topic Collection
- [Crisis in Mississippi: The Emergency Management and Hospital Response to the City of Jackson’s Water Outage](#)
- [Going with No Flow: Coping with Hospital Water Supply Issues](#)
- [Managing the Storm After the Storm: Healthcare in TX Recovers from Severe Winter Weather](#)
- [No-Notice Health Care Facility Water Loss: HCA Houston Healthcare Tomball’s Experience](#)
- [Sudden Water Loss and Actionable Considerations](#)
- [The Hurricane Ian Experience at Lee Health: Wreckage, Resilience, and Recovery](#)
- [Utility Failures in Health Care Toolkit](#)

Other Resources

- [Emergency Water Supply Planning Guide for Hospitals and Healthcare Facilities](#)