

ASPR TRACIE Technical Assistance Request

Request Receipt Date (by ASPR TRACIE): 8 September 2017

Response Date: 13 September 2017; updated 16 June 2021; updated 24 April 2025

Type of TA Request: Standard

Request:

The requestor asked if ASPR TRACIE had any resources on supplemental bulk water supply methods for hospitals in the event that their primary water supply was disrupted.

Response:

The ASPR TRACIE Team conducted a search for resources on hospital supplemental bulk water supply methods. We also reviewed the [ASPR TRACIE Utility Failures Topic Collection](#). Section I of this document provides resources on supplemental bulk water supply methods for hospitals. Section II includes additional relevant materials.

In particular, we would like to highlight the following resource as this was the primary guidance document that was referenced several times on other websites.

Centers for Disease Control and Prevention and American Water Works Association. (2019). [Emergency Water Supply Planning Guide for Hospitals and Health Care Facilities](#).

This comprehensive document provides a four-step process for the development of a hospital emergency water supply plan and includes tips for assembling the right planning team, performing a water use audit, analyzing alternatives, and developing and exercising the plan. It is also available in Spanish: https://www.cdc.gov/water-emergency/media/pdfs/19_302124-EWSP-GUIDE-SPANISH.pdf.

I. Emergency Water Supply Resources

ASPR TRACIE. (2023). [Utility Failures in Health Care Toolkit](#).

Utility failures are a major concern for healthcare and may cause substantial harm to patients, staff, and facilities. Threats include infrastructure damage due to natural disasters and other incidents, planned outages to relieve stress on services or prevent other hazards, and malicious acts such as physical and cyber sabotage. It is also important to note the cascading effects a failure of one utility may have on others; more than one utility may fail simultaneously or sequentially. This suite of tip sheets can help healthcare facility managers and emergency planners identify issues to consider when planning for and responding to various types of utility failures. **NOTE:** Select the [Water](#) tip sheet to review considerations based on a short-term water outage.

Centers for Disease Control and Prevention and American Water Works Association. (2019). [Emergency Water Supply Planning Guide for Hospitals and Health Care Facilities](#).

This comprehensive document provides a four-step process for the development of a hospital emergency water supply plan and includes tips for assembling the right planning team, performing a water use audit, analyzing alternatives, and developing and exercising the plan. It is also available in Spanish: https://www.cdc.gov/water-emergency/media/pdfs/19_302124-EWSP-GUIDE-SPANISH.pdf.

Environmental Protection Agency. (2023). [A Critical Connection: The Water and Healthcare/Public Health Sectors](#).

This article describes how healthcare organizations can work with public health, utility companies, and other stakeholders to ensure continuity of potable water and wastewater services. Strategies include cooperating with local emergency management, coordinating preparedness and water use advisories, cooperating with poison control centers, supporting water quality improvement, and knowing the Incident Command System.

Roberson, A.J., Hildebrand, D. (2010). [Emergency Water Supply Planning, Part 1: Hospitals and Health Care Facilities](#). (Free registration required). American Water Works Association. 102(5): 36, 38, 40.

The authors of this article discuss the impact of water supply loss on hospitals and other healthcare facilities. They also address the Centers for Disease Control and Prevention and American Water Works Association's "Emergency Water Supply Planning Guide for Hospitals and Health Care Facilities" document (provided in this TA response) and note the goal of this project was to provide guidance for healthcare facilities in evaluating their water use and determining how it might be curtailed in an emergency, and in developing an emergency water supply plan for the facility.

Salfarlie, W. (2012). ['Code Blue.' Planning and Managing Emergency Water Systems](#). Health Facilities Management.

The author of this article addresses the planning process for hospital's emergency water supply, and further breaks it into planning for existing hospitals and for new construction.

Stymiest, D. (2015). [How to Plan for Water Outages](#). Health Facilities Management.

The author lists best practices for healthcare facility planners to consider regarding preventing, preparing for, and responding to water outages.

U.S. Department of Health and Human Services, Healthcare and Public Health Sector. (2024). [Planning for Water Supply Interruptions: A Guide for Hospitals & Healthcare Facilities](#).

This document provides information on the impact of water loss on healthcare facilities, and a series of questions for planners to use to prepare their facilities for water service interruptions.

U.S. Environmental Protection Agency. (2011). [Planning for an Emergency Drinking Water Supply](#).

This document addresses the supply of drinking water after a disaster. Five workshops were convened with approximately sixty technical experts who reviewed alternative means of providing drinking water in the event of destruction, impairment, or contamination of the public water supply.

II. Other Relevant Resources

ASPR TRACIE. (2018). [Going with No Flow: Coping with Hospital Water Supply Issues](#).

ASPR TRACIE interviewed Craig DeAtley (PA-C, Director, Institute for Public Health Emergency Readiness, MedStar Washington Hospital Center) to discuss the facility's response to a 2018 water outage.

ASPR TRACIE. (2021). [Managing the Storm After the Storm: Healthcare in TX Recovers from Severe Winter Weather](#).

Michael Wargo (HCA Healthcare), Scott Cormier (Medxcel), and Toni Carnie (HCA Houston Healthcare Tomball) share how a rare winter storm, extreme cold, and unplanned power outages affected utilities--particularly water and water pressure--in healthcare facilities throughout Texas. This summary highlights issues that will benefit from additional mitigation and preparedness activities as extreme weather incidents increase in frequency.

ASPR TRACIE. (2023). [Crisis in Mississippi: The Emergency Management and Hospital Response to the City of Jackson's Water Outage](#).

Jim Craig (MPH, CHEP, CHSP, CPM), Senior Deputy with the Mississippi State Department of Health, and Dr. Damon A. Darsey (MD, FAEMS), an Acute Care Consultant with Franciscan Missionaries of Our Lady Health System, share their experiences during the 2022 floods and water outage that impacted the City of Jackson, Mississippi. Access the recording here:
<https://files.asprtracie.hhs.gov/documents/healthcare-preparedness-series-jackson-water-crisis-response.pdf>.

ASPR TRACIE. (2023). [No-Notice Health Care Facility Water Loss: HCA Houston Healthcare Tomball's Experience.](#)

Winter Storm Uri brought about sub-zero temperatures and caused extended losses of power and water to over 4.3 million residents in Texas, in structures built to repel rather than hold heat. In March 2023, Jake Marshall (Senior Director of Enterprise Emergency Operations, HCA Healthcare) and Toni Carnie, Safety Officer and Emergency Management Coordinator (HCA Houston Healthcare Tomball) shared their lessons learned as part of an ASPR TRACIE Speaker Series from the event from one facility's perspective and how they have incorporated them as their system continues to recover. Access the recording here: [https://files.asprtracie.hhs.gov/documents/hca-water-pressure-loss-uri-speaker-series-ppt.pdf.](https://files.asprtracie.hhs.gov/documents/hca-water-pressure-loss-uri-speaker-series-ppt.pdf)

Federal Emergency Management Agency. (2021). [IS-553.A: Coordination Between Water Utilities and Emergency Management Agencies.](#)

This one-hour course provides information on key utility services, such as drinking water and wastewater, emergency services, and the impact of their disruption. It emphasizes coordination and relationships between sectors, and actions to improve the preparedness and response of these utilities.

Melnychuk, E., Sallade, T., and Kraus, C. (2022). [Hospitals as Disaster Victims: Lessons not Learned?](#) Journal of the American College of Emergency Physicians Open.

The authors analyzed peer-reviewed literature, grey literature, and news articles and listed the following as barriers to successful disaster response: loss of power, water, heating and ventilation, communications, health information technology, staffing, supplies, safety and security, and structural and non-structural damage. They highlight consistent themes challenging hospitals and remind readers that traditional mitigation strategies still work to bolster resilience.

St. Dominic's Hospital. (2022). [2022 Jackson Water Crisis Response Summary.](#)

This short article describes how the lessons incorporated by staff at St. Dominic's Hospital after Hurricane Katrina helped mitigate risks to the hospital's well-fed water system. These improvements and the support provided to hospital staff (e.g., providing showers, bottled waters, and other supplies) helped ensure that the hospital was able to continue to provide patient care and maintain operations during the 2022 Pearl River flooding event.