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Frequently Asked Questions
Preliminary Investigation Report on January Boil Water Advisory to NSUARB

Do you know what happened at the plant?

During a power outage, the main generator at the low lift pump station was engaged as designed, and power was restored to both the low lift and main facility buildings. However, during the transition to generator power, fuses on the service water pumps blew, resulting in a loss of service water. The main chlorination system could not function without service water and went offline during the incident, resulting in a lack of chlorination for primary disinfection. The Boil Water Advisory was issued to protect public health from the resulting 66-minute interruption in chlorine disinfection.

Was it the same as the July advisory? Why not?

While both events resulted in BWAs, the causes of the interruptions were different.

The July 1, 2024, incident was caused when the electrical safety systems prevented the main emergency generator from activating, and the secondary generator failed. This resulted in a loss of power to the chlorination system.

In contrast, during the January 21, 2025, power outage, the backup generator did engage. However, during the power transfer, the fuses for the service water pumps were blown, which interrupted the chlorine disinfection process.

While all treatment requirements, except for disinfection, were met in both incidents, Halifax Water issued the BWA to protect public health based on regulatory requirements and direction from the Nova Scotia Environment and Climate Change (NSECC).

Did the planned power interruption cause the issues at JDKWSP?

Whether it was a planned or unplanned interruption, our infrastructure is expected to be ready and operational regardless. The facility's utility power loss that night was no different from any unplanned power loss that occasionally occurs for various reasons. As a precautionary practice and with enough advance notice, our staff will transition to emergency backup power ahead of a planned outage to ensure a more seamless transition and minimize risk to the facility's electrical infrastructure. This helps ensure continuity of service if there is a potential outage.

Why is chlorine so important? Can you drink this water without it?

In keeping with Health Canada's Guidelines for Drinking Water Quality and NSECC, Halifax Water is required to provide primary disinfection at the facilities and maintain a chlorine residual of at least 0.2 mg/L (milligrams per litre or parts per million) for secondary throughout the distribution system to protect against microbial contamination. Chlorine is the most common drinking water disinfection process used to inactivate bacteria, viruses, and other microorganisms.

What was the risk to public health?

Chlorination helps eliminate the potential risk of microbial contamination. It provides a layer of protection for drinking water as it flows through Halifax Water's extensive network of pipes within the distribution system.

Why is Halifax Water having these operational issues so often?

This facility is almost 50 years old. Planning has been underway to enhance resiliency and ultimate asset renewal. Based on the number of upgrades that are required, Halifax Water is currently evaluating several potential solutions, including a new replacement facility. The draft report and recommendations will be submitted to the NSUARB in March 2025.

What has Halifax Water learned it must improve?

Halifax Water has developed a suite of preliminary corrective measures ranging from enhanced monitoring, improved communications with interested parties, and implementing processes to aid in troubleshooting during emergencies. While this report is preliminary, more information will be included in the final report due on March 21.

How many customers were impacted by the BWA?

Approximately 200,000 customers served by the Pockwock system were impacted by the BWA.

Lake Major serves another 105,000 customers, and they were not impacted.

Why wasn't the Provincial alert system used?

The provincial alerting system was used, but based on discussions with the municipality's EMO, a non-intrusive Provincial alert was issued on the morning of January 21. In consultation with HALIFAX, a non-intrusive alert was issued as there was no imminent threat to human life.

The protocols for notifications are still being formalized, which is why Halifax Water is working with the municipality and the province on a more standardized approach.

Why was this report submitted to the NSUARB?

Halifax Water is municipally owned and regulated by the NSUARB and NSECC. After the BWA was issued, the NSUARB requested that a preliminary investigation report be submitted by February 4.

Is it available publicly?

Yes, to access the report, please click **here**.

What are the next steps?

Halifax Water will conduct a comprehensive root cause analysis through an industry-standard incident investigation process and deliver a final after-incident review report to NSAURB by March 21.

This report will also be shared with the Halifax Water Board, NSECC, Halifax Mayor and Council and will also be publicly available.

What is Halifax Water doing to better coordinate with Nova Scotia Power?

Halifax Water has already engaged with Nova Scotia Power to discuss ways we can improve communications. Halifax Water and Nova Scotia Power are working to clarify communication protocols for various types of power events and improve communications for power outages, including emergency and non-emergency events.

What are the long-term solutions for the J.D. Kline Water Supply Plant?

This facility is almost 50 years old, and some aspects of the equipment and infrastructure are reaching the end of their operational life. Over the years, changes to the distribution system and the addition of new developments to the transmission main leaving the facility mean the gravity flow of water from the plant cannot be stopped without posing significant risks to water quality and quantity downstream. Additionally, changing water quality in Pockwock Lake due to lake recovery and climate change is pushing the plant to its original design limits, requiring the need for additional treatment technologies to ensure future resilience.

As a result, upgrades to the treatment process and the addition of on-site storage infrastructure have been planned through the Water Supply Enhancement Program. This is a long-term program to address asset renewal, growth, and evolving regulatory requirements for water supply plants. On-site storage would allow the facility to meet disinfection requirements before water enters the distribution system.

Based on the age of the plant and the number of upgrades that are required, Halifax Water is currently evaluating several potential solutions, including a new replacement facility. The draft report and recommendations will be submitted to the NSUARB in March 2025.

What corrective actions has Halifax Water completed since the July 2024 boil water advisory?

Sixteen (16) corrective measures were identified in the after-incident review from July 1, 2024. Nine corrective measures have been implemented, most of which relate to the specific root causes identified for that incident and are independent of the January 20 and 21 events. This preliminary report identifies fourteen (14) initial corrective measures for the January 20 and 21 events. Three of the corrective measures identified for this incident are common between the two events and relate to continuous improvement initiatives that would form the basis of corrective measures for any incident.

At this time, the only identified common root cause between the two disinfection interruption incidents and subsequent BWAs relates to the plant's original design. The timeline for implementing adequate treated water storage, which would allow the plant to shut down and prevent the release of unchlorinated water, is a long-term corrective measure for both incidents, but it could not have been implemented before the January 20 to 21, 2025, incident.