

Operational Guideline for Manitoba Water Suppliers

Emergency Reporting

PURPOSE

This guideline has been developed to help public and semi-public drinking water suppliers throughout Manitoba meet their regulatory requirements with regard to reporting water system emergencies.

Legislation

Schedule A of the [Drinking Water Quality Standards Regulation \(the Regulation\)](#) requires a water supplier to immediately notify a drinking water officer of any treated water sample that is positive for *E. coli*, total coliform > 10 mpn/100ml, or if multiple samples are positive from the same sampling period.

Schedule C of the Regulation requires a water supplier to immediately notify a drinking water officer of any treated water sample that does not meet a microbial, chemical, radiological or physical standard specified in Sections 4 to 6 or in the operating licence.

After reporting, the water system supplier is required to take such action as directed by a drinking water officer or medical officer of health.

Operating Licence

As specified in the Operating Licence, water suppliers are required to immediately notify the Office of Drinking Water of any condition(s) that may affect the ability of the water system to produce or deliver safe drinking water. This includes treatment upsets or bypass conditions, contamination of source or treated water, or a disinfection, filtration or distribution system failure.

Emergency Reporting Conditions

Water suppliers must immediately contact the regional drinking water officer if any of the following conditions apply. Other conditions or situations may exist that also require emergency reporting.

In instances where a water supplier is uncertain if the water system has been compromised they must immediately contact the [Regional Drinking Water Officer](#).

Health Surveillance

- Where there is rumored illness within the community served by the water system and reason to believe it is related to consumption of distributed water, i.e. changes in distributed water quality occurring about the same time as the illnesses reported.

Bacteriological

- Where routine testing indicates the presence of *E. coli* (EC), total coliform (TC) > 10 mpn/100ml, or if multiple samples are positive for TC from the same sampling period.
- Where corrective actions undertaken in response to low total coliform (<10 TC mpn/100ml) have failed and re-testing confirms the initial result.

Disinfection

- Where routine testing indicates that water entering the distribution system does not meet the primary disinfection standard as specified in Table 1 of the Operating Licence.
- Where routine testing indicates that water within the distribution system does not meet the secondary disinfection standard as specified in Table 1 of the Operating Licence, there is a continued presence of bacteria, and that corrective actions have failed.
- Where routine monitoring indicates that an approved primary disinfection process, such as ultra violet light, chlorine dioxide or ozone, has malfunctioned or is in alarm conditions.

Turbidity

- For systems licenced for continuous on-line monitoring:
 - Where three or more consecutive five minute measurements exceed the do-not-exceed level specific to the filtration process;
 - Where a single five minute measurement exceeds the do-not-exceed level specific to the filtration process and is related to on-going exceedances of the Normal Operating Standard for turbidity.

- For systems licenced for handheld monitoring:
 - Where an initial daily handheld measurement exceeds the do-not-exceed level specific to the filtration process, and the exceedance has been confirmed by a subsequent handheld measurement taken immediately after the initial sample.

Chemical Standard

- Where general chemistry results show that the water system does not meet or no longer meets a standard as specified in its operating licence.
- Where general chemistry results show that the water system does not meet a health based parameter as specified in [Health Canada's Guidelines for Canadian Drinking Water Quality](#).

General Disruptions

- Where the water system experiences a power outage that affects the treatment or delivery of the water.
- Where the water system; treatment plant, reservoirs or other infrastructure has been vandalized.

Source Water

- Where wide spread flooding has the potential to compromise the water supply well(s).
- Where the source water experiences a sudden change in water quality conditions, such as lake turn-over or algae bloom, that the water system may not be able to deal with in time to ensure treated water quality is not adversely affected.
- Where the source water experiences an unexplainable, significant change in color, clarity, odor or taste that the water system may not be able to deal with in time to ensure treated water quality is not adversely affected.

Treatment Component Failure

- Where a water system experiences a serious malfunction or failure in a critical chemical feed systems such as chlorine, coagulant, etc.
- Where a water system experiences a disruption or failure of critical on-line or continuous monitoring equipment.

- Where a serious malfunction or failure in any critical barrier may allow untreated or inadequately treated water to enter the distribution system such as filtration, disinfection (chemical or UV), etc.

Distribution Failure

- Where a hauled water sourced system may run out of water.
- Where a water system experiences a major pressure loss (localized or system wide) of the distribution system (water pressure < 20 psi in the distribution system) due to a power outage, distribution pump failure, or major fire.
- Where a water system experiences a major watermain break (localized or system wide) that cannot be repaired in a timely manner or under pressure or under sanitary conditions.

Actions that may be required

For corrective actions in response to a bacterial standard, see [ODW-OG-05 Schedule A MR 41-2007](#). Otherwise water suppliers may be required to:

- resample to confirm result (be sure to have extra sampling supplies on hand);
- increase the frequency of monitoring or add more locations or testing requirements;
- ensure adequate disinfection residuals or increase chemical dosages;
- undertake maintenance such as repairs, watermain flushing, reservoir cleaning, shock chlorinating well(s);
- distribute water quality advisory notice to all affected water users;
- complete a bacteriological assessment;
- submit an updated compliance plan.

Where a water supplier knows of or anticipates that an upset condition, by-pass or any event within a water system could occur and suspect that corrective actions may not fix the situation they should immediately contact the regional Drinking Water Officer.



Office of Drinking Water

[Regional Drinking Water Officers](#) are available for operational and monitoring advice and to provide technical assistance.

After hours, please call the Environmental Emergency Response line at 204-944-4888 and ask for the on-call drinking water officer.

For more information related to Manitoba's drinking water and how it is regulated visit: www.manitoba.ca/drinkingwater.