

## Operational Guideline for Manitoba Water Suppliers

### **Response to total coliform positive ≤10 mpn/100ml**

#### **Schedule A MR 41/2007**

#### **Corrective Action for Failure to Comply with a Bacteriological Standard**

#### **PURPOSE**

This guideline has been established to ensure that public and semi-public drinking water suppliers throughout the Province of Manitoba meet their regulatory requirements with regard to taking corrective actions for a positive bacterial test ≤10 mpn/100ml only.

#### **Legislation**

Schedule A of the [Drinking Water Quality Standards Regulation \(MR 41/2007\)](#)

Section 2 states that if a water system does not meet the total coliform standard, but no *E.coli*, high readings or multiple positives samples have been detected, the corrective actions that a water supplier must take under subsection 3(2) of the regulation is described in sections 3 to 5 [of the schedule].

The Schedule also 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 see [ODW-OG-04 Emergency Reporting](#).

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

#### **Corrective Actions**

The following are corrective actions that a water supplier must take to be deemed to have complied with the standard: Section 3(2) Drinking Water Quality Standards Regulation (MR 41/2007).

#### **Disinfected public or semi-public water system with a water distribution system**

- Ensure that the required disinfectant residual is present entering the distribution and at any point in the distribution system as specified Table 1 of your Operating Licence, and increase where required;

- Retest at the same sampling location as the initial positive result. Be sure to measure and record disinfection residuals and turbidity (where required) on the bacteriological sample submission form; **and**
- Take an additional retest at the same location 24hrs after the first retest sample.

The operator can collect three distribution samples instead of submitting one sample on two consecutive days for systems in a remote area given the available transportation for shipping or if directed by the regional drinking water officer.

If the initial positive sample was reported with low or no chlorine residual or if there were other indicators such as a recent break or work being done near the sample location, take additional samples throughout the distribution system; including one location 5 to 10 service connections upstream and one location 5 to 10 service connections downstream of the initial sample. Then retest at the initial location 24hrs after the first retest.

If after taking the corrective actions above, total coliform levels are found in any resample, immediately contact the [Regional Drinking Water Officer](#) and take one or more of the following actions:

- Flush the distribution system or part of the distribution system where the positive tests occurred
- Drain, clean and shock chlorinate (if necessary) reservoirs or storage tanks
- Evaluate or have water treatment processes and distribution system evaluated to identify problem areas
- Based on the evaluation, take any necessary improvements or changes to correct the problem

After completing the additional corrective actions above, take additional samples throughout the distribution system; including one location 5 to 10 service connections upstream and one location 5 to 10 service connections downstream of the initial sample. Then retest at all locations 24hrs after the first retest.

## Disinfected semi-public water system with no water distribution system

- Ensure disinfection system is working properly and that the appropriate residual is present or confirm UV is operating within validated conditions and not in an alarm state and retest immediately

If the first retest meets the bacteriological standard, resume testing frequency and normal water use.

If the first retest is positive for total coliform, immediately

- Provide only bottled water or an alternative safe source of water until the water supply meets the standard (for information on water use see [fact sheets](#))
- Conduct or have a sanitary survey or well head inspection conducted and correct any identified problems (for information on conducting a well head inspection see [ODW-OG-01 Wellhead Assessment](#))
- Flush system, and retest (second retest)

If the second retest meets the bacterial standard, resume testing frequency and normal water use. If your sampling frequency is quarterly, submit an additional sample 4 to 6 weeks to confirm that corrective actions have worked.

If the second retest does not meet the bacterial standard, contact your drinking water officer.

## Semi-public water system with a non-disinfected well

- Retest immediately; and

If the first retest meets the bacteriological standard, resume testing frequency and normal water use.

If the first retest is positive for total coliform, immediately

- Provide only bottled water or an alternative safe source of water until the water supply meets the standard (for information on water use see [fact sheets](#))
- Shock chlorinate well and plumbing system (for information on shocking your well see [fact sheets](#))

- Conduct or have a sanitary survey or well head inspection conducted and correct any identified problems (for information on conducting a well head inspection see [ODW-OG-01 Wellhead Assessment](#))
- Flush system thoroughly, test to ensure the absence of chlorine and retest (second retest) 48 hours to 5 days after shock chlorinating the well

If the second retest meets the bacterial standard, resume normal water use. If undertaking routine bacterial testing on a quarterly basis, submit a third sample 4 to 6 weeks after the second resample to confirm that corrective actions have worked.

If the second or subsequent retest(s) do not meet the bacterial standard, contact your drinking water officer.

**If corrective actions have failed or any resample at any time is reported positive for *E-coli*, total coliform > 10 mpn/100ml, or if multiple samples are positive from the same sampling period; water suppliers must contact the regional drinking water officer and take further actions as directed.**

Water systems experiencing continued or persistent bacterial positives may be asked to conduct a bacteriological assessment of the source water, treatment and distribution system as well as relevant operational practices and procedures in order to identify and correct any deflections that could be responsible for the abnormal results.

### 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](http://www.manitoba.ca/drinkingwater).