

Taking a drinking water sample for bacterial testing

Tips for owners and operators of drinking water systems covered by Ontario Regulation 252/05

Ontario Regulation 252/05 came into effect on June 3, 2005. O. Reg. 252/05 applies to drinking water systems serving facilities that have non-residential or seasonal uses. **Churches, community halls, bed-and-breakfasts, tourist outfitters and a large commercial or industrial complex** are examples of businesses and facilities covered by O. Reg. 252/05. The new regulation requires these drinking water system owners to test their drinking water regularly for bacteria, and if necessary, report and take corrective action on adverse test results.

O. Reg. 252/05 does not cover systems that supply drinking water to designated facilities – that is, facilities such as schools and health care facilities serving vulnerable populations such as seniors or children. Such drinking water systems are covered by Ontario Regulation 170/03.

O. Reg. 252/05 is the first step in the Ontario government's proposal to make local public health units responsible for regulating these drinking water systems by late 2006. For more information on O. Reg. 252/05, visit: www.ene.gov.on.ca/envision/water/sdwa/reg252.htm

Option to test water or post a sign

O. Reg. 252/05 gives some (not all) facilities the option of testing their drinking water regularly for bacteria, or posting a sign saying the water is not tested for drinking purposes. Check the regulations or the guide material (website address in next section) to see if you are eligible to post a sign.

Before you begin taking drinking water test samples:

1. Check whether you are eligible to post a sign. If so, and you want to post, follow steps outlined in the *Supplying Safe Drinking Water* guide applicable to your business or facility, at www.ene.gov.on.ca/envision/water/sdwa/reg252.htm

2. Notify the Ministry of the Environment of your intent to test your drinking water. Use a *Laboratory Services Notification* form available from the website listed above. The ministry will give you a drinking water system number – your own reference number for all your samples and tests.

3. Select a laboratory that is licensed to test for *E. coli* and total coliforms. Call the ministry's Public Information Centre at 1-800-565-4923 for information on licensed laboratories near you.

4. Know your requirements under the regulation. You must test for *E. coli* and total coliforms, which must not be detected in any sample. Any presence of these bacteria will generate an adverse test result. Also know your testing frequency, and the sampling location.

5. Get a *Chain-of-Custody* form in advance from your selected licensed laboratory. This form must be completed and submitted with each drinking water test sample.

General Sample Handling:

The way you collect, store and transport your drinking water test sample affects the accuracy of your test results. Improper handling may yield signs of drinking water contamination where it may not truly exist. The licensed laboratory you select will give you detailed instructions for handling a drinking water test sample, including:

- collection procedures;
- containers to use, including those supplied by the laboratory;
- labeling of samples;

Continued overleaf



- completion and submission of forms;
- transportation of samples; and
- time periods for delivery of samples.

Carefully follow the licensed laboratory's instructions to ensure accurate results. Below are some general tips for handling drinking water test samples.

Where to collect your drinking water sample:

- Take the drinking water sample from any tap in the distribution or plumbing system – preferably from a cold-water tap used by the public for drinking purposes.

Collecting your drinking water sample:

- **Remove** any aerators, tap screens, hoses, filters, etc., on the tap.
- **Wash your hands** or wear disposable gloves.
- **Let the water run cold** for at least two minutes before collecting the sample.
- **Use a sterile sampling bottle provided by a licensed laboratory to collect the water.** These bacteriological sampling bottles have tamper-proof seals. Don't use if the seal has been broken; ask the laboratory for a new one.
- **Don't rinse sampling bottle before using**, or you will remove some or all of its preservative and ruin the sample.
- **Don't touch the inside or lip of the sampling bottle and its cap**, otherwise you may contaminate your sample. The inside of the cap and container should only come into contact with the air and the collected sample of drinking water.
- **Label the bottle before taking the sample** as it may be difficult to write on a wet label. On the label, put the date, your drinking water system number, the spot where the sample was taken, and that it is a *distribution* sample.
- **Fill the sampling bottle to the shoulder**, leaving an air space. Don't allow the water to overflow. Adjust the tap flow rate to prevent splashing.
- **Cap the bottle immediately** after collecting the sample, and seal it properly.

Storing and transporting samples:

- **Submit your drinking water test sample to the licensed laboratory as quickly as possible after collection.** The earlier the laboratory gets your drinking water sample, the

quicker it can be tested and the more accurate your test results will be. Ship early in the week to avoid having your sample sit in the laboratory over the weekend before testing.

- **If you're not shipping the sample to the laboratory right away, store it in the refrigerator until you're ready.**
- **Ship your sample bottles or containers to the laboratory in coolers, or in foam pack containers with ice or ice packs.** Don't pack the bottles with loose ice as this may contaminate the sample. If you only have loose ice, encase it in waterproof packaging or a sealed container.
- **Don't allow samples to freeze.** In winter, you may want to take advantage of heated shipping offered by some courier companies.
- **Send the completed *Chain-of-Custody* form to the laboratory along with the collected sample.** If sending it inside the cooler containing the sample, ensure that the form is enclosed inside a waterproof package, e.g., a new zip-lock bag.

Recording your samples and test results:

- Put your drinking water system number on the completed *Chain-of-Custody* form, and indicate that your drinking water test sample is for compliance with O. Reg. 252/05. Record the date and time the sample was taken, the spot where it was taken and that it is a *distribution* sample, plus the name of the person who took it.
- The licensed laboratory will send you a report on the test of your drinking water sample.
- If the results show contamination of *E.coli* or total coliform, you must take corrective action. Check your *Supplying Safe Drinking Water* guide and the *Procedure For Corrective Action for Non-Residential and Non-Municipal Seasonal Residential Systems that Do Not Serve Designated Facilities and are Not Currently Using Chlorine*: www.ene.gov.on.ca/envision/gp/5150e.pdf
- Keep test result records for **at least five years.**

For More Information

If you would like other guides and fact sheets related to drinking water, please contact the Ministry of the Environment's Public Information Centre at: 1-800-565-4923 or visit the Ministry of the Environment's website at: www.ene.gov.on.ca/envision/water/sdwa/reg252.htm