



Small Drinking Water System Operator Guide to Adverse Water Quality Incidents

The purpose of this document is to guide operators of Small Drinking Water Systems (SDWS) in proper response to adverse water quality incidents (AWQIs). It applies only to AWQIs reported under O.Reg. 319/08 (Small Drinking Water Systems), and not AWQIs reported under O.Reg. 170/03 (Drinking Water Systems).

Please note that this document is a guide only. The regulation takes precedence. It can be found at www.ontario.ca/laws/regulation/080319

What is an adverse water quality incident (AWQI)?

An AWQI is an event which may affect the potability (safety) of the water provided to the users (e.g. customers, guests, or residents) of the SDWS. It may include but is not limited to:

- An adverse test result reported by a lab. For example, total coliforms.
- An adverse test result measured by the operator of the SDWS. For example, low chlorine residual in the distribution system.
- An adverse observation on the part of the operator of the SDWS. For example, a failure of the treatment process.

By far the most common AWQI is microbiological contamination of the water such as total coliforms and E. coli.

Who calls who?

If a sample you submit to the lab is adverse, the lab will call you using the contact information you provided on the *Chain of Custody* form. The lab will also call Peterborough Public Health (PPH). This will occur on a 24/7 basis. You are then required by s. 9 of the regulation to immediately report the adverse to PPH. Do not wait for our call.

If you have an adverse test result on a test which you personally perform, or you make an adverse observation, you are also required by s. 9 of the regulation to immediately report the adverse test or observation to PPH. See below for more information.

Peterborough Public Health (PPH) can be reached at 705-743-1000. During regular business hours (Monday to Friday, 8:30 a.m. to 4:30 p.m., excluding holidays) follow the telephone prompts or ask for inspection. An administrative assistant will record information about the AWQI and direct your call to the appropriate Public Health Inspector (PHI). After hours, listen to the message and follow the instructions to reach on-call staff.

Steps to Follow:

1. **Immediately**, call PPH at 705-743-1000. When you speak to the PHI, tell them what corrective actions you plan to take. The PHI will advise you if those corrective actions are satisfactory, or may require additional corrective actions.
2. **Within 24 hours** of reporting the adverse, complete and return section 2 of the form, *Notice of Adverse Test Result and Issue Resolution* indicating the corrective actions you have taken or plan to take, and return the form to PPH. You can fax the form to PPH at 705-743-1203 or send it by email to the email address provided by the PHI you spoke to.
3. **Within 7 days** of the issue being resolved, update the form, *Notice of Adverse Test Result and Issue Resolution* indicating the corrective actions which you have completed and return the form to PPH. Include water test results (the certificate of analysis) with the form if applicable. You can fax the form to PPH at 705-743-1203 or send it by email to the email address provided by the PHI you spoke to.

The form *Notice of Adverse Test Result and Issue Resolution* will be sent to you by the lab (if the adverse occurred as a result of a sample you submitted to the lab). They will complete sections 1 and 3 of the form. The form sent by the lab may not include section 2. If it does not, you can find the form at our website, peterboroughpublichealth.ca by searching for “SDWS”. It will be at the bottom of the page under forms. Or follow this link: <https://www.peterboroughpublichealth.ca/your-health/food-water-safety/well-water-safety/drinking-water-systems/>

What is an Adverse Test Result?

These are defined in s.2(1) of O.Reg. 319/08 (“the regulation”). They include but are not limited to:

- A result that exceeds the standard listed in the Ontario Drinking Water Quality Standards (e.g. total coliforms or E. coli greater than 0)
- A result indicating that the free chlorine residual is less 0.05mg/l (in a SDWS which provides secondary disinfection)

What is an Adverse Observation?

These are also defined in s.2(1) of the regulation. They include but are not limited to:

- Inappropriate disinfection (e.g. the UV failed or low chlorine residual in a system using chlorine for primary treatment)
- Inappropriate filtration (e.g. turbidity greater than 1 NTU)
- A break in a distribution pipe which could result in contamination of the water

Corrective Actions

Corrective actions are listed in sections 26 to 34 of the regulation. These are the actions you must follow in the event you have an adverse test result or adverse observation. When calling PPH to report an adverse, advise the PHI on what corrective action you plan to take. They may require additional corrective action to mitigate the risk to the users.

Relax! If you are unsure of the appropriate corrective action or how to fill out the form, PPH staff are available to help you.