

# COLLECTING SAMPLES FOR *E. COLI* AND TURBIDITY TESTING

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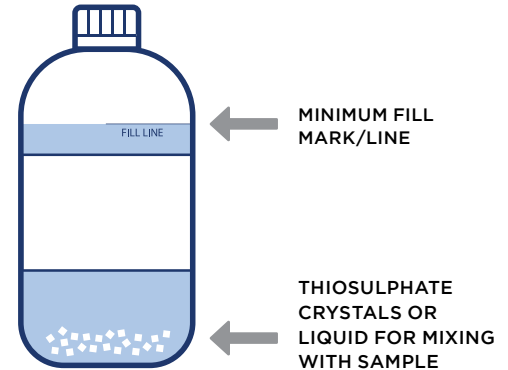
## A GUIDE FOR THOSE USING RAINWATER HARVESTING AND OTHER ALTERNATIVE (NON-POTABLE) WATER SYSTEMS



[vancouver.ca/operating-permit](http://vancouver.ca/operating-permit)

As of January 1, 2019, all new and existing alternative water systems must conduct periodic water quality testing, completed by an accredited laboratory (see [vancouver.ca/operating-permit](http://vancouver.ca/operating-permit)). It is the system owner's responsibility to arrange for laboratory testing.

These guidelines provide instructions for collecting water quality samples for laboratory analysis. Please contact your chosen laboratory with any questions.



### A. SAMPLING MATERIALS

- Ensure you use Personal Protective Equipment appropriate to the collection site.
- 1 x 200 mL sterile plastic bottle containing sodium thiosulphate, labelled (obtained from the laboratory). Do not open the bottle until you are ready to take the sample.
- 1 sampling form (i.e. requisition or chain of custody sheet) per water sample bottle, ensuring all necessary fields are filled in such as: facility/site name, date and time of collection, type of sample (non-potable), and type of test (*E. coli* and turbidity).

### B. SAMPLING INSTRUCTIONS

1. Wash hands and use gloves.
2. Flush system for approximately 2-3 minutes (to achieve 15-38 L flush). Time will be dependent on pipe diameter; larger pipe diameter requires less time to achieve the same volume.
3. Once flushing is completed, using aseptic technique (do not let the lid touch any surface or clothing) collect 200 mL of water filling up to the fill line of the bottle (see figure above). Tighten the lid to ensure no leakage. Gently invert several times to mix.
4. Fill in sample site information both on the bottle label and the requisition. The person collecting the sample must be the same individual who fills out the requisition.

### C. SHIPPING INSTRUCTIONS

- Samples should be stored and shipped at less than 10°C
- Temperature considerations:
  - During warmer temperatures, please include frozen cooler pack(s) with shipment. Do not use loose ice.
  - During colder temperatures, please insulate bottles with plastic bubble wrap or absorbent materials to avoid freezing.
- Ship only on same day or by overnight courier. Samples should be received by the lab within 24 hours of collection.

### D. RESULTS, REPORTING AND CORRECTIVE ACTIONS

- *E. coli* results will be reported as CFU (colony forming units) or MPN (most probable number) per 100 mL. Corrective action is required when results are greater than or equal to 100 CFU or MPN per 100 mL.
- Turbidity results will be reported in NTU (nephelometric turbidity units). Corrective action is required when results are greater than or equal to 10 NTU.
- Results must be uploaded to the City of Vancouver through the on-line portal; see [vancouver.ca/operating-permit](http://vancouver.ca/operating-permit).

This document was developed in partnership between British Columbia Centre for Disease Control (BCCDC) Public Health Laboratory, Vancouver Coastal Health and the City of Vancouver.