

# New City of Vancouver Regulations for Legionella



## What is Legionella?

*Legionella pneumophila* is a naturally occurring waterborne bacteria that is found at low levels in natural freshwater environments such as lakes and streams. *Legionella* bacteria may also be present in building water systems like cooling towers and evaporative condensers (within large air conditioning systems), as well as decorative water features, rainwater collection systems, and poorly maintained hot tubs/spas. In systems such as these, *Legionella* can multiply under ideal conditions, which includes warm (25-45°C) stagnant water, and unclean piping and equipment. Since *Legionella* is naturally occurring, the bacteria may never be completely eliminated, but its growth can be controlled.

The most effective measures to control *Legionella* infection outbreaks include actions to reduce the growth of the bacteria in building water systems and to reduce opportunities for human exposure. Temperature controls, preventing accumulation of stagnant water, adequate disinfection protocols, and regular maintenance and monitoring of water systems typically reduce the occurrence of the bacteria.

## Why is testing for Legionella important?

*Legionella pneumophila* is the cause of Legionnaires' disease, which is a serious and potentially fatal respiratory illness that results in severe pneumonia. The bacteria can also cause a milder illness called Pontiac fever, resulting in flu-like symptoms that typically resolve within a few days without treatment. These illnesses are caused by inhalation of aerosols or water droplets contaminated with the *Legionella* bacteria; they are not transmitted from person to person.

The ALS laboratory in Vancouver now offers *Legionella* testing. The laboratory is CALA accredited to ISO/IEC 17025 and is enrolled in a CDC ELITE certification process for *Legionella pneumophila* analysis using the culture method that conforms to ISO 11731, "Water Quality - Enumeration of *Legionella*."



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## New City of Vancouver Regulatory Requirements

Effective January 1, 2021, the City of Vancouver requires all new and existing cooling towers and evaporative condensers to be tested for *Legionella pneumophila* at seasonal start-up, typically in the spring or summer.

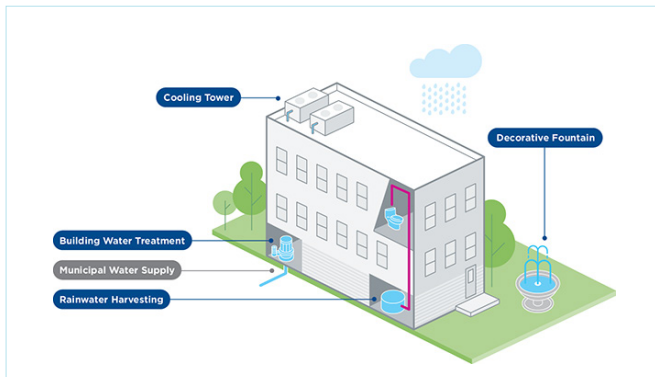
As of January 1, 2022, all building water systems will require operating permits that are associated with an individual holding the Environmental Operators Certification Program (EOCP) "Building Water System (BWS) Operator" certification, and *Legionella pneumophila* testing will be required for these systems on a monthly or bi-monthly basis. All details are available at the City of Vancouver link below:

[Get a water systems operating permit | City of Vancouver](#)

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City of Vancouver

The table below provides a summary of the *Legionella* sampling requirements under this new regulation.

City of Vancouver <i>Legionella</i> Regulatory Requirements		
Operating System	As of Jan 1, 2021	As of Jan 1, 2022
Cooling Towers & Evaporative Condensers	One-time <i>Legionella pneumophila</i> testing at system start-up	Monthly <i>Legionella pneumophila</i> testing
Indoor & Outdoor Decorative Water Features	NA	<i>Legionella pneumophila</i> testing once every 2 months
Rainwater Harvesting and Other Alternative Water Systems	NA	<i>Legionella pneumophila</i> testing once every 2 months

For *Legionella* test results that exceed the specified action levels outlined in the regulation, the City of Vancouver will require the following:

» If *Legionella pneumophila* test results are  $\geq 10$  CFU/mL and  $\leq 1000$  CFU/mL, the system owner must notify the Chief Building Official at the City of Vancouver within 24 hours of receipt of final results. Prompt remedial treatment (cleaning and disinfection) is required within specified timeframes, with follow-up testing 48 hours to 5 days later.

» If *Legionella pneumophila* results are  $> 1000$  CFU/mL, the laboratory must immediately notify the system owner, the Chief Building Official and the Medical Health Officer. Immediate remedial treatment is required, with follow-up testing 48 hours to 5 days later.

The ALS Vancouver laboratory is fully set-up to meet the City of Vancouver's immediate reporting requirements for *Legionella*.

## Sampling for Legionella

The City of Vancouver has prepared a detailed guidance document for *Legionella* sample collection: "Collecting Samples for Legionella Testing." This document is a *Legionella* testing guide for those using cooling towers, decorative water features, rainwater harvesting, and other alternative water systems. The full document is available at the following link: [Collecting Samples for Legionella Testing \(vancouver.ca\)](https://vancouver.ca/collecting-samples-for-legionella-testing).

If you have in-house expertise and only require testing for *Legionella* (or any other analysis), ALS can provide simple, easy to use sampling kits that contain everything required for your sampling events. ALS can also incorporate your testing schedule into our system to provide sample bottles pre-labelled with your site location, individual sampling point names, and sampling dates, with traceable job reference numbers (yours and ours). This approach can save you time at sampling and also facilitates slightly faster delivery of test results.

If you require assistance with your *Legionella* sampling, ALS Vancouver works with a number of service providers with the required certification who can assist with your sampling and system operation needs. ALS can put together a proposal for all testing, and can work with any sampling/BWS provider, including provision of the advanced reporting features described above.

Each *Legionella* sampling kit contains the following:

- » Sample bottles – 250 mL HDPE with sodium thiosulfate preservative
- » Labels
- » Chain of custody form
- » Shipping cooler
- » Ice packs
- » Sampling instructions

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## Submitting Samples to ALS

Once collected, samples should be kept cold, but not frozen, for delivery to the laboratory as soon as possible using the provided packaging with ice or ice packs. Samples must be maintained at 2-8°C and unless arranged otherwise, must arrive at the laboratory Monday to Friday (8 am to 5 pm) within 24 hours from sampling. The holding time (time within which the analysis must commence) for *Legionella pneumophila* analysis is 48 hours from sampling.

## Legionella Results & Reporting

ALS Vancouver provides final *Legionella* results electronically via email. The ALS report will clearly compare Legionella pneumophila results against the City of Vancouver regulations and will highlight any failures or exceedances. Clear, fully automated reporting of regulatory failures allows samplers and building owners to take prompt action based on test results.

ALS reports can be automatically sent to multiple individuals (i.e. sampler, building owner, facility manager, etc.) depending on each client's specific needs.

In addition to the final report, results are also available on-line 24/7 through our secure internet-based reporting system, *ALSolutions*, which will also store your test results as a long-term backup.

For additional information, or to arrange your *Legionella* sampling and/or analysis, please contact ALS Vancouver at 604-253-4188.