

Legionella/Legionellosis

Information for Hotel Operators

Any facility with hot water distribution may have environmental conditions conducive to Legionella growth. Legionellosis (lee-juh-nel-OH-sis) is a bacterial disease caused by Legionella bacteria that can present clinically as Legionnaires' disease or Pontiac fever. Legionnaires' disease is a more severe type of pneumonia and often requires hospitalization while Pontiac fever is a milder form of pneumonia. Ohio reported more than 700 Legionnaires' disease cases in 2021 and 500 cases in 2022.

Legionnaires' disease has an estimated mortality rate of 10% (25% in healthcare facilities). However, it can be treated with proper medications.

How will I know if there is a Legionnaires' disease case at my hotel?

Hotel owners may be contacted by the local health department if a Legionnaires' disease case has been identified in association with the hotel.

Where is Legionella found and how are people exposed to it?

Legionella is naturally found in fresh water such as lakes and streams. In the building environment, Legionella can grow in water distribution systems. Legionella mostly infects people when it gets into man-made water sources such as potable water systems or cooling towers. People are infected when they breathe in tiny water droplets or aerosols that contain the bacteria.

Legionella is more likely to be found in facilities with:

- Multiple floors and complex water distribution systems.
- Old plumbing or plumbing systems with dead-end legs/segments.
- Unoccupied or vacant rooms.
- Water outlets that have been unused for an extended period. (e.g., a week).
- Circulating water distribution systems in which the residual disinfectant chlorine is less than optimal.
- Hot water systems with recirculating loops.

Legionella can grow and spread in many areas of a building, including:

- Sink faucets and showerheads.
- Whirlpool tubs, spas, and bathtubs.
- Cooling towers.
- Decorative fountains.
- Misters and humidifiers.

Legionella thrives in stagnant water and grows best within a specific temperature range of 77 °F to 113 °F.



Planning

Complete the Legionella Environmental Assessment Form (LEAF)

This form enables hotel operators to have a thorough understanding of their facility's water systems and aerosolizing devices in order to help minimize the risk of Legionella growth. The LEAF form is available at the Centers for Disease Control and Prevention (CDC) website (cdc.gov/legionella).

Develop and update the Water Management Program (WMP)

WMPs are designed to identify hazardous areas and risky environmental conditions in the building and to list detailed steps to reduce the risk for Legionella growth and spread within the water distribution system and water-using devices. The CDC offers resources for developing an effective WMP. Hotel operators may benefit from the "Preventing Legionnaires' Disease" training on developing WMPs available at the CDC website (<https://www.cdc.gov/nceh/ehs/elearn/prevent-LD-training.html>).

Maintenance

Maintain proper water temperature.

- Maintain hot water storage tanks at 140 °F and circulating hot water temperatures close to 120 °F, and not below 113 ° F.
- Conduct periodic thermal flushing of the water heater tanks to 165 °F.

Flush the plumbing system.

- Flush the plumbing system after periodic facility, floor, or room closures where water may have gone stagnant.
- Flush when there is a change in routine environmental measures or any new construction or plumbing repairs.
- Thorough flushing should include cold and hot water piping distribution lines and fixtures (i.e., sink aerators, shower heads, sprayers, etc).

Prevent stagnation.

- Identify areas of risk where water may become stagnant.
- Remove dead end legs/segments and make plumbing corrections when required.

Maintain water-using devices.

- Any device that uses nonsterile water can grow Legionella at favorable temperatures.
- Flush and replace filters according to manufacturer's recommendations.
- Regularly clean and maintain water-using devices such as humidifiers, water walls or decorative fountains, ice machines, etc.
- Regularly clean and maintain water system components, such as thermostatic mixing valves, aerators, shower heads, hoses, filters, and storage tanks.

Maintain proper disinfectant levels.

- Use an appropriate disinfectant for the water system where applicable and routinely monitor disinfectant residual levels.

Testing for Legionella.

- Testing for Legionella in the water system is recommended when a Legionellosis case is found in association with the facility.