

# Standard 188-2021



## Legionellosis: Risk Management for Building Water Systems

### Purpose

This standard establishes minimum legionellosis risk management requirements for building water systems. It is written with enforceable language to facilitate code and regulatory adoption of the standard.

### Significance

Legionellosis refers to two diseases that can be caused by the bacterium *Legionella*: a form of pneumonia called Legionnaires' Disease, and a less-severe influenza-like illness called Pontiac Fever. While Legionnaire's Disease has been known for many years, recent outbreaks have increased awareness of the disease, its causes and prevention strategies. According to the World Health Organization, since many countries lack appropriate methods of diagnosing the infection or sufficient surveillance systems to detect it, the actual rate of occurrence is unknown. In Europe, Australia and the United States, there are about 10-15 cases detected per million population annually, with more than 10% of cases in the U.S. being fatal. In Canada, the average number of reported cases of Legionnaires' disease is generally less than 100 per year.<sup>1</sup> A 2019 National Academy of Sciences, Engineering, and Medicine report estimated that 52,000 to 70,000 Americans suffer from Legionnaires' Disease every year, which is many times higher than the number of reported cases.<sup>2</sup>

### Scope

- Provides minimum legionellosis risk management requirements for the design, construction, commissioning, operation, maintenance, repair, replacement and expansion of new and existing buildings and their associated potable and non-potable water systems and components.
- Applies to human-occupied commercial, institutional, multi-unit- residential and industrial buildings, excluding single-family residential buildings.
- Additionally, ASHRAE Guideline 12-2023, *Managing the Risk of Legionellosis Associated with Building Water Systems*, is a supplement to this standard and provides information and guidance on managing legionellosis in specific types of building water systems.

### Highlights

- ✓ The state of Michigan requires health facilities to implement a water management program consistent with Standard 188-2018.
- ✓ The state of New York requires building owners for buildings with cooling towers to obtain a maintenance program and plan for each cooling tower, developed in accordance with Standard 188-2015.
- ✓ The Centers for Disease Control and Prevention lists Standard 188-2018 on its webpage for guidelines, standards, and laws preventing Legionnaires' Disease.
- ✓ The Centers for Medicare and Medicaid Services issued a directive in 2017 that requires Medicare-certified health care facilities to develop and maintain water management policies. This directive also calls for health care facilities to use Standard 188 to assist in developing the water management plans.
- ✓ The Uniform Plumbing Code, which is also a national standard designated by the American National Standards Institute (ANSI), has referenced Standard 188 since 2021, and mentions that jurisdictions can choose to adopt Standard 188.

<sup>1</sup> World Health Organization, Legionellosis: <https://www.who.int/news-room/fact-sheets/detail/legionellosis>

<sup>2</sup> Consensus Study Report: Management of Legionella in Water Systems, National Academies of Sciences, Engineering and Medicine: <https://nap.nationalacademies.org/resource/25474/Legionella%204-pager.pdf>