



A New Legionella Standard

ASHRAE, the American Society of Heating, Refrigerating, and Air-conditioning Engineers, Inc., has released a new standard (*ANSI/ASHRAE Standard 188, Legionellosis: Risk Management for Building Water Systems*) to establish minimum Legionellosis risk management requirements for building water systems. Legionellosis is an infectious, sometimes fatal, disease caused by water contaminated with certain *Legionella* bacteria species.

Unlike existing guidelines and best practices, Standard 188 establishes specific methods for risk management for the control of *Legionella* in buildings with centralized industrial and commercial water systems. It mandates using risk management principles to develop a comprehensive building water system maintenance plan for *Legionella* control.

Standard 188, published in 2015 and updated every three years, is the first risk management standard in the United States for the prevention of Legionellosis associated with building water systems. As a standard, 188 defines a clear level of care that carries greater weight than guidelines.

It is important for facility managers and owners to understand the requirements and responsibilities associated with Standard 188. A poorly-designed Water Management Plan can be difficult to follow and document, and failure to comply is expected to increase accountability. Without previous risk management experience, many facility managers will need outside assistance.

What is required?

Standard 188 requires facility managers to take three basic steps:

1. Conduct a building survey to determine its risk characterization.
2. Develop a Water Management Plan for *Legionella* control in all building water systems.
3. Document the Plan with all specified verification and validation steps followed.

Initial Risk Characterization

Any commercial or industrial building that has a cooling tower, whirlpool spa, ornamental fountain, mister, air washer or other devices that release water aerosols must develop a Water Management Program for those devices in compliance with the Standard.

Additionally, if the building or property meets at least one of the following criteria, the owner or property manager must develop a comprehensive Water Management Plan for all building water systems listed above plus all of the potable building water systems in the building.

- Multiple housing units with central hot water
- More than 10 stories in height
- Inpatient healthcare facility (hospital / nursing home)
- Building for housing or treating people for burns, chemotherapy for cancer, or solid organ transplant or bone marrow transplant
- Building for housing or treating people that are immunocompromised or diabetic
- Building for housing people primarily over 65

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Program Development

If the risk characterization indicates a Water Management Program is required, it is the responsibility of building owners/facility management to:

- Form a Program Team
- Conduct a hazard analysis
- Prepare a written Water Management Program

Forming a Program Team

The Program Team is responsible for conducting the hazard analysis and preparing a risk management plan that meets the requirements of Standard 188. This team must include at least one person who understands risk management principles and one person familiar with the building water systems.

Water Management Program

The hazard analysis and written water management program required by Standard 188 includes the following elements:

- **Describe Water Systems**
The first step is to conduct a systemic analysis of hazardous conditions in the building water systems.
- **Determine Control Locations**
Determine the locations where control measures should be applied.
- **Establish Control Measures**
Establish the range of values, and maximum and minimum levels for control.
- **Establish Monitoring Program**
Define procedures for monitoring whether control measures are operating within established limits.
- **Determine Corrective Actions**
Corrective actions must be defined for each control measure to describe what must be done when test results are outside of the limits.
- **Confirmation Procedures**
Verification and Validation procedures must be established to confirm the program is being implemented as planned, and controls the hazardous conditions throughout the building.
- **Establish Documentation**
A written plan must be prepared and maintained documenting all activities of the program.

Chem-Aqua Can Help You

Chem-Aqua takes risk mitigation for *Legionella* and other waterborne pathogens seriously. Our Chem-Aqua Environmental Services group provides specialized training and support for managing the risks associated with *Legionella* in building water systems.

Our team, which includes globally recognized *Legionella* experts, has over 30 years of domestic and international experience reducing the risks associated with *Legionella* and other waterborne pathogens.

We have a variety of options available to help you comply with the principles of Standard 188, ranging from educational seminars, to cooling water compliance modules, all the way to complete site-specific water management plans.

Chem-Aqua can help you with:

- Plan development, implementation, monitoring, verification, and consulting
- *Legionella* testing using accredited third-party labs proficient in ISO 11731
- Cooling tower cleaning and disinfection
- Domestic water remediation services
- Secondary disinfection of potable water systems

For more information, contact Chem-Aqua through your local representative or at www.chemaqua.com.