Legionella and Water Safety in Your Building

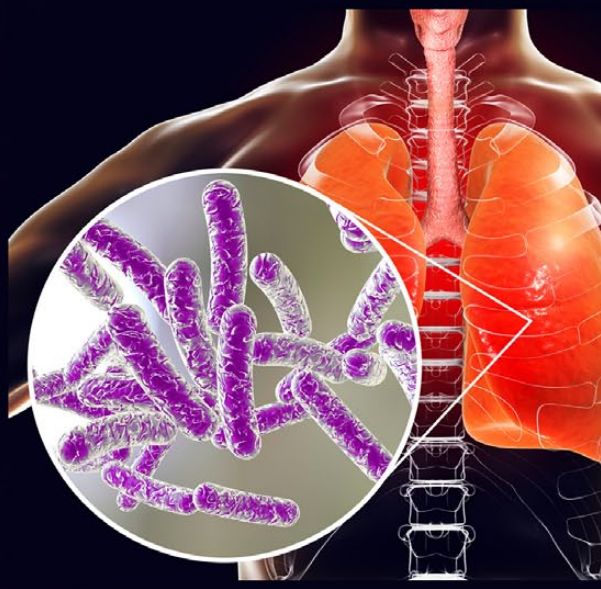
QUICK GUIDE FOR FACILITY TEAMS

- *What do I need to know about Legionella and other waterborne pathogens?*
- *What is our legal responsibility in regards to water safety?*
- *How do I prevent contamination and control our health and liability risks?*

safePATH 188™

What Is *Legionella*?

Legionella is the waterborne bacteria that causes Legionnaires' Disease, a potentially fatal infection of the respiratory system. *Legionella* can grow and spread through your building's water system, entering the lungs when you breath in small droplets of water. According to the CDC, an estimated 10,000 to 18,000 people are infected every year in our country.



Who Is Most At Risk?

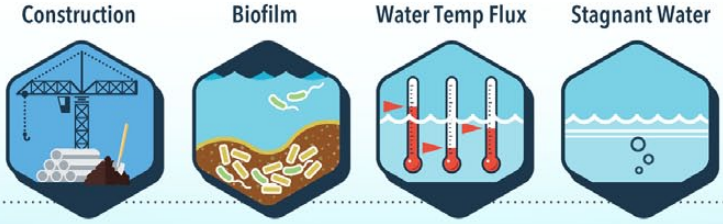
Anyone can get Legionnaires' disease, but some people's age, habits, or health place them at greater risk, including:

- People 50 years of age and older
- Those with compromised immune systems
- Those with respiratory or kidney disease
- Heavy smokers or drinkers

ANATOMY OF A *LEGIONELLA* OUTBREAK

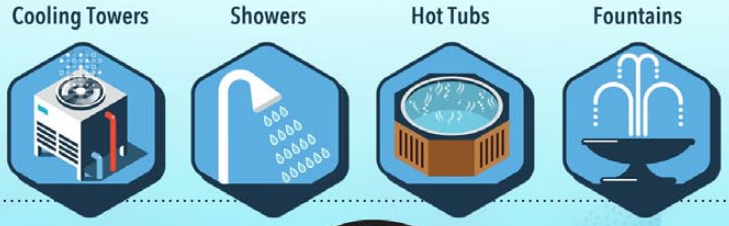
1 GROWS

Internal or external factors create favorable conditions for *Legionella* bacteria to grow and spread within your building's water system.



2 SPREADS

Infected water droplets get airborne, aerosolized by common mechanical or plumbing fixtures and inhaled by building occupants.

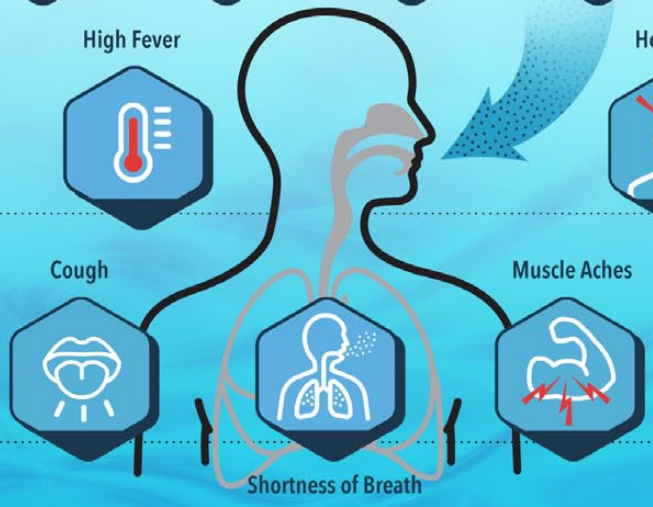


3 INFECTS

Within ten days, infected parties begin to display flu-like symptoms. Bacteria invades the lungs, causing Pontiac Fever or the more severe Legionnaire's Disease.

4 THREATENS

Legionnaire's symptoms continue to progress into severe pneumonia, often accompanied by coughing, shortness of breath, nausea, and vomiting.



from the CDC Legionella Toolkit

Identifying Buildings at Increased Risk

Survey your building (or property) to determine if you need a water management program to reduce the risk of *Legionella* growth and spread.

If you answer YES to any of questions 1 through 4, you should have a water management program for *that building's* hot and cold water distribution system.

Healthcare Facilities

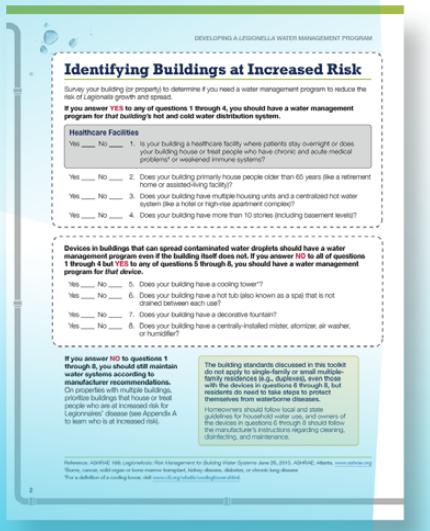
Yes ____ No ____ 1. Is your building a healthcare facility where patients stay overnight or does your building house or treat people who have chronic and acute medical problems† or weakened immune systems?

Yes ____ No ____ 2. Does your building primarily house people older than 65 years (like a retirement home or assisted-living facility)?

Yes ____ No ____ 3. Does your building have multiple housing units and a centralized hot water system (like a hotel or high-rise apartment complex)?

Yes ____ No ____ 4. Does your building have more than 10 stories (including basement levels)?

Do We Need A WSMP? (Water Safety Management Plan)


DEVELOPING A LEGIONELLA WATER MANAGEMENT PROGRAM

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Devices in buildings that can spread contaminated water droplets should have a water management program even if the building itself does not. If you answer NO to all of questions 1 through 4 but YES to any of questions 5 through 8, you should have a water management program for *that device*.

Yes ___ No ___ 5. Does your building have a cooling tower*?

Yes ___ No ___ 6. Does your building have a hot tub (also known as a spa) that is not drained between each use?

Yes ___ No ___ 7. Does your building have a decorative fountain?

Yes ___ No ___ 8. Does your building have a centrally-installed mister, atomizer, air washer, or humidifier?

If you answer NO to questions 1 through 8, you should still maintain water systems according to manufacturer recommendations. On properties with multiple buildings, prioritize buildings that house or treat people who are at increased risk for Legionnaires' disease (see Appendix A to learn who is at increased risk).

The building standards discussed in this toolkit do not apply to single-family or small multiple-family residences (e.g., duplexes), even those with the devices in questions 5 through 8, but residents do need to take steps to protect themselves from waterborne diseases.

Homeowners should follow local and state guidelines for household water use, and owners of the devices in questions 5 through 8 should follow the manufacturer's instructions regarding cleaning, disinfecting, and maintenance.

Reference: ASHRAE 188: Legionellosis: Risk Management for Building Water Systems. June 26, 2015. ASHRAE: Atlanta. www.ashrae.org

†Burns, cancer, solid organ or bone marrow transplant, kidney disease, diabetes, or chronic lung disease

*For a definition of a cooling tower, visit www.cdc.org/nchstp/cooling/tower.shtml.

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Page 2 of the CDC *Legionella* Toolkit

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What is Our Responsibility?

For Healthcare Facilities

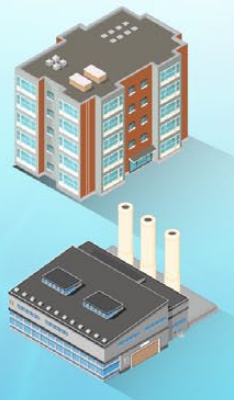
The Centers for Medicare and Medicaid Services (CMS) require Medicare-certified healthcare facilities to have water management policies and procedures in place to reduce the risk of *Legionella* and other pathogens in building water systems.

Accrediting organizations will review your facility's policies, procedures, and reports documenting water safety management practices. They will verify that you've done the following:

- Conducted a facility risk assessment to identify where *Legionella* and other pathogens could grow and spread in your water system
- Implemented a water safety management program informed by ASHRAE Standard 188 and the CDC toolkit, including control measures such as physical controls, temperature management, disinfectant level control, visual inspections, and enviromental testing for pathogens
- Specified testing protocols and acceptable ranges for control measures, and document the results of testing and corrective actions taken when control limits are exceeded

What is ASHRAE Standard 188?

In 2015, the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) established a set of best practices to reduce the risk of legionellosis. These are published under *ASHRAE Standard 188*, which has become the accepted standard in the industry. In 2016, the CDC developed a toolkit to help facilities implement ASHRAE Standard 188, updating content in 2017. In April of 2019, ASHRAE announced it will further develop water safety and quality guidelines under future *Standard 514*.



For Commercial or Industrial Facilities

While non-healthcare facilities fall outside CMS jurisdiction, ASHRAE Standard 188 and CDC recommendations apply to all buildings with complex water systems. In 2017, New York became the first state to legally regulate commercial, industrial, and multi-family residential buildings in regard to their preventive measures. More states are expected to follow, especially as cases of Legionnaire's Disease continue to rise.

In the event of a *Legionella* outbreak, the extent of your legal liability rests largely on the documented presence of proper water safety practices within your facility, using ASHRAE Standard 188 as a guide.

H2O WATER TECHNOLOGY

What is the Cost of Negligence?

What is at stake if you just ignore the industry standards? Some facility management teams hope the *Legionella* problem goes away on its own, adopting a passive approach until the law directly forces change. From a short-term cost perspective, that can be a tempting option. But by forestalling action, you end up exposing your building ownership to costs that could far outweigh the actual expense of adopting a water safety management plan.

What do you put at risk?

- Increased chance of a *Legionella* outbreak in your building, threatening the health of your people

- Significant financial liability associated with cases of Legionnaire's Disease, with an average claim of $11.5 million in incidents where negligence is determined

- A non-compliance citation from the CMS, placing your Medicare/Medicaid accredidation in jeopardy (applies to healthcare)

- Bad press and reputational damage that can take years to recover from

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How Do We Control Our Risk?

The Path to Simplifying Your Safety Compliance

As important as it is, satisfying the requirements of ASHRAE Standard 188 can be a drain on time and resources. At HOH, we've been providing water safety expertise for more than 30 years. We know what works, what's required, and how to get it done and documented in an efficient, cost-effective manner.

The SafePATH188 Solution

SafePATH188, our comprehensive water safety management program, was designed to bring you into full compliance with the latest industry standards, even in high-risk healthcare facilities. The program can be customized to your particular needs, but most include these core elements:

- A complete Water Safety Management Plan based on ASHRAE Standard 188 and CDC Toolkit
- Water safety training to inform and equip your team
- An ongoing advisory role on your water safety committee
- Scheduled testing and treatment to keep you in documented compliance

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HOH WATER TECHNOLOGY

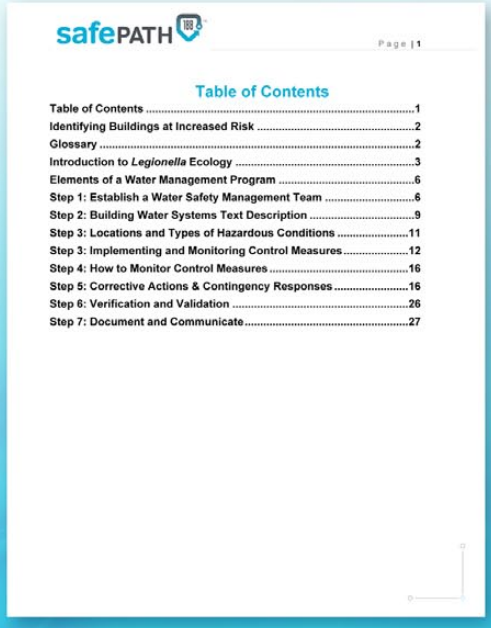
What Does the Program Deliver?

Expert Guidance, Practical Implementation

An HOH water safety professional will work closely with you and your team throughout the entire SafePATH188 process, helping you to:

- **Eliminate compliance headaches**
  With an intimate knowledge of industry standards and what they mean for a variety of systems, our team will help you navigate the complexity of compliance demands. We also make it a point to stay current with new and emerging regulations.
- **Simplify your planning and documentation process**
  We help you draw up you water system's flow diagram, identify key vulnerabilities and risk levels, determine control points, draft a testing and treatment schedule, and pull all the documentation together in a format that satisfies accrediting organizations.
- **Implement turnkey testing and treatment**
  Testing and treatment are key activities in keeping your facility safe and citation-free. It's also at the core of HOH expertise.
- **Secure reliable emergency response**
  With our local coverage, you can be sure an HOH water safety pro is nearby to remediate any critical issues.

Table of Contents and sample page from a SafePATH188 Water Safety Management Plan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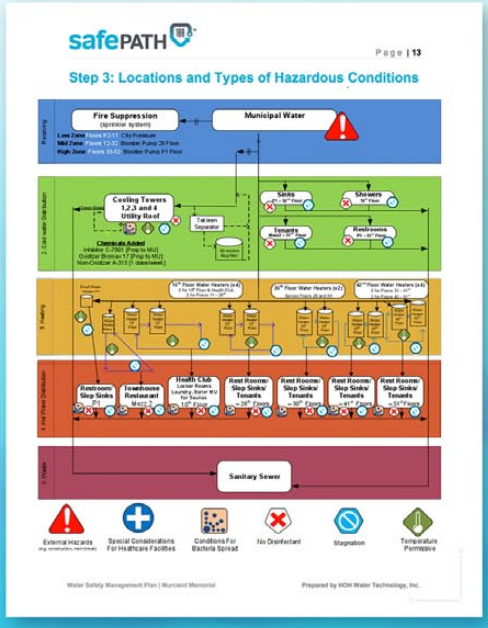

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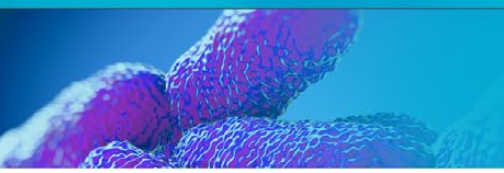

For more information,

or to schedule a site survey,

contact your local HOH

Water Safety Professional

HOH WATER TECHNOLOGY

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