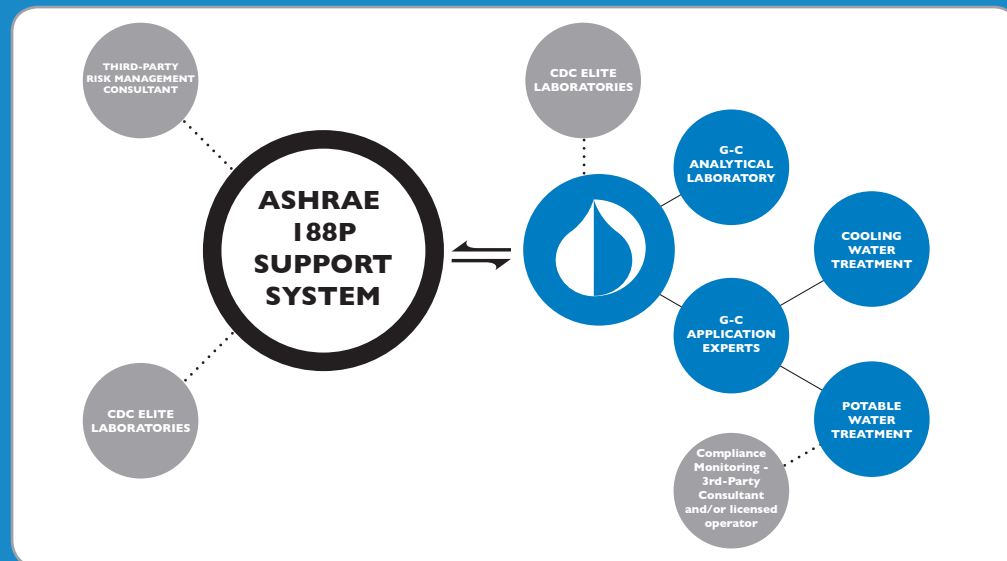


4

Planning.

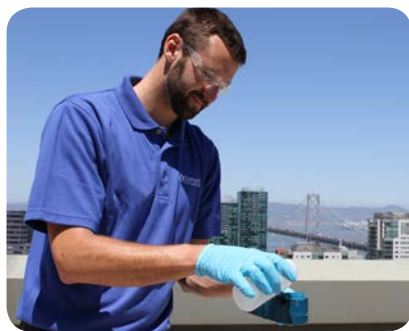
Garratt-Callahan is available to provide additional information and assistance throughout the process. To fully support your system assessment and complete the development of your written program or for more information contact your Garratt-Callahan sales representative or send an email to ASHRAE188@g-c.com.



Legionella Control Program

Minimizing the risk from *Legionella* and many other Waterborne Pathogens

About Garratt-Callahan.



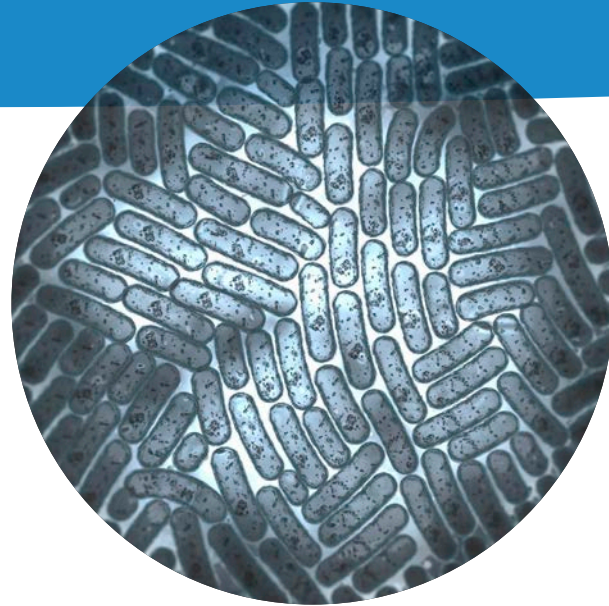
Garratt-Callahan is a recognized leading provider of expert industrial water treatment solutions. By offering products, services, and support backed by over 110 years of experience, we deliver peace-of-mind and real savings in time, manpower, and resources. What we do positively impacts our customer's ability to conserve energy, reduce water consumption and become more environmentally conscious. At Garratt-Callahan expertise matters and has since 1904.

Discover more at www.garrattcallahan.com

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WATERBORNE PATHOGENS

Legionellosis in Hospitals.

Waterborne pathogens are a significant risk for any building, especially hospitals and healthcare facilities due to their at-risk population. *Legionella pneumophila*, a well-known waterborne pathogen, is naturally-occurring in the environment and grows best in warm water. *Legionella* bacteria can enter a building water system, and under the right conditions, persist and thrive throughout the system. System design may promote the colonization of *Legionella* bacteria within biofilms. Water temperature, plumbing materials, and the configuration and age of the water systems are just a few of the conditions that promote the colonization of *Legionella* bacteria.

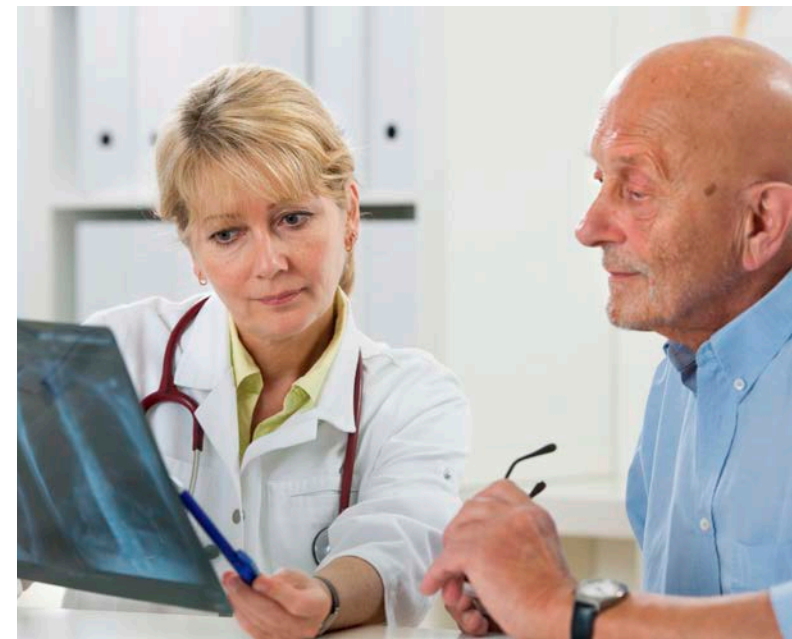
Legionella pneumophila can cause illness and even death. Even those who survive can suffer long-term effects such as fatigue, neurologic symptoms, neuromuscular symptoms and posttraumatic stress disorder. However, it is preventable.

The Risks.

The occurrence of Legionellosis is higher in hospitals and healthcare facilities than observed anywhere else. The United States Centers for Disease Control and Prevention (USCDC) reports that 23% of all Legionnaires' Disease (LD) cases in the U.S. come from healthcare buildings; 80% of cases are traced to potable water systems. According to the USCDC: "an estimated 8,000 to 18,000 persons are hospitalized with LD in the U.S. each year." With 90-95% of cases going undetected, Legionellosis is frequently misdiagnosed as common pneumonia. The USCDC also reports that up to 30% of these cases prove to be fatal.

Prevention.

Although *Legionella* bacteria are found everywhere, they flourish in water systems. The bacteria are transmitted to susceptible hosts via inhaled aerosol droplets. The ASHRAE 188 Standard, supported by numerous public agencies, requires a Risk Management Program for compliance. The purpose is to "establish minimum Legionellosis risk management for building water systems."



Prevention and risk minimization begins with the following:

1. Increasing awareness
2. Taking a proactive approach rather than a reactive one
3. Implementing Preventative Best Practices
4. Developing a Water Management Program and verifying program efficacy
5. Choosing the right team and technology to address your secondary disinfection program needs