



Background Information on Standard 188 Updated June 2017

1. Legionnaires' disease is a serious type of pneumonia caused by bacteria, called *Legionella*, that live in water. *Legionella* can make people sick when they inhale contaminated water from building water systems that are not adequately maintained.

Legionella are common aquatic bacteria occurring naturally in freshwater environments, such as lakes, rivers and streams. There they are found in very low numbers, but the bacteria can become a health concern when it finds favorable conditions to grow (multiply) and colonize in human-built water systems.

CDC investigations of building-associated outbreaks show the most common places for getting the disease are hotels, long-term care facilities, and hospitals. (Cruise ships are another place where Legionnaires' disease outbreaks can happen.) In these types of buildings, the sources for spreading water droplets contaminated with *Legionella* can include: Showers and faucets of large (potable water) plumbing systems; Cooling towers; Hot tubs; Decorative fountains and aerosolizing water features.

2. Disease causation is not simple. The mere presence of *Legionella* in a water system or device is not sufficient to cause disease. To cause disease, the bacteria must ultimately be inhaled or aspirated (going down the "wrong tube" when swallowing) into the lungs of a susceptible person. People with conditions that have reduced their ability to fight off infections are especially susceptible.

3. According to the CDC, Legionnaires' disease is on the increase in the United States. Data collected from 2000-2014 shows a 4-fold (400%) increase in the reported cases of Legionnaires' disease in the USA. While this is believed to be due, in part, to the increased clinical surveillance of the disease, it is also likely due to the complexities and aging infrastructure of our water distribution systems.

4. ASHRAE has developed ANSI/ASHRAE Standard 188-2015, Legionellosis: Risk Management for Building Water Systems to assist designers and building operators in developing a Water Management Plan specific to the systems that exist in their building or campus.

Design and good operations, maintenance procedures that prevent growth and spread of *Legionella* are regarded as the best methods of preventing disease. Even though a Water Management Plan will not guarantee that a system or individual component will be free of legionella, using these practices will reduce the chance of heavy colonization, amplification and dissemination to persons.

ASHRAE has multiple education and outreach activities to promote effective use of STD 188-2015. A large number of presentations are being given to organizations by the SSPC188 speakers bureau and through the Distinguished Lecturer series for ASHRAE local sections. Over 150

persons have attended a paid ASHRAE Leadership Institute course on Standard 188.

Over 5000 copies of STD 188-2015 have been purchased from ASHRAE. In addition, ASHRAE has developed an outreach tool used in its grassroots public action activity through local sections. Multiple organizations are engaged in assisting building owners and operators to develop water management plans per STD 188-2015. The use of the standard is spreading rapidly.