

WATER MANAGEMENT TREATMENT PROGRAM



ChemTreat can help develop a sustainable treatment program consistent with Cooling Technology Institute (CTI) and American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) guidelines for reducing the risk of Legionellosis in evaporative cooling water systems.



Facility Concerns

Legionella bacteria can cause serious illness in humans. Legionellosis can take two forms: Legionnaires' disease, a type of pneumonia that can be severe and even life threatening and Pontiac fever, a less-severe, influenza type illness.

Certain individuals are at a higher risk of infection:

- Immuno-compromised
- Smokers
- Elderly
- Dialysis Patients

Legionella can grow and proliferate in building water systems such as:

- Potable Water Systems
- Decorative Fountains
- Whirlpools or Spas
- Cooling Towers

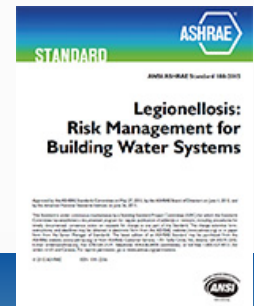
ChemTreat Can Help

ASHRAE published the first United States standard for Legionella. ANSI/ASHRAE Standard 188, Legionellosis: Risk Management for Building Water Systems provides minimum risk management requirements for new and existing buildings and the associated water systems and components. The standard applies to buildings with certain risk characteristics, including:

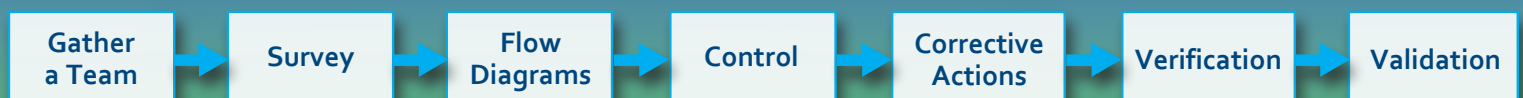
- Use
- Occupants
- Equipment

ChemTreat can assist with meeting the elements of compliance through:

- Third-party Water Management Plans (WMP)
- Automation and Control
- Online Real-time Data Logging
- Validation Testing
- Tower Cleanings
- Education



Steps to ASHRAE Standard 188



COOLING TOWERS

- Locate tower away from air intakes and as remote as possible
- Minimize drift and exposure to at-risk population affected by plume
- Manage equipment within KPI (Key Performance Indicators)
- Maintain disinfectant according to WMP and document
- Clean according to WMP and document



Safety Precautions



FOUNTAINS

- Locate away from at-risk populations or remove
- Ensure accessibility for maintenance
- Clean according to WMP
- Maintain disinfectant according to WMP and record use/control limits
- Drain fountain when not in use
- Document maintenance/cleaning operations
- Validate program

POTABLE WATER

- Determine control methodologies
- Document KPI in accordance with WMP
- Clean fixtures and ice machines regularly and document
- Flush water through system and remove dead legs to prevent stagnant conditions
- Maintain any secondary disinfectants in accordance with WMP
- Validate program and document operations



SPAS & HOT TUBS

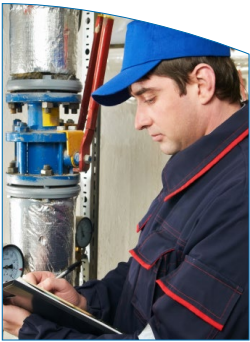
- Maintain water chemistry within KPI
- Clean and disinfect according to WMP
- Schedule and routinely check mechanical systems using KPI
- Document maintenance/cleaning operations
- Install and maintain continuous filtration
- Avoid extended periods of stagnant water

ChemTreat's Enhanced Offerings



Automation & Control

- Ion-specific electrode technologies for real-time disinfectant monitoring and data logging
- Web-enabled data management to provide real-time reporting and analysis to tablets, PCs and smartphones
- Preset alarms provide 24/7 notification of changes in key parameters



Customer Education

- Comprehensive team training with the startup of water management programs
- Seminars and workshops to communicate best practices and new technologies
- Audit programs to ensure efficiency of operations and highlight cost savings opportunities



Cooling Systems

- State-of-the-art chemistry for the prevention and control of scale, corrosion, deposition, and microbiological growth
- Breakthrough green solutions for cooling water treatment
- Treatment programs developed to optimize water usage



Potable Water Systems

- Assistance with third-party water management programs
- Validation testing and reporting
- Consulting expertise

