Building Water Management Plans
ANSI/ASHRAE 188-2021 SUMMARY

Legionellosis: Risk Management for Building Water Systems

Minimizing the **legionellosis risk** associated with building water systems is a primary concern for hospitals, hotels, and commercial buildings. The CDC recommends the development and implementation of a **Water Management Plan** to minimize the spread of legionellosis.

ANSI/ASHRAE Standard 188-2021 is purposed with establishing minimum legionellosis risk management requirements for new & existing building water systems and is intended to be used by owners and managers of human-occupied buildings, excluding single-family residential buildings. The standard does not provide prescriptive guidance around water treatment strategies or testing limits. The standard instead focuses on the creation and implementation of a documented risk management process by the owners and managers of buildings. *This technical bulletin provides a brief overview of the standard and is not meant to replace reading the standard.*

Does Your Building Apply to this Standard?

The applicability of the standard depends on a survey of the building's risk factors based on listed criteria.

1. Does your building have one or more of the following:
a) Open and closed-circuit **cooling towers** or evaporative condensers that provide cooling and/or refrigeration for the HVAC&R systems or other systems or devices in the building.
b) **Whirlpools** or **spas** in the building or on the site.
c) **Ornamental fountains**, **misters, atomizers, air washers, humidifiers**, or other **non-potable water systems** or devices that release water aerosols in the building or on site.

2. Is your building characterized by one or more of the following:
a) Multiple housing units with one or more centralized potable water heater systems.
b) Building is more than 10 stories high (includes below grade levels).
c) Healthcare facility where patient stays exceed 24 hours.
d) Building containing one or more areas for the purpose of housing or treating occupants receiving treatment for burns, chemotherapy for cancer, solid organ transplantation, or bone marrow transplantation.
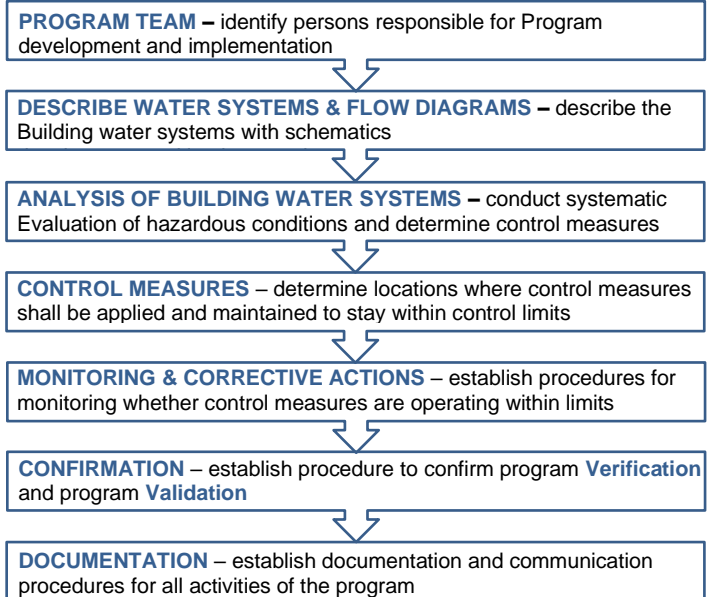
e) Building containing one or more areas for the purpose of housing or treating occupants that are immunocompromised, at-risk, are taking drugs that weaken the immune system, have renal disease, diabetes, or chronic lung disease
f) Building identified as housing occupants over the age of 65 years.

If the building has one or more of the risk factors listed in items #1 and #2 above, then **ASHRAE Standard 188** applies as follows:
a) If a building contains any factors listed in item #1 (a–c) and no characteristics of item #2 (a-f), a water management program should be developed for only those systems identified in item #1.
b) If a building is identified as having any of the characteristics in item #2 (a–f), a water management program should be developed for the potable building water system and any of the water systems of item #1 (if present).

Section 4.3 of Standard 188 also provides specific guidance for health care facilities.

Elements of a Water Management Plan

PROGRAM TEAM – identify persons responsible for Program development and implementation

DESCRIBE WATER SYSTEMS & FLOW DIAGRAMS – describe the Building water systems with schematics

ANALYSIS OF BUILDING WATER SYSTEMS – conduct systematic Evaluation of hazardous conditions and determine control measures

CONTROL MEASURES – determine locations where control measures shall be applied and maintained to stay within control limits

MONITORING & CORRECTIVE ACTIONS – establish procedures for monitoring whether control measures are operating within limits

CONFIRMATION – establish procedure to confirm program **Verification** and program **Validation**

DOCUMENTATION – establish documentation and communication procedures for all activities of the program

For more details on developing a Water Management Plan for your building, contact your Pace Technical Representative or refer to the ashrae.org and cdc.gov for additional information.