



# Overview of Water Safety Management Standards and Rules



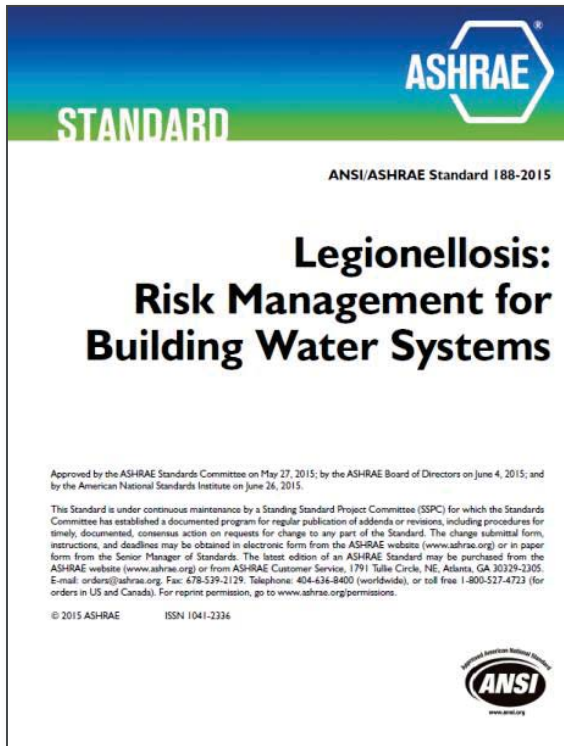
**Patsy Root**  
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**IDEXX WATER**

# Many organizations have rules or guidance on managing Legionnaires'



is reserved.

# ASHRAE 188:2018 Standard and the CDC Tool Kit



## ASHRAE 188

- First NA standard
- Only ANSI Accredited Standard
- Consensus view of the best practices for managing Legionnaires' risk in building water systems
- Recommended Water Safety Plan
- Testing specific section



## CDC Toolkit

- Yes/No Worksheet for risky building areas
- Walk through of *Legionella* mgmt. program
- Example problem scenarios
- Healthcare-specific guidance

# WSM Plans – Who needs them?



# Centers for Medicare & Medicaid Service (CMS) Memo



Memo June 2017  
Updated July 2018

Sent to:  
**State Survey Agency  
Directors**

Subject:  
Requirement to **Reduce  
Legionella** Risk in  
Healthcare Facility Water  
Systems to Prevent Cases  
and Outbreaks of  
Legionnaires' Disease (LD)

DEPARTMENT OF HEALTH & HUMAN SERVICES  
Centers for Medicare & Medicaid Services  
7500 Security Boulevard, Mail Stop C2-21-16  
Baltimore, Maryland 21244-1850



Center for Clinical Standards and Quality/Quality, Safety and Oversight Group

**DATE:** June 02, 2017 **Ref: QSO-17-30- Hospitals/CAHs/NHs**  
**REVISÉD 07.06.2018**

**TO:** State Survey Agency Directors

**FROM:** Director  
Quality, Safety and Oversight Group (formerly Survey & Certification Group)

**SUBJECT:** Requirement to Reduce *Legionella* Risk in Healthcare Facility Water Systems to Prevent Cases and Outbreaks of Legionnaires' Disease (LD)

**\*\*\*Revised to Clarify Expectations for Providers, Accrediting Organizations, and Surveyors\*\*\***

### Memorandum Summary

- **Legionella Infections:** The bacterium *Legionella* can cause a serious type of pneumonia called LD in persons at risk. Those at risk include persons who are at least 50 years old, smokers, or those with underlying medical conditions such as chronic lung disease or immunosuppression. Outbreaks have been linked to poorly maintained water systems in buildings with large or complex water systems including hospitals and long-term care facilities. Transmission can occur via aerosols from devices such as showerheads, cooling towers, hot tubs, and decorative fountains.
- **Facility Requirements to Prevent Legionella Infections:** Facilities must develop and adhere to policies and procedures that inhibit microbial growth in building water systems that reduce the risk of growth and spread of *Legionella* and other opportunistic pathogens in water.
- This policy memorandum applies to Hospitals, Critical Access Hospitals (CAHs) and Long-Term Care (LTC). However, this policy memorandum is also intended to provide general awareness for all healthcare organizations.
- *This policy memorandum clarifies expectations for providers, accrediting organizations, and surveyors and does not impose any new expectations nor requirements for hospitals, CAHs and surveyors of hospitals and CAHs. For these provider types, the memorandum is merely clarifying already existent expectations.*
- *This policy memorandum supersedes the previous Survey & Certification (S&C) 17-30 released on June 02, 2017 and the subsequent revisions issued on June 9, 2017.*

# CMS Memo – not new Requirements



- 42 CFR §482.42 for hospitals:

“The hospital must provide a sanitary environment to avoid sources and transmission of infections and communicable diseases. There must be an active program for the prevention, control, and investigation of infections and communicable diseases.”

- 42 CFR §483.80 for skilled nursing facilities and nursing facilities:

“The facility must establish and maintain an infection prevention and control program designed to provide a safe, sanitary, and comfortable environment and to help prevent the development and transmission of communicable diseases and infections.”

- 42 CFR §485.635(a)(3)(vi) for critical access hospitals (CAHs):

CAH policies must include: “A system for identifying, reporting, investigating and controlling infections and communicable diseases of patients and personnel.”

# CMS Memo

## Basic requirements for water systems



**1**

Conduct risk assessment; where could pathogens grow?

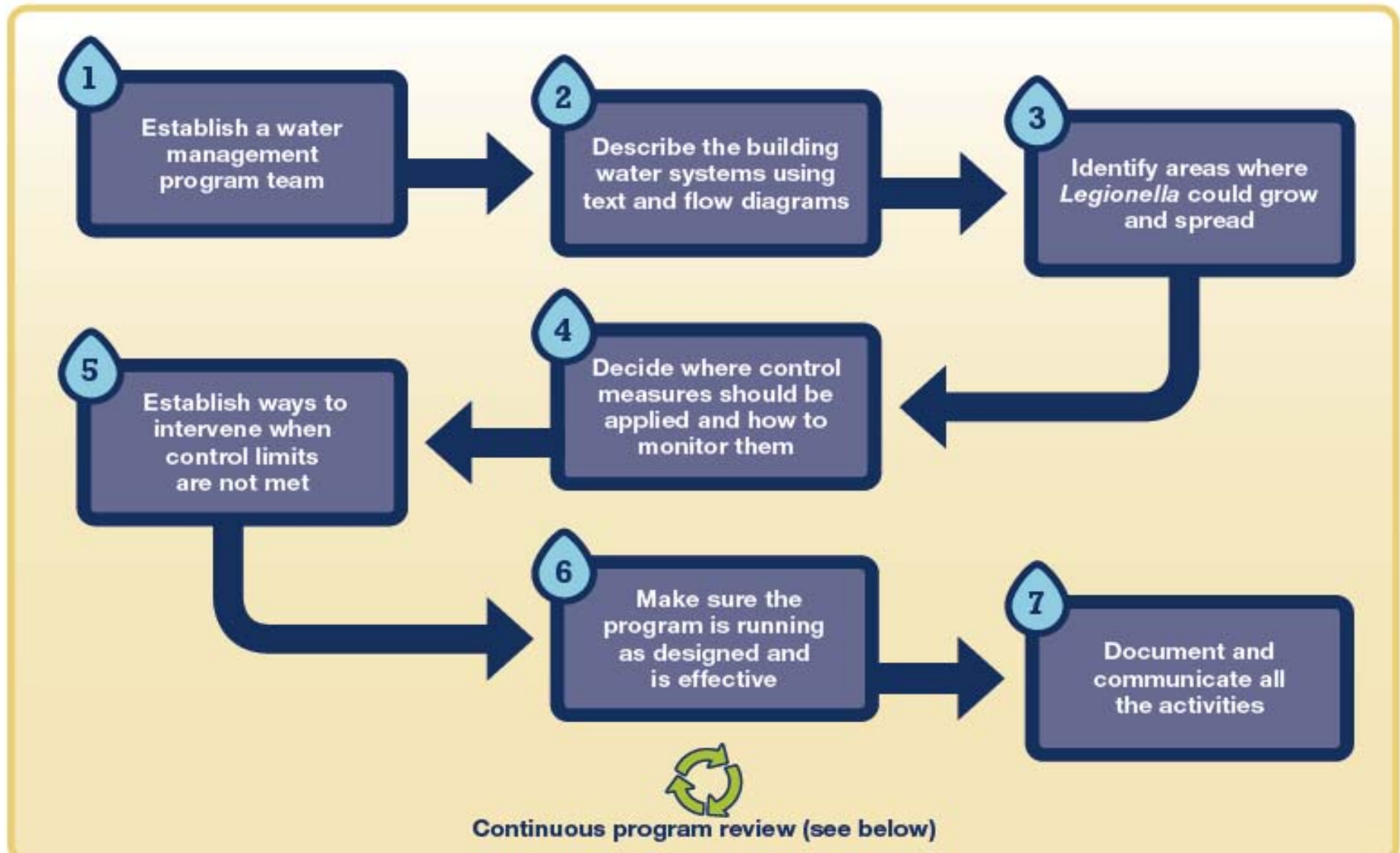
**2**

Implement a water safety management program

**3**

Specify monitoring: test methods and ranges

# CDC Tool Kit WSM Plan: 7 core activities



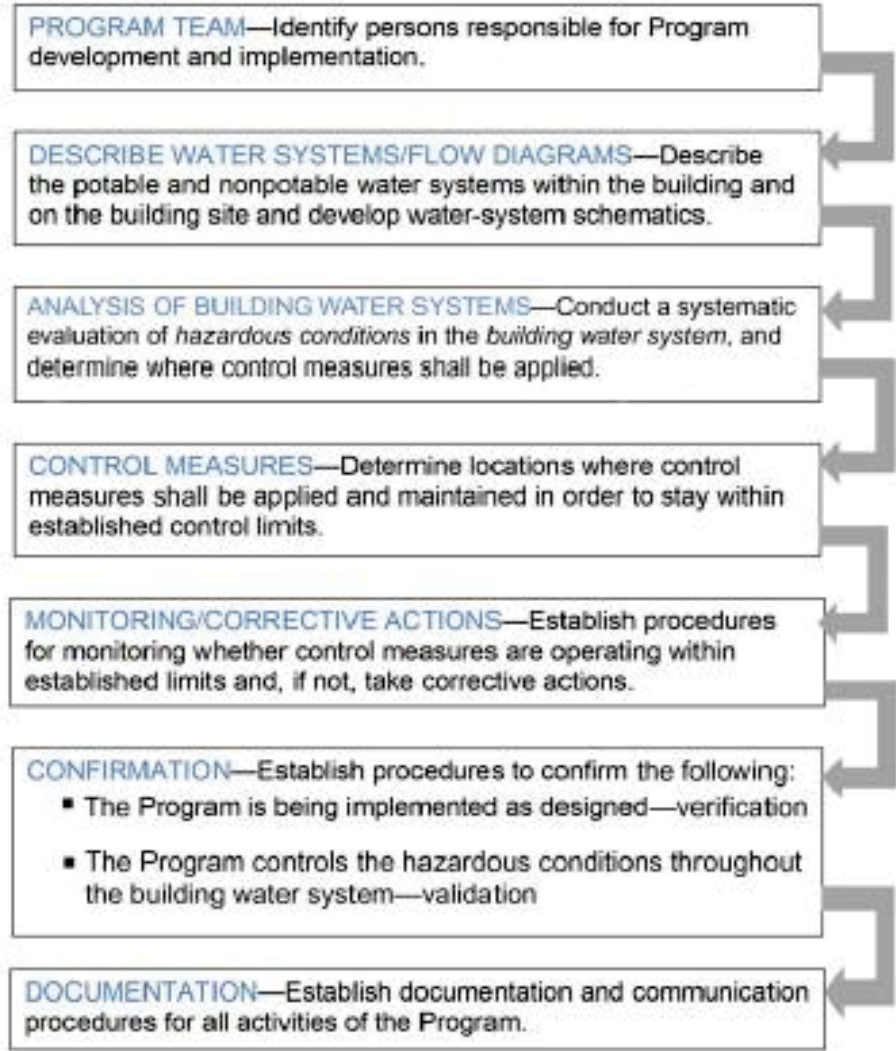


# WSM Plan – 7 core activities

## ASHRAE 188



1. Establish Team
2. Describe System
3. Assess Risk
4. ID Controls
5. Monitor/Correct
6. Verify/Validate
7. Document



# Standards and Guides for managing Legionnaires' disease



## Summary:

- Of the many standards and guides, the most used are ASHRAE 188 and CDC Tool Kit
- These two documents both employ a 7-step process to help create effective water safety management (WSM) plans
- Not even the best plans will eradicate *Legionella* from a water system, this is about management
- Public health should be in a leadership role in guiding and educating healthcare facilities on the basics of WSM planning and compliance with CMS rule
- CMS Memos reference ASHRAE 188 and CDC Tool Kit



# Water Safety Management Team: Roles and Responsibilities



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# WSM Team Roles and Responsibilities

## WATER SAFETY (RISK) MANAGEMENT STEPS



ROLES & RESPONSIBILITIES



WRITING THE SUMMARY



DESCRIBE THE BUILDING



IDENTIFY RISK



MITIGATE RISK



CORRECTIVE ACTIONS



DOCUMENTATION




RESOURCES & TOOLS

# WSM Plan – 7 core activities

## ASHRAE 188



  
You are here

1. Establish Team
2. Describe System
3. Assess Risk
4. ID Controls
5. Monitor/Correct
6. Verify/Validate
7. Document

**PROGRAM TEAM**—Identify persons responsible for Program development and implementation.

**DESCRIBE WATER SYSTEMS/FLOW DIAGRAMS**—Describe the potable and nonpotable water systems within the building and on the building site and develop water-system schematics.

**ANALYSIS OF BUILDING WATER SYSTEMS**—Conduct a systematic evaluation of *hazardous conditions* in the *building water system*, and determine where control measures shall be applied.

**CONTROL MEASURES**—Determine locations where control measures shall be applied and maintained in order to stay within established control limits.

**MONITORING/CORRECTIVE ACTIONS**—Establish procedures for monitoring whether control measures are operating within established limits and, if not, take corrective actions.

**CONFIRMATION**—Establish procedures to confirm the following:

- The Program is being implemented as designed—verification
- The Program controls the hazardous conditions throughout the building water system—validation

**DOCUMENTATION**—Establish documentation and communication procedures for all activities of the Program.

# WSM Plan Team – key roles



# WSM Plan Team: core functional areas



Oversee, Decision makers

Communicators

- Building owner
- Building manager/administrator

Understand infection prevention

- Certified industrial hygienists
- *Environmental health specialists*

Confirm Program, V&V

- *Microbiologists* (including laboratory services)
- *Head of health services*
- *State and local health officials*

Know the water system

- Maintenance or engineering
- EH&S

Know where/how to put controls

- Equipment/chemical suppliers
- Contractors/consultants

Source: CDC Tool Kit

# WSM Team: making decisions using RACI



## Responsible

- The person who actually carries out the process or task assignment
- Responsible to get the job done

## Accountable

- The person who is ultimately accountable for process or task being completed appropriately
- Responsible person(s) are accountable to this person

## Consulted

- People who are not directly involved with carrying out the task, but who are consulted
- May be stakeholder or subject matter expert

## Informed

- Those who receive output from the process or task, or who have a need to stay informed



# Using RACI to manage WSM Teams



## RACI - Water Safety Management Planning

Project/Decision: Write and Implement a Water Safety Management plan for XYZ Hospital

Objective: Demonstrated risk reduction for hospital occupants from Legionnaires' disease

Team Admin:

Date Opened:

Participants	Building Administrator / COO	Facilities / Maintenance Manager	Chief Engineer / Plumbing	Industrial hygienist / Infection Preventionist	Nursing	Public Health	EH&S	Water Treatment Specialist	Laboratory Testing Services	Public Water Supplier	TIME FRAME
Define Decisions/ Activities/Tasks											
Define project Scope	A/R	R	R	R	C	R	R	C	C	I	OCT 17 2018
Write project Summary	A/R	R	R	R	R	R	R	C	C	N/A	OCT 17 2019
Assign Team Member Roles											
Objective 1 Describe the system in simplified drawing	R	A/R	R	C	C	C	C	I	N/A	C	Oct 30 2018
Objective 2A: Assess system for risk; determine where hazardous conditions exist	C	R	A/R	R	C	C	R	C	N/A	I	

# Knowledgeable Public Health organizations that can contribute to WSM



- State and Local Health Officials from Public Health groups
- Association of State and Territorial Health Officials (ASTHO)
- National Association of City and County Health Officials (NACCHO)
- Environmental Council of the States (ECOS)
- Including: sanitarians, environmental health specialists, microbiologists, industrial hygienists, safety/hazard officers



# WSM Team Roles and Responsibilities



## Summary:

- Understand the core competencies needed to form an effective WSM team
- Insure that you have a facilitator
- Following the RACI model, have one “A” person/task to make final decisions based on team input
- Include people who understand the building systems, how to identify risk, the occupants (including employees) and where/how to manage identified risk
- Include the testing laboratory and public water provider; they have core knowledge that shouldn't go untapped
- Public health should educate on and participate in WSM teams
- Document team activities and record meeting minutes for future reference