

A Deeper Dive into Legionella Outbreak Investigation for Local Health Departments

December 1, 2021

10-11:30am

NJ Department of Health-Communicable Disease Service



- Slides will be posted to the NJDOH-CDS Legionellosis (Legionnaires' Disease and Pontiac Fever) webpage after the webinar.

The screenshot shows the NJ Health website header with the NJ Health logo and the tagline "Improving Health Through Leadership and Innovation". Navigation buttons include "About Us", "Your Health", "Healthcare Facilities & Services", "Public Health", and "Chief State Medical Examiner". A search bar contains the text "How do I...?". Below the header is a dark blue navigation bar for the "Communicable Disease Service" with links for Home, Diseases & Health Topics A-Z List, Disease Reporting, Immunization Requirements, Education & Training, Statistics, Reports & Publications, and Forms. A breadcrumb trail reads: Home > Diseases & Health Topics A-Z List > Legionellosis (Legionnaires' Disease and Pontiac Fever).

Legionellosis (Legionnaires' Disease and Pontiac Fever)

Report within 24 hours of Diagnosis to the Local Health Department.

Legionnaires' disease and Pontiac fever are collectively known as legionellosis, a disease caused by *Legionella* bacteria. *Legionella* is a type of bacterium found naturally in freshwater environments, like lakes and streams. It can become a health concern when it grows and spreads in human-made water systems such as building premise plumbing and cooling towers (structures that contain water and a fan as part of centralized air-cooling systems for building or industrial processes). *Legionella* can continue to persist in the water system unless proper steps are taken to prevent the growth of bacteria.

People can get Legionnaires' disease or Pontiac fever when they breathe in small droplets of water

Disease Reporting

- [Communicable Disease Manual Chapter](#)
- [Case Definitions](#)
- [Legionellosis Case Report Form](#)
- [Legionnaires' Disease Hypothesis-generating Questionnaire Template](#)
- [Legionnaires' Disease Cruise Ship Questionnaire Template](#)

Disclosure statement

- The speaker(s) have nothing to disclose.
- They report no actual or potential financial disclosure or conflicts of interest with the material in this presentation.

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- Credits offered for this webinar:
 - 1.5 Public Health credits
 - No other credits provided
- Must be registered on NJLMN and complete evaluation to receive credits
 - Only those who are registered on NJLMN will receive the evaluation link
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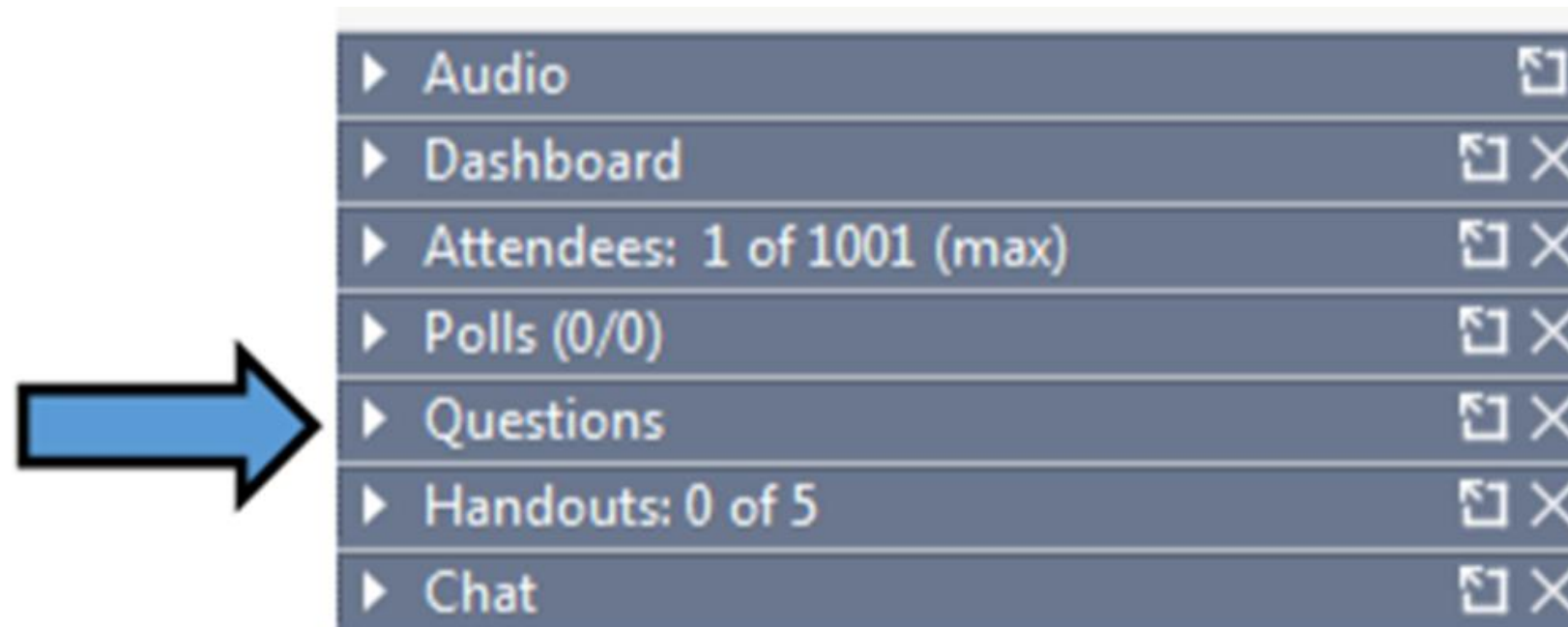
- The link to the evaluation is sent to the e-mail address used to register on NJLMN

Add NJLMN@njlincs.net to your address book/safe sender list to ensure that you get e-mail from NJLMN

- Evaluation link closes 7 days after the webinar (December 8, 2021)
 - Credits are **not** automatically awarded when you complete the evaluation
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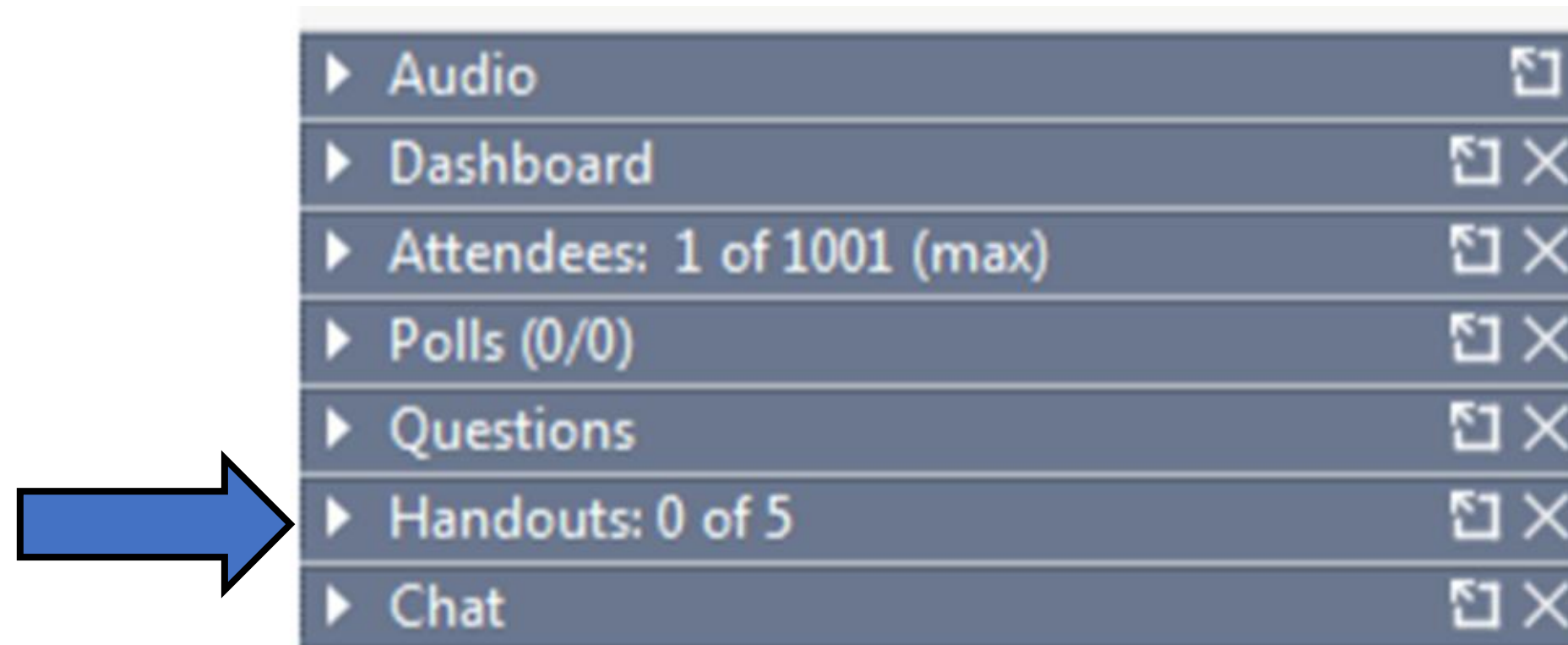
Have a Question During the Presentation?

- All attendee lines are muted. Please use the “Question” box to ask a question.
 - Questions will be answered at the end of the webinar, time permitting.



Presenter Slides

- Slides may be accessed in the “Handouts” while the webinar is “live”
- Slides will be posted to the NJDOH-CDS Legionella webpage after the webinar.



A Deeper Dive into Legionellosis Outbreak Guidance for Local Health Departments

Infection Control, Healthcare, & Environmental Epidemiology

Communicable Disease Service

New Jersey Department of Health

December 1, 2021

Meet the Team



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Agenda

Legionnaires' Disease Overview

Etiology, Transmission, Risk Factors, Sources

Legionella

Ecology, Growth Promoting Factors

Outbreak Investigations

Definitions, Response, and Recommendations

Risk Communication

Notification Letters, Press Releases, Health Advisories

Disease Associated With *Legionella*

- **Legionellosis**: a bacterial disease caused by *Legionella* bacteria, that can present as either Legionnaires' disease or Pontiac fever
 1. **Legionnaires' disease**: presents as pneumonia often requiring treatment in a hospital
 2. **Pontiac fever**: a milder, self-limited illness
- Although extremely rare, *Legionella* can also **cause infections at a body site outside of the lungs**, for example, endocarditis or joint infections

Legionellosis vs Legionnaires' disease

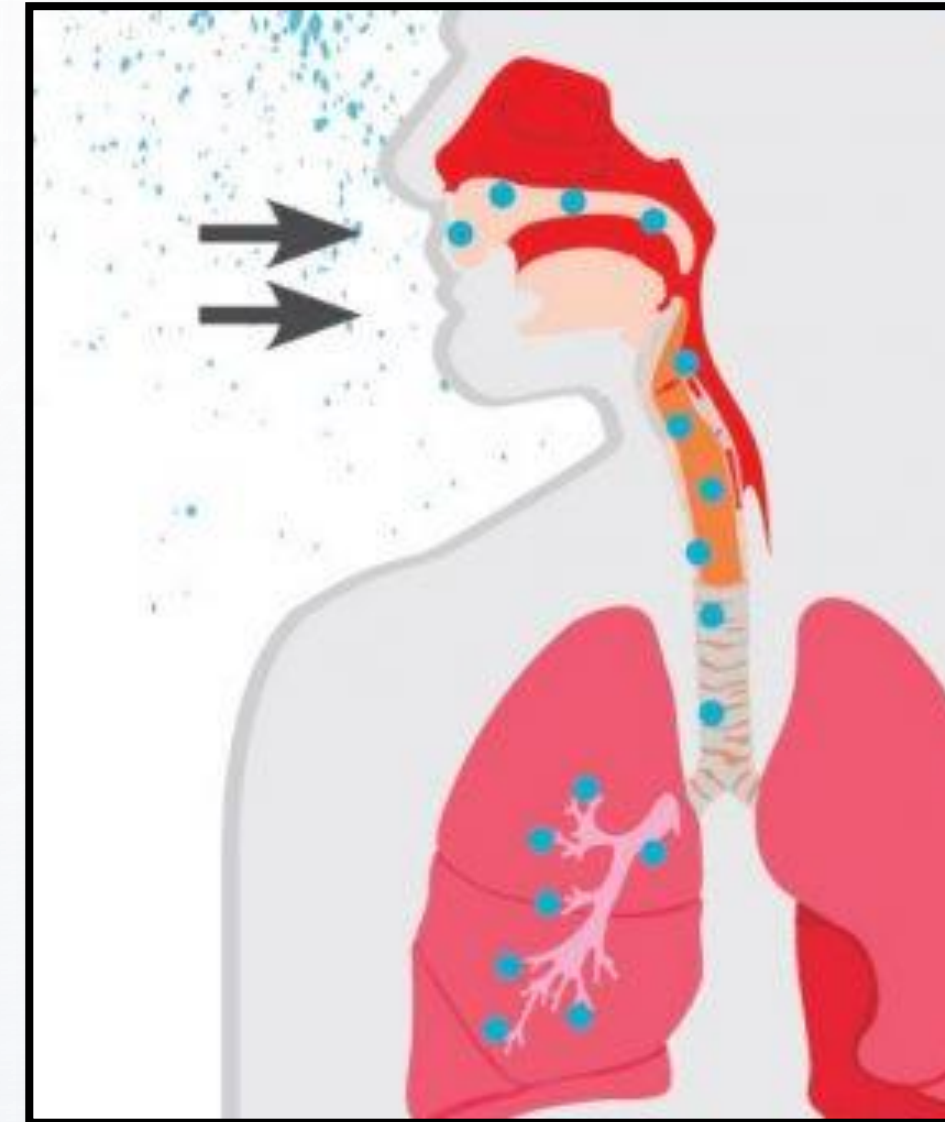
For surveillance, NJDOH uses "legionellosis" to ensure all forms of clinical disease due to *Legionella* are included.

Other times, NJDOH refers to "Legionnaires' disease" instead of "legionellosis" when describing cases and outbreaks.

- **Majority of reported cases are Legionnaires' disease**
- **Legionnaires' disease is associated with higher mortality**

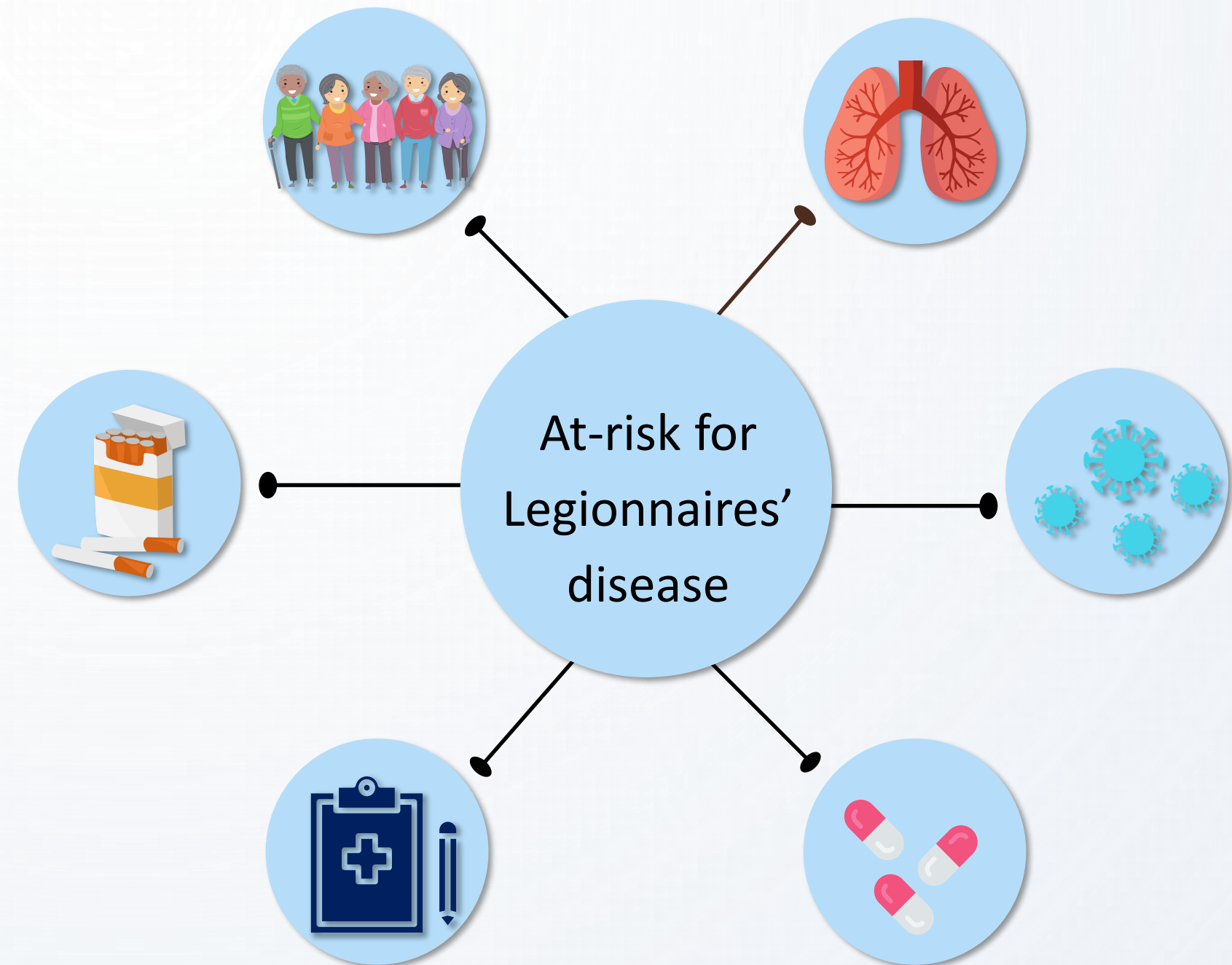
Modes of Transmission

- **Most common**
 - Inhalation of aerosolized water containing *Legionella*
 - Devices such as sink faucets, shower heads, cooling towers, decorative fountains, hot tubs, humidifiers, misters, and respiratory equipment can produce aerosols
- **Less common**
 - Aspiration of drinking water
- **Generally, not person-to-person**



Risk Factors for Legionnaires' Disease

- Most healthy people exposed to *Legionella* do not become ill
- Who is at increased risk for developing Legionnaires' disease?
 - **Age ≥ 50 years**
 - **Smoking (current or former)**
 - **Chronic lung disease**
 - **Underlying health conditions**
 - **Immunocompromised**



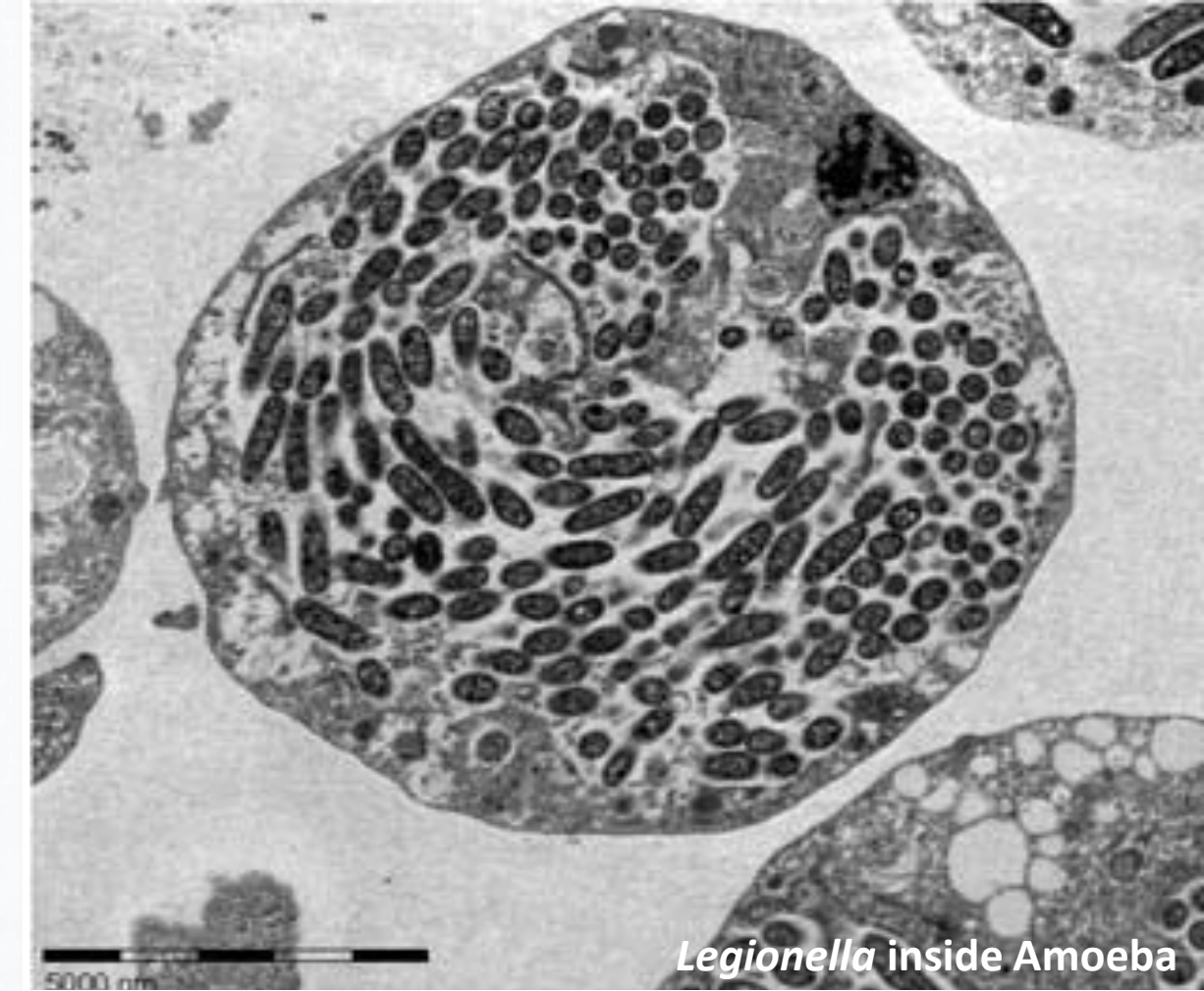
What are *Legionella*?

- Bacterium discovered following an outbreak at a Legionnaires' Convention in Philadelphia in 1976
- Over 60 species of *Legionella*
 - *Legionella pneumophila* accounts for ~90% of reported US cases
- Found in freshwater environments
 - Ground water and surface water
- Become a health concern in human-made systems
 - Allows for amplification and aerosolization



Legionella are Smart!

- **Use single-celled protozoa as hosts**
 - Provides *Legionella* with food and nutrients for growth and reproduction
 - Serves as a form of protection from adverse environmental factors (i.e., heat and disinfectants)
- **Associated with biofilms**
 - Communities of microorganisms embedded in slime
 - Found on any continually moist substrate
 - Provides shelter from harsh conditions such as heat and disinfectants
 - Extremely difficult to remove
 - Can break off in chunks and seed other areas downstream



Legionella in Building Water Systems



SOURCE WATER

Wells + Aquifers

Lakes

Rivers

Streams



PUBLIC WATER SUPPLY

WQPS and disinfectant residual regulated by state and federal codes

Chlorine or monochloramine

Water is not sterile leaving the treatment plant



BUILDING WATER SYSTEM

Building owner responsible for maintaining the water system

Complex water systems

Water may be filtered, conditioned, heated, stored, and distributed



AMPLIFICATION

Warm water temperatures

Water age & stagnation

Sediment

Low or no Disinfectant residual



AEROSOLIZATION

Sink faucets

Showerheads

Hot tubs & hydrotherapy tubs

Decorative fountains

Cooling towers

Humidifiers

Medical devices

Legionella in Human-Made Water Systems

Sediment

- Provides shelter and nutrients for *Legionella*
- Contributes to disinfectant residual loss
- Areas prone to sediment include expansion tanks, storage tanks, dead legs

Temperature

- Can multiply between 68° - 120°F; optimal growth range is between 77° - 113°F
- As temperature increases, the time for *Legionella* to die becomes shorter
- Dormant below 68°F but still able to cause disease

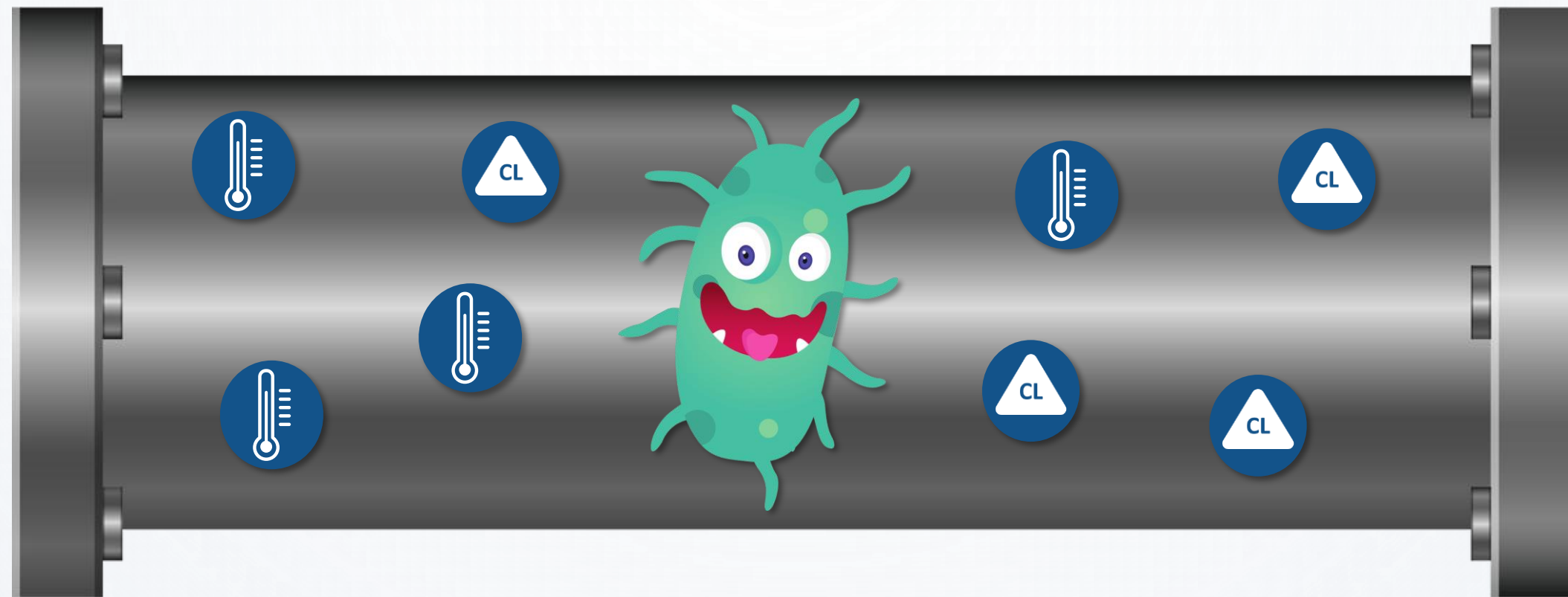
Water age

- Promotes biofilm formation and sediment accumulation
- Can lead to water temperatures favorable for *Legionella* growth
- Contributes to disinfectant residual loss

Disinfectant residual

- Breaks down under certain conditions such as high temperatures or presence of organic matter
- Inadequate disinfectant residual allows *Legionella* to grow

Remember...*Legionella* are Smart!



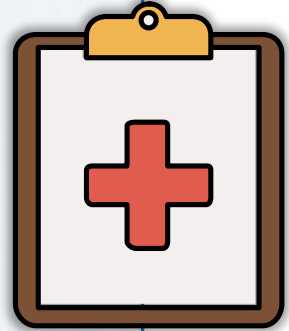
Legionella can still be present in water even if conditions aren't optimal for growth since they can be protected by protozoa and biofilm.

Surveillance and Case Investigations

- Single cases of Legionnaires' disease are **reportable within 24 hours of diagnosis** to the Local Health Department (LHD)
- Prompt case investigations help to **quickly identify epidemiological links** between cases and the need for outbreak investigations
- The **first step** is to determine if a full investigation is needed
 - The setting of the outbreak can impact this decision
- NJDOH **assists with outbreak investigations** and **provides technical expertise**

How to Conduct a Legionnaires' Disease Case Investigation Presentation:
<https://www.nj.gov/health/cd/topics/legion.shtml>

What prompts an outbreak investigation?



Healthcare Facilities (e.g., acute-care, long-term care, psychiatric, outpatient)

- ≥ 1 presumptive healthcare-associated case
- ≥ 2 possible healthcare-associated cases within a 12-month period
- ≥ 3 possible healthcare-associated cases regardless of timeframe
- ≥ 1 possible healthcare-associated case following a previously recognized outbreak at the same facility



Non-Healthcare Facilities (e.g., hotel, apartment complex, gym, casino)

- ≥ 2 cases associated with the same possible source within a 12-month period
- ≥ 3 cases associated with the same possible source regardless of time frame
- ≥ 1 case following a previously recognized outbreak at the same facility

What prompts an outbreak investigation?

Community-Associated Outbreaks

- An increase in Legionnaires' disease cases in a certain geographic area beyond what one would normally expect for that time and place
- NJDOH conducts weekly analyses for unusual clustering of Legionnaires' disease cases across the state

Special Considerations

- ≥ 1 case at an assisted living facility, correctional facility, group home, or other facility where people generally do not leave the premises is treated with the same considerations as a healthcare-associated outbreak
- If epidemiologic evidence is not strong enough to warrant a full investigation, consider at least conducting an environmental assessment to determine if conditions for *Legionella* growth exist in the facility

Outbreak Investigation Procedures

- **LHD with jurisdiction over the affected facility's municipality** is responsible for leading that outbreak investigation, in conjunction with NJDOH
- Responding to urgent public health issues **requires balancing timeliness of response with the need for accurate data** to support the implementation of control measures
 - Activities are typically not done linearly and sequentially
 - Every investigation is unique and requires careful planning and periodic reassessments



Initial Activities (continued)

- Notify the facility manager or owner
- Coordinate a call with appropriate stakeholders
 - **Facility:** Management, Facility Engineer, Industrial Hygienist, Administration, Infection Preventionist
 - **LHD:** Health Officer, Disease Investigator, Public Health Nurse, Registered Environmental Health Specialist
 - **NJDOH:** *Legionella* Team
- Provide overview of *Legionella* ecology
- Review **building characteristics**
- Request a copy of the **Water Management Program**
- Provide **recommendations and guidance**



Immediate Control Measures

- Consider immediate control measures if a building's potable water (i.e., water used for drinking and bathing) is thought to be the source of *Legionella* transmission
- Control measures should be tailored to the building and circumstances of the outbreak, examples include:



- **Implementing water restrictions (e.g., taking a bath instead of showers)**
 - **Installing 0.2-micron biological point-of-use filters**
 - **Providing bottled drinking water for anyone at risk for aspiration**
 - **Distributing notification letters to appropriate audiences**
- If a device such as a hot tub, cooling tower, or decorative fountain is thought to be the source of *Legionella* transmission, ensure that it is turned off, but not drained

Recommendations



Hire a consultant who has experience with *Legionella* and large water systems



Conduct an onsite environmental assessment with the LHD and NJDOH



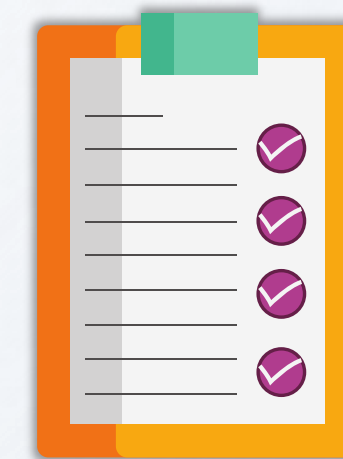
Perform environmental sampling for *Legionella*



Perform an emergency chemical shock remediation

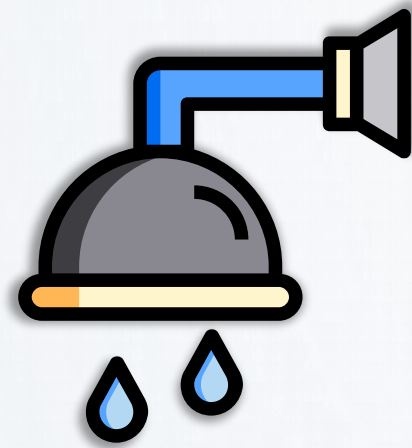


Assess the efficacy of the emergency remediation by conducting post-remediation sampling

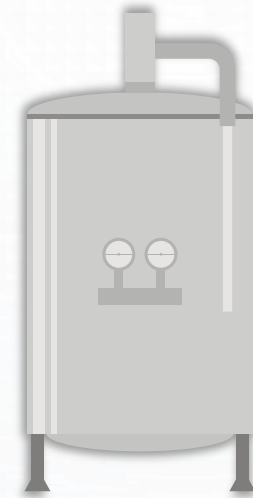


Develop and implement a Water Management Program (WMP)

Recommendations



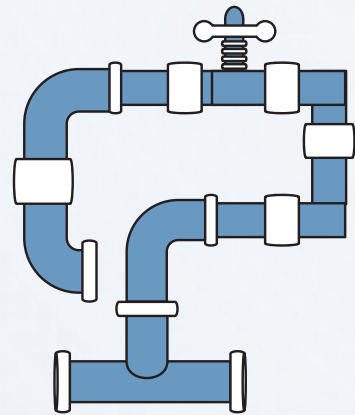
Clean showerheads and aerators to remove biofilm and scale



Ensure hot water tanks are properly maintained and the temperature is set correction



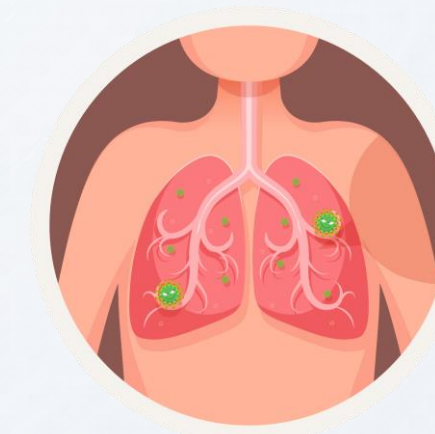
Flush both cold and hot water at minimum on a weekly basis (twice a week for healthcare facilities)



Assess the building for dead legs



Adhere to manufacturer's instructions for all respiratory equipment and devices



Conduct active clinical surveillance for new cases

Environmental Assessment Form

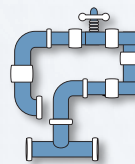
- Enables public health officials to **gain a better understanding** of the facility's water system:



Facility Characteristics



Water Supply Source



Premise Plumbing System



Water System Devices

- **Identifies areas that may be hazardous** and promote *Legionella* growth
- Aids in developing a **comprehensive sampling plan**

The image shows a screenshot of the 'LEGIONELLA ENVIRONMENTAL ASSESSMENT FORM' from the New Jersey Department of Health (NJ Health) and the Center for Disease Prevention and Control (CDS). The form is titled 'LEGIONELLA ENVIRONMENTAL ASSESSMENT FORM' and includes the following sections:

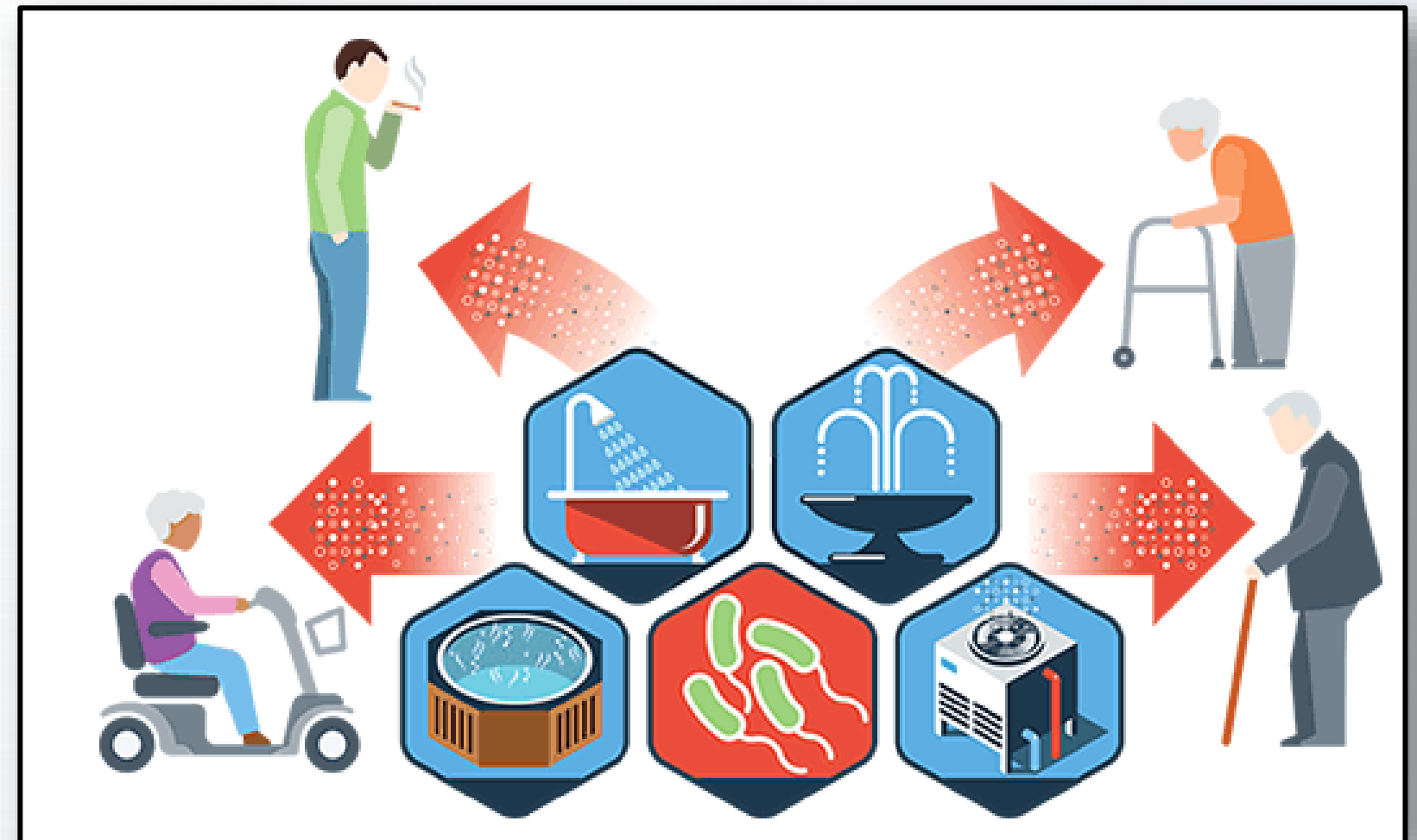
- Person completing the assessment:** Fields for Name, Title, Telephone, Organization, Email, and Date Form Completed.
- Facility Characteristics:** A series of questions and checkboxes:
 - 1. Is this a healthcare facility or senior living facility with skilled nursing care (e.g., hospital, long term care/rehab/assisted living/skilled nursing facility, or clinic)?
 - Yes → If yes, skip to Q.3 & also complete Appendix A.
 - No
 - 2. If NO, indicate type of facility (check all that apply):
 - Senior living facility (e.g., retirement home without skilled nursing care)
 - Other residential building (e.g., apartment, condominium)
 - Hotel, motel, or resort
 - Recreational facility (e.g., health club, water park)
 - Office building
 - Manufacturing facility
 - Restaurant
 - Other _____
 - 3. Total number of buildings on campus: _____ Total number of buildings patient(s) was exposed: _____
 - 4. Total number of floors including basement levels: _____
 - 5. Total number of rooms that can be occupied overnight (e.g., patient rooms, hotel rooms): _____
 - 6. Can windows in patient/guest rooms be opened? YES NO
 - 7. Does occupancy vary throughout the year? YES NO
If YES, seasons with lowest occupancy (check all that apply):
 - Winter Spring Summer Fall
 - 8. Are any occupant rooms taken out of service during specific parts of the year, e.g., low season?
 - YES NO
 - If YES, which rooms? _____

June 2021 v1.1 1



Facility Characteristics

- **Year built**
- **Size of facility**
 - Number of buildings on campus
 - Number of floors and rooms
- **Type of facility (e.g., healthcare, hotel, residential)**
- **Type of population**
 - Immunocompromised
 - Older (i.e., ≥ 50 years)
- **History of *Legionella* colonization**





Water Age & Stagnation

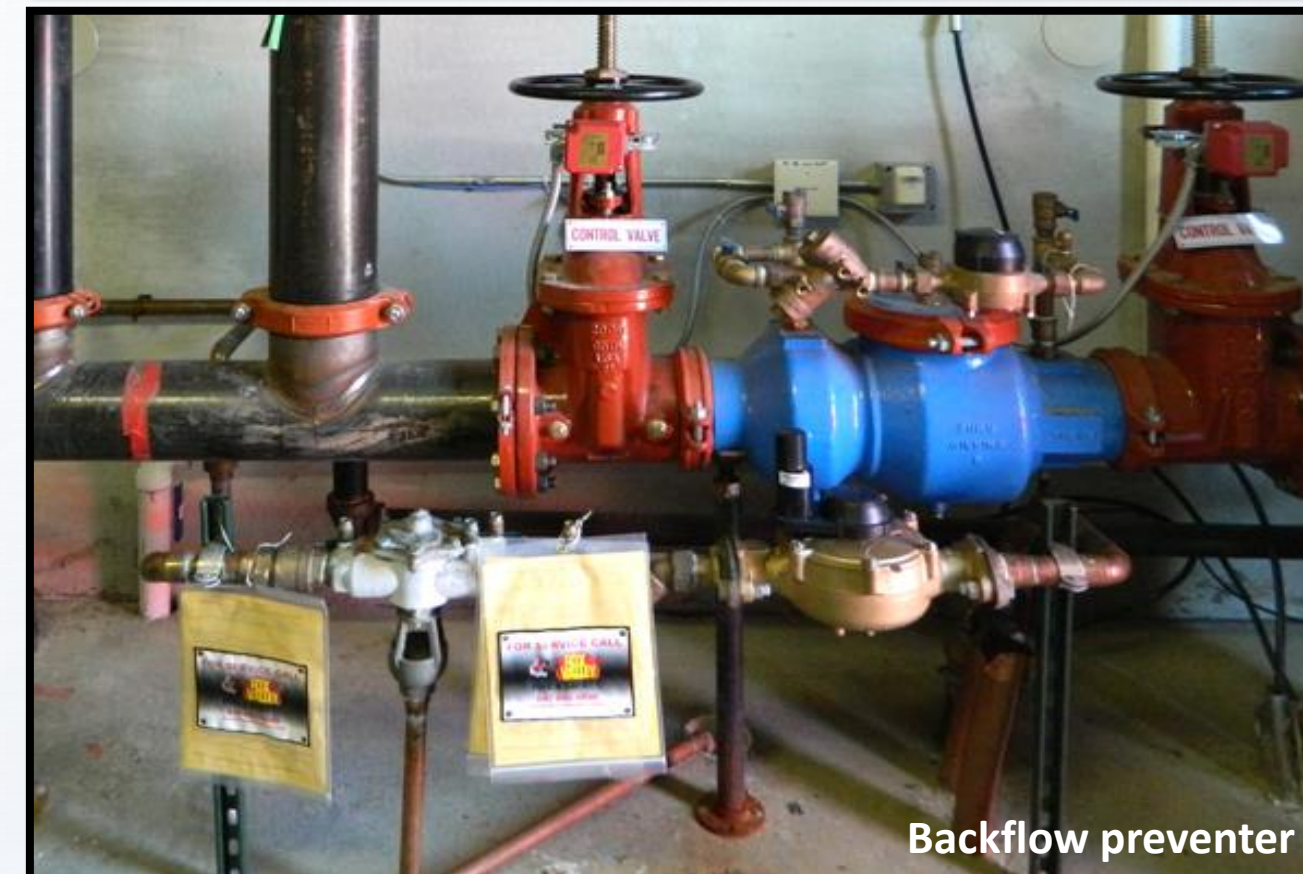
- **Operational Dead Leg** (infrequent use):
 - Fluctuations in occupancy
 - Infrequent use pattern
- **Non-Operational Dead Leg** (no flow):
 - Renovations
 - Expansion
 - Improvement
- Dead legs should be **removed** or, where unavoidable, be **made as short as possible**
- Routine flushing helps reduce water age and purge build-up of sediment
 - **At least once a week**
 - **At least twice a week for healthcare facilities**





Emergency Water Systems

- **Safety showers and eye wash stations**
 - Associated with increased water age (i.e., operational dead leg)
 - Should be flushed at least weekly
- **Fire sprinkler system**
 - Promotes stagnation due to infrequent use
 - Cross connections can introduce *Legionella* into the potable water system
 - Appropriate backflow prevention is required to separate the potable water system from nonpotable uses

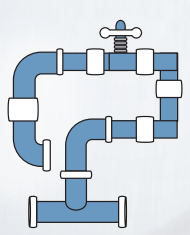




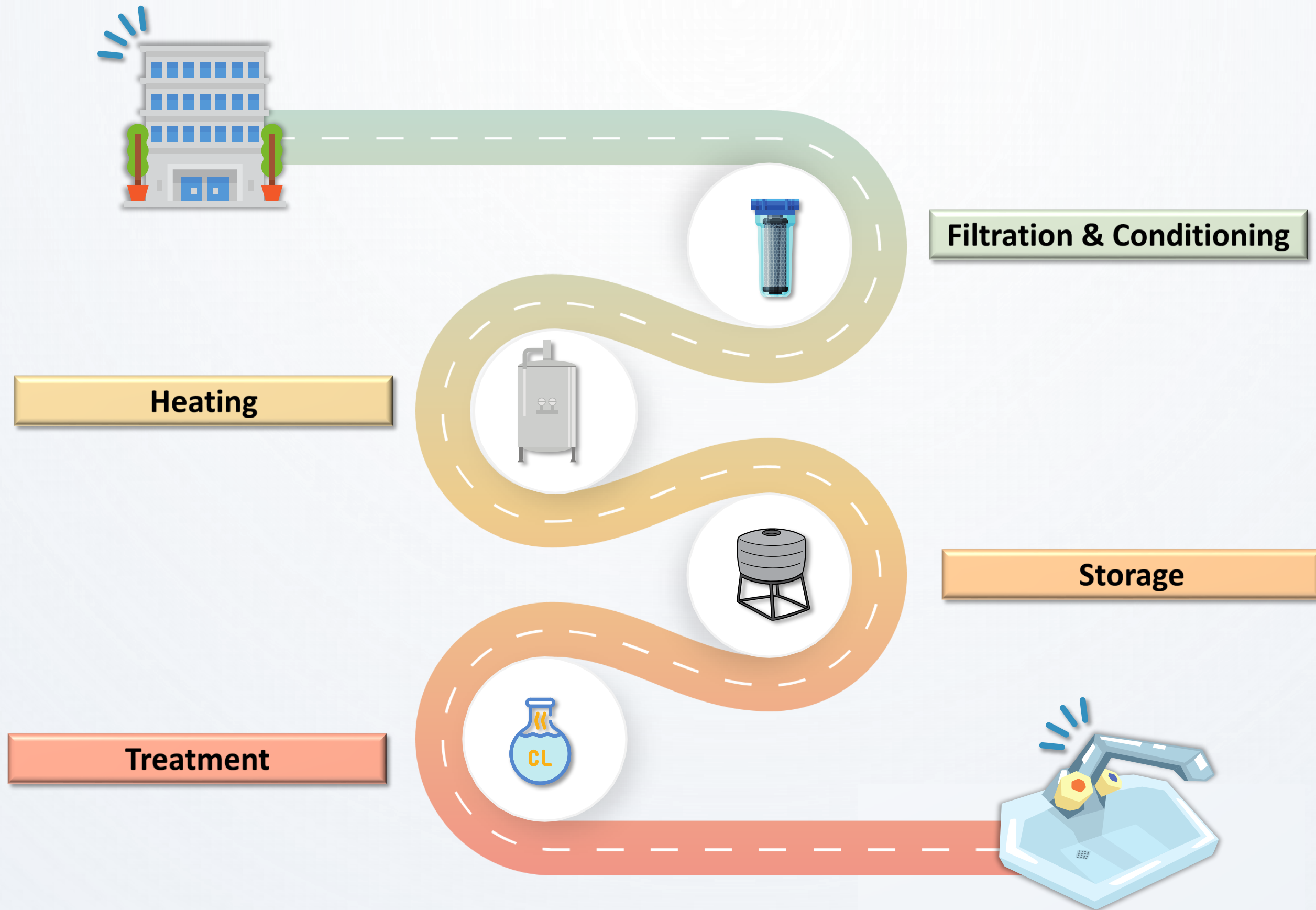
Water Supply Source

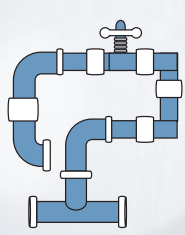
- **Source of the water**
 - Municipal water supply
 - Private well
- **Disruptions to incoming water quality:**
 - Pressure drops
 - Water main breaks
 - Water line construction
- **Monitoring for incoming water**
 - Temperature
 - Disinfectant residual
 - pH





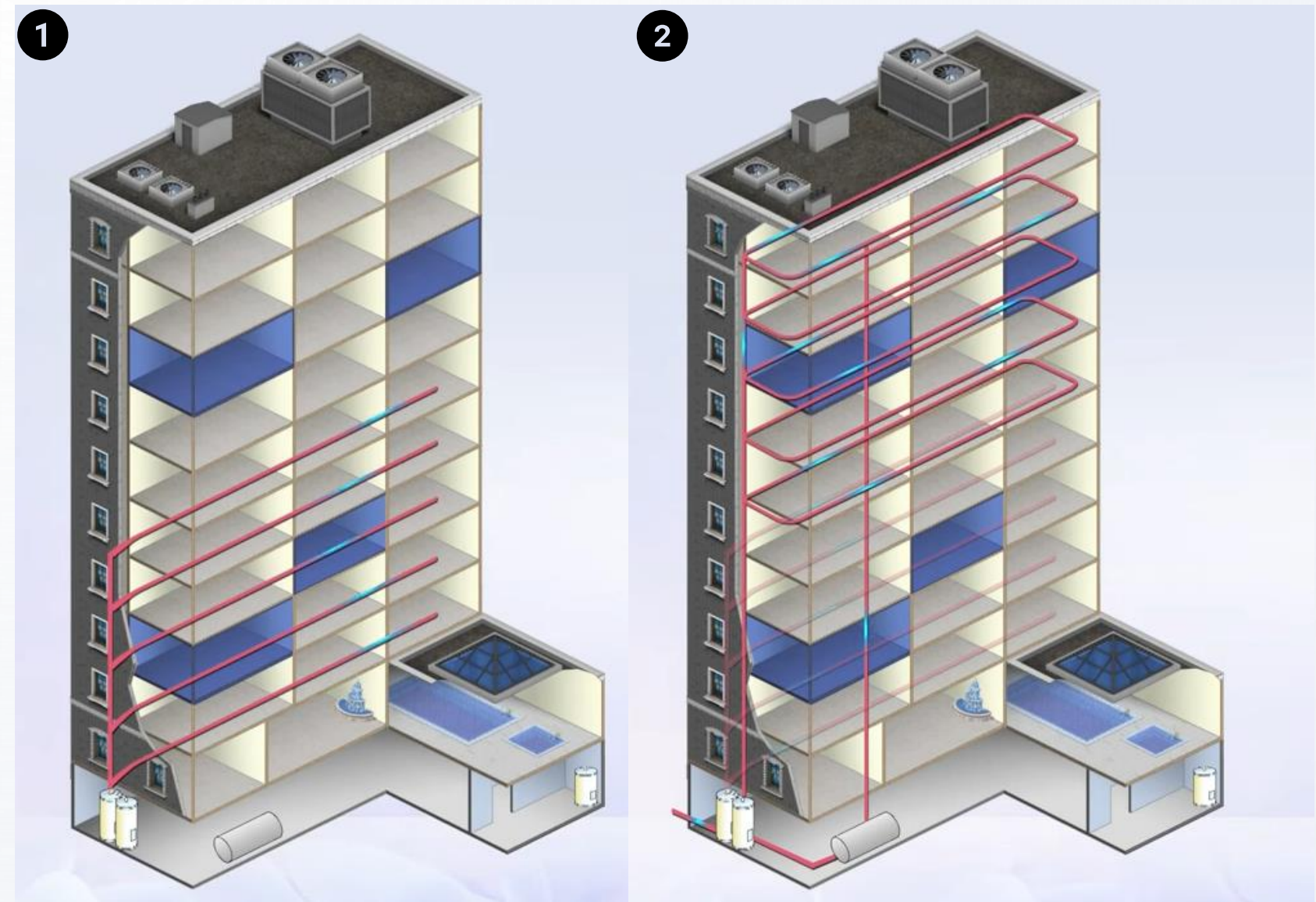
Premise Plumbing System





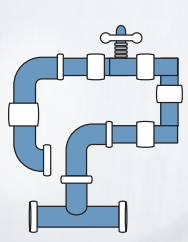
Recirculation System

- A system that keeps the water continuously moving and returns unused water to be reheated.
- Aids in **preventing** water stagnation, favorable growth temperatures, decreased disinfectant residual, and sediment build-up.
- **Monitoring at points of use**
 - Temperature
 - Disinfectant residual



No Recirculation Loop

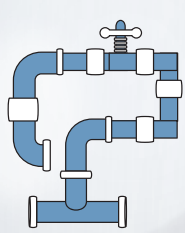
Recirculation Loop



Hot Water Tanks & Expansion Tanks

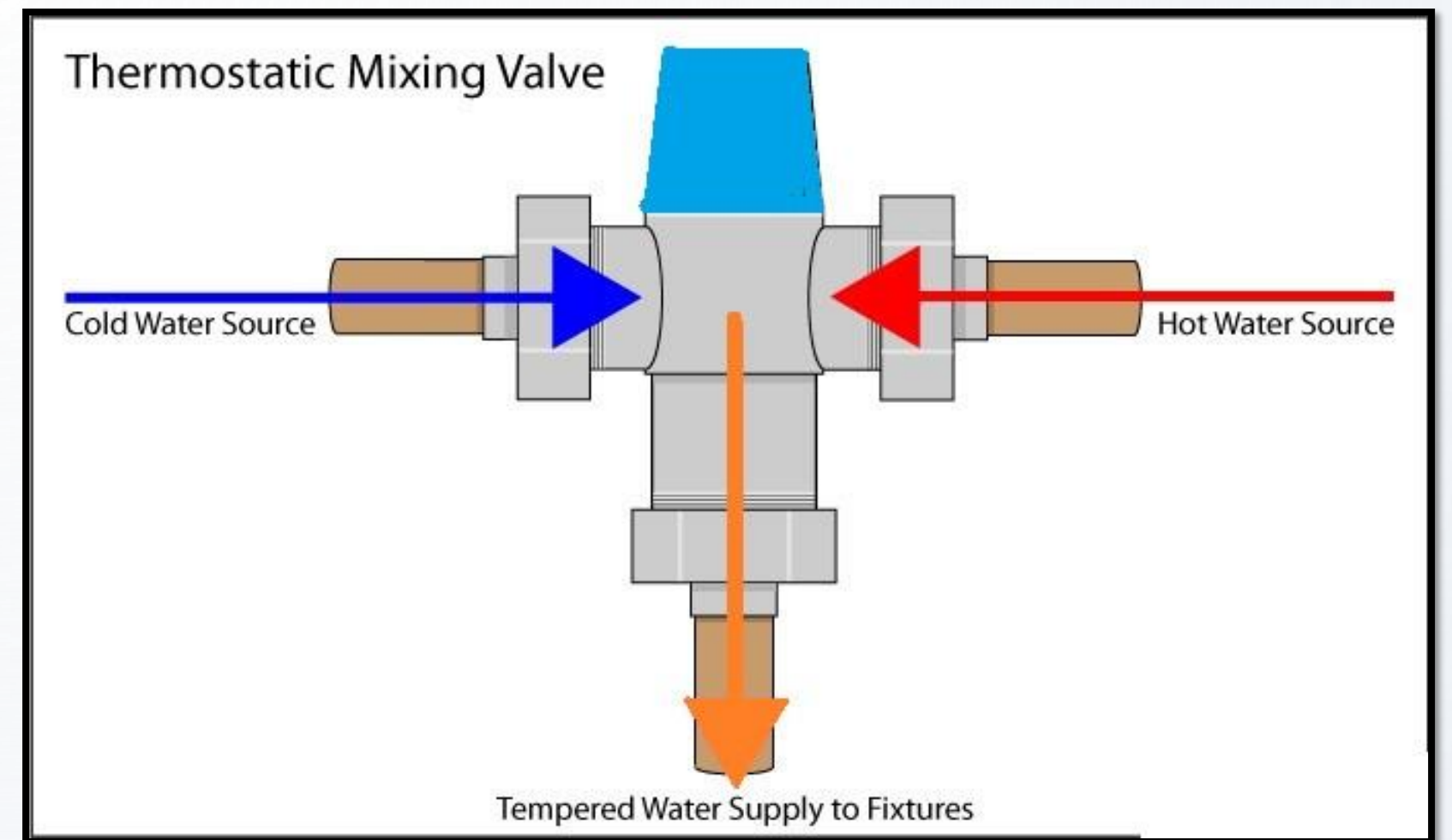
- **Hot Water Tanks**
 - Install date, tank size, average temperature, maintenance, areas served
 - Sediment accumulation
 - Temperature stratification
 - Perform regular maintenance (e.g., flushing and draining) and store water ≥ 140 °F
- **Expansion Tanks**
 - Sediment accumulation
 - Water stagnation
 - Designed and located to minimize sediment build-up, heat gain, and stagnant water
 - Flow through design
 - Placed as close as practical to pipe runs
 - Facilitate manual or automatic flushing

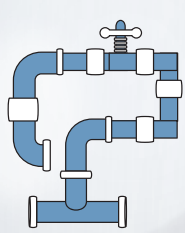




Thermostatic Mixing Valves

- Controls the mix of hot and cold water
- Serves as a safety mechanism to **prevent scalding** due to high water temperatures
- Allows hot water to be **stored at a higher temperature** (e.g., $>140^{\circ}\text{F}$)
- Should be installed as **close as practical to the point of use** (e.g., sinks, showerheads).
- For **centralized mixing valves**, the blended water temperature should be high enough to **maintain a minimum of 120°F** , or highest temperature **allowable by local regulations and codes**.





Filtration & Conditioning



All water processing equipment must be installed, maintained, and replaced per manufacturer instructions

- **Water Softeners**

- Exchanges mineral ions with sodium ions
- Reduces the high mineral content (e.g., calcium, magnesium) dissolved in water
- Does not protect against protozoa, bacteria, and viruses
- Prevents scale buildup
- May reduce the disinfectant residual

- **Activated Carbon Filters**

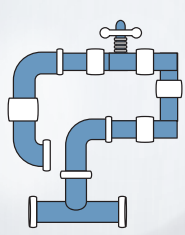
- Point of entry (POE) and point of use (POU)
- Useful in removing natural organic matter, volatile organic compounds (VOCs), synthetic compounds (SOCs), and more
- Can deplete disinfectant residual
- Filter media can provide nutrients for *Legionella*



Water Softener



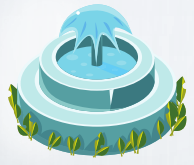
Point of Entry GAC Filter



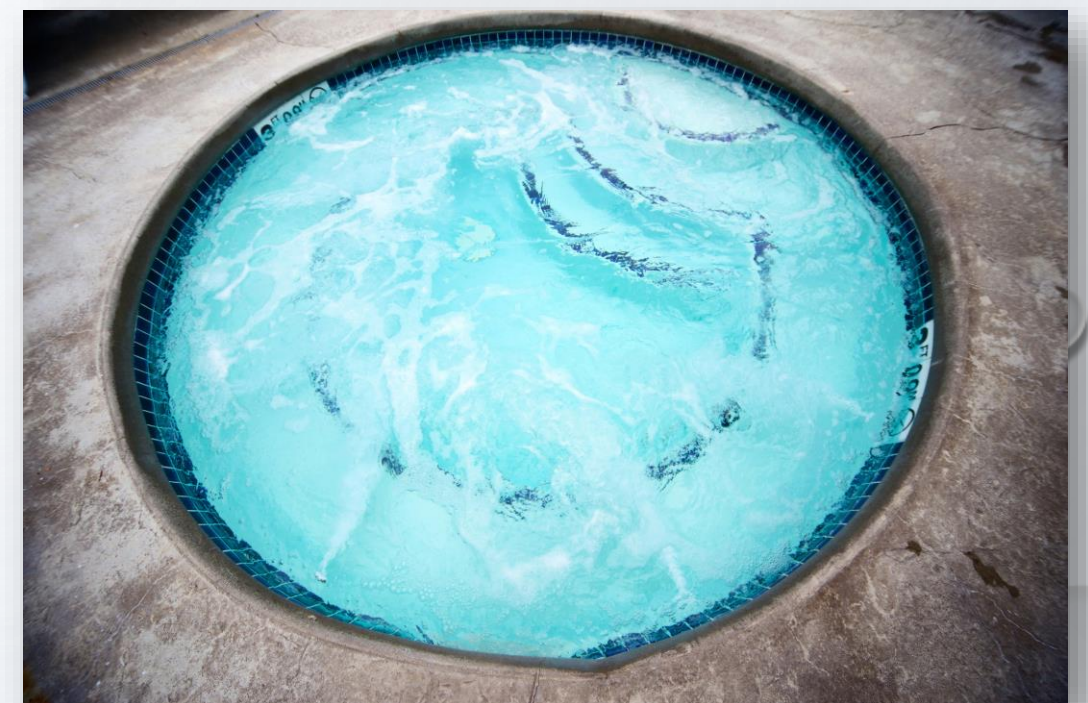
Supplemental Disinfection

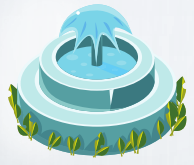
- Intended to maintain a disinfectant residual throughout the potable water system
 - Water received from a water utility **may not contain a consistent, measurable disinfectant residual**
 - **Water quality, organic matter, water age, pH, plumbing materials, and water temperature** may affect the disinfectant residual
- Consult with a **water treatment professional**
 - Improper use may be **ineffective, harmful to occupants, and damaging to equipment**
 - Contact watersupply@dep.nj.gov to determine current requirements





Water System Devices





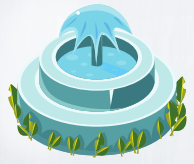
Hot Tubs & Whirlpool Spas

- Temperatures within **favorable growth range**
- Build-up of **organic matter**
- Loss of **biocide residual**
- Produces aerosols
- Routine cleaning and maintenance:
 - Monitor and maintain **disinfectant residual and pH levels**
 - N.J.A.C 8:26 Public Recreational Bathing
 - **Scrub surfaces after drainage**
 - **Replace the water based on bather use**
 - (Spa volume in gallons/3)
Average # users per day



APPENDIX D. Chemical water quality standards for hot tubs and spas

	Minimum	Ideal	Maximum
Free chlorine residual (parts per million (ppm))	2.0	3.0-5.0	10.0
Combined chlorine (ppm)	None	None	0.2
Bromine (ppm)	2.0	4.0-6.0	10.0
pH	7.2	7.4-7.6	7.8



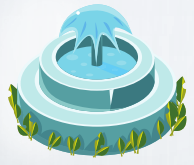
Decorative Fountains

- Light features and hot climates can increase **water temperatures**
- Limited hours of operation can **facilitate microbial growth**
- Subject to **contamination**
- Produces aerosols
- Routine cleaning and maintenance:
 - Maintain water temperatures **outside of the favorable growth range for *Legionella***
 - **Avoid idling periods**
 - Monitor and maintain **disinfectant residual**
 - Immediately clean and disinfect if **cloudy water, visible debris, algae, biofilm, or foul odor are present**



Table 1. *Legionella* Control Measures for Decorative Fountains by Volume in US Gallons

Water Parameter	Control Measure	Recommendations		
		< 5 gallons	5–25 gallons	> 25 gallons
Sediment and Biofilm	Cleaning frequency	Weekly	Monthly	Routinely to remove scale and deposits as indicated by water quality measurements.
		Any time there is visible biofilm or debris (in addition to above routine cleaning)		
Temperature	Control limits	Maintain water temperature below 77°F (25°C).*		
Water Age	Water turnover, flow, replacement	Water turnover and flow are needed to maintain water treatment applied for microbial control. Avoid idle periods. Run at least daily.		
Disinfectant Residual	Control limits	3–5 ppm free chlorine for at least 1 hour per day	3–5 ppm free chlorine for at least 1 hour per day	0.5 ppm free chlorine for at least 6 hours/day



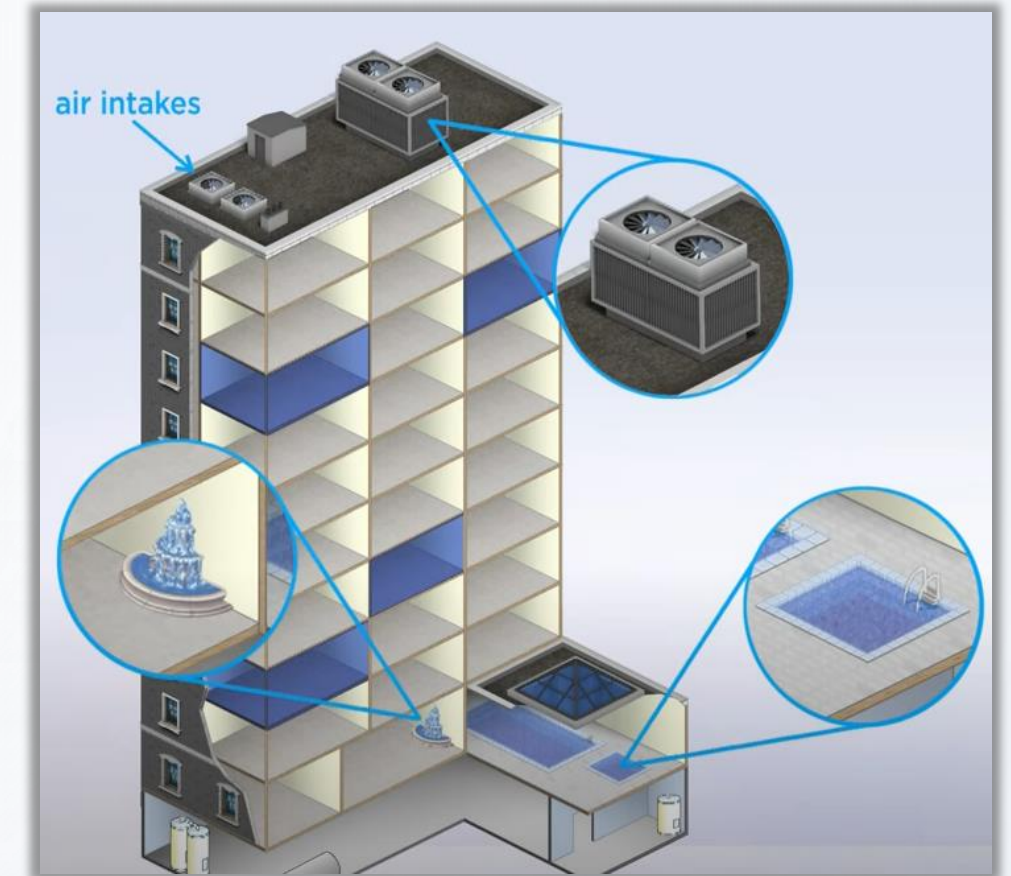
Cooling Towers

- Serve as an evaporative heat rejection device
- Part of the **centralized air-cooling system** of large buildings or used for **industrial processes**.
- Made up of a **fan**, open **basin of water**, water **pipes leading in and out of the basin**.
- Prone to **scaling, sediment build-up, and favorable temperatures**
- Can spread aerosolized water **many miles**
- **Implicated in many outbreak investigations**
- Needs **regular maintenance** to prevent *Legionella* growth
 - Use automated chemical system
 - Flush dead legs at least weekly
 - Perform an annual off-line cleaning and disinfection at least annually
 - Follow manufacturer's instructions before startup, when idling, and after shutdown



Environmental Sampling

- To identify potential sources of exposure as well as characterize the extent of *Legionella* colonization
- Sampling locations based on available data
 - **Central distribution** points
 - **Hazardous areas** (i.e., cooling towers, decorative fountains, dead legs)
 - **Areas ill individuals were exposed** to aerosolized water
 - **Representative number of samples** throughout the building
- Sampling procedures
 - **First draw** sample collection
 - Treat samples with 0.1N solution of **sodium thiosulfate**
 - **Collect 1-liter** (1000 mL) bulk water samples
 - Collect biofilm swabs from fixtures in **visibly poor condition**
 - Perform a **culture test** at a CDC Elite Member Laboratory
 - Characterized for **speciation and serogroup**
 - Collect **water quality parameters** (i.e., temperature, disinfectant residual, pH)

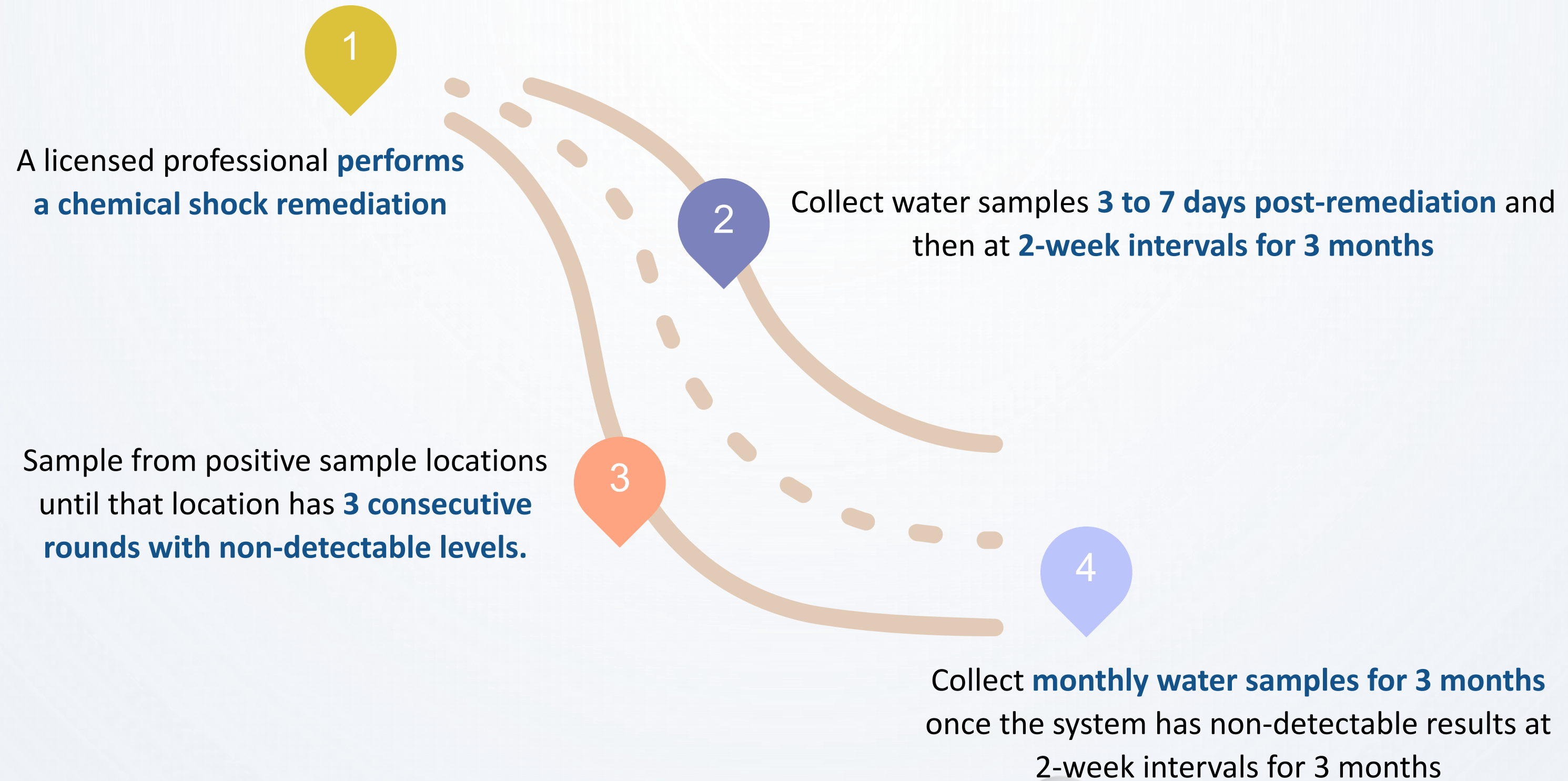


Remediation

- Potable water systems colonized by *Legionella* may need a remedial treatment
 - **When control measures are ineffective**
 - **Routine results indicate poor *Legionella* control**
 - **Outbreak or illness suspected by the Local or State Health Department**
- Uses chemical disinfectants for a relatively short period frequently at concentrations well above maximum levels permitted for potable water
 - Precautions must be taken to prevent occupants from being exposed to water
- Considered a temporary measure
 - **Recolonization likely to occur if root causes are not addressed**



Post-Remediation Sampling Schedule



Risk Communication

- Every Legionnaires' disease outbreak investigation is **unique**
- Public health officials may need to **quickly communicate through multiple channels to different stakeholders** throughout the duration of an outbreak investigation
 - May be challenging given the high-profile, fast-moving nature of some outbreaks
- The goal is to **provide accurate and timely information about health threats** that people can use to improve their health and the health of their communities
 - Develop messaging strategies and tools in advance of outbreaks to be prepared for the next event

**“The right message
at the right time
from the right person
can save lives”**

For More Information....

See *The CDC Field Epidemiology Manual* chapter “[Communicating During an Outbreak or Public Health Investigation](#)” for detailed guidance on developing messaging and working with the media

Notification Letters

- Must be **tailored to fit the target audience** (e.g., hotel guests, tenants, patients and families, staff)
- Key public health messages:
 - Provide information on **how those at risk can protect themselves**
 - Provide information about the **suspected source and implemented control measures** (e.g., remediating the hot water system, water restrictions, installation of point-of-use filters)
 - Encourage anyone who has symptoms of Legionnaires' disease to **see a healthcare provider who can evaluate their symptoms and provide testing and treatment, if indicated**

Dear Neighbor,

[Building Name] has been notified that [# of cases] tenants of the building became sick with Legionnaires' disease, a type of pneumonia. In response, [Building Name] is working with the [Local Health Department Name] and New Jersey Department of Health to test the water in your building for the bacteria (*Legionella*) that causes Legionnaires' disease. We wanted to notify you right away about this testing and we will keep you informed once we have the results.

Legionnaires' disease is a type of pneumonia caused by bacteria called *Legionella*. People can get Legionnaires' disease by breathing in aerosolized (small droplets) of water containing *Legionella* bacteria. Aerosolized water can come from showers, faucets, hot tubs, humidifiers, and decorative fountains. **Legionnaires' disease is not spread from person-to-person.**

The risk of getting sick from a building's water system is very low, especially for healthy people. The most important thing you can do is to get medical attention right away if you start having symptoms such as fever, chills, muscle aches, and cough. This is even more important if you are aged 50 or older (especially if you smoke cigarettes), have chronic lung disease, have a weakened immune system, or take medicines that weaken your immune system. While Legionnaires' disease is serious, it can be treated with antibiotics.

If you have one of the health issues above, take these extra steps as a precaution:

- Consider taking a bath instead of a shower, since a shower could create a water mist. Try to minimize your time in the bathroom while the tub is filling.
- It is fine to brush your teeth, wash your hands, or wash dishes, but fill the sink slowly to avoid creating mist.
- It is fine to drink cold water from the tap but start with cold water when heating water for tea, coffee, or cooking. You cannot get Legionnaires' disease by drinking water.

We will continue to update you on important information about your building. If you have questions about Legionnaires' disease, please contact the [Local Health Department point of contact] at [phone number]. Be sure to include your name and contact information. Additional information about Legionnaires' disease can be found at the Centers for Disease Control and Prevention (CDC) website at: <https://www.cdc.gov/legionella/index.html>.

Sincerely,

[Building point of contact]

Press Releases

- During community-associated outbreaks, sometimes it is necessary to **reach a larger audience** (e.g., all people who live in or visited a specific geographic area)
 - **On-going risk and no source** has been identified
 - **Potential sources of *Legionella* exposure have been identified** and could impact the surrounding community (e.g., cooling tower, water utility company)

Home > 2019 > New Jersey Department of Health Investigating Cluster of Legionnaires' Cases in Union County

PO Box 360
Trenton, NJ 08625-0360

For Release:
May 24, 2019

Shereef Elnahal
Commissioner

For Further Information Contact:
Office of Communications
(609) 984-7160

New Jersey Department of Health Investigating Cluster of Legionnaires' Cases in Union County

The New Jersey Department of Health (NJDOH) has identified a cluster of Legionnaires' disease cases in Union County, New Jersey.

As of May 23, NJDOH is aware of 22 confirmed cases of Legionnaires' disease in individuals who reside in or visited Union County, New Jersey. The people became ill between March 8 through May 13, 2019. Five deaths have been reported among older adults who had other significant medical conditions. NJDOH is currently working with the U.S. Centers for Disease Control and Prevention and local health departments in Union County to investigate this cluster.

"This is a continuing investigation. The risk to any resident of, or recent visitor to Union County is very small," said New Jersey Health Commissioner Dr. Shereef Elnahal. "Out of an abundance of caution, the Department recommends that individuals who live in Union County who become ill with pneumonia-like/respiratory symptoms, such as fever, chills, cough, shortness of breath, muscle aches, and headache visit their healthcare provider."

PO Box 360
Trenton, NJ 08625-0360

For Release:
September 22, 2021

Judith M. Persichilli
Commissioner

For Further Information Contact:
Office of Communications
(609) 984-7160

NJ Department of Health, Hamilton Twp. Officials say Water is Safe to Drink, But Urge Precautions During Ongoing Legionnaires' Disease Investigation

Four cases of Legionnaires' disease were reported in Hamilton Township, Mercer County between May-August 2021, along with an additional reported case from November 2020. The Hamilton Township Division of Health continues to work closely with the New Jersey Department of Health (NJDOH) to investigate these cases as part of a larger investigation, which was initiated in [August 2020 following a reported cluster of four cases](#). Hamilton Township reported two deaths in August 2020 and an additional death was reported late last month in an elderly township resident among the nine reported cases.

Health Advisories

- To alert area clinicians about the outbreak and **provide information about appropriate diagnostic testing and treatment**
 - Request that **clinicians maintain a high index of suspicion for *Legionella* when evaluating patients** for community-acquired and healthcare-associated pneumonia
 - **Support clinical testing** for individuals who may be an outbreak-associated case of Legionnaires' disease



Call for Enhanced Surveillance and Testing for Legionellosis in Essex County

Date: July 29, 2021

Public Health Message Type: Alert Advisory Update Information

Intended Audience: All public health partners Healthcare providers Infection preventionists
 Local health departments Schools/child care centers ACOs
 Animal health professionals Other:

Key Points or Updates:

- The New Jersey Department of Health (NJDOH) is investigating a suspected cluster of Legionnaires' disease cases being reported in Essex County, New Jersey.
- Healthcare providers are being asked to have a high index of suspicion for *Legionella* when evaluating patients for community-acquired and healthcare-associated pneumonia, particularly if SARS-CoV-2 testing is negative.
- NJDOH is requesting that respiratory specimens are collected and held for patients who test positive for *Legionella* by a urinary antigen test and who reside/work in or visited Essex County.
- All suspected or confirmed cases of legionellosis (Legionnaires' disease and Pontiac fever) should be promptly reported to the local health department where the patient resides. If the patient residence is unknown, report to your own local health department. Contact information is available at: localhealth.nj.gov.

When is an Outbreak Investigation Over?

Did You Know?

NJDOH provides LHD with a template letter to notify the facility manager/owner that the outbreak investigation has been officially concluded

Determination made on a case-by-case basis

- Before considering to conclude an outbreak investigation, an effective Water Management Program must be in place

Possible considerations include:

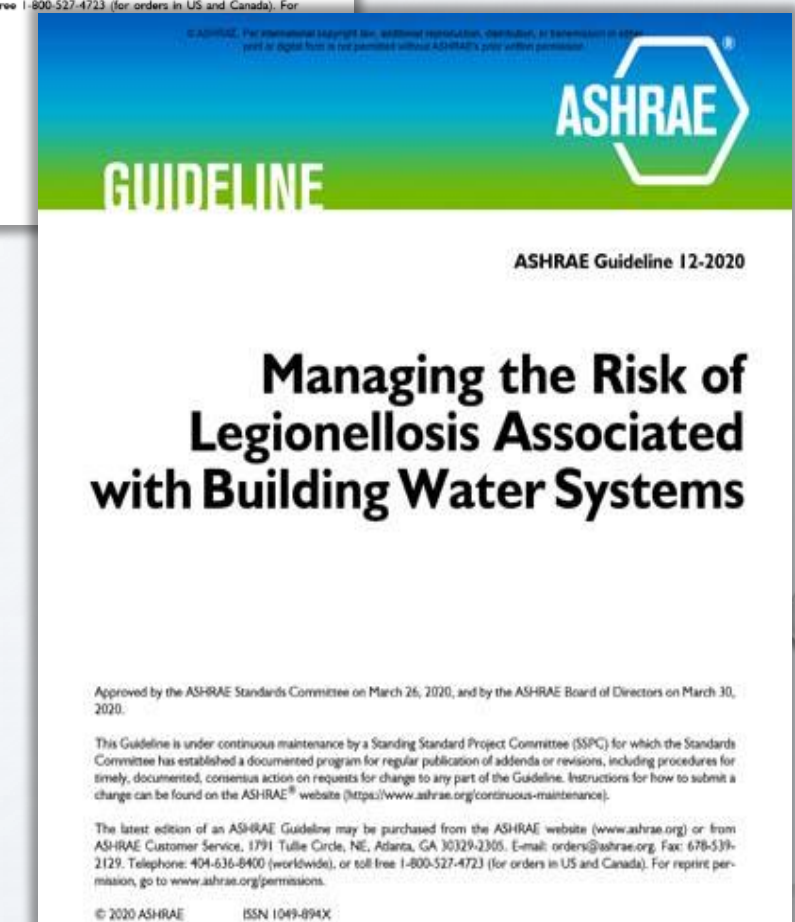
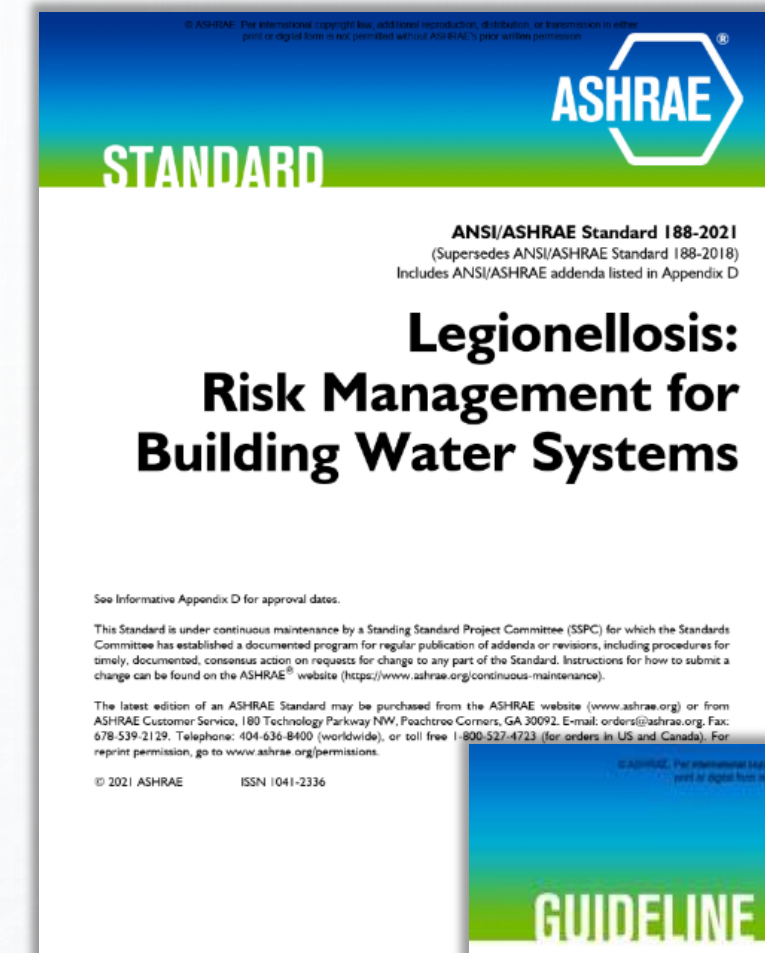
- No new cases of Legionnaires' disease during a period of careful monitoring for new cases
- No new cases of Legionnaires' disease following implementation of long-term Legionella control strategies as part of a Water Management Program
- No detection of *Legionella* during post-remediation environmental monitoring

Extend enhanced environmental & clinical surveillance upon identification of:

- *Legionella* culture (+) environmental samples
- New cases of Legionnaires' disease
- Suboptimal performance of the Water Management Program

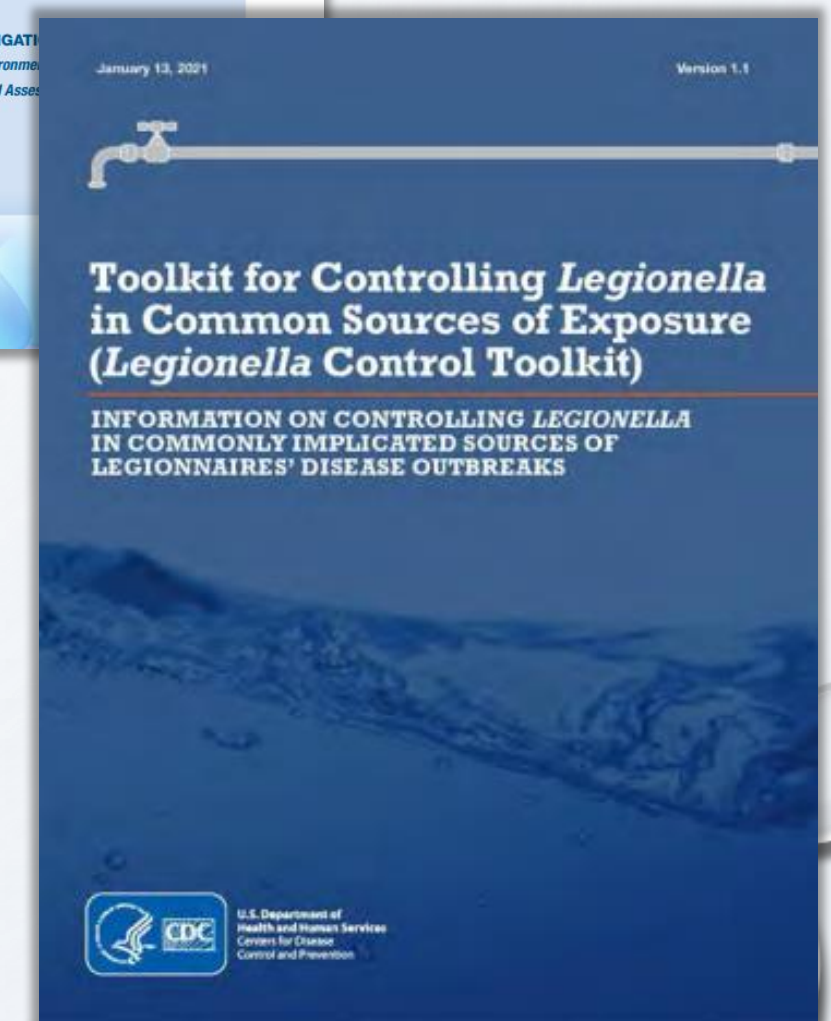
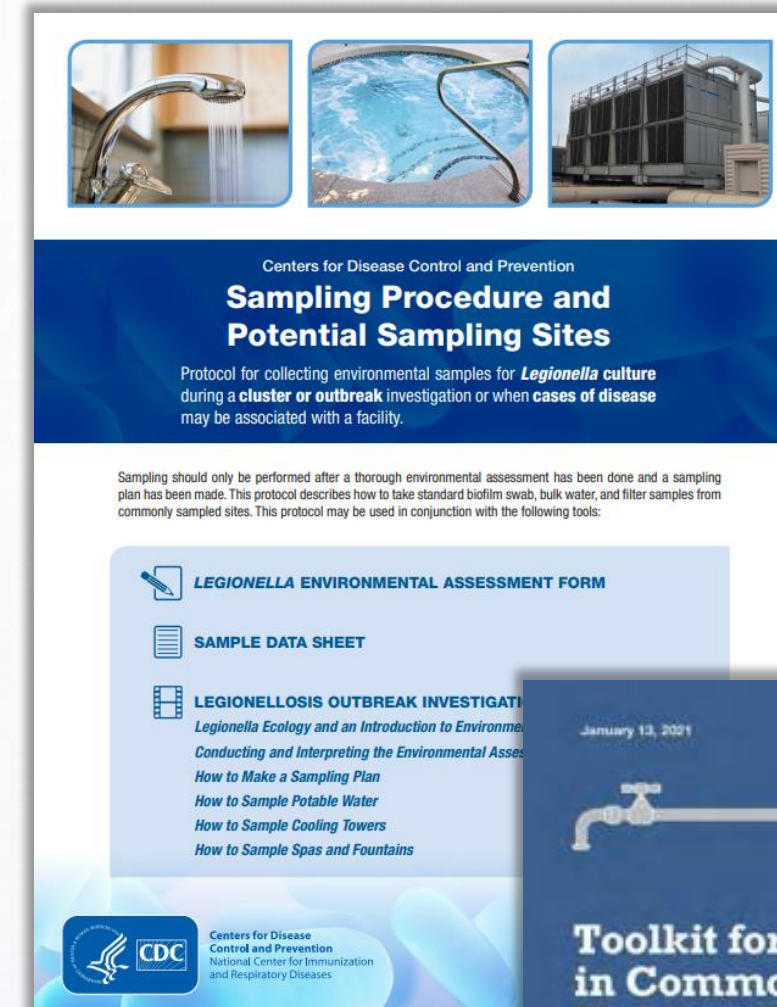
Standards & Guidelines

- **ANSI/ASHRAE Standard 188-2021:** Legionellosis Risk Management for Building Water Systems
- **ASHRAE Guideline 12-2020:** Managing the Risk of Legionellosis Associated with Building Water Systems
- **Cooling Technology Institute (GDL) 159:** Practices to Reduce the Risk of Legionellosis from Evaporative Heat Rejection Equipment Systems
- **VHA Directive 1061:** Prevention of Healthcare-Associated *Legionella* Disease and Scald Injury from Water Systems
- **Centers for Medicare and Medicaid Services Memo:** Requirement to Reduce *Legionella* Risk in Healthcare Facility Water Systems to Prevent Cases and Outbreaks of Legionnaires' Disease



Additional Environmental Resources

- **CDC Sampling Procedure and Potential Sampling Sites**
 - Provide guidance on sampling materials, sampling protocols, and what locations to sample.
 - <https://www.cdc.gov/legionella/downloads/cdc-sampling-procedure.pdf>
- **CDC Legionella Water Management Program (WMP) Toolkit**
 - Translate ASHRAE Standard 188-2021 into plain language
 - Step-by-step guide to creating a WMP
 - <https://www.cdc.gov/legionella/wmp/toolkit/index.html>
- **CDC Toolkit for Controlling Legionella in Common Sources of Exposure**
 - Compliment ASHRAE Guideline 12-2020
 - Evaluate hazardous conditions associated with building water systems and what control measures to implement
 - <https://www.cdc.gov/legionella/wmp/control-toolkit/index.html>



Questions and Contact Information



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REMINDER....

- Please look for evaluation link post-webinar in your in-box.
- If you are seeking Public Health credits, you must complete the evaluation.
- Public Health credits will be awarded AFTER the evaluation link closes.
- The evaluation link closes seven (7) days after the webinar (December 8, 2021).
- If you do not receive the link by the end of the day today, please contact Laura Taylor at laura.taylor@doh.nj.gov