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**ASHRAE Testimony to the New York City Council Committee on Health
Public Hearing on Oversight – New York City's Response to the 2026 Legionnaires' Disease
Cluster**

September 2, 2026

Chair Schulman and members of the New York City Council Committee on Health, thank you for the opportunity to testify at this public hearing regarding New York City's response to the 2026 Legionnaires' Disease outbreak.

My name is Bill McQuade, and I am a Fellow and the immediate past president of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). ASHRAE is a nonprofit professional and technical society of more than 55,000 members in over 130 countries who focus on building systems, energy efficiency, indoor air quality, water system safety, refrigeration, and resiliency within the built environment. Through research, standards development, publishing, certification and continuing education, ASHRAE shapes tomorrow's global built environment today. Managing building water systems to reduce waterborne disease risk is essential to comprehensive water safety. Multiple ASHRAE standards and guidelines directly address Legionnaires' disease risk.

I am an engineer with over thirty years of experience working in the HVAC&R industry and I was chosen by the U.S. Department of State and the U.S. Environmental Protection Agency to represent the industry on the Indo-U.S. Taskforce on Hydrofluorocarbons and contributed to the U.S. Department of Energy's HVAC Roadmap Collaboration Team (Oak Ridge National Lab).

My testimony is focused on the urgent need to strengthen New York City's approach to preventing Legionnaires' disease. This disease, caused by *Legionella* bacteria, is the leading cause of waterborne illness and death in this country but it is preventable. In the nearly fifty years since Legionnaires' was officially identified, we have learned how *Legionella* grows, how people are exposed, and how risk can be reduced. But we continue to see sharp increases in disease incidence with a five-fold increase in cases in the last two decades, with New York City leading the nation in the number of cases per capita. This demonstrates that knowledge alone is not enough. We need consistent and comprehensive prevention policies, systems in place and accountability.

The Public Health Challenge

Legionnaires' disease is a severe form of pneumonia caused when people inhale tiny water droplets containing *Legionella* bacteria. It is not spread person to person, and it is not caused by

drinking a glass of water unless it is aspirated (when water goes down to the wrong pipe). It is a waterborne disease that becomes a respiratory disease when contaminated water is aerosolized or aspirated and breathed into the lungs.

The consequences can be very serious. Older adults, smokers, people with chronic lung disease, and people with weakened immune systems face higher risk. Roughly one in ten diagnosed cases is fatal, and the fatality rate can be higher among vulnerable populations.

Most cases are not part of large, highly visible outbreaks. Most cases are individual or sporadic cases, which make up 96% of all reported cases. These cases may not generate headlines or trigger a full environmental investigation. But collectively, they represent a significant burden of disease. Unfortunately, full investigations typically only follow outbreaks, so where we look the most may not necessarily be the places with the greatest risk.

CDC-reviewed outbreak data reinforces the role of water systems. Among drinking-water-associated outbreaks reported from 28 states between 2015 and 2020, 80 percent were linked to drinking water systems. Most were biofilm-associated, and *Legionella* caused a disproportionate share of severe outcomes, including nearly all hospitalizations and deaths in those outbreaks.

That is why prevention cannot be limited to reacting after an outbreak or narrowly focusing on only one aspect of the water system, water-using cooling equipment. The precautionary principle is relevant here: when a preventable harm is serious, and practical risk-reduction steps are available, we should not wait for perfect certainty or a crisis before acting.

Why a Comprehensive Approach Matters

Historically, many *Legionella* policies have focused too narrowly on a few familiar pieces of water using equipment or certain facilities. Those systems matter, but prevention cannot stop there. Any water-using system or equipment in a building that can create spray, mist, bubbles, droplets, or aerosols needs to be identified, evaluated, and managed.

At the same time, the building is only one part of a larger water pathway. *Legionella* risk must be managed from the source, through the public distribution system, into building or home plumbing, and finally to the fixtures and equipment where people can be exposed. That is what we mean by a source-to-tap approach.

Water can enter a building or home with low disinfectant residual, biofilm in parts of the distribution system, or after disruptions that disturb pipes and change water quality. Inside plumbing systems and equipment, stagnation, warm temperatures, low flow, dead legs, poor commissioning, and inadequate maintenance can allow bacteria to grow. Exposure can occur through showers, faucets, decorative water features, hot tubs, humidifiers, cooling towers, and other aerosol-generating devices. And a private residence has no water management program, no operator, no inspections, and no way to add disinfectant to the water its occupants use. The only *Legionella* control is the residual that enters the building at the curb.

That is why public water systems cannot be treated as separate from building water safety and one type of water using equipment should not be treated as separate from public water and building water systems. Municipal water quality, disinfectant residuals, biofilm, pressure changes, treatment changes, main breaks, construction, storms, and flooding can all influence the risk that ultimately appears inside buildings.

The practical lesson is simple: a policy that starts only at the point of exposure is already too late. Comprehensive or “source-to-tap” prevention gives communities a better chance to reduce illness before it occurs. The founding lesson of modern public health reinforces this approach. John Snow did not go house to house to address a cholera epidemic in the 1850s. He went upstream and removed the town’s pump handle. Intervention at the point of distribution can stop exposure for everyone downstream.

The Role of ASHRAE Standards and Water Management Programs

In 2016, the CDC declared that Legionnaires’ disease is preventable through proper water management. The CDC released a toolkit, *Developing a Water Management Program to Reduce Legionella Growth and Spread*, which is based on the leading global building ANSI-standard, ASHRAE 188 for reducing Legionellosis risk which was first published in 2016 and updated most recently in 2021. Standard 188 and a related Guideline 12-2023 provide detailed guidance on creating building water management programs for managing *Legionella* bacteria risk focused on the types of buildings and facilities, plumbing systems, water-using equipment and populations that may utilize or be served by a building. ASHRAE Standard 188 and ASHRAE Guideline 12 are written to be usable and implemented by a broad range of building owners. Standard 188 helps building owners and operators to understand their systems, identify where risk exists, establish control measures, monitor performance, take corrective action, and document the process. Guideline 12 provides practical guidance for implementing 188 and reducing *Legionella* risk.

The standards are the result of extensive input from technical experts, academia, and healthcare stakeholders and from city, state, and national public health departments and regulatory authorities including the CDC developed over a decade.

History and Existing Policies in New York City

In the summer of 2015, the South Bronx experienced the largest Legionnaires’ disease outbreak in New York City’s history. The City Council held a hearing similar to this one and ASHRAE testified, outlining the newly published Standard 188 for *Legionella* risk management in buildings as discussed above. ASHRAE described the Standard and how it should be adopted in its totality to be effective.

Despite our recommendations, New York City enacted Local law 77-2015 which focused on only one aspect of Standard 188, regulating cooling equipment. We are unaware of any national or internal health organization or experts which recommend this narrow approach for Legionnaires’

disease prevention. And the experience in other countries with a similar policy like in Europe is that it has been ineffective as case rates continue to climb. Local Law 77 has now been in place for eleven years. It requires every cooling tower in the city to be registered, tested quarterly, and remediated when *Legionella* is found, backed by inspections. It is the most aggressive cooling tower regulation in the United States. Yet, New York's case rate has only grown. While enforcement and compliance of this law is important, it is not enough to address the true burden of this disease.

In the last decade, New York City has seen cases rise- having one of the highest Legionnaires' disease rates per capita in the US, and the overwhelming majority are sporadic and not related to an outbreak, which receive very little attention or investigation. New York City has also had major, large scale outbreaks including Harlem last summer and on the Upper East Side this summer along with cases tied to apartment and other residential or commercial buildings which are regularly announced. This includes NYC Housing Authority buildings in the Bronx, a residential building in Harlem last winter and remediation is ongoing for cases in an East Village residential complex.

Rather than continuing to limit outbreak investigations and the City's Legionnaires' policies to only one aspect of the water system, we strongly encourage you to follow the best practice recommendations and policies of national experts for comprehensive risk mitigation across the system.

Policies to Prevent Legionnaires' Disease

Water utilities, building owners, and public health agencies each play a critical role in helping to prevent Legionnaires' disease. A precautionary approach asks each to identify foreseeable risks, apply practical controls, communicate clearly, and improve the system before illness occurs.

For utilities, that includes maintaining appropriate disinfectant residuals, monitoring and managing the water system to mitigate *Legionella* risk, and communicating disruptions. For building owners, it means implementing water management programs and acting when notified by utilities that disruptions have occurred which can increase *Legionella* risk in their buildings. For public health agencies, it means strengthening surveillance, investigations, education, and coordination.

The Flint, Michigan outbreak, the Illinois Veterans' Home in Quincy outbreak, and investigations involving Trenton Water Works and Grand Rapids, Minnesota all point to the same lesson: changes in source water, treatment, corrosion control, disinfectant residual, pressure, and distribution-system conditions can create or amplify *Legionella* risk. Timely, plain-language notification helps owners and operators of buildings and high-risk facilities, and vulnerable individuals take reasonable precautions.

Addressing Likely Concerns

New policies may raise questions about cost, feasibility, coordination, and unintended consequences. Those questions should guide careful implementation, not inaction. A

precautionary approach is not unlimited regulation; it is a call for proportionate, evidence-informed steps when the risk is serious and preventable. Some may argue that current requirements are enough. But rising cases and repeated outbreaks suggest otherwise. Water systems already manage biofilm and disinfectant effectiveness through practices such as free chlorine conversion. That is a reminder that biofilm and residual control are real operating issues, not theoretical concerns.

Some may suggest that source-to-tap policies are too broad. In my view, that is exactly why a broader approach is needed. The science tells us the pathway is broader than one device, one building type, or one point in the system.

Others may be concerned about disinfectant residual targets, treatment practices, or operational impacts. But public water systems are a significant part of the prevention equation which should be monitored, managed and communicated accordingly. We can and should do more to kill and starve *Legionella* bacteria in the public water distribution system to prevent its “seeding” of *Legionella* into our buildings, homes and equipment.

Some may worry that public notification will create fear. Clear communication does the opposite. It builds trust by giving people timely, accurate, plain-language information about risk and reasonable precautions.

A Practical Path for Implementation

As the Committee considers policies to prevent future outbreaks and see a meaningful reduction in Legionnaires’ disease cases, I would encourage five practical principles.

1. **Keep the approach source-to-tap.** Include public water systems, distribution systems, building plumbing, and all water-using equipment.
2. **Apply the precautionary principle.** When harm is serious and reasonable prevention steps exist, act before outbreaks occur.
3. **Use recognized standards.** Build on ASHRAE Standard 188, ASHRAE Guideline 12, and related guidance.
4. **Communicate clearly.** Public notices should be understandable, targeted, and actionable.
5. **Support implementation with education.** Provide clear expectations, templates, and training so programs become routine practice, and raise public awareness on susceptibility, signs and symptoms of Legionnaires’ disease and how to reduce risks.

We would encourage New York City to look to its neighbors in New Jersey which enacted a comprehensive Legionnaires’ disease prevention law in 2024. It includes all of these elements and is in the process of being implemented there. Such a comprehensive policy can help create a culture of prevention: fewer illnesses, fewer emergency responses, and better coordination among utilities, building owners, and public health officials.

Closing

Members of the Committee, Legionnaires' disease is complex, but the basic policy question is straightforward: do we continue to rely primarily on reaction after illness occurs and accept that New York will continue to have approx. 600 cases per year of a disease that is fatal for 1 in 10 (and an even higher fatality rate of 25% for hospital-associated infections), or do we take a precautionary, prevention-first approach that reduces foreseeable risk holistically before people are harmed?

New York currently leads the nation in Legionnaires' disease cases per capita and regularly experiences large-scale outbreaks, and cases in many residential and commercial buildings. It must make the choice to move toward a comprehensive, science-based, source-to-tap approach that recognizes community water systems, building plumbing, and water-using equipment all as part of the solution.

We have the knowledge. We have consensus standards. We have practical tools. What is needed now is the will to apply them consistently.

I respectfully urge the Committee and the City Council to continue working with public health experts, utilities, building owners, engineers, and advocates to enact Legionnaires' disease policies that are comprehensive, effective and practical.

Nearly fifty years after Legionnaires' disease began as a public health tragedy, New York must take a major step forward to turn the tide, not by reaction, but by prevention.

Thank you for your time, and I would be pleased to answer any questions.