



Testimony

of

**Mary T. Bassett, MD, MPH, Commissioner
New York City Department of Health and Mental Hygiene**

before the

New York City Council Committee on Housing and Buildings

regarding

Cooling Towers Registration, and Inspection and Testing for Microbes

and

Preconsidered Intro

**August 11, 2015
Council Chambers – City Hall
New York City**

Good morning Chairperson Williams and members of the Committee on Housing and Buildings. I am Dr. Mary Bassett, Commissioner of the New York City Department of Health and Mental Hygiene. I am joined by Dan Kass, Deputy Commissioner for Environmental Health. Thank you for the opportunity to testify today on the proposed legislation, which will require the registration of the City's cooling towers as well as routine inspections and testing for the presence of microbes.

Background and Current Outbreak

As you know, the Health Department is currently investigating an outbreak of Legionnaires' disease in the South Bronx. Legionnaires' disease, caused by the bacteria Legionella, is a severe respiratory illness similar to other community-acquired pneumonias. Groups at high risk for Legionnaires' disease include people who are middle-aged or older – especially cigarette smokers – people with chronic lung disease or weakened immune systems, and people who take immunosuppressive drugs. Most healthy people do not become ill even if exposed.

I am happy to report that we have no new deaths today, and no one in the past seven days has reported an onset of symptoms. To date, there have been 115 reported cases of individuals with Legionnaires' disease, 79 people have been discharged from the hospital, and tragically 12 people have died. In the impact zone, our disease detectives determined cooling towers were the likely source of exposure. Initially, we identified 17 cooling towers in the area and immediately tested them for Legionella. Five of these locations tested positive, and building owners were ordered to immediately disinfect the towers and undertake a longer-term remediation plan. As of yesterday evening, a total of 18 sites have tested positive for Legionella, 11 of these inside the impact zone. Regardless of test results, every cooling tower identified in the impact zone has been immediately ordered disinfected and remediated, and any site that has tested positive has been immediately ordered disinfected and remediated.

On August 6, in an effort to prevent any other outbreaks of Legionnaires' disease, I issued an order to all building owners to either disinfect their cooling towers within 14 days or provide evidence that their towers had been disinfected in the past 30 days. We do not know exactly how many cooling towers there are in the five boroughs, but we estimate that there could be several thousand. The City will conduct random audits to ensure compliance with this order, and failure to comply could result in notices of violation and fines. Every building owner has complied with our orders to date, and we expect broad cooperation going forward.

The decrease of reported new cases along with a decline in emergency department visits for pneumonia in the South Bronx signals the effectiveness of our efforts in collaboration with other city, state, and federal agencies in containing the outbreak. We should not be surprised to see sporadic cases in this or other parts of the city as the bacteria is normally found in the environment, but we are confident that through our established surveillance systems we will be able to respond quickly to all reports.

Collaboration with partners and other experts has also played a key role in our response to this outbreak. We have taken several steps to provide clear, timely information to residents of the South Bronx. These include:

- Convening a panel of experts in the field of infectious disease to discuss the work the City has done so far and to ensure that all the appropriate steps were taken to find and eliminate the source of the outbreak;
- Sending teams of outreach staff and volunteer doctors with the Medical Reserve Corp to more than 85 clinics, residences and other locations in the South Bronx where vulnerable populations live, speaking to administrators and residents, and delivering nearly 9,000 copies of frequently-asked questions, or FAQs, in English and Spanish to ensure that critical information on symptoms and treatment of Legionnaires disease is communicated clearly and directly to residents in the impact zone;
- Distributing over 15,000 flyers and conducting 46,000 robocalls, in multiple languages, to residents of the South Bronx to educate them about this outbreak;
- Coordinating with the Department for the Aging, the New York State Nurses Association and the Medical Reserve Corp to offer clinic hours in 13 senior centers in the South Bronx;
- Working with the Human Resource Administration, Department for the Aging, Health and Hospitals Corporation, the NYC Housing Authority and other City agencies to distribute FAQs to their clients;
- Participating in a town hall meeting hosted by Council Member Gibson and the Mayor's Community Assistance Unit on August 3rd attended by nearly 400 people;
- Participating in a tele-town hall meeting with Bronx residents on August 7th; and
- Participating in a Spanish-language tele-town meeting with Bronx residents on August 10th.
- This evening, our First Deputy Commissioner Dr. Oxiris Barbot, and Bronx District Health Office Assistant Commissioner Dr. Jane Bedell will participate in another town hall meeting, and we will continue to meet with residents to answer their questions and provide information and assistance.

In the coming weeks we will continue to monitor for new cases and work in close collaboration with area hospitals, as well as provide updates to elected officials and Bronx residents. I want to take a moment to thank Speaker Mark-Viverito, Borough President Diaz Jr., Council Member Gibson, and other local elected officials for their leadership and engagement of Bronx residents. In addition, I want to thank the State Health Department, whose lab at Wadsworth has provided incalculable assistance and the Centers for Disease Control and Prevention, which has offered crucial advice and staff support in recent days.

Before turning to the legislation before us, I want to reiterate some key messages that the Council and others have helped us disseminate. New York City's drinking water supply is safe and unaffected by Legionella. In addition, water tanks and home air conditioner units are also unaffected by Legionella. And walking into air conditioned environments is safe, as well.

With respect to the proposed legislation, the Administration strongly supports the registration of cooling towers and routine inspection and testing for microbes in order to help prevent and investigate future outbreaks of Legionnaires' disease. The scale of this outbreak has shown us that the risk of

Legionnaires' disease is one that we can no longer accept and long term action is needed. In regards to the airborne release of Legionella bacteria, cooling towers represent a source of particular concern because they are outdoors and can produce mist that can contain bacteria, such as Legionella. When conducting our epidemiological investigations in the South Bronx related to this recent outbreak, we quickly realized the number and location of cooling towers in the impact zone was unknown and required intensive leg work by City staff to determine. A registry of cooling towers maintained by the Department of Buildings will improve our response to future outbreaks.

The proposed legislation also addresses two other issues – ensuring adherence to industry standards for maintenance, cleaning, application of biocides and testing for microbes, and reporting samples with elevated levels of microbes to the Health Department – that are intended to reduce the risk of future outbreaks.

Specifically, this bill will:

- Require owners to develop and follow a maintenance program and plan that is in accordance with the American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE) standard;
- Require inspections and testing of cooling towers on a quarterly basis while a building's cooling tower is in use, and within 15 days before the initial use of the cooling tower during any year;
- Require that all inspections be performed by a person qualified in applying the relevant industry standards related to microbial testing and evaluating cooling systems for the presence of Legionella bacteria; and
- Include in each inspection a test for the presence of microbes in the water of the cooling tower. The Health Department will establish by rules the targets and acceptable methods of microbial testing and laboratory analysis; the acceptable methods of cleaning and disinfecting cooling towers; the levels of microbes in cooling towers that require mitigation to prevent health risks; and the levels of microbes in cooling towers that present a serious health threat and require immediate reporting to the department and cleaning and disinfecting.

In order to ensure compliance with these requirements, the proposed legislation allows the Health Department to enter any property to inspect the cooling tower for compliance and levy significant penalties for violations. In cases where an owner fails to disinfect or otherwise remediate as ordered, the Health Department would clean the tower and bill the owner.

This is groundbreaking legislation. Currently, no other large city or state in the country has passed a law regulating cooling towers, despite the fact that they have been implicated in Legionnaires' disease outbreaks across the United States. It is clear that this bill will advance our certainty of the location of cooling towers, improve our ability to rapidly investigate potential sources of outbreaks, and most importantly, reduce the potential for exposure to pathogens associated with respiratory illness.

Legionella exists in the environment, and we will continue to see sporadic cases of Legionnaires' disease in New York City. But we believe that this important legislation will go a long way towards reducing the number and severity of these outbreaks.

Thank you again for the opportunity to testify and also for your support and assistance during this outbreak. We are happy to answer any questions.

**RICK D. CHANDLER, P.E.
COMMISSIONER
NEW YORK CITY DEPARTMENT OF BUILDINGS**

**HEARING BEFORE THE NEW YORK CITY COUNCIL
COMMITTEE ON HOUSING & BUILDINGS**

August 11, 2015

Good morning, Chair Williams and members of the Housing & Buildings Committee. I am Rick Chandler, Commissioner of the New York City Department of Buildings. I am joined by First Deputy Commissioner Thomas Fariello and I am pleased to join Department of Health & Mental Hygiene Commissioner Mary Bassett and Deputy Commissioner Dan Kass to offer testimony in support of proposed legislation that will regulate cooling towers.

A cooling tower is part of a building's cooling, industrial process, or energy production system. Cooling towers extract waste heat to the atmosphere through the cooling of water stream to a lower temperature. This process can result in a mist being emitted into the atmosphere. If cooling towers are not properly maintained, that mist can contain bacteria, such as Legionella, which the Health Department has identified in parts of the South Bronx.

Cooling towers are one option to cool buildings and can be used in any size building depending on the use. Generally speaking, cooling towers can be found on industrial buildings, hotels, universities, buildings on campuses with shared building systems and larger commercial and residential buildings, typically 25,000 square feet and larger.

Currently there is no accurate count of cooling towers throughout the City. This is because cooling towers are typically only one component of a larger heating, ventilation and air condition (HVAC) system. Construction documents submitted to the Department do not distinguish

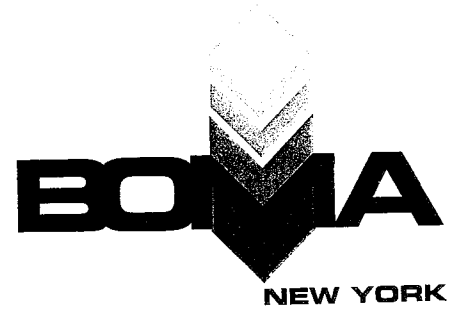
between a cooling tower and some other component of a HVAC system, just as they would not distinguish between a brick and stucco facade.

The legislation before this Committee will allow the City to better identify where cooling towers are located by requiring building owners to register them with the Department and more importantly, empowers the Health Department to establish requirements to ensure they are properly maintained.

This proposed legislation requires registration with the Department of existing cooling towers within sixty days of the law's enactment and for new installations, prior to their initial operation. The registration form is now available on the Department's website, enabling building owners to voluntarily register their cooling towers in anticipation of the enactment of this legislation, should the City Council approve it. Additionally, the Department has prepared a service notice for building owners and operators and a brochure for the public.

The proposed legislation also requires building owners to certify with the Department annually that their cooling towers have been inspected, tested, cleaned and disinfected in accordance with Health Department regulations. For cooling towers that are discontinued, the proposed legislation requires owners to notify the Department within thirty days of discontinuance and state that the cooling tower was sanitized in compliance with Health Department requirements.

Thank you for your attention and the opportunity to testify before you today. I welcome any questions you may have.



**HEARING TESTIMONY FROM
THE BUILDING OWNERS AND MANAGERS ASSOCIATION OF GREATER NEW
YORK:**

**A LOCAL LAW TO AMEND THE ADMINISTRATIVE CODE OF NEW YORK, IN
RELATION TO REGULATION OF COOLING TOWERS.**

Good afternoon Chair Williams and the esteemed members of the Committee on Housing and Buildings. My name is Daniel Avery, and I am the Director of Legislative Affairs for the Building Owners and Managers Association of Greater New York (BOMA/NY). I thank you all for affording me the opportunity to offer testimony on legislation before you today that would require new regulations for cooling towers.

First, a little background on BOMA/NY. We represent more than 750 owners, property managers, and building professionals who either own or manage 400 million square feet of commercial space. We are responsible for the safety of over 3 million tenants, generate more than \$1.5 billion in tax revenue, and oversee annual budgets of more than \$4 billion. BOMA/NY is the largest Association in the BOMA International Federation, the world's largest trade organization.

Owners and operators of BOMA/NY buildings typically take an active and effective approach to the operation, maintenance, and treatment of cooling towers. Generally, a continuous feed system is used whereby biocides and other necessary chemicals are inserted into the system on an as-needed basis, along with replacement water, such that a proper ratio is maintained. Licensed professionals establish and oversee these systems, conducting testing and visual inspection, usually on a monthly basis, and regular cleanings are scheduled based on the visual inspections. A building's managing engineer is often trained to test tower water, and can do so on an almost daily basis in order to flag any abnormalities and consult with the outside licensed professional to fix any problems. These systems also use chemicals to prevent corrosion and to keep particles in suspension so that they can be filtered out. These practices ensure that cooling tower systems are clean, well maintained, and do not pose a hazard from bacteria or other pathogens.

Given the recent outbreak of Legionnaires' disease, we understand the need to ensure that cooling towers are maintained in a way that protects public health. We would hope that practices similar to those described above would be sufficient to meet the requirements of this legislation. With many of the provisions of the bill requiring rulemaking, it is difficult to know if that is the case, and we look forward to working with the City in formulating those rules. We do have several concerns with aspects of the bill as written, including:

- 1) The ASHRAE188p standard is new, untested, and unknown to those who typically set up and maintain cooling tower bacteria control operations. This standard has not yet been added to the Code and so has not been properly vetted. If it is to be used, it should be phased in over time to allow for the development of a sufficient number of professionals trained in the process.
- 2) The registration period for cooling towers should be nine months instead of six weeks.
- 3) Cleaning and disinfecting after a cooling tower is shut down for three days is unnecessary where there is proper treatment. Three day and longer shutdowns are common at certain times of the year, including for holiday weekends.
- 4) The law should be limited to direct contact or open cooling towers.

Once again, thank you for allowing me to testify today. I'll be happy to take questions.

**Testimony before the Committee on Housing and Buildings
of the New York City Council
By Angela Sung Pinsky
Senior Vice President, Management Services and Government Affairs
Real Estate Board of New York
August 11, 2015**

Good morning Chairpersons Williams and Johnson and members of the Committee on Housing and Building and Committee on Health. The Real Estate Board of New York, representing nearly 17,000 owners, developers, managers, and brokers of real property in New York City, thanks you for the opportunity to testify on the proposed legislation regarding cooling towers and Legionella reporting.

As we have unfortunately learned over the past few weeks, legionella in cooling towers and systems can present a serious public health risk if not properly managed, monitored, tested and controlled. In continuing conversations with many of our owner and management members, we are learning that due to the seriousness of the risks, many buildings already have protocols and operational plans in place which outline the management of these systems. Therefore, REBNY and our members are supportive of the Administration and the City Council memorializing responsible regulations and requirements for registration of building systems, proper maintenance of cooling towers, and prevention of additional outbreaks of Legionnaire's Disease.

We would, however, like to comment on specific proposals discussed regarding the legislation:

1. **ASHRAE 188** - Initial discussions referenced the requirement to maintain the cooling tower in accordance with section 7.2 of ASHRAE 188–2015, which acknowledges that building types, system types and management programs will vary and contribute to determining the appropriate responses to presence of legionella.
 - a. This ASHRAE standard was released roughly 8 weeks ago, in June of 2015. The industry is not yet prepared to widely adopt this protocol and, although many buildings have responsive and public health protective maintenance and testing protocols, very few buildings – if any – have ASHRAE 188-2015 specifically in place.
 - b. We have heard estimates of anywhere between 2,500 to 30,000 cooling towers in the city and estimate that the development of the ASHRAE 188 protocol would require at least a few weeks.
 - c. With the limited number of qualified consultants to complete this work, we strongly urge that the City accept sufficient and responsible building protocols that may currently be in place, with a requirement to maintain them onsite for inspections by the City, which is consistent with requirements for many building operations.

2. **Registration/Decommission Notification** – The timeframes of 60 days for registration and 30 days for notification for decommissioning are sufficient if these processes are similar to the registration currently in place on the DOB website, which do not require the hiring of filing representatives or expeditors.
3. **Annual Reporting** – The reporting should mirror the reporting as currently required by the Department of Health for water tank and potable water inspections
4. **Disinfecting Shut Down Systems** – the requirement to disinfect cooling towers when a system is shut down for more than 3 days is too frequent and could cause costly, disruptive and unnecessary disinfections several times per year.
 - a. Many buildings already disinfect annually when they winterize their systems and take them offline. Additionally, disinfection and excessive use of biocides can cause corrosion in the cooling systems, which would increase maintenance and capital costs and would introduce other public health risks of their own.
 - b. Disinfecting a 25,000 gallon cooling tower could require in excess of 100,000 gallons of water. Alternatively, to avoid the requirement of disinfection, a building could run the cooling system when not necessary wasting energy and increasing carbon emissions. Additionally, if there is no corresponding load, this may increase the water temperature and may increase the biological growth
 - c. The City should amend this section to match the ASHRAE standard which allows the building to determine the maximum idle time, or at a minimum the standard should be changed from 3 days to 7 days.
5. **Cooling tower vs. Cooling System** – The requirement to disinfect a cooling tower should be tied to the time period the cooling tower is shut down, and not the cooling systems which can be idle due to a cooling of outside temperature
6. **Microbes vs. Bacterial Counts** – The inspection should test for bacterial counts and not microbes
7. **Minimum testing** – The requirement to test every 90 days is actually slightly less than quarterly and testing 4 times is slightly less than a year. In order to match the operational calendar and allow a building to test the same time every year, the requirement should be changed to every 100 days or quarterly.
8. **Violations** – The violations should be reflective of other category 1 or major violations, such as failure to maintain elevators, ranging from \$500 - \$10,000 depending on the violation. A violation of \$5000 is extreme penalty for missing a section of a report, or other minor infractions.

Again, we greatly appreciate the opportunity to testify and provide comments regarding this important legislation and will avail ourselves, members, consultants and experts upon request.

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 8/11/13

Name: Dr. Mary Bassett (PLEASE PRINT)

Address: Commissioner, DOHMH

I represent: _____

Address: _____

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 8/11/13

Name: Denkoff (PLEASE PRINT)

Address: Deputy Commissioner, Environmental Health

I represent: DOHMH

Address: _____

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 8/11/15

(PLEASE PRINT)

Name: Rick Chandler

Address: Commissioner, Dept of Buildings

I represent: _____

Address: _____

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 8/11/15

(PLEASE PRINT)

Name: Daniel Avery

Address: 11 Penn Plaza 2201

I represent: BOMA/NY

Address: _____

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 8/11/2015

(PLEASE PRINT)

Name: MICHAEL PATTON

Address: 22 WILLOW PARK RD / GASTONBURG CT

I represent: ASHLEIGH STD 188

Address: ALBANY GA.

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 8/11/15

(PLEASE PRINT)

Name: Angela Pinsky

Address: Real Estate Board of NY (Rebny)

I represent: _____

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 8/11/15

(PLEASE PRINT)

Name: Tom Fariello

Address: Dept of Buildings

I represent: _____

Address: _____

Please complete this card and return to the Sergeant-at-Arms