Testimony

of

Demetre Daskalakis
Deputy Commissioner, Disease Control

New York City Department of Health and Mental Hygiene

before the

New York City Council Committee on Health

on

Cooling Tower Systems

October 23, 2018
City Hall – Committee Room
New York, NY

Good morning Chairs Levine and Cornegy, and members of the Health and Housing and Buildings Committees. I am Dr. Demetre Daskalakis, Deputy Commissioner for Disease Control at the New York City Department of Health and Mental Hygiene. I am joined by my colleague Corinne Schiff, Deputy Commissioner for Environmental Health. On behalf of Acting Commissioner Oxiris Barbot, thank you for the opportunity to testify on cooling tower systems and *Legionella* pneumonia – also known as Legionnaires' disease – in New York City.

Bacteria, including *Legionella* bacteria, are found naturally in the environment. Although many species of Legionella exist in the environment, just a few are known causes of human disease. These bacteria are acquired by exposures to water mist in nature or by human-made water systems. When inhaled into the lungs, the bacteria may cause *Legionella* pneumonia. *Legionella* pneumonia is not contagious, so it is not passed from person-to-person, nor can it be acquired from drinking water. Most healthy people do not become ill if exposed to *Legionella*, and *Legionella* pneumonia is treatable with common, well-tolerated and often oral antibiotics. *Legionella* pneumonia is most commonly acquired by individuals with risk factors that may make them generally more susceptible to pneumonias, such as having chronic lung disease or a weakened immune system, or being over 50 years of age or a smoker.

Although the vast majority of cases of *Legionella* pneumonia are sporadic and related to unidentified natural or human-made environmental exposures, cooling towers are recognized as one of the water systems with high potential for dispersion of *Legionella*-containing water mist. To review, cooling towers are water systems found generally, though not exclusively, on the top of buildings, and are responsible for regulating the temperature of cooling systems such as central air conditioning or refrigeration. These towers release water mist or vapor into the environment in order to regulate the temperatures of building cooling systems. Although the vast majority of cooling towers perform this function without threat to human health, these towers may provide *Legionella* bacteria with an ideal environment for growth if not correctly maintained. With proper maintenance, including the use of chemicals, or biocides, that sterilize the water, these conditions may be disrupted, and bacterial growth can be prevented.

In 2015, after an outbreak of *Legionella* pneumonia in the South Bronx, the Administration and Council worked together to enact Local Law 77, which for the first time in the United States, sets standards for cooling tower system maintenance for building owners, and enables the City to better reduce and contain *Legionella* in cooling tower systems. In 2016, the Department created a new office to oversee building owners' compliance with the local law, promulgated agency regulations setting out detailed implementation requirements and expanded the Department's laboratory and disease surveillance activities and cooling tower system regulatory oversight capacity. We hired a highly skilled team, including specialized water ecologists who perform annual inspections of registered cooling tower systems. New York City now has the most rigorous cooling tower oversight in North America and is seen as a national model for this work.

The Department's water ecologists annually inspect all registered cooling tower systems. These highly trained staff inspect all cooling tower equipment, assess the chemical treatment of the water in the cooling tower systems, and review maintenance and operational records, including water quality testing records for *Legionella* bacteria. These inspections are conducted to determine compliance with Local Law 77, and summonses are issued to building owners who fail to comply.

To improve compliance, the Department also provides training, technical assistance and resources for building owners, cooling tower operators and water treatment vendors, including guidance on how to safely bring the systems on and offline. Since 2016, the Department has performed over 11,000 inspections covering over 6,000 registered, active cooling towers.

In addition to cooling tower system oversight, we have a comprehensive disease surveillance system in place to identify and monitor disease. The surveillance system identifies possible cases of *Legionella* pneumonia in New York City, and it combines a review of mandated reportable disease results with syndromic surveillance, which is information such as patient symptoms and use of medications that signal the possible presence of disease. We receive mandated reports on approximately 100 different diseases of public health concern, including *Legionella*, and daily reports of syndromic data from emergency departments, urgent care, EMS, pharmacies and school nurses. Day in and day out, our expert staff work diligently to analyze data from these sources to identify any signals that may indicate a potential increase, cluster or outbreak. *Legionella* pneumonia is one of the diseases for which we get automated lab reporting, meaning we are notified of every positive test for *Legionella* in New York City, and we investigate each case through interviews with patients or their families and a review of their medical records.

On a daily basis, advanced computer algorithms are used to rapidly identify patterns of *Legionella* that may suggest a possible cluster of infections to be investigated for a common source of exposure to the bacteria. This system takes into account time, space and expected numbers of *Legionella* pneumonia to determine the possibility of a "community cluster." Community clusters are most suggestive of a single source, such as that resulting from a mist generated by a contaminated cooling tower system. Cooling towers are the most commonly identified source of *Legionella* pneumonia in New York City.

When our disease surveillance indicates an unusual cluster of *Legionella* pneumonia, the Department quickly mobilizes to investigate that geographic area. While in the field for investigation efforts and on a routine basis, our experts are looking for cooling towers that may not be registered by observing surrounding rooftops and analyzing online satellite imagery. During an investigation, water ecologists are dispatched to collect samples of water from the cooling tower, review cooling tower system records to assess compliance with maintenance requirements and perform compliance activities. If a water sample tests positive for *Legionella* bacteria, the Commissioner issues an order to require timely disinfection, cleaning or other appropriate corrective action. We typically investigate several community clusters each year and are currently investigating a community cluster in Lower Washington Heights.

The two prongs of our approach – cooling tower system oversight and disease surveillance and response – are complementary to each other and enable us to quickly identify potential community clusters and work with property owners to ensure that issues are addressed immediately. We also encourage New Yorkers to seek medical attention for flu-like or pneumonia symptoms, such as fever, cough or difficulty breathing. In the event of a cluster, the Department actively conducts outreach in the affected area, via media alerts, community meetings and on-the-ground outreach to help ensure awareness and vigilance by community members, and we send health alerts to medical providers citywide.

Before turning to the legislation, I want to reiterate some key messages for the public: New York City's drinking water supply is safe, as are home air conditioning units; walking into air conditioned environments is also safe. This Council has been instrumental in helping the Department disseminate this messaging to New Yorkers, and I want to thank you for your commitment.

Regarding the bills being considered today, Introduction 1164 proposes mandated reporting on cooling tower oversight and *Legionella* pneumonia cases. The Administration fully supports the intent of this bill and is committed to transparency for New Yorkers. The Department issues an annual report on cooling tower system inspections and is happy to expand upon that report. The Department is also creating a public-facing website to provide information about building-specific inspection results that we think meets the intent of this bill. The website should go live in early 2019.

Introduction 1158 requires the Department to provide education and information to building owners and operators about cooling tower maintenance requirements. We support this bill. The Department currently hosts a regular Cooling Tower Academy and community-based education sessions, and we have an online self-assessment tool that has been very helpful for building owners and compliance improvement.

Introduction 1149 requires the Department of Buildings to digitize the certification process and send an electronic reminder to building owners and operators in advance of certification deadlines, and it requires owners to send inspection results directly to the Health Department. The Administration supports the intent of updating this process to be more user-friendly and streamlined. We have concerns about using a pre-populated certification form, as this form provides important operational information that may change year to year, such as components of the Maintenance Program and Plan and staffing, and we want the owner or operator to take the time to complete this form accurately to help improve compliance with the law. We look forward to speaking with Council further regarding this proposal.

Finally, Introduction 1166 would require the Department to conduct an assessment of potential determinants of *Legionella* pneumonia in the City and report on these findings to the Council. We support this bill and welcome the opportunity to share findings from the Department's existing and robust surveillance system.

Thank you for the opportunity to testify on this issue today. We are happy to take questions.

BOMA New York

Comments from the Building Owners and Managers Association of Greater New York on oversight on cooling towers and on several proposed bills related to cooling towers.

Good afternoon Chairman Cornegy, Chairman Levine and esteemed members of the two Committees. My name is Laura Belt Ponomarev, and I am Chair of the Advocacy Committee at BOMA/NY, the Building Owners and Managers Association of Greater New York. I thank you for this opportunity to testify today on existing cooling tower regulations and on several proposed pieces of legislation regarding cooling towers. First, allow me to give you a little background information on BOMA New York.

BOMA New York represents more than 750 property owners, managers, and building professionals who own or manage 400 million square feet of commercial space in New York City. We are an association within BOMA International, a federation of 90 US associations and 19 international affiliates that own and operate approximately 10.5 billion square feet of office space in the United States.

Back in 2015, after a deadly outbreak of legionnaire's disease, the City Council passed local law 77 in record time, and later added Chapter 8 of Title 24 to the Rules of the City of New York to implement the bill. All or most BOMA New York buildings had long treated cooling towers to prevent legionella, and the monitoring and treatment protocol mandated did not seem significantly different from what we were doing, so we were in a good place to comply with the new law and rules.

Nonetheless, implementation and enforcement of the law have been difficult and frustrating, even as we've continued to work closely with our partners at the Department of Health (DOH) to try to surmount those difficulties. In our view, the primary issues are that enforcement has been inconsistent, and inspectors tend to give out a lot of penalties, primarily for what we consider small administrative matters. Many violations are in fact incorrect, and our members have spent a great deal of time at the ECB getting violations overturned. (I should note, however, that it seems, at least anecdotally, like the number of violations has dropped of late.) Meanwhile, tests routinely come back as in compliance or even non-detect. In addition, the regulations have led to significantly higher costs for monitoring and testing cooling towers.

In general, we have pushed the DOH to focus less on micromanaging every building in the City, and instead to work with building sectors most likely to be struggling with legionella

management. In addition, we have asked them to establish a system for approving legionella management "books" that each building has to have, so there is certainty about meeting the administrative requirements of the rules, and/or to move to a performance-based approach, whereby good test results indicate that proper management practices are in place, and lengthy inspections are not necessary. Neither of these approaches have yet been adopted, but we continue to have productive talks with DOH about these and other matters.

As for the specific laws under consideration, they tend to move in the direction of greater administrative burdens, for both buildings and the City, with no clear evidence that they will actually protect health.

Intro 1149: In relation to documentation and submission of cooling tower inspections and certifications:

We are neutral on the provision that the City notify buildings 30 days prior to required 90-day inspections, although it seems like a significant burden that could easily take away from other City efforts and resources. As to filing all 90-day inspection reports within five days of inspection, we are opposed. First, these inspections include legionella testing, and it takes 15 days to incubate test samples and generate a test report, which the lab then sends to the qualified person. Therefore, five days is completely unrealistic. In addition, currently, only test results that show non-compliance need to be reported to DOH. The test results and reports are extensive and would not be up-loadable to the current portal due to their size. These reports and results must be kept on site for at least three years and are available to inspectors. We believe that these current reporting requirements are entirely adequate for protecting human health.

Intro 1164: In relation to reporting the results of cooling tower inspections and to repeal Local Law 77 for the year 2015, relating to cooling towers:

This bill largely cleans up and updates reporting requirements under local law 77 of 2015. It does, however, add the requirement that the results of each 90-day inspection be posted electronically. Again, these reports are extensive and technical, and it is not immediately clear how posting every one of them electronically will forward the goal of protecting human health. The vast majority will show compliance with legionella results and normal, functioning cooling towers. Non-compliant tests, mitigation efforts, and mitigation results are already submitted to DOH. Therefore, we oppose this new requirement as unnecessary and burdensome.

Once again, thank you for this opportunity to testify on the oversight of cooling tower regulations and on these proposed bills. I'd be happy to take any questions.

Alliance to Prevent Legionnaires' Disease

Alliance to Prevent Legionnaires' Disease, Inc.
1200 G Street NW, Suite 800 | Washington, DC 20005
preventlegionnaires.org | 1-202-434-8757

Alliance to Prevent Legionnaires' Disease Testimony for New York City Council Committees on Health and Housing & Buildings Hearing

October 23, 2018

Good morning Chairmen Levine and Cornegy, Jr. and members of the Committees on Health and Housing & Buildings. My name is Daryn Cline, I am the Director of Technology and Science for the Alliance to Prevent Legionnaires' Disease. I appreciate this opportunity to provide testimony today regarding the four bills under review.

The Alliance to Prevent Legionnaires' disease is a nonprofit public health advocacy group dedicated to reducing the occurrence of Legionnaires' disease. We promote public research, education, best practices for water management, and advocating for comprehensive public water supply strategies to combat this preventable disease.

I understand that Intros 1149, 1158 and 1164 aim to increase compliance with Local law 77 of 2015, however we remain concerned that due to its very narrow focus, even 100% compliance with the law will not result in a reduction Legionnaires' disease (LD) cases in New York City.

Alliance to Prevent Legionnaires' Disease, Inc.
1200 G Street NW, Suite 800 | Washington, DC 20005
preventlegionnaires.org | 1-202-434-8757

This fact was evident in the presentation provided by your former Director of Building Water Oversight, Dr. Chris Crawford at the 2nd Committee on Management of Legionella in Water Systems at the National Academy of Sciences in Washington, D.C., where he provided a presentation that NYC had over 90% compliance with the law, but he failed to note that the rates were continuing to skyrocket. It is anticipated that NYC will have 600 cases of Legionnaires' disease this year, well over the average. Clearly, compliance with Law 77 in NYC has not reduced LD cases.

However, we do strongly support the direction that Intro 1166 takes by calling on the City Health and Buildings Departments to assess ALL potential determinants of Legionnaires' disease in the city including potential sources and associated risk factors, with a report to the Council and Mayor within one year. Specific to this bill, we have included our recommendations for what such an assessment should include and policy changes that could result in a meaningful impact on LD rates across the city.

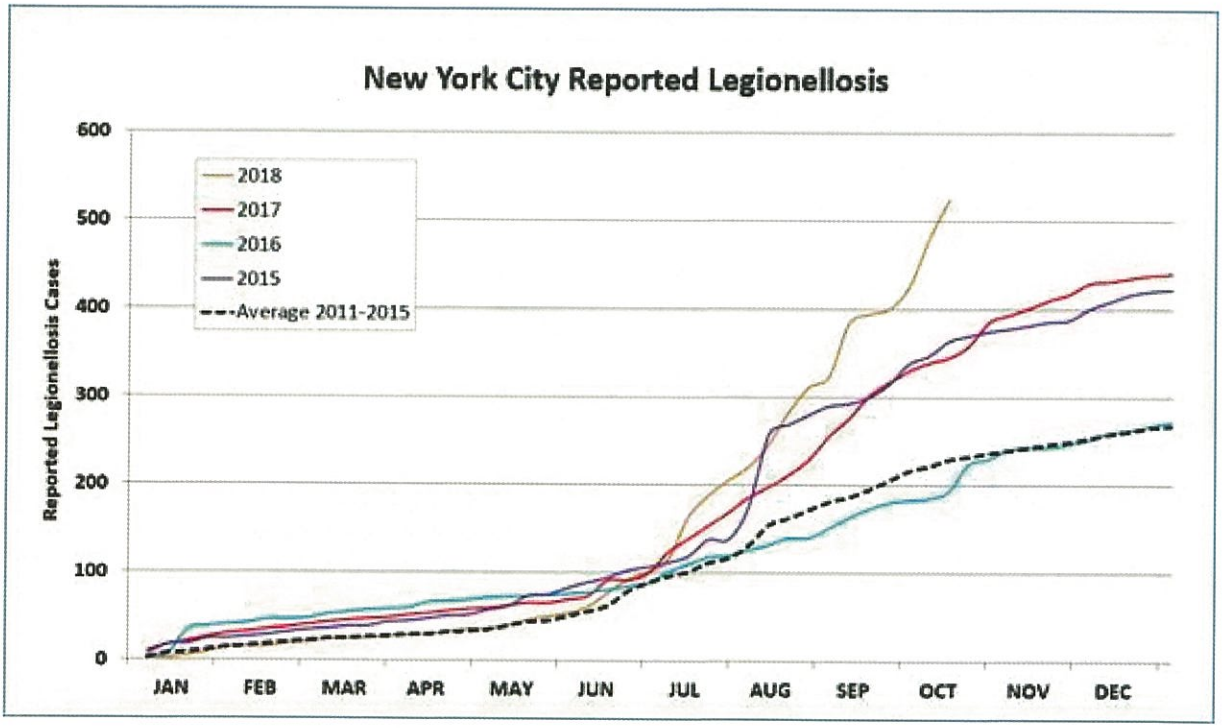
Equipment Focused Requirements will not Address NYC's LD Issues

Legionnaires' disease has plagued New York City for years and rates continue to climb. Since enactment of Local law 77, which is exclusively focused on building equipment that uses the publicly supplied water flowing in and throughout their buildings, LD rates are at their highest. Several outbreaks have hit the city and dangerous levels of Legionella bacteria has been found in NYCHA-operated and other buildings across the city.

Alliance to Prevent Legionnaires' Disease

Alliance to Prevent Legionnaires' Disease, Inc.
1200 G Street NW, Suite 800 | Washington, DC 20005
preventlegionnaires.org | 1-202-434-8757

Below is a chart which demonstrates year to date LD rates in NYC as compared to prior and recent years.

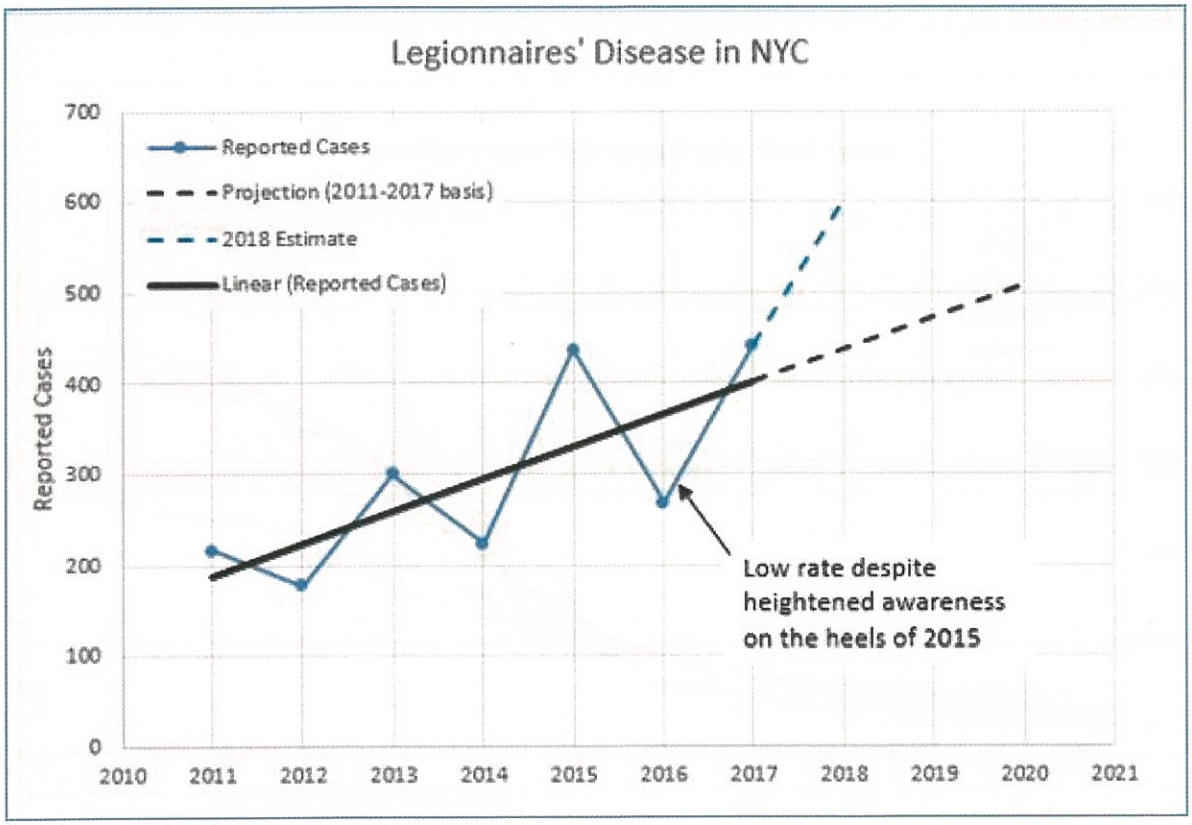


Data Source: Centers for Disease Control and Prevention

While the Health Department continues to tout its response efforts, we are seeing the highest rates of LD per capita in the country and NYC is expected to reach an all-time high this year. The Health Department responds to this saying the increased rates are due to increased awareness and diagnosis, but LD rates declined in 2016, the year following the

Alliance to Prevent Legionnaires' Disease, Inc.
1200 G Street NW, Suite 800 | Washington, DC 20005
preventlegionnaires.org | 1-202-434-8757

largest outbreak in NYC when awareness was high. The chart below shows this fact.



Further, national experts agree that there has been and continues to be an actual spike in rates over the last decade, likely due to aging infrastructure, an aging and more susceptible population and other factors.

Lives are at stake and those responsible for public health must take a proactive and comprehensive stance in addressing *Legionella* in residents' homes and buildings city-wide. The overwhelming number of LD cases are sporadic in nature. 96% of cases in fact are single or sporadic according to the federal Centers for Disease Control and

Alliance to Prevent Legionnaires' Disease, Inc.
1200 G Street NW, Suite 800 | Washington, DC 20005
preventlegionnaires.org | 1-202-434-8757

Prevention (CDC), for which epidemiology points to the drinking water. A recent article in the New York Post revealed that the DEP is switching water supplies in the Catskills due to work on an aqueduct, and the water quality complaints have started to come in. I would venture to say that the cases of LD will see a large spike as well during this water change. It is quite common to see increases in LD rates after major events.

According to the CDC, about 35 percent of all Legionnaires' outbreaks can be attributed to events which take place outside of the building, including disruptions due to construction or water main breaks, and even excessive rain. Such events disrupt *Legionella* bacteria that live and proliferate in biofilm in the piping of public distribution systems pushing a slug of the bacteria into homes and buildings as water enters them for use and consumption.

Given this, proper management and monitoring of the water from source to tap is critical to tackle waterborne illness like LD and others. We would note that NYC is one of five localities in the country that has been granted a waiver from filtering its water by the federal Environmental Protection Agency (EPA). While a filtration plant has been recently installed which filters 20-30% of the city's water the remainder is unfiltered and treated with UV. We believe this should not be an either-or approach.

Alliance to Prevent Legionnaires' Disease

Alliance to Prevent Legionnaires' Disease, Inc.
1200 G Street NW, Suite 800 | Washington, DC 20005
preventlegionnaires.org | 1-202-434-8757

I recently returned from meetings with city officials in Vancouver, Canada which uses both filtration, UV and high chlorine levels throughout the distribution system. Vancouver is known for the pristine nature of their water and their LD rates are very low. As part of the assessment called for in Intro. 1166, we recommend that water source, distribution systems and piping, building management and water-using equipment all be studied as potential sources of legionella bacteria. More importantly, we call for the management of all as part of a system-wide approach to address legionella and other waterborne pathogens. Below we have included specific recommendations in this regard.

Recommendations

- Increase investments in our aging water infrastructure to ensure that corroding pipes do not contaminate our water.
- Better guidelines for communication between water utilities and building managers when water disruption events occur. Building owners should know when there is an increased risk for *Legionella* bacteria.
- Monitoring for *Legionella* in the public water supply to help determine the root cause of cases that take place throughout the City including water tank inspections that detect *Legionella* bacteria and other opportunistic pathogens in the bulk water and with the use of swabs. Last year, the Alliance conducted testing of several public water sources in Manhattan. We found a number of positive samples in drinking water fountains sinks in public parks and other locations,

Alliance to Prevent Legionnaires' Disease, Inc.
1200 G Street NW, Suite 800 | Washington, DC 20005
preventlegionnaires.org | 1-202-434-8757

including samples positive for the most virulent strains of LD. We notified the City Health Department but our sense is little action was taken. We believe there is a strong need for more *Legionella* testing in the public water to get to the root cause and prevent disease.

- Minimum disinfectant residuals to ensure that the water flowing through public pipes is being treated properly before it enters our buildings. While NYC data does demonstrate the presence of disinfectant residuals, we believe a minimum for all points in the distribution system is important. The state of Louisiana enacted a residual requirement of 0.5 ppm of residual disinfectant a few years ago and Illinois has a similar proposal pending. Nearly half the states in the US have set a minimum disinfectant residual level but New York is not one of them. This is a policy we would urge the Committees to consider.
- As part of the focus of next week's hearing, the Alliance recommends that water tank inspections to specifically include testing for *Legionella* bacteria in addition to the Coliform and E. Coli tests.
- Proper building water management including monitoring and maintenance of all water-using equipment. However, an exclusive focus here is not likely to generate the intended results since it is simply not practical to expect building owners to effectively control waterborne threats, especially when the quality of the water

supply entering the building varies due to its components and unanticipated events.

In summary, the Alliance urges City Council members and other City officials to look beyond narrow approaches that focus only on one component and examine the system. We support a more comprehensive approach to the prevention of Legionnaires' disease that, in addition to proper management of building equipment, equally focuses on steps that can be taken—both short and long term—to reduce *Legionella* health risks originating in the public water supply system.

Broad solutions like those we have outlined above will ultimately make building water management more effective and provide water to our homes that we can consume confidently. We appreciate each of the Council member's time in listening to this testimony and urge each of you to consider comprehensive solutions to keep our communities safe and ensure that they are receiving the safest and highest water quality possible.

Sincerely,

Daryn S. Cline, *Director, Technology and Science*

Alliance to Prevent Legionnaires' Disease, Inc.
www.preventlegionnaires.org
1-202-434-8757 Office
1-410-861-7801 Cell

732-249-0990 phone
732-249-0905 fax
info@towerwater.com
5 Shirley Avenue
Somerset, NJ 08873
towerwater.com

TOWER WATER

Urgent Change in New York City Domestic Water

On or about June 15, 2018, the New York DEP, in conjunction with the New York City Bureau of Water has turned on emergency wells as well as opened a water main from the Croton Reservoir to add to the New York City Water supply. This last time this occurred was in June 2016 and lasted for approximately six months.

Prior to this date, New York City was being fed by the northern reservoirs such as the Catskill which is mostly made up of softer mountain runoff. This new city water is a combination of the soft water with the inclusion of harder ground water.

What does this mean for your property?

1. The following **characteristics** may change:
    - Smell, odor
    - Taste
    - Feel
    - Color (brown water condition)

2. **Water consumption increases** due to HVAC equipment needs. Buildings with cooling towers or boilers will experience the following:

- Cooling Towers – Used to operate 8-12 cycles*. (*How many times they reused the water until it was necessary to bleed.) Now they will operate 3.5-5 cycles. *This is an increase of about 50-60% water consumption.*

- Steam Boilers – (using less than 95% return) These will use more water, proportionally, to the amount of condensate returning. Water softeners will need to be considered and if they already exist will need to be set to regenerate more often.

3. **Water treatment** – Cycles of Concentration will be greatly reduced. This will cause the usage of significantly more water make-up and Inhibitor Chemical that is not included in your contract. *Conductivity limits will need to be set higher due to increased incoming conductivity, chlorides and hardness.*

4. **Domestic Water Filters** – may need to be changed on a more frequent basis.

5. **Reverse Osmosis Systems** - These systems will need cleaning, filtering and membrane changes more frequently.

6. **Water Softeners** – These systems will need to be re-adjusted and recalculated due to the loading which is now about 5 times greater than it previously was. This will require five times the amount of salt for regeneration.

7. **Glycol Systems** – In the past, because of the extremely soft water conditions, we were able to mix 95% glycol down with NYC water. Now it will be necessary to consult with the glycol manufacturer before mixing or may require deionized water for make down.

8**. Cooling tower Legionella Water management plans** - Will need adjustment to account for higher conductivities and increased weekly chemical usage amount and dosages.

What should I do?

- Verify that you do, in fact, have this condition. To do this, check your city water for elevated conductivity with your on-site meter

    - **Normal Conductivity** = 85-140 microSiemens
    - **Elevated Conductivity**= >150 microSiemens *

    *** Call your Tower Water Account Manager if an elevated condition is found.**

- Your Tower Water technical account manager should be testing your incoming water every visit.
- Discuss the recommended course of action with your Tower Water person.
- Plan to increase your budget due the increase in usage of water, chemicals, supplies, equipment etc.

Is this a permanent condition?

It is unclear how long it will last. The DEP reservoirs are not at or below normal condition (93.0%) at present. There is work being done on several water mains at this time. They have been working on this transmission main system for years.

As a company, **Tower Water** takes the approach that it is here to stay until we test otherwise. We will always do what is technically correct to provide the best protection to your HVAC systems while maintaining a competitive price.

If you have any further questions for concerns on your **water treatment**, please do not hesitate to contact me at 732-249-0990 or email me directly at Russell@towerwater.com.

If you have any further questions for the **Department of Water**, it is in reference to well water, it is referred to as the "In-City Resiliency Water Project" please contact 718-595-7000 or 311. See links below.

http://www.nyc.gov/html/dep/html/drinking_water/groundwater07.shtml

https://www1.nyc.gov/html/dep/pdf/reviews/in-city-water-supply-resiliency/in-city-water-resiliency-fsow.pdf

https://youtu.be/6YIZCVkfY5M

Very truly yours,

Russell M. Baskin, ME, CWT
President
Water Treatment Consultant

Home

Customer Services
- Pay Online
- Ways to Pay Your Bill
- eBilling
- Account Information
- Customer Assistance
- Service Line Protection Program
- Water Rates
- Property Managers & Trade Professionals

Water Utilities
- Drinking Water
  - NYC Water On the Go
  - Reservoir Levels
  - Current Releases
  - Drinking Water Supply & Quality Report
  - History of New York City's Water Supply System
- Wastewater
- Stormwater
- Harbor Water
- Long Term Control Plan

The Watershed
- Watershed Protection
- Watershed Recreation

Citywide Initiatives
- Environmental Education
- Conservation Programs
- Air Pollution Control
- Noise Codes & Complaints

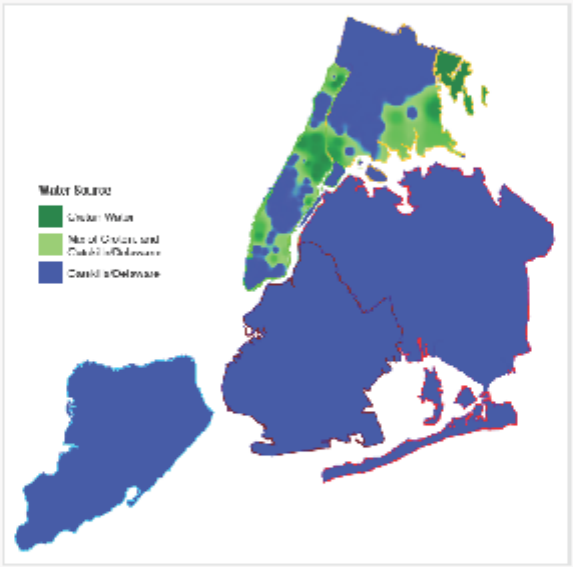
Business and Professionals
- Forms & Permits
- Support for Businesses
- Doing Business with DEP
- Asbestos Abatement
- Construction, Demolition & Abatement

About DEP
- Inside DEP
- News
- Capital Projects

Croton Water Distribution Maps

Neighborhoods in New York City receive their water from reservoirs of the Croton System or the Catskill-Delaware System. The map below shows which portions of the City are receiving water from each source under different operating scenarios that are commonly used by DEP. The map is a graphical representation that does not delineate exact boundaries between the distribution of one water source or the other.

Current Conditions



Reservoir Levels
Current: 94.5%
Normal: 87.4%

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: 10/23/18

(PLEASE PRINT)

Name: Corinne Schiff

Address: _____

I represent: NYC DOHMH

Address: 42-09 28th St, LIC

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: 10/23/18

(PLEASE PRINT)

Name: Dr. Demetre Daskalakis

Address: _____

I represent: NYC DOHMH

Address: 42-09 28th St, LIC

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 1149, 1164 Res. No. _____

☐ in favor ☐ in opposition

Date: 10/23/18

(PLEASE PRINT)

Name: Laura Belt Pondmarev

Address: Woolworth Building

I represent: BOMA/New York

Address: One Penn Plaza Suite 2205

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: 10/23/18

(PLEASE PRINT)

Name: Russell M. Baskin

Address: 5 Shirley Ave Somerset NJ 08852

I represent: Towerwatch

Address: 1460 Broadway NY, NY

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 1149, 1158, 1164 Res. No. _____

☐ in favor ☒ in opposition

Date: 10/23/18

(PLEASE PRINT)

Name: Daryn Cline

Address: 1200 G Street NW Washington, DC 20005

I represent: The Alliance to Prevent Legionnaire's Disease

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 1164 Res. No. _____

☒ in favor ☐ in opposition

Date: 10/23/18

(PLEASE PRINT)

Name: Daryn Cline

Address: 1200 G. St. NW, Wash, DC. 20005

I represent: Alliance to Prevent Legionnaire's Disease

Address: _____

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